ARM Group LLC
Engineers and Scientists

June 17, 2020

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

Re: Comment Response Letter:
Response and Development Work Plan (Rev. 1)
Area B: Sub-Parcel B6-3
Tradepoint Atlantic
Sparrows Point, MD 21219

Dear Ms. Brown:

On behalf of EnviroAnalytics Group, LLC (EAG), ARM Group LLC (ARM) is pleased to provide the enclosed revision of the Response and Development Work Plan (RADWP) for the portion of the Tradepoint Atlantic property designated as Area B: Sub-Parcel B6-3 (the Site). ARM is providing responses to comments received from the Maryland Department of the Environment (MDE) and the United States Environmental Protection Agency (USEPA) via email on June 1, 2020 regarding the previous submission of the Sub-Parcel B6-3 RADWP (Revision 0 dated May 5, 2020). Responses to the comments are given below; the original comments are included in italics with the responses following.

The agency comments were relatively minor; however, more extensive updates related to Regional Screening Level (RSL) revisions for naphthalene were required and are discussed in detail below. An updated version of the RADWP text (Revision 1) is provided as **Attachment 1**. Additional hard copy replacement pages (figures, tables, etc.) are also provided as noted below. The enclosed CD provides a compiled PDF of the entire report with the inserted replacement pages, along with the electronic attachments. Revised cover and spine cardstock sheets are also provided for insertion into the binders currently held by the agencies.

1. *Please provide a change page (and corrected CD) for pp. 2-3, in order to revise the final paragraph on p. 3 to accurately describe the approved RADWPs and developments for the other sub-parcels of Parcel [B]6, rather than indicating the remaining acreage has not been developed.*

   Section 1.0 has been updated to include references to the two previously implemented RADWPs within Parcel B6.

9175 Guilford Road • Suite 310 • Columbia, MD 21046
voice: (410) 290 – 7775 • fax: (410) 290 – 7776 • www.armgroup.net

2. *Please provide a figure showing the location of permanent fencing around this development parcel, if planned.*

   Appendix D has been updated to include a new drawing that shows the location of permanent fencing. There will be fencing around the east and north sides of the Site.

3. *Will the entrance to this facility off Sparrows Point Boulevard be gated?*

   The new drawing included in **Appendix D** (attached to this letter) shows that gates will provide secure access to the fenced area on the north and east sides of the Site. The parking lot located off Sparrows Point Boulevard will not be gated.

4. *Also, MDE has questions regarding the rail lines located to the east of the development parcel. Responses to these questions may be provided under separate cover. Are the rail lines still in place? If so, are they in use? Confirm that this area of rail lines and the slope leading up to Sparrows Point Boulevard on the eastern edge of Parcel B6 will be a remnant on the site.*

   Rail lines to the east of Sub-Parcel B6-3 are still in place and in use. They lie within the remnant area of Parcel B6, which includes the rail lines and the referenced slope. Remnant areas throughout Parcel B6 will be addressed in future work associated with completion of the obligations of the Administrative Consent Order (ACO) and associated MDE Voluntary Cleanup Program (VCP) requirements.

Additional Revisions:

5. The USEPA notified ARM via email on June 5, 2020 that the Regional Screening Levels (RSLs) for naphthalene have been recently revised to 8.6 mg/kg and 0.12 ug/L for soil and water, respectively. Therefore, soil and groundwater PALs within this RADWP have been revised accordingly. The detection summary tables for organics in soil and groundwater (**Table 1** and **Table 3**) have been updated in addition to **Figure GW1**, which shows a new naphthalene PAL exceedance at location FM-012-PZS. **Table 5** has also been updated to show the revised Constituent of Potential Concern (COPC) screening analysis with the new naphthalene screening levels. Note that naphthalene remains below the updated screening levels and is therefore not designated as a COPC. No updates to the other risk assessment tables or associated findings were necessary.

6. The schedule (Section 7.0) has been updated to include a new anticipated approval date for the RADWP.

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

Respectfully Submitted,
ARM Group LLC

Joshua M. Barna, G.I.T.
Staff Geologist

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

ATTACHMENT 1

RESPONSE AND DEVELOPMENT WORK PLAN

AREA B: SUB-PARCEL B6-3
TRADEPOINT ATLANTIC
SPARROWS POINT, MARYLAND

Prepared For:

ENVIROANALYTICS GROUP, LLC
1515 Des Peres Road, Suite 300
Saint Louis, Missouri 63131

Prepared By:

ARM GROUP LLC
9175 Guilford Road
Suite 310
Columbia, Maryland 21046

ARM Project No. 20010206

Respectfully Submitted,

Joshua M. Barna, G.I.T.
Staff Geologist

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

Revision 1 – June 17, 2020

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1.0 INTRODUCTION

ARM Group LLC (ARM), on behalf of EnviroAnalytics Group, LLC (EAG), has prepared this Response and Development Work Plan (RADWP) for a portion of the Tradepoint Atlantic property that has been designated as Area B: Sub-Parcel B6-3 (the Site). Tradepoint Atlantic submitted a letter (**Appendix A**) requesting an expedited plan review to achieve construction deadlines for the proposed development on this Site. Parcel B6 is comprised of approximately 148.5 acres of the approximately 3,100-acre former plant property. As shown on **Figure 1**, Sub-Parcel B6-3 consists of approximately 30.3 acres located within Parcel B6.

As shown on **Figure 2** and **Figure 3**, Sub-Parcel B6-3 is slated for development and occupancy as a logistics center (Logistics Center VI). The logistics center will include main office and warehouse space, with a total area of approximately 400,000 square feet (including 32,000 square feet of office space). Associated water lines, sanitary sewer lines, storm drains, conventional and trailer parking, access roads, and interior roads are also proposed. The planned development activities will generally include grading; construction of the main 400,000 square foot building; installation of utilities; landscaping and paving of parking areas and roadways. Subsequent site-use will involve workers in the on-site building, and truck drivers entering and leaving the Site with goods. Outside of the main development area designated as Sub-Parcel B6-3, temporary construction zones (not intended for permanent occupancy) with a total area of approximately 0.7 acres within the Limit of Disturbance (LOD) will be utilized to install the facility entrance and subgrade utility connections for the project.

A Logistics Center Grading Plan (Revision 0 dated March 3, 2020) was previously submitted to allow Tradepoint Atlantic to proceed with grading (site preparation) for the future construction of the warehouse building designated as Logistics Center VI. The proposed grading work was limited to the footprint of the proposed warehouse building and the immediately surrounding area. The preceding plan did not include the full scope of grading work required to facilitate development of Sub-Parcel B6-3 as described herein. The Logistics Center Grading Plan was approved for implementation on March 13, 2020, and the scope of work proposed in that plan is ongoing.

The conduct of any environmental assessment and cleanup activities on the Tradepoint Atlantic property, as well as any associated development, is subject to the requirements outlined in the following agreements:

- Administrative Consent Order (ACO) between Tradepoint Atlantic (formerly Sparrows Point Terminal, LLC) and the Maryland Department of the Environment (MDE), 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 (USEPA), effective November 25, 2014.

Sub-Parcel B6-3 is part of the acreage that was removed (Carveout Area) from inclusion in the Multimedia Consent Decree between Bethlehem Steel Corporation, the USEPA, and the MDE (effective October 8, 1997) as documented in correspondence received from USEPA on September 12, 2014. Based on this agreement, USEPA determined that no further investigation or corrective measures will be required under the terms of the Consent Decree for the Carveout Area. However, the SA reflects that the property within the Carveout Area will remain subject to the USEPA's Resource Conservation and Recovery Act (RCRA) Corrective Action authorities.

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

In consultation with the MDE, Tradepoint Atlantic affirms that it desires to accelerate the assessment, remediation, and redevelopment of certain sub-parcels within the larger site due to current market conditions. To that end, the MDE and Tradepoint Atlantic agree that the Controlled Hazardous Substance (CHS) Act (Section 7-222 of the Environment Article) and the CHS Response Plan (Code of Maryland Regulations (COMAR) 26.14.02) shall serve as the governing statutory and regulatory authority for completing the development activities on Sub-Parcel B6-3 and complement the statutory requirements of the VCP (Section 7-501 of the Environment Article). Upon submission of a RADWP and completion of any remedial activities for the sub-parcel, the MDE shall issue a No Further Action Letter (NFA) upon a recordation of an Environmental Covenant describing any necessary land use controls for the specific sub-parcel. At such time that all the sub-parcels within the larger parcel have completed remedial activities, Tradepoint Atlantic shall submit to the MDE a request for issuing a Certificate of Completion (COC) as well as all pertinent information concerning completion of remedial activities conducted on the parcel. Once the VCP has completed its review of the submitted information it shall issue a COC for the entire parcel described in Tradepoint Atlantic's VCP application.

Alternatively, Tradepoint Atlantic or other entity may elect to submit an application for a specific sub-parcel and submit it to the VCP for review and acceptance. If the application is received after the cleanup and redevelopment activities described in this RADWP are implemented and a NFA is issued by the MDE pursuant to the CHS Act, the VCP shall prepare a No Further Requirements Determination for the sub-parcel.

If Tradepoint Atlantic or other entity has not carried out cleanup and redevelopment activities described in the RADWP, the cleanup and redevelopment activities may be conducted under the oversight authority of either the VCP or the CHS Act, so long as those activities comport with this RADWP.

This RADWP provides a Site description and history; summary of environmental conditions identified by the Phase I Environmental Site Assessment (ESA); summary of relevant findings and environmental conditions identified by the Parcel B6 Phase II Investigation and Finishing Mills Groundwater Phase II Investigation; a human health Screening Level Risk Assessment (SLRA) conducted for the identified conditions; and any necessary engineering and/or institutional controls to facilitate the planned Sub-Parcel B6-3 development and address the impacts and potential human health exposures. These controls include work practices and applicable protocols that are submitted for approval to support the development and use of the Site. Engineering/institutional controls approved and installed for this RADWP shall be described in closure certification documentation submitted to the MDE demonstrating that exposure pathways on the Site are addressed in a manner that protects public health and the environment.

Parcel B6 contains two other development areas covered by previously implemented RADWPs. Sub-Parcel B6-1 consists of 73 acres, with the majority located within Parcel B6, but also extending into Parcel B22 and Parcel B3. The details of this development project can be found in the RADWP for Sub-Parcel B6-1 (Revision 2 dated July 7, 2017). Sub-Parcel B6-2 consists of 50.5 acres of the northern portion of Parcel B6. The details of this development project can be found in the RADWP for Sub-Parcel B6-2 (Revision 1 dated January 24, 2018) and associated addendum for Retail Area #1 (Revision 2 dated May 22, 2018). The referenced RADWPs, in addition to this document, address most of the acreage with Parcel B6.

The remaining acreage of Parcel B6 will be addressed in future work associated with completion of the obligations of the ACO and associated VCP requirements. This work will include assessments of risk and, if necessary, RADWPs to address unacceptable risks associated with the proposed future land use. As noted above, temporary construction zones with a total area of approximately 0.7 acres will be utilized to install the facility entrance and subgrade utility connections for the project outside of the sub-parcel. The temporary work outside of the boundary of the Site is not intended to be the basis for the issuance of a NFA or a COC, although the scope of construction is covered by this RADWP.

2.0 SITE DESCRIPTION AND HISTORY

2.1 SITE DESCRIPTION

Parcel B6 includes an area of approximately 148.5 acres as shown on **Figure 1**. The Sub-Parcel B6-3 development project consists of approximately 30.3 acres intended for occupancy comprising the eastern section of Parcel B6. The development will include construction of a logistics center totaling approximately 400,000 square feet (**Figure 2** and **Figure 3**). Outside of the main development area designated as Sub-Parcel B6-3, temporary construction zones (not intended for permanent occupancy) with a total area of approximately 0.7 acres within the construction LOD will be utilized to install the facility entrance and subgrade utility connections for the project. The Site is currently zoned Manufacturing Heavy-Industrial Major (MH-IM), and is not occupied. There is no groundwater use on-site or within the surrounding Tradepoint Atlantic property.

Sub-Parcel B6-3 is at an elevation of approximately 9 to 15 feet above mean sea level (amsl) in most areas. The eastern half of the Site (which is vacant but includes a significant portion of the historical Contractor's Village) is generally at higher elevations than the western half (which includes a number of existing railways). According to Figure B-2 of the Stormwater Pollution Prevention Plan (SWPPP) Revision 8 dated April 2, 2020, stormwater from Sub-Parcel B6-3 is directed towards the Tin Mill Canal (TMC) to the north and west and is ultimately discharged through the National Pollution Discharge Elimination System (NPDES) Outfall 014 to Bear Creek located distantly to the west.

2.2 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 the facility ceased in fall 2012.

The proposed Sub-Parcel B6-3 development project includes the eastern portion of Parcel B6. Several iron and steel work processes were completed within the boundary of Parcel B6, which was occupied in part by the Hot Strip Mill. The Hot Strip Mill was located outside (to the west) of Sub-Parcel B6-3. The western half of Sub-Parcel B6-3 was historically occupied by a number of railways oriented in a north-south direction which presumably serviced the former Hot Strip Mill. The eastern half of Sub-Parcel B6-3 included the majority of the former Contractor's Village, which was used by numerous contractors for equipment and material staging for use at the steel plant. More information regarding the specific historical activities conducted at the Site can be found in the Phase II Investigation Work Plan for Parcel B6 (Revision 2 dated May 12, 2016).

3.0 ENVIRONMENTAL SITE ASSESSMENT RESULTS

3.1 PHASE I ENVIRONMENTAL SITE ASSESSMENT RESULTS

A Phase I ESA was completed by Weaver Boos Consultants for the entire Sparrows Point property on May 19, 2014. Weaver Boos completed site visits of Sparrows Point from February 19 through 21, 2014, for the purpose of characterizing current conditions at the former steel plant. The Phase I ESA identified particular features across the Tradepoint Atlantic property which presented potential risks to the environment. These Recognized Environmental Conditions (RECs) included buildings and process areas where releases of hazardous substances and/or petroleum products potentially may have occurred. The Phase I ESA also relied upon findings identified during a previous visual site inspection (VSI) conducted as part of the RCRA Facility Assessment (RFA) prepared by A.T. Kearney, Inc. dated August 1993, for the purpose of identifying Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs) on the property. This 1991 VSI is regularly cited in the Description of Current Conditions (DCC) Report prepared by Rust Environment and Infrastructure, dated January 1998 (included with Weaver Boos' Phase I ESA).

Weaver Boos' distinction of a REC or Non-REC was based upon the findings of the DCC Report (which was prepared when the features remained on-site in 1998) or on observations of the general area during their site visit. Weaver Boos made the determination to identify a feature as a REC based on historical information, observations during the site visit, and prior knowledge and experience. The following RECs were identified within, or near, Sub-Parcel B6-3:

Former Fuel UST at Contractor's Village (REC 20, Finding 270):
During Weaver Boos' site visit, an area of storage buildings included in the former Contractor's Village was observed east of the railyard. The area was formerly used by contractors for equipment and material staging for use in the mill. A diesel fuel UST was formerly located along the eastern edge of the Contractor's Village. The UST was removed, and according to the Phase I ESA it is unclear whether any leaks or staining were observed in the surrounding soil.

Hot Strip Mill Cooling Tower (undesignated REC, Finding 30, also listed as SWMU 65):
Wastewater from the Hot Strip Mill basins was discharged to the cooling tower. If the cooling tower was unable to accept the wastewater volume, the TMC acted as the overflow. Heavy oil and grease impacted scale was observed on the tower and surrounding ground during Weaver Boos' site visit. Materials in the impacted scale were likely to contain hazardous substances and/or petroleum products which may have resulted in a release to the environment.

Relevant SWMUs and AOCs were also identified as located on Figure 3-1 from the DCC Report. This figure generally shows the SWMUs, AOCs, and main facility areas within the property boundaries. SWMU 65 (Hot Strip Mill Cooling Tower) is cross-listed as a REC and discussed above. There were no AOCs or additional SWMUs identified within the Site boundary.

3.2 INVESTIGATION RESULTS – SUB-PARCEL B6-3

Phase II Investigations specific to soil and groundwater conditions were performed for the property area including Sub-Parcel B6-3 in accordance with the requirements outlined in the ACO as further described in the following agency-approved Phase II Investigation Work Plans:

- Area B: Parcel B6 (Revision 2) dated May 12, 2016
- Finishing Mills Groundwater Investigation (Revision 1) dated July 7, 2016

All soil samples (Parcel B6 Phase II Investigation) and groundwater samples (Finishing Mills Groundwater Phase II Investigation) were collected and analyzed in accordance with agency-approved protocols during the Phase II Investigations, the specific details of which can be reviewed in each agency-approved Work Plan. Each Phase II Investigation was developed to target specific features which represented a potential release of hazardous substances and/or petroleum products to the environment, including RECs, SWMUs, and AOCs, as applicable, as well as numerous other targets identified from former operations that would have the potential for environmental contamination. Samples were also collected at site-wide locations to ensure full coverage of each investigation area. The full analytical results and conclusions of each investigation have been presented to the agencies in the following Phase II Investigation Reports:

- Area B: Parcel B6 (Revision 2) dated March 16, 2018
- Finishing Mills Groundwater Investigation (Revision 0) dated November 30, 2016

This RADWP summarizes the relevant soil and groundwater findings from these Phase II Investigations with respect to the proposed development of Sub-Parcel B6-3.

3.2.1 Phase II Soil Investigation Findings

Based on the scope of development, 40 soil samples collected from 19 soil borings during the Parcel B6 Phase II Investigation were included in this evaluation of Sub-Parcel B6-3. The 19 boring locations are shown on **Figure 4**, and the samples obtained from these borings provided relevant analytical data for discussion of on-site conditions. Note that two of the selected soil borings, B6-081-SB and B6-082-SB, are located outside Sub-Parcel B6-3; however, data from these locations have been included in this evaluation because they are close to the development LOD and characterize soil in the temporary construction zones that are to be used for construction of utilities at the northern end of the sub-parcel.

