Phase II Investigation
Work Plan

Area B: Parcel B8
Sparrows Point Terminal, LLC
Sparrows Point, Maryland

Prepared for:
EnviroAnalytics Group
1650 Des Peres Road, Suite 230
Saint Louis, Missouri 63131

Prepared by:
ARM Group Inc.
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September 25, 2015

ARM Project 150300M

Respectfully submitted,

Eric S. Magdar
Senior Geologist

T. Neil Peters, P.E.
Vice President

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1.0 INTRODUCTION

1.1 Introduction

ARM Group Inc. (ARM), on behalf of EnviroAnalytics Group (EAG), has prepared the following Work Plan to complete a Phase II site investigation on a portion of the Sparrows Point Terminal, LLC property that has been designated as Area B, Parcel B8 (the Site). Parcel B8 is comprised of 13.5 acres of the approximately 3,100-acre former plant property located as shown on **Figure 1**.

Site characterization of Parcel B8 will be performed in compliance with requirements pursuant to the following:

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

An application to enter the Site into the Maryland Department of the Environment Voluntary Cleanup Program (MDE-VCP) was submitted to MDE on September 10, 2014. The Site's current and anticipated future use is Tier 3 (Industrial), and plans for the Site include demolition and redevelopment over the next several years.

Parcel B8 is part of the acreage that was removed (Carveout Area) from inclusion in the Multimedia Consent Decree between Bethlehem Steel Corporation, the United States Environmental Protection Agency (EPA), and the Maryland Department of the Environment (MDE) (effective October 8, 1997) as documented in correspondence received from EPA on September 12, 2014. Based on this agreement, EPA has determined that no further investigation or corrective measures will be required under the terms of the Consent Decree for the Carveout Area. However, the SA reflects that the property within the Carveout Area will remain subject to the EPA's RCRA Corrective Action authorities.

The Site is partially occupied by the Billet Building. SPT is seeking to put the Billet Building back into commercial use as soon as feasibly possible. SPT is proposing a focused Building Occupancy Assessment (BOA) of the Billet Building as part of this Work Plan to verify that the current conditions within, below and around the Billet Building would not pose a potentially unacceptable risk to commercial workers occupying the Billet Building.

1.2 Site Background

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

Groundcover at the Site is comprised of approximately 36 % natural soils and 64% slag based on the approximate shoreline of the Sparrows Point Peninsula in 1916, as shown on **Figure 2** (Adapted from Figure 3 on the Description of Current Conditions Report (DCC) report prepared by Rust Environmental and Infrastructure, dated January 1998).

Parcel B8 is partially occupied by the Billet Building, which has also been historically referred to as the Billet Conditioning Building, the Billet Prep Building, and the Billet Record Building. According to the Description of Current Conditions Report (Rust 1998), the Billet Prep Area was the location of the Billet Prep Trenches and Blind Sumps; which was designated as SWMU 53. This unit was associated with piping designed to transport non-hazardous process wastewater to the Tin Mill Canal Discharge Pipes and ultimately to the Tin Mill Canal. This unit began operating in the 1960's and was discontinued sometime around 1993 or 1994. There are currently no discharges from this unit, and the trenches and sumps were filled in when the building was converted to an area used for steel plate storage and shipping.

Historically, the portion of Parcel B8 that was not occupied by the Billet Building was utilized as parking lots and railroads. The anticipated future use of the building will be for commercial activities. At this time, the only known improvement to the structure is the installation of a new floor throughout the building interior.

1.3 Sampling Design and Rationale

1.3.1 Billet Building BOA

According to the Phase I Environmental Site Assessment (ESA) prepared by Weaver Boos Consultants, dated May 19, 2014, at the time of the report the building was used by MCM Management Corporation for the processing of certain asbestos containing building materials that were generated during on-going demolition activities. The Phase I ESA also reported the existence of the Billet Prep Trenches and Blind Sumps, as well as the Billet Prep Waste Oil Storage Tank (SWMU 50), Billet Prep Rinsewater Collection Tanks (SWMU 51), and Billet Prep Baghouse Collectors (SWMU 52); however, they were all listed as Non-RECs as the prior DCC Report had determined that no further action was required for the areas and were also not

subject to an enforcement action when brought to the attention of the appropriate government agencies. In addition, as noted in the Weaver Boos Consultant's report, certain buildings were not able to be observed during the Phase I ESA, which led to multiple limitations. Based on communications with Weaver Boos Consultants, access to the Billet Building was restricted at the time of their site visit due to the asbestos processing taking place within it.

As part of the Work Plan development process, ARM and EAG conducted a walkthrough inspection of the Billet Building on March 30, 2015. During the walk through inspection ARM observed the Billet Building to be empty and inactive.

Additional observations made during the inspection are provided below.

- The surface of the floor is a mix of asphalt, concrete and soil.
- The asbestos-containing building materials had been removed
- A mechanical room along the southern edge of the building was observed.
- A storage room, with unknown contents, was observed along the eastern edge of the building.

Exposure Pathway Analysis

The building is served by public water and there is no groundwater use on site. Therefore, exposure to groundwater is not a potential concern.

The exterior of the building would be used only for worker parking and truck traffic. While the majority of the exterior of the building is not entirely paved, there is only a minimal potential for commercial workers to come into contact with or ingest soil while they walked into the building from their vehicle. Given the historic use of this building, and the very short duration of any potential exposure outside of the building, the potential risk associated with exposure to the soils surrounding the building would be expected to be minimal.

Any required construction or subsurface utility work would be performed by SPT's contractors, and the lease would include a restriction to prevent the tenant from disturbing any pavement or doing any excavation on the property without measures protective of workers' health and approved protocols. Therefore direct contact with the soil outside of the building, and potential exposure by dermal contact or incidental ingestion or by inhalation of vapors in an excavation, are not pathways of concern.

Currently, the floor within the Billet Building is a mix of asphalt, concrete and soil. If the subsurface has been impacted by releases of Volatile Organic Compounds (VOCs) from the Billet Building, or from operations on the adjoining areas of the property, there is a potential for volatilization from the subsurface. In this case, workers in the building could be exposed to

VOC constituents accumulating in the indoor air. This pathway will be evaluated in the BOA through the collection of sub-slab soil gas and "deep" soil gas samples.

The potential exposure via dermal contact or incidental ingestion of soil will not be evaluated in the BOA as a new floor will be constructed prior to occupancy.

Based on the potential exposures described above, an evaluation of the potential for impacts to indoor air will be sufficient to assess the risk to a commercial worker presented by the proposed use of the existing building.

The proposed sub-slab soil gas sample locations are provided on **Figure 8**. The MDE project manager will verify the final locations of the sub-slab soil gas sampling points in the field.

1.3.2 Parcel-wide Investigation

Across the whole Sparrows Point property, several buildings and facilities may have been historical sources of environmental contamination. These areas were identified as targets for sampling through a careful review of historical documents. When a sampling target was identified, borings were placed at or next to its location using GIS software (ArcMap Version 10.2.2). The first sampling targets to be identified were Recognized Environmental Conditions (RECs) located within the Site boundaries, as shown on the REC Location Map provided in the Phase I Environmental Site Assessment (ESA) prepared by Weaver Boos Consultants dated May 19, 2014. Additional Findings (non-RECs) from the Phase I ESA which were identified as Potential Environmental Concerns were also reviewed and targeted as applicable. There were no RECs or additional Findings identified at the Site outside of the Billet Building.

Following the identification and evaluation of all RECs at the Site, SWMUs and Areas of Concern (AOCs) were identified from the DCC report. These included the Billet Prep Trenches and Blind Sumps, as well as the Billet Prep Waste Oil Storage Tank (SWMU 50), Billet Prep Rinsewater Collection Tanks (SWMU 51), and Billet Prep Baghouse Collectors (SWMU 52); however, the specific locations of these were not identified.

Following the identification of all SWMUs and AOCs, three (3) sets of historical site drawings were reviewed to identify additional sampling targets. These site drawings included the 5000 Set (Plant Arrangement), 5100 Set (Plant Index), and the 5500 Set (Plant Sewer Lines). The 5500 Set drawings only provided partial coverage of the Site. Sampling target locations were identified if the historical site drawings depicted industrial activities or a specific feature at a location that may have been a source of environmental contamination that impacted the Site. Based on this criterion, no additional sampling targets were identified at the Site.

Once all sampling targets were identified, additional sample locations were added to fill in areas with insufficient coverage (large spatial gaps between proposed borings) within the Site. The density of soil gas sampling points and soil borings was maintained above the requirements set forth in **Worksheet 17 – Sampling Design and Rationale**. Parcel B8 contained a total of 7.6 acres without engineered barriers, and 5.8 acres with engineered barriers (buildings/parking). Of the 5.8 acres containing engineered barriers, 1.6 acres contained building footprints (sampling covered by sub-slab soil gas), and 4.2 acres contained parking. In accordance with the relevant sampling density requirements, a minimum of 8 soil bores were required in the area without engineered barriers, and a minimum of 3 soil bores were required in the parking sections. A minimum of 4 soil gas locations were required within the Billet Building itself. **Figures 3 through 10** show the proposed sample locations and the Site boundary overlain on the relevant figures and drawings from the historical documents.

2.0 PROJECT ORGANIZATION AND RESPONSIBILITIES

2.1 Project Personnel

The site characterization of Area B Parcel B8 will be conducted by ARM under a contract with EAG. ARM will provide project planning, field sampling and reporting support. The required drilling, Geoprobe® and laboratory services will be contracted directly by EAG. The management, field, and laboratory responsibilities of key project personnel are defined in this section.

The ARM Project Manager, Mr. Eric Magdar is responsible for ensuring that all activities are conducted in accordance with this Work Plan and the contract requirements. Mr. Magdar will provide technical coordination with the MDE, EPA and EAG. The ARM Project Manager is responsible for managing all operations conducted for this project including:

- Ensure all personnel assigned to this project review the technical project plans before initiation of all tasks associated with the project.
- Review of project plans in a timely manner.
- Ensure proper methods and procedures are implemented to collect representative samples.
- Monitor the project budget and schedule and ensure the availability of necessary personnel, equipment, subcontractors, and other necessary services.

The lead ARM Geologist, Mr. Stewart Kabis, will be responsible for coordinating field activities including the collection, preservation, documentation and shipment of samples. Mr. Kabis will directly communicate with the ARM Project Manager and Laboratory Project Manager on issues pertaining to sample shipments, schedules, container requirements, and other necessary issues. Mr. Kabis is also responsible for ensuring the accuracy of sample documentation including the completion of the chain-of-custody (CoC) forms.

Pace Analytical Services, Inc. (PACE) of Greensburg, Pennsylvania will provide the analytical services for this project. The address for the laboratory is as follows:

Pace Analytical
1638 Roseytown Road
Greensburg, PA 15601

During the field activities, the Laboratory Project Manager will coordinate directly with the ARM Project Manager on issues regarding sample shipments, schedules, container requirements, and other field-laboratory logistics. The Laboratory Project Manager will monitor the daily activities of the laboratory, coordinate all production activities, and ensure that work is being

conducted as specified in this document. Rachel Christner will be the Laboratory Project Manager for PACE on this project.

2.2 Health and Safety Issues

Because of the potential presence of metals, petroleum hydrocarbons and chlorinated hydrocarbons in the soil and groundwater at the Site, the investigation will be conducted under a site-specific Health and Safety Plan to protect investigation workers from possible exposure to contaminated soil and groundwater.

Based on information provided to ARM, the planned site activities will be conducted under modified Level D personal protection. The requirements of the modified Level D protection are defined in ARM's site specific Health and Safety Plan. All field personnel assigned for work at the Site have been trained in accordance with the Occupational Safety and Health Administration (OSHA) Hazardous Waste Operations and Emergency Response standard (29 CFR 1910.120) and other applicable OSHA training standards. All field staff will be experienced in hazardous waste site work, use of personal protective equipment (PPE), and emergency response procedures.

