

SCREENING LEVEL RISK ASSESSMENT REPORT

AREA B: PARCEL B4 REMNANT AREA
TRADEPOINT ATLANTIC
SPARROWS POINT, MARYLAND

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Respectfully Submitted,

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Revision 0 – August 30, 2019

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Soil Data Validation Reports	Electronic Attachment
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ProUCL Input Tables (formatted soil analytical data)	Electronic Attachment
ProUCL Output Tables	Electronic Attachment
Lead Evaluation Spreadsheet	Electronic Attachment

1.0 INTRODUCTION

ARM Group Inc. (ARM), on behalf of EnviroAnalytics Group (EAG), has prepared this Screening Level Risk Assessment (SLRA) for an undeveloped remnant portion of the Tradepoint Atlantic property that has been designated within Area B: Parcel B4 (the Remnant Area or the Site). The Maryland Department of the Environment (MDE) and the United States Environmental Protection Agency (USEPA) are providing regulatory oversight of the ongoing investigation and redevelopment activities on the property. The USEPA intends to issue a final Statement of Basis for each parcel of the Tradepoint Atlantic property. In general, the Statement of Basis for each parcel is planned to be based upon the actual development plans which are supported by Response and Development Work Plans (RADWPs) containing site-specific SLRAs. As determined by USEPA, supplemental site-specific SLRA documents are to be prepared for those portions of the parcel that are outside of planned development areas (termed “remnants”).

1.1 SITE DESCRIPTION

Many of the ongoing or proposed development areas on the property overlap with portions of the investigative parcel boundaries designated within Area A and Area B. The full extent of Parcel B4, shown in **Figure 1**, is comprised of 72.1 acres of the approximately 3,100-acre former steel mill property located in Sparrows Point, Maryland. The central portion of Parcel B4 has undergone recent industrial redevelopment as noted in the approved RADWP for Area B: Sub-Parcel B4-1, Revision 2 dated August 10, 2016. Sub-Parcel B4-1 represents approximately 21.0 acres of redevelopment within Parcel B4. The northeastern section of Parcel B4 is also in the process of undergoing redevelopment as noted in the RADWP for Area B: Sub-Parcel B1-1, Revision 1 dated August 30, 2019. This area includes approximately 14.2 acres of redevelopment within Parcel B4 as a component of the larger development project designated as Sub-Parcel B1-1.

The legal description for Sub-Parcel B1-1 was prepared by Morris & Ritchie Associates, Inc. and is provided in **Appendix A**. No legal description currently exists for Sub-Parcel B4-1; however, the boundary used in this SLRA Report is not expected to change significantly. Ultimately, environmental covenant boundaries will be required to be established for Sub-Parcel B1-1 and Sub-Parcel B4-1 because these areas of the property are subject to long-term capping requirements (and associated institutional controls) to be protective of workers.

This SLRA Report covers the remainder of Parcel B4, which consists of a 36.9-acre plot that completely surrounds Sub-Parcel B4-1 (**Figure 1**). Currently, there are no development plans for this Remnant Area and therefore a RADWP is not being pursued. This SLRA includes a site-specific assessment for potential Composite Workers as well as Construction Workers (as a contingency because the remnant could potentially be developed in the future).

1.2 SUMMARY OF PARCEL INVESTIGATION

A Phase II Investigation for soil conditions was performed in accordance with the approved Phase II Investigation Work Plan for Parcel B4 (Revision 1 dated July 8, 2016). The findings of the soil investigation were presented in the Phase II Investigation Report for Parcel B4 (Revision 1 dated August 7, 2019). Groundwater at the Site was investigated and described in a separate Area B Groundwater Investigation Work Plan (dated October 6, 2015). The Area B Groundwater Phase II Investigation Report (Revision 0 dated September 30, 2016) was submitted to discuss the detailed finding of this groundwater investigation. The groundwater findings in the vicinity of Parcel B4 were also summarized in the Phase II Investigation Report for Parcel B4. This SLRA Report document summarizes the soil and groundwater data that are relevant to this evaluation of the Parcel B4 Remnant Area.

A total of 60 soil samples were collected from the 30 boring locations shown on **Figure 2** during the Phase II investigation. The data from these samples were included in the evaluation of risk for the Parcel B4 Remnant Area. Phase II Investigation soil samples were analyzed for Target Compound List (TCL) volatile organic compounds (VOCs), TCL semi-volatile organic compounds (SVOCs), total petroleum hydrocarbon (TPH) diesel range organics (DRO) and gasoline range organics (GRO), Target Analyte List (TAL) metals, hexavalent chromium, and cyanide. Shallow soil samples (0 to 1 foot bgs) were also analyzed for polychlorinated biphenyls (PCBs). Oil & Grease analysis was not required or completed during the Parcel B4 Phase II Investigation. **Table 1** and **Table 2** summarize organic and inorganic parameter soil detections, respectively.

PAL exceedances in the soil samples relevant for the Parcel B4 Remnant Area included two SVOCs (benzo[a]pyrene and naphthalene), three PCB groups (Aroclor 1254, Aroclor 1260, and total PCBs), DRO, and six inorganics (arsenic, chromium VI, lead, manganese, thallium, and vanadium). In addition, one boring location exhibited physical evidence of non-aqueous phase liquid (NAPL) in the soil core (B4-018-SB). The soil PAL exceedances for SVOCs, PCBs, DRO, and inorganics are provided on **Figure S1** through **Figure S4**, respectively. B4-018-SB is also highlighted on **Figure S3** due to the evidence of NAPL at this location.

A total of eight shallow groundwater samples (shown on **Figure GW1**) were collected from permanent monitoring wells during the Area B Groundwater Investigation, and the data from these samples were included in the evaluation of current conditions under the Parcel B4 Remnant Area. The groundwater samples were analyzed for TCL-VOCs, TCL-SVOCs, TPH-DRO/GRO, TAL-metals (total and dissolved), hexavalent chromium (total), and cyanide (total). In addition, property perimeter well locations (which included multiple monitoring wells along the western side of the Parcel B4 Remnant Area) were also analyzed for PCBs. Oil & Grease analysis was not required or completed during the Area B Groundwater Investigation. **Table 3** and **Table 4** summarize organic and inorganic parameter groundwater detections, respectively.

Aqueous PAL exceedances in the shallow groundwater in the vicinity of the Parcel B4 Remnant Area, as shown on **Figure GW1**, consisted of two VOCs (benzene and chloroform), four SVOCs (1,1-biphenyl, benz[a]anthracene, benzo[a]pyrene, and naphthalene), DRO, GRO, and three inorganics (cobalt, manganese, and cyanide). For simplicity, the inorganic PAL exceedances shown on the figure do not include duplicate exceedances of total and dissolved metals at relevant sample locations. If both total and dissolved concentrations exceeded the PAL for a specific compound, the value for total metals is displayed on the figure for each sample.

The soil and groundwater laboratory Certificates of Analysis (including Chains of Custody) and Data Validation Reports are included as electronic attachments.

1.3 SUPPLEMENTAL PCB DELINEATION ACTIVITIES

Additional PCB delineation activities were completed to further characterize a detection of PCBs in excess of 50 mg/kg (the limit at which mandatory excavation and removal of PCB-impacted material is required by the agencies) at one boring location (B4-037-SB). PCB delineation activities resulted in the collection of 117 additional soil samples (from the 49 boring locations shown on **Figure 3**). Each delineation location was sampled at every 1-foot interval from 0 to 5 feet bgs (unless refusal was encountered). The standard surface (0 to 1 foot bgs) and subsurface (4 to 5 feet bgs) samples were analyzed first, and the other samples recovered from 2 to 4 feet bgs were analyzed if exceedances of 50 mg/kg were identified in the preceding samples.

Several of the delineation soil samples exceeded 50 mg/kg of total PCBs (including a re-sample at the original location B4-037-SB). The delineation locations with concentrations of total PCBs above 50 mg/kg are shown along with the corresponding analytical results on **Figure 3**. A summary of the delineation analytical results for total PCBs is presented in **Table 5**, which demonstrates that the vertical distribution of material exceeding 50 mg/kg of total PCBs was limited to the shallow soil.

The delineation results were formally presented in the Delineation Activities and Proposed Excavation of PCB Impacted Soil Letter dated March 22, 2017, which was approved by the MDE on April 3, 2017. A Comment Response Letter was subsequently submitted on April 5, 2017 to provide clarification regarding concrete testing and materials handling for the approved excavation plan, and was subsequently approved on April 6, 2017. Material exceeding the threshold of 50 mg/kg will be excavated and disposed of at a permitted off-site commercial landfill approved to accept Toxic Substances Control Act (TSCA) regulated waste. Therefore, because such materials will be excavated, the PCB data from soil samples exhibiting exceedances of 50 mg/kg of total PCBs have been excluded from the SLRA. The PCB data from the remaining delineation soil samples (i.e., those with total PCBs <50 mg/kg) are included in the SLRA.

2.0 HUMAN HEALTH SCREENING LEVEL RISK ASSESSMENT

2.1 ANALYSIS PROCESS

A human health SLRA has been completed based on the analytical data obtained from the characterization of surface and subsurface soils in the Parcel B4 Remnant Area. The SLRA was conducted to evaluate the existing soil conditions within this section of Parcel B4 that has not yet been developed so that a baseline SLRA exists for the entirety of the property parcel designated as Parcel B4. Additionally, should future development within this Remnant Area be pursued, the SLRA will serve to guide risk management in this area.

The SLRA included the following evaluation process:

Identification of Exposure Units (EUs): The entire Parcel B4 Remnant Area covers a total of 36.9 acres and therefore does not require division into separate EUs. Both the Construction Worker and Composite Worker evaluations cover the entirety of the Remnant Area.

Identification of Constituents of Potential Concern (COPCs): For the project-specific SLRA, compounds that were present at concentrations at or above the USEPA Regional Screening Levels (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 6** to identify compounds above the relevant screening levels.

All aroclor mixtures (e.g., Aroclor 1242, Aroclor 1260) are taken into account for the reported concentrations of total PCBs. The total PCBs concentrations are used to evaluate the carcinogenic risk associated with PCBs. Aroclor 1254, which is included in the total PCBs summation for the carcinogenic risk estimate, is also evaluated separately for systemic toxicity (i.e., non-cancer hazard).

Exposure Point Concentrations (EPCs): The soil COPC dataset was divided into surface (0 to 1 foot), subsurface (>1 foot), and pooled depths for estimation of potential EPCs. 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 (not applicable at this Site). For total PCBs, all results equaling or exceeding 50 mg/kg have been delineated for excavation and removal, as described in Section 1.3.

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.

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 EU that would result in risk ratios equivalent to a cumulative cancer risk of $1E-5$ or Hazard Index (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 in the Parcel B4 Remnant Area is 80 days.

There is no potential for 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 any future construction/excavation leads to a potential Construction Worker exposure to groundwater, 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 for the site-wide EU were compared to the applicable RSL (800 mg/kg) as an initial screening. If the mean concentrations for the site-wide EU were below the applicable RSL, the Site 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 site-wide EU were below 2,518 mg/kg, the Site 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 7**. For lead, any results equaling or exceeding 10,000 mg/kg would warrant additional delineation for possible excavation and removal (not applicable at this Site).

Assessment of TPH-DRO/GRO: EPCs were not calculated for TPH-DRO/GRO. Instead, the individual results were compared to the PAL set to a HQ of 1 (6,200 mg/kg). Two soil samples exceeded the PAL for TPH-DRO: B4-037-SB-6 (6,760 mg/kg), and B4-042-SB-5 (6,270 mg/kg). One boring location exhibited physical evidence of product (i.e., NAPL) in the soil core (B4-018-SB). In the event that a future development project is proposed, these locations should be considered for proximity to any proposed utilities.

Risk Characterization Approach: 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 site-wide EU will be considered 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.

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 site-wide EU, then capping of the Site 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 Site, 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.

2.2 SLRA RESULTS AND RISK CHARACTERIZATION

Soil data were divided into three datasets (surface, subsurface, and pooled) for the Parcel B4 Remnant Area to evaluate potential exposure scenarios. Each of these exposure scenarios is relevant for the potential future Composite Worker and Construction Worker in the event that a future construction project is proposed on the Parcel B4 Remnant Area. Currently, there are no development plans for this Remnant Area.

EPCs were calculated for each soil dataset (i.e., surface, subsurface, and pooled surface/subsurface) at the Site. 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 three 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 8**. These EPCs were used for both the Composite Worker and Construction Worker evaluations.

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 7**, which indicates that neither surface, subsurface, nor pooled soils exceeded the USEPA RSL of 800 mg/kg. There were no locations within the Remnant Area where concentrations of lead exceeded 10,000 mg/kg.

Composite Worker Assessment:

Risk ratios for the estimates of potential EPCs for the Composite Worker are shown in **Table 9** (surface), **Table 10** (subsurface), and **Table 11** (pooled soils). The results are summarized below:

Worker Scenario	Exposure Unit	Medium	Hazard Index (>1)	Total Cancer Risk
Composite Worker	Remnant	Surface Soil	none	1E-5
		Subsurface Soil	none	1E-5
		Surface & Subsurface Soil	none	1E-5

Based on the risk ratios for the Parcel B4 Remnant Area, following removal of the defined area containing concentrations of total PCBs greater than 50 mg/kg, further remediation or engineering controls are not required to be protective of potential future Composite Workers for the surface, subsurface, and pooled exposure scenarios. None of the carcinogenic risk estimates were greater than 1E-5, and none of the non-carcinogenic HI values exceeded 1, indicating that further remediation or engineering controls are not necessary.

Construction Worker Assessment:

Construction Worker risks were evaluated for several exposure scenarios to determine the maximum exposure frequency for the site-wide EU 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 of

80 days are shown in **Table 12** (surface), **Table 13** (subsurface), and **Table 14** (pooled soils). The variables entered for calculation of the site-specific Construction Worker SSLs (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 of the selected exposure scenario are summarized below:

Worker Scenario	Exposure Unit	Medium	Hazard Index (>1)	Total Cancer Risk
Construction Worker	Remnant (80-day exposure)	Surface Soil	none	1E-6
		Subsurface Soil	none	1E-6
		Surface & Subsurface Soil	none	1E-6

Using the exposure duration of 80 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 site-specific health and safety requirements (beyond standard Level D protection) will be required only if the exposure duration of 80 days will be exceeded for an individual worker within the Site.

2.3 EVALUATION OF COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT (CERCLA) CRITERIA

Results from the SLRA indicate that, following selective removal of PCB-contaminated soils containing concentrations of total PCBs greater than 50 mg/kg, further remediation or engineering controls are not required within the Parcel B4 Remnant Area to mitigate potential current and future Composite Worker risks. Site-specific health and safety controls would not be required to mitigate Construction Worker risks (in the event that a future development/construction project is proposed) provided an exposure duration of 80 days is not exceeded for an individual worker at the Site. Should a longer exposure duration exceeding this limit be required on a future construction project, upgraded Personal Protective Equipment (PPE) beyond standard Level D protection (i.e., modified Level D PPE) would be required to be implemented in accordance with the PPE Standard Operational Procedure (SOP). Since the Composite Worker and Construction Worker scenarios were below the criteria requiring additional responses, no additional protections for the current and future Composite Worker and Construction Worker are warranted (beyond protective institutional controls).

The scenario of selective removal of PCB-contaminated soils with no further remediation or engineering controls has been evaluated for consistency with the CERCLA Threshold Criteria and the Balancing Criteria as described below. The Threshold Criteria assess the overall protection of human health and the environment, the achievement of media cleanup objectives, and the 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 selective removal scenario, as a whole, protects and maintains protection of human health and the environment. The selective removal scenario evaluated in the SLRA indicates that risks to current and future Composite Workers are acceptable despite a limited number of detections of soil constituents remaining in excess of the USEPA RSLs. Groundwater does not present a human health hazard since there is no groundwater use. Implementation of the proposed institutional controls will address the residual risk and will also protect hypothetical future Construction Workers by eliminating or controlling potential exposure pathways, thus reducing potential intake and contact of soil and groundwater COPCs by human receptors.

Achieve Media Cleanup Objective: The assessment against this criterion describes how the selective removal scenario meets the cleanup objective, which is risk reduction, appropriate for the expected current and reasonably anticipated future land use. Currently, there are no development plans for this Remnant Area. The objective is to protect current and future Composite Workers and Construction Workers from potential exposures to site-related soil or groundwater constituents at levels that may result in risks of adverse health effects. The combination of controlled access and use restrictions, along with the selective removal of PCB impacts greater than 50 mg/kg, will attain the soil and groundwater cleanup objectives.

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 selective removal scenario to reduce or eliminate, to the maximum extent practicable, further releases. Sampling results identified a locality of concern with elevated PCB concentrations which will be excavated and removed, thus reducing the potential for future releases in this area. Otherwise, sampling results did not indicate localized, discernible source areas associated with the soil conditions observed at the Site, with the possible exception of NAPL at select locations. Soil boring locations with physical evidence of possible NAPL and/or elevated DRO concentrations (B4-018-SB, B4-037-SB, and B4-042-SB) should be considered for proximity to proposed utilities in the event that a future development project is proposed. If future utilities are proposed in the vicinity of these borings, appropriate protocols for the mitigation of potential product mobility should be specified. The control measures included on the property, 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 associated with any future intrusive activities.

Balancing Criteria:

Long-Term Reliability and Effectiveness: The assessment against this criterion evaluates the long-term effectiveness of the selective removal scenario in maintaining protection of human health and the environment. The primary focus of this criterion is the extent and effectiveness of the controls that may be required to manage the risk posed by treatment residuals and/or untreated wastes.

The Composite Worker evaluation indicated no long-term risks which might require mitigation (following the selective removal of PCB-contaminated soils). Institutional controls (deed restrictions) will be implemented to protect future Construction Workers against disturbances of the soil that might lead to inadvertent long-term contact with potentially impacted soils or groundwater. The institutional controls are anticipated to include a restriction prohibiting the use of groundwater for any purpose, a written notice to the MDE and USEPA at least 30 days prior to any future soil disturbances if the proposed duration of intrusive activity exposure would exceed the allowable duration determined in the SLRA (unless the contractor is proposing to use the upgraded modified Level D PPE specified in the approved SOP), health and safety requirements for any excavations, and proper management and characterization of any removed material. The long-term effectiveness is high, as institutional controls are readily implementable and easily maintained. Given the historical, heavily industrial uses of the Site and the surrounding area, 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. A reduction of toxicity will result from the selective removal of PCB-contaminated soil. Following this selective removal, additional remediation or engineering controls are not necessary to further reduce toxicity, mobility, or volume of waste in this case. No engineering controls are proposed for this Site.

Short-term Effectiveness: The assessment against this criterion examines how well the proposed selective removal scenario protects human health and the environment during the construction and implementation phase. 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. Selective removal of PCB-contaminated soil will be conducted under a Health and Safety Plan (HASP) to ensure protection of human health throughout the short duration of the excavation/removal process. There is no implementation phase for the installation of any engineering controls in this case.

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. There are no concerns related to implementability in this case.

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 other alternatives. The selective removal scenario, involving the excavation and off-site disposal of PCB-contaminated soil, has a reasonable associated remedial cost. There is no cost associated with the installation of any engineering controls in this case.

State/Support Agency Acceptance: MDE has been involved throughout the Site investigation process. The proposed use restrictions included in this SLRA 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.

3.0 SUMMARY AND RECOMMENDATIONS

A SLRA based on the surface and subsurface soil samples from within the Parcel B4 Remnant Area indicates that, following removal of the defined area containing concentrations of total PCBs greater than 50 mg/kg, further remediation or engineering controls are not required to mitigate Composite Worker risks. Should future development or construction within this Remnant Area be pursued, compliance with the 80-day Construction Worker exposure duration limit (as stipulated by the SLRA) will be required, unless the contractor is proposing to use the upgraded modified Level D PPE specified in the approved SOP.

An environmental covenant will be required to encompass the Parcel B4 Remnant Area. Although further remediation or engineering controls are not required after selective removal of PCB-contaminated soils, institutional controls (deed restrictions) will be implemented to protect Composite Workers (and potentially future Construction Workers) against disturbances of the soil that might lead to inadvertent contact with impacted soils or groundwater. The proposed institutional controls for the remnant will be defined according to the environmental covenant boundary.

While a comprehensive RADWP is not warranted at this time because there are no development plans for the designated remnant, should future development be pursued, such work would remain subject to many of the standard requirements for construction as outlined in RADWPs previously approved by the agencies. Future development which may encompass a portion of the remnant will be subject to the submission of a separate RADWP, which will formally designate any areas seeking regulatory closure. The project-specific requirements for a proposed construction project would be able to utilize the SLRA results described in this document as a basis for risk management.

Any intrusive construction within the remnant area would remain subject to the implementation protocols outlined in RADWPs, including but not limited to the following:

- Oversight provided by an Environmental Professional (EP).
- Activities conducted under a HASP.
- Soil screening requirements implemented as required.
- Erosion and sediment controls installed as required.
- Dust monitoring implemented as required.
- If dewatering is necessary, sampling and disposal conducted as required.

