

PHASE II INVESTIGATION REPORT

AREA A: PARCEL A3
TRADEPOINT ATLANTIC
SPARROWS POINT, MARYLAND

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1.0 INTRODUCTION

ARM Group Inc. (ARM), on behalf of EnviroAnalytics Group (EAG), has completed a Phase II Investigation of a portion of the Tradepoint Atlantic property (formerly Sparrows Point Terminal, LLC) that has been designated as Area A: Parcel A3 (the Site). Parcel A3 is comprised of 64 acres of the approximately 3,100-acre former steel making facility (**Figure 1**). The Site is bounded to the west by Riverside Drive and Bear Creek, to the north by Bethlehem Boulevard and Interstate 695, and to the east by the former Pipe Mill Area, which is currently designated as Parcel A1. The Site has been cleared of all significant vegetation and is currently out of use, but is proposed for industrial redevelopment. Approximately 15 acres in the northernmost section of the parcel is occupied by the former Rod and Wire Mill area, which is currently undergoing groundwater interim remedial measures.

The Phase II Investigation was performed in accordance with procedures outlined in the Phase II and Pre-Design Investigation Work Plan – Parcel A3. This Work Plan (dated September 17, 2015) was approved by the Maryland Department of the Environment and the United States Environmental Protection Agency in compliance with requirements pursuant to the following:

- Administrative Consent Order (ACO) between Tradepoint Atlantic (formerly Sparrows Point Terminal, LLC) and the Maryland Department of the Environment (effective September 12, 2014); and
- Settlement Agreement and Covenant Not to Sue (SA) between Tradepoint Atlantic (formerly Sparrows Point Terminal, LLC) and the United States Environmental Protection Agency (effective November 25, 2014).

An application to enter the Tradepoint Atlantic property into the Maryland Department of the Environment Voluntary Cleanup Program (MDE-VCP) was submitted to MDE on September 10, 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. Parcel A3 is also part of the acreage that remains subject to the requirements of the Multimedia Consent Decree between Bethlehem Steel Corporation, the United States Environmental Protection Agency (EPA), and the Maryland Department of the Environment (MDE) (effective October 8, 1997) as documented in correspondence received from EPA on September 12, 2014.

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 Rod and Wire Mill area is located in the northwestern portion of the Site, and is the location of the former mills that produced rods and wire products from the 1940's to the early 1980's. All manufacturing activities at the Rod and Wire Mill area ceased operation in the early 1980's with subsequent demolition of all structures between 1994 and 2000, based on historical aerial photos. Current ground cover includes slag aggregate that was placed in conjunction with the demolition program.

Manufacturing activities at the Rod and Wire Mill included leaching of zinc ore and a subsequent treatment process to remove cadmium impurities. The leaching process was implemented in large tanks located inside the north end of the former Rod and Wire Mill building. In the 1950's through the early 1970's, the acidic leach residue was stored in the Northwest Pond until about 1959 when filters were installed to dewater the residues. Dewatered sludge generated from this process was temporarily stored on the ground outside the north end of the mill in the Former Sludge Bin Storage Area. Filtrate from the dewatering process was recycled to the wire plating process. Excess filtrate was discharged to the East Pond until 1971, after which it was sent to the Humphrey Creek Wastewater Treatment Plant (HCWWTP) for treatment. These operations ended in the early 1980's when the Rod and Wire Mill was shut down.

1.2. OBJECTIVES

The objective of this Phase II Investigation was to fully characterize the nature and extent of contamination at the Site. 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. A summary table of the site investigation locations including the boring identification number, if applicable, and the analyses performed is provided as **Appendix A**.

2.0 ENVIRONMENTAL SETTING

2.1. LAND USE AND SURFACE FEATURES

The Tradepoint Atlantic property consists of the former Sparrows Point steel mill plant. 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.

According to topographic maps provided by EAG, the Site is at an elevation of approximately eleven (11) feet above mean sea level (amsl). Elevations in the parcel are fairly uniform between 10 and 12 feet over the majority of the central parcel area. Along the western edge, the parcel slopes sharply downward to the adjacent Bear Creek. Elevations at the Site range from approximately 0 at the parcel boundary up to approximately 20 feet amsl at the highest point (a mound in the northwest corner). Surface runoff collects in low spots on the parcel with no clear discharge location. Along the western edge of the property, runoff waters flow towards Bear Creek located just across the parcel boundary. Bear Creek is a tidal water body, which likely influences large-scale groundwater flow beneath 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 overly deeper Mesozoic and/or Precambrian bedrock.

2.3. SITE GEOLOGY/HYDROGEOLOGY

Groundcover at the Site is comprised of approximately 78% natural soils based on the approximate shoreline of the Sparrows Point Peninsula in 1916, as shown on **Figure 2** (adapted from Figure 2-20 in the Description of Current Conditions (DCC) Report prepared by Rust Environmental and Infrastructure, dated January 1998).

In general, the encountered subsurface geology included slag fill materials overlying natural soils, which included fine-grained sediments (clays and silts) and coarse grained sediments (sands). Groundwater was observed within the soil cores at initial depths ranging from 4 to 18 feet below the ground surface (bgs) across the Site. Soil boring logs are provided in **Appendix B**.

Groundwater occurrence at the Site has been segregated into three horizons identified as shallow, intermediate and deep hydrogeologic zones. The shallow water bearing zone (water table) includes piezometers screened to depths of approximately 15-feet below ground surface. The intermediate water bearing zone includes piezometers screened from approximately 20- to 30-foot depths. The intermediate water bearing zone is the focus of the interim pump and treat measure currently in use at the Site and is therefore also referred to as the intermediate pumping zone. The deep water bearing zone is defined as those piezometers screened from approximately 50- to 75-feet below ground surface.

Temporary groundwater sample collection points were installed at 12 locations across the Site to investigate groundwater conditions. Of these 12 locations, eight were installed in the shallow hydrogeologic zone during the Phase II Investigation, and four were screened in the intermediate water-bearing unit during the Pre-Design Investigation. Analysis of the groundwater data from intermediate temporary piezometers installed exclusively for the Pre-Design Investigation has been included in a separate completion report (ARM 2016). In addition to the eight shallow temporary groundwater sample collection points, 10 existing wells were sampled for the Phase II Investigation. Five of the existing wells are screened within the shallow groundwater zone (RW02-PZM000, RW07-PZM004, RW10-PZM004, RW19-PZM000, and RW20-PZM000), and five wells are screened in the intermediate zone (RW02-PZM020, RW07-PZM017, RW10-PZM020, RW19-PZM020, and RW20-PZM020). The locations of the groundwater sampling points are indicated on **Figure 3** (shallow) and **Figure 4** (intermediate). The temporary groundwater sample collection points and existing wells were surveyed by a Maryland-licensed surveyor. The supporting documentation from the surveys is included as **Appendix C**.

A synoptic round of groundwater level measurements was collected on January 28, 2016 from each of the groundwater points included in the parcel-specific sampling plan. The existing intermediate groundwater recovery system (including pumping wells RW10-PZM020 and RW15-PZM020) was operating normally at the time of the groundwater level measurements. Several site-wide wells which were not included in the sampling plan were included in the potentiometric survey to provide better resolution of the groundwater potentiometric surface.

Surveyed top of casing (TOC) and ground surface elevations for all applicable locations can be found in **Table 1**, along with the depth to water (DTW) measurements from this date.

Based on the field measurements, groundwater potentiometric surface maps were constructed for the shallow and intermediate hydrogeologic zones. Potentiometric maps for the shallow and intermediate zones have been included on **Figure 5** and **Figure 6**, respectively. In the northern half of the Site, groundwater in the shallow zone appears to flow radially in all directions from a mounded location in the vicinity of RW10-PZM004. On the southern half of the Site, shallow groundwater appears to flow radially in all directions from a mounded location in the vicinity of RW-050-PZ. In the intermediate zone, groundwater data was available only for the northern half of the Site. In this zone, groundwater flow below the western half of the parcel is affected by the recovery system as well as the tidal influence on Bear Creek, as elevations below 0 feet amsl were reported in several wells. Intermediate groundwater appears to flow from the north and east toward the recovery system pumping wells.

3.0 SITE INVESTIGATION

A total of 159 soil samples, and 18 groundwater samples (13 shallow and five intermediate) were collected for analysis between September 21, 2015 and April 13, 2016 as part of the Parcel A3 Phase II Investigation. This Phase II Investigation utilized methods and protocols that followed the procedures included in the Quality Assurance Project Plan (QAPP) dated October 2, 2015 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 Parcel A3 Work Plan dated September 17, 2015, and the QAPP.

All site characterization activities were conducted under the site-specific health and safety plan (HASP) provided as Appendix A of the approved 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 GIS software (ArcMap Version 10.2.2).

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 Environmental and Infrastructure. The following RECs were identified in the Parcel A3 Work Plan: Rod Mill Remediation Area (REC 6A, Finding 131, also listed as SWMU 27); Northwest Pond (REC 6B, Finding 132, also listed as SWMU 28); East Pond (REC 6C, Finding 133, also listed as SWMU 29); Rod Mill Trenches/Sumps (REC 6D, Finding 153, also listed as SWMU 45); and Unknown Aboveground Storage Tank (REC 6E, Finding 160, also listed as AOC X). In addition to the SWMU units cross-listed as RECs (discussed above), the following SWMUs were identified in the Parcel A3 Work Plan: Sludge Bin Storage Area (SWMU 27, included in the Rod Mill Remediation Area); Rod Mill Equalization Tanks (SWMU 30); Cadmium Treatment Trenches (SWMU 38); Rod Mill Scale Pits (SWMU 39); and Rod Mill Cooling Tower (SWMU 44).

Three (3) sets of historical steel mill plant 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), and the 5500 Set (Plant Sewer Lines). A summary of the specific drawings covering the Site is presented in **Table 2**. 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.

Based on the review of plant drawings, sampling targets were identified at the Site that included the following: Paint Room; Oil Storage Areas; Truck Repair Areas; Pits (various); Furnaces; Cooling Towers; Water Treatment Areas; Acid Tanks; Dye Room; Compressor Rooms; Pump Houses; Bearing Shop; Millwright Shop; Roll Shop; Maintenance Shop; Fuel Storage; Electroplating Area; Lead Room; Leach Plant; Galvanizing Line; Battery Storage Area; Rail Activities; Stelmor Lines; and Bethanizing Plant. A summary of the areas that were investigated, along with the boring identification numbers and the analyses performed, has been provided as **Appendix A**.

Additional sample locations were then added to fill in large spatial gaps between proposed borings to provide complete coverage of the Site. The density of soil borings met the requirements set forth in QAPP Worksheet 17 – Sampling Design and Rationale. Parcel A3 contained a total of 59.1 acres without engineered barriers. The former Rod & Wire Mill building footprints (previously demolished) occupied 22.8 acres. The current engineered barriers on the parcel are comprised of 5.2 acres of paved parking/roads. In accordance with the relevant sampling density requirements, a minimum of 30 soil borings were required to cover the area without engineered barriers, and a minimum of 3 soil borings were required to cover areas with barriers. A total of 33 borings were required to meet the density specification; however, 65 soil borings were completed during the Phase II Investigation. The original sampling plan proposed 61 boring locations, and four additional locations were added during the course of fieldwork. These additional borings were added during the course of delineation activities after free-phase product was identified in an existing groundwater well (RW22-PZM).

During the completion of fieldwork it was necessary to shift some borings from the approved locations given in the Work Plan primarily due to access restrictions, refusal, and/or utility conflicts. **Table 3** provides the identification numbers of the field adjusted borings, the rationale for field adjustment, 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 60 locations across the Site to assess the presence or absence of soil contamination, and to assess the vertical distribution of any encountered contamination (**Figure 7**). The continuous core soil borings were advanced to depths between 4.5 and 20 feet bgs, with an average depth of roughly 10 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). Due to limited access and as per the approved Work Plan, five borings

were completed using hand augers to a total depth of 0.5 to 1.0 feet bgs (locations RW-071-SB; RW-072-SB; RW-073-SB; RW-074-SB; and RW-075-SB, **Figure 7**). At each location, each soil core was visually inspected and screened with a hand-held Photo Ionization 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 D**. Please note that unless otherwise indicated, all Unified Soil Classification System (USCS) group symbols provided on the attached boring logs are from visual observations, and not from laboratory testing.

One shallow sample was collected from the 0 to 1 foot depth interval, and a deeper sample was collected from the 4 to 5 foot depth interval from each continuous core soil boring. One additional set of samples was also collected from the 9 to 10 foot depth interval if groundwater had not been encountered; however, these samples were held by the laboratory pending the analysis of the 0 to 1 and 4 to 5 foot depth interval samples. If the PID or other field observations indicated contamination to exist at a depth greater than 5 feet bgs but less than 9 feet bgs, and was above the water table, the sample from the deeper 4 to 5 foot interval was shifted to the alternate depth interval. It should be noted that soil samples were not collected from a depth that was below the water table, and the continuous core soil borings that were completed and logged to depths greater than 10 feet were done to facilitate the installation of the temporary groundwater sampling points. Soil sampling activities were conducted in accordance with the procedures and methods referenced in **Field SOP Numbers 008, 009, 012, and 013** provided in Appendix A of the QAPP.

Down-hole soil sampling equipment was decontaminated after soil sampling had been concluded at a location, according to the procedures and methods referenced in **Field SOP Number 016** provided in Appendix A of the QAPP.

Soil samples were submitted to Pace Analytical Services, Inc. (PACE), and analyzed for Target Compound List (TCL) volatile organic compounds (VOCs) via USEPA Method 8260B, TCL semi-volatile organic compounds (SVOCs) via USEPA Methods 8270D and 8270D SIM, Oil & Grease via USEPA Method 9071, Target Analyte List (TAL) Metals via 6010C and 7471C, hexavalent chromium via USEPA Method 7196A, and cyanide via USEPA Method 9012. Based on the specific sampling plan targets, select locations were analyzed for total petroleum hydrocarbon (TPH) diesel range organics (DRO) and gasoline range organics (GRO) via USEPA Methods 8015B and 8015D. Additionally, the shallow soil samples collected across the Site from the 0 to 1 foot bgs interval were also analyzed for polychlorinated biphenyls (PCBs) via USEPA Method 8082. Sample containers, preservatives, and holding times for the sample analyses are listed in the QAPP Worksheet 19 & 30 – Sample Containers, Preservation, and Holding Times.

3.3. GROUNDWATER INVESTIGATION

A total of 10 existing site-wide wells (five shallow and five intermediate) were sampled for inclusion in the Parcel A3 Phase II Investigation. Eight shallow temporary groundwater sample collection points were also installed to facilitate the collection of additional groundwater samples and to support the definition of the potentiometric surface. The soil boring locations where the shallow temporary groundwater sample collection points were installed during the Phase II Investigation included RW-002-SB, RW-006-SB, RW-011-SB, RW-021-SB, RW-025-SB, RW-027-SB, RW-048-SB, and RW-050-SB (**Figure 3**). The temporary groundwater sample collection point construction logs have been included as **Appendix E**.

At each location the Geoprobe® DT22 Dual Tube sampling system was advanced to a depth approximately 10 feet below where groundwater was identified in the associated soil cores, the 1.25-inch inner rod string was removed, and the temporary, 1-inch PVC groundwater sample collection point was installed through the outer casing. Following its installation, 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 temporary groundwater 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 in accordance with methods referenced in **Field SOP Number 006** provided in Appendix A of the QAPP; which employed the use of a laboratory supplied sample containers and preservatives, a peristaltic pump, dedicated polyethylene tubing, and a YSI water quality meter with a flow-through cell. Groundwater samples submitted for analysis of TAL Metals which were collected from temporary groundwater sample collection points were filtered in the field with an in-line 0.45 micron filter. Groundwater samples collected from permanent wells were not filtered. The sampling and purge logs have been included in **Appendix F**. Calibration of the YSI meter was performed before the start of each day of the sampling event, and a calibration post-check was completed at the end of the day. Appropriate documentation of the YSI calibration has also been included in **Appendix F**.

Groundwater samples were submitted to PACE, and analyzed for TCL-VOCs via USEPA Method 8260B, TCL-SVOCs via USEPA Methods 8270D and 8270D SIM, Oil & Grease via USEPA Method 1664A, TAL-Metals (total) or Dissolved Metals via 6010C and 7470A, hexavalent chromium via USEPA Method 7196A, and cyanide (total) via USEPA Method 9012A. In addition, select locations were analyzed for TPH-DRO/GRO via USEPA Methods 8015B and 8015D. Sample containers, preservatives, and holding times for the sample analyses are listed in the QAPP Worksheet 19 & 30 – Sample Containers, Preservation, and Holding Times.

3.4. MANAGEMENT OF INVESTIGATION-DERIVED WASTE (IDW)

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

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

Following the completion of field activities, a composite sample was gathered from the Parcel A3 Phase II IDW soil drums for TCLP analysis. Following this analysis, the waste soil was characterized as non-hazardous. A list of all detections from the soil TCLP procedure can be found in **Table 4**, which indicates no exceedances of TCLP criteria.

IDW drums containing aqueous materials were characterized by preparing composite samples from randomly selected drums. Each composite sample included aliquots from three individual drums that were chosen from a set of 30 drums being staged on-site at the date of collection. A total of eight aqueous composite samples were collected for TCLP analysis. A list of all detections from the TCLP analysis of the aqueous waste can be found in **Table 5**, which indicates no exceedances of TCLP criteria. Although there were no TCLP exceedances, one aqueous drum was designated as hazardous waste because it contained purge water from one piezometer which had an elevated detection of cadmium (44.5 mg/L) in its analytical sample. This drum was segregated based on this preliminary analytical result and was not included in the composite samples.

The parcel specific IDW drum log from the Phase II investigation is included as **Appendix G**. 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

The analytical results for the detected parameters are summarized and compared to the site-specific project action limits (PALs) in attached **Table 6** (Organics) and **Table 7** (Inorganics). The laboratory Certificates of Analysis (including Chains of Custody) are included as **Appendix H**, and the Data Validation Reports have been included as **Appendix I**. The data validation reports 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

As provided on **Table 6**, several VOCs were identified above the laboratory's method detection limits (MDLs) in the soil samples collected from across the Site. Three VOCs were detected above their respective PALs (trichloroethene, 1,2-dibromo-3-chloropropane, and 1,4-dichlorobenzene). The locations of the PAL exceedances are provided on **Figure S-1(1)**. All three exceedances were in the northern portion of the parcel with the exceedances limited to single compounds in three different boring locations.

Table 6 provides a summary of SVOCs detected above the laboratory's MDLs in the soil samples collected from across the Site. Seven SVOCs, all polynuclear aromatic hydrocarbons (PAHs), were detected above their respective PALs. Exceedances were noted at over half the boring locations distributed throughout the parcel. A summary of the PAL exceedance locations has been provided on **Figure S-2**.

Shallow soil samples collected across the Site from the 0-1 foot bgs interval were also analyzed for PCBs. **Table 6** provides a summary of the PCBs detected above the laboratory's MDLs. Only one PCB mixture (Aroclor 1254) and total PCBs were detected above the specified PALs, both at 6.7 mg/kg. This exceedance location (RW-035-SB-1) is provided on **Figure S-3(1)**.

There were detections of Oil & Grease at numerous locations across the Site. While no PAL was specified for Oil & Grease in the approved QAPP, **Table 6** provides a summary of the detections. The table also provides a summary of TPH-DRO/GRO detections. Only DRO was detected above its PAL, at the single location RW-033-SB-1 which targeted oil tanks. The highest detection of Oil & Grease (39,600 mg/kg) was identified in boring RW-029-SB; which targeted a pump house. Five boring locations had Oil & Grease detections exceeding 10,000 mg/kg at one or more sample depths (RW-004-SB, RW-010-SB, RW-029-SB, RW-041-SB, and RW-055-SB). A summary of the TPH/Oil & Grease PAL exceedance locations has been provided on **Figure S-4(2)**.

4.1.2. 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. Five inorganic compounds were detected above their respective PALs. A summary of the PAL exceedance locations has been provided on **Figure S-5**.

4.1.3. Soil Conditions: Results Summary

Constituents of potential concern (COPCs) were defined as any compound exhibiting at least one exceedance of its applicable PAL. **Table 8** provides a summary of results for all COPCs in soil. The table displays the detection frequency for each COPC and compares the maximum detected values for each compound to the applicable PALs. The maximum detections for several PAH compounds listed in the table were associated with a single sample (RW-020-SB-7), which targeted the Water Treatment System. The sampling plan defined in the Parcel A3 Work Plan was designed to target the specific features which represented a potential release of hazardous substances and/or petroleum products to the environment. **Table 9** indicates which soil impacts (PAL exceedances) are associated with the specific targets listed in the Parcel A3 Work Plan.

All soil data were screened to determine whether individual sample results may be indicative of the presence of discrete Hot Spots on the Site. Following the guidelines presented in the June 2008 Cleanup Standards for Soil and Groundwater prepared by the MDE, a potential Hot Spot would be identified if the result was 100 times the PAL (i.e., a lifetime cancer risk of $1E-4$ or Hazard Index of 100). The MDE guidance indicates that all identified Hot Spots have to be addressed in accordance with a MDE approved Remedial Action Plan, with the expectation that treatment shall be used to remediate Hot Spot contamination, wherever practicable. On Parcel A3, benzo[a]pyrene exceeded this criterion at boring location RW-020-SB-7 and arsenic exceeded the criterion at RW-021-SB-1. The targets associated with borings RW-020-SB and RW-021-SB were the Water Treatment System and Rod Mill Cooling Tower, respectively. The Hot Spot criterion for lead was set at a more stringent level of 2,000 mg/kg because the EPA RSL is not risk-based. There were seven samples collected during the Phase II Investigation (RW-035-SB-1, RW-036-SB-1, RW-040-SB-1, RW-052-SB-5, RW-055-SB-1, RW-055-SB-7, and RW-077-SB-5) which exceeded this level for lead, with several targets associated directly with lead-containing areas or trenches/sumps. These sample locations and results identified as potential Hot Spots are given in **Table 10**.

4.2. GROUNDWATER CONDITIONS

The analytical results for the detected parameters are summarized and compared to the site-specific PALs in attached **Table 11** (Organics) and **Table 12** (Inorganics). The laboratory's Certificates of Analysis (including Chains of Custody) are included as **Appendix J**, and the Data Validation Reports have been included as **Appendix K**. The data validation reports contain a

glossary of qualifiers for the final flags assigned to individual results in the attached summary tables.

4.2.1. Groundwater Conditions: Organic Compounds

As provided on **Table 11**, several VOCs were identified above the laboratory's MDLs in groundwater samples collected from across the Site. Two VOCs were detected above their respective PALs (1,1-dichloroethane and trichloroethene). Both compounds had PAL exceedances in the shallow and intermediate hydrogeologic zone. A summary of the PAL exceedance locations has been provided as **Figure GW-1** (Shallow Hydrogeologic Zone) and **Figure GW-2** (Intermediate Hydrogeologic Zone).

Table 11 provides a summary of SVOCs reported in groundwater above the laboratory's MDLs. Five SVOCs were detected above their respective PALs. Three of the five SVOC compounds had PAL exceedances only in the shallow hydrogeologic zone. A summary of the PAL exceedance locations has been provided as **Figure GW-3** (Shallow Hydrogeologic Zone) and **Figure GW-4** (Intermediate Hydrogeologic Zone).

While no PAL was specified in the approved QAPP for Oil & Grease, **Table 11** provides a summary of the Oil & Grease detections. The table also provides a summary of TPH-DRO/GRO detections in groundwater. The maximum detection of Oil & Grease was 21,400 µg/L at existing shallow well RW10-PZM004. Only two other locations had detections of Oil & Grease, both of which were shallow piezometers with "J" flagged reported values of 1000 µg/L. Only DRO was detected above its PAL, and only in the shallow hydrogeologic zone. A summary of the TPH/Oil & Grease PAL exceedance locations has been provided on **Figure GW-5** (Shallow Hydrogeologic Zone).

4.2.2. Groundwater Conditions: Inorganic Constituents

Table 12 provides a summary of inorganic constituents detected above the MDLs in the groundwater samples collected from across the Site. A total of 11 inorganic compounds were detected above their respective PAL. Five of the inorganic compounds had PAL exceedances only in the shallow hydrogeologic zone; one compound had exceedances only in the intermediate zone. The remaining five compounds exceeded their respective PALs at one or more locations in both of the hydrogeologic zones. A summary of the PAL exceedance locations has been provided as **Figure GW-6** (Shallow Hydrogeologic Zone) and **Figure GW-7** (Intermediate Hydrogeologic Zone).

4.2.3. Groundwater Conditions: Results Summary

COPCs were defined as any compound exhibiting at least one exceedance of its applicable PAL. The sampling plan defined in the Parcel A3 Work Plan was designed to provide a representative

survey of groundwater beneath the Site, with groundwater collection points distributed regularly throughout the parcel.

Groundwater data were screened to determine whether individual sample results may be indicative of the presence of Hot Spots in the groundwater. A potential Hot Spot would be identified if the result was greater than the established PAL and exceeded 100 times the tapwater risk-based screening level specified in the November 2015 EPA Regional Screening Level (RSL) Summary Table (i.e., representing a cancer risk of 1E-4 or a non-cancer hazard index of 100). For many compounds, the tapwater RSL was used as the original guidance for the established PAL, as specified in the QAPP Worksheet 15 – Project Action Limits and Laboratory-Specific Detection/Quantitation Limits. In these cases, a Hot Spot was identified if the groundwater concentration exceeded 100 times the PAL. Where there was a maximum contaminant level (MCL) established, the PAL was set at the MCL, which in some cases exceeded the screening criterion of 100 times the RSL. In these cases, the MCL was used to identify any Hot Spot locations. If Hot Spots were determined to present an actual or potential exposure risk to nearby human populations, they would be addressed in accordance with a MDE approved Remedial Action Plan, with the expectation that treatment would be used to remediate Hot Spot contamination, wherever practicable. Based on these criteria, a total of 11 Hot Spots have been identified in Parcel A3. Locations which represent potential groundwater Hot Spots, and the compounds for which they were identified, have been summarized in **Table 13**. All of the listed compounds are inorganics, and eight of the identified Hot Spots are located in the Rod and Wire Mill area currently under interim remedial measures. The three Hot Spots in the central and southern areas of the parcel are all arsenic detections greater than 100 times the tapwater RSL (0.052 µg/L) but only slightly above the established PAL (10 µg/L).

4.2.4. Non-Aqueous Phase Liquid

While performing inspections of select, existing groundwater monitoring wells on September 21, 2015, a light non-aqueous phase liquid (LNAPL) was discovered in shallow groundwater monitoring well RW22-PZM; which is located in the northwest portion of the Site. The thickness of the LNAPL in RW22-PZM, which is screened from 9.5 to 19.5 feet below the ground surface (bgs), was measured with an oil-water interface probe and determined to be approximately 11 feet thick. In an attempt to delineate the extent of the LNAPL observed in the existing well, and under EAG's direction, temporary piezometers were installed and inspected in the up-gradient and down-gradient directions, and four soil borings were added to the Phase II Investigation sampling plan for visual determination of the presence/absence of LNAPL and analytical sample collection (RW-076-SB through RW-079-SB). The delineation of the observed LNAPL is ongoing. EAG has periodically removed LNAPL from the impacted groundwater point, and continues to monitor the LNAPL thickness. The exact dates of removal activities, as well as product thickness measurements and recovery volumes, have been included in **Appendix L**.

5.0 DATA USABILITY ASSESSMENT

The approved site-wide QAPP specified 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, TAL metals, cyanide, or TPH-DRO/GRO) 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 Project Action Limits established in the QAPP (i.e., the most current USEPA RSLs) to identify the presence of constituents of potential concern in each environmental medium.

Quality control (QC) samples were collected during field studies to evaluate field/laboratory variability. A summary of QA/QC samples associated with this investigation has been included as **Appendix M**. The following QC samples were submitted for analysis to support the data validation:

- Trip Blank – at a rate of one 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, PCBs, Hexavalent Chromium, and Cyanide
 - Water - VOCs, SVOCs, Metals, TPH-DRO, TPH-GRO, 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, PCBs, and Hexavalent Chromium
 - Water - VOCs, SVOCs, Metals, TPH-DRO, TPH-GRO, and Hexavalent Chromium
- Field Blank and Equipment Blank – at a rate of one per twenty samples
 - Soil - VOC, SVOC, Metals, TPH-DRO, TPH-GRO, Hexavalent Chromium, and Cyanide
 - Water - VOCs, SVOCs, Metals, TPH-DRO, TPH-GRO, Hexavalent Chromium, and Cyanide

The 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 chain-of-custody (COC) forms 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 and/or checked once per day. The logs have been provided in **Appendix D** (PID calibration log) and **Appendix F** (YSI calibration log).

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 COCs 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 the environmental sample analyses performed by PACE and supporting Level IV Data Package information by Environmental Data Quality Inc. (EDQI).

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 QAPP dated October 2, 2015 and the quality control requirements specified in the methods and associated acceptance criteria were also used to evaluate the non-CLP data.

The Data Validation Reports (DVRs) provided by EDQI have been included as **Appendix I** and **Appendix K**.

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 Data Validation Reports provided in **Appendix I** and

Appendix K. 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 data validation report 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. A discussion of data completeness (the proportion of non-rejected data) is included below. A summary of the results that were rejected during data validation has been provided on **Table 14** (soil) and **Table 15** (groundwater).

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, 007, 008, 009, 010, 011, 017, and 024.** Review of the field notes and laboratory sample receipt records indicated that collection of soil and groundwater 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 deviations from the QAPP were noted in the data set.

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 N.** As indicated in this table, the completeness value was reduced below the benchmark level for several soil SVOC compounds. As a result of dilutions due to matrix interferences, some of the initial soil samples had limited value for characterization of SVOCs. As a corrective measure, and to improve the accuracy and precision of the dataset, an

additional round of soil samples were collected and analyzed for SVOCs at each of the affected boring locations and the results of the second round of samples was used in lieu of the original results for SVOCs. While 13 SVOC compounds did not achieve an overall completeness of 90%, the overall for this class of compounds is considered adequate for site characterization.

The only soil SVOC compound with an overall completeness value below 74% was 3,3'-dichlorobenzidine. Excluding the SVOCs, the completeness goal was met for all but a few individual compounds in soils, limited to 1,4-dioxane, bromomethane, chloroethane, 1,1,2-trichloro-1,2,2-trifluoroethane, and dichlorodifluoromethane. In the groundwater samples, only 3,3'-dichlorobenzidine, methyl acetate, and hexavalent chromium were below the goal of 90% completeness.

Overall, the data can be used as intended. The only limitations identified in the soil data were the number of rejected sample results for 1,4-dioxane, bromomethane, chloroethane, 1,1,2-trichloro-1,2,2-trifluoroethane, and dichlorodifluoromethane. However, adequate data for groundwater were available to determine that these are not significant constituents of potential concern at the Site. Each of these five compounds achieved a 100% completeness score in groundwater, and only 1,4-dioxane was detected in the groundwater (with a maximum concentration of 1.8 µg/L, which exceeds the PAL by less than a factor of 4). The lack of soil/groundwater data for 3,3'-dichlorobenzidine is not considered to be a significant data gap as this compound was not detected in any samples and is not expected to be a site-related contaminant. Similarly, the lack of complete groundwater data for methyl acetate is not considered to be a significant data gap as there were no detections of this compound, and soil detections indicated very low levels (with a maximum detection of 0.0023 mg/kg flagged with a "J" qualifier).

Hexavalent chromium exceeded the soil PAL at three sample locations distributed in the central and southern portion of the parcel. The groundwater analytical results for hexavalent chromium were rejected in these areas. The lack of hexavalent chromium data in groundwater in these areas is a potential data gap.

6.0 FINDINGS AND RECOMMENDATIONS

The objective of this Phase II Investigation was to fully characterize the nature and extent of contamination at the Site. During the Phase II Investigation, a total of 18 groundwater samples (13 shallow and five intermediate) and 159 soil samples (all locations and depths) were collected and analyzed to define the nature and extent of contamination in Parcel A3. The sampling and analysis plan for the parcel was developed to target specific features which represented a potential release of hazardous substances and/or petroleum products to the environment. Groundwater samples were analyzed for TCL-VOCs, TCL-SVOCs, Oil & Grease, TAL-Metals (total or dissolved), hexavalent chromium, and cyanide. Soil samples were analyzed for TCL-VOCs, TCL-SVOCs, Oil & Grease, TAL-Metals, hexavalent chromium, and cyanide. Select soil and groundwater samples were also analyzed for TPH-DRO/GRO. Shallow soil samples (0-1 foot bgs) were analyzed for PCBs.

The Phase I ESA conducted by Weaver Boos identified several RECs at the Site, warranting the extensive field investigations conducted during this Phase II Investigation. The samples collected during this study have provided analytical data regarding current conditions at the Site, and facilitated the identification of potential contaminant releases. Soil and groundwater conditions have been adequately characterized across most of the Site to support future risk assessments and associated response action planning, if necessary, as well as development planning. However, further focused investigation is recommended to better characterize conditions in several areas, as discussed below.

6.1. SOIL

The concentrations of constituents in the soil have been largely characterized by the Phase II Investigation to provide estimates of exposure point concentrations to support risk assessment. COPC in soil consisted of five inorganics (arsenic, manganese, lead, cadmium, and hexavalent chromium), seven SVOCs (benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[k]fluoranthene, dibenz[a,h]anthracene, indeno[1,2,3-c,d]pyrene, and naphthalene), two PCB groups (total PCBs and Aroclor 1254), three VOCs (trichloroethene, 1,2-dibromo-3-chloropropane, and 1,4-dichlorobenzene), and TPH-DRO. With the exception of benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, arsenic, and lead, the remaining COPCs appeared to be present above their applicable PALs only at individual isolated locations. While most compounds did not appear to be widespread at the Site, individual contaminants could potentially be found in discrete Hot Spots. In accordance with the June 2008 Cleanup Standards for Soil and Groundwater developed by the MDE, a potential Hot Spot was identified if the result was 100 times the PAL (i.e., EPA Region III RBC value in excess of 1E-4 cancer risk or Hazard Index of 100). The Hot Spot criterion for lead was set at a more stringent level of 2,000 mg/kg because the EPA RSL is not risk-based.

There were few PAL exceedances for PCBs, VOCs, and DRO, and the low magnitudes of the exceedances indicated that these compound groups are not significant contaminants at the Site. PCBs were detected above the PAL at only one sample location (RW-035-SB-1), and the maximum detection (Aroclor 1254/Total PCBs) was only 6.7 mg/kg. There was only one significant detection for DRO (RW-033-SB-1) and it exceeded the PAL by less than a factor of 2. Three VOCs were identified as COPCs (trichloroethene, 1,2-dibromo-3-chloropropane, and 1,4-dichlorobenzene), but each had only one PAL exceedance. In all cases, the COPC VOCs exceeded the screening level by less than a factor of 4. Furthermore, the compounds 1,2-dibromo-3-chloropropane and 1,4-dichlorobenzene each had only a single detection across the entire parcel. No further delineation is recommended in response to these low-level exceedances.

SVOCs and inorganics in soil were responsible for a far greater number of PAL exceedances at the Site. Furthermore, the magnitudes of several exceedances were much larger than those associated with the compounds previously discussed. On Parcel A3, individual soil sample results for benzo[a]pyrene (RW-020-SB-7) and arsenic (RW-021-SB-1) exceeded 100 times the PAL, indicating the presence of Hot Spots which may require further delineation activities. The targets associated with RW-020-SB and RW-021-SB were the Water Treatment System and Rod Mill Cooling Tower, respectively. These locations are further described as follows:

- The maximum detections for four PAH COPCs (benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, and benzo[k]fluoranthene) were identified within a single analytical sample (RW-020-SB-7) associated with the Water Treatment System. The Hot Spot identified for benzo[a]pyrene at the Water Treatment System was limited to one sample at a depth of 7 feet with concentrations less than the Hot Spot criterion in the two shallower soil samples in that boring. Although the result for benzo[a]pyrene exceeds the Hot Spot criteria, this sample occurs at a substantial depth with limited future exposure potential. Therefore, this area is considered to be adequately defined for risk assessment and remedial design purposes and further investigation is not warranted;
- The arsenic at RW-021-SB occurs within the shallow soil horizon (0-1 ft). Additional investigation of this soil Hot Spot associated with the arsenic concentration at the Rod Mill Cooling Tower was recommended by the MDE in order to define the maximum exposure concentrations and the lateral extent of this metal contamination.

In addition to the SVOC and inorganic Hot Spots listed above, seven soil sample results for lead exceeded 2,000 mg/kg (the criterion specified by MDE for delineation of potential lead Hot Spots). Several of the targets associated with RW-035-SB-1, RW-036-SB-1, RW-040-SB-1, RW-052-SB-5, RW-055-SB-1, RW-055-SB-7, and RW-077-SB-5 were associated with lead handling activities or facility trenches/sumps. These locations are further described as follows:

- The lead contamination associated with the Rod Mill Trenches and Sumps (RW-052-SB and RW-055-SB) occurs within the shallow soil horizon (0-1 ft) as well as deeper samples. Based on the magnitude of the exceedances, additional investigation of these individual soil Hot Spots was recommended by the MDE in order to define the maximum exposure concentrations and lateral extent of this metal contamination.
- The lead at RW-077-SB was limited to one sample at a depth of 5 feet bgs, with negligible concentrations in the 1-foot and 10-foot bgs samples at the same boring location. This sample occurs at a substantial depth with limited future exposure potential. Therefore, this area is considered to be adequately defined for risk assessment and remedial design purposes and further investigation is not warranted. MDE did not request further delineation.
- The remaining lead Hot Spots are associated with a former Oil Room (RW-035-SB), Lead Room (RW-036-SB), and Lead Storage Room (RW-040-SB), and are located within 150 feet of the elevated detections associated with the Rod Mill Trenches and Sumps. The lead concentrations at these locations were significantly lower than at the Trenches/Sumps (RW-052-SB and RW-055-SB), and additional delineation is not necessary based on the observed levels. MDE did not request further delineation. Based on lead delineation in the area of the Trenches/Sumps (RW-052-SB and RW-055-SB), the lead contamination does not appear to be connected in a continuous Hot Spot.

6.2. GROUNDWATER

The only VOC compounds to exceed their respective PALs were 1,1-dichloroethane, and the chlorinated parent compound trichloroethene. These detections were isolated with no individual groundwater location having more than one PAL exceedance, although the shallow/intermediate well pair of RW07 exhibited exceedances of 1,1-dichloroethane in both aquifer zones. The two groundwater samples selected for TPH-DRO/GRO analysis based on their target locations both exceeded the PAL for DRO. However, the maximum detection (233 µg/L) was less than 5 times the PAL and flagged with a “J” qualifier. Overall, TPH and VOCs were not determined to be significant groundwater contaminants at the Site. Five SVOCs were detected at concentrations above the PALs, including benzo[a]anthracene, benzo[b]fluoranthene, naphthalene, pentachlorophenol, and 1,4-dioxane. However, most of these PAL exceedances were relatively minor. All of the detections were less than 10 times the PAL, with the exception of naphthalene, which had a maximum detection of 6.4 µg/L. Overall, organic compounds are not considered to be significant contaminants in the groundwater.

Analysis of the groundwater samples identified concentrations of several inorganic compounds that significantly exceeded their PALs. As demonstrated in the provided summary figures, the highest concentrations of inorganic constituents were located in the northern portion of the Site and were more prevalent in the intermediate zone where elevated metals were expected based on

the historical uses of the Site and the known historical exceedances in the intermediate groundwater wells found in the former Rod and Wire Mill area. In some cases, the inorganic PALs were exceeded by several orders of magnitude (cadmium and hexavalent chromium). Cadmium appeared to be the most significant contaminant in the intermediate hydrogeologic zone, with a maximum detection of 10.2 mg/L in the intermediate well RW10-PZM020. No exceedances for cadmium or zinc were identified in the shallow groundwater in the central and southern portions of the Site. The concentrations of inorganics in this area were relatively low with PAL exceedances identified in this area for iron, manganese, vanadium, cobalt, thallium and arsenic. However, these metals are not considered to be significant constituents in the groundwater in the central or southern portions of the Site since iron, vanadium, cobalt, and thallium exceeded the PAL in only one sample each, and arsenic and manganese were only detected slightly above their respective PALs in two of the five samples from this area.

Individual contaminants could potentially be present in discrete groundwater Hot Spots. A potential Hot Spot would be identified if the analytical result was greater than the established PAL and exceeded 100 times the tapwater screening level in the EPA RSL Summary Table (i.e., representing a cancer risk of 1E-4 or a non-cancer hazard index of 100). In Parcel A3, 11 sample locations (with four individual inorganic compounds: arsenic, cadmium, hexavalent chromium, and cyanide) were identified as potential Hot Spots for groundwater (**Table 13**). Three detections of arsenic in the central and southern areas of the Site were greater than 100 times the tapwater RSL (0.052 µg/L) but only slightly above the established PAL (10 µg/L). Therefore, due to the relatively low magnitude of the arsenic exceedances, this compound does not warrant additional assessment or characterization at locations RW-021-PZ, RW-025-PZ, or RW-048-PZ. All of the remaining Hot Spots were inorganic compounds found in the former Rod and Wire Mill area. A Pre-Design Investigation of the Rod and Wire Mill area has already been completed (for inorganics) and remedial design planning is currently underway to address the dissolved metals in the northern portion of the Site. As the exceedances in the remainder of the Site appear isolated and are relatively low concentrations that do not indicate the presence of significant impacts or continuing sources to groundwater, no further investigation of groundwater in this area is recommended.

6.3. NON-AQUEOUS PHASE LIQUID

One well, RW22-PZM, contained a significant volume of free-phase LNAPL. No other groundwater sample collection points contained any measureable LNAPL. Monitoring and delineation of the LNAPL contamination near RW22-PZM is currently ongoing. Upon the completion of field activities, a letter report will be prepared which summarizes the findings of the monitoring and delineation, including the thickness and horizontal extent of the product, as well as a summary of the recovered product volumes.

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FIGURES



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Image courtesy of USGS Earthstar Geographics SIO © 2016 Microsoft Corporation © 2010 NAVTEQ © AND

ARM Group Inc.
 Earth Resource Engineers
 and Consultants

0 375 750 1,500
 Feet

- Site Boundary
- Private Property
- Area A Boundaries
- Area B Boundaries

Tradepoint Atlantic
Area A and Area B Parcels

May 31, 2016

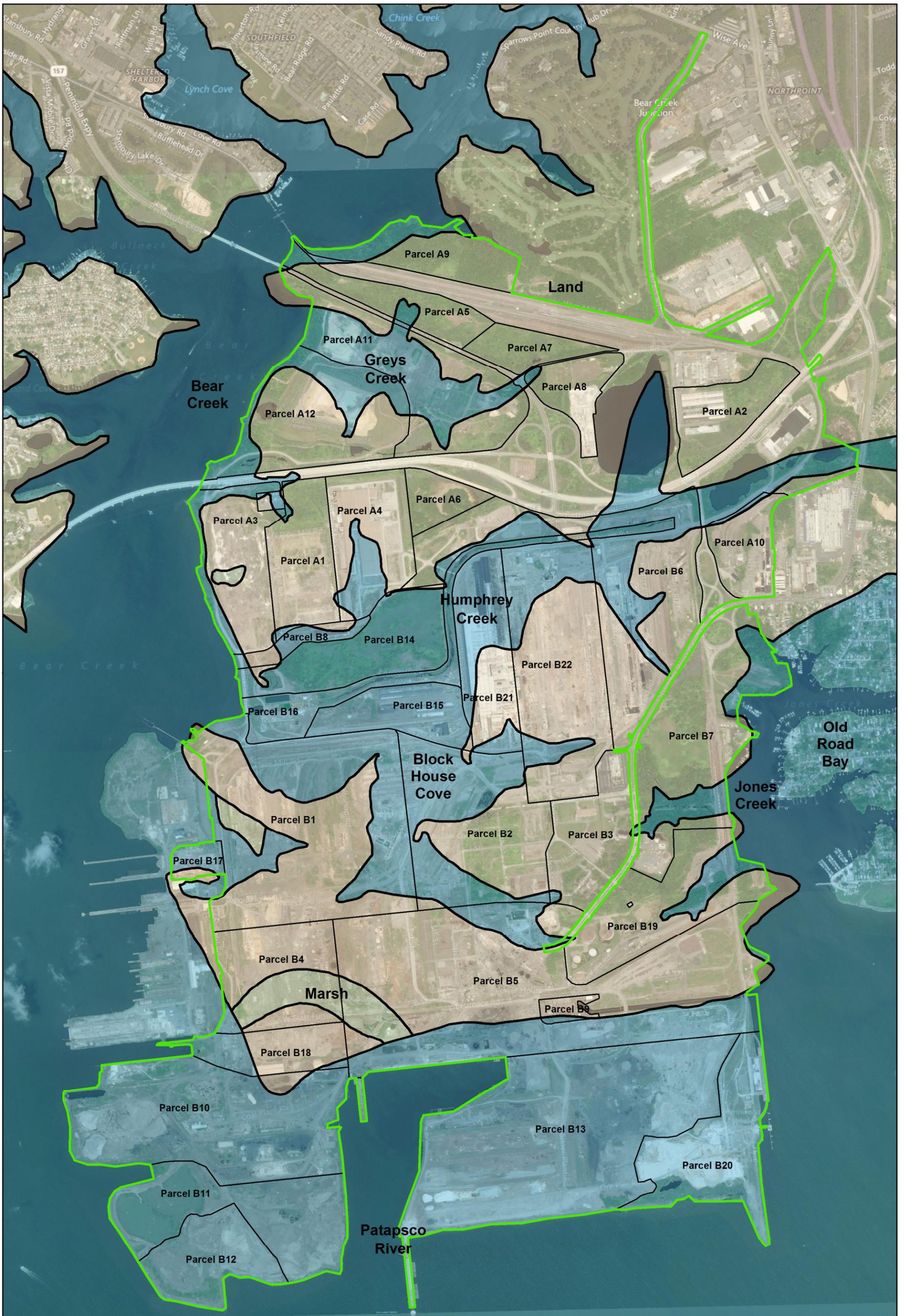
EnviroAnalytics Group

Area A: Project 150298M
 Area B: Project 150300M

Tradepoint Atlantic

Baltimore County, MD

Figure
1



bing	Image courtesy of USGS Earthstar Geographics SIO © 2016 Microsoft Corporation © 2010 NAVTEQ © AND		EnviroAnalytics Group	Tradepoint Atlantic	Figure
<p>ARM Group Inc. Earth Resource Engineers and Consultants</p> <p>0 375 750 1,500 Feet</p>	<ul style="list-style-type: none"> Site Boundary Area A Boundaries Area B Boundaries Land Marsh Water 	<p>Approximate Shoreline in 1916</p> <p>May 31, 2016</p> <p><small>Adapted from Figure 2-5 of the Description of Current Conditions Report prepared by Rust Environmental and Infrastructure, dated January 1998</small></p>	<p>Area A: Project 150298M Area B: Project 150300M</p>	<p>Baltimore County, MD</p>	2



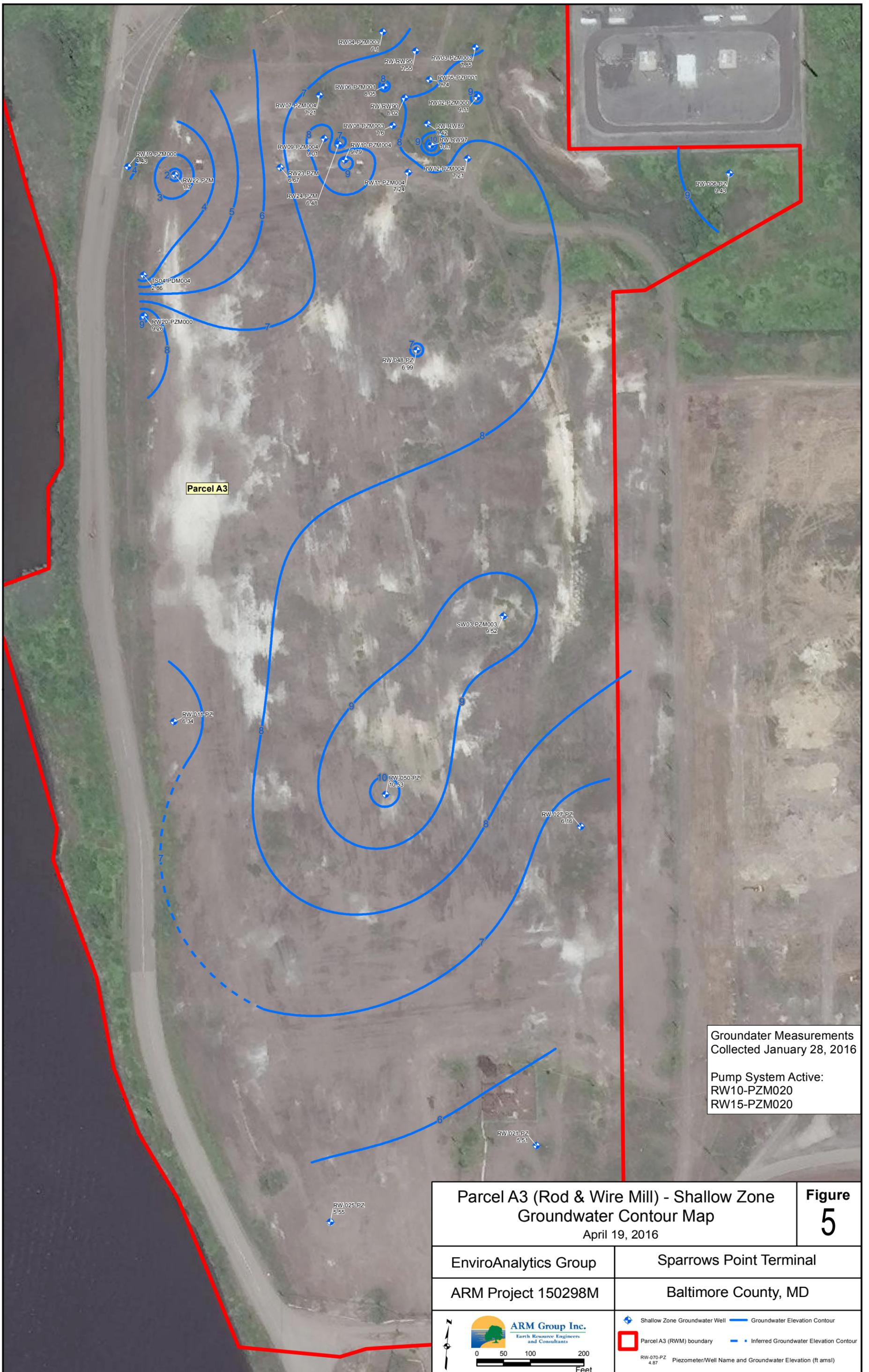


Parcel A3

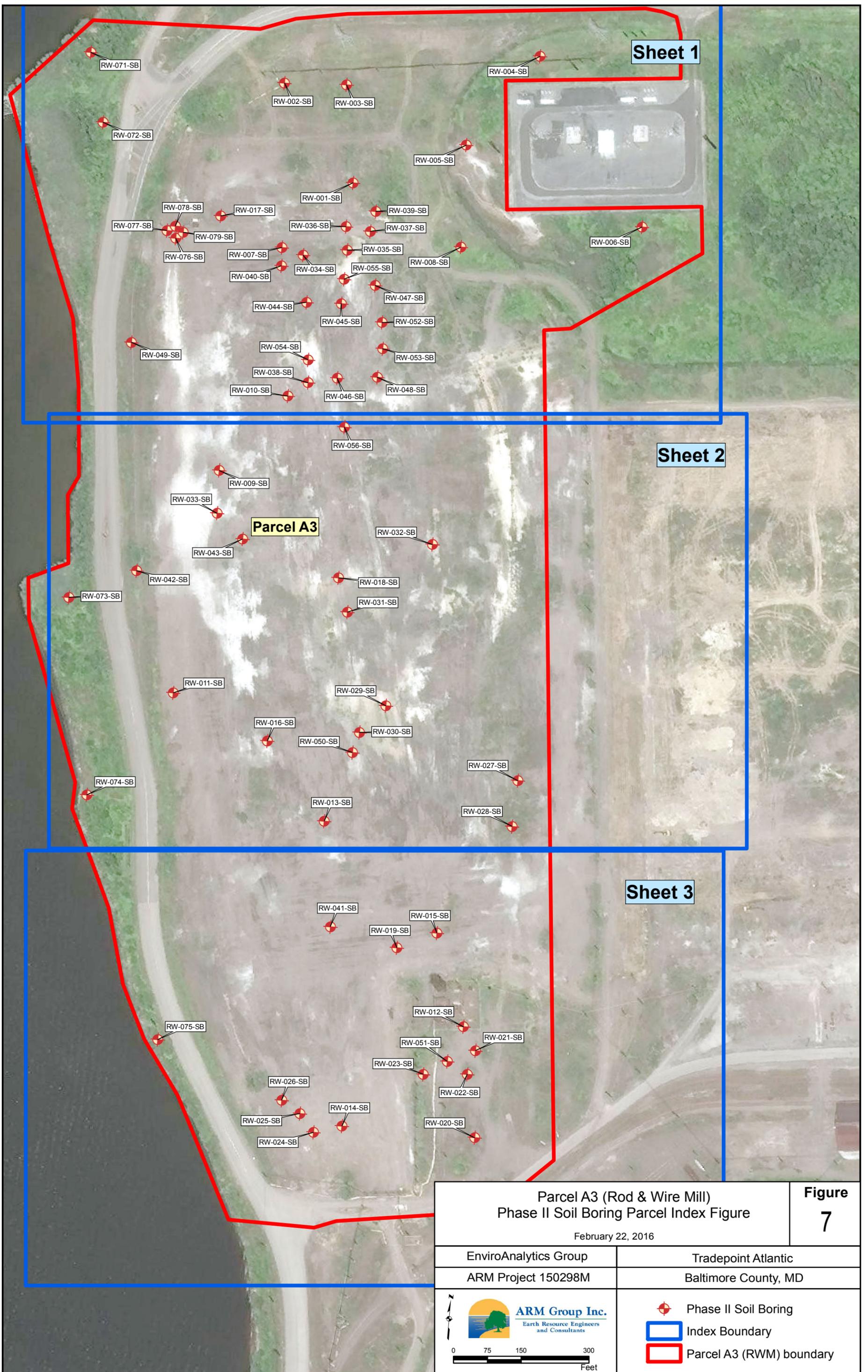
Parcel A3 (Rod & Wire Mill)
Groundwater Sample Locations (intermediate)
 April 4, 2016

Figure 4

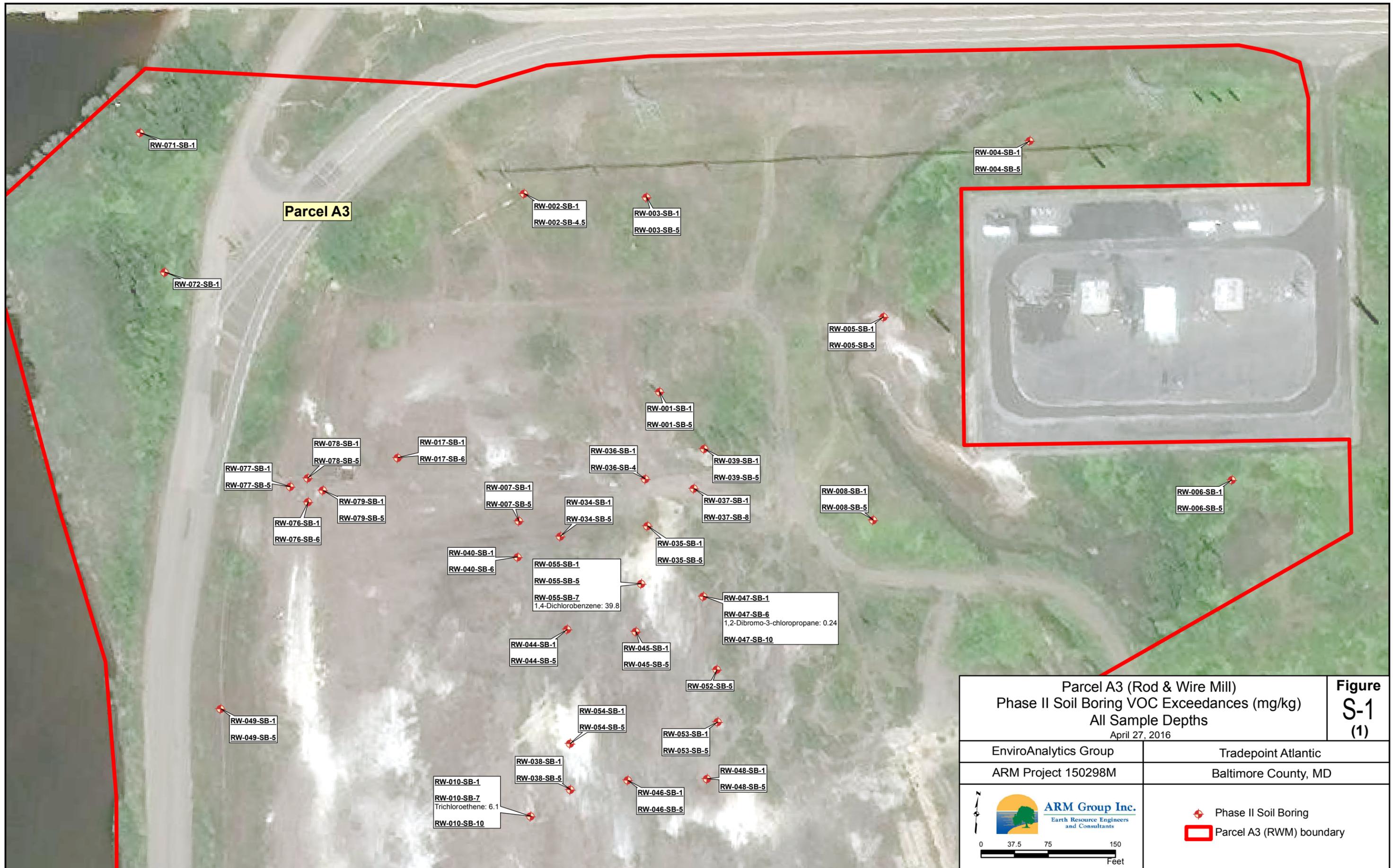
EnviroAnalytics Group	Tradepoint Atlantic
ARM Project 150298M	Baltimore County, MD
  0 62.5 125 250 Feet	 Existing Site-wide Well (Intermediate)  Parcel A3 (RWM) boundary







Parcel A3 (Rod & Wire Mill) Phase II Soil Boring Parcel Index Figure February 22, 2016		Figure 7
EnviroAnalytics Group	Tradepoint Atlantic	
ARM Project 150298M	Baltimore County, MD	
 	<ul style="list-style-type: none"> Phase II Soil Boring Index Boundary Parcel A3 (RWM) boundary 	



Parcel A3

RW-071-SB-1

RW-072-SB-1

RW-002-SB-1
RW-002-SB-4.5

RW-003-SB-1
RW-003-SB-5

RW-004-SB-1
RW-004-SB-5

RW-005-SB-1
RW-005-SB-5

RW-001-SB-1
RW-001-SB-5

RW-077-SB-1
RW-077-SB-5

RW-078-SB-1
RW-078-SB-5

RW-017-SB-1
RW-017-SB-6

RW-036-SB-1
RW-036-SB-4

RW-039-SB-1
RW-039-SB-5

RW-076-SB-1
RW-076-SB-6

RW-079-SB-1
RW-079-SB-5

RW-007-SB-1
RW-007-SB-5

RW-034-SB-1
RW-034-SB-5

RW-037-SB-1
RW-037-SB-8

RW-008-SB-1
RW-008-SB-5

RW-006-SB-1
RW-006-SB-5

RW-040-SB-1
RW-040-SB-6

RW-055-SB-1
RW-055-SB-5
RW-055-SB-7
1,4-Dichlorobenzene: 39.8

RW-035-SB-1
RW-035-SB-5

RW-047-SB-1
RW-047-SB-6
1,2-Dibromo-3-chloropropane: 0.24
RW-047-SB-10

RW-044-SB-1
RW-044-SB-5

RW-045-SB-1
RW-045-SB-5

RW-052-SB-5

RW-049-SB-1
RW-049-SB-5

RW-054-SB-1
RW-054-SB-5

RW-053-SB-1
RW-053-SB-5

RW-010-SB-1
RW-010-SB-7
Trichloroethene: 6.1
RW-010-SB-10

RW-038-SB-1
RW-038-SB-5

RW-046-SB-1
RW-046-SB-5

RW-048-SB-1
RW-048-SB-5



RW-071-SB-1

RW-072-SB-1

RW-002-SB-1
RW-002-SB-4.5

RW-003-SB-1
RW-003-SB-4.5

RW-004-SB-1
Benzo(a)pyrene: 0.51
RW-004-SB-5
Benzo(a)anthracene: 4.3
Benzo(a)pyrene: 3.9
Benzo(b)fluoranthene: 9.2
Dibenz(a,h)anthracene: 0.96
RW-004-SB-10

RW-005-SB-1
RW-005-SB-5

RW-001-SB-1
RW-001-SB-5

RW-017-SB-1
RW-017-SB-5

RW-078-SB-1
Benzo(a)pyrene: 0.85
RW-078-SB-5

RW-036-SB-1
RW-036-SB-4

RW-039-SB-1
RW-039-SB-5

RW-077-SB-1
RW-077-SB-5

RW-007-SB-1
Benzo(a)pyrene: 1.9
Benzo(b)fluoranthene: 3.0
Dibenz(a,h)anthracene: 0.4

RW-034-SB-1
RW-034-SB-5

RW-037-SB-1
RW-037-SB-5

RW-006-SB-1
Benzo(a)pyrene: 0.44
RW-006-SB-5

RW-076-SB-1
Benzo(a)pyrene: 1.6
Dibenz(a,h)anthracene: 0.41
RW-076-SB-5

RW-079-SB-1
Benzo(a)pyrene: 2.0
Benzo(b)fluoranthene: 3.1
Dibenz(a,h)anthracene: 0.39
RW-079-SB-5

RW-035-SB-1
Benzo(a)pyrene: 1.4
Benzo(b)fluoranthene: 5.4
RW-035-SB-5

RW-008-SB-1
RW-008-SB-5

RW-040-SB-1
Benzo(a)anthracene: 9.6
Benzo(a)pyrene: 7.6
Benzo(b)fluoranthene: 11.4
Dibenz(a,h)anthracene: 1.4
Indeno(1,2,3-cd)pyrene: 3.8
Naphthalene: 28.6
RW-040-SB-5

RW-055-SB-1
Benzo(a)pyrene: 0.42
RW-055-SB-5

RW-047-SB-1
RW-047-SB-5

RW-049-SB-1
Benzo(a)pyrene: 0.41
RW-049-SB-5

RW-044-SB-1
Benzo(a)pyrene: 0.39
RW-044-SB-5

RW-045-SB-1
Benzo(a)anthracene: 4.0
Benzo(a)pyrene: 3.9
Benzo(b)fluoranthene: 5.5
Dibenz(a,h)anthracene: 0.89
RW-045-SB-10

RW-052-SB-1
Benzo(a)pyrene: 0.64
RW-052-SB-5
Benzo(a)anthracene: 14.7
Benzo(a)pyrene: 10.8
Benzo(b)fluoranthene: 17.0
Dibenz(a,h)anthracene: 2.7
Indeno(1,2,3-cd)pyrene: 6.2
Naphthalene: 23.4

RW-010-SB-1
RW-010-SB-7

RW-038-SB-1
RW-038-SB-5

RW-048-SB-1
RW-048-SB-5

RW-056-SB-1
RW-056-SB-5

RW-009-SB-1
Benzo(a)pyrene: 0.52
RW-009-SB-5

RW-033-SB-1
Benzo(a)anthracene: 6.8
Benzo(a)pyrene: 6.7
Benzo(b)fluoranthene: 10.7
Dibenz(a,h)anthracene: 1.1
RW-033-SB-4.5

RW-043-SB-1
RW-043-SB-8
Naphthalene: 75.0
RW-043-SB-10

RW-032-SB-1
RW-032-SB-5

RW-042-SB-1
Benzo(a)pyrene: 0.55
RW-042-SB-5

RW-018-SB-1
RW-018-SB-5

RW-031-SB-1
RW-031-SB-6

RW-011-SB-1
Benzo(a)pyrene: 1.9
Dibenz(a,h)anthracene: 0.45
RW-011-SB-5
Benzo(a)anthracene: 3.2
Benzo(a)pyrene: 2.9
Benzo(b)fluoranthene: 4.4
Dibenz(a,h)anthracene: 0.33

RW-029-SB-1
RW-029-SB-7
Benzo(a)pyrene: 3.4

RW-030-SB-1
RW-030-SB-5

RW-016-SB-1
Benzo(a)pyrene: 1.6
Dibenz(a,h)anthracene: 0.36

RW-050-SB-1
RW-050-SB-4.5

RW-027-SB-1
Benzo(a)anthracene: 5.2
Benzo(a)pyrene: 3.8
Benzo(b)fluoranthene: 9.3
Dibenz(a,h)anthracene: 1.1
RW-027-SB-5

RW-073-SB-0.5
Benzo(a)pyrene: 1.3

RW-074-SB-0.5

RW-013-SB-1
RW-013-SB-5

RW-028-SB-1
RW-028-SB-5

RW-041-SB-1
RW-041-SB-5
Benzo(a)pyrene: 0.74

RW-019-SB-1
Benzo(a)pyrene: 0.5
RW-019-SB-4

RW-015-SB-1
RW-015-SB-5
Benzo(a)anthracene: 23.1
Benzo(a)pyrene: 16.7
Benzo(b)fluoranthene: 23.6
Dibenz(a,h)anthracene: 1.3
Indeno(1,2,3-cd)pyrene: 3.4
RW-015-SB-10

RW-075-SB-1
Benzo(a)pyrene: 0.57

RW-012-SB-1
RW-012-SB-5

RW-021-SB-1
Benzo(a)pyrene: 0.41
RW-021-SB-5

RW-026-SB-1
RW-026-SB-5

RW-025-SB-1
Benzo(a)pyrene: 0.52
RW-025-SB-5

RW-023-SB-1
RW-023-SB-5

RW-022-SB-1
RW-022-SB-5

RW-020-SB-1
Benzo(a)pyrene: 0.81
RW-020-SB-4.5
Benzo(a)anthracene: 8.1
Benzo(a)pyrene: 6.5
Benzo(b)fluoranthene: 15.2

RW-024-SB-1
RW-024-SB-5

RW-014-SB-1
RW-014-SB-5

RW-020-SB-7
Benzo(a)anthracene: 60.9
Benzo(a)pyrene: 42.3
Benzo(b)fluoranthene: 76.3
Benzo(b)fluoranthene: 36.0
Dibenz(a,h)anthracene: 0.48

Parcel A3

Parcel A3 (Rod & Wire Mill)		Figure S-2
Phase II Soil Boring SVOC Exceedances (mg/kg)		
All Sample Depths		
June 21, 2016		
EnviroAnalytics Group	Tradepoint Atlantic	
ARM Project 150298M	Baltimore County, MD	

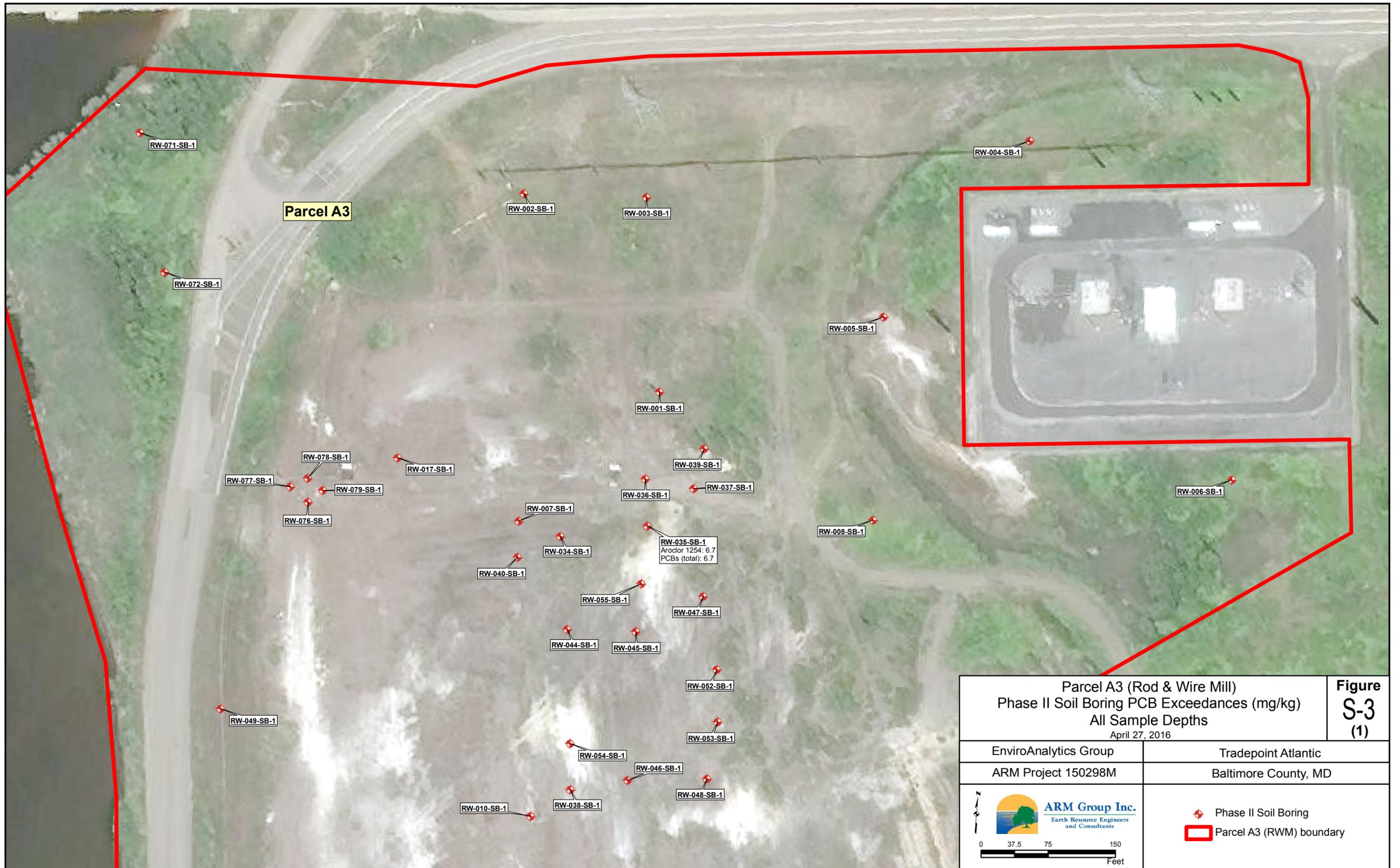


Figure S-3 (1)

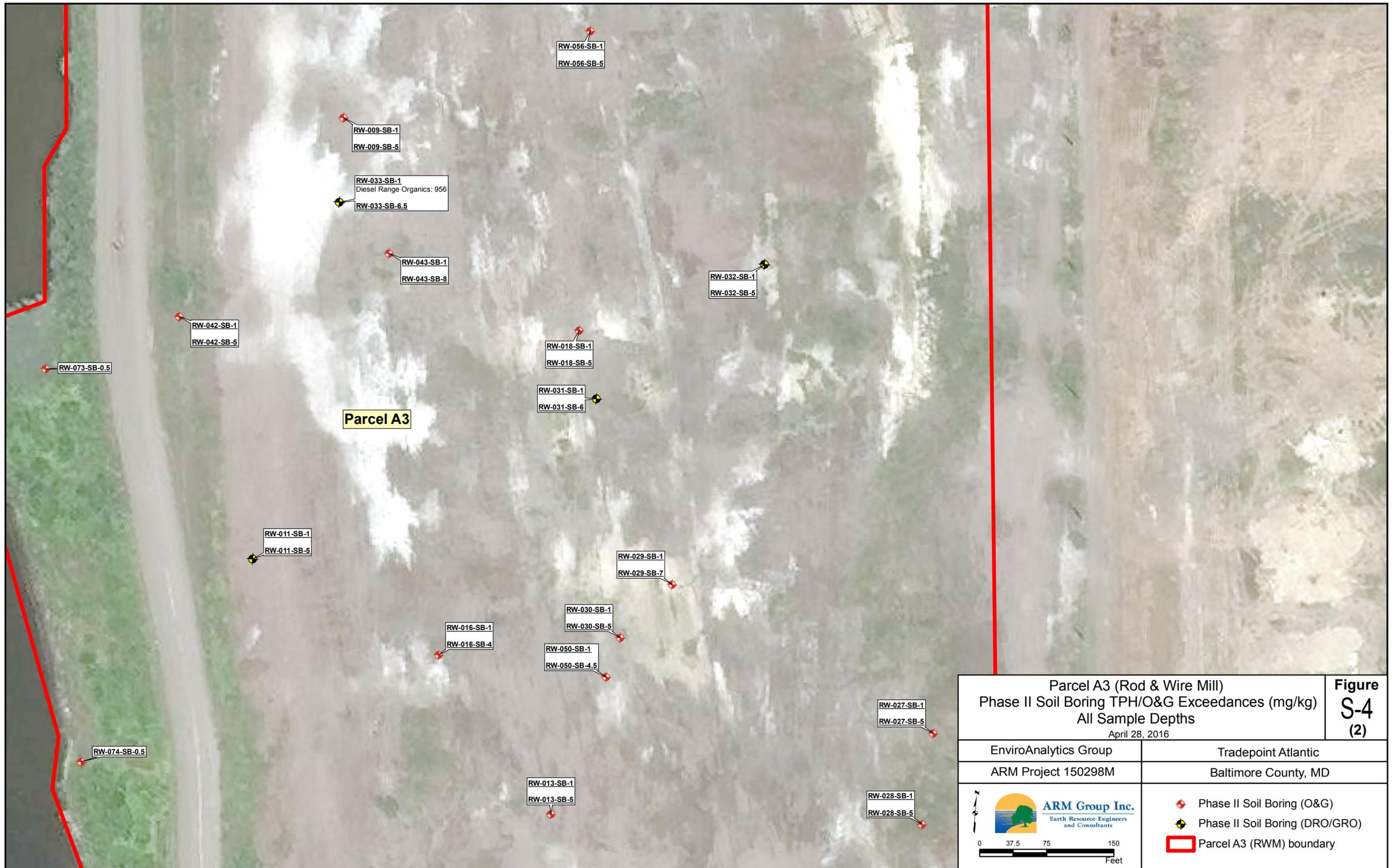


Figure S-4 (2)



