



ARM Group LLC

Engineers and Scientists

November 3, 2020

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

Re: Delineation/Characterization Work Plan:
PAH & PCB Impacted Soil
Area B: Parcel B23
Tradepoint Atlantic
Sparrows Point, Maryland 21219

Dear Ms. Brown:

ARM Group LLC (ARM), on behalf of Tradepoint Atlantic, completed a Phase II Investigation of Parcel B23 (the Site) in February 2019. Parcel B23 is part of Area B of the Tradepoint Atlantic property located in Sparrows Point, Maryland. The Site contains an active railyard, repair shop, and several associated buildings. The Phase II Investigation findings were presented to the Maryland Department of the Environment (MDE) and United States Environmental Protection Agency (USEPA) in the Phase II Investigation Report (Revision 0) dated December 20, 2019.

An initial review of the analytical results from the soil investigation identified elevated concentrations of semi-volatile organic compounds (SVOCs), in particular select polynuclear aromatic hydrocarbons (PAHs), in the shallow soil samples obtained at locations B23-010-SB, B23-015-SB, and B23-034-SB, and elevated concentrations of polychlorinated biphenyls (PCBs) in the shallow soil sample collected at location B23-016-SB. Each of these sample locations had elevated PAH or PCB concentrations above their respective Project Action Limits (PALs) in the shallow (0 to 1 foot below ground surface (bgs)) sample interval. PAL exceedances of SVOCs and PCBs observed during the Phase II Investigation are presented on **Figure 1** and **Figure 2**, respectively.

Following the receipt of analytical data from the Phase II Investigation, a Screening Level Risk Assessment (SLRA) was performed for both the Composite Worker and the Construction Worker scenarios to determine if risk levels were acceptable on the parcel. The results of the SLRA are described in detail within the Comment Response Letter for the Parcel B23 Phase II Investigation Report dated July 17, 2020. The Comment Response Letter included two Composite Worker

scenarios: 1) a baseline scenario incorporating all analytical soil data, and 2) a supplemental scenario to account for interim remedies that were recently installed at locations B23-010-SB, B23-015-SB, B23-016-SB, and B23-034-SB. The supplemental SLRA removed the data from the locations with elevated PAH detections (B23-010-SB, B23-015-SB, and B23-034-SB) or PCB detections (B23-016-SB) in the shallow soil, as interim remedies were put in place at each of these locations to prevent exposure to workers at the Site. The interim remedies included a fence around location B23-010-SB, a concrete plug at location B23-015-SB (within an existing surrounding concrete pad), and a 5-inch layer of recycled crushed concrete placed at locations B23-016-SB and B23-034-SB. Since the submission of the Comment Response Letter, the fence surrounding location B23-010-SB has been removed, and the area has been paved over with a more permanent asphalt pavement area. Photographs of the new asphalt paved area covering B23-010-SB are included in the updated **Attachment 1**. The configurations of these remedies are presented on **Figure 3a/3b/3c**.

To determine if further action is warranted, supplemental delineation and characterization activities will be completed along the edges of the areas addressed by the interim remedies. The results of the proposed delineation investigation will be used to determine if expanded interim remedies are warranted or if the current interim remedies are sufficient until a final remedy is established. This document proposes the protocols to be followed during the delineation activities. All delineation protocols will be conducted in accordance with the Standard Operating Procedures (SOPs) and requirements given in the property-wide Quality Assurance Project Plan (QAPP). The investigation will be conducted under the property-wide Health and Safety Plan (HASP).

Delineation activities are proposed to define the extent of the elevated PAH and PCB concentrations surrounding the four locations of interest. Locations B23-016-SB and B23-034-SB will also be resampled in accordance with this delineation plan; B23-010-SB and B23-015-SB will not be resampled because they are located beneath concrete or asphalt paved areas. At each boring location, soil samples will be collected for analysis from the shallow interval (0 to 1-foot bgs) using a Geoprobe® direct push rig. At each delineation boring location, the shallow sample interval will be adjusted downward if pavement or recycled concrete is present at the surface, and the soil sample will be collected from the 1-foot interval directly below.