3.1 INSTITUTIONAL CONTROLS (FUTURE LAND USE CONTROLS)

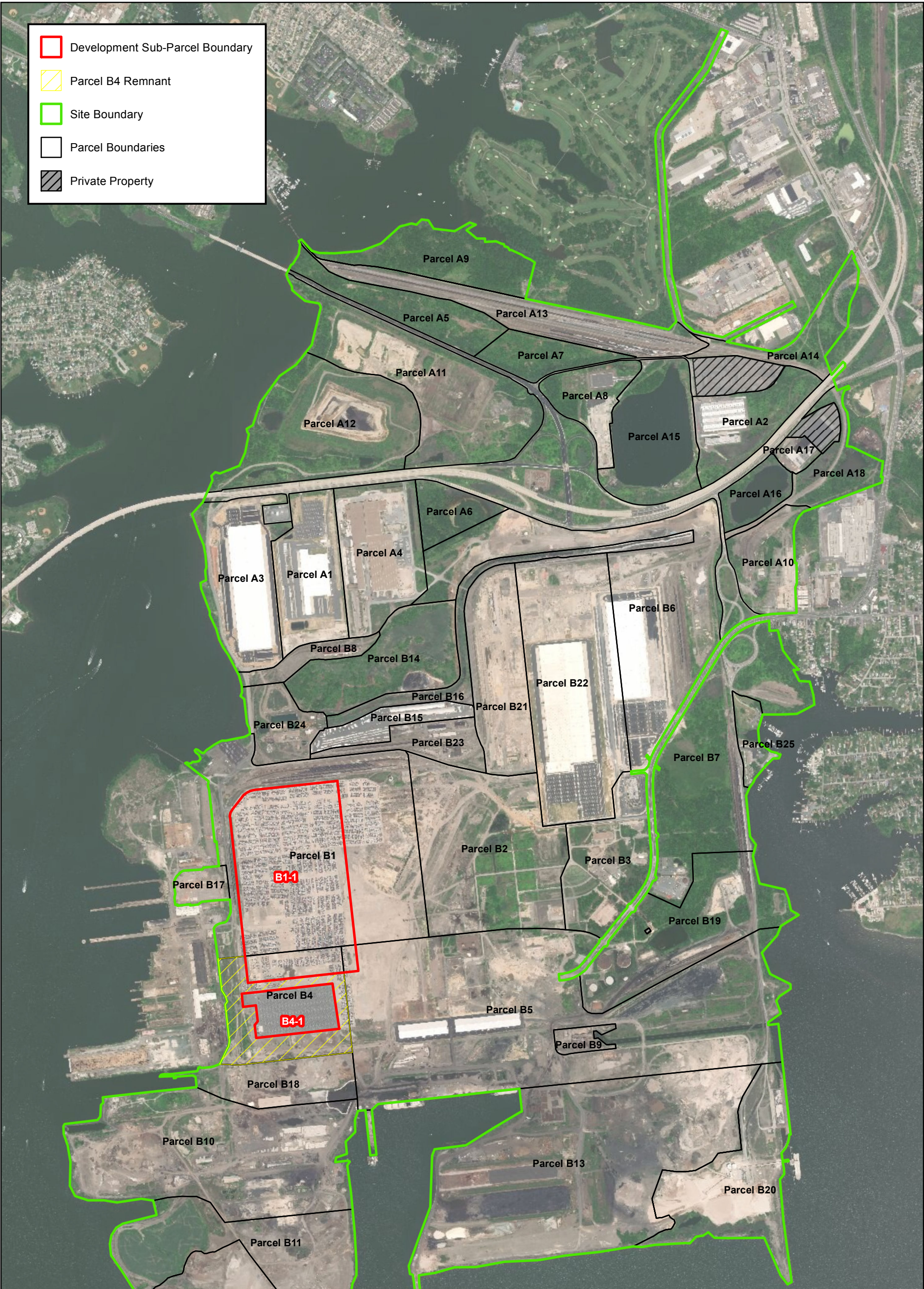
Long-term conditions related to future use of the Site will be placed on the SLRA approval, No Further Action Letter (NFA), and Certificate of Completion (COC). These conditions are anticipated to include the following:

- 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 and USEPA at least 30 days prior to any future soil disturbances if the proposed duration of intrusive activity exposure would exceed the allowable duration determined in the SLRA, unless the contractor is proposing to use the upgraded modified Level D PPE specified in the approved SOP.
- Requirement for a HASP in the event of any future excavations.
- Complete appropriate characterization and disposal of any future material excavated at the Site in accordance with applicable local, state and federal requirements.

As the responsible party, Tradepoint Atlantic will file the above deed restrictions as defined by the MDE-VCP in the NFA and COC. Deed restrictions will be recorded after receipt of the final NFA. Long-term requirements will include compliance with the conditions specified in the NFA, COC, and the deed restrictions recorded for the Site.

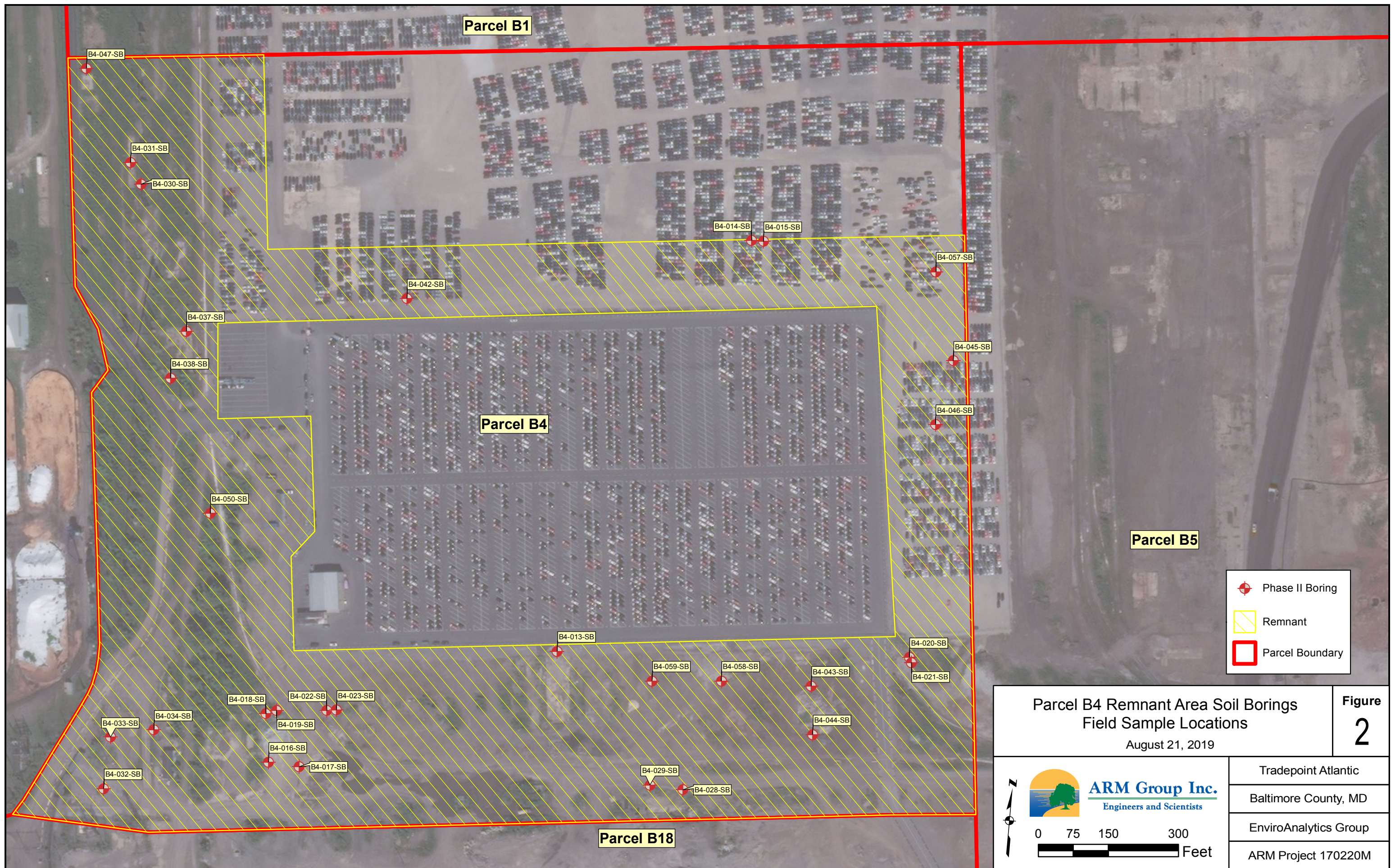
Written notice to the MDE and USEPA of planned excavation activities will include the proposed date(s) for the excavation, location of the excavation, health and safety protocols (as required), clean fill source (as required), and proposed characterization and disposal requirements.

FIGURES



- Development Sub-Parcel Boundary
- Parcel B4 Remnant
- Site Boundary
- Parcel Boundaries
- Private Property

Tradepoint Atlantic Area A and Area B Parcels August 21, 2019		Figure 1
ARM Group Inc. Engineers and Scientists		Tradepoint Atlantic Baltimore County, MD EnviroAnalytics Group
 		Area A: Project 150298M Area B: Project 150300M Development: Project 160443M



B4-047-SB

B4-031-SB

B4-030-SB

B4-014-SB

B4-015-SB

B4-057-SB

B4-042-SB

B4-037-SB

B4-038-SB

B4-045-SB

B4-046-SB

B4-050-SB

B4-013-SB

B4-020-SB

B4-059-SB

B4-058-SB

B4-043-SB

B4-021-SB

B4-018-SB

B4-022-SB

B4-023-SB

B4-044-SB

B4-033-SB

B4-034-SB

B4-019-SB

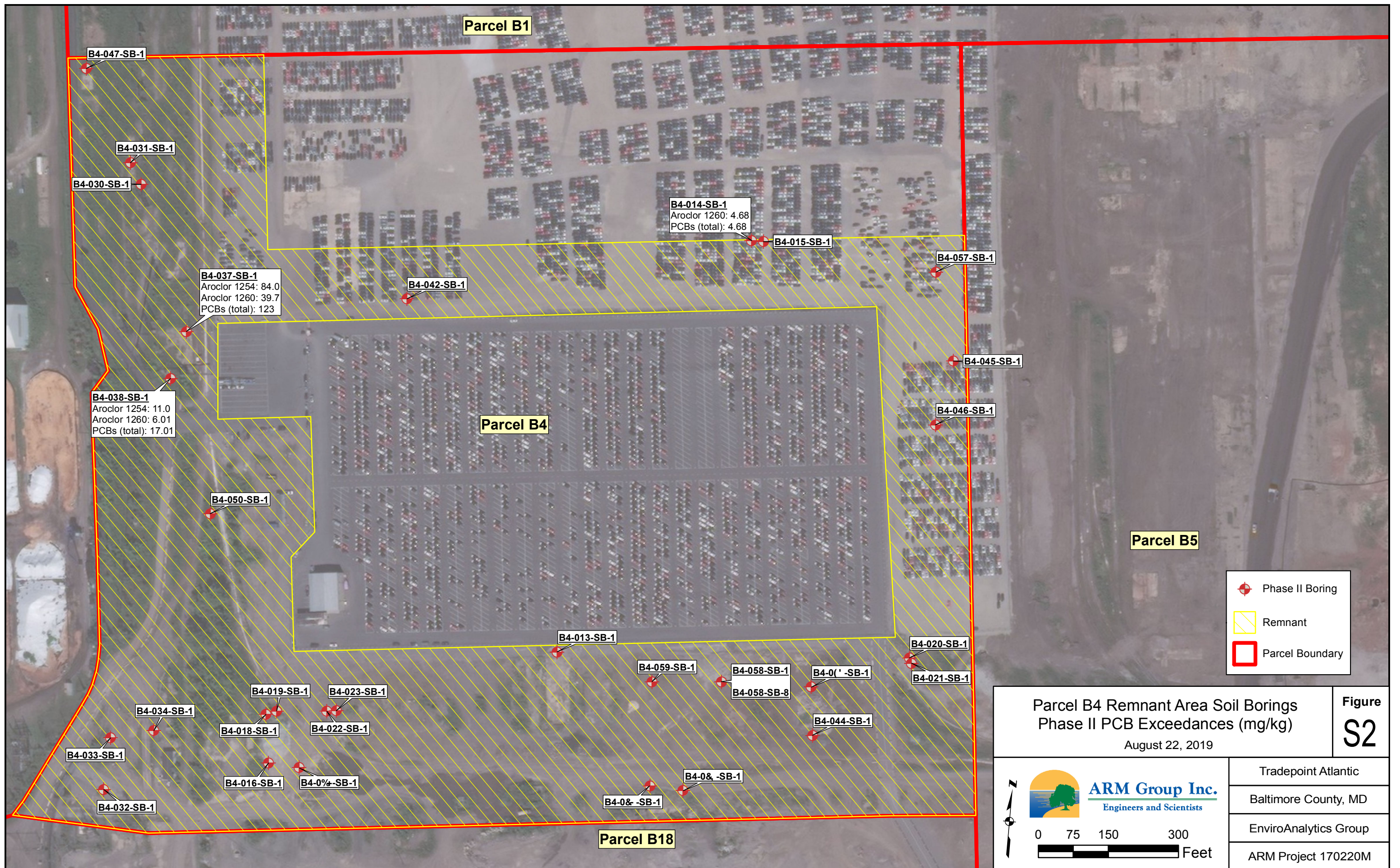
B4-016-SB

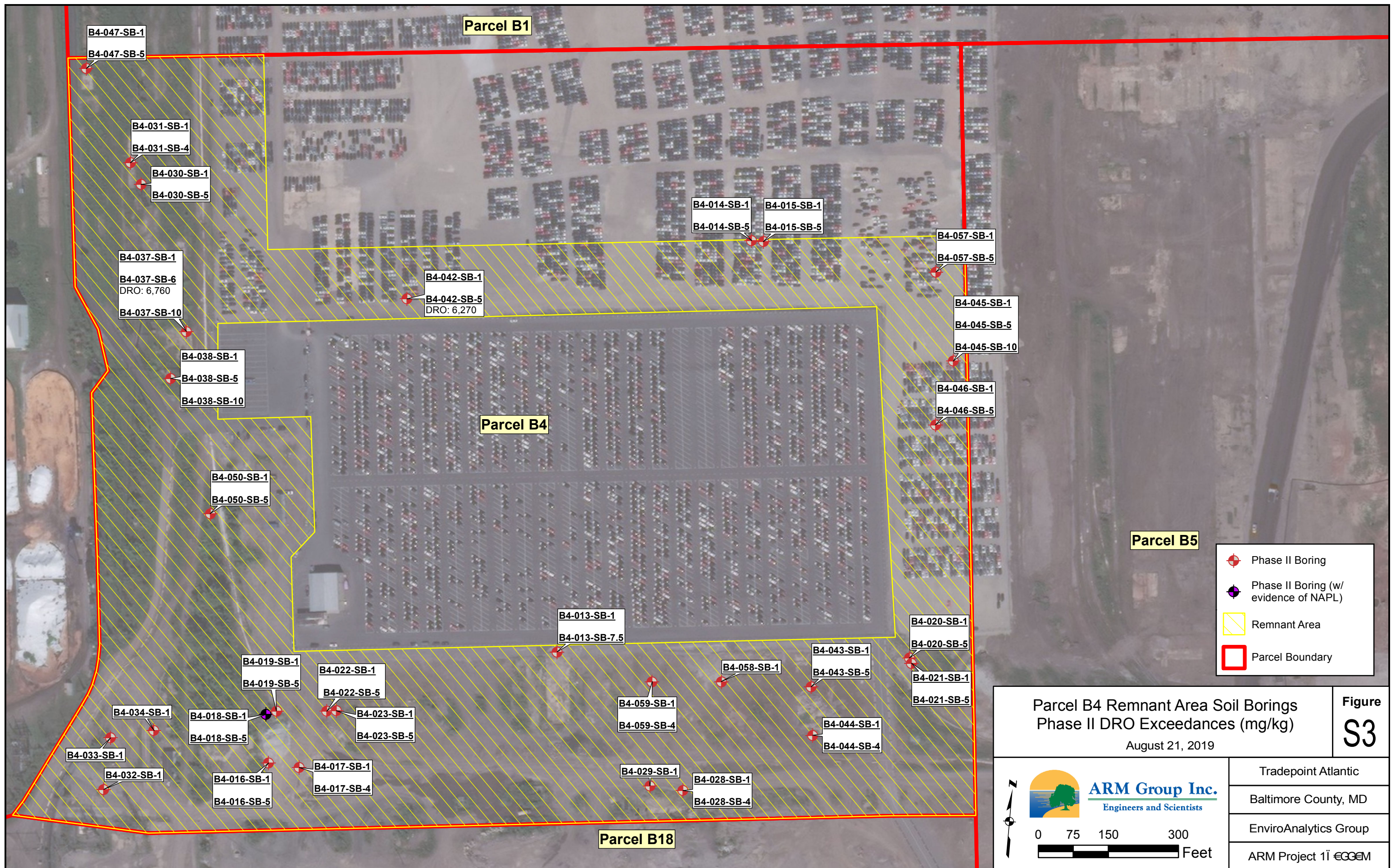
B4-017-SB

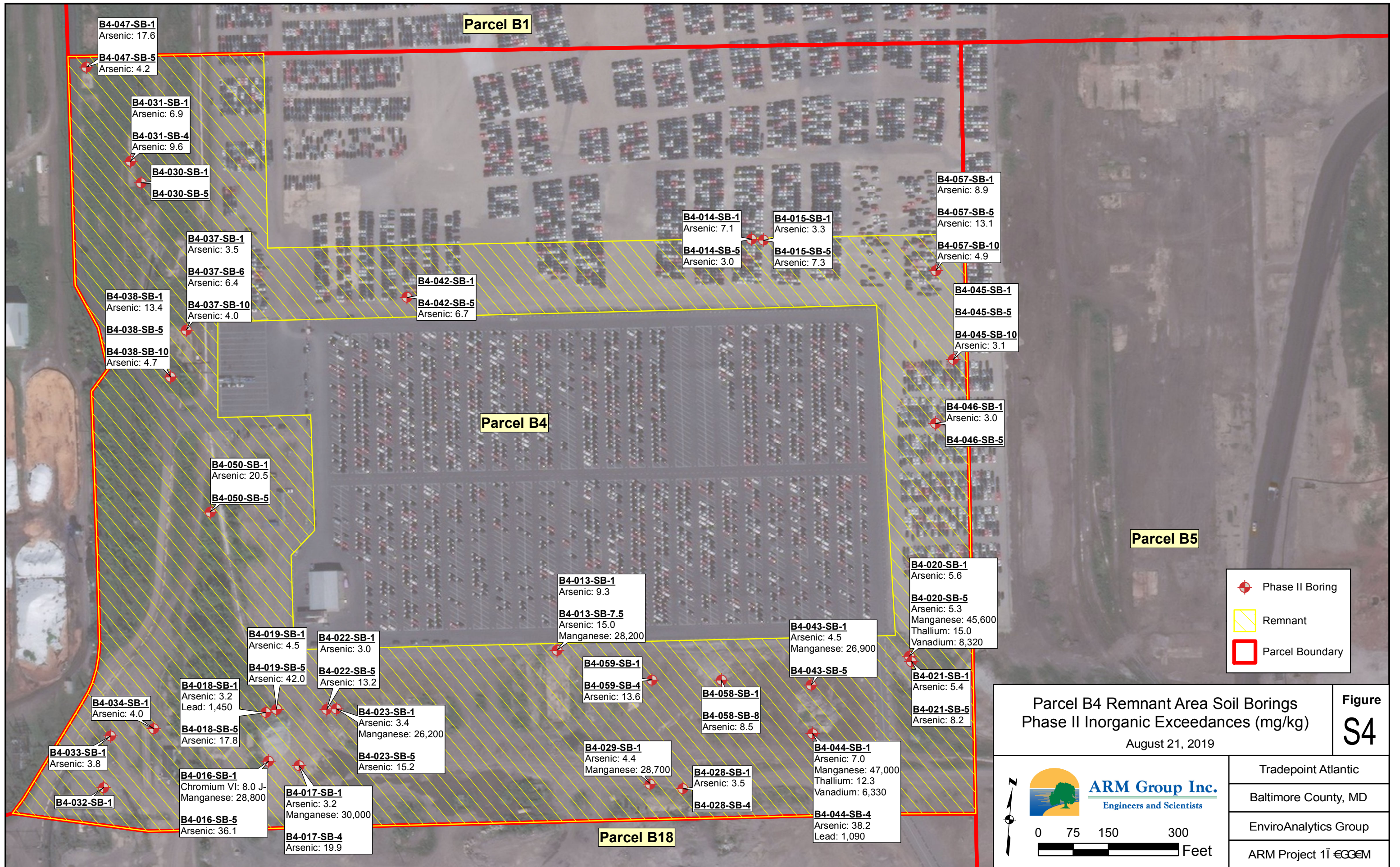
B4-029-SB

B4-028-SB

B4-032-SB







B4-047-SB-1
Arsenic: 17.6

B4-047-SB-5
Arsenic: 4.2

B4-031-SB-1
Arsenic: 6.9

B4-031-SB-4
Arsenic: 9.6

B4-030-SB-1

B4-030-SB-5

B4-037-SB-1
Arsenic: 3.5

B4-037-SB-6
Arsenic: 6.4

B4-038-SB-1
Arsenic: 13.4

B4-038-SB-5

B4-038-SB-10
Arsenic: 4.7

B4-037-SB-10
Arsenic: 4.0

B4-042-SB-1

B4-042-SB-5
Arsenic: 6.7

B4-014-SB-1
Arsenic: 7.1

B4-014-SB-5
Arsenic: 3.0

B4-015-SB-1
Arsenic: 3.3

B4-015-SB-5
Arsenic: 7.3

B4-057-SB-1
Arsenic: 8.9

B4-057-SB-5
Arsenic: 13.1

B4-057-SB-10
Arsenic: 4.9

B4-045-SB-1

B4-045-SB-5

B4-045-SB-10
Arsenic: 3.1

B4-046-SB-1
Arsenic: 3.0

B4-046-SB-5

B4-050-SB-1
Arsenic: 20.5

B4-050-SB-5

B4-013-SB-1
Arsenic: 9.3

B4-013-SB-7.5
Arsenic: 15.0
Manganese: 28,200

B4-043-SB-1
Arsenic: 4.5
Manganese: 26,900

B4-043-SB-5

B4-020-SB-1
Arsenic: 5.6

B4-020-SB-5
Arsenic: 5.3
Manganese: 45,600
Thallium: 15.0
Vanadium: 8,320

B4-021-SB-1
Arsenic: 5.4

B4-021-SB-5
Arsenic: 8.2

B4-019-SB-1
Arsenic: 4.5

B4-019-SB-5
Arsenic: 42.0

B4-022-SB-1
Arsenic: 3.0

B4-022-SB-5
Arsenic: 13.2

B4-018-SB-1
Arsenic: 3.2
Lead: 1,450

B4-018-SB-5
Arsenic: 17.8

B4-023-SB-1
Arsenic: 3.4
Manganese: 26,200

B4-023-SB-5
Arsenic: 15.2

B4-059-SB-1

B4-059-SB-4
Arsenic: 13.6

B4-058-SB-1

B4-058-SB-8
Arsenic: 8.5

B4-034-SB-1
Arsenic: 4.0

B4-033-SB-1
Arsenic: 3.8

B4-032-SB-1

B4-016-SB-1
Chromium VI: 8.0 J-
Manganese: 28,800

B4-016-SB-5
Arsenic: 36.1

B4-017-SB-1
Arsenic: 3.2
Manganese: 30,000

B4-017-SB-4
Arsenic: 19.9

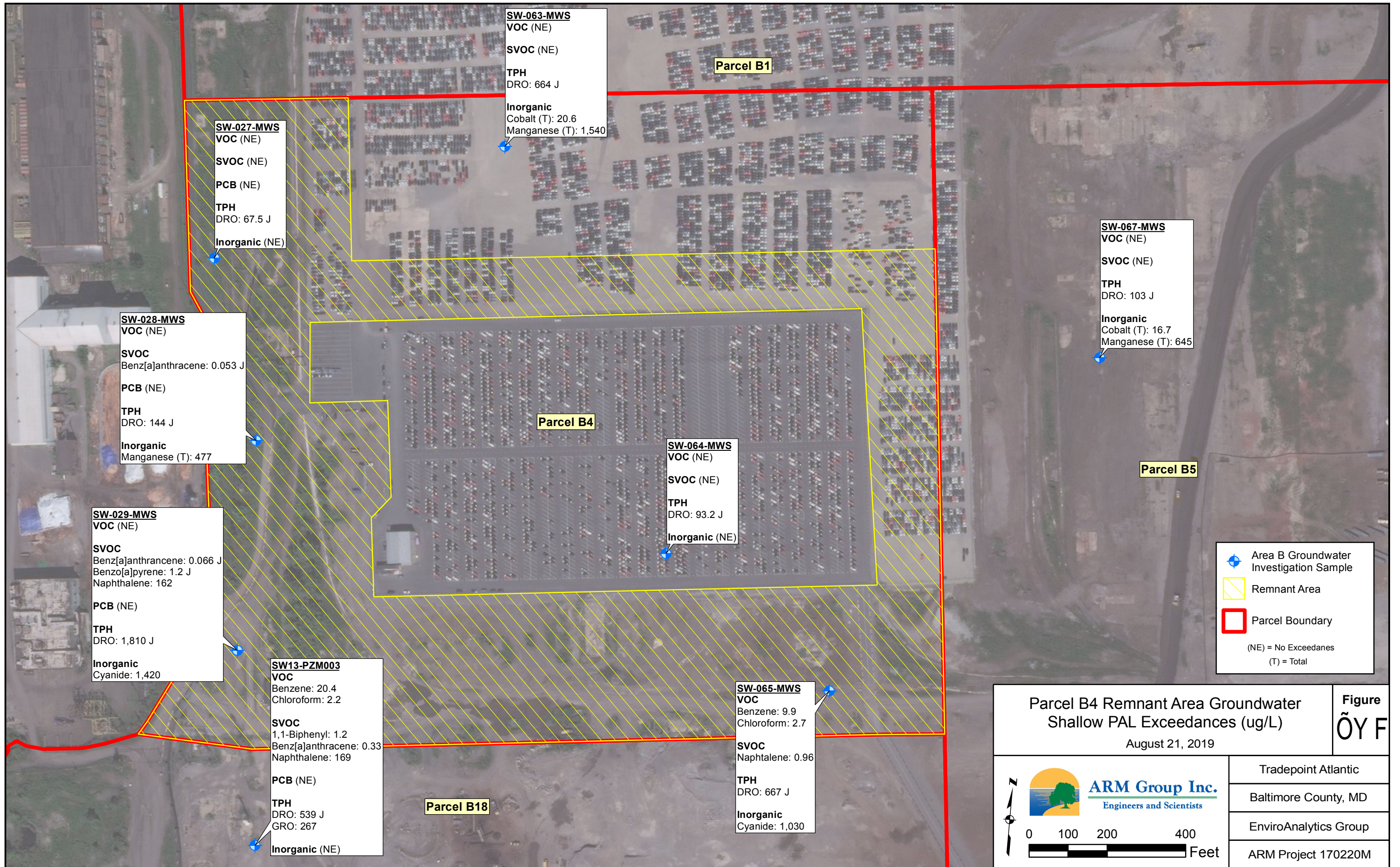
B4-029-SB-1
Arsenic: 4.4
Manganese: 28,700