Soil samples collected during the Phase II Investigation were analyzed for the USEPA Target Compound List (TCL) semi-volatile organic compounds (SVOCs), TCL volatile organic compounds (VOCs), total petroleum hydrocarbon (TPH) diesel range organics (DRO) and gasoline range organics (GRO), USEPA Target Analyte List (TAL) metals, hexavalent chromium, and cyanide. During the implementation of the Parcel B6 Work Plan, TPH-DRO/GRO analysis was

required at every location, but Oil & Grease analysis was not required or completed. Only select locations (B6-089-SB and B6-093-SB) were additionally analyzed for Oil & Grease because these borings were completed after the new requirements for Oil & Grease analysis were established. Shallow soil samples (0 to 1 foot bgs) were additionally analyzed for polychlorinated biphenyls (PCBs). The laboratory Certificates of Analysis (including Chains of Custody) and relevant Data Validation Reports (50% validated soil data) are included as electronic attachments. The Data Validation Reports contain qualifier keys for the flags assigned to individual results in the attached summary tables.

Soil sample results were screened against the Project Action Limits (PALs) established in the property-wide Quality Assurance Project Plan (QAPP) dated April 5, 2016, or based on other direct agency guidance (e.g., TPH/Oil & Grease). **Table 1** and **Table 2** provide summaries of the detected organic compounds and inorganics in the soil samples collected from the 19 soil borings relevant for this Site evaluation. **Figure SB1** and **Figure SB2** present the soil sample results that exceeded the PALs among these soil borings. The PALs for relevant polynuclear aromatic hydrocarbons (PAHs) have been adjusted upward based on revised toxicity data published in the USEPA Regional Screening Level (RSL) Composite Worker Soil Table. PAL exceedances among the Phase II Investigation soil samples relevant for the proposed development project were limited to five inorganics (arsenic, lead, manganese, thallium, and vanadium) and one SVOC (benzo[a]pyrene). There were no observations of physical evidence of non-aqueous phase liquid (NAPL) during field screening of the soil borings within, or proximate to, the Site.

3.2.2 Phase II Groundwater Investigation Findings

Groundwater conditions were investigated in accordance with the Finishing Mills Groundwater Investigation Work Plan. Shallow groundwater samples were obtained from four temporary groundwater sample collection points (piezometers) and three permanent monitoring wells within, or in close proximity to, Sub-Parcel B6-3. The seven shallow groundwater points which provided relevant analytical data for the proposed development project are shown on **Figure 5**. There is no direct exposure risk for future Composite Workers at the Site because there is no use of groundwater on the Tradepoint Atlantic property; however, groundwater may be encountered in the sub-parcel during some construction tasks. If groundwater is encountered during development, it will be managed to prevent exposures in accordance with the dewatering requirements outlined in Section 5.2.

The groundwater samples were analyzed for TCL-VOCs, TCL-SVOCs, TAL-dissolved metals, TPH-DRO/GRO, hexavalent chromium, and total cyanide. Permanent groundwater wells were additionally analyzed for TAL-total metals. Groundwater samples submitted for analysis of dissolved metals were filtered in the field with an in-line 0.45 micron filter. Oil & Grease analysis was not required or completed during the Finishing Mills Groundwater Phase II Investigation.

Hexavalent chromium is typically analyzed via USEPA Method 7196A, which is a colorimetric method. All hexavalent chromium samples in the Finishing Mills Groundwater Phase II Investigation were initially collected as total hexavalent chromium. However, high turbidities present in some unfiltered samples resulted in a matrix interference with this colorimetric method. Due to an elevated result reported for total hexavalent chromium which was considered to be suspect, FM-008-PZS was resampled using low-flow techniques on July 5, 2016 to be analyzed for total hexavalent chromium again by method 7196A and by an alternative method (7199). The data for total hexavalent chromium from the July 5, 2016 sampling event were used in lieu of the original data from the sample with high turbidity. On July 15, 2016, FM-008-PZS was again resampled (along with others in the Finishing Mills Area) to be analyzed for dissolved hexavalent chromium via USEPA Method 7196A. These resampling events were also reported within the Finishing Mills Groundwater Phase II Investigation Report.

The laboratory Certificates of Analysis (including Chains of Custody) and relevant Data Validation Reports (50% validated groundwater data) are included as electronic attachments. The Data Validation Reports contain qualifier keys for the flags assigned to individual results in the attached summary tables.

The Phase II Investigation shallow groundwater results were screened against the PALs established in the property-wide QAPP dated April 5, 2016, or based on other direct agency guidance (e.g., TPH). **Table 3** and **Table 4** provide summaries of the detected organic compounds and inorganics in the groundwater samples submitted for laboratory analysis, and **Figure GW1** presents the groundwater results that exceeded the PALs. Similar to the evaluation of soil data, the PALs for relevant PAHs have been adjusted upward based on revised toxicity data published in the USEPA RSL Resident Tapwater Table. PAL exceedances among the Phase II Investigation shallow groundwater samples collected in the vicinity of the proposed development project consisted of one VOC (1,1-dichloroethane), one SVOC (naphthalene), TPH-DRO, and five total/dissolved metals (hexavalent chromium, cobalt, manganese, thallium, and vanadium). Each groundwater collection point was also inspected for evidence of NAPL using an oil-water interface probe prior to sampling. None of the groundwater sample collection points relevant for the proposed development project showed evidence of NAPL during these checks.

3.2.3 Locations of Potential Concern

There are no concerns related to potential vapor intrusion (VI) risks/hazards with respect to the proposed future use of the Site. Total cyanide had previously been identified as a potential VI risk in the Finishing Mills Groundwater Phase II Investigation Report, but the screening level for cyanide has since been adjusted upward by the USEPA, eliminating this concern.

Other locations of potential concern which are subject to special requirements could include elevated lead, PCBs, or TPH/Oil & Grease in soil. The soil data relevant for Sub-Parcel B6-3 were evaluated to determine the presence of any such locations of potential concern including: lead

concentrations above 10,000 mg/kg, PCB concentrations above 50 mg/kg, or TPH/Oil & Grease concentrations above 6,200 mg/kg. There were no soil concentrations of lead, PCBs, or TPH/Oil & Grease above the specified criteria.

Locations with physical evidence of NAPL are also considered to be locations of potential concern with respect to proposed development. None of the groundwater sample collection points included in the Finishing Mills Groundwater Phase II Investigation exhibited evidence of NAPL. During field screening of the soil cores for the original Parcel B6 Phase II investigation, there were no locations with observations of physical evidence of NAPL within, or in close proximity to, the development sub-parcel.

3.3 HUMAN HEALTH SCREENING LEVEL RISK ASSESSMENT

3.3.1 Analysis Process

A human health Screening Level Risk Assessment (SLRA) has been completed based on the analytical data obtained from the characterization of surface and subsurface soils. This includes the soil data obtained during the preceding Parcel B6 Phase II Investigation (discussed in Section 3.2.1). It should be noted that processed slag aggregate sourced from the Tradepoint Atlantic property will be used as the primary fill material and pavement subbase for this project; therefore, regardless of the findings of the Composite Worker baseline assessment, Sub-Parcel B6-3 will be subject to surface engineering controls (i.e., capping) unless separate approvals are received from the MDE following appropriate laboratory testing of the slag aggregate. The SLRA was conducted to further evaluate the existing soil conditions in support of the design of any additional necessary response measures.

The SLRA included the following evaluation process:

Identification of Exposure Units (EUs): The Composite Worker SLRA was evaluated using a single site-wide EU (designated as EU1) with an area of 30.3 acres covering the entirety of Sub-Parcel B6-3. The Construction Worker SLRA was evaluated using a slightly expanded EU (designated as EU1-EXP), covering 31.0 acres in total which includes the additional construction worker areas incorporated within the LOD to include the facility entrance and utility connections outside of the sub-parcel. Two soil borings (B6-081-SB and B6-082-SB) positioned along the utility easements to the north of the main development area were not included in EU1 for the Composite Worker evaluation but were included in EU1-EXP for the Construction Worker evaluation.

Identification of Constituents of Potential Concern (COPCs): For the project-specific SLRA, compounds that were present at concentrations at or above the USEPA RSLs set at a target cancer risk of 1E-6 or target non-cancer Hazard Quotient (HQ) of 0.1 were identified as COPCs to be included in the SLRA. A COPC screening analysis is provided in **Table 5** to identify all compounds above the relevant screening levels.

Exposure Point Concentrations (EPCs): The COPC soil datasets for the site-wide EU1 and EU1-EXP were divided into surface (0 to 1 foot), subsurface (>1 foot), and pooled depths for estimation of potential EPCs. Thus, there are three soil datasets associated with each EU. A statistical analysis was performed for each COPC dataset using the ProUCL software (version 5.0) developed by the USEPA to determine representative reasonable maximum exposure (RME) values for the EPC for each constituent. The RME value is typically the 95% Upper Confidence Limit (UCL) of the mean. For lead, the arithmetic mean for each depth was calculated for comparison to the Adult Lead Model (ALM)-based values, and any individual results exceeding 10,000 mg/kg would be delineated for possible excavation and removal (if applicable). For PCBs, all results equaling or exceeding 50 mg/kg would be delineated for excavation and removal (if applicable).

Risk Ratios: The surface soil EPCs, subsurface soil EPCs, and pooled soil EPCs were compared to the USEPA RSLs for the Composite Worker and to site-specific Soil Screening Levels (SSLs) for the Construction Worker based on equations derived in the USEPA Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites (OSWER 9355.4-24, December 2002). Risk ratios were calculated with a cancer risk of 1E-6 and a non-cancer HQ of 1. The risk ratios for the carcinogens were summed to develop a screening level estimate of the baseline cumulative cancer risk. The risk ratios for the non-carcinogens were segregated and summed by target organ to develop a screening level estimate of the baseline cumulative non-cancer Hazard Index (HI).

For the Construction Worker, site-specific risk-based evaluations were completed for a range of potential exposure frequencies to determine the maximum exposure frequency for the site-wide EU1-EXP that would result in risk ratios equivalent to a cumulative cancer risk of 1E-5 or HI of 1 for the individual target organs. This analysis indicated that the allowable exposure frequency before additional worker protections or more detailed job safety evaluations might be needed is 25 days.

There is no potential for direct human exposure to groundwater for a Composite Worker since groundwater is not used on the Tradepoint Atlantic property (and is not proposed to be utilized). In the event that construction/excavation leads to a potential Construction Worker exposure to groundwater during development, health and safety plans and management procedures shall be followed to limit exposure risk.

Assessment of Lead: For lead, the arithmetic mean concentrations for surface soils, subsurface soils, and pooled soils were compared to the applicable RSL (800 mg/kg) as an initial screening. If the mean concentrations for the EU were below the applicable RSL, the EU was identified as requiring no further action for lead. If a mean concentration exceeded the RSL, the mean values were compared to calculated ALM values (ALM Version dated 6/21/2009 updated with the 5/17/2017 OLEM Directive) with inputs of 1.8

for the geometric standard deviation and a blood baseline lead level of 0.6 ug/dL. The ALM calculation generates a soil lead concentration of 2,518 mg/kg, which is the most conservative (i.e., lowest) concentration which would yield a probability of 5% of a blood lead concentration of 10 ug/dL. If the arithmetic mean concentrations for the EU were below 2,518 mg/kg, the EU was identified as requiring no further action for lead. The lead averages and ALM screening levels are presented for surface, subsurface, and pooled soils in **Table 6**. Any individual results equaling or exceeding 10,000 mg/kg of lead would warrant additional delineation for possible excavation (if applicable).

Assessment of TPH/Oil & Grease: EPCs were not calculated for TPH/Oil & Grease. Instead, the individual results were compared to the PAL set to a HQ of 1 (6,200 mg/kg). No soil samples exceeded the PAL for TPH/Oil & Grease. Potential evidence of NAPL was not observed at any soil boring locations relevant for the proposed development. Contingency measures to address the potential presence of NAPL which could be encountered during construction are addressed in subsequent sections of this RADWP.

Risk Characterization Approach: Generally, if the baseline risk ratio for each non-carcinogenic COPC or cumulative target organ does not exceed 1 (with the exception of lead), and the sum of the risk ratios for the carcinogenic COPCs does not exceed a cumulative cancer risk of 1E-5, then a no further action determination will be recommended. If the baseline estimate of cumulative cancer risk exceeds 1E-5 but is less than or equal to 1E-4, then capping of the EU will be considered to be an acceptable remedy for the Composite Worker. For the Construction Worker, cumulative cancer risks exceeding 1E-5, but less than or equal to 1E-4, will be mitigated via site-specific health and safety requirements. The efficacy of capping for elevated non-cancer hazard will be evaluated in terms of the magnitude of exceedance and other factors such as bioavailability of the COPC.

Due to the grading activities including cut and fill which will be implemented during development at the Site, the SLRA was evaluated to determine baseline Composite and Construction Worker exposures to surface, subsurface, and pooled data. It should be noted that processed slag aggregate sourced from the Tradepoint Atlantic property will be used as the primary fill material and pavement subbase for this project; therefore, regardless of the findings of the Composite Worker baseline assessment, Sub-Parcel B6-3 will be subject to surface engineering controls (i.e., capping) unless separate approvals are received from the MDE following appropriate laboratory testing of the slag aggregate material. The goal of the SLRA is therefore to determine whether additional response actions beyond capping may be needed due to current conditions at the Site. It should be noted that processed slag aggregate has already been placed in the vicinity of the proposed warehouse in accordance with the approved Logistics Center Grading Plan (Revision 0 dated March 3, 2020).

The USEPA's acceptable risk range is between 1E-6 and 1E-4. If the sum of the risk ratios for carcinogens exceeds a cumulative cancer risk of 1E-4, further analysis of site conditions will be required including the consideration of toxicity reduction in any proposal for a remedy. The magnitude of any non-carcinogen HI exceedances and bioavailability of the COPC will also dictate further analysis of site conditions including consideration of toxicity reduction in any proposal for a remedy. For lead, if the ALM results indicate that the mean concentrations would present a 5% to 10% probability of a blood concentration of 10 ug/dL for the EU, then capping of the EU would be an acceptable presumptive remedy. The mean soil lead concentrations corresponding to ALM probabilities of 5% and 10% are 2,518 mg/kg and 3,216 mg/kg, respectively. If the ALM indicates that the mean concentrations would present a >10% probability of a blood concentration of 10 ug/dL for the EU, further analysis of site conditions including toxicity reduction will be completed such that the probability would be reduced to less than 10% after toxicity reduction, but before capping.

3.3.2 Sub-Parcel B6-3 SLRA Results and Risk Characterization

Soil data were divided into three datasets (surface, subsurface, and pooled) for Sub-Parcel B6-3 to evaluate potential exposure scenarios. Due to the grading activities including cut and fill which will be implemented during development at the Site, each of these potential exposure scenarios is relevant for both the Composite and Construction Worker.

EPCs were calculated for each soil dataset (i.e., surface, subsurface, and pooled surface/subsurface) in the site-wide EU1 and EU1-EXP. ProUCL output tables (with computed UCLs) derived from the data for each COPC in soils are provided as electronic attachments, with computations presented and EPCs calculated for COPCs within each of the datasets. The ProUCL input tables are also included as electronic attachments. The results were evaluated to identify any samples that may require additional assessment or special management based on the risk characterization approach. The calculated EPCs for the surface, subsurface, and pooled exposure scenarios are provided in **Table 7**.

As indicated above, the EPCs for lead are the average (i.e., arithmetic mean) values for each dataset. A lead evaluation spreadsheet, providing the computations to determine lead averages for each dataset, is also included as an electronic attachment. The average lead concentrations are presented for each dataset in **Table 6**, which indicates that neither surface, subsurface, nor pooled soils exceeded an average lead value of 800 mg/kg. The screening criterion for lead was set at an arithmetic mean of 800 mg/kg based on the RSL, with a secondary limit of 2,518 mg/kg based on the May 2017 updated ALM developed by the USEPA (corresponding to a 5% probability of a blood lead level of 10 ug/dL). There were no locations with lead detections above 10,000 mg/kg.

None of the detections of PCBs included in the project-specific SLRA evaluation exceeded the mandatory excavation criterion of 50 mg/kg.

Composite Worker Assessment:

Risk ratios for the estimates of potential EPCs for the Composite Worker baseline scenario prior to the placement of slag aggregate at the Site are shown in **Table 8** (surface), **Table 9** (subsurface), and **Table 10** (pooled). The results are summarized as follows:

Worker Scenario	Exposure Unit	Medium	Hazard Index (>1)	Total Cancer Risk
Composite Worker	EU1 (30.3 acres)	Surface Soil	Dermal = 2	6E-6
		Subsurface Soil	Dermal = 5 Nervous = 2	4E-6
		Pooled Soil	Dermal = 2	3E-6

Based on the risk ratios for Sub-Parcel B6-3, environmental capping (100% of the Site) is an acceptable remedy to be protective of future Composite Workers for the surface, subsurface, and pooled exposure scenarios. None of the carcinogenic risk estimates for the Composite Worker were greater than the acceptable risk level of 1E-5 or the secondary risk level of 1E-4 which would warrant consideration of toxicity reduction. Each scenario exceeded the non-cancer HI value of 1 for at least one target organ system (each scenario exceeded the HI value of 1 for the dermal system target organ and the subsurface soil scenario exceeded the HI value of 1 for the nervous system target organ). The proposed capping remedy will provide adequate protection from these HI threshold exceedances. Capping and institutional controls (to maintain the integrity of the cap) are suitable measures for the protection of the future Composite Worker for both cancer risks and non-cancer hazards. The capping remedy will additionally be protective of slag aggregate which will be used as the primary fill material and pavement subbase at the Site.

Construction Worker Assessment:

According to the work schedule provided by Tradepoint Atlantic, intrusive activities which could result in potential Construction Worker exposures are expected to be limited to four primary utility installation tasks:

- Domestic Water/Fire Loop: 4 weeks (20 exposure days) estimated
- Sanitary: 2 weeks (10 exposure days) estimated
- Stormwater: 6 weeks (30 exposure days) estimated
- Pond Excavation and Grading: 4 weeks (20 exposure days) estimated

Although the anticipated work period may be subject to change (see schedule in Section 7.0), the duration of these activities is not expected to increase. Construction Worker risks were evaluated for several exposure scenarios to determine the maximum exposure frequency for the side-wide

EU1-EXP (which includes the additional construction worker areas as noted above) that would result in risk ratios equivalent to a cumulative cancer risk of 1E-5 or HI of 1 for any individual target organ. Risk ratios for the estimates of potential EPCs for the Construction Worker scenario using the selected duration (25 work days) are shown in **Table 11** (surface), **Table 12** (subsurface), and **Table 13** (pooled). The variables entered for calculation of the site-specific Construction Worker SSLs (EU area, input assumptions, and exposure frequency) are indicated as notes on the tables. The spreadsheet used for computation of the site-specific Construction Worker SSLs is included in **Appendix B**. The results are summarized as follows:

Worker Scenario	Exposure Unit	Medium	Hazard Index (>1)	Total Cancer Risk
Construction Worker	EU1-EXP (31.0 acres) (25 exposure days)	Surface Soil	none	9E-8
		Subsurface Soil	none	7E-8
		Pooled Soil	none	6E-8

Using the selected exposure duration of 25 days, the carcinogenic risks were all less than 1E-5, and none of the non-carcinogens caused a cumulative HI to exceed 1 for any target organ system. These findings are below the acceptable limits for no further action established by the agencies. This evaluation indicates that additional site-specific health and safety requirements (beyond standard Level D protection) would be required only if the allowable exposure duration of 25 days were to be exceeded for an individual worker.