Delineation soil samples surrounding locations B23-010-SB, B23-015-SB, and B23-034-SB will be analyzed for PAHs via USEPA method 8270 SIM. Delineation soil samples surrounding location B23-016-SB will be analyzed for PCBs via USEPA Method 8082. Any soil waste generated during the delineation activities will be placed in designated drums and characterized for PCB and TCLP parameters (VOCs, SVOCs, and metals) to determine the appropriate disposal requirements. Any (minimal) aqueous waste generated from decontamination fluids, etc. will be managed in bulk with waste from other investigations and will be appropriately characterized prior to disposal.

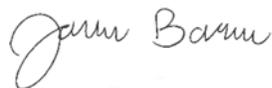


The proposed delineation includes five new delineation borings (and three previous Phase II borings) around the original B23-010-SB and B23-015-SB locations, two new delineation borings (and one previous Phase II boring) around the original B23-016-SB location, and three new delineation borings around the original B23-034-SB location. In addition, B23-016-SB and B23-034-SB will be resampled as noted above. The proposed delineation borings and triangulated areas are shown on **Figure 3a/3b/3c**. Due to the configuration of the existing pavements and interim remedies installed at the Site, the proposed delineation locations do not have a uniform offset from the original locations of interest. Based on the analytical results obtained from these delineation locations, the sampling grids may be modified (with additional borings added) to improve the resolution or expand the delineation grids if necessary. The analytical results will be evaluated according to the Composite Worker SLRA approach to determine whether expansion of the interim remedies or alternative response actions (such as excavation) are warranted.

The findings of this investigation, including any expansion of the delineation scope proposed herein, will be provided to the agencies in a Supplemental Investigation Report. The Supplemental Investigation Report will include an updated SLRA that will incorporate the new delineation sample data. In the event that a remedial response action such as excavation is required in the future, a Work Plan will be provided under separate cover for agency review.