3.0 FIELD ACTIVITIES AND PROCEDURES

3.1 Utility Clearance

ARM will take appropriate precautions to avoid subsurface utilities and structures during the site investigation. Prior to initiating any subsurface investigations, ARM will attempt to determine the location of utilities in the project area using the Miss Utility system. Additionally, any required state or local permits will be acquired prior to the commencement of site activities.

In addition to the Miss Utility system, EAG will clear each proposed boring with utility personnel currently working on the property. To facilitate this, ARM will locate with a GPS and mark all proposed boring locations in the field.

3.2 Sampling Plan

The purpose of this site characterization is to identify any existing hazardous conditions across the entire Site. A summary of the RECs and other areas of concern that will be investigated, along with the proposed boring identification number and the analyses being performed, has been provided as **Appendix A.**

This Work Plan presents the methods and protocols to be used to complete the site characterization. These methods and procedures follow the MDE-VCP and EPA guidelines. Information regarding the project organization, field activities and sampling methods, sampling equipment, sample handling and management procedures, the laboratory analytical methods and selected laboratory, quality control and quality assurance procedures, investigation-derived waste (IDW) management methods, reporting requirements are described in detail in the Quality Assurance Project Plan (QAPP) that has been developed to support the investigation and remediation of the Sparrows Point Terminal Site (Sparrows Point Terminal Quality Assurance Project Plan, ARM Group Inc. July 17th, 2015).

The proposed schedule of this investigation is contained in this work plan. All site characterization activities will be conducted under the site-specific health and safety plan (HASP); which is provided as **Appendix B**.

3.3 Soil Investigation

Soil samples will be collected according to procedures referenced in the **Quality Assurance Plan** (QAPP) **Worksheet 21—Field SOPs** (Standard Operating Procedures) and **Appendix A** of the QAPP**.**

Regarding soil sampling depth, a shallow sample will be collected from the 0 to 1 foot depth interval, and a deeper sample be collected from the 4 to 5 foot depth interval. One additional set

of samples will also be collected from the 9 to 10 foot depth interval; if groundwater has not been encountered however, these samples will be held by the laboratory pending the analysis of the 0 to 1 and 4 to 5 foot depth interval samples. If the PID or other field observations indicate contamination to exist at a depth greater than 5 feet bgs but less than 9 feet bgs, and is above the water table, the sample from the deeper 4-5 foot interval may be shifted to the depth interval indicated by the PID response. It should be noted that no soil samples will be collected from a depth that is below the water table.

Additional surficial soil samples (0 to 0.5 foot depth interval) will be collected within the Billet Building at regular intervals along the walls. Three surficial soil samples will be collected along each of the main interior walls, with two additional samples collected from the stained soil areas observed during the initial walk through inspection. A further two surface soil samples will be collected from the building interior in the large open floor area without asphalt/concrete coverage. In addition to the interior samples, exterior surficial soil samples (0 to 0.5 foot depth interval) will be gathered surrounding the outlying buildings (OBs) of the main Billet Building. The interior and exterior soil samples were added in response to a previously completed lead-based paint (LBP) survey. If no soils are present in the proposed locations, samples will be relocated to the nearest sampleable area or discarded if no suitable location exists.

After soil sampling has been concluded at a location, all down-hole soil sampling equipment will be decontaminated according to procedures referenced in the QAPP **Worksheet 21—Field SOPs** and **Appendix A** of the QAPP**, SOP No. 016 Equipment Decontamination.** The decontamination procedures that will be used during the course of this investigation include **Decontamination Area** (Section 3.1 of the SOP), **Decontamination of Sampling Equipment** (Section 3.5), **Decontamination of Groundwater Sampling Pumps** (Section 3.6), **Decontamination of Measurement Devices & Monitoring Equipment** (Section 3.7), **Decontamination of Subsurface Drilling Equipment** (Section 3.8), and **Document and Record Keeping** (Section 5).

All soil samples (excluding the exterior surficial soil samples) will be analyzed for TCL-VOCs, TCL-SVOCs, TAL-Metals, Oil & Grease, hexavalent chromium, and cyanide. Additionally, the shallow soil samples collected across the Site from the 0-1 foot bgs interval will also be analyzed for PCBs. The building interior surficial soil samples will also be tested for the presence of diesel and gasoline range organics (DRO/GRO). The exterior surficial soil samples will be analyzed for TAL-Metals only. Analytical methods, sample containers, preservatives, and holding times for the sample analyses are listed in the QAPP **Worksheet 19 & 30—Sample Containers, Preservation, and Holding Times.**

3.4 Soil Gas Investigation

To determine if historical on-site activities have negatively impacted the soil or groundwater beneath the Billet Building, and to determine if there is a potentially unacceptable risk associated with the vapor intrusion to indoor air risk pathway, sub-slab soil gas and "deep" soil gas samples will be collected from temporary monitoring probes installed at each of the locations provided on **Figure 8**. The "deep" soil gas samples will be collected from a depth that is two feet above the groundwater table in areas where soil is exposed within the building. Soil gas samples will be collected according to procedures outlined in QAPP **Worksheet 21—Field SOPs** and **Appendix A** of the QAPP**.**

3.5 Groundwater Investigation

Groundwater samples will be collected according to procedures referenced in the QAPP **Worksheet 21—Field SOPs** and **Appendix A** of the QAPP**.** Sample locations where piezometers will be installed include: B8-009-PZ, B8-010-PZ, B8-013-PZ, and B8-016-PZ through B8-020-PZ. Groundwater samples will also be collected from currently existing monitoring wells HI02-PZM006 and HI07-PZM005. Prior to the start of work at Parcel B8, the currently existing groundwater wells (HI02-PZM006, HI07-PZM005, and HI01-PZM009) were examined to determine their overall condition. It was determined that HI01-PZM009, previously included as a groundwater monitoring point, was not suitable for sampling. To compensate for the unusable well, B8-009-SB was added as an additional piezometer and relocated to the western edge of the parcel.

All groundwater samples will be analyzed for TCL-VOCs, TCL-SVOCs, TAL-Dissolved Metals, Oil & Grease, hexavalent chromium, and cyanide. Analytical methods, sample containers, preservatives, and holding times for the sample analyses are listed in the QAPP **Worksheet 19 & 30—Sample Containers, Preservation, and Holding Times**. Historical results from the existing wells can be found in **Appendix C**, along with the completed well inspection logs for this parcel.

ARM will check each piezometer for the presence of LPH using an oil-water interface probe, in accordance with methods referenced in the QAPP **Worksheet 21—Field SOPs** and **Appendix A** of the QAPP. All piezometers will also be surveyed to obtain groundwater elevation data. The elevation data from these piezometers will be used to create a groundwater contour map indicating groundwater flow direction.

Once each PVC piezometer has been sampled, surveyed and/or checked for LPH, it will be emptied, removed and discarded. The boreholes will then be abandoned in accordance with Maryland abandonment standards as stated in COMAR 26.04.04.34 through 36.

3.6 Sample Documentation

3.6.1 Sample Numbering

Samples will be numbered in accordance with the QAPP **Appendix C—Data Management Plan.**

3.6.2 Sample Labels & Chain-of-Custody Forms

Samples will be labeled and recorded on the Chain-of-Custody form in accordance with methods referenced in the QAPP **Worksheet 26 & 27—Sample Handling, Custody and Disposal**.

3.7 Laboratory Analysis

EAG has contracted PACE of Greensburg, Pennsylvania to perform the laboratory analysis for this project. All sample analyses to be performed are listed in **Appendix A**. The samples will be submitted for analysis with a standard turnaround time (approximately 10 work days). The specific list of compounds and analytes that the soil gas, soil and groundwater samples will be analyzed for, as well as the quantitation limits and project action limits, is provided in **Worksheet 15 – Project Action Limits and Laboratory-Specific Detection/Quantitation Limits.**

4.0 QUALITY ASSURANCE AND QUALITY CONTROL PROCEDURES

All soil and groundwater samples will be collected using dedicated equipment including new soil core liners and polyethylene tubing. Each cooler temperature will be measured and documented by the laboratory upon receipt.

Quality control (QC) samples are collected during field studies for various purposes, among which are to isolate site effects (control samples), to define background conditions (background sample), and to evaluate field/laboratory variability (spikes and blanks, trip blanks, duplicates, etc.).

The following QC samples will be submitted for analysis to support the data validation:

- Trip Blank – at a rate of one per day
  - Water - VOCs only
- Blind Field Duplicate – at a rate of one duplicate per twenty samples
  - Water - VOC, SVOC, Metals
  - Soil - VOC, SVOC, Metals
- Matrix Spike/Matrix Spike Duplicate – at a rate of one per twenty samples
  - Water - VOC, SVOC, Metals
  - Soil - VOC, SVOC, Metals

The QC samples will be collected and analyzed in accordance with the QAPP **Worksheet 12—Measurement Performance Criteria, Worksheet 20—Field Quality Control** and **Worksheet 28—Analytical Quality Control and Corrective Action.**

Since all samples will be collected using dedicated disposable sampling equipment, no equipment blanks will be required.

5.0 MANAGEMENT OF INVESTIGATION-DERIVED WASTE

All investigation derived waste (IDW) procedures will be carried out in accordance with methods referenced in the QAPP **Worksheet 21—Field SOPs** and **Appendix A** of the QAPP**.**

6.0 DATA VALIDATION

All data validation procedures will be carried out in accordance with the QAPP **Worksheet 34—Data Verification and Validation Inputs, Worksheet 35- Data Verification Procedures** and **Worksheet 36- Data Validation Procedures.**

7.0 REPORTING

Following the receipt of all sampling results from "Area B Parcel B8", ARM will prepare a Phase II Site Investigation Report that will document the sample collection procedures and supporting rationale, and present and interpret the analytical results. All results will be presented in tabular and graphical formats as appropriate to best summarize the data for future use. The sample results will be compared against relevant criteria such as the MDE Generic Numeric Cleanup Standards and the EPA Regional Screening Levels, considering appropriate land use factors and institutional controls, to identify contaminants and exposure pathways of potential concern. ARM will also present recommendations for any additional site investigation activities if warranted.

8.0 SCHEDULE

The activities below are planned so that they may be completed within six months of agency approval of this Work Plan. In addition, the investigation report will be submitted to the regulatory authorities within two months of completion of the field investigation in accordance with these approximate timeframes:

- the sample collection activities will take approximately four (4) weeks to complete (including mobilization activities) once approval of the work plan is received with the BOA being performed first;
- the soil gas, soil and groundwater sample analysis, data validation and review is expected to require an additional six (6) weeks to complete; and
- the preparation of the investigation report, including an internal Quality Assurance Review cycle, will require another four (4) weeks.