Certain activities at the Site (utility installations for specific crews as noted above) are anticipated to exceed the allowable duration, and Construction Worker risks must be mitigated to facilitate the proposed construction work. Additional site-specific health and safety requirements are warranted to be protective of workers. Upgraded Personal Protective Equipment (PPE) beyond standard Level D protection will be used for the entire scope of intrusive work covered by this RADWP as a protective measure to ensure that there are no unacceptable exposures for Construction Workers during project implementation. The modified Level D PPE requirements which will be applied immediately and throughout this project, including specific PPE details, planning, tracking/supervision, enforcement, and documentation, are outlined in the PPE Standard Operational Procedure (SOP) provided as **Appendix C**.

Institutional controls will be required to be established for the protection of future Construction Workers in the event of any future long-term construction projects which could include intrusive activities. The anticipated institutional controls, including notification requirements, health and safety requirements, and materials management requirements, are specified in Section 5.4.

3.3.3 Evaluation of Comprehensive Environmental Response, Compensation, and Liability Act Criteria

Results from the SLRA indicate that a site-wide remedy of capping with institutional controls will be acceptable to mitigate potential current and future Composite Worker risks resulting from on-site soil conditions. Site-specific health and safety controls will be implemented to mitigate Construction Worker risks within the sub-parcel. This includes using modified Level D PPE. The modified Level D PPE requirements will be implemented throughout the project duration in accordance with the PPE SOP provided as **Appendix C**. Institutional controls will also be required to be established for the protection of future Construction Workers in the event of any future long-term construction projects which could include intrusive activities.

The proposed VCP capping remedy with institutional controls was evaluated for consistency with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Threshold Criteria and the Balancing Criteria. The Threshold Criteria assess the overall protection of human health and the environment, as well as achievement of media cleanup objectives and control of sources of releases at the Site. The Balancing Criteria assess long-term effectiveness and permanence; reduction of toxicity, mobility or volume; short-term effectiveness; implementability; cost effectiveness; and community and State acceptance.

Threshold Criteria:

Protect Human Health and the Environment: The assessment against this criterion evaluates how the remedy, as a whole, protects and maintains protection of human health and the environment. This criterion is satisfied when response actions are complete. The purpose of this remedy is to provide a protective barrier between human site users and impacted materials, and to protect the environment by preventing surface water from contacting potentially impacted materials in place. The capping and institutional control remedy would eliminate risk to current and future industrial workers by preventing exposure to areas of the Site where processed slag aggregate has been placed or where soil concentrations exceed a cancer risk of 1E-5 or a HI of 1. Groundwater does not present a direct human health hazard since there is no groundwater use on the property. Implementation of the proposed use restrictions will address the residual risk and will also protect future workers by eliminating or controlling potential exposure pathways, thus, reducing potential intake and contact of soil/groundwater COPCs by human receptors.

Achieve Media Cleanup Objective: The assessment against this criterion describes how the remedy meets the cleanup objective, which is risk reduction, appropriate for the expected current and reasonably anticipated future land use. The objective is to protect current/future Composite Workers and Construction Workers from potential exposures to COPCs present in soil or groundwater at levels that may result in risks of adverse health effects. Given the controlled access and use restrictions, the proposed remedy will attain

soil and groundwater objectives. The activity use restrictions will eliminate current and future unacceptable exposures to both soil and groundwater.

Control the Source of Releases: In its RCRA Corrective Action proposed remedies, USEPA seeks to eliminate or reduce further releases of hazardous wastes or hazardous constituents that may pose a threat to human health and the environment. Controlling the sources of contamination relates to the ability of the proposed remedy to reduce or eliminate, to the maximum extent practicable, further releases. Sampling results did not indicate localized, discernible source areas associated with the soil conditions observed at the Site. The control measures included in the proposed remedy, such as Materials Management Plan requirements and groundwater use restrictions, provide a mechanism to control and reduce potential further releases of COPCs. This is achieved by eliminating the potential for groundwater use and requiring proper planning for intrusive activities.

Balancing Criteria:

Long-Term Reliability and Effectiveness: The assessment against this criterion evaluates the long-term effectiveness of the remedy in maintaining protection of human health and the environment after the response objectives have been met. The primary focus of this criterion is the extent and effectiveness of the controls that may be required to manage the risk posed by slag aggregate, treatment residuals, and/or untreated wastes. The proposed capping remedies have been proven to be effective in the long-term at similar sites with similar conditions. The capping remedy will permanently contain the slag aggregate and other potentially contaminated media in place. In order for the cap to effectively act as a barrier, regular inspections will be required to determine if erosion or cracks have formed that could expose workers to contaminated materials.

Institutional controls will be implemented to protect future Composite and Construction Workers against inadvertent contact with potentially impacted media. The anticipated institutional controls are specified in Section 5.4. The Tenant will be required to sign onto the Environmental Covenant with restriction in the NFA. The proposed remedy will maintain protection of human health and the environment over time by controlling exposures to the hazardous constituents potentially remaining in slag aggregate or existing on-site media. The long-term effectiveness is high, as use restrictions are readily implementable and easily maintained. Given the historical, heavily industrial uses of the Site and the surrounding area, including the presence of landfills, land and groundwater use restrictions are expected to continue in the long term.

Reduction of Toxicity, Mobility, or Volume of Waste: The assessment against this criterion evaluates the anticipated performance of specific technologies that a remedial action alternative may employ. The capping remedy will prevent the spread of contaminants in wind-blown dust or stormwater and will prevent infiltration through the

unsaturated zone from carrying contaminants to the groundwater. Thus, the mobility of contaminants will be reduced by the capping remedy.

Short-term Effectiveness: The assessment against this criterion examines how well the proposed remedy protects human health and the environment during the construction and implementation until response objectives have been met. This criterion also includes an estimate of the time required to achieve protection for either the entire site or individual elements associated with specific site areas or threats. The risks to the Construction Worker during remedy implementation are mitigated by executing the modified Level D PPE requirements outlined in **Appendix C**. The short-term risk to site workers following these upgraded health and safety measures during implementation of the remedy will be low, leading to a high level of short-term effectiveness for protection of future site users and the environment. Short-term effectiveness in protecting on-site workers and the environment will be achieved through establishing appropriate management, construction, health and safety, and security procedures. Proper water management protocols will be implemented to prevent discharges offsite. Security and fences will be used to maintain controlled access during construction.

Implementability: The assessment against this criterion evaluates the technical and administrative feasibility, including the availability of trained and experienced personnel, materials, and equipment. Technical feasibility includes the ability to construct and operate the technology, the reliability of the technology, and the ability to effectively monitor the technology. Administrative feasibility includes the capability of obtaining permits, meeting permit requirements, and coordinating activities of governmental agencies. The proposed capping remedy for the Composite Worker area will use readily available, typically acceptable, and proven technologies.

Cost Effectiveness: The assessment against this criterion evaluates the capital costs, annual Operating and Maintenance (O&M) costs, and the net present value (NPV) of this remedy relative to alternatives. The capping remedy remedial costs would be incurred as part of the proposed site development, regardless of the findings of the SLRA.

State Support / Agency Acceptance: MDE has been involved throughout the Site investigation process. The proposed use restrictions included in the proposed remedy are generally recognized as commonly employed measures for long-term stewardship. Ultimately State/MDE support will be evaluated based on comments received during the public comment period.

A capping remedy with institutional controls would satisfy the CERCLA Threshold Criteria and the Balancing Criteria and would do so in a manner that ensures reliable implementation and effectiveness. The remedy is cost-effective and consistent with the proposed development plan.

4.0 PROPOSED SITE DEVELOPMENT PLAN

Tradepoint Atlantic is proposing to construct a logistics center totaling approximately 400,000 square feet on Sub-Parcel B6-3. The proposed development will include permanent improvements on approximately 30.3 acres of land intended for occupancy within Parcel B6. The proposed future use of Sub-Parcel B6-3 is Tier 3 – Industrial. The remainder of Parcel B6 will be addressed in separate development plans in accordance with the requirements of the ACO that will include RADWPs, if necessary. Outside of the main development area, temporary construction zones with a total area of approximately 0.7 acres will be utilized to install the facility entrance and subgrade utility connections for the project. The temporary work outside of the boundary of the Site is not intended to be the basis for the issuance of a NFA or a COC, although the scope of construction work is covered by this RADWP. The Site (30.3 acres encompassing Sub-Parcel B6-3; excluding the temporary construction zones) will be fully capped by surface engineering controls.

Certain compounds are present in the soils located near the surface and in the subsurface at concentrations in excess of the PALs. Therefore, soil is considered a potential media of concern. Potential risks to future adult workers associated with impacts to soil and groundwater exceeding the PALs will be addressed through a remedy consisting of surface engineering controls (capping of the entire area) and institutional controls (deed restrictions). The development plan provides for a containment remedy and institutional controls that will mitigate future adult workers from contacting impacted soil at the Site. In addition, Tradepoint Atlantic has proposed the use of processed slag aggregate as the primary fill material and pavement subbase at the Site. The placement of materials other than approved clean fill, including slag aggregate, requires the installation of surface engineering controls regardless of the existing soil conditions.

Future Construction Workers may contact impacted surface and/or subsurface soil during earth movement activities associated with construction activities, including within the temporary construction zones outside of the primary development area. The findings of the Construction Worker SLRA indicated that using the site-specific 25-day exposure frequency for the site-wide EU1-EXP, the screening level estimates of Construction Worker cancer risk were less than 1E-5 and no HI values above 1 were identified for any target organ system (the acceptable thresholds for no further action).

Certain activities at the Site are anticipated to exceed the allowable duration, and Construction Worker risks must be mitigated to facilitate the proposed construction work. Additional site-specific health and safety requirements are warranted to be protective of workers. Upgraded PPE beyond standard Level D protection will be used in conjunction with the property-wide Health and Safety Plan (HASP) for the entire scope of intrusive work covered by this RADWP as a protective measure to ensure that there are no unacceptable exposures for Construction Workers during project implementation. The modified Level D PPE requirements which will be applied throughout this project, including specific PPE details, planning, tracking/supervision, enforcement, and documentation, are outlined in the PPE SOP provided as **Appendix C**.

A restriction prohibiting the use of groundwater for any purpose at the Site will be included as an institutional control in the NFA and COC issued by the MDE, and a deed restriction prohibiting the use of groundwater will be filed. The groundwater use restriction will protect future Composite Workers from potential direct exposures. Proper water management is required to prevent unacceptable discharges or risks to Construction Workers during development. Work practices and health and safety plans governing groundwater encountered during excavation activities will provide protection for Construction Workers involved with development at the Site.

The development plan for the Site is shown on **Figure 2** and **Figure 3**, and the detailed development drawings (provided by Bohler Engineering) are included as **Appendix D**. The process of constructing the proposed logistics center will involve the tasks listed below. Documentation of the outlined tasks and procedures will be provided in a Sub-Parcel B6-3 Development Completion Report. The Development Completion Report will also cover the initial grading (site preparation) work that was described and approved within the Logistics Center Grading Plan (Revision 0 dated March 3, 2020) which preceded this RADWP.

4.1 RESPONSE PHASE – GROUNDWATER NETWORK ABANDONMENT

Permanent groundwater monitoring wells SW-076-MWS, SW-076-MWI, SW-080-MWS, and SW-080-MWI are located inside the development boundary as shown on **Figure 6**. The identified groundwater monitoring wells were sampled during the Finishing Mills Groundwater Phase II Investigation, with the results presented and discussed in the associated Phase II Investigation Report. As part of this development project, these four monitoring wells will be properly abandoned in accordance with COMAR 26.04.04.34 through 36. Several temporary groundwater sample collection points were also installed within and surrounding the Site at the locations shown on **Figure 6** but have already been properly abandoned.

The abandonment of any permitted groundwater wells must be reported to the Water Management Administration as per COMAR 26.04.04, and records of all groundwater well and piezometer abandonments (including abandonment forms, if available) will be included in the Development Completion Report. It is understood that the agencies may require the installation of additional permanent monitoring wells in the future following site development.

4.2 DEVELOPMENT PHASE

4.2.1 Erosion and Sediment Control Installation

Installation of erosion and sediment controls will be completed in accordance with the requirements of the 2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control prior to construction at the Site. Any soils which are disturbed during the installation of erosion and sediment controls will be replaced on-site below the cap.

4.2.2 Grading and Site Preparation

As indicated on the development plans in **Appendix D**, grading activities including both cut and fill will occur within the Sub-Parcel B6-3 boundary. The preceding Logistics Center Grading Plan (Revision 0 dated March 3, 2020) was submitted to allow Tradepoint Atlantic to proceed with grading (site preparation) for the future construction of the warehouse building designated as Logistics Center VI. The work proposed within the Grading Plan was limited to the footprint of the proposed warehouse building and the immediately surrounding area, and it did not include the full scope of grading work required to facilitate development of Sub-Parcel B6-3.

Any material that is not suitable for compaction will be excavated and replaced with subbase material, although it is not anticipated that poor soils will be encountered. Borrow materials will be obtained from MDE-approved sources and will be documented prior to transport to the Site. Processed slag aggregate sourced from the Tradepoint Atlantic property or other materials approved by the MDE for industrial use may be used as fill, but the placement of materials other than approved clean fill will necessitate that the Site will be subject to surface engineering controls (i.e., capping). Fill sources shall be free of organic material, frozen material, or other deleterious material. In the case that there is excess material (not anticipated), the spoils will be stockpiled at a suitable location in accordance with the Materials Management Plan (MMP) for the Sparrows Point Facility (Papadopulos & Associates, et al., June 17, 2015). This work will be coordinated with MDE accordingly. No excess material will leave the 3,100-acre property without prior approval from MDE.

4.2.3 Installation of Structures and Underground Utilities

The logistics center building, parking lots, and other infrastructure associated with the development of Sub-Parcel B6-3 will be installed as shown on the drawings in **Appendix D**. Soils relocated or removed during construction may be replaced on-site below the cap, but soil removed from utility trenches cannot be used as fill within the utility trenches unless such materials are approved for this use by the VCP. Additional protocols for the installation of utilities at the Site are provided in Section 5.1.2. Any water removed will be sampled (if necessary) as described in Section 5.2 and (if acceptable) sent to the on-site Humphrey Creek Wastewater Treatment Plant (HCWWTP).

4.2.4 Floor Slabs and Paving

Much of the Site will be covered with floor slabs or paving as indicated in the development plans provided in **Appendix D**. The paved areas will receive a layer of subbase material which will consist of compacted aggregate base, which may include processed slag aggregate sourced from the Tradepoint Atlantic property. The placement of processed slag aggregate or materials other than MDE-approved clean fill will necessitate that the Site will be subject to surface engineering controls (i.e., capping).

The required minimum thicknesses of all site-wide pavement sections which will serve as surface engineering controls are shown in the minimum capping section details provided in **Appendix E**. According to the development plans, all paved areas at the Site will be installed with a minimum of 4 inches of compacted aggregate base and a minimum of 4 inches of overlying pavement surface (asphalt or concrete), which meet these required minimum thicknesses.

4.2.5 Landscaping

The areas marked as "Proposed Area to be Landscaped" on the development plans (**Appendix D**) will be covered by landscaped caps. Additionally, any undesignated areas within the Site boundary will also be covered with landscaped caps. Tradepoint Atlantic has confirmed that this will include the narrow undesignated area along the southeastern edge of the Site at Sparrows Point Boulevard as well as the undesignated area at the northeastern corner of the Site.

The required minimum thicknesses of all site-wide landscaping sections which will serve as surface engineering controls are shown in the minimum capping section details provided in **Appendix E**. According to the development plans, all landscaped areas at the Site will be installed with a minimum of 6 inches of clean topsoil overlying 18 inches of clean fill, with an underlying geotextile marker fabric between the clean fill and the existing underlying material. The proposed landscape sections for the Site meet the minimum capping requirements.

4.2.6 Stormwater Management

The proposed stormwater utility layout for the Site is provided on the development plan drawings in **Appendix D**. New stormwater infrastructure will be installed throughout the Site and will discharge to two new stormwater ponds. The required minimum thicknesses of all pond sections which will serve as surface engineering controls are shown in the minimum capping section details provided in **Appendix E**. According to the development plans, the stormwater ponds will be installed with an impermeable PVC liner between the existing soil (or fill) and 1 foot of overlying clean fill. The proposed pond sections for the Site meet the minimum capping requirements.

Based on the shallow groundwater elevation measurements collected during the Finishing Mills Groundwater Phase II Investigation, the pond excavations may encounter groundwater. As shown on **Figure 7**, the shallow groundwater elevations underlying the eastern stormwater pond and southern stormwater pond are at approximately 11 feet amsl (similar to the pond bottom elevation) and 7 feet amsl (4 feet below the pond bottom), respectively. Any water removed will be sampled (if necessary) as described in Section 5.2 and (if acceptable) sent to the on-site HCWWTP.

Tradepoint Atlantic is working with the MDE Industrial & General Permits Division to renew the property-wide NPDES permit. The stormwater management systems for each parcel are reviewed and approved by Baltimore County for each individual development project.

5.0 DEVELOPMENT IMPLEMENTATION PROTOCOLS

5.1 DEVELOPMENT PHASE

This plan presents protocols for the handling of soils and fill materials in association with the development of Sub-Parcel B6-3. In particular, this plan highlights the minimum standards for construction practices and managing potentially contaminated materials to reduce potential risks to workers and the environment.

Several exceedances of the PALs were identified in soil samples across the Site. The PALs are set based on USEPA's RSLs for industrial soils, or other direct guidance from the MDE. Because PAL exceedances can present potential risks to human health and the environment at certain concentrations, this plan presents material management and other protocols to be followed during the work to adequately mitigate potential risks from such materials remaining on-site during the development phase. There were no locations in the proposed Site boundary with soil exceedances of the special management criteria for PCBs (50 mg/kg), lead (10,000 mg/kg), or TPH/Oil & Grease (6,200 mg/kg). NAPL was not identified at any soil boring locations or groundwater sample collection points relevant for the Site.