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

Respectfully Submitted,
ARM Group LLC



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



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



FIGURES

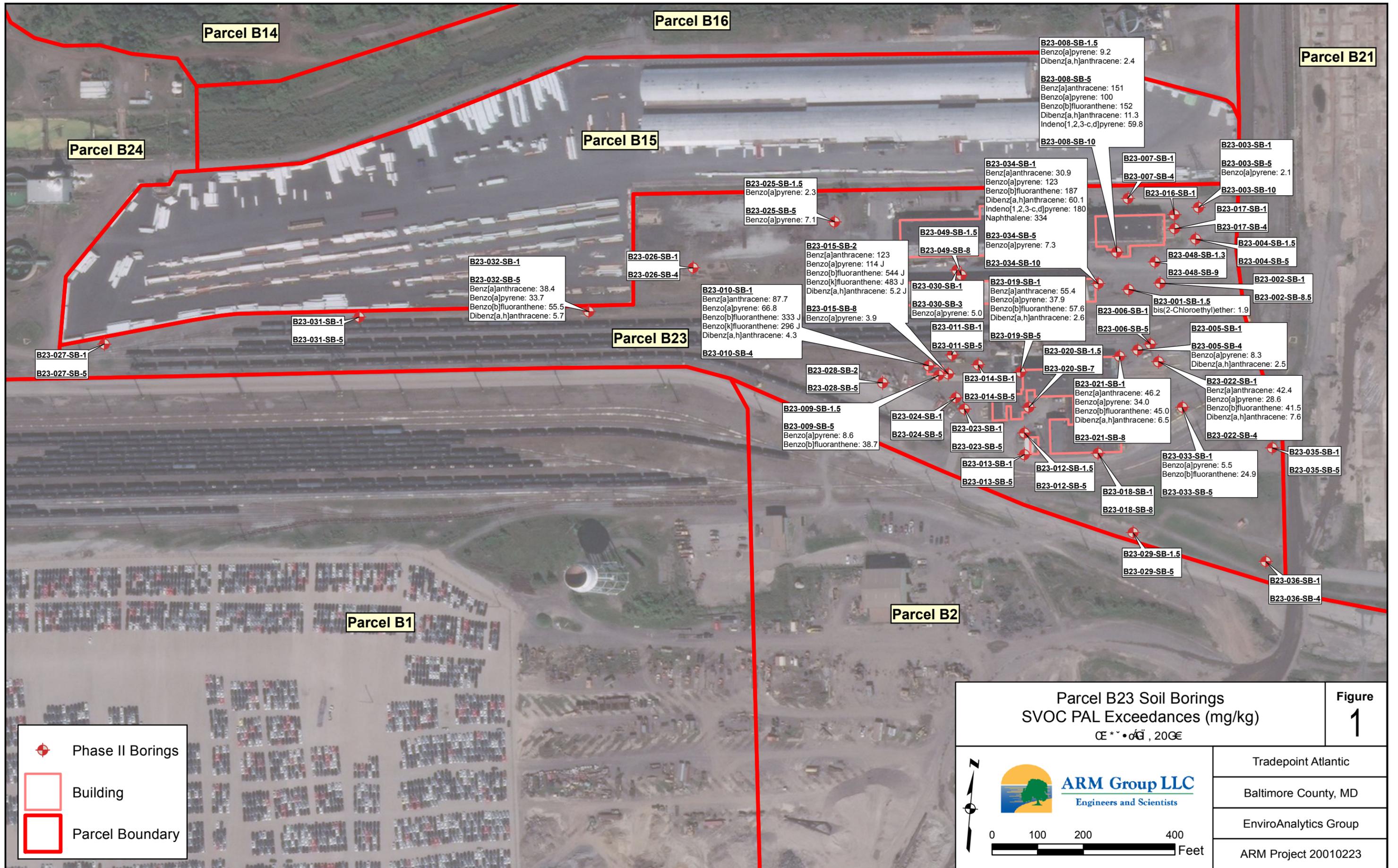