FIGURES

ARM Group Inc.
Earth Resource Engineers and Consultants

0 375 750 1,500 Feet

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

Sparrows Point
Area A and Area B Parcels

September 17, 2015

EnviroAnalytics Group

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

Sparrows Point Terminal

Baltimore County, MD

Figure 1

ARM Group Inc.
Earth Resource Engineers and Consultants

0 375 750 1,500 Feet

Site Boundary
Area A Boundaries
Area B Boundaries
Land
Marsh
Water

Approximate Shoreline in 1916
September 17, 2015

Adapted from Figure 2-5 of the Description of Current Conditions Report prepared by Rust Environmental and Infrastructure, dated January 1998

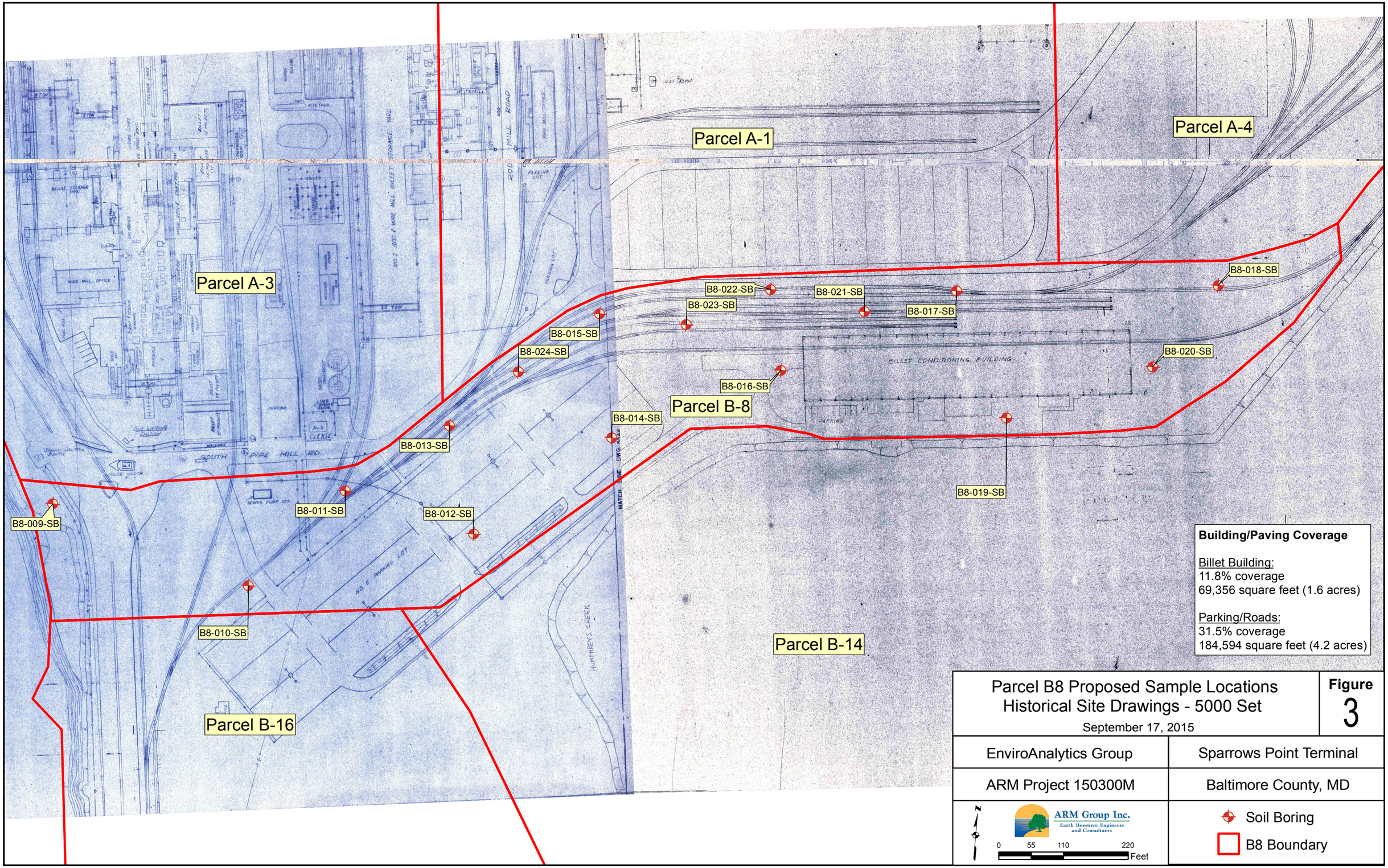
EnviroAnalytics Group

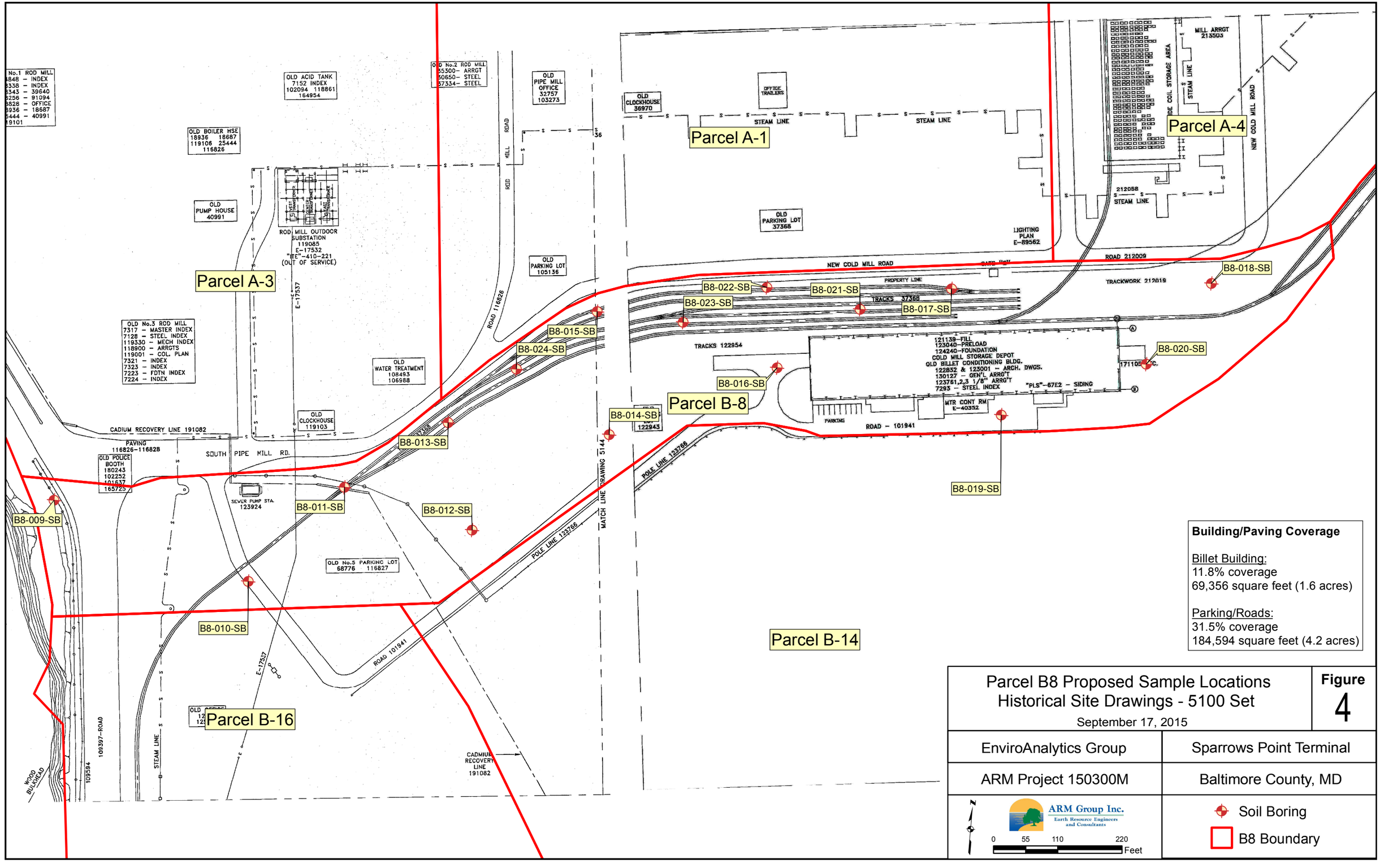
Area A: Project 150298M
Area B: Project 150300M

Sparrows Point Terminal

Baltimore County, MD

Figure 2


Parcel A-1
Parcel A-3
Parcel A-4
Parcel B-8
Parcel B-14
Parcel B-16
B8-009-SB
B8-010-SB
B8-011-SB
B8-012-SB
B8-013-SB
B8-014-SB
B8-015-SB
B8-016-SB
B8-017-SB
B8-018-SB
B8-019-SB
B8-020-SB
B8-021-SB
B8-022-SB
B8-023-SB
B8-024-SB
MILL ROAD
SOUTH PIPE MILL RD.
BILLET CONDITIONING BUILDING
WIRE MILL OFFICE
PIPE MILL OFFICE
NO. 5 PARKING LOT
HUMPHREYS CREEK
MATCH LINE DWG. A-22
Building/Paving Coverage
Billet Building:
11.8% coverage
69,356 square feet (1.6 acres)
Parking/Roads:
31.5% coverage
184,594 square feet (4.2 acres)
Parcel B8 Proposed Sample Locations
Historical Site Drawings - 5000 Set
September 17, 2015
Figure
3
EnviroAnalytics Group
Sparrows Point Terminal
ARM Project 150300M
Baltimore County, MD
ARM Group Inc.
Earth Resource Engineers and Consultants
0
55
110
220
Feet
Soil Boring
B8 Boundary



Building/Paving Coverage

Billet Building:
11.8% coverage
69,356 square feet (1.6 acres)

Parking/Roads:
31.5% coverage
184,594 square feet (4.2 acres)

Parcel B8 Proposed Sample Locations
Historical Site Drawings - 5100 Set

September 17, 2015

Figure 4

EnviroAnalytics Group	Sparrows Point Terminal
ARM Project 150300M	Baltimore County, MD

ARM Group Inc.
Earth Resource Engineers and Consultants

0 55 110 220 Feet

Soil Boring

B8 Boundary

Parcel A-1

Parcel A-4

Parcel A-3

B8-022-SB

B8-023-SB

B8-021-SB

B8-017-SB

B8-018-SB

B8-015-SB

B8-024-SB

B8-020-SB

B8-016-SB

Parcel B-8

B8-014-SB

B8-013-SB

B8-019-SB

B8-009-SB

B8-011-SB

B8-012-SB

B8-010-SB

Parcel B-14

Parcel B-16

Building/Paving Coverage

Billet Building:
11.8% coverage
69,356 square feet (1.6 acres)

Parking/Roads:
31.5% coverage
184,594 square feet (4.2 acres)

Parcel B8 Proposed Sample Locations
Historical Site Drawings - 5500 Set

September 17, 2015

Figure 5

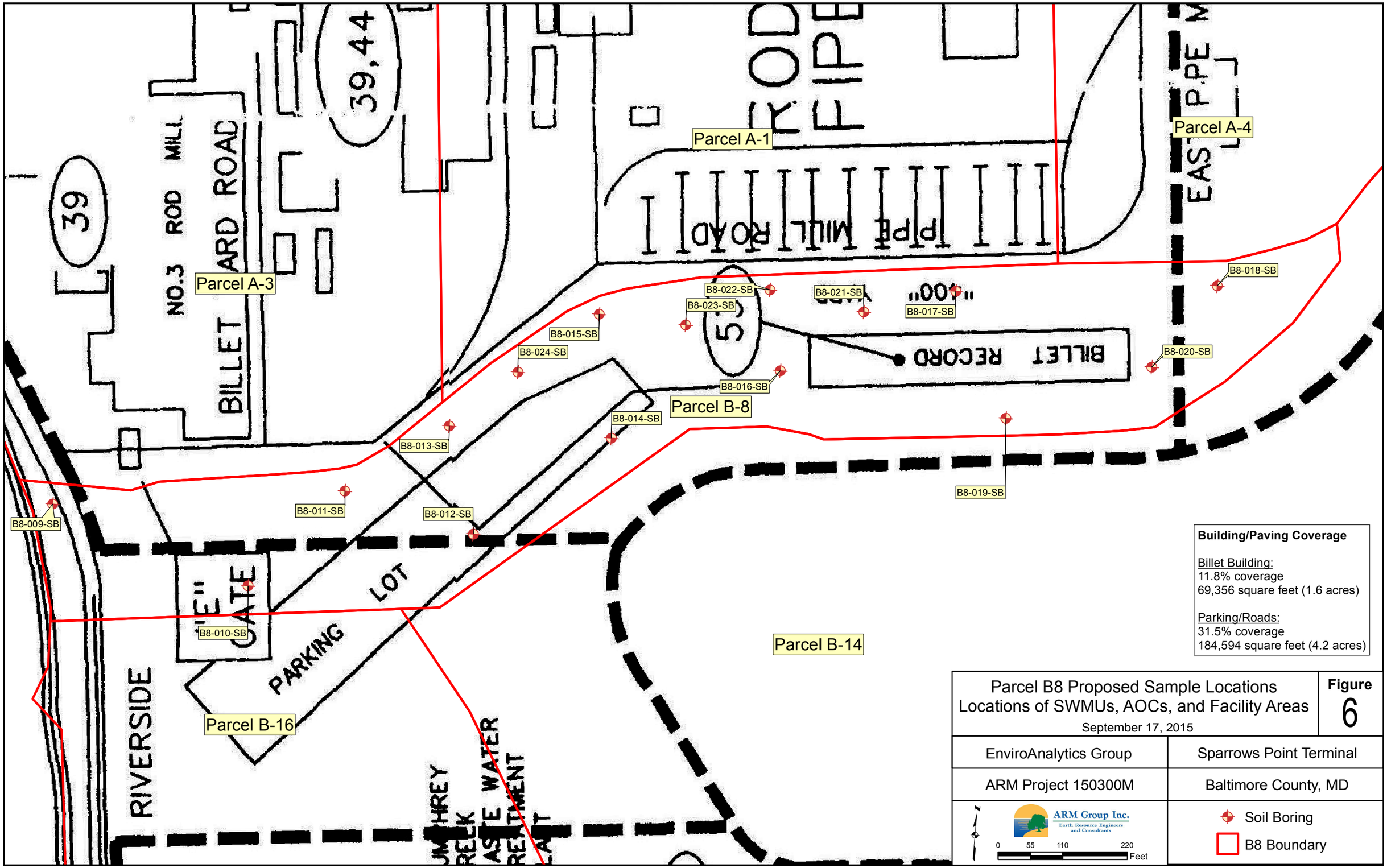
EnviroAnalytics Group	Sparrows Point Terminal
ARM Project 150300M	Baltimore County, MD