Following completion of the SLRA, the findings of the Construction Worker evaluation indicated that using the site-specific 25-day exposure frequency for the site-wide EU1-EXP, the screening level estimates of Construction Worker cancer risk were less than 1E-5 and no HI values above 1 were identified for any target organ system (the acceptable thresholds for no further action). Certain activities at the Site are anticipated to exceed the allowable duration of 25 days, and Construction Worker risks must be mitigated to facilitate the proposed construction. Upgraded PPE beyond standard Level D protection will be used in conjunction with the HASP for the entire scope of intrusive work covered by this RADWP as a protective measure to ensure that there are no unacceptable exposures for Construction Workers during project implementation. The modified Level D PPE requirements which will be applied throughout this project, including specific PPE details, planning, tracking/supervision, enforcement, and documentation, are outlined in the PPE SOP provided as **Appendix C**.

Based on the characterization of surface and subsurface soils and the associated SLRA findings, surface engineering controls are an acceptable remedy to be protective of future adult Composite Workers who otherwise could potentially contact surface soil (or relocated subsurface soil) at the Site. In addition, Tradepoint Atlantic has proposed the use of processed slag aggregate as the primary fill material and pavement subbase at the Site. The placement of materials other than approved clean fill, including slag aggregate, requires the installation of surface engineering controls (i.e., capping) regardless of the existing soil conditions. The proposed capping sections will meet the required minimum thicknesses for surface engineering controls, which are provided in **Appendix E**.

5.1.1 Erosion/Sediment Control

Erosion and sediment controls will be installed prior to commencing work in accordance with the 2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control. The erosion and sediment controls will be approved by the MDE. In addition, the following measures will be taken to prevent contaminated soil from exiting the Site:

- Stabilized construction entrance will be placed at site entrance.
- A dry street sweeper will be used as necessary on adjacent roads, and the swept dust will be collected and properly managed.
- Accumulated sediment removed from silt fence, and sediment traps if applicable, shall be periodically removed and returned to the Site.

5.1.2 Soil Excavation and Utility Trenching

A pre-excavation meeting shall be held to address proper operating procedures for working on-site and monitoring excavations and utility trenching in potentially contaminated material. This meeting shall include the construction manager and the EP providing oversight on the project. During the meeting, the construction manager and the EP shall review the proposed excavation/trenching locations and any associated utility inverts. The construction manager will be responsible for conveying all relevant information regarding excavation/grading and/or utility work to the workers who will be involved with these activities. The Utility Excavation NAPL Contingency Plan (discussed below) must also be reviewed during the pre-excavation meeting. The HASP and PPE SOP for the project shall also be reviewed and discussed.

The EP will provide oversight of soil excavation/trenching activities as described in Section 5.6. Soil excavation/trenching will occur during various phases of construction. In general, and based on the existing sampling information, all excavated materials are expected to be suitable for replacement on the Site. However, the EP will monitor the soil excavation activities for signs of significantly contaminated material which may not be suitable for reuse (as described below). The EP will also be responsible for monitoring organic vapor concentrations in the worker breathing zone within utility trenches and excavations to determine whether any increased level of health and safety protection is required.

To the extent practical, all excavation activities should be conducted in a manner to minimize double or extra handling of materials. Any stockpiles shall be kept within the Site footprint, and in a location that is not subjected to concentrated stormwater runoff. Stockpiles shall be managed as necessary to prevent the erosion and off-site migration of stockpiled materials, and in accordance with the applicable provisions of the 2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control. Soil designated for replacement on-site which does not

otherwise exhibit evidence of contamination (as determined by the EP) may be managed in large stockpiles (no size restriction) as long as they remain within the erosion and sediment controls.

All utility trenches will be backfilled with bedding and backfill materials approved by the MDE for industrial use. A general utility cross section is provided as **Appendix F**. Additional preventative measures will be required if evidence of petroleum contamination is encountered, to prevent the discharge to, or migration of, petroleum product along a utility conduit. Contingency measures have been developed to ensure that utilities will be constructed in a manner that will prevent the migration of any encountered NAPL, and that excavated material will be properly managed. The Utility Excavation NAPL Contingency Plan (**Appendix G**) provides protocols to be followed if NAPL is encountered during the construction activities. Preventative measures to inhibit the spread of petroleum product will be conducted in accordance with this plan.

The EP will monitor all soil excavation and utility trenching activities for signs of potential contamination. In particular, soils will be monitored with a hand-held PID for potential VOCs and will also be visually inspected for the presence of staining, petroleum waste materials, or other indications of significant contamination. If screening of excavated materials by the EP indicates the presence of conditions of potential concern (i.e., sustained PID readings greater than 10 ppm, visual staining, unsuitable waste materials, etc.), such materials shall be segregated for additional sampling and special management.

Excavated material exhibiting evidence of significant contamination shall be placed in stockpiles (not to exceed 500 cubic yards) on polyethylene sheeting and covered with polyethylene sheeting to minimize potential exposures and erosion when not in use. Materials stockpiled due to evidence of contamination will be sampled in accordance with waste disposal requirements and transported to an appropriate permitted disposal facility. Plans for analysis of segregated soils for any use other than disposal must be submitted to the MDE for approval.

Excavated material that is visibly impacted by NAPL will be segregated and managed in accordance with the requirements specified in the Utility Excavation NAPL Contingency Plan. Excavated material with indications of possible NAPL contamination will also be containerized or placed in a stockpile (not to exceed 500 cubic yards) on polyethylene sheeting and covered with polyethylene sheeting until the material can be analyzed for TPH/Oil & Grease and PCBs (total) to characterize the material for appropriate disposal. The MDE will be notified if such materials are encountered during excavation or utility trenching activities.

5.1.3 Soil Sampling and Disposal

Excavated materials that are determined by the EP to warrant sampling and analysis because of elevated PID readings or other indications of potential contamination shall be sampled and analyzed to determine how the materials should be managed. If excavated and stockpiled, such materials should be covered with a polyethylene tarp to minimize potential exposures and erosion.

All stockpiled soil may be considered for use as fill at this Site or on other areas of the property depending on the analytical results. A sampling Work Plan including a description of the material, estimated volume, and sampling parameters will be submitted to the MDE for approval. The resulting analytical data will be submitted to the MDE to determine the suitability of the material for reuse. If the MDE determines that the materials are unsuitable for reuse, the materials will be sampled to determine if they are classified as hazardous waste.

Soil material that is determined to be a hazardous waste shall be shipped off-site in accordance with applicable regulations to an appropriate and permitted RCRA disposal facility. Soil material may be taken to an appropriate non-hazardous landfill (including Greys Landfill) for proper disposal if the concentrations of excavated sampled materials indicate that the materials are not hazardous, but still are not suitable for reuse. The quantities of all materials that require disposal, if any, will be recorded and identified in the Development Completion Report.

5.1.4 **Fill**

Processed slag aggregate sourced from the Tradepoint Atlantic property will be used as the primary fill material for this project. The placement of processed slag aggregate or materials other than approved clean fill will necessitate that the Site will be subject to surface engineering controls (i.e., capping). Soil excavated on the sub-parcel has been determined to be suitable for re-use at the Site below the surface engineering controls, unless such materials are determined by the EP/MDE to be unsuitable for use as outlined in Section 5.1.2 and Section 5.1.3.

All over-excavated utility trenches will be backfilled with bedding and backfill approved by the MDE for industrial use. Soil removed from utility trenches cannot be used as fill within the utility trenches unless such materials are approved for this use by the VCP. As with structural fill, processed slag aggregate and other materials approved for industrial use can be used as backfill in utility trenches if the area will be covered by a VCP cap. Any utility backfill which will extend into the cap (i.e., top 2 feet of backfill in landscaped areas) must meet the VCP clean fill requirements, and a geotextile marker fabric will be placed between the VCP clean fill and any underlying material. Materials placed in areas outside of the Site boundary (i.e., within the temporary construction zones outside of Sub-Parcel B6-3) must meet the VCP clean fill requirements or be otherwise approved by the MDE prior to placement. A general utility detail drawing is provided as **Appendix F**. Material imported to the Site will be screened according to MDE guidance for suitability.

5.1.5 **Dust Control**

General construction operations, including soil excavation and transport, and trenching for utilities will be performed at the Site. These activities are anticipated to be performed in areas of soil impacted with COPCs. Best management practices should be undertaken at the Sparrows Point property as a whole to prevent the generation of dust which could impact other areas of the property

outside of the immediate work zone. To limit worker exposure to contaminants borne on dust and windblown particulates, dust monitoring will be performed in the immediate work zone and at the upwind and downwind perimeter of the Site, and dust control measures will be implemented if warranted based on the monitoring results. The action level proposed for the purpose of determining the need for dust suppression techniques (e.g. watering and/or misting) during the development activities at the Site will be 3.0 mg/m³. The lowest of the site-specific dust action levels, OSHA PELs, and ACGIH TLV was selected as the proposed action level.

The EP will be responsible for the dust monitoring program. Air monitoring will be performed using Met One Instruments, Inc. E-Sampler dust monitors or equivalent real-time air monitoring devices. The EP will set-up dust monitoring equipment at the outset of ground intrusive work or other dust-generating activities, and continuous dust monitoring will be performed during this work. In addition to work area monitoring, a dust monitor will be placed at selected perimeter locations that will correspond to the upwind and downwind boundaries based on the prevailing wind direction predicted for that day. The prevailing wind direction will be assessed during the day, and the positions of the perimeter monitors will be adjusted if there is a substantial shift in the prevailing wind direction.

Once all dust-generating activities are complete (which may occur at a later stage of the project once ground intrusive work has been completed or after the Site has been capped), the dust monitoring program may be discontinued. If additional dust-generating activities commence, additional dust monitoring activities will be performed.

If sustained dust concentrations exceed the action level (3.0 mg/m³) at any of the monitoring locations as a result of conditions occurring at the Site, operations will be stopped temporarily until dust suppression can be implemented. Operations may be resumed once monitoring indicates that dust concentrations are below the action level. The background dust concentration will be utilized to evaluate whether Site activities are the source of the action level exceedance. The background dust concentration will be based on measurements over a minimum of a 1-hour period at the upwind Site boundary. The upwind data will be used to calculate a time weighted average background dust concentration. As noted above, the locations of the perimeter dust monitors may be adjusted periodically if there is a substantial shift in the prevailing wind direction.

As applicable, air monitoring will be conducted during development implementation activities to assess levels of exposure to Site workers, establish that the work zone designations are valid, and verify that respiratory protection being worn by personnel, if needed, is adequate. Concurrent with the work zone air monitoring, perimeter air monitoring will also be performed at the upwind and downwind Site boundaries to ensure contaminants are not migrating off-site. The concentration measured at the downwind perimeter shall not exceed the action level of 3.0 mg/m³, unless caused by background dust from upwind of the Site. If exceedances of the action level are identified downwind for more than five minutes, the background dust concentration shall be evaluated to

determine whether the action level exceedances are attributable to Site conditions. If on-site activities are the source of the exceedances, dust control measures and additional monitoring will be implemented. The dust suppression measures may include wetting or misting using a hose connected to a water supply or a water truck stationed at the Site.

Dust control measures will be implemented as described above to address dust generated as a result of construction activities conducted at the Site. However, based on the nature of the area and/or ongoing activities surrounding the Site, it is possible that windblown particulates may come from surrounding areas. As discussed above, the dust concentration in the upwind portion of the Site will be considered when monitoring dust levels in the work area. A pre-construction meeting will be held to discuss the potential of windblown particulates from other activities impacting the air monitoring required for this RADWP. Site contact information will be provided to address the possibility of upwind dust impacts. If sustained dust is observed above the action level (3.0 mg/m^3) and it is believed to originate from off-site (i.e., upwind) sources, this will immediately be reported to the MDE-VCP project team, as well as the MDE Air and Radiation Administration (ARA).

5.2 WATER MANAGEMENT

This plan presents the protocols for handling any groundwater or surface water that needs to be removed to facilitate construction of the proposed Sub-Parcel B6-3 development.

5.2.1 Groundwater PAL Exceedances

A total of seven shallow groundwater samples (as shown on **Figure 5**) were collected during the preceding Finishing Mills Groundwater Phase II Investigation from four temporary groundwater sample collection points (piezometers) and three permanent monitoring wells within and surrounding the Site. Aqueous PAL exceedances in shallow groundwater in the vicinity of the development LOD included both inorganics and organic compounds. The aqueous PAL exceedances obtained during the preceding Phase II Investigation are shown on **Figure GW1**.

While the concentrations of PAL exceedances are not deemed to be a significant human health hazard for future Composite Workers since there is no on-site groundwater use which could lead to direct exposures, proper water management is required during construction to prevent unacceptable discharges or risks to Construction Workers.

5.2.2 Dewatering

Dewatering may be necessary during the installation of underground utilities and within excavations/trenches. If dewatering is required, it shall be done in accordance with all local, state, and federal regulations. Water that collects in excavations/trenches due to intrusion of groundwater, stormwater, and/or dust control waters will be transported to the HCWWTP. The water will be treated and discharged in accordance with NPDES Permit No. 90-DP-0064A; I. Special Conditions; A.4; Effluent Limitations and Monitoring Requirements.

Any water that must be removed and sent to the HCWWTP will be pumped to the nearest catch basin that discharges to the TMC, or otherwise may be pumped directly to the TMC. Water in the TMC feeds into the HCWWTP where it is treated prior to release into Bear Creek. Any discharged water will be pumped through a filter bag or equivalent to remove suspended solids prior to discharge. A figure is not being provided at this time as the specific discharge location for dewatering fluids may change during development as conditions dictate. Documentation of the catch basin(s) used shall be provided in the Development Completion Report.

The EP will inspect any water that collects in the excavations/trenches. If the water exhibits indications of significant contamination (sheen, odor, discoloration, presence of product), or if the excavation/trench is within a known area of significant groundwater contamination (if groundwater is the source of the intrusive water), the water may be sampled and analyzed for some or all of the analyses listed below. The analyses run will be dependent on the suspected source of contamination and local site conditions.

The results of the analyses will be reviewed by the HCWWTP operator to determine if any wastewater treatment system adjustments are necessary. If the results of the analyses are above the threshold levels listed below, the water will be further evaluated to confirm acceptable treatment at the HCWWTP, or will be evaluated to design an appropriate pre-treatment option. Alternatively, the water may be disposed of at an appropriate off-site facility.

Analysis	Threshold Levels
• Total metals by USEPA Method 6020A	1,000 ppm
• PCBs by USEPA Method 8082	>Non-Detect
• SVOCs by USEPA Method 8270C	1 ppm
• VOCs by USEPA Method 8260B	1 ppm
• Oil & Grease by USEPA Method 1664	200 ppm

Documentation of any water testing, as well as the selected disposal option, will be reported to the MDE in the Development Completion Report. Any permits or permit modifications related to dewatering will be provided to the agencies as addenda to this RADWP.

5.3 HEALTH AND SAFETY

A property-wide HASP (**Appendix H**) has been developed and is attached to this plan to present the minimum requirements for worker health and safety protection for all development projects. All contractors working on the Site must prepare their own HASP that provides a level of protection at least as much as that provided by the attached HASP. Alternately, on-site contractors may elect to adopt the HASP provided.

General health and safety controls (level D protection) are adequate to mitigate potential risk to Construction Workers conducting ground intrusive activities for a duration of up to 25 exposure days. However, certain ground intrusive activities at the Site (utility installations for specific crews) are anticipated to exceed the allowable duration. Modified Level D PPE will be used for the entire scope of intrusive work covered by this RADWP as a protective measure to ensure that there are no unacceptable exposures for Construction Workers during project implementation. Health and safety controls outlined in the HASP and PPE SOP will mitigate any potential risk to Construction Workers from contacting impacted soil and groundwater during development. The modified Level D PPE requirements planned for this development project, including specific PPE details, planning, tracking/supervision, enforcement, and documentation, are outlined in the PPE SOP provided as **Appendix C**. The EP will be responsible for monitoring organic vapor concentrations in the worker breathing zone within the utility trenches and excavations to determine whether any increased level of health and safety protection (including engineering controls and/or PPE) is required.

Prior to commencing work, the contractor must conduct an on-site safety meeting for all personnel. All personnel must be made aware of the HASP and the PPE SOP. Detailed safety information shall be provided to personnel who may be exposed to COPCs. Workers will be responsible for following established safety procedures to prevent contact with potentially contaminated material.

5.4 INSTITUTIONAL CONTROLS (FUTURE LAND USE CONTROLS)

Long-term conditions related to future use of the Site will be placed on the RADWP approval, NFA, and COC. These conditions are anticipated to include the following:

- A restriction prohibiting the use of groundwater for any purpose at the Site and a requirement to characterize, containerize, and properly dispose of groundwater in the event of deep excavations encountering groundwater. The entire Tradepoint Atlantic property will be subject to the groundwater use restriction.
- Notice to the MDE at least 30 days prior to any future soil disturbances that are expected to breach the approved capping remedy (i.e., through the pavement cap or marker fabric in landscaped areas).
- Notice to the USEPA at least 30 days prior to any future soil disturbances that are expected to breach the approved capping remedy, only if the proposed duration of intrusive activity would exceed the allowable exposure duration determined in the SLRA and the contractor will not use the modified Level D PPE specified in the approved SOP.
- Requirement for a HASP in the event of any future excavations at the Site.
- Complete appropriate characterization and disposal of any material excavated at the Site in accordance with applicable local, state and federal requirements.
- Implementation of inspection procedures and maintenance of the containment remedies.

The responsible party will file the above deed restrictions as defined by the MDE-VCP in the NFA and COC. The Tenant will be required to sign onto the Environmental Covenant with restriction in the NFA. Tradepoint Atlantic will notify the Tenant of this requirement and will provide MDE with contact information for the Tenant prior to issuance of the NFA.

5.5 POST REMEDIATION REQUIREMENTS

Post remediation requirements will include compliance with the conditions specified in the NFA, COC, and the deed restrictions recorded for the Site. Deed restrictions will be recorded within 30 days after receipt of the final NFA. In addition, the MDE and USEPA will be provided with a written notice of any future excavations (as applicable) in accordance with the requirements given in Section 5.4. Written notice of planned excavation activities will include the proposed date(s) for the excavation, location of the excavation, health and safety protocols (as required), clean fill source (as required), and proposed characterization and disposal requirements.