RW-071-SB-1
Arsenic: 11.4
Manganese: 32,800

RW-072-SB-1

RW-002-SB-1
Arsenic: 34.4
Lead: 1,080

RW-002-SB-4.6
Arsenic: 152

RW-002-SB-4
Arsenic: 23.0
Cadmium: 2,340
Lead: 1,220

RW-002-SB-5
Arsenic: 11.8

RW-001-SB-10
Arsenic: 137

RW-004-SB-1
Arsenic: 6.3

RW-004-SB-6
Arsenic: 19.4

RW-004-SB-10
Arsenic: 10.3

RW-005-SB-1
Arsenic: 142
Cadmium: 2,240

RW-005-SB-5
Arsenic: 5.9

RW-078-SB-1
Arsenic: 13.7
Lead: 1,420

RW-078-SB-5
Arsenic: 32.4

RW-078-SB-10
Arsenic: 3.1

RW-017-SB-1
Arsenic: 5.2

RW-017-SB-5
Arsenic: 6.2

RW-036-SB-1
Arsenic: 3.8
Lead: 2,850

RW-036-SB-4
Arsenic: 3.3

RW-036-SB-10
Arsenic: 8.5

RW-001-SB-1
Arsenic: 26.5

RW-001-SB-5

RW-039-SB-1
Arsenic: 4.6

RW-039-SB-5
Arsenic: 3.7

RW-039-SB-10
Arsenic: 14.9

RW-077-SB-1
Arsenic: 5.1

RW-077-SB-5
Arsenic: 132
Lead: 3,980

RW-077-SB-10
Arsenic: 27,700

RW-079-SB-1
Arsenic: 5.7

RW-079-SB-5
Manganese: 27,700

RW-076-SB-1
Arsenic: 29.6

RW-076-SB-6

RW-040-SB-1
Arsenic: 9.3
Lead: 3,230

RW-040-SB-6
Arsenic: 6.6

RW-040-SB-10
Arsenic: 7.9

RW-034-SB-1
Arsenic: 4.0

RW-034-SB-5

RW-055-SB-1
Arsenic: 4.3
Lead: 44,700

RW-055-SB-5
Arsenic: 3.8

RW-055-SB-7
Arsenic: 0.2
Lead: 2,860

RW-055-SB-10
Arsenic: 4.0

RW-035-SB-1
Arsenic: 6.3
Lead: 3,670

RW-035-SB-5

RW-037-SB-1
Lead: 1,090

RW-037-SB-8
Arsenic: 12.3

RW-037-SB-10
Arsenic: 7.0

RW-008-SB-1
Arsenic: 3.8

RW-008-SB-5
Arsenic: 3.8

RW-008-SB-10
Arsenic: 12.2

RW-049-SB-1
Arsenic: 5.6

RW-049-SB-5

RW-049-SB-10
Arsenic: 7.6

RW-044-SB-1
Arsenic: 4.1

RW-044-SB-5
Arsenic: 4.6

RW-044-SB-10

RW-045-SB-1
Manganese: 30,200

RW-045-SB-5
Arsenic: 4.6

RW-045-SB-10

RW-052-SB-1
Arsenic: 4.5

RW-052-SB-6
Lead: 1,050

RW-052-SB-10
Arsenic: 4.0
Lead: 16,400

RW-038-SB-1
Lead: 924

RW-038-SB-5

RW-046-SB-1
Arsenic: 5.9
Lead: 1,670

RW-046-SB-5

RW-048-SB-1
Arsenic: 4.1
Lead: 1,730

RW-048-SB-5

RW-009-SB-1
Arsenic: 3.1
Manganese: 28,200

RW-009-SB-5
Arsenic: 4.0

RW-009-SB-10
Arsenic: 14.4

RW-056-SB-1
Manganese: 30,000

RW-056-SB-5

RW-033-SB-1
Arsenic: 9.6

RW-033-SB-6.5
Arsenic: 6.0

RW-033-SB-10
Arsenic: 6.0

RW-043-SB-1

RW-018-SB-1
Arsenic: 4.6
Lead: 979

RW-018-SB-5
Manganese: 30,500

RW-018-SB-6
Arsenic: 4.4

RW-032-SB-1
Arsenic: 11.9

RW-032-SB-5
Arsenic: 10.0

RW-032-SB-10
Arsenic: 10.0

RW-073-SB-0.6
Arsenic: 8.7

RW-011-SB-1
Arsenic: 12.9

RW-011-SB-5
Arsenic: 169

RW-031-SB-1
Arsenic: 4.0
Chromium VI: 11.1
Manganese: 27,900

RW-031-SB-6

RW-029-SB-1
Arsenic: 17.5

RW-029-SB-7
Arsenic: 3.6

RW-016-SB-1
Manganese: 30,000

RW-016-SB-4
Arsenic: 8.7

RW-050-SB-1
Arsenic: 3.3
Manganese: 28,900

RW-050-SB-4.5
Arsenic: 16.5

RW-030-SB-1
Arsenic: 6.3
Manganese: 27,100

RW-030-SB-5
Arsenic: 7.0

RW-030-SB-10
Arsenic: 11.9

RW-027-SB-1
Arsenic: 4.7

RW-027-SB-5
Arsenic: 6.9

RW-027-SB-10

RW-074-SB-0.6
Arsenic: 5.1
Manganese: 46,200

RW-013-SB-1
Arsenic: 4.1
Manganese: 35,200

RW-013-SB-5
Arsenic: 9.7

RW-013-SB-10
Arsenic: 7.0

RW-041-SB-1
Manganese: 29,200

RW-041-SB-5
Arsenic: 5.6
Lead: 845

RW-019-SB-1
Arsenic: 7.0

RW-019-SB-4
Arsenic: 32.2
Manganese: 54,000

RW-019-SB-10

RW-015-SB-1
Arsenic: 5.9

RW-015-SB-5
Arsenic: 5.4

RW-015-SB-10

RW-012-SB-1
Arsenic: 6.9

RW-012-SB-5
Arsenic: 4.4

RW-012-SB-8
Arsenic: 5.7

RW-051-SB-1
Arsenic: 4.4
Manganese: 29,800

RW-051-SB-5
Arsenic: 9.4

RW-051-SB-10
Arsenic: 26.6

RW-021-SB-1
Arsenic: 492

RW-021-SB-6
Arsenic: 4.6

RW-021-SB-10
Arsenic: 3.8

RW-023-SB-1
Arsenic: 5.8

RW-023-SB-5
Arsenic: 4.8

RW-023-SB-10
Arsenic: 4.3

RW-022-SB-1
Arsenic: 39.2

RW-022-SB-5
Arsenic: 11.1

RW-026-SB-1
Arsenic: 4.6

RW-026-SB-5

RW-025-SB-1
Arsenic: 4.3

RW-025-SB-5

RW-014-SB-1
Chromium VI: 7.8
Manganese: 28,100

RW-014-SB-5

RW-024-SB-1

RW-024-SB-5

RW-020-SB-1
Arsenic: 6.0
Lead: 832

RW-020-SB-4.5

Parcel A3 (Rod & Wire Mill)		Figure S-5
Phase II Soil Boring Inorganic Exceedances (mg/kg) All Sample Depths June 21, 2016		
EnviroAnalytics Group	Tradepoint Atlantic	
ARM Project 150298M	Baltimore County, MD	
 ARM Group Inc. Soil Remediation Engineers and Scientists	 Phase II Soil Boring Parcel A3 (RWM) boundary	
		



<p align="center">Parcel A3 (Rod & Wire Mill) Groundwater VOC Exceedances (ug/L) Shallow Hydrogeologic Zone February 24, 2016</p>		<p>Figure GW-1</p>
EnviroAnalytics Group	Tradepoint Atlantic	
ARM Project 150298M	Baltimore County, MD	
 ARM Group Inc. Earth Resource Engineers and Consultants	 Existing Site-wide Well (Shallow)	 Phase II Piezometer (Shallow)
	 Parcel A3 (RWM) boundary	



<p align="center">Parcel A3 (Rod & Wire Mill) Groundwater VOC Exceedances (ug/L) Intermediate Hydrogeologic Zone February 24, 2016</p>		<p>Figure GW-2</p>
EnviroAnalytics Group	Tradepoint Atlantic	
ARM Project 150298M	Baltimore County, MD	
 ARM Group Inc. Earth Resource Engineers and Consultants	<p>  Existing Site-wide Well (Intermediate)  Parcel A3 (RWM) boundary </p>	
<p>0 75 150 300 Feet</p>		



Figure
GW-3



RW07-PZM017
 1,4-Dioxane: 1.8
 Naphthalene: 2.1

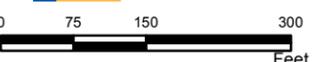
RW02-PZM020

RW10-PZM020
 1,4-Dioxane: 0.8
 Naphthalene: 1.9

RW19-PZM020

Parcel A3

RW20-PZM020

Parcel A3 (Rod & Wire Mill) Groundwater SVOC Exceedances (ug/L) Intermediate Hydrogeologic Zone June 7, 2016		Figure GW-4
EnviroAnalytics Group	Tradepoint Atlantic	
ARM Project 150298M	Baltimore County, MD	
 ARM Group Inc. Earth Resource Engineers and Consultants	 Existing Site-wide Well (Intermediate)  Parcel A3 (RWM) boundary	
 		

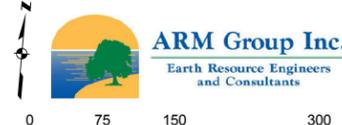


Parcel A3

RW-011-PZ
Diesel Range Organics: 171

RW-027-PZ
Diesel Range Organics: 233

Only RW-011-PZ and RW-027-PZ were analyzed for TPH-DRO/GRO

<p>Parcel A3 (Rod & Wire Mill) Groundwater TPH/O&G Exceedances (ug/L) Shallow Hydrogeologic Zone February 24, 2016</p>		<p>Figure GW-5</p>
<p>EnviroAnalytics Group</p>	<p>Tradepoint Atlantic</p>	
<p>ARM Project 150298M</p>	<p>Baltimore County, MD</p>	
	 Existing Site-wide Well (Shallow)	 Phase II Piezometer (Shallow)
	 Parcel A3 (RWM) boundary	



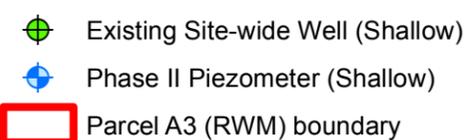
EnviroAnalytics Group ARM Project 150298M		Tradepoint Atlantic Baltimore County, MD	
 ARM Group Inc. Earth Resource Engineers and Consultants			



Figure
GW-7

RW07-PZM017
 Antimony: 7.3
 Cadmium: 9,780
 Cobalt: 144
 Iron: 283,000
 Manganese: 17,500
 Zinc: 387,000

RW02-PZM020
 Antimony: 11.0
 Cadmium: 47.2
 Cobalt: 113
 Iron: 443,000
 Manganese: 19,000
 Zinc: 576,000

RW19-PZM020
 Cadmium: 41.9
 Cobalt: 38.5
 Iron: 37,000
 Manganese: 2,580
 Zinc: 7,000

RW10-PZM020
 Antimony: 7.9
 Cadmium: 10,200
 Cobalt: 114
 Iron: 202,000
 Manganese: 18,000
 Zinc: 509,000

RW20-PZM020
 Cobalt: 53.1
 Iron: 226,000
 Manganese: 9,210
 Zinc: 82,800

Parcel A3

TABLES

**TABLE 1
GROUNDWATER ELEVATION DATA**

<u>Location Name</u>	<u>Hydrogeologic Zone</u>	<u>TOC Elevation (feet AMSL)</u>	<u>Ground Elevation (feet AMSL)</u>	<u>Measured DTW (ft)</u>	<u>Groundwater Elevation (feet AMSL)</u>
RW-002-PZ	Shallow	12.62	9.56	5.82	6.80
RW-006-PZ	Shallow	14.28	10.87	4.85	9.43
RW-011-PZ	Shallow	15.15	11.34	8.81	6.34
RW-025-PZ	Shallow	15.28	11.61	9.73	5.55
RW-027-PZ	Shallow	14.77	11.17	8.61	6.16
RW-048-PZ	Shallow	14.28	11.56	7.29	6.99
RW-050-PZ	Shallow	15.47	11.40	4.94	10.53
RW-021-PZ	Shallow	13.88	10.25	8.37	5.51
RW02-PZM000	Shallow	12.39	10.05	3.28	9.11
RW07-PZM004	Shallow	13.70	10.61	6.49	7.21
RW10-PZM004	Shallow	10.92	11.22	1.13	9.79
RW19-PZM000	Shallow	13.49	11.16	9.06	4.43
RW20-PZM000	Shallow	13.54	11.06	4.28	9.26
RW03-PZM003	Shallow	10.87	10.31	3.02	7.85
RW04-PZM003	Shallow	11.11	10.27	5.01	6.10
RW05-PZP001	Shallow	13.03	10.76	5.29	7.74
RW06-PZM001	Shallow	12.17	10.20	4.12	8.05
RW08-PZM003	Shallow	11.38	10.76	3.78	7.60
RW09-PZM004	Shallow	13.67	10.76	4.66	9.01
RW11-PZM004	Shallow	13.79	11.11	6.55	7.24
RW12-PZM004	Shallow	13.88	11.16	6.67	7.21
SW03-PZM003	Shallow	14.54	10.93	5.02	9.52
TS04-PDM004	Shallow	13.69	11.10	10.83	2.86
RW22-PZM	Shallow	14.19	11.45	12.49	1.70
RW23-PZM	Shallow	14.11	11.81	7.44	6.67
RW24-PZM	Shallow	14.05	11.21	7.57	6.48
RW-RW89	Shallow	11.35	10.97	2.93	8.42
RW-RW90	Shallow	11.08	10.55	3.06	8.02
RW-RW95	Shallow	12.62	10.81	5.07	7.55
RW-RW97	Shallow	13.08	10.93	2.98	10.1

**TABLE 1
GROUNDWATER ELEVATION DATA**

<u>Location Name</u>	<u>Hydrogeologic Zone</u>	<u>TOC Elevation (feet AMSL)</u>	<u>Ground Elevation (feet AMSL)</u>	<u>Measured DTW (ft)</u>	<u>Groundwater Elevation (feet AMSL)</u>
RW-057-PZ	Intermediate	13.14	10.17	13.42	-0.28
RW-063-PZ	Intermediate	14.19	11.07	12.45	1.74
RW-067-PZ	Intermediate	13.37	10.68	13.57	-0.20
RW-070-PZ	Intermediate	14.14	10.84	9.27	4.87
RW22 50ft	Intermediate	11.25	11.25*	11.60	-0.35
RW23 50ft	Intermediate	11.46	11.46*	11.85	-0.39
RW24 50ft	Intermediate	11.05	11.05*	11.55	-0.50
RW01-PZM020	Intermediate	12.72	10.15	12.81	-0.09
RW02-PZM020	Intermediate	13.02	10.27	13.34	-0.32
RW07-PZM017	Intermediate	12.94	10.71	13.58	-0.64
RW13-PZM020	Intermediate	13.05	11.17	13.50	-0.45
RW14-PZM020	Intermediate	13.60	11.24	14.13	-0.53
RW15-PZM020	Intermediate	12.17	11.84	13.87	-1.70
RW16-PZM020	Intermediate	13.89	11.65	14.41	-0.52
RW17-PZM019	Intermediate	13.73	11.43	14.26	-0.53
RW19-PZM020	Intermediate	13.53	11.28	14.11	-0.58
RW20-PZM020	Intermediate	13.03	11.14	14.09	-1.06
RW21-PZM023	Intermediate	12.93	10.68	13.43	-0.50
RW-RWBW-21	Intermediate	15.11	14.75	14.96	0.15

DTW = Depth to water

TOC = Top of casing

AMSL = Above mean sea level

* = Identical ground and TOC elevations may be due to survey error.

**TABLE 2
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.)	5043	8/3/1959	3/11/1982
		5048	8/3/1959	3/11/1982
		5053	6/15/1959	3/11/1982
		5054	4/27/1959	3/11/1982
Plant Index	Roads, water bodies, demolished buildings/structures, electric lines, above-ground pipelines	5143	<i>Unknown</i>	8/15/2008
		5148	<i>Unknown</i>	11/10/2008
		5153	<i>Unknown</i>	11/10/2008
		5154	<i>Unknown</i>	3/26/2008
Plant Sewer Lines	Same as above plus trenches, sumps, underground piping (includes pipe materials)	5543	9/16/1959	4/1/1975
		5548	9/14/1959	3/2/1976
		5553	2/16/1960	8/11/1974
		5554	2/10/1976	2/10/1976

**TABLE 3
FIELD SHIFTED BORING LOCATIONS**

<u>Location ID</u>	<u>Sample Target</u>	<u>Proposed Location</u> [¥]		<u>Final Location</u> [¥]		<u>Relocation Distance & Direction</u>		<u>Rationale</u>
		<u>Northing</u>	<u>Easting</u>	<u>Northing</u>	<u>Easting</u>			
RW-013-SB	Stelmor Pit	570,690	1,456,496	570,700	1,456,496	10 ft	N	Refusal
RW-021-SB/PZ	Cooling Tower	570,220	1,456,853	570,222	1,456,874	21 ft	E	Refusal
RW-029-SB	Pump House	570,967	1,456,626	570,966	1,456,609	16 ft	W	Refusal
RW-034-SB	Electroplating Building	571,953	1,456,346	571,945	1,456,340	10 ft	SW	Refusal; Melted liner with low recovery
RW-045-SB	Bethanizing Plant	571,854	1,456,424	571,846	1,456,434	12 ft	SE	Refusal
RW-055-SB	Rod Mill Trenches and Sumps	571,907	1,456,428	571,900	1,456,435	10 ft	SE	Refusal
RW-072-SB	Open Area Near Shoreline	572,017	1,455,815	572,200	1,455,874	193 ft	NE	Hand auger refusal; Access restrictions
RW-074-SB	Open Area Near Shoreline	570,655	1,456,024	570,712	1,455,968	79 ft	NW	Hand auger refusal; Access restrictions
RW-075-SB	Open Area Near Shoreline	570,189	1,456,171	570,185	1,456,171	4 ft	S	Hand auger refusal; Access restrictions

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

TABLE 4
TCLP DETECTIONS FOR SOLID IDW

<u>Parameter</u>	<u>Result (mg/L)</u>	<u>TCLP Limit (mg/L)</u>	<u>TCLP Exceedance</u>	<u>Laboratory Flag</u>	<u>Laboratory LOQ (mg/L)</u>
2-Butanone (MEK)	0.0074	200	No	JBM1	5
Arsenic	0.0061	5	No	J	0.05
Barium	0.42	100	No	J	1
Cadmium	0.0039	1	No	J	0.05
Chromium	0.0034	5	No	J	0.05
Lead	0.042	5	No	J	0.25
Selenium	0.0094	1	No	J	0.1
Trichloroethene	0.0099	0.5	No	J	0.05

J = The positive result reported for this analyte is a quantitative estimate below the laboratory PQL.
 JB = The positive result reported for this analyte is an estimate with evidence of blank contamination.
 M1 = Matrix spike recovery exceeded laboratory QC limits.
 TCLP = Toxicity characteristic leaching procedure
 LOQ = Limit of Quantitation

**TABLE 5
TCLP DETECTIONS FOR LIQUID IDW**

<u>Location ID</u>	<u>Parameter</u>	<u>Result (mg/L)</u>	<u>TCLP Limit (mg/L)</u>	<u>TCLP Exceedance</u>	<u>Laboratory Flag</u>	<u>Laboratory LOQ (mg/L)</u>
Water Disposal 1	Barium	0.0338	100	No		0.01
Water Disposal 1	Cadmium	0.0006	1	No	J	0.003
Water Disposal 1	Chromium	0.0016	5	No	J	0.005
Water Disposal 2	Barium	0.0811	100	No		0.01
Water Disposal 2	Chloroform	0.0029	6	No		0.001
Water Disposal 2	Chromium	0.0012	5	No	J	0.005
Water Disposal 3	Barium	0.0051	100	No	J	0.01
Water Disposal 3	Chloroform	0.0016	6	No		0.001
Water Disposal 3	Chromium	0.00085	5	No	J	0.005
Water Disposal 4	Arsenic	0.0094	5	No		0.005
Water Disposal 4	Barium	0.101	100	No		0.01
Water Disposal 4	Chloroform	0.0024	6	No		0.001
Water Disposal 4	Chromium	0.0012	5	No	J	0.005
Water Disposal 5	Barium	0.398	100	No		0.01
Water Disposal 5	Cadmium	0.00058	1	No	J	0.003
Water Disposal 5	Chloroform	0.0039	6	No		0.001
Water Disposal 5	Chromium	0.0012	5	No	J	0.005
Water Disposal 6	Barium	2.14	100	No		0.01
Water Disposal 6	Cadmium	0.001	1	No	J	0.003
Water Disposal 6	Chloroform	0.00058	6	No	J	0.001
Water Disposal 7	Barium	0.0889	100	No		0.01
Water Disposal 7	Cadmium	0.00067	1	No	J	0.003
Water Disposal 7	Chloroform	0.00075	6	No	J	0.001
Water Disposal 7	Trichloroethene	0.00065	0.5	No	J	0.001
Water Disposal 8	Barium	0.01	100	No	J	0.01

J = The positive result reported for this analyte is a quantitative estimate below the laboratory PQL.

TCLP = Toxicity characteristic leaching procedure

LOQ = Limit of Quantitation

Table 6
Summary of Organics Detected in Soil
Parcel A3
Tradepoint Atlantic
Sparrows Point, Maryland

Parameter	Units	PAL	RW-001-SB-1	RW-001-SB-5	RW-002-SB-1	RW-002-SB-4.5	RW-003-SB-1	RW-003-SB-4.5	RW-003-SB-5	RW-003-SB-10	RW-004-SB-1	RW-004-SB-5	RW-004-SB-10	RW-005-SB-1	RW-005-SB-5	RW-006-SB-1	RW-006-SB-5													
			Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil												
			10/1/2015	10/1/2015	9/29/2015	9/29/2015	9/29/2015	3/15/2016	9/29/2015	9/29/2015	10/6/2015	10/6/2015	10/6/2015	10/6/2015	10/6/2015	10/8/2015	10/8/2015													
Volatile Organic Compounds																														
1,1,2-Trichloroethane	mg/kg	5	0.0058	U	0.0064	U	0.0049	U	0.006	U	0.0051	U	NA	0.0056	U	NA	0.0045	U	0.0046	U	NA	0.0062	U	0.0041	U	0.0053	U	0.0044	U	
1,1-Dichloroethane	mg/kg	16	0.0058	U	0.0064	U	0.0049	U	0.006	U	0.0051	U	NA	0.0056	U	NA	0.0045	U	0.0046	U	NA	0.0062	U	0.0041	U	0.0053	U	0.0044	U	
1,2,3-Trichlorobenzene	mg/kg	930	0.0058	U	0.0064	U	0.0049	U	0.006	U	0.0051	U	NA	0.0056	U	NA	0.0045	U	0.0046	U	NA	0.0062	U	0.0041	U	0.0053	U	0.0044	U	
1,2-Dibromo-3-chloropropane	mg/kg	0.064	0.0058	U	0.0064	U	0.0049	U	0.006	U	0.0051	U	NA	0.0056	U	NA	0.0045	U	0.0046	U	NA	0.0062	U	0.0041	U	0.0053	U	0.0044	U	
1,2-Dichloroethane	mg/kg	2	0.0058	U	0.0064	U	0.0049	U	0.006	U	0.0051	U	NA	0.0056	U	NA	0.0045	U	0.0046	U	NA	0.0062	U	0.0041	U	0.0053	U	0.0044	U	
1,2-Dichloroethene (Total)	mg/kg	2,300	0.012	U	0.013	U	0.0099	U	0.012	U	0.01	U	NA	0.011	U	NA	0.0089	U	0.0092	U	NA	0.012	U	0.0082	U	0.011	U	0.0088	U	
1,4-Dichlorobenzene	mg/kg	11	0.0058	U	0.0064	U	0.0049	U	0.006	U	0.0051	U	NA	0.0056	U	NA	0.0045	U	0.0046	U	NA	0.0062	U	0.0041	U	0.0053	U	0.0044	U	
2-Butanone (MEK)	mg/kg	190,000	0.0082	J	0.0032	J	0.011	0.0092	J	0.0055	J	NA	0.0059	J	NA	0.0025	J	0.0096	U	NA	0.003	J	0.00091	J	0.0099	J	0.0013	J		
2-Hexanone	mg/kg	1,300	0.012	U	0.013	U	0.0099	U	0.012	U	0.01	U	NA	0.011	U	NA	0.0089	U	0.0092	U	NA	0.012	U	0.0082	U	0.011	U	0.0088	U	
4-Methyl-2-pentanone (MIBK)	mg/kg	56,000	0.012	U	0.013	U	0.0099	U	0.012	U	0.01	U	NA	0.011	U	NA	0.0089	U	0.0014	J	NA	0.012	U	0.0082	U	0.011	U	0.0088	U	
Acetone	mg/kg	670,000	0.068	U	0.036	J	0.12	0.039	J	0.066	J	NA	0.017	J	NA	0.019	J	0.036	U	NA	0.021	J	0.0098	J	0.097	J	0.013	J		
Benzene	mg/kg	5.1	0.0058	U	0.0064	U	0.0013	J	0.001	J	0.0007	J	NA	0.0029	J	NA	0.00053	J	0.0058	U	NA	0.0016	J	0.0041	U	0.00066	J	0.0044	U	
Bromoform	mg/kg	86	0.0058	U	0.0064	U	0.0049	U	0.006	U	0.0051	U	NA	0.0056	U	NA	0.0045	U	0.0046	U	NA	0.0062	U	0.0041	U	0.0053	U	0.0044	U	
Carbon disulfide	mg/kg	3,500	0.0091	U	0.0026	J	0.0056	J	0.016	J	0.0055	J	NA	0.0025	J	NA	0.0041	J	0.0074	U	NA	0.0094	J	0.0015	J	0.0039	J	0.0046	J	
Chloroform	mg/kg	1.4	0.0058	U	0.0064	U	0.0049	U	0.006	U	0.0051	U	NA	0.0056	U	NA	0.0045	U	0.0046	U	NA	0.0062	U	0.0041	U	0.0053	U	0.0044	U	
Chloromethane	mg/kg	460	0.0058	U	0.0064	U	0.0049	U	0.006	U	0.0051	U	NA	0.0056	U	NA	0.0045	U	0.0046	U	NA	0.0062	U	0.0041	U	0.0053	U	0.0044	U	
cis-1,2-Dichloroethene	mg/kg	2,300	0.0058	U	0.0064	U	0.0049	U	0.006	U	0.0051	U	NA	0.0056	U	NA	0.0045	U	0.0046	U	NA	0.0062	U	0.0041	U	0.0053	U	0.0044	U	
Cyclohexane	mg/kg	27,000	0.012	U	0.013	U	0.00061	J	0.001	J	0.01	U	NA	0.0033	J	NA	0.0089	U	0.0041	J	NA	0.012	U	0.0082	U	0.011	U	0.0088	U	
Ethylbenzene	mg/kg	25	0.0058	U	0.0064	U	0.0049	U	0.006	U	0.0051	U	NA	0.0056	U	NA	0.0045	U	0.0013	J	NA	0.0062	U	0.0041	U	0.0053	U	0.0044	U	
Isopropylbenzene	mg/kg	9,900	0.0058	U	0.0064	U	0.0049	U	0.006	U	0.0051	U	NA	0.0056	U	NA	0.0045	U	0.0046	U	NA	0.0062	U	0.0041	U	0.0053	U	0.0044	U	
Methyl Acetate	mg/kg	1,200,000	0.058	U	0.064	U	0.049	U	0.06	U	0.051	U	NA	0.056	U	NA	0.045	U	0.046	U	NA	0.062	U	0.041	U	0.053	U	0.044	U	
Methylene Chloride	mg/kg	1,000	0.0046	J	0.0059	J	0.0036	J	0.006	U	0.0051	U	NA	0.0033	J	NA	0.003	J	0.0022	J	NA	0.0037	J	0.0039	J	0.0034	J	0.0043	J	
Styrene	mg/kg	35,000	0.0058	U	0.0064	U	0.0049	U	0.006	U	0.0051	U	NA	0.0056	U	NA	0.0045	U	0.0046	U	NA	0.0062	U	0.0041	U	0.0053	U	0.0044	U	
Tetrachloroethene	mg/kg	100	0.0058	U	0.0064	U	0.0049	U	0.006	U	0.0051	U	NA	0.0056	U	NA	0.0045	U	0.0046	U	NA	0.0062	U	0.0041	U	0.0053	U	0.0044	U	
Toluene	mg/kg	47,000	0.0058	U	0.0064	U	0.00085	J	0.0007	J	0.00061	J	NA	0.0019	J	NA	0.00041	J	0.0043	J	NA	0.0015	J	0.0041	U	0.00074	J	0.00085	J	
Trichloroethene	mg/kg	6	0.0058	U	0.0008	J	0.0049	U	0.006	U	0.0051	U	NA	0.0056	U	NA	0.0045	U	0.0046	U	NA	0.0062	U	0.0041	U	0.0053	U	0.0044	U	
Xylenes	mg/kg	2,800	0.017	U	0.019	U	0.015	U	0.018	U	0.015	U	NA	0.017	U	NA	0.013	U	0.0043	J	NA	0.019	U	0.012	U	0.016	U	0.013	U	
Semi-Volatile Organic Compounds*																														
2,4,5-Trichlorophenol	mg/kg	82,000	0.21	U	0.19	U	0.17	U	0.18	U	0.17	U	NA	0.18	U	NA	0.18	U	0.18	U	0.19	U	0.2	U	0.19	U	0.18	R	0.19	U
2,4-Dimethylphenol	mg/kg	16,000	0.083	U	0.075	U	0.069	U	0.07	U	0.069	U	0.074	U	NA	NA	0.072	U	0.016	J	0.077	U	0.081	U	0.076	U	0.072	R	0.077	U
2-Methylnaphthalene	mg/kg	3,000	0.0076	U	0.0084	U	0.066	J	0.0044	J	0.092	J	NA	0.013	J	NA	0.015	J	0.35	J	0.13	UJ	0.0069	J	0.0078	U	0.045	J	0.0083	U
2-Methylphenol	mg/kg	41,000	0.083	U	0.075	U	0.069	U	0.07	U	0.069	U	0.074	U	NA	NA	0.072	U	0.015	J	0.077	U	0.081	U	0.076	U	0.072	R	0.077	U
3&4-Methylphenol(m&p Cresol)	mg/kg	41,000	0.17	U	0.15	U	0.14	U	0.14	U	0.14	U	0.15	U	NA	NA	0.14	U	0.059	J	0.15	U	0.16	U	0.15	U	0.14	R	0.15	U
Acenaphthene	mg/kg	45,000	0.0076	U	0.0084	U	0.0068	J	0.0071	U	0.027	J	NA	0.0026	J	NA	0.0044	J	0.19	J	0.052	UJ	0.0032	J	0.0078	U	0.016	J	0.0083	U
Acenaphthylene	mg/kg	45,000	0.0076	U	0.0084	U	0.026	J	0.025	J	0.016	J	NA	0.014	J	NA	0.14	J	1	J	0.24	UJ	0.0066	J	0.0078	U	0.07	J	0.0083	U
Acetophenone	mg/kg	120,000	0.083	U	0.075	U	0.069	U	0.07	U	0.069	U	0.074	U	NA	NA	0.072	U	0.074	U	0.077	U	0.081	U	0.076	U	0.072	U	0.077	U
Anthracene	mg/kg	230,000	0.002	J	0.0084	U	0.029	J	0.0098	J	0.033	J	NA	0.014	J	NA	0.088	J	1.9	J	0.45	UJ	0.0037	J	0.0078	U	0.067	J	0.0011	J
Benzaldehyde	mg/kg	120,000	0.083	R	0.075	R	0.018	J	0.07	R	0.069	R	0.074	R	NA	NA	0.072	R	0.074	R	0.077	UJ	0.081	R	0.076	R	0.072	R	0.077	R
Benzo[a]anthracene	mg/kg	2.9	0.011	J	0.0084	U	0.13	J	0.044	J	0.13	J	NA	0.046	J	NA	0.41	J	4.3	J	0.9	UJ	0.011	J	0.0078	U	0.35	J	0.0048	J
Benzo[a]pyrene	mg/kg	0.29	0.014	J	0.0084	U	0.19	J	0.078	J	0.17	J	NA	0.053	J	NA	0.51	J	3.9	J	0.91	UJ	0.011	J	0.0078	U	0.44	J	0.0051	J
Benzo[b]fluoranthene	mg/kg	2.9	0.02	J	0.0084	U	0.43	J	0.16	J	0.																			

Table 6
Summary of Organics Detected in Soil
Parcel A3
Tradepoint Atlantic
Sparrows Point, Maryland

Parameter	Units	PAL	RW-007-SB-1	RW-007-SB-5	RW-007-SB-10	RW-008-SB-1	RW-008-SB-5	RW-008-SB-10	RW-009-SB-1	RW-009-SB-5	RW-009-SB-10	RW-010-SB-1	RW-010-SB-7	RW-010-SB-10	RW-011-SB-1	RW-011-SB-5	RW-012-SB-1															
			Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil														
			9/28/2015	9/28/2015	9/28/2015	9/29/2015	9/29/2015	9/29/2015	9/25/2015	9/25/2015	9/25/2015	9/25/2015	9/25/2015	9/25/2015	9/25/2015	9/25/2015	9/21/2015															
Volatile Organic Compounds																																
1,1,2-Trichloroethane	mg/kg	5	0.0064	U	0.0041	U	NA		0.0047	U	0.005	U	NA		0.0052	U	0.0045	U	NA		0.0044	U	0.0048	U	0.0053	J	0.005	U	0.0067	U	0.0054	U
1,1-Dichloroethane	mg/kg	16	0.0064	U	0.0041	U	NA		0.0047	U	0.005	U	NA		0.0052	U	0.0045	U	NA		0.0044	U	0.0048	U	0.0051	R	0.005	U	0.0067	U	0.0054	U
1,2,3-Trichlorobenzene	mg/kg	930	0.0064	U	0.0041	U	NA		0.0047	U	0.005	U	NA		0.0052	U	0.0045	U	NA		0.0044	U	0.0048	U	0.0051	R	0.005	U	0.0067	U	0.0054	U
1,2-Dibromo-3-chloropropane	mg/kg	0.064	0.0064	UJ	0.0041	UJ	NA		0.0047	U	0.005	U	NA		0.0052	U	0.0045	U	NA		0.0044	U	0.0048	U	0.0051	R	0.005	U	0.0067	U	0.0054	U
1,2-Dichloroethane	mg/kg	2	0.0064	U	0.0041	U	NA		0.0047	U	0.005	U	NA		0.0052	U	0.0045	U	NA		0.0044	U	0.0048	U	0.0051	R	0.005	U	0.0067	U	0.0054	U
1,2-Dichloroethane (Total)	mg/kg	2,300	0.013	U	0.0081	U	NA		0.0094	U	0.01	U	NA		0.01	U	0.009	U	NA		0.0087	U	0.0093	J	0.0079	J	0.0099	U	0.013	U	0.011	U
1,4-Dichlorobenzene	mg/kg	11	0.0064	U	0.0041	U	NA		0.0047	U	0.005	U	NA		0.0052	U	0.0045	U	NA		0.0044	U	0.0048	U	0.0051	R	0.005	U	0.0067	U	0.0054	U
2-Butanone (MEK)	mg/kg	190,000	0.013	U	0.0081	U	NA		0.0045	J	0.0016	J	NA		0.01	U	0.009	U	NA		0.0087	U	0.0096	U	0.01	R	0.0053	J	0.0057	J	0.0052	J
2-Hexanone	mg/kg	1,300	0.013	U	0.0081	U	NA		0.0094	U	0.01	U	NA		0.01	U	0.009	U	NA		0.0013	J	0.0096	U	0.01	R	0.0099	U	0.013	U	0.011	U
4-Methyl-2-pentanone (MIBK)	mg/kg	56,000	0.013	U	0.0081	U	NA		0.0094	U	0.01	U	NA		0.01	U	0.009	U	NA		0.0087	U	0.0096	U	0.01	R	0.0099	U	0.013	U	0.011	U
Acetone	mg/kg	670,000	0.046		0.0081	U	NA		0.033		0.018		NA		0.01	U	0.009	U	NA		0.0087	UJ	0.0096	UJ	0.0063	J	0.026		0.047		0.029	J
Benzene	mg/kg	5.1	0.0064	U	0.0041	U	NA		0.0047	U	0.005	U	NA		0.0052	U	0.0045	U	NA		0.0044	U	0.0048	U	0.0051	R	0.005	U	0.0067	U	0.0054	U
Bromoform	mg/kg	86	0.0064	UJ	0.0041	UJ	NA		0.0047	U	0.005	U	NA		0.0052	UJ	0.0045	UJ	NA		0.0044	UJ	0.0048	UJ	0.0051	R	0.005	UJ	0.0067	UJ	0.0054	U
Carbon disulfide	mg/kg	3,500	0.014		0.006		NA		0.0047	U	0.0018	J	NA		0.0052	U	0.0045	U	NA		0.0044	U	0.0048	U	0.0051	R	0.015		0.0042	J	0.0094	
Chloroform	mg/kg	1.4	0.0064	U	0.0041	U	NA		0.0047	U	0.005	U	NA		0.0052	U	0.0045	U	NA		0.0044	U	0.0048	U	0.0051	R	0.005	U	0.0067	U	0.0054	U
Chloromethane	mg/kg	460	0.0064	U	0.0041	U	NA		0.0047	U	0.005	U	NA		0.0052	U	0.0045	U	NA		0.0044	U	0.0048	U	0.0051	R	0.005	U	0.0067	U	0.0054	U
cis-1,2-Dichloroethene	mg/kg	2,300	0.0064	U	0.0041	U	NA		0.0047	U	0.005	U	NA		0.0052	U	0.0045	U	NA		0.0044	U	0.0085		0.0079	J	0.005	U	0.0067	U	0.0054	U
Cyclohexane	mg/kg	27,000	0.013	U	0.0081	U	NA		0.0094	U	0.01	U	NA		0.01	U	0.009	U	NA		0.0087	U	0.0096	U	0.01	R	0.0099	U	0.0058	J	0.011	U
Ethylbenzene	mg/kg	25	0.0064	U	0.0041	U	NA		0.0047	U	0.005	U	NA		0.0052	U	0.0045	U	NA		0.0044	U	0.0048	U	0.0051	R	0.005	U	0.0067	U	0.0054	U
Isopropylbenzene	mg/kg	9,900	0.0064	U	0.0041	U	NA		0.0047	U	0.005	U	NA		0.0052	U	0.0045	U	NA		0.0044	U	0.0048	U	0.0051	R	0.005	U	0.0067	U	0.0054	U
Methyl Acetate	mg/kg	1,200,000	0.064	U	0.041	U	NA		0.047	U	0.0022	J	NA		0.052	U	0.045	U	NA		0.044	U	0.048	U	0.051	R	0.05	U	0.067	U	0.054	U
Methylene Chloride	mg/kg	1,000	0.0064	U	0.0041	U	NA		0.0045	J	0.0029	J	NA		0.0057		0.0038	J	NA		0.0044	U	0.0048	U	0.0052	J	0.005	U	0.0067	U	0.0054	U
Styrene	mg/kg	35,000	0.0064	U	0.0041	U	NA		0.0047	U	0.005	U	NA		0.0052	U	0.0045	U	NA		0.0044	U	0.0048	U	0.0051	R	0.005	U	0.0067	U	0.0054	U
Tetrachloroethene	mg/kg	100	0.0064	U	0.0041	U	NA		0.0047	U	0.005	U	NA		0.0052	U	0.0045	U	NA		0.0044	U	0.0048	U	0.001	J	0.005	U	0.0067	U	0.0054	U
Toluene	mg/kg	47,000	0.0064	U	0.0041	U	NA		0.0047	U	0.005	U	NA		0.0052	U	0.0045	U	NA		0.0044	U	0.0048	U	0.0051	R	0.005	U	0.0067	U	0.0054	U
Trichloroethene	mg/kg	6	0.0064	U	0.0041	U	NA		0.0047	U	0.005	U	NA		0.0052	U	0.0044	J	NA		0.0045		6.1		NA		0.005	U	0.0067	U	0.0054	U
Xylenes	mg/kg	2,800	0.019	U	0.012	U	NA		0.014	U	0.015	U	NA		0.016	U	0.014	U	NA		0.013	U	0.014	U	0.015	R	0.015	U	0.02	U	0.016	U
Semi-Volatile Organic Compounds*																																
2,4,5-Trichlorophenol	mg/kg	82,000	0.19	R	0.92	U	NA		0.19	U	0.19	U	NA		0.92	U	0.95	U	NA		0.91	U	1	U	NA		0.91	U	0.97	U	0.93	R
2,4-Dimethylphenol	mg/kg	16,000	0.074	R	0.37	U	NA		0.074	U	0.077	U	NA		0.37	U	0.38	U	NA		0.36	U	0.4	U	NA		0.37	U	0.39	U	0.37	R
2-Methylnaphthalene	mg/kg	3,000	0.078		0.0075	U	NA		0.0073	U	0.0083	U	NA		0.031		0.0026	J	NA		0.0073	U	0.0063	J	NA		0.21		0.85		0.0075	U
2-Methylphenol	mg/kg	41,000	0.074	R	0.37	U	NA		0.074	U	0.077	U	NA		0.37	U	0.38	U	NA		0.36	U	0.4	U	NA		0.37	U	0.39	U	0.37	R
3&4-Methylphenol(m&p Cresol)	mg/kg	41,000	0.15	R	0.73	U	NA		0.15	U	0.15	U	NA		0.74	U	0.76	U	NA		0.72	U	0.81	U	NA		0.73	U	0.77	U	0.74	R
Acenaphthene	mg/kg	45,000	0.17		0.0075	U	NA		0.0073	U	0.0083	U	NA		0.037		0.0076	U	NA		0.0073	U	0.0081	U	NA		0.49		0.43		0.0075	U
Acenaphthylene	mg/kg	45,000	0.11		0.0075	U	NA		0.0073	U	0.0083	U	NA		0.033		0.0076	U	NA		0.0073	U	0.0081	U	NA		0.064		0.12		0.0075	U
Acetophenone	mg/kg	120,000	0.019	J	0.37	U	NA		0.074	U	0.077	U	NA		0.37	U	0.38	U	NA		0.36	U	0.4	U	NA		0.37	U	0.39	U	0.37	U
Anthracene	mg/kg	230,000	0.7		0.0075	U	NA		0.0073	U	0.0083	U	NA		0.15		0.0026	J	NA		0.0073	U	0.0081	U	NA		0.86		0.9		0.0044	J
Benzaldehyde	mg/kg	120,000	0.074	R	0.37	U	NA		0.074	R	0.077	R	NA		0.37	U	0.38	U	NA		0.36	U	0.4	U	NA		0.37	U	0.44		0.37	U
Benzo[a]anthracene	mg/kg	2.9	2.2		0.0055	J	NA		0.0033	J	0.0049	J	NA		0.49		0.0067	J	NA		0.0022	J	0.0081	U	NA		1.9		3.2	J	0.022	
Benzo[a]pyrene	mg/kg	0.29	1.9		0.0075	U	NA		0.0073	U	0.0055	J	NA		0.52		0.0066	J	NA		0.0073	U	0.0081	U	NA		1.9		2.9	J	0.037	
Benzo[b]fluoranthene	mg/kg																															

Table 6
Summary of Organics Detected in Soil
Parcel A3
Tradepoint Atlantic
Sparrows Point, Maryland

Parameter	Units	PAL	RW-012-SB-5	RW-012-SB-8	RW-013-SB-1	RW-013-SB-5	RW-013-SB-10	RW-014-SB-1	RW-014-SB-5	RW-015-SB-1	RW-015-SB-5	RW-015-SB-10	RW-016-SB-1	RW-016-SB-4	RW-017-SB-1	RW-017-SB-6	RW-018-SB-1													
			Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil												
			9/21/2015	9/21/2015	9/23/2015	9/23/2015	9/23/2015	9/22/2015	9/22/2015	9/22/2015	9/22/2015	9/21/2015	9/21/2015	9/21/2015	9/23/2015	9/23/2015	9/29/2015	9/29/2015	9/24/2015											
Volatile Organic Compounds																														
1,1,2-Trichloroethane	mg/kg	5	0.0042	U	NA	0.0051	U	0.005	U	NA	0.0054	U	0.0049	U	0.0048	U	0.0049	U	0.0058	U	0.0053	U	0.0045	U	0.0044	U	0.0047	U		
1,1-Dichloroethane	mg/kg	16	0.0042	U	NA	0.0051	U	0.005	U	NA	0.0054	U	0.0049	U	0.0048	U	0.0049	U	0.0058	U	0.0053	U	0.0045	U	0.0044	U	0.0047	U		
1,2,3-Trichlorobenzene	mg/kg	930	0.0042	U	NA	0.0051	U	0.005	U	NA	0.0054	U	0.0049	U	0.0048	U	0.0049	U	0.0058	U	0.0053	U	0.0045	U	0.0044	U	0.0047	U		
1,2-Dibromo-3-chloropropane	mg/kg	0.064	0.0042	U	NA	0.0051	U	0.005	U	NA	0.0054	U	0.0049	U	0.0048	U	0.0049	U	0.0058	U	0.0053	U	0.0045	U	0.0044	U	0.0047	U		
1,2-Dichloroethane	mg/kg	2	0.0042	U	NA	0.0051	U	0.005	U	NA	0.0054	U	0.0049	U	0.0048	U	0.0049	U	0.0058	U	0.0053	U	0.0045	U	0.0044	U	0.0047	U		
1,2-Dichloroethane (Total)	mg/kg	2,300	0.0084	U	NA	0.01	U	0.0099	U	NA	0.011	U	0.0097	U	0.0097	U	0.0098	U	0.012	U	0.011	U	0.0091	U	0.0089	U	0.0094	U		
1,4-Dichlorobenzene	mg/kg	11	0.0042	U	NA	0.0051	U	0.005	U	NA	0.0054	U	0.0049	U	0.0048	U	0.0049	U	0.0058	U	0.0053	U	0.0045	U	0.0044	U	0.0047	U		
2-Butanone (MEK)	mg/kg	190,000	0.0084	U	NA	0.01	U	0.0099	U	NA	0.011	U	0.0097	U	0.0097	U	0.0098	U	0.012	U	0.011	U	0.0027	J	0.0023	J	0.0094	U		
2-Hexanone	mg/kg	1,300	0.0084	U	NA	0.01	U	0.0099	U	NA	0.011	U	0.0097	U	0.0097	U	0.0098	U	0.012	U	0.011	U	0.0091	U	0.0089	U	0.0094	U		
4-Methyl-2-pentanone (MIBK)	mg/kg	56,000	0.0084	U	NA	0.01	U	0.0099	U	NA	0.011	U	0.0097	U	0.0097	U	0.0098	U	0.012	U	0.011	U	0.0091	U	0.0089	U	0.0094	U		
Acetone	mg/kg	670,000	0.025	J	NA	0.015	U	0.0099	U	NA	0.016	U	0.019	J	0.025	J	0.0098	UJ	0.031	U	0.011	U	0.024	U	0.027	J	0.0084	J		
Benzene	mg/kg	5.1	0.0042	U	NA	0.0051	U	0.005	U	NA	0.0054	U	0.0049	U	0.0048	U	0.0049	U	0.0058	U	0.0029	J	0.00038	J	0.0044	U	0.0047	U		
Bromoform	mg/kg	86	0.0042	U	NA	0.0051	U	0.005	U	NA	0.0054	U	0.0049	U	0.0048	U	0.0049	U	0.0058	U	0.0053	U	0.0045	U	0.0044	U	0.0047	U		
Carbon disulfide	mg/kg	3,500	0.0025	J	NA	0.0083	U	0.005	U	NA	0.0054	U	0.0049	U	0.011	U	0.0049	U	0.0041	J	0.0053	U	0.014	U	0.0044	U	0.0047	U		
Chloroform	mg/kg	1.4	0.0042	U	NA	0.0051	U	0.005	U	NA	0.0054	U	0.0049	U	0.0048	U	0.0049	U	0.0058	U	0.0053	U	0.0045	U	0.0044	U	0.0047	U		
Chloromethane	mg/kg	460	0.0042	U	NA	0.0051	U	0.005	U	NA	0.0054	U	0.0049	U	0.0048	U	0.0049	U	0.0058	U	0.0053	U	0.0045	U	0.0044	U	0.0047	U		
cis-1,2-Dichloroethene	mg/kg	2,300	0.0042	U	NA	0.0051	U	0.005	U	NA	0.0054	U	0.0049	U	0.0048	U	0.0049	U	0.0058	U	0.0053	U	0.0045	U	0.0044	U	0.0047	U		
Cyclohexane	mg/kg	27,000	0.0084	U	NA	0.01	U	0.0099	U	NA	0.011	U	0.0097	U	0.0097	U	0.0098	U	0.012	U	0.011	U	0.0091	U	0.0089	U	0.0094	U		
Ethylbenzene	mg/kg	25	0.0042	U	NA	0.0051	U	0.005	U	NA	0.0054	U	0.0049	U	0.0048	U	0.0049	U	0.0058	U	0.0053	U	0.0045	U	0.0044	U	0.0047	U		
Isopropylbenzene	mg/kg	9,900	0.0042	U	NA	0.0051	U	0.005	U	NA	0.0054	U	0.0049	U	0.0048	U	0.0049	U	0.0058	U	0.0053	U	0.0045	U	0.0044	U	0.0047	U		
Methyl Acetate	mg/kg	1,200,000	0.042	U	NA	0.051	U	0.05	U	NA	0.054	U	0.049	U	0.048	U	0.049	U	0.058	U	0.053	U	0.045	U	0.044	U	0.047	U		
Methylene Chloride	mg/kg	1,000	0.0042	U	NA	0.0051	U	0.005	U	NA	0.0054	U	0.0049	U	0.0042	B	0.0049	U	0.0045	J	0.0053	U	0.0043	J	0.0055	U	0.0047	U		
Styrene	mg/kg	35,000	0.0042	U	NA	0.0051	U	0.005	U	NA	0.0054	U	0.0049	U	0.0048	U	0.0049	U	0.0058	U	0.0053	U	0.0045	U	0.0044	U	0.0047	U		
Tetrachloroethene	mg/kg	100	0.0042	U	NA	0.0051	U	0.005	U	NA	0.0054	U	0.0049	U	0.0048	U	0.0049	U	0.0058	U	0.0053	U	0.0045	U	0.0044	U	0.0047	U		
Toluene	mg/kg	47,000	0.0042	U	NA	0.0051	U	0.005	U	NA	0.0054	U	0.0049	U	0.0048	U	0.0049	U	0.0058	U	0.002	J	0.00039	J	0.0044	U	0.0047	U		
Trichloroethene	mg/kg	6	0.0042	U	NA	0.0051	U	0.005	U	NA	0.0054	U	0.0049	U	0.0048	U	0.0049	U	0.0058	U	0.0053	U	0.0045	U	0.0044	U	0.0047	U		
Xylenes	mg/kg	2,800	0.013	U	NA	0.015	U	0.015	U	NA	0.016	U	0.015	U	0.015	U	0.015	U	0.017	U	0.016	U	0.014	U	0.013	U	0.014	U		
Semi-Volatile Organic Compounds*																														
2,4,5-Trichlorophenol	mg/kg	82,000	0.93	U	NA	0.91	UJ	0.97	U	NA	0.92	R	0.98	U	0.91	U	0.97	U	0.92	R	0.96	U	0.19	U	0.19	U	0.94	R		
2,4-Dimethylphenol	mg/kg	16,000	0.37	U	NA	0.36	UJ	0.39	U	NA	0.37	R	0.39	U	0.36	U	0.39	U	0.37	R	0.39	U	0.074	U	0.077	U	0.38	R		
2-Methylnaphthalene	mg/kg	3,000	0.0075	U	NA	0.0032	J	0.0073	J	NA	0.0073	U	0.0043	J	0.074	U	4.1	U	0.0081	UJ	0.0075	U	0.13	U	0.011	0.0097	U	0.0076	U	
2-Methylphenol	mg/kg	41,000	0.37	U	NA	0.36	UJ	0.39	U	NA	0.37	R	0.39	U	0.36	U	0.39	U	0.37	R	0.39	U	0.074	U	0.077	U	0.38	R		
3&4-Methylphenol(m&p Cresol)	mg/kg	41,000	0.75	U	NA	0.73	UJ	0.77	U	NA	0.74	R	0.79	U	0.73	U	0.78	U	0.74	R	0.77	U	0.15	U	0.15	U	0.75	R		
Acenaphthene	mg/kg	45,000	0.0075	U	NA	0.0063	J	0.0079	U	NA	0.0073	U	0.0079	U	0.074	U	6.3	U	0.0081	UJ	0.0075	U	0.03	U	0.0073	U	0.0076	U		
Acenaphthylene	mg/kg	45,000	0.0075	U	NA	0.0036	J	0.0079	U	NA	0.0073	U	0.0079	U	0.074	U	0.13	U	0.0081	UJ	0.0075	U	0.013	U	0.022	U	0.0076	U		
Acetophenone	mg/kg	120,000	0.37	U	NA	0.36	U	0.39	U	NA	0.37	U	0.39	U	0.36	U	0.39	U	0.0033	J	0.37	U	0.39	U	0.074	U	0.077	U	0.38	U
Anthracene	mg/kg	230,000	0.0015	J	NA	0.031	U	0.0079	U	NA	0.0073	U	0.0079	U	0.025	J	22.3	U	0.0025	J	0.23	U	0.051	U	0.0054	J	0.0017	J		
Benzaldehyde	mg/kg	120,000	0.37	U	NA	0.22	J	0.39	U	NA	0.37	U	0.26	J	0.36	U	0.39	U	0.23	J	0.26	B	0.074	R	0.077	R	0.38	U		
Benzo[a]anthracene	mg/kg	2.9	0.0065	J	NA	0.1	U	0.0079	U	NA	0.0073	U	0.0024	J	0.15	U	23.1	U	0.0076	J	0.0095	U	1.6	U	0.18	U	0.011	U		
Benzo[a]pyrene	mg/kg	0.29	0.0048	J	NA	0.095	U	0.0079	U	NA	0.0073	U	0.0079	U	0.17	U	16.7	U	0.0054	J	0.0076	U	1.6	U	0.18	U	0.011	U		
Benzo[b]fluoranthene	mg/kg	2.9	0.014	U	NA	0.15	U	0.0079	U	NA	0.0073	U	0.0055	J	0.27	U	23.6	U	0.011	J	0.015	U	2.8	U	0.34	U	0.018	U		
Benzo[g,h,i]perylene	mg/kg		0.0022	J	NA	0.054	U	0.0079	U	NA	0.0073	U	0.0026	J	0.054	J	2.1	U	0.0022	J	0.005	J	0.73	U	0.036	U	0.0027	J		
Benzo[k]fluoranthene	mg/kg	29	0.012	U	NA	0.064	U	0.0079	U	NA	0.0073	U	0.0017	J	0.12	U	9	U	0.0048	J	0.0075	J	1.6	U	0.12	U	0.01	U		
Biphenyl (Diphenyl)	mg/kg	200	0.37	U	NA	0.36	U	0.39	U	NA	0.37	U	0.39	U																

Table 6
Summary of Organics Detected in Soil
Parcel A3
Tradepoint Atlantic
Sparrows Point, Maryland

Parameter	Units	PAL	RW-018-SB-5	RW-019-SB-1	RW-019-SB-4	RW-019-SB-10	RW-020-SB-1	RW-020-SB-4.5	RW-020-SB-7	RW-021-SB-1	RW-021-SB-6	RW-021-SB-10	RW-022-SB-1	RW-022-SB-8.5	RW-023-SB-1	RW-023-SB-5	RW-023-SB-10												
			Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil											
			9/24/2015	9/22/2015	9/22/2015	9/22/2015	9/21/2015	9/21/2015	9/21/2015	9/21/2015	9/21/2015	9/21/2015	9/21/2015	9/21/2015	9/21/2015	9/22/2015	9/22/2015												
Volatile Organic Compounds																													
1,1,2-Trichloroethane	mg/kg	5	0.0047	U	0.0066	U	0.0058	U	NA	0.0049	U	0.0058	U	NA	0.0052	U	0.0043	U	NA	0.0052	U	0.0097	U	0.0061	U	0.0046	U	NA	
1,1-Dichloroethane	mg/kg	16	0.0047	U	0.0066	U	0.0058	U	NA	0.0049	U	0.0058	U	NA	0.0052	U	0.0043	U	NA	0.0052	U	0.0097	U	0.0061	U	0.0046	U	NA	
1,2,3-Trichlorobenzene	mg/kg	930	0.0047	U	0.0066	U	0.0058	U	NA	0.0049	U	0.0058	U	NA	0.0052	U	0.0043	U	NA	0.0052	U	0.0097	U	0.0061	U	0.0046	U	NA	
1,2-Dibromo-3-chloropropane	mg/kg	0.064	0.0047	U	0.0066	U	0.0058	U	NA	0.0049	U	0.0058	U	NA	0.0052	U	0.0043	U	NA	0.0052	U	0.0097	U	0.0061	U	0.0046	U	NA	
1,2-Dichloroethane	mg/kg	2	0.0047	U	0.0066	U	0.0058	U	NA	0.0049	U	0.0058	U	NA	0.0052	U	0.0043	U	NA	0.0052	U	0.0097	U	0.0061	U	0.0046	U	NA	
1,2-Dichloroethene (Total)	mg/kg	2,300	0.0093	U	0.013	U	0.012	U	NA	0.0098	U	0.012	U	NA	0.01	U	0.0086	U	NA	0.01	U	0.019	U	0.012	U	0.0092	U	NA	
1,4-Dichlorobenzene	mg/kg	11	0.0047	U	0.0066	U	0.0058	U	NA	0.0049	U	0.0058	U	NA	0.0052	U	0.0043	U	NA	0.0052	U	0.0097	U	0.0061	U	0.0046	U	NA	
2-Butanone (MEK)	mg/kg	190,000	0.0093	U	0.0074	J	0.012	U	NA	0.0042	J	0.012	U	NA	0.01	U	0.0086	U	NA	0.01	U	0.055	U	0.012	U	0.0092	U	NA	
2-Hexanone	mg/kg	1,300	0.0093	U	0.013	U	0.012	U	NA	0.0098	U	0.012	U	NA	0.01	U	0.0086	U	NA	0.01	U	0.019	U	0.012	U	0.0092	U	NA	
4-Methyl-2-pentanone (MIBK)	mg/kg	56,000	0.0093	U	0.013	U	0.012	U	NA	0.0098	U	0.012	U	NA	0.01	U	0.0086	U	NA	0.01	U	0.019	U	0.012	U	0.0092	U	NA	
Acetone	mg/kg	670,000	0.0049	J	0.044	J	0.02	U	NA	0.031	J	0.011	J	NA	0.028	J	0.012	J	NA	0.023	J	0.29	J	0.027	J	0.02	U	NA	
Benzene	mg/kg	5.1	0.0047	U	0.0066	U	0.0019	J	NA	0.0049	U	0.0058	U	NA	0.0052	U	0.0043	U	NA	0.0052	U	0.0097	U	0.0061	U	0.0046	U	NA	
Bromoform	mg/kg	86	0.0047	U	0.0066	U	0.0058	U	NA	0.0049	U	0.0058	U	NA	0.0052	U	0.0043	U	NA	0.0052	U	0.0097	U	0.0061	U	0.0046	U	NA	
Carbon disulfide	mg/kg	3,500	0.0047	U	0.0066	U	0.0048	J	NA	0.012	J	0.0037	J	NA	0.0032	J	0.0031	J	NA	0.0087	J	0.0059	J	0.014	J	0.0046	U	NA	
Chloroform	mg/kg	1.4	0.0047	U	0.0066	U	0.0058	U	NA	0.0049	U	0.0058	U	NA	0.0052	U	0.0043	U	NA	0.0052	U	0.0097	U	0.0061	U	0.0046	U	NA	
Chloromethane	mg/kg	460	0.0047	U	0.0066	U	0.0058	U	NA	0.0049	U	0.0058	U	NA	0.0052	U	0.0043	U	NA	0.0052	U	0.0097	U	0.0061	U	0.0046	U	NA	
cis-1,2-Dichloroethene	mg/kg	2,300	0.0047	U	0.0066	U	0.0058	U	NA	0.0049	U	0.0058	U	NA	0.0052	U	0.0043	U	NA	0.0052	U	0.0097	U	0.0061	U	0.0046	U	NA	
Cyclohexane	mg/kg	27,000	0.0093	U	0.013	U	0.012	U	NA	0.0098	U	0.012	U	NA	0.01	U	0.0086	U	NA	0.01	U	0.019	U	0.012	U	0.0092	U	NA	
Ethylbenzene	mg/kg	25	0.0047	U	0.0066	U	0.0058	U	NA	0.0049	U	0.0058	U	NA	0.0052	U	0.0043	U	NA	0.0052	U	0.0097	U	0.0061	U	0.0046	U	NA	
Isopropylbenzene	mg/kg	9,900	0.0047	U	0.0066	U	0.0058	U	NA	0.0049	U	0.0058	U	NA	0.0052	U	0.0043	U	NA	0.0052	U	0.0097	U	0.0061	U	0.0046	U	NA	
Methyl Acetate	mg/kg	1,200,000	0.047	U	0.066	U	0.058	U	NA	0.049	U	0.058	U	NA	0.052	U	0.043	U	NA	0.052	U	0.097	U	0.061	U	0.046	U	NA	
Methylene Chloride	mg/kg	1,000	0.0047	U	0.0066	U	0.0058	U	NA	0.0049	U	0.0058	U	NA	0.0052	U	0.0043	U	NA	0.0052	U	0.0097	U	0.0061	U	0.0046	U	NA	
Styrene	mg/kg	35,000	0.0047	U	0.0066	U	0.0058	U	NA	0.0049	U	0.0058	U	NA	0.0052	U	0.0043	U	NA	0.0052	U	0.0097	U	0.0061	U	0.0046	U	NA	
Tetrachloroethene	mg/kg	100	0.0047	U	0.0066	U	0.0058	U	NA	0.0049	U	0.0058	U	NA	0.0052	U	0.0043	U	NA	0.0052	U	0.0097	U	0.0061	U	0.0046	U	NA	
Toluene	mg/kg	47,000	0.0047	U	0.0066	U	0.0023	J	NA	0.0027	J	0.0058	U	NA	0.0052	U	0.0043	U	NA	0.0052	U	0.0097	U	0.0061	U	0.0046	U	NA	
Trichloroethene	mg/kg	6	0.0027	J	0.0066	U	0.0058	U	NA	0.0049	U	0.0058	U	NA	0.0052	U	0.0043	U	NA	0.0052	U	0.0097	U	0.0061	U	0.0046	U	NA	
Xylenes	mg/kg	2,800	0.014	U	0.02	U	0.017	U	NA	0.015	U	0.017	U	NA	0.016	U	0.013	U	NA	0.016	U	0.029	U	0.018	U	0.014	U	NA	
Semi-Volatile Organic Compounds*																													
2,4,5-Trichlorophenol	mg/kg	82,000	0.97	U	0.95	R	1	U	NA	0.85	U	0.92	U	NA	0.89	U	1	U	NA	0.93	UJ	1.5	R	0.93	R	1	U	NA	
2,4-Dimethylphenol	mg/kg	16,000	0.39	U	0.38	R	0.4	U	NA	0.34	U	0.37	U	NA	0.36	U	0.4	U	NA	0.37	U	0.59	R	0.37	R	0.4	U	NA	
2-Methylnaphthalene	mg/kg	3,000	0.016	U	0.039	J	0.18	U	NA	0.022	U	0.22	U	0.2	J	0.16	U	0.0081	U	NA	0.074	U	0.011	J	0.0073	U	0.0081	U	NA
2-Methylphenol	mg/kg	41,000	0.39	U	0.38	R	0.4	U	NA	0.34	U	0.37	U	NA	0.36	U	0.4	U	NA	0.37	U	0.59	R	0.37	R	0.4	U	NA	
3&4-Methylphenol(m&p Cresol)	mg/kg	41,000	0.78	U	0.76	R	0.8	U	NA	0.68	U	0.74	U	NA	0.71	U	0.81	U	NA	0.74	U	1.2	J	0.74	R	0.8	U	NA	
Acenaphthene	mg/kg	45,000	0.0078	U	0.05	J	0.2	U	NA	0.017	U	0.79	J	0.024	U	0.0081	U	NA	0.074	U	0.012	U	0.0073	U	0.0081	U	NA		
Acenaphthylene	mg/kg	45,000	0.0078	U	0.077	U	0.03	U	NA	0.0053	J	0.005	J	0.0067	J	0.14	U	0.0081	U	NA	0.074	U	0.012	U	0.0073	U	0.0081	U	NA
Acetophenone	mg/kg	120,000	0.39	U	0.38	U	0.4	U	NA	0.34	U	0.37	U	NA	0.36	U	0.4	U	NA	0.37	U	0.59	U	0.37	U	0.4	U	NA	
Anthracene	mg/kg	230,000	0.0078	U	0.16	U	0.14	U	NA	0.098	U	4.4	J	30.5	J	0.11	U	0.0032	J	NA	0.074	U	0.012	U	0.0073	U	0.0081	U	NA
Benzaldehyde	mg/kg	120,000	0.39	U	0.38	U	0.31	J	NA	0.34	U	0.37	U	NA	0.36	U	0.4	U	NA	0.37	U	0.59	U	0.26	B	0.4	U	NA	
Benzo[a]anthracene	mg/kg	2.9	0.0078	U	0.48	U	0.13	U	NA	1.1	U	8.1	U	60.9	J	0.36	U	0.015	U	NA	0.15	U	0.0087	J	0.0043	J	0.0053	J	NA
Benzo[a]pyrene	mg/kg	0.29	0.0078	U	0.5	U	0.11	U	NA	0.81	U	6.5	U	42.8	J	0.41	U	0.016	U	NA	0.16	U	0.0082	J	0.0057	J	0.006	J	NA
Benzo[b]fluoranthene	mg/kg	2.9	0.0078	U	0.85	U	0.23	U	NA	2.1	U	15.2	U	76.3	J	1.2	U	0.024	U	NA	0.4	U	0.023	U	0.01	U	0.0096	U	NA
Benzo[g,h,i]perylene	mg/kg	0.0078	U	0.27	U	0.048	U	NA	0.16	U	0.39	U	0.72	J	0.12	U	0.004	J	NA	0.087	U	0.0042	J	0.0045	J	0.0039	J	NA	
Benzo[k]fluoranthene	mg/kg	29	0.0078	U	0.38	U	0.071	U	NA	1.8	U	13	U	36	J	0.42	U	0.011	U	NA	0.34	U	0.02						

Table 6
Summary of Organics Detected in Soil
Parcel A3
Tradepoint Atlantic
Sparrows Point, Maryland

Parameter	Units	PAL	RW-024-SB-1	RW-024-SB-6	RW-025-SB-1	RW-025-SB-5	RW-026-SB-1	RW-026-SB-5	RW-027-SB-1	RW-027-SB-5	RW-027-SB-10	RW-028-SB-1	RW-028-SB-5	RW-029-SB-1	RW-029-SB-7	RW-030-SB-1	RW-030-SB-5	
			Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
			9/22/2015	9/22/2015	9/22/2015	9/22/2015	9/22/2015	9/22/2015	9/22/2015	9/22/2015	9/22/2015	9/22/2015	9/22/2015	9/22/2015	9/22/2015	9/22/2015	9/22/2015	9/22/2015
Volatile Organic Compounds																		
1,1,2-Trichloroethane	mg/kg	5	0.0049	U	0.0068	U	0.0053	U	0.005	U	0.0049	U	0.005	U	0.0051	U	0.0049	U
1,1-Dichloroethane	mg/kg	16	0.0049	U	0.0068	U	0.0053	U	0.005	U	0.0049	U	0.005	U	0.0051	U	0.0049	U
1,2,3-Trichlorobenzene	mg/kg	930	0.0049	U	0.0068	U	0.0053	U	0.005	U	0.0049	U	0.005	U	0.0051	U	0.0049	U
1,2-Dibromo-3-chloropropane	mg/kg	0.064	0.0049	U	0.0068	U	0.0053	U	0.005	U	0.0049	U	0.005	U	0.0051	U	0.0049	U
1,2-Dichloroethane	mg/kg	2	0.0049	U	0.0068	U	0.0053	U	0.005	U	0.0049	U	0.005	U	0.0051	U	0.0049	U
1,2-Dichloroethane (Total)	mg/kg	2,300	0.0098	U	0.014	U	0.011	U	0.01	U	0.0098	U	0.01	U	0.0097	U	0.0097	U
1,4-Dichlorobenzene	mg/kg	11	0.0049	U	0.0068	U	0.0053	U	0.005	U	0.0049	U	0.005	U	0.0051	U	0.0049	U
2-Butanone (MEK)	mg/kg	190,000	0.0098	U	0.013	J	0.011	U	0.0041	J	0.0098	U	0.01	U	0.0049	J	0.0097	U
2-Hexanone	mg/kg	1,300	0.0098	U	0.014	U	0.011	U	0.01	U	0.0098	U	0.01	U	0.0097	U	0.0097	U
4-Methyl-2-pentanone (MIBK)	mg/kg	56,000	0.0098	U	0.014	U	0.011	U	0.01	U	0.0098	U	0.01	U	0.0097	U	0.0097	U
Acetone	mg/kg	670,000	0.048		0.014	U	0.018		0.017		0.0089	J	0.0059	J	0.023		0.0097	U
Benzene	mg/kg	5.1	0.0049	U	0.0068	U	0.0053	U	0.005	U	0.0049	U	0.005	U	0.0051	U	0.0049	U
Bromoform	mg/kg	86	0.0049	U	0.0068	U	0.0053	U	0.005	U	0.0049	U	0.005	U	0.0051	U	0.0049	U
Carbon disulfide	mg/kg	3,500	0.051		0.04		0.0053	U	0.006		0.012		0.005	U	0.0062		0.0049	U
Chloroform	mg/kg	1.4	0.0049	U	0.0068	U	0.0053	U	0.005	U	0.0049	U	0.005	U	0.0051	U	0.0049	U
Chloromethane	mg/kg	460	0.0049	U	0.0068	U	0.0053	U	0.005	U	0.0049	U	0.005	U	0.0051	U	0.0049	U
cis-1,2-Dichloroethene	mg/kg	2,300	0.0049	U	0.0068	U	0.0053	U	0.005	U	0.0049	U	0.005	U	0.0051	U	0.0049	U
Cyclohexane	mg/kg	27,000	0.0098	U	0.014	U	0.011	U	0.01	U	0.0098	U	0.01	U	0.0097	U	0.0097	U
Ethylbenzene	mg/kg	25	0.0049	U	0.0068	U	0.0053	U	0.005	U	0.0049	U	0.005	U	0.0051	U	0.0049	U
Isopropylbenzene	mg/kg	9,900	0.0049	U	0.0068	U	0.0053	U	0.005	U	0.0049	U	0.005	U	0.0051	U	0.0049	U
Methyl Acetate	mg/kg	1,200,000	0.049	U	0.068	U	0.053	U	0.05	U	0.049	U	0.05	U	0.051	U	0.049	U
Methylene Chloride	mg/kg	1,000	0.0039	J	0.007		0.0053	U	0.005	U	0.0049	U	0.0039	J	0.0051	U	0.0046	J
Styrene	mg/kg	35,000	0.0049	U	0.0068	U	0.0053	U	0.005	U	0.0049	U	0.005	U	0.0051	U	0.0049	U
Tetrachloroethene	mg/kg	100	0.0049	U	0.0068	U	0.0053	U	0.005	U	0.0049	U	0.005	U	0.0051	U	0.0049	U
Toluene	mg/kg	47,000	0.0049	U	0.0068	U	0.0053	U	0.005	U	0.0049	U	0.005	U	0.0051	U	0.0049	U
Trichloroethene	mg/kg	6	0.0049	U	0.0068	U	0.0053	U	0.005	U	0.0049	U	0.005	U	0.0051	U	0.0049	U
Xylenes	mg/kg	2,800	0.015	U	0.021	U	0.016	U	0.015	U								
Semi-Volatile Organic Compounds*																		
2,4,5-Trichlorophenol	mg/kg	82,000	0.87	R	0.88	U	0.92	R	0.91	U	0.9	U	0.92	U	4.9	U	1	U
2,4-Dimethylphenol	mg/kg	16,000	0.35	R	0.35	U	0.37	R	0.36	U	0.36	U	0.37	U	1.9	U	0.4	U
2-Methylnaphthalene	mg/kg	3,000	0.0047	J	0.0071	U	0.073	U	0.022		0.0072	U	0.0075	U	0.061	J	0.008	U
2-Methylphenol	mg/kg	41,000	0.35	R	0.35	U	0.37	R	0.36	U	0.36	U	0.37	U	1.9	U	0.4	U
3&4-Methylphenol(m&p Cresol)	mg/kg	41,000	0.69	R	0.7	U	0.74	R	0.73	U	0.72	U	0.74	U	3.9	U	0.8	U
Acenaphthene	mg/kg	45,000	0.0069	U	0.0071	U	0.056	J	0.03		0.0072	U	0.0075	U	0.21		0.008	U
Acenaphthylene	mg/kg	45,000	0.0012	J	0.0071	U	0.073	U	0.0066	J	0.0072	U	0.0075	U	0.17		0.008	U
Acetophenone	mg/kg	120,000	0.35	U	0.35	U	0.37	U	0.36	U	0.36	U	0.37	U	1.9	U	0.4	U
Anthracene	mg/kg	230,000	0.0027	J	0.0071	U	0.2		0.075		0.0071	J	0.0075	U	1.2		0.008	U
Benzaldehyde	mg/kg	120,000	0.35	U	0.22	J	0.37	U	0.36	U	0.22	J	0.37	U	1.2	B	0.4	U
Benzo[a]anthracene	mg/kg	2.9	0.014		0.0065	J	0.57		0.055		0.026		0.0075	U	5.2		0.0028	J
Benzo[a]pyrene	mg/kg	0.29	0.012		0.011		0.52		0.048		0.03		0.0075	U	3.8		0.008	U
Benzo[b]fluoranthene	mg/kg	2.9	0.03		0.016		0.85		0.079		0.054		0.0075	U	9.3		0.008	U
Benzo[g,h,i]perylene	mg/kg		0.0069	U	0.0081		0.25		0.021		0.015		0.0075	U	2.6		0.0016	J
Benzo[k]fluoranthene	mg/kg	29	0.013		0.0096		0.53		0.03		0.017		0.0075	U	3.5		0.008	U
Biphenyl (Diphenyl)	mg/kg	200	0.35	U	0.35	U	0.37	U	0.36	U	0.36	U	0.37	U	1.9	U	0.4	U
bis(2-Ethylhexyl)phthalate	mg/kg	160	0.35	U	0.35	U	0.73		0.36	U	0.36	U	0.37	U	1.9	U	0.4	U
Caprolactam	mg/kg	400,000	0.87	U	0.88	U	0.92	U	0.91	U	0.9	U	0.92	U	4.9	U	1	U
Carbazole	mg/kg		0.35	U	0.35	U	0.37	U	0.36	U	0.36	U	0.37	U	0.54	J	0.4	U
Chrysene	mg/kg	290	0.026		0.0082		0.63		0.06		0.028		0.0075	U	6.2		0.0021	J
Dibenz[a,h]anthracene	mg/kg	0.29	0.0069	U	0.0071	U	0.1		0.0092		0.0054	J	0.0075	U	1.1		0.008	U
Di-n-butylphthalate	mg/kg	82,000	0.35	U	0.35	U	0.37	U	0.36	U	0.36	U	0.37	U	1.9	U	0.4	U
Di-n-octylphthalate	mg/kg	8,200	0.35	U	0.35	U	0.3	J	0.36	U	0.36	U	0.37	U	1.9	U	0.4	U
Fluoranthene	mg/kg	30,000	0.047		0.012		1.3		0.18		0.056		0.0075	U	15		0.0053	J
Fluorene	mg/kg	30,000	0.001	J	0.0012	J	0.037	J	0.051		0.0018	J	0.0075	U	0.28		0.0009	J
Indeno[1,2,3-c,d]pyrene	mg/kg	2.9	0.0084		0.0071	U	0.26		0.021		0.016		0.0075	U	2.9		0.008	U
Naphthalene	mg/kg	17	0.003	J	0.0071	U	0.073	U	0.017		0.0072	U	0.0075	U	0.13		0.008	U
Phenanthrene	mg/kg		0.024		0.0071	U	0.87		0.31		0.025		0.0075	U	4.5		0.008	U
Phenol	mg/kg	250,000	1.3		0.35	U	0.37	U	0.36	U	0.36	U	0.37	U	1.9	U	0.4	U
Pyrene	mg/kg	23,000	0.038		0.011		1.2		0.16		0.052		0.0075	U	14.7		0.0046	J
PCBs																		
Total PCB	mg/kg	0.97	0.12	U	NA		0.22	J	NA		0.13	U	NA		0.14	U	NA	
Aroclor 1242	mg/kg	0.97	0.017	U	NA		0.22		NA		0.018	U	NA		0.019	U	NA	
Aroclor 1248	mg/kg	0.94	0.017	U	NA		0.037	U	NA		0.031		NA		0.019	U	NA	
Aroclor 1254	mg/kg	0.97	0.02		NA		0.037	U	NA		0.018	U	NA		0.019	U	NA	
Aroclor 1260	mg/kg	0.99	0.017	U	NA		0.037	U	NA		0.018	U	NA		0.019	U	NA	
TPH/Oil and Grease																		
Oil and Grease	mg/kg		437		635		8,190		1,120		284		496					

Table 6
Summary of Organics Detected in Soil
Parcel A3
Tradepoint Atlantic
Sparrows Point, Maryland