ARM Group Inc.
Earth Resource Engineers and Consultants

0 55 110 220 Feet

Soil Boring

B8 Boundary



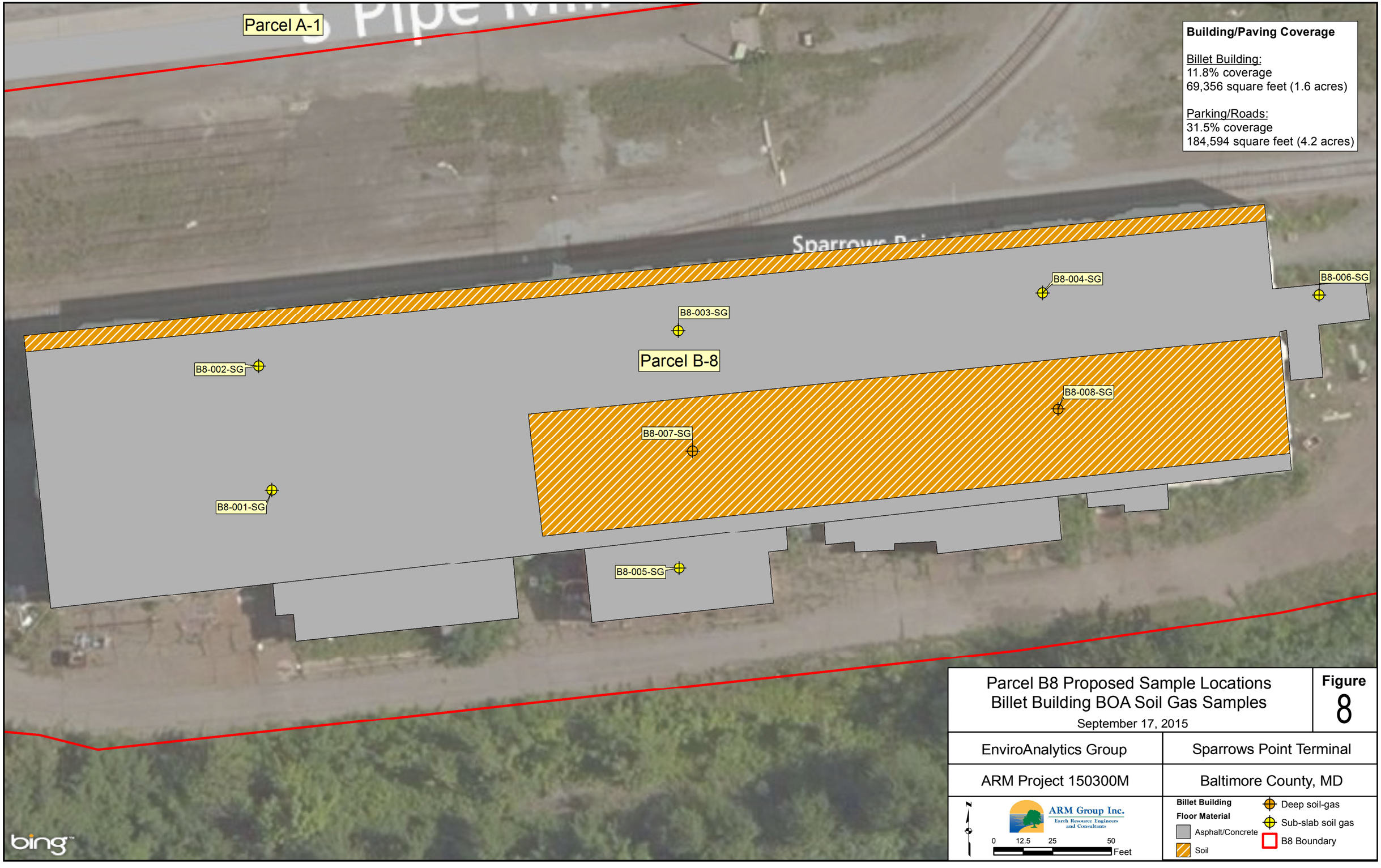
Building/Paving Coverage

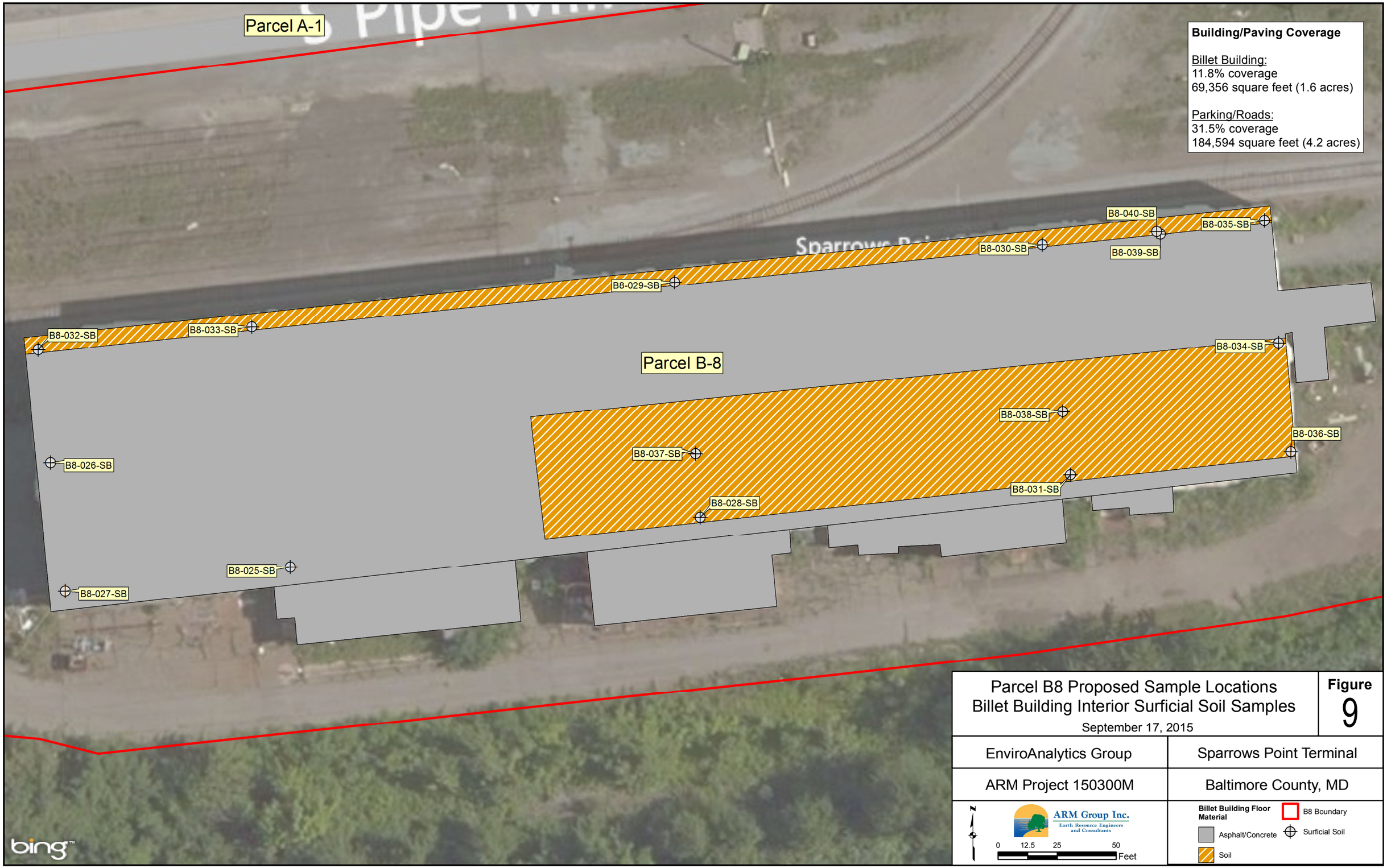
Billet Building:
11.8% coverage
69,356 square feet (1.6 acres)

Parking/Roads:
31.5% coverage
184,594 square feet (4.2 acres)

Parcel B8 Proposed Sample Locations Locations of SWMUs, AOCs, and Facility Areas September 17, 2015	**Figure** 6
EnviroAnalytics Group	Sparrows Point Terminal
ARM Project 150300M	Baltimore County, MD
ARM Group Inc. Earth Resource Engineers and Consultants 0 55 110 220 Feet	Soil Boring B8 Boundary


Parcel A-1
Parcel A-3
Parcel A-4
Parcel B-8
Parcel B-14
Parcel B-16
Rod Mill Rd
E Pipe Mill Rd
S Pipe Mill Rd
S Pipe Mill Rd
Billet Yard Rd
Riverside Dr
Sparrows Point Industrial Complex
B8-017-PZ
B8-018-PZ
B8-016-PZ
HI07-PZM005
B8-020-PZ
B8-013-PZ
HI02-PZM006
B8-019-PZ
HI01-PZM009
B8-009-PZ
B8-010-PZ
bing
Building/Paving Coverage
Billet Building:
11.8% coverage
69,356 square feet (1.6 acres)
Parking/Roads:
31.5% coverage
184,594 square feet (4.2 acres)
Parcel B8
Proposed Piezometer Locations
September 17, 2015
Figure
7
EnviroAnalytics Group
Sparrows Point Terminal
ARM Project 150300M
Baltimore County, MD
ARM Group Inc.
Earth Resource Engineers and Consultants
0
55
110
220
Feet
Piezometer
Exisiting Site-wide Well
Unusable Site-wide Well
B8 Boundary


Parcel A-1
Sparrows Point
Building/Paving Coverage
Billet Building:
11.8% coverage
69,356 square feet (1.6 acres)
Parking/Roads:
31.5% coverage
184,594 square feet (4.2 acres)
B8-004-SG
B8-006-SG
B8-003-SG
Parcel B-8
B8-002-SG
B8-008-SG
B8-007-SG
B8-001-SG
B8-005-SG
bing
Parcel B8 Proposed Sample Locations
Billet Building BOA Soil Gas Samples
September 17, 2015
Figure
8
EnviroAnalytics Group
Sparrows Point Terminal
ARM Project 150300M
Baltimore County, MD
N
ARM Group Inc.
Earth Resource Engineers and Consultants
0 12.5 25 50
Feet
Billet Building
Floor Material
Asphalt/Concrete
Soil
Deep soil-gas
Sub-slab soil gas
B8 Boundary



Building/Paving Coverage

Billet Building:
11.8% coverage
69,356 square feet (1.6 acres)

Parking/Roads:
31.5% coverage
184,594 square feet (4.2 acres)

Parcel B8 Proposed Sample Locations
Billet Building Interior Surficial Soil Samples