Additional requirements will include inspection procedures and maintenance of the containment remedies to minimize degradation which could lead to future exposures. An Operations and Maintenance Plan (O&M Plan) will be submitted in the future for MDE approval. This O&M Plan will include long-term inspection and maintenance requirements for the capping remedies installed at the Site. The responsible party will perform cap inspections, perform maintenance of the cap, and retain inspection records, as required by the O&M Plan.

5.6 CONSTRUCTION OVERSIGHT

Construction Oversight by an EP will ensure and document that the project is built as designed and appropriate environmental and safety protocols are followed. Upon completion, the EP will certify that the project is constructed in accordance with this RADWP.

The EP will monitor all soil excavation and utility trenching activities for signs of potential contamination that may not have been previously identified. In particular, soils will be monitored with a hand-held PID for potential VOCs, and will also be visually inspected for staining, petroleum waste materials, or other indications of significant contamination. If screening of excavated materials by the EP indicates the presence of conditions of potential concern (i.e., sustained PID readings greater than 10 ppm, visual staining, unsuitable waste materials, etc.), such materials shall be segregated for additional sampling and special management (as described in Section 5.1.2; Soil Excavation and Utility Trenching). The EP will also perform routine periodic breathing zone monitoring and PPE spot checks during ground intrusive activities. The EP will also inspect any water that collects in the excavations/trenches on an as-needed basis to coordinate appropriate sampling prior to disposal (as described in Section 5.2.2; Dewatering).

Daily inspections, as necessary, will be performed during general site grading and cap construction activities to verify that appropriate fill materials are being used (as described in Section 5.1.4; Fill),

dust monitoring and control measures are being implemented as appropriate (as described in Section 5.1.5; Dust Control), the requirements of the HASP and the PPE SOP are being enforced as applicable (as described in Section 5.3; Health and Safety), and surface engineering controls are being installed with the appropriate thicknesses (shown on the RADWP attachments). Oversight by an EP will not be required during construction activities which do not have a significant environmental component, such as above-grade building construction.

Records shall be provided by the EP to document:

- Compliance with soil screening requirements
- Proper water management, including documentation of any testing and water disposal
- Observations of construction activities during site grading and cap construction
- Proper cap thickness and construction

6.0 PERMITS, NOTIFICATIONS AND CONTINGENCIES

The participant and their contractors will comply with all local, state, and federal laws and regulations by obtaining any necessary approvals and permits to conduct the activities contained herein. Any permits or permit modifications from State or local authorities will be provided as addenda to this RADWP.

A grading permit is required if the proposed grading disturbs over 5,000 square feet of surface area or over 100 cubic yards of earth. A grading permit is required for any grading activities in any watercourse, floodplain, wetland area, buffers (stream and within 100 feet of tidal water), habitat protection areas or forest buffer areas (includes forest conservation areas). Erosion and Sediment Control Plans will be submitted to, and approved by, the MDE prior to initiation of land disturbance for development.

There are no wetlands identified within the project area, so no permits are required from the MDE Water Resources Administration.

Contingency measures will include the following:

1. The MDE will be notified immediately of any previously undiscovered contamination, previously undiscovered storage tanks and other oil-related issues, and citations from regulatory entities related to health and safety practices.

2. Any significant change to the implementation schedule will be noted in the progress reports to MDE.

3. Modified Level D PPE will be used for the entire scope of intrusive work covered by this RADWP as a protective measure to ensure that there are no unacceptable exposures for Construction Workers during project implementation. The modified Level D PPE requirements which will be applied throughout this project are outlined in the PPE SOP provided as **Appendix C**. If it is not possible to implement the PPE SOP as provided, the agencies will be notified and a RADWP Addendum will be submitted to detail any appropriate mitigative measures.

7.0 IMPLEMENTATION SCHEDULE

Progress reports will be submitted to the MDE on a quarterly basis. Each quarterly progress report will include, at a minimum, a discussion of the following information regarding tasks completed during the specified quarter:

- Development Progress
- Dust Monitoring
- Water Management
- Soil Management (imported materials, screening, stockpiling)
- Soil Sampling and Disposal
- Notable Occurrences (if applicable)
- Additional Associated Work (if applicable)

The proposed implementation schedule is shown below:

Task	**Proposed Completion Date**
Logistics Center Grading Plan Approval	March 13, 2020
Anticipated RADWP Approval	June 26, 2020

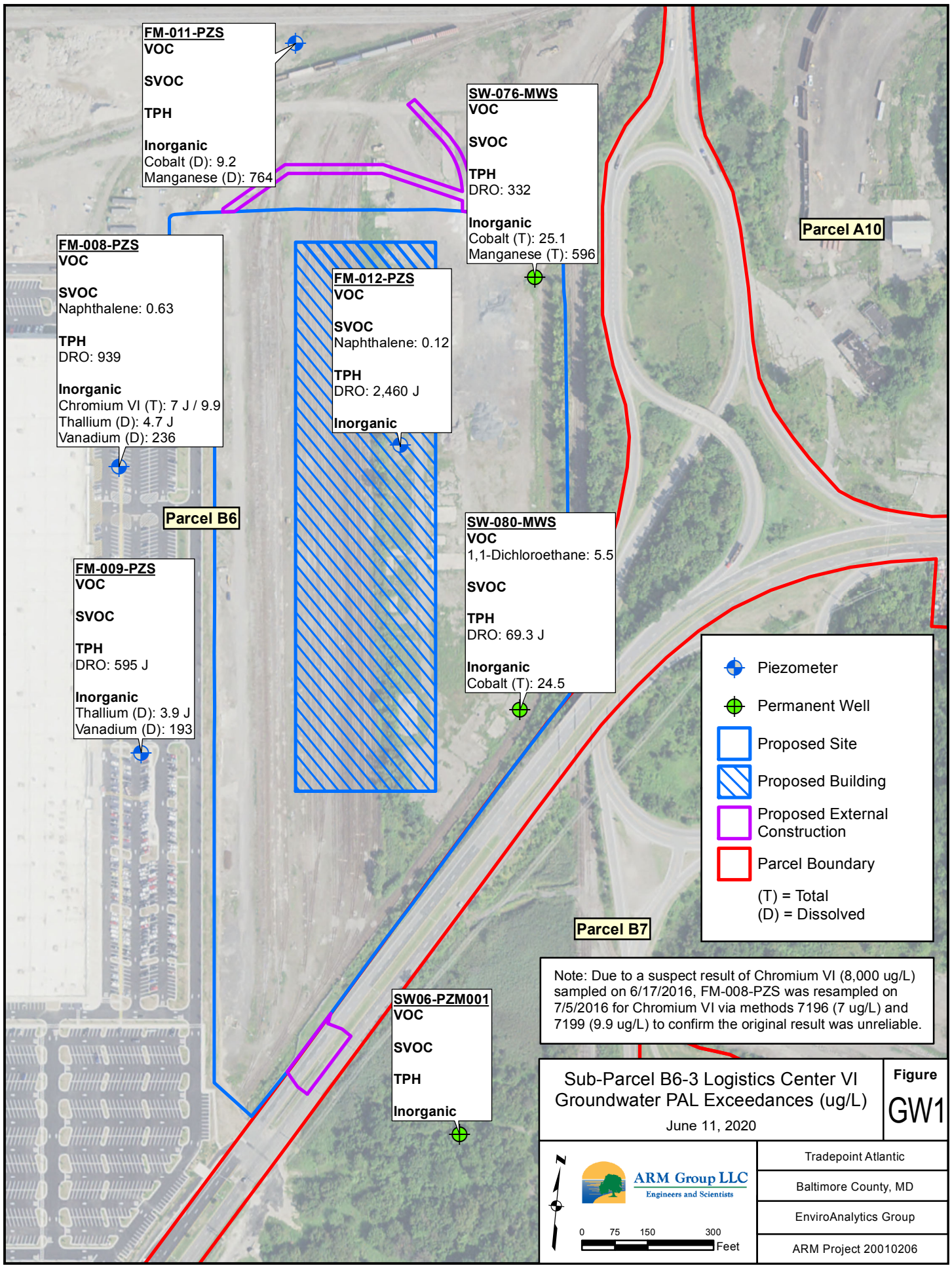
Task	**Proposed Completion Date**
Groundwater Network Abandonments	June 30, 2020

Task	**Proposed Completion Date**
Installation of Erosion and Sediment Controls	March 2020 (start)
Slag (or Alternative Fill) Delivery and Placement	March 2020 (start)
Site Preparation/Grading – Building Pad & Parking	March 2020 (start)
Utility Installations: Domestic Water/Fire Loop (4 weeks) Sanitary (2 weeks) Stormwater (6 weeks) Pond Excavation and Grading (4 weeks)	June 2020 (start)

Construction of Building	June 2020 (start)
Installation of Pavements	July 2020 (start)
Submittal of Development Completion Report/ Notice of Completion of Remedial Actions*	December 2020
Request for NFA from the MDE	January 2021
Recordation of institutional controls in the land records office of Baltimore County	Within 30 days of receiving the approval of NFA from the MDE
Submit proof of recordation with Baltimore County	Upon receipt from Baltimore County

*Notice of Completion of Remedial Actions will be prepared by Professional Engineer registered in Maryland and submitted with the Development Completion Report to certify that the work is consistent with the requirements of this RADWP and the Site is suitable for occupancy and use.

FIGURES


FM-011-PZS
VOC
SVOC
TPH
Inorganic
Cobalt (D): 9.2
Manganese (D): 764
SW-076-MWS
VOC
SVOC
TPH
DRO: 332
Inorganic
Cobalt (T): 25.1
Manganese (T): 596
Parcel A10
FM-008-PZS
VOC
SVOC
Naphthalene: 0.63
TPH
DRO: 939
Inorganic
Chromium VI (T): 7 J / 9.9
Thallium (D): 4.7 J
Vanadium (D): 236
FM-012-PZS
VOC
SVOC
Naphthalene: 0.12
TPH
DRO: 2,460 J
Inorganic
Parcel B6
SW-080-MWS
VOC
1,1-Dichloroethane: 5.5
SVOC
TPH
DRO: 69.3 J
Inorganic
Cobalt (T): 24.5
FM-009-PZS
VOC
SVOC
TPH
DRO: 595 J
Inorganic
Thallium (D): 3.9 J
Vanadium (D): 193
Piezometer
Permanent Well
Proposed Site
Proposed Building
Proposed External Construction
Parcel Boundary
(T) = Total
(D) = Dissolved
Parcel B7
SW06-PZM001
VOC
SVOC
TPH
Inorganic
Note: Due to a suspect result of Chromium VI (8,000 ug/L) sampled on 6/17/2016, FM-008-PZS was resampled on 7/5/2016 for Chromium VI via methods 7196 (7 ug/L) and 7199 (9.9 ug/L) to confirm the original result was unreliable.
Sub-Parcel B6-3 Logistics Center VI
Groundwater PAL Exceedances (ug/L)
June 11, 2020
Figure
GW1
ARM Group LLC
Engineers and Scientists
0 75 150 300
Feet
Tradepoint Atlantic
Baltimore County, MD
EnviroAnalytics Group
ARM Project 20010206

TABLES

Table 1 - Sub-Parcel B6-3
Summary of Organics Detected in Soil

Parameter	Units	PAL	B6-001-SB-1 6/15/2016	B6-001-SB-9 6/15/2016	B6-002-SB-1 6/15/2016	B6-002-SB-4.5 6/15/2016	B6-023-SB-1 6/14/2016	B6-023-SB-4 6/14/2016	B6-023-SB-10 6/14/2016	B6-030-SB-1 6/15/2016	B6-030-SB-5 6/15/2016	B6-031-SB-1 6/15/2016	B6-031-SB-4 6/15/2016	B6-032-SB-1 6/15/2016	B6-032-SB-4 6/15/2016
Volatile Organic Compounds															
1,2-Dichlorobenzene	mg/kg	9,300	0.0062 U	0.0057 U	0.0071 U	0.0052 U	0.0032 U	0.0064 U	N/A	0.0052 U	0.0052 U	0.0053 U	0.0049 U	0.0055 U	0.0047 U
2-Butanone (MEK)	mg/kg	190,000	0.012 U	0.011 U	**0.0046 J**	0.01 U	0.0064 U	0.013 U	N/A	0.01 U	0.01 U	**0.008 J**	0.0098 U	**0.0031 J**	**0.0065 J**
Acetone	mg/kg	670,000	0.012 U	0.011 U	0.014 U	0.01 U	0.0064 UJ	0.013 UJ	N/A	0.01 U	0.01 U	**0.036**	0.0098 U	0.011 U	**0.018**
Benzene	mg/kg	5.1	0.0062 U	0.0057 U	**0.0037 J**	0.0052 U	0.0032 U	0.0064 U	N/A	0.0052 U	0.0052 U	0.0053 U	0.0049 U	0.0055 U	0.0047 U
Ethylbenzene	mg/kg	25	0.0062 U	0.0057 U	0.0071 U	0.0052 U	0.0032 U	**0.002 J**	N/A	0.0052 U	0.0052 U	0.0053 U	0.0049 U	0.0055 U	0.0047 U
Toluene	mg/kg	47,000	0.0062 U	0.0057 U	0.0071 U	0.0052 U	0.0032 U	**0.0061 J**	N/A	0.0052 U	0.0052 U	0.0053 U	0.0049 U	0.0055 U	0.0047 U
Xylenes	mg/kg	2,800	0.019 U	0.017 U	0.021 U	0.016 U	0.0096 U	**0.013 J**	N/A	0.016 U	0.015 U	0.016 U	0.015 U	0.017 U	0.014 U
Semi-Volatile Organic Compounds^															
1,1-Biphenyl	mg/kg	200	0.07 U	0.083 U	0.081 U	0.082 U	0.069 U	**0.044 J**	N/A	**0.1**	0.078 U	0.072 U	0.08 U	**0.022 J**	0.076 U
1,2,4,5-Tetrachlorobenzene	mg/kg	350	0.07 U	0.083 U	0.081 U	0.082 U	0.069 U	0.075 U	N/A	0.071 U	0.078 U	0.072 U	0.08 U	0.07 U	0.076 U
2,4-Dimethylphenol	mg/kg	16,000	0.07 U	0.083 R	0.081 U	0.082 U	0.069 U	**0.075**	N/A	**0.024 J**	0.078 U	0.072 R	0.08 U	**0.13**	**0.03 J**
2-Chloronaphthalene	mg/kg	60,000	0.07 U	0.083 U	0.081 U	0.082 U	0.069 U	0.075 U	N/A	0.071 U	0.078 U	0.072 U	0.08 U	0.07 U	0.076 U
2-Methylnaphthalene	mg/kg	3,000	**0.017**	0.0084 U	**0.0034 J**	0.0085 U	0.07 U	**0.25**	N/A	**0.44**	0.0078 UJ	**0.002 J**	**0.0074 J**	**0.17**	**0.0056 J**
2-Methylphenol	mg/kg	41,000	0.07 U	0.083 R	0.081 U	0.082 U	0.069 U	0.075 U	N/A	0.071 U	0.078 U	0.072 R	0.08 U	0.07 U	0.076 U
3&4-Methylphenol(m&p Cresol)	mg/kg	41,000	0.14 U	0.17 R	0.16 U	0.16 U	0.14 U	**0.033 J**	N/A	0.14 U	0.16 U	0.14 R	0.16 U	**0.039 J**	0.15 U
Acenaphthene	mg/kg	45,000	**0.0026 J**	**0.00071 J**	**0.0011 J**	0.0085 U	0.07 U	**0.073 J**	N/A	**0.021**	0.0078 U	0.0072 U	**0.033**	**0.011**	**0.08**
Acenaphthylene	mg/kg	45,000	**0.0062 J**	**0.0016 J**	**0.0016 J**	0.0085 U	0.07 U	**0.11**	N/A	**0.014**	0.0078 U	0.0072 U	0.0081 U	**0.0096**	**0.023**
Acetophenone	mg/kg	120,000	0.07 U	0.083 U	0.081 U	0.082 U	0.069 U	0.075 U	N/A	0.071 U	0.078 U	0.072 U	0.08 U	0.07 U	0.076 U
Anthracene	mg/kg	230,000	**0.017**	**0.002 J**	**0.0055 J**	**0.0013 J**	0.07 U	**0.44**	N/A	**0.056**	0.0078 UJ	**0.0011 J**	**0.032**	**0.026**	**0.094**
Benz[a]anthracene	mg/kg	21	**0.047**	**0.0017 J**	**0.023**	**0.0043 J**	**0.016 J**	**1.6**	N/A	**0.078**	0.0078 U	**0.0019 J**	**0.002 J**	**0.033**	0.0077 U
Benzaldehyde	mg/kg	120,000	0.07 UJ	0.083 UJ	0.081 UJ	0.082 UJ	0.069 UJ	**0.13 J**	N/A	**0.044 J**	0.078 UJ	0.072 UJ	0.08 UJ	0.07 UJ	0.076 UJ
Benzo[a]pyrene	mg/kg	2.1	**0.043**	0.0084 U	**0.018**	**0.0029 J**	**0.01 J**	**1.4 J**	0.0082 U	**0.069**	0.0078 U	0.0072 U	**0.0012 J**	**0.033**	0.0077 U
Benzo[b]fluoranthene	mg/kg	21	**0.12**	**0.0019 J**	**0.043**	**0.0075 J**	**0.022 J**	**3.4 J**	0.0082 U	**0.25**	0.0078 U	**0.0029 J**	**0.0038 J**	**0.13**	**0.0019 J**
Benzo[g,h,i]perylene	mg/kg		**0.021**	0.0084 U	**0.0072 J**	**0.0012 J**	0.07 UJ	**0.35 J**	N/A	**0.048**	0.0078 U	0.0072 U	0.0081 U	**0.018**	0.0077 U
Benzo[k]fluoranthene	mg/kg	210	**0.1**	**0.0016 J**	**0.038**	**0.0061 J**	**0.02 J**	**3 J**	N/A	**0.22**	0.0078 U	**0.0026 J**	**0.0032 J**	**0.12**	**0.0018 J**
bis(2-Ethylhexyl)phthalate	mg/kg	160	**0.028 J**	0.083 U	0.081 U	0.082 U	**0.015 J**	0.075 UJ	N/A	**0.056 J**	0.078 U	0.072 U	0.08 U	**0.032 J**	0.076 U
Caprolactam	mg/kg	400,000	0.18 U	0.21 U	0.2 U	0.21 U	0.17 U	0.19 U	N/A	0.18 U	0.2 U	0.18 U	0.2 U	0.18 U	0.19 U
Carbazole	mg/kg		0.07 U	0.083 U	0.081 U	**0.063 J**	0.069 U	**0.15**	N/A	**0.022 J**	0.078 U	0.072 U	0.08 U	0.07 U	0.076 U
Chrysene	mg/kg	2,100	**0.043**	**0.0011 J**	**0.022**	**0.004 J**	**0.0085 J**	**1.2**	N/A	**0.13**	0.0078 U	**0.002 J**	**0.005 J**	**0.064**	**0.0042 J**
Dibenz[a,h]anthracene	mg/kg	2.1	**0.0069 J**	0.0084 U	**0.0046 J**	0.0085 U	0.07 UJ	**0.16 J**	N/A	**0.015**	0.0078 U	0.0072 U	0.0081 U	**0.006 J**	0.0077 U
Di-n-butylphthalate	mg/kg	82,000	**0.05 J**	0.083 U	0.081 U	0.082 U	0.069 U	0.075 U	N/A	0.071 U	0.078 U	0.072 U	0.08 U	0.07 U	0.076 U
Di-n-ocytlphthalate	mg/kg	8,200	0.07 U	0.083 U	0.081 U	0.082 U	0.069 UJ	0.075 UJ	N/A	0.071 UJ	0.078 UJ	0.072 U	0.08 U	0.07 UJ	0.076 U
Fluoranthene	mg/kg	30,000	**0.07**	**0.0039 J**	**0.042**	**0.0064 J**	**0.013 J**	**2.1**	N/A	**0.13**	0.0078 U	**0.0045 J**	**0.013**	**0.055**	**0.006 J**
Fluorene	mg/kg	30,000	**0.0023 J**	0.0084 U	**0.0014 J**	0.0085 U	0.07 U	**0.13**	N/A	**0.045**	0.0078 U	0.0072 U	**0.01**	**0.024**	**0.094**
Hexachloroethane	mg/kg	8	0.07 U	0.083 U	0.081 U	0.082 U	0.069 U	0.075 U	N/A	0.071 U	0.078 U	0.072 U	0.08 U	0.07 U	0.076 U
Indeno[1,2,3-c,d]pyrene	mg/kg	21	**0.02**	0.0084 U	**0.007 J**	**0.0012 J**	0.07 UJ	**0.38 J**	N/A	**0.045**	0.0078 U	0.0072 U	0.0081 U	**0.016**	0.0077 U
Naphthalene	mg/kg	8.6	**0.012**	0.0084 U	0.0055 B	0.0023 B	0.07 U	**0.35**	N/A	**0.2**	0.0078 U	0.0072 U	0.0062 B	**0.063**	**0.011**
N-Nitroso-di-n-propylamine	mg/kg	0.33	0.07 U	0.083 U	0.081 U	0.082 U	0.069 U	0.075 U	N/A	0.071 U	0.078 U	0.072 U	0.08 U	0.07 U	0.076 U
N-Nitrosodiphenylamine	mg/kg	470	0.07 U	0.083 U	0.081 U	0.082 U	0.069 U	0.075 U	N/A	**0.055 J**	0.078 U	0.072 U	0.08 U	**0.026 J**	0.076 U
Phenanthrene	mg/kg		**0.049**	**0.007 J**	**0.025**	**0.0036 J**	**0.0092 J**	**1.2**	N/A	**0.32**	0.0078 U	**0.0054 J**	**0.04**	**0.12**	**0.23**
Phenol	mg/kg	250,000	0.07 U	0.083 R	0.081 U	0.082 U	0.069 U	0.075 U	N/A	0.071 U	0.078 U	0.072 R	0.08 U	0.07 U	0.076 U
Pyrene	mg/kg	23,000	**0.06**	**0.0028 J**	**0.037**	**0.0056 J**	**0.011 J**	**1.8**	N/A	**0.2**	0.0078 U	**0.0041 J**	**0.044**	**0.076**	**0.031**
PCBs															
Aroclor 1242	mg/kg	0.97	**0.067**	N/A	0.054 U	N/A	0.05 U	N/A	N/A	0.0527 U	N/A	0.0545 U	N/A	0.0522 U	N/A
Aroclor 1254	mg/kg	0.97	0.0524 U	N/A	0.054 U	N/A	0.05 U	N/A	N/A	0.0527 U	N/A	0.0545 U	N/A	0.0522 U	N/A
Aroclor 1260	mg/kg	0.99	0.0524 U	N/A	0.054 U	N/A	0.05 U	N/A	N/A	0.0527 U	N/A	0.0545 U	N/A	0.0522 U	N/A
Aroclor 1262	mg/kg		0.0524 U	N/A	0.054 U	N/A	0.05 U	N/A	N/A	0.0527 U	N/A	0.0545 U	N/A	0.0522 U	N/A
Aroclor 1268	mg/kg		0.0524 U	N/A	0.054 U	N/A	0.05 U	N/A	N/A	0.0527 U	N/A	0.0545 U	N/A	0.0522 U	N/A
PCBs (total)	mg/kg	0.97	**0.067**	N/A	0.054 U	N/A	0.05 U	N/A	N/A	0.0527 U	N/A	0.0545 U	N/A	0.0522 U	N/A
TPH/Oil & Grease															
Diesel Range Organics	mg/kg	6,200	**31.8 J**	**17.3 J**	**36.4 J**	**23.3 J**	**40.1 J**	**653 J**	**4.1 J**	**463 J**	**5.1 J**	**15.3 J**	**245 J**	**433 J**	**553 J**
Gasoline Range Organics	mg/kg	6,200	12.5 U	11 U	14.2 U	9.5 U	6.6 U	**17.3**	N/A	9 U	10.5 U	10.4 U	9.7 U	8.8 U	**20.3**
Oil & Grease	mg/kg	6,200	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Detections in bold
Values in red indicate an exceedance of the Project Action Limit (PAL)
N/A indicates that the parameter was not analyzed for this sample
* indicates non-validated data
^ PAH compounds were analyzed via SIM