Parameter	Units	PAL	RW-030-SB-10	RW-031-SB-1	RW-031-SB-6	RW-032-SB-1	RW-032-SB-5	RW-032-SB-10	RW-033-SB-1	RW-033-SB-6.5	RW-033-SB-10	RW-034-SB-1	RW-034-SB-5	RW-035-SB-1	RW-035-SB-5	RW-036-SB-1	RW-036-SB-4												
			Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil											
			9/23/2015	9/24/2015	9/24/2015	9/24/2015	9/24/2015	9/24/2015	9/25/2015	9/25/2015	9/25/2015	9/25/2015	9/25/2015	9/29/2015	9/29/2015	9/29/2015	9/29/2015												
Volatile Organic Compounds																													
1,1,2-Trichloroethane	mg/kg	5	NA	0.0046	U	0.0045	U	0.0053	U	0.006	U	NA	0.0069	UJ	0.0045	U	NA	0.0058	U	0.0056	U	0.0044	U	0.0039	U	0.0053	U	0.0048	U
1,1-Dichloroethane	mg/kg	16	NA	0.0046	U	0.0045	U	0.0053	U	0.0077	U	NA	0.0069	U	0.0045	U	NA	0.0058	U	0.0056	U	0.0044	U	0.0039	U	0.0053	U	0.0048	U
1,2,3-Trichlorobenzene	mg/kg	930	NA	0.0046	U	0.0045	U	0.0053	UJ	0.006	UJ	NA	0.0069	UJ	0.0045	UJ	NA	0.0058	U	0.0056	U	0.0044	U	0.0039	U	0.0053	U	0.0048	U
1,2-Dibromo-3-chloropropane	mg/kg	0.064	NA	0.0046	U	0.0045	U	0.0053	UJ	0.006	UJ	NA	0.0069	UJ	0.0045	U	NA	0.0058	UJ	0.0056	UJ	0.0044	U	0.0039	U	0.0053	U	0.0048	U
1,2-Dichloroethane	mg/kg	2	NA	0.0046	U	0.0045	U	0.0053	U	0.006	U	NA	0.0069	U	0.0045	U	NA	0.0058	U	0.0056	U	0.0044	U	0.0039	U	0.0053	U	0.0048	U
1,2-Dichloroethene (Total)	mg/kg	2,300	NA	0.0092	U	0.0089	U	0.011	U	0.012	U	NA	0.014	U	0.12	U	NA	0.012	U	0.011	U	0.0088	U	0.0078	U	0.011	U	0.0096	U
1,4-Dichlorobenzene	mg/kg	11	NA	0.0046	U	0.0045	U	0.0053	UJ	0.006	UJ	NA	0.0069	UJ	0.0045	U	NA	0.0058	U	0.0056	U	0.0044	U	0.0039	U	0.0053	U	0.0048	U
2-Butanone (MEK)	mg/kg	190,000	NA	0.0031	J	0.0089	U	0.0044	J	0.016	U	NA	0.015	U	0.081	U	NA	0.012	U	0.011	U	0.0062	J	0.0078	U	0.0038	J	0.0025	J
2-Hexanone	mg/kg	1,300	NA	0.0092	U	0.0089	U	0.011	U	0.012	U	NA	0.014	UJ	0.011	J	NA	0.012	U	0.011	U	0.0088	U	0.0078	U	0.011	U	0.0096	U
4-Methyl-2-pentanone (MIBK)	mg/kg	56,000	NA	0.0092	U	0.0089	U	0.011	U	0.012	U	NA	0.014	UJ	0.0063	J	NA	0.012	U	0.011	U	0.0088	U	0.0078	U	0.011	U	0.0096	U
Acetone	mg/kg	670,000	NA	0.026	U	0.012	U	0.027	U	0.085	U	NA	0.094	U	0.21	U	NA	0.013	U	0.011	J	0.045	U	0.0078	U	0.035	U	0.021	U
Benzene	mg/kg	5.1	NA	0.0046	U	0.0045	U	0.0023	J	0.0028	J	NA	0.0059	J	0.0045	U	NA	0.0058	U	0.0056	U	0.0028	J	0.0039	U	0.0053	U	0.0048	U
Bromoform	mg/kg	86	NA	0.0046	UJ	0.0045	U	0.0053	U	0.006	U	NA	0.0069	UJ	0.0045	UJ	NA	0.0058	UJ	0.0056	UJ	0.0044	U	0.0039	U	0.0053	U	0.0048	U
Carbon disulfide	mg/kg	3,500	NA	0.0048	U	0.0042	J	0.0073	U	0.012	U	NA	0.0044	J	0.0045	U	NA	0.043	U	0.0043	J	0.0067	U	0.0076	U	0.0055	U	0.0015	J
Chloroform	mg/kg	1.4	NA	0.0046	U	0.0045	U	0.0053	U	0.006	U	NA	0.0062	J	0.0045	U	NA	0.0058	U	0.0056	U	0.0044	U	0.0039	U	0.0053	U	0.0048	U
Chloromethane	mg/kg	460	NA	0.0046	U	0.0045	U	0.0053	U	0.006	U	NA	0.0069	U	0.0045	U	NA	0.0058	U	0.0056	U	0.0044	U	0.00051	J	0.0053	U	0.0048	U
cis-1,2-Dichloroethene	mg/kg	2,300	NA	0.0046	U	0.0045	U	0.0053	U	0.006	U	NA	0.0048	J	0.12	U	NA	0.0058	U	0.0056	U	0.0044	U	0.0039	U	0.0053	U	0.0048	U
Cyclohexane	mg/kg	27,000	NA	0.0092	U	0.0089	U	0.0062	J	0.012	U	NA	0.014	U	0.0091	U	NA	0.012	U	0.011	U	0.0088	U	0.0078	U	0.011	U	0.0096	U
Ethylbenzene	mg/kg	25	NA	0.0046	U	0.0045	U	0.0053	U	0.006	U	NA	0.0069	UJ	0.0039	J	NA	0.0058	U	0.0056	U	0.0044	U	0.0039	U	0.0053	U	0.0048	U
Isopropylbenzene	mg/kg	9,900	NA	0.0046	U	0.0045	U	0.0053	UJ	0.006	UJ	NA	0.0069	UJ	0.0024	J	NA	0.0058	U	0.0056	U	0.0044	U	0.0039	U	0.0053	U	0.0048	U
Methyl Acetate	mg/kg	1,200,000	NA	0.046	U	0.045	U	0.053	U	0.06	U	NA	0.069	U	0.045	U	NA	0.058	U	0.056	U	0.044	U	0.039	U	0.053	U	0.048	U
Methylene Chloride	mg/kg	1,000	NA	0.0046	U	0.0045	U	0.0053	U	0.006	U	NA	0.0069	U	0.0047	U	NA	0.0058	U	0.0056	U	0.0044	U	0.0035	J	0.0029	J	0.0048	U
Styrene	mg/kg	35,000	NA	0.0046	U	0.0045	U	0.0053	U	0.006	U	NA	0.0069	UJ	0.0045	U	NA	0.0058	U	0.0056	U	0.0044	U	0.0039	U	0.0053	U	0.0048	U
Tetrachloroethene	mg/kg	100	NA	0.0046	U	0.0045	U	0.0053	U	0.006	U	NA	0.0069	UJ	0.0045	U	NA	0.0058	U	0.0056	U	0.0044	U	0.0039	U	0.0053	U	0.0048	U
Toluene	mg/kg	47,000	NA	0.0046	U	0.0045	U	0.0022	J	0.0028	J	NA	0.0069	UJ	0.003	J	NA	0.0058	U	0.0056	U	0.00081	J	0.0039	U	0.0053	U	0.0048	U
Trichloroethene	mg/kg	6	NA	0.0046	U	0.0045	U	0.0053	U	0.006	U	NA	0.53	J	0.031	J	NA	0.0058	U	0.0056	U	0.0024	J	0.0039	U	0.0053	U	0.0048	U
Xylenes	mg/kg	2,800	NA	0.014	U	0.013	U	0.016	U	0.018	U	NA	0.021	UJ	0.052	U	NA	0.018	U	0.017	U	0.013	U	0.0011	J	0.016	U	0.014	U
Semi-Volatile Organic Compounds*																													
2,4,5-Trichlorophenol	mg/kg	82,000	NA	0.96	R	0.94	U	4.6	U	1.1	U	NA	19.8	U	0.96	UJ	NA	0.18	R	0.98	U	0.94	U	1	U	0.2	R	0.94	U
2,4-Dimethylphenol	mg/kg	16,000	NA	0.38	R	0.37	U	1.9	U	0.42	U	NA	7.9	U	0.38	U	NA	0.072	R	0.39	U	0.37	U	0.4	U	0.079	R	0.38	U
2-Methylnaphthalene	mg/kg	3,000	NA	0.0075	U	0.0075	U	0.15	U	0.53	U	NA	0.83	U	6.3	U	NA	0.0056	J	0.0078	U	0.052	U	0.0079	U	0.018	U	0.0076	U
2-Methylphenol	mg/kg	41,000	NA	0.38	R	0.37	U	1.9	U	0.42	U	NA	0.83	U	0.38	U	NA	0.072	R	0.39	U	0.37	U	0.4	U	0.079	R	0.38	U
3&4-Methylphenol(m&p Cresol)	mg/kg	41,000	NA	0.34	J	0.75	U	3.7	U	0.85	U	NA	15.9	U	0.77	U	NA	0.14	R	0.78	U	0.75	U	0.8	U	0.16	R	0.75	U
Acenaphthene	mg/kg	45,000	NA	0.0075	U	0.0075	U	0.075	U	0.015	U	NA	1.6	U	0.78	U	NA	0.0036	J	0.0078	U	0.12	U	0.0079	U	0.013	U	0.0076	U
Acenaphthylene	mg/kg	45,000	NA	0.0075	U	0.0075	U	0.075	U	0.0095	U	NA	0.32	U	0.78	U	NA	0.0061	J	0.0078	U	0.13	U	0.0079	U	0.033	U	0.0076	U
Acetophenone	mg/kg	120,000	NA	0.38	U	0.37	U	1.9	U	0.42	U	NA	7.9	U	0.38	U	NA	0.072	U	0.39	U	0.37	U	0.4	U	0.079	U	0.38	U
Anthracene	mg/kg	230,000	NA	0.0075	U	0.0075	U	0.099	U	0.06	U	NA	2.9	U	0.78	U	NA	0.023	U	0.0028	J	0.37	U	0.0079	U	0.07	U	0.0019	J
Benzaldehyde	mg/kg	120,000	NA	0.38	U	0.37	U	1.9	U	0.39	B	NA	5.1	B	0.5	U	NA	0.072	R	0.39	U	0.37	U	0.4	U	0.019	J	0.38	U
Benzo[a]anthracene	mg/kg	2.9	NA	0.0075	U	0.0075	U	0.32	U	0.19	U	NA	6.8	U	0.21	J	NA	0.12	U	0.0042	J	1.3	U	0.0079	U	0.3	U	0.0038	J
Benzo[a]pyrene	mg/kg	0.29	NA	0.0075	U	0.0075	U	0.24	U	0.2	U	NA	6.7	U	0.78	U	NA	0.12	U	0.0078	U	1.4	U	0.0079	U	0.28	U	0.0046	J
Benzo[b]fluoranthene	mg/kg	2.9	NA	0.0075	U	0.0042	J	0.36	U	0.34	U	NA	10.7	U	0.78	U	NA	0.22	U	0.004	J	5.4	U	0.0079	U	0.74	U	0.0073	J
Ben																													

Table 6
Summary of Organics Detected in Soil
Parcel A3
Tradepoint Atlantic
Sparrows Point, Maryland

Parameter	Units	PAL	RW-036-SB-10	RW-037-SB-1	RW-037-SB-8	RW-037-SB-10	RW-038-SB-1	RW-038-SB-5	RW-039-SB-1	RW-039-SB-5	RW-039-SB-10	RW-040-SB-1	RW-040-SB-6	RW-040-SB-10	RW-041-SB-1	RW-041-SB-5	RW-042-SB-1											
			Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil										
			9/29/2015	9/29/2015	9/29/2015	9/29/2015	9/25/2015	9/25/2015	9/29/2015	9/29/2015	9/29/2015	9/28/2015	9/28/2015	9/28/2015	9/28/2015	9/23/2015	9/23/2015	9/30/2015										
Volatiles Organic Compounds																												
1,1,2-Trichloroethane	mg/kg	5	NA	0.0047	U	0.0038	U	NA	0.004	U	0.0041	U	0.0048	U	0.0048	U	NA	0.0054	U	0.0051	U	NA	0.0046	U	0.0081	U	0.006	U
1,1-Dichloroethane	mg/kg	16	NA	0.0047	U	0.0038	U	NA	0.004	U	0.0041	U	0.0048	U	0.0048	U	NA	0.0054	U	0.0051	U	NA	0.0046	U	0.0081	U	0.006	U
1,2,3-Trichlorobenzene	mg/kg	930	NA	0.0047	U	0.0038	U	NA	0.004	U	0.0041	U	0.0048	U	0.0048	U	NA	0.0054	U	0.0051	U	NA	0.0046	U	0.0081	U	0.006	U
1,2-Dibromo-3-chloropropane	mg/kg	0.064	NA	0.0047	U	0.0038	U	NA	0.004	U	0.0041	U	0.0048	U	0.0048	U	NA	0.0054	UJ	0.0051	UJ	NA	0.0046	U	0.0081	U	0.006	U
1,2-Dichloroethane	mg/kg	2	NA	0.0047	U	0.0038	U	NA	0.004	U	0.0041	U	0.0048	U	0.0048	U	NA	0.0054	U	0.0051	U	NA	0.0046	U	0.0081	U	0.006	U
1,2-Dichloroethene (Total)	mg/kg	2,300	NA	0.0095	U	0.0076	U	NA	0.0058	J	0.01		0.0095	U	0.0097	U	NA	0.011	U	0.01	U	NA	0.0092	U	0.016	U	0.012	U
1,4-Dichlorobenzene	mg/kg	11	NA	0.0047	U	0.0038	U	NA	0.004	U	0.0041	U	0.0048	U	0.0048	U	NA	0.0054	U	0.0051	U	NA	0.0046	U	0.0081	U	0.006	U
2-Butanone (MEK)	mg/kg	190,000	NA	0.0025	J	0.0076	U	NA	0.0038	J	0.0082	U	0.002	J	0.0097	U	NA	0.011	U	0.01	U	NA	0.0092	U	0.016	U	0.011	J
2-Hexanone	mg/kg	1,300	NA	0.0095	U	0.0076	U	NA	0.0081	U	0.0082	U	0.0095	U	0.0097	U	NA	0.011	U	0.01	U	NA	0.0092	U	0.016	U	0.012	U
4-Methyl-2-pentanone (MIBK)	mg/kg	56,000	NA	0.0095	U	0.0076	U	NA	0.0081	U	0.0082	U	0.0095	U	0.0097	U	NA	0.011	U	0.01	U	NA	0.0092	U	0.016	U	0.012	U
Acetone	mg/kg	670,000	NA	0.015		0.0076	U	NA	0.044	J	0.0082	UJ	0.0095	U	0.016		NA	0.018		0.01	U	NA	0.0076	J	0.04		0.061	
Benzene	mg/kg	5.1	NA	0.0047	U	0.0038	U	NA	0.004	U	0.0041	U	0.0048	U	0.0048	U	NA	0.0054	U	0.0051	U	NA	0.0046	U	0.0081	U	0.0018	J
Bromoform	mg/kg	86	NA	0.0047	U	0.0038	U	NA	0.004	UJ	0.0041	UJ	0.0048	U	0.0048	U	NA	0.0054	UJ	0.0051	UJ	NA	0.0046	U	0.0081	U	0.006	U
Carbon disulfide	mg/kg	3,500	NA	0.0058		0.0038	U	NA	0.0046		0.0041	U	0.0048	U	0.0048	U	NA	0.0044	J	0.0055		NA	0.0035	J	0.007	J	0.028	
Chloroform	mg/kg	1.4	NA	0.0047	U	0.0038	U	NA	0.004	U	0.0041	U	0.0048	U	0.0048	U	NA	0.0054	U	0.0051	U	NA	0.0046	U	0.0081	U	0.006	U
Chloromethane	mg/kg	460	NA	0.0047	U	0.0038	U	NA	0.004	U	0.0041	U	0.0048	U	0.0048	U	NA	0.0054	U	0.0051	U	NA	0.0046	U	0.0081	U	0.006	U
cis-1,2-Dichloroethene	mg/kg	2,300	NA	0.0047	U	0.0038	U	NA	0.005		0.0092		0.0048	U	0.0048	U	NA	0.0054	U	0.0051	U	NA	0.0046	U	0.0081	U	0.006	U
Cyclohexane	mg/kg	27,000	NA	0.0095	U	0.0076	U	NA	0.0081	U	0.0082	U	0.0095	U	0.0097	U	NA	0.011	U	0.01	U	NA	0.0092	U	0.016	U	0.0033	J
Ethylbenzene	mg/kg	25	NA	0.0047	U	0.0038	U	NA	0.004	U	0.0041	U	0.0048	U	0.0048	U	NA	0.0054	U	0.0051	U	NA	0.0046	U	0.0081	U	0.006	U
Isopropylbenzene	mg/kg	9,900	NA	0.0047	U	0.0038	U	NA	0.004	U	0.0041	U	0.0048	U	0.0048	U	NA	0.0054	U	0.0051	U	NA	0.0046	U	0.0081	U	0.006	U
Methyl Acetate	mg/kg	1,200,000	NA	0.047	U	0.038	U	NA	0.04	U	0.041	U	0.048	U	0.048	U	NA	0.054	U	0.051	U	NA	0.046	U	0.081	U	0.06	U
Methylene Chloride	mg/kg	1,000	NA	0.0047	U	0.0034	J	NA	0.004	U	0.0041	U	0.004	J	0.0025	J	NA	0.0054	U	0.0051	U	NA	0.0044	J	0.0081	U	0.0038	J
Styrene	mg/kg	35,000	NA	0.0047	U	0.0038	U	NA	0.004	U	0.0041	U	0.0048	U	0.0048	U	NA	0.0054	U	0.0051	U	NA	0.0046	U	0.0081	U	0.006	U
Tetrachloroethene	mg/kg	100	NA	0.0047	U	0.0038	U	NA	0.004	U	0.0041	U	0.0048	U	0.0048	U	NA	0.0054	U	0.0051	U	NA	0.0046	U	0.0081	U	0.006	U
Toluene	mg/kg	47,000	NA	0.0047	U	0.00026	J	NA	0.004	U	0.0041	U	0.00042	J	0.0048	U	NA	0.0054	U	0.0051	U	NA	0.0046	U	0.0081	U	0.0029	J
Trichloroethene	mg/kg	6	NA	0.0047	U	0.0038	U	NA	0.038		0.047		0.0048	U	0.0048	U	NA	0.0054	U	0.0051	U	NA	0.0046	U	0.0081	U	0.006	U
Xylenes	mg/kg	2,800	NA	0.014	U	0.011	U	NA	0.012	U	0.012	U	0.014	U	0.014	U	NA	0.016	U	0.015	U	NA	0.014	U	0.024	U	0.018	U
Semi-Volatile Organic Compounds*																												
2,4,5-Trichlorophenol	mg/kg	82,000	NA	0.2	R	0.022	J	NA	0.91	U	0.97	U	0.18	R	0.92	R	NA	0.18	R	1	U	NA	0.91	U	20.5	U	0.21	U
2,4-Dimethylphenol	mg/kg	16,000	NA	0.078	R	0.081	U	NA	0.36	U	0.39	U	0.073	R	0.37	U	NA	0.072	R	0.41	U	NA	0.36	U	8.2	U	0.082	U
2-Methylnaphthalene	mg/kg	3,000	NA	0.0064	J	0.0078	U	NA	0.0036	J	0.0078	U	0.0043	J	0.0075	U	NA	0.98		0.0082	U	NA	0.0072	U	0.16	U	0.093	
2-Methylphenol	mg/kg	41,000	NA	0.078	R	0.081	U	NA	0.36	U	0.39	U	0.073	R	0.37	UJ	NA	0.072	R	0.41	U	NA	0.36	U	8.2	U	0.082	U
3&4-Methylphenol(m&p Cresol)	mg/kg	41,000	NA	0.16	R	0.16	U	NA	0.72	U	0.78	U	0.15	R	0.74	U	NA	0.14	R	0.81	U	NA	0.09	J	16.4	U	0.16	U
Acenaphthene	mg/kg	45,000	NA	0.0073	J	0.0078	U	NA	0.0038	J	0.0078	U	0.0074	U	0.0075	U	NA	0.55		0.0082	U	NA	0.0072	U	0.16	U	0.018	
Acenaphthylene	mg/kg	45,000	NA	0.015		0.0078	U	NA	0.0049	J	0.0078	U	0.0067	J	0.0075	U	NA	1.2		0.0082	U	NA	0.0072	U	0.16	U	0.11	
Acetophenone	mg/kg	120,000	NA	0.078	U	0.081	U	NA	0.36	U	0.39	U	0.05	J	0.37	U	NA	0.072	U	0.41	U	NA	0.36	U	8.2	U	0.082	U
Anthracene	mg/kg	230,000	NA	0.023		0.0078	U	NA	0.02		0.0078	U	0.011		0.0075	U	NA	5.3		0.0051	J	NA	0.0072	U	0.32		0.14	
Benzaldehyde	mg/kg	120,000	NA	0.078	R	0.081	R	NA	0.36	U	0.39	U	0.073	R	0.37	U	NA	0.072	R	0.41	U	NA	0.26	J	8.2	U	0.082	R
Benzo[a]anthracene	mg/kg	2.9	NA	0.097		0.0078	U	NA	0.089		0.0078	U	0.034		0.0075	U	NA	9.6		0.012		NA	0.0023	J	0.73		0.51	
Benzo[a]pyrene	mg/kg	0.29	NA	0.071		0.0078	U	NA	0.093		0.0078	U	0.045		0.0075	U	NA	7.6		0.0082	U	NA	0.0072	U	0.74		0.55	
Benzo[b]fluoranthene	mg/kg	2.9	NA	0.21		0.0078	U	NA	0.19		0.0078	U	0.09		0.0075	U	NA	11.4		0.0082	U	NA	0.0043	J	1.1		1.3	
Benzo[g,h,i]perylene	mg/kg	NA	NA	0.03		0.0078	U	NA	0.028		0.0078	U	0.016		0.0075	U	NA	3.1		0.0049	J	NA	0.0029	J	0.42		0.2	
Benzo[k]fluoranthene	mg/kg	29	NA	0.099		0.0078	U	NA	0.087		0.0078	U	0.047		0.0075	U	NA	4		0.0082	U	NA	0.0014	J	0.42		0.38	
Biphenyl (Diphenyl)	mg/kg	200	NA	0.078	U	0.081																						

Table 6
Summary of Organics Detected in Soil
Parcel A3
Tradepoint Atlantic
Sparrows Point, Maryland

Parameter	Units	PAL	RW-042-SB-5	RW-043-SB-1	RW-043-SB-8	RW-043-SB-10	RW-044-SB-1	RW-044-SB-5	RW-044-SB-10	RW-045-SB-1	RW-045-SB-5	RW-045-SB-10	RW-046-SB-1	RW-046-SB-5	RW-047-SB-1	RW-047-SB-6	RW-047-SB-10															
			Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil														
			9/30/2015	9/24/2015	9/24/2015	9/24/2015	9/28/2015	9/28/2015	9/28/2015	9/28/2015	9/28/2015	9/28/2015	9/25/2015	9/25/2015	9/28/2015	9/28/2015	9/28/2015															
Volatile Organic Compounds																																
1,1,2-Trichloroethane	mg/kg	5	0.0058	U	0.0044	U	0.23	U	NA		0.0049	U	0.0044	U	NA		0.0064	U	0.0056	U	NA		0.005	U	0.0047	U	0.0046	U	0.23	U	0.23	R
1,1-Dichloroethane	mg/kg	16	0.0058	U	0.0044	U	0.23	U	NA		0.0049	U	0.0033	J	NA		0.0064	U	0.0056	U	NA		0.005	U	0.0047	U	0.0046	U	0.23	U	0.23	R
1,2,3-Trichlorobenzene	mg/kg	930	0.0058	U	0.0044	U	0.23	U	NA		0.0049	U	0.0044	U	NA		0.0064	U	0.0056	U	NA		0.005	U	0.0047	U	0.0046	U	0.23	U	0.23	R
1,2-Dibromo-3-chloropropane	mg/kg	0.064	0.0058	U	0.0044	U	0.23	U	NA		0.0049	UJ	0.0044	UJ	NA		0.0064	UJ	0.0056	UJ	NA		0.005	U	0.0047	U	0.0046	UJ	0.24	J	0.23	R
1,2-Dichloroethane	mg/kg	2	0.0058	U	0.0044	U	0.23	U	NA		0.0049	U	0.0044	U	NA		0.0064	U	0.0056	U	NA		0.005	U	0.0047	U	0.0046	U	0.23	U	0.23	R
1,2-Dichloroethane (Total)	mg/kg	2,300	0.012	U	0.0087	U	0.47	U	NA		0.0099	U	0.0088	U	NA		0.013	U	0.011	U	NA		0.01	U	0.0095	U	0.0092	U	0.46	U	0.45	R
1,4-Dichlorobenzene	mg/kg	11	0.0058	U	0.0044	U	0.23	U	NA		0.0049	U	0.0044	U	NA		0.0064	U	0.0056	U	NA		0.005	U	0.0047	U	0.0046	U	0.23	U	0.23	R
2-Butanone (MEK)	mg/kg	190,000	0.003	J	0.0021	J	0.47	U	NA		0.0099	U	0.0088	U	NA		0.013	U	0.011	U	NA		0.0051	J	0.0095	U	0.0092	U	0.46	U	0.45	R
2-Hexanone	mg/kg	1,300	0.012	U	0.0095		0.47	U	NA		0.0099	U	0.0088	U	NA		0.013	U	0.011	U	NA		0.01	U	0.0095	U	0.0092	U	0.46	U	0.45	R
4-Methyl-2-pentanone (MIBK)	mg/kg	56,000	0.012	U	0.0087	U	0.47	U	NA		0.0099	U	0.0088	U	NA		0.013	U	0.011	U	NA		0.01	U	0.0095	U	0.0092	U	0.46	U	0.45	R
Acetone	mg/kg	670,000	0.032		0.025		0.47	U	NA		0.019		0.0088	U	NA		0.024		0.011	U	NA		0.026	J	0.0095	UJ	0.022		0.46	U	0.14	J
Benzene	mg/kg	5.1	0.0058	U	0.0044	U	0.23	U	NA		0.0049	U	0.0044	U	NA		0.0064	U	0.0056	U	NA		0.0015	J	0.0047	U	0.0046	U	0.23	U	0.23	R
Bromoform	mg/kg	86	0.0058	U	0.0044	UJ	0.23	UJ	NA		0.0049	UJ	0.0044	UJ	NA		0.0064	UJ	0.0056	UJ	NA		0.005	UJ	0.0047	UJ	0.0054	J	0.23	UJ	0.23	R
Carbon disulfide	mg/kg	3,500	0.0058	U	0.0044	U	0.23	U	NA		0.0029	J	0.0044	U	NA		0.0074		0.023		NA		0.0091		0.0047	U	0.0042	J	0.23	U	0.23	R
Chloroform	mg/kg	1.4	0.0058	U	0.0044	U	0.23	U	NA		0.0049	U	0.0044	U	NA		0.0064	U	0.0056	U	NA		0.005	U	0.0047	U	0.0046	U	0.23	U	0.23	R
Chloromethane	mg/kg	460	0.0058	U	0.0044	U	0.23	U	NA		0.0049	U	0.0044	U	NA		0.0064	U	0.0056	U	NA		0.005	U	0.0047	U	0.0046	U	0.23	U	0.23	R
cis-1,2-Dichloroethene	mg/kg	2,300	0.0058	U	0.0044	U	0.085	J	NA		0.0049	U	0.0044	U	NA		0.0064	U	0.0056	U	NA		0.005	U	0.0047	U	0.0046	U	0.23	U	0.23	R
Cyclohexane	mg/kg	27,000	0.012	U	0.0087	U	0.47	U	NA		0.0099	U	0.0088	U	NA		0.013	U	0.011	U	NA		0.01	U	0.0095	U	0.0092	U	0.46	U	0.45	R
Ethylbenzene	mg/kg	25	0.0058	U	0.0044	U	0.75		NA		0.0049	U	0.0044	U	NA		0.0064	U	0.0013	J	NA		0.005	U	0.0047	U	0.0046	U	0.37		0.52	J
Isopropylbenzene	mg/kg	9,900	0.0058	U	0.0044	U	0.86		NA		0.0049	U	0.0044	U	NA		0.0064	U	0.0056	U	NA		0.005	U	0.0047	U	0.0046	U	0.52		1.2	J
Methyl Acetate	mg/kg	1,200,000	0.058	U	0.044	U	2.3	U	NA		0.049	U	0.044	U	NA		0.064	U	0.056	U	NA		0.05	U	0.047	U	0.046	U	2.3	U	2.3	R
Methylene Chloride	mg/kg	1,000	0.0055	J	0.0035	J	0.23	U	NA		0.0049	U	0.0044	U	NA		0.0064	U	0.0056	U	NA		0.005	U	0.0047	U	0.0046	U	0.23	U	0.23	R
Styrene	mg/kg	35,000	0.0058	U	0.0044	U	0.23	U	NA		0.0049	U	0.0044	U	NA		0.0064	U	0.0056	U	NA		0.005	U	0.0047	U	0.0046	U	0.23	U	0.23	R
Tetrachloroethene	mg/kg	100	0.0058	U	0.0044	U	0.23	U	NA		0.0049	U	0.0044	U	NA		0.0064	U	0.0056	U	NA		0.005	U	0.0047	U	0.0046	U	0.23	U	0.23	R
Toluene	mg/kg	47,000	0.0058	U	0.0044	U	0.075	J	NA		0.0049	U	0.0044	U	NA		0.0064	U	0.0056	U	NA		0.005	U	0.0047	U	0.0046	U	0.23	U	0.23	R
Trichloroethene	mg/kg	6	0.0058	U	0.0021	J	0.23	U	NA		0.0049	U	0.0044	U	NA		0.0064	U	0.0056	U	NA		0.032		0.0047	U	0.0046	U	0.23	U	0.23	R
Xylenes	mg/kg	2,800	0.017	U	0.013	U	6.4		NA		0.015	U	0.013	U	NA		0.019	U	0.017	U	NA		0.015	U	0.014	U	0.014	U	0.7	U	0.68	R
Semi-Volatile Organic Compounds*																																
2,4,5-Trichlorophenol	mg/kg	82,000	0.18	U	0.91	U	18.8	R	NA		0.19	R	0.97	U	NA		0.19	UJ	0.97	U	NA		0.98	U	0.93	U	0.95	U	1	U	NA	
2,4-Dimethylphenol	mg/kg	16,000	0.072	U	0.37	U	7.5	R	NA		0.076	R	0.39	U	NA		0.074	UJ	0.39	U	NA		0.39	U	0.37	U	0.38	U	0.4	U	NA	
2-Methylnaphthalene	mg/kg	3,000	0.0075	U	0.0073	U	273		0.04	J	0.037		0.0077	U	NA		0.0091		0.24		NA		0.076	J	0.0076	U	0.054		0.091		NA	
2-Methylphenol	mg/kg	41,000	0.072	U	0.37	U	7.5	U	NA		0.076	R	0.39	U	NA		0.074	UJ	0.39	U	NA		0.39	U	0.37	U	0.38	U	0.4	U	NA	
3&4-Methylphenol(m&p Cresol)	mg/kg	41,000	0.14	U	0.73	U	15	R	NA		0.15	R	0.77	U	NA		0.15	UJ	0.77	U	NA		0.78	U	0.74	U	0.76	U	0.8	U	NA	
Acenaphthene	mg/kg	45,000	0.0075	U	0.0073	U	0.57		0.0078	UJ	0.034		0.0077	U	NA		0.0047	J	0.51		NA		0.14		0.0076	U	0.0065	J	0.0081	U	NA	
Acenaphthylene	mg/kg	45,000	0.0075	U	0.0073	U	0.28		0.0078	UJ	0.025		0.0077	U	NA		0.0025	J	0.3		NA		0.04	J	0.0076	U	0.013		0.0081	U	NA	
Acetophenone	mg/kg	120,000	0.072	U	0.37	U	7.5	U	NA		0.076	U	0.39	U	NA		0.074	U	0.39	U	NA		0.39	U	0.37	U	0.38	U	0.4	U	NA	
Anthracene	mg/kg	230,000	0.0075	U	0.0073	U	0.054	J	0.0078	UJ	0.13		0.0077	U	NA		0.021		1.9		NA		0.63		0.0076	U	0.037		0.0025	J	NA	
Benzaldehyde	mg/kg	120,000	0.072	R	0.37	U	7.5	U	NA		0.076	R	0.39	U	NA		0.074	R	0.39	U	NA		0.25	B	0.37	U	0.38	U	0.4	U	NA	
Benzo[a]anthracene	mg/kg	2.9	0.0075	U	0.0061	J	0.15	U	0.0078	UJ	0.43		0.0077	U	NA		0.06		4		NA		1.6		0.0076	U	0.15		0.0051	J	NA	
Benzo[a]pyrene	mg/kg	0.29	0.0075	U	0.0073	U	0.15	U	0.0078	UJ	0.39		0.0077	U	NA		0.043		3.9		NA		1.7		0.0076	U	0.14		0.0031	J	NA	
Benzo[b]fluoranthene	mg/kg	2.9	0.0075	U	0.008 </																											

Table 6
Summary of Organics Detected in Soil
Parcel A3
Tradepoint Atlantic
Sparrows Point, Maryland

Parameter	Units	PAL	RW-048-SB-1	RW-048-SB-5	RW-049-SB-1	RW-049-SB-5	RW-049-SB-10	RW-050-SB-1	RW-050-SB-4.5	RW-051-SB-1	RW-051-SB-5	RW-051-SB-10	RW-052-SB-1	RW-052-SB-5	RW-053-SB-1	RW-053-SB-5	RW-053-SB-10														
			Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil													
			9/25/2015	9/25/2015	9/30/2015	9/30/2015	9/30/2015	9/23/2015	9/23/2015	9/21/2015	9/21/2015	9/21/2015	9/28/2015	9/28/2015	9/28/2015	9/28/2015	9/28/2015														
Volatile Organic Compounds																															
1,1,2-Trichloroethane	mg/kg	5	0.0046	U	0.0044	U	0.0059	U	0.006	U	NA		0.005	U	0.0031	U	0.0048	U	0.0068	U	NA		0.0049	R	0.0053	R	0.0052	U	0.0042	U	NA
1,1-Dichloroethane	mg/kg	16	0.0046	U	0.0044	U	0.0059	U	0.006	U	NA		0.005	U	0.0031	U	0.0048	U	0.0068	U	NA		0.0049	R	0.0058	R	0.0052	U	0.0042	U	NA
1,2,3-Trichlorobenzene	mg/kg	930	0.0046	U	0.0044	U	0.0059	U	0.006	U	NA		0.005	U	0.0031	U	0.0048	U	0.0068	U	NA		0.0049	R	0.0015	R	0.0052	U	0.0042	U	NA
1,2-Dibromo-3-chloropropane	mg/kg	0.064	0.0046	U	0.0044	U	0.0059	U	0.006	U	NA		0.005	U	0.0031	U	0.0048	U	0.0068	U	NA		0.0049	R	0.0053	R	0.0052	U	0.0042	U	NA
1,2-Dichloroethane	mg/kg	2	0.0046	U	0.0044	U	0.0059	U	0.006	U	NA		0.005	U	0.0031	U	0.0048	U	0.0068	U	NA		0.0049	R	0.0053	R	0.0052	U	0.0042	U	NA
1,2-Dichloroethene (Total)	mg/kg	2,300	0.0092	U	0.0088	U	0.012	U	0.012	U	NA		0.01	U	0.0062	U	0.0097	U	0.014	U	NA		0.0099	R	0.011	R	0.01	U	0.0083	U	NA
1,4-Dichlorobenzene	mg/kg	11	0.0046	U	0.0044	U	0.0059	U	0.006	U	NA		0.005	U	0.0031	U	0.0048	U	0.0068	U	NA		0.0049	R	0.0053	R	0.0052	U	0.0042	U	NA
2-Butanone (MEK)	mg/kg	190,000	0.0084	J	0.0088	U	0.019		0.0014	J	NA		0.01	U	0.0062	U	0.0097	U	0.014	U	NA		0.0076	R	0.031	R	0.0042	J	0.0083	U	NA
2-Hexanone	mg/kg	1,300	0.0092	U	0.0088	U	0.012	U	0.012	U	NA		0.01	U	0.0062	U	0.0097	U	0.014	U	NA		0.082	R	0.011	R	0.01	U	0.0083	U	NA
4-Methyl-2-pentanone (MIBK)	mg/kg	56,000	0.0092	U	0.0088	U	0.012	U	0.012	U	NA		0.01	U	0.0062	U	0.0097	U	0.014	U	NA		0.0027	R	0.029	R	0.01	U	0.0083	U	NA
Acetone	mg/kg	670,000	0.02	J	0.0088	U	0.12		0.015		NA		0.016		0.035		0.016	J	0.02	J	NA		0.043	R	0.13	R	0.015	J	0.0083	U	NA
Benzene	mg/kg	5.1	0.0039	J	0.0044	U	0.0023	J	0.006	U	NA		0.005	U	0.0092		0.0048	U	0.0068	U	NA		0.0038	R	0.1	R	0.0052	U	0.0042	U	NA
Bromoform	mg/kg	86	0.0046	U	0.0044	U	0.0059	U	0.006	U	NA		0.005	U	0.0031	U	0.0048	U	0.0068	U	NA		0.0049	R	0.0053	R	0.0052	U	0.0042	U	NA
Carbon disulfide	mg/kg	3,500	0.011		0.0048		0.017		0.0036	J	NA		0.005	U	0.04		0.0097		0.034		NA		0.0093	R	0.023	R	0.0087		0.0042	U	NA
Chloroform	mg/kg	1.4	0.0046	U	0.0044	U	0.0059	U	0.006	U	NA		0.005	U	0.0031	U	0.0048	U	0.0068	U	NA		0.0049	R	0.0053	R	0.0052	U	0.0042	U	NA
Chloromethane	mg/kg	460	0.0046	U	0.0044	U	0.0059	U	0.006	U	NA		0.005	U	0.0031	U	0.0048	U	0.0068	U	NA		0.0049	R	0.0053	R	0.0052	U	0.0042	U	NA
cis-1,2-Dichloroethene	mg/kg	2,300	0.0046	U	0.0044	U	0.0059	U	0.006	U	NA		0.005	U	0.0031	U	0.0048	U	0.0068	U	NA		0.0049	R	0.0053	R	0.0052	U	0.0042	U	NA
Cyclohexane	mg/kg	27,000	0.0056	J	0.0088	U	0.0061	J	0.012	U	NA		0.01	U	0.0062	U	0.0097	U	0.014	U	NA		0.0039	R	0.011	U	0.01	U	0.0083	U	NA
Ethylbenzene	mg/kg	25	0.0011	J	0.0044	U	0.0059	U	0.006	U	NA		0.005	U	0.0032		0.0048	U	0.0068	U	NA		0.0049	R	0.12		0.0052	U	0.0042	U	NA
Isopropylbenzene	mg/kg	9,900	0.0046	U	0.0044	U	0.0059	U	0.006	U	NA		0.005	U	0.0031	U	0.0048	U	0.0068	U	NA		0.0049	R	0.04		0.0052	U	0.0042	U	NA
Methyl Acetate	mg/kg	1,200,000	0.046	U	0.044	U	0.059	U	0.06	U	NA		0.05	U	0.031	U	0.048	U	0.068	U	NA		0.049	R	0.053	U	0.052	U	0.042	U	NA
Methylene Chloride	mg/kg	1,000	0.0045	J	0.0044	U	0.0024	J	0.0045	J	NA		0.005	U	0.0031	U	0.0048	U	0.0068	U	NA		0.0049	R	0.0061		0.0052	U	0.0042	U	NA
Styrene	mg/kg	35,000	0.0046	U	0.0044	U	0.0059	U	0.006	U	NA		0.005	U	0.0031	U	0.0048	U	0.0068	U	NA		0.0049	R	0.41		0.0052	U	0.0042	U	NA
Tetrachloroethene	mg/kg	100	0.0046	U	0.0044	U	0.0059	U	0.006	U	NA		0.005	U	0.0031	U	0.0048	U	0.0068	U	NA		0.0049	R	0.0053	U	0.0052	U	0.0042	U	NA
Toluene	mg/kg	47,000	0.0033	J	0.0044	U	0.0017	J	0.00053	J	NA		0.005	U	0.0078		0.0048	U	0.0068	U	NA		0.0034	R	0.17		0.0052	U	0.0042	U	NA
Trichloroethene	mg/kg	6	0.0046	U	0.0044	U	0.0022	J	0.006	U	NA		0.005	U	0.0031	U	0.0048	U	0.0068	U	NA		0.0049	R	0.014		0.0052	U	0.0019	U	NA
Xylenes	mg/kg	2,800	0.014	U	0.013	U	0.018	U	0.018	U	NA		0.015	U	0.0034	J	0.014	U	0.02	U	NA		0.015	R	0.18		0.016	U	0.013	U	NA
Semi-Volatile Organic Compounds*																															
2,4,5-Trichlorophenol	mg/kg	82,000	0.94	U	0.96	U	0.21	U	0.19	U	NA		0.9	R	4.6	U	0.88	R	1.4	R	NA		10	U	10.3	U	10	U	0.97	U	NA
2,4-Dimethylphenol	mg/kg	16,000	0.37	U	0.38	U	0.085	U	0.078	U	NA		0.36	R	1.8	U	0.35	R	0.55	R	NA		4	U	4.1	U	4	U	0.39	U	NA
2-Methylnaphthalene	mg/kg	3,000	0.021		0.0077	U	0.031		0.0079	U	NA		0.0072	U	0.02	J	0.011		0.017		NA		0.053		8.1		0.079	U	0.0077	U	NA
2-Methylphenol	mg/kg	41,000	0.37	U	0.38	U	0.085	U	0.078	U	NA		0.36	R	1.8	U	0.35	R	0.55	R	NA		4	U	4.1	U	4	U	0.39	U	NA
3&4-Methylphenol(m&p Cresol)	mg/kg	41,000	0.75	U	0.77	U	0.17	U	0.16	U	NA		0.72	R	3.6	U	0.7	R	1.1	R	NA		8	U	8.2	U	8	U	0.77	U	NA
Acenaphthene	mg/kg	45,000	0.0047	J	0.0077	U	0.0081		0.0079	U	NA		0.0072	U	0.034	J	0.009		0.015		NA		0.029		4.1		0.079	U	0.0077	U	NA
Acenaphthylene	mg/kg	45,000	0.013		0.0077	U	0.075		0.0079	U	NA		0.0072	U	0.072	U	0.015		0.004	J	NA		0.099		1.7		0.079	U	0.0077	U	NA
Acetophenone	mg/kg	120,000	0.37	U	0.38	U	0.085	U	0.078	U	NA		0.36	U	1.8	U	0.35	U	0.55	U	NA		4	U	4.1	U	4	U	0.39	U	NA
Anthracene	mg/kg	230,000	0.021		0.0077	U	0.11		0.0062	J	NA		0.0049	J	0.067	J	0.074		0.038		NA		0.14		8.4		0.044	J	0.0077	U	NA
Benzaldehyde	mg/kg	120,000	0.37	U	0.25	J	0.085	R	0.078	R	NA		0.22	J	1.8	U	0.35	U	0.55	U	NA		4	U	4.1	U	4	U	0.39	U	NA
Benzo[a]anthracene	mg/kg	2.9	0.081		0.0077	U	0.36		0.015		NA		0.011		0.16		0.18		0.094		NA		0.61		14.7		0.15		0.0077	U	NA
Benzo[a]pyrene	mg/kg	0.29	0.085		0.0077	U	0.41		0.012		NA		0.0098		0.14		0.15		0.1		NA		0.64		10.8		0.18		0.0077	U	NA
Benzo[b]fluoranthene	mg/kg	2.9	0.15		0.0077	U	1.1		0.021		NA		0.016		0.22		0.3		0.19</												

Table 6
Summary of Organics Detected in Soil
Parcel A3
Tradepoint Atlantic
Sparrows Point, Maryland

Parameter	Units	PAL	RW-054-SB-1	RW-054-SB-5	RW-055-SB-1	RW-055-SB-5	RW-055-SB-10	RW-055-SB-7	RW-056-SB-1	RW-056-SB-5	RW-071-SB-1	RW-072-SB-1	RW-073-SB-0.5	RW-074-SB-0.5	RW-075-SB-1	RW-076-SB-1	RW-076-SB-6
			Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
			9/25/2015	9/25/2015	9/28/2015	9/28/2015	9/28/2015	9/28/2015	9/25/2015	9/25/2015	9/30/2015	9/30/2015	9/30/2015	9/30/2015	9/30/2015	10/8/2015	10/8/2015
Volatile Organic Compounds																	
1,1,2-Trichloroethane	mg/kg	5	0.0046 U	0.0054 U	0.0046 U	0.0045 U	NA	0.34 U	0.0049 U	0.0065 U	0.0054 U	0.0054 U	0.0064 U	0.0055 U	0.0058 U	0.0045 U	0.0044 U
1,1-Dichloroethane	mg/kg	16	0.0046 U	0.0054 U	0.0046 U	0.0045 U	NA	0.34 U	0.0049 U	0.0065 U	0.0054 U	0.0054 U	0.0064 U	0.0055 U	0.0058 U	0.0045 U	0.0044 U
1,2,3-Trichlorobenzene	mg/kg	930	0.0046 U	0.0054 U	0.0046 U	0.0045 U	NA	0.96 B	0.0049 U	0.0065 U	0.0054 U	0.0054 U	0.0064 U	0.0055 U	0.0058 U	0.0045 U	0.0044 U
1,2-Dibromo-3-chloropropane	mg/kg	0.064	0.0046 U	0.0054 U	0.0046 U	0.0045 U	NA	0.34 U	0.0049 U	0.0065 U	0.0054 U	0.0054 U	0.0064 U	0.0055 U	0.0058 U	0.0045 U	0.0044 U
1,2-Dichloroethane	mg/kg	2	0.0046 U	0.0054 U	0.0046 U	0.0045 U	NA	0.34 U	0.0049 U	0.0065 U	0.0054 U	0.0054 U	0.0064 U	0.0055 U	0.0058 U	0.0045 U	0.0044 U
1,2-Dichloroethene (Total)	mg/kg	2,300	0.0052 J	0.011 U	0.0093 U	0.0089 U	NA	0.69 U	0.0099 U	0.0068 J	0.011 U	0.011 U	0.013 U	0.011 U	0.012 U	0.009 U	0.0089 U
1,4-Dichlorobenzene	mg/kg	11	0.0046 U	0.0054 U	0.0046 U	0.0045 U	NA	39.8	0.0049 U	0.0065 U	0.0054 U	0.0054 U	0.0064 U	0.0055 U	0.0058 U	0.0045 U	0.0044 U
2-Butanone (MEK)	mg/kg	190,000	0.004 J	0.011 U	0.0093 U	0.0089 U	NA	0.69 U	0.0038 J	0.011 J	0.015	0.012	0.029	0.012	0.022	0.013	0.0032 J
2-Hexanone	mg/kg	1,300	0.0093 U	0.011 U	0.0093 U	0.0089 U	NA	0.69 U	0.0099 U	0.013 U	0.011 U	0.011 U	0.013 U	0.011 U	0.012 U	0.009 U	0.0089 U
4-Methyl-2-pentanone (MIBK)	mg/kg	56,000	0.0093 U	0.011 U	0.0093 U	0.0089 U	NA	0.69 U	0.0099 U	0.013 U	0.011 U	0.011 U	0.013 U	0.011 U	0.012 U	0.009 U	0.0089 U
Acetone	mg/kg	670,000	0.028 J	0.011 U	0.011	0.0048 J	NA	0.69 U	0.034 J	0.036 J	0.075	0.2	0.47	0.098	0.22	0.056	0.016
Benzene	mg/kg	5.1	0.0015 J	0.0054 U	0.0046 U	0.0045 U	NA	0.96	0.0049 U	0.0065 U	0.0019 J	0.00052 J	0.0036 J	0.0018 J	0.0015 J	0.0015 J	0.0044 U
Bromoform	mg/kg	86	0.0046 U	0.0054 U	0.0046 U	0.0045 U	NA	0.34 U	0.0049 U	0.0065 U	0.0054 U	0.0054 U	0.0064 U	0.0055 U	0.0058 U	0.0045 U	0.0044 U
Carbon disulfide	mg/kg	3,500	0.0067	0.0054 U	0.0046 U	0.0045 U	NA	0.34 U	0.0086	0.028	0.0022 J	0.0018 J	0.015	0.0087	0.0077	0.003 J	0.0067
Chloroform	mg/kg	1.4	0.0046 U	0.0054 U	0.0046 U	0.0045 U	NA	0.34 U	0.0049 U	0.0065 U	0.0054 U	0.0054 U	0.0064 U	0.0055 U	0.0058 U	0.0045 U	0.0044 U
Chloromethane	mg/kg	460	0.0046 U	0.0054 U	0.0046 U	0.0045 U	NA	0.34 U	0.0049 U	0.0065 U	0.0054 U	0.0054 U	0.0064 U	0.0055 U	0.0058 U	0.0045 U	0.0044 U
cis-1,2-Dichloroethene	mg/kg	2,300	0.0041 J	0.0054 U	0.0046 U	0.0045 U	NA	0.34 U	0.0049 U	0.0042 J	0.0054 U	0.0054 U	0.0064 U	0.0055 U	0.0058 U	0.0045 U	0.0044 U
Cyclohexane	mg/kg	27,000	0.0093 U	0.011 U	0.0093 U	0.0089 U	NA	0.69 U	0.0099 U	0.013 U	0.0014 J	0.011 U	0.0024 J	0.00098 J	0.00093 J	0.0031 J	0.0024 J
Ethylbenzene	mg/kg	25	0.0046 U	0.0054 U	0.0046 U	0.0045 U	NA	8.4	0.0049 U	0.0022 J	0.0054 U	0.0054 U	0.0064 U	0.0055 U	0.0058 U	0.0045 U	0.0044 U
Isopropylbenzene	mg/kg	9,900	0.0046 U	0.0054 U	0.0046 U	0.0045 U	NA	0.47	0.0049 U	0.008	0.0054 U	0.0054 U	0.0064 U	0.0055 U	0.0058 U	0.0045 U	0.0044 U
Methyl Acetate	mg/kg	1,200,000	0.046 U	0.054 U	0.046 U	0.045 U	NA	3.4 U	0.049 U	0.065 U	0.054 U	0.0016 J	0.0016 J	0.055 U	0.058 U	0.045 U	0.044 U
Methylene Chloride	mg/kg	1,000	0.0047	0.0054 U	0.0044 J	0.0045 U	NA	0.34 U	0.0049 U	0.0051 J	0.0026 J	0.0045 J	0.0039 J	0.0055 U	0.0039 J	0.0045 U	0.0044 U
Styrene	mg/kg	35,000	0.0046 U	0.0054 U	0.0046 U	0.0045 U	NA	0.3 J	0.0049 U	0.0065 U	0.0054 U	0.0054 U	0.0064 U	0.0055 U	0.0058 U	0.0045 U	0.0044 U
Tetrachloroethene	mg/kg	100	0.0046 U	0.0054 U	0.0046 U	0.0045 U	NA	0.34 U	0.0049 U	0.0065 U	0.0054 U	0.0054 U	0.0064 U	0.0055 U	0.0058 U	0.0045 U	0.0044 U
Toluene	mg/kg	47,000	0.0046 U	0.0054 U	0.0046 U	0.0045 U	NA	0.75	0.0049 U	0.0065 U	0.0013 J	0.00066 J	0.0023 J	0.001 J	0.0013 J	0.0011 J	0.0044 U
Trichloroethene	mg/kg	6	0.088	0.0072	0.0046 U	0.0045 U	NA	0.49	0.0087	0.01	0.0054 U	0.0054 U	0.0064 U	0.0055 U	0.0058 U	0.0045 U	0.0044 U
Xylenes	mg/kg	2,800	0.014 U	0.016 U	0.014 U	0.013 U	NA	1.3	0.015 U	0.02 U	0.016 U	0.016 U	0.019 U	0.017 U	0.017 U	0.014 U	0.013 U
Semi-Volatile Organic Compounds*																	
2,4,5-Trichlorophenol	mg/kg	82,000	0.96 U	1 U	0.22 R	1 U	NA	1 U	0.9 U	1 U	0.18 U	0.19 U	0.22 U	0.18 U	0.2 U	0.19 U	0.19 U
2,4-Dimethylphenol	mg/kg	16,000	0.38 U	0.4 U	0.086 R	0.41 U	NA	0.41 U	0.36 U	0.4 U	0.073 U	0.077 U	0.087 U	0.073 U	0.079 U	0.074 U	0.077 U
2-Methylnaphthalene	mg/kg	3,000	0.027	0.002 J	0.056	0.0082 U	NA	4	0.0073 U	0.0069 J	0.0073	0.0071	0.1	0.051	0.017	0.1	0.15 U
2-Methylphenol	mg/kg	41,000	0.38 U	0.4 U	0.086 R	0.41 U	NA	0.41 U	0.36 U	0.4 U	0.073 U	0.077 U	0.087 U	0.073 U	0.079 U	0.074 U	0.077 U
3&4-Methylphenol(m&p Cresol)	mg/kg	41,000	0.76 U	0.81 U	0.17 R	0.82 U	NA	0.81 U	0.72 U	0.8 U	0.15 U	0.15 U	0.17 U	0.15 U	0.16 U	0.15 U	0.15 U
Acenaphthene	mg/kg	45,000	0.042	0.0082 U	0.084	0.0082 U	NA	0.51	0.0073 U	0.0062 J	0.0071 U	0.0071 U	0.18	0.043	0.035	0.07 J	0.15 U
Acenaphthylene	mg/kg	45,000	0.037	0.0082 U	0.013	0.0082 U	NA	1	0.0073 U	0.008 U	0.0067 J	0.019	0.2	0.012	0.01	0.3	0.15 U
Acetophenone	mg/kg	120,000	0.38 U	0.4 U	0.086 U	0.41 U	NA	0.41 U	0.36 U	0.4 U	0.073 U	0.077 U	0.087 U	0.073 U	0.079 U	0.074 U	0.077 U
Anthracene	mg/kg	230,000	0.17	0.0082 U	0.065	0.013	NA	1	0.0064 J	0.023	0.0046 J	0.012	0.48	0.037	0.13	0.23	0.15 U
Benzaldehyde	mg/kg	120,000	0.38 U	0.4 U	0.086 R	0.41 U	NA	0.41 U	0.36 U	0.4 U	0.019 J	0.054 J	0.071 J	0.019 J	0.032 J	0.028 J	0.077 R
Benzo[a]anthracene	mg/kg	2.9	0.61	0.0082 U	0.35	0.022	NA	2.1	0.026	0.0069 J	0.018	0.053	1.4	0.18	0.68	1.3	0.15 U
Benzo[a]pyrene	mg/kg	0.29	0.65	0.0082 U	0.42	0.017	NA	1.6	0.03	0.0026 J	0.02	0.058	1.3	0.24	0.57	1.6	0.15 U
Benzo[b]fluoranthene	mg/kg	2.9	1.1	0.0082 U	0.73	0.023	NA	2.5	0.06	0.0061 J	0.036	0.089	2	0.43	1	2.8	0.15 U
Benzo[g,h,i]perylene	mg/kg	0.35	0.0082 U	0.3	0.0091	NA	0.76	0.0079	0.0024 J	0.017	0.03	0.57	0.089	0.11	0.96	1.5	0.15 U
Benzo[k]fluoranthene	mg/kg	29	0.35	0.0082 U	0.24	0.0098	NA	0.84	0.034	0.0035 J	0.013	0.039	0.96	0.13	0.32	1.2	0.15 U
Biphenyl (Diphenyl)	mg/kg	200	0.38 U	0.4 U	0.086 U	0.41 U	NA	0.76	0.36 U	0.4 U	0.073 U	0.077 U	0.087 U	0.073 U	0.079 U	0.074 U	0.077 U
bis(2-Ethylhexyl)phthalate	mg/kg	160	0.38 U	0.4 U	0.086 U	0.41 U	NA	0.41 U	0.36 U	0.4 U	0.078 J	0.077 U	0.087 U	0.073 U	0.079 U	0.074 U	0.077 U
Caprolactam	mg/kg	400,000	0.96 U	1 U	0.22 U	1 U	NA	1 U	0.9 U	1 U	0.18 U	0.19 U	0.22 U	0.18 U	0.2 U	0.19 U	0.19 U
Carbazole	mg/kg	0.38 U	0.4 U	0.086 U	0.41 U	NA	0.3 J	0.36 U	0.4 U	0.073 U	0.077 U	0.087 U	0.057 J	0.024 J	0.044 J	0.023 J	0.077 U
Chrysene	mg/kg	290	0.57	0.00074 J	0.41	0.02	NA	2.1	0.032	0.0088	0.024	0.056	1.3	0.21	0.64	1.1	0.15 U
Dibenz[a,h]anthracene	mg/kg	0.29	0.14	0.0082 U	0.14	0.0082 U	NA	0.33	0.0073 U	0.008 U	0.0059 J	0.013	0.25	0.041	0.056	0.41	0.15 U
Di-n-butylphthalate	mg/kg	82,000	0.38 U	0.4 U	0.086 U	0.41 U	NA	0.41 U	0.36 U	0.4 U	0.073 U	0.077 U	0.087 U	0.073 U	0.079 U	0.074 U	0.077 U
Di-n-octylphthalate	mg/kg	8,200	0.38 U	0.4 U	0.086 U	0.41 U	NA	0.41 U	0.36 U	0.4 U	0.073 U	0.077 U	0.087 U	0.073 U	0.079 U	0.074 U	0.077 U
Fluoranthene	mg/kg	30,000	1.3	0.0082 U	0.57	0.085	NA	5.4									

Table 6
Summary of Organics Detected in Soil
Parcel A3
Tradepoint Atlantic
Sparrows Point, Maryland

Parameter	Units	PAL	RW-077-SB-1	RW-077-SB-5	RW-077-SB-10	RW-078-SB-1	RW-078-SB-5	RW-078-SB-10	RW-079-SB-1	RW-079-SB-5						
			Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil					
			10/8/2015	10/8/2015	10/8/2015	10/8/2015	10/8/2015	10/8/2015	10/8/2015	10/8/2015	10/8/2015					
Volatile Organic Compounds																
1,1,2-Trichloroethane	mg/kg	5	0.0058	U	0.0073	U	NA	0.0045	U	0.0067	UJ	NA	0.0056	U	0.0044	U
1,1-Dichloroethane	mg/kg	16	0.0058	U	0.0073	U	NA	0.0045	U	0.0067	U	NA	0.0056	U	0.0044	U
1,2,3-Trichlorobenzene	mg/kg	930	0.0058	U	0.0073	U	NA	0.0045	UJ	0.0067	UJ	NA	0.0056	U	0.0044	UJ
1,2-Dibromo-3-chloropropane	mg/kg	0.064	0.0058	U	0.0073	U	NA	0.0045	UJ	0.0067	UJ	NA	0.0056	U	0.0044	UJ
1,2-Dichloroethane	mg/kg	2	0.0058	U	0.0073	U	NA	0.0045	U	0.0067	U	NA	0.0056	U	0.0044	U
1,2-Dichloroethene (Total)	mg/kg	2,300	0.012	U	0.015	U	NA	0.0091	U	0.013	U	NA	0.011	U	0.0089	U
1,4-Dichlorobenzene	mg/kg	11	0.0058	U	0.0073	U	NA	0.0045	UJ	0.0067	UJ	NA	0.0056	U	0.0044	UJ
2-Butanone (MEK)	mg/kg	190,000	0.0049	J	0.012	J	NA	0.015	J	0.0029	J	NA	0.0041	J	0.0059	J
2-Hexanone	mg/kg	1,300	0.012	U	0.015	U	NA	0.0091	U	0.013	UJ	NA	0.011	U	0.0089	U
4-Methyl-2-pentanone (MIBK)	mg/kg	56,000	0.012	U	0.015	U	NA	0.0021	J	0.013	UJ	NA	0.011	U	0.0089	U
Acetone	mg/kg	670,000	0.016	J	0.014	J	NA	0.1	J	0.02	J	NA	0.019	J	0.023	J
Benzene	mg/kg	5.1	0.0058	U	0.002	J	NA	0.0018	J	0.0036	J	NA	0.0056	U	0.0016	J
Bromoform	mg/kg	86	0.0058	U	0.0073	U	NA	0.0045	UJ	0.0067	UJ	NA	0.0056	U	0.0044	UJ
Carbon disulfide	mg/kg	3,500	0.024	J	0.01	J	NA	0.0037	J	0.0029	J	NA	0.013	J	0.015	J
Chloroform	mg/kg	1.4	0.0058	U	0.0073	U	NA	0.0045	U	0.0067	U	NA	0.0056	U	0.0044	U
Chloromethane	mg/kg	460	0.0058	U	0.0073	U	NA	0.0045	U	0.0067	U	NA	0.0056	U	0.0044	U
cis-1,2-Dichloroethene	mg/kg	2,300	0.0058	U	0.0073	U	NA	0.0045	U	0.0067	U	NA	0.0056	U	0.0044	U
Cyclohexane	mg/kg	27,000	0.012	U	0.0089	J	NA	0.00068	J	0.0029	J	NA	0.011	U	0.0031	J
Ethylbenzene	mg/kg	25	0.0058	U	0.0073	U	NA	0.0045	U	0.0067	UJ	NA	0.0056	U	0.0044	U
Isopropylbenzene	mg/kg	9,900	0.0058	U	0.0073	U	NA	0.0045	UJ	0.0067	UJ	NA	0.0056	U	0.0044	UJ
Methyl Acetate	mg/kg	1,200,000	0.058	U	0.073	U	NA	0.045	U	0.067	U	NA	0.056	U	0.0023	J
Methylene Chloride	mg/kg	1,000	0.0048	J	0.0046	J	NA	0.0028	J	0.0035	J	NA	0.0041	J	0.002	J
Styrene	mg/kg	35,000	0.0058	U	0.0073	U	NA	0.0045	U	0.0067	UJ	NA	0.0056	U	0.0044	U
Tetrachloroethene	mg/kg	100	0.0058	U	0.0073	U	NA	0.0045	U	0.0067	UJ	NA	0.0056	U	0.0044	U
Toluene	mg/kg	47,000	0.00041	J	0.0017	J	NA	0.0014	J	0.0034	J	NA	0.00054	J	0.0013	J
Trichloroethene	mg/kg	6	0.0058	U	0.0073	U	NA	0.0045	U	0.0067	UJ	NA	0.0056	U	0.0058	J
Xylenes	mg/kg	2,800	0.017	U	0.022	U	NA	0.014	U	0.02	UJ	NA	0.017	U	0.013	U
Semi-Volatile Organic Compounds*																
2,4,5-Trichlorophenol	mg/kg	82,000	0.2	U	0.22	U	NA	0.18	U	0.19	U	NA	0.18	U	0.19	U
2,4-Dimethylphenol	mg/kg	16,000	0.017	J	0.087	U	NA	0.023	J	0.075	U	NA	0.074	U	0.078	U
2-Methylnaphthalene	mg/kg	3,000	0.15	U	0.006	J	NA	0.14	U	0.28	J	NA	0.022	J	0.15	U
2-Methylphenol	mg/kg	41,000	0.078	U	0.087	U	NA	0.071	U	0.075	U	NA	0.074	U	0.078	U
3&4-Methylphenol(m&p Cresol)	mg/kg	41,000	0.023	J	0.026	J	NA	0.039	J	0.15	U	NA	0.15	U	0.16	U
Acenaphthene	mg/kg	45,000	0.15	U	0.0083	U	NA	0.14	U	0.0096	J	NA	0.15	U	0.15	U
Acenaphthylene	mg/kg	45,000	0.15	U	0.0092	J	NA	0.11	J	0.092	J	NA	0.27	J	0.15	U
Acetophenone	mg/kg	120,000	0.1	J	0.021	J	NA	0.071	U	0.075	U	NA	0.074	U	0.078	U
Anthracene	mg/kg	230,000	0.15	U	0.0049	J	NA	0.27	J	0.038	J	NA	0.64	J	0.15	U
Benzaldehyde	mg/kg	120,000	0.063	J	0.059	J	NA	0.071	R	0.075	R	NA	0.074	R	0.078	R
Benzo[a]anthracene	mg/kg	2.9	0.15	U	0.0094	J	NA	0.87	J	0.084	J	NA	2.2	J	0.043	J
Benzo[a]pyrene	mg/kg	0.29	0.15	U	0.01	J	NA	0.85	J	0.074	J	NA	2	J	0.022	J
Benzo[b]fluoranthene	mg/kg	2.9	0.15	U	0.023	J	NA	1.2	J	0.16	J	NA	3.1	J	0.045	J
Benzo[g,h,i]perylene	mg/kg	0.029	J	0.0073	J	NA	0.53	J	0.033	J	NA	1	J	0.026	J	
Benzo[k]fluoranthene	mg/kg	29	0.15	U	0.0098	J	NA	0.55	J	0.051	J	NA	1.1	J	0.019	J
Biphenyl (Diphenyl)	mg/kg	200	0.055	J	0.02	J	NA	0.016	J	0.075	U	NA	0.074	U	0.078	U
bis(2-Ethylhexyl)phthalate	mg/kg	160	0.078	UJ	0.087	U	NA	0.071	U	0.075	U	NA	0.074	UJ	0.078	U
Caprolactam	mg/kg	400,000	0.2	U	0.22	U	NA	0.18	U	0.19	U	NA	0.18	U	0.19	U
Carbazole	mg/kg	0.092	J	0.087	U	NA	0.05	J	0.075	U	NA	0.074	U	0.078	U	
Chrysene	mg/kg	290	0.15	U	0.013	J	NA	0.72	J	0.14	J	NA	2	J	0.032	J
Dibenz[a,h]anthracene	mg/kg	0.29	0.15	U	0.0083	U	NA	0.18	J	0.022	J	NA	0.39	J	0.15	U
Di-n-butylphthalate	mg/kg	82,000	0.078	U	0.087	U	NA	0.071	U	0.075	U	NA	0.074	U	0.078	U
Di-n-octylphthalate	mg/kg	8,200	0.078	UJ	0.087	U	NA	0.071	U	0.075	U	NA	0.074	UJ	0.078	U
Fluoranthene	mg/kg	30,000	0.058	J	0.024	J	NA	1.6	J	0.15	J	NA	4.7	J	0.055	J
Fluorene	mg/kg	30,000	0.15	U	0.0015	J	NA	0.032	J	0.023	J	NA	0.07	J	0.15	U
Indeno[1,2,3-c,d]pyrene	mg/kg	2.9	0.15	U	0.0059	J	NA	0.51	J	0.031	J	NA	1.1	J	0.15	U
Naphthalene	mg/kg	17	0.15	U	0.024	J	NA	0.12	J	0.34	J	NA	0.086	J	0.15	U
Phenanthrene	mg/kg	15	0.15	U	0.022	J	NA	0.68	J	0.26	J	NA	2.4	J	0.15	U
Phenol	mg/kg	250,000	0.078	U	0.087	U	NA	0.071	U	0.075	U	NA	0.074	U	0.078	U
Pyrene	mg/kg	23,000	0.051	J	0.018	J	NA	1.3	J	0.15	J	NA	3.7	J	0.046	J
PCBs																
Total PCB	mg/kg	0.97	0.13	U	NA	NA	NA	6.2	U	NA	NA	NA	6.4	U	NA	NA
Aroclor 1242	mg/kg	0.97	0.018	U	NA	NA	NA	0.89	U	NA	NA	NA	0.91	U	NA	NA
Aroclor 1248	mg/kg	0.94	0.018	U	NA	NA	NA	0.89	U	NA	NA	NA	0.91	U	NA	NA
Aroclor 1254	mg/kg	0.97	0.018	U	NA	NA	NA	0.89	U	NA	NA	NA	0.91	U	NA	NA
Aroclor 1260	mg/kg	0.99	0.018	U	NA	NA	NA	0.89	U	NA	NA	NA	0.91	U	NA	NA
TPH/Oil and Grease																
Oil and Grease	mg/kg		1,220	J	NA	NA	NA	5,030	J	1,420	J	NA	1,820	J	2,730	J
Diesel Range Organics	mg/kg	620	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gasoline Range Organics	mg/kg		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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Detections in bold

*PAH compounds were analyzed via SIM

Qualifier Keys can be viewed at the end of the table and in the EDQI reports

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

**Table 7
Summary of Inorganics Detected in Soil
Parcel A3
Tradepoint Atlantic
Sparrows Point, Maryland**

Parameter	Units	PAL	RW-001-SB-1	RW-001-SB-5	RW-002-SB-1	RW-002-SB-4.5	RW-003-SB-1	RW-003-SB-4.5	RW-003-SB-5	RW-003-SB-10	RW-004-SB-1	RW-004-SB-5										
			Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil										
			10/1/2015	10/1/2015	9/29/2015	9/29/2015	9/29/2015	3/15/2016	9/29/2015	9/29/2015	10/6/2015	10/6/2015										
Metals																						
Aluminum	mg/kg	1,100,000	32,200		9,050		20,500		12,100		16,500		NA		4,350		NA		9,660	J	12,200	J
Antimony	mg/kg	470	2.5	B	3	R	3.2	UJ	2.7	UJ	2.5	UJ	NA		2.2	UJ	NA		2.7	UJ	3.3	UJ
Arsenic	mg/kg	3	26.5	J	2.8	J	34.4		152		23		NA		11.8		137	J	6.3		19.4	
Barium	mg/kg	220,000	1,060		27.5		340		236		294		NA		54.5		NA		92.4		196	
Beryllium	mg/kg	2,300	2.9		0.26	B	2.6		0.88	B	2.3		NA		0.31	B	NA		0.66	J	0.74	J
Cadmium	mg/kg	980	879		42.7		62.4		22.8		2,340		NA		73.1		NA		14.7	J	274	J
Chromium	mg/kg	120,000	35.6	J	9.9	J	302		160		490		NA		413		NA		106		135	
Chromium, Hexavalent	mg/kg	6.3	1.1	U	1.3	U	1.1	U	1.1	U	1.1	U	NA		1.1	U	NA		1.1	U	1.2	U
Cobalt	mg/kg	350	2.7	B	2.5	B	7.2		5.4		8.2		NA		3.2	J	NA		4.4	B	5.1	B
Copper	mg/kg	47,000	222		6.4		99.8		84		607		NA		58.8		NA		59.7		182	
Iron	mg/kg	820,000	17,900		9,530		143,000		44,300		139,000		NA		54,300		NA		23,700		28,100	
Lead	mg/kg	800	586		4.7		1,080		111		1,230		NA		174		NA		88.9	J	365	J
Manganese	mg/kg	26,000	6,490		47.9		8,720	J	4,570	J	10,600	J	NA		9,570	J	NA		1,090	J	978	J
Mercury	mg/kg	350	0.11	R	0.034	J-	0.053	J	0.0076	J	0.09	J	NA		0.0053	J	NA		0.37		0.11	J
Nickel	mg/kg	22,000	16.1		5.6	J	34.8		23.7		39.3		NA		24.8		NA		9.5		16.9	
Selenium	mg/kg	5,800	2.8	B	4	U	4.3	U	3.6	U	3.3	U	NA		3	U	NA		3.6	U	3.2	B
Silver	mg/kg	5,800	1.4	B	3	U	1.3	J	2.7	U	0.83	J	NA		2.2	U	NA		2.7	U	1.5	B
Thallium	mg/kg	12	9.9	UJ	9.9	UJ	10.8	U	9	U	8.4	U	NA		7.5	U	NA		8.9	U	11.2	U
Vanadium	mg/kg	5,800	303		18.4		433		219		1,030		NA		950		NA		128		125	
Zinc	mg/kg	350,000	59,400	J	2,400	J	5,460		2,020		35,000		NA		3,790		NA		718		16,500	
Other																						
Cyanide	mg/kg	150	0.91		0.1	J	0.31	J	0.21	J	0.13	J	NA		0.57	U	NA		0.62	U	1.3	

Detections in bold

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**Table 7
Summary of Inorganics Detected in Soil
Parcel A3
Tradepoint Atlantic
Sparrows Point, Maryland**

Parameter	Units	PAL	RW-004-SB-10	RW-005-SB-1	RW-005-SB-5	RW-006-SB-1	RW-006-SB-5	RW-007-SB-1	RW-007-SB-5	RW-007-SB-10	RW-008-SB-1	RW-008-SB-5										
			Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil										
			10/6/2015	10/6/2015	10/6/2015	10/8/2015	10/8/2015	9/28/2015	9/28/2015	9/28/2015	9/29/2015	9/29/2015										
Metals																						
Aluminum	mg/kg	1,100,000	NA		30,200	J	13,100	J	16,200		14,800		14,800		11,000		NA		10,600		16,900	
Antimony	mg/kg	470	NA		2.1	UJ	3.3	UJ	2.5	UJ	2.9	UJ	2.4	UJ	2	UJ	NA		2.7	UJ	3.3	UJ
Arsenic	mg/kg	3	10.3	J	142		5.9		11.2	J	6	J	5.2		6.2		20.5	J	2.2		3.6	
Barium	mg/kg	220,000	NA		574		63.9		297	J	64.1	J	295		30.6		NA		37		50	
Beryllium	mg/kg	2,300	NA		2.3		0.43	J	1.2		0.97		1.1		0.34	J	NA		0.27	B	1.6	
Cadmium	mg/kg	980	NA		2,240	J	6.5	J	61.9	J	1.1	B	2.3		0.98	U	NA		2.2		3.6	
Chromium	mg/kg	120,000	NA		19.5		16.3		1,030		22.5		211	J	15	J	NA		14		32.7	
Chromium, Hexavalent	mg/kg	6.3	NA		1.2	U	1.2	U	1.1	UJ	1.2	UJ	1.1	UJ	0.45	J-	NA		1.1	U	1.2	U
Cobalt	mg/kg	350	NA		5.3		4.2	B	18		3.3	J	9.2		20.4		NA		3.4	J	5.2	J
Copper	mg/kg	47,000	NA		468		7		74.4		9.6		53.9		7.7		NA		8.6		9.7	
Iron	mg/kg	820,000	NA		21,100		16,400		112,000		27,900		34,600		15,100		NA		11,500		40,800	
Lead	mg/kg	800	NA		343	J	6.3	J	169		19.1		373		10		NA		6.7		35.1	
Manganese	mg/kg	26,000	NA		8,230	J	379	J	18,200		150		3,640		244		NA		161	J	92.2	J
Mercury	mg/kg	350	NA		0.035	J	0.029	J	0.068	J	0.031	J	0.11	U	0.038	J	NA		0.031	J	0.016	J
Nickel	mg/kg	22,000	NA		21.8		8.8	B	54.3	J	8.3	J	44.1		7.2		NA		7.6	B	9.9	B
Selenium	mg/kg	5,800	NA		2.1	B	4.4	U	1.9	J	3.9	U	3.1	U	2.6	U	NA		3.5	U	4.4	U
Silver	mg/kg	5,800	NA		4.8		3.3	U	2.5	U	2.9	U	2.4	U	2	U	NA		2.7	U	3.3	U
Thallium	mg/kg	12	NA		7.1	U	11.1	U	6.6	J	9.6	U	7.9	U	6.6	U	NA		8.8	U	11.1	U
Vanadium	mg/kg	5,800	NA		233		31.1		2,320		39.6		290		47.6		NA		21		82.6	
Zinc	mg/kg	350,000	NA		67,900		1,000		8,290	J	225	J	590		24.9		NA		755		1,210	
Other																						
Cyanide	mg/kg	150	NA		0.28	J	0.59	U	0.52	J	0.14	J	1.4		0.59	U	NA		0.61	U	0.66	U

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**Table 7
Summary of Inorganics Detected in Soil
Parcel A3
Tradepoint Atlantic
Sparrows Point, Maryland**

Parameter	Units	PAL	RW-008-SB-10	RW-009-SB-1	RW-009-SB-5	RW-009-SB-10	RW-010-SB-1	RW-010-SB-7	RW-010-SB-10	RW-011-SB-1	RW-011-SB-5	RW-012-SB-1										
			Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil									
			9/29/2015	9/25/2015	9/25/2015	9/25/2015	9/25/2015	9/25/2015	9/25/2015	9/25/2015	9/25/2015	9/25/2015	9/21/2015									
Metals																						
Aluminum	mg/kg	1,100,000	NA		16,700		10,700		NA		10,400		13,100		NA		13,000		8,640		30,100	
Antimony	mg/kg	470	NA		3.1	UJ	3.1	UJ	NA		2.5	UJ	2.6	UJ	NA		2.7	UJ	7.2	J	2.8	UJ
Arsenic	mg/kg	3	12.2	J	3.1		4		14.4	J	3.4		1.8	J	NA		12.9		169		6.9	
Barium	mg/kg	220,000	NA		133		36.5		NA		28		54.2		NA		169		230		312	
Beryllium	mg/kg	2,300	NA		1	U	0.53	J	NA		0.21	B	0.67	B	NA		0.63	B	0.71	B	4.9	
Cadmium	mg/kg	980	NA		0.51	J	1.6	U	NA		1.3	U	1.3	U	NA		1.5		3.2		0.6	B
Chromium	mg/kg	120,000	NA		1,180		14.2		NA		15.9		130		NA		1,010		102		594	J
Chromium, Hexavalent	mg/kg	6.3	NA		6	J-	1.1	UJ	NA		1.1	UJ	0.48	J-	NA		1.1	UJ	1.2	UJ	1.1	U
Cobalt	mg/kg	350	NA		2.4	B	3	B	NA		2.4	B	10.7		NA		5.5		26.3		1.4	J
Copper	mg/kg	47,000	NA		47.1		3	B	NA		4.8		49.9		NA		131		245		30.8	
Iron	mg/kg	820,000	NA		125,000		16,800		NA		13,800		26,100		NA		7,180		4,750		88,100	
Lead	mg/kg	800	NA		120		14.7		NA		15.1		316		NA		176		661		25.4	
Manganese	mg/kg	26,000	NA		28,200	J	41.1	J	NA		85.4	J	414	J	NA		1,510	J	2,120	J	16,200	
Mercury	mg/kg	350	NA		4.2		0.021	J	NA		0.041	J	0.037	J	NA		0.055	J	0.35		0.018	J+
Nickel	mg/kg	22,000	NA		18.8		7.1	B	NA		6.4	B	52.9		NA		25.2		126		11.5	
Selenium	mg/kg	5,800	NA		4.1	U	4.2	U	NA		3.4	U	3.5	U	NA		3.7	U	4.7	U	2.4	B
Silver	mg/kg	5,800	NA		3.1	U	3.1	U	NA		2.5	U	2.6	U	NA		2.7	U	1.2	J	2.8	U
Thallium	mg/kg	12	NA		10.3	U	10.4	U	NA		8.4	U	8.8	U	NA		9.1	U	11.8	U	9.3	U
Vanadium	mg/kg	5,800	NA		3,070	J	25.7	J	NA		24.1	J	34.4	J	NA		1,820	J	71.5	J	437	J
Zinc	mg/kg	350,000	NA		239		16.7		NA		19.1		47.8		NA		507		1,740		153	
Other																						
Cyanide	mg/kg	150	NA		0.19	J	0.69	U	NA		0.11	J	0.7	U	NA		0.53	J	3.4		0.58	J

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Table 7
Summary of Inorganics Detected in Soil
Parcel A3
Tradepoint Atlantic
Sparrows Point, Maryland

Parameter	Units	PAL	RW-012-SB-5	RW-012-SB-8	RW-013-SB-1	RW-013-SB-5	RW-013-SB-10	RW-014-SB-1	RW-014-SB-5	RW-015-SB-1	RW-015-SB-5	RW-015-SB-10									
			Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil								
			9/21/2015	9/21/2015	9/23/2015	9/23/2015	9/23/2015	9/22/2015	9/22/2015	9/21/2015	9/21/2015	9/21/2015									
Metals																					
Aluminum	mg/kg	1,100,000	12,800		NA	8,750		7,480		NA	7,550	6,310	36,300	17,000		NA					
Antimony	mg/kg	470	2.9	UJ	NA	3.3	UJ	3.3	UJ	NA	2.8	UJ	4	J	2.3	UJ	3.4	UJ	NA		
Arsenic	mg/kg	3	4.4		5.7	J	4.1		9.7		7		2.7		1.6	J	5.9		5.4		2.8
Barium	mg/kg	220,000	51.4		NA	39.1		19.6		NA	34.6		46.1		695		58.5		NA		
Beryllium	mg/kg	2,300	0.63	B	NA	1.1	U	1.1	U	NA	0.95	U	0.19	B	2.9		0.61	B	NA		
Cadmium	mg/kg	980	1.4	U	NA	0.59	J	1.7	U	NA	0.71	B	0.65	B	2		1.7	U	NA		
Chromium	mg/kg	120,000	24.6	J	NA	1,380		15.7		NA	1350		12.6		33.2	J	27.9	J	NA		
Chromium, Hexavalent	mg/kg	6.3	1.1	U	NA	4.2		0.98	J	NA	7.8	J-	1.2	U	1.1	U	1.2	U	NA		
Cobalt	mg/kg	350	7		NA	2.3	B	0.97	B	NA	1.5	B	1.2	B	5.5		6.8		NA		
Copper	mg/kg	47,000	11.3		NA	37.4		4.9	B	NA	23.7		28.7		18.7		10.5		NA		
Iron	mg/kg	820,000	17,500		NA	235,000		20,700		NA	296,000		10,500		36,200		23,400		NA		
Lead	mg/kg	800	57.2		NA	23.2		8.8		NA	3.2		30.5		35.6		11		NA		
Manganese	mg/kg	26,000	160		NA	35,200		27.3		NA	28,100	J	167	J	5520		245		NA		
Mercury	mg/kg	350	0.13	J+	NA	0.067	J	0.018	J	NA	0.11	U	0.003	J	0.11	U	0.011	J+	NA		
Nickel	mg/kg	22,000	13.8		NA	28.1	J	1.9	J	NA	26.8		7.7	J	11.2		14.8		NA		
Selenium	mg/kg	5,800	3.8	U	NA	3.5	J	4.4	U	NA	3.8	U	3.2	U	2.6	B	4.5	U	NA		
Silver	mg/kg	5,800	2.9	U	NA	1.8	B	3.3	U	NA	1.7	J	2.4	U	2.3	U	3.4	U	NA		
Thallium	mg/kg	12	9.5	U	NA	11	UJ	11.1	UJ	NA	9.5	U	7.9	U	7.6	U	11.3	U	NA		
Vanadium	mg/kg	5,800	29.5	J	NA	923		26.2		NA	806	J	14.3	J	368	J	36.6	J	NA		
Zinc	mg/kg	350,000	45.7		NA	112	J	12.6	J	NA	93.5		64.6		1,310		54.6		NA		
Other																					
Cyanide	mg/kg	150	0.68	U	NA	0.22	J	0.68	U	NA	0.54	U	0.6	U	0.24	J	0.65	U	NA		

Detections in bold

R: The analytical result was rejected during validation.