B4-028-SB-1
Arsenic: 3.5

B4-028-SB-4

B4-044-SB-1
Arsenic: 7.0
Manganese: 47,000
Thallium: 12.3
Vanadium: 6,330

B4-044-SB-4
Arsenic: 38.2
Lead: 1,090



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

Parcel B1

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

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

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

Parcel B4

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

Parcel B5

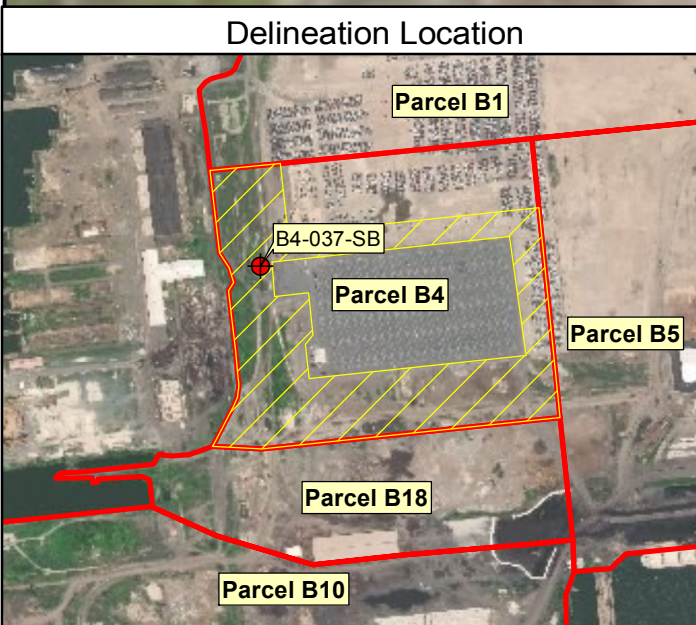
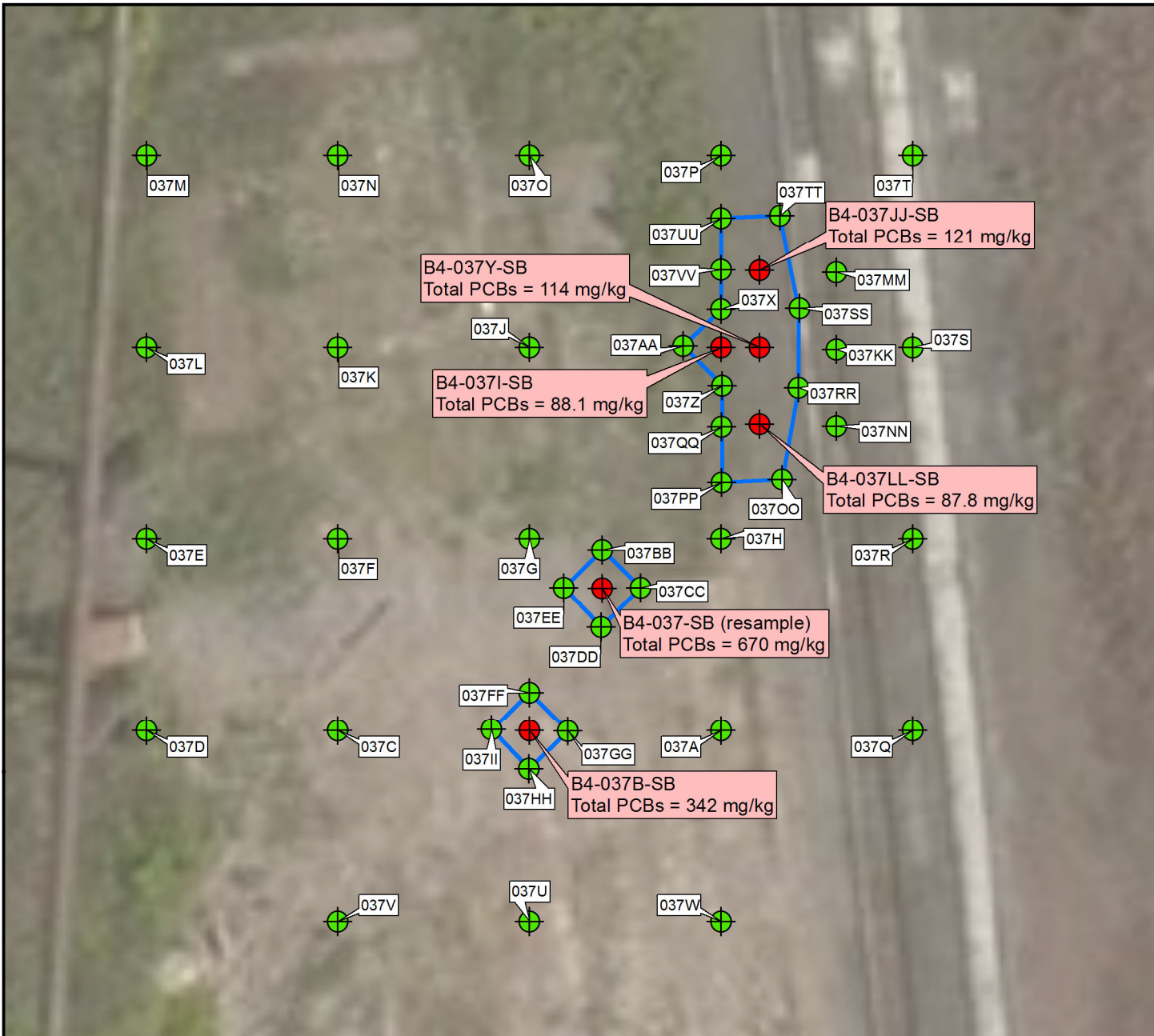
SW-029-MWS
VOC (NE)
SVOC
 Benz[a]anthracene: 0.066 J
 Benzo[a]pyrene: 1.2 J
 Naphthalene: 162
PCB (NE)
TPH
 DRO: 1,810 J
Inorganic
 Cyanide: 1,420

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

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

Area B Groundwater Investigation Sample
 Remnant Area
 Parcel Boundary
 (NE) = No Exceedanes
 (T) = Total

Parcel B4 Remnant Area Groundwater Shallow PAL Exceedances (ug/L) August 21, 2019		Figure
ARM Group Inc. Engineers and Scientists		
Tradepoint Atlantic Baltimore County, MD		
EnviroAnalytics Group ARM Project 170220M		



**Parcel B4 PCB Delineation
Sample Locations (B4-037-SB)**
August 23, 2019

**Figure
3**

EnviroAnalytics Group
ARM Project 170220M
Tradepoint Atlantic
Baltimore County, MD

0 5 10 20 Feet

- PCB Exceedance
- No PCB Exceedance
- Delineation Boundary
- Remnant

Excavation Criteria
Total PCBs: 50 mg/kg

TABLES

**Table 1 - Parcel B4 Remnant
Summary of Organics Detected in Soil**

Parameter	Units	PAL	B4-013-SB-1	B4-013-SB-7.5	B4-014-SB-1	B4-014-SB-5	B4-015-SB-1	B4-015-SB-5	B4-016-SB-1	B4-016-SB-5	B4-017-SB-1	B4-017-SB-4	B4-018-SB-1	B4-018-SB-5	B4-019-SB-1	B4-019-SB-5	B4-020-SB-1
Volatile Organic Compounds																	
1,2,3-Trichlorobenzene	mg/kg	930	0.0073 U	0.004 U	0.0046 J	0.0049 U	0.0017 J	0.0052 U	0.0049 U	0.0056 U	0.0049 U	0.0078 U	0.005 U	0.0068 UJ	0.0049 U	0.0065 UJ	0.0051 U
1,2,4-Trichlorobenzene	mg/kg	110	0.0073 U	0.004 U	0.0083	0.0049 U	0.0037 J	0.0052 U	0.0049 U	0.0056 U	0.0049 U	0.0078 U	0.005 U	0.0068 UJ	0.0049 U	0.0065 UJ	0.0051 U
2-Butanone (MEK)	mg/kg	190,000	0.015 U	0.0079 U	0.0099 U	0.0025 J	0.0099 U	0.0026 J	0.0098 UJ	0.014 J	0.0098 U	0.016 U	0.01 UJ	0.021 J	0.0097 UJ	0.013 UJ	0.01 UJ
2-Hexanone	mg/kg	1,300	0.015 U	0.0079 U	0.0099 U	0.0098 U	0.0099 U	0.01 U	0.0098 U	0.011 U	0.0098 U	0.016 U	0.01 U	0.014 U	0.0097 U	0.013 U	0.01 U
4-Methyl-2-pentanone (MIBK)	mg/kg	56,000	0.015 U	0.0079 U	0.0099 U	0.0024 J	0.0099 U	0.01 U	0.0098 U	0.011 U	0.0098 U	0.016 U	0.0083 J	0.014 U	0.0097 U	0.013 U	0.01 U
Acetone	mg/kg	670,000	0.023 J	0.033 J	0.0099 U	0.035	0.047	0.045	0.029 J	0.071 J	0.031 J	0.089 B	0.01 B	0.1 J	0.051 J	0.043 J	0.022 J
Benzene	mg/kg	5.1	0.0073 U	0.0021 J	0.005 U	0.0049 U	0.005 U	0.0052 U	0.0049 U	0.0016 J	0.0049 U	0.0078 U	0.005 U	0.0035 J	0.0014 J	0.0065 U	0.0051 U
Chloroform	mg/kg	1.4	0.0073 U	0.004 U	0.005 U	0.0049 U	0.005 U	0.0052 U	0.0049 U	0.0056 U	0.0049 U	0.0078 U	0.005 U	0.0068 U	0.0049 U	0.0065 U	0.0051 U
Ethylbenzene	mg/kg	25	0.0073 U	0.004 U	0.005 U	0.0049 U	0.005 U	0.0052 U	0.0049 U	0.0023 J	0.0049 U	0.0078 U	0.005 U	0.0026 J	0.0049 U	0.0065 U	0.0051 U
Isopropylbenzene	mg/kg	9,900	0.0073 U	0.004 U	0.005 U	0.0049 U	0.005 U	0.0052 U	0.0049 U	0.0056 U	0.0049 U	0.0078 U	0.005 U	0.011 J	0.0049 U	0.0065 UJ	0.0051 U
Methyl Acetate	mg/kg	1,200,000	0.073 U	0.04 U	0.05 U	0.049 U	0.05 U	0.052 U	0.049 U	0.056 U	0.049 U	0.078 U	0.05 U	0.068 U	0.0021 J	0.065 U	0.051 U
Styrene	mg/kg	35,000	0.0073 U	0.004 U	0.005 U	0.0049 U	0.005 U	0.0052 U	0.0049 U	0.0056 U	0.0049 U	0.0031 J	0.005 U	0.0068 U	0.0049 U	0.0065 U	0.0051 U
Toluene	mg/kg	47,000	0.0059 J	0.0045	0.013 B	0.012 B	0.018 B	0.015 B	0.01	0.011	0.01	0.011	0.011	0.009	0.0085	0.0039 J	0.0066
Xylenes	mg/kg	2,800	0.022 U	0.012 U	0.015 U	0.015 U	0.015 U	0.016 U	0.015 U	0.0038 J	0.015 U	0.023 U	0.0038 J	0.011 J	0.015 U	0.019 U	0.015 U
Semi-Volatile Organic Compounds[^]																	
1,1-Biphenyl	mg/kg	200	0.076 J	0.074 U	0.038 J	0.08 U	0.073 U	0.081 U	0.073 U	0.15 J	0.073 U	0.025 J	0.097 J	0.4 J	0.075 U	0.66 J	0.071 U
2,4-Dimethylphenol	mg/kg	16,000	0.081 UJ	0.074 U	0.055 J	0.08 U	0.073 R	0.081 U	0.073 R	0.077 U	0.073 R	0.09 R	0.074 U	0.46 U	0.075 U	0.079 U	0.071 U
2,4-Dinitrophenol	mg/kg	1,600	0.2 UJ	0.19 U	0.19 U	0.2 U	0.18 R	0.2 U	0.18 R	0.19 U	0.18 R	0.23 R	0.066 J	1.1 U	0.19 U	0.2 U	0.18 U
2,6-Dinitrotoluene	mg/kg	1.5	0.081 U	0.074 U	0.077 U	0.08 U	0.073 U	0.039 J	0.073 U	0.077 U	0.073 U	0.09 U	0.074 U	0.46 U	0.075 U	0.079 U	0.071 U
2-Methylnaphthalene	mg/kg	3,000	0.72	0.06	0.013	0.0081 U	0.011	0.14	0.0091	0.62	0.0093	0.26 J	0.068 J	0.61	0.11	2.2	0.015
2-Methylphenol	mg/kg	41,000	0.081 UJ	0.074 U	0.064 J	0.08 U	0.073 R	0.081 U	0.073 R	0.077 U	0.073 R	0.09 R	0.074 U	0.46 U	0.075 U	0.079 U	0.071 U
3&4-Methylphenol(m&p Cresol)	mg/kg	41,000	0.16 UJ	0.15 U	0.042 J	0.16 U	0.15 R	0.16 U	0.15 R	0.15 U	0.15 R	0.18 R	0.15 U	0.91 U	0.15 U	0.028 J	0.14 U
4-Chloroaniline	mg/kg	11	0.081 U	0.074 U	0.077 U	0.08 U	0.073 U	0.081 U	0.073 U	0.077 U	0.073 U	0.09 U	0.074 U	0.46 U	0.075 U	0.079 U	0.071 U
Acenaphthene	mg/kg	45,000	0.056	0.0045 J	0.004 B	0.0081 U	0.0015 B	0.0094	0.0026 J	0.014 J	0.00094 J	0.034	0.021 J	1 J	0.019 J	0.57 J	0.0028 J
Acenaphthylene	mg/kg	45,000	0.11	0.023	0.0051 J	0.0026 J	0.0019 J	0.018	0.039	0.31	0.0019 J	0.81	0.15	0.92	0.34	2	0.029
Acetophenone	mg/kg	120,000	0.11	0.074 U	0.077 U	0.08 U	0.073 U	0.081 U	0.073 U	0.061 J	0.073 U	0.026 J	0.038 J	0.46 U	0.075 U	0.046 J	0.071 U
Anthracene	mg/kg	230,000	0.37	0.039	0.011	0.0081 U	0.0074 U	0.039	0.034	0.19	0.0053 J	0.53 J	0.046 J	0.73	0.049	6.3	0.031
Benz[a]anthracene	mg/kg	21	2.1	0.18	0.049	0.0081 U	0.021	0.091	0.14	1.1	0.017	4.3	0.076	1.3	0.15	7.5	0.061
Benzaldehyde	mg/kg	120,000	0.072 J	0.074 R	0.15 J	0.08 R	0.073 R	0.081 R	0.073 R	0.064 J	0.073 R	0.09 R	0.074 R	0.46 R	0.075 R	0.071 J	0.071 R
Benzo[a]pyrene	mg/kg	2.1	2.1	0.19	0.057	0.001 B	0.021	0.13	0.1	1.4	0.011	4.7	0.065 J	2.3	0.22	6.7	0.06
Benzo[b]fluoranthene	mg/kg	21	3.6	0.47	0.17	0.0022 B	0.098	0.26	0.25	3.9	0.042	9.3	0.18	4	0.68	15.7	0.16
Benzo[g,h,i]perylene	mg/kg		0.66	0.087	0.018	0.0081 U	0.016	0.072	0.073	0.37	0.0064 J	3.5	0.079	2.7	0.064	1.4	0.04
Benzo[k]fluoranthene	mg/kg	210	1.4	0.45	0.16	0.0021 B	0.095	0.24	0.24	3.7	0.04	8.9	0.17	3.9	0.65	15.2	0.15
bis(2-Ethylhexyl)phthalate	mg/kg	160	0.081 U	0.074 U	0.077 UJ	0.08 U	0.073 U	0.081 U	0.073 U	0.077 UJ	0.073 UJ	0.09 UJ	0.074 UJ	0.46 UJ	0.075 U	0.079 UJ	0.071 UJ
Caprolactam	mg/kg	400,000	0.2 U	0.19 U	0.19 U	0.2 U	0.18 U	0.19 U	0.18 U	0.19 U	0.18 U	0.23 U	0.19 U	0.19 U	1.1 U	0.19 U	0.18 U
Carbazole	mg/kg		0.3	0.074 U	0.077 U	0.08 U	0.073 U	0.026 J	0.073 U	0.065 J	0.073 U	0.024 J	0.029 J	0.22 J	0.019 J	2.5 J	0.022 J
Chrysene	mg/kg	2,100	2.4	0.21	0.13	0.0011 B	0.051	0.11	0.12	1.1	0.022	3.7	0.12	1.3	0.17	6.4	0.076
Dibenz[a,h]anthracene	mg/kg	2.1	0.47	0.045	0.015 U	0.0081 U	0.0056 J	0.03	0.024	0.17	0.002 J	1.1	0.023 J	0.68	0.02	0.65	0.012
Di-n-butylphthalate	mg/kg	82,000	0.081 U	0.074 U	0.044 J	0.08 UJ	0.073 UJ	0.081 UJ	0.073 U	0.077 U	0.073 U	0.09 U	0.074 U	0.88 J	0.075 U	0.079 U	0.071 U
Fluoranthene	mg/kg	30,000	4.6	0.39	0.27	0.002 B	0.16	0.24	0.4	1.6	0.051	7.1	0.68	1.9	0.31	28.9	0.13
Fluorene	mg/kg	30,000	0.042	0.0079	0.0035 B	0.0081 U	0.0015 B	0.018	0.0087	0.019 J	0.0014 J	0.07	0.057 J	0.28	0.012	3.7	0.02
Indeno[1,2,3-c,d]pyrene	mg/kg	21	0.94	0.1	0.012 J	0.0081 U	0.016	0.07	0.067	0.38	0.0056 J	3.3	0.056 J	1.9	0.055	1.5	0.034
Naphthalene	mg/kg	17	0.5	0.065	0.023	0.0081 U	0.017	0.09	0.021	32.8	0.043	1 J	0.61	8	0.36	1.7	0.049
N-Nitrosodiphenylamine	mg/kg	470	0.081 U	0.074 U	0.065 J	0.08 U	0.073 U	0.081 U	0.073 U	0.077 U	0.073 U	0.09 U	0.074 U	0.46 U	0.075 U	0.079 U	0.071 U
Phenanthrene	mg/kg		1.1	0.2	0.1	0.0028 B	0.27	0.2	0.15	0.82	0.035	1.3	0.59	0.62	0.12	27.4	0.083
Phenol	mg/kg	250,000	0.026 J	0.074 U	0.13 J	0.08 U	0.073 R	0.081 U	0.073 R	0.077 U	0.073 R	0.09 R	0.074 U	0.46 U	0.075 U	0.02 J	0.071 U
Pyrene	mg/kg	23,000	4	0.3	0.19	0.0015 J	0.079	0.24	0.32	1.4	0.04	7.2	0.36	1.8	0.31	23.3	0.11
PCBs																	
Aroclor 1221	mg/kg	0.72	0.0592 U	N/A	0.164 U	N/A	0.0538 U	N/A	0.0544 U	N/A	0.0556 U	N/A	0.0566 U	N/A	0.0575 U	N/A	0.0539 U
Aroclor 1242	mg/kg	0.97	0.0592 U	N/A	0.164 U	N/A	0.0538 U	N/A	0.0544 U	N/A	0.0556 U	N/A	0.0566 U	N/A	0.0575 U	N/A	0.0539 U
Aroclor 1248	mg/kg	0.94	0.0592 U	N/A	0.164 U	N/A	0.0538 U	N/A	0.0544 U	N/A	0.0556 U	N/A	0.0566 U	N/A	0.0575 U	N/A	0.0539 U
Aroclor 1254	mg/kg	0.97	0.0592 U	N/A	0.164 U	N/A	0.0538 U	N/A	0.0544 U	N/A	0.0556 U	N/A	0.07	N/A	0.0575 U	N/A	0.0539 U
Aroclor 1260	mg/kg	0.99	0.0592 U	N/A	4.68	N/A	0.839	N/A	0.0544 U	N/A	0.0556 U	N/A	0.0566 U	N/A	0.0292 J	N/A	0.0392 J
Aroclor 1268	mg/kg		0.0592 U	N/A	0.164 U	N/A	0.053										