U: This analyte was not detected in the sample. The numeric value represents the sample quantitation/detection limit.
UJ: This analyte was not detected in the sample. The actual quantitation/detection limit may be higher than reported.
J: The positive result reported for this analyte is a quantitative estimate.
B: This analyte was not detected substantially above the level of the associated method blank or field blank.
R: The result for this analyte is unreliable. Additional data is needed to confirm or disprove the presence of this analyte in the sample.

Table 1 - Sub-Parcel B6-3
Summary of Organics Detected in Soil

Parameter	Units	PAL	B6-046-SB-1 6/14/2016	B6-046-SB-6 6/14/2016	B6-071-SB-1* 6/17/2016	B6-071-SB-4* 6/17/2016	B6-072-SB-1* 6/17/2016	B6-072-SB-4* 6/17/2016	B6-073-SB-1 6/16/2016	B6-073-SB-5 6/16/2016	B6-077-SB-1 6/15/2016	B6-077-SB-4 6/15/2016	B6-079-SB-1 6/15/2016	B6-079-SB-7 6/15/2016	B6-080-SB-1 6/16/2016
Volatile Organic Compounds															
1,2-Dichlorobenzene	mg/kg	9,300	0.0055 U	0.0055 U	0.0055 U	0.0054 U	0.004 U	0.0047 U	0.0062 UJ	0.0046 U	0.0059 U	0.0044 U	0.0056 U	0.0048 U	0.005 U
2-Butanone (MEK)	mg/kg	190,000	0.011 U	**0.0051 J**	0.011 U	0.011 U	0.008 U	0.0095 U	0.012 U	0.0093 U	0.012 U	**0.0064 J**	0.011 U	0.0096 U	0.01 U
Acetone	mg/kg	670,000	0.011 UJ	**0.052 J**	0.011 U	0.011 U	0.008 U	0.0095 U	0.012 UJ	0.0093 UJ	0.012 U	**0.018**	0.011 U	**0.0059 J**	0.01 UJ
Benzene	mg/kg	5.1	0.0055 U	0.0055 U	0.0055 U	0.0054 U	0.004 U	0.0047 U	0.0062 U	0.0046 U	0.0059 U	0.0044 U	0.0056 U	0.0048 U	0.005 U
Ethylbenzene	mg/kg	25	0.0055 U	0.0055 U	0.0055 U	0.0054 U	0.004 U	0.0047 U	0.0062 U	0.0046 U	0.0059 U	0.0044 U	0.0056 U	0.0048 U	0.005 U
Toluene	mg/kg	47,000	0.0055 U	0.0055 U	0.0055 U	0.0054 U	0.004 U	0.0047 U	0.0062 U	0.0046 U	0.0059 U	**0.0015 J**	0.0056 U	0.0048 U	0.005 U
Xylenes	mg/kg	2,800	0.017 U	0.016 U	0.017 U	0.016 U	0.012 U	0.014 U	0.019 U	0.014 U	0.018 U	0.013 U	0.017 U	0.014 U	0.015 U
Semi-Volatile Organic Compounds^															
1,1-Biphenyl	mg/kg	200	0.076 U	0.084 U	0.072 U	0.073 U	**0.029 J**	0.079 U	**0.27**	0.079 U	0.069 U	0.078 U	0.08 U	0.076 U	0.083 U
1,2,4,5-Tetrachlorobenzene	mg/kg	350	0.076 U	0.084 U	**0.065 J**	0.073 U	**0.076**	0.079 U	0.077 U	0.079 U	0.069 U	0.078 U	0.08 U	0.076 U	0.083 U
2,4-Dimethylphenol	mg/kg	16,000	0.076 UJ	0.084 U	0.072 U	0.073 U	0.074 U	0.079 U	**0.11**	0.079 U	0.069 U	0.078 U	0.08 U	0.076 U	0.083 U
2-Chloronaphthalene	mg/kg	60,000	0.076 U	0.084 U	0.072 U	0.073 U	**0.21**	0.079 U	0.077 U	0.079 U	0.069 U	0.078 U	0.08 U	0.076 U	0.083 U
2-Methylnaphthalene	mg/kg	3,000	**0.038**	**0.0023 J**	**0.015**	**0.012**	**0.058 J**	**0.019**	**7.5**	0.0079 U	**0.056**	0.0079 U	**0.014**	0.0076 U	0.0082 U
2-Methylphenol	mg/kg	41,000	0.076 UJ	0.084 U	0.072 U	0.073 U	0.074 U	0.079 U	**0.11**	0.079 U	0.069 U	0.078 U	0.08 U	0.076 U	0.083 U
3&4-Methylphenol(m&p Cresol)	mg/kg	41,000	**0.02 J**	0.17 U	0.14 U	0.14 U	**0.019 J**	**0.026 J**	**0.22**	0.16 U	0.14 U	0.15 U	0.16 U	0.15 U	0.17 U
Acenaphthene	mg/kg	45,000	**0.0033 J**	**0.0017 J**	**0.0049 J**	**0.0024 J**	0.074 U	**0.0058 J**	**0.12**	0.0079 U	**0.0023 J**	0.0079 U	**0.0037 J**	0.0076 U	0.0082 U
Acenaphthylene	mg/kg	45,000	**0.026**	0.0084 U	**0.15**	**0.21**	**0.019 J**	**0.0062 J**	**0.27**	0.0079 U	**0.074**	0.0079 U	**0.019**	0.0076 U	0.0082 U
Acetophenone	mg/kg	120,000	0.076 U	0.084 U	0.072 U	0.073 U	0.074 U	0.079 U	**0.16**	0.079 U	**0.017 J**	0.078 U	0.08 U	0.076 U	0.083 U
Anthracene	mg/kg	230,000	**0.022**	0.0084 U	**0.15**	**0.19**	**0.022 J**	**0.04**	**0.9**	**0.0014 J**	**0.045 J**	0.0079 U	**0.013**	**0.001 J**	0.0082 U
Benz[a]anthracene	mg/kg	21	**0.036**	**0.0037 J**	**0.25**	**0.73**	0.074 U	**0.067**	**3.6**	**0.0017 J**	**0.23 J**	0.0079 U	**0.095**	0.0076 U	0.0082 U
Benzaldehyde	mg/kg	120,000	**0.021 J**	0.084 UJ	**0.022 J**	0.073 U	**0.041 J**	0.079 U	**0.45**	0.079 U	0.069 UJ	0.078 UJ	0.08 UJ	0.076 UJ	0.083 U
Benzo[a]pyrene	mg/kg	2.1	**0.03**	**0.0022 J**	**0.37**	**0.57**	**0.033 J**	**0.056**	3.2	0.0079 U	**0.28 J**	0.0079 U	**0.078**	0.0076 U	0.0082 U
Benzo[b]fluoranthene	mg/kg	21	**0.094**	**0.0061 J**	**1.1**	**1.1**	**0.087**	**0.12**	**5.3**	**0.0018 J**	**0.54 J**	0.0079 U	**0.17**	0.0076 U	0.0082 U
Benzo[g,h,i]perylene	mg/kg		**0.031**	**0.002 J**	**0.23**	**0.38**	**0.027 J**	**0.027**	**1.4**	0.0079 U	**0.21 J**	0.0079 U	**0.043**	0.0076 U	0.0082 U
Benzo[k]fluoranthene	mg/kg	210	**0.082**	**0.0053 J**	**0.93**	**0.45**	**0.075**	**0.1**	**2.1**	**0.0015 J**	**0.47 J**	0.0079 U	**0.15**	0.0076 U	0.0082 U
bis(2-Ethylhexyl)phthalate	mg/kg	160	0.076 U	0.084 U	**0.022 J**	0.073 U	0.074 U	0.079 U	0.077 UJ	0.079 U	0.069 U	0.078 U	0.08 U	**0.11**	0.083 U
Caprolactam	mg/kg	400,000	0.19 U	0.21 U	0.18 U	0.18 U	0.19 U	0.2 U	0.19 U	0.2 U	0.17 U	0.19 U	0.2 U	0.19 U	0.21 U
Carbazole	mg/kg		**0.028 J**	0.084 U	**0.095**	**0.11**	0.074 U	**0.035 J**	**0.4**	0.079 U	0.069 U	0.078 U	0.08 U	0.076 U	0.083 U
Chrysene	mg/kg	2,100	**0.075**	**0.0029 J**	**0.35**	**0.78**	**0.053 J**	**0.064**	**4.5**	**0.0011 J**	**0.23 J**	0.0079 U	**0.087**	0.0076 U	0.0082 U
Dibenz[a,h]anthracene	mg/kg	2.1	**0.011**	0.0084 U	**0.084**	**0.13**	0.074 U	**0.01**	**0.78**	0.0079 U	**0.069 J**	0.0079 U	**0.014**	0.0076 U	0.0082 U
Di-n-butylphthalate	mg/kg	82,000	0.076 U	0.084 U	0.072 U	0.073 U	0.074 U	0.079 U	0.077 U	0.079 U	0.069 U	0.078 U	0.08 U	0.076 U	0.083 U
Di-n-ocytlphthalate	mg/kg	8,200	0.076 UJ	0.084 U	0.072 U	0.073 U	0.074 U	0.079 U	0.077 UJ	0.079 U	0.069 U	0.078 U	0.08 U	0.076 U	0.083 U
Fluoranthene	mg/kg	30,000	**0.082**	**0.0059 J**	**0.33**	**1.3**	**0.057 J**	**0.15**	**4.6**	**0.0025 J**	**0.27 J**	0.0079 U	**0.18**	**0.0011 J**	0.0082 U
Fluorene	mg/kg	30,000	**0.0066 J**	**0.0014 J**	**0.0075**	**0.015**	0.074 U	**0.022**	**0.22**	0.0079 U	**0.0095**	0.0079 U	**0.005 J**	0.0076 U	0.0082 U
Hexachloroethane	mg/kg	8	0.076 U	0.084 U	0.072 U	0.073 U	0.074 U	0.079 U	**0.057 J**	0.079 U	0.069 U	0.078 U	0.08 U	0.076 U	0.083 U
Indeno[1,2,3-c,d]pyrene	mg/kg	21	**0.022**	**0.0016 J**	**0.22**	**0.38**	**0.022 J**	**0.024**	**1.4**	0.0079 U	**0.19 J**	0.0079 U	**0.042**	0.0076 U	0.0082 U
Naphthalene	mg/kg	8.6	**0.1**	0.0047 B	**0.037**	**0.037**	**0.057 J**	**0.047**	**5.1**	0.0079 U	**0.094**	0.0079 U	**0.011**	0.0076 U	0.0082 U
N-Nitroso-di-n-propylamine	mg/kg	0.33	0.076 U	0.084 U	0.072 U	0.073 U	0.074 U	0.079 U	0.077 U	0.079 U	0.069 U	0.078 U	0.08 U	0.076 U	0.083 U
N-Nitrosodiphenylamine	mg/kg	470	0.076 U	0.084 U	0.072 U	0.073 U	0.074 U	0.079 U	0.077 U	0.079 U	0.069 U	0.078 U	0.08 U	0.076 U	0.083 U
Phenanthrene	mg/kg		**0.16**	**0.0053 J**	**0.082**	**0.2**	**0.084**	**0.13**	**6.5**	**0.0034 J**	**0.09**	0.0079 U	**0.052**	**0.0045 J**	0.0082 U
Phenol	mg/kg	250,000	0.076 UJ	0.084 U	0.072 U	**0.018 J**	0.074 U	0.079 U	**0.11**	0.079 U	0.069 U	0.078 U	0.08 U	0.076 U	0.083 U
Pyrene	mg/kg	23,000	**0.069**	**0.0048 J**	**0.35**	**1.8**	**0.049 J**	**0.12**	**3.7**	**0.0019 J**	**0.22 J**	0.0079 U	**0.16**	**0.001 J**	0.0082 U
PCBs															
Aroclor 1242	mg/kg	0.97	0.0568 U	N/A	0.0569 U	N/A	0.0534 U	N/A	0.0539 U	N/A	0.0565 U	N/A	0.0555 U	N/A	0.0577 U
Aroclor 1254	mg/kg	0.97	0.0568 U	N/A	0.0569 U	N/A	0.0534 U	N/A	0.0539 U	N/A	0.0565 U	N/A	0.0555 U	N/A	0.0577 U
Aroclor 1260	mg/kg	0.99	0.0568 U	N/A	**0.537**	N/A	0.0534 U	N/A	0.0539 U	N/A	0.0565 U	N/A	0.0555 U	N/A	0.0577 U
Aroclor 1262	mg/kg		0.0568 U	N/A	0.0569 U	N/A	**0.0689**	N/A	**0.134**	N/A	0.0565 U	N/A	0.0555 U	N/A	0.0577 U
Aroclor 1268	mg/kg		0.0568 U	N/A	0.0569 U	N/A	0.0534 U	N/A	0.0539 U	N/A	0.0565 U	N/A	0.0555 U	N/A	0.0577 U
PCBs (total)	mg/kg	0.97	0.0568 U	N/A	**0.537**	N/A	**0.0689**	N/A	**0.134**	N/A	0.0565 U	N/A	0.0555 U	N/A	0.0577 U
TPH/Oil & Grease															
Diesel Range Organics	mg/kg	6,200	**64.8 J**	**10.6 J**	**40**	**43.8**	**22.2**	**28.2**	**270 J**	8 UJ	**60 J**	**4.9 J**	**41.3 J**	**46.7 J**	8.2 UJ
Gasoline Range Organics	mg/kg	6,200	11.1 U	10.3 U	10.6 U	12 U	9.2 U	11.2 U	**17.1**	10.8 U	11.1 U	9 U	11.4 U	10.7 U	10.2 U
Oil & Grease	mg/kg	6,200	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Detections in bold
Values in red indicate an exceedance of the Project Action Limit (PAL)
N/A indicates that the parameter was not analyzed for this sample
* indicates non-validated data
^ PAH compounds were analyzed via SIM

U: This analyte was not detected in the sample. The numeric value represents the sample quantitation/detection limit.
UJ: This analyte was not detected in the sample. The actual quantitation/detection limit may be higher than reported.
J: The positive result reported for this analyte is a quantitative estimate.
B: This analyte was not detected substantially above the level of the associated method blank or field blank.
R: The result for this analyte is unreliable. Additional data is needed to confirm or disprove the presence of this analyte in the sample.