September 17, 2015

Figure 9

EnviroAnalytics Group	Sparrows Point Terminal
ARM Project 150300M	Baltimore County, MD

N

ARM Group Inc.
Earth Resource Engineers and Consultants

0 12.5 25 50 Feet

Billet Building Floor Material
- Asphalt/Concrete
- Soil

- B8 Boundary
- Surficial Soil


Parcel A1
Sparrows Point Industrial Complex
Parcel B8
Building/Paving Coverage
Billet Building:
11.8% coverage
69,356 square feet (1.6 acres)
Parking/Roads:
31.5% coverage
184,594 square feet (4.2 acres)
B8-042-SB
B8-041-SB
OB #2
OB #1
B8-043-SB
B8-044-SB
B8-045-SB
B8-046-SB
OB #8
OB #6
OB #5
OB #7
B8-049-SB
B8-048-SB
B8-047-SB
OB #4
B8-052-SB
OB #3
B8-050-SB
B8-051-SB
B8-054-SB
B8-053-SB
bing
Parcel B8 Proposed Sample Locations
Billet Building Exterior Surficial Soil Samples
September 25, 2015
Figure
10
EnviroAnalytics Group
Sparrows Point Terminal
ARM Project 150300M
Baltimore County, MD
ARM Group Inc.
Earth Resource Engineers and Consultants
N
0
12.5
25
50
Feet
B8 Boundary
Surficial Soil (exterior)
Outlying Building (OB)

Appendix A

Parcel B8 Sampling Plan Summary
Former Sparrows Point Steel Mill
Sparrows Point, Maryland

Table 1 - Soil Gas Samples

Sample Location(s)	Number of	Source Area/ Description	REC & Finding/ SWMU/AOC	Boring Depth Sample Depth	Analytical Parameters	RATIONALE
					Soil Gas Samples	
B8-001 through B8-006	6	Billet Building	SWMU 53	6 inches below bottom of concrete slab	VOCs	Investigate potential impacts related to historical activities within and around the Billet Building.
B8-007, B8-008	2	Billet Building	SWMU 53	2 feet above groundwater	VOCs	Investigate potential impacts related to historical activities within and around the Billet Building.
Total:	8					

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

Sub-Slab: 1 sample collected per 20,000 ft^2, with a minimum of 3 per building

Billet Building (69,356 ft^2) = **4 Samples**

VOCs - Volatile Organic Compounds (Target Compound List)

Parcel B8 Sampling Plan Summary
Former Sparrows Point Steel Mill
Sparrows Point, Maryland

Table 2 - Soil Borings

Sample Location(s)	Number of Locations	Source Area/ Description	REC & Finding/ SWMU/AOC	Boring Depth Sample Depth	Analytical Parameters		RATIONALE
					Soil Samples	Groundwater Samples†	
B8-009 through B8-020	12	Parcel B8 Coverage		Total depth of 20 feet bgs or groundwater. Soil samples from 0-1', 4-5', 9-10' bgs. May be adjusted in the field based on observations or field screening.	VOC, SVOC, Metals, O&G, PCBs (0-1')	VOC, SVOC, O&G, Dissolved Metals	Investigate potential impacts related to historical activities, and characterize soil and groundwater in areas not previously sampled.
B8-021 through B8-024	4	Rail Area Investigation		Total depth of 20 feet bgs or groundwater. Soil samples from 0-1', 4-5', 9-10' bgs. May be adjusted in the field based on observations or field screening.	VOC, SVOC, Metals, O&G, PCBs (0-1')		Investigate potential impacts related to railroads and railcars.
B8-025 through B8-038	14	Billet Building (Interior)		0 to 0.5 feet bgs	VOC, SVOC, Metals, O&G, PCBs, DRO/GRO		Investigate potential impacts related to historical activities within the Billet Building.
B8-039 and B8-040	2	Billet Building (Interior)		0 to 0.5 feet bgs	VOC, SVOC, Metals, O&G, PCBs, DRO/GRO		Investigate stained floor area within the Billet Building.
B8-041 through B8-054	14	Billet Building (Exterior)		0 to 0.5 feet bgs	Metals		Investigate potential impacts of lead-based paint or other unknown materials on outlying buildings.
HI02-PZM006, HI07-PZM005	2 (currently existing)	Parcel-wide groundwater		17 and 14 feet bgs, respectively		VOC, SVOC, O&G, Dissolved Metals	Investigate potential impacts related to historical activities, and characterize groundwater
Total:	46						

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

No Engineered Barrier (1-15 acres): 1 boring per acre with no less than 3 borings

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

No Engineered Barrier (7.6 acres) = **8 Samples**

Engineered Barrier - Parking/Buildings (5.8 acres)

Parking (4.2 acres) = **3 Samples**

Building Footprints (1.6 acres) = **N/A** (Covered by Soil Gas, see Table 1)

VOCs - Volatile Organic Compounds (Target Compound List)
SVOCs - Semivolatile Organic Compounds (Target Compound List)
Metals - (Target Analyte List plus Hexavalent Chromium and Cyanide)
O&G - Oil and Grease
PCBs - Polychlorinated Biphenyls
DRO/GRO - Diesel Range Organics/Gasoline Range Organics
bgs - Below Ground Surface
†Field measurements include pH, DO, ORP, conductivity, temperature.

Appendix B

Health and Safety Plan

Area B: Parcel B8
Sparrows Point Terminal, LLC
Sparrows Point, Maryland

Prepared for:
EnviroAnalytics Group
1650 Des Peres Road
Suite 230
Saint Louis, Missouri 63131

Prepared by:
ARM Group Inc.
9175 Guilford Road
Suite 310
Columbia, MD 21046

April 2015

ARM Project 150137M

Respectfully submitted,

Eric S. Magdar	T. Neil Peters
Senior Geologist	Vice President

TABLE OF CONTENTS

1.0 INTRODUCTION

This Health and Safety Plan (HASP) has been prepared for employees of ARM Group Inc. (ARM) to address personnel health and safety requirements for employees of ARM and its subcontractors to complete a Phase II investigation on a portion of the Sparrows Point Terminal, LLC property that has been designated as Parcel B8. The on-site activities shall include the following: collection of soil samples, installation and purging of temporary piezometers, and the collection of groundwater samples. ARM will comply with industry-standard health and safety protocol and Occupational Safety and Health Administration (OSHA) 29 CFR 1910.120 to prevent human exposure to volatile organic compounds (VOC), semi-volatile organic compounds (SVOC), petroleum hydrocarbons, polychlorinated biphenyls (PCB) and metals present in site soil and groundwater.

2.0 GENERAL INFORMATION

2.1 Site Description

Parcel B8, which is comprised of 332 acres of the approximately 3,100-acre former plant property, is located off of Sparrows Point Boulevard in Sparrows Point, Maryland. Parcel B8 is one of 10 parcels that make up a larger area, known as Area B, of the Sparrows Point facility. Area B and its parcels are shown on **Figure 1.**

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

2.2 Site Hazards

The following is a general description of the potential site hazards.

Chemical Hazards:

- VOCs, SVOCs, PCBs and petroleum hydrocarbons potentially present in soil and groundwater.

Explosive Hazards:

- VOC and petroleum hydrocarbon vapors in boreholes, piezometers and collection containers.

Physical Hazards:

- Slipping/tripping in work area
- Stress/fatigue from heat or cold temperatures
- Traffic
- Driving on steep slopes in off-road conditions
- Insect and animal bites
- Hand tools

Mechanical/Electrical Hazards:

- Underground utilities
- Heavy equipment (Geoprobe)
- Noise from heavy equipment operations
- Power tools

2.3 Utilities

Prior to initiating any subsurface investigations, all underground utilities will be cleared using the Miss Utility system. Additionally, EnviroAnalytics Group (EAG) will clear each proposed

boring with utility personnel currently working on the property. The ARM staff will be responsible for avoiding any above ground utilities while operating vehicles on the site.

2.4 Waste Management

A small quantity of investigation derived waste material will be generated as a result of the planned site work. These wastes will include purge and decontamination water, and soil cuttings. All soil cuttings will be returned to their respective borehole. Purge and decon water will be containerized in steel 55-gallon drums for on-site treatment, off-site disposal or discharge to ground surface, pending the receipt of analytical results. Waste will also include used personnel protective equipment (PPE) and disposable sampling equipment that may contain some chemical residue. These materials will be collected and disposed of in a municipal waste dumpster, unless visibly affected. Based on information of the site subsurface conditions, no grossly contaminated material is expected to be generated. Should such waste be generated, the materials will be stored in a steel 55-gallon drum for subsequent off-site disposal.

2.5 Site Controls and Security

It is the responsibility of ARM staff to keep unauthorized personnel away from the work areas during site work. All equipment used at the site must be secured or taken off-site. Subsurface intrusions should be covered to reduce any hazard that may be posed. Traffic cones, caution tape, physical barriers, or other such means as necessary shall be used to ensure that no unauthorized work area entry occurs.

3.0 OPERATING PROCEDURES

3.1 Air Monitoring

Due to the nature of the site activities and materials potentially present at the site, no vapor hazards are expected. If discernable odors are noted, then work will be temporarily suspended and air monitoring will be initiated using a PID or explosive gas indicator. If sustained vapor concentrations are measured at or above action levels in the breathing zone, work will immediately cease until such time as appropriate action is established. This action may require the upgrade of PPE or reevaluation of the need to proceed.

3.2 Personnel Protection

Personnel health and safety protection shall follow the guidelines provided by this HASP. Modifications to the HASP may be made by the field supervisor with the approval of the ARM Project Manager on a day-to-day basis as conditions change, based on existing conditions. Any necessary revisions must be fully documented by the field supervisor to include the specifics and rationalizations for the change.

It is anticipated that a modified Level D will be appropriate for the anticipated site activities. PPE associated with this designated level of protection (Level D), as established by the USEPA, is listed in a later section. Equipment listed for this level should be available to all personnel.

PPE will be stored in a clean, dry environment prior to it usage. Disposable equipment shall remain, in as much as possible, its original manufacturer's packaging to ensure its integrity. PPE that is assigned to a specific end user is subject to inspection by the supervisor at any time.

3.2.1 Determination of Level of Protection Requirements

The appropriate level of personnel protection must be established on the basis of ambient air monitoring responses. Air monitoring action levels should be consistent with the primary compounds of concern as listed in Table 3-1 (below). Appropriate action should be taken if total organic vapor air concentrations are sustained at a concentration equal to or greater than the PEL listed on Table 3-1.

Substance	CAS #	OSHA PEL (ppm)	IDLH (ppm)
Benzene	71-43-2	10	500
Toluene	108-88-3	200	500
Ethyl benzene	100-41-4	100	800
Xylenes	1330-20-7	100	900
Naphthalene	91-20-3	10	250
Tetrachloroethylene	127-18-4	100	150
Trichloroethylene	79-01-6	100	1,000

Notes: ppm = parts per million, PEL = Permissible Exposure Limit,
STEL = Short Term Exposure Limit, IDLH = Immediately Dangerous to Life or Health

This criterion will be applicable to all activities unless specific protection requirement for a certain task are addressed separately. As previously stated, it is anticipated that a modified Level D will be appropriate for the anticipated site activities; which requires a regular worker uniform, steel-toed safety shoes, hardhat, safety glasses and long paints. Level D will be considered the minimum protection level for all work on-site.

Respiratory protection against dust must also be considered during site work, particularly on windy days. The usage of dust respirators (high efficiency particulate air [HEPA] filters) will be determined by site conditions and judgment of the field supervisor. Sprinklers may be used to control dust during work activities.

3.2.2 Dermal Protection

In general, dermal protection levels will correspond with the respiratory protection level in use during an activity as described in other sections. For most activities on the site, Level D dermal protection will be adequate. When work tasks are such that a higher level of personal protection is required, dermal protection may be upgraded to coated Tyvek (Saranex) or chemical-resistant rain suit or Tyvek. This determination will be made by the ARM Field Supervisor as required.