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+: This positive result reported for this analyte is a quantitative estimate, but may be biased high.

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 blank/preparation or field blank.

NA: This parameter was not analyzed for this sample.

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

**Table 7
Summary of Inorganics Detected in Soil
Parcel A3
Tradepoint Atlantic
Sparrows Point, Maryland**

Parameter	Units	PAL	RW-016-SB-1	RW-016-SB-4	RW-017-SB-1	RW-017-SB-6	RW-018-SB-1	RW-018-SB-5	RW-019-SB-1	RW-019-SB-4	RW-019-SB-10	RW-020-SB-1										
			Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil										
			9/23/2015	9/23/2015	9/29/2015	9/29/2015	9/24/2015	9/24/2015	9/22/2015	9/22/2015	9/22/2015	9/21/2015										
Metals																						
Aluminum	mg/kg	1,100,000	14,700		9,720		6,930		5,120		17,900		7,640		19,200		16,200		NA		27,000	
Antimony	mg/kg	470	2.3	UJ	2.2	UJ	2.4	UJ	3.3	UJ	2.8	UJ	3.2	UJ	2.7	UJ	1.4	B	NA		3	UJ
Arsenic	mg/kg	3	2.2		6.7		2.7		2.8	U	3.6		4.4		7		32.2		2.6	U	6	
Barium	mg/kg	220,000	39		180		73.4		39.5		92.8		32.6		236		2,400		NA		264	
Beryllium	mg/kg	2,300	0.76	U	0.32	B	0.34	B	0.32	B	0.94	U	0.26	B	1.6		2.9		NA		4.4	
Cadmium	mg/kg	980	0.47	J	0.9	J	0.65	B	0.26	B	0.34	B	1.6	U	1.5		6.5		NA		2.3	
Chromium	mg/kg	120,000	1,530		460		352		23.7		1,470	J	9.2	J	215	J	173	J	NA		222	J
Chromium, Hexavalent	mg/kg	6.3	3.1		1.2	U	0.52	J-	1.1	UJ	7.7		1.2	U	1.2	UJ	1.2	UJ	NA		1	U
Cobalt	mg/kg	350	3.8	U	8		3.2	J	3.7	J	4.7	UJ	2.7	B	4.7		30.6		NA		7.7	
Copper	mg/kg	47,000	23.6		186		15.4		6.4		24.5	J	5.9	J	84		244		NA		106	
Iron	mg/kg	820,000	195,000		75,600		44,900		6,770		151,000		9,560		37,900		40,100		NA		77,200	
Lead	mg/kg	800	14.4		203		76.9		13.3		36.9	J	6.3	J	203		335		NA		832	
Manganese	mg/kg	26,000	30,000		15,600		8,460	J	486	J	30,500		69.8		6,440		54,000		30.7		6,360	
Mercury	mg/kg	350	0.011	J	0.07	J	0.93		0.64		0.18	J	0.037	J	0.97	J+	0.12	U	NA		0.023	J+
Nickel	mg/kg	22,000	11.2	J	22.2	J	8.5		5.9	B	9.8	J	7.1	B	17.2		123		NA		39.3	
Selenium	mg/kg	5,800	3	U	2.9	U	3.2	U	4.4	U	3.8	U	4.3	U	3.6	U	4		NA		2.7	B
Silver	mg/kg	5,800	1.1	B	2.2	U	2.4	U	3.3	U	2.8	U	3.2	U	2.7	U	1.7	J	NA		3	U
Thallium	mg/kg	12	7.6	UJ	7.4	UJ	8	U	11	U	9.4	UJ	10.7	UJ	9	U	8.9	U	NA		9.9	U
Vanadium	mg/kg	5,800	855		2,980		799		23.6		921		19		200	J	187	J	NA		153	J
Zinc	mg/kg	350,000	101	J	179	J	121		41.2		105		18.2		547		1,050		NA		764	
Other																						
Cyanide	mg/kg	150	0.12	J	0.24	J	0.32	J	0.24	J	0.55	U	0.57	U	0.2	J	1.9		NA		0.73	

Detections in bold

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

NA: This parameter was not analyzed for this sample.

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

**Table 7
Summary of Inorganics Detected in Soil
Parcel A3
Tradepoint Atlantic
Sparrows Point, Maryland**

Parameter	Units	PAL	RW-020-SB-4.5	RW-020-SB-7	RW-021-SB-1	RW-021-SB-6	RW-021-SB-10	RW-022-SB-1	RW-022-SB-8.5	RW-023-SB-1	RW-023-SB-5	RW-023-SB-10								
			Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil								
			9/21/2015	9/21/2015	9/21/2015	9/21/2015	9/21/2015	9/21/2015	9/21/2015	9/21/2015	9/22/2015	9/22/2015	9/22/2015							
Metals																				
Aluminum	mg/kg	1,100,000	14,200		NA	21,000		14,500		NA		17,600		14,000		10,800		13,700		NA
Antimony	mg/kg	470	2.6	UJ	NA	2.8	UJ	2.5	UJ	NA		2.5	UJ	5.4	UJ	2.9	UJ	1.6	B	NA
Arsenic	mg/kg	3	2.4		NA	492		4.6		3.8		39.2		11.1		5.8		4.8		4.3
Barium	mg/kg	220,000	170		NA	584		44.6		NA		240		287		93.9		44		NA
Beryllium	mg/kg	2,300	1.9		NA	2.2		0.43	B	NA		2.6		0.62	B	0.34	B	0.7	B	NA
Cadmium	mg/kg	980	0.43	B	NA	3.5		0.6	B	NA		2.5		0.74	J	0.59	B	0.18	B	NA
Chromium	mg/kg	120,000	9.1	J	NA	141	J	24.8	J	NA		449	J	52.6	J	1,090	J	83	J	NA
Chromium, Hexavalent	mg/kg	6.3	1.1	U	NA	1.1	U	1.2	U	NA		1.1	U	1.8	U	1.1	U	1.2	UJ	NA
Cobalt	mg/kg	350	1	J	NA	34.7		6.3		NA		17		5.7	J	1.7	B	4.7	B	NA
Copper	mg/kg	47,000	9		NA	364		11.1		NA		96.4		27.5		44.2		15.2		NA
Iron	mg/kg	820,000	6,100		NA	89,400		19,000		NA		136,000		50,000		173,000		16,500		NA
Lead	mg/kg	800	19.8		NA	710		18.5		NA		201		62.2		21.3		14.4		NA
Manganese	mg/kg	26,000	2,070		NA	5,290		90		NA		11,400		962		25,600		89.4		NA
Mercury	mg/kg	350	0.11	U	NA	0.0055	J+	0.11	J+	NA		0.41	J+	0.065	J+	0.0067	J+	0.062	J+	NA
Nickel	mg/kg	22,000	2	J	NA	39.5		13		NA		34.4		21.8		24.6		11.9		NA
Selenium	mg/kg	5,800	3.5	U	NA	3.8	U	3.4	U	NA		3.3	U	4.6	J	2.4	B	4.2	U	NA
Silver	mg/kg	5,800	2.6	U	NA	2.8	U	2.5	U	NA		0.57	J	5.4	U	2.9	U	3.2	U	NA
Thallium	mg/kg	12	8.8	U	NA	9.5	U	8.5	U	NA		8.4	U	4.5	B	9.7	U	10.5	U	NA
Vanadium	mg/kg	5,800	15.6	J	NA	422	J	36.3	J	NA		257	J	41.7	J	795	J	34.1	J	NA
Zinc	mg/kg	350,000	73.8		NA	1,890		136		NA		592		183		193		38.2		NA
Other																				
Cyanide	mg/kg	150	0.41	J	NA	0.61	J	1.1		NA		0.56	U	2.8		0.79		0.61	U	NA

Detections in bold

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NA: This parameter was not analyzed for this sample.

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

Table 7
Summary of Inorganics Detected in Soil
Parcel A3
Tradepoint Atlantic
Sparrows Point, Maryland

Parameter	Units	PAL	RW-024-SB-1	RW-024-SB-6	RW-025-SB-1	RW-025-SB-5	RW-026-SB-1	RW-026-SB-5	RW-027-SB-1	RW-027-SB-5	RW-027-SB-10	RW-028-SB-1										
			Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil										
			9/22/2015	9/22/2015	9/22/2015	9/22/2015	9/22/2015	9/22/2015	9/23/2015	9/23/2015	9/23/2015	9/23/2015										
Metals																						
Aluminum	mg/kg	1,100,000	20,600		38,800		13,200		9,010		3,530		2,890		14,300		11,600		NA		18,600	
Antimony	mg/kg	470	2.6	UJ	2.2	UJ	2.5	UJ	2.2	UJ	2.6	UJ	2.9	UJ	3	UJ	3.6	UJ	NA		2.9	UJ
Arsenic	mg/kg	3	2.2	U	2.2		4.6		4.3		2.2	U	2.4	U	4.7		6.9		3	U	4.2	
Barium	mg/kg	220,000	124		434		123		74.7		55.4		14		91.7		32		NA		173	
Beryllium	mg/kg	2,300	1.7		6		1.1		0.81		0.15	B	0.29	B	0.98	B	2.1		NA		1.2	
Cadmium	mg/kg	980	0.32	B	0.35	B	1.7		0.35	B	0.34	B	1.5	U	0.52	J	1.8	U	NA		0.56	J
Chromium	mg/kg	120,000	496		67.1		661		19.5		30.4		4.9		56.6		30.7		NA		465	
Chromium, Hexavalent	mg/kg	6.3	1.1	UJ	1.1	U	1.1	UJ	1.1	UJ	1.1	UJ	1.1	U	1.2	U	0.58	J	NA		1.3	U
Cobalt	mg/kg	350	0.82	B	0.85	J	3.4	B	3.5	J	2.1	J	1.7	B	25.4		5.6	B	NA		4.7	B
Copper	mg/kg	47,000	12.4		13.4		48		13		22		2.5	B	28.2		5.5	B	NA		74.5	
Iron	mg/kg	820,000	81,000		31,400		138,000		13,500		25,500		4,280		29,700		115,000		NA		71,500	
Lead	mg/kg	800	6.2		4.8		109		35.1		25.9		2.4	U	62.7		32		NA		67.3	
Manganese	mg/kg	26,000	13,700	J	5,440		16,400	J	668	J	538	J	37.1	J	759		99.4		NA		9,690	
Mercury	mg/kg	350	0.0067	J	0.1	U	11.2		0.0041	J	0.054	J	0.11	U	0.12	J	0.0049	J	NA		0.035	J
Nickel	mg/kg	22,000	9.3		2.9	J	23.9		7.4		15.1		2.3	J	14.2	J	12	J	NA		13.2	J
Selenium	mg/kg	5,800	2.7	B	4.7		3.3	U	3	U	3.5	U	3.9	U	4	U	4.9	U	NA		3.9	U
Silver	mg/kg	5,800	2.6	U	2.2	U	2.5	U	2.2	U	2.6	U	2.9	U	3	U	1.3	B	NA		2.9	U
Thallium	mg/kg	12	8.8	U	7.3	U	8.2	U	7.4	U	8.7	U	9.7	U	9.9	UJ	12.1	UJ	NA		9.7	UJ
Vanadium	mg/kg	5,800	339	J	266	J	534	J	40.1	J	21.4	J	7.5	J	253		45.8		NA		420	
Zinc	mg/kg	350,000	51.7		21.6		310		173		50.3		8		182	J	35.8	J	NA		150	J
Other																						
Cyanide	mg/kg	150	0.15	J	0.65	U	1.3		0.61	U	0.3	J	0.59	U	0.7	U	0.66	U	NA		0.36	J

Detections in bold

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NA: This parameter was not analyzed for this sample.

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

Table 7
Summary of Inorganics Detected in Soil
Parcel A3
Tradepoint Atlantic
Sparrows Point, Maryland

Parameter	Units	PAL	RW-028-SB-5	RW-029-SB-1	RW-029-SB-7	RW-030-SB-1	RW-030-SB-5	RW-030-SB-10	RW-031-SB-1	RW-031-SB-6	RW-032-SB-1	RW-032-SB-5										
			Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil									
			9/23/2015	9/23/2015	9/23/2015	9/23/2015	9/23/2015	9/23/2015	9/23/2015	9/24/2015	9/24/2015	9/24/2015	9/24/2015									
Metals																						
Aluminum	mg/kg	1,100,000	17,900		19,000		7,240		12,500		4,370		NA		11,600		8,220		28,400		9,100	
Antimony	mg/kg	470	3.4	UJ	2.8	UJ	3.1	UJ	2.9	UJ	3.2	UJ	NA		2.7	UJ	3.1	UJ	2.8	UJ	3.3	UJ
Arsenic	mg/kg	3	5.6		17.5		3.6		6.3		7		11.9		4		2.7		2.4	U	11.6	
Barium	mg/kg	220,000	327		303		79.3		67.4		200		NA		46.6		35.8		1,140		155	
Beryllium	mg/kg	2,300	1	B	2		0.31	B	0.47	B	1.1	U	NA		0.88	U	0.3	B	1.5		0.59	B
Cadmium	mg/kg	980	0.22	J	45.8		1.5	U	0.7	J	1.6	U	NA		0.65	B	1.5	U	0.42	B	0.65	B
Chromium	mg/kg	120,000	19.7		182		21.1		1,220		32.1		NA		1,320	J	116	J	30.8	J	21	J
Chromium, Hexavalent	mg/kg	6.3	1.2	U	1.1	U	1.3	UJ	2.4	J-	1.4	U	NA		11.1		1.1	U	1.1	UJ	1.3	UJ
Cobalt	mg/kg	350	5.1	B	20.2		4.9	B	2.1	B	2.8	B	NA		1.5	B	2.9	B	4.4	B	7.2	J
Copper	mg/kg	47,000	22.1		548		43.1		25.6		21.8		NA		43.1	J	7.1	J	80.5	J	48.9	J
Iron	mg/kg	820,000	15,700		41,900		22,400		151,000		30,800		NA		223,000		19,200		34,800		14,700	
Lead	mg/kg	800	45.1		229		101		25.5		240		NA		4.8	J	7.2	J	35	J	168	J
Manganese	mg/kg	26,000	1,900		7,650		402		27,100		117		NA		27,900		1,880		5,300		368	
Mercury	mg/kg	350	0.12	U	0.14	J	0.43	J	0.05	J	0.074	J	NA		0.11	UJ	0.063	J	0.028	J	0.98	J
Nickel	mg/kg	22,000	11.3	J	42	J	13.8	J	27.4	J	15.8	J	NA		22.1	J	6	J	7.5	B	15.6	J
Selenium	mg/kg	5,800	4.6	U	3.7	U	4.1	U	3.9	U	4.3	U	NA		3.5	U	4.1	U	3.8	U	4.4	U
Silver	mg/kg	5,800	3.4	U	2.8	U	3.1	U	2.9	U	3.2	U	NA		1.1	B	3.1	U	2.8	U	3.3	U
Thallium	mg/kg	12	11.4	UJ	9.3	UJ	10.2	UJ	9.8	UJ	10.7	UJ	NA		8.8	UJ	10.2	UJ	9.5	UJ	10.9	UJ
Vanadium	mg/kg	5,800	70.2		182		42.1		795		29.6		NA		850		76.9		120		23.3	
Zinc	mg/kg	350,000	55	J	7,170	J	121	J	155	J	76.9	J	NA		196		18.7		56.8		280	
Other																						
Cyanide	mg/kg	150	0.73	U	0.14	J	0.62	U	0.21	J	0.84	U	NA		0.69	U	0.63	U	0.68	U	0.64	U

Detections in bold

R: The analytical result was rejected during validation.

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+: This positive result reported for this analyte is a quantitative estimate, but may be biased high.

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 blank/preparation or field blank.

NA: This parameter was not analyzed for this sample.

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

**Table 7
Summary of Inorganics Detected in Soil
Parcel A3
Tradepoint Atlantic
Sparrows Point, Maryland**

Parameter	Units	PAL	RW-032-SB-10	RW-033-SB-1	RW-033-SB-6.5	RW-033-SB-10	RW-034-SB-1	RW-034-SB-5	RW-035-SB-1	RW-035-SB-5	RW-036-SB-1	RW-036-SB-4									
			Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil								
			9/24/2015	9/25/2015	9/25/2015	9/25/2015	9/28/2015	9/28/2015	9/29/2015	9/29/2015	9/29/2015	9/29/2015									
Metals																					
Aluminum	mg/kg	1,100,000	NA	14,800	16,500	NA		15,800	19,000	21,200	16,200	15,400	9,960								
Antimony	mg/kg	470	NA	2.4	UJ	3.5	UJ	NA	2.4	UJ	3.3	UJ	2.7	UJ	3.4	UJ	3.2	UJ			
Arsenic	mg/kg	3	10	6.9		9.6		6	J	2.1		2.3	J	6.3		2.2	U	3.8		3.3	
Barium	mg/kg	220,000	NA	186		48.8		NA	140		111		253		24.4		207		45.3		
Beryllium	mg/kg	2,300	NA	0.95		1	B	NA	0.9		0.82	J	1.3		0.46	B	1.2		0.38	B	
Cadmium	mg/kg	980	NA	0.45	J	1.8	U	NA	1.4		1.6	U	60.1		0.34	J	43.7		69.7		
Chromium	mg/kg	120,000	NA	120		23.9		NA	898	J	30.6		302		27		447		12.6		
Chromium, Hexavalent	mg/kg	6.3	NA	0.47	J-	1.2	UJ	NA	1.1	UJ	0.56	J-	1.1	U	1.2	U	1.1	U	1.1	U	
Cobalt	mg/kg	350	NA	12.2		4.3	B	NA	1.8	B	6.5		6.3		3.2	J	3.2	J	4.8	J	
Copper	mg/kg	47,000	NA	78.9		8.6		NA	42.1		12.1		445		7.7		82.5		16.1		
Iron	mg/kg	820,000	NA	1,880		1,200		NA	112,000		13,400		130,000		12,200		75,400		12,400		
Lead	mg/kg	800	NA	97.1		14.8		NA	465		13		3,670		18.3		2,650		34.9		
Manganese	mg/kg	26,000	NA	132	J	90.8	J	NA	19,100		77.7		7,980	J	44	J	10,600	J	85.8	J	
Mercury	mg/kg	350	NA	0.044	J	0.045	J	NA	5.4		0.037	J	0.56		0.029	J	0.13		0.21		
Nickel	mg/kg	22,000	NA	31.3		10.8	J	NA	14.4		17.7		43.5		7.6	B	21.3		8.6	B	
Selenium	mg/kg	5,800	NA	1.9	J	4.7	U	NA	3.2	U	4.4	U	3.6	U	3.5	U	4.5	U	4.2	U	
Silver	mg/kg	5,800	NA	2.4	U	3.5	U	NA	2.4	U	3.3	U	0.76	B	2.7	U	3.4	U	3.2	U	
Thallium	mg/kg	12	NA	7.9	U	11.8	U	NA	8.1	U	2.6	J	9	U	8.8	U	11.2	U	10.6	U	
Vanadium	mg/kg	5,800	NA	337	J	46.1	J	NA	590		40.7		560		39.7		397		25.1		
Zinc	mg/kg	350,000	NA	171		27.2		NA	336		58.6		4,270		242		3,950		3,290		
Other																					
Cyanide	mg/kg	150	NA	0.12	J	0.59	U	NA	0.53	U	0.57	U	2.9		0.76		0.74		0.66	U	

Detections in bold

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

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

NA: This parameter was not analyzed for this sample.

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

**Table 7
Summary of Inorganics Detected in Soil
Parcel A3
Tradepoint Atlantic
Sparrows Point, Maryland**

Parameter	Units	PAL	RW-036-SB-10	RW-037-SB-1	RW-037-SB-8	RW-037-SB-10	RW-038-SB-1	RW-038-SB-5	RW-039-SB-1	RW-039-SB-5	RW-039-SB-10	RW-040-SB-1							
			Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil							
			9/29/2015	9/29/2015	9/29/2015	9/29/2015	9/25/2015	9/25/2015	9/29/2015	9/29/2015	9/29/2015	9/28/2015							
Metals																			
Aluminum	mg/kg	1,100,000	NA	16,400	15,700	NA	7,570	19,900	8,390	8,600	NA	11,500							
Antimony	mg/kg	470	NA	3.4	UJ	2.7	UJ	3.2	UJ	3.5	UJ	3.2	UJ						
Arsenic	mg/kg	3	8.5	J	4.5	12.3	7	J	2.7	U	3	U	4.6	3.7	14.8	J	9.3	J	
Barium	mg/kg	220,000	NA	79.7	42.7	NA	34	91.5	88.3	27.9	NA	225	J						
Beryllium	mg/kg	2,300	NA	0.49	B	0.67	B	NA	1.1	U	0.37	B	0.42	B	0.32	B	NA	0.92	
Cadmium	mg/kg	980	NA	10.7	35.8	NA	0.23	J	1.8	U	168	7.4	NA	90.6	J				
Chromium	mg/kg	120,000	NA	1,030	28.3	NA	205	27.4	15.7	13	NA	288							
Chromium, Hexavalent	mg/kg	6.3	NA	1.2	U	0.48	J	NA	2.5	J-	0.98	J-	1.1	U	1.1	UJ	NA	1.1	UJ
Cobalt	mg/kg	350	NA	1.6	J	6	NA	1.8	J	3.7	B	5.4	1.9	J	NA	10.6			
Copper	mg/kg	47,000	NA	54.6	10.7	NA	8.6	9.8	25.3	8.1	NA	70.7							
Iron	mg/kg	820,000	NA	156,000	17,400	NA	35,800	6,920	14,400	13,600	NA	72,000	J						
Lead	mg/kg	800	NA	1,090	14.6	NA	924	224	108	13.2	NA	3,230	J						
Manganese	mg/kg	26,000	NA	24,100	J	112	J	NA	5,460	J	39.1	J	185	J	59.5	J	NA	6,630	
Mercury	mg/kg	350	NA	0.052	J	0.014	J	NA	0.05	J	0.048	J	0.67	0.036	J	NA	0.24	J	
Nickel	mg/kg	22,000	NA	17.1	12.2	NA	6.1	B	12	9.9	B	5.6	B	NA	49	J			
Selenium	mg/kg	5,800	NA	4.6	U	3.6	U	NA	4.3	U	4.7	U	4	U	4.3	U	NA	3.2	U
Silver	mg/kg	5,800	NA	3.4	U	2.7	U	NA	3.2	U	3.5	U	3	U	3.2	U	NA	0.35	J
Thallium	mg/kg	12	NA	11.4	U	8.9	U	NA	10.6	U	11.8	U	10.1	U	10.7	U	NA	8	UJ
Vanadium	mg/kg	5,800	NA	1,250	33.3	NA	158	J	24.5	J	18.4	20.6	NA	480					
Zinc	mg/kg	350,000	NA	1,700	7,650	NA	89.6	90.4	2,000	432	NA	28,300							
Other																			
Cyanide	mg/kg	150	NA	0.33	J	0.57	U	NA	0.28	J	0.67	U	0.62	U	0.57	U	NA	0.35	J

Detections in bold

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

NA: This parameter was not analyzed for this sample.

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

Table 7
Summary of Inorganics Detected in Soil
Parcel A3
Tradepoint Atlantic
Sparrows Point, Maryland

Parameter	Units	PAL	RW-040-SB-6	RW-040-SB-10	RW-041-SB-1	RW-041-SB-5	RW-042-SB-1	RW-042-SB-5	RW-043-SB-1	RW-043-SB-8	RW-043-SB-10	RW-044-SB-1										
			Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil									
			9/28/2015	9/28/2015	9/23/2015	9/23/2015	9/30/2015	9/30/2015	9/24/2015	9/24/2015	9/24/2015	9/28/2015										
Metals																						
Aluminum	mg/kg	1,100,000	17,100		NA		13,200		13,400		8,710		2,960		6,880		8,560		NA		13,800	
Antimony	mg/kg	470	2.6	UJ	NA		3	UJ	3.3	UJ	3	UJ	2.5	UJ	2.3	UJ	2.2	UJ	NA		3.3	UJ
Arsenic	mg/kg	3	6.6	J	7.9	J	2.6		5.6		9	J	2.1	U	1.7	B	2.3		NA		4.1	
Barium	mg/kg	220,000	40.4	J	NA		36		139		131		22		33.5		22.6		NA		131	
Beryllium	mg/kg	2,300	1.6	J	NA		1	U	1.4		1.3	J	0.25	B	0.32	B	0.27	B	NA		1.3	
Cadmium	mg/kg	980	1.3	U	NA		0.43	J	1.5	J	10.3	J	1.2	U	1.2	U	1.1	U	NA		1.4	B
Chromium	mg/kg	120,000	48.7		NA		1,390		309		110	J	3.9	J	11	J	9.9	J	NA		266	J
Chromium, Hexavalent	mg/kg	6.3	1.2	UJ	NA		6	J-	1.2	U	1.2	UJ	1.1	UJ	1.1	UJ	1.1	UJ	NA		1.1	UJ
Cobalt	mg/kg	350	5.2		NA		5.1	U	5.4	B	15	J	1.4	J	3.8	B	4.4	J	NA		2.9	B
Copper	mg/kg	47,000	15.6		NA		25.1		42.8		101	J	2.2	J	7.4	J	6	J	NA		23.5	
Iron	mg/kg	820,000	56,900	J	NA		200,000		43,900		72,700		2,910		7,140		9,770		NA		43,800	
Lead	mg/kg	800	32.9	J	NA		2.5	U	845		198	J	5.2	J	13.2	J	5.2	J	NA		463	
Manganese	mg/kg	26,000	414		NA		29,200		3,880		1,140		35.8		76.8		67.9		NA		6,350	
Mercury	mg/kg	350	0.015	J	NA		0.1	U	0.12	U	0.12		0.013	J	0.055	J	0.016	J	NA		0.11	
Nickel	mg/kg	22,000	10.4	J	NA		23.2	J	16	J	85.4	J	2.9	B	6	B	5.3	B	NA		11	J
Selenium	mg/kg	5,800	3.5	U	NA		4.1	U	4.3	U	4	U	3.3	U	3.1	U	2.9	U	NA		4.4	U
Silver	mg/kg	5,800	2.6	U	NA		0.47	B	3.3	U	3	U	2.5	U	2.3	U	2.2	U	NA		3.3	U
Thallium	mg/kg	12	8.8	UJ	NA		10.1	UJ	10.9	UJ	10.1	U	8.2	U	7.7	UJ	7.2	UJ	NA		11.1	U
Vanadium	mg/kg	5,800	91.8		NA		894		148		56.5	J	6.3	J	16.4		17.8		NA		193	
Zinc	mg/kg	350,000	34.7		NA		98.6	J	408	J	1,930		11		20.1		13.4		NA		495	
Other																						
Cyanide	mg/kg	150	1.8		NA		0.63	U	2.4		0.88		0.17	J	0.66	U	0.63	U	NA		0.33	J

Detections in bold

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

NA: This parameter was not analyzed for this sample.

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

**Table 7
Summary of Inorganics Detected in Soil
Parcel A3
Tradepoint Atlantic
Sparrows Point, Maryland**

Parameter	Units	PAL	RW-044-SB-5	RW-044-SB-10	RW-045-SB-1	RW-045-SB-5	RW-045-SB-10	RW-046-SB-1	RW-046-SB-5	RW-047-SB-1	RW-047-SB-6	RW-047-SB-10									
			Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil								
			9/28/2015	9/28/2015	9/28/2015	9/28/2015	9/28/2015	9/25/2015	9/25/2015	9/28/2015	9/28/2015	9/28/2015									
Metals																					
Aluminum	mg/kg	1,100,000	13,300		NA		16,900		47,700		NA		14,300		6,090		16,500		9,620		NA
Antimony	mg/kg	470	3.1	UJ	NA		2.9	UJ	2.5	UJ	NA		3.2	UJ	3.1	UJ	2.4	UJ	3.2	UJ	NA
Arsenic	mg/kg	3	4.6		2.9	U	2.9		4.6		2.1	U	5.9		2.6	U	4.1		2.7	U	NA
Barium	mg/kg	220,000	23		NA		82.2		399		NA		200		18.4		131		27.4		NA
Beryllium	mg/kg	2,300	0.49	J	NA		0.23	J	8.7		NA		0.9	B	0.23	B	0.72	J	0.47	J	NA
Cadmium	mg/kg	980	1.5	U	NA		0.97	B	8.2		NA		3.5		0.34	J	0.9	B	1.6	U	NA
Chromium	mg/kg	120,000	23.2	J	NA		1,360	J	32.1	J	NA		119		10.7		230	J	19	J	NA
Chromium, Hexavalent	mg/kg	6.3	1.3	J-	NA		0.84	J-	1.2	UJ	NA		1.2	UJ	1.1	UJ	1.1	UJ	1.2	UJ	NA
Cobalt	mg/kg	350	2.5	B	NA		4.9	U	0.58	B	NA		6.9		3	B	7.6		3.3	J	NA
Copper	mg/kg	47,000	6.5		NA		36.7		9.9		NA		95.2		5.1	B	41.4		4.9	B	NA
Iron	mg/kg	820,000	22,800		NA		164,000		6,460		NA		68,000		9,270		37,300		17,300		NA
Lead	mg/kg	800	18.5		NA		315		121		NA		1,670		4.9		133		15.2		NA
Manganese	mg/kg	26,000	14.6		NA		30,200		3,900		NA		2,930	J	91.4	J	6,130		33		NA
Mercury	mg/kg	350	0.027	J	NA		0.017	J	0.11	U	NA		0.37		0.0099	J	0.24		0.021	J	NA
Nickel	mg/kg	22,000	5.4	B	NA		14.6		1.8	B	NA		26.6		10.1	B	21.6		6.8	B	NA
Selenium	mg/kg	5,800	4.1	U	NA		3.9	U	5.2		NA		4.3	U	4.2	U	3.2	U	4.3	U	NA
Silver	mg/kg	5,800	3.1	U	NA		2.9	U	2.5	U	NA		3.2	U	3.1	U	2.4	U	3.2	U	NA
Thallium	mg/kg	12	10.3	U	NA		9.8	U	8.2	U	NA		10.7	U	10.4	U	8.1	U	10.8	U	NA
Vanadium	mg/kg	5,800	40.6		NA		889		48.5		NA		143	J	19.8	J	133		54.3		NA
Zinc	mg/kg	350,000	20.9		NA		253		443		NA		3,950		819		210		18.6		NA
Other																					
Cyanide	mg/kg	150	0.56	U	NA		0.49	J	0.71	J	NA		3.1		0.69	U	0.57	U	0.49	J	NA

Detections in bold

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NA: This parameter was not analyzed for this sample.

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

**Table 7
Summary of Inorganics Detected in Soil
Parcel A3
Tradepoint Atlantic
Sparrows Point, Maryland**

Parameter	Units	PAL	RW-048-SB-1	RW-048-SB-5	RW-049-SB-1	RW-049-SB-5	RW-049-SB-10	RW-050-SB-1	RW-050-SB-4.5	RW-051-SB-1	RW-051-SB-5	RW-051-SB-10										
			Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil									
			9/25/2015	9/25/2015	9/30/2015	9/30/2015	9/30/2015	9/23/2015	9/23/2015	9/21/2015	9/21/2015	9/21/2015										
Metals																						
Aluminum	mg/kg	1,100,000	11,900		10,900		23,800		9,540		NA		11,300		5,010		13,300		35,600		NA	
Antimony	mg/kg	470	3	UJ	2.8	UJ	3.4	UJ	3.3	UJ	NA		2.6	UJ	2.2	UJ	3.1	UJ	4.7	UJ	NA	
Arsenic	mg/kg	3	4.1		2.1	J	2.6	J	5.6	J	7.6	J	3.3		16.5		4.4		9.4		26.6	J
Barium	mg/kg	220,000	68.6	J	43.1	J	285		22		NA		71.6		65.8		64.4		427		NA	
Beryllium	mg/kg	2,300	0.25	B	0.61	B	2.8	J	0.31	B	NA		0.87	U	0.17	B	0.22	B	6.5		NA	
Cadmium	mg/kg	980	0.57	J	1.4	U	1	J	1.6	U	NA		0.64	J	0.3	J	1	B	0.87	B	NA	
Chromium	mg/kg	120,000	504	J	14.8	J	60.6	J	23	J	NA		1,480		406		1,370	J	133	J	NA	
Chromium, Hexavalent	mg/kg	6.3	1.1	UJ	1.2	UJ	1.2	UJ	0.52	J-	NA		5.2		1.1	U	2.9		1.7	U	NA	
Cobalt	mg/kg	350	3.5	B	2.9	B	18.4	J	1.9	J	NA		1.3	B	52		1.2	J	5.4	J	NA	
Copper	mg/kg	47,000	40.7		3.4	B	55.1	J	10.3	J	NA		43.3		986		36.6		48.5		NA	
Iron	mg/kg	820,000	73,500		5,710		54,900		22,600		NA		192,000		375,000		203,000		90,600		NA	
Lead	mg/kg	800	1,730	J	18.3	J	71.5	J	7.5	J	NA		7.2		139		64.4		52.9		NA	
Manganese	mg/kg	26,000	14,100	J	52.5	J	880		257		NA		28,900		8,060		29,800		4,160		NA	
Mercury	mg/kg	350	0.079	J	0.045	J	0.047	J	0.021	J	NA		0.1	U	0.0049	J	0.4	J+	0.063	J+	NA	
Nickel	mg/kg	22,000	18.2		6.8	B	69.4	J	5	B	NA		43.9	J	132	J	19.8		23.5		NA	
Selenium	mg/kg	5,800	4	U	3.7	U	4.6	U	4.3	U	NA		3.5	U	3	U	4.1	U	4.7	B	NA	
Silver	mg/kg	5,800	3	U	2.8	U	3.4	U	3.3	U	NA		0.84	B	3.2		3.1	U	4.7	U	NA	
Thallium	mg/kg	12	10	U	9.4	U	11.5	U	10.8	U	NA		8.7	UJ	7.4	UJ	10.2	U	15.8	U	NA	
Vanadium	mg/kg	5,800	369	J	17.5	J	70.9	J	34.9	J	NA		911		1,740		902	J	86.5	J	NA	
Zinc	mg/kg	350,000	186		29.1		344		18.7	B	NA		175	J	1,010	J	407		144		NA	
Other																						
Cyanide	mg/kg	150	1.2	J	0.18	J	0.16	J	0.39	J	NA		0.24	J	0.52	J	0.15	J	0.45	J	NA	

Detections in bold

R: The analytical result was rejected during validation.

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+: This positive result reported for this analyte is a quantitative estimate, but may be biased high.

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 blank/preparation or field blank.

NA: This parameter was not analyzed for this sample.

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

Table 7
Summary of Inorganics Detected in Soil
Parcel A3
Tradepoint Atlantic
Sparrows Point, Maryland

Parameter	Units	PAL	RW-052-SB-1	RW-052-SB-5	RW-053-SB-1	RW-053-SB-5	RW-053-SB-10	RW-054-SB-1	RW-054-SB-5	RW-055-SB-1	RW-055-SB-5	RW-055-SB-10										
			Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil									
			9/28/2015	9/28/2015	9/28/2015	9/28/2015	9/28/2015	9/25/2015	9/25/2015	9/28/2015	9/28/2015	9/28/2015										
Metals																						
Aluminum	mg/kg	1,100,000	21,600		6,420		12,900		17,800		NA		9,810		19,000		16,600		15,200		NA	
Antimony	mg/kg	470	2.3	UJ	3.3	UJ	3.5	UJ	3.3	UJ	NA		3	UJ	3	UJ	2.8	UJ	3.1	UJ	NA	
Arsenic	mg/kg	3	5.7		4		2.4	J	7.3		9	J	4.6		2.6		4.3		3.6		4	J
Barium	mg/kg	220,000	368		237		142		67.9		NA		66.5		80.3	J	222		37.2		NA	
Beryllium	mg/kg	2,300	1.8		0.33	B	0.51	J	0.75	J	NA		0.37	B	0.6	B	1.8		0.93	B	NA	
Cadmium	mg/kg	980	3		12.7		0.57	B	1.5	B	NA		1.3	J	1.5	U	0.66	B	1.6	U	NA	
Chromium	mg/kg	120,000	194	J	133		21.8	J	24.8	J	NA		155		36.2	J	774	J	31.3		NA	
Chromium, Hexavalent	mg/kg	6.3	1.2	UJ	1.3	UJ	1.2	UJ	1.2	UJ	NA		1.1	UJ	0.74	J-	1.1	UJ	0.63	J-	NA	
Cobalt	mg/kg	350	7.1		4.7	B	5	B	5.5	J	NA		4.9	B	2.5	J	3.5	B	3.4	J	NA	
Copper	mg/kg	47,000	42.4		610		222		27.1		NA		53.4		8.4		253		11.5		NA	
Iron	mg/kg	820,000	85,700		32,000		15,400		10,200		NA		33,600		18,300		150,000		32,600		NA	
Lead	mg/kg	800	1,050		16,400		192		186		NA		979		269	J	44,700		79		NA	
Manganese	mg/kg	26,000	6,360		11,600		409		126		NA		3,350	J	28.8	J	24,500		78.1		NA	
Mercury	mg/kg	350	0.24		2.6		0.14		0.034	J	NA		0.22		0.019	J	0.02	J	0.0058	J	NA	
Nickel	mg/kg	22,000	20.1		23.2		12.5		21.6		NA		16.4		7.6	B	26.6		7.4	B	NA	
Selenium	mg/kg	5,800	3.1	U	4.4	U	4.6	U	4.4	U	NA		4	U	2.2	B	3.7	U	4.2	U	NA	
Silver	mg/kg	5,800	0.29	J	22.8		3.5	U	3.3	U	NA		3	U	3	U	48.4		3.1	U	NA	
Thallium	mg/kg	12	7.8	U	11.1	U	11.5	U	11	U	NA		10	U	9.9	U	9.2	U	10.4	U	NA	
Vanadium	mg/kg	5,800	208		249		31.1		32.8		NA		151	J	41.8	J	1,500		53.1		NA	
Zinc	mg/kg	350,000	744		6,690		246		430		NA		599		226		194		58.7		NA	
Other																						
Cyanide	mg/kg	150	0.58	J	0.35	J	0.59	J	0.7	U	NA		1.3	J	0.6	U	0.65	U	0.62	U	NA	

Detections in bold

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

NA: This parameter was not analyzed for this sample.

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

Table 7
Summary of Inorganics Detected in Soil
Parcel A3
Tradepoint Atlantic
Sparrows Point, Maryland

Parameter	Units	PAL	RW-055-SB-7	RW-056-SB-1	RW-056-SB-5	RW-071-SB-1	RW-072-SB-1	RW-073-SB-0.5	RW-074-SB-0.5	RW-075-SB-1	RW-076-SB-1	RW-076-SB-6										
			Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil										
			9/28/2015	9/25/2015	9/25/2015	9/30/2015	9/30/2015	9/30/2015	9/30/2015	9/30/2015	9/30/2015	10/8/2015	10/8/2015									
Metals																						
Aluminum	mg/kg	1,100,000	8,520		14,300		41,300		9,880		1,150		17,200		8,890		8,680		7,070		11,300	
Antimony	mg/kg	470	3.1	UJ	2.9	UJ	3.4	UJ	3	UJ	2.2	UJ	3.1	UJ	2.8	UJ	3.3	UJ	1.9	UJ	2.3	UJ
Arsenic	mg/kg	3	6.2		2.1	J	2.9	U	11.4	J	2.3	J	8.7	J	6.1	J	8.2	J	29.6	J	3	J
Barium	mg/kg	220,000	60		53.1		407		138		9.3		217		127		118		93.8	J	34.1	J
Beryllium	mg/kg	2,300	0.32	J	0.98	U	6.4		0.98	B	0.73	U	1.4	J	1	J	0.66	B	0.26	B	0.25	J
Cadmium	mg/kg	980	13.3		0.55	J	1.5	J	0.55	B	2.1	J	1.6	J	1.2	J	0.78	J	2.7	J	1.1	U
Chromium	mg/kg	120,000	31.5		1430		8		895	J	10.3	J	960	J	777	J	26.6	J	709		24.8	
Chromium, Hexavalent	mg/kg	6.3	1.2	UJ	5.3	J-	1.2	UJ	1.1	UJ	1.1	UJ	1.3	UJ	1.1	UJ	1.1	UJ	1.1	UJ	1.1	UJ
Cobalt	mg/kg	350	5.2	B	4.9	U	1.2	B	8.8	J	0.77	J	22.5	J	5	J	6.2	J	22.6		2.3	J
Copper	mg/kg	47,000	84.5		127		3.2	B	71.4	J	5	J	81.6	J	40.9	J	32.7	J	284		8.6	
Iron	mg/kg	820,000	19,400		168,000		10,100		167,000		6,380		95,000		96,800		15,800		255,000		15,200	
Lead	mg/kg	800	2,860		101		47.6		43.3	J	27.2	J	401	J	82	J	125	J	276		9.2	
Manganese	mg/kg	26,000	660		30,000	J	2520	J	32,600		101		13,500		46,200		640		21,100		204	
Mercury	mg/kg	350	0.74		0.058	J	0.12	U	0.012	J	0.026	J	0.18		0.034	J	0.51		0.06	J	0.35	J
Nickel	mg/kg	22,000	17.6		14.3		2.6	B	18.6	J	2.7	B	98.9	J	19	J	15.8	J	79.3	J	6.5	J
Selenium	mg/kg	5,800	4.2	U	3.9	U	6.8		3.9	U	2.9	U	4.2	U	3.8	U	4.3	U	2.5	U	3	U
Silver	mg/kg	5,800	3.1	U	2.9	U	3.4	U	3	U	2.2	U	3.1	U	2.8	U	3.3	U	1.3	B	2.3	U
Thallium	mg/kg	12	10.4	U	9.8	U	11.5	U	9.9	U	7.3	U	10.4	U	9.4	U	10.9	U	1.3	J	7.6	U
Vanadium	mg/kg	5,800	26.7		864	J	52.7	J	3,090	J	13.9	J	2,600	J	2,880	J	36	J	1,480		46.9	
Zinc	mg/kg	350,000	9,550		206		11,900		249		262		941		591		551		590	J	20.7	J
Other																						
Cyanide	mg/kg	150	1.3		0.18	J	0.27	J	0.38	J	0.5	J	2.1		0.89		0.36	J	0.92		0.83	

Detections in bold

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

NA: This parameter was not analyzed for this sample.

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

**Table 7
Summary of Inorganics Detected in Soil
Parcel A3
Tradepoint Atlantic
Sparrows Point, Maryland**

Parameter	Units	PAL	RW-077-SB-1	RW-077-SB-5	RW-077-SB-10	RW-078-SB-1	RW-078-SB-5	RW-078-SB-10	RW-079-SB-1	RW-079-SB-5								
			Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil							
			10/8/2015	10/8/2015	10/8/2015	10/8/2015	10/8/2015	10/8/2015	10/8/2015	10/8/2015	10/8/2015							
Metals																		
Aluminum	mg/kg	1,100,000	41,600		15,600		NA		11,600		6,240		NA		25,400		6,230	
Antimony	mg/kg	470	2.3	UJ	3.1	UJ	NA		1.7	UJ	3.2	UJ	NA		2.3	UJ	2.8	UJ
Arsenic	mg/kg	3	5.1	J	132	J	1.8	J	13.7	J	32.4	J	3.1		5.7	J	2.7	J
Barium	mg/kg	220,000	515	J	121	J	NA		156	J	172	J	NA		165	J	54.7	J
Beryllium	mg/kg	2,300	7.3		0.77	J	NA		0.82		0.47	J	NA		0.58	J	0.3	J
Cadmium	mg/kg	980	0.63	B	1.7	J	NA		8.8	J	4.8	J	NA		3.2	J	1.4	U
Chromium	mg/kg	120,000	6.9		18.7		NA		430		33.8		NA		918		11.5	
Chromium, Hexavalent	mg/kg	6.3	1.1	UJ	1.3	UJ	NA		1.1	UJ	1.2	UJ	NA		1.1	UJ	1.1	UJ
Cobalt	mg/kg	350	0.82	J	13.7		NA		12.1		10.2		NA		4.8		3.2	J
Copper	mg/kg	47,000	7.4		217		NA		126		416		NA		63.8		14.9	
Iron	mg/kg	820,000	8,560		66,800		NA		167,000		62,900		NA		173,000		8,240	
Lead	mg/kg	800	7.4		3,980		7.8		1,420		346		NA		259		54.6	
Manganese	mg/kg	26,000	3,760		2,660		NA		12,500		1,300		NA		27,700		196	
Mercury	mg/kg	350	0.1	UJ	0.024	J	NA		0.42	J	0.091	J	NA		0.098	J	0.5	J
Nickel	mg/kg	22,000	1.6	J	25.1	J	NA		53.5	J	23	J	NA		37.1	J	5.5	J
Selenium	mg/kg	5,800	2.4	B	4.2	U	NA		2.3	U	4.3	U	NA		3.1	U	3.7	U
Silver	mg/kg	5,800	2.3	U	2.4	B	NA		1.7	U	1.1	B	NA		3.1		2.8	U
Thallium	mg/kg	12	7.8	U	10.4	U	NA		5.7	U	10.8	U	NA		7.8	U	9.4	U
Vanadium	mg/kg	5,800	34		184		NA		923		53.3		NA		1,030		37.2	
Zinc	mg/kg	350,000	38.7	J	636	J	NA		2,070	J	1,720	J	NA		390	J	46.9	J
Other																		
Cyanide	mg/kg	150	0.36	J	8.9		NA		2.6		1.3		NA		2		0.31	J

Detections in bold

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NA: This parameter was not analyzed for this sample.

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

**TABLE 8
SUMMARY OF SOIL COPCs**

<u>Parameter</u>	<u>CAS#</u>	<u>Frequency of Detections (%)</u>	<u>Sample ID of Max Result</u>	<u>Unit</u>	<u>PAL Solid</u>	<u>Max Result</u>
1,2-Dibromo-3-chloropropane	96-12-8	1	RW-047-SB-6	mg/kg	0.064	0.24
1,4-Dichlorobenzene	106-46-7	1	RW-055-SB-7	mg/kg	11	39.8
Aroclor 1254	11097-69-1	8	RW-035-SB-1	mg/kg	0.97	6.7
Arsenic	7440-38-2	89	RW-021-SB-1	mg/kg	3	492
Benzo[a]anthracene	56-55-3	81	RW-020-SB-7	mg/kg	2.9	60.9
Benzo[a]pyrene	50-32-8	73	RW-020-SB-7	mg/kg	0.29	42.8
Benzo[b]fluoranthene	205-99-2	79	RW-020-SB-7	mg/kg	2.9	76.3
Benzo[k]fluoranthene	207-08-9	78	RW-020-SB-7	mg/kg	29	36
Cadmium	7440-43-9	78	RW-003-SB-1	mg/kg	980	2,340
Chromium VI	18540-29-9	21	RW-031-SB-1	mg/kg	6.3	11.1
Dibenz[a,h]anthracene	53-70-3	50	RW-052-SB-5	mg/kg	0.29	2.7
Diesel Range Organics	DRO	58	RW-033-SB-1	mg/kg	620	956
Indeno[1,2,3-c,d]pyrene	193-39-5	55	RW-052-SB-5	mg/kg	2.9	6.2
Lead	7439-92-1	98	RW-055-SB-1	mg/kg	800	44,700
Manganese	7439-96-5	100	RW-019-SB-4	mg/kg	26,000	54,000
Naphthalene	91-20-3	68	RW-043-SB-8	mg/kg	17	75
PCBs (total)	1336-36-3	19	RW-035-SB-1	mg/kg	0.97	6.7
Trichloroethene	79-01-6	16	RW-010-SB-7	mg/kg	6	6.1

**TABLE 9
SOIL PAL EXCEEDANCES FOR SPECIFIC TARGETS**

<u>Target Feature</u>	<u>Boring ID</u>	<u>Sample Depth (ft)</u>	<u>Parameter</u>	<u>PAL (mg/kg)</u>	<u>Result (mg/kg)</u>	<u>Final Flag</u>
Above Ground Storage Tank	RW-030-SB	1	Arsenic	3	6.3	
		1	Manganese	26,000	27,100	
		5	Arsenic	3	7	
		10	Arsenic	3	11.9	
Acid Storage Area	RW-039-SB	1	Arsenic	3	4.6	
		5	Arsenic	3	3.7	
		10	Arsenic	3	14.8	J
Acid Tank	RW-015-SB	1	Arsenic	3	5.9	
		5	Arsenic	3	5.4	
		5	Benzo[a]anthracene	2.9	23.1	
		5	Benzo[a]pyrene	0.29	16.7	
		5	Benzo[b]fluoranthene	2.9	23.6	
		5	Dibenz[a,h]anthracene	0.29	1.3	
		5	Indeno[1,2,3-c,d]pyrene	2.9	3.4	
Battery Room	RW-043-SB	8	Naphthalene	17	75	
Bearing Shop	RW-028-SB	1	Arsenic	3	4.2	
		5	Arsenic	3	5.6	
Bethanizing Plant	RW-045-SB	1	Manganese	26,000	30,200	
		5	Arsenic	3	4.6	
		5	Benzo[a]anthracene	2.9	4	
		5	Benzo[a]pyrene	0.29	3.9	
		5	Benzo[b]fluoranthene	2.9	5.5	
		5	Dibenz[a,h]anthracene	0.29	0.89	
	RW-046-SB	1	Arsenic	3	5.9	
		1	Benzo[a]pyrene	0.29	1.7	
	RW-047-SB	1	Lead	800	1,670	
		1	Arsenic	3	4.1	
	RW-048-SB	6	1,2-Dibromo-3-chloropropane	0.064	0.24	J
1		Arsenic	3	4.1		
RW-048-SB	1	Lead	800	1,730	J	
Compressor Room	RW-019-SB	1	Arsenic	3	7	
		1	Benzo[a]pyrene	0.29	0.5	
		4	Arsenic	3	32.2	
		4	Manganese	26,000	54,000	
Cooling Tower	RW-012-SB	1	Arsenic	3	6.9	
		5	Arsenic	3	4.4	
		8	Arsenic	3	5.7	J
Dye Room	RW-018-SB	1	Arsenic	3	3.6	
		1	Chromium VI	6.3	7.7	
		1	Manganese	26,000	30,500	
		5	Arsenic	3	4.4	

**TABLE 9
SOIL PAL EXCEEDANCES FOR SPECIFIC TARGETS**

<u>Target Feature</u>	<u>Boring ID</u>	<u>Sample Depth (ft)</u>	<u>Parameter</u>	<u>PAL (mg/kg)</u>	<u>Result (mg/kg)</u>	<u>Final Flag</u>	
East Pond	RW-004-SB	1	Arsenic	3	6.3		
		1	Benzo[a]pyrene	0.29	0.51		
		5	Arsenic	3	19.4		
		5	Benzo[a]anthracene	2.9	4.3		
		5	Benzo[a]pyrene	0.29	3.9		
		5	Benzo[b]fluoranthene	2.9	9.2		
		5	Dibenz[a,h]anthracene	0.29	0.96		
		5	Indeno[1,2,3-c,d]pyrene	2.9	4.9		
		5	Naphthalene	17	18.6		
			10	Arsenic	3	10.3	J
		RW-005-SB	1	Arsenic	3	142	
			1	Cadmium	980	2,240	J
		RW-006-SB	5	Arsenic	3	5.9	
			1	Arsenic	3	11.2	J
		RW-008-SB	1	Benzo[a]pyrene	0.29	0.44	
			5	Arsenic	3	6	J
		5	Arsenic	3	3.6		
		10	Arsenic	3	12.2	J	
Fuel Shop	RW-032-SB	5	Arsenic	3	11.6		
		10	Arsenic	3	10		
Galvanizing Line	RW-038-SB	1	Lead	800	924		
	RW-044-SB	1	Arsenic	3	4.1		
		1	Benzo[a]pyrene	0.29	0.39		
		5	Arsenic	3	4.6		
Leach Pit	RW-037-SB	1	Arsenic	3	4.5		
		1	Benzo[a]pyrene	0.29	0.36		
		1	Lead	800	1,090		
		8	Arsenic	3	12.3		
		10	Arsenic	3	7	J	
Lead Room	RW-036-SB	1	Arsenic	3	3.8		
		1	Benzo[a]pyrene	0.29	1.2	J	
		1	Lead	800	2,650		
		4	Arsenic	3	3.3		
		10	Arsenic	3	8.5	J	

**TABLE 9
SOIL PAL EXCEEDANCES FOR SPECIFIC TARGETS**

<u>Target Feature</u>	<u>Boring ID</u>	<u>Sample Depth (ft)</u>	<u>Parameter</u>	<u>PAL (mg/kg)</u>	<u>Result (mg/kg)</u>	<u>Final Flag</u>
Lead Storage Room	RW-040-SB	1	Arsenic	3	9.3	J
		1	Benzo[a]anthracene	2.9	9.6	
		1	Benzo[a]pyrene	0.29	7.6	
		1	Benzo[b]fluoranthene	2.9	11.4	
		1	Dibenz[a,h]anthracene	0.29	1.4	
		1	Indeno[1,2,3-c,d]pyrene	2.9	3.8	
		1	Lead	800	3,230	J
		6	Arsenic	3	6.6	J
		10	Arsenic	3	7.9	J
Maintenance Shop	RW-031-SB	1	Arsenic	3	4	
		1	Chromium VI	6.3	11.1	
		1	Manganese	26,000	27,900	
NAPL Delineation (additions)	RW-076-SB	1	Arsenic	3	29.6	J
		1	Benzo[a]pyrene	0.29	1.6	
		1	Dibenz[a,h]anthracene	0.29	0.41	
	RW-077-SB	1	Arsenic	3	5.1	J
		5	Arsenic	3	132	J
		5	Lead	800	3,980	
	RW-078-SB	1	Arsenic	3	13.7	J
		1	Benzo[a]pyrene	0.29	0.85	
		1	Lead	800	1,420	
		5	Arsenic	3	32.4	J
		10	Arsenic	3	3.1	
	RW-079-SB	1	Arsenic	3	5.7	J
		1	Benzo[a]pyrene	0.29	2	
		1	Benzo[b]fluoranthene	2.9	3.1	
		1	Dibenz[a,h]anthracene	0.29	0.39	
1		Manganese	26,000	27,700		
No. 3 Rod Mill Furnace	RW-014-SB	1	Chromium VI	6.3	7.8	J-
		1	Manganese	26,000	28,100	J
Northwest Pond	RW-002-SB	1	Arsenic	3	34.4	
		1	Lead	800	1,080	
		4.5	Arsenic	3	152	
	RW-003-SB	1	Arsenic	3	23	
		1	Cadmium	980	2,340	
		1	Lead	800	1,230	
		5	Arsenic	3	11.8	
10	Arsenic	3	137	J		

**TABLE 9
SOIL PAL EXCEEDANCES FOR SPECIFIC TARGETS**

<u>Target Feature</u>	<u>Boring ID</u>	<u>Sample Depth (ft)</u>	<u>Parameter</u>	<u>PAL (mg/kg)</u>	<u>Result (mg/kg)</u>	<u>Final Flag</u>
Oil Room	RW-035-SB	1	Aroclor 1254	0.97	6.7	
		1	Arsenic	3	6.3	
		1	Benzo[a]pyrene	0.29	1.4	
		1	Benzo[b]fluoranthene	2.9	5.4	
		1	Lead	800	3,670	
		1	PCBs (total)	0.97	6.7	J
Oil Storage Area	RW-010-SB	1	Arsenic	3	3.4	
		7	Trichloroethene	6	6.1	
Oil Tanks	RW-033-SB	1	Arsenic	3	6.9	
		1	Benzo[a]anthracene	2.9	6.8	
		1	Benzo[a]pyrene	0.29	6.7	
		1	Benzo[b]fluoranthene	2.9	10.7	
		1	Dibenz[a,h]anthracene	0.29	1.1	
		1	Diesel Range Organics	620	956	
		1	Indeno[1,2,3-c,d]pyrene	2.9	41	
		6.5	Arsenic	3	9.6	
	10	Arsenic	3	6	J	
Paint Room	RW-007-SB	1	Arsenic	3	5.2	
		1	Benzo[a]pyrene	0.29	1.9	
		1	Benzo[b]fluoranthene	2.9	3	
		1	Dibenz[a,h]anthracene	0.29	0.4	
		5	Arsenic	3	6.2	
		10	Arsenic	3	20.5	J
Pump House	RW-023-SB	1	Arsenic	3	5.8	
		5	Arsenic	3	4.8	
		10	Arsenic	3	4.3	
	RW-029-SB	1	Arsenic	3	17.5	
		7	Arsenic	3	3.6	
		7	Benzo[a]pyrene	0.29	3.4	
Rail Activities	RW-042-SB	1	Arsenic	3	9	J
		1	Benzo[a]pyrene	0.29	0.55	
	RW-049-SB	1	Benzo[a]pyrene	0.29	0.41	
		5	Arsenic	3	5.6	J
		10	Arsenic	3	7.6	J
Rod Mill Cooling Tower	RW-021-SB	1	Arsenic	3	492	
		1	Benzo[a]pyrene	0.29	0.41	
		6	Arsenic	3	4.6	
		10	Arsenic	3	3.8	
	RW-022-SB	1	Arsenic	3	39.2	
		8.5	Arsenic	3	11.1	

**TABLE 9
SOIL PAL EXCEEDANCES FOR SPECIFIC TARGETS**

<u>Target Feature</u>	<u>Boring ID</u>	<u>Sample Depth (ft)</u>	<u>Parameter</u>	<u>PAL (mg/kg)</u>	<u>Result (mg/kg)</u>	<u>Final Flag</u>
Rod Mill Scale Pit	RW-025-SB	1	Arsenic	3	4.6	
		1	Benzo[a]pyrene	0.29	0.52	
		5	Arsenic	3	4.3	
Rod Mill Trenches and Sumps	RW-009-SB	1	Arsenic	3	3.1	
		1	Benzo[a]pyrene	0.29	0.52	
		1	Manganese	26,000	28,200	J
		5	Arsenic	3	4	
		10	Arsenic	3	14.4	J
	RW-050-SB	1	Arsenic	3	3.3	
		1	Manganese	26,000	28,900	
		4.5	Arsenic	3	16.5	
	RW-051-SB	1	Arsenic	3	4.4	
		1	Manganese	26,000	29,800	
		5	Arsenic	3	9.4	
		10	Arsenic	3	26.6	J
	RW-052-SB	1	Arsenic	3	5.7	
		1	Benzo[a]pyrene	0.29	0.64	
		1	Lead	800	1,050	
		5	Arsenic	3	4	
		5	Benzo[a]anthracene	2.9	14.7	
		5	Benzo[a]pyrene	0.29	10.8	
		5	Benzo[b]fluoranthene	2.9	17	
		5	Indeno[1,2,3-c,d]pyrene	2.9	6.2	
		5	Lead	800	16,400	
	5	Naphthalene	17	23.4		
	RW-053-SB	5	Arsenic	3	7.3	
		10	Arsenic	3	9	J
	RW-054-SB	1	Arsenic	3	4.6	
		1	Benzo[a]pyrene	0.29	0.65	
		1	Lead	800	979	
	RW-055-SB	1	Arsenic	3	4.3	
		1	Benzo[a]pyrene	0.29	0.42	
		1	Lead	800	44,700	
		5	Arsenic	3	3.6	
		7	1,4-Dichlorobenzene	11	39.8	
		7	Arsenic	3	6.2	
		7	Benzo[a]pyrene	0.29	1.6	
		7	Dibenz[a,h]anthracene	0.29	0.33	
		7	Lead	800	2,860	
7		Naphthalene	17	28.6		
10	Arsenic	3	4	J		
RW-056-SB	1	Manganese	26,000	30,000	J	

**TABLE 9
SOIL PAL EXCEEDANCES FOR SPECIFIC TARGETS**

<u>Target Feature</u>	<u>Boring ID</u>	<u>Sample Depth (ft)</u>	<u>Parameter</u>	<u>PAL (mg/kg)</u>	<u>Result (mg/kg)</u>	<u>Final Flag</u>
Roll Shop	RW-027-SB	1	Arsenic	3	4.7	
		1	Benzo[a]anthracene	2.9	5.2	
		1	Benzo[a]pyrene	0.29	3.8	
		1	Benzo[b]fluoranthene	2.9	9.3	
		1	Dibenz[a,h]anthracene	0.29	1.1	
		5	Arsenic	3	6.9	
Sludge Bin Storage Area	RW-001-SB	1	Arsenic	3	26.5	J
Soap Mixer Area	RW-016-SB	1	Manganese	26,000	30,000	
		4	Arsenic	3	6.7	
		4	Benzo[a]pyrene	0.29	1.6	
		4	Dibenz[a,h]anthracene	0.29	0.36	
Stelmor Lines	RW-041-SB	1	Manganese	26,000	29,200	
		1	Benzo[a]pyrene	0.29	0.74	
		5	Arsenic	3	5.6	
		5	Lead	800	845	
Stelmor Pit	RW-013-SB	1	Arsenic	3	4.1	
		1	Manganese	26,000	35,200	
		5	Arsenic	3	9.7	
		10	Arsenic	3	7	
Truck Repair Shop	RW-011-SB	1	Arsenic	3	12.9	
		1	Benzo[a]pyrene	0.29	1.9	
		1	Dibenz[a,h]anthracene	0.29	0.45	
		5	Arsenic	3	169	
		5	Benzo[a]anthracene	2.9	3.2	J
		5	Benzo[a]pyrene	0.29	2.9	J
		5	Benzo[b]fluoranthene	2.9	4.4	
5	Dibenz[a,h]anthracene	0.29	0.33			
Water Processing Machine	RW-017-SB	1	Benzo[a]pyrene	0.29	0.44	J

**TABLE 9
SOIL PAL EXCEEDANCES FOR SPECIFIC TARGETS**

<u>Target Feature</u>	<u>Boring ID</u>	<u>Sample Depth (ft)</u>	<u>Parameter</u>	<u>PAL (mg/kg)</u>	<u>Result (mg/kg)</u>	<u>Final Flag</u>
Water Treatment System	RW-020-SB	1	Arsenic	3	6	
		1	Benzo[a]pyrene	0.29	0.81	
		1	Lead	800	832	
		4.5	Benzo[a]anthracene	2.9	8.1	
		4.5	Benzo[a]pyrene	0.29	6.5	
		4.5	Benzo[b]fluoranthene	2.9	15.2	
		7	Benzo[a]anthracene	2.9	60.9	J
		7	Benzo[a]pyrene	0.29	42.8	J
		7	Benzo[b]fluoranthene	2.9	76.3	J
		7	Benzo[k]fluoranthene	29	36	J
		7	Dibenz[a,h]anthracene	0.29	0.48	J

J = The positive result is a quantitative estimate.

J- = The positive result is a quantitative estimate, but may be biased low.

**TABLE 10
POTENTIAL HOT SPOTS DETECTED IN SOIL**

<u>Target Feature</u>	<u>Sample ID</u>	<u>Parameter</u>	<u>Hot Spot Criteria (mg/kg)</u>	<u>Result (mg/kg)</u>	<u>Final Flag</u>
Water Treatment System	RW-020-SB-7	Benzo[a]pyrene	29	42.8	J
Rod Mill Cooling Tower	RW-021-SB-1	Arsenic	300	492	
Oil Room	RW-035-SB-1	Lead	2,000	3,670	
Lead Room	RW-036-SB-1	Lead	2,000	2,650	
Lead Storage Room	RW-040-SB-1	Lead	2,000	3,230	J
Rod Mill Trenches and Sumps	RW-052-SB-5	Lead	2,000	16,400	
Rod Mill Trenches and Sumps	RW-055-SB-1	Lead	2,000	44,700	
Rod Mill Trenches and Sumps	RW-055-SB-7	Lead	2,000	2,860	
NAPL Delineation (additions)	RW-077-SB-5	Lead	2,000	3,980	

J = The positive result is a quantitative estimate.

Table 11
Summary of Organics Detected in Groundwater
Parcel A3
Tradepoint Atlantic
Sparrows Point, Maryland

Parameter	Units	PAL	RW02-PZM000		RW02-PZM020		RW07-PZM004		RW07-PZM017		RW10-PZM004		RW10-PZM020		RW19-PZM000		RW19-PZM020		RW20-PZM000		RW20-PZM020			
			Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater	
			11/13/2015		11/13/2015		11/13/2015		11/13/2015		11/12/2015		11/12/2015		11/12/2015		11/12/2015		11/16/2015		11/17/2015		11/17/2015	
Volatile Organic Compounds																								
1,1,1-Trichloroethane	µg/L	200	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U		
1,1-Dichloroethane	µg/L	2.7	1	U	0.3	J	4.8		7.3		1	U	1.7		1	U	1	U	1	U	1	U		
1,1-Dichloroethene	µg/L	7	1	U	1	U	1	U	1.3		1	U	0.45	J	1	U	1	U	1	U	1	U		
1,2-Dichloroethene (Total)	µg/L	70	2	U	0.51	J	2	U	2	U	2	U	2.9		2	U	2	U	2	U	2	U		
2-Butanone (MEK)	µg/L	5,600	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U		
4-Methyl-2-pentanone (MIBK)	µg/L	1,200	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U		
Acetone	µg/L	14,000	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U		
Benzene	µg/L	5	1	U	1	U	1	U	1	U	1	U	1.1		1	U	1	U	1	U	1	U		
Carbon disulfide	µg/L	810	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U		
cis-1,2-Dichloroethene	µg/L	70	1	U	0.51	J	1	U	1	U	1	U	2.8		1	U	0.44	J	1	U	1	U		
Cyclohexane	µg/L	13,000	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U		
Ethylbenzene	µg/L	700	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U		
Isopropylbenzene (Cumene)	µg/L	450	1	U	1	U	1	U	1	U	1.7		1	U	1	U	1	U	1	R	1	U		
Toluene	µg/L	1,000	1	U	1	U	1	U	0.43	J	1	U	0.35	J	1	U	1	U	1	U	1	U		
Trichloroethene	µg/L	5	1	U	1	U	1	U	0.53	J	4.2		6.9		1	U	1	U	0.6	J	0.69	J		
Vinyl chloride	µg/L	2	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U		
Xylene (Total)	µg/L	10,000	3	U	3	U	3	U	3	U	3	U	3	U	3	U	3	U	3	U	3	U		
Semi-Volatile Organic Compounds*																								
1,4-Dioxane	µg/L	0.46	0.1	U	0.15		0.1	UJ	1.8		0.1	U	0.8		0.1	U	0.28		0.53		0.38			
2,3,4,6-Tetrachlorophenol	µg/L	240	1	U	1	U	1	U	1	U	0.56	J	1	U	1	U	1	U	1	U	1	U		
2,4-Dimethylphenol	µg/L	39	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U		
2-Methylnaphthalene	µg/L	36	0.1	U	0.1	U	0.1	U	0.3		0.049	J	0.56		0.1	U	0.1	U	0.1	U	0.1	U		
3&4-Methylphenol(m&p Cresol)	µg/L	930	2	U	2	U	2	U	2	U	2.1	U	2	U	2.1	U	2	U	2	U	2	U		
Acenaphthene	µg/L	530	0.1	U	0.36		0.1	U	1.6		0.1	U	0.51		0.1	U	0.1	U	0.1	UJ	0.04	J		
Acenaphthylene	µg/L	530	0.1	U	2.6		0.1	U	0.66		0.1	U	0.83		0.1	U	0.1	U	0.1	UJ	0.1	U		
Anthracene	µg/L	1,800	0.1	U	0.1	U	0.1	U	0.4		0.044	J	0.11		0.015	J	0.1	U	0.1	U	0.042	J		
Benzo(a)anthracene	µg/L	0.012	0.1	U	0.1	U	0.1	U	0.1	U	0.1	UJ	0.1	UJ	0.1	UJ	0.1	UJ	0.1	UJ	0.1	U		
Benzo(a)pyrene	µg/L	0.2	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U		
Benzo(b)fluoranthene	µg/L	0.034	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U		
Benzo(k)fluoranthene	µg/L	0.34	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U		
bis(2-Ethylhexyl)phthalate	µg/L	6	1	U	1	U	0.22	J	1	U	1	U	1	U	1	U	0.22	J	1	U	1	U		
Caprolactam	µg/L	9,900	2.5	U	2.5	U	2.6	UJ	2.5	U	2.6	U	2.6	U	2.6	U	2.5	U	2.6	U	0.3	J		
Carbazole	µg/L		1	U	0.25	J	1	U	1.5		1	U	0.69	J	1	U	1	U	1	U	0.29	J		
Chrysene	µg/L	3.4	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	UJ	0.1	U		
Fluoranthene	µg/L	800	0.1	U	0.1	U	0.1	U	0.011	J	0.015	J	0.1	UJ	0.1	UJ	0.1	UJ	0.1	UJ	0.041	J		
Fluorene	µg/L	290	0.1	U	0.1	U	0.1	U	0.024	J	0.022	J	0.02	J	0.1	U	0.1	U	0.1	UJ	0.2			
Naphthalene	µg/L	0.17	0.1	U	0.09	J	0.058	J	2.1		1.5		1.9		0.023	B	0.031	B	0.1	U	0.089	J		
Pentachlorophenol	µg/L	1	2.5	UJ	2.5	U	2.6	U	2.5	U	2.2	J	2.6	U	2.6	U	2.5	U	2.6	U	2.6	U		
Phenanthrene	µg/L		0.1	U	0.1	U	0.1	U	0.53		0.026	J	0.084	J	0.1	U	0.1	U	0.1	U	0.35			
Phenol	µg/L	5,800	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U		
Pyrene	µg/L	120	0.1	U	0.1	U	0.1	U	0.1	U	0.029	J	0.1	UJ	0.1	UJ	0.1	UJ	0.1	UJ	0.021	J		
TPH/Oil and Grease																								
Oil and Grease	µg/L		4,900	U	4,820	U	4,870	U	4,850	U	21,400		4,800	U	4,800	U	4,820	U	4,800	U	4,800	U		
Diesel Range Organics	µg/L	100	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA			

Detections in bold

R: The analytical result was rejected during validation.

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/preparation or field blank.

NA: This parameter was not analyzed for this sample.