Table 1 - Sub-Parcel B6-3
Summary of Organics Detected in Soil

Parameter	Units	PAL	B6-080-SB-5 6/16/2016	B6-081-SB-1 6/16/2016	B6-081-SB-5 6/16/2016	B6-082-SB-1* 6/17/2016	B6-082-SB-5* 6/17/2016	B6-085-SB-1* 6/17/2016	B6-085-SB-8* 6/17/2016	B6-086-SB-1* 6/17/2016	B6-086-SB-4* 6/17/2016	B6-089-SB-1 9/19/2016	B6-089-SB-4 9/19/2016	B6-093-SB-1* 9/21/2016	B6-093-SB-7* 9/21/2016
Volatile Organic Compounds															
1,2-Dichlorobenzene	mg/kg	9,300	0.0049 U	0.0063 U	0.0067 UJ	0.0069 U	0.005 U	0.0058 U	0.0058 U	0.0055 U	0.011 U	0.0052 U	**0.00085 J**	0.0044 U	0.0049 U
2-Butanone (MEK)	mg/kg	190,000	0.0099 U	0.013 U	0.013 UJ	0.014 U	0.01 U	0.012 U	0.012 U	0.011 U	0.022 U	0.01 U	**0.0073 J**	0.0089 U	**0.0023 J**
Acetone	mg/kg	670,000	0.0099 UJ	0.013 UJ	0.013 UJ	0.014 U	0.01 U	0.012 U	0.012 U	0.011 U	0.022 U	0.01 U	**0.055 J**	0.0089 U	0.014 B
Benzene	mg/kg	5.1	0.0049 U	0.0063 U	0.0067 UJ	0.0069 U	0.005 U	0.0058 U	0.0058 U	0.0055 U	0.011 U	0.0052 U	0.005 U	0.0044 U	0.0049 U
Ethylbenzene	mg/kg	25	0.0049 U	0.0063 U	0.0067 UJ	0.0069 U	0.005 U	0.0058 U	0.0058 U	0.0055 U	0.011 U	0.0052 U	0.005 U	0.0044 U	0.0049 U
Toluene	mg/kg	47,000	0.0049 U	0.0063 U	0.0067 UJ	0.0069 U	0.005 U	0.0058 U	0.0058 U	0.0055 U	0.011 U	0.0052 U	0.005 U	0.0044 U	0.0049 U
Xylenes	mg/kg	2,800	0.015 U	0.019 U	0.02 UJ	0.021 U	0.015 U	0.017 U	0.017 U	0.017 U	0.033 U	0.016 U	0.015 U	**0.0049 J**	0.015 U
Semi-Volatile Organic Compounds^															
1,1-Biphenyl	mg/kg	200	0.078 U	0.075 U	0.081 U	0.075 U	0.081 U	0.075 U	**0.03 J**	0.068 U	0.073 U	**0.028 J**	**0.15**	0.073 U	0.076 U
1,2,4,5-Tetrachlorobenzene	mg/kg	350	0.078 U	0.075 U	0.081 U	0.075 U	0.081 U	0.075 U	0.078 U	0.068 U	**0.062 J**	0.073 U	0.084 U	0.073 U	0.076 U
2,4-Dimethylphenol	mg/kg	16,000	0.078 U	0.075 U	0.081 U	0.075 U	0.081 U	0.075 U	0.078 U	0.068 U	0.073 U	**0.016 J**	0.084 U	0.073 U	0.076 U
2-Chloronaphthalene	mg/kg	60,000	0.078 U	0.075 U	0.081 U	0.075 U	0.081 U	0.075 U	0.078 U	0.068 U	0.073 U	0.073 U	0.084 U	0.073 U	0.076 U
2-Methylnaphthalene	mg/kg	3,000	0.0079 U	**0.013**	**0.012**	**0.013**	0.0082 U	**0.1**	**0.13**	**0.0033 J**	**0.022**	**0.07**	**0.64**	**0.13**	**0.0075 J**
2-Methylphenol	mg/kg	41,000	0.078 U	0.075 U	0.081 U	0.075 U	0.081 U	0.075 U	0.078 U	0.068 U	0.073 U	0.073 U	0.084 U	0.073 U	0.076 U
3&4-Methylphenol(m&p Cresol)	mg/kg	41,000	0.16 U	0.15 U	0.16 U	0.15 U	0.16 U	0.15 U	**0.021 J**	0.14 U	0.15 U	0.15 U	0.17 U	0.15 U	0.15 U
Acenaphthene	mg/kg	45,000	0.0079 U	**0.0026 J**	**0.0017 J**	**0.0018 J**	0.0082 U	**0.004 J**	**0.0073 J**	**0.00066 J**	**0.00081 J**	**0.0038 J**	**0.12**	**0.0084 J**	**0.0045 J**
Acenaphthylene	mg/kg	45,000	0.0079 U	**0.0074**	**0.0087**	**0.0066 J**	0.0082 U	**0.018**	**0.0071 J**	**0.0039 J**	**0.022**	**0.015**	**0.037**	**0.018 J**	**0.0012 J**
Acetophenone	mg/kg	120,000	0.078 U	0.075 U	0.081 U	0.075 U	0.081 U	0.075 U	0.078 U	0.068 U	0.073 U	**0.022 J**	0.084 U	**0.022 J**	0.076 U
Anthracene	mg/kg	230,000	0.0079 U	**0.0092**	**0.011**	**0.01**	**0.0015 J**	**0.033**	**0.035**	**0.0044 J**	**0.012**	**0.022**	**0.22**	**0.014 J**	**0.0054 J**
Benz[a]anthracene	mg/kg	21	0.0079 U	**0.036**	**0.022**	**0.041**	**0.0058 J**	**0.13**	**0.066**	**0.0073**	**0.0081**	**0.059**	**0.0074 J**	**0.083**	0.0076 U
Benzaldehyde	mg/kg	120,000	0.078 U	0.075 U	0.081 U	0.075 U	0.081 U	**0.019 J**	**0.056 J**	0.068 U	0.073 U	**0.05 J**	0.084 UJ	**0.022 J**	0.076 U
Benzo[a]pyrene	mg/kg	2.1	0.0079 U	**0.041**	**0.03**	**0.036**	**0.0044 J**	**0.14**	**0.054**	**0.0077**	**0.0098**	**0.051**	**0.0077 J**	**0.067 J**	0.0076 U
Benzo[b]fluoranthene	mg/kg	21	0.0079 U	**0.085**	**0.069**	**0.093**	**0.0096**	**0.3**	**0.16**	**0.032**	**0.026**	**0.21**	**0.025**	**0.15**	0.0076 U
Benzo[g,h,i]perylene	mg/kg		0.0079 U	**0.035**	**0.033**	**0.027**	**0.0023 J**	**0.074**	**0.036**	**0.0094**	**0.0085**	**0.025**	**0.0035 J**	**0.036 J**	0.0076 U
Benzo[k]fluoranthene	mg/kg	210	0.0079 U	**0.085**	**0.025**	**0.081**	**0.0083**	**0.26**	**0.14**	**0.028**	**0.023**	**0.18**	**0.021**	**0.11**	0.0076 U
bis(2-Ethylhexyl)phthalate	mg/kg	160	0.078 U	0.075 U	0.081 U	0.075 U	0.081 U	0.075 U	0.078 U	0.068 U	0.073 U	**0.077 J**	**0.029 J**	**0.039 J**	0.076 U
Caprolactam	mg/kg	400,000	0.2 U	0.19 U	0.2 U	0.19 U	0.2 U	0.19 U	0.19 U	0.17 U	0.18 U	0.18 U	0.21 U	**0.021 J**	0.19 U
Carbazole	mg/kg		0.078 U	0.075 U	0.081 U	0.075 U	0.081 U	0.075 U	0.078 U	0.068 U	0.073 U	0.073 U	0.084 U	0.073 U	0.076 U
Chrysene	mg/kg	2,100	0.0079 U	**0.043**	**0.037**	**0.04**	**0.0057 J**	**0.15**	**0.15**	**0.014**	**0.017**	**0.099**	**0.014**	**0.073 J**	0.0076 U
Dibenz[a,h]anthracene	mg/kg	2.1	0.0079 U	**0.011**	**0.0097**	**0.009**	**0.0016 J**	**0.027**	**0.017**	**0.0027 J**	**0.0019 J**	**0.0076**	0.0084 U	**0.012 J**	0.0076 U
Di-n-butylphthalate	mg/kg	82,000	0.078 U	0.075 U	0.081 U	0.075 U	0.081 U	0.075 U	0.078 U	0.068 U	0.073 U	0.073 U	0.084 U	**0.037 J**	0.076 U
Di-n-ocytlphthalate	mg/kg	8,200	0.078 U	0.075 U	0.081 U	0.075 U	0.081 U	0.075 U	0.078 U	0.068 U	0.073 U	0.073 UJ	0.084 UJ	**0.04 J**	0.076 U
Fluoranthene	mg/kg	30,000	0.0079 U	**0.062**	**0.031**	**0.058**	**0.0069 J**	**0.21**	**0.12**	**0.013**	**0.023**	**0.15**	**0.031**	**0.1**	**0.00065 J**
Fluorene	mg/kg	30,000	0.0079 U	**0.0019 J**	**0.0027 J**	**0.0018 J**	0.0082 U	**0.0082**	**0.017**	**0.0006 J**	**0.0022 J**	**0.0091**	**0.31**	**0.0071 J**	**0.0073 J**
Hexachloroethane	mg/kg	8	0.078 U	0.075 U	0.081 U	0.075 U	0.081 U	0.075 U	0.078 U	0.068 U	0.073 U	0.073 U	0.084 U	0.073 U	0.076 U
Indeno[1,2,3-c,d]pyrene	mg/kg	21	0.0079 U	**0.03**	**0.028**	**0.022**	**0.0021 J**	**0.068**	**0.026**	**0.0074**	**0.0056 J**	**0.028**	**0.0033 J**	**0.033 J**	0.0076 U
Naphthalene	mg/kg	8.6	0.0031 B	**0.014**	**0.012**	**0.0064 J**	0.0082 U	**0.069**	**0.067**	**0.0029 J**	**0.053**	**0.077**	**0.087**	**0.11**	**0.0031 J**
N-Nitroso-di-n-propylamine	mg/kg	0.33	0.078 U	0.075 U	0.081 U	0.075 U	0.081 U	0.075 U	0.078 U	0.068 U	0.073 U	0.073 U	0.084 U	**0.056 J**	0.076 U
N-Nitrosodiphenylamine	mg/kg	470	0.078 U	0.075 U	0.081 U	0.075 U	0.081 U	0.075 U	**0.029 J**	0.068 U	0.073 U	**0.027 J**	0.084 U	0.073 U	0.076 U
Phenanthrene	mg/kg		**0.00067 J**	**0.032**	**0.027**	**0.035**	**0.0037 J**	**0.16**	**0.21**	**0.0079**	**0.064**	**0.093**	**0.82**	**0.095**	**0.022**
Phenol	mg/kg	250,000	0.078 U	0.075 U	0.081 U	0.075 U	0.081 U	0.075 U	**0.021 J**	0.068 U	0.073 U	0.073 U	0.084 U	0.073 U	0.076 U
Pyrene	mg/kg	23,000	0.0079 U	**0.053**	**0.029**	**0.051**	**0.0064 J**	**0.18**	**0.099**	**0.013**	**0.02**	**0.14**	**0.13**	**0.089**	**0.0015 J**
PCBs															
Aroclor 1242	mg/kg	0.97	N/A	0.055 U	N/A	0.054 U	N/A	0.0546 U	N/A	0.0536 U	N/A	0.0551 U	N/A	0.0607 U	N/A
Aroclor 1254	mg/kg	0.97	N/A	0.055 U	N/A	0.054 U	N/A	0.0546 U	N/A	0.0536 U	N/A	0.0551 U	N/A	**0.434**	N/A
Aroclor 1260	mg/kg	0.99	N/A	0.055 U	N/A	0.054 U	N/A	0.0546 U	N/A	0.0536 U	N/A	0.0551 U	N/A	**0.439**	N/A
Aroclor 1262	mg/kg		N/A	0.055 U	N/A	0.054 U	N/A	0.0546 U	N/A	0.0536 U	N/A	0.0551 U	N/A	0.0607 U	N/A
Aroclor 1268	mg/kg		N/A	0.055 U	N/A	0.054 U	N/A	0.0546 U	N/A	**0.072**	N/A	0.0551 U	N/A	0.0607 U	N/A
PCBs (total)	mg/kg	0.97	N/A	0.055 U	N/A	0.054 U	N/A	0.0546 U	N/A	**0.072**	N/A	0.0551 U	N/A	**0.873**	N/A
TPH/Oil & Grease															
Diesel Range Organics	mg/kg	6,200	7.9 UJ	**10.8 J**	**23.8 J**	**13.2**	**3.8 J**	**31.6**	**50.9**	**4.3 J**	**35.7**	**560**	**259**	**75.6**	6 B
Gasoline Range Organics	mg/kg	6,200	9 U	16 U	13.7 U	10.3 U	12 U	9.1 U	10 U	13 U	23.7 U	11.2 U	**18.7**	12.2 U	9.9 U
Oil & Grease	mg/kg	6,200	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**2,820**	**725**	**602**	**318**

Detections in bold
Values in red indicate an exceedance of the Project Action Limit (PAL)
N/A indicates that the parameter was not analyzed for this sample
* indicates non-validated data
^ PAH compounds were analyzed via SIM

U: This analyte was not detected in the sample. The numeric value represents the sample quantitation/detection limit.
UJ: This analyte was not detected in the sample. The actual quantitation/detection limit may be higher than reported.
J: The positive result reported for this analyte is a quantitative estimate.
B: This analyte was not detected substantially above the level of the associated method blank or field blank.
R: The result for this analyte is unreliable. Additional data is needed to confirm or disprove the presence of this analyte in the sample.

Table 3 - Sub-Parcel B6-3
Summary of Organics Detected in Groundwater

Parameter	Units	PAL	FM-008-PZS*	FM-009-PZS	FM-011-PZS*	FM-012-PZS	SW06-PZM001	SW-076-MWS	SW-080-MWS*
			6/17/2016	6/15/2016	6/17/2016	6/30/2016	2/11/2016	6/29/2016	7/1/2016
Volatile Organic Compounds									
1,1-Dichloroethane	µg/L	2.7	1 U	1 U	1 U	1 U	1 U	1 U	**5.5**
1,1-Dichloroethene	µg/L	7	1 U	1 U	1 U	1 U	1 U	1 U	**0.89 J**
2-Butanone (MEK)	µg/L	5,600	10 U	10 U	10 U	**10.1**	10 U	**8.5 J**	10 U
Acetone	µg/L	14,000	10 U	10 U	10 U	**139**	10 R	**82.3**	10 U
Carbon disulfide	µg/L	810	1 U	1 U	**2.7**	1 U	1 U	1 U	1 U
Ethylbenzene	µg/L	700	**0.99 J**	1 U	1 U	1 U	1 U	1 U	1 U
Methyl tert-butyl ether (MTBE)	µg/L	14	1 U	1 U	**2.6**	1 U	1 U	1 U	1 U
Xylenes	µg/L	10,000	**2.3 J**	3 U	3 U	3 U	3 U	3 U	3 U
Semi-Volatile Organic Compounds^									
1,4-Dioxane	µg/L	0.46	**0.098 J**	0.1 U	**0.34**	0.1 U	0.1 U	0.1 U	**0.26**
2,4-Dimethylphenol	µg/L	360	**0.58 J**	1 U	1 U	1 U	1 U	1 U	1 U
2-Methylnaphthalene	µg/L	36	**0.091 J**	0.1 UJ	0.1 U	**0.044 J**	0.1 U	0.1 UJ	0.1 U
3&4-Methylphenol(m&p Cresol)	µg/L	930	**1.3 J**	2.1 U	2 U	2 U	2 U	2 U	2 U
Acenaphthene	µg/L	530	**0.074 J**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Acenaphthylene	µg/L	530	**0.026 J**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Acetophenone	µg/L	1,900	1 U	1 U	1 U	**1**	1 U	1 U	1 U
Anthracene	µg/L	1,800	**0.23**	**0.078 J**	0.1 U	**0.11**	0.1 U	**0.023 J**	0.1 U
Benzo[b]fluoranthene	µg/L	0.25	0.1 U	0.1 UJ	0.1 U	0.1 U	0.019 B	0.1 U	0.1 U
bis(2-Ethylhexyl)phthalate	µg/L	6	**0.4 J**	**0.36 J**	**0.27 J**	1 U	1 U	**0.2 J**	1 U
Fluoranthene	µg/L	800	**0.044 J**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Fluorene	µg/L	290	**0.042 J**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Naphthalene	µg/L	0.12	**0.63**	0.035 B	0.054 B	**0.12**	0.053 B	0.018 B	0.1 U
Pentachlorophenol	µg/L	1	2.6 U	**0.75 J**	2.6 U	2.6 U	2.5 U	2.6 U	2.5 U
Phenanthrene	µg/L		**0.082 J**	0.1 U	0.1 U	**0.28**	0.1 U	0.1 U	0.1 U
Phenol	µg/L	5,800	1 U	1 U	1 U	**1.6**	1 U	1 U	1 U
Pyrene	µg/L	120	**0.027 J**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
TPH									
Diesel Range Organics	µg/L	47	**939**	**595 J**	103 U	**2,460 J**	102 UJ	**332**	**69.3 J**

Detections in bold
Values in red indicate an exceedance of the Project Action Limit (PAL)
* indicates non-validated data
^ PAH compounds were analyzed via SIM
U: This analyte was not detected in the sample. The numeric value represents the sample quantitation/detection limit.
UJ: This analyte was not detected in the sample. The actual quantitation/detection limit may be higher than reported.
J: The positive result reported for this analyte is a quantitative estimate.
B: The analyte was not detected substantially above the level of the associtaed method blank or field blank.
R: The result for this analyte is unreliable. Additional data is needed to confirm or disprove the presence of this analyte in the sample.