Chemical and abrasion-resistant outer gloves and inner chemical-resistant disposable gloves would be required in the work zone to provide adequate protection of hands and assist in preventing transfer of contaminants. As much of the investigation may require handling of possibly contaminated equipment, groundwater, or soil, chemical-resistant gloves should be required for all on-site work with these materials. Various operations, which require dexterity and do not necessitate the abrasion-resistant feature of outer gloves, could be performed with the inner gloves only, at the direction of the ARM Field Supervisor.

3.2.3 Eye Protection

Since many volatile contaminants are capable of penetrating skin tissues, the eyes provide a potential route of entry into the body. Typically, volatile organic vapors will be detected in the air-monitoring program. Dust and air-borne particulates will be monitored visually and nuisance dust standards will be applied. If exceeded, dust masks will be donned. Eye protection requirements must correspond to the respiratory protection level.

3.3 Task-Related Personnel Protection

At a minimum, all workers are required to wear long pants, steel toed shoes and a sleeved shirt at all times. Additional PPE will be required on a task-specific basis.

3.3.1 Installation of Geoprobe Soil Borings and Piezometers, Soil Logging and Soil Sampling Activities

All personnel should wear the following:

- Long pants and sleeved shirt/vest (high visibility)
- Steel toe safety boots
- Safety glasses with side shields
- Hearing protection
- Chemical resistant gloves

3.3.2 Groundwater Sampling

All personnel should wear the following:

- Long pants and sleeved shirt/vest (high visibility)
- Steel toe safety boots
- Safety glasses with side shields
- Chemical resistant gloves

3.4 Explosion Prevention

Due to the potential presence of flammable materials at the site, the following safety guidelines must be followed to prevent the possibility of explosion:

a. All monitoring equipment will be intrinsically safe or explosion-proof, if used in areas of possible explosive atmospheres.

b. A fire extinguisher, first-aid kit, and an eye wash station will be located at the site within a short distance of site work.

c. Any compressed gas cylinders or bottles will be stored safely as required by the OSHA regulations. In addition, metal barriers must be provided and installed between oxygen and acetylene bottles, extending above the height of the regulators. At the end of each work shift, regulators shall be removed and replaced with protective caps.

d. No explosives, whatsoever, shall be used or stored on the premises.

e. All cleaning fluids or solvents must be stored and transported in OSHA-approved safety containers.

f. Propane, butane, or other heavier-than-air gases shall not be transported onto or used on-site unless prior approval is obtained in writing from the Project Manager and the Facility Operator.

4.0 DECONTAMINATION PROCEDURES

Decontamination procedures will be used on some field tasks, but not all, completed at the site. All decontamination operations will be performed at the sampling location unless the level of PPE is upgraded. If the level of PPE is upgraded, all decontamination operations will be performed in a central decontamination area and supervised by the ARM Field Supervisor. If necessary, a decontamination corridor will be set up adjacent to the area and equipped with brushes, plastic bags, and drum storage. Disposable outerwear and contaminated disposable equipment will be collected and bagged for future disposal. The ARM Field Supervisor would be required to inspect PPE and clothing to determine if decontamination procedures were sufficient to allow passage into the staging area.

The following decontamination facilities, as a minimum, will be provided in the staging area:

a. Hand washing facilities

b. First-aid kit

c. Eye wash station

d. Fire extinguisher

Proper on-site decontamination procedures, the use of disposable outer clothing, and field wash of hands and face as soon as possible after leaving the decontamination corridor could effectively minimize the opportunity for skin contact with contaminants.

4.1 Personnel Decontamination Procedures

Decontamination procedures should be as follows:

Level D decontamination will consist of:

1. Potable water wash and potable water rinse of boots and outer gloves (if worn).

2. Bag or drum all visibly impacted disposable clothing.

3. Field wash of hands and face.

4.2 Equipment Decontamination

All equipment such as drilling and excavation equipment, tools, and pumps should be cleaned with potable water and a non-phosphate detergent (Liquinox), to prevent cross-contamination during the field effort and prior to equipment being taken from the site. Specific procedures for decontamination of field equipment would be established by the ARM Project Manager in order to prevent cross contamination by the drilling or sampling equipment.

Level D personnel protection is required during equipment decontamination.

5.0 EMERGENCY CONTINGENCY INFORMATION

Pertinent emergency telephone numbers are listed in Table 5-1. This information must be reviewed by and provided to all personnel prior to site entry.

Table 5-1
Emergency Telephone Numbers

Facility/Title	Telephone Number
Fire and Police	911
Ambulance	911
James Calenda, EnviroAnalytics Group	(314) 620-3056
Eric Magdar, ARM Manager	Office: (410) 290-7775 Cell: (301) 529-7140
Hospital – Johns Hopkins Bayview	(410) 550-0350

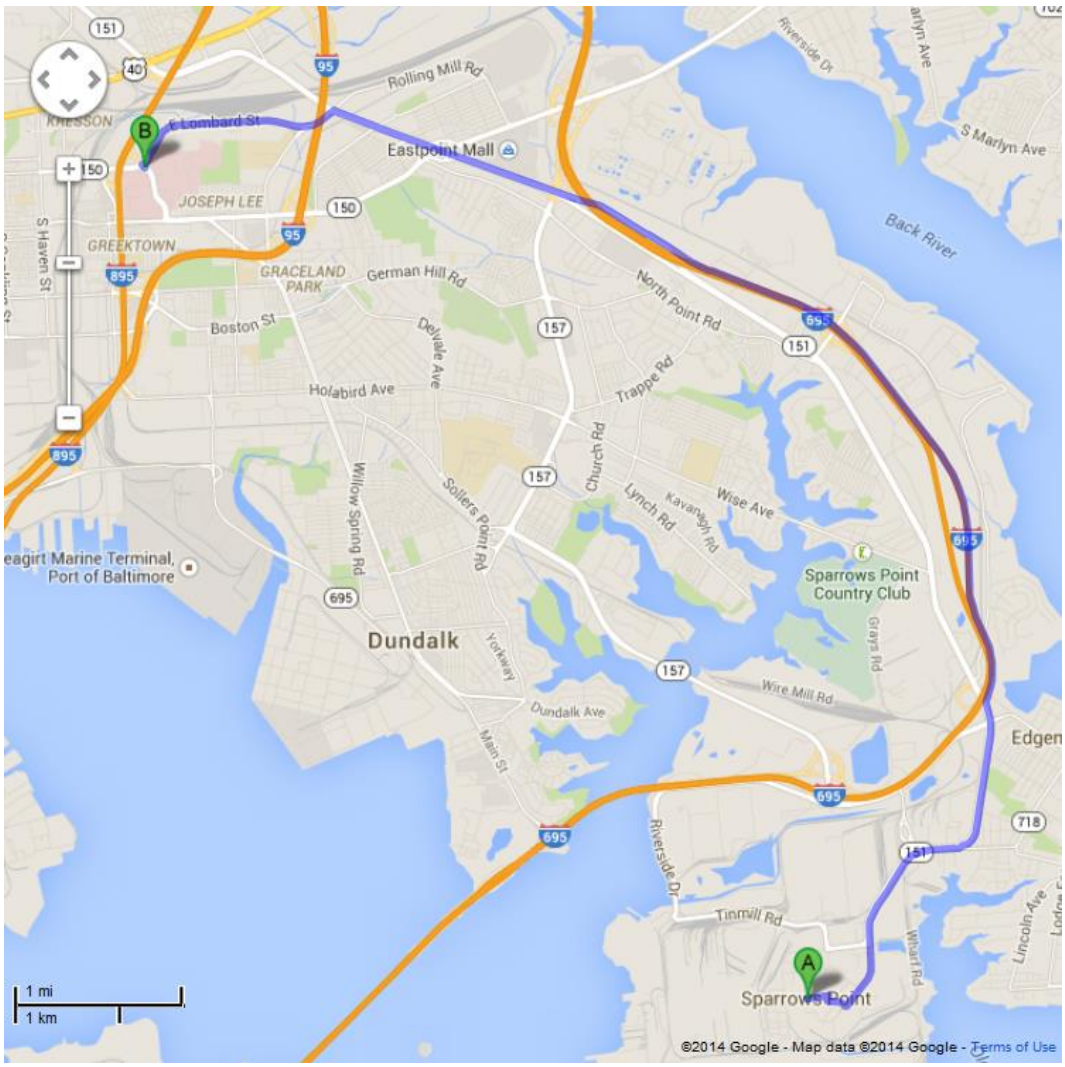
In the event of a fire or explosion, the site will be evacuated immediately and the appropriate emergency response groups notified. In the event of an environmental incident caused by spill or spread of contamination, personnel will attempt to contain the spread of contamination, if possible.

In the event of a personnel injury, emergency first aid would be applied on site by ARM as deemed necessary. The victim should be transported to the local medical facility if needed. The map to the hospital is provided below.

Hospital Route From Sparrows Point Terminal

Johns Hopkins Bayview
4940 Eastern Avenue
Baltimore, MD
(410) 550-0350

1. Start out going East on 7th Street.
2. Turn LEFT onto Sparrow Point Road.
3. Travel 1.4 miles and continue onto North Point Boulevard.
4. Travel 0.9 miles and turn slight right to merge onto I-695 North/Baltimore Beltway toward Essex.
5. Travel 3.4 miles and take EXIT 40 for MD-151/N. Pt. Blvd. N toward MD-150/East. Blvd W/Baltimore.
6. Travel 0.5 miles and merge onto MD-151 N/North Point Blvd.
7. Travel 2.0 miles and turn LEFT onto Kane Street.
8. Travel 0.2 miles and turn slight right onto E. Lombard Street.
9. Travel 1.2 miles and turn left onto Bayview Blvd.
10. Make a left at the emergency room of the hospital



6.0 ACKNOWLEDGEMENT OF PLAN

All site personnel are required to read and comply with the HASP. The following safety compliance affidavit should be signed and dated by each person directed to work on-site.

I have read this HASP and agree to conduct all on-site work in conformity with the requirements of the HASP. I acknowledge that failure to comply with the designated procedures in the HASP may lead to my removal from the site, and appropriate disciplinary actions by my employer.

Title and Company	Name	Signature	Date

Appendix C

WELL INSPECTION FORM

Site: Sparrows Point: Area B Location of Well: Parcel B8 (West)

Project Number: 150300M-10-3 Date: 8/20/15

WELL INFORMATION

Well ID: HI01-PZM009 Well Permit No.: _____

Coordinates:

Latitude/**Northing** 569840.9 Longitude/**Easting** 1456398.5

Condition of pad and/or cover: No Pad or Cover Evident Flush Mount or Stick-Up? N/A

Well ID Marked? No If yes, where? _____

Locking cap? No Lock? No Diameter of Well: 0.5”

Structural integrity of well: Poor - no pad or cover with the well PVC buried

WELL MEASUREMENTS

	Measured (Current)	Historic Reported
Depth to Water (feet BGS/TOC)	N/A	
Depth to Bottom (feet BGS/TOC)	N/A	20 BGS

Notes: BGS = below ground surface, TOC = top of casing

Additional Comments: The well was ultimately located by digging around the location given by GPS coordinates. The well was roughly 6 inches below ground surface covered by soil, with roots growing into the open end of the PVC. The casing was too narrow to be gauged with the water meter. The well was spray painted for identification and sealed by a nitrile glove.

PICTURE OF WELL DURING INSPECTION

WELL INSPECTION FORM

Site: Sparrows Point: Area B Location of Well: Parcel B8 (Middle)

Project Number: 150300M-10-3 Date: 8/20/15

WELL INFORMATION

Well ID: HI02-PZM006 Well Permit No.: _____

Coordinates:

Latitude/**Northing** 569967.1 Longitude/**Easting** 1457454.2

Condition of pad and/or cover: Fair (vegetation) Flush Mount or Stick-Up? Flush mount

Well ID Marked? No If yes, where? _____

Locking cap? No Lock? No Diameter of Well: 2”

Structural integrity of well: Good

WELL MEASUREMENTS

	Measured (Current)	**Historic Reported**
Depth to Water (feet BGS/TOC)	6.22 TOC / 6.55 BGS	
Depth to Bottom (feet BGS/TOC)	16.89 TOC / 17.22 BGS	17 BGS

Notes: BGS = below ground surface, TOC = top of casing

Additional Comments: Location of the well was difficult due to the amount of vegetative cover. Housing was filled with water which needed to be bailed out before gauging could be completed.