**Table 1 - Parcel B4 Remnant
Summary of Organics Detected in Soil**

Parameter	Units	PAL	B4-020-SB-5	B4-021-SB-1	B4-021-SB-5	B4-022-SB-1	B4-022-SB-5	B4-023-SB-1	B4-023-SB-5	B4-028-SB-1	B4-028-SB-4	B4-029-SB-1	B4-030-SB-1	B4-030-SB-5	B4-031-SB-1	B4-031-SB-4	B4-032-SB-1
Volatile Organic Compounds																	
1,2,3-Trichlorobenzene	mg/kg	930	0.0069 U	0.0057 U	0.0062 U	0.006 UJ	0.0061 UJ	0.0062 UJ	0.0059 UJ	0.005 U	0.0059 U	0.0051 U	0.0058 U	0.0044 U	0.0044 U	0.0051 U	0.0051 UJ
1,2,4-Trichlorobenzene	mg/kg	110	0.0069 U	0.0057 U	0.0062 U	0.006 UJ	0.0061 UJ	0.0062 UJ	0.0059 UJ	0.005 U	0.0059 U	0.0051 U	0.0058 U	0.0044 U	0.0044 U	0.0051 U	0.0051 UJ
2-Butanone (MEK)	mg/kg	190,000	0.014 UJ	0.011 UJ	0.017 J	0.012 U	0.012 U	0.012 U	0.012 U	0.0099 U	0.012 U	0.025	0.012 U	0.0024 J	0.0087 U	0.01 U	0.0049 J
2-Hexanone	mg/kg	1,300	0.014 U	0.011 U	0.012 U	0.012 U	0.012 U	0.012 U	0.012 U	0.0099 U	0.012 U	0.0022 J	0.012 U	0.0088 U	0.0087 U	0.01 U	0.01 U
4-Methyl-2-pentanone (MIBK)	mg/kg	56,000	0.014 U	0.011 U	0.012 U	0.012 U	0.012 U	0.012 U	0.012 U	0.0099 U	0.012 U	0.01 U	0.012 U	0.0088 U	0.0087 U	0.01 U	0.01 U
Acetone	mg/kg	670,000	0.047 J	0.028 J	0.04 J	0.0093 B	0.016 B	0.042 J	0.012 UJ	0.017 B	0.097 B	0.11 B	0.015	0.038	0.0087 U	0.025	0.031 J
Benzene	mg/kg	5.1	0.0073	0.0057 U	0.037	0.006 U	0.005 J	0.0062 U	0.0059 U	0.005 U	0.0059 U	0.0051 U	0.0058 U	0.0044 U	0.0044 U	0.019	0.021
Chloroform	mg/kg	1.4	0.0069 U	0.0057 U	0.0062 U	0.006 U	0.0061 U	0.0062 U	0.0059 U	0.005 U	0.0059 U	0.0051 U	0.0058 U	0.0044 U	0.0044 U	0.0051 U	0.0051 U
Ethylbenzene	mg/kg	25	0.017	0.0057 U	0.0077	0.006 U	0.0014 J	0.0062 U	0.0059 U	0.005 U	0.0059 U	0.0051 U	0.0058 U	0.0044 U	0.0044 U	0.001 J	0.0051 U
Isopropylbenzene	mg/kg	9,900	0.0069 U	0.0057 U	0.0062 U	0.006 U	0.0061 U	0.0062 U	0.0059 UJ	0.005 U	0.0059 U	0.0051 U	0.0058 U	0.0044 U	0.0044 U	0.0051 U	0.0051 U
Methyl Acetate	mg/kg	1,200,000	0.069 U	0.057 U	0.062 U	0.06 U	0.061 U	0.062 U	0.059 U	0.05 U	0.059 U	0.051 U	0.058 U	0.044 U	0.044 U	0.051 U	0.051 U
Styrene	mg/kg	35,000	0.0069 U	0.0057 U	0.0062 U	0.006 U	0.0061 U	0.0062 U	0.0059 U	0.005 U	0.0059 U	0.0051 U	0.0058 U	0.0044 U	0.0044 U	0.0051 U	0.0051 U
Toluene	mg/kg	47,000	0.041	0.0083	0.036	0.006 U	0.0042 J	0.0062 U	0.0059 U	0.0048 J	0.0052 J	0.0074	0.013 B	0.013 B	0.008 B	0.016 B	0.0032 J
Xylenes	mg/kg	2,800	0.018 J	0.017 U	0.0077 J	0.018 U	0.018 U	0.019 U	0.018 U	0.003 J	0.018 U	0.015 U	0.017 U	0.013 U	0.013 U	0.0088 J	0.015 U
Semi-Volatile Organic Compounds[^]																	
1,1-Biphenyl	mg/kg	200	0.073 U	0.15 J	0.033 J	0.078 U	0.037 J	0.077 U	0.039 J	0.078 U	0.024 J	0.051 J	0.052 J	0.077 U	0.45	0.024 J	0.019 J
2,4-Dimethylphenol	mg/kg	16,000	0.073 U	0.074 UJ	0.078 UJ	0.078 R	0.078 U	0.077 R	0.079 U	0.078 R	0.077 R	0.072 R	0.074 U	0.077 U	0.074 U	0.078 U	0.074 R
2,4-Dinitrophenol	mg/kg	1,600	0.18 U	0.19 R	0.2 UJ	0.2 R	0.2 UJ	0.19 R	0.2 UJ	0.2 R	0.19 R	0.18 R	0.19 U	0.19 U	0.18 U	0.2 U	0.19 R
2,6-Dinitrotoluene	mg/kg	1.5	0.073 U	0.074 U	0.078 U	0.078 U	0.078 U	0.077 U	0.079 U	0.078 U	0.077 U	0.072 U	0.074 U	0.077 U	0.074 U	0.078 U	0.074 U
2-Methylnaphthalene	mg/kg	3,000	0.017	0.41 J	0.2	0.014	0.12	0.0058 J	0.65	0.019	0.12	0.068	0.04 J	0.0015 J	0.36	0.21	0.15
2-Methylphenol	mg/kg	41,000	0.073 U	0.074 UJ	0.078 UJ	0.078 R	0.031 J	0.077 R	0.079 U	0.078 R	0.077 R	0.072 R	0.074 U	0.077 U	0.074 U	0.078 U	0.074 R
3&4-Methylphenol(m&p Cresol)	mg/kg	41,000	0.14 U	0.15 UJ	0.16 UJ	0.16 R	0.099 J	0.15 R	0.16 U	0.16 R	0.15 R	0.14 R	0.15 U	0.15 U	0.15 U	0.16 U	0.15 R
4-Chloroaniline	mg/kg	11	0.073 U	0.074 U	0.078 U	0.078 U	0.078 U	0.077 U	0.079 U	0.078 U	0.077 U	0.072 U	0.074 U	0.077 U	0.074 U	0.028 J	0.074 U
Acenaphthene	mg/kg	45,000	0.0073 J	0.056 J	0.2 J	0.0012 J	0.016	0.008 U	0.18	0.0036 J	0.017	0.021	0.03 B	0.0046 B	0.3	0.098	0.018
Acenaphthylene	mg/kg	45,000	0.0052 J	0.59 J	0.35	0.0042 J	0.13	0.0024 J	1.1	0.0031 J	0.022	0.0075	0.061 J	0.0078 U	0.53	1.5	0.078
Acetophenone	mg/kg	120,000	0.073 U	0.074 U	0.078 U	0.078 U	0.035 J	0.077 U	0.079 U	0.078 U	0.028 J	0.022 J	0.074 U	0.077 U	0.063 J	0.025 J	0.027 J
Anthracene	mg/kg	230,000	0.0073 J	0.56 J	2.1	0.0074 J	0.074	0.0026 J	2.6	0.018	0.087	0.059	0.12	0.0078 U	1.2	2.6	0.069
Benz[a]anthracene	mg/kg	21	0.028	0.88 J	7	0.028	0.53	0.007 J	4.8	0.037	0.14	0.09	0.33	0.0078 U	4.1	6.1	0.23
Benzaldehyde	mg/kg	120,000	0.073 R	0.074 R	0.078 R	0.078 R	0.042 J	0.077 R	0.079 R	0.078 R	0.021 J	0.041 J	0.074 R	0.077 R	0.033 J	0.019 J	0.018 J
Benzo[a]pyrene	mg/kg	2.1	0.031	0.8 J	6	0.033	0.51	0.0067 J	4.1 J	0.024	0.11	0.043	0.37 J	0.063	4.2	5.4 J	0.24 J
Benzo[b]fluoranthene	mg/kg	21	0.081	1.4	12.6	0.085	1.2	0.021	9.8 J	0.076	0.33	0.22	0.96 J	0.0078 U	8.7	16.6 J	0.74 J
Benzo[g,h,i]perylene	mg/kg		0.031	0.18 J	2.7	0.019	0.19	0.0039 J	0.78	0.016	0.048	0.023	0.15 J	0.0078 U	1.2	1.5 J	0.15 J
Benzo[k]fluoranthene	mg/kg	210	0.079	1.4 J	12.1	0.086	1.2	0.021	10 J	0.074	0.31	0.21	0.92 J	0.0078 U	8.3	16 J	0.76 J
bis(2-Ethylhexyl)phthalate	mg/kg	160	0.073 U	0.074 UJ	0.078 UJ	0.078 U	0.016 J	0.077 U	0.079 U	0.078 UJ	0.077 UJ	0.072 UJ	0.074 UJ	0.077 UJ	0.074 UJ	0.078 UJ	0.023 J
Caprolactam	mg/kg	400,000	0.18 U	0.19 U	0.2 U	0.2 U	0.2 U	0.19 U	0.2 U	0.2 U	0.19 U	0.087 J	0.19 U	0.19 U	0.18 U	0.2 U	0.19 U
Carbazole	mg/kg		0.073 U	0.68 J	0.65 J	0.078 U	0.076 J	0.077 U	0.27	0.078 U	0.037 J	0.024 J	0.043 J	0.077 U	0.36	0.078 U	0.074 U
Chrysene	mg/kg	2,100	0.04	0.81 J	6.4	0.042	0.57	0.011	4.9	0.058	0.18	0.17	0.36	0.0014 B	4.2	5.8	0.3
Dibenz[a,h]anthracene	mg/kg	2.1	0.0082 J	0.079 J	1.1	0.0059 J	0.091	0.008 U	0.37	0.0048 J	0.013	0.008	0.075 UJ	0.0078 U	0.35	0.49 J	0.05 J
Di-n-butylphthalate	mg/kg	82,000	0.073 U	0.074 U	0.078 U	0.078 U	0.078 U	0.077 U	0.079 U	0.078 U	0.077 U	0.072 U	0.074 UJ	0.077 UJ	0.018 J	0.078 UJ	0.074 U
Fluoranthene	mg/kg	30,000	0.071	2.4	15.9	0.062	0.92	0.026	13.4	0.18	0.53	0.58	0.89	0.0032 B	9.5	21.5	0.52
Fluorene	mg/kg	30,000	0.0062 J	0.48 J	0.57	0.0014 J	0.019	0.00078 J	2.2	0.0062 J	0.045	0.027	0.036 B	0.0078 U	0.29	0.11	0.012
Indeno[1,2,3-c,d]pyrene	mg/kg	21	0.024	0.21 J	3	0.018	0.22	0.0034 J	1	0.013	0.037	0.018	0.11 J	0.0078 U	1.1	1.5 J	0.15 J
Naphthalene	mg/kg	17	0.02	1.4	0.65	0.016	0.31	0.0086	2.3	0.02	0.27	0.066	0.13	0.01	1.3	1.4	0.4
N-Nitrosodiphenylamine	mg/kg	470	0.073 U	0.074 U	0.078 U	0.078 U	0.078 U	0.077 U	0.079 U	0.078 U	0.077 U	0.072 U	0.074 U	0.077 U	0.074 U	0.078 U	0.074 U
Phenanthrene	mg/kg		0.053	1.5	6.9	0.045	0.3	0.023	12	0.14	0.44	0.68	0.54	0.0027 B	5.1	13	0.36
Phenol	mg/kg	250,000	0.073 U	0.074 UJ	0.078 U	0.078 R	0.13 J	0.077 R	0.079 U	0.078 R	0.077 R	0.072 R	0.074 U	0.077 U	0.021 J	0.078 U	0.074 R
Pyrene	mg/kg	23,000	0.053	2	11.9	0.055	0.87	0.021	9.8	0.15	0.46	0.5	0.98	0.0034 J	10.5	15.7	0.46
PCBs																	
Aroclor 1221	mg/kg	0.72	N/A	0.0555 U	N/A	0.059 U	N/A	0.0584 U	N/A	0.0568 U	N/A	0.068 U	0.0574 U	N/A	0.0575 U	N/A	0.0536 U
Aroclor 1242	mg/kg	0.97	N/A	0.0555 U	N/A	0.059 U	N/A	0.0584 U	N/A	0.0568 U	N/A	0.068 U	0.0574 U	N/A	0.0575 U	N/A	0.0536 U
Aroclor 1248	mg/kg	0.94	N/A	0.0555 U	N/A	0.059 U	N/A	0.0584 U	N/A	0.0568 U	N/A	0.068 U	0.139	N/A	0.283	N/A	0.0536 U
Aroclor 1254	mg/kg	0.97	N/A	0.0555 U	N/A	0.059 U	N/A	0.0584 U	N/A	0.223	N/A	0.0916	0.0888	N/A	0.25	N/A	0.173
Aroclor 1260	mg/kg	0.99	N/A	0.0296 J	N/A	0.059 U	N/A	0.0584 U	N/A	0.0568 U	N/A	0.068 U	0.0594	N/A	0.314	N/A	0.0536 U
Aroclor 1268	mg/kg																

**Table 1 - Parcel B4 Remnant
Summary of Organics Detected in Soil**

Parameter	Units	PAL	B4-033-SB-1	B4-034-SB-1	B4-037-SB-1	B4-037-SB-6	B4-037-SB-10	B4-038-SB-1	B4-038-SB-5	B4-038-SB-10	B4-042-SB-1	B4-042-SB-5	B4-043-SB-1	B4-043-SB-5	B4-044-SB-1	B4-044-SB-4	B4-045-SB-1
Volatile Organic Compounds																	
1,2,3-Trichlorobenzene	mg/kg	930	0.0046 UJ	0.0049 UJ	0.0053 U	0.0074	0.0044 U	0.0054 U	0.0048 U	0.0044 U	0.0071 U	0.0046 U	0.0055 U	0.0054 U	0.0061 U	0.008 U	0.0065 U
1,2,4-Trichlorobenzene	mg/kg	110	0.0046 UJ	0.0049 UJ	0.0053 U	0.0042 U	0.0044 U	0.0054 U	0.0048 U	0.0044 U	0.0071 U	0.0046 U	0.0055 U	0.0054 U	0.0061 U	0.008 U	0.0065 U
2-Butanone (MEK)	mg/kg	190,000	0.0091 U	0.0044 J	0.011 U	0.0045 J	0.005 J	0.011 U	0.0096 U	0.0088 U	0.014 U	0.013	0.011 U	0.011 U	0.0037 J	0.016 UJ	0.013 U
2-Hexanone	mg/kg	1,300	0.0091 U	0.0098 U	0.011 U	0.0085 U	0.0088 U	0.011 U	0.0096 U	0.0088 U	0.014 U	0.0036 J	0.011 U	0.011 U	0.012 U	0.016 U	0.013 U
4-Methyl-2-pentanone (MIBK)	mg/kg	56,000	0.0091 U	0.0098 U	0.011 U	0.0085 U	0.0088 U	0.011 U	0.0096 U	0.0088 U	0.014 U	0.0026 J	0.011 U	0.011 U	0.012 U	0.016 U	0.013 U
Acetone	mg/kg	670,000	0.0091 UJ	0.028 J	0.015 J	0.045 J	0.047 J	0.028 J	0.024 J	0.024 J	0.071	0.1	0.03 B	0.029 B	0.061 J	0.04 J	0.024 J
Benzene	mg/kg	5.1	0.0046 U	0.0059	0.0053 U	0.0013 J	0.0044 U	0.0054 U	0.0048 U	0.0044 U	0.0071 U	0.0019 J	0.0055 U	0.0054 U	0.0061 U	0.008 U	0.0065 U
Chloroform	mg/kg	1.4	0.0046 U	0.0049 U	0.0053 U	0.0042 U	0.0044 U	0.0054 U	0.0048 U	0.0044 U	0.0071 U	0.0046 U	0.0055 U	0.0054 U	0.0061 U	0.008 U	0.0065 U
Ethylbenzene	mg/kg	25	0.0046 U	0.0049 U	0.0053 U	0.0042 U	0.0044 U	0.0054 U	0.0048 U	0.0044 U	0.0071 U	0.0046 U	0.0055 U	0.0054 U	0.0061 U	0.008 U	0.0065 U
Isopropylbenzene	mg/kg	9,900	0.0046 U	0.0049 U	0.0053 U	0.0042 U	0.0044 U	0.0054 U	0.0048 U	0.0044 U	0.0071 U	0.0046 U	0.0055 U	0.0054 U	0.0061 U	0.008 U	0.0065 U
Methyl Acetate	mg/kg	1,200,000	0.046 U	0.049 U	0.053 U	0.042 U	0.044 U	0.054 U	0.048 U	0.044 U	0.071 U	0.046 U	0.055 U	0.054 U	0.061 U	0.08 U	0.065 U
Styrene	mg/kg	35,000	0.0046 U	0.0049 U	0.0053 U	0.0042 U	0.0044 U	0.0054 U	0.0048 U	0.0044 U	0.0071 U	0.0046 U	0.0055 U	0.0054 U	0.0061 U	0.008 U	0.0065 U
Toluene	mg/kg	47,000	0.0046 U	0.002 J	0.0046 J	0.0064 J	0.014	0.007	0.01	0.011	0.012	0.0043 J	0.0047 J	0.0064	0.016	0.0036 J	0.0097 B
Xylenes	mg/kg	2,800	0.014 U	0.015 U	0.016 U	0.013 U	0.013 U	0.016 U	0.014 U	0.013 U	0.021 U	0.014 U	0.017 U	0.016 U	0.018 U	0.024 U	0.019 U
Semi-Volatile Organic Compounds[^]																	
1,1-Biphenyl	mg/kg	200	0.073 U	0.016 J	0.02 J	0.15 U	0.16 U	0.089	0.073 U	0.078 U	0.073 U	0.031 J	0.19	0.077 U	0.07 U	0.022 J	0.074 U
2,4-Dimethylphenol	mg/kg	16,000	0.073 U	0.076 R	0.075 U	0.15 U	0.16 U	0.08 U	0.073 U	0.078 U	0.073 U	0.069 U	0.079 UJ	0.077 R	0.07 U	0.082 U	0.074 U
2,4-Dinitrophenol	mg/kg	1,600	0.18 UJ	0.19 R	0.19 UJ	0.39 R	0.4 UJ	0.2 UJ	0.18 UJ	0.2 UJ	0.18 UJ	0.17 UJ	0.2 UJ	0.19 R	0.18 U	0.2 U	0.19 U
2,6-Dinitrotoluene	mg/kg	1.5	0.073 U	0.076 U	0.075 U	0.15 U	0.16 U	0.08 U	0.073 U	0.078 U	0.073 U	0.069 U	0.079 U	0.077 U	0.07 U	0.082 U	0.074 U
2-Methylnaphthalene	mg/kg	3,000	0.023	0.046	0.055	0.077 U	0.08 U	0.16	0.0074 U	0.0078 U	0.073 U	0.092	0.053	0.0061 J	0.0098	0.2	0.011
2-Methylphenol	mg/kg	41,000	0.073 U	0.076 R	0.075 U	0.15 U	0.16 U	0.08 U	0.073 U	0.078 U	0.073 U	0.069 U	0.079 UJ	0.077 R	0.07 U	0.082 U	0.074 U
3&4-Methylphenol(m&p Cresol)	mg/kg	41,000	0.15 U	0.15 R	0.15 U	0.31 U	0.32 U	0.16 U	0.15 U	0.16 U	0.15 U	0.14 U	0.16 UJ	0.15 R	0.14 U	0.16 U	0.15 U
4-Chloroaniline	mg/kg	11	0.073 U	0.076 U	0.075 U	0.15 U	0.16 U	0.08 U	0.073 U	0.078 U	0.073 U	0.069 U	0.079 U	0.077 U	0.07 U	0.082 U	0.074 U
Acenaphthene	mg/kg	45,000	0.0029 J	0.0071 J	0.053	0.16	0.12	0.013	0.0074 U	0.0078 U	0.073 U	0.084	0.12	0.0019 J	0.0039 J	0.013 J	0.0028 B
Acenaphthylene	mg/kg	45,000	0.044	0.21	0.063	0.086	0.043 J	0.12	0.0074 U	0.0078 U	0.0062 J	0.039 J	0.006 J	0.001 J	0.0019 J	0.14	0.0058 J
Acetophenone	mg/kg	120,000	0.073 U	0.042 J	0.075 U	0.15 U	0.16 U	0.04 J	0.073 U	0.078 U	0.073 U	0.053 J	0.079 U	0.077 U	0.07 U	0.082 U	0.074 U
Anthracene	mg/kg	230,000	0.014	0.022	0.29	0.14	0.21	0.11	0.0074 U	0.0078 U	0.028 B	0.57	0.033	0.0077 J	0.017	0.12	0.013
Benz[a]anthracene	mg/kg	21	0.055	0.1	1.4	0.11	0.05 J	0.4	0.0074 U	0.0078 U	0.25	0.068 U	0.097	0.025	0.014	0.4	0.077
Benzaldehyde	mg/kg	120,000	0.073 R	0.029 J	0.075 R	0.15 R	0.16 R	0.069 J	0.073 R	0.078 R	0.073 R	0.069 R	0.018 J	0.077 R	0.07 R	0.028 J	0.074 R
Benzo[a]pyrene	mg/kg	2.1	0.067	0.29	1.1	0.094	0.016 J	0.43	0.0074 U	0.0078 U	0.36	2.9	0.2	0.027	0.0085	0.61	0.094
Benzo[b]fluoranthene	mg/kg	21	0.2	0.59	1.6	0.21	0.039 J	1	0.0074 U	0.0078 U	1.2	8.5	0.33	0.059	0.039	1.1	0.18
Benzo[g,h,i]perylene	mg/kg		0.047	0.23	0.55	0.086	0.08 U	0.1	0.0074 U	0.0078 U	0.14	1.6	0.1	0.016	0.004 J	0.16	0.046
Benzo[k]fluoranthene	mg/kg	210	0.21	0.6	1.6	0.21	0.037 J	1	0.0074 U	0.0078 U	1.1	8.1	0.32	0.057	0.038	1.1	0.18
bis(2-Ethylhexyl)phthalate	mg/kg	160	0.073 U	0.034 J	0.075 UJ	0.15 UJ	0.16 UJ	0.042 B	0.073 U	0.078 U	0.073 UJ	0.069 UJ	0.079 UJ	0.077 UJ	0.07 U	0.082 UJ	0.074 U
Caprolactam	mg/kg	400,000	0.18 U	0.19 U	0.19 U	0.39 U	0.4 U	0.19 U	0.18 U	0.39 U	0.2 U	0.18 U	0.17 U	0.074 J	0.19 U	0.18 U	0.2 U
Carbazole	mg/kg		0.073 U	0.076 U	0.13	0.15 U	0.16 UJ	0.12	0.073 U	0.078 U	0.073 U	0.3 J	0.31	0.077 U	0.07 U	0.059 J	0.074 U
Chrysene	mg/kg	2,100	0.073	0.14	1.4	0.17	0.035 J	0.51	0.0074 U	0.0078 U	1.8	12.6	0.12	0.033	0.019	0.52	0.086
Dibenz[a,h]anthracene	mg/kg	2.1	0.015	0.056	0.22	0.026 J	0.08 U	0.059	0.0074 U	0.0078 U	0.057 J	0.64	0.032	0.0043 J	0.0072 U	0.087	0.016
Di-n-butylphthalate	mg/kg	82,000	0.073 U	0.076 U	0.075 U	0.15 U	0.16 UJ	0.08 U	0.073 U	0.078 U	0.073 U	0.069 UJ	0.079 U	0.077 U	0.07 U	0.082 U	0.074 UJ
Fluoranthene	mg/kg	30,000	0.074	0.11	1.8	0.36	0.11	1.1	0.00076 J	0.00097 J	0.41	6.4	0.2	0.042	0.062	0.69	0.17
Fluorene	mg/kg	30,000	0.0021 J	0.0075 J	0.043	0.4	0.087	0.026	0.0074 U	0.0078 U	0.073 U	0.074	0.019	0.0079 U	0.008	0.011	0.0026 B
Indeno[1,2,3-c,d]pyrene	mg/kg	21	0.046	0.19	0.47	0.063 J	0.01 J	0.13	0.0074 U	0.0078 U	0.15	1.6	0.096	0.014	0.0037 J	0.19	0.041
Naphthalene	mg/kg	17	0.073	0.3	0.076	0.077 U	0.08 U	0.18	0.0074 U	0.0078 U	0.073 U	0.092	0.042	0.0042 J	0.011	0.21	0.0069 B
N-Nitrosodiphenylamine	mg/kg	470	0.073 U	0.076 U	0.075 U	0.15 U	0.16 UJ	0.08 U	0.073 U	0.078 U	0.073 U	0.069 UJ	0.079 U	0.077 U	0.07 U	0.082 U	0.074 U
Phenanthrene	mg/kg		0.049	0.082	1.2	0.18	0.26	0.64	0.00085 J	0.0078 U	0.078	2.4	0.15	0.022	0.066	0.33	0.05
Phenol	mg/kg	250,000	0.073 U	0.076 R	0.075 U	0.15 U	0.16 U	0.08 U	0.073 U	0.078 U	0.073 U	0.035 J	0.079 UJ	0.077 R	0.07 U	0.082 U	0.074 U
Pyrene	mg/kg	23,000	0.069	0.12	3.1	0.42	0.13	0.92	0.00069 J	0.0011 J	0.75	7.7	0.2	0.042	0.053	0.67	0.16
PCBs																	
Aroclor 1221	mg/kg	0.72	0.0542 U	0.057 U	2.75 U	N/A	N/A	0.29 U	N/A	N/A	0.279	N/A	0.065 U	N/A	0.054 U	N/A	0.0542 U
Aroclor 1242	mg/kg	0.97	0.0542 U	0.057 U	2.75 U	N/A	N/A	0.29 U	N/A	N/A	0.158	N/A	0.065 U	N/A	0.054 U	N/A	0.0542 U
Aroclor 1248	mg/kg	0.94	0.0542 U	0.057 U	2.75 U	N/A	N/A	0.29 U	N/A	N/A	0.0559 U	N/A	0.065 U	N/A	0.054 U	N/A	0.0542 U
Aroclor 1254	mg/kg	0.97	0.456	0.38	84	N/A	N/A	11	N/A	N/A	0.0559 U	N/A	0.065 U	N/A	0.054 U	N/A	0.0542 U
Aroclor 1260	mg/kg	0.99	0.0542 U	0.057 U	39.7	N/A	N/A	6.01	N/A	N/A	0.0559 U	N/A	0.065 U	N/A	0.054 U	N/A	0.0542 U
Aroclor 1268	mg/kg		0.0542 U	0.057 U	2.75 U	N/A	N/A	0.29 U	N/A	N/A	0.301	N/A	0.065 U	N/A	0.054 U	N/A	