*PAH compounds were analyzed via SIM

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

Table 11
Summary of Organics Detected in Groundwater
Parcel A3
Tradepoint Atlantic
Sparrows Point, Maryland

Parameter	Units	PAL	RW-002-PZ		RW-006-PZ		RW-011-PZ		RW-021-PZ		RW-025-PZ		RW-027-PZ		RW-048-PZ		RW-050-PZ	
			Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater	
			10/27/2015		10/27/2015		10/27/2015		10/27/2015		10/26/2015		10/26/2015		10/27/2015		10/26/2015	
Volatile Organic Compounds																		
1,1,1-Trichloroethane	µg/L	200	1	U	1	U	1	U	1	U	1.2		1	U	1	U	1	U
1,1-Dichloroethane	µg/L	2.7	0.25	J	1	U	1	U	1	U	40.7		0.4	J	1	U	1	U
1,1-Dichloroethene	µg/L	7	1	U	1	U	1	U	1	U	0.7	J	1	U	1	U	1	U
1,2-Dichloroethene (Total)	µg/L	70	2	U	2	U	1.5	J	2	U	2	U	2	U	0.76	J	2	U
2-Butanone (MEK)	µg/L	5,600	10	U	10	U	10	U	10	U	10	U	10	U	10	U	4	J
4-Methyl-2-pentanone (MIBK)	µg/L	1,200	10	U	10	U	10	U	10	U	1.1	J	10	U	10	U	10	U
Acetone	µg/L	14,000	10	U	10	U	10	U	5.6	J	10	U	10	U	10	U	10	U
Benzene	µg/L	5	1	U	1	U	0.58	J	1	U	1	U	1	U	1	U	2.8	
Carbon disulfide	µg/L	810	1	U	1	U	1	U	1	UJ	1	UJ	0.62	J	1	U	1	UJ
cis-1,2-Dichloroethene	µg/L	70	1	U	1	U	1.4		1	U	1	U	1	U	0.63	J	0.38	J
Cyclohexane	µg/L	13,000	10	U	10	U	0.24	J	10	U	10	U	10	U	10	U	0.84	J
Ethylbenzene	µg/L	700	1	U	1	U	1	U	1	U	2.7		1	U	1	U	0.73	J
Isopropylbenzene (Cumene)	µg/L	450	1	U	1	U	1	U	1	U	0.24	J	1	U	1	U	1	U
Toluene	µg/L	1,000	1	U	1	U	0.43	J	1	U	1.8		1	U	1	U	1.3	
Trichloroethene	µg/L	5	1	U	1	U	1		1	U	1	U	1	U	1.5		6.2	
Vinyl chloride	µg/L	2	1	U	1	U	0.41	J	1	U	0.21	J	1	U	1	U	1	U
Xylene (Total)	µg/L	10,000	3	U	3	U	3	U	3	U	4.2		3	U	3	U	0.73	J
Semi-Volatile Organic Compounds*																		
1,4-Dioxane	µg/L	0.46	0.13		0.16		0.051	J	0.53		0.53		0.92		0.73		0.034	J
2,3,4,6-Tetrachlorophenol	µg/L	240	0.59	J	1	U	1	U	1	U	1	U	1	U	1	U	1	U
2,4-Dimethylphenol	µg/L	39	1	U	1	U	1	U	1	U	0.86	J	1	U	1	U	1	U
2-Methylnaphthalene	µg/L	36	0.1	U	0.1	U	0.65		0.1	U	0.15		0.1	U	0.1	U	0.026	J
3&4-Methylphenol(m&p Cresol)	µg/L	930	2	U	2.1	U	2.1	U	2.1	U	0.62	J	2.1	U	2.1	U	2.1	U
Acenaphthene	µg/L	530	0.1	U	0.1	U	0.29		0.1	U	0.35		0.1	U	0.1	U	0.032	J
Acenaphthylene	µg/L	530	0.1	U	0.1	U	0.62		0.1	U	0.021	J	0.1	U	0.1	U	0.1	U
Anthracene	µg/L	1,800	0.045	J	0.39		0.26		0.1	U	0.21		0.1	U	0.1	U	0.1	U
Benzo(a)anthracene	µg/L	0.012	0.018	J	0.03	J	0.054	J	0.1	U	0.035	J	0.1	U	0.018	J	0.018	J
Benzo(a)pyrene	µg/L	0.2	0.1	U	0.1	U	0.021	J	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Benzo(b)fluoranthene	µg/L	0.034	0.1	U	0.1	U	0.043	J	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Benzo(k)fluoranthene	µg/L	0.34	0.1	U	0.1	U	0.018	J	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
bis(2-Ethylhexyl)phthalate	µg/L	6	1	U	1	U	1	U	1	U	1	U	1	U	1	U	0.47	J
Caprolactam	µg/L	9,900	2.6	U	2.6	U	2.6	U	2.6	U	2.6	U	2.6	U	2.6	U	2.6	U
Carbazole	µg/L		0.37	J	1	U	1.4		1	U	0.36	J	1	U	1	U	1	U
Chrysene	µg/L	3.4	0.1	U	0.1	U	0.033	J	0.1	U	0.016	J	0.1	U	0.0085	J	0.1	U
Fluoranthene	µg/L	800	0.051	J	0.1	U	0.45		0.1	U	0.4		0.027	J	0.033	J	0.048	J
Fluorene	µg/L	290	0.038	J	0.044	J	0.8		0.1	U	0.34		0.023	J	0.1	U	0.025	J
Naphthalene	µg/L	0.17	0.033	B	0.036	B	6.4		0.025	B	1.1		0.027	B	0.027	B	0.13	
Pentachlorophenol	µg/L	1	2.6	U	2.6	U	2.6	U	2.6	U	0.77	J	2.6	U	2.6	U	2.6	U
Phenanthrene	µg/L		0.066	J	0.032	J	1.7		0.1	U	0.42		0.1	U	0.1	U	0.054	J
Phenol	µg/L	5,800	1	U	1	U	0.22	J	1	U	0.66	J	1	U	1	U	1	U
Pyrene	µg/L	120	0.036	J	0.019	J	0.3		0.1	U	0.34		0.028	J	0.026	J	0.042	J
TPH/Oil and Grease																		
Oil and Grease	µg/L		1,000	J	4,850	U	4,870	U	1,000	J	4,820	U	4,820	U	4,820	U	4,850	U
Diesel Range Organics	µg/L	100	NA		NA		171		NA		NA		233	J	NA		NA	

Detections in bold

R: The analytical result was rejected during validation.

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/preparation or field blank.

NA: This parameter was not analyzed for this sample.

*PAH compounds were analyzed via SIM

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

**Table 12
Summary of Inorganics Detected in Groundwater
Parcel A3
Tradepoint Atlantic
Sparrows Point, Maryland**

Parameter	Units	PAL	RW02-PZM000	RW02-PZM020	RW07-PZM004	RW07-PZM017	RW10-PZM004	RW10-PZM020	RW19-PZM000	RW19-PZM020	RW20-PZM000	RW20-PZM020										
			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater										
			11/13/2015	11/13/2015	11/13/2015	11/13/2015	11/12/2015	11/12/2015	11/12/2015	11/12/2015	11/16/2015	11/17/2015										
Total Metals																						
Aluminum	ug/L	20,000	42.6	B	32.5	B	29.8	B	38.1	B	121		206		248		35.5	B	315		24.1	B
Antimony	ug/L	6	2.5	B	11		6	U	7.3		2.3	J	7.9		2.3	B	6	U	2.2	J	6	U
Arsenic	ug/L	10	116		6.9		5	U	5	U	7.4	J	3.3	J	14.6	J	5	U	118		3.7	J
Barium	ug/L	2,000	26.4		8.1	B	47.2		9.9	B	14.2		13.7		12.4		34.3		11.6	B	28.7	
Beryllium	ug/L	4	1	U	0.39	B	1	U	1	U	1	U	1	U	1	U	1	U	0.37	J	1	U
Cadmium	ug/L	5	31.3		47.2		3.2		9,780		3	U	10,200		3	U	41.9		0.58	B	0.59	J
Chromium	ug/L	100	17.1		5	U	1.9	B	5	U	0.98	J	5	U	24.4		0.89	J	0.83	J	5	U
Chromium, Hexavalent	ug/L	0.035	13		10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Cobalt	ug/L	6	5	U	113		0.7	J	144		5	U	114		1.5	J	38.5		5	U	53.1	
Copper	ug/L	1,300	3	J	5	U	5	U	1.5	J	5	U	7.8		4.2	B	12		5	U	6	
Iron	ug/L	14,000	70	U	443,000		41	B	283,000		70	U	202,000		448		37,000		103		226,000	
Manganese	ug/L	430	4.7	B	19,000		5,480		17,500		1.9	J	18,000		0.89	J	2,580		3.8	J	9,210	
Nickel	ug/L	390	0.63	B	63.2		2.3	B	109		10	U	92.8		0.76	B	12.6		0.66	B	40	
Selenium	ug/L	50	5.3	B	8	U	8	U	8	U	4.9	J	8	U	3.6	J	8	U	3.4	B	8	U
Silver	ug/L	94	6	U	7.6		6	U	5.2	B	6	U	4.1	B	6	U	0.62	B	6	U	4.5	J
Thallium	ug/L	2	4.1	J	10	U	10	U	10	U	3.9	B	10	U	4.2	B	50	U	10	U	10	U
Vanadium	ug/L	86	196		7.5		64.4		5.9		154		5.6		260		1.5	B	71		4	B
Zinc	ug/L	6,000	912		576,000		925		387,000		1.4	B	509,000		10	U	7,000		10	U	82,800	
Dissolved Metals																						
Aluminum, Dissolved	ug/L	20,000	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Antimony, Dissolved	ug/L	6	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Arsenic, Dissolved	ug/L	10	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Barium, Dissolved	ug/L	2,000	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Beryllium, Dissolved	ug/L	4	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Cadmium, Dissolved	ug/L	5	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Chromium, Dissolved	ug/L	100	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Cobalt, Dissolved	ug/L	6	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Copper, Dissolved	ug/L	1,300	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Iron, Dissolved	ug/L	14,000	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Manganese, Dissolved	ug/L	430	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Mercury, Dissolved	ug/L	2	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Nickel, Dissolved	ug/L	390	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Selenium, Dissolved	ug/L	50	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Silver, Dissolved	ug/L	94	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Thallium, Dissolved	ug/L	2	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Vanadium, Dissolved	ug/L	86	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Zinc, Dissolved	ug/L	6,000	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Other																						
Cyanide	ug/L	200	10	U	10	U	10	U	10	U	10	U	10	U	1330		10	U	215		10	U

Detections in bold

R: The analytical result was rejected during validation.

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/preparation or field blank.

NA: This parameter was not analyzed for this sample.

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

Table 12
Summary of Inorganics Detected in Groundwater
Parcel A3
Tradepoint Atlantic
Sparrows Point, Maryland

Parameter	Units	PAL	RW-002-PZ	RW-006-PZ	RW-011-PZ	RW-021-PZ	RW-025-PZ	RW-027-PZ	RW-048-PZ	RW-050-PZ
			Groundwater							
			10/27/2015	10/27/2015	10/27/2015	10/27/2015	10/26/2015	10/26/2015	10/27/2015	10/26/2015
Total Metals										
Aluminum	ug/L	20,000	NA							
Antimony	ug/L	6	NA							
Arsenic	ug/L	10	NA							
Barium	ug/L	2,000	NA							
Beryllium	ug/L	4	NA							
Cadmium	ug/L	5	NA							
Chromium	ug/L	100	NA							
Chromium, Hexavalent	ug/L	0.035	10 R							
Cobalt	ug/L	6	NA							
Copper	ug/L	1,300	NA							
Iron	ug/L	14,000	NA							
Manganese	ug/L	430	NA							
Nickel	ug/L	390	NA							
Selenium	ug/L	50	NA							
Silver	ug/L	94	NA							
Thallium	ug/L	2	NA							
Vanadium	ug/L	86	NA							
Zinc	ug/L	6,000	NA							
Dissolved Metals										
Aluminum, Dissolved	ug/L	20,000	47.5 B	171 J	540 U	50 U	1,540 U	54.2 B	34.2 J	55.8 U
Antimony, Dissolved	ug/L	6	6 U	2.2 J	6 U	6 U	6 U	6 U	6 U	6 U
Arsenic, Dissolved	ug/L	10	3.7 J	5 U	6.4 U	21.7 U	10.1 U	4.2 B	15.5 U	5.7 U
Barium, Dissolved	ug/L	2,000	17.2 U	12.7 B	83.3 U	118 U	26.3 U	30.2 U	59.2 U	11.3 U
Beryllium, Dissolved	ug/L	4	1 U	1 U	1 U	0.36 J	1 U	1 U	0.35 J	1 U
Cadmium, Dissolved	ug/L	5	102 U	20.1 U	3 U	0.84 B	3 U	3 U	1.1 B	3 U
Chromium, Dissolved	ug/L	100	1 J	5 U	2.4 J	5 U	1.7 J	5 U	5 U	0.92 J
Cobalt, Dissolved	ug/L	6	1.4 J	42.4 U	5 U	5 U	5 U	51.1 U	41.3 U	5 U
Copper, Dissolved	ug/L	1,300	1.5 B	1.5 B	5 U	2.2 B	5 U	5 U	1.5 J	5 U
Iron, Dissolved	ug/L	14,000	2,460 U	54,200 U	44.4 J	73,200 U	51.9 B	11,600 U	90,800 U	25 B
Manganese, Dissolved	ug/L	430	5,150 U	3,220 U	3.9 B	2,030 U	1 B	1,250 U	3,860 U	22.5 U
Mercury, Dissolved	ug/L	2	0.2 U	0.2 U	0.2 U	0.2 U	0.03 J	0.2 U	0.2 U	0.2 U
Nickel, Dissolved	ug/L	390	3.1 J	37 U	1.2 J	1.9 J	3.6 B	51.3 U	20.2 U	3 B
Selenium, Dissolved	ug/L	50	8 U	8 U	8 U	8 U	5.3 B	8 U	8 U	3.4 B
Silver, Dissolved	ug/L	94	6 U	1.1 B	6 U	1.2 B	6 U	6 U	1.7 B	6 U
Thallium, Dissolved	ug/L	2	10 U	3.6 J						
Vanadium, Dissolved	ug/L	86	13 U	1.7 B	114 U	2.2 J	34.8 U	0.88 J	2.3 B	59.3 U
Zinc, Dissolved	ug/L	6,000	5,520 U	245,000 U	10 U	1.9 B	0.8 B	1,180 U	1,810 U	0.75 B
Other										
Cyanide	ug/L	200	10 U	10 U	10 U	18 U	4.5 J	10 U	10 U	10 U

Detections in bold

R: The analytical result was rejected during validation.

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/preparation or field blank.

NA: This parameter was not analyzed for this sample.

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

TABLE 13
100xRSL GROUNDWATER EXCEEDANCES (>PAL)

<u>Location ID</u>	<u>Parameter</u>	<u>CAS#</u>	<u>Result</u>	<u>Final Flag</u>	<u>Tapwater RSL (ug/L)</u>	<u>Aqueous PAL (ug/L)</u>
RW02-PZM000	Chromium VI	18540-29-9	13		0.035	0.035
RW07-PZM017	Cadmium	7440-43-9	9,780		9.2	5
RW-025-PZ	Arsenic	7440-38-2	10.1		0.052	10
RW19-PZM000	Arsenic	7440-38-2	14.6	J	0.052	10
RW20-PZM000	Cyanide	57-12-5	215		1.5	200
RW-048-PZ	Arsenic	7440-38-2	15.5		0.052	10
RW-021-PZ	Arsenic	7440-38-2	21.7		0.052	10
RW19-PZM000	Cyanide	57-12-5	1,330		1.5	200
RW02-PZM000	Arsenic	7440-38-2	116		0.052	10
RW10-PZM020	Cadmium	7440-43-9	10,200		9.2	5
RW20-PZM000	Arsenic	7440-38-2	118		0.052	10



Parcel A3 - Table 14

Rejected Results for Soil

Parameter	Result	Units	PAL	Exceeds PAL?	Flag
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Sample: *RW-001-SB-1*

1,1,2-Trichloro-1,2,2-Trifluoroetha	0.058	mg/kg	170,000	no	R
1,4-Dioxane	0.12	mg/kg	24	no	R
Benzaldehyde	0.083	mg/kg	120,000	no	R
Chloroethane	0.0058	mg/kg	57,000	no	R
Mercury	0.11	mg/kg	350	no	R

Sample: *RW-001-SB-5*

1,1,2-Trichloro-1,2,2-Trifluoroetha	0.064	mg/kg	170,000	no	R
1,4-Dioxane	0.13	mg/kg	24	no	R
Antimony	3	mg/kg	470	no	R
Benzaldehyde	0.075	mg/kg	120,000	no	R
Chloroethane	0.0064	mg/kg	57,000	no	R

Sample: *RW-002-SB-1*

1,1,2-Trichloro-1,2,2-Trifluoroetha	0.049	mg/kg	170,000	no	R
1,4-Dioxane	0.099	mg/kg	24	no	R
Bromomethane	0.0049	mg/kg	30	no	R
Chloroethane	0.0049	mg/kg	57,000	no	R
Dichlorodifluoromethane	0.0049	mg/kg	370	no	R

Sample: *RW-002-SB-4.5*

1,1,2-Trichloro-1,2,2-Trifluoroetha	0.06	mg/kg	170,000	no	R
1,4-Dioxane	0.12	mg/kg	24	no	R
Benzaldehyde	0.07	mg/kg	120,000	no	R
Bromomethane	0.006	mg/kg	30	no	R
Chloroethane	0.006	mg/kg	57,000	no	R
Dichlorodifluoromethane	0.006	mg/kg	370	no	R

Sample: *RW-003-SB-1*

1,1,2-Trichloro-1,2,2-Trifluoroetha	0.051	mg/kg	170,000	no	R
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Rejected Results for Soil

Parameter	Result	Units	PAL	Exceeds PAL?	Flag
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Sample: *RW-003-SB-1*

1,4-Dioxane	0.1	mg/kg	24	no	R
Benzaldehyde	0.069	mg/kg	120,000	no	R
Bromomethane	0.0051	mg/kg	30	no	R
Chloroethane	0.0051	mg/kg	57,000	no	R
Dichlorodifluoromethane	0.0051	mg/kg	370	no	R

Sample: *RW-003-SB-4.5*

Benzaldehyde	0.074	mg/kg	120,000	no	R
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Sample: *RW-003-SB-5*

1,1,2-Trichloro-1,2,2-Trifluoroetha	0.056	mg/kg	170,000	no	R
1,4-Dioxane	0.11	mg/kg	24	no	R
Bromomethane	0.0056	mg/kg	30	no	R
Chloroethane	0.0056	mg/kg	57,000	no	R
Dichlorodifluoromethane	0.0056	mg/kg	370	no	R

Sample: *RW-004-SB-1*

1,4-Dioxane	0.089	mg/kg	24	no	R
Benzaldehyde	0.072	mg/kg	120,000	no	R
Bromomethane	0.0045	mg/kg	30	no	R
Chloroethane	0.0045	mg/kg	57,000	no	R

Sample: *RW-004-SB-5*

1,4-Dioxane	0.092	mg/kg	24	no	R
2,4-Dinitrophenol	0.18	mg/kg	1,600	no	R
Benzaldehyde	0.074	mg/kg	120,000	no	R
Bromomethane	0.0046	mg/kg	30	no	R
Chloroethane	0.0046	mg/kg	57,000	no	R
Hexachlorocyclopentadiene	0.074	mg/kg	7.5	no	R

Sample: *RW-005-SB-1*

1,4-Dioxane	0.12	mg/kg	24	no	R
Benzaldehyde	0.081	mg/kg	120,000	no	R
Bromomethane	0.0062	mg/kg	30	no	R

Rejected Results for Soil

Parameter	Result	Units	PAL	Exceeds PAL?	Flag
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Sample: *RW-005-SB-1*

Chloroethane	0.0062	mg/kg	57,000	no	R
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Sample: *RW-005-SB-5*

1,4-Dioxane	0.082	mg/kg	24	no	R
Benzaldehyde	0.076	mg/kg	120,000	no	R
Bromomethane	0.0041	mg/kg	30	no	R
Chloroethane	0.0041	mg/kg	57,000	no	R

Sample: *RW-006-SB-1*

1,4-Dioxane	0.11	mg/kg	24	no	R
2,3,4,6-Tetrachlorophenol	0.072	mg/kg	25,000	no	R
2,4,5-Trichlorophenol	0.18	mg/kg	82,000	no	R
2,4,6-Trichlorophenol	0.072	mg/kg	210	no	R
2,4-Dichlorophenol	0.072	mg/kg	2,500	no	R
2,4-Dimethylphenol	0.072	mg/kg	16,000	no	R
2,4-Dinitrophenol	0.18	mg/kg	1,600	no	R
2-Chlorophenol	0.072	mg/kg	5,800	no	R
2-Methylphenol	0.072	mg/kg	41,000	no	R
3&4-Methylphenol(m&p Cresol)	0.14	mg/kg	41,000	no	R
Benzaldehyde	0.072	mg/kg	120,000	no	R
Bromomethane	0.0053	mg/kg	30	no	R
Chloroethane	0.0053	mg/kg	57,000	no	R
Pentachlorophenol	0.18	mg/kg	4	no	R
Phenol	0.072	mg/kg	250,000	no	R

Sample: *RW-006-SB-5*

1,4-Dioxane	0.088	mg/kg	24	no	R
Benzaldehyde	0.077	mg/kg	120,000	no	R
Bromomethane	0.0044	mg/kg	30	no	R
Chloroethane	0.0044	mg/kg	57,000	no	R

Sample: *RW-007-SB-1*

1,4-Dioxane	0.13	mg/kg	24	no	R
2,3,4,6-Tetrachlorophenol	0.074	mg/kg	25,000	no	R

Rejected Results for Soil

Parameter	Result	Units	PAL	Exceeds PAL?	Flag
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Sample: **RW-007-SB-1**

2,4,5-Trichlorophenol	0.19	mg/kg	82,000	no	R
2,4,6-Trichlorophenol	0.074	mg/kg	210	no	R
2,4-Dichlorophenol	0.074	mg/kg	2,500	no	R
2,4-Dimethylphenol	0.074	mg/kg	16,000	no	R
2,4-Dinitrophenol	0.19	mg/kg	1,600	no	R
2-Chlorophenol	0.074	mg/kg	5,800	no	R
2-Methylphenol	0.074	mg/kg	41,000	no	R
3&4-Methylphenol(m&p Cresol)	0.15	mg/kg	41,000	no	R
Benzaldehyde	0.074	mg/kg	120,000	no	R
Bromomethane	0.0064	mg/kg	30	no	R
Pentachlorophenol	0.19	mg/kg	4	no	R
Phenol	0.074	mg/kg	250,000	no	R

Sample: **RW-007-SB-5**

1,4-Dioxane	0.081	mg/kg	24	no	R
3,3'-Dichlorobenzidine	0.37	mg/kg	5.1	no	R
Bromomethane	0.0041	mg/kg	30	no	R

Sample: **RW-008-SB-1**

1,1,2-Trichloro-1,2,2-Trifluoroetha	0.047	mg/kg	170,000	no	R
1,4-Dioxane	0.094	mg/kg	24	no	R
Benzaldehyde	0.074	mg/kg	120,000	no	R
Bromomethane	0.0047	mg/kg	30	no	R
Chloroethane	0.0047	mg/kg	57,000	no	R
Dichlorodifluoromethane	0.0047	mg/kg	370	no	R

Sample: **RW-008-SB-5**

1,1,2-Trichloro-1,2,2-Trifluoroetha	0.05	mg/kg	170,000	no	R
1,4-Dioxane	0.1	mg/kg	24	no	R
Benzaldehyde	0.077	mg/kg	120,000	no	R
Bromomethane	0.005	mg/kg	30	no	R
Chloroethane	0.005	mg/kg	57,000	no	R
Dichlorodifluoromethane	0.005	mg/kg	370	no	R

Rejected Results for Soil

Parameter	Result	Units	PAL	Exceeds PAL?	Flag
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Sample: *RW-009-SB-1*

1,4-Dioxane	0.1	mg/kg	24	no	R
3,3'-Dichlorobenzidine	0.37	mg/kg	5.1	no	R
Chloroethane	0.0052	mg/kg	57,000	no	R

Sample: *RW-009-SB-5*

1,4-Dioxane	0.09	mg/kg	24	no	R
3,3'-Dichlorobenzidine	0.38	mg/kg	5.1	no	R
Chloroethane	0.0045	mg/kg	57,000	no	R

Sample: *RW-010-SB-1*

1,4-Dioxane	0.087	mg/kg	24	no	R
3,3'-Dichlorobenzidine	0.36	mg/kg	5.1	no	R
Bromomethane	0.0044	mg/kg	30	no	R
Chloroethane	0.0044	mg/kg	57,000	no	R

Sample: *RW-010-SB-10*

1,1,1-Trichloroethane	0.0051	mg/kg	36,000	no	R
1,1,2,2-Tetrachloroethane	0.0051	mg/kg	2.7	no	R
1,1,2-Trichloro-1,2,2-Trifluoroetha	0.051	mg/kg	170,000	no	R
1,1-Dichloroethane	0.0051	mg/kg	16	no	R
1,1-Dichloroethene	0.0051	mg/kg	1,000	no	R
1,2,3-Trichlorobenzene	0.0051	mg/kg	930	no	R
1,2,4-Trichlorobenzene	0.0051	mg/kg	110	no	R
1,2-Dibromo-3-chloropropane	0.0051	mg/kg	0.064	no	R
1,2-Dibromoethane	0.0051	mg/kg	0.16	no	R
1,2-Dichlorobenzene	0.0051	mg/kg	9,300	no	R
1,2-Dichloroethane	0.0051	mg/kg	2	no	R
1,2-Dichloropropane	0.0051	mg/kg	4.4	no	R
1,3-Dichlorobenzene	0.0051	mg/kg		no	R
1,4-Dichlorobenzene	0.0051	mg/kg	11	no	R
1,4-Dioxane	0.1	mg/kg	24	no	R
2-Butanone (MEK)	0.01	mg/kg	190,000	no	R
2-Hexanone	0.01	mg/kg	1,300	no	R
4-Methyl-2-pentanone (MIBK)	0.01	mg/kg	56,000	no	R

Rejected Results for Soil

Parameter	Result	Units	PAL	Exceeds PAL?	Flag
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Sample: *RW-010-SB-10*

Benzene	0.0051	mg/kg	5.1	no	R
Bromodichloromethane	0.0051	mg/kg	1.3	no	R
Bromoform	0.0051	mg/kg	86	no	R
Bromomethane	0.0051	mg/kg	30	no	R
Carbon disulfide	0.0051	mg/kg	3,500	no	R
Carbon tetrachloride	0.0051	mg/kg	2.9	no	R
Chlorobenzene	0.0051	mg/kg	1,300	no	R
Chloroethane	0.0051	mg/kg	57,000	no	R
Chloroform	0.0051	mg/kg	1.4	no	R
Chloromethane	0.0051	mg/kg	460	no	R
cis-1,3-Dichloropropene	0.0051	mg/kg		no	R
Cyclohexane	0.01	mg/kg	27,000	no	R
Dibromochloromethane	0.0051	mg/kg	3.3	no	R
Dichlorodifluoromethane	0.0051	mg/kg	370	no	R
Ethylbenzene	0.0051	mg/kg	25	no	R
Isopropylbenzene	0.0051	mg/kg	9,900	no	R
Methyl Acetate	0.051	mg/kg	1,200,000	no	R
Methyl tert-butyl ether (MTBE)	0.0051	mg/kg	210	no	R
Styrene	0.0051	mg/kg	35,000	no	R
Toluene	0.0051	mg/kg	47,000	no	R
trans-1,2-Dichloroethene	0.0051	mg/kg	23,000	no	R
trans-1,3-Dichloropropene	0.0051	mg/kg		no	R
Trichlorofluoromethane	0.0051	mg/kg	3,100	no	R
Vinyl chloride	0.0051	mg/kg	1.7	no	R
Xylenes	0.015	mg/kg	2,800	no	R

Sample: *RW-010-SB-7*

1,4-Dioxane	0.096	mg/kg	24	no	R
3,3'-Dichlorobenzidine	0.4	mg/kg	5.1	no	R
Bromomethane	0.0048	mg/kg	30	no	R
Chloroethane	0.0048	mg/kg	57,000	no	R

Sample: *RW-011-SB-1*

1,4-Dioxane	0.099	mg/kg	24	no	R
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Rejected Results for Soil

Parameter	Result	Units	PAL	Exceeds PAL?	Flag
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Sample: *RW-011-SB-1*

3,3'-Dichlorobenzidine	0.37	mg/kg	5.1	no	R
Chloroethane	0.005	mg/kg	57,000	no	R

Sample: *RW-011-SB-5*

1,4-Dioxane	0.13	mg/kg	24	no	R
3,3'-Dichlorobenzidine	0.39	mg/kg	5.1	no	R
Chloroethane	0.0067	mg/kg	57,000	no	R

Sample: *RW-012-SB-1*

1,4-Dioxane	0.11	mg/kg	24	no	R
2,3,4,6-Tetrachlorophenol	0.37	mg/kg	25,000	no	R
2,4,5-Trichlorophenol	0.93	mg/kg	82,000	no	R
2,4,6-Trichlorophenol	0.37	mg/kg	210	no	R
2,4-Dichlorophenol	0.37	mg/kg	2,500	no	R
2,4-Dimethylphenol	0.37	mg/kg	16,000	no	R
2,4-Dinitrophenol	0.93	mg/kg	1,600	no	R
2-Chlorophenol	0.37	mg/kg	5,800	no	R
2-Methylphenol	0.37	mg/kg	41,000	no	R
3&4-Methylphenol(m&p Cresol)	0.74	mg/kg	41,000	no	R
Pentachlorophenol	0.93	mg/kg	4	no	R
Phenol	0.37	mg/kg	250,000	no	R

Sample: *RW-012-SB-5*

1,4-Dioxane	0.084	mg/kg	24	no	R
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Sample: *RW-013-SB-1*

1,4-Dioxane	0.1	mg/kg	24	no	R
3,3'-Dichlorobenzidine	0.36	mg/kg	5.1	no	R

Sample: *RW-013-SB-5*

1,4-Dioxane	0.099	mg/kg	24	no	R
3,3'-Dichlorobenzidine	0.39	mg/kg	5.1	no	R

Sample: *RW-014-SB-1*

Rejected Results for Soil

Parameter	Result	Units	PAL	Exceeds PAL?	Flag
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Sample: **RW-014-SB-1**

1,4-Dioxane	0.11	mg/kg	24	no	R
2,3,4,6-Tetrachlorophenol	0.37	mg/kg	25,000	no	R
2,4,5-Trichlorophenol	0.92	mg/kg	82,000	no	R
2,4,6-Trichlorophenol	0.37	mg/kg	210	no	R
2,4-Dichlorophenol	0.37	mg/kg	2,500	no	R
2,4-Dimethylphenol	0.37	mg/kg	16,000	no	R
2,4-Dinitrophenol	0.92	mg/kg	1,600	no	R
2-Chlorophenol	0.37	mg/kg	5,800	no	R
2-Methylphenol	0.37	mg/kg	41,000	no	R
3&4-Methylphenol(m&p Cresol)	0.74	mg/kg	41,000	no	R
3,3'-Dichlorobenzidine	0.37	mg/kg	5.1	no	R
Pentachlorophenol	0.92	mg/kg	4	no	R

Sample: **RW-014-SB-5**

1,4-Dioxane	0.097	mg/kg	24	no	R
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Sample: **RW-015-SB-1**

1,4-Dioxane	0.097	mg/kg	24	no	R
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Sample: **RW-015-SB-5**

1,4-Dioxane	0.098	mg/kg	24	no	R
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Sample: **RW-016-SB-1**

1,4-Dioxane	0.12	mg/kg	24	no	R
2,3,4,6-Tetrachlorophenol	0.37	mg/kg	25,000	no	R
2,4,5-Trichlorophenol	0.92	mg/kg	82,000	no	R
2,4,6-Trichlorophenol	0.37	mg/kg	210	no	R
2,4-Dichlorophenol	0.37	mg/kg	2,500	no	R
2,4-Dimethylphenol	0.37	mg/kg	16,000	no	R
2,4-Dinitrophenol	0.92	mg/kg	1,600	no	R
2-Chlorophenol	0.37	mg/kg	5,800	no	R
2-Methylphenol	0.37	mg/kg	41,000	no	R
3&4-Methylphenol(m&p Cresol)	0.74	mg/kg	41,000	no	R
3,3'-Dichlorobenzidine	0.37	mg/kg	5.1	no	R

Rejected Results for Soil

Parameter	Result	Units	PAL	Exceeds PAL?	Flag
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Sample: *RW-016-SB-1*

Pentachlorophenol	0.92	mg/kg	4	no	R
Phenol	0.37	mg/kg	250,000	no	R

Sample: *RW-016-SB-4*

1,4-Dioxane	0.11	mg/kg	24	no	R
3,3'-Dichlorobenzidine	0.39	mg/kg	5.1	no	R

Sample: *RW-017-SB-1*

1,1,2-Trichloro-1,2,2-Trifluoroetha	0.045	mg/kg	170,000	no	R
1,4-Dioxane	0.091	mg/kg	24	no	R
Benzaldehyde	0.074	mg/kg	120,000	no	R
Bromomethane	0.0045	mg/kg	30	no	R
Chloroethane	0.0045	mg/kg	57,000	no	R
Dichlorodifluoromethane	0.0045	mg/kg	370	no	R

Sample: *RW-017-SB-6*

1,1,2-Trichloro-1,2,2-Trifluoroetha	0.044	mg/kg	170,000	no	R
1,4-Dioxane	0.089	mg/kg	24	no	R
Benzaldehyde	0.077	mg/kg	120,000	no	R
Bromomethane	0.0044	mg/kg	30	no	R
Chloroethane	0.0044	mg/kg	57,000	no	R
Dichlorodifluoromethane	0.0044	mg/kg	370	no	R

Sample: *RW-018-SB-1*

1,4-Dioxane	0.094	mg/kg	24	no	R
2,3,4,6-Tetrachlorophenol	0.38	mg/kg	25,000	no	R
2,4,5-Trichlorophenol	0.94	mg/kg	82,000	no	R
2,4,6-Trichlorophenol	0.38	mg/kg	210	no	R
2,4-Dichlorophenol	0.38	mg/kg	2,500	no	R
2,4-Dimethylphenol	0.38	mg/kg	16,000	no	R
2,4-Dinitrophenol	0.94	mg/kg	1,600	no	R
2-Chlorophenol	0.38	mg/kg	5,800	no	R
2-Methylphenol	0.38	mg/kg	41,000	no	R
3&4-Methylphenol(m&p Cresol)	0.75	mg/kg	41,000	no	R

Rejected Results for Soil

Parameter	Result	Units	PAL	Exceeds PAL?	Flag
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Sample: *RW-018-SB-1*

3,3'-Dichlorobenzidine	0.38	mg/kg	5.1	no	R
Bromomethane	0.0047	mg/kg	30	no	R
Chloroethane	0.0047	mg/kg	57,000	no	R
Pentachlorophenol	0.94	mg/kg	4	no	R
Phenol	0.38	mg/kg	250,000	no	R

Sample: *RW-018-SB-5*

1,4-Dioxane	0.093	mg/kg	24	no	R
3,3'-Dichlorobenzidine	0.39	mg/kg	5.1	no	R
Bromomethane	0.0047	mg/kg	30	no	R
Chloroethane	0.0047	mg/kg	57,000	no	R

Sample: *RW-019-SB-1*

1,4-Dioxane	0.13	mg/kg	24	no	R
2,3,4,6-Tetrachlorophenol	0.38	mg/kg	25,000	no	R
2,4,5-Trichlorophenol	0.95	mg/kg	82,000	no	R
2,4,6-Trichlorophenol	0.38	mg/kg	210	no	R
2,4-Dichlorophenol	0.38	mg/kg	2,500	no	R
2,4-Dimethylphenol	0.38	mg/kg	16,000	no	R
2,4-Dinitrophenol	0.95	mg/kg	1,600	no	R
2-Chlorophenol	0.38	mg/kg	5,800	no	R
2-Methylphenol	0.38	mg/kg	41,000	no	R
3&4-Methylphenol(m&p Cresol)	0.76	mg/kg	41,000	no	R
3,3'-Dichlorobenzidine	0.38	mg/kg	5.1	no	R
Pentachlorophenol	0.95	mg/kg	4	no	R

Sample: *RW-019-SB-4*

1,4-Dioxane	0.12	mg/kg	24	no	R
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Sample: *RW-020-SB-1*

1,4-Dioxane	0.098	mg/kg	24	no	R
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Sample: *RW-020-SB-4.5*

1,4-Dioxane	0.12	mg/kg	24	no	R
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Rejected Results for Soil

Parameter	Result	Units	PAL	Exceeds PAL?	Flag
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Sample: *RW-021-SB-1*

1,4-Dioxane	0.1	mg/kg	24	no	R
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Sample: *RW-021-SB-6*

1,4-Dioxane	0.086	mg/kg	24	no	R
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Sample: *RW-022-SB-1*

1,4-Dioxane	0.1	mg/kg	24	no	R
2,4-Dinitrophenol	0.93	mg/kg	1,600	no	R
Pentachlorophenol	0.93	mg/kg	4	no	R

Sample: *RW-022-SB-8.5*

1,4-Dioxane	0.19	mg/kg	24	no	R
2,3,4,6-Tetrachlorophenol	0.59	mg/kg	25,000	no	R
2,4,5-Trichlorophenol	1.5	mg/kg	82,000	no	R
2,4,6-Trichlorophenol	0.59	mg/kg	210	no	R
2,4-Dichlorophenol	0.59	mg/kg	2,500	no	R
2,4-Dimethylphenol	0.59	mg/kg	16,000	no	R
2,4-Dinitrophenol	1.5	mg/kg	1,600	no	R
2-Chlorophenol	0.59	mg/kg	5,800	no	R
2-Methylphenol	0.59	mg/kg	41,000	no	R
Pentachlorophenol	1.5	mg/kg	4	no	R

Sample: *RW-023-SB-1*

1,4-Dioxane	0.12	mg/kg	24	no	R
2,3,4,6-Tetrachlorophenol	0.37	mg/kg	25,000	no	R
2,4,5-Trichlorophenol	0.93	mg/kg	82,000	no	R
2,4,6-Trichlorophenol	0.37	mg/kg	210	no	R
2,4-Dichlorophenol	0.37	mg/kg	2,500	no	R
2,4-Dimethylphenol	0.37	mg/kg	16,000	no	R
2,4-Dinitrophenol	0.93	mg/kg	1,600	no	R
2-Chlorophenol	0.37	mg/kg	5,800	no	R
2-Methylphenol	0.37	mg/kg	41,000	no	R
3&4-Methylphenol(m&p Cresol)	0.74	mg/kg	41,000	no	R
3,3'-Dichlorobenzidine	0.37	mg/kg	5.1	no	R

Rejected Results for Soil

Parameter	Result	Units	PAL	Exceeds PAL?	Flag
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Sample: **RW-023-SB-1**

Pentachlorophenol	0.93	mg/kg	4	no	R
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Sample: **RW-023-SB-5**

1,4-Dioxane	0.092	mg/kg	24	no	R
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Sample: **RW-024-SB-1**

1,4-Dioxane	0.098	mg/kg	24	no	R
2,3,4,6-Tetrachlorophenol	0.35	mg/kg	25,000	no	R
2,4,5-Trichlorophenol	0.87	mg/kg	82,000	no	R
2,4,6-Trichlorophenol	0.35	mg/kg	210	no	R
2,4-Dichlorophenol	0.35	mg/kg	2,500	no	R
2,4-Dimethylphenol	0.35	mg/kg	16,000	no	R
2,4-Dinitrophenol	0.87	mg/kg	1,600	no	R
2-Chlorophenol	0.35	mg/kg	5,800	no	R
2-Methylphenol	0.35	mg/kg	41,000	no	R
3&4-Methylphenol(m&p Cresol)	0.69	mg/kg	41,000	no	R
3,3'-Dichlorobenzidine	0.35	mg/kg	5.1	no	R
Pentachlorophenol	0.87	mg/kg	4	no	R

Sample: **RW-024-SB-6**

1,4-Dioxane	0.14	mg/kg	24	no	R
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Sample: **RW-025-SB-1**

1,4-Dioxane	0.11	mg/kg	24	no	R
2,3,4,6-Tetrachlorophenol	0.37	mg/kg	25,000	no	R
2,4,5-Trichlorophenol	0.92	mg/kg	82,000	no	R
2,4,6-Trichlorophenol	0.37	mg/kg	210	no	R
2,4-Dichlorophenol	0.37	mg/kg	2,500	no	R
2,4-Dimethylphenol	0.37	mg/kg	16,000	no	R
2,4-Dinitrophenol	0.92	mg/kg	1,600	no	R
2-Chlorophenol	0.37	mg/kg	5,800	no	R
2-Methylphenol	0.37	mg/kg	41,000	no	R
3&4-Methylphenol(m&p Cresol)	0.74	mg/kg	41,000	no	R
3,3'-Dichlorobenzidine	0.37	mg/kg	5.1	no	R

Rejected Results for Soil

Parameter	Result	Units	PAL	Exceeds PAL?	Flag
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Sample: *RW-025-SB-1*

Pentachlorophenol	0.92	mg/kg	4	no	R
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Sample: *RW-025-SB-5*

1,4-Dioxane	0.1	mg/kg	24	no	R
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Sample: *RW-026-SB-1*

1,4-Dioxane	0.098	mg/kg	24	no	R
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Sample: *RW-026-SB-5*

1,4-Dioxane	0.1	mg/kg	24	no	R
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Sample: *RW-027-SB-1*

1,4-Dioxane	0.1	mg/kg	24	no	R
3,3'-Dichlorobenzidine	1.9	mg/kg	5.1	no	R

Sample: *RW-027-SB-5*

1,4-Dioxane	0.097	mg/kg	24	no	R
3,3'-Dichlorobenzidine	0.4	mg/kg	5.1	no	R

Sample: *RW-028-SB-1*

1,4-Dioxane	0.13	mg/kg	24	no	R
3,3'-Dichlorobenzidine	0.43	mg/kg	5.1	no	R

Sample: *RW-028-SB-5*

1,4-Dioxane	0.13	mg/kg	24	no	R
3,3'-Dichlorobenzidine	0.4	mg/kg	5.1	no	R

Sample: *RW-029-SB-1*

1,4-Dioxane	0.085	mg/kg	24	no	R
3,3'-Dichlorobenzidine	7.4	mg/kg	5.1	YES	R

Sample: *RW-029-SB-7*

1,4-Dioxane	5.8	mg/kg	24	no	R
3,3'-Dichlorobenzidine	8.4	mg/kg	5.1	YES	R

Rejected Results for Soil

Parameter	Result	Units	PAL	Exceeds PAL?	Flag
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Sample: **RW-030-SB-1**

1,4-Dioxane	0.11	mg/kg	24	no	R
2,3,4,6-Tetrachlorophenol	0.4	mg/kg	25,000	no	R
2,4,5-Trichlorophenol	0.99	mg/kg	82,000	no	R
2,4,6-Trichlorophenol	0.4	mg/kg	210	no	R
2,4-Dichlorophenol	0.4	mg/kg	2,500	no	R
2,4-Dimethylphenol	0.4	mg/kg	16,000	no	R
2,4-Dinitrophenol	0.99	mg/kg	1,600	no	R
2-Chlorophenol	0.4	mg/kg	5,800	no	R
2-Methylphenol	0.4	mg/kg	41,000	no	R
3&4-Methylphenol(m&p Cresol)	0.79	mg/kg	41,000	no	R
3,3'-Dichlorobenzidine	0.4	mg/kg	5.1	no	R
Pentachlorophenol	0.99	mg/kg	4	no	R
Phenol	0.4	mg/kg	250,000	no	R

Sample: **RW-030-SB-5**

1,4-Dioxane	0.12	mg/kg	24	no	R
3,3'-Dichlorobenzidine	0.46	mg/kg	5.1	no	R

Sample: **RW-031-SB-1**

1,4-Dioxane	0.092	mg/kg	24	no	R
2,3,4,6-Tetrachlorophenol	0.38	mg/kg	25,000	no	R
2,4,5-Trichlorophenol	0.96	mg/kg	82,000	no	R
2,4,6-Trichlorophenol	0.38	mg/kg	210	no	R
2,4-Dichlorophenol	0.38	mg/kg	2,500	no	R
2,4-Dimethylphenol	0.38	mg/kg	16,000	no	R
2,4-Dinitrophenol	0.96	mg/kg	1,600	no	R
2-Chlorophenol	0.38	mg/kg	5,800	no	R
2-Methylphenol	0.38	mg/kg	41,000	no	R
3,3'-Dichlorobenzidine	0.38	mg/kg	5.1	no	R
Chloroethane	0.0046	mg/kg	57,000	no	R
Pentachlorophenol	0.96	mg/kg	4	no	R
Phenol	0.38	mg/kg	250,000	no	R

Sample: **RW-031-SB-6**

Rejected Results for Soil

Parameter	Result	Units	PAL	Exceeds PAL?	Flag
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Sample: **RW-031-SB-6**

1,4-Dioxane	0.089	mg/kg	24	no	R
Bromomethane	0.0045	mg/kg	30	no	R
Chloroethane	0.0045	mg/kg	57,000	no	R

Sample: **RW-032-SB-1**

1,4-Dioxane	0.11	mg/kg	24	no	R
3,3'-Dichlorobenzidine	1.9	mg/kg	5.1	no	R
Bromomethane	0.0053	mg/kg	30	no	R
Chloroethane	0.0053	mg/kg	57,000	no	R

Sample: **RW-032-SB-5**

1,4-Dioxane	0.12	mg/kg	24	no	R
3,3'-Dichlorobenzidine	0.42	mg/kg	5.1	no	R
Bromomethane	0.006	mg/kg	30	no	R
Chloroethane	0.006	mg/kg	57,000	no	R

Sample: **RW-033-SB-1**

1,4-Dioxane	0.14	mg/kg	24	no	R
3,3'-Dichlorobenzidine	7.9	mg/kg	5.1	YES	R
Chloroethane	0.0069	mg/kg	57,000	no	R

Sample: **RW-033-SB-6.5**

1,4-Dioxane	0.091	mg/kg	24	no	R
3,3'-Dichlorobenzidine	0.38	mg/kg	5.1	no	R
4-Chloroaniline	0.38	mg/kg	11	no	R
Chloroethane	0.0045	mg/kg	57,000	no	R

Sample: **RW-034-SB-1**

1,4-Dioxane	0.12	mg/kg	24	no	R
2,3,4,6-Tetrachlorophenol	0.072	mg/kg	25,000	no	R
2,4,5-Trichlorophenol	0.18	mg/kg	82,000	no	R
2,4,6-Trichlorophenol	0.072	mg/kg	210	no	R
2,4-Dichlorophenol	0.072	mg/kg	2,500	no	R
2,4-Dimethylphenol	0.072	mg/kg	16,000	no	R

Rejected Results for Soil

Parameter	Result	Units	PAL	Exceeds PAL?	Flag
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Sample: **RW-034-SB-1**

2,4-Dinitrophenol	0.18	mg/kg	1,600	no	R
2-Chlorophenol	0.072	mg/kg	5,800	no	R
2-Methylphenol	0.072	mg/kg	41,000	no	R
3&4-Methylphenol(m&p Cresol)	0.14	mg/kg	41,000	no	R
Benzaldehyde	0.072	mg/kg	120,000	no	R
Bromomethane	0.0058	mg/kg	30	no	R
Pentachlorophenol	0.18	mg/kg	4	no	R
Phenol	0.072	mg/kg	250,000	no	R

Sample: **RW-034-SB-5**

1,4-Dioxane	0.11	mg/kg	24	no	R
3,3'-Dichlorobenzidine	0.39	mg/kg	5.1	no	R
Bromomethane	0.0056	mg/kg	30	no	R

Sample: **RW-035-SB-1**

1,1,2-Trichloro-1,2,2-Trifluoroetha	0.044	mg/kg	170,000	no	R
1,4-Dioxane	0.088	mg/kg	24	no	R
3,3'-Dichlorobenzidine	0.37	mg/kg	5.1	no	R
Bromomethane	0.0044	mg/kg	30	no	R
Chloroethane	0.0044	mg/kg	57,000	no	R
Dichlorodifluoromethane	0.0044	mg/kg	370	no	R

Sample: **RW-035-SB-5**

1,1,2-Trichloro-1,2,2-Trifluoroetha	0.039	mg/kg	170,000	no	R
1,4-Dioxane	0.078	mg/kg	24	no	R
3,3'-Dichlorobenzidine	0.4	mg/kg	5.1	no	R
Bromomethane	0.0039	mg/kg	30	no	R
Chloroethane	0.0039	mg/kg	57,000	no	R
Dichlorodifluoromethane	0.0039	mg/kg	370	no	R

Sample: **RW-036-SB-1**

1,1,2-Trichloro-1,2,2-Trifluoroetha	0.053	mg/kg	170,000	no	R
1,4-Dioxane	0.11	mg/kg	24	no	R
2,3,4,6-Tetrachlorophenol	0.079	mg/kg	25,000	no	R

Rejected Results for Soil

Parameter	Result	Units	PAL	Exceeds PAL?	Flag
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Sample: **RW-036-SB-1**

2,4,5-Trichlorophenol	0.2	mg/kg	82,000	no	R
2,4,6-Trichlorophenol	0.079	mg/kg	210	no	R
2,4-Dichlorophenol	0.079	mg/kg	2,500	no	R
2,4-Dimethylphenol	0.079	mg/kg	16,000	no	R
2,4-Dinitrophenol	0.2	mg/kg	1,600	no	R
2-Chlorophenol	0.079	mg/kg	5,800	no	R
2-Methylphenol	0.079	mg/kg	41,000	no	R
3&4-Methylphenol(m&p Cresol)	0.16	mg/kg	41,000	no	R
Bromomethane	0.0053	mg/kg	30	no	R
Chloroethane	0.0053	mg/kg	57,000	no	R
Dichlorodifluoromethane	0.0053	mg/kg	370	no	R
Pentachlorophenol	0.2	mg/kg	4	no	R
Phenol	0.079	mg/kg	250,000	no	R

Sample: **RW-036-SB-4**

1,1,2-Trichloro-1,2,2-Trifluoroetha	0.048	mg/kg	170,000	no	R
1,4-Dioxane	0.096	mg/kg	24	no	R
3,3'-Dichlorobenzidine	0.38	mg/kg	5.1	no	R
Bromomethane	0.0048	mg/kg	30	no	R
Chloroethane	0.0048	mg/kg	57,000	no	R
Dichlorodifluoromethane	0.0048	mg/kg	370	no	R

Sample: **RW-037-SB-1**

1,1,2-Trichloro-1,2,2-Trifluoroetha	0.047	mg/kg	170,000	no	R
1,4-Dioxane	0.095	mg/kg	24	no	R
2,3,4,6-Tetrachlorophenol	0.078	mg/kg	25,000	no	R
2,4,5-Trichlorophenol	0.2	mg/kg	82,000	no	R
2,4,6-Trichlorophenol	0.078	mg/kg	210	no	R
2,4-Dichlorophenol	0.078	mg/kg	2,500	no	R
2,4-Dimethylphenol	0.078	mg/kg	16,000	no	R
2,4-Dinitrophenol	0.2	mg/kg	1,600	no	R
2-Chlorophenol	0.078	mg/kg	5,800	no	R
2-Methylphenol	0.078	mg/kg	41,000	no	R
3&4-Methylphenol(m&p Cresol)	0.16	mg/kg	41,000	no	R

Rejected Results for Soil

Parameter	Result	Units	PAL	Exceeds PAL?	Flag
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Sample: **RW-037-SB-1**

Benzaldehyde	0.078	mg/kg	120,000	no	R
Bromomethane	0.0047	mg/kg	30	no	R
Chloroethane	0.0047	mg/kg	57,000	no	R
Dichlorodifluoromethane	0.0047	mg/kg	370	no	R
Pentachlorophenol	0.2	mg/kg	4	no	R
Phenol	0.078	mg/kg	250,000	no	R

Sample: **RW-037-SB-8**

1,1,2-Trichloro-1,2,2-Trifluoroetha	0.038	mg/kg	170,000	no	R
1,4-Dioxane	0.076	mg/kg	24	no	R
Benzaldehyde	0.081	mg/kg	120,000	no	R
Bromomethane	0.0038	mg/kg	30	no	R
Chloroethane	0.0038	mg/kg	57,000	no	R
Dichlorodifluoromethane	0.0038	mg/kg	370	no	R

Sample: **RW-038-SB-1**

1,4-Dioxane	0.081	mg/kg	24	no	R
3,3'-Dichlorobenzidine	0.36	mg/kg	5.1	no	R
Bromomethane	0.004	mg/kg	30	no	R
Chloroethane	0.004	mg/kg	57,000	no	R

Sample: **RW-038-SB-5**

1,4-Dioxane	0.082	mg/kg	24	no	R
3,3'-Dichlorobenzidine	0.39	mg/kg	5.1	no	R
Bromomethane	0.0041	mg/kg	30	no	R
Chloroethane	0.0041	mg/kg	57,000	no	R

Sample: **RW-039-SB-1**

1,1,2-Trichloro-1,2,2-Trifluoroetha	0.048	mg/kg	170,000	no	R
1,4-Dioxane	0.095	mg/kg	24	no	R
2,3,4,6-Tetrachlorophenol	0.073	mg/kg	25,000	no	R
2,4,5-Trichlorophenol	0.18	mg/kg	82,000	no	R
2,4,6-Trichlorophenol	0.073	mg/kg	210	no	R
2,4-Dichlorophenol	0.073	mg/kg	2,500	no	R

Rejected Results for Soil

Parameter	Result	Units	PAL	Exceeds PAL?	Flag
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Sample: **RW-039-SB-1**

2,4-Dimethylphenol	0.073	mg/kg	16,000	no	R
2,4-Dinitrophenol	0.18	mg/kg	1,600	no	R
2-Chlorophenol	0.073	mg/kg	5,800	no	R
2-Methylphenol	0.073	mg/kg	41,000	no	R
3&4-Methylphenol(m&p Cresol)	0.15	mg/kg	41,000	no	R
Benzaldehyde	0.073	mg/kg	120,000	no	R
Bromomethane	0.0048	mg/kg	30	no	R
Chloroethane	0.0048	mg/kg	57,000	no	R
Dichlorodifluoromethane	0.0048	mg/kg	370	no	R
Pentachlorophenol	0.18	mg/kg	4	no	R
Phenol	0.073	mg/kg	250,000	no	R

Sample: **RW-039-SB-5**

1,1,2-Trichloro-1,2,2-Trifluoroetha	0.048	mg/kg	170,000	no	R
1,4-Dioxane	0.097	mg/kg	24	no	R
2,3,4,6-Tetrachlorophenol	0.37	mg/kg	25,000	no	R
2,4,5-Trichlorophenol	0.92	mg/kg	82,000	no	R
2,4,6-Trichlorophenol	0.37	mg/kg	210	no	R
3,3'-Dichlorobenzidine	0.37	mg/kg	5.1	no	R
Bromomethane	0.0048	mg/kg	30	no	R
Chloroethane	0.0048	mg/kg	57,000	no	R
Dichlorodifluoromethane	0.0048	mg/kg	370	no	R
Pentachlorophenol	0.92	mg/kg	4	no	R

Sample: **RW-040-SB-1**

1,4-Dioxane	0.11	mg/kg	24	no	R
2,3,4,6-Tetrachlorophenol	0.072	mg/kg	25,000	no	R
2,4,5-Trichlorophenol	0.18	mg/kg	82,000	no	R
2,4,6-Trichlorophenol	0.072	mg/kg	210	no	R
2,4-Dichlorophenol	0.072	mg/kg	2,500	no	R
2,4-Dimethylphenol	0.072	mg/kg	16,000	no	R
2,4-Dinitrophenol	0.18	mg/kg	1,600	no	R
2-Chlorophenol	0.072	mg/kg	5,800	no	R
2-Methylphenol	0.072	mg/kg	41,000	no	R

Rejected Results for Soil

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

3&4-Methylphenol(m&p Cresol)	0.14	mg/kg	41,000	no	R
Benzaldehyde	0.072	mg/kg	120,000	no	R
Bromomethane	0.0054	mg/kg	30	no	R
Pentachlorophenol	0.18	mg/kg	4	no	R
Phenol	0.072	mg/kg	250,000	no	R

Sample: **RW-040-SB-6**

1,4-Dioxane	0.1	mg/kg	24	no	R
3,3'-Dichlorobenzidine	0.41	mg/kg	5.1	no	R
Bromomethane	0.0051	mg/kg	30	no	R

Sample: **RW-041-SB-1**

1,4-Dioxane	0.092	mg/kg	24	no	R
3,3'-Dichlorobenzidine	0.36	mg/kg	5.1	no	R

Sample: **RW-041-SB-5**

1,4-Dioxane	0.16	mg/kg	24	no	R
3,3'-Dichlorobenzidine	8.2	mg/kg	5.1	YES	R

Sample: **RW-042-SB-1**

1,4-Dioxane	0.12	mg/kg	24	no	R
Benzaldehyde	0.082	mg/kg	120,000	no	R
Bromomethane	0.006	mg/kg	30	no	R
Chloroethane	0.006	mg/kg	57,000	no	R

Sample: **RW-042-SB-5**

1,4-Dioxane	0.12	mg/kg	24	no	R
Benzaldehyde	0.072	mg/kg	120,000	no	R
Bromomethane	0.0058	mg/kg	30	no	R
Chloroethane	0.0058	mg/kg	57,000	no	R

Sample: **RW-043-SB-1**

1,4-Dioxane	0.087	mg/kg	24	no	R
3,3'-Dichlorobenzidine	0.37	mg/kg	5.1	no	R

Rejected Results for Soil

Parameter	Result	Units	PAL	Exceeds PAL?	Flag
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Sample: *RW-043-SB-1*

Chloroethane	0.0044	mg/kg	57,000	no	R
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Sample: *RW-043-SB-8*

1,4-Dioxane	4.7	mg/kg	24	no	R
2,3,4,6-Tetrachlorophenol	7.5	mg/kg	25,000	no	R
2,4,5-Trichlorophenol	18.8	mg/kg	82,000	no	R
2,4,6-Trichlorophenol	7.5	mg/kg	210	no	R
2,4-Dichlorophenol	7.5	mg/kg	2,500	no	R
2,4-Dimethylphenol	7.5	mg/kg	16,000	no	R
2,4-Dinitrophenol	18.8	mg/kg	1,600	no	R
2-Chlorophenol	7.5	mg/kg	5,800	no	R
3&4-Methylphenol(m&p Cresol)	15	mg/kg	41,000	no	R
3,3'-Dichlorobenzidine	7.5	mg/kg	5.1	YES	R
Chloroethane	0.23	mg/kg	57,000	no	R
Pentachlorophenol	18.8	mg/kg	4	YES	R
Phenol	7.5	mg/kg	250,000	no	R

Sample: *RW-044-SB-1*

1,4-Dioxane	0.099	mg/kg	24	no	R
2,3,4,6-Tetrachlorophenol	0.076	mg/kg	25,000	no	R
2,4,5-Trichlorophenol	0.19	mg/kg	82,000	no	R
2,4,6-Trichlorophenol	0.076	mg/kg	210	no	R
2,4-Dichlorophenol	0.076	mg/kg	2,500	no	R
2,4-Dimethylphenol	0.076	mg/kg	16,000	no	R
2,4-Dinitrophenol	0.19	mg/kg	1,600	no	R
2-Chlorophenol	0.076	mg/kg	5,800	no	R
2-Methylphenol	0.076	mg/kg	41,000	no	R
3&4-Methylphenol(m&p Cresol)	0.15	mg/kg	41,000	no	R
Benzaldehyde	0.076	mg/kg	120,000	no	R
Bromomethane	0.0049	mg/kg	30	no	R
Pentachlorophenol	0.19	mg/kg	4	no	R
Phenol	0.076	mg/kg	250,000	no	R

Sample: *RW-044-SB-5*

Rejected Results for Soil

Parameter	Result	Units	PAL	Exceeds PAL?	Flag
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Sample: *RW-044-SB-5*

1,4-Dioxane	0.088	mg/kg	24	no	R
3,3'-Dichlorobenzidine	0.39	mg/kg	5.1	no	R
Bromomethane	0.0044	mg/kg	30	no	R

Sample: *RW-045-SB-1*

1,4-Dioxane	0.13	mg/kg	24	no	R
Benzaldehyde	0.074	mg/kg	120,000	no	R
Bromomethane	0.0064	mg/kg	30	no	R

Sample: *RW-045-SB-5*

1,4-Dioxane	0.11	mg/kg	24	no	R
3,3'-Dichlorobenzidine	0.39	mg/kg	5.1	no	R
Bromomethane	0.0056	mg/kg	30	no	R

Sample: *RW-046-SB-1*

1,4-Dioxane	0.1	mg/kg	24	no	R
3,3'-Dichlorobenzidine	0.39	mg/kg	5.1	no	R
Bromomethane	0.005	mg/kg	30	no	R
Chloroethane	0.005	mg/kg	57,000	no	R

Sample: *RW-046-SB-5*

1,4-Dioxane	0.095	mg/kg	24	no	R
3,3'-Dichlorobenzidine	0.37	mg/kg	5.1	no	R
Bromomethane	0.0047	mg/kg	30	no	R
Chloroethane	0.0047	mg/kg	57,000	no	R

Sample: *RW-047-SB-1*

1,4-Dioxane	0.092	mg/kg	24	no	R
3,3'-Dichlorobenzidine	0.38	mg/kg	5.1	no	R
Bromomethane	0.0046	mg/kg	30	no	R

Sample: *RW-047-SB-10*

1,1,1-Trichloroethane	0.23	mg/kg	36,000	no	R
1,1,2,2-Tetrachloroethane	0.23	mg/kg	2.7	no	R

Rejected Results for Soil

Parameter	Result	Units	PAL	Exceeds PAL?	Flag
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Sample: **RW-047-SB-10**

1,1,2-Trichloro-1,2,2-Trifluoroetha	2.3	mg/kg	170,000	no	R
1,1,2-Trichloroethane	0.23	mg/kg	5	no	R
1,1-Dichloroethane	0.23	mg/kg	16	no	R
1,1-Dichloroethene	0.23	mg/kg	1,000	no	R
1,2,3-Trichlorobenzene	0.23	mg/kg	930	no	R
1,2,4-Trichlorobenzene	0.23	mg/kg	110	no	R
1,2-Dibromo-3-chloropropane	0.23	mg/kg	0.064	YES	R
1,2-Dibromoethane	0.23	mg/kg	0.16	YES	R
1,2-Dichlorobenzene	0.23	mg/kg	9,300	no	R
1,2-Dichloroethane	0.23	mg/kg	2	no	R
1,2-Dichloroethene (Total)	0.45	mg/kg	2,300	no	R
1,2-Dichloropropane	0.23	mg/kg	4.4	no	R
1,3-Dichlorobenzene	0.23	mg/kg		no	R
1,4-Dichlorobenzene	0.23	mg/kg	11	no	R
1,4-Dioxane	4.5	mg/kg	24	no	R
2-Butanone (MEK)	0.45	mg/kg	190,000	no	R
2-Hexanone	0.45	mg/kg	1,300	no	R
4-Methyl-2-pentanone (MIBK)	0.45	mg/kg	56,000	no	R
Benzene	0.23	mg/kg	5.1	no	R
Bromodichloromethane	0.23	mg/kg	1.3	no	R
Bromoform	0.23	mg/kg	86	no	R
Bromomethane	0.23	mg/kg	30	no	R
Carbon disulfide	0.23	mg/kg	3,500	no	R
Carbon tetrachloride	0.23	mg/kg	2.9	no	R
Chlorobenzene	0.23	mg/kg	1,300	no	R
Chloroethane	0.23	mg/kg	57,000	no	R
Chloroform	0.23	mg/kg	1.4	no	R
Chloromethane	0.23	mg/kg	460	no	R
cis-1,2-Dichloroethene	0.23	mg/kg	2,300	no	R
cis-1,3-Dichloropropene	0.23	mg/kg		no	R
Cyclohexane	0.45	mg/kg	27,000	no	R
Dibromochloromethane	0.23	mg/kg	3.3	no	R
Dichlorodifluoromethane	0.23	mg/kg	370	no	R
Methyl Acetate	2.3	mg/kg	1,200,000	no	R

Rejected Results for Soil

Parameter	Result	Units	PAL	Exceeds PAL?	Flag
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Sample: **RW-047-SB-10**

Methyl tert-butyl ether (MTBE)	0.23	mg/kg	210	no	R
Methylene Chloride	0.23	mg/kg	1,000	no	R
Styrene	0.23	mg/kg	35,000	no	R
Tetrachloroethene	0.23	mg/kg	100	no	R
Toluene	0.23	mg/kg	47,000	no	R
trans-1,2-Dichloroethene	0.23	mg/kg	23,000	no	R
trans-1,3-Dichloropropene	0.23	mg/kg		no	R
Trichloroethene	0.23	mg/kg	6	no	R
Trichlorofluoromethane	0.23	mg/kg	3,100	no	R
Vinyl chloride	0.23	mg/kg	1.7	no	R
Xylenes	0.68	mg/kg	2,800	no	R

Sample: **RW-047-SB-6**

1,4-Dioxane	4.6	mg/kg	24	no	R
3,3'-Dichlorobenzidine	0.4	mg/kg	5.1	no	R
Bromomethane	0.23	mg/kg	30	no	R

Sample: **RW-048-SB-1**

1,4-Dioxane	0.092	mg/kg	24	no	R
3,3'-Dichlorobenzidine	0.37	mg/kg	5.1	no	R
Bromomethane	0.0046	mg/kg	30	no	R
Chloroethane	0.0046	mg/kg	57,000	no	R

Sample: **RW-048-SB-5**

1,4-Dioxane	0.088	mg/kg	24	no	R
3,3'-Dichlorobenzidine	0.38	mg/kg	5.1	no	R
Bromomethane	0.0044	mg/kg	30	no	R
Chloroethane	0.0044	mg/kg	57,000	no	R

Sample: **RW-049-SB-1**

1,4-Dioxane	0.12	mg/kg	24	no	R
Benzaldehyde	0.085	mg/kg	120,000	no	R
Bromomethane	0.0059	mg/kg	30	no	R
Chloroethane	0.0059	mg/kg	57,000	no	R

Rejected Results for Soil

Parameter	Result	Units	PAL	Exceeds PAL?	Flag
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Sample: **RW-049-SB-5**

1,4-Dioxane	0.12	mg/kg	24	no	R
Benzaldehyde	0.078	mg/kg	120,000	no	R
Bromomethane	0.006	mg/kg	30	no	R
Chloroethane	0.006	mg/kg	57,000	no	R

Sample: **RW-050-SB-1**

1,4-Dioxane	0.1	mg/kg	24	no	R
2,3,4,6-Tetrachlorophenol	0.36	mg/kg	25,000	no	R
2,4,5-Trichlorophenol	0.9	mg/kg	82,000	no	R
2,4,6-Trichlorophenol	0.36	mg/kg	210	no	R
2,4-Dichlorophenol	0.36	mg/kg	2,500	no	R
2,4-Dimethylphenol	0.36	mg/kg	16,000	no	R
2,4-Dinitrophenol	0.9	mg/kg	1,600	no	R
2-Chlorophenol	0.36	mg/kg	5,800	no	R
2-Methylphenol	0.36	mg/kg	41,000	no	R
3&4-Methylphenol(m&p Cresol)	0.72	mg/kg	41,000	no	R
3,3'-Dichlorobenzidine	0.36	mg/kg	5.1	no	R
Pentachlorophenol	0.9	mg/kg	4	no	R
Phenol	0.36	mg/kg	250,000	no	R

Sample: **RW-050-SB-4.5**

1,4-Dioxane	0.062	mg/kg	24	no	R
3,3'-Dichlorobenzidine	1.8	mg/kg	5.1	no	R

Sample: **RW-051-SB-1**

1,4-Dioxane	0.097	mg/kg	24	no	R
2,3,4,6-Tetrachlorophenol	0.35	mg/kg	25,000	no	R
2,4,5-Trichlorophenol	0.88	mg/kg	82,000	no	R
2,4,6-Trichlorophenol	0.35	mg/kg	210	no	R
2,4-Dichlorophenol	0.35	mg/kg	2,500	no	R
2,4-Dimethylphenol	0.35	mg/kg	16,000	no	R
2,4-Dinitrophenol	0.88	mg/kg	1,600	no	R
2-Chlorophenol	0.35	mg/kg	5,800	no	R
2-Methylphenol	0.35	mg/kg	41,000	no	R

Rejected Results for Soil

Parameter	Result	Units	PAL	Exceeds PAL?	Flag
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Sample: **RW-051-SB-1**

3&4-Methylphenol(m&p Cresol)	0.7	mg/kg	41,000	no	R
Pentachlorophenol	0.88	mg/kg	4	no	R
Phenol	0.35	mg/kg	250,000	no	R

Sample: **RW-051-SB-5**

1,4-Dioxane	0.14	mg/kg	24	no	R
2,3,4,6-Tetrachlorophenol	0.55	mg/kg	25,000	no	R
2,4,5-Trichlorophenol	1.4	mg/kg	82,000	no	R
2,4,6-Trichlorophenol	0.55	mg/kg	210	no	R
2,4-Dichlorophenol	0.55	mg/kg	2,500	no	R
2,4-Dimethylphenol	0.55	mg/kg	16,000	no	R
2,4-Dinitrophenol	1.4	mg/kg	1,600	no	R
2-Chlorophenol	0.55	mg/kg	5,800	no	R
2-Methylphenol	0.55	mg/kg	41,000	no	R
3&4-Methylphenol(m&p Cresol)	1.1	mg/kg	41,000	no	R
Pentachlorophenol	1.4	mg/kg	4	no	R
Phenol	0.55	mg/kg	250,000	no	R

Sample: **RW-052-SB-1**

1,1,1-Trichloroethane	0.0049	mg/kg	36,000	no	R
1,1,2,2-Tetrachloroethane	0.0049	mg/kg	2.7	no	R
1,1,2-Trichloro-1,2,2-Trifluoroetha	0.049	mg/kg	170,000	no	R
1,1,2-Trichloroethane	0.0049	mg/kg	5	no	R
1,1-Dichloroethane	0.0049	mg/kg	16	no	R
1,1-Dichloroethene	0.0049	mg/kg	1,000	no	R
1,2,3-Trichlorobenzene	0.0049	mg/kg	930	no	R
1,2,4-Trichlorobenzene	0.0049	mg/kg	110	no	R
1,2-Dibromo-3-chloropropane	0.0049	mg/kg	0.064	no	R
1,2-Dibromoethane	0.0049	mg/kg	0.16	no	R
1,2-Dichlorobenzene	0.0049	mg/kg	9,300	no	R
1,2-Dichloroethane	0.0049	mg/kg	2	no	R
1,2-Dichloroethene (Total)	0.0099	mg/kg	2,300	no	R
1,2-Dichloropropane	0.0049	mg/kg	4.4	no	R
1,3-Dichlorobenzene	0.0049	mg/kg		no	R

Rejected Results for Soil

Parameter	Result	Units	PAL	Exceeds PAL?	Flag
Sample: RW-052-SB-1					
1,4-Dichlorobenzene	0.0049	mg/kg	11	no	R
1,4-Dioxane	0.099	mg/kg	24	no	R
2-Butanone (MEK)	0.0076	mg/kg	190,000	no	R
2-Hexanone	0.082	mg/kg	1,300	no	R
3,3'-Dichlorobenzidine	4	mg/kg	5.1	no	R
4-Methyl-2-pentanone (MIBK)	0.0027	mg/kg	56,000	no	R
Acetone	0.043	mg/kg	670,000	no	R
Benzene	0.0038	mg/kg	5.1	no	R
Bromodichloromethane	0.0049	mg/kg	1.3	no	R
Bromoform	0.0049	mg/kg	86	no	R
Bromomethane	0.0049	mg/kg	30	no	R
Carbon disulfide	0.0093	mg/kg	3,500	no	R
Carbon tetrachloride	0.0049	mg/kg	2.9	no	R
Chlorobenzene	0.0049	mg/kg	1,300	no	R
Chloroethane	0.0049	mg/kg	57,000	no	R
Chloroform	0.0049	mg/kg	1.4	no	R
Chloromethane	0.0049	mg/kg	460	no	R
cis-1,2-Dichloroethene	0.0049	mg/kg	2,300	no	R
cis-1,3-Dichloropropene	0.0049	mg/kg		no	R
Cyclohexane	0.0039	mg/kg	27,000	no	R
Dibromochloromethane	0.0049	mg/kg	3.3	no	R
Dichlorodifluoromethane	0.0049	mg/kg	370	no	R
Ethylbenzene	0.0049	mg/kg	25	no	R
Isopropylbenzene	0.0049	mg/kg	9,900	no	R
Methyl Acetate	0.049	mg/kg	1,200,000	no	R
Methyl tert-butyl ether (MTBE)	0.0049	mg/kg	210	no	R
Methylene Chloride	0.0049	mg/kg	1,000	no	R
Styrene	0.0049	mg/kg	35,000	no	R
Tetrachloroethene	0.0049	mg/kg	100	no	R
Toluene	0.0034	mg/kg	47,000	no	R
trans-1,2-Dichloroethene	0.0049	mg/kg	23,000	no	R
trans-1,3-Dichloropropene	0.0049	mg/kg		no	R
Trichloroethene	0.0049	mg/kg	6	no	R
Trichlorofluoromethane	0.0049	mg/kg	3,100	no	R

Rejected Results for Soil

Parameter	Result	Units	PAL	Exceeds PAL?	Flag
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Sample: **RW-052-SB-1**

Vinyl chloride	0.0049	mg/kg	1.7	no	R
Xylenes	0.015	mg/kg	2,800	no	R

Sample: **RW-052-SB-5**

1,1,1-Trichloroethane	0.0053	mg/kg	36,000	no	R
1,1,2,2-Tetrachloroethane	0.0053	mg/kg	2.7	no	R
1,1,2-Trichloro-1,2,2-Trifluoroetha	0.053	mg/kg	170,000	no	R
1,1,2-Trichloroethane	0.0053	mg/kg	5	no	R
1,1-Dichloroethane	0.0058	mg/kg	16	no	R
1,1-Dichloroethene	0.0053	mg/kg	1,000	no	R
1,2,3-Trichlorobenzene	0.0015	mg/kg	930	no	R
1,2,4-Trichlorobenzene	0.0026	mg/kg	110	no	R
1,2-Dibromo-3-chloropropane	0.0053	mg/kg	0.064	no	R
1,2-Dibromoethane	0.0053	mg/kg	0.16	no	R
1,2-Dichlorobenzene	0.0053	mg/kg	9,300	no	R
1,2-Dichloroethane	0.0053	mg/kg	2	no	R
1,2-Dichloroethene (Total)	0.011	mg/kg	2,300	no	R
1,2-Dichloropropane	0.0053	mg/kg	4.4	no	R
1,3-Dichlorobenzene	0.0053	mg/kg		no	R
1,4-Dichlorobenzene	0.0053	mg/kg	11	no	R
1,4-Dioxane	0.11	mg/kg	24	no	R
2-Butanone (MEK)	0.031	mg/kg	190,000	no	R
2-Hexanone	0.011	mg/kg	1,300	no	R
3,3'-Dichlorobenzidine	4.1	mg/kg	5.1	no	R
4-Methyl-2-pentanone (MIBK)	0.029	mg/kg	56,000	no	R
Acetone	0.13	mg/kg	670,000	no	R
Benzene	0.1	mg/kg	5.1	no	R
Bromodichloromethane	0.0053	mg/kg	1.3	no	R
Bromoform	0.0053	mg/kg	86	no	R
Bromomethane	0.0053	mg/kg	30	no	R
Carbon disulfide	0.023	mg/kg	3,500	no	R
Carbon tetrachloride	0.0053	mg/kg	2.9	no	R
Chlorobenzene	0.0023	mg/kg	1,300	no	R
Chloroethane	0.0053	mg/kg	57,000	no	R

Rejected Results for Soil

Parameter	Result	Units	PAL	Exceeds PAL?	Flag
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Sample: **RW-053-SB-1**

1,4-Dioxane	0.1	mg/kg	24	no	R
3,3'-Dichlorobenzidine	4	mg/kg	5.1	no	R
Bromomethane	0.0052	mg/kg	30	no	R
Chloroethane	0.0052	mg/kg	57,000	no	R

Sample: **RW-053-SB-5**

1,4-Dioxane	0.083	mg/kg	24	no	R
3,3'-Dichlorobenzidine	0.39	mg/kg	5.1	no	R
Chloroethane	0.0042	mg/kg	57,000	no	R
Chloroform	0.0042	mg/kg	1.4	no	R
Chloromethane	0.0042	mg/kg	460	no	R
cis-1,2-Dichloroethene	0.0042	mg/kg	2,300	no	R
cis-1,3-Dichloropropene	0.0042	mg/kg		no	R
Cyclohexane	0.0083	mg/kg	27,000	no	R
Dibromochloromethane	0.0042	mg/kg	3.3	no	R
Dichlorodifluoromethane	0.0042	mg/kg	370	no	R
Ethylbenzene	0.0042	mg/kg	25	no	R
Isopropylbenzene	0.0042	mg/kg	9,900	no	R
Methyl Acetate	0.042	mg/kg	1,200,000	no	R
Methyl tert-butyl ether (MTBE)	0.0042	mg/kg	210	no	R
Methylene Chloride	0.0042	mg/kg	1,000	no	R
Styrene	0.0042	mg/kg	35,000	no	R
Tetrachloroethene	0.0042	mg/kg	100	no	R
Toluene	0.0042	mg/kg	47,000	no	R
trans-1,2-Dichloroethene	0.0042	mg/kg	23,000	no	R
trans-1,3-Dichloropropene	0.0042	mg/kg		no	R
Trichloroethene	0.0019	mg/kg	6	no	R
Trichlorofluoromethane	0.0042	mg/kg	3,100	no	R
Vinyl chloride	0.0042	mg/kg	1.7	no	R
Xylenes	0.013	mg/kg	2,800	no	R