PICTURE OF WELL DURING INSPECTION

WELL INSPECTION FORM

Site: Sparrows Point: Area B Location of Well: Parcel B8 (East)

Project Number: 150300M-10-3 Date: 8/20/15

WELL INFORMATION

Well ID: HI07-PZM005 Well Permit No.: _____

Coordinates:

Latitude/**Northing** 570178 Longitude/**Easting** 1458394

Condition of pad and/or cover: Fair (rusted) Flush Mount or Stick-Up? Stick up

Well ID Marked? Yes If yes, where? Vertical on casing (faded)

Locking cap? Yes Lock? Broken Diameter of Well: 2”

Structural integrity of well: Good

WELL MEASUREMENTS

	Measured (Current)	Historic Reported
Depth to Water (feet BGS/TOC)	9.04 TOC / 6.00 BGS	
Depth to Bottom (feet BGS/TOC)	17.24 TOC / 14.20 BGS	14 BGS

Notes: BGS = below ground surface, TOC = top of casing

Additional Comments: Included in a set of 3 wells located on eastern edge of Parcel B8. Lock was broken to gain access for gauging.

PICTURE OF WELL DURING INSPECTION

Well	Chemical Analyte	CAS #	Sample Date	Result	Units	Qualifier	Detection Limit
HI01-PZM009	Bicarbonate	71-52-3	12/11/2000	22	mg/L		1
HI01-PZM009	Calcium	7440-70-2	12/11/2000	83	mg/L		0.5
HI01-PZM009	Chloride	16887-00-6	10/1/2000	130000	ug/L		
HI01-PZM009	Chloride	16887-00-6	12/11/2000	130	mg/L		2
HI01-PZM009	Iron	7439-89-6	10/1/2000	1300	ug/L		
HI01-PZM009	Iron	7439-89-6	12/11/2000	1.3	mg/L		0.1
HI01-PZM009	Magnesium	7439-95-4	12/11/2000	6.7	mg/L		0.1
HI01-PZM009	Manganese	7439-96-5	12/11/2000	0.17	mg/L		0.01
HI01-PZM009	Potassium	7440-09-7	12/11/2000	17	mg/L		0.1
HI01-PZM009	Sodium	7440-23-5	12/11/2000	78	mg/L		0.5
HI01-PZM009	Sulfate	18785-72-3	10/1/2000	220000	ug/L		
HI01-PZM009	Sulfate	14808-79-8	12/11/2000	220	mg/L		10
HI01-PZM009	Total dissolved solids (TDS)	TDS	12/11/2000	600	mg/L		10
HI02-PZM006	1,1,1,2-Tetrachloroethane	630-20-6	10/1/2001	1	ug/L	U	1
HI02-PZM006	1,1,1,2-Tetrachloroethane	630-20-6	12/4/2001	1	ug/L	U	1
HI02-PZM006	1,1,1-Trichloroethane	71-55-6	10/1/2001	1	ug/L	U	1
HI02-PZM006	1,1,1-Trichloroethane	71-55-6	12/4/2001	1	ug/L	U	1
HI02-PZM006	1,1,2,2-Tetrachloroethane	79-34-5	10/1/2001	1	ug/L	U	1
HI02-PZM006	1,1,2,2-Tetrachloroethane	79-34-5	12/4/2001	1	ug/L	U	1
HI02-PZM006	1,1,2-Trichloroethane	79-00-5	10/1/2001	1	ug/L	U	1
HI02-PZM006	1,1,2-Trichloroethane	79-00-5	12/4/2001	1	ug/L	U	1
HI02-PZM006	1,1-Dichloroethane	75-34-3	10/1/2001	1	ug/L	U	1
HI02-PZM006	1,1-Dichloroethane	75-34-3	12/4/2001	1	ug/L	U	1
HI02-PZM006	1,1-Dichloroethene	75-35-4	10/1/2001	1	ug/L	U	1
HI02-PZM006	1,1-Dichloroethene	75-35-4	12/4/2001	1	ug/L	U	1
HI02-PZM006	1,2,4-Trichlorobenzene	120-82-1	10/1/2001	10	ug/L	U	10
HI02-PZM006	1,2,4-Trichlorobenzene	120-82-1	12/4/2001	10	ug/L	U	10
HI02-PZM006	1,2-Dichlorobenzene	95-50-1	10/1/2001	10	ug/L	U	10
HI02-PZM006	1,2-Dichlorobenzene	95-50-1	12/4/2001	10	ug/L	U	10
HI02-PZM006	1,2-Dichloroethane	107-06-2	10/1/2001	1	ug/L	U	1
HI02-PZM006	1,2-Dichloroethane	107-06-2	12/4/2001	1	ug/L	U	1
HI02-PZM006	1,2-Dichloropropane	78-87-5	10/1/2001	1	ug/L	U	1
HI02-PZM006	1,2-Dichloropropane	78-87-5	12/4/2001	1	ug/L	U	1
HI02-PZM006	1,3-Dichlorobenzene	541-73-1	10/1/2001	10	ug/L	U	10
HI02-PZM006	1,3-Dichlorobenzene	541-73-1	12/4/2001	10	ug/L	U	10
HI02-PZM006	1,4-Dichlorobenzene	106-46-7	10/1/2001	10	ug/L	U	10
HI02-PZM006	1,4-Dichlorobenzene	106-46-7	12/4/2001	10	ug/L	U	10
HI02-PZM006	2,2'-Oxybis(1-chloropropane)	108-60-1	12/4/2001	10	ug/L	U	10
HI02-PZM006	2,4,5-Trichlorophenol	95-95-4	10/1/2001	10	ug/L	U	10
HI02-PZM006	2,4,5-Trichlorophenol	95-95-4	12/4/2001	10	ug/L	U	10
HI02-PZM006	2,4,6-Trichlorophenol	88-06-2	10/1/2001	10	ug/L	U	10
HI02-PZM006	2,4,6-Trichlorophenol	88-06-2	12/4/2001	10	ug/L	U	10
HI02-PZM006	2,4-Dichlorophenol	120-83-2	10/1/2001	10	ug/L	U	10
HI02-PZM006	2,4-Dichlorophenol	120-83-2	12/4/2001	10	ug/L	U	10
HI02-PZM006	2,4-Dimethylphenol	105-67-9	10/1/2001	32	ug/L		
HI02-PZM006	2,4-Dimethylphenol	105-67-9	12/4/2001	32	ug/L		10
HI02-PZM006	2,4-Dinitrophenol	51-28-5	10/1/2001	50	ug/L	U	50
HI02-PZM006	2,4-Dinitrophenol	51-28-5	12/4/2001	50	ug/L	U	50
HI02-PZM006	2,4-Dinitrotoluene	121-14-2	10/1/2001	10	ug/L	U	10
HI02-PZM006	2,4-Dinitrotoluene	121-14-2	12/4/2001	10	ug/L	U	10
HI02-PZM006	2,6-Dinitrotoluene	606-20-2	10/1/2001	10	ug/L	U	10
HI02-PZM006	2,6-Dinitrotoluene	606-20-2	12/4/2001	10	ug/L	U	10
HI02-PZM006	2-Butanone	78-93-3	12/4/2001	5	ug/L	U	5
HI02-PZM006	2-Butanone	78-93-3	12/4/2001	1.2	ug/L	J	5
HI02-PZM006	2-Butanone (MEK)	78-93-3	10/1/2001	1.2	ug/L	J	
HI02-PZM006	2-Chloronaphthalene	91-58-7	10/1/2001	10	ug/L	U	10
HI02-PZM006	2-Chloronaphthalene	91-58-7	12/4/2001	10	ug/L	U	10

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HI02-PZM006	2-Chlorophenol	95-57-8	10/1/2001	10	ug/L	U	10
HI02-PZM006	2-Chlorophenol	95-57-8	12/4/2001	10	ug/L	U	10
HI02-PZM006	2-Hexanone	591-78-6	10/1/2001	5	ug/L	U	5
HI02-PZM006	2-Hexanone	591-78-6	12/4/2001	5	ug/L	U	5
HI02-PZM006	2-Methylnaphthalene	91-57-6	10/1/2001	1.4	ug/L	J	
HI02-PZM006	2-Methylnaphthalene	91-57-6	12/4/2001	1.4	ug/L	J	10
HI02-PZM006	2-Methylphenol	95-48-7	10/1/2001	1.1	ug/L	J	
HI02-PZM006	2-Methylphenol	95-48-7	12/4/2001	1.1	ug/L	J	10
HI02-PZM006	2-Nitrophenol	88-75-5	10/1/2001	10	ug/L	U	10
HI02-PZM006	2-Nitrophenol	88-75-5	12/4/2001	10	ug/L	U	10
HI02-PZM006	3-&4-Methylphenol	108-39-4 and 106-44-5	10/1/2001	10	ug/L		
HI02-PZM006	3,3´-Dichlorobenzidine	91-94-1	10/1/2001	50	ug/L	U	50
HI02-PZM006	3,3'-Dichlorobenzidine	91-94-1	12/4/2001	50	ug/L	U	50
HI02-PZM006	3,3'-Dimethylbenzidine	119-93-7	10/1/2001	50	ug/L	U	50
HI02-PZM006	3,3'-Dimethylbenzidine	119-93-7	12/4/2001	50	ug/L	U	50
HI02-PZM006	4,6-Dinitro-2-methylphenol	534-52-1	10/1/2001	50	ug/L	U	50
HI02-PZM006	4,6-Dinitro-2-methylphenol	534-52-1	12/4/2001	50	ug/L	U	50
HI02-PZM006	4-Bromophenyl phenyl ether	101-55-3	10/1/2001	10	ug/L	U	10
HI02-PZM006	4-Bromophenyl-phenylether	101-55-3	12/4/2001	10	ug/L	U	10
HI02-PZM006	4-Chloro-3-methylphenol	59-50-7	10/1/2001	10	ug/L	U	10
HI02-PZM006	4-Chloro-3-methylphenol	59-50-7	12/4/2001	10	ug/L	U	10
HI02-PZM006	4-Chlorophenyl phenyl ether	7005-72-3	10/1/2001	10	ug/L	U	10
HI02-PZM006	4-Chlorophenyl-phenylether	7005-72-3	12/4/2001	10	ug/L	U	10
HI02-PZM006	4-Methyl-2-pentanone	108-10-1	12/4/2001	5	ug/L	U	5
HI02-PZM006	4-Methyl-2-pentanone (MIBK)	108-10-1	10/1/2001	5	ug/L	U	5
HI02-PZM006	4-Methylphenol	106-44-5	12/4/2001	10	ug/L		10
HI02-PZM006	4-Nitrophenol	100-02-7	10/1/2001	50	ug/L	U	50
HI02-PZM006	4-Nitrophenol	100-02-7	12/4/2001	50	ug/L	U	50
HI02-PZM006	Acenaphthene	83-32-9	10/1/2001	1.5	ug/L	J	
HI02-PZM006	Acenaphthene	83-32-9	12/4/2001	1.5	ug/L	J	10
HI02-PZM006	Acenaphthylene	208-96-8	10/1/2001	10	ug/L	U	10
HI02-PZM006	Acenaphthylene	208-96-8	12/4/2001	10	ug/L	U	10
HI02-PZM006	Acetone	67-64-1	10/1/2001	6.3	ug/L	J	
HI02-PZM006	Acetone	67-64-1	12/4/2001	5.2	ug/L	J	10
HI02-PZM006	Acetone	67-64-1	12/4/2001	6.3	ug/L	J	10
HI02-PZM006	Amenable cyanide	AMENABLECN	12/4/2001	5	mg/L	J	0.01
HI02-PZM006	Anthracene	120-12-7	10/1/2001	10	ug/L	U	10
HI02-PZM006	Anthracene	120-12-7	12/4/2001	10	ug/L	U	10
HI02-PZM006	Antimony	7440-36-0	10/1/2001	4.5	ug/L	J	
HI02-PZM006	Antimony	7440-36-0	12/4/2001	4.5	ug/L	J	4.1
HI02-PZM006	Aroclor-1016	12674-11-2	12/4/2001	1	ug/L	U	1
HI02-PZM006	Aroclor-1221	11104-28-2	12/4/2001	1	ug/L	U	1
HI02-PZM006	Aroclor-1232	11141-16-5	12/4/2001	1	ug/L	U	1
HI02-PZM006	Aroclor-1242	53469-21-9	12/4/2001	1	ug/L	U	1
HI02-PZM006	Aroclor-1248	12672-29-6	12/4/2001	1	ug/L	U	1
HI02-PZM006	Aroclor-1254	11097-69-1	12/4/2001	1	ug/L	U	1
HI02-PZM006	Aroclor-1260	11096-82-5	12/4/2001	1	ug/L	U	1
HI02-PZM006	Arsenic	7440-38-2	10/1/2001	2.1	ug/L	U	2.1
HI02-PZM006	Arsenic	7440-38-2	12/4/2001	2.1	ug/L	B	2
HI02-PZM006	Barium	7440-39-3	10/1/2001	33.4	ug/L	J	
HI02-PZM006	Barium	7440-39-3	12/4/2001	33.4	ug/L	J	0.14
HI02-PZM006	Benzene	71-43-2	10/1/2001	0.77	ug/L	J	
HI02-PZM006	Benzene	71-43-2	12/4/2001	1.2	ug/L		1
HI02-PZM006	Benzene	71-43-2	12/4/2001	0.77	ug/L	J	1
HI02-PZM006	Benzo(a)anthracene	56-55-3	12/4/2001	10	ug/L	U	10
HI02-PZM006	Benzo(a)pyrene	50-32-8	12/4/2001	10	ug/L	U	10
HI02-PZM006	Benzo(b)fluoranthene	205-99-2	12/4/2001	10	ug/L	U	10