Figure 1

Parcel B23 Soil Borings SVOC PAL Exceedances (mg/kg)
 CE * 10⁻⁶ / 10³, 20CE

0 100 200 400 Feet

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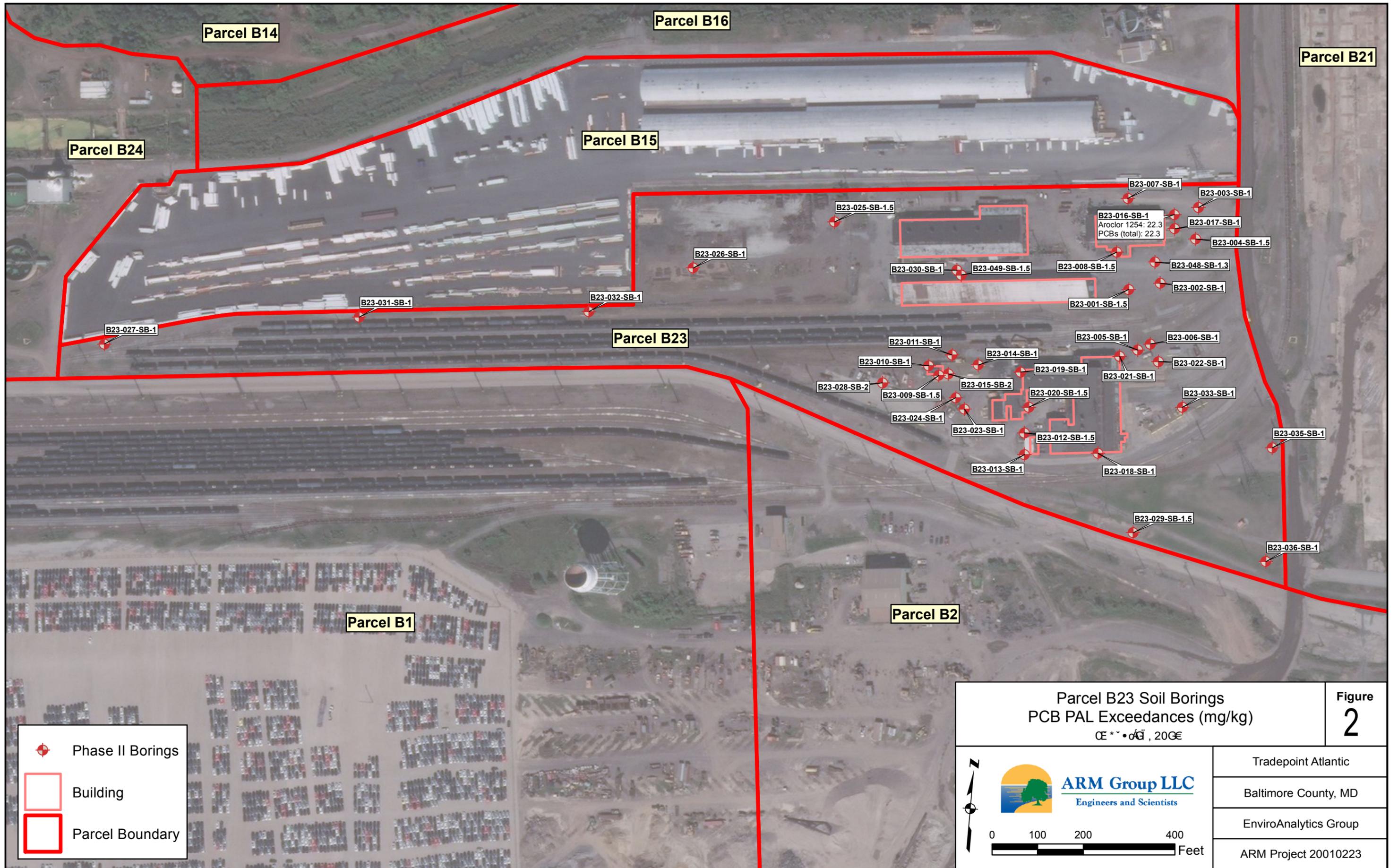
- Phase II Borings
- Building
- Parcel Boundary