Sample: **RW-054-SB-1**

1,4-Dioxane	0.093	mg/kg	24	no	R
3,3'-Dichlorobenzidine	0.38	mg/kg	5.1	no	R

Rejected Results for Soil

Parameter	Result	Units	PAL	Exceeds PAL?	Flag
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Sample: *RW-054-SB-1*

Bromomethane	0.0046	mg/kg	30	no	R
Chloroethane	0.0046	mg/kg	57,000	no	R

Sample: *RW-054-SB-5*

1,4-Dioxane	0.11	mg/kg	24	no	R
3,3'-Dichlorobenzidine	0.4	mg/kg	5.1	no	R
Bromomethane	0.0054	mg/kg	30	no	R
Chloroethane	0.0054	mg/kg	57,000	no	R

Sample: *RW-055-SB-1*

1,4-Dioxane	0.093	mg/kg	24	no	R
2,3,4,6-Tetrachlorophenol	0.086	mg/kg	25,000	no	R
2,4,5-Trichlorophenol	0.22	mg/kg	82,000	no	R
2,4,6-Trichlorophenol	0.086	mg/kg	210	no	R
2,4-Dichlorophenol	0.086	mg/kg	2,500	no	R
2,4-Dimethylphenol	0.086	mg/kg	16,000	no	R
2,4-Dinitrophenol	0.22	mg/kg	1,600	no	R
2-Chlorophenol	0.086	mg/kg	5,800	no	R
2-Methylphenol	0.086	mg/kg	41,000	no	R
3&4-Methylphenol(m&p Cresol)	0.17	mg/kg	41,000	no	R
Benzaldehyde	0.086	mg/kg	120,000	no	R
Bromomethane	0.0046	mg/kg	30	no	R
Pentachlorophenol	0.22	mg/kg	4	no	R
Phenol	0.086	mg/kg	250,000	no	R

Sample: *RW-055-SB-5*

1,4-Dioxane	0.089	mg/kg	24	no	R
3,3'-Dichlorobenzidine	0.41	mg/kg	5.1	no	R
Bromomethane	0.0045	mg/kg	30	no	R

Sample: *RW-055-SB-7*

1,4-Dioxane	6.9	mg/kg	24	no	R
3,3'-Dichlorobenzidine	0.41	mg/kg	5.1	no	R
Bromomethane	0.34	mg/kg	30	no	R

Rejected Results for Soil

Parameter	Result	Units	PAL	Exceeds PAL?	Flag
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Sample: *RW-056-SB-1*

1,4-Dioxane	0.099	mg/kg	24	no	R
3,3'-Dichlorobenzidine	0.36	mg/kg	5.1	no	R
Bromomethane	0.0049	mg/kg	30	no	R
Chloroethane	0.0049	mg/kg	57,000	no	R

Sample: *RW-056-SB-5*

1,4-Dioxane	0.13	mg/kg	24	no	R
3,3'-Dichlorobenzidine	0.4	mg/kg	5.1	no	R
Bromomethane	0.0065	mg/kg	30	no	R
Chloroethane	0.0065	mg/kg	57,000	no	R

Sample: *RW-071-SB-1*

1,4-Dioxane	0.11	mg/kg	24	no	R
Bromomethane	0.0054	mg/kg	30	no	R
Chloroethane	0.0054	mg/kg	57,000	no	R

Sample: *RW-072-SB-1*

1,4-Dioxane	0.11	mg/kg	24	no	R
Bromomethane	0.0054	mg/kg	30	no	R
Chloroethane	0.0054	mg/kg	57,000	no	R

Sample: *RW-073-SB-0.5*

1,4-Dioxane	0.13	mg/kg	24	no	R
2,4-Dinitrotoluene	0.087	mg/kg	7.4	no	R
Bromomethane	0.0064	mg/kg	30	no	R
Chloroethane	0.0064	mg/kg	57,000	no	R
Hexachlorocyclopentadiene	0.087	mg/kg	7.5	no	R

Sample: *RW-074-SB-0.5*

1,4-Dioxane	0.11	mg/kg	24	no	R
Bromomethane	0.0055	mg/kg	30	no	R
Chloroethane	0.0055	mg/kg	57,000	no	R

Sample: *RW-075-SB-1*

1,4-Dioxane	0.11	mg/kg	24	no	R
Bromomethane	0.0055	mg/kg	30	no	R
Chloroethane	0.0055	mg/kg	57,000	no	R

Rejected Results for Soil

Parameter	Result	Units	PAL	Exceeds PAL?	Flag
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Sample: *RW-075-SB-1*

1,4-Dioxane	0.12	mg/kg	24	no	R
Bromomethane	0.0058	mg/kg	30	no	R
Chloroethane	0.0058	mg/kg	57,000	no	R

Sample: *RW-076-SB-1*

1,4-Dioxane	0.09	mg/kg	24	no	R
Bromomethane	0.0045	mg/kg	30	no	R
Chloroethane	0.0045	mg/kg	57,000	no	R

Sample: *RW-076-SB-6*

1,4-Dioxane	0.089	mg/kg	24	no	R
Benzaldehyde	0.077	mg/kg	120,000	no	R
Bromomethane	0.0044	mg/kg	30	no	R
Chloroethane	0.0044	mg/kg	57,000	no	R

Sample: *RW-077-SB-1*

1,4-Dioxane	0.12	mg/kg	24	no	R
Bromomethane	0.0058	mg/kg	30	no	R
Chloroethane	0.0058	mg/kg	57,000	no	R

Sample: *RW-077-SB-5*

1,4-Dioxane	0.15	mg/kg	24	no	R
Bromomethane	0.0073	mg/kg	30	no	R
Chloroethane	0.0073	mg/kg	57,000	no	R

Sample: *RW-078-SB-1*

1,4-Dioxane	0.091	mg/kg	24	no	R
Benzaldehyde	0.071	mg/kg	120,000	no	R
Bromomethane	0.0045	mg/kg	30	no	R
Chloroethane	0.0045	mg/kg	57,000	no	R

Sample: *RW-078-SB-5*

1,4-Dioxane	0.13	mg/kg	24	no	R
Benzaldehyde	0.075	mg/kg	120,000	no	R

Rejected Results for Soil

Parameter	Result	Units	PAL	Exceeds PAL?	Flag
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Sample: *RW-078-SB-5*

Bromomethane	0.0067	mg/kg	30	no	R
Chloroethane	0.0067	mg/kg	57,000	no	R

Sample: *RW-079-SB-1*

1,4-Dioxane	0.11	mg/kg	24	no	R
Benzaldehyde	0.074	mg/kg	120,000	no	R
Bromomethane	0.0056	mg/kg	30	no	R
Chloroethane	0.0056	mg/kg	57,000	no	R

Sample: *RW-079-SB-5*

1,4-Dioxane	0.089	mg/kg	24	no	R
Benzaldehyde	0.078	mg/kg	120,000	no	R
Bromomethane	0.0044	mg/kg	30	no	R
Chloroethane	0.0044	mg/kg	57,000	no	R



Parcel A3 - Table 15

Rejected Results for Groundwater

Parameter	Result	Units	PAL	Exceeds PAL?	Flag
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Sample: *RW-002-PZ*

3,3'-Dichlorobenzidine	1	µg/L	0.12	YES	R
Chromium VI	10	µg/L	0.035	YES	R
Methyl Acetate	5	µg/L	20,000	no	R

Sample: *RW-006-PZ*

3,3'-Dichlorobenzidine	1	µg/L	0.12	YES	R
Chromium VI	10	µg/L	0.035	YES	R
Methyl Acetate	5	µg/L	20,000	no	R

Sample: *RW-011-PZ*

3,3'-Dichlorobenzidine	1	µg/L	0.12	YES	R
Chromium VI	10	µg/L	0.035	YES	R
Methyl Acetate	5	µg/L	20,000	no	R

Sample: *RW-021-PZ*

3,3'-Dichlorobenzidine	1	µg/L	0.12	YES	R
Chromium VI	10	µg/L	0.035	YES	R
Methyl Acetate	5	µg/L	20,000	no	R

Sample: *RW-025-PZ*

3,3'-Dichlorobenzidine	1	µg/L	0.12	YES	R
Chromium VI	10	µg/L	0.035	YES	R
Methyl Acetate	5	µg/L	20,000	no	R

Sample: *RW-027-PZ*

3,3'-Dichlorobenzidine	1	µg/L	0.12	YES	R
Chromium VI	10	µg/L	0.035	YES	R
Methyl Acetate	5	µg/L	20,000	no	R

Rejected Results for Groundwater

Parameter	Result	Units	PAL	Exceeds PAL?	Flag
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Sample: *RW02-PZM000*

Methyl Acetate	5	µg/L	20,000	no	R
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Sample: *RW02-PZM020*

Methyl Acetate	5	µg/L	20,000	no	R
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Sample: *RW-048-PZ*

3,3'-Dichlorobenzidine	1	µg/L	0.12	YES	R
Chromium VI	10	µg/L	0.035	YES	R
Methyl Acetate	5	µg/L	20,000	no	R

Sample: *RW-050-PZ*

3,3'-Dichlorobenzidine	1	µg/L	0.12	YES	R
Chromium VI	10	µg/L	0.035	YES	R
Methyl Acetate	5	µg/L	20,000	no	R

Sample: *RW07-PZM004*

3,3'-Dichlorobenzidine	1	µg/L	0.12	YES	R
Methyl Acetate	5	µg/L	20,000	no	R

Sample: *RW07-PZM017*

Methyl Acetate	5	µg/L	20,000	no	R
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Sample: *RW10-PZM004*

4-Chloroaniline	1	µg/L	0.36	YES	R
Methyl Acetate	5	µg/L	20,000	no	R

Sample: *RW10-PZM020*

Methyl Acetate	5	µg/L	20,000	no	R
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Sample: *RW19-PZM000*

Methyl Acetate	5	µg/L	20,000	no	R
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Sample: *RW19-PZM020*

Methyl Acetate	5	µg/L	20,000	no	R
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Rejected Results for Groundwater

Parameter	Result	Units	PAL	Exceeds PAL?	Flag
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Sample: *RW20-PZM000*

3,3'-Dichlorobenzidine	1	µg/L	0.12	YES	R
Isopropylbenzene	1	µg/L	450	no	R

Sample: *RW20-PZM020*

3,3'-Dichlorobenzidine	1	µg/L	0.12	YES	R
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APPENDIX A

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Table 1
Phase II Borings

Sample Location	REC or Source Area	Boring Depth*	Sample Depth*	Analytical Parameters		Rationale
				Soil	Groundwater	
RW-001-SB	SMWU 27 (REC 6A)	20 feet	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium and Cyanide		Characterize soil to define nature and extent of suspected source area
	Sludge Bin Storage Area		4-5', 9-10'	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide		
RW-002-SB	SWMU 28 (REC 6B)	20 feet	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium and Cyanide	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide	Characterize soil and groundwater to define nature and extent of suspected source area
	Northwest Pond		4-5', 9-10'	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide		
RW-003-SB	SWMU 28 (REC 6B)	20 feet	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium and Cyanide		Characterize soil to define nature and extent of suspected source area
	Northwest Pond		4-5', 9-10'	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide		
RW-004-SB	SWMU 29 (REC 6C)	20 feet	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium and Cyanide		Characterize soil to define nature and extent of suspected source area
	East Pond		4-5', 9-10'	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide		
RW-005-SB	SWMU 29 (REC 6C)	20 feet	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium and Cyanide		Characterize soil to define nature and extent of suspected source area
	East Pond		4-5', 9-10'	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide		
RW-006-SB	SWMU 29 (REC 6C)	20 feet	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium and Cyanide	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide	Characterize soil and groundwater to define nature and extent of suspected source area
	East Pond		4-5', 9-10'	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide		
RW-007-SB	Paint Room	20 feet	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium and Cyanide		Characterize soil to investigate potential environmental concern from former paint room
			4-5', 9-10'	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide		
RW-008-SB	SWMU 29 (REC 6C)	20 feet	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium and Cyanide		Characterize soil to define nature and extent of suspected source area
	East Pond		4-5', 9-10'	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide		
RW-009-SB	SWMU 45	20 feet	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium and Cyanide		Characterize soil to define nature and extent of suspected source area
	Rod Mill Trenches and Sumps		4-5', 9-10'	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide		
RW-010-SB	Oil Storage Area	20 feet	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium, Cyanide, TPH-GRO and TPH-DRO		Characterize soil to investigate potential environmental concern from former oil storage area
			4-5', 9-10'	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium, Cyanide, TPH-GRO and TPH-DRO		
RW-011-SB	Truck Repair Shop	20 feet	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium, Cyanide, TPH-GRO and TPH-DRO	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium, Cyanide, TPH-GRO and TPH-DRO	Characterize soil and groundwater to investigate potential environmental concern from former truck repair shop
			4-5', 9-10'	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium, Cyanide, TPH-GRO and TPH-DRO		
RW-012-SB	Cooling Tower	20 feet	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium and Cyanide		Characterize soil to investigate potential environmental concern from former cooling tower
			4-5', 9-10'	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide		

*Total depth of 20 feet or groundwater. Soil samples from 0-1', 4-5', 9-10' bgs. Lowest sample interval may be adjusted in the field based on observations or field screening.

Table 1
Phase II Borings

Sample Location	REC or Source Area	Boring Depth*	Sample Depth*	Analytical Parameters		Rationale
				Soil	Groundwater	
RW-013-SB	Stelmor Pit	20 feet	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium and Cyanide		Characterize soil to investigate potential environmental concern from former stelmor pit
			4-5', 9-10'	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide		
RW-014-SB	No. 3 Rod Mill Furnace	20 feet	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium and Cyanide		Characterize soil to investigate potential environmental concern from former No. 3 Rod Mill Furnace
			4-5', 9-10'	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide		
RW-015-SB	Acid Tank	20 feet	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium and Cyanide		Characterize soil to investigate potential environmental concern from former acid tank
			4-5', 9-10'	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide		
RW-016-SB	Soap Mixer Area	20 feet	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium and Cyanide		Characterize soil to investigate potential environmental concern from former soap storage and soap mixer area
			4-5', 9-10'	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide		
RW-017-SB	Water Processing Machine	20 feet	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium and Cyanide		Characterize soil to investigate potential environmental concern from former water processing machine
			4-5', 9-10'	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide		
RW-018-SB	Dye Room	20 feet	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium and Cyanide		Characterize soil to investigate potential environmental concern in former dye room
			4-5', 9-10'	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide		
RW-019-SB	Compressor Room	20 feet	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium and Cyanide		Characterize soil to investigate potential environmental concern from former compressor room
			4-5', 9-10'	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide		
RW-020-SB	Water Treatment System	20 feet	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium and Cyanide		Characterize soil to investigate potential environmental concern from former water treatment system
			4-5', 9-10'	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide		
RW-021-SB	SWMU 44	20 feet	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium and Cyanide	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide	Characterize soil and groundwater to define nature and extent of suspected source area
	Rod Mill Cooling Tower		4-5', 9-10'	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide		
RW-022-SB	SWMU 44	20 feet	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium and Cyanide		Characterize soil to define nature and extent of suspected source area
	Rod Mill Cooling Tower		4-5', 9-10'	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide		
RW-023-SB	Pump House	20 feet	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium and Cyanide		Characterize soil to investigate potential environmental concern from former pump house
			4-5', 9-10'	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide		
RW-024-SB	Millwright Shop	20 feet	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium and Cyanide		Characterize soil to investigate potential environmental concern from former millwright shop
			4-5', 9-10'	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide		

*Total depth of 20 feet or groundwater. Soil samples from 0-1', 4-5', 9-10' bgs. Lowest sample interval may be adjusted in the field based on observations or field screening.

Table 1
Phase II Borings

Sample Location	REC or Source Area	Boring Depth*	Sample Depth*	Analytical Parameters		Rationale
				Soil	Groundwater	
RW-025-SB	SWMU 39	20 feet	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium and Cyanide	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide	Characterize soil and groundwater to define nature and extent of suspected source area
	Rod Mill Scale Pit		4-5', 9-10'	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide		
RW-026-SB	SWMU 39	20 feet	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium and Cyanide		Characterize soil to define nature and extent of suspected source area
	Rod Mill Scale Pit		4-5', 9-10'	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide		
RW-027-SB	Roll Shop	20 feet	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium, Cyanide, TPH-GRO and TPH-DRO	VOCs, SVOCs, PPL Metals, O&G, Cobalt, Hexavalent Chromium, Cyanide, TPH-GRO and TPH-DRO	Characterize soil and groundwater to investigate potential environmental concern from former roll shop
			4-5', 9-10'	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium, Cyanide, TPH-GRO and TPH-DRO		
RW-028-SB	Bearing Shop	20 feet	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium and Cyanide		Characterize soil to investigate potential environmental concern from former bearing shop
			4-5', 9-10'	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide		
RW-029-SB	Pump House	20 feet	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium and Cyanide		Characterize soil to investigate potential environmental concern from former pump house
			4-5', 9-10'	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide		
RW-030-SB	AOC X (REC 6E)	20 feet	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium and Cyanide		Characterize soil to define nature and extent of suspected source area
	Above Ground Storage Tank		4-5', 9-10'	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide		
RW-031-SB	Maintenance Shop	20 feet	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium, Cyanide, TPH-GRO and TPH-DRO		Characterize soil to investigate potential environmental concern from former maintenance shop
			4-5', 9-10'	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium, Cyanide, TPH-GRO and TPH-DRO		
RW-032-SB	Fuel Shop	20 feet	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium, Cyanide, TPH-GRO and TPH-DRO		Characterize soil to investigate potential environmental concern from former fuel shop
			4-5', 9-10'	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium, Cyanide, TPH-GRO and TPH-DRO		
RW-033-SB	Oil Tanks	20 feet	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium, Cyanide, TPH-GRO and TPH-DRO		Characterize soil to investigate potential environmental concern from former oil tanks
			4-5', 9-10'	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium, Cyanide, TPH-GRO and TPH-DRO		
RW-034-SB	Electroplating Area	20 feet	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium and Cyanide		Characterize soil to investigate potential environmental concern from former electroplating area
			4-5', 9-10'	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide		
RW-035-SB	Oil Room	20 feet	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium, Cyanide, TPH-GRO and TPH-DRO		Characterize soil to investigate potential environmental concern from former oil room
			4-5', 9-10'	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium, Cyanide, TPH-GRO and TPH-DRO		
RW-036-SB	Lead Room	20 feet	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium and Cyanide		Characterize soil to investigate potential environmental concern from former lead room
			4-5', 9-10'	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide		

*Total depth of 20 feet or groundwater. Soil samples from 0-1', 4-5', 9-10' bgs. Lowest sample interval may be adjusted in the field based on observations or field screening.

Table 1
Phase II Borings

Sample Location	REC or Source Area	Boring Depth*	Sample Depth*	Analytical Parameters		Rationale
				Soil	Groundwater	
RW-037-SB	Leach Plant	20 feet	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium and Cyanide		Characterize soil to investigate potential environmental concern from former leach plant
			4-5', 9-10'	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide		
RW-038-SB	Galvanizing Line	20 feet	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium and Cyanide		Characterize soil to investigate potential environmental concern from former galvanizing line
			4-5', 9-10'	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide		
RW-039-SB	Acid Storage Area	20 feet	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium and Cyanide		Characterize soil to investigate potential environmental concern from former acid storage area
			4-5', 9-10'	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide		
RW-040-SB	Lead Storage Room	20 feet	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium and Cyanide		Characterize soil to investigate potential environmental concern from former lead storage room
			4-5', 9-10'	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide		
RW-041-SB	Stelmor Lines	20 feet	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium and Cyanide		Characterize soil to investigate potential environmental concern from former stelmor lines
			4-5', 9-10'	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide		
RW-042-SB	Rail Activities	20 feet	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium and Cyanide		Characterize soil to investigate potential environmental concern from former rail activities
			4-5', 9-10'	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide		
RW-043-SB	Battery Room	20 feet	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium and Cyanide		Characterize soil to investigate potential environmental concern from former battery room
			4-5', 9-10'	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide		
RW-044-SB	Galvanizing Line	20 feet	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium and Cyanide		Characterize soil to investigate potential environmental concern from former galvanizing line
			4-5', 9-10'	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide		
RW-045-SB	Bethanizing Plant	20 feet	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium and Cyanide		Characterize soil to investigate potential environmental concern from former bethanizing plant
			4-5', 9-10'	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide		
RW-046-SB	Bethanizing Plant	20 feet	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium and Cyanide		Characterize soil to investigate potential environmental concern from former bethanizing plant
			4-5', 9-10'	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide		
RW-047-SB	Bethanizing Plant	20 feet	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium and Cyanide		Characterize soil to investigate potential environmental concern from former bethanizing plant
			4-5', 9-10'	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide		
RW-048-SB	Bethanizing Plant	20 feet	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium and Cyanide	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide	Characterize soil and groundwater to investigate potential environmental concern from former bethanizing plant
			4-5', 9-10'	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide		

*Total depth of 20 feet or groundwater. Soil samples from 0-1', 4-5', 9-10' bgs. Lowest sample interval may be adjusted in the field based on observations or field screening.

Table 1
Phase II Borings

Sample Location	REC or Source Area	Boring Depth*	Sample Depth*	Analytical Parameters		Rationale
				Soil	Groundwater	
RW-049-SB	Rail Activities	20 feet	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium and Cyanide		Characterize soil to investigate potential environmental concern from former rail activities
			4-5', 9-10'	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide		
RW-050-SB	SWMU 45	20 feet	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium and Cyanide	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide	Characterize soil and groundwater to define nature and extent of suspected source area
	Rod Mill Trenches and Sumps		4-5', 9-10'	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide		
RW-051-SB	SWMU 45	20 feet	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium and Cyanide		Characterize soil to define nature and extent of suspected source area
	Rod Mill Trenches and Sumps		4-5', 9-10'	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide		
RW-052-SB	SWMU 45	20 feet	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium and Cyanide		Characterize soil to define nature and extent of suspected source area
	Rod Mill Trenches and Sumps		4-5', 9-10'	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide		
RW-053-SB	SWMU 45	20 feet	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium and Cyanide		Characterize soil to define nature and extent of suspected source area
	Rod Mill Trenches and Sumps		4-5', 9-10'	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide		
RW-054-SB	SWMU 45	20 feet	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium and Cyanide		Characterize soil to define nature and extent of suspected source area
	Rod Mill Trenches and Sumps		4-5', 9-10'	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide		
RW-055-SB	SWMU 45	20 feet	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium and Cyanide		Characterize soil to define nature and extent of suspected source area
	Rod Mill Trenches and Sumps		4-5', 9-10'	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide		
RW-056-SB	SWMU 45	20 feet	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium and Cyanide		Characterize soil to define nature and extent of suspected source area
	Rod Mill Trenches and Sumps		4-5', 9-10'	VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide		
RW-071-SB	Parcel A3 Coverage	1 foot	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium and Cyanide		Investigate potential impacts of historical activities and characterize surface soils in areas not previously sampled
RW-072-SB	Parcel A3 Coverage	1 foot	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium and Cyanide		Investigate potential impacts of historical activities and characterize surface soils in areas not previously sampled
RW-073-SB	Parcel A3 Coverage	1 foot	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium and Cyanide		Investigate potential impacts of historical activities and characterize surface soils in areas not previously sampled
RW-074-SB	Parcel A3 Coverage	1 foot	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium and Cyanide		Investigate potential impacts of historical activities and characterize surface soils in areas not previously sampled
RW-075-SB	Parcel A3 Coverage	1 foot	0-1'	VOCs, SVOCs, TAL Metals, O&G, PCBs, Hexavalent Chromium and Cyanide		Investigate potential impacts of historical activities and characterize surface soils in areas not previously sampled

*Total depth of 20 feet or groundwater. Soil samples from 0-1', 4-5', 9-10' bgs. Lowest sample interval may be adjusted in the field based on observations or field screening.

Table 1
Phase II Borings

Sample Location	REC or Source Area	Boring Depth*	Sample Depth*	Analytical Parameters		Rationale
				Soil	Groundwater	
RW02-PZM000	Existing Monitoring Well		15 feet		VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide	Characterize groundwater in shallow zone
RW02-PZM020	Existing Monitoring Well		25 feet		VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide	Characterize groundwater in intermediate zone
RW07-PZM004	Existing Monitoring Well		15 feet		VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide	Characterize groundwater in shallow zone
RW07-PZM017	Existing Monitoring Well		25 feet		VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide	Characterize groundwater in intermediate zone
RW10-PZM004	Existing Monitoring Well		15 feet		VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide	Characterize groundwater in shallow zone
RW10-PZM020	Existing Monitoring Well		25 feet		VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide	Characterize groundwater in intermediate zone
RW19-PZM000	Existing Monitoring Well		15 feet		VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide	Characterize groundwater in shallow zone
RW19-PZM020	Existing Monitoring Well		25 feet		VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide	Characterize groundwater in intermediate zone
RW20-PZM000	Existing Monitoring Well		15 feet		VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide	Characterize groundwater in shallow zone
RW20-PZM020	Existing Monitoring Well		25 feet		VOCs, SVOCs, TAL Metals, O&G, Hexavalent Chromium and Cyanide	Characterize groundwater in intermediate zone

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

No Engineered Barrier (41-70 acres): 1 boring per 2 acres with no less than 27 borings

Engineered Barrier (1-15 acres): 1 boring per 2 acres with no less than 2 borings

No Engineered Barrier (59.1 acres) = **30 Samples**[†]

Engineered Barrier - Parking/Roadways (5.2 acres) = **3 Samples**[†]

[†]Minimum total number of samples is 33, compare to sample numbers in Table 1 and Table 2

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APPENDIX B

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Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 10/1/2015
 Weather : Rain
 Northing (US ft) : 572,115.07
 Easting (US ft) : 1,456,436.55

Boring ID: RW-001-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0				(0-0.33') Topsoil, with roots, dark brown, moist, low, no cohesion, no plasticity	ML	
			RW-001-SB-1	(0.33-4.3') Sandy SILT, brownish orange, moist, hard, low cohesion, low plasticity	ML	
	80					
5				(4.3-6') Silty SAND, orangish brown, moist, soft, no cohesion, no plasticity	SM	
				(6-10') SAND, orangish brown, moist, soft, no cohesion, no plasticity	SW-SM	
10						Wet at 9' bgs Boring terminated at 10' bgs due to encountering groundwater

Total Borehole Depth: 10' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 9/29/2015
 Weather : Cloudy
 Northing (US ft) : 572,332.42
 Easting (US ft) : 1,456,266.37

Boring ID: RW-002-SB

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Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0				(0-0.5') Topsoil, with roots, dark brown, dry, loose, no cohesion, no plasticity	ML	Wet at 4.5' bgs
			RW-002-SB-1	(0.5-2') Slag, light gray, platy, loose, no cohesion, no plasticity	GW-GM	
70		4.5		(2-4.7') Slag, with medium grained sand and gravel, gravel up to 2"	GW-GM	
		6.8				
		2.9	RW-002-SB-4.5	(4.7-6') CLAY, with slag, reddish orange, wet, very soft	CL	
5				(6-7.5') Slag, with fine to medium grained sand, dark brown, wet, shean observed where wet, no cohesion, no plasticity	GW-GM	
				(7.5-10') SAND, tan to red, wet, firm, medium cohesion, no plasticity	SM-SW	Boring terminated at 10' bgs due to encountering groundwater
80						
10						

Total Borehole Depth: 10' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date Started : 9/29/2015
 Weather : Cloudy
 Northing (US ft) : 572,330.20
 Easting (US ft) : 1,456,403.28

Boring ID: RW-003-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0				(0-0.5') Topsoil, with some clay, brown, dry, soft, no cohesion, no plasticity	ML	
		1.7	RW-003-SB-1	(0.5-5.5') Slag, black, with medium to coarse grained sand and white to yellow rocks/sand sized particles, loose, dry, no cohesion, no plasticity		
		4.5				
100		9.5			GW-GM	
		5.9				Mothball odor
		14.0				
5		12.5		(5.5-7.5') Silty CLAY, brown, wet, very soft, low cohesion, low plasticity	CL	
		10.0				
67		8.5		(7.5-8') Coal tar, dark brown, wet, sticky, strong odor, soft, no plasticity	ML/MH	Wet at 8' bgs Boring terminated at 8' bgs
End of Boring						
10						

Total Borehole Depth: 8' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 10/6/2015
 Weather : Sunny
 Northing (US ft) : 572,430.34
 Easting (US ft) : 1,456,824.20

Boring ID: RW-004-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		8.4	RW-004-SB-1	0-0.5' Topsoil, with clay and organic matter, dark brown, dry, firm, medium cohesion, medium plasticity	ML	
		20.5		0.5-2' SAND, with trace clay and some slag, dry, firm, no cohesion, no plasticity	SM	
100		44.0		2-8' Clayey SAND, black to brown, dry, firm, low cohesion, low plasticity		Petroleum odor
		36.8				
5		52.9	RW-004-SB-5		SM-SC	
		-				
20		-				
		-		8-12' Sandy CLAY, black to brown, dry, soft, medium cohesion, medium plasticity		
10		167.2	RW-004-SB-10		SC	Petroleum odor
		-				
40		-		12-16' CLAY, gray, wet, very soft, sticky, high cohesion, high plasticity	CH	Wet at 13' bgs
		-				
15		-				
		-		16-17.3' CLAY, light gray, moist, soft, high cohesion, high plasticity	CH	
		-				
40		-		17.3-20' Clayey SILT, beige, wet, soft, iron stained, no cohesion, no plasticity	ML	
		-				
20		-				

Total Borehole Depth: 20' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 10/6/2015
 Weather : Sunny, 70s F
 Northing (US ft) : 572,220.49
 Easting (US ft) : 1,456,678.83

Boring ID: RW-005-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	RW-005-SB-1	(0-0.3') Sandy CLAY, brown, moist, soft, medium cohesion, medium plasticity	CL	Wet at 5.5' bgs
		8.8		(0.3-2.3') Slag, medium sand to gravel sized, dark brown, dry, loose, no cohesion, no plasticity	GM-GW	
80		7.3		(2.3-3.25') Silty SAND, brown, dry, soft, no cohesion, no plasticity	SM	
		0.6		(3.25-7') Sandy CLAY, dark brown, moist, soft, high cohesion, high plasticity	CH	
5		0.0	RW-005-SB-5			
		0.0				
		-		(7-10') SAND, orange	SW-SM	
100		-				
		-		(10-13') CLAY, gray, wet, hard, high cohesion, medium plasticity	CL	
		-		(13-14') Sandy CLAY, orange and gray, mottled, wet, soft, medium cohesion, medium plasticity	CL/CH	
		-		(14-18.5') SAND, well sorted, orange, wet, soft to firm, no cohesion, no plasticity	SW	
15		-				
		-				
		-				
		-		18.5-20' CLAY, dark gray, wet, sticky, slightly firm, high cohesion, high plasticity	CH	Boring terminated at 20' bgs
20		-				

Total Borehole Depth: 20' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Kevin Pumphrey
 Drilling Equipment : Geoprobe 7822DT

Date : 10/8/2015
 Weather : Sunny, 70s F
 Northing (US ft) : 572,073.37; 572,072.73
 Easting (US ft) : 1,457,082.23; 1,457,086.37

**Boring ID: RW-006-SB
 RW-070-SB**

(page 1 of 2)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	XRF Zn (PPM)	XRF Cd (PPM)	DESCRIPTION	USCS
0		-	RW-070-SB-1	8775 ± 119	ND <75	(0-0.7') Topsoil, brown, with plant detritis, dry, loose, soft, no cohesion, no plasticity, few slag gravels at 0.33'	ML
		16.3		68 ± 6	ND <55	(0.7-2.16') Slag, coarse grained to gravel sized, brown, dry, loose, no cohesion, no plasticity	GW
	100	10.2	RW-070-SB-3	1198 ± 37	ND <91	(2.16-2.66') Slag, coarse grained to gravel sized, light gray, dry, loose, no cohesion, no plasticity	GM
		4.9		50 ± 5	ND <49	(2.66-3.66') SAND, fine grained with silt, brown, dry, soft, loose, no cohesion, no plasticity	SM
		5.8		691 ± 17	ND <55	(3.66-5') CLAY, with wood debris, brown, moist, soft, high cohesion, high plasticity, wet at 5' bgs	CH
5		-		1423 ± 20	100 ± 15	(5-7.5') Sandy CLAY, grayish brown, wet, firm, high cohesion, high plasticity	CH
		-	RW-070-SB-7	8228 ± 59	158 ± 13		CH
	90	-		1491 ± 20	65 ± 14	(7.5-11') CLAY, with trace sand, light gray, wet, soft, medium cohesion, medium plasticity	CL-CH
		-		1950 ± 23	ND <42		
		-		1537 ± 21	ND <44		
		-		421 ± 11	ND <46		CH
	80	-		374 ± 10	ND <42	(11-14.16') CLAY, with trace sand, light gray, wet, firm, high cohesion, high plasticity, less firm at 13.16'	
		-		1085 ± 16	58 ± 13		
		-		553 ± 13	ND <47		SW
	15	-	RW-070-SB-15	1423 ± 20	100 ± 15	(14.16-17') SAND, coarse grained, light gray, soft, wet, no cohesion, no plasticity	
		-		71 ± 5	ND <41		
		-		61 ± 4	62 ± 14		SW
	83	-		66 ± 4	ND <39	(17-20') SAND, medium to coarse grained, orange, wet, soft, no cohesion, no plasticity	
		-		231 ± 8	ND <42		
20		-	RW-070-SB-20	291 ± 9	ND <44		

Total Borehole Depth: 35' bgs

0-10ft. - based on RW-006-SB drilling
 10-25ft. - based on RW-070-SB drilling



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Kevin Pumphrey
 Drilling Equipment : Geoprobe 7822DT

Date : 10/8/2015
 Weather : Sunny, 70s F
 Northing (US ft) : 572,073.37; 572,072.73
 Easting (US ft) : 1,457,082.23; 1,457,086.37

**Boring ID: RW-006-SB
RW-070-SB**

(page 2 of 2)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	XRF Zn (PPM)	XRF Cd (PPM)	DESCRIPTION	USCS	
20		-		1472 ± 20	ND <43	(20-25') CLAY, with trace sand, gray, wet, soft, high cohesion, high plasticity	CH	
	100	-	RW-070-SB-22	1497 ± 20	54 ± 14			
		-		210 ± 8	57 ± 15			
		-		100 ± 6	56 ± 15			
		-		61 ± 6	61 ± 18			
25		-		NA	NA	(25-28') CLAY, gray, wet, very soft, high cohesion, high plasticity	CH	
	60	-	RW-070-SB-27	180 ± 7	ND <41	(28-29') SAND, coarse grained, light gray, wet, soft, no cohesion, no plasticity	SW	
		-		64 ± 5	ND <44			
		-		48 ± 5	ND <48	(29-35') CLAY, gray, wet, soft, high cohesion, high plasticity	CH	
		-		131 ± 7	ND <47			
		-		106 ± 5	ND <42			
	100	-	RW-070-SB-32	104 ± 6	74 ± 15			
		-		73 ± 5	ND <46			
		-		74 ± 5	62 ± 16			
		-		52 ± 5	64 ± 16			
35	End of Boring							
40								

Total Borehole Depth: 35' bgs

0-10ft. - based on RW-006-SB drilling
 10-25ft. - based on RW-070-SB drilling



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Kevin Pumphrey
 Drilling Equipment : Geoprobe 7822DT

Date : 9/28/2015
 Weather : Sunny
 Northing (US ft) : 571,958.28
 Easting (US ft) : 1,456,292.43

Boring ID: RW-007-SB

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Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		3.9	RW-007-SB-1	(0-1') SAND, medium grained with slag gravels, dark brown, dry, loose, no cohesion, no plasticity	SW	Boring terminated at 15' bgs due to encountering groundwater
		7.4		(1-2') SAND, with trace clay, orangish brown, dry, loose, no cohesion, no plasticity	SM	
100		9.4		(2-2.66') Slag, gravel sized with medium grained sand, dark brown, dry, loose, no cohesion, no plasticity	GW-GM	
		6.9		(2.66-4.66') Clayey SAND, orange, dry, hard, no cohesion, no plasticity	SM	
5		1.5	RW-007-SB-5	(4.66-5') CLAY, with trace sand, orange, dry, hard, low cohesion, low plasticity	CL	
		7.1		(5-6') Sandy CLAY, orangish beige, dry, hard, medium cohesion, low plasticity	CL	
		5.4		(6-10') CLAY, orangish gray, dry, hard, medium cohesion, low plasticity	CL	
100		6.8				
		5.4				
10		2.9	RW-007-SB-10		CL	
		0.0		(10-11.33') CLAY, gray, dry, firm, medium cohesion, medium plasticity		
		0.0		(11.33-13.83') CLAY, light gray, moist, soft, medium cohesion, medium plasticity		
100		0.0				
		0.0			SW	
15		0.0		(13.83-15') SAND, orange, wet, soft, no cohesion, no plasticity		

Total Borehole Depth: 15' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date Started : 9/29/2015
 Weather : Cloudy
 Northing (US ft) : 571,993.87
 Easting (US ft) : 1,456,686.96

Boring ID: RW-008-SB

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Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		0.0	RW-008-SB-1	(0-1') Clayey SAND, brown, platy, soft, low cohesion, no plasticity	SM	
		0.0		(1-5') Sandy CLAY, with some silt, brown, dry, firm, medium cohesion, low to medium plasticity	CL	
90		0.0				
		0.0				
		0.0	RW-008-SB-5		CL	
5		1.8		(5-10') CLAY, grayish brown, dry, firm, medium cohesion, medium plasticity		
		2.5				
		2.3			CL	
100		2.1				
		1.7	RW-008-SB-10			
		0.0		(10-12.5') Silty CLAY, brown, moist, firm, medium cohesion, low plasticity	ML-CL	
10		0.0				
		0.0		(12.5-14.5') CLAY, gray, moist, very soft, high cohesion, high plasticity	CH	
100		0.0				
		0.0		(14.5-15') SAND, dark beige, wet, soft, no cohesion, no plasticity	SM	
15						Wet at 14.5' Boring terminated at 15' bgs due to encountering groundwater

Total Borehole Depth: 15' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Kevin Pumphrey
 Drilling Equipment : Geoprobe 7822DT

Date : 9/25/2015
 Weather : Cloudy
 Northing (US ft) : 571,453.51
 Easting (US ft) : 1,456,197.66

Boring ID: RW-009-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		0.0	RW-009-SB-1	(0-3') Slag, with fine to medium grained sand, dark brown, slag up to 2", black in spots, dry, loose, no plasticity	SW-SM	Sand Medium grained at 4" bgs Coarse grained at 14" bgs Very coarse grained at 36" bgs
		0.0				
100		0.2				
		0.0		(3-4.5') Clayey SILT, with trace sand, dark gray, dry, medium cohesion, very low plasticity	ML	
		0.0	RW-009-SB-5	(4.5-5') Clayey SAND, with silt, gray to orange brown, dry, firm, medium cohesion, low plasticity	SC	
5		0.0		(5-6') Clayey SAND, orange, dry, hard, medium cohesion, very low plasticity	SC	
		0.0		(6-10') CLAY, with trace sands, gray, dry, very fine, medium cohesion, medium plasticity	CL	
100		0.0				
		0.0	RW-009-SB-10	(10-11') CLAY, dark gray, moist, hard, high cohesion, high plasticity	CH	
10		0.0		(11-14.5') CLAY, gray, moist, very soft, high cohesion, high plasticity	CH	
		0.0				
100		0.0				
		0.0		(14.5-15') SAND, medium grained, brownish orange, wet, soft, low cohesion, no plasticity	SM	
15		0.0				Wet at 14.5' bgs Boring terminated at 15' bgs due to encountering groundwater

Total Borehole Depth: 15' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Kevin Pumphrey
 Drilling Equipment : Geoprobe 7822DT

Date : 9/25/2015
 Weather : Cloudy
 Northing (US ft) : 571,631.45
 Easting (US ft) : 1,456,334.09

Boring ID: RW-010-SB

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Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		0.3	RW-010-SB-1	(0-3.5') Silty SAND, dark beige, dry, firm, low cohesion, no plasticity	SM	
		0.0				
100		0.4				
		0.7				
		0.0		(3.5-5') Silty CLAY, dark beige, dry, hard, low cohesion, low plasticity	CL	
5		255.8		(5-5.33') SAND, orangish beige, very firm, no cohesion, no plasticity	SM	
		273.2	RW-010-SB-7	(5.33-11') CLAY, gray, dry, hard, medium plasticity, high cohesion	CL-CH	
100		236.5				
		19.2				
		18.1	RW-010-SB-10			
10		-				
		32.3		(11-18') CLAY, tan to dark gray, moist, very firm, decreasing firmness with depth, high cohesion, high plasticity	CH	
80		33.4				
		12.4				
		42.3				
15		-				
		-				
60		52.5				
		5.5		(18-20') SAND, beige, wet, soft, no cohesion, no plasticity	SM	
		42.5				
20						Wet at 18' bgs Boring terminated at 20' bgs

Total Borehole Depth: 20' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Tim Niblett
 Drilling Equipment : Geoprobe 7822DT

Date : 9/25/2015
 Weather : Windy/cloudy
 Northing (US ft) : 570,953.94
 Easting (US ft) : 1,456,139.22

Boring ID: RW-011-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	RW-011-SB-1	(0-6') Slag, gravel sized with medium to coarse grained sand, brown, dry, loose, no plasticity	GW-GM	Moist at 4' bgs Wet at 5' bgs
		-				
80	2.9	70.9				
		68.0	RW-011-SB-5			
5		-		(6-10') Slag, gravel sized, with medium to coarse grained sand, black, slag up to 1.5", very wet, loose, no plasticity	GW-GM	Boring terminated at 10' bgs due to encountering groundwater
		-				
60	4.8	100.1				
10						

Total Borehole Depth: 10' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 9/21/2015
 Weather : Cloudy
 Northing (US ft) : 570,272.36
 Easting (US ft) : 1,456,843.11

Boring ID: RW-012-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		0.0	RW-012-SB-1	(0-0.5') SAND, coarse grained, with slag, dark brown, slag up to 3/4", loose, no plasticity	SW-SM	
		0.0		(0.5-3') SAND, with slag, light brown, with slag, loose	SW-SM	
100		0.0				
		0.0		(3-5') SILT, with trace sand, brown, moist, dense, high cohesion, no plasticity	ML	
5		0.0	RW-012-SB-5			
		0.0		(5-7') SILT, with trace clay, gray to brown, dense, medium cohesion	ML	
		0.0				
100		0.0	RW-012-SB-8	(7-8') CLAY, black, very moist, dense, high cohesion, high plasticity	CH	
		0.0		(8-15') CLAY, brown, very moist, high cohesion, high plasticity, density increasing from 10-15' bgs firm to hard		
10		0.0				
		0.0			CH	
		0.0				
100		0.0				
		0.0				
		0.0				
15		0.0				Boring terminated at 15' bgs due to encountering groundwater

Total Borehole Depth: 15' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Kevin Pumphrey
 Drilling Equipment : Geoprobe 7822DT

Date : 9/23/2015
 Weather : Clear/Sunny
 Northing (US ft) : 570,699.67
 Easting (US ft) : 1,456,496.49

Boring ID: RW-013-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		0.0	RW-013-SB-1	(0-0.5') SAND, medium to coarse grained, with slag gravels, dark brown, dry, loose	SW	
		0.0		(0.5-1.5') SAND, fine to coarse grained, with gravel and brick pieces, brown, firm, slight cohesion	SW	
100		0.0		(1.5-5') CLAY, reddish brown, dry, hard, high cohesion, high plasticity, transitioning to Sandy CLAY at bottom	CH	
		0.2				
5		0.0	RW-013-SB-5			
		0.0		(5-11') Silty CLAY, with trace sand, light brown, dry, hard, high cohesion, low plasticity	CL	
100		0.0				
		0.0				
10		0.0	RW-013-SB-10			
		0.0		(11-15') CLAY, brownish red, transitioning dry to moist, hard to soft, low to high plasticity with depth	CL-CH	
80		0.0				
		0.0				
15		-		(15-20') SAND, medium grained, wet, soft, medium cohesion, no plasticity		Wet at 15' bgs
		-				
100		-			SM	
		-				
20		-				Boring terminated at 20' bgs

Total Borehole Depth: 20' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Kevin Pumphrey
 Drilling Equipment : Geoprobe 7822DT

Date : 9/22/2015
 Weather : Cloudy
 Northing (US ft) : 570,029.02
 Easting (US ft) : 1,456,594.51

Boring ID: RW-014-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	RW-014-SB-1	(0-0.5') SAND, medium to coarsed grained with gravels, dark brown, dry, loose, no plasticity	SW-SM	
				(0.5-2') SAND, coarse grained with gravels, reddish brown, with pieces of concrete, dry, loose, no plasticity	SW-SM	
	90	0.0		(2-3') Concrete, with coarse grained sand, gravel up to 2", dry, loose, no plasticity	GW-GM	
		4.5		(3-6') Fill, gravel with coarse to very coarse grained sand, brick pieces, moist to wet, loose, no cohesion		
5		0.0	RW-014-SB-5		GW-GM	
	100	0.0				Refusal at 6' bgs
End of Borehole						
10						

Total Borehole Depth: 6' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 9/21/2015
 Weather : Cloudy
 Northing (US ft) : 570,474.34
 Easting (US ft) : 1,456,766.39

Boring ID: RW-015-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		0.0	RW-015-SB-1	(0-3') Sandy SILT, with slag, dark brown, slag up to 1", dry, loose, no plasticity	ML	
		0.0			ML	
100		0.0		(3-4') SILT, brown, dry, firm, no plasticity	ML	
		0.0	RW-015-SB-5	(4-5') SILT, brown, dry, hard, slight plasticity	ML-CL	
5		0.0		(5-7') Sandy CLAY, brown to dark brown, dense, low cohesion, slight plasticity	CL	
		0.0		(7-11') CLAY, brown, dry, dense, medium cohesion, medium plasticity	CL	
100		0.0			CL	
		0.0	RW-015-SB-10			
10		-		(11-15') CLAY, brown, dry, hard, dense, high cohesion, high plasticity	CH	
		-			CH	
60		0.0			CH	Moist at 14' bgs
		1.0			CH	
15		0.0		(15-15.5') SAND, coarse grained, with gravel sized slag, dark brown, dry, dense, medium to high cohesion, no plasticity	SW-SM	
		-		(15.5-19') CLAY, with trace sand, tan, high cohesion, high plasticity	CH	
100		0.0			CH	Wet at 17' bgs
		0.0			CH	
		0.0			CH	
20		0.0		(19-20') SAND, beige, well graded, medium cohesion, no plasticity	SW-SM	Boring terminated at 20' bgs

Total Borehole Depth: 20' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Kevin Pumphrey
 Drilling Equipment : Geoprobe 7822DT

Date : 9/23/2015
 Weather : Sunny/clear
 Northing (US ft) : 570,865.41
 Easting (US ft) : 1,456,355.80

Boring ID: RW-016-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	RW-016-SB-1	(0-4') SAND, medium grained, with slag gravels, dark brown, moist at 3', loose		
		0.0			SW-SM	
80		0.0				
		1.0	RW-016-SB-4			
		0.2		(4-5.5') SAND, coarse grained with slag, gravels, reddish brown, wet, medium cohesion, no plasticity	SW-SM	Wet at 4' bgs
5		-		(5.5-8') Gravelly SAND, with some clay and slag, reddish brown, wet, medium cohesion, no plasticity		
		-			SW-SM	
80		-		(8-10') Sandy CLAY, gray, wet, firm to soft with depth, medium to high plasticity		
		-			CL-CH	
10		-				Boring terminated at 10' bgs due to encountering groundwater

Total Borehole Depth: 10' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 9/29/2015
 Weather : Cloudy
 Northing (US ft) : 572,016.89
 Easting (US ft) : 1,456,151.37

Boring ID: RW-017-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	RW-017-SB-1	(0-3') SAND, medium grained, with gravels and slag, orange, firm, no cohesion, no plasticity	SW-SM	Slight odor
	80	4.0			SW-SM	
		11.9				
		7.5		(3-5') SAND, tan, with brown streaks, wet, soft, no cohesion, no plasticity	SW-SM	
		3.3				
5		-	RW-017-SB-6	(5-5.33') SAND, brown, moist, soft, low cohesion, no plasticity	SW-SM	
		1.0		(5.33-8') SAND, tannish orange, moist, firm, low cohesion, no plasticity	SW-SM	
	100	1.2				
		1.6		(8-10') Silty CLAY, tan, moist, hard, high cohesion, medium plasticity	CL	
		0.9	RW-017-SB-10			
10		-		(10-14') Silty CLAY, gray, very firm to firm with depth, high cohesion, low plasticity	CL	Wet at 14' bgs Boring terminated at 15' bgs due to encountering groundwater
		-				
	100	-				
		-				
		-		(14-15') SAND, orange, wet, soft, no cohesion, no plasticity	SW-SM	
15						

Total Borehole Depth: 15' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Kevin Pumphrey
 Drilling Equipment : Geoprobe 7822DT

Date : 9/24/2015
 Weather : Sunny, 80s F
 Northing (US ft) : 571,239.54
 Easting (US ft) : 1,456,480.80

Boring ID: RW-018-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		0.0	RW-018-SB-1	(0-1') SAND, medium grained with slag gravels, dark brown, loose, dry, no cohesion, no plasticity	SW-SM	
		0.0		(1-5') Sandy CLAY, reddish brown, dry, hard, medium cohesion, low plasticity	CL	
100		0.0				
		0.0	RW-018-SB-5			
5		0.0		(5-6.5') Clayey SAND, brown, dry, very firm, high cohesion, medium plasticity	CL	
		0.0		(6.5-10') Clayey SAND, dark brown, wet, soft to very soft with depth, high cohesion, medium plasticity	CL	
100		0.0				
		0.0				
10		0.0				Boring terminated at 10' bgs due to encountering groundwater

Total Borehole Depth: 10' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Kevin Pumphrey
 Drilling Equipment : Geoprobe 7822DT

Date : 9/22/2015
 Weather : Cloudy
 Northing (US ft) : 570,433.99
 Easting (US ft) : 1,456,680.89

Boring ID: RW-019-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	RW-019-SB-1	(0-0.5') Topsoil, with medium to coarse grained sand and gravels up to 1", dark brown, dry, loose, no cohesion, no plasticity	ML	Slight odor
	100	0.0		(0.5-2.5') SAND, medium to coarse grained with gravels, brown to dark brown, no cohesion, no plasticity	SW-SM	
		0.0		(2.5-3.5') SAND, coarse grained with gravels and trace silts, brown	SW-SM	
		0.1		(3.5-4.5') SILT, dark gray, very firm, medium cohesion, no plasticity	ML	
5		0.0	RW-019-SB-5	(4.5-5') CLAY, brown, dense, high plasticity, high cohesion	CH	
		0.0		(5-5.5') SAND, coarse grained with gravel, dark brown, loose, no cohesion, no plasticity	SW	
		0.0		(5.5-6.5') CLAY, brown to reddish brown, dense, high cohesion, medium to high plasticity	CL-CH	
	100	0.0		(6.5-8') SILT, orange, dense, medium cohesion, slight plasticity	ML	
		0.0		(8-10.5') CLAY, with trace silt, gray, very hard, high plasticity	CH	
10		-	RW-019-SB-10		CH	
		0.0		(10.5-13.5') CLAY, gray to brown, dense to less dense with depth, medium to high plasticity with depth	CL-CH	
	90	0.0				
		0.0		(13.5-16.5') Sandy CLAY, gray, moist, high cohesion, high plasticity	CH	
15		0.0				
		0.0		(16.5-18.5') SAND, beige, wet, well sorted, soft	SW-SM	
	70	0.0				
		-		(18.5-20') No Recovery	-	
20		-				Boring terminated at 20' bgs

Total Borehole Depth: 20' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 9/21/2015
 Weather : Cloudy/cool

 Northing (US ft) : 570,029.04
 Easting (US ft) : 1,456,888.79

Boring ID: RW-020-SB

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Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0				(0-0.5') Topsoil, with slag, brown, slag up to 3", poorly sorted	SM	
			RW-020-SB-1	(0.5-2.5') GRAVEL, with coarse sand, light gray to white, loose, no plasticity		
		0.0			GW-GM	
70		0.0		(2.5-3.5') SAND, medium to coarse grained with gravels up to 2", red, loose, no plasticity	SW	
		0.0		(3.5-5.5') SAND, medium grained with slag, green to gray, dry, loose, no cohesion		
		0.0	RW-020-SB-4.5		SP	
5				(5.5-8.5') Slag, with coarse sand, brown, slag gravels up to 3", no plasticity		
					GW-GM	
		0.0	RW-020-SB-7			
		0.0		(8.5-10') No Recovery		Wet at 8.5 bgs
10		0.0				Boring terminated at 10' bgs

Total Borehole Depth: 10' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 9/21/2015
 Weather : Cloudy
 Northing (US ft) : 570,221.85
 Easting (US ft) : 1,456,874.07

Boring ID: RW-021-SB

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Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	RW-021-SB-1	(0-0.5') Topsoil, with roots and slag, dry, loose, soft	SM	Boring terminated at 20' bgs
		0.0		(1.5-4') SAND, coarse grained with gravel sized slag, dark black to brown, dry, loose, no cohesion, no plasticity	SM	
80		0.0				
		0.0				
		0.0		(4-6') CLAY, tan, moist, very firm, high cohesion, medium plasticity	CL	
5		-	RW-021-SB-6			
		0.0		(6-7.5') Silty CLAY, dark brown, moist, firm, high cohesion, medium to high plasticity	CL-CH	
80		0.0				
		0.0		(7.5-10') Silty CLAY, olive green to brown, moist, increasing firmness with depth, high cohesion, high plasticity	CH	
10		0.0	RW-021-SB-10			
		-		(10-15') Silty SAND, green to rusty brown, moist, hard, medium cohesion, no plasticity, less dense from 11-14', slag gravels at bottom	SM	
100		0.0				
		0.0				
		0.0				
15		0.0		(15-15.5') SAND, coarse grained with gravel sized slag, black, dry, loose, no cohesion, no plasticity	SM-SW	
		0.0		(15.5-17') Sandy CLAY, grayish brown, with gravel sized slag, moist, medium cohesion, medium plasticity	CL	
100		0.0		(17-20') Sandy CLAY, grayish brown, moist, slightly firm, high cohesion, medium plasticity	CL	
		0.0				
20		0.0				

Total Borehole Depth: 20' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 9/21/2015
 Weather : Cloudy/cool
 Northing (US ft) : 570,168.12
 Easting (US ft) : 1,456,860.65

Boring ID: RW-022-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	RW-022-SB-1	(0-3') SAND, medium to coarse grained with slag gravels up to 2", dark brown	SW-SM	
60	0.0	-		(3-4.5') Sandy CLAY, dark black, thick, dense, medium cohesion, slight plasticity	CL	
5		-		(4.5-6') Organic material, dark black, little to no soil material	OL	
71	0.0	-		(6-8.5') SAND, medium grained, gray, moist, medium cohesion	SW-SM	Waste odor
		-	RW-022-SB-8.5			Wet at 8.5 bgs Boring terminated at 8.5' bgs due to encountering groundwater
End of Boring						
10						

Total Borehole Depth: 8.5' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : E. Magdar
 Drilling Company : Green Services, Inc
 Driller : Kevin Pumphrey
 Drilling Equipment : Geoprobe 7822DT

Date Started : 9-22-15
 Weather : Cloudy
 0 Hr Depth to Water : NA
 24 Hr Depth to Water : NA
 Northing (US ft) : 570,159.87
 Easting (US ft) : 1,456,763.43

Boring ID: RW-023-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		0.0	RW-023-SB-1	(0-2') Fill, dark brown, with brick pieces up to 1", loose, dry, no cohesion, no plasticity	SM-GM	
		0.0				
80		0.0		(2-5.5') CLAY, orange brown, with gravel and coarse sand grading to clean clay with depth, firm, dry, high cohesion, slight to high plasticity	CL	
		0.0				
5		0.0	RW-23-SB-5			
		-				
		0.0		(5.5-7') Concrete gravels, dark gray, dry, no cohesion, no plasticity	GM	
		0.0				
80		0.0		(7-10') CLAY, dark gray, firm grading to soft, high cohesion, low to high plasticity	CH	
		0.0				
10		0.0	RW-023-SB-10			
		0.0		(10-11') CLAY, brown, very firm, dry, high cohesion, medium plasticity	CL	
		0.0		(11-12') CLAY, gray, slightly firm, dry, high cohesion, medium plasticity	CL	
		0.0		(12-12.5') Sandy CLAY, gray, wet, high cohesion, high plasticity	CH	
50		0.0		(12.5-15') No Recovery		
		-				
		-				
15						Boring terminated at 15' bgs due to encountering groundwater

Total Borehole Depth: 15' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Kevin Pumphrey
 Drilling Equipment : Geoprobe 7822DT

Date : 9/22/2015
 Weather : Cloudy
 Northing (US ft) : 570,010.13
 Easting (US ft) : 1,456,532.53

Boring ID: RW-024-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		35.9	RW-024-SB-1	(0-6') Concrete debris, light gray, dry, loose, no cohesion, no plasticity	N/A	
		0.0				
20		4.8				
		2.9				
		-	RW-024-SB-5			
5		-			GM-GW	
		1.5		(6-8') Slag, gravel sized with fine grained sand, gray, dry, loose, no cohesion, no plasticity		
80		2.9		(8-9') GRAVEL with sand, gray to orange, low cohesion, no plasticity	GM-GW	
		0.0			SM-SW	
		0.0	RW-024-SB-10	(9-13.5') SAND, fine to medium grained, reddish brown, wet, soft, low cohesion, no plasticity		
10		0.0				
		0.0				
		0.0				
100		0.0			CH	
		0.0		(13.5-15') CLAY, dark gray, moist to wet, firm, high cohesion, high plasticity		
		0.0				
15						Boring terminated at 15' bgs due to encountering groundwater

Total Borehole Depth: 15' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Kevin Pumphrey
 Drilling Equipment : Geoprobe 7822DT

Date : 9/22/2015
 Weather : Windy/cloudy
 Northing (US ft) : 570,049.19
 Easting (US ft) : 1,456,499.18

Boring ID: RW-025-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	RW-025-SB-1	(0-4') Fill, medium grained sand to gravels up to 1.5", dry, loose, dark brown to brown, decreasing grain size with depth	SM-GM	
	80	0.0				
		0.0				
		0.0				
		0.0				
5		0.0	RW-025-SB-5	(4-5.5') SAND, fine to medium grained, dark black, hard, no plasticity	SM	Slight odor
		-				
		0.0		(5.5-8') SAND, fine to coarse grained with trace gravels, dark brown and orange, orange mottling,	SM	Wet at 7' bgs
	80	0.0				
		73.9				
		1.5		(8-10') SAND, medium to fine grained, red to black, wet, well sorted, soft, no plasticity	SW	
10						Boring terminated at 10' bgs due to encountering groundwater

Total Borehole Depth: 10' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Kevin Pumphrey
 Drilling Equipment : Geoprobe 7822DT

Date : 9/22/2015
 Weather : Windy/cloudy
 Northing (US ft) : 570,075.07
 Easting (US ft) : 1,456,456.16

Boring ID: RW-026-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	RW-026-SB-1	(0-2') Fill, fine to coarse grained sand with some gravels, reddish brown, dry, loose, no cohesion, no plasticity	SM-SW	
		0.0				
80		0.0		(2-3') SAND, with silt and white gravels, fine grained, black, dry, loose, low cohesion, no plasticity	SM	
		1.5		(3-5.5') SAND, fine grained, orange, well sorted, moist, soft to firm, low cohesion, no plasticity	SW	
5		0.5	RW-026-SB-5		SW	Slight odor
		-		(5.5-7') SAND, well sorted, orange to dark gray, moist, high cohesion, no plasticity	SW	
		0.0				
80		0.0		(7-10') SAND, fine grained, well sorted, orange, wet, soft, spot of clay lense in middle of core, medium cohesion	SW-SM	Wet at 7' bgs
		0.0				
		0.0				
10						Boring terminated at 10' bgs due to encountering groundwater

Total Borehole Depth: 10' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Kevin Pumphrey
 Drilling Equipment : Geoprobe 7822DT

Date : 9/23/2015
 Weather : Sunny
 Northing (US ft) : 570,826.54
 Easting (US ft) : 1,456,914.90

Boring ID: RW-027-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		0.0	RW-027-SB-1	(0-1') SILT, with trace clay and organic material, brown, dry, firm, high cohesion, slight plasticity	ML	
		0.0		(1-4') Clayey SILT, brown to orange, dry, firm, high cohesion, slight plasticity	CL	
100		0.0			CL	
		0.0			CL	
5		0.0	RW-027-SB-5	(4-5') Clayey SAND, orangish brown, moist, very firm, high cohesion, no plasticity	SC	
		0.0		(5-7') CLAY, with some slag, orangish brown, hard, high cohesion, medium plasticity	CL	
		0.0		(7-10') CLAY, with some slag, gray, firm, high cohesion, medium plasticity	CL	
100		0.0			CL	
		0.0	RW-027-SB-10			
10		0.0		(10-16') CLAY, gray to dark gray, very moist, soft, high cohesion, high plasticity	CH	
		0.0			CH	
90		0.0			CH	
		0.0			CH	
15		-				Water at 15' bgs
		-		(16-20') SAND, fine grained, reddish brown, wet, soft	SM	
60		-			SM	
		-			SM	
20		-				Boring terminated at 20' bgs

Total Borehole Depth: 20' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Kevin Pumphrey
 Drilling Equipment : Geoprobe 7822DT

Date : 9/23/2015
 Weather : Sunny
 Northing (US ft) : 570,724.11
 Easting (US ft) : 1,456,911.43

Boring ID: RW-028-SB

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Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	RW-028-SB-1	(0-1.5') Slag, gray, gravel sized with find to coarse grained sand, dry, loose	GM	
		0.0		(1.5-2') CLAY, brown, dry, hard, high cohesion, medium plasticity	CL	
	80	0.7		(2-5') Gravelly CLAY, with black slag, brown, firm, medium cohesion, low to medium plasticity	CL	
		13.7				
		0.0	RW-028-SB-5			
5		-		(5-5.5') Slag, sand sized with clay, black, wet, low cohesion, no plasticity	GM	
		-		(5.5-10') CLAY, with trace sand, gray to brown, hard, high cohesion, high plasticity	CH	
		-				
10	100	-				

Wet at 6' bgs

Boring terminated at 10' bgs

Total Borehole Depth: 10' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Kevin Pumphrey
 Drilling Equipment : Geoprobe 7822DT

Date : 9/23/2015
 Weather : Sunny
 Northing (US ft) : 570,966.48
 Easting (US ft) : 1,456,609.48

Boring ID: RW-029-SB

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Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	RW-029-SB-1	(0-1.5') Silty CLAY, brown, dry, firm, high cohesion, medium plasticity	CL	
	90	0.0		(1.5-5') Slag, gravel to fine grained sized, light gray, dry, loose, no cohesion	GW	
		0.0				
		0.0				
5		3.6		(5-7') Slag, medium to coarse grained size, black, wet, soft, strong petroleum odor, high cohesion, high plasticity	GC	Wet at 6' bgs Strong petroleum odor
	100	3.2	RW-029-SB-7			Refusal at 7' bgs
End of Boring						
10						

Total Borehole Depth: 7' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Kevin Pumphrey
 Drilling Equipment : Geoprobe 7822DT

Date Started : 9/23/2015
 Weather : Sunny/windy
 Northing (US ft) : 570,902.06
 Easting (US ft) : 1,456,556.83

Boring ID: RW-030-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	RW-030-SB-1	(0-4') Slag, gravel sized with fine to medium sand, brown, dry, loose, moist at bottom, clay lenses	GM	Wet 5-6' bgs
80		0.2				
		0.9				
		0.8				
5		0.4	RW-030-SB-5	(4-4.33') Slag, medium grained sized, with trace gravel, black, moist, slightly firm	GM SC	
		0.0		(4.33-5') Clayey SAND, light brown, moist, hard, high cohesion, medium plasticity	SC	
		0.0		(5-6') Clayey SAND, light black, wet, soft, high cohesion, slight plasticity		
100		0.0		(6-11') Sandy CLAY, reddish brown, dry, firm to hard, high cohesion, low plasticity	SC	
		0.0	RW-030-SB-10			
10		-				
60		-		(11-16') CLAY, dark beige, moist, firm to hard, high cohesion, medium plasticity	CL	
		0.0				
15		0.0				
		-				
60		-		(16-20') CLAY, with trace sand, dark beige, moist, firm, medium to high cohesion, medium plasticity	CL	
		0.0				
20		0.0				Boring terminated at 20' bgs

Total Borehole Depth: 20' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Kevin Pumphrey
 Drilling Equipment : Geoprobe 7822DT

Date : 9/24/2015
 Weather : Sunny
 Northing (US ft) : 571,165.51
 Easting (US ft) : 1,456,506.92

Boring ID: RW-031-SB

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Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	RW-031-SB-1	(0-3.33') SAND, medium grained with gravel sized slag, black, moist, no cohesion, no plasticity	SW-SM	Wet at 7' bgs
	80	0.0				
		0.0		(3.33-5.8') Sandy CLAY, light to dark brown, moist, high cohesion, low plasticity	CL	
5		0.0	RW-031-SB-6			
		-		(5.8-8.8') SAND, with trace clay, black, wet, soft, high cohesion, no plasticity	SM	
	67	0.0				
		0.0		(8.8-9.2') Slag, with sand, black, wet, slightly firm, medium cohesion, no plasticity	GW-GM	
		0.0		(9.2-10') SAND, with some clay, black to brown, wet, soft, high cohesion, slight plasticity	SM	Boring terminated at 10' bgs due to encountering groundwater
10						

Total Borehole Depth: 10' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Kevin Pumphrey
 Drilling Equipment : Geoprobe 7822DT

Date : 9/24/2015
 Weather : Sunny
 Northing (US ft) : 571,331.31
 Easting (US ft) : 1,456,681.40

Boring ID: RW-032-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	RW-032-SB-1	(0-3.7') Concrete, sand and gravel sized, light gray, dry loose, no cohesion, no plasticity	GM	Wet 5-6' bgs
40		-				
		0.0				
5		0.0	RW-032-SB-5	(3.7-5') Sandy CLAY, black to light brown, dry to moist. high cohesion, medium plasticity	CL	
		0.0		(5-7') Clayey SAND, dark gray, wet, very soft, high cohesion, low plasticity	SC	
		0.0		(7-9') SAND, medium to coarse grained, dark beige, wet, very firm, medium cohesion, no plasticity	SM	
100		0.0				
		0.0	RW-032-SB-10	(9-11.5') Sandy CLAY, dark beige, moist, hard, medium cohesion, low plasticity	CL	
10		-				
		-		(11.5-12.5') SAND, dark beige, wet, firm, medium cohesion, no plasticity	SM	
70		-		(12.5-17.3') CLAY, gray, firm, high cohesion, high plasticity	CH	
		-				
15		-				
		-		(17.3-20') SAND, medium grained, reddish tan, wet, soft, medium cohesion, no plasticity	SM	
67		-				
		-				
20		-				Boring terminated at 20' bgs

Total Borehole Depth: 20' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Kevin Pumphrey
 Drilling Equipment : Geoprobe 7822DT

Date : 9/25/2015
 Weather : Cloudy
 Northing (US ft) : 571,359.00
 Easting (US ft) : 1,456,200.93

Boring ID: RW-033-SB

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Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		6.7	RW-033-SB-1	(0-2.5') Slag, gravel sized with fine to medium grained sand, dark brown to black, moist, loose, no cohesion, no plasticity	GM-GW	Highest PID reading at 7' bgs Strong petroleum odor throughout
		32.3				
90		56.7		(2.5-5') Clayey SAND, brownish orange, moist, firm, low cohesion, no plasticity	SM	
		47.9				
5		54.1		(5-8.5') Sandy CLAY, dark gray, moist, hard, high cohesion, low plasticity, orange mottling at 5.5'	CL	
		386.5				
		422.9	RW-033-SB-6.5			
80		330.0		(8.5-11') CLAY, with trace sand, gray, dry, hard, high cohesion, high plasticity	CH	
		252.5				
		253.2	RW-033-SB-10			
10		-		(11-14.5') CLAY, with trace sand, gray, moist, soft, high cohesion, high plasticity	CH	
		2.2				
		9.5				
100		3.6				
		34.8		(14.5-15') SAND, beige, wet, medium cohesion, no plasticity	SM	
15						Wet at 15' bgs Boring terminated at 15' bgs

Total Borehole Depth: 15' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Kevin Pumphrey
 Drilling Equipment : Geoprobe 7822DT

Date : 9/28/2015
 Weather : Cloudy
 Northing (US ft) : 571,945.23
 Easting (US ft) : 1,456,340.16

Boring ID: RW-034-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		0.1	RW-034-SB-1	(0-2.5') Slag, gravel and medium grained sand sized, brown, loose, soft, no cohesion, no plasticity	GW-GM	
		0.0				
80		0.0		(2.5-4') Clayey SAND, with gravel slag, orange, moist, low cohesion, no plasticity	SM	
		0.0				
5		0.0	RW-034-SB-5	(4-5') Slag, gravel and sand sized with hard gray clay, dry to moist	GM	
		0.0		(5-5.83') SAND, medium to coarse grained with some gravel sized slag, brown, dry, loose, soft, no plasticity	SM-SW	
		0.0		(5.83-6.3') Clayey SAND, brownish orange, dry, slightly firm, no cohesion, no plasticity	SM	
		0.0		(6.3-10.5') CLAY, gray, dry, hard, medium cohesion, high plasticity	CH	
100		0.0				
		0.0	RW-034-SB-10			
		0.0		(10.5-12') CLAY, brown, moist, firm, high cohesion, high plasticity	CH	
		0.0		(12-14') CLAY, gray, moist, very soft, high cohesion, high plasticity	CH	
		0.0				
		0.0		(14-15') SAND, orange, wet, soft, no cohesion, no plasticity	SM	Wet at 14' bgs Boring terminated at 15' bgs due to encountering groundwater
15						

Total Borehole Depth: 15' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 9/29/2015
 Weather : Cloudy
 Northing (US ft) : 571,965.43
 Easting (US ft) : 1,456,436.17

Boring ID: RW-035-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	RW-035-SB-1	(0-3') Clayey SAND, with gravel slag, brown, dry to moist, loose, soft, no cohesion, no plasticity	SM	
	90	5.2				
		23.3				
		23.9		(3-5') Silty CLAY, light brown, dry, hard, medium cohesion, low plasticity	CL	
		4.4	RW-035-SB-5			
5		1.4		(5-7.5') Silty CLAY, with trace sand, light brown to orange, dry, hard, low cohesion, low plasticity	CL	
		0.1				
	100	9.5		(7.5-9.5') CLAY, with trace sand, light brown, dry, medium cohesion, medium plasticity	CL-CH	
		0.4				
		0.5	RW-035-SB-10	(9.5-12.5') CLAY, brownish gray to brown, moist, soft to very soft, high cohesion, high plasticity	CH	
10		-				
		-				
	80	0.0		(12.5-15') SAND, beige to orange, wet, no cohesion, no plasticity	SM-SW	Wet at 12.5'
		0.0				
		-				
15						Boring terminated at 15' bgs

Total Borehole Depth: 15' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date Started : 9/29/2015
 Weather : Cloudy
 Northing (US ft) : 572,017.08
 Easting (US ft) : 1,456,429.23

Boring ID: RW-036-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	RW-036-SB-1	(0-1.5') SAND, medium grained with gravel, brown, dry, soft, no cohesion, no plasticity	SW-SM	Petroleum odor
		96.5		(1.5-2.5') Slag, gravel and sand sized, light gray, dry, loose, no cohesion, no plasticity	GM-SM	
80		193.0		(2.5-3.5') Clayey SAND, beige, moist, soft, medium cohesion, no plasticity, brick pieces at bottom	SW-SM	
		158.5		(3.5-5') SAND, beige, moist, soft, no cohesion, no plasticity	SM	
		88.5	RW-036-SB-4		SM	
5		19.7		(5-6.66') CLAY, orange and gray, dry, very firm, medium cohesion, low plasticity	CL	
		3.2		(6.66-8.33') Clayey SAND, beige, moist, soft, medium cohesion, no plasticity	SM	
100		3.6				
		17.5		(8.33-11') CLAY, grayish brown, dry, hard, high cohesion, low plasticity		
		5.8	RW-036-SB-10		CL	
		-				
		-				
60		-		(11-14') CLAY, gray, moist, soft, high cohesion, high plasticity	CH	
		0.0				
		0.0		(14-15') SAND, orange, wet, no cohesion, no plasticity	SM	Wet at 14'
15						Boring terminated at 15' bgs

Total Borehole Depth: 15' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 9-29-15
 Weather : Cloudy
 Northing (US ft) : 572,011.43
 Easting (US ft) : 1,456,484.09

Boring ID: RW-037-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		3.8	RW-037-SB-1	(0-2.5') SAND, fine to medium grained with slag gravels, light to dark to reddish brown, dry, soft, no cohesion, no plasticity	SM	Lengthwise void in soil sleeve from 5-10' bgs
		96.6				
100		201.8		(2.5-4.33') Clayey SAND, dark beige, moist, firm, low cohesion, no plasticity	SM	
		136.7				
5		33.6		(4.33-5') Sandy CLAY, brown, dry, very firm, medium cohesion, low plasticity	CL	
		66.0		(5-10') CLAY, dark reddish beige, dry, hard, medium cohesion, medium plasticity	CL	
	100	90.7				
		116.5	RW-037-SB-8			
		94.6				
10		10.1	RW-037-SB-10			
		0.0		(10-12.5') CLAY, gray, moist, very firm, orange mottling, high cohesion, medium to high plasticity	CL-CH	
		0.0				
100		0.0		(12.5-15.5') CLAY, gray, moist, soft, high cohesion, high plasticity	CH	Wet at 15' bgs
		0.0				
15		0.0		(15.5-18.5') SAND, tan to orange, wet, soft, no cohesion, no plasticity	SM-SW	
		-				
90		-				
		-		(18.5-20') SAND, dark gray, wet, soft, no cohesion, no plasticity	SW	Boring terminated at 20' bgs
20		-				

Total Borehole Depth: 20' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Kevin Pumphrey
 Drilling Equipment : Geoprobe 7822DT

Date : 9/25/2015
 Weather : Cloudy
 Northing (US ft) : 571,664.65
 Easting (US ft) : 1,456,376.10

Boring ID: RW-038-SB

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Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	RW-038-SB-1	(0-1.5') SAND, with gravel, dark brown, dry, loose, no cohesion, no plasticity	SW-SM	
	80	0.0		(1.5-3.5') SAND, orangish tan, moist, slight cohesion, no plasticity	SW-SM	
		0.0		(3.5-5') Sandy CLAY, decreasing sand content with depth, orangish beige, moist, firm, medium cohesion, medium plasticity	CL	
5		0.0	RW-038-SB-5	(5-5.5') SAND, orange, moist, soft, low cohesion, no plasticity	SW-SM	
		0.0		(5.5-10.5') CLAY, gray, dry, firm to hard, medium cohesion, medium plasticity	CL	
	100	0.0				
		0.0			CL	
		0.0	RW-038-SB-10			
10		0.0		(10.5-14.7') CLAY, gray, moist, very soft, high cohesion, high plasticity	CH	
	90	0.0				
		0.0				
		0.0		(14.7-20') SAND, beige, wet, soft, no cohesion, no plasticity	SW-SM	Wet at 15' bgs
	15	-				
		-				
	90	0.0				
		0.0			SW-SM	
		0.0				
		0.0				
20		0.0				Boring terminated at 20' bgs

Total Borehole Depth: 20' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 9/29/2015
 Weather : Cloudy
 Northing (US ft) : 572,056.57
 Easting (US ft) : 1,456,491.73