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HI02-PZM006	Benzo(g,h,i)perylene	191-24-2	12/4/2001	10	ug/L	U	10
HI02-PZM006	Benzo(k)fluoranthene	207-08-9	12/4/2001	10	ug/L	U	10
HI02-PZM006	Benzo[a]anthracene	56-55-3	10/1/2001	10	ug/L	U	10
HI02-PZM006	Benzo[a]pyrene	50-32-8	10/1/2001	10	ug/L	U	10
HI02-PZM006	Benzo[b]fluoranthene	205-99-2	10/1/2001	10	ug/L	U	10
HI02-PZM006	Benzo[g,h,i]perylene	191-24-2	10/1/2001	10	ug/L	U	10
HI02-PZM006	Benzo[k]fluoranthene	207-08-9	10/1/2001	10	ug/L	U	10
HI02-PZM006	Beryllium	7440-41-7	10/1/2001	0.83	ug/L	U	0.83
HI02-PZM006	Beryllium	7440-41-7	12/4/2001	0.83	ug/L	B	0.4
HI02-PZM006	Bicarbonate	71-52-3	12/4/2001	16.5	mg/L		5
HI02-PZM006	bis(2-Chloroethoxy)methane	111-91-1	10/1/2001	10	ug/L	U	10
HI02-PZM006	bis(2-Chloroethoxy)methane	111-91-1	12/4/2001	10	ug/L	U	10
HI02-PZM006	bis(2-Chloroethyl)ether	111-44-4	10/1/2001	10	ug/L	U	10
HI02-PZM006	bis(2-Chloroethyl)ether	111-44-4	12/4/2001	10	ug/L	U	10
HI02-PZM006	bis(2-Ethylhexyl)phthalate	117-81-7	10/1/2001	10	ug/L	U	10
HI02-PZM006	bis(2-Ethylhexyl)phthalate	117-81-7	12/4/2001	10	ug/L	U	10
HI02-PZM006	Bromoform	75-25-2	10/1/2001	1	ug/L	U	1
HI02-PZM006	Bromoform	75-25-2	12/4/2001	1	ug/L	U	1
HI02-PZM006	Bromoform	75-25-2	12/4/2001	1	ug/L	U	1
HI02-PZM006	Butylbenzylphthalate	85-68-7	10/1/2001	10	ug/L	U	10
HI02-PZM006	Butylbenzylphthalate	85-68-7	12/4/2001	10	ug/L	U	10
HI02-PZM006	Cadmium	7440-43-9	10/1/2001	0.63	ug/L	U	0.63
HI02-PZM006	Cadmium	7440-43-9	12/4/2001	0.63	ug/L	U	0.63
HI02-PZM006	Calcium	7440-70-2	12/4/2001	103000	ug/L		12.2
HI02-PZM006	Carbon disulfide	75-15-0	10/1/2001	1.2	ug/L		
HI02-PZM006	Carbon disulfide	75-15-0	12/4/2001	1	ug/L	U	1
HI02-PZM006	Carbon disulfide	75-15-0	12/4/2001	1.2	ug/L		1
HI02-PZM006	Carbon tetrachloride	56-23-5	10/1/2001	1	ug/L	U	1
HI02-PZM006	Carbon tetrachloride	56-23-5	12/4/2001	1	ug/L	U	1
HI02-PZM006	Chloride	16887-00-6	10/1/2001	85600	ug/L		
HI02-PZM006	Chloride	16887-00-6	12/4/2001	85.6	mg/L		1
HI02-PZM006	Chlorobenzene	108-90-7	10/1/2001	1	ug/L	U	1
HI02-PZM006	Chlorobenzene	108-90-7	12/4/2001	1	ug/L	U	1
HI02-PZM006	Chloroethane	75-00-3	10/1/2001	2	ug/L	U	2
HI02-PZM006	Chloroethane	75-00-3	12/4/2001	2	ug/L	U	2
HI02-PZM006	Chloroethane	75-00-3	12/4/2001	2	ug/L	U	2
HI02-PZM006	Chloroform	67-66-3	10/1/2001	1	ug/L	U	1
HI02-PZM006	Chloroform	67-66-3	12/4/2001	1	ug/L	U	1
HI02-PZM006	Chromium	7440-47-3	10/1/2001	1.1	ug/L	U	1.1
HI02-PZM006	Chromium	7440-47-3	12/4/2001	1.1	ug/L	U	1.1
HI02-PZM006	Chrysene	218-01-9	10/1/2001	10	ug/L	U	10
HI02-PZM006	Chrysene	218-01-9	12/4/2001	10	ug/L	U	10
HI02-PZM006	cis-1,3-Dichloropropene	10061-01-5	10/1/2001	1	ug/L	U	1
HI02-PZM006	cis-1,3-Dichloropropene	10061-01-5	12/4/2001	1	ug/L	U	1
HI02-PZM006	Cobalt	7440-48-4	10/1/2001	0.86	ug/L	U	0.86
HI02-PZM006	Cobalt	7440-48-4	12/4/2001	0.86	ug/L	U	0.86
HI02-PZM006	Copper	7440-50-8	10/1/2001	3.9	ug/L	U	3.9
HI02-PZM006	Copper	7440-50-8	12/4/2001	3.9	ug/L	B	0.77
HI02-PZM006	Cyanide, amenable	57-12-5	10/1/2001	5000	ug/L	J	
HI02-PZM006	Dibenz(a,h)anthracene	53-70-3	12/4/2001	10	ug/L	U	10
HI02-PZM006	Dibenz[a,h]anthracene	53-70-3	10/1/2001	10	ug/L	U	10
HI02-PZM006	Dibenzofuran	132-64-9	10/1/2001	0.74	ug/L	J	
HI02-PZM006	Dibenzofuran	132-64-9	12/4/2001	0.74	ug/L	J	10
HI02-PZM006	Diethylphthalate	84-66-2	10/1/2001	10	ug/L	U	10
HI02-PZM006	Diethylphthalate	84-66-2	12/4/2001	10	ug/L	U	10
HI02-PZM006	Dimethyl phthalate	131-11-3	12/4/2001	10	ug/L	U	10
HI02-PZM006	Dimethylphthalate	131-11-3	10/1/2001	10	ug/L	U	10

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HI02-PZM006	Di-n-butylphthalate	84-74-2	10/1/2001	10	ug/L	U	10
HI02-PZM006	Di-n-butylphthalate	84-74-2	12/4/2001	10	ug/L	U	10
HI02-PZM006	Di-n-octylphthalate	117-84-0	10/1/2001	10	ug/L	U	10
HI02-PZM006	Di-n-octylphthalate	117-84-0	12/4/2001	10	ug/L	U	10
HI02-PZM006	Ethylbenzene	100-41-4	10/1/2001	1	ug/L	U	1
HI02-PZM006	Ethylbenzene	100-41-4	12/4/2001	1	ug/L	U	1
HI02-PZM006	Fluoranthene	206-44-0	10/1/2001	10	ug/L	U	10
HI02-PZM006	Fluoranthene	206-44-0	12/4/2001	10	ug/L	U	10
HI02-PZM006	Fluorene	86-73-7	10/1/2001	1.3	ug/L	J	
HI02-PZM006	Fluorene	86-73-7	12/4/2001	1.3	ug/L	J	10
HI02-PZM006	Hexachlorobenzene	118-74-1	10/1/2001	10	ug/L	U	10
HI02-PZM006	Hexachlorobenzene	118-74-1	12/4/2001	10	ug/L	U	10
HI02-PZM006	Hexachlorobutadiene	87-68-3	10/1/2001	10	ug/L	U	10
HI02-PZM006	Hexachlorobutadiene	87-68-3	12/4/2001	10	ug/L	U	10
HI02-PZM006	Hexachlorocyclopentadiene	77-47-4	10/1/2001	50	ug/L	U	50
HI02-PZM006	Hexachlorocyclopentadiene	77-47-4	12/4/2001	50	ug/L	U	50
HI02-PZM006	Hexachloroethane	67-72-1	10/1/2001	10	ug/L	U	10
HI02-PZM006	Hexachloroethane	67-72-1	12/4/2001	10	ug/L	U	10
HI02-PZM006	Indeno(1,2,3-cd)pyrene	193-39-5	12/4/2001	10	ug/L	U	10
HI02-PZM006	Indeno[1,2,3-cd]pyrene	193-39-5	10/1/2001	10	ug/L	U	10
HI02-PZM006	Iron	7439-89-6	10/1/2001	45	ug/L	U	45
HI02-PZM006	Iron	7439-89-6	12/4/2001	45	ug/L	U	45
HI02-PZM006	Isophorone	78-59-1	10/1/2001	10	ug/L	U	10
HI02-PZM006	Isophorone	78-59-1	12/4/2001	10	ug/L	U	10
HI02-PZM006	Lead	7439-92-1	10/1/2001	1.8	ug/L	U	1.8
HI02-PZM006	Lead	7439-92-1	12/4/2001	1.8	ug/L	U	1.8
HI02-PZM006	Magnesium	7439-95-4	12/4/2001	39.6	ug/L	B	7.1
HI02-PZM006	Manganese	7439-96-5	12/4/2001	0.65	ug/L	B	0.47
HI02-PZM006	Mercury	7439-97-6	10/1/2001	0.054	ug/L	R	
HI02-PZM006	Mercury	7439-97-6	12/4/2001	0.054	ug/L	R	0.054
HI02-PZM006	Methylene chloride	75-09-2	10/1/2001	2	ug/L	U	2
HI02-PZM006	Methylene chloride	75-09-2	12/4/2001	2	ug/L	U	2
HI02-PZM006	Methylene chloride	75-09-2	12/4/2001	2	ug/L	U	2
HI02-PZM006	Naphthalene	91-20-3	10/1/2001	7.3	ug/L	J	
HI02-PZM006	Naphthalene	91-20-3	12/4/2001	7.3	ug/L	J	10
HI02-PZM006	Nickel	7440-02-0	10/1/2001	2.9	ug/L	J	
HI02-PZM006	Nickel	7440-02-0	12/4/2001	2.9	ug/L	J	2.4
HI02-PZM006	Nitrobenzene	98