Table 5 - Sub-Parcel B6-3
COPC Screening Analysis

Parameter	CAS#	Location of Max Result	Max Detection (mg/kg)	Final Flag	Min Detection (mg/kg)	Average Detection (mg/kg)	Total Samples	Frequency of Detection (%)	Cancer TR=1E-06 (mg/kg)	Non-Cancer HQ=0.1 (mg/kg)	COPC?
1,1-Biphenyl	92-52-4	B6-073-SB-1	0.27		0.022	0.08	38	21.05	410	20	no
1,2,4,5-Tetrachlorobenzene	95-94-3	B6-072-SB-1	0.076		0.062	0.07	38	7.89		35	no
1,2-Dichlorobenzene	95-50-1	B6-089-SB-4	0.00085	J	0.00085	0.0009	38	2.63		930	no
2,4-Dimethylphenol	105-67-9	B6-032-SB-1	0.13		0.016	0.06	36	16.67		1,600	no
2-Butanone (MEK)	78-93-3	B6-031-SB-1	0.008	J	0.0023	0.005	38	21.05		19,000	no
2-Chloronaphthalene	91-58-7	B6-072-SB-1	0.21		0.21	0.21	38	2.63		6,000	no
2-Methylnaphthalene	91-57-6	B6-073-SB-1	7.5		0.002	0.35	38	73.68		300	no
2-Methylphenol	95-48-7	B6-073-SB-1	0.11		0.11	0.11	36	2.78		4,100	no
Acenaphthene	83-32-9	B6-073-SB-1 & B6-089-SB-4	0.12		0.00066	0.02	38	71.05		4,500	no
Acenaphthylene	208-96-8	B6-073-SB-1	0.27		0.0012	0.04	38	68.42			no
Acetone	67-64-1	B6-089-SB-4	0.055	J	0.0059	0.03	38	15.79		67,000	no
Acetophenone	98-86-2	B6-073-SB-1	0.16		0.017	0.06	38	10.53		12,000	no
Aluminum	7429-90-5	B6-081-SB-1	41,300		3,790	18,313	38	100.00		110,000	no
Anthracene	120-12-7	B6-073-SB-1	0.9		0.001	0.08	38	84.21		23,000	no
Aroclor 1242	53469-21-9	B6-001-SB-1	0.067		0.067	0.07	19	5.26	0.95		no
Aroclor 1254	11097-69-1	B6-093-SB-1	0.434		0.434	0.43	19	5.26	0.97	1.5	no
Aroclor 1260	11096-82-5	B6-071-SB-1	0.537		0.439	0.49	19	10.53	0.99		no
Arsenic	7440-38-2	B6-085-SB-8	43.7		2.3	8.04	40	90.00	3	48	YES (C)
Barium	7440-39-3	B6-081-SB-5	1,010	J	24.1	225	38	100.00		22,000	no
Benz[a]anthracene	56-55-3	B6-073-SB-1	3.6		0.0017	0.24	38	78.95	21		no
Benzaldehyde	100-52-7	B6-073-SB-1	0.45		0.019	0.09	38	26.32	820	12,000	no
Benzene	71-43-2	B6-002-SB-1	0.0037	J	0.0037	0.004	38	2.63	5.1	42	no
Benzo[a]pyrene	50-32-8	B6-073-SB-1	3.2		0.0012	0.24	39	71.79	2.1	22	YES (C)
Benzo[b]fluoranthene	205-99-2	B6-073-SB-1	5.3		0.0018	0.43	39	82.05	21		no
Benzo[g,h,i]perylene	191-24-2	B6-073-SB-1	1.4		0.0012	0.12	38	68.42			no
Benzo[k]fluoranthene	207-08-9	B6-023-SB-4	3	J	0.0015	0.28	38	84.21	210		no
Beryllium	7440-41-7	B6-081-SB-1	6.2		0.21	1.64	38	89.47	6,900	230	no
bis(2-Ethylhexyl)phthalate	117-81-7	B6-079-SB-7	0.11		0.015	0.05	38	23.68	160	1,600	no
Cadmium	7440-43-9	B6-046-SB-1	11.1		1.3	4.16	38	21.05	9,300	98	no
Caprolactam	105-60-2	B6-093-SB-1	0.021	J	0.021	0.02	38	2.63		40,000	no
Carbazole	86-74-8	B6-073-SB-1	0.4		0.022	0.11	38	21.05			no
Chromium	7440-47-3	B6-086-SB-1	2,840		10	427	38	100.00		180,000	no
Chromium VI	18540-29-9	B6-031-SB-1	3.9	J-	3.9	3.90	38	2.63	6.3	350	no
Chrysene	218-01-9	B6-073-SB-1	4.5		0.0011	0.26	38	84.21	2,100		no
Cobalt	7440-48-4	B6-085-SB-8	173		0.58	16.0	38	94.74	1,900	35	YES (NC)
Copper	7440-50-8	B6-085-SB-8	720		3	78.2	38	100.00		4,700	no

Table 5 - Sub-Parcel B6-3
COPC Screening Analysis

Parameter	CAS#	Location of Max Result	Max Detection (mg/kg)	Final Flag	Min Detection (mg/kg)	Average Detection (mg/kg)	Total Samples	Frequency of Detection (%)	Cancer TR=1E-06 (mg/kg)	Non-Cancer HQ=0.1 (mg/kg)	COPC?
Cyanide	57-12-5	B6-073-SB-1	2.1	J-	0.054	0.65	38	63.16		120	no
Dibenz[a,h]anthracene	53-70-3	B6-073-SB-1	0.78		0.0016	0.06	38	57.89	2.1		no
Di-n-butylphthalate	84-74-2	B6-001-SB-1	0.05	J	0.037	0.04	38	5.26		8,200	no
Di-n-ocytlphthalate	117-84-0	B6-093-SB-1	0.04	J	0.04	0.04	38	2.63		820	no
Ethylbenzene	100-41-4	B6-023-SB-4	0.002	J	0.002	0.002	38	2.63	25	2,000	no
Fluoranthene	206-44-0	B6-073-SB-1	4.6		0.00065	0.30	38	89.47		3,000	no
Fluorene	86-73-7	B6-089-SB-4	0.31		0.0006	0.04	38	68.42		3,000	no
Hexachloroethane	67-72-1	B6-073-SB-1	0.057	J	0.057	0.06	38	2.63	8	46	no
Indeno[1,2,3-c,d]pyrene	193-39-5	B6-073-SB-1	1.4		0.0012	0.12	38	68.42	21		no
Iron	7439-89-6	B6-085-SB-8	333,000		8,750	72,559	38	100.00		82,000	YES (NC)
Lead^	7439-92-1	B6-085-SB-8	2,940		2.5	205	38	97.37		800	YES (NC)
Manganese	7439-96-5	B6-086-SB-1	108,000		37.2	11,549	38	100.00		2,600	YES (NC)
Mercury	7439-97-6	B6-073-SB-1	0.92		0.0034	0.06	38	76.32		35	no
Naphthalene	91-20-3	B6-073-SB-1	5.1		0.0029	0.28	38	63.16	8.6	59	no
Nickel	7440-02-0	B6-085-SB-8	1,460		7.4	104	38	97.37	64,000	2,200	no
N-Nitroso-di-n-propylamine	621-64-7	B6-093-SB-1	0.056	J	0.056	0.06	38	2.63	0.33		no
N-Nitrosodiphenylamine	86-30-6	B6-030-SB-1	0.055	J	0.026	0.03	38	10.53	470		no
PCBs (total)*	1336-36-3	B6-093-SB-1	0.873		0.067	0.29	19	31.58	0.94		no
Phenanthrene	85-01-8	B6-073-SB-1	6.5		0.00067	0.31	38	92.11			no
Phenol	108-95-2	B6-073-SB-1	0.11		0.018	0.05	36	8.33		25,000	no
Pyrene	129-00-0	B6-073-SB-1	3.7		0.001	0.28	38	89.47		2,300	no
Selenium	7782-49-2	B6-081-SB-1	3.7	J	2.3	3.00	38	5.26		580	no
Silver	7440-22-4	B6-086-SB-1	10.7		0.74	3.98	38	28.95		580	no
Thallium	7440-28-0	B6-081-SB-5	41.8		4.5	16.5	38	21.05		1.2	YES (NC)
Toluene	108-88-3	B6-023-SB-4	0.0061	J	0.0015	0.004	38	5.26		4,700	no
Vanadium	7440-62-2	B6-086-SB-1	11,500		7.2	1,216	38	100.00		580	YES (NC)
Xylenes	1330-20-7	B6-023-SB-4	0.013	J	0.0049	0.009	38	5.26		250	no
Zinc	7440-66-6	B6-085-SB-8	7,360		16.9	571	38	100.00		35,000	no

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

COPC = Constituent of Potential Concern
TR = Target Risk C = Compound was identified as a cancer COPC
HQ = Hazard Quotient NC = Compound was identified as a non-cancer COPC

*PCBs (total) include the sum of all detected aroclor mixtures, including those without regional screening levels (e.g. Aroclor 1262, Aroclor 1268) which are not displayed.
^The COPC screening level for lead was not adjusted to the HQ=0.1 because lead is not assessed in the SLRA. The 800 mg/kg PAL is relevant to the Adult Lead Model procedure.

APPENDIX D

SITE SPECIFIC STRIPING NOTES

1. ALL STRIPING WILL BE TWO (2) COATS OF 6 MILS DRY THICKNESS, EACH COAT.
2. ALL PAVEMENT STRIPING ON CONCRETE PAVEMENT WILL BE YELLOW UNLESS OTHERWISE NOTED.
3. ALL PAVEMENT STRIPING ON ASPHALT PAVEMENT WILL BE WHITE, UNLESS OTHERWISE NOTED. STRIPING WITHIN TRAILER PARKING TO REMAIN WHITE ACROSS CONCRETE DOLLY STRIP.

SHA NOTE

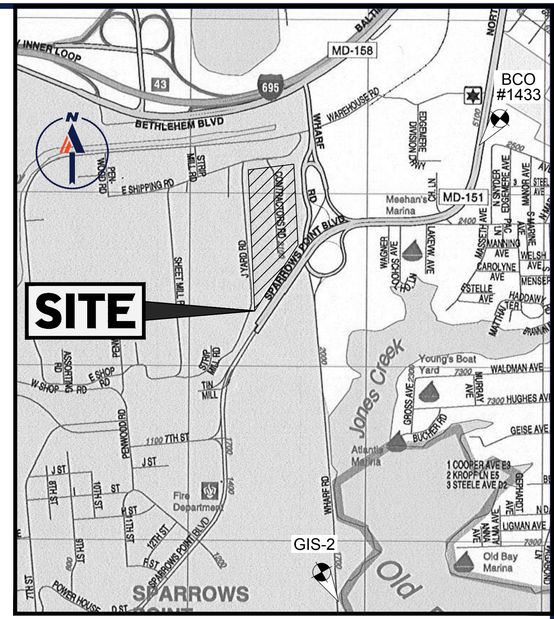
ALL PROPOSED IMPROVEMENTS WITHIN THE SHA RIGHT-OF-WAY ARE SHOWN FOR REFERENCE ONLY ON THIS PLAN. REFER TO THE APPROVED SHA PLANS FOR THE FINAL DESIGN, APPLICABLE DETAILS AND SPECIFICATIONS.

BENCHMARK INFORMATION

ELEVATIONS ARE BASED ON NAVD 88. COORDINATES AND MERIDIAN ARE BASED ON THE MARYLAND COORDINATE SYSTEM (MCS) PER THE FOLLOWING MONUMENTS:

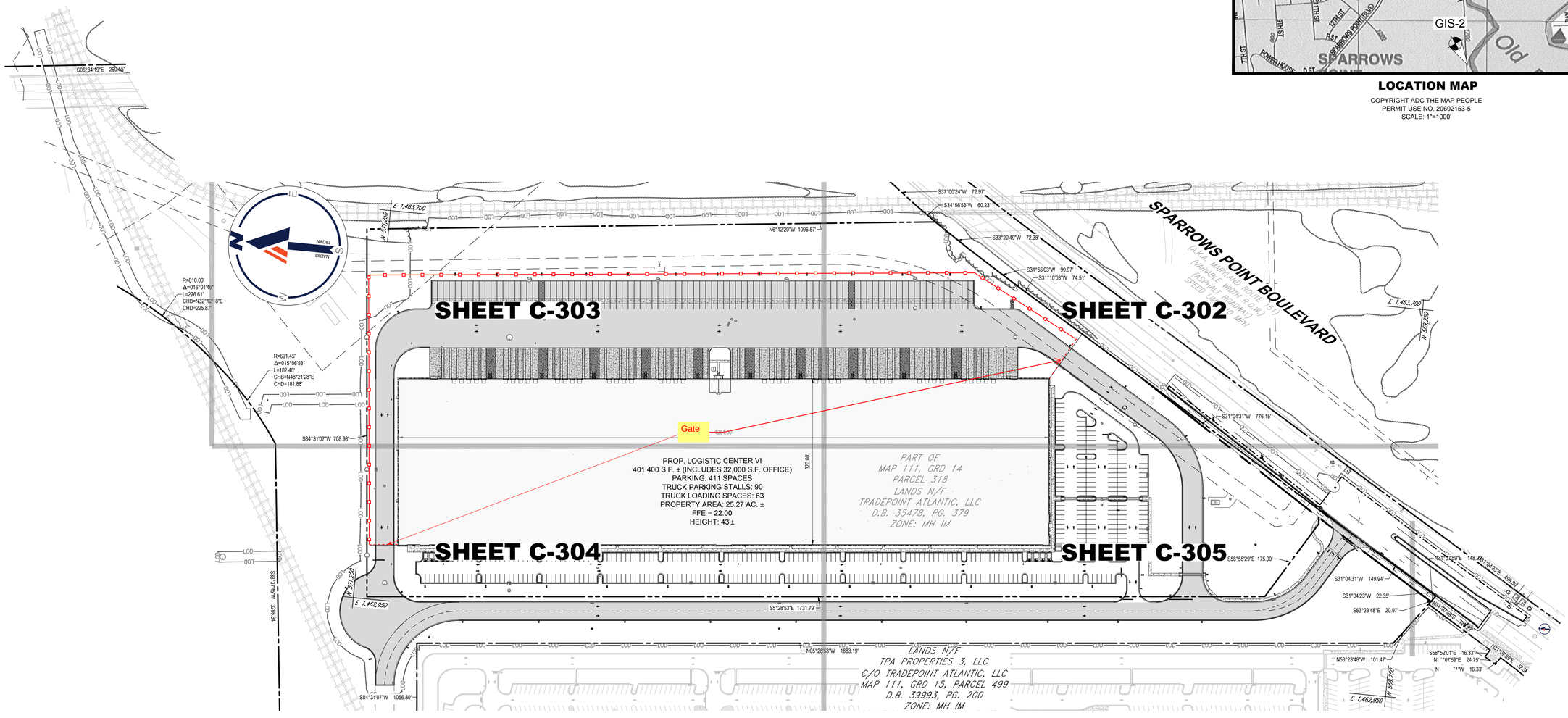
BCO# 1433 (CAPPED REBAR)
N 571,683.79, E 1,466,230.69, ELEV. 16.59
IN MEDIAN OF NORTH POINT BLVD SOUTH OF NORTH SNYDER AVE.

GIS #2 (BRASS DISK)
N 565,182.39, E. 1,464,480.72, ELEV. 9.95
EAST SIDE OF WHARF ROAD 420'± NORTH OF LIGHT TOWER



LOCATION MAP

COPYRIGHT ADC THE MAP PEOPLE
PERMIT USE NO. 20602153-5
SCALE: 1"=1000'



BOHLER
SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY

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NOT APPROVED FOR CONSTRUCTION

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PROJECT No.:	MD1620669
DRAWN BY:	ISL/MJR
CHECKED BY:	MJG
DATE:	4/17/2020
CAD I.D.:	MD1620669-SDP-0

PROJECT:

PROJECT VIPER

FOR

TRADEPOINT ATLANTIC

PHASE II PLANS

1800 SPARROWS POINT BOULEVARD
BALTIMORE, MD 21219
TM 111, GRID 14, PARCEL 318
ELECTION DISTRICT 15
COUNCILMANIC DISTRICT 7
BALTIMORE COUNTY

BOHLER
901 DULANEY VALLEY ROAD, SUITE 801
TOWSON, MARYLAND 21204
Phone: (410) 821-7900
Fax: (410) 821-7987
MD@BohlerEng.com

M.J. GESELL
PROFESSIONAL ENGINEER
MARYLAND LICENSE No. 44097
PROFESSIONAL CERTIFICATION
I, MICHAEL J. GESELL, HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 44097, EXPIRATION DATE: 6/9/21

SHEET TITLE:

OVERALL SITE PLAN

SHEET NUMBER:

C-301

ORG. DATE - 4/17/2020

H:\BM\D1620669\DRAWINGS\PLAN SETS\PHASE II & CONSTRUCTION DOCUMENTS\MD1620669-SDP-0-----LAYOUT C-301 - OVERALL SITE PLAN