Tradepoint Atlantic

Baltimore County, MD

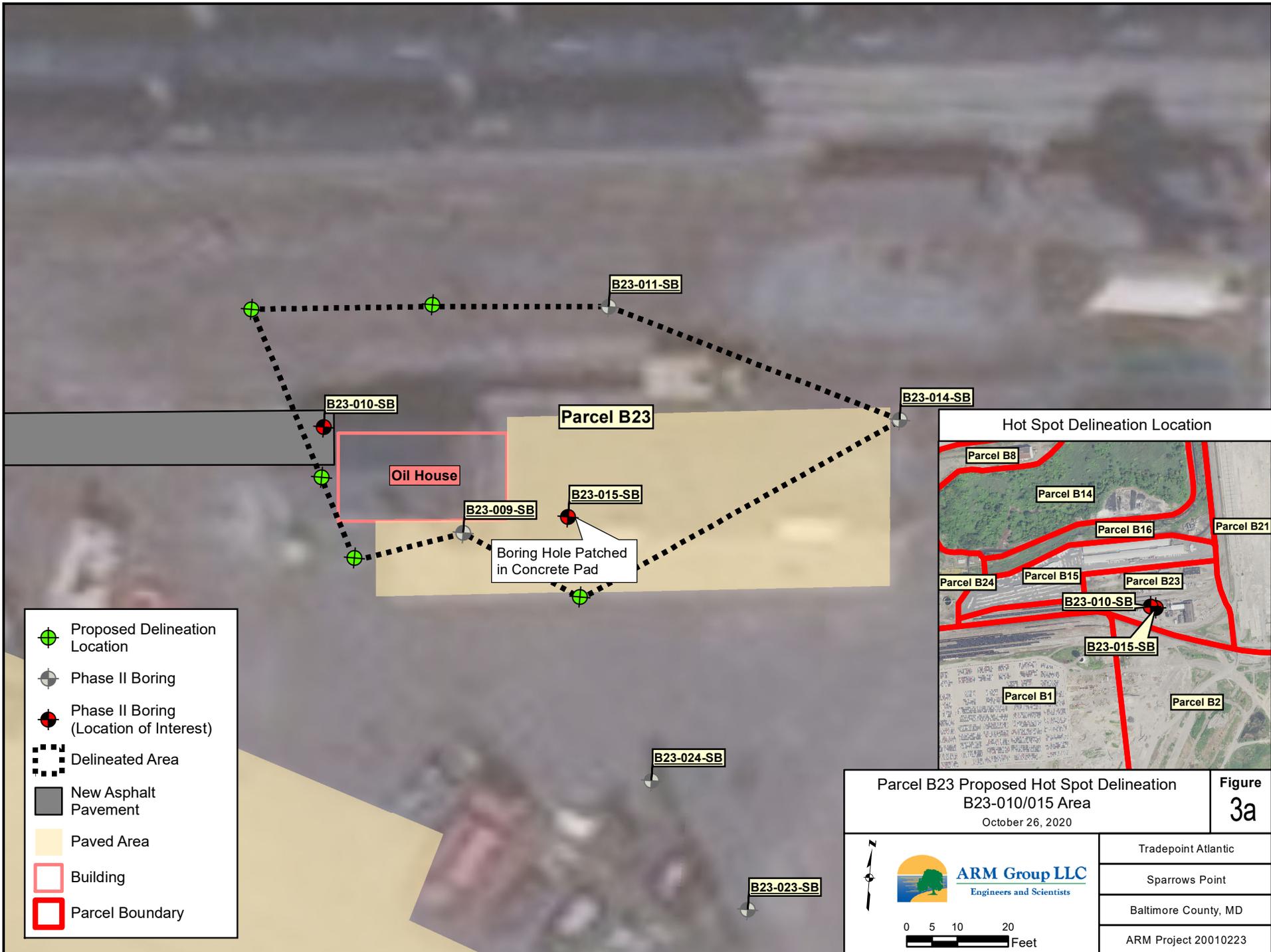
EnviroAnalytics Group

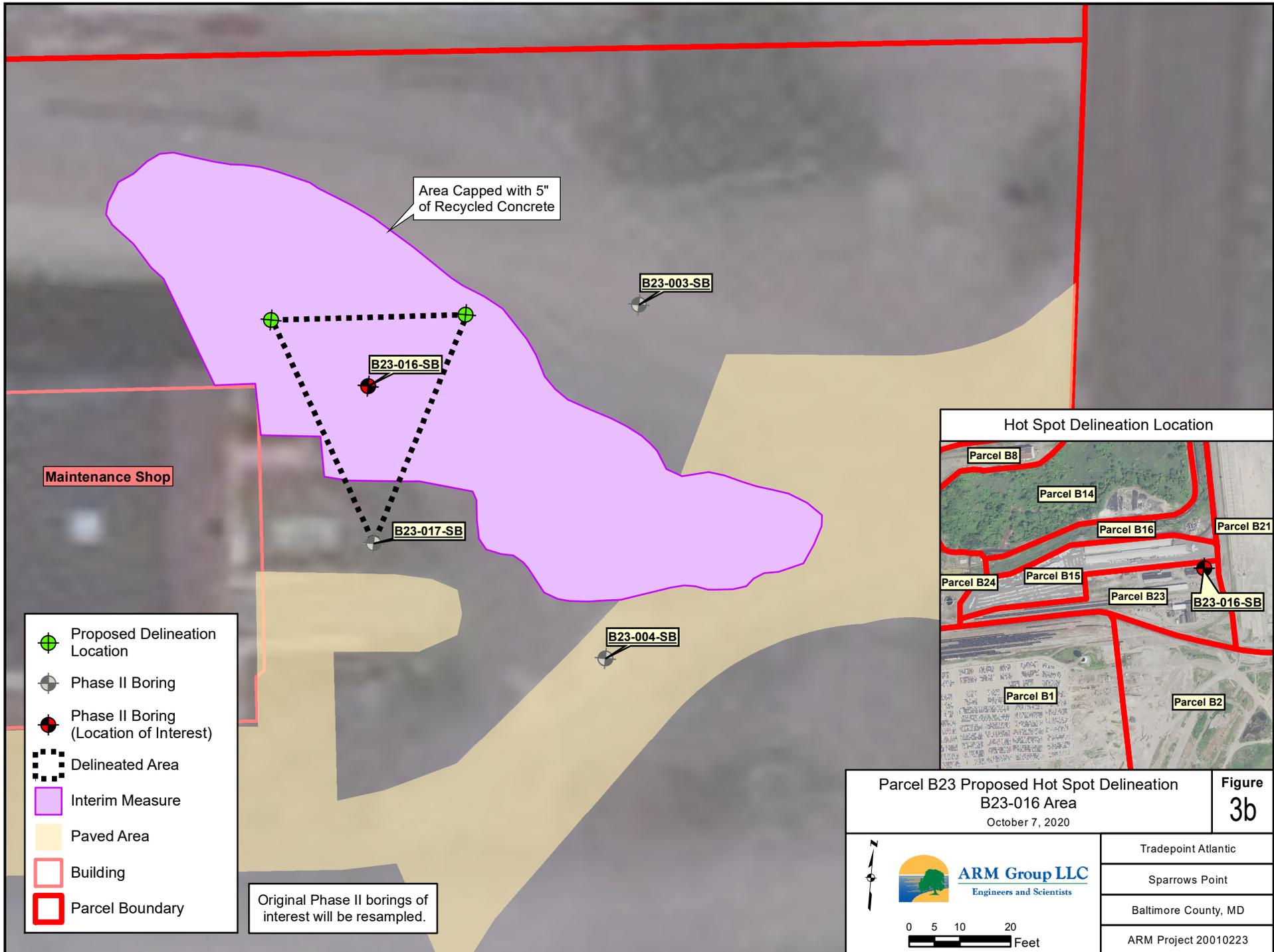
ARM Project 20010223



 Phase II Borings
 Building
 Parcel Boundary

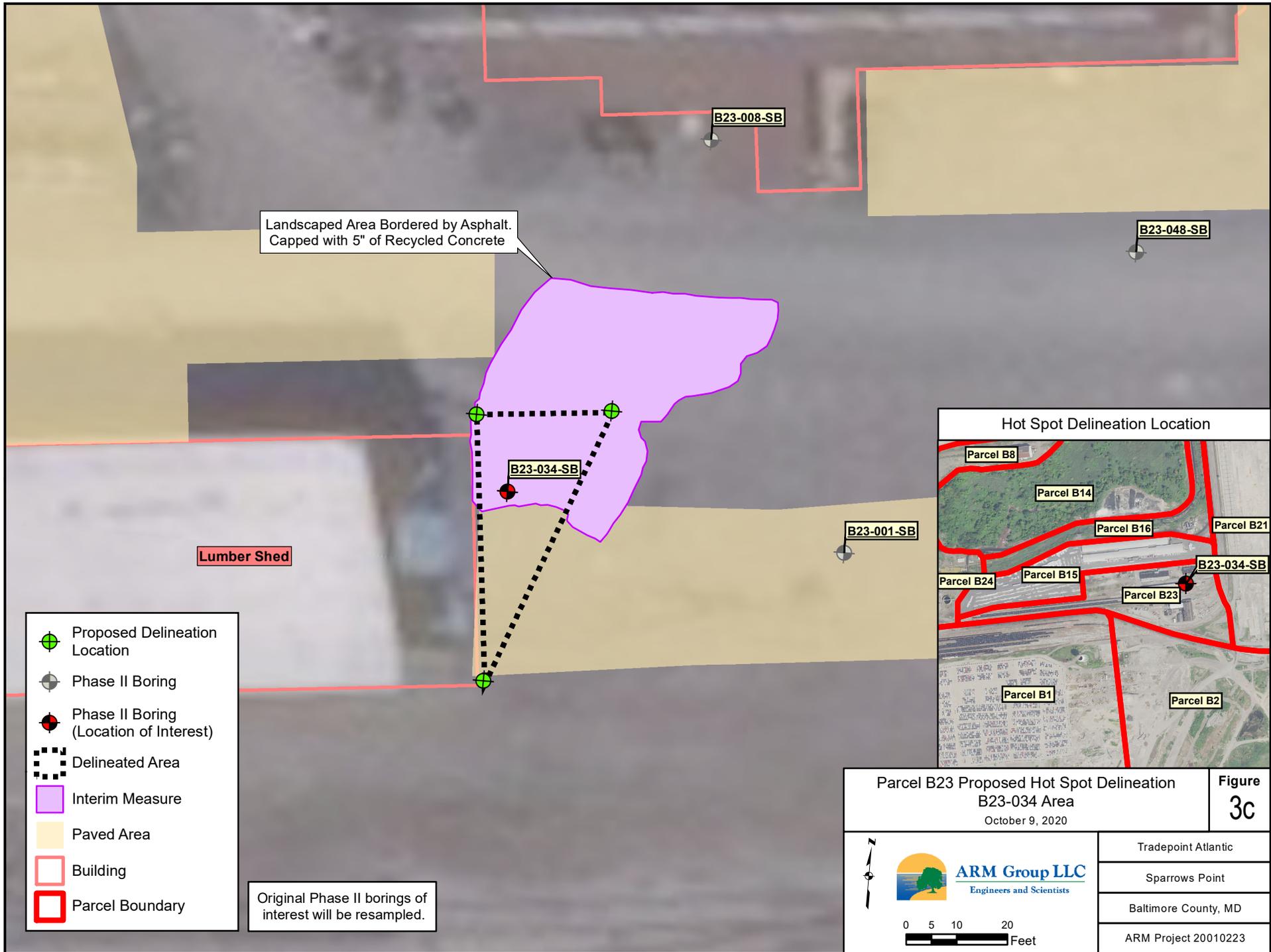
Parcel B23 Soil Borings PCB PAL Exceedances (mg/kg) <small>CE * 10⁻⁶ / 10³, 20CE</small>		Figure 2
 ARM Group LLC <small>Engineers and Scientists</small>		Tradepoint Atlantic Baltimore County, MD EnviroAnalytics Group ARM Project 20010223
 		





-  Proposed Delineation Location
-  Phase II Boring
-  Phase II Boring (Location of Interest)
-  Delineated Area
-  Interim Measure
-  Paved Area
-  Building
-  Parcel Boundary

Original Phase II borings of interest will be resampled.



ATTACHMENT 1

Interim Remedy Photograph Log
Tradepoint Atlantic Property: Parcel B23
Sparrows Point, Baltimore County, Maryland



060820-1: Concrete patch installed at boring hole for B23-015-SB.



100720-1: New asphalt pavement covering boring B23-010-SB.

Interim Remedy Photograph Log
Tradepoint Atlantic Property: Parcel B23
Sparrows Point, Baltimore County, Maryland



100720-2: New asphalt pavement covering boring B23-010-SB.



070820-1: Crushed recycled concrete temporary cap installed covering boring B23-016-SB.

Interim Remedy Photograph Log
Tradeport Atlantic Property: Parcel B23
Sparrows Point, Baltimore County, Maryland



070820-2: Crushed recycled concrete temporary cap installed covering boring B23-016-SB.



070820-3: Crushed recycled concrete temporary cap installed covering boring B23-034-SB.

Interim Remedy Photograph Log
Tradepoint Atlantic Property: Parcel B23
Sparrows Point, Baltimore County, Maryland



070820-4: Crushed recycled concrete temporary cap installed covering boring B23-034-SB.