Boring ID: RW-039-SB

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Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	RW-039-SB-1	(0-1') Slag, gravel sized up to 2", light gray, dry, no cohesion, no plasticity	GM-GW	
	90	1.8		(1-4') Clayey SAND, brown to orange, firm, low cohesion, no plasticity	SM	
		1.6				
		1.2				
5		1.1	RW-039-SB-5	(4-5') Sandy CLAY, orange, medium cohesion, med plasticity	CL	
		0.2		(5-10') CLAY, dark beige to orange, dry, hard, high cohesion, medium plasticity, firm at 9.16'		
	100	6.6				
		8.7			CL	
		6.0				
10		0.9	RW-039-SB-10			
		0.0		(10-14.8') CLAY, gray, moist, firm to soft by 13'+ bgs, high cohesion, medium plasticity		
	100	0.0				
		0.0			CL-CH	
		0.0				
15		-		(14.8-15') SAND, orange, wet, soft, no cohesion, no plasticity	SM	Wet at 15' bgs Boring terminated at 15' bgs due to encountering groundwater
				End of Boring		
20						

Total Borehole Depth: 15' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Kevin Pumphrey
 Drilling Equipment : Geoprobe 7822DT

Date : 9/28/2015
 Weather : Sunny
 Northing (US ft) : 571,918.12
 Easting (US ft) : 1,456,294.68

Boring ID: RW-040-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	RW-040-SB-1	(0-3.7') Slag, gravel to medium grained sized, dark brown, dry, loose, no cohesion, no plasticity	GM	
40		-				
		0.0		(3.7-4.3') Clayey SAND, brown, dry, firm, no cohesion, no plasticity	SM	
5		22.9		(4.3-5') Slag, up to 2" in size, light gray, dry, loose, no cohesion, no plasticity	GM	
		2.4	RW-040-SB-6	(5-5.5') CLAY, with slag gravels, orangish brown, dry, hard, medium cohesion, low plasticity	CL	
		8.6		(5.5-10') CLAY, grayish brown, dry, hard, high cohesion, medium plasticity	CL	
100		9.3				
		7.0				
		1.1	RW-040-SB-10		CH	
10		-		(10-14') CLAY, gray, moist, soft, high cohesion, high plasticity		
		-				
100		-				
		-		(14-15') SAND, orange, wet, loose, soft, no cohesion, no plasticity	SM	
15		-				

Wet at 14' bgs
 Boring terminated at 15' bgs due to encountering groundwater

Total Borehole Depth: 15' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Kevin Pumphrey
 Drilling Equipment : Geoprobe 7822DT

Date : 9/23/2015
 Weather : Sunny
 Northing (US ft) : 570,467.77
 Easting (US ft) : 1,456,530.35

Boring ID: RW-041-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	RW-041-SB-1	(0-2') Slag, coarse grained and gravel sized, dark brown, dry, loose, no cohesion	GM	Wet at 5' bgs
		0.0				
80		0.0		(2-4') Slag, medium grained to gravel sized with some brick and organic material, black, dry, loose, no cohesion, no plasticity	GM	
		3.4				
5		0.0	RW-041-SB-5	(4-5.5') Slag, medium grained to gravel sized, moist, loose, no plasticity	GM	
		-		(5.5-7') Brick, pieces up to 2", loose, no cohesion, no plasticity	N/A	
		0.0				
80		0.0		(7-10') Slag, coarse grained to gravel sized, wet, loose, no cohesion, no plasticity	GM	
		3.7				
		3.5				
10						Boring terminated at 10' bgs due to encountering groundwater

Total Borehole Depth: 10' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Kevin Pumphrey
 Drilling Equipment : Geoprobe 7822DT

Date : 9/30/2015
 Weather : Rainy
 Northing (US ft) : 571,216.32
 Easting (US ft) : 1,456,033.80

Boring ID: RW-042-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	RW-042-SB-1	(0-3.7') GRAVEL, up to 3" in size with fine to medium grained sand, black and gray, dry, loose, no plasticity	GM	
	100	1.3				
		3.0				
		1.7				
		0.3	RW-042-SB-5	(3.7-5') SAND, fine to medium grained, brown, moist, soft, slight cohesion, no plasticity	SM	
5		0.1		(5-9') CLAY, gray and orange, dry, hard, medium cohesion, low plasticity	CL	
	100	0.7				
		0.1				
		0.4	RW-042-SB-8			
		0.5		(9-10') SAND, reddish brown, moist, slightly firm, no cohesion, no plasticity	SW	
10		0.0		(10-12.5') SAND, trace clay, brown, moist, soft, no cohesion, no plasticity	SW-SM	
	100	0.0				
		0.0				
		-		(12.5-14.5') CLAY, grayish brown, moist, firm, high cohesion, high plasticity	CH	
		-				
15		-		(14.5-15') SAND, orange, wet, soft, no cohesion, no plasticity	SW	

Wet at 13.5' bgs

Boring terminated at 15' bgs due to encountering groundwater

Total Borehole Depth: 15' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Kevin Pumphrey
 Drilling Equipment : Geoprobe 7822DT

Date : 9/24/2015
 Weather : Sunny
 Northing (US ft) : 571,306.75
 Easting (US ft) : 1,456,261.70

Boring ID: RW-043-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	RW-043-SB-1	(0-4') Sandy SILT, brown, dry, hard, medium cohesion, no plasticity	ML	
		-				
60		0.0				
		0.0				
		0.0		(4-5') Sandy CLAY, with trace silt, brown, dry, hard, high cohesion, low plasticity	CL	
5		24.2		(5-7') Sandy CLAY, dark brown to black, moist, soft, high cohesion, medium plasticity	CL	
		29.0				
100		69.7	RW-043-SB-8	(7-9') SAND, with trace clay, brown, moist, firm, medium cohesion, no plasticity	SM	
		22.9				
		6.4	RW-043-SB-10	(9-14.5') CLAY, gray, hard to very hard, dry, high cohesion, medium to high plasticity	CL-CH	
10		17.2				
		6.4				
		2.6				
	100	8.4				
		-		(14.5-15') SAND, light brown, wet, soft, medium cohesion, no plasticity	SW	

Boring terminated at 15' bgs due to encountering groundwater

Total Borehole Depth: 15' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Kevin Pumphrey
 Drilling Equipment : Geoprobe 7822DT

Date : 9/28/2015
 Weather : Cloudy
 Northing (US ft) : 571,842.17
 Easting (US ft) : 1,456,357.01

Boring ID: RW-044-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		15.0	RW-044-SB-1	0-0.2' Slag, dark brown, sand and gravel sized, dry, loose, no cohesion, no plasticity	GM N/A	
		32.9		(0.2-0.5') Concrete, angular gravels up to 2", dry, loose, no cohesion, no plasticity		
100		9.8		(0.5-3') Clayey SAND, brownish orange, dry, soft to firm, no cohesion, no plasticity	SM	
		5.9		(3-5') CLAY, orange to gray, dry, hard, medium to high cohesion, high plasticity	CH	
5		1.8	RW-044-SB-5			
		1.0		(5-10.5') CLAY, gray, dry, hard, with orange mottling, high cohesion, high plasticity		
		0.5				
100		0.9			CH	
		1.9				
10		0.0	RW-044-SB-10			
		-		(10.5-14') CLAY, gray, moist, slightly firm, high cohesion, high plasticity, soft at ~13'	CH	
		0.0				
90		0.0				
		0.0				
		0.0		(14-15') SAND, beige, wet, soft, no cohesion, no plasticity	SW-SM	
15		0.0				

Wet at 14' bgs
 Boring terminated at 15' bgs due to encountering groundwater

Total Borehole Depth: 15' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Kevin Pumphrey
 Drilling Equipment : Geoprobe 7822DT

Date : 9/28/2015
 Weather : Cloudy
 Northing (US ft) : 571,846.41
 Easting (US ft) : 1,456,433.67

Boring ID: RW-045-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	RW-045-SB-1	(0-1.2') Slag, dark brown, sand and gravel sized, dry, loose, no cohesion, no plasticity	GM	
		2.9		(1.2-2') Slag, sand and gravel sized, dark brown, dry, loose, no plasticity	GM	
	80	5.0		(2-2.7') Sandy CLAY, brown, dry, firm, low cohesion, low plasticity	CL	
		10.6		(2.7-3.2') SAND, with gravels and chunks of wood, black, oily shean, loose	GM	
		42.4	RW-045-SB-5	(3.2-7') Slag, medium grained, gray, moist, loose	CH	
5		0.0				
		0.0				
	100	0.0		(7-11') CLAY, light brown to gray, dry to moist, hard, high cohesion, high plasticity	CH	
		0.0				
		0.0	RW-045-SB-10		CH	
10		-				
		0.0		(11-14') CLAY, brown to grayish brown, moist, soft, high cohesion, high plasticity		
	90	0.0				
		0.0			SM	
		0.0		(14-15') SAND, brownish orange, wet, no cohesion, no plasticity		
15						Wet at 14' bgs Boring terminated at 15' bgs due to encountering groundwater

Total Borehole Depth: 15' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Kevin Pumphrey
 Drilling Equipment : Geoprobe 7822DT

Date : 9/25/2015
 Weather : Cloudy
 Northing (US ft) : 571,680.54
 Easting (US ft) : 1,456,439.05

Boring ID: RW-046-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		0.0	RW-046-SB-1	(0-1') Slag, medium grained to gravel sized, brown, dry, loose, no cohesion, no plasticity	GM-GW	
		0.0		(1-3') Sandy SILT, reddish brown, dry, firm, medium cohesion, no plasticity	ML	
100		0.0		(3-5.5') Silty SAND, reddish brown, moist, soft, low cohesion, no plasticity	SM	
		0.0	RW-046-SB-5			
5		-		(5.5-8') Sandy SILT, gray, dry, very firm, medium cohesion, no plasticity	ML	
		0.0		(8-9') Clayey SAND, dark brown to orange, moist, soft, medium cohesion, no plasticity	SM	
80		0.0				
		0.0	RW-046-SB-10	(9-10') CLAY, dark gray, moist, very firm, high cohesion, high plasticity	CH	
10		-		(10-18') CLAY, dark gray, moist, soft to firm, high cohesion, very high plasticity		
		-				
100		0.0			CH	
		0.0				
15		-				
		-				
100		-				
		-		(18-20') SAND, with trace clay, gray, wet, very soft, low cohesion, no plasticity	SM	Wet at 18' bgs
20		-				Boring terminated at 20' bgs due to encountering groundwater

Total Borehole Depth: 20' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Kevin Pumphrey
 Drilling Equipment : Geoprobe 7822DT

Date : 9/28/2015
 Weather : Cloudy
 Northing (US ft) : 571,892.60
 Easting (US ft) : 1,456,505.28

Boring ID: RW-047-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		0.0	RW-047-SB-1	(0-1.3') Sandy SILT, with some slag gravels, brown, dry, soft, low cohesion, no plasticity	ML	
		20.7		(1.3-2.5') SAND, medium grained with gravel and concrete up to 2", brown with tan patches, dry, loose, soft, no plasticity	SM-GM	
100		183.4		(2.5-5') Sandy CLAY, light gray, dry, firm, medium cohesion, low plasticity	CL	
		1587.0				
		392.5				
5		1885.2	RW-047-SB-6	(5-7') Clayey SAND, brown, dry, firm, high cohesion, high plasticity	CH	
		227.4				
100		121.8		(7-10.5') CLAY, gray, dry, firm, high cohesion, high plasticity	CH	
		41.5				
		2.9	RW-047-SB-10			
10		-		(10.5-16') CLAY, gray, moist, slightly firm to soft, high cohesion, high plasticity	CH	Wet at 15' bgs
		-				
80		1.4			CH	
		1.7				
		1.5				
15		-		(16-20') SAND, orange to dark gray, wet, soft, no cohesion, no plasticity	SW	Boring terminated at 20' bgs due to encountering groundwater
		-				
60		-				
		-				
20		-				

Total Borehole Depth: 20' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Kevin Pumphrey
 Drilling Equipment : Geoprobe 7822DT

Date : 9/25/2015
 Weather : Cloudy
 Northing (US ft) : 571,690.26
 Easting (US ft) : 1,456,527.15

Boring ID: RW-048-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		4.0	RW-048-SB-1	(0-1.5') Slag, medium grained to gravel sized, dark brown, dry, loose, no cohesion, no plasticity	GM	
	90	32.9		(1.5-4') SAND, with trace clay, brownish orange, moist, soft, no cohesion, no plasticity		
		5.2			SM	
		0.0				
		0.0	RW-048-SB-5	(4-4.5') SAND, with trace clay, gray, moist, soft, no cohesion, no plasticity	SM	
5		-		(4.5-5.5') Sandy CLAY, gray, moist, soft, high cohesion, high plasticity	CH	
		0.0		(5.5-14.8') CLAY, gray, moist, firm, soft in spots, high cohesion, high plasticity		
	90	0.4				
		1.0				
		0.8	RW-048-SB-10			
10		-			CH	
		0.0				
	90	0.0				
		0.0				
		0.0				
15		0.0		(14.8-15') SAND, beige, wet, soft, no cohesion, no plasticity	SW	Wet at 14.7' bgs Boring terminated at 15' bgs due to encountering groundwater

Total Borehole Depth: 15' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Kevin Pumphrey
 Drilling Equipment : Geoprobe 7822DT

Date Started : 9/30/2015
 Weather : Rainy
 Northing (US ft) : 571,720.49
 Easting (US ft) : 1,455,978.85

Boring ID: RW-049-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		0.3	RW-049-SB-1	(0-0.3') Slag, medium grained to gravel sized, black, loose, no cohesion, no plasticity	GW-GM	
		1.6		(0.3-1.5') SAND, with slag, orange	SM	
	100	0.2		(1.5-4') SILT, dark gray, dry, hard, low cohesion, no plasticity	ML	
		0.8				
		0.6	RW-049-SB-5	(4-5') SAND, with some clay, orange, moist, hard, no cohesion, no plasticity	SM	
5		0.3		(5-7') Sandy CLAY, orange and gray, dry, hard, medium cohesion, low plasticity	CL	
		1.3				
	100	1.3		(7-9') Clayey SAND, orange, moist to wet, firm, no cohesion, no plasticity	SM	
		0.4				
		0.5	RW-049-SB-10	(9-10') CLAY, orange, dry, hard, medium cohesion, low plasticity	CL	
10		0.0		(10-17') CLAY, gray, firm to soft, high cohesion, high plasticity		
		0.0				
	100	0.0			CH	
		0.0				
		0.0				
15		-				
		-				
	80	-		(17-20') SAND, beige, wet, soft, no cohesion, no plasticity	SM	Wet at 17' bgs
		-				
		-				
20		-				Boring terminated at 20' bgs

Total Borehole Depth: 20' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Kevin Pumphrey
 Drilling Equipment : Geoprobe 7822DT

Date : 9/23/2015
 Weather : Sunny/windy
 Northing (US ft) : 570,856.99
 Easting (US ft) : 1,456,544.69

Boring ID: RW-050-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interva;	DESCRIPTION	USCS	REMARKS
0		-	RW-050-SB-1	(0-3') SAND, medium to coarse grained, dark brown, dry, loose, low cohesion, no plasticity, intermittent light tan sand	SM-SW	Wet at 5' bgs Strong odor at 4.5'
		35.6				
80		73.9				
		88.8	RW-050-SB-4.5	(3-5.5') Slag, medium grained to gravel sized, moist, no plasticity, wet at 4.5'	GM	
5		201.1				
		-		(5.5-10') Clayey SILT, reddish brown, wet, firm, high cohesion, low plasticity	ML	Boring terminated at 10' bgs due to encountering groundwater
		-				
80		-				
		-				
		-				
10						

Total Borehole Depth: 10' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Kevin Pumphrey
 Drilling Equipment : Geoprobe 7822DT

Date : 9/21/2015
 Weather : Cloudy/windy
 Northing (US ft) : 570,192.49
 Easting (US ft) : 1,456,813.79

Boring ID: RW-051-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	RW-051-SB-1	(0-4') SAND, medium to coarse grained with slag, brown, dry, loose	SW	
		-				
66	0.0	0.0				
		0.0				
		0.0	RW-051-SB-5	(4-5') SAND, medium to coarse grained with slag, gray, moist, loose	SW	
5		0.0		(5-8') SAND, medium grained to gravel sized with slag, brown, moist, medium cohesion, no plasticity	SW	
		0.0				
100	0.0	0.0				
		0.0		(8-9') CLAY, black, wet, dense to very dense, high cohesion	CL/CH	Wet at 9' bgs Waste odor Boring terminated at 9' bgs
		0.0				
End of Boring						
10						

Total Borehole Depth: 9' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Kevin Pumphrey
 Drilling Equipment : Geoprobe 7822DT

Date : 9/28/2015
 Weather : Cloudy
 Northing (US ft) : 571,812.29
 Easting (US ft) : 1,456,527.33

Boring ID: RW-052-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	RW-052-SB-1	(0-2') SAND, fine to coarse grained with slag gravels and clay, brown, dry, loose, slight cohesion	SM	
		30.0				
	90	64.2		(2-3') Concrete, sand sized, light gray, dry, loose, no plasticity	GM	
		4.7		(3-5') Petroleum product, black, wet, thick, wood chunks, black shean, soft, no cohesion, no plasticity	N/A	Possible oil
		17.2	RW-052-SB-5			
5						Boring terminated at 5' bgs due to refusal

Total Borehole Depth: 5' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Kevin Pumphrey
 Drilling Equipment : Geoprobe 7822DT

Date : 9/28/2015
 Weather : Cloudy
 Northing (US ft) : 571,754.13
 Easting (US ft) : 1,456,533.40

Boring ID: RW-053-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		0.0	RW-053-SB-1	(0-1.2') Slag, silt to gravel sized, brown, dry, loose, no cohesion, no plasticity	SM-GM	
		0.0		(1.2-3.2') Silty SAND, orangish brown, dry, soft to firm, low cohesion, no plasticity	SM	
100		0.0		(3.2-4') Sandy CLAY, with trace silt, dark beige, dry, medium cohesion, slight plasticity	CL	
		0.2		(4-5') CLAY, with trace sand and silt, dark gray, moist, high cohesion, medium plasticity	CL	
5		0.0	RW-053-SB-5	(5-5.5') Sandy CLAY, reddish brown, dry, soft, medium cohesion, medium plasticity	CL	
		0.5		(5.5-10') CLAY, with trace sand, reddish brown to dark gray, moist, high cohesion, high plasticity		
100		1.1				
		0.5			CH	
		0.7				
10		0.0	RW-053-SB-10	(10-14.5') CLAY, gray, moist, soft, high cohesion, high plasticity		
		0.0				
		0.0			CH	
		0.0				
		0.0				
15		0.0		(14.5-15') SAND, beige, wet, soft, no cohesion, no plasticity	SM	Wet at 15' Boring terminated at 15' bgs due to encountering groundwater

Total Borehole Depth: 15' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Kevin Pumphrey
 Drilling Equipment : Geoprobe 7822DT

Date : 9/25/2015
 Weather : Sunny, 80s F
 Northing (US ft) : 571,715.93
 Easting (US ft) : 1,456,371.08

Boring ID: RW-054-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		0.0	RW-054-SB-1	(0-1.5') Silty SAND, with some slag, brown, moist, slight cohesion, no plasticity	SM	
		0.0		(1.5-2.5') Silty SAND, with some slag, orange, moist, slight cohesion, no plasticity	SM	
100		0.6		(2.5-5') CLAY, with trace sand, reddish gray, moist, hard, medium cohesion, medium plasticity	CL	
		0.0				
5		0.0	RW-054-SB-5	(5-11') CLAY, brown, dry, firm, high cohesion, medium plasticity, trace sand at 9.3'		
		0.0				
100		0.0			CL	
		0.0				
10		0.0	RW-054-SB-10			
		-		(11-14.33') CLAY, dark gray, moist, slightly firm, high cohesion, high plasticity	CH	
		-				
100		-				
		0.0				
15		0.0		(14.33-15') SAND, gray, wet, soft, no cohesion, no plasticity	SM	Wet at 14.2' Boring terminated at 15' bgs due to encountering groundwater

Total Borehole Depth: 15' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Kevin Pumphrey
 Drilling Equipment : Geoprobe 7822DT

Date : 9/28/2015
 Weather : Cloudy
 Northing (US ft) : 571,907.29
 Easting (US ft) : 1,456,427.69

Boring ID: RW-055-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		0.0	RW-055-SB-1	(0-1') Slag, medium grained to gravel sized, brown, dry, loose, no plasticity	GW	
		0.0		(1-2') Slag, silt to gravel sized, brown, dry, firm, low cohesion, no plasticity	GM	
	100	3.3		(2-5') CLAY, brown, dry, firm, medium cohesion, medium plasticity	CL	
		9.5				
		0.0	RW-055-SB-5			
5		0.0		(5-9') CLAY, orange, with gray mottling, moist, soft, high cohesion, high plasticity	CH	
		0.0				
	100	1.5				
		0.0		(9-13.5') CLAY, gray, moist, soft, high cohesion, high plasticity; with brown streaks at 11' bgs	CH	
10		0.7	RW-055-SB-10			
		-				
		0.0				
	80	0.0				Wet at 12.5'
		0.0		(13.5-15') SAND, beige, wet, soft, no cohesion, no plasticity	SW	
		0.0				
15		0.0				Boring terminated at 15' bgs due to encountering groundwater

Total Borehole Depth: 15' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Kevin Pumphrey
 Drilling Equipment : Geoprobe 7822DT

Date : 9/25/2015
 Weather : Cloudy
 Northing (US ft) : 571,574.00
 Easting (US ft) : 1,456,464.39

Boring ID: RW-056-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	RW-056-SB-1	(0-1') Slag, medium grained to gravel sized, brown, dry, loose, soft, no cohesion, no plasticity	SM-GM	
		0.2		(1-1.25') SAND, with trace clay, brown, dry, soft, low cohesion, no plasticity	SM	
				(1.25-1.75') Brick pieces	N/A	
	90	0.0		(1.75-3') Silty SAND, with gravels, brown, moist, no cohesion, no plasticity	SM	
		7.6		(3-7') Slag, clayey to gravel sized, black, moist to very wet		
5		0.2	RW-056-SB-5		SM/GM	Potential oil Black water with slag
		-				
		-				Perched water ~5' bgs, water in borehole rose to 1.5' below grade after 2nd sleeve removed, no more sleeves advanced
20		-		(7-10') Slag, gravel at top to clayey at bottom, black, loose to soft, no cohesion to high cohesion, no plasticity to high plasticity	GM-GC	Petroleum odor
		0.0				Boring terminated at 10' bgs due to encountering groundwater
10						

Total Borehole Depth: 10' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 ARM Technician : N. Kurtz
 Boring Equipment : 2" Hand Auger

Date : 9/30/2015
 Weather : Cloudy
 Northing (US ft) : 572,352.53
 Easting (US ft) : 1,455,833.28

Boring ID: RW-071-SB

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Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0	100	0.6	RW-071-SB-1	(0-1') SAND, light brown, fine to medium grained, moist, loose, no cohesion, no plasticity	SW	
End of Boring						
5						

Total Borehole Depth: 1' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 ARM Technician : N. Kurtz
 Boring Equipment : 2" Hand Auger

Date : 9/30/2015
 Weather : Cloudy
 Northing (US ft) : 572,200.33
 Easting (US ft) : 1,455,873.83

Boring ID: RW-072-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0	100	0.6	RW-072-SB-1	(0-1') Slag, sand to gravel sized (1"), dark brown, roots present, dry, loose, no plasticity	GM	
End of Boring						
5						

Total Borehole Depth: 1' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 ARM Technician : N. Kurtz
 Boring Equipment : 2" Hand Auger

Date : 9/30/2015
 Weather : Cloudy
 Northing (US ft) : 571,145.10
 Easting (US ft) : 1,455,890.10

Boring ID: RW-073-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0	100	0.8	RW-073-SB-1	(0-0.5') Topsoil and gravel slag, dark brown, roots present, dry, loose, no cohesion, no plasticity	GM	Refusal at 0.5 bgs
End of Boring						
5						

Total Borehole Depth: 0.5' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 ARM Technician : N. Kurtz
 Boring Equipment : 2" Hand Auger

Date : 9/30/2015
 Weather : Cloudy
 Northing (US ft) : 570,711.77
 Easting (US ft) : 1,455,967.94

Boring ID: RW-074-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0	100	0.5	RW-074-SB-1	(0-0.5') Topsoil, dark brown, roots present, dry, loose, no cohesion, no plasticity	ML	Refusal at 0.5 bgs
End of Boring						
5						

Total Borehole Depth: 0.5' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 ARM Technician : N. Kurtz
 Boring Equipment : 2" Hand Auger

Date : 9/30/2015
 Weather : Cloudy
 Northing (US ft) : 570,184.83
 Easting (US ft) : 1,456,170.99

Boring ID: RW-075-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0	100	0.0	RW-075-SB-1	(0-1') Topsoil, small roots present, brown, dry, loose, no plasticity	ML	
End of Boring						
5						

Total Borehole Depth: 1' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Kevin Pumphrey
 Drilling Equipment : Geoprobe 7822DT

Date : 10/8/2015
 Weather : 80s F, sunny
 Northing (US ft) : 571,958.50
 Easting (US ft) : 1,456,055.86

Boring ID: RW-076-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	RW-076-SB-1	(0-2.5') SAND, medium grained with slag gravels, brown, dry, loose, no cohesion, no plasticity	SM	Petroleum odor at 6' bgs
	80	35.7		(2.5-3') Silty SAND, orange, dry, firm, no cohesion, no plasticity	SM	
		35.5		(3-3.5') Slag, gravel sized, light gray, dry, no cohesion, no plasticity	GM	
		12.5		(3.5-5') Silty SAND, orange, dry, soft, medium cohesion, no plasticity	SM	
5		8.9	RW-076-SB-6	(5-6') SAND, medium grained with slag gravels, brown, dry, loose, no cohesion, no plasticity	SP	
		0.0		(6-8') Sandy CLAY, light to dark gray, oily shean, moist, very soft, medium cohesion, high plasticity	SC	
90		0.0		(8-11') SAND, orange, moist, firm, no cohesion, no plasticity	SW	
		0.2				
		0.0	RW-076-SB-10			
10		-		(11-12.3') Silty SAND, orange, moist, soft, low cohesion, no plasticity	SM	
	60	0.0		(12.3-14.6') CLAY, orangish brown, moist, hard, high cohesion, medium plasticity	CL	
		0.0			Wet at 14.4' bgs	
		0.0		(14.6-15') SAND, medium grained, orange, wet, soft, no cohesion, no plasticity		
15				End of Boring	SP	Boring terminated at 15' bgs due to encountering groundwater

Total Borehole Depth: 15' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Kevin Pumphrey
 Drilling Equipment : Geoprobe 7822DT

Date : 10/8/2015
 Weather : 80s F, sunny
 Northing (US ft) : 571,973.82
 Easting (US ft) : 1,456,034.94

Boring ID: RW-077-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	RW-077-SB-1	(0-2') Slag, coarse grained to gravel sized, light gray, dry, loose, no cohesion, no plasticity	GM	Petroleum odor at 6' bgs
	80	13.0				
		7.3		(2-5') Slag, medium to coarse grained with trace clay, black, slightly moist, loose, no cohesion, no plasticity	SM	
		13.0				
5		1.8	RW-077-SB-5			
		0.0		(5-6.5') Silty SAND, with some slag gravels, gray, wet, very soft, low cohesion, no plasticity	SM	
		0.1		(6.5-7.5') Silty SAND, with trace clay, orange to gray, wet, very soft, low cohesion, slight plasticity	SM	
100		0.3		(7.5-10') SILT, light gray, dry, hard, no cohesion, no plasticity	ML	
		1.7				
		0.0	RW-077-SB-10			
10		0.0		(10-14.66') Sandy CLAY, gray, moist, firm, low cohesion, low plasticity	CL	Wet at 14.4' bgs Boring terminated at 15' bgs due to encountering groundwater
	100	0.0				
		0.0				
15		-		(14.66-15') SAND, orange, wet, soft, no cohesion, no plasticity	SW	

Total Borehole Depth: 15' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Kevin Pumphrey
 Drilling Equipment : Geoprobe 7822DT

Date : 10/8/2015
 Weather : 80s F, sunny
 Northing (US ft) : 571,985.40
 Easting (US ft) : 1,456,053.35

Boring ID: RW-078-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	RW-078-SB-1	(0-0.5') Topsoil, brown, dry, loose, soft, no cohesion, no plasticity	ML	Wet at 7' bgs - perched
		-		(0.5-3.0') Slag, coarse grained to gravel sized, black, dry, loose, no cohesion	GM	
60		32.1		(3-4') Silty SAND, orange, dry, soft, no cohesion, no plasticity	SM	
		3.5				
5		5.5	RW-078-SB-5	(4-6') Slag, coarse sand to gravel sized, beige to brown, dry, loose, no plasticity	SM/GM	
		-				
		-		(6-9') Silty SAND, medium grained, beige, wet, very soft, no cohesion, no plasticity	SM	
60		4.5				
		0.0				
		0.5	RW-078-SB-10	(9-10.8') Clayey SAND, gray to beige, dry to wet, firm, low cohesion, no plasticity	SM	
10		-		(10.8-11.3') SAND, gray, wet, soft, no cohesion, no plasticity	SW	Wet at 14.7' bgs Boring terminated at 15' bgs due to encountering groundwater
		-		(11.3-14.6') CLAY, grayish beige, dry, firm, medium cohesion, low plasticity	CL	
90		-				
		-		(14.6-15') SAND, medium grained, orange, wet, soft, no cohesion, no plasticity	SW	

Total Borehole Depth: 15' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150298M-10-3
 Project Description : Sparrows Point - Parcel A3
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Kevin Pumphrey
 Drilling Equipment : Geoprobe 7822DT

Date : 10/8/2015
 Weather : 80s F, Sunny
 Northing (US ft) : 571,972.82
 Easting (US ft) : 1,456,071.47

Boring ID: RW-079-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		0.3	RW-079-SB-1	(0-2') SAND, medium to coarse grained with gravel slag, brown, dry, loose, soft, no plasticity	SM	Wet at 7' bgs - perched
	90	2.0				
		1.3		(2-2.8') Clayey SAND, orange, moist, firm, low cohesion, no plasticity	SM	
		5.1		(2.8-3.3') SAND, very coarse grained to gravel sized, beige, loose, no plasticity	SW	
5		2.0	RW-079-SB-5	(3.3-6') Sandy CLAY, sand is fine grained, beige, wet, very soft, low cohesion, low plasticity	SC	
		-				
		-		(6-7.5') SAND, coarse grained with gravel, beige to brown, wet, loose, no plasticity	SW	
60		2.5	RW-079-SB-7	(7.5-8') SAND, fine to medium grained, brown, moist, no cohesion, no plasticity	SW	
		5.2				
10		2.4	RW-079-SB-10	(8-14.8') Clayey SILT, light gray, dry, hard, no cohesion, no plasticity		
		-			ML	
		-				
		-				
15		-		(14.8-15') SAND, medium grained, orange, moist, soft, loose, no plasticity	SP	
		-		(15-20') SAND, orangish beige, wet, soft, no cohesion, no plasticity		
	100	-			SW	
		-				
20		-				Boring terminated at 20' bgs due to encountering groundwater

Total Borehole Depth: 20' bgs.

APPENDIX C

B8-009-PZ	569732.21	1456540.64	13.99	11.76
B8-010-PZ	569657.78	1456741.04	12.73	10.52
B8-013-PZ	569957.71	1457081.01	13.56	9.80
B8-016-PZ	570091.95	1457637.26	13.99	10.54
B8-017-PZ	570261.64	1457914.69	12.00	9.81
B8-018-PZ	570304.18	1458366.07	11.79	9.21
B8-019-PZ	570052.18	1458026.66	13.60	9.97
B8-020-PZ	570151.96	1458265.97	12.50	9.88
RW-002-PZ	572319.86	1456268.80	12.62	9.56
RW-006-PZ	572066.50	1457083.26	14.28	10.87
RW-011-PZ	570954.75	1456139.80	15.15	11.34
RW-021-PZ	570224.93	1456882.30	13.88	10.25
RW-025-PZ	570048.83	1456512.07	15.28	11.61
RW-027-PZ	570825.85	1456912.97	14.77	11.17
RW-048-PZ	571686.96	1456530.55	14.28	11.56
RW-050-PZ	570853.87	1456545.21	15.47	11.40
RW-057-PZ	572112.71	1456434.62	13.14	10.17
RW-063-PZ	572433.51	1456825.40	14.19	11.07
RW-067-PZ	572214.11	1456680.41	13.37	10.68
RW-070-PZ	572063.81	1457082.09	14.14	10.84
RW22 50FT	571963.73	1456061.85	11.25	11.25
RW23 50FT	572002.55	1456257.38	11.46	11.46
RW24 50FT	572055.46	1456360.62	11.05	11.05

RW19-PZM020	571975.38	1455960.61	13.53	11.28
RW19-PZM050	571973.56	1455966.33	12.95	11.17
RW19-PZP003	571981.70	1455964.46	13.49	11.16
RW20-PZM020	571694.60	1456021.05	13.03	11.14
RW20-PZM050	571704.36	1456022.96	11.87	11.09
RW20-PZP000	571705.48	1456018.60	13.54	11.06
RW21-PZM023	571512.69	1456045.20	12.93	10.86
RW-RW89	572109.51	1456513.71	11.35	10.97
RW-RW90	572154.39	1456467.19	11.08	10.55
RW-RW93	NOT INSTALLED			
RW-RW95	572243.17	1456479.97	12.62	10.81
RW-RW97	572070.55	1456523.86	13.08	10.93
RW-RWBW-20	WELL CASING DAMAGED, COULD NOT SURVEY (SEE FIGURE 1.0)			14.04
RW-RWBW-21	572425.20	1456092.04	15.11	14.75
SW03-PZM003	571205.39	1456735.24	14.54	10.93
SW03-PZM060	571201.38	1456738.70	14.93	10.92
TS04-PDM004	571781.18	1456010.86	13.69	11.10
TS04-PPM007	571713.99	1455885.63	10.20	10.24
TS04-PZM023	571723.19	1455884.69	10.05	10.30
SW-061-MWS	567005.21	1457693.91	15.83	13.65
SW-059-MWS	567199.64	1458459.63	15.99	13.64
SW-060-MWS	567889.61	1457693.79	14.12	12.20
SW-051-MWS	565671.75	1462655.02	13.40	10.99
SW-049-MWS	566666.92	1463263.78	11.55	11.89
SW-050-MWS	565719.62	1463489.52	10.62	8.04
SW-066-MWS	564235.89	1458826.45	13.02	10.77
SW-071-MWS	564957.19	1460809.42	16.63	14.25
SW-072-MWS	564563.01	1460661.22	14.60	12.02
SW-073-MWS	564422.72	1461025.48	14.76	12.43
SW-065-MWS	564008.99	1457839.54	12.27	12.57
SW-057-MWS	567666.75	1460456.19	12.31	12.62
SW-058-MWS	568148.01	1459749.57	11.45	11.75
SW-056-MWS	566048.47	1460677.32	11.52	8.72
SW-054-MWS	566520.20	1461893.20	13.35	10.89
SW-055-MWS	565946.68	1461317.07	11.87	9.28
SW-053-MWS	567410.98	1461986.20	13.84	14.06
SW-037-MWS	563571.81	1461007.95	13.28	10.96
SW-035-MWS	563772.91	1460297.91	13.43	11.06
SW-034-MWS	563668.32	1459941.32	12.62	10.16
SW-032-MWS	563537.58	1458639.17	12.64	10.49
SW-027-MWS	564973.53	1456177.11	16.98	14.33
SW-028-MWS	564518.61	1456324.45	15.59	13.20

SW-021-MWS	568534.52	1457422.96	12.83	10.42
SW-022-MWS	568222.29	1457122.05	14.31	12.20
SW-023-MWS	568116.87	1456637.37	14.66	12.79
SW-024-MWS	568021.88	1456157.41	14.03	11.62
SW-025-MWS	566943.92	1456126.02	13.16	11.03
SW-026-MWS	566649.66	1455514.08	11.51	8.61
SW-040-MWS	564306.40	1463005.67	13.01	11.16
SW-041-MWS	564416.60	1463773.99	13.47	11.80
SW-042-MWS	564740.08	1464633.24	7.40	7.78
SW-043-MWS	565729.24	1464430.00	10.26	8.53
SW-044-MWS	566398.36	1464363.35	8.61	8.99
SW-048-MWS	568760.44	1463140.98	16.73	14.27
SW-046-MWS	569504.23	1464948.41	9.80	10.13
SW-047-MWS	570242.63	1464394.66	20.24	20.56
SW-038-MWS	563432.87	1461357.62	16.28	13.76
SW-039-MWS	563507.65	1462484.16	19.91	17.91
SW-031-MWS	563598.44	1458394.82	13.41	10.93
SW-070-MWS	565612.92	1459619.82	11.17	9.10
SW-052-MWS	565095.06	1462682.05	13.88	11.49
SW-045-MWS	568357.88	1463927.89	13.10	11.17
SW-043-MWI	565719.77	1464429.47	10.43	8.56
SW-045-MWI	568344.09	1463932.84	12.86	10.92
SW-074-MWI	567047.75	1464301.55	10.20	8.20
SW-036-MWS	563678.17	1460774.35	13.38	10.82
SW-033-MWS	563597.45	1459274.61	10.28	10.59
SW-030-MWS	563547.95	1458146.61	14.72	12.32
SW-074-MWS	567038.13	1464298.66	11.32	8.79
SW-062-MWS	567420.73	1456909.57	16.81	14.39
SW-063-MWS	565322.90	1456892.20	19.98	17.54
SW-067-MWS	564917.48	1458453.61	14.85	12.66
SW-068-MWS	565823.84	1458036.16	16.87	14.55
SW-069-MWS	566309.02	1458770.00	16.56	14.23
SW-029-MWS	563980.59	1456323.19	15.75	13.15
SW-064-MWS	564322.36	1457393.54	17.39	15.15
FM01-PZM003	568251.65	1460279.28	10.08	10.37
FM01-PZM041	568251.76	1460275.61	9.91	10.24
FM05-PZM004	568565.69	1462040.51	14.48	11.73
FM05-PZM024	568578.67	1462043.77	14.47	12.04
SG07-PZM007	NOT INSTALLED			
SW06-PZM001	569184.69	1463625.88	17.29	14.92
SW06-PZM053	569188.45	1463637.32	16.75	14.59
SW07-PZM004	567658.52	1456050.21	14.52	12.02

SW07-PZM108	567665.11	1456048.67	15.76	11.56
SW08-PZM003	568091.75	1458990.33	11.75	9.37
SW08-PZM053	568090.03	1458982.75	12.02	9.67
SW09-PZM004	566974.91	1460293.50	13.16	10.34
SW09-PZM028	566965.08	1460295.30	12.70	10.48
SW09-PZM068	566970.72	1460290.93	13.31	10.32
NO DESC.	566975.78	1460287.86	13.03	10.17
SW10-PZM012	567312.59	1463288.23	7.91	4.82
SW10-PZM085	567286.63	1463311.33	7.83	4.88
SW11-PZM005	565794.79	1456073.98	13.54	11.35
SW12-PZP001	565989.17	1457438.18	17.66	15.57
SW13-PZM003	563493.91	1456407.34	16.26	14.01
SW13-PZM025	563498.66	1456410.45	15.59	13.56
SW13-PZM111	563502.75	1456409.98	15.37	13.66
SW14-PZM004	563392.23	1457680.38	15.85	13.80
SW15-PZM005	564367.29	1459534.16	14.83	12.17
SW15-PZM031	564371.72	1459531.84	14.90	12.02
SW15-PZM085	564367.22	1459539.25	14.23	12.15
NO DESC.	564374.63	1459537.53	14.50	12.19
SW16-PZM003	564524.42	1462434.76	14.94	12.80
SW16-PZM067	564528.56	1462441.95	15.33	13.06
TM03-PZM004	568852.92	1457628.81	12.66	10.34
TM03-PZM037	568849.30	1457622.17	12.08	10.38
TM05-PZM005	568837.40	1458595.64	12.76	10.62
TM05-PZM040	568830.24	1458596.23	12.83	10.70
TS10-PDM008	567529.89	1464010.26	6.74	3.88
SG07 PD	564025.39	1463980.66	17.93	15.19

Figure 1.0: RW-RWBW-20 Photographs



APPENDIX D

PID CALIBRATION LOG

PROJECT NAME: Area A Parcel A3				SAMPLER NAME: N. Kurtz, L. Perrin & P. Vogel		
PROJECT NUMBER: 150298M-10/11-3				DATE: April 1, 2016	PAGE <u>1</u> of <u>1</u>	
DATE/TIME	PID SERIAL #	FRESH AIR CAL	STANDARD	STANDARD CONCENTRATION	METER READING	COMMENTS
9/21/2015	592-913262	*	Isobutylene	100 ppm	100.1	LLP
9/22/2015	592-908581	*	Isobutylene	100 ppm	100.1	LLP
9/23/2015	592-908581	*	Isobutylene	100 ppm	100.1	LLP
9/24/2015	592-908581	*	Isobutylene	100 ppm	100.1	NSK
9/25/2015	592-908581	*	Isobutylene	100 ppm	100.1	LLP
9/28/2015	592-908581	*	Isobutylene	100 ppm	100.3	LLP
9/29/2015	592-908608	*	Isobutylene	100 ppm	100.0	NSK
9/30/2015	592-908608	*	Isobutylene	101 ppm	100.1	LLP
10/1/2015	592-908608	*	Isobutylene	100 ppm	100.1	NSK
10/5/2015	592-908608	0.0	Isobutylene	100 ppm	100.0	-
10/6/2015	592-908608	0.0	Isobutylene	100 ppm	99.6	-
10/7/2015	592-908608	0.0	Isobutylene	100 ppm	100.0	-
10/8/2015	592-908608	0.0	Isobutylene	100 ppm	100.0	-
10/21/2015	592-908608	0.0	Isobutylene	100 ppm	100.1	PV
10/22/2015	592-908608	0.0	Isobutylene	100 ppm	100.1	PV
10/23/2015	592-908608	0.0	Isobutylene	100 ppm	100.0	PV
10/26/2015	592-908608	0.0	Isobutylene	100 ppm	100.0	PV
10/27/2015	592-908608	0.0	Isobutylene	100 ppm	100.1	PV
10/28/2015	592-908608	0.0	Isobutylene	100 ppm	100.1	PV
10/29/2015	592-908608	0.0	Isobutylene	100 ppm	100.0	PV
			Isobutylene	100 ppm		
			Isobutylene	100 ppm		
			Isobutylene	100 ppm		

* Fresh air calibrations were completed, but not recorded

APPENDIX E



**LOG OF TEMPORARY GROUNDWATER SAMPLE
COLLECTION POINT: RW-002-PZ**

Client: EnviroAnalytics Group
Site: Sparrows Point - Area A Parcel A3
Sparrows Point, MD
ARM Project No.: 150298M-10-3
Page 1 of 1

Date Installed : 10-9-15
Casing/Riser Type : PVC
Borehole Diameter : 2.25"
Drilling Method : 7822DT Geoprobe
Driller : Kevin Pumphrey

Drilling Company : Green Services, Inc
TOC Elevation : 12.62
0-Hr DTW : 5.20' bgs
24-Hr DTW : 2.64' bgs
ARM Representative : L. Perrin

Depth in Feet	Surf. Elev. 9.56	DESCRIPTION	PZM Name: RW-002-PZ	REMARKS
0		Riser Type: PVC Riser Diameter: 1 inch Riser Stickup: 32.5"	<p>Granular bentonite seal 1" PVC Riser Sand Pack 1" PVC Screen</p>	
9		Screen Type: PVC Screen Diameter: 1 inch Screen Amount: 10 feet Slot Size: 0.010"		
1		Filter Pack: Top: 3.5' bgs Bottom: 14.5' bgs Grain Size: WG #2		
8		Bentonite Seal: Top: 0 (surface) Bottom: 3.5' bgs Grain Size: 3/8" chips/ granular 30-50 mesh		
2		End of Boring		
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

Total Depth: 14.5' bgs



**LOG OF TEMPORARY GROUNDWATER SAMPLE
COLLECTION POINT: RW-006-PZ**

Client: EnviroAnalytics Group
Site: Sparrows Point - Area A Parcel A3
Sparrows Point, MD
ARM Project No.: 150298M-10-3
Page 1 of 1

Date Installed : 10-9-15
Casing/Riser Type : PVC
Borehole Diameter : 2.25"
Drilling Method : 7822DT Geoprobe
Driller : Kevin Pumphrey

Drilling Company : Green Services, Inc
TOC Elevation : 14.28
0-Hr DTW : 5.20' bgs
24-Hr DTW : 2.64' bgs
ARM Representative : L. Perrin

Depth in Feet	Surf. Elev. 10.87	DESCRIPTION	PZM Name: RW-006-PZ	REMARKS
0		Riser Type: PVC Riser Diameter: 1 inch Riser Stickup: 42"	<p>Granular bentonite seal 1" PVC Riser Sand Pack 1" PVC Screen</p>	
1	10			
2	9			
3	8			
4	7	Screen Type: PVC Screen Diameter: 1 inch Screen Amount: 10 feet Slot Size: 0.010"		
5	6			
6	5			
7	4			
8	3	Filter Pack: Top: 9.5' bgs Bottom: 21.5' bgs Grain Size: WG #2		
9	2			
10	1			
11	0			
12	-1	Bentonite Seal: Top: 0 (surface) Bottom: 9.5' bgs Grain Size: 3/8" chips/ granular 30-50 mesh		
13	-2			
14	-3			
15	-4			
16	-5			
17	-6			
18	-7			
19	-8			
20	-9			
21	-10			
22	-11	End of Boring		
23	-12			
24	-13			
25	-14			

Total Depth: 21.5' bgs



LOG OF TEMPORARY GROUNDWATER SAMPLE COLLECTION POINT: RW-011-PZ

Client: EnviroAnalytics Group
Site: Sparrows Point - Area A Parcel A3
Sparrows Point, MD
ARM Project No.: 150298M-10-3
Page 1 of 1

Date Installed : 10-12-15
Casing/Riser Type : PVC
Borehole Diameter : 2.25"
Drilling Method : 7822DT Geoprobe
Driller : Don Marchese

Drilling Company : Green Services, Inc
TOC Elevation : 15.15
0-Hr DTW : 4.85' bgs
24-Hr DTW : 4.80' bgs
ARM Representative : L. Perrin

Depth in Feet	Surf. Elev. 11.34	DESCRIPTION	PZM Name: RW-011-PZ	REMARKS
0	11	Riser Type: PVC Riser Diameter: 1 inch Riser Stickup: 43.25"	<p>Granular bentonite seal 1" PVC Riser Sand Pack 1" PVC Screen</p>	
1	10			
2	9			
3	8			
4	7	Screen Type: PVC Screen Diameter: 1 inch Screen Amount: 15 feet Slot Size: 0.010"		
5	6			
6	5			
7	4			
8	3	Filter Pack: Top: 3' bgs Bottom: 19' bgs Grain Size: WG #2		
9	2			
10	1			
11	0			
12	-1	Bentonite Seal: Top: 0 (surface) Bottom: 3' bgs Grain Size: 3/8" chips/ granular 30-50 mesh		
13	-2			
14	-3			
15	-4			
16	-5			
17	-6			
18	-7			
19	-8	End of Boring		

Total Depth: 19' bgs



**LOG OF TEMPORARY GROUNDWATER SAMPLE
COLLECTION POINT: RW-021-PZ**

Client: EnviroAnalytics Group
Site: Sparrows Point - Area A Parcel A3
Sparrows Point, MD
ARM Project No.: 150298M-10-3
Page 1 of 1

Date Installed : 10-12-15
Casing/Riser Type : PVC
Borehole Diameter : 2.25"
Drilling Method : 7822DT Geoprobe
Driller : Don Marchese

Drilling Company : Green Services, Inc
TOC Elevation : 13.88
0-Hr DTW : Dry
24-Hr DTW : 5.11' bgs
ARM Representative : L. Perrin

Depth in Feet	Surf. Elev. 10.25	DESCRIPTION	PZM Name: RW-021-PZ	REMARKS
0	10	Riser Type: PVC Riser Diameter: 1 inch Riser Stickup: 40"	<p>Granular bentonite seal 1" PVC Riser Sand Pack 1" PVC Screen</p>	
1	9			
2	8			
3	7			
4	6	Screen Type: PVC Screen Diameter: 1 inch Screen Amount: 15 feet Slot Size: 0.010"		
5	5			
6	4			
7	3			
8	2	Filter Pack: Top: 2' bgs Bottom: 18' bgs Grain Size: WG #1		
9	1			
10	0			
11	-1			
12	-2	Bentonite Seal: Top: 0 (surface) Bottom: 2' bgs Grain Size: 3/8" chips/ granular 30-50 mesh		
13	-3			
14	-4			
15	-5			
16	-6			
17	-7			
18	-8	End of Boring		
19	-9			
20				

Total Depth: 18' bgs



**LOG OF TEMPORARY GROUNDWATER SAMPLE
COLLECTION POINT: RW-025-PZ**

Client: EnviroAnalytics Group
Site: Sparrows Point - Area A Parcel A3
Sparrows Point, MD
ARM Project No.: 150298M-10-3
Page 1 of 1

Date Installed : 10-12-15
Casing/Riser Type : PVC
Borehole Diameter : 2.25"
Drilling Method : 7822DT Geoprobe
Driller : Don Marchese

Drilling Company : Green Services, Inc
TOC Elevation : 15.28
0-Hr DTW : 5.89' bgs
24-Hr DTW : 5.97' bgs
ARM Representative : L. Perrin

Depth in Feet	Surf. Elev. 11.61	DESCRIPTION	PZM Name: RW-025-PZ	REMARKS
0		Riser Type: PVC Riser Diameter: 1 inch Riser Stickup: 41.75"	<p>Granular bentonite seal 1" PVC Riser Sand Pack 1" PVC Screen</p>	
1		Screen Type: PVC Screen Diameter: 1 inch Screen Amount: 15 feet Slot Size: 0.010"		
2				
3		Filter Pack: Top: 2' bgs Bottom: 18' bgs Grain Size: WG #2		
4		Bentonite Seal: Top: 0 (surface) Bottom: 2' bgs Grain Size: 3/8" chips/ granular 30-50 mesh		
5				
6		End of Boring		
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

Total Depth: 18' bgs



**LOG OF TEMPORARY GROUNDWATER SAMPLE
COLLECTION POINT: RW-027-PZ**

Client: EnviroAnalytics Group
Site: Sparrows Point - Area A Parcel A3
Sparrows Point, MD
ARM Project No.: 150298M-10-3
Page 1 of 1

Date Installed : 10-12-15
Casing/Riser Type : PVC
Borehole Diameter : 2.25"
Drilling Method : 7822DT Geoprobe
Driller : Don Marchese

Drilling Company : Green Services, Inc
TOC Elevation : 14.77
0-Hr DTW : 4.01' bgs
24-Hr DTW : 4.63' bgs
ARM Representative : L. Perrin

Depth in Feet	Surf. Elev. 11.17	DESCRIPTION	PZM Name: RW-027-PZ	REMARKS
0	11	Riser Type: PVC Riser Diameter: 1 inch Riser Stickup: 39.25"	<p>Granular bentonite seal 1" PVC Riser Sand Pack 1" PVC Screen</p>	
1	10			
2	9			
3	8			
4	7	Screen Type: PVC Screen Diameter: 1 inch Screen Amount: 15 feet Slot Size: 0.010"		
5	6			
6	5			
7	4			
8	3	Filter Pack: Top: 2' bgs Bottom: 18' bgs Grain Size: WG #2		
9	2			
10	1			
11	0			
12	-1	Bentonite Seal: Top: 0 (surface) Bottom: 2' bgs Grain Size: 3/8" chips/ granular 30-50 mesh		
13	-2			
14	-3			
15	-4			
16	-5			
17	-6			
18	-7	End of Boring		
19	-8			
20				

Total Depth: 18' bgs



LOG OF TEMPORARY GROUNDWATER SAMPLE COLLECTION POINT: RW-048-PZ

Client: EnviroAnalytics Group
Site: Sparrows Point - Area A Parcel A3
Sparrows Point, MD
ARM Project No.: 150298M-10-3
Page 1 of 1

Date Installed : 10-9-15
Casing/Riser Type : PVC
Borehole Diameter : 2.25"
Drilling Method : 7822DT Geoprobe
Driller : Kevin Pumphrey

Drilling Company : Green Services, Inc
TOC Elevation : 14.28
0-Hr DTW : 6.20' bgs
24-Hr DTW : 6.52' bgs
ARM Representative : L. Perrin

Depth in Feet	Surf. Elev. 11.56	DESCRIPTION	PZM Name: RW-048-PZ	REMARKS
0	11	Riser Type: PVC Riser Diameter: 1 inch Riser Stickup: 30.25"	<p>Bentonite seal</p> <p>1" PVC Riser</p> <p>Sand Pack</p> <p>1" PVC Screen</p>	
1	10	Screen Type: PVC Screen Diameter: 1 inch Screen Amount: 10 feet Slot Size: 0.010"		
2	9	Filter Pack: Top: 10' bgs Bottom: 22' bgs Grain Size: WG #2		
3	8	Bentonite Seal: Top: 0 (surface) Bottom: 10' bgs Grain Size: 3/8" chips/ granular 30-50 mesh		
4	7			
5	6			
6	5			
7	4			
8	3			
9	2			
10	1			
11	0			
12	-1			
13	-2			
14	-3			
15	-4			
16	-5			
17	-6			
18	-7			
19	-8			
20	-9			
21	-10			
22	-11	End of Boring		
23	-12			
24	-13			
25				

Total Depth: 22' bgs



LOG OF TEMPORARY GROUNDWATER SAMPLE COLLECTION POINT: RW-050-PZ

Client: EnviroAnalytics Group
Site: Sparrows Point - Area A Parcel A3
Sparrows Point, MD
ARM Project No.: 150298M-10-3
Page 1 of 1

Date Installed : 10-12-15
Casing/Riser Type : PVC
Borehole Diameter : 2.25"
Drilling Method : 7822DT Geoprobe
Driller : Don Marchese

Drilling Company : Green Services, Inc
TOC Elevation : 15.47
0-Hr DTW : 1.02' bgs
24-Hr DTW : 1.00' bgs
ARM Representative : L. Perrin

Depth in Feet	Surf. Elev. 11.40	DESCRIPTION	PZM Name: RW-050-PZ	REMARKS
0				
1	11	Riser Type: PVC Riser Diameter: 1 inch Riser Stickup: 46"	<p>Granular bentonite seal</p> <p>1" PVC Riser</p> <p>Sand Pack</p> <p>1" PVC Screen</p>	
2	10			
3	9			
4	8			
5	7	Screen Type: PVC Screen Diameter: 1 inch Screen Amount: 15 feet Slot Size: 0.010"		
6	6			
7	5			
8	4			
9	3	Filter Pack: Top: 2' bgs Bottom: 18' bgs Grain Size: WG #2		
10	2			
11	1			
12	0			
13	-1	Bentonite Seal: Top: 0 (surface) Bottom: 2' bgs Grain Size: 3/8" chips/ granular 30-50 mesh		
14	-2			
15	-3			
16	-4			
17	-5			
18	-6			
19	-7	End of Boring		
20	-8			

Total Depth: 18' bgs

APPENDIX F

GROUNDWATER SAMPLING RECORD SHEET

Sheet Number _____ of _____

Job Name: _____ Job Location: _____

Job Number: _____ Phase: _____ Task: _____

Sample Location: RW-025-PZ Name(s) of Sampler(s): B. Gehman

Description of Sample: Water Soil _____ Other _____

PURGING

Time/Date Started: 10-26-15 / _____

Air Temperature: _____ (°F/°C)

Weather Sunny Rain _____

Conditions Overcast Other _____

Depth to Water: 10.23 ft

Total Well Depth: 21.35 ft Toe

Height of Water Column: _____ ft 3.50' stickup

Well Diameter: 1-inch 4-inch _____

2-inch _____ 6-inch _____

Well Volume Calculation:

_____ ft x _____ gal/ft = _____ gal

Purge Volume = _____ x _____ = _____ gal

Purging Method: Pump _____ Bailed _____ Other _____

Gallons Removed: _____ gal

Length of Time Purged _____ min

Yield at End of Purging: _____ gpm

How was yield measured? _____

Color _____ Odor _____

Turbidity _____

Was well cavitated? Yes _____ No _____

SAMPLING

Time/Date Started: _____ / 12:55

Air Temperature: _____ (°F/°C)

Weather Sunny _____ Rain _____

Conditions Overcast _____ Other _____

Depth to Water: _____ ft

Sampling Method: Bailer _____

Submersible Pump _____

Peristaltic Pump _____

Other _____

Number of Bottles Filled: _____

Date Sent To Lab: _____

Laboratory Name: _____

Parameters to Analyze: _____

Chain of Custody Number: _____

Other: _____

FIELD DATA

Time	12:26	12:31	12:36	12:41	12:46	12:51	
Volume of water purged	1.5	2.1	2.7	3.3	3.9	4.5	gal
pH	20.06	20.09	20.01	19.98 ^{11.05}	11.05	11.06	s.u.
Conductance	0.735	0.773	0.754	0.734	0.731	0.731	umhos/cm
Temperature	20.06	20.09	20.01	19.98	20.06	20.06	°C
DO	0.35	0.39	0.28	0.28	0.26	0.26	mg/l
Redox	-208.6	-232.4	-241.1	-255.6	-260.1	-261.2	mV
Turbidity	1183AU	707AU	178 NTU	145 NTU	138	130	NTU
Other -	817	853	833	809	795	794	spc - us/cm

Remarks: _____

Very turbid brown

Pipe 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

GROUNDWATER SAMPLING RECORD SHEET

Sheet Number _____ of _____

Job Name: _____ Job Location: _____

Job Number: _____ Phase: _____ Task: _____

Sample Location: RW-027-P2 Name(s) of Sampler(s): B. Gehman

Description of Sample: Water Soil _____ Other _____

PURGING

Time/Date Started: _____ / 10-26-15

Air Temperature: _____ (°F/°C)

Weather Sunny Rain _____

Conditions Overcast _____ Other _____

Depth to Water: 8.86' ft

Total Well Depth: 20.96 ft TOC

Height of Water Column: _____ ft 3 22' stick up

Well Diameter: 1-inch 4-inch _____

2-inch _____ 6-inch _____

Well Volume Calculation:
_____ ft x _____ gal/ft = _____ gal

Purge Volume = _____ x _____ = _____ gal

Purging Method: Pump Bailed Other _____

Gallons Removed: _____ gal

Length of Time Purged _____ min

Yield at End of Purging: _____ gpm

How was yield measured? _____

Color _____ Odor _____

Turbidity _____

Was well cavitated? Yes No

SAMPLING

Time/Date Started: _____ / 14:15

Air Temperature: _____ (°F/°C)

Weather Sunny _____ Rain _____

Conditions Overcast _____ Other _____

Depth to Water: _____ ft

Sampling Method: Bailer _____

Submersible Pump _____

Peristaltic Pump _____

Other _____

Number of Bottles Filled: _____

Date Sent To Lab: _____

Laboratory Name: _____

Parameters to Analyze: _____

Chain of Custody Number: _____

Other: _____

FIELD DATA

Time	13:42	13:47	13:52	13:57	14:02	14:07		Remarks: <u>Turbid</u>
Volume of water purged	<u>1.2</u>	<u>1.5</u>	<u>2.1</u>	<u>2.6</u>	<u>3.1</u>	<u>3.7</u>	gal	<u>14:12 → 4.3 gal</u>
pH	<u>7.77</u>	<u>7.01</u>	<u>6.40</u>	<u>6.10</u>	<u>5.63</u>	<u>5.78</u>	s.u.	<u>5.76</u>
Conductance	<u>0.556</u>	<u>0.553</u>	<u>0.549</u>	<u>0.547</u>	<u>0.547</u>	<u>0.546</u>	^{µS/cm} µmhos/cm	<u>0.545</u>
Temperature	<u>18.37</u>	<u>18.42</u>	<u>18.26</u>	<u>18.34</u>	<u>18.25</u>	<u>18.26</u>	°C	<u>18.14</u>
DO	<u>0.27</u>	<u>0.21</u>	<u>0.28</u>	<u>0.16</u>	<u>0.15</u>	<u>0.11</u>	mg/l	<u>0.09</u>
Redox	<u>-147.9</u>	<u>-150.6</u>	<u>-128.7</u>	<u>-110.5</u>	<u>-116.9</u>	<u>-119.7</u>	mV	<u>-119.0</u>
Turbidity	<u>2913 ^{AU}</u>	<u>2115 AU</u>	<u>1279 AU</u>	<u>1381 AU</u>	<u>1033 AU</u>	<u>1157 AU</u>	NTU	<u>1232 AU</u>
Other -	<u>637</u>	<u>637</u>	<u>630</u>	<u>628</u>	<u>628</u>	<u>627</u>	<u>SPC-45/cm</u>	<u>627</u>

Pipe 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

GROUNDWATER SAMPLING RECORD SHEET

Sheet Number _____ of _____

Job Name: _____ Job Location: _____

Job Number: _____ Phase: _____ Task: _____

Sample Location: RW-050-PZ Name(s) of Sampler(s): B. Gebman

Description of Sample: Water Soil _____ Other _____

PURGING

Time/Date Started: _____ / 10-26-15

Air Temperature: _____ (°F/°C)

Weather Sunny Rain _____

Conditions Overcast _____ Other _____

Depth to Water: 5.50 ft

Total Well Depth: 21.52 ft TOC

Height of Water Column: _____ ft 3.72' stickup

Well 1-inch _____ 4-inch _____

Diameter: 2-inch _____ 6-inch _____

Well Volume Calculation:
_____ ft x _____ gal/ft = _____ gal

Purge Volume = _____ x _____ = _____ gal

Purging Method: Pump Bailed Other

Gallons Removed: _____ gal

Length of Time Purged _____ min

Yield at End of Purging: _____ gpm

How was yield measured? _____

Color _____ Odor _____

Turbidity _____

Was well cavitated? Yes No

SAMPLING

Time/Date Started: _____ / 15:25

Air Temperature: _____ (°F/°C)

Weather Sunny _____ Rain _____

Conditions Overcast _____ Other _____

Depth to Water: _____ ft

Sampling Method: Bailer _____

Submersible Pump _____

Peristaltic Pump _____

Other _____

Number of Bottles Filled: _____

Date Sent To Lab: _____

Laboratory Name: _____

Parameters to Analyze: _____

Chain of Custody Number: _____

Other: _____

FIELD DATA

Time	14:59	15:04	15:09	15:14	15:19	15:24	
Volume of water purged	0.9	1.4	2.0	2.6	3.3	3.9	gal
pH	10.05	10.26	10.34	10.35	10.34	10.36	s.u.
Conductance	0.575	0.556	0.545	0.536	0.533	0.532	umhos/cm ^{ms/cm}
Temperature	19.14	19.13	19.20	19.14	19.16	19.12	°C
DO	0.43	0.21	0.15	0.13	0.12	0.10	mg/l
Redox	-53.1	-75.9	-97.4	-113.6	-120.0	-127.3	mV
Turbidity	43.6	33.7	12.8	8.04	4.54	4.03	NTU
Other- spC	646	624	612	603	600	599	ns/cm

Remarks: Turbid dark brown

Pipe 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

GROUNDWATER SAMPLING RECORD SHEET

Sheet Number _____ of _____

Job Name: _____ Job Location: _____

Job Number: _____ Phase: _____ Task: _____

Sample Location: RW-021-PZ Name(s) of Sampler(s): B. Gehman

Description of Sample: Water Soil _____ Other _____

PURGING

Time/Date Started: _____ / 10-26-15

Air Temperature: 50s (°F/°C)

Weather Sunny _____ Rain _____

Conditions Overcast Other _____

Depth to Water: 9.38' ft

Total Well Depth: 21.54 ft Toe

Height of Water Column: _____ ft 3.35' = stickup

Well Diameter: 1-inch 4-inch _____

2-inch _____ 6-inch _____

Well Volume Calculation:

_____ ft x _____ gal/ft = _____ gal

Purge Volume = _____ x _____ = _____ gal

Purging Method: Pump _____ Bailed _____ Other _____

Gallons Removed: _____ gal

Length of Time Purged _____ min

Yield at End of Purging: _____ gpm

How was yield measured? _____

Color _____ Odor _____

Turbidity _____

Was well cavitated? Yes _____ No _____

SAMPLING

Time/Date Started: 7:30 / 10-27-15

Air Temperature: _____ (°F/°C)

Weather Sunny _____ Rain _____

Conditions Overcast _____ Other _____

Depth to Water: _____ ft

Sampling Method: Bailer _____

Submersible Pump _____

Peristaltic Pump _____

Other _____

Number of Bottles Filled: _____

Date Sent To Lab: _____

Laboratory Name: _____

Parameters to Analyze: _____

Chain of Custody Number: _____

Other: _____

FIELD DATA

Time	11:26	11:31	11:36				
Volume of water purged	0.3	0.7	2				gal
pH	6.50	6.56	2				s.u.
Conductance	0.868	0.885	2				umhos/cm ^{ms/cm}
Temperature	18.92	18.95	2				°C
DO	0.74	0.54	2				mg/l
Redox	-245.9	-275.6	2				mV
Turbidity	127 AU	69.0	2				NTU
Other - <u>SPC</u>	982	1000	2				us/cm

Remarks: _____

Turbid yellow → brown

Well purged dry @ 11:36

Sample when adequate recovery

Pipe 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

GROUNDWATER SAMPLING RECORD SHEET

Sheet Number _____ of _____

Job Name: _____ Job Location: _____

Job Number: _____ Phase: _____ Task: _____

Sample Location: RW-002-PZ Name(s) of Sampler(s): B. Gehman

Description of Sample: Water Soil _____ Other _____

PURGING

Time/Date Started: _____ / 10-27-15

Air Temperature: _____ (°F/°C)

Weather Sunny _____ Rain _____

Conditions Overcast Other _____

Depth to Water: ~~14~~ 6.49 ft

Total Well Depth: ~~16.97~~ 16.97 ft TDC

Height of Water Column: _____ ft

Well 1-inch 4-inch _____ 2.65 → stickup

Diameter: 2-inch _____ 6-inch _____

Well Volume Calculation:

_____ ft x _____ gal/ft = _____ gal

Purge Volume = _____ x _____ = _____ gal

Purging Method: Pump _____ Bailed _____ Other _____

Gallons Removed: _____ gal

Length of Time Purged _____ min

Yield at End of Purging: _____ gpm

How was yield measured? _____

Color _____ Odor _____

Turbidity _____

Was well cavitated? Yes _____ No _____

SAMPLING

Time/Date Started: _____ / 15:20

Air Temperature: _____ (°F/°C)

Weather Sunny _____ Rain _____

Conditions Overcast _____ Other _____

Depth to Water: _____ ft

Sampling Method: Bailer _____

Submersible Pump _____

Peristaltic Pump _____

Other _____

Number of Bottles Filled: _____

Date Sent To Lab: _____

Laboratory Name: _____

Parameters to Analyze: _____

Chain of Custody Number: _____

Other: _____

FIELD DATA

Time	15:07	15:12	15:17	1			
Volume of water purged	1.95	2.4	3.0				gal
pH	6.77	6.73	6.71				s.u.
Conductance	1.225	1.228	1.230				umhos/cm ^{ns/cm}
Temperature	17.42	17.45	17.46				°C
DO	0.63	0.35	0.31				mg/l
Redox	-167.3	-182.6	-187.9				mV
Turbidity	431	22.6	15.4				NTU ^{NTU}
Other - <u>SPC</u>	1433	1434	1437				umhos/cm

Remarks: _____

Pipe 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

GROUNDWATER SAMPLING RECORD SHEET

Sheet Number _____ of _____

Job Name: _____ Job Location: _____

Job Number: _____ Phase: _____ Task: _____

Sample Location: RW-006-PZ Name(s) of Sampler(s): B. Gehman

Description of Sample: Water Soil _____ Other _____

PURGING

Time/Date Started: 10-27-15 / _____

Air Temperature: _____ (°F/°C)

Weather Sunny _____ Rain _____

Conditions Overcast Other _____

Depth to Water: 5.65 ft

Total Well Depth: ~~21.78~~ 21.78 ft TC

Height of Water Column: _____ ft stickup = 3.13

Well Diameter: 1-inch 4-inch _____

2-inch _____ 6-inch _____

Well Volume Calculation:
 _____ ft x _____ gal/ft = _____ gal

Purge Volume = _____ x _____ = 1.94 ^{3" W} gal

Purging Method: Pump _____ Bailed _____ Other _____

Gallons Removed: _____ gal

Length of Time Purged _____ min

Yield at End of Purging: _____ gpm

How was yield measured? _____

Color _____ Odor _____

Turbidity _____

Was well cavitated? Yes _____ No _____

SAMPLING

Time/Date Started: _____ / 11:30

Air Temperature: _____ (°F/°C)

Weather Sunny _____ Rain _____

Conditions Overcast _____ Other _____

Depth to Water: _____ ft

Sampling Method: Bailer _____

Submersible Pump _____

Peristaltic Pump _____

Other _____

Number of Bottles Filled: _____

Date Sent To Lab: _____

Laboratory Name: _____

Parameters to Analyze: _____

Chain of Custody Number: _____

Other: _____

FIELD DATA

Time	11:15	11:20	11:25				
Volume of water purged	2.0	2.6	3.3				gal
pH	5.42	5.02	4.87				s.u.
Conductance	1.345	1.264	1.213				umhos/cm
Temperature	15.71	15.68	15.70				°C
DO	0.49	0.35	0.34				mg/l
Redox	-85.3	-86.9	-97.5				mV
Turbidity	OVER RANGE	1301 AU	811 AU				NTU
Other - <u>spc</u>	1624	1532	1473				

Remarks: _____

Pipe 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

GROUNDWATER SAMPLING RECORD SHEET

Sheet Number _____ of _____

Job Name: _____ Job Location: _____

Job Number: _____ Phase: _____ Task: _____

Sample Location: RW-011-PZ Name(s) of Sampler(s): B. Gohman

Description of Sample: Water Soil _____ Other _____

PURGING

Time/Date Started: _____ / 10-27-15

Air Temperature: 40s (°F/°C)

Weather Sunny _____ Rain _____

Conditions Overcast Other _____

Depth to Water: 9.04 ft ~~7~~

Total Well Depth: 22.25 ft TOC

Height of Water Column: _____ ft stickup = 3.56'

Well Diameter: 1-inch 4-inch _____

2-inch _____ 6-inch _____

Well Volume Calculation:
 _____ ft x _____ gal/ft = _____ gal

Purge Volume = _____ x _____ = _____ gal

Purging Method: Pump Bailed _____ Other _____

Gallons Removed: _____ gal

Length of Time Purged _____ min

Yield at End of Purging: _____ gpm

How was yield measured? Grab bucket

Color _____ Odor _____

Turbidity _____

Was well cavitating? Yes _____ No _____

SAMPLING

Time/Date Started: _____ / 9:05

Air Temperature: _____ (°F/°C)

Weather Sunny _____ Rain _____

Conditions Overcast _____ Other _____

Depth to Water: _____ ft

Sampling Method: Bailer _____

Submersible Pump _____

Peristaltic Pump _____

Other _____

Number of Bottles Filled: _____

Date Sent To Lab: _____

Laboratory Name: _____

Parameters to Analyze: _____

Chain of Custody Number: _____

Other: _____

FIELD DATA

Time	8:37	8:42	8:47	8:52	8:57	9:02	
Volume of water purged	1.15	1.6	2.2	2.8	3.4	4.0	gal
pH	11.53	11.83	11.92	11.95	11.95	11.96	s.u.
Conductance	1.697	1.718	1.716	1.706	1.694	1.689	µmhos/cm
Temperature	17.62	17.91	17.96	18.12	18.15	18.24	°C
DO	0.24	0.18	0.18	0.13	0.11	0.11	mg/l
Redox	-209.64	-244.9	-266.4	-280.8	-289.2	-290.7	mV
Turbidity	51.2	18.81	30.2	19.6	18.9	17.0	NTU
Other - <u>spc</u>	1975	1986	1983	1960	1949	1940	us/cm

Remarks: Turbid black

Pipe 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

GROUNDWATER SAMPLING RECORD SHEET

Sheet Number _____ of _____

Job Name: _____ Job Location: _____

Job Number: _____ Phase: _____ Task: _____

Sample Location: RW-048-P2 Name(s) of Sampler(s): B. Gohman

Description of Sample: Water Soil _____ Other _____

PURGING

Time/Date Started: _____ / 10-27-15

Air Temperature: _____ (°F/°C)

Weather Sunny _____ Rain _____

Conditions Overcast Other _____

Depth to Water: 7.97 ft

Total Well Depth: ~~24.40~~ 24.40 ft TOC

Height of Water Column: _____ ft 2.50 stickup

Well 1-inch 4-inch _____

Diameter: 2-inch _____ 6-inch _____

Well Volume Calculation:

14.03 ft x 0.041 gal/ft = 0.575 gal

Purge Volume = 0.575 x 3 = 1.72 gal

Purging Method: Pump _____ Bailed _____ Other _____

Gallons Removed: _____ gal

Length of Time Purged _____ min

Yield at End of Purging: _____ gpm

How was yield measured? _____

Color _____ Odor _____

Turbidity _____

Was well cavitated? Yes _____ No _____

SAMPLING

Time/Date Started: _____ / 10:10

Air Temperature: _____ (°F/°C)

Weather Sunny _____ Rain _____

Conditions Overcast _____ Other _____

Depth to Water: _____ ft

Sampling Method: Bailer _____

Submersible Pump _____

Peristaltic Pump _____

Other _____

Number of Bottles Filled: _____

Date Sent To Lab: _____

Laboratory Name: _____

Parameters to Analyze: _____

Chain of Custody Number: _____

Other: _____

FIELD DATA

Time	9:57	10:02 AM	10:07				
Volume of water purged	1.8	2.4	3.0				gal
pH	9.45	8.41	7.74				s.u.
Conductance	2.209	2.269	2.183				umhos/cm
Temperature	17.25	17.30	17.34				°C
DO	0.24	0.17	0.15				mg/l
Redox	-262.5	-260.7	-256.8				mV
Turbidity	4051 AU	3416 AU	1322 AU				NTU
Other - <u>spc</u>	2574	2649	2545				

Remarks: 3 W.V. → low flow sample

Pipe 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

GROUNDWATER SAMPLING RECORD SHEET

Sheet Number 1 of 1

Job Name: Area A Parcel A3 Job Location: SPT
 Job Number: 150298m Phase: # Task: GW sampling
 Sample Location: RW10-P2m004 Name(s) of Sampler(s): Lisa Perrin
 Description of Sample: Water X Soil _____ Other _____

<p style="text-align: center;">PURGING</p> <p>Time/Date Started: <u>0925 / 11-12-15</u> Air Temperature: <u>55</u> (°F/°C) Weather Sunny _____ Rain _____ Conditions Overcast <u>X</u> Other _____ Depth to Water: <u>1.32</u> ft Total Well Depth: <u>13.87</u> ft Height of Water Column: <u>12.55</u> ft Well 1-inch _____ 4-inch _____ Diameter: 2-inch <u>X</u> 6-inch _____ Well Volume Calculation: 12.55 ft x 0.041 gal/ft = 0.515 gal Purge Volume = 3 x 0.515 = 1.55 gal Purging Method: Pump <u>X</u> Bailed _____ Other _____ Gallons Removed: <u>2.50</u> gal Length of Time Purged <u>35</u> min Yield at End of Purging: <u>0.0714</u> gpm How was yield measured? _____ Color <u>Clear</u> Odor <u>None</u> Turbidity <u>low</u> Was well cavitating? Yes _____ No _____</p>	<p style="text-align: center;">SAMPLING MS/LS/S</p> <p>Time/Date Started: <u>1005 / 11-12-15</u> Air Temperature: <u>55</u> (°F/°C) Weather Sunny _____ Rain _____ Conditions Overcast <u>X</u> Other _____ Depth to Water: _____ ft Sampling Method: Bailer _____ Submersible Pump X _____ Peristaltic Pump <u>X</u> _____ Other _____ Number of Bottles Filled: <u>31</u> Date Sent To Lab: <u>11-12-15</u> Laboratory Name: <u>PACE</u> Parameters to Analyze: <u>See COC</u> _____ _____ Chain of Custody Number: _____ Other: _____</p>
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FIELD DATA

Time	0925	0930	0935	0940	0945	0950	0955	Remarks: <u>1000</u>
Volume of water purged	0.25	0.75	1.00	1.25	1.75	2.10	gal 2.50	<u>2.75</u>
pH ± 0.1	12.22	12.49	12.52	12.55	12.59	12.59	s.u. ^{12.58} 12.58	<u>12.58</u>
Conductance	0.237	0.238	0.238	0.241	0.243	0.244	ms/cm 0.245	<u>0.244</u>
Temperature %	17.87	18.01	17.96	17.93	17.83	17.76	°C 17.62	<u>17.56</u>
DO none % 0.3	2.56	2.84	2.32	1.57	1.14	0.81	mg/l 0.71	<u>0.71</u>
Redox ± 10 mV	-14.7	-22.7	-24.5	-25.9	-35.3	-62.6	mV -82.7	<u>-87.7</u>
Turbidity 75, 10%	7.34	4.80	2.58	1.96	2.12	2.22	NTU 1.83	1.51 <u>1.51</u>
SpC 3%	274	275	275	279	281	284	us/cm 284	<u>285</u>