**Table 1 - Parcel B4 Remnant
Summary of Organics Detected in Soil**

Parameter	Units	PAL	B4-045-SB-5	B4-045-SB-10	B4-046-SB-1	B4-046-SB-5	B4-047-SB-1	B4-047-SB-5	B4-050-SB-1	B4-050-SB-5	B4-057-SB-1*	B4-057-SB-5*	B4-057-SB-10*	B4-058-SB-1*	B4-058-SB-8*	B4-059-SB-1*	B4-059-SB-4*
Volatile Organic Compounds																	
1,2,3-Trichlorobenzene	mg/kg	930	0.0059 U	0.0053 U	0.0059 U	0.0061 U	0.0066 U	0.0048 U	0.006 U	0.0047 U	0.0047 U	0.0054 U	N/A	0.0042 U	0.0084 U	0.0044 U	0.0077 U
1,2,4-Trichlorobenzene	mg/kg	110	0.0059 U	0.0053 U	0.0059 U	0.0061 U	0.0066 U	0.0048 U	0.006 U	0.0047 U	0.0047 U	0.0054 U	N/A	0.0042 U	0.0084 U	0.0044 U	0.0077 U
2-Butanone (MEK)	mg/kg	190,000	0.012 U	0.011 UJ	0.012 UJ	0.012 UJ	0.013 U	0.0096 U	0.012 U	0.0093 U	0.0094 U	0.011 U	N/A	0.0085 U	0.017 U	0.0087 U	0.015 U
2-Hexanone	mg/kg	1,300	0.012 U	0.011 U	0.012 U	0.012 U	0.013 U	0.0096 U	0.012 U	0.0093 U	0.0094 U	0.011 U	N/A	0.0085 U	0.017 U	0.0087 U	0.015 U
4-Methyl-2-pentanone (MIBK)	mg/kg	56,000	0.012 U	0.011 U	0.012 U	0.012 U	0.013 U	0.0096 U	0.012 U	0.0093 U	0.0094 U	0.011 U	N/A	0.0085 U	0.017 U	0.0087 U	0.015 U
Acetone	mg/kg	670,000	0.031 J	0.029 J	0.022 B	0.022 B	0.0073 J	0.028	0.012 U	0.034 J	0.0094 U	0.011 U	N/A	0.014	0.017 U	0.026	0.015 U
Benzene	mg/kg	5.1	0.0059 U	0.0053 U	0.0059 U	0.0061 U	0.0066 U	0.0048 U	0.006 U	0.0047 U	0.0047 U	0.0054 U	N/A	0.0042 U	0.0084 U	0.0044 U	0.0077 U
Chloroform	mg/kg	1.4	0.0059 U	0.0053 U	0.0059 U	0.0061 U	0.0066 U	0.0048 U	0.006 U	0.0047 U	0.0047 U	0.0054 U	N/A	0.0042 U	0.0066 J	0.0044 U	0.0077 U
Ethylbenzene	mg/kg	25	0.0059 U	0.0053 U	0.0059 U	0.0061 U	0.0066 U	0.0048 U	0.006 U	0.0047 U	0.0047 U	0.0054 U	N/A	0.0042 U	0.0084 U	0.0044 U	0.0077 U
Isopropylbenzene	mg/kg	9,900	0.0059 U	0.0053 U	0.0059 U	0.0061 U	0.0066 U	0.0048 U	0.006 U	0.0047 U	0.0047 U	0.0054 U	N/A	0.0042 U	0.0084 U	0.0044 U	0.0077 U
Methyl Acetate	mg/kg	1,200,000	0.059 U	0.053 U	0.059 U	0.061 U	0.066 U	0.048 U	0.06 U	0.047 U	0.047 U	0.054 U	N/A	0.042 U	0.084 U	0.044 U	0.077 U
Styrene	mg/kg	35,000	0.0059 U	0.0053 U	0.0059 U	0.0061 U	0.0066 U	0.0048 U	0.006 U	0.0047 U	0.0047 U	0.0054 U	N/A	0.0042 U	0.0084 U	0.0044 U	0.0077 U
Toluene	mg/kg	47,000	0.012 B	0.008 B	0.0097	0.012	0.018 B	0.015 B	0.0051 J	0.012	0.0047 U	0.0054 U	N/A	0.0042 U	0.0084 U	0.0044 U	0.0077 U
Xylenes	mg/kg	2,800	0.018 U	0.016 U	0.018 U	0.018 U	0.02 U	0.014 U	0.018 U	0.014 U	0.014 U	0.016 U	N/A	0.013 U	0.025 U	0.013 U	0.023 U
Semi-Volatile Organic Compounds^																	
1,1-Biphenyl	mg/kg	200	0.072 U	0.073 U	0.071 U	0.072 U	0.024 J	0.076 U	0.067 J	0.077 U	0.072 U	0.072 U	N/A	0.07 U	0.083 U	0.071 U	0.091 U
2,4-Dimethylphenol	mg/kg	16,000	0.072 U	0.073 U	0.071 U	0.072 U	0.076 U	0.076 UJ	0.078 U	0.077 U	0.072 U	0.072 U	N/A	0.07 U	0.083 U	0.071 U	0.091 U
2,4-Dinitrophenol	mg/kg	1,600	0.18 U	0.18 U	0.18 U	0.18 U	0.19 U	0.19 UJ	0.2 UJ	0.19 UJ	0.18 U	0.18 U	N/A	0.18 U	0.21 U	0.18 U	0.23 U
2,6-Dinitrotoluene	mg/kg	1.5	0.072 U	0.073 U	0.071 U	0.072 U	0.076 U	0.076 U	0.078 U	0.077 U	0.072 U	0.072 U	N/A	0.07 U	0.083 U	0.071 U	0.091 U
2-Methylnaphthalene	mg/kg	3,000	0.0091	0.0079	0.0088	0.0074	0.062 J	0.0019 J	0.25	0.0078 U	0.014	0.022	N/A	0.021 J	0.052	0.0058 J	0.45
2-Methylphenol	mg/kg	41,000	0.072 U	0.073 U	0.071 U	0.072 U	0.076 U	0.076 U	0.078 U	0.077 U	0.072 U	0.072 U	N/A	0.07 U	0.083 U	0.071 U	0.091 U
3&4-Methylphenol(m&p Cresol)	mg/kg	41,000	0.14 U	0.15 U	0.14 U	0.14 U	0.15 U	0.15 U	0.03 J	0.15 U	0.14 U	0.14 U	N/A	0.14 U	0.17 U	0.14 U	0.18 U
4-Chloroaniline	mg/kg	11	0.072 U	0.073 U	0.071 U	0.072 U	0.076 U	0.076 U	0.078 U	0.077 U	0.072 U	0.072 U	N/A	0.07 U	0.083 U	0.071 U	0.091 U
Acenaphthene	mg/kg	45,000	0.0034 B	0.0038 B	0.0013 J	0.0025 J	0.011 B	0.0077 U	0.011	0.0078 U	0.0044 J	0.0017 J	N/A	0.071 U	0.005 J	0.0072 U	0.0061 J
Acenaphthylene	mg/kg	45,000	0.00093 J	0.002 J	0.0014 J	0.00073 J	0.18	0.0042 J	0.18	0.0078 U	0.0054 J	0.006 J	N/A	0.0085 J	0.0041 J	0.0016 J	0.02
Acetophenone	mg/kg	120,000	0.072 U	0.073 U	0.071 U	0.072 U	0.076 U	0.076 U	0.11	0.077 U	0.072 U	0.072 U	N/A	0.07 U	0.023 J	0.071 U	0.026 J
Anthracene	mg/kg	230,000	0.0086	0.0059 B	0.0047 J	0.007 J	0.16	0.0059 B	0.21	0.0078 U	0.012	0.038	N/A	0.012 J	0.0086	0.003 J	0.026
Benz[a]anthracene	mg/kg	21	0.036	0.032	0.032	0.028	0.97	0.032	0.95	0.0078 U	0.04	0.41	N/A	0.034 J	0.016	0.015	0.092
Benzaldehyde	mg/kg	120,000	0.072 R	0.073 R	0.071 R	0.072 R	0.019 J	0.076 R	0.11 J	0.077 R	0.023 J	0.072 U	N/A	0.07 U	0.032 J	0.071 U	0.054 J
Benzo[a]pyrene	mg/kg	2.1	0.045	0.05	0.058	0.033	1.3	0.047	0.97	0.0078 U	0.026	0.32	0.55	0.025 J	0.011	0.013	0.086
Benzo[b]fluoranthene	mg/kg	21	0.084	0.072	0.1	0.077	3.2	0.063	1.6	0.0018 J	0.094	0.77	N/A	0.085	0.032	0.037	0.22
Benzo[g,h,i]perylene	mg/kg		0.026	0.027	0.022	0.013	0.34	0.026	0.25	0.0078 U	0.029	0.28	N/A	0.031 J	0.011	0.015	0.06
Benzo[k]fluoranthene	mg/kg	210	0.08	0.069	0.099	0.074	3.1	0.026	0.72	0.0016 J	0.069	0.23	N/A	0.063 J	0.024	0.034	0.2
bis(2-Ethylhexyl)phthalate	mg/kg	160	0.072 U	0.073 U	0.071 U	0.072 U	0.076 UJ	0.076 UJ	0.024 B	0.077 U	0.072 U	0.072 U	N/A	0.07 U	0.083 U	0.071 U	0.091 U
Caprolactam	mg/kg	400,000	0.18 U	0.18 U	0.18 U	0.18 U	0.19 U	0.19 U	0.2 U	0.19 U	0.18 U	0.18 U	N/A	0.18 U	0.21 U	0.18 U	0.23 U
Carbazole	mg/kg		0.072 U	0.073 U	0.071 U	0.072 U	0.11 J	0.076 U	0.087	0.077 U	0.072 U	0.036 J	N/A	0.07 U	0.083 U	0.071 U	0.091 U
Chrysene	mg/kg	2,100	0.05	0.048	0.043	0.039	0.95	0.026	0.92	0.00086 J	0.049	0.39	N/A	0.058 J	0.033	0.022	0.16
Dibenz[a,h]anthracene	mg/kg	2.1	0.0076	0.008	0.0076	0.0038 J	0.12	0.0085	0.13	0.0078 U	0.0083	0.11	N/A	0.071 U	0.0048 J	0.0038 J	0.023
Di-n-butylphthalate	mg/kg	82,000	0.072 UJ	0.073 UJ	0.071 U	0.072 U	0.076 UJ	0.076 UJ	0.078 U	0.077 U	0.072 U	0.072 U	N/A	0.07 U	0.083 U	0.071 U	0.091 U
Fluoranthene	mg/kg	30,000	0.055	0.043	0.049	0.044	2.1	0.068	2.2	0.0018 J	0.082	0.51	N/A	0.077	0.036	0.036	0.2
Fluorene	mg/kg	30,000	0.0018 B	0.0022 B	0.0011 J	0.0012 J	0.022 B	0.0077 U	0.015	0.0078 U	0.0012 J	0.0015 J	N/A	0.071 U	0.004 J	0.00067 J	0.012
Indeno[1,2,3-c,d]pyrene	mg/kg	21	0.018	0.017	0.018	0.0099	0.35	0.025	0.33	0.0078 U	0.022	0.27	N/A	0.019 J	0.0079 J	0.011	0.056
Naphthalene	mg/kg	17	0.0085	0.0045 B	0.0067 J	0.0051 J	0.09	0.0025 B	0.89	0.0078 U	0.012	0.022	N/A	0.065 J	0.11	0.0067 J	0.31
N-Nitrosodiphenylamine	mg/kg	470	0.072 U	0.073 U	0.071 U	0.072 U	0.076 U	0.076 U	0.078 U	0.077 U	0.072 U	0.072 U	N/A	0.07 U	0.083 U	0.071 U	0.091 U
Phenanthrene	mg/kg		0.033	0.026	0.021	0.023	0.52	0.017	0.64	0.0016 J	0.066	0.28	N/A	0.062 J	0.096	0.025	0.33
Phenol	mg/kg	250,000	0.072 U	0.073 U	0.071 U	0.072 U	0.076 U	0.076 U	0.03 J	0.077 U	0.072 U	0.072 U	N/A	0.07 U	0.083 U	0.071 U	0.091 U
Pyrene	mg/kg	23,000	0.094	0.079	0.056	0.071	1.7	0.057	2	0.0019 J	0.072	0.39	N/A	0.062 J	0.03	0.032	0.16
PCBs																	
Aroclor 1221	mg/kg	0.72	N/A	N/A	0.0596 U	N/A	0.054 U	N/A	0.0569 U	N/A	0.0536 U	N/A	N/A	0.059 U	0.0665 U	0.0548 U	N/A
Aroclor 1242	mg/kg	0.97	N/A	N/A	0.0596 U	N/A	0.054 U	N/A	0.0569 U	N/A	0.0536 U	N/A	N/A	0.059 U	0.0665 U	0.0548 U	N/A
Aroclor 1248	mg/kg	0.94	N/A	N/A	0.0596 U	N/A	0.054 U	N/A	0.0569 U	N/A	0.0536 U	N/A	N/A	0.059 U	0.0665 U	0.0548 U	N/A
Aroclor 1254	mg/kg	0.97	N/A	N/A	0.0596 U	N/A	0.054 U	N/A	0.0569 U	N/A	0.0536 U	N/A	N/A	0.105	0.0665 U	0.122	N/A
Aroclor 1260	mg/kg	0.99	N/A	N/A	0.0596 U	N/A	0.0417 J	N/A	0.0569 U	N/A	0.0536 U	N/A	N/A	0.059 U	0.0665 U	0.0548 U	N/A
Aroclor 1268	mg/kg		N/A	N/A	0.0596 U	N/A	0.054 U	N/A	0.0569 U	N/A	0.0536 U	N/A	N/A	0.059 U	0.0665 U	0.0548 U	N/A
PCBs (total)	mg/kg	0.97	N/A	N/A	0.0596 U	N/A	0.0417 J	N/A	0.0569 U	N/A	0.0536 U	N/A	N/A	0.105	0.0665 U	0.122	N/A
TPH </																	

**Table 2 - Parcel B4 Remnant
Summary of Inorganics Detected in Soil**

Parameter	Units	PAL	B4-013-SB-1	B4-013-SB-7.5	B4-014-SB-1	B4-014-SB-5	B4-015-SB-1	B4-015-SB-5	B4-016-SB-1	B4-016-SB-5	B4-017-SB-1
Metals											
Aluminum	mg/kg	1,100,000	24,900	13,800	7,970	16,200	13,900	17,400	18,600	15,600	11,500
Arsenic	mg/kg	3	9.3	15	7.1	3	3.3	7.3	2.7 U	36.1	3.2
Barium	mg/kg	220,000	303	155	101 J	54.8 J	60.9 J	78.1 J	40.9	1,300	100 J
Beryllium	mg/kg	2,300	1.7	0.87 B	0.32 B	0.54 B	0.78 B	0.69 B	1.1 U	3.2	1 U
Cadmium	mg/kg	980	1.9	1.7	7.5	1.6 U	1.4 B	0.29 B	0.71 J	3.1	0.51 J
Chromium	mg/kg	120,000	52.2 J	137 J	764	17.9	1,130	35.6	1,340	405	1,380
Chromium VI	mg/kg	6.3	1.2 UJ	1.1 UJ	1.2 U	1.2 U	5.8	1.2 UJ	8 J-	1.2 R	2.1 J
Cobalt	mg/kg	350	9.7	19.1	6.7	4.1 J	2.3 J	6.8	3.4 B	30.1	0.65 J
Copper	mg/kg	47,000	88.2	146	146	9.8	72.3	19.7	25	203	35.5 J
Iron	mg/kg	820,000	79,900	83,700	234,000	17,500	203,000	32,400	203,000	97,200	206,000
Lead	mg/kg	800	792 J	232 J	597	11.6	68.2	64.7	14	679	4.4
Manganese	mg/kg	26,000	1,980	28,200	20,200 J	89.2 J	25,800 J	237 J	28,800	11,700	30,000
Mercury	mg/kg	350	0.0049 J-	0.026 J-	0.35	0.0079 J	0.049 J	0.066 J	0.018 J	0.0038 J	0.019 J
Nickel	mg/kg	22,000	24.1 J	96.5 J	53.6	12.8	25.5	18.6	16.8	157	12.1 J
Selenium	mg/kg	5,800	4.9 U	3.8 U	4.7 U	4.3 U	4.1 U	4.5 U	4.3 U	4.1 U	4.1 U
Silver	mg/kg	5,800	3.7 U	2.5 J	3 J	3.2 U	2 J	3.3 U	2.1 J	1.7 J	1.7 J
Thallium	mg/kg	12	9.8 U	9.5 U	11.7 U	10.8 U	10.2 U	11.1 U	10.7 U	10.2 U	10.4 UJ
Vanadium	mg/kg	5,800	189 J	53.5 J	503	20.6	768	46.6	938	197	739 J
Zinc	mg/kg	350,000	639 J	481 J	3,190	32.3	698	119	76.5 J	1,150 J	132 J
Other											
Cyanide	mg/kg	150	1.7 J-	0.47 J-	0.45 J-	0.69 UJ	0.33 J-	0.069 J-	1.7 J-	10.5 J-	1.6 J+

Bold indicates detection

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

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

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

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

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

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

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

N/A: This parameter was not analyzed for this sample.

*Indicates nonvalidated

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

**Table 2 - Parcel B4 Remnant
Summary of Inorganics Detected in Soil**

Parameter	Units	PAL	B4-017-SB-4	B4-018-SB-1	B4-018-SB-5	B4-019-SB-1	B4-019-SB-5	B4-020-SB-1	B4-020-SB-5	B4-021-SB-1	B4-021-SB-5
Metals											
Aluminum	mg/kg	1,100,000	36,300	20,100	24,300	34,400	6,050	6,440	8,380	7,900	23,400
Arsenic	mg/kg	3	19.9	3.2	17.8	4.5	42	5.6	5.3	5.4	8.2
Barium	mg/kg	220,000	244 J	214	434	412	210	57.3	143	68.6	262
Beryllium	mg/kg	2,300	1.2 B	2.4	3.1	6.4	0.49 B	0.53 B	0.93 U	0.71 B	1.6
Cadmium	mg/kg	980	2	2.6	2.3	0.82 J	4.6	1.2 J	0.88 J	1.8	1.3 J
Chromium	mg/kg	120,000	840	828	1,180	277	1,770	241	1,750	529	169
Chromium VI	mg/kg	6.3	1.4 UJ	0.73 J-	1.4 R	1.1 R	1.2 R	1.1 UJ	0.31 J-	1.1 R	1.2 UJ
Cobalt	mg/kg	350	11.9	5.6	49	5.2 B	133	4.4 B	12.4	4.3 B	12.1
Copper	mg/kg	47,000	206 J	400	342	50.2	621	36.9	138	44.3	161
Iron	mg/kg	820,000	179,000	143,000	112,000	64,300	293,000	118,000	131,000	135,000	123,000
Lead	mg/kg	800	511	1,450	352	70.4	664	72.8	76	169	222
Manganese	mg/kg	26,000	22,600	13,900	7,810	9,930	5,510	7,710	45,600	12,100	4,200
Mercury	mg/kg	350	0.95	46.4	2.5	2	0.2	0.038 J	0.049 J	0.1 J	0.0048 J
Nickel	mg/kg	22,000	47.9 J	21.3	340	15.7	941	20.4	60.6	22.6	31.9
Selenium	mg/kg	5,800	3.1 J	4.2 U	3.4 B	4.3 U	3.6 B	3.9 U	3.7 U	4.3 U	5.3
Silver	mg/kg	5,800	1.8 J	2.3 J	1.2 J	3.2 U	4.1	1.5 B	2.8 U	1.9 B	3.4 U
Thallium	mg/kg	12	12 UJ	10.4 U	11 U	10.8 U	10.7 U	9.6 U	15	10.8 U	11.4 U
Vanadium	mg/kg	5,800	624 J	488	91.8	188	379	152	8,320	278	603
Zinc	mg/kg	350,000	532 J	540 J	796 J	253 J	1,750 J	686 J	173 J	990 J	410 J
Other											
Cyanide	mg/kg	150	8.5 J+	91.5 J-	4.3 J-	4.1 J-	1.8 J-	2.9 J-	0.76 J-	10 J-	1.7 J-

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

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

N/A: This parameter was not analyzed for this sample.

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

**Table 2 - Parcel B4 Remnant
Summary of Inorganics Detected in Soil**

Parameter	Units	PAL	B4-022-SB-1	B4-022-SB-5	B4-023-SB-1	B4-023-SB-5	B4-028-SB-1	B4-028-SB-4	B4-029-SB-1	B4-030-SB-1	B4-030-SB-5
Metals											
Aluminum	mg/kg	1,100,000	14,300	10,500	11,100	17,800	13,600	8,350	14,700	32,200	8,650
Arsenic	mg/kg	3	3	13.2	3.4	15.2	3.5	2.6 U	4.4	2.7	2.8
Barium	mg/kg	220,000	98.8	98.5	56.5	380	79.6 J	42.2 J	105 J	655 J	45.5 J
Beryllium	mg/kg	2,300	0.78 J	0.91 J	1 U	1.1	0.35 B	0.39 B	0.47 B	3	0.32 B
Cadmium	mg/kg	980	0.56 B	1.6 B	0.32 B	2.7	0.62 B	0.35 B	1.2 J	0.95 B	1.5 U
Chromium	mg/kg	120,000	980	54.3	978	52.7	1,130	479	1,400	52.1	12.1
Chromium VI	mg/kg	6.3	4.5	1.2 U	5.8	1.2 U	1.2 UJ	1.2 UJ	1.1 UJ	1.1 U	1.2 U
Cobalt	mg/kg	350	1.4 B	10.1	1.3 B	8.8	2.6 J	0.41 J	1.1 B	3.2 J	4 J
Copper	mg/kg	47,000	32.9 J	65 J	30 J	89.1 J	51.1 J	17.1 J	34.1 J	45.5	3.3 J
Iron	mg/kg	820,000	192,000 J	48,600 J	229,000 J	74,400 J	268,000	77,200	235,000	28,800	11,000
Lead	mg/kg	800	20.1	358	2.6 U	200	23.7	11	91.3	103	5
Manganese	mg/kg	26,000	25,000	2,610	26,200	3,430	24,300	11,900	28,700	7,540 J	248 J
Mercury	mg/kg	350	0.0099 J	0.3 J	0.066 J	0.37 J	0.092 J	0.12	7.8	0.11 U	0.017 J
Nickel	mg/kg	22,000	19.8 J	36.9 J	18.8 J	31.2 J	25.2 J	8.2 J	15.7 J	22.8	6.6 B
Selenium	mg/kg	5,800	4.6 U	4.8 U	4.2 U	4 U	4.2 U	4.2 U	3.7 U	3.9 U	4 U
Silver	mg/kg	5,800	3.5 U	3.6 U	1.1 B	3 U	2.5 B	3.1 U	2.4 J	3 U	3 U
Thallium	mg/kg	12	11.6 UJ	11.9 UJ	10.4 UJ	10.1 UJ	10.6 UJ	10.5 UJ	9.3 UJ	9.9 U	9.9 U
Vanadium	mg/kg	5,800	567	130	629	93.9	532 J	235 J	794 J	155	19.5
Zinc	mg/kg	350,000	316	948	194	393	313 J	63.6 J	802 J	233	17.5
Other											
Cyanide	mg/kg	150	0.45 J	0.19 J	1.1	13.2	1.4 J+	0.79 J+	87.2 J+	0.83 J-	0.67 UJ

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

N/A: This parameter was not analyzed for this sample.

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

**Table 2 - Parcel B4 Remnant
Summary of Inorganics Detected in Soil**

Parameter	Units	PAL	B4-031-SB-1	B4-031-SB-4	B4-032-SB-1	B4-033-SB-1	B4-034-SB-1	B4-037-SB-1	B4-037-SB-6	B4-037-SB-10	B4-038-SB-1
Metals											
Aluminum	mg/kg	1,100,000	15,700	23,300	24,000	19,400	11,200	6,900	16,400	16,800	7,760
Arsenic	mg/kg	3	6.9	9.6	2.9	3.8	4	3.5	6.4	4	13.4
Barium	mg/kg	220,000	251 J	557 J	216	62.4	82.7	220	65.6	61.8	166
Beryllium	mg/kg	2,300	1.3	2.2	2.4	0.36 B	0.27 B	0.54 J	0.6 J	0.32 J	0.94
Cadmium	mg/kg	980	3.1	2.8	0.55 B	0.49 B	0.87 B	2.7	0.28 B	1.6 U	2
Chromium	mg/kg	120,000	341	114	554	740	533	34.6	25.5	19.9	66.5
Chromium VI	mg/kg	6.3	1.1 U	1.2 U	1.1 U	3.1	1.2 U	0.22 B	1.1 R	1.2 R	5.6 J-
Cobalt	mg/kg	350	10.2	9.2	3.2 B	2.4 B	1.6 B	4.3 B	5	4.7 B	11
Copper	mg/kg	47,000	128	113	44.4 J	49.3 J	57.6 J	96.1	17.3	6.3	236
Iron	mg/kg	820,000	109,000	76,200	123,000 J	155,000 J	95,800 J	16,700	20,600	19,000	34,400
Lead	mg/kg	800	408	305	89.5	52.4	163	348 J	16.6 J	8.5 J	715 J
Manganese	mg/kg	26,000	8,150 J	6,750 J	14,500	20,200	14,000	1,100 J	113 J	69.1 J	1,200 J
Mercury	mg/kg	350	0.25	0.065 J	1.4 J	0.3 J	2.7 J	0.096 J	0.027 J	0.041 J	0.14
Nickel	mg/kg	22,000	67.1	45.5	19.3 J	24.1 J	15.5 J	15.2	11.4	12.4	46.8
Selenium	mg/kg	5,800	4.4 U	4 U	4.4 U	4 U	4.3 U	3.9 U	3.9 U	4.4 U	3.8 U
Silver	mg/kg	5,800	0.91 B	3 U	3.3 U	0.99 J	3.2 U	2.9 U	2.9 U	3.3 U	2.8 U
Thallium	mg/kg	12	11.1 U	10 U	11.1 UJ	10.1 UJ	10.7 UJ	9.6 U	9.7 U	10.9 U	9.4 U
Vanadium	mg/kg	5,800	295	138	338	431	369	36.3	36.7	24.2	31.9
Zinc	mg/kg	350,000	1,230	368	246	131	213	455	41.4	33.4	639
Other											
Cyanide	mg/kg	150	0.9 J-	0.88 J-	10.1	5.2	7.1	0.13 J	0.7 U	0.7 U	0.36 J

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

N/A: This parameter was not analyzed for this sample.

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

**Table 2 - Parcel B4 Remnant
Summary of Inorganics Detected in Soil**

Parameter	Units	PAL	B4-038-SB-5	B4-038-SB-10	B4-042-SB-1	B4-042-SB-5	B4-043-SB-1	B4-043-SB-5	B4-044-SB-1	B4-044-SB-4	B4-045-SB-1
Metals											
Aluminum	mg/kg	1,100,000	5,420	16,500	3,120	16,200	6,700	49,200	7,420	26,200	46,300
Arsenic	mg/kg	3	2.6 U	4.7	2.2 U	6.7	4.5	2.5 U	7	38.2	2.6 U
Barium	mg/kg	220,000	32.9	55.7	30.3	154	55.6 J	363 J	87.6	375	851 J
Beryllium	mg/kg	2,300	0.31 J	0.55 J	0.87 U	1.8	1.2 U	7.4	1.1 U	1.5	7.7
Cadmium	mg/kg	980	1.6 U	1.5 U	0.44 B	2.1 J	2.9	0.3 J	1.1 J	6.4	0.82 B
Chromium	mg/kg	120,000	7.5	15.6	23	85.1	1,270	17.4	1,670	198	32.5
Chromium VI	mg/kg	6.3	0.27 B	0.33 B	0.57 B	0.62 B	1.2 UJ	1.2 UJ	1.1 UJ	1.2 UJ	1.1 UJ
Cobalt	mg/kg	350	3.6 B	6.9	0.72 B	7.5	3.8 B	0.45 B	4.5 J	28.6	0.75 J
Copper	mg/kg	47,000	2 J	9.4	8.1 J	81.2 J	54.2 J	2.4 B	38.5	216	7.5
Iron	mg/kg	820,000	6,420	19,900	6,170	59,100	254,000	8,230	204,000	129,000	28,800
Lead	mg/kg	800	3.6 J	7 J	17 J	130 J	133	2.9	33	1,090	19.7
Manganese	mg/kg	26,000	235 J	179 J	353	4,190	26,900	3,080	47,000	3,520	3,080 J
Mercury	mg/kg	350	0.0079 J	0.014 J	0.013 J	0.0047 J	0.012 J	0.11 U	0.1 U	0.12 U	0.11 U
Nickel	mg/kg	22,000	5.6 J	12.6	4.6 B	21.6	29.5 J	1.3 J	21.2	120	5.5 B
Selenium	mg/kg	5,800	4.2 U	3.9 U	3.5 U	3.5 U	4.8 U	4.1 U	4.2 U	3.1 B	3.4 B
Silver	mg/kg	5,800	3.1 U	3 U	2.6 UJ	2.7 UJ	3.6 U	3.1 U	3.2 U	1.3 J	3.1 U
Thallium	mg/kg	12	10.4 U	9.8 U	8.7 UJ	8.9 UJ	11.9 UJ	10.2 UJ	12.3	9.7 U	10.2 U
Vanadium	mg/kg	5,800	11.5	30.3	15.3 J	129 J	4,000 J	14.3 J	6,330	217	20.1
Zinc	mg/kg	350,000	15.1	33.9	30.6	344	4,100 J	6.4 J	347 J	1,850 J	449
Other											
Cyanide	mg/kg	150	0.56 U	0.043 J	0.085 J-	0.093 J-	0.36 J+	0.27 J+	0.65 UJ	13.7 J-	0.97 J-

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N/A: This parameter was not analyzed for this sample.

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

**Table 2 - Parcel B4 Remnant
Summary of Inorganics Detected in Soil**

Parameter	Units	PAL	B4-045-SB-5	B4-045-SB-10	B4-046-SB-1	B4-046-SB-5	B4-047-SB-1	B4-047-SB-5	B4-050-SB-1	B4-050-SB-5	B4-057-SB-1*
Metals											
Aluminum	mg/kg	1,100,000	38,600	51,200	38,300	45,000	11,600	10,500	7,770	8,340	7,240
Arsenic	mg/kg	3	2.4 U	3.1	3	2.3 U	17.6	4.2	20.5	2.1	8.9
Barium	mg/kg	220,000	487 J	982	617	658	328 J	81.3 J	90.4	23.5	53.5
Beryllium	mg/kg	2,300	7.6	9	6.5	8.1	0.98	0.7 J	0.44 J	0.24 J	0.16 J
Cadmium	mg/kg	980	0.33 B	0.26 B	3.6	0.29 J	1.2 B	1.4 U	1.6	1.1 U	27.3
Chromium	mg/kg	120,000	22.1	28	73.7	28.3	103	13.5	217	9.1	836
Chromium VI	mg/kg	6.3	1.1 UJ	1.1 UJ	1.1 UJ	1.1 UJ	1.1 U	1.1 U	0.33 B	0.42 B	0.3 B
Cobalt	mg/kg	350	0.37 J	0.54 J	2.3 B	0.57 B	19.3	4.9	43.1	3 B	4.8
Copper	mg/kg	47,000	1.9 J	3.7 J	27.7	3.4 B	146	5.5	228	3.8	119
Iron	mg/kg	820,000	14,100	25,100	77,100	13,300	78,400	13,700	101,000	11,600	329,000
Lead	mg/kg	800	2.4 U	2.6 U	119	2.3 U	475	6.6	247 J	5.1 J	556
Manganese	mg/kg	26,000	2,660 J	3,200	3,970	3,040	3,050 J	285 J	1,950 J	53.5 J	14,700
Mercury	mg/kg	350	0.11 R	0.1 R	0.11 U	0.11 U	0.051 J	0.016 J	0.06 J	0.013 J	0.019 J
Nickel	mg/kg	22,000	2.2 B	3.8 B	13.1	3.1 B	113	6.3 B	290	6.6 J	69.6
Selenium	mg/kg	5,800	2.2 B	3.9 B	2.7 B	4.2	3.9 U	3.7 U	4.1 U	3.1 U	3.4 U
Silver	mg/kg	5,800	2.9 U	3.1 U	0.62 B	2.7 U	2.9 U	2.8 U	1.4 B	2.3 U	11.1
Thallium	mg/kg	12	9.5 U	10.3 U	8.3 U	9 U	9.7 U	9.3 U	10.2 U	7.6 U	8.4 U
Vanadium	mg/kg	5,800	14.1	18.2	43	23	180	23.9	171	13.6	343
Zinc	mg/kg	350,000	7.1	15.4	3,700 J	10.6 J	448	19.8	542	17.9	36,700
Other											
Cyanide	mg/kg	150	0.93 J-	0.89 J-	1.4 J-	1.2 J-	0.2 J	0.55 UJ	0.18 J	0.64 U	0.45 J

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N/A: This parameter was not analyzed for this sample.

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**Table 2 - Parcel B4 Remnant
Summary of Inorganics Detected in Soil**

Parameter	Units	PAL	B4-057-SB-5*	B4-057-SB-10*	B4-058-SB-1*	B4-058-SB-8*	B4-059-SB-1*	B4-059-SB-4*
Metals								
Aluminum	mg/kg	1,100,000	24,100	N/A	24,900	29,100	13,100	14,800
Arsenic	mg/kg	3	13.1	4.9	2.7	8.5	2 J	13.6
Barium	mg/kg	220,000	199	N/A	378	309	87.1	202
Beryllium	mg/kg	2,300	0.99	N/A	1.9	4.2	0.26 J	0.98 J
Cadmium	mg/kg	980	1.1 J	N/A	1.9	0.72 J	0.45 J	2.8
Chromium	mg/kg	120,000	365	N/A	395	28.4	1,080	142
Chromium VI	mg/kg	6.3	0.51 B	N/A	0.47 B	0.35 B	0.39 B	0.49 B
Cobalt	mg/kg	350	52	N/A	3.2 J	3.7 J	4.4 U	18.2
Copper	mg/kg	47,000	76.7	N/A	49.1	79.8	42.3	307
Iron	mg/kg	820,000	58,100	N/A	111,000	59,600	207,000	38,300
Lead	mg/kg	800	165	N/A	87.7	188	46.4	706
Manganese	mg/kg	26,000	4,000	N/A	12,400	1,970	24,600	2,630
Mercury	mg/kg	350	0.029 J	N/A	0.027 J	0.12 U	0.053 J	0.62
Nickel	mg/kg	22,000	415	N/A	19.5	6.1 J	26.1	96.9
Selenium	mg/kg	5,800	3.6 U	N/A	3.5 U	2.9 J	3.6 U	4.3 U
Silver	mg/kg	5,800	0.72 J	N/A	1.4 J	3 U	2.9	1.2 J
Thallium	mg/kg	12	9.1 U	N/A	8.8 U	9.9 U	8.9 U	10.9 U
Vanadium	mg/kg	5,800	231	N/A	371	26.4	530	72.4
Zinc	mg/kg	350,000	504	N/A	398	188	124	1,290
Other								
Cyanide	mg/kg	150	6.7	N/A	0.5 J	0.99	0.88	10.1

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**Table 3 - Parcel B4 Remnant
Summary of Organics Detected in Groundwater**

Parameter	Units	PAL	SW-027-MWS	SW-028-MWS	SW-029-MWS	SW-063-MWS	SW-064-MWS	SW-065-MWS	SW-067-MWS	SW13-PZM003
Volatiles Organic Compounds										
1,1-Dichloroethane	µg/L	2.7	1 U	1 U	0.73 J	1 U	1 U	1 U	1 U	1 U
Benzene	µg/L	5	1 U	1 U	3.6	1 U	1 U	9.9	1 U	20.4
Carbon disulfide	µg/L	810	1 U	1 U	1 U	1 U	1 U	2.1	1 U	1 U
Chloroform	µg/L	0.22	1 U	1 U	1 U	1 U	1 U	2.7	1 U	2.2
Ethylbenzene	µg/L	700	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2
Isopropylbenzene	µg/L	450	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.23 J
Toluene	µg/L	1,000	1 U	1 U	0.49 J	1 U	1 U	0.59 J	1 U	35.6
Xylenes	µg/L	10,000	3 U	3 U	3 U	3 U	3 U	3 U	3 U	47.7
Semi-Volatile Organic Compounds[^]										
1,1-Biphenyl	µg/L	0.83	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.2
1,4-Dioxane	µg/L	0.46	0.1 U	0.1 U	0.045 J	0.19	0.062 J	0.13	0.1 U	0.14
2,4-Dimethylphenol	µg/L	360	1 U	1 U	1 U	1 U	1 U	2.7	1 U	1 U
2-Methylnaphthalene	µg/L	36	0.1 U	0.1 U	0.35	0.1 U	0.1 U	0.092 B	0.1 U	12.2
2-Methylphenol	µg/L	930	1 U	1 U	1 U	1 U	1 U	0.63 J	1 U	0.43 J
3&4-Methylphenol(m&p Cresol)	µg/L	930	2 U	2 U	2 U	2 U	2 U	9.1	2 U	0.8 J
Acenaphthene	µg/L	530	0.1 U	0.51	0.19	0.1 U	0.1 U	0.035 B	0.1 U	0.64
Acenaphthylene	µg/L	530	0.1 U	0.018 J	0.088 J	0.1 U	0.1 U	0.1 U	0.1 U	0.7
Acetophenone	µg/L	1,900	1 U	1 U	0.45 J	1 U	1 U	2.2	1 U	6.2
Anthracene	µg/L	1,800	0.041 J	0.04 J	0.083 J	0.2	0.036 J	0.093 J	0.1 U	2.1
Benz[a]anthracene	µg/L	0.03	0.015 J	0.053 J	0.066 J	0.1 U	0.016 J	0.023 J	0.1 U	0.33
Benzo[a]pyrene	µg/L	0.2	0.1 U	0.033 J	1.2 J	0.1 U	0.1 U	0.1 U	0.1 U	0.04 J
Benzo[b]fluoranthene	µg/L	0.25	0.022 B	0.13	2.7 B	0.1 U	0.1 U	0.1 U	0.1 U	0.11
Benzo[g,h,i]perylene	µg/L		0.1 U	0.1 U	1.3 J	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzo[k]fluoranthene	µg/L	2.5	0.1 U	0.092 B	1.3 B	0.1 U	0.1 U	0.1 U	0.1 U	0.11
bis(2-Ethylhexyl)phthalate	µg/L	6	1 U	1 U	1 U	0.26 J	1 U	1 U	0.25 B	1 U
Caprolactam	µg/L	9,900	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.6 UJ	0.51 J	2.5 U
Carbazole	µg/L		1 U	1 U	1 U	1 U	1 U	1 U	1 U	7.4
Chrysene	µg/L	25	0.1 U	0.038 B	0.048 B	0.1 U	0.1 U	0.1 U	0.1 U	0.29
Diethylphthalate	µg/L	15,000	1 U	1 U	1 U	1 U	1 U	1 U	2.1	1 U
Fluoranthene	µg/L	800	0.1 U	0.2	0.091 J	0.1 U	0.015 J	0.014 J	0.1 U	3.5
Fluorene	µg/L	290	0.1 U	0.1 U	0.079 J	0.1 U	0.1 U	0.1 U	0.1 U	2.5
Naphthalene	µg/L	0.17	0.024 B	0.082 B	162	0.1 U	0.13	0.96	0.043 B	169
Phenanthrene	µg/L		0.1 U	0.041 J	0.08 J	0.1 U	0.02 J	0.025 B	0.1 U	9.7
Phenol	µg/L	5,800	1 U	1 U	0.32 J	1 U	1 U	1 U	1 U	0.27 J
Pyrene	µg/L	120	0.1 U	0.32	0.078 J	0.1 U	0.014 J	0.1 U	0.1 U	2.4
TPH										
Diesel Range Organics	µg/L	47	67.5 J	144 J	1,810 J	664 J	93.2 J	667 J	103 J	539 J
Gasoline Range Organics	µg/L	47	200 U	200 U	200 U	200 U	200 U	200 U	200 U	267

Detections in bold

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

[^]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 for this analyte is a quantitative estimate.

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

**Table 4 - Parcel B4 Remnant
Summary of Inorganics Detected in Groundwater**

Parameter	Units	PAL	SW-027-MWS	SW-028-MWS	SW-029-MWS	SW-063-MWS	SW-064-MWS	SW-065-MWS	SW-067-MWS	SW13-PZM003
Total Metals										
Aluminum	µg/L	20,000	32.8 J	180	56.1	380	192 J	1,140	719	206 J
Antimony	µg/L	6	3.8 J	6 U	6 U	6 U	6 U	6 U	6 U	6 U
Arsenic	µg/L	10	4.2 J	4.3 J	5 U	4.4 B	5 U	5.9	5 U	5 U
Barium	µg/L	2,000	32.4	68.6	84.3	65.3	61.9	53.1	23.6	64.2
Beryllium	µg/L	4	1 U	1 U	1 U	1 U	1 U	1 U	1.8	1 U
Cadmium	µg/L	5	3 U	3 U	0.73 J	3 U	3 U	3 U	3 U	3 U
Chromium	µg/L	100	9.9	1.3 J	0.87 B	1 J	1.9 B	0.89 J	5 U	5 U
Cobalt	µg/L	6	5 U	5 U	2.9 J	20.6	5 U	1.2 J	16.7	5 U
Iron	µg/L	14,000	26.6 J	534	678	13,000	47.6 J	594	12,400	14.6 J
Manganese	µg/L	430	1.8 B	477	167	1,540	6.7	3.4 J	645	4.3 B
Nickel	µg/L	390	10 U	1.2 B	10 U	9.7 B	0.66 B	1.6 B	19.1	10 U
Selenium	µg/L	50	8 U	8 U	6.8 B	8 U	5.6 B	3.1 B	8 U	6 J
Vanadium	µg/L	86	31.8	1.2 B	5 B	5 U	2.4 B	2.7 J	5 U	0.85 B
Zinc	µg/L	6,000	7.1 B	2.2 J	2.4 B	5.7 B	1.1 B	2.6 J	68.2	0.72 B
Dissolved Metals										
Aluminum, Dissolved	µg/L	20,000	50 U	22.1 B	42.4 J	62.7	72	1,100	652	196
Arsenic, Dissolved	µg/L	10	5 U	4.9 B	5 U	5 U	5 U	7.1	3.5 B	5 U
Barium, Dissolved	µg/L	2,000	34.2	63.3	85.8	62.5	60.5	53.4	21.5	65.7
Beryllium, Dissolved	µg/L	4	1 U	1 U	1 U	1 U	1 U	1 U	1.7	1 U
Cadmium, Dissolved	µg/L	5	0.51 J	3 U	3 U	3 U	3 U	3 U	3 U	3 U
Chromium, Dissolved	µg/L	100	10.2	0.84 J	5 U	0.86 J	1.5 B	2.7 J	5 U	5 U
Cobalt, Dissolved	µg/L	6	5 U	5 U	1.9 B	20.1	5 U	1.5 J	15.8	5 U
Iron, Dissolved	µg/L	14,000	12.2 B	392	595	11,700	70 U	504	11,400	70 U
Manganese, Dissolved	µg/L	430	2.2 J	475	183	1,510	5 U	1.7 J	625	5 U
Nickel, Dissolved	µg/L	390	1.6 B	1.2 B	10 U	9.7 B	10 U	2.6 B	19	10 U
Selenium, Dissolved	µg/L	50	4.5 B	8 U	8 U	8 U	6.6 J	5.3 J	8 U	8 U
Thallium, Dissolved	µg/L	2	10 U	4.8 J	10 U	10 U	10 U	10 U	10 U	10 U
Vanadium, Dissolved	µg/L	86	32.8	0.87 B	4.6 J	5 U	2.3 B	2.7 B	5 U	0.85 B
Zinc, Dissolved	µg/L	6,000	7.4 J	10 U	43.6	5.2 B	0.95 B	2.5 B	68.5	1.3 B
Other										
Cyanide	µg/L	200	10 U	10 U	1,420	10 U	10 U	1,030	10 U	9.9 J

Detections in bold

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

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

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

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

**Table 77'RectegriD6'Tgo pcpv
Soil PCB Delineation Results (B4-037-SB)**

Total PCBs Results

Boring ID	B4-037-SB		B4-037-SB		B4-037A-SB		B4-037B-SB		B4-037C-SB	
Sample Date	3/2/2016		10/13/2016		10/12/2016		10/12/2016		10/12/2016	
Depth (ft)	Result (mg/kg)	Flag	Result (mg/kg)	Flag	Result (mg/kg)	Flag	Result (mg/kg)	Flag	Result (mg/kg)	Flag
0.5	--		--		0.28		342		7.37	
1	123.7		670		0.0571	U	0.102		0.0686	
2	--		1.44		--		--		--	
3	--		0.693		--		--		--	
4	--		1.166		--		--		--	
5	--		0.0565	U	0.0614	U	0.0567	U	0.0561	U

Red highlighted cells indicate PCB exceedance of delineation/excavation criteria (50 mg/kg)

**Table 77' RctegriD6'Tgo pcpv
Soil PCB Delineation Results (B4-037-SB)**

Total PCBs Results

Boring ID	B4-037D-SB		B4-037E-SB		B4-037F-SB		B4-037G-SB		B4-037H-SB		B4-037I-SB	
Sample Date	10/12/2016		10/12/2016		10/12/2016		10/12/2016		10/12/2016		10/12/2016	
Depth (ft)	Result (mg/kg)	Flag	Result (mg/kg)	Flag	Result (mg/kg)	Flag	Result (mg/kg)	Flag	Result (mg/kg)	Flag	Result (mg/kg)	Flag
0.5	--		1.57		--		1.264		--		--	
1	2.72		4.69		32		0.0569	U	0.579		88.1	
2	--		--		--		--		--		1.03	
3	--		--		--		--		--		0.0556	U
4	--		--		--		--		--		0.053	J
5	0.0582	U	0.0563	U	4.65		0.0726		0.0601		0.0542	U

Red highlighted cells indicate PCB exceedance of delineation/excavation criteria (50 mg/kg)

**Table 77'RectegriD6'Tgo pcpv
Soil PCB Delineation Results (B4-037-SB)**

Total PCBs Results

Boring ID	B4-037J-SB		B4-037K-SB		B4-037L-SB		B4-037M-SB		B4-037N-SB		B4-037O-SB	
Sample Date	10/12/2016		10/12/2016		10/12/2016		10/12/2016		10/12/2016		10/12/2016	
Depth (ft)	Result (mg/kg)	Flag	Result (mg/kg)	Flag	Result (mg/kg)	Flag	Result (mg/kg)	Flag	Result (mg/kg)	Flag	Result (mg/kg)	Flag
0.5	--		--		--		--		--		--	
1	6.57		12.4		5.58		14.68		28.9		12.3	
2	--		--		--		--		--		--	
3	--		--		--		--		--		--	
4	--		--		--		--		--		--	
5	0.0581	U	1.53		0.0586	U	0.059	U	0.0598	U	0.0589	U

**Table 7''RctegriD6'Tgo pcpv
Soil PCB Delineation Results (B4-037-SB)**

Total PCBs Results

Boring ID	B4-037P-SB		B4-037Q-SB		B4-037R-SB		B4-037S-SB		B4-037T-SB		B4-037U-SB	
Sample Date	10/12/2016		10/12/2016		10/12/2016		10/12/2016		10/12/2016		10/28/2016	
Depth (ft)	Result (mg/kg)	Flag	Result (mg/kg)	Flag	Result (mg/kg)	Flag	Result (mg/kg)	Flag	Result (mg/kg)	Flag	Result (mg/kg)	Flag
0.5	--		--		--		--		--		--	
1	7.94		2.83		0.0551	U	0.0556	U	0.0556	U	1.335	
2	--		--		--		--		--		--	
3	--		--		--		--		--		--	
4	--		--		--		--		--		--	
5	0.0588	U	0.0579	U	0.0602	U	0.0542	U	2.74		0.056	U

**Table 77'RectegriD6'Tgo pcpv
Soil PCB Delineation Results (B4-037-SB)**

Total PCBs Results

Boring ID	B4-037V-SB		B4-037W-SB		B4-037X-SB		B4-037Y-SB		B4-037Z-SB		B4-037AA-SB	
Sample Date	10/28/2016		10/28/2016		10/27/2016		10/27/2016		10/27/2016		10/27/2016	
Depth (ft)	Result (mg/kg)	Flag	Result (mg/kg)	Flag	Result (mg/kg)	Flag	Result (mg/kg)	Flag	Result (mg/kg)	Flag	Result (mg/kg)	Flag
0.5	--		--		--		--		--		--	
1	0.682		0.0556	J	22.2		114		11.3		11.5	
2	--		--		--		20.6		--		--	
3	--		--		--		6.74		--		--	
4	--		--		--		0.231		--		--	
5	0.0569	U	0.0602	U	0.0565	U	0.0611	U	0.0571	U	0.056	U

Red highlighted cells indicate PCB exceedance of delineation/excavation criteria (50 mg/kg)

**Table 77'RectegriD6'Tgo pcpv
Soil PCB Delineation Results (B4-037-SB)**

Total PCBs Results

Boring ID	B4-037BB-SB		B4-037CC-SB		B4-037DD-SB		B4-037EE-SB		B4-037FF-SB		B4-037GG-SB	
Sample Date	10/27/2016		10/27/2016		10/27/2016		10/27/2016		10/28/2016		10/28/2016	
Depth (ft)	Result (mg/kg)	Flag	Result (mg/kg)	Flag	Result (mg/kg)	Flag	Result (mg/kg)	Flag	Result (mg/kg)	Flag	Result (mg/kg)	Flag
0.5	--		--		--				--		0.0548	
1	29.4		34		9.3		5.73		0.2952		0.3395	
2	--		--		refusal				--		--	
3	--		--		--				--		--	
4	--		--		--				--		--	
5	0.0713		0.0586	U	--		0.0595	U	0.0576	U	0.0582	U

**Table 77'RectegriD6'Tgo pcpv
Soil PCB Delineation Results (B4-037-SB)**

Total PCBs Results

Boring ID	B4-037HH-SB		B4-037II-SB		B4-037JJ-SB		B4-037KK-SB		B4-037LL-SB		B4-037MM-SB	
Sample Date	10/28/2016		10/28/2016		11/21/2016		11/21/2016		11/21/2016		11/21/2016	
Depth (ft)	Result (mg/kg)	Flag	Result (mg/kg)	Flag	Result (mg/kg)	Flag	Result (mg/kg)	Flag	Result (mg/kg)	Flag	Result (mg/kg)	Flag
0.5	--		--		--		--				--	
1	0.136		25.21		121		1.45		87.8		4.16	
2	--		--		14		--		15.1		--	
3	--		--		0.298		--		0.0378	J	--	
4	--		--		0.0611		--		0.145		--	
5	0.0555	U	0.0577	U	0.327		0.0569		0.0586		0.0559	U

Red highlighted cells indicate PCB exceedance of delineation/excavation criteria (50 mg/kg)

**Table 77' RctegrID6'Tgo pcpv
Soil PCB Delineation Results (B4-037-SB)**

Total PCBs Results

Boring ID	B4-037NN-SB		B4-037OO-SB		B4-037PP-SB		B4-037QQ-SB		B4-037RR-SB		B4-037SS-SB	
Sample Date	11/21/2016		12/13/2016		12/13/2016		12/13/2016		12/13/2016		12/13/2016	
Depth (ft)	Result (mg/kg)	Flag	Result (mg/kg)	Flag	Result (mg/kg)	Flag	Result (mg/kg)	Flag	Result (mg/kg)	Flag	Result (mg/kg)	Flag
0.5	--		--		--		--		--		--	
1	1.3		1.2	J	1.6	J	2.3	J	1.3	J	6.1	
2	--		--		--		--		--		--	
3	--		--		--		--		--		--	
4	--		--		--		--		--		--	
5	0.0563	U	0.14	U	0.14	U	0.13	U	0.14	U	0.67	U

**Table 77' RctegrID6'Tgo pcpv
Soil PCB Delineation Results (B4-037-SB)**

Total PCBs Results

Boring ID	B4-037TT-SB		B4-037UU-SB		B4-037VV-SB	
Sample Date	12/13/2016		12/13/2016		12/13/2016	
Depth (ft)	Result (mg/kg)	Flag	Result (mg/kg)	Flag	Result (mg/kg)	Flag
0.5	--		--		--	
1	11.4		1.4	J	1.4	U
2	--		--		--	
3	--		--		--	
4	--		--		--	
5	0.13	U	0.14	U	0.15	U

**Table 6 - Parcel B4 Remnant
COPC Screen 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	B4-019-SB-5	0.66	J	0.016	0.11	59	42.37	410	20	no
1,2,3-Trichlorobenzene	87-61-6	B4-037-SB-6	0.0074		0.0017	0.005	59	5.08		93	no
1,2,4-Trichlorobenzene	120-82-1	B4-014-SB-1	0.0083		0.0037	0.006	59	3.39	110	26	no
2,4-Dimethylphenol	105-67-9	B4-014-SB-1	0.055	J	0.055	0.06	47	2.13		1,600	no
2,4-Dinitrophenol	51-28-5	B4-018-SB-1	0.066	J	0.066	0.07	45	2.22		160	no
2,6-Dinitrotoluene	606-20-2	B4-015-SB-5	0.039	J	0.039	0.04	59	1.69	1.5	25	no
2-Butanone (MEK)	78-93-3	B4-029-SB-1	0.025		0.0024	0.009	59	22.03		19,000	no
2-Hexanone	591-78-6	B4-042-SB-5	0.0036	J	0.0022	0.003	59	3.39		130	no
2-Methylnaphthalene	91-57-6	B4-019-SB-5	2.2		0.0015	0.17	59	88.14		300	no
2-Methylphenol	95-48-7	B4-014-SB-1	0.064	J	0.031	0.05	47	4.26		4,100	no
4-Chloroaniline	106-47-8	B4-031-SB-4	0.028	J	0.028	0.03	59	1.69	11	330	no
4-Methyl-2-pentanone (MIBK)	108-10-1	B4-018-SB-1	0.0083	J	0.0024	0.004	59	5.08		14,000	no
Acenaphthene	83-32-9	B4-018-SB-5	1	J	0.00094	0.08	59	71.19		4,500	no
Acenaphthylene	208-96-8	B4-019-SB-5	2		0.00073	0.19	59	93.22			no
Acetone	67-64-1	B4-042-SB-5 & B4-018-SB-5	0.1		0.0073	0.04	59	66.10		67,000	no
Acetophenone	98-86-2	B4-050-SB-1 & B4-013-SB-1	0.11		0.022	0.05	59	28.81		12,000	no
Aluminum	7429-90-5	B4-045-SB-10	51,200		3,120	18,329	59	100.00		110,000	no
Anthracene	120-12-7	B4-019-SB-5	6.3		0.0026	0.40	59	84.75		23,000	no
Aroclor 1221	11104-28-2	B4-042-SB-1	0.279		0.279	0.28	141	0.71	0.83		no
Aroclor 1242	53469-21-9	B4-037II-SB-1	8.09		0.158	4.12	141	1.42	0.95		YES (C)
Aroclor 1248	12672-29-6	B4-031-SB-1	0.283		0.139	0.21	141	1.42	0.95		no
Aroclor 1254	11097-69-1	B4-037CC-SB-1	16.2		0.07	2.55	141	19.15	0.97	1.5	YES (C/NC)
Aroclor 1260	11096-82-5	B4-037F-SB-1	32		0.005	4.38	141	48.94	0.99		YES (C)
Arsenic	7440-38-2	B4-019-SB-5	42		2	8.93	60	86.67	3	48	YES (C)
Barium	7440-39-3	B4-016-SB-5	1,300		23.5	237	59	100.00		22,000	no
Benz[a]anthracene	56-55-3	B4-019-SB-5	7.5		0.007	0.89	59	89.83	21		no
Benzaldehyde	100-52-7	B4-014-SB-1	0.15	J	0.018	0.05	22	86.36	820	12,000	no
Benzene	71-43-2	B4-021-SB-5	0.037		0.0013	0.009	59	20.34	5.1	42	no
Benzo[a]pyrene	50-32-8	B4-019-SB-5	6.7		0.0067	0.89	60	93.33	2.1	22	YES (C)
Benzo[b]fluoranthene	205-99-2	B4-031-SB-4	16.6	J	0.0018	2.06	59	93.22	21		no
Benzo[g,h,i]perylene	191-24-2	B4-017-SB-4	3.5		0.0039	0.38	59	89.83			no
Benzo[k]fluoranthene	207-08-9	B4-031-SB-4	16	J	0.0016	1.93	59	93.22	210		no
Beryllium	7440-41-7	B4-045-SB-10	9		0.16	2.54	59	62.71	6,900	230	no
bis(2-Ethylhexyl)phthalate	117-81-7	B4-034-SB-1	0.034	J	0.016	0.02	59	5.08	160	1,600	no
Cadmium	7440-43-9	B4-057-SB-1	27.3		0.29	2.86	59	59.32	9,300	98	no
Caprolactam	105-60-2	B4-029-SB-1	0.087	J	0.074	0.08	59	3.39		40,000	no
Carbazole	86-74-8	B4-019-SB-5	2.5	J	0.019	0.26	59	42.37			no
Chloroform	67-66-3	B4-058-SB-8	0.0066	J	0.0066	0.007	59	1.69	1.4	100	no
Chromium	7440-47-3	B4-019-SB-5	1,770		7.5	459	59	100.00		180,000	no
Chromium VI	18540-29-9	B4-016-SB-1	8	J-	0.31	3.99	52	17.31	6.3	350	YES (C)
Chrysene	218-01-9	B4-042-SB-5	12.6		0.00086	1.09	59	93.22	2,100		no
Cobalt	7440-48-4	B4-019-SB-5	133		0.37	14.5	59	66.10	1,900	35	YES (NC)

**Table 6 - Parcel B4 Remnant
COPC Screen 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?
Copper	7440-50-8	B4-019-SB-5	621		1.9	94.2	59	96.61		4,700	no
Cyanide	57-12-5	B4-018-SB-1	91.5	J-	0.043	6.12	59	86.44		120	no
Dibenz[a,h]anthracene	53-70-3	B4-017-SB-4 & B4-021-SB-5	1.1		0.002	0.16	59	81.36	2.1		no
Di-n-butylphthalate	84-74-2	B4-018-SB-5	0.88	J	0.018	0.31	59	5.08		8,200	no
Ethylbenzene	100-41-4	B4-020-SB-5	0.017		0.001	0.005	59	10.17	25	2,000	no
Fluoranthene	206-44-0	B4-019-SB-5	28.9		0.00076	2.28	59	96.61		3,000	no
Fluorene	86-73-7	B4-019-SB-5	3.7		0.00067	0.20	59	72.88		3,000	no
Indeno[1,2,3-c,d]pyrene	193-39-5	B4-017-SB-4	3.3		0.0034	0.37	59	91.53	21		no
Iron	7439-89-6	B4-057-SB-1	329,000		6,170	103,756	59	100.00		82,000	YES (NC)
Isopropylbenzene	98-82-8	B4-018-SB-5	0.011	J	0.011	0.01	59	1.69		990	no
Lead [^]	7439-92-1	B4-018-SB-1	1,450		2.9	236	59	93.22		800	YES (NC)
Manganese	7439-96-5	B4-044-SB-1	47,000		53.5	10,838	59	100.00		2,600	YES (NC)
Mercury	7439-97-6	B4-018-SB-1	46.4		0.0038	1.38	57	85.96		35	YES (NC)
Methyl Acetate	79-20-9	B4-019-SB-1	0.0021	J	0.0021	0.002	59	1.69		120,000	no
Naphthalene	91-20-3	B4-016-SB-5	32.8		0.0042	1.14	59	83.05	17	59	YES (C)
Nickel	7440-02-0	B4-019-SB-5	941		1.3	69.7	59	88.14	64,000	2,200	no
N-Nitrosodiphenylamine	86-30-6	B4-014-SB-1	0.065	J	0.065	0.07	59	1.69	470		no
PCBs (total)*	1336-36-3	B4-037CC-SB-1	34		0.0292	5.35	141	56.03	0.94		YES (C)
Phenanthrene	85-01-8	B4-019-SB-5	27.4		0.00085	1.46	59	94.92			no
Phenol	108-95-2	B4-014-SB-1 & B4-022-SB-5	0.13	J	0.02	0.06	47	14.89		25,000	no
Pyrene	129-00-0	B4-019-SB-5	23.3		0.00069	1.90	59	100.00		2,300	no
Selenium	7782-49-2	B4-021-SB-5	5.3		2.9	3.88	59	6.78		580	no
Silver	7440-22-4	B4-057-SB-1	11.1		0.72	2.47	59	30.51		580	no
Styrene	100-42-5	B4-017-SB-4	0.0031	J	0.0031	0.003	59	1.69		3,500	no
Thallium	7440-28-0	B4-020-SB-5	15		12.3	13.7	59	3.39		1.2	YES (NC)
Toluene	108-88-3	B4-020-SB-5	0.041		0.002	0.01	59	61.02		4,700	no
Vanadium	7440-62-2	B4-020-SB-5	8,320		11.5	547	59	100.00		580	YES (NC)
Xylenes	1330-20-7	B4-020-SB-5	0.018	J	0.003	0.008	59	11.86		250	no
Zinc	7440-66-6	B4-057-SB-1	36,700		6.4	1,194	59	100.00		35,000	YES (NC)

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.

**Table 7 - Parcel B4 Remnant
Assessment of Lead**

Exposure Unit	Surface/Sub-Surface	Arithmetic Mean (mg/kg)
Parcel Remnant (36.9 ac.)	Surface	233
	Sub-Surface	208
	Pooled	221

Adult Lead Model (ALM) Risk Levels	
Soil Concentration (mg/kg)	Probability of Blood Concentration of 10 ug/dL
2,518 mg/kg	5%
3,216 mg/kg	10%

**Table 8 - Parcel B4 Remnant
Soil Exposure Point Concentrations**

			Parcel Remnant (36.9)					
			Surface Soil EPCs		Sub-Surface Soil EPCs		Pooled Soil EPCs	
Parameter	Cancer COPC Screening Level (mg/kg)	Non-Cancer COPC Screening Level (mg/kg)	EPC Type	EPC (mg/kg)	EPC Type	EPC (mg/kg)	EPC Type	EPC (mg/kg)
Arsenic	3.00	48.0	95% KM (Chebyshev) UCL	9.10	95% GROS Adjusted Gamma UCL	17.3	95% KM (Chebyshev) UCL	12.9
Chromium VI	6.30	350	95% KM (t) UCL	2.24	Maximum Value	0.31	95% KM (t) UCL	1.34
Cobalt	1,900	35.0	95% GROS Adjusted Gamma UCL	9.38	95% KM (Chebyshev) UCL	36.7	95% KM (Chebyshev) UCL	21.3
Iron		82,000	95% Student's-t UCL	168,503	95% Adjusted Gamma UCL	89,291	95% Approximate Gamma UCL	127,605
Manganese		2,600	95% Student's-t UCL	18,901	95% Adjusted Gamma UCL	10,597	95% Approximate Gamma UCL	14,538
Mercury		35.0	99% KM (Chebyshev) UCL	17.6	99% KM (Chebyshev) UCL	1.18	99% KM (Chebyshev) UCL	9.38
Vanadium		580	95% H-UCL	1,530	95% Chebyshev (Mean, Sd) UCL	1,647	95% Chebyshev (Mean, Sd) UCL	1,343
Zinc		35,000	95% H-UCL	2,522	95% Adjusted Gamma UCL	678	95% Chebyshev (Mean, Sd) UCL	3,904
PCBs (total)	0.94		97.5% KM (Chebyshev) UCL	10.3	95% Approximate Gamma KM-UCL	2.60	97.5% KM (Chebyshev) UCL	6.56
Aroclor 1254	NE	1.50	95% KM (Chebyshev) UCL	2.39	Maximum Value	0.53	95% KM (Chebyshev) UCL	1.34
Benzo[a]pyrene	2.10	22.0	95% Chebyshev (Mean, Sd) UCL	1.13	99% KM (Chebyshev) UCL	4.94	97.5% KM (Chebyshev) UCL	2.12
Naphthalene	17.0	59.0	99% KM (Chebyshev) UCL	0.90	99% KM (Chebyshev) UCL	13.2	99% KM (Chebyshev) UCL	6.61

Bold indicates EPC higher than lowest COPC SL

COPC = Constituent of Potential Concern

NE = Not Evaluated. Aroclor 1254 was included for non-cancer hazard only. The carcinogenic risk is evaluated with total PCBs.

**Table 9 - Parcel B4 Remnant
Surface Soils
Composite Worker Risk Ratios**

Parameter	Target Organs	Parcel Remnant (36.9 ac.)				
		EPC mg/kg	Composite Worker			
			RSLs (mg/kg)		Risk Ratios	
			Cancer	Non-Cancer	Risk	HQ
Arsenic	Cardiovascular; Dermal	9.10	3.00	480	3.0E-06	0.02
Chromium VI	Respiratory	2.24	6.30	3,500	3.6E-07	0.0006
Cobalt	Thyroid	9.38	1,900	350	4.9E-09	0.03
Iron	Gastrointestinal	168,503		820,000		0.2
Manganese	Nervous	18,901		26,000		0.7
Mercury	Nervous	17.6		350		0.05
Vanadium	Dermal	1,530		5,800		0.3
Zinc	Hematologic; Immune	2,522		350,000		0.007
PCBs (total)		10.3	0.94		1.1E-05	
Aroclor 1254	Dermal; Immune; Ocular	2.39	NE	15.0		0.2
Benzo[a]pyrene	Developmental	1.13	2.10	220	5.4E-07	0.005
Naphthalene	Nervous; Respiratory	0.90	17.0	590	5.3E-08	0.002
					1E-05	↓

RSLs were obtained from the EPA Regional Screening Levels at https://epa-prgs.ornl.gov/cgi-bin/chemicals/csl_search

NE = Not Evaluated. Aroclor 1254 was not included for non-cancer hazard only. The carcinogenic risk is evaluated with total PCBs.

Total HI	Cardiovascular	0
	Dermal	0
	Respiratory	0
	Thyroid	0
	Gastrointestinal	0
	Nervous	1
	Hematologic	0
	Immune	0
Ocular	0	
Developmental	0	

**Table 10 - Parcel B4 Remnant
Sub-Surface Soils
Composite Worker Risk Ratios**

Parameter	Target Organs	Parcel Remnant (36.9 ac.)				
		EPC mg/kg	Composite Worker			
			RSLs (mg/kg)		Risk Ratios	
			Cancer	Non-Cancer	Risk	HQ
Arsenic	Cardiovascular; Dermal	17.3	3.00	480	5.8E-06	0.04
Chromium VI	Respiratory	0.31	6.30	3,500	4.9E-08	0.00009
Cobalt	Thyroid	36.7	1,900	350	1.9E-08	0.1
Iron	Gastrointestinal	89,291		820,000		0.1
Manganese	Nervous	10,597		26,000		0.4
Mercury	Nervous	1.18		350		0.003
Vanadium	Dermal	1,647		5,800		0.3
Zinc	Hematologic; Immune	678		350,000		0.002
PCBs (total)		2.60	0.94		2.8E-06	
Aroclor 1254	Dermal; Immune; Ocular	0.53	NE	15.0		0.04
Benzo[a]pyrene	Developmental	4.94	2.10	220	2.4E-06	0.02
Naphthalene	Nervous; Respiratory	13.2	17.0	590	7.8E-07	0.02
					1E-05	↓

Bold indicates maximum value

RSLs were obtained from the EPA Regional Screening Levels at https://epa-prgs.ornl.gov/cgi-bin/chemicals/csl_search

NE = Not Evaluated. Aroclor 1254 was not included for non-cancer hazard only. The carcinogenic risk is evaluated with total PCBs.

Total HI	Cardiovascular	0
	Dermal	0
	Respiratory	0
	Thyroid	0
	Gastrointestinal	0
	Nervous	0
	Hematologic	0
	Immune	0
	Ocular	0
Developmental	0	

**Table 11 - Parcel B4 Remnant
Pooled Soils
Composite Worker Risk Ratios**

Parameter	Target Organs	Parcel Remnant (36.9 ac.)				
		EPC mg/kg	Composite Worker			
			RSLs (mg/kg)		Risk Ratios	
			Cancer	Non-Cancer	Risk	HQ
Arsenic	Cardiovascular; Dermal	12.9	3.00	480	4.3E-06	0.03
Chromium VI	Respiratory	1.34	6.30	3,500	2.1E-07	0.0004
Cobalt	Thyroid	21.3	1,900	350	1.1E-08	0.06
Iron	Gastrointestinal	127,605		820,000		0.2
Manganese	Nervous	14,538		26,000		0.6
Mercury	Nervous	9.38		350		0.03
Vanadium	Dermal	1,343		5,800		0.2
Zinc	Hematologic; Immune	3,904		350,000		0.01
PCBs (total)		6.56	0.94		7.0E-06	
Aroclor 1254	Dermal; Immune; Ocular	1.34	NE	15.0		0.09
Benzo[a]pyrene	Developmental	2.12	2.10	220	1.0E-06	0.01
Naphthalene	Nervous; Respiratory	6.61	17.0	590	3.9E-07	0.01
					1E-05	↓

RSLs were obtained from the EPA Regional Screening Levels at https://epa-prgs.ornl.gov/cgi-bin/chemicals/csl_search

NE = Not Evaluated. Aroclor 1254 was not included for non-cancer hazard only. The carcinogenic risk is evaluated with total PCBs.

Total HI	Cardiovascular	0
	Dermal	0
	Respiratory	0
	Thyroid	0
	Gastrointestinal	0
	Nervous	1
	Hematologic	0
	Immune	0
	Ocular	0
Developmental	0	

**Table 12 - Parcel B4 Remnant
Surface Soils
Construction Worker Risk Ratios**

80 Day		Parcel Remnant (36.9 ac.)				
Parameter	Target Organs	EPC mg/kg	Construction Worker			
			SSLs (mg/kg)		Risk Ratios	
			Cancer	Non-Cancer	Risk	HQ
Arsenic	Cardiovascular; Dermal	9.10	47.3	301	1.9E-07	0.03
Chromium VI	Respiratory	2.24	67.4	2,503	3.3E-08	0.0009
Cobalt	Thyroid	9.38	14,660	2,968	6.4E-10	0.003
Iron	Gastrointestinal	168,503		751,692		0.2
Manganese	Nervous	18,901		13,066		1
Mercury	Nervous	17.6		1,544		0.01
Vanadium	Dermal	1,530		4,999		0.3
Zinc	Hematologic; Immune	2,522		322,154		0.008
PCBs (total)		10.3	13.3		7.7E-07	
Aroclor 1254	Dermal; Immune; Ocular	2.39	NE	23.4		0.1
Benzo[a]pyrene	Developmental	1.13	53.0	17.3	2.1E-08	0.07
Naphthalene	Nervous; Respiratory	0.90	37.3	54.3	2.4E-08	0.02
					1E-06	↓

SSLs calculated using equations in the EPA Supplemental Guidance dated 2002

Guidance Equation Input Assumptions:

- 5 cars/day (2 tons/car)
- 5 trucks/day (20 tons/car)
- 3 meter source depth thickness

NE = Not Evaluated. Aroclor 1254 was included for non-cancer hazard only. The carcinogenic risk is evaluated with total PCBs.

Total HI	Cardiovascular	0
	Dermal	0
	Respiratory	0
	Thyroid	0
	Gastrointestinal	0
	Nervous	1
	Hematologic	0
	Immune	0
	Ocular	0
Developmental	0	

**Table 13 - Parcel B4 Remnant
Sub-Surface Soils
Construction Worker Risk Ratios**

80 Day		Parcel Remnant (36.9 ac.)				
Parameter	Target Organs	EPC mg/kg	Construction Worker			
			SSLs (mg/kg)		Risk Ratios	
			Cancer	Non-Cancer	Risk	HQ
Arsenic	Cardiovascular; Dermal	17.3	47.3	301	3.7E-07	0.06
Chromium VI	Respiratory	0.31	67.4	2,503	4.6E-09	0.0001
Cobalt	Thyroid	36.7	14,660	2,968	2.5E-09	0.01
Iron	Gastrointestinal	89,291		751,692		0.1
Manganese	Nervous	10,597		13,066		0.8
Mercury	Nervous	1.18		1,544		0.0008
Vanadium	Dermal	1,647		4,999		0.3
Zinc	Hematologic; Immune	678		322,154		0.002
PCBs (total)		2.60	13.3		2.0E-07	
Aroclor 1254	Dermal; Immune; Ocular	0.53	NE	23.4		0.02
Benzo[a]pyrene	Developmental	4.94	53.0	17.3	9.3E-08	0.3
Naphthalene	Nervous; Respiratory	13.2	37.3	54.3	3.5E-07	0.2
					1E-06	↓

Bold indicates maximum value

SSLs calculated using equations in the EPA Supplemental Guidance dated 2002

Guidance Equation Input Assumptions:

- 5 cars/day (2 tons/car)
- 5 trucks/day (20 tons/car)
- 3 meter source depth thickness

NE = Not Evaluated. Aroclor 1254 was included for non-cancer hazard only. The carcinogenic risk is evaluated with total PCBs.

Total HI	Cardiovascular	0
	Dermal	0
	Respiratory	0
	Thyroid	0
	Gastrointestinal	0
	Nervous	1
	Hematologic	0
	Immune	0
	Ocular	0
Developmental	0	

**Table 14 - Parcel B4 Remnant
Pooled Soils
Construction Worker Risk Ratios**

80 Day		Parcel Remnant (36.9 ac.)				
Parameter	Target Organs	EPC mg/kg	Construction Worker			
			SSLs (mg/kg)		Risk Ratios	
			Cancer	Non-Cancer	Risk	HQ
Arsenic	Cardiovascular; Dermal	12.9	47.3	301	2.7E-07	0.04
Chromium VI	Respiratory	1.34	67.4	2,503	2.0E-08	0.0005
Cobalt	Thyroid	21.3	14,660	2,968	1.5E-09	0.007
Iron	Gastrointestinal	127,605		751,692		0.2
Manganese	Nervous	14,538		13,066		1
Mercury	Nervous	9.38		1,544		0.006
Vanadium	Dermal	1,343		4,999		0.3
Zinc	Hematologic; Immune	3,904		322,154		0.01
PCBs (total)		6.56	13.3		4.9E-07	
Aroclor 1254	Dermal; Immune; Ocular	1.34	NE	23.4		0.06
Benzo[a]pyrene	Developmental	2.12	53.0	17.3	4.0E-08	0.1
Naphthalene	Nervous; Respiratory	6.61	37.3	54.3	1.8E-07	0.1
					1E-06	↓

SSLs calculated using equations in the EPA Supplemental Guidance dated 2002

Guidance Equation Input Assumptions:

- 5 cars/day (2 tons/car)
- 5 trucks/day (20 tons/car)
- 3 meter source depth thickness

NE = Not Evaluated. Aroclor 1254 was included for non-cancer hazard only. The carcinogenic risk is evaluated with total PCBs.

Total HI	Cardiovascular	0
	Dermal	0
	Respiratory	0
	Thyroid	0
	Gastrointestinal	0
	Nervous	1
	Hematologic	0
	Immune	0
	Ocular	0
Developmental	0	

APPENDIX A

MORRIS & RITCHIE ASSOCIATES, INC.

ENGINEERS, ARCHITECTS, PLANNERS, SURVEYORS,
AND LANDSCAPE ARCHITECTS



December 3, 2018

115.015 Acre Land Unit 14, TradePoint Atlantic Land Condominium, Located Southwest of Tinmill Road, Fifteenth Election District, Baltimore County, Maryland

BEGINNING for the same at a pin & cap now set distant North 59° 47' 05" East 399.25 feet from a Mag Nail heretofore set at the end of the four-hundred and fourth or North 18 degrees 10 minutes 45 seconds West 91.11 Feet line of a Special Warranty Deed from Sparrows Point LLC to Sparrows Point Terminal, LLC, dated September 18, 2014 and recorded among the Land Records of Baltimore County, Maryland in Book 35478, Folio 379, said point of beginning having Maryland Coordinate System coordinates of North 564997.37 feet and East 1456527.50 feet, thence running for new lines of division through the land described in the said deed, as now surveyed, with bearings referred to the Maryland Coordinate System (NAD'83/91) and the datum of the said deed, six courses, viz:

1. North 06° 10' 49" West 2571.86 feet to a mag. nail now set at a point of curvature,
2. By a non-tangent curve to the right with a radius of 156.01 feet and an arc length of 82.15 feet, said curve being subtended by a chord bearing North 08° 58' 43" East 81.21 feet,
3. North 32° 33' 29" East 64.14 feet,
4. North 37° 17' 24" East 220.36 feet to a point of curvature,
5. By a tangent curve to the right with a radius of 300.00 feet and an arc length of 243.36 feet, said curve being subtended by a chord bearing North 60° 31' 44" East 236.74 feet, to a mag. nail now set at a point of tangency, and
6. North 83° 45' 59" East 1278.85 feet to a mag. nail now set at the northwest corner of Land Unit 15, thence binding in part on all of the westerly side of the said Land Unit 15 and in part binding on the westerly side of Land Unit 16 for part of its distance, and continuing to run for a new line of division through the land described in the aforesaid deed,
7. South 06° 19' 40" East, passing over a pin & cap now set at the western common corner of the aforesaid Land Units 15 and 16 at a distance of 1191.30 feet, 2955.00 feet to a pin & cap now set, thence leaving the aforesaid Land Unit 16 and continuing to run for a new line of division through the land described in the aforesaid deed,
8. South 83° 49' 11" West 1716.87 feet to the place of beginning.

CONTAINING 115.015 acres of land, more or less.

3445-A Box Hill Corporate Center Drive, Abingdon, MD 21009 (410) 515-9000 Fax: (410) 515-9002 www.mragta.com

Abingdon, MD ♦ Baltimore, MD ♦ Laurel, MD ♦ Towson, MD ♦ Georgetown, DE ♦ New Castle, DE ♦ Leesburg, VA ♦ Raleigh, NC
(410) 515-9000 (410) 935-5050 (410) 792-9792 (410) 821-1690 (302) 855-5734 (302) 326-2200 (703) 994-4047 (984) 200-2103

115.015 Acre Land Unit 14

December 3, 2018

Page 2 of 2

BEING part of the land conveyed by and described in a Special Warranty Deed from Sparrows Point LLC to Sparrows Point Terminal, LLC, dated September 18, 2014 and recorded among the Land Records of Baltimore County, Maryland in Book 35478, Folio 379; BEING ALSO all of Land Unit 14 as shown on the plats entitled "CONDOMINIUM PLAT, LAND UNITS 12 THROUGH 17, TRADEPOINT ATLANTIC LAND CONDOMINIUM" and to be recorded among the said Land Records.



(Current License Expires 5/2/20)

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APPENDIX B

**Construction Worker Soil Screening Levels
Maximum Allowable Work Day Exposure
Calculation Spreadsheet - Parcel B4 Remnant**

Description	Variable	Value
Days worked per week	DW	5
Exposure duration (yr)	ED	1
Hours worked per day	ET	8
A/constant (unitless) - particulate emission factor	Aconst	12.9351
B/constant (unitless) - particulate emission factor	Bconst	5.7383
C/constant (unitless) - particulate emission factor	Cconst	71.7711
Dispersion correction factor (unitless)	FD	0.185
Days per year with at least .01" precipitation	P	130
Target hazard quotient (unitless)	THQ	1
Body weight (kg)	BW	80
Averaging time - noncancer (yr)	ATnc	1
Soil ingestion rate (mg/d)	IR	330
Skin-soil adherence factor (mg/cm ²)	AF	0.3
Skin surface exposed (cm ²)	SA	3300
Event frequency (ev/day)	EV	1
Target cancer risk (unitless)	TR	01E-06
Averaging time - cancer (yr)	ATc	70
A/constant (unitless) - volatilization	Aconstv	2.4538
B/constant (unitless) - volatilization	Bconstv	17.566
C/constant (unitless) - volatilization	Cconstv	189.0426
Dry soil bulk density (kg/L)	Pb	1.5
Average source depth (m)	ds	3
Soil particle density (g/cm ³)	Ps	2.65
Total soil porosity	Lpore/Lsoil	0.43
Air-filled soil porosity	Lair/Lsoil	0.28

**Construction Worker Soil Screening Levels
Maximum Allowable Work Day Exposure
Calculation Spreadsheet - Parcel B4 Remnant**

Area of site (ac)	Ac	36.9
Overall duration of construction (wk/yr)	EW	16
Exposure frequency (day/yr)	EF	80
Cars per day	Ca	5
Tons per car	CaT	2
Trucks per day	Tru	5
Tons per truck	TrT	20
Mean vehicle weight (tons)	w	11
Derivation of dispersion factor - particulate emission factor (g/m2-s per kg/m3)	Q/Csr	13.8
Overall duration of traffic (s)	Tt	2,304,000
Surface area (m2)	AR	149,329
Length (m)	LR	386
Distance traveled (km)	ΣVKT	309
Particulate emission factor (m3/kg)	PEFsc	137,708,263
Derivation of dispersion factor - volatilization (g/m2-s per kg/m3)	Q/Csa	6.88
Total time of construction (s)	Tcv	2,304,000

Input
Calculation

Chemical	Toxicity Criteria Source	[^] Ingestion SF (mg/kg-day) ⁻¹	[^] Inhalation Unit Risk (ug/m ³) ⁻¹	[^] Subchronic RfD (mg/kg-day)	[^] Subchronic RfC (mg/m ³)	[^] GIABS	Dermally Adjusted RfD (mg/kg-day)	[^] ABS	[^] RBA	[*] Dia	[*] Diw	[*] Henry's Law Constant (unitless)	[*] Kd	[*] Koc	DA	Volatilization Factor - Unlimited Reservoir (m ³ /kg)	Carcinogenic Ingestion/ Dermal SL (SLing/der)	Carcinogenic Inhalation SL (SLinh)	Carcinogenic SL (mg/kg)	Non-Carcinogenic Ingestion/ Dermal SL (SLing/der)	Non-Carcinogenic Inhalation SL (SLinh)	Non-Carcinogenic SL (mg/kg)
Arsenic, Inorganic	I/C	1.50E+00	4.30E-03	3.00E-04	1.50E-05	1	3.00E-04	0.03	0.6			-	2.90E+01				47.4	30,684	47.3	304	28,273	301
Chromium(VI)	A/C/I	5.00E-01	8.40E-02	5.00E-03	3.00E-04	0.025	1.25E-04	0.01	1			-	1.90E+01				70.4	1,571	67.4	2,514	565,465	2,503
Cobalt	P	-	9.00E-03	3.00E-03	2.00E-05	1	3.00E-03	0.01	1			-	4.50E+01					14,660	14,660	3,222	37,698	2,968
Iron	P	-	-	7.00E-01	-	1	7.00E-01	0.01	1			-	2.50E+01							751,692		751,692
Manganese (Non-diet)	I	-	-	2.40E-02	5.00E-05	0.04	9.60E-04	0.01	1			-	6.50E+01							15,169	94,244	13,066
Mercuric Chloride (and other salts)	I	-	-	2.00E-03	3.00E-04	0.07	1.40E-04	0.01	1			-								1,548	565,465	1,544
Vanadium and Compounds	A	-	-	1.00E-02	1.00E-04	0.026	2.60E-04	0.01	1			-	1.00E+03							5,135	188,488	4,999
Zinc	I	-	-	3.00E-01	-	1	3.00E-01	0.01	1			-	6.20E+01							322,154		322,154
PCB Total	I	2.00E+00	5.71E-04	-	-	1		0.14	1	2.40E-02	6.30E-06	1.70E-02	4.68E+02	7.80E+04	4.66E-08	1.54E+4	27.3	25.9	13.3			
Aroclor 1254	A/I	2.00E+00	5.71E-04	3.00E-05	-	1	3.00E-05	0.14	1	2.40E-02	6.10E-06	1.16E-02	7.80E+02	1.30E+05	1.91E-08	2.41E+4	27.3	40.4	NE	23.4		23.4
Benzo[a]pyrene	I	1.00E+00	6.00E-04	3.00E-04	2.00E-06	1	3.00E-04	0.13	1	4.80E-02	5.60E-06	1.87E-05	3.54E+03	5.90E+05	2.37E-11	6.85E+5	55.7	1,088	53.0	239	18.7	17.3
Naphthalene	C/I/A	-	3.40E-05	6.00E-01	3.00E-03	1	6.00E-01	0.13	1	6.00E-02	8.40E-06	1.80E-02	9.00E+00	1.50E+03	6.35E-06	1.32E+3		37.3	37.3	477,436	54.3	54.3

*chemical specific parameters found in Chemical Specific Parameters Spreadsheet at <https://www.epa.gov/risk/regional-screening-levels-rsls>

[^]chemical specific parameters found in Unpaved Road Traffic calculator at https://epa-prgs.ornl.gov/cgi-bin/chemicals/csl_search

I: chemical specific parameters found in the IRIS at <https://www.epa.gov/iris>

C: chemical specific parameters found in Cal EPA at <https://www.dtsc.ca.gov/AssessingRisk>

A: chemical specific parameters found in Agency for Toxic Substances and Disease Registry Minimal Risk Levels (MRLs) at https://www.atsdr.cdc.gov/mrls/pdfs/atsdr_mrls.pdf

P: chemical specific parameters found in the Database of EPA PPRTVs at <https://hhprt.vt.gov/quickview/pprtv.php>

NE = Not Evaluated. Aroclor 1254 was included for non-cancer hazard only. The carcinogenic risk is evaluated with total PCBs.