Pipe 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

3x purge volume was not completed b/c permanent well

GROUNDWATER SAMPLING RECORD SHEET

Sheet Number _____ of _____

Job Name: Area A Parcel A3 Job Location: SPT
 Job Number: 150298m Phase: PDI Task: GW Sampling
 Sample Location: RW10-PM020 Name(s) of Sampler(s): Lisa Petrin
 Description of Sample: Water Soil _____ Other _____

PURGING

Time/Date Started: 1203 / 11-12-15
 Air Temperature: 61 (°F/°C)
 Weather Sunny _____ Rain _____
 Conditions Overcast Other _____
 Depth to Water: NA ft
 Total Well Depth: NA ft
 Height of Water Column: _____ ft
 Well Diameter: 1-inch _____ 4-inch
 2-inch _____ 6-inch _____
 Well Volume Calculation:
 _____ ft x _____ gal/ft = _____ gal
 Purge Volume = _____ x _____ = _____ gal
 Purging Method: Pump Bailed _____ Other _____
 Gallons Removed: 0 gal
 Length of Time Purged NA min
 Yield at End of Purging: NA gpm
 How was yield measured? _____
 Color Slightly cloudy Odor none
 Turbidity Low/mod
 Was well cavitating? Yes _____ No _____

SAMPLING

Time/Date Started: 1220 / 11-12-15
 Air Temperature: 61 (°F/°C)
 Weather Sunny _____ Rain _____
 Conditions Overcast Other _____
 Depth to Water: _____ ft
 Sampling Method: Bailer _____
 Submersible Pump
 Peristaltic Pump
 Other _____
 Number of Bottles Filled: 16
 Date Sent To Lab: 11-12-15
 Laboratory Name: PACE
 Parameters to Analyze: See COC
 Chain of Custody Number: _____
 Other: _____

FIELD DATA

Time	1203	/					
Volume of water purged	0						gal
pH ± 0.1	6.74						s.u.
Conductance	3.213						ms/cm
Temperature ^{W/m}	17.20						°C
DO ^{W/B} _{W/B 0.3}	0.82						mg/l
Redox ± 10 mV	-85.3						mV
Turbidity 75, 10%	12.32						NTU
SpC 3%	3777						us/cm

Remarks: Well is from pump test, has already been running

Pipe 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

GROUNDWATER SAMPLING RECORD SHEET

Sheet Number 1 of 1

Job Name: Area A Parcel A3 Job Location: SPT
 Job Number: 150298m Phase: II Task: GW sampling
 Sample Location: RW19-P2M000 Name(s) of Sampler(s): Lisa Perrin
 Description of Sample: Water Soil Other

PURGING

Time/Date Started: 1502 / 11-12-15
 Air Temperature: 61 (°F/°C)
 Weather Sunny Rain
 Conditions Overcast Other
 Depth to Water: 9.05 ft
 Total Well Depth: NA ft
 Height of Water Column: NA ft
 Well 1-inch 4-inch
 Diameter: 2-inch 6-inch
 Well Volume Calculation:
 _____ ft x _____ gal/ft = _____ gal
 Purge Volume = _____ x _____ = _____ gal
 Purging Method: Pump Bailed Other
 Gallons Removed: 1.50 1.75 gal
 Length of Time Purged 30 min
 Yield at End of Purging: 0.0583 gpm
 How was yield measured? _____
 Color clear Odor none
 Turbidity low
 Was well cavitated? Yes No

SAMPLING Dup 1

Time/Date Started: 1538 / 11-12-15
 Air Temperature: 61 (°F/°C)
 Weather Sunny Rain
 Conditions Overcast Other
 Depth to Water: _____ ft
 Sampling Method: Bailer _____
 Submersible Pump _____
 Peristaltic Pump
 Other _____
 Number of Bottles Filled: 18
 Date Sent To Lab: 11-12-15
 Laboratory Name: PAACE
 Parameters to Analyze: See COC

 Chain of Custody Number: _____
 Other: _____

FIELD DATA

Time	1502	1507	1512	1517	1522	1527		Remarks:
Volume of water purged	2.25	2.50	3.00	3.25	3.50	3.75	gal	<u>1532</u> <u>4.00</u>
pH ± 0.1	9.29	9.68	10.22	10.72	11.51	11.56	s.u.	<u>11.59</u>
Conductance	0.430	0.334	0.262	0.222	0.218	0.219	ms/cm	<u>0.212</u>
Temperature 3%	18.97	18.69	18.60	18.58	18.54	18.54	°C	<u>18.56</u>
DO 70% 0.3 10%	5.00	4.67	4.84	5.03	5.28	5.31	mg/l	<u>5.60</u>
Redox ± 10 mV	-106.7	-95.0	-81.1	-78.9	-79.1	-75.4	mV	<u>-64.2</u>
Turbidity 75, 10%	11.5	3.84	3.32	1.32	0.74	0.84	NTU	<u>1.21</u>
SpC 3%	487	373	295	253	249	250	us/cm	<u>241</u>

Pipe 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

* 3x purge volume was not completed b/c permanent well

GROUNDWATER SAMPLING RECORD SHEET

Sheet Number 1 of 1

Job Name: Area A Parcel A3 Job Location: SPT
 Job Number: 150298m Phase: PDI Task: GW sampling
 Sample Location: RW19-P2M020 Name(s) of Sampler(s): Lisa Perrin
 Description of Sample: Water X Soil _____ Other _____

PURGING

Time/Date Started: 1330 / 11-12-15
 Air Temperature: 61 (°F) (°C)
 Weather Sunny _____ Rain _____
 Conditions Overcast X Other _____
 Depth to Water: 14.08 ft
 Total Well Depth: NA ft
 Height of Water Column: NA ft
 Well Diameter: 1-inch _____ 4-inch _____
 2-inch X 6-inch _____
 Well Volume Calculation:
 _____ ft x _____ gal/ft = _____ gal
 Purge Volume = _____ x _____ = _____ gal
 Purging Method: Pump X Bailed _____ Other _____
 Gallons Removed: _____ gal
 Length of Time Purged _____ min
 Yield at End of Purging: _____ gpm
 How was yield measured? _____
 Color gray Odor none
 Turbidity mod
 Was well cavitating? Yes _____ No _____

SAMPLING

Time/Date Started: 1355 / 11-12-15
 Air Temperature: 61 (°F) (°C)
 Weather Sunny _____ Rain _____
 Conditions Overcast X Other _____
 Depth to Water: _____ ft
 Sampling Method: Bailer _____
 Submersible Pump X
 Peristaltic Pump _____
 Other _____
 Number of Bottles Filled: 16
 Date Sent To Lab: 11-12-15
 Laboratory Name: PACE
 Parameters to Analyze: See CDC
 Chain of Custody Number: _____
 Other: _____

FIELD DATA

Time	1330	1335	1340	1345			
Volume of water purged	0.25	0.50	1.00	1.50			gal
pH ± 0.1	5.84	5.70	5.68	5.65			s.u.
Conductance	8.586	9.777	10.07	10.21			ms/cm
Temperature 10%	16.92	17.20	17.39	17.34			°C
DO 10% <u>ASAP</u> 0.3	1.00	0.45	0.43	0.30			mg/l
Redox ± 10 mV	-48.6	-62.8	-66.9	-71.3			mV
Turbidity 75, 10%	67.4	53.4	25.3	12.81			NTU
SpC 3%	9896	11458	11776	11973			us/cm

Remarks: _____

Pipe 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

3x purge volume was not completed b/c permanent well

GROUNDWATER SAMPLING RECORD SHEET

Sheet Number 1 of 1

Job Name: Area A Parcel A3

Job Location: SPT

Job Number: 150298m Phase: II

Task: GW sampling

Sample Location: RW02-P2m000 Name(s) of Sampler(s): Lisa Perrini

Description of Sample: Water Soil Other

PURGING

Time/Date Started: 1322 / 11-13-15
 Air Temperature: 59 (°F/°C)
 Weather Sunny Rain
 Conditions Overcast Other
 Depth to Water: _____ ft
 Total Well Depth: _____ ft
 Height of Water Column: _____ ft
 Well Diameter: 1-inch _____ 4-inch _____
 2-inch 6-inch _____
 Well Volume Calculation:
 _____ ft x _____ gal/ft = _____ gal
 Purge Volume = _____ x _____ = _____ gal
 Purging Method: Pump Bailed Other
 Gallons Removed: 1.50 gal
 Length of Time Purged 28 min
 Yield at End of Purging: 0.0536 gpm
 How was yield measured? _____
 Color clear Odor none
 Turbidity low
 Was well cavitating? Yes No

SAMPLING

Time/Date Started: 1400 / 11-13-15
 Air Temperature: 59 (°F/°C)
 Weather Sunny Rain
 Conditions Overcast Other
 Depth to Water: _____ ft
 Sampling Method: Bailer _____
 Submersible Pump _____
 Peristaltic Pump
 Other _____
 Number of Bottles Filled: 9
 Date Sent To Lab: 11-13-15
 Laboratory Name: PACE
 Parameters to Analyze: See COC

 Chain of Custody Number: _____
 Other: _____

FIELD DATA

Time	1325	1330	1335	1340	1345	1350	
Volume of water purged	0.25	0.50	0.75	1.00	1.25	1.50	gal
pH ± 0.1	6.83	6.93	7.14	7.20	7.23	7.24	s.u.
Conductance	0.758	0.748	0.743	0.738	0.734	0.732	ms/cm
Temperature 3%	16.94	16.93	17.01	16.71	16.52	16.53	°C
DO 10% <u>APHA (0.3)</u>	6.24	5.12	6.34	6.58	6.29	6.28	mg/l
Redox ± 10 mV	-91.9	-93.6	-92.8	-93.8	-95.3	-97.1	mV
Turbidity 75, 10%	2.85	1.85	1.37	1.28	0.85	1.09	NTU
SpC 3%	895	885	817	877	876	873	us/cm

Remarks: _____

Pipe 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

GROUNDWATER SAMPLING RECORD SHEET

Sheet Number 1 of 1

Job Name: Area A Parcel A3 Job Location: SPT
 Job Number: 150290m Phase: PDF Task: GW sampling
 Sample Location: RW02-P2M020 Name(s) of Sampler(s): Lisa Perrin
 Description of Sample: Water X Soil _____ Other _____

PURGING

Time/Date Started: 1200 / 11-13-15
 Air Temperature: 59 °F/°C
 Weather Sunny X Rain _____
 Conditions Overcast _____ Other _____
 Depth to Water: 12.03 ft
 Total Well Depth: _____ ft
 Height of Water Column: _____ ft
 Well Diameter: 1-inch _____ 4-inch _____
 2-inch X 6-inch _____
 Well Volume Calculation:
 _____ ft x _____ gal/ft = _____ gal
 Purge Volume = _____ x _____ = _____ gal
 Purging Method: Pump X Bailed _____ Other _____
 Gallons Removed: 1.75 gal
 Length of Time Purged 28 min
 Yield at End of Purging: 0.0625 gpm
 How was yield measured? By
 Color clear Odor none
 Turbidity low
 Was well cavitating? Yes _____ No _____

SAMPLING

Time/Date Started: 1240 / 11-13-15
 Air Temperature: 59 °F/°C
 Weather Sunny X Rain _____
 Conditions Overcast _____ Other _____
 Depth to Water: _____ ft
 Sampling Method: Bailer _____
 Submersible Pump _____
 Peristaltic Pump X
 Other _____
 Number of Bottles Filled: 16
 Date Sent To Lab: 11-13-15
 Laboratory Name: PHCE
 Parameters to Analyze: See COC
 Chain of Custody Number: _____
 Other: _____

FIELD DATA

Time	1203	1208	1223	1228	1233	1238	
Volume of water purged	0.25	0.50	1.00	1.25	1.50	1.75	gal
pH ± 0.1	4.91	4.49	4.40	4.25	4.19	4.17	s.u.
Conductance	2.822	3.263	3.369	3.292	3.224	3.134	ms/cm
Temperature %	16.63	16.25	16.37	16.46	16.43	16.45	°C
DO % <u>0.3</u>	0.32	0.18	0.18	0.21	0.19	0.17	mg/l
Redox ± 10 mV	-108.8	-102.3	-102.1	-104.1	-104.8	-107.0	mV
Turbidity 75, 10%	6.60	8.78	3.17	2.29	1.69	1.91	NTU
SpC 3%	3352	3959	4031	3939	3854	3741	us/cm

Remarks: * 3x
Volume was not
calculated b/c
permanent well.

Pipe 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

GROUNDWATER SAMPLING RECORD SHEET

Sheet Number 1 of 1

Job Name: Area A parcel A3 Job Location: SPT
 Job Number: 150298m Phase: II Task: GW Sampling
 Sample Location: RW07-P2M004 Name(s) of Sampler(s): Lisa Perrin
 Description of Sample: Water X Soil _____ Other _____

PURGING

Time/Date Started: 1100 / 11-13-15
 Air Temperature: 58 (°F/°C)
 Weather Sunny X Rain _____
 Conditions Overcast _____ Other _____
 Depth to Water: 6.20 ft
 Total Well Depth: _____ ft
 Height of Water Column: _____ ft
 Well Diameter: 1-inch _____ 4-inch _____
 2-inch X 6-inch _____
 Well Volume Calculation:
 _____ ft x _____ gal/ft = _____ gal
 Purge Volume = _____ x _____ = _____ gal
 Purging Method: Pump X Bailed _____ Other _____
 Gallons Removed: 1.60 gal
 Length of Time Purged: 22 min
 Yield at End of Purging: 0.073 gpm
 How was yield measured? _____
 Color Clear Odor none
 Turbidity low
 Was well cavitated? Yes _____ No _____

SAMPLING

Time/Date Started: 1125 / 11-13-15
 Air Temperature: 58 (°F/°C)
 Weather Sunny X Rain _____
 Conditions Overcast _____ Other _____
 Depth to Water: _____ ft
 Sampling Method: Bailer _____
 Submersible Pump _____
 Peristaltic Pump X
 Other _____
 Number of Bottles Filled: 9
 Date Sent To Lab: 11-13-15
 Laboratory Name: PACE
 Parameters to Analyze: see COC

 Chain of Custody Number: _____
 Other: _____

FIELD DATA

Time	1102	1107	1112	1117	1122		
Volume of water purged	0.25	0.50	0.75	1.20	1.60		gal
pH ± 0.1	6.22	6.76	7.13	7.24	7.28		s.u.
Conductance	0.497	0.436	0.423	0.425	0.430		ms/cm
Temperature %	18.54	18.44	18.49	18.46	18.50		°C
DO 100% 0.3	0.50	0.71	0.85	0.74	0.61		mg/l
Redox ± 10 mV	-87.2	-101.2	-110.8	-118.4	-124.2		mV
Turbidity 75, 10%	6.03	4.49	3.26	3.54	3.80		NTU
SpC 3%	540	499	480	486	491		us/cm

Remarks: _____

Well Volume: 1" I.D. = 0.041 gal/ft 4" I.D. = 0.653 gal/ft
 2" I.D. = 0.163 gal/ft 6" I.D. = 1.47 gal/ft

GROUNDWATER SAMPLING RECORD SHEET

Sheet Number 1 of 1

Job Name: Area A Parcel A3

Job Location: SPT

Job Number: 150298m Phase: PDI

Task: GW sampling

Sample Location: RW07-PZM07 Name(s) of Sampler(s): Lisa Perrin

Description of Sample: Water Soil Other

PURGING

Time/Date Started: 0941 / 11-13-15
 Air Temperature: 55 (°F) (°C)
 Weather Sunny Rain
 Conditions Overcast Other
 Depth to Water: 11.91 ft
 Total Well Depth: 30 ft
 Height of Water Column: ft
 Well Diameter: 1-inch 4-inch
 2-inch 6-inch
 Well Volume Calculation:
 ft x gal/ft = gal
 Purge Volume = x = gal
 Purging Method: Pump Bailed Other
 Gallons Removed: 1.75 gal
 Length of Time Purged 28 min
 Yield at End of Purging: 0.0625 gpm
 How was yield measured?
 Color clear Odor none
 Turbidity low
 Was well cavitating? Yes No

SAMPLING

Time/Date Started: 1015 / 11-13-15
 Air Temperature: 55 (°F) (°C)
 Weather Sunny Rain
 Conditions Overcast Other
 Depth to Water: ft
 Sampling Method: Bailer
 Submersible Pump
 Peristaltic Pump
 Other
 Number of Bottles Filled: 16
 Date Sent To Lab: 11-13-15
 Laboratory Name: PAC9
 Parameters to Analyze: See LOC
 Chain of Custody Number:
 Other:

FIELD DATA

Time	0944	0949	0954	0959	1004	1009	
Volume of water purged	0.25	0.50	1.00	1.25	1.50	1.75	gal
pH ± 0.1	5.24	4.49	4.30	4.19	4.14	4.10	s.u.
Conductance	2.666	2.641	2.610	2.597	2.592	2.577	ms/cm
Temperature deg	17.33	17.30	17.12	17.31	17.43	17.18	°C
DO deg <u>10%</u> 0.3	0.50	0.40	0.38	0.31	0.28	0.25	mg/l
Redox ± 10 mV	-38.6	-44.1	-48.6	-56.0	-60.9	-64.1	mV
Turbidity <u>75</u> , <u>10%</u>	1.73	1.47	1.82	0.61	0.83	0.68	NTU
SpC <u>3%</u>	3123	3096	3072	3043	3027	3030	us/cm

Remarks:

Pipe 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

GROUNDWATER SAMPLING RECORD SHEET

Sheet Number 1 of 1

Job Name: Area A Parcel A3 Job Location: SPT
 Job Number: 150298m Phase: II Task: 6w Sampling
 Sample Location: Ru20-P21000 Name(s) of Sampler(s): Lisa Ferrin
 Description of Sample: Water X Soil _____ Other _____

PURGING

Time/Date Started: 1019 / 11-16-12
 Air Temperature: 41 (°F/°C)
 Weather Sunny X Rain _____
 Conditions Overcast _____ Other _____
 Depth to Water: 4.41 ft
 Total Well Depth: _____ ft
 Height of Water Column: _____ ft
 Well Diameter: 1-inch _____ 4-inch _____
 2-inch X 6-inch _____
 Well Volume Calculation:
 _____ ft x _____ gal/ft = _____ gal
 Purge Volume = _____ x _____ = _____ gal
 Purging Method: Pump X Bailed _____ Other _____
 Gallons Removed: 1.00 gal
 Length of Time Purged 15 min
 Yield at End of Purging: 0.0666 gpm
 How was yield measured? _____
 Color Clear Odor none
 Turbidity low
 Was well cavitated? Yes _____ No _____

SAMPLING

Time/Date Started: 1045 / 11-16-12
 Air Temperature: 41 (°F/°C)
 Weather Sunny X Rain _____
 Conditions Overcast _____ Other _____
 Depth to Water: _____ ft
 Sampling Method: Bailer _____
 Submersible Pump _____
 Peristaltic Pump X
 Other _____
 Number of Bottles Filled: 9
 Date Sent To Lab: 11-16-15
 Laboratory Name: PALC
 Parameters to Analyze: see COC
 Chain of Custody Number: _____
 Other: _____

FIELD DATA

Time	1019	1024	1029	1034			
Volume of water purged	0.25	0.50	0.75	1.00			gal
pH ± 0.1	11.67	11.54	11.50	11.51			s.u.
Conductance	0.198	0.181	0.174	0.171			ms/cm
Temperature 3%	18.84	18.30	18.41	18.74			°C
DO 0.3 (0.3) 4%	1.02	0.86	0.68	0.52			mg/l
Redox ± 10 mV	-159.7	-153.8	-158.4	-160.8			mV
Turbidity 75, 10%	3.36	1.24	0.92	0.76			NTU
SpC 3%	241	225	199	194			us/cm

Remarks: permanent well

Pipe 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

TABLE 1
MULTIPARAMETER CALIBRATION LOG

Project Name Parcel A3 Date 10/26/15
 Weather Sunny 50s to 60s
 Calibrated by B. Gehman Instrument YSI Meter
 Serial Number NA

Parameters	Morning Calibration	Morning Temperature	End of Day Calibration Check	End of Day Temperature
Specific Conductance Standard #1	1.413	50 F (est.)	1.419	58 F
Specific Conductance Standard #2	NA	NA	NA	NA
pH (7)	7.00	50 F (est.)	7.22	58 F
pH (4)	4.00	50 F (est.)	4.31	58 F
pH(10)	10.00	50 F (est.)	9.60	58 F
ORP Zobel Solution	240.0	50 F (est.)	NA [‡]	58 F
Dissolved Oxygen 100% water saturated air mg/L	10.08	50 F (est.)	9.18 [‡]	58 F
Dissolved Oxygen Zero Dissolved Oxygen Solution mg/L	NA	50 F (est.)	NA	58 F
Barometric Pressure mm Hg	773.43	NA	772.41	NA
Turbidity #1 (10 NTU)	calibrated before each sample	NA	NA	NA
Turbidity #2 (0.0 NTU)	calibrated before each sample	NA	NA	NA
Turbidity Standard #3	NA	NA	NA	NA

[‡]DO is outside of the post-calibration acceptance criteria. A post-calibration check was not performed for ORP. Values displayed on field purge logs may be inaccurate.

TABLE 1
MULTIPARAMETER CALIBRATION LOG

Project Name Parcel A3 Date 10/27/15
 Weather 40s to 50s, cool
 Calibrated by B. Gehman Instrument YSI Meter
 Serial Number NA

Parameters	Morning Calibration	Morning Temperature	End of Day Calibration Check	End of Day Temperature
Specific Conductance Standard #1	1.409	39 F	1.443	58 F
Specific Conductance Standard #2	NA	NA	NA	NA
pH (7)	7.00	39 F	6.72	58 F
pH (4)	4.00	39 F	4.03	58 F
pH(10)	10.00	39 F	9.89	58 F
ORP Zobel Solution	240	39 F	240	58 F
Dissolved Oxygen 100% water saturated air mg/L	10.33	39 F	10.17	58 F
Dissolved Oxygen Zero Dissolved Oxygen Solution mg/L	NA	39 F	NA	58 F
Barometric Pressure mm Hg	773.94	NA	772.16	NA
Turbidity #1 (10 NTU)	NA	NA	NA	NA
Turbidity #2 (0.0 NTU)	NA	NA	NA	NA
Turbidity Standard #3	NA	NA	NA	NA

TABLE 1
MULTIPARAMETER CALIBRATION LOG

Project Name Parcel A3 Date 11/12/15
 Weather Cloudy 50s
 Calibrated by N. Kurtz & L. Perrin Instrument YSI Meter
 Serial Number NA

Parameters	Morning Calibration	Morning Temperature	End of Day Calibration Check*	End of Day Temperature
Specific Conductance Standard #1	1.446	55 F (est.)	1.078 [‡]	60 F (est.)
Specific Conductance Standard #2	NA	NA	NA	NA
pH (7)	7.00	55 F (est.)	7.00	60 F (est.)
pH (4)	4.00	55 F (est.)	3.87	60 F (est.)
pH(10)	10.00	55 F (est.)	10.00	60 F (est.)
ORP Zobel Solution	240	55 F (est.)	240	60 F (est.)
Dissolved Oxygen 100% water saturated air mg/L	99.9%	55 F (est.)	99.5%	60 F (est.)
Dissolved Oxygen Zero Dissolved Oxygen Solution mg/L	NA	55 F (est.)	NA	60 F (est.)
Barometric Pressure mm Hg	NA	NA	NA	NA
Turbidity #1 (10 NTU)	NA	NA	NA	NA
Turbidity #2 (0.0 NTU)	NA	NA	NA	NA
Turbidity Standard #3	NA	NA	NA	NA

[‡]Specific conductance is outside of the post-calibration acceptance criteria. Values displayed on field purge logs may be biased low.

TABLE 1
MULTIPARAMETER CALIBRATION LOG

Project Name Parcel A3 Date 11/13/15
 Weather Sunny 60s
 Calibrated by N. Kurtz & L. Perrin Instrument YSI Meter
 Serial Number NA

Parameters	Morning Calibration	Morning Temperature	End of Day Calibration Check	End of Day Temperature
Specific Conductance Standard #1	1.410	55 F (est.)	1.186 [‡]	57 F (est.)
Specific Conductance Standard #2	NA	NA	NA	NA
pH (7)	7.00	55 F (est.)	NA [‡]	57 F (est.)
pH (4)	3.87	55 F (est.)	NA [‡]	57 F (est.)
pH(10)	10.00	55 F (est.)	9.87	57 F (est.)
ORP Zobel Solution	240.0	55 F (est.)	NA [‡]	57 F (est.)
Dissolved Oxygen 100% water saturated air mg/L	99.5%	55 F (est.)	NA [‡]	57 F (est.)
Dissolved Oxygen Zero Dissolved Oxygen Solution mg/L	NA	55 F (est.)	NA	57 F (est.)
Barometric Pressure mm Hg	NA	NA	NA	NA
Turbidity #1 (10 NTU)	NA	NA	NA	NA
Turbidity #2 (0.0 NTU)	NA	NA	NA	NA
Turbidity Standard #3	NA	NA	NA	NA

[‡]Specific conductance is outside of the post-calibration acceptance criteria. Post-calibration checks were not performed for DO, ORP, or pH (4 & 7). Values displayed on field purge logs may be inaccurate.

TABLE 1
MULTIPARAMETER CALIBRATION LOG

Project Name Parcel A3 Date 11/16/15
 Weather Sunny 60s
 Calibrated by N. Kurtz & L. Perrin Instrument YSI Meter
 Serial Number NA

Parameters	Morning Calibration	Morning Temperature	End of Day Calibration Check	End of Day Temperature
Specific Conductance Standard #1	1.451	50 F (est.)	1.363	60 F (est.)
Specific Conductance Standard #2	NA	NA	NA	NA
pH (7)	7.01	50 F (est.)	6.89	60 F (est.)
pH (4)	3.99	50 F (est.)	2.89 [‡]	60 F (est.)
pH(10)	10.03	50 F (est.)	10.62	60 F (est.)
ORP Zobel Solution	240.0	50 F (est.)	216.2 [‡]	60 F (est.)
Dissolved Oxygen 100% water saturated air mg/L	100.3%	50 F (est.)	91.1% [‡]	60 F (est.)
Dissolved Oxygen Zero Dissolved Oxygen Solution mg/L	NA	50 F (est.)	NA	60 F (est.)
Barometric Pressure mm Hg	NA	NA	NA	NA
Turbidity #1 (10 NTU)	NA	NA	NA	NA
Turbidity #2 (0.0 NTU)	NA	NA	NA	NA
Turbidity Standard #3	NA	NA	NA	NA

[‡]ORP, DO and pH = 4 are outside of the post-calibration acceptance criteria. Values displayed on field purge logs may be biased low.

TABLE 1
MULTIPARAMETER CALIBRATION LOG

Project Name Parcel A3 Date 11/17/15
 Weather Sunny 40s
 Calibrated by N. Kurtz & L. Perrin Instrument YSI Meter
 Serial Number NA

Parameters	Morning Calibration	Morning Temperature	End of Day Calibration Check	End of Day Temperature
Specific Conductance Standard #1	0.985 [‡]	52 F (est.)	1.005 [‡]	55 F (est.)
Specific Conductance Standard #2	NA	NA	NA	NA
pH (7)	6.99	52 F (est.)	5.27 [‡]	55 F (est.)
pH (4)	3.58	52 F (est.)	-0.67 [‡]	55 F (est.)
pH(10)	10.08	52 F (est.)	10.17	55 F (est.)
ORP Zobel Solution	240.0	52 F (est.)	235.4	55 F (est.)
Dissolved Oxygen 100% water saturated air mg/L	99.9%	52 F (est.)	100.8%	55 F (est.)
Dissolved Oxygen Zero Dissolved Oxygen Solution mg/L	NA	52 F (est.)	NA	55 F (est.)
Barometric Pressure mm Hg	NA	NA	NA	NA
Turbidity #1 (10 NTU)	NA	NA	NA	NA
Turbidity #2 (0.0 NTU)	NA	NA	NA	NA
Turbidity Standard #3	NA	NA	NA	NA

[‡]Specific conductance and pH < 10 are outside of the post-calibration acceptance criteria. Values displayed on field purge logs may be biased low.

APPENDIX G

Parcel A3 - IDW Drum Log Phase II Investigation

Drum ID	Designation	Activity/Phase	Contents	Open Date
5-N. Acid-9/15/15-A	Non-haz.	Area A	Nitric Acid	9/15/2015
6-Hexane-9/15/15-A	Hazardous	Area A	Hexane	9/15/2015
8-Liners-9/21/15-A3 (RWM)	Non-haz.	Parcel A3	Liners	9/21/2015
9-PPE-9/21/15-A3 (RWM)	Non-haz.	Parcel A3	PPE	9/21/2015
10-Soil-9/21/15-A3 (RWM)	Non-haz.	Parcel A3	Soil	9/21/2015
11-Decon Water-9/21/15-A3 (RWM)	Non-haz.	Parcel A3	Decon water	9/21/2015
12-Soil-9/23/15-A3 (RWM)	Non-haz.	Parcel A3	Soil	9/23/2015
13-Liners-9/23/15-A3 (RWM)	Non-haz.	Parcel A3	Liners	9/23/2015
14-Soil-9/25/15-A3 (RWM)	Non-haz.	Parcel A3	Soil	9/25/2015
15-PPE-9/25/15-A3 (RWM)	Non-haz.	Parcel A3	PPE	9/25/2015
16-Soil-9/29/15-A3 (RWM)	Non-haz.	Parcel A3	Soil	9/29/2015
17-Soil-9/29/25-A3 (RWM)	Non-haz.	Parcel A3	Soil	9/29/2015
18-Liners-9/29/15-A3 (RWM)	Non-haz.	Parcel A3	Liners	9/29/2015
19-Decon Water-9/29/15-A3 (RWM)	Non-haz.	Parcel A3	Decon water	9/29/2015
20-PPE-9/30/15-A3 (RWM)	Non-haz.	Parcel A3	PPE	9/30/2015
29-Soil-10/1/15-A3 (RWM)	Non-haz.	Parcel A3	Soil	10/1/2015
RW-24-PZM(I) Soil	Non-haz.	Parcel A3	Soil	10/15/2015
31 RW 24-PZM(I) Soil	Non-haz.	Parcel A3	Soil	10/15/2015
32 RW 24-PZM(I) Soil	Non-haz.	Parcel A3	Soil	10/15/2015
33 RW 23-PZM(I) Soil	Non-haz.	Parcel A3	Soil	10/16/2015
34 RW 23-PZM(I) Soil	Non-haz.	Parcel A3	Soil	10/16/2015
RW22-PZM(I) Soil	Non-haz.	Parcel A3	Soil	10/21/2015
RW22-PZM(I) Soil	Non-haz.	Parcel A3	Soil	10/20/2015
RW-(22,23,24) PZM(I)	Non-haz.	Parcel A3	Purge water	10/22/2015

Drum ID	Designation	Activity/Phase	Contents	Open Date
61-Purge Water-11/4/15-A3	Hazardous	Parcel A3	Purge water	11/4/2015
78-Purge water-11/16/15-A3	Non-haz.	Parcel A3	Purge water	11/16/2015
91-PPE-11/11/15-A3	Non-haz.	Parcel A3	PPE	11/11/2015
93-Dec Water-11/11/15-A3	Non-haz.	Parcel A3	Decon water	11/11/2015

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APPENDIX H

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(Electronic Attachment)

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APPENDIX I

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APPENDIX J

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APPENDIX L

**NAPL MEASUREMENT AND REMOVAL ACTIVITIES
Parcel A3: RW22-PZM**

2/24/2016	Depth to Product (feet)	10.59
	Depth to Water (feet)	10.59
	Total Product Thickness (feet)	0
	Product Recovered (gallons)	15
3/4/2016	Depth to Product (feet)	9.69
	Depth to Water (feet)	9.84
	Total Product Thickness (feet)	0.15
	Product Recovered (gallons)	1
3/11/2016	Depth to Product (feet)	10.02
	Depth to Water (feet)	10.19
	Total Product Thickness (feet)	0.17
	Product Recovered (gallons)	0.5
3/18/2016	Depth to Product (feet)	9.56
	Depth to Water (feet)	9.72
	Total Product Thickness (feet)	0.16
	Product Recovered (gallons)	0.5
3/24/2016	Depth to Product (feet)	10.03
	Depth to Water (feet)	10.23
	Total Product Thickness (feet)	0.2
	Product Recovered (gallons)	0.5
3/30/2016	Depth to Product (feet)	10.33
	Depth to Water (feet)	10.59
	Total Product Thickness (feet)	0.26
	Product Recovered (gallons)	0.5
4/14/2016	Depth to Product (feet)	10.11
	Depth to Water (feet)	10.6
	Total Product Thickness (feet)	0.49
	Product Recovered (gallons)	-
4/25/2016	Depth to Product (feet)	10.24
	Depth to Water (feet)	10.32
	Total Product Thickness (feet)	0.08
	Product Recovered (gallons)	-
5/2/2016	Depth to Product (feet)	10.63
	Depth to Water (feet)	10.79
	Total Product Thickness (feet)	0.16
	Product Recovered (gallons)	-
5/9/2016	Depth to Product (feet)	9.42
	Depth to Water (feet)	9.75
	Total Product Thickness (feet)	0.33
	Product Recovered (gallons)	-
5/16/2016	Depth to Product (feet)	8.1
	Depth to Water (feet)	8.23
	Total Product Thickness (feet)	0.13
	Product Recovered (gallons)	-
5/23/2016	Depth to Product (feet)	9.39
	Depth to Water (feet)	9.55
	Total Product Thickness (feet)	0.16
	Product Recovered (gallons)	-
6/1/2016	Depth to Product (feet)	9.5
	Depth to Water (feet)	10.18
	Total Product Thickness (feet)	0.68
	Product Recovered (gallons)	-
6/7/2016	Depth to Product (feet)	9.52
	Depth to Water (feet)	9.62
	Total Product Thickness (feet)	0.1
	Product Recovered (gallons)	-

APPENDIX M

QA/QC Tracking Log

Date:	Sample IDs	
9/21/2015	1) RW-020-SB-1	
	2) RW-020-SB-4	
	3) RW-020-SB-7	
	4) RW-022-SB-1	
	5) RW-022-SB-8.5	
	6) RW-021-SB-1	
	7) RW-012-SB-1	Duplicate: RW-012-SB-5
	8) RW-012-SB-5	Date: 9/21/2015
	9) RW-012-SB-8	MS/MSD: RW-023-SB-5
	10) RW-051-SB-1	Date: 9/22/2015
	11) RW-051-SB-5	Field Blank:
	12) RW-051-SB-10	Date: 9/22/2015
	13) RW-015-SB-1	Eq. Blank:
	14) RW-015-SB-5	Date: 9/22/2015
	15) RW-015-SB-10	
9/22/2015	16) RW-021-SB-6	
	17) RW-021-SB-10	
	18) RW-019-SB-1	
	19) RW-019-SB-4	
	20) RW-019-SB-10	

Date:	Sample IDs	
9/23/2015	1) RW-013-SB-5	
	2) RW-013-SB-10	
	3) RW-016-SB-1	
	4) RW-016-SB-4	
	5) RW-050-SB-1	
	6) RW-050-SB-4.5	
	7) RW-030-SB-1	Duplicate: RW-029-SB-1
	8) RW-030-SB-5	Date: 9/23/2015
	9) RW-030-SB-10	MS/MSD: RW-030-SB-1
	10) RW-029-SB-1	Date: 9/23/2015
	11) RW-029-SB-7	Field Blank:
	12) RW-031-SB-1	Date: 9/25/2015
	13) RW-31-SB-6	Eq. Blank:
	14) RW-018-SB-1	Date: 9/25/2015
	9/25/2015	15) RW-018-SB-5
16) RW-032-SB-1		
17) RW-032-SB-5		
18) RW-032-SB-10		
19) RW-043-SB-1		
20) RW-043-SB-8		

9/22/2015	1) RW-023-SB-1	
	2) RW-023-SB-5	
	3) RW-023-SB-10	
	4) RW-014-SB-1	
	5) RW-014-SB-5	
	6) RW-024-SB-1	
	7) RW-024-SB-6	Duplicate: RW-041-SB-1
	8) RW-024-SB-10	Date: 9/23/2015
	9) RW-025-SB-1	MS/MSD: RW-026-SB-5
	10) RW-025-SB-5	Date: 9/22/2015
9/23/2015	11) RW-026-SB-1	Field Blank:
	12) RW-026-SB-5	Date: 9/23/2015
	13) RW-041-SB-1	Eq. Blank:
	14) RW-041-SB-5	Date: 9/23/2015
	15) RW-027-SB-1	
	16) RW-027-SB-5	
	17) RW-027-SB-10	
	18) RW-028-SB-1	
	19) RW-028-SB-5	
	20) RW-013-SB-1	

9/23/2015	1) RW-043-SB-10	
9/25/2015	2) RW-011-SB-1	
	3) RW-011-SB-5	
	4) RW-033-SB-1	
	5) RW-033-SB-6.5	
	6) RW-033-SB-10	
	7) RW-009-SB-1	Duplicate: RW-009-SB-5
	8) RW-009-SB-5	Date: 9/25/2015
	9) RW-009-SB-10	MS/MSD: RW-033-SB-6.5
	10) RW-056-SB-1	Date: 9/25/2015
	11) RW-056-SB-5	Field Blank:
12) RW-056-SB-10	Date: 9/25/2015	
9/15/2015	13) RW-046-SB-1	Eq. Blank:
	14) RW-046-SB-5	Date: 9/15/2015
	15) RW-046-SB-10	
	16) RW-038-SB-1	
	17) RW-038-SB-5	
	18) RW-038-SB-10	
	19) RW-010-SB-1	
	20) RW-010-SB-7	

Trip Blanks: 9/21/2015, 9/22/2015, 9/23/2015, 9/25/2015

QA/QC Tracking Log

Date:	Sample IDs	
9/25/2015	1) RW-010-SB-10	
	2) RW-054-SB-1	
	3) RW-054-SB-5	
	4) RW-054-SB-10	
	5) RW-048-SB-1	
	6) RW-048-SB-5	
	7) RW-048-SB-10	Duplicate: RW-054-SB-5
9/28/2015	8) RW-053-SB-1	Date: 9/25/2015
	9) RW-053-SB-5	MS/MSD: RW-048-SB-5
	10) RW-053-SB-10	Date: 9/25/2015
	11) RW-052-SB-1	Field Blank:
	12) RW-052-SB-5	Date: 9/28/2015
	13) RW-047-SB-1	Eq. Blank:
	14) RW-047-SB-6	Date: 9/28/2015
	15) RW-047-SB-10	
	16) RW-045-SB-1	
	17) RW-045-SB-5	
	18) RW-045-SB-10	
	19) RW-055-SB-1	
	20) RW-055-SB-5	

Date:	Sample IDs	
9/29/2015	1) RW-037-SB-1	
	2) RW-037-SB-8	
	3) RW-037-SB-10	
	4) RW-039-SB-1	
	5) RW-039-SB-5	
	6) RW-039-SB-10	
	7) RW-008-SB-1	Duplicate: RW-008-SB-1
	8) RW-008-SB-5	Date: 9/29/2015
	9) RW-008-SB-10	MS/MSD: RW-039-SB-5
	10) RW-003-SB-1	Date: 9/29/2015
	11) RW-003-SB-5	Field Blank:
	12) RW-003-SB-10	Date:
	13) RW-002-SB-1	Eq. Blank:
	14) RW-002-SB-4.5	Date:
	15) RW-017-SB-1	
	16) RW-017-SB-6	
	17) RW-017-SB-10	
9/30/2015	18) RW-049-SB-1	
	19) RW-049-SB-5	
	20) RW-049-SB-10	

9/28/2016	1) RW-055-SB-10	
	2) RW-055A-SB-7	
	3) RW-044-SB-1	
	4) RW-044-SB-5	
	5) RW-044-SB-10	
	6) RW-040-SB-1	
	7) RW-040-SB-6	Duplicate: RW-044-SB-5
	8) RW-040-SB-10	Date: 9/28/2015
	9) RW-007-SB-1	MS/MSD: RW-034-SB-5
	10) RW-007-SB-5	Date: 9/28/2015
	11) RW-007-SB-10	Field Blank:
	12) RW-034-SB-1	Date: 9/28/2015
	13) RW-034-SB-5	Eq. Blank:
	14) RW-034-SB-10	Date: 9/28/2015
9/29/2016	15) RW-035-SB-1	
	16) RW-035-SB-5	
	17) RW-035-SB-10	
	18) RW-036-SB-1	
	19) RW-036-SB-4	
	20) RW-036-SB-10	

9/30/2015	1) RW-042-SB-1	
	2) RW-042-SB-5	
	3) RW-042-SB-10	
	4) RW-073-SB-0.5	
	5) RW-074-SB-0.5	
	6) RW-075-SB-1	
	7) RW-072-SB-1	Duplicate: RW-071-SB-1
	8) RW-071-SB-1	Date: 9/30/2015
10/1/2015	9) RW-057-SB-1	MS/MSD: RW-042-SB-5
	10) RW-057-SB-3	Date: 9/30/2015
	11) RW-057-SB-6	Field Blank:
	12) RW-057-SB-15	Date: 9/30/2015
	13) RW-057-SB-16	Eq. Blank:
	14) RW-057-SB-23	Date: 9/30/2015
	15) RW-057-SB-29	
	16) RW-057-SB-32	
	17) RW-001-SB-1	
	18) RW-001-SB-5	
	19) RW-059-SB-1	
	20) RW-059-SB-3	

Trip Blanks: 9/28/2015, 9/29/2015, 9/30/2015, 10/1/2015

QA/QC Tracking Log

Date:	Sample IDs	
10/1/2015	1) RW-059-SB-6	
	2) RW-059-SB-11	
	3) RW-059-SB-20	
	4) RW-059-SB-23	
	5) RW-059-SB-26	
	6) RW-059-SB-34	
10/5/2015	7) RW-061-SB-1	<u>Duplicate:</u> RW-059-SB-26
	8) RW-061-SB-2	<u>Date:</u> 10/1/2015
	9) RW-061-SB-7	<u>MS/MSD:</u> RW-059-SB-34
	10) RW-061-SB-11	<u>Date:</u> 10/1/2015
	11) RW-061-SB-19	<u>Field Blank:</u>
	12) RW-061-SB-21	<u>Date:</u> 10/1/2015
	13) RW-061-SB-29	<u>Eq. Blank:</u>
	14) RW-061-SB-34	<u>Date:</u> 10/1/2015
	15) RW-062-SB-1	
	16) RW-062-SB-3	
	17) RW-062-SB-10	
	18) RW-062-SB-15	
	19) RW-062-SB-20	
	20) RW-062-SB-22	

Date:	Sample IDs	
	1) RW-004-SB-10	
	2) RW-063-SB-1	
	3) RW-063-SB-5	
	4) RW-063-SB-8	
	5) RW-063-SB-19	
	6) RW-063-SB-25	
10/6/2015	7) RW-063-SB-30	<u>Duplicate:</u> RW-063-SB-13
	8) RW-063-SB-13	<u>Date:</u> 10/6/2015
	9) RW-063-SB-42	<u>MS/MSD:</u> RW-064-SB-16
	10) RW-064-SB-1	<u>Date:</u> 10/6/2015
	11) RW-064-SB-5	<u>Field Blank:</u>
	12) RW-064-SB-8	<u>Date:</u> 10/6/2015
	13) RW-064-SB-12	<u>Eq. Blank:</u>
	14) RW-064-SB-16	<u>Date:</u> 10/6/2015
	15) RW-064-SB-21	
	16) RW-064-SB-29	
	17) RW-064-SB-32	
	18) RW-005-SB-1	
	19) RW-005-SB-5	
	10/7/2015	20) RW-067-SB-1

10/5/2015	1) RW-062-SB-30	
	2) RW-062-SB-32	
	3) RW-060-SB-1	
	4) RW-060-SB-4	
	5) RW-060-SB-7	
	6) RW-060-SB-12	
	7) RW-060-SB-20	<u>Duplicate:</u> RW-060-SB-12
	8) RW-060-SB-22	<u>Date:</u> 10/5/2015
	9) RW-060-SB-26	<u>MS/MSD:</u> RW-058-SB-8
	10) RW-060-SB-33	<u>Date:</u> 10/5/2015
	11) RW-058-SB-1	<u>Field Blank:</u>
	12) RW-058-SB-2	<u>Date:</u> 10/5/2015
	13) RW-058-SB-8	<u>Eq. Blank:</u>
	14) RW-058-SB-15	<u>Date:</u> 10/5/2015
10/6/2015	15) RW-058-SB-20	
	16) RW-058-SB-22	
	17) RW-058-SB-28	
	18) RW-058-SB-32	
	19) RW-004-SB-1	
	20) RW-004-SB-5	

10/7/2015	1) RW-067-SB-2	
	2) RW-067-SB-8	
	3) RW-067-SB-12	
	4) RW-067-SB-19	
	5) RW-067-SB-25	
	6) RW-067-SB-26	
	7) RW-067-SB-35	<u>Duplicate:</u> RW-067-SB-35
	8) RW-066-SB-1	<u>Date:</u> 10/7/2015
	9) RW-066-SB-4	<u>MS/MSD:</u> RW-066-SB-4
	10) RW-066-SB-6	<u>Date:</u> 10/7/2015
	11) RW-066-SB-11	<u>Field Blank:</u>
	12) RW-066-SB-20	<u>Date:</u> 10/7/2015
	13) RW-066-SB-27	<u>Eq. Blank:</u>
	14) RW-066-SB-35	<u>Date:</u> 10/7/2015
	15) RW-069-SB-1	
	16) RW-069-SB-3	
	17) RW-069-SB-10	
	18) RW-069-SB-12	
	19) RW-069-SB-20	
	20) RW-069-SB-23	

Trip Blanks: 10/5/2015, 10/6/2015, 10/7/2015

QA/QC Tracking Log

Date:	Sample IDs		
10/7/2015	1)	RW-069-SB-28	
	2)	RW-069-SB-35	
	3)	RW-068-SB-1	
	4)	RW-068-SB-5	
	5)	RW-068-SB-7	
	6)	RW-068-SB-12	
	7)	RW-068-SB-17	<u>Duplicate:</u> RW-070-SB-3
	8)	RW-068-SB-22	<u>Date:</u> 10/8/2015
	9)	RW-068-SB-26	<u>MS/MSD:</u> RW-070-SB-20
	10)	RW-068-SB-32	<u>Date:</u> 10/8/2015
10/8/2015	11)	RW-006-SB-1	<u>Field Blank:</u>
	12)	RW-006-SB-5	<u>Date:</u> 10/8/2015
	13)	RW-070-SB-1	<u>Eq. Blank:</u>
	14)	RW-070-SB-3	<u>Date:</u> 10/8/2015
	15)	RW-070-SB-7	
	16)	RW-070-SB-15	
	17)	RW-070-SB-20	
	18)	RW-070-SB-22	
	19)	RW-070-SB-27	
	20)	RW-070-SB-32	

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

	1)	RW-065-SB-1	
	2)	RW-065-SB-5	
	3)	RW-065-SB-9	
	4)	RW-065-SB-15	
	5)	RW-065-SB-19	
	6)	RW-065-SB-24	
	7)	RW-065-SB-26	<u>Duplicate:</u> RW-079-SB-5
	8)	RW-065-SB-35	<u>Date:</u> 10/8/2015
	9)	RW-076-SB-1	<u>MS/MSD:</u> RW-065-SB-35
10/8/2015	10)	RW-076-SB-6	<u>Date:</u> 10/8/2015
	11)	RW-076-SB-10	<u>Field Blank:</u>
	12)	RW-077-SB-1	<u>Date:</u> 10/8/2015
	13)	RW-077-SB-5	<u>Eq. Blank:</u>
	14)	RW-077-SB-10	<u>Date:</u> 10/8/2015
	15)	RW-078-SB-1	
	16)	RW-078-SB-5	
	17)	RW-078-SB-10	
	18)	RW-079-SB-1	
	19)	RW-079-SB-5	
20)	RW-079-SB-10		

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	2)		
	3)		
	4)		
	5)		
	6)		
	7)		<u>Duplicate:</u>
	8)		<u>Date:</u>
	9)		<u>MS/MSD:</u>
	10)		<u>Date:</u>
	11)		<u>Field Blank:</u>
	12)		<u>Date:</u>
	13)		<u>Eq. Blank:</u>
	14)		<u>Date:</u>
	15)		
	16)		
	17)		
	18)		
	19)		
	20)		

Trip Blanks:10/8/2015

QA/QC Tracking Log

Date:	Sample IDs		
*3/14/2016	1)	RW-008-SB-1	
	2)	RW-008-SB-5	
	3)	RW-006-SB-1	
	4)	RW-006-SB-5	
	5)	RW-005-SB-1	
	6)	RW-005-SB-5	
	7)	RW-037-SB-1	<u>Duplicate:</u> RW-008-SB-1
	8)	RW-037-SB-8	<u>Date:</u> 3/14/2016
	9)	RW-039-SB-1	<u>MS/MSD:</u> RW-079-SB-1
	10)	RW-036-SB-1	<u>Date:</u> 3/14/2016
	11)	RW-001-SB-1	<u>Field Blank:</u>
	12)	RW-001-SB-5	<u>Date:</u> 3/14/2016
	13)	RW-055-SB-1	<u>Eq. Blank:</u>
	14)	RW-045-SB-1	<u>Date:</u> 3/14/2016
	15)	RW-044-SB-1	<u>Notes:</u> *SVOC only
	16)	RW-040-SB-1	and no trip blank
	17)	RW-034-SB-1	
	18)	RW-007-SB-1	
	19)	RW-079-SB-1	
	20)	RW-079-SB-5	

Date:	Sample IDs		
*3/18/2019	1)	RW-073-SB-0.5	
	2)	RW-074-SB-0.5	
	3)	RW-075-SB-1	
*4/13/2016	4)	RW-004-SB-10	
	5)		
	6)		
	7)		<u>Duplicate:</u> RW-075-SB-1
	8)		<u>Date:</u> 3/18/2016
	9)		<u>MS/MSD:</u> RW-073-SB-0.5
	10)		<u>Date:</u>
	11)		<u>Field Blank:</u>
	12)		<u>Date:</u> 3/18/2016
	13)		<u>Eq. Blank:</u>
	14)		<u>Date:</u> 3/18/2016
	15)		<u>Notes:</u> *SVOC only
	16)		and no trip blank
	17)		
	18)		
	19)		
	20)		

*3/14/2016	1)	RW-078-SB-1	
	2)	RW-078-SB-5	
	3)	RW-076-SB-1	
	4)	RW-076-SB-6	
	5)	RW-077-SB-1	
	6)	RW-077-SB-5	
	7)	RW-049-SB-1	<u>Duplicate:</u> RW-079-SB-5
	8)	RW-049-SB-5	<u>Date:</u> 3/14/2016
	9)	RW-017-SB-1	<u>MS/MSD:</u> RW-004-SB-5
	10)	RW-017-SB-6	<u>Date:</u> 3/15/2016
*3/15/2016	11)	RW-002-SB-1	<u>Field Blank:</u>
	12)	RW-002-SB-4.5	<u>Date:</u> 3/14/2016
	13)	RW-003-SB-1	<u>Eq. Blank:</u>
	14)	RW-003-SB-5	<u>Date:</u> 3/14/2016
	15)	RW-042-SB-1	<u>Notes:</u> *SVOC only
	16)	RW-042-SB-5	and no trip blank
	17)	RW-004-SB-1	
	18)	RW-004-SB-5	
*3/18/2016	19)	RW-071-SB-1	
	20)	RW-072-SB-2	

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7)	<u>Duplicate:</u>
8)	<u>Date:</u>
9)	<u>MS/MSD:</u>
10)	<u>Date:</u>
11)	<u>Field Blank:</u>
12)	<u>Date:</u>
13)	<u>Eq. Blank:</u>
14)	<u>Date:</u>
15)	
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Trip Blanks:

APPENDIX N

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

Parameter	Parameter Group	Matrix	Unit	Number of Results	Detections	Number of Rejected Results	Number of Non-rejected Results	Completeness
Cyanide	CN	Soil	mg/kg	126	79	0	126	100.00%
Aluminum	Metal	Soil	mg/kg	126	126	0	126	100.00%
Antimony	Metal	Soil	mg/kg	126	6	1	125	99.21%
Arsenic	Metal	Soil	mg/kg	151	135	0	151	100.00%
Barium	Metal	Soil	mg/kg	126	126	0	126	100.00%
Beryllium	Metal	Soil	mg/kg	126	113	0	126	100.00%
Cadmium	Metal	Soil	mg/kg	126	98	0	126	100.00%
Chromium	Metal	Soil	mg/kg	126	126	0	126	100.00%
Chromium VI	Metal	Soil	mg/kg	126	26	0	126	100.00%
Cobalt	Metal	Soil	mg/kg	126	121	0	126	100.00%
Copper	Metal	Soil	mg/kg	126	126	0	126	100.00%
Iron	Metal	Soil	mg/kg	126	126	0	126	100.00%
Lead	Metal	Soil	mg/kg	126	124	0	126	100.00%
Manganese	Metal	Soil	mg/kg	127	127	0	127	100.00%
Mercury	Metal	Soil	mg/kg	126	110	1	125	99.21%
Nickel	Metal	Soil	mg/kg	126	126	0	126	100.00%
Selenium	Metal	Soil	mg/kg	126	19	0	126	100.00%
Silver	Metal	Soil	mg/kg	126	25	0	126	100.00%
Thallium	Metal	Soil	mg/kg	126	4	0	126	100.00%
Vanadium	Metal	Soil	mg/kg	126	126	0	126	100.00%
Zinc	Metal	Soil	mg/kg	126	126	0	126	100.00%
Aroclor 1016	PCB	Soil	mg/kg	64	0	0	64	100.00%
Aroclor 1221	PCB	Soil	mg/kg	64	0	0	64	100.00%
Aroclor 1232	PCB	Soil	mg/kg	64	0	0	64	100.00%
Aroclor 1242	PCB	Soil	mg/kg	64	2	0	64	100.00%
Aroclor 1248	PCB	Soil	mg/kg	64	3	0	64	100.00%
Aroclor 1254	PCB	Soil	mg/kg	64	5	0	64	100.00%
Aroclor 1260	PCB	Soil	mg/kg	64	9	0	64	100.00%
PCBs (total)	PCB	Soil	mg/kg	64	12	0	64	100.00%
1,1-Biphenyl	SVOC	Soil	mg/kg	127	16	0	127	100.00%
1,2,4,5-Tetrachlorobenzene	SVOC	Soil	mg/kg	127	0	0	127	100.00%
2,3,4,6-Tetrachlorophenol	SVOC	Soil	mg/kg	127	0	25	102	80.31%
2,4,5-Trichlorophenol	SVOC	Soil	mg/kg	127	1	25	102	80.31%
2,4,6-Trichlorophenol	SVOC	Soil	mg/kg	127	0	25	102	80.31%
2,4-Dichlorophenol	SVOC	Soil	mg/kg	127	0	24	103	81.10%
2,4-Dimethylphenol	SVOC	Soil	mg/kg	127	3	24	103	81.10%
2,4-Dinitrophenol	SVOC	Soil	mg/kg	127	0	26	101	79.53%
2,4-Dinitrotoluene	SVOC	Soil	mg/kg	127	0	1	126	99.21%
2,6-Dinitrotoluene	SVOC	Soil	mg/kg	127	0	0	127	100.00%
2-Chloronaphthalene	SVOC	Soil	mg/kg	127	0	0	127	100.00%
2-Chlorophenol	SVOC	Soil	mg/kg	127	0	24	103	81.10%
2-Methylnaphthalene	SVOC	Soil	mg/kg	131	78	0	131	100.00%
2-Methylphenol	SVOC	Soil	mg/kg	127	1	23	104	81.89%
2-Nitroaniline	SVOC	Soil	mg/kg	127	0	0	127	100.00%
3&4-Methylphenol(m&p Cresol)	SVOC	Soil	mg/kg	127	7	22	105	82.68%
3,3'-Dichlorobenzidine	SVOC	Soil	mg/kg	127	0	63	64	50.39%
4-Chloroaniline	SVOC	Soil	mg/kg	127	0	1	126	99.21%
4-Nitroaniline	SVOC	Soil	mg/kg	127	0	0	127	100.00%
Acenaphthene	SVOC	Soil	mg/kg	131	59	0	131	100.00%
Acenaphthylene	SVOC	Soil	mg/kg	131	64	0	131	100.00%
Acetophenone	SVOC	Soil	mg/kg	127	5	0	127	100.00%
Anthracene	SVOC	Soil	mg/kg	131	91	0	131	100.00%
Benzaldehyde	SVOC	Soil	mg/kg	127	30	33	94	74.02%
Benzo[a]anthracene	SVOC	Soil	mg/kg	131	106	0	131	100.00%
Benzo[a]pyrene	SVOC	Soil	mg/kg	131	96	0	131	100.00%
Benzo[b]fluoranthene	SVOC	Soil	mg/kg	131	103	0	131	100.00%
Benzo[g,h,i]perylene	SVOC	Soil	mg/kg	131	104	0	131	100.00%
Benzo[k]fluoranthene	SVOC	Soil	mg/kg	131	102	0	131	100.00%

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

Parameter	Parameter Group	Matrix	Unit	Number of Results	Detections	Number of Rejected Results	Number of Non-rejected Results	Completeness
bis(2-chloroethoxy)methane	SVOC	Soil	mg/kg	127	0	0	127	100.00%
bis(2-Chloroethyl)ether	SVOC	Soil	mg/kg	127	0	0	127	100.00%
bis(2-Chloroisopropyl)ether	SVOC	Soil	mg/kg	127	0	0	127	100.00%
bis(2-Ethylhexyl)phthalate	SVOC	Soil	mg/kg	127	8	0	127	100.00%
Caprolactam	SVOC	Soil	mg/kg	127	1	0	127	100.00%
Carbazole	SVOC	Soil	mg/kg	127	29	0	127	100.00%
Chrysene	SVOC	Soil	mg/kg	131	109	0	131	100.00%
Dibenz[a,h]anthracene	SVOC	Soil	mg/kg	131	65	0	131	100.00%
Diethylphthalate	SVOC	Soil	mg/kg	127	0	0	127	100.00%
Di-n-butylphthalate	SVOC	Soil	mg/kg	127	2	0	127	100.00%
Di-n-octylphthalate	SVOC	Soil	mg/kg	127	1	0	127	100.00%
Fluoranthene	SVOC	Soil	mg/kg	131	108	0	131	100.00%
Fluorene	SVOC	Soil	mg/kg	131	100	0	131	100.00%
Hexachlorobenzene	SVOC	Soil	mg/kg	127	0	0	127	100.00%
Hexachlorobutadiene	SVOC	Soil	mg/kg	127	0	0	127	100.00%
Hexachlorocyclopentadiene	SVOC	Soil	mg/kg	127	0	2	125	98.43%
Hexachloroethane	SVOC	Soil	mg/kg	127	0	0	127	100.00%
Indeno[1,2,3-c,d]pyrene	SVOC	Soil	mg/kg	131	72	0	131	100.00%
Isophorone	SVOC	Soil	mg/kg	127	0	0	127	100.00%
Naphthalene	SVOC	Soil	mg/kg	131	89	0	131	100.00%
Nitrobenzene	SVOC	Soil	mg/kg	127	0	0	127	100.00%
N-Nitroso-di-n-propylamine	SVOC	Soil	mg/kg	127	0	0	127	100.00%
N-Nitrosodiphenylamine	SVOC	Soil	mg/kg	127	0	0	127	100.00%
Pentachlorophenol	SVOC	Soil	mg/kg	127	0	26	101	79.53%
Phenanthrene	SVOC	Soil	mg/kg	131	93	0	131	100.00%
Phenol	SVOC	Soil	mg/kg	127	4	18	109	85.83%
Pyrene	SVOC	Soil	mg/kg	131	111	0	131	100.00%
Diesel Range Organics	TPH	Soil	mg/kg	12	7	0	12	100.00%
Gasoline Range Organics	TPH	Soil	mg/kg	24	2	0	24	100.00%
Oil and Grease	TPH	Soil	mg/kg	123	123	0	123	100.00%
1,1,1-Trichloroethane	VOC	Soil	mg/kg	128	0	4	124	96.88%
1,1,2,2-Tetrachloroethane	VOC	Soil	mg/kg	128	0	4	124	96.88%
1,1,2-Trichloro-1,2,2-Trifluoroethane	VOC	Soil	mg/kg	128	0	22	106	82.81%
1,1,2-Trichloroethane	VOC	Soil	mg/kg	128	1	3	125	97.66%
1,1-Dichloroethane	VOC	Soil	mg/kg	128	2	4	124	96.88%
1,1-Dichloroethene	VOC	Soil	mg/kg	128	0	4	124	96.88%
1,2,3-Trichlorobenzene	VOC	Soil	mg/kg	128	1	4	124	96.88%
1,2,4-Trichlorobenzene	VOC	Soil	mg/kg	128	0	4	124	96.88%
1,2-Dibromo-3-chloropropane	VOC	Soil	mg/kg	128	1	4	124	96.88%
1,2-Dibromoethane	VOC	Soil	mg/kg	128	0	4	124	96.88%
1,2-Dichlorobenzene	VOC	Soil	mg/kg	128	0	4	124	96.88%
1,2-Dichloroethane	VOC	Soil	mg/kg	128	1	4	124	96.88%
1,2-Dichloroethene (Total)	VOC	Soil	mg/kg	128	7	3	125	97.66%
1,2-Dichloropropane	VOC	Soil	mg/kg	128	0	4	124	96.88%
1,3-Dichlorobenzene	VOC	Soil	mg/kg	128	0	4	124	96.88%
1,4-Dichlorobenzene	VOC	Soil	mg/kg	128	1	4	124	96.88%
2-Butanone (MEK)	VOC	Soil	mg/kg	128	61	4	124	96.88%
2-Hexanone	VOC	Soil	mg/kg	128	4	4	124	96.88%
4-Methyl-2-pentanone (MIBK)	VOC	Soil	mg/kg	128	3	4	124	96.88%
Acetone	VOC	Soil	mg/kg	128	100	2	126	98.44%
Benzene	VOC	Soil	mg/kg	128	32	4	124	96.88%
Bromodichloromethane	VOC	Soil	mg/kg	128	0	4	124	96.88%
Bromoform	VOC	Soil	mg/kg	128	1	4	124	96.88%
Bromomethane	VOC	Soil	mg/kg	128	0	76	52	40.63%
Carbon disulfide	VOC	Soil	mg/kg	128	87	4	124	96.88%
Carbon tetrachloride	VOC	Soil	mg/kg	128	0	4	124	96.88%
Chlorobenzene	VOC	Soil	mg/kg	128	0	4	124	96.88%
Chloroethane	VOC	Soil	mg/kg	128	0	73	55	42.97%

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

Parameter	Parameter Group	Matrix	Unit	Number of Results	Detections	Number of Rejected Results	Number of Non-rejected Results	Completeness
Chloroform	VOC	Soil	mg/kg	128	1	4	124	96.88%
Chloromethane	VOC	Soil	mg/kg	128	1	4	124	96.88%
cis-1,2-Dichloroethene	VOC	Soil	mg/kg	128	9	3	125	97.66%
cis-1,3-Dichloropropene	VOC	Soil	mg/kg	128	0	4	124	96.88%
Cyclohexane	VOC	Soil	mg/kg	128	19	4	124	96.88%
Dibromochloromethane	VOC	Soil	mg/kg	128	0	4	124	96.88%
Dichlorodifluoromethane	VOC	Soil	mg/kg	128	0	20	108	84.38%
Ethylbenzene	VOC	Soil	mg/kg	128	11	3	125	97.66%
Isopropylbenzene	VOC	Soil	mg/kg	128	7	3	125	97.66%
Methyl Acetate	VOC	Soil	mg/kg	128	4	4	124	96.88%
Methyl tert-butyl ether (MTBE)	VOC	Soil	mg/kg	128	0	4	124	96.88%
Methylene Chloride	VOC	Soil	mg/kg	128	51	3	125	97.66%
Styrene	VOC	Soil	mg/kg	128	2	4	124	96.88%
Tetrachloroethene	VOC	Soil	mg/kg	128	1	3	125	97.66%
Toluene	VOC	Soil	mg/kg	128	39	4	124	96.88%
trans-1,2-Dichloroethene	VOC	Soil	mg/kg	128	0	4	124	96.88%
trans-1,3-Dichloropropene	VOC	Soil	mg/kg	128	0	4	124	96.88%
Trichloroethene	VOC	Soil	mg/kg	127	20	3	124	97.64%
Trichlorofluoromethane	VOC	Soil	mg/kg	128	0	4	124	96.88%
Vinyl chloride	VOC	Soil	mg/kg	128	0	4	124	96.88%
Xylenes	VOC	Soil	mg/kg	128	7	4	124	96.88%
1,4-Dioxane	VOC/SVOC	Soil	mg/kg	128	0	128	0	0.00%
Cyanide	CN	Water	ug/L	18	4	0	18	100.00%
Aluminum	Metal	Water	ug/L	18	17	0	18	100.00%
Antimony	Metal	Water	ug/L	18	8	0	18	100.00%
Arsenic	Metal	Water	ug/L	18	14	0	18	100.00%
Barium	Metal	Water	ug/L	18	18	0	18	100.00%
Beryllium	Metal	Water	ug/L	18	5	0	18	100.00%
Cadmium	Metal	Water	ug/L	18	12	0	18	100.00%
Chromium	Metal	Water	ug/L	18	10	0	18	100.00%
Chromium VI	Metal	Water	ug/L	18	1	8	10	55.56%
Cobalt	Metal	Water	ug/L	18	11	0	18	100.00%
Copper	Metal	Water	ug/L	18	10	0	18	100.00%
Iron	Metal	Water	ug/L	18	16	0	18	100.00%
Lead	Metal	Water	ug/L	18	0	0	18	100.00%
Manganese	Metal	Water	ug/L	18	18	0	18	100.00%
Mercury	Metal	Water	ug/L	18	1	0	18	100.00%
Nickel	Metal	Water	ug/L	18	17	0	18	100.00%
Selenium	Metal	Water	ug/L	18	6	0	18	100.00%
Silver	Metal	Water	ug/L	18	8	0	18	100.00%
Thallium	Metal	Water	ug/L	18	4	0	18	100.00%
Vanadium	Metal	Water	ug/L	18	18	0	18	100.00%
Zinc	Metal	Water	ug/L	18	15	0	18	100.00%
1,1-Biphenyl	SVOC	Water	ug/L	18	0	0	18	100.00%
1,2,4,5-Tetrachlorobenzene	SVOC	Water	ug/L	18	0	0	18	100.00%
2,3,4,6-Tetrachlorophenol	SVOC	Water	ug/L	18	2	0	18	100.00%
2,4,5-Trichlorophenol	SVOC	Water	ug/L	18	0	0	18	100.00%
2,4,6-Trichlorophenol	SVOC	Water	ug/L	18	0	0	18	100.00%
2,4-Dichlorophenol	SVOC	Water	ug/L	18	0	0	18	100.00%
2,4-Dimethylphenol	SVOC	Water	ug/L	18	1	0	18	100.00%
2,4-Dinitrophenol	SVOC	Water	ug/L	18	0	0	18	100.00%
2,4-Dinitrotoluene	SVOC	Water	ug/L	18	0	0	18	100.00%
2,6-Dinitrotoluene	SVOC	Water	ug/L	18	0	0	18	100.00%
2-Chloronaphthalene	SVOC	Water	ug/L	18	0	0	18	100.00%
2-Chlorophenol	SVOC	Water	ug/L	18	0	0	18	100.00%
2-Methylnaphthalene	SVOC	Water	ug/L	18	6	0	18	100.00%
2-Methylphenol	SVOC	Water	ug/L	18	0	0	18	100.00%
2-Nitroaniline	SVOC	Water	ug/L	18	0	0	18	100.00%

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

Parameter	Parameter Group	Matrix	Unit	Number of Results	Detections	Number of Rejected Results	Number of Non-rejected Results	Completeness
3&4-Methylphenol(m&p Cresol)	SVOC	Water	ug/L	18	1	0	18	100.00%
3,3'-Dichlorobenzidine	SVOC	Water	ug/L	18	0	11	7	38.89%
4-Chloroaniline	SVOC	Water	ug/L	18	0	1	17	94.44%
4-Nitroaniline	SVOC	Water	ug/L	18	0	0	18	100.00%
Acenaphthene	SVOC	Water	ug/L	18	7	0	18	100.00%
Acenaphthylene	SVOC	Water	ug/L	18	5	0	18	100.00%
Acetophenone	SVOC	Water	ug/L	18	0	0	18	100.00%
Anthracene	SVOC	Water	ug/L	18	9	0	18	100.00%
Benzaldehyde	SVOC	Water	ug/L	18	0	0	18	100.00%
Benzo[a]anthracene	SVOC	Water	ug/L	18	6	0	18	100.00%
Benzo[a]pyrene	SVOC	Water	ug/L	18	1	0	18	100.00%
Benzo[b]fluoranthene	SVOC	Water	ug/L	18	1	0	18	100.00%
Benzo[g,h,i]perylene	SVOC	Water	ug/L	18	0	0	18	100.00%
Benzo[k]fluoranthene	SVOC	Water	ug/L	18	1	0	18	100.00%
bis(2-chloroethoxy)methane	SVOC	Water	ug/L	18	0	0	18	100.00%
bis(2-Chloroethyl)ether	SVOC	Water	ug/L	18	0	0	18	100.00%
bis(2-Chloroisopropyl)ether	SVOC	Water	ug/L	18	0	0	18	100.00%
bis(2-Ethylhexyl)phthalate	SVOC	Water	ug/L	18	3	0	18	100.00%
Caprolactam	SVOC	Water	ug/L	18	1	0	18	100.00%
Carbazole	SVOC	Water	ug/L	18	7	0	18	100.00%
Chrysene	SVOC	Water	ug/L	18	3	0	18	100.00%
Dibenz[a,h]anthracene	SVOC	Water	ug/L	18	0	0	18	100.00%
Diethylphthalate	SVOC	Water	ug/L	18	0	0	18	100.00%
Di-n-butylphthalate	SVOC	Water	ug/L	18	0	0	18	100.00%
Di-n-octylphthalate	SVOC	Water	ug/L	18	0	0	18	100.00%
Fluoranthene	SVOC	Water	ug/L	18	9	0	18	100.00%
Fluorene	SVOC	Water	ug/L	18	10	0	18	100.00%
Hexachlorobenzene	SVOC	Water	ug/L	18	0	0	18	100.00%
Hexachlorobutadiene	SVOC	Water	ug/L	18	0	0	18	100.00%
Hexachlorocyclopentadiene	SVOC	Water	ug/L	18	0	0	18	100.00%
Hexachloroethane	SVOC	Water	ug/L	18	0	0	18	100.00%
Indeno[1,2,3-c,d]pyrene	SVOC	Water	ug/L	18	0	0	18	100.00%
Isophorone	SVOC	Water	ug/L	18	0	0	18	100.00%
Naphthalene	SVOC	Water	ug/L	18	16	0	18	100.00%
Nitrobenzene	SVOC	Water	ug/L	18	0	0	18	100.00%
N-Nitroso-di-n-propylamine	SVOC	Water	ug/L	18	0	0	18	100.00%
N-Nitrosodiphenylamine	SVOC	Water	ug/L	18	0	0	18	100.00%
Pentachlorophenol	SVOC	Water	ug/L	18	2	0	18	100.00%
Phenanthrene	SVOC	Water	ug/L	18	9	0	18	100.00%
Phenol	SVOC	Water	ug/L	18	2	0	18	100.00%
Pyrene	SVOC	Water	ug/L	18	9	0	18	100.00%
Diesel Range Organics	TPH	Water	ug/L	2	2	0	2	100.00%
Gasoline Range Organics	TPH	Water	ug/L	2	0	0	2	100.00%
Oil and Grease	TPH	Water	ug/L	18	3	0	18	100.00%
1,1,1-Trichloroethane	VOC	Water	ug/L	18	1	0	18	100.00%
1,1,2,2-Tetrachloroethane	VOC	Water	ug/L	18	0	0	18	100.00%
1,1,2-Trichloro-1,2,2-Trifluoroethane	VOC	Water	ug/L	18	0	0	18	100.00%
1,1,2-Trichloroethane	VOC	Water	ug/L	18	0	0	18	100.00%
1,1-Dichloroethane	VOC	Water	ug/L	18	7	0	18	100.00%
1,1-Dichloroethene	VOC	Water	ug/L	18	3	0	18	100.00%
1,2,3-Trichlorobenzene	VOC	Water	ug/L	18	0	0	18	100.00%
1,2,4-Trichlorobenzene	VOC	Water	ug/L	18	0	0	18	100.00%
1,2-Dibromo-3-chloropropane	VOC	Water	ug/L	18	0	0	18	100.00%
1,2-Dibromoethane	VOC	Water	ug/L	18	0	0	18	100.00%
1,2-Dichlorobenzene	VOC	Water	ug/L	18	0	0	18	100.00%
1,2-Dichloroethane	VOC	Water	ug/L	18	0	0	18	100.00%
1,2-Dichloropropane	VOC	Water	ug/L	18	0	0	18	100.00%
1,3-Dichlorobenzene	VOC	Water	ug/L	18	0	0	18	100.00%

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

Parameter	Parameter Group	Matrix	Unit	Number of Results	Detections	Number of Rejected Results	Number of Non-rejected Results	Completeness
1,4-Dichlorobenzene	VOC	Water	ug/L	18	0	0	18	100.00%
2-Butanone (MEK)	VOC	Water	ug/L	18	1	0	18	100.00%
2-Hexanone	VOC	Water	ug/L	18	0	0	18	100.00%
4-Methyl-2-pentanone (MIBK)	VOC	Water	ug/L	18	1	0	18	100.00%
Acetone	VOC	Water	ug/L	18	1	0	18	100.00%
Benzene	VOC	Water	ug/L	18	3	0	18	100.00%
Bromodichloromethane	VOC	Water	ug/L	18	0	0	18	100.00%
Bromoform	VOC	Water	ug/L	18	0	0	18	100.00%
Bromomethane	VOC	Water	ug/L	18	0	0	18	100.00%
Carbon disulfide	VOC	Water	ug/L	18	1	0	18	100.00%
Carbon tetrachloride	VOC	Water	ug/L	18	0	0	18	100.00%
Chlorobenzene	VOC	Water	ug/L	18	0	0	18	100.00%
Chloroethane	VOC	Water	ug/L	18	0	0	18	100.00%
Chloroform	VOC	Water	ug/L	18	0	0	18	100.00%
Chloromethane	VOC	Water	ug/L	18	0	0	18	100.00%
cis-1,2-Dichloroethene	VOC	Water	ug/L	18	6	0	18	100.00%
cis-1,3-Dichloropropene	VOC	Water	ug/L	18	0	0	18	100.00%
Cyclohexane	VOC	Water	ug/L	18	2	0	18	100.00%
Dibromochloromethane	VOC	Water	ug/L	18	0	0	18	100.00%
Dichlorodifluoromethane	VOC	Water	ug/L	18	0	0	18	100.00%
Ethylbenzene	VOC	Water	ug/L	18	2	0	18	100.00%
Isopropylbenzene	VOC	Water	ug/L	18	2	1	17	94.44%
Methyl Acetate	VOC	Water	ug/L	18	0	16	2	11.11%
Methyl tert-butyl ether (MTBE)	VOC	Water	ug/L	18	0	0	18	100.00%
Methylene Chloride	VOC	Water	ug/L	18	0	0	18	100.00%
Styrene	VOC	Water	ug/L	18	0	0	18	100.00%
Tetrachloroethene	VOC	Water	ug/L	18	0	0	18	100.00%
Toluene	VOC	Water	ug/L	18	5	0	18	100.00%
trans-1,2-Dichloroethene	VOC	Water	ug/L	18	0	0	18	100.00%
trans-1,3-Dichloropropene	VOC	Water	ug/L	18	0	0	18	100.00%
Trichloroethene	VOC	Water	ug/L	18	8	0	18	100.00%
Trichlorofluoromethane	VOC	Water	ug/L	18	0	0	18	100.00%
Vinyl chloride	VOC	Water	ug/L	18	2	0	18	100.00%
Xylenes	VOC	Water	ug/L	18	2	0	18	100.00%
1,4-Dioxane	VOC/SVOC	Water	ug/L	18	14	0	18	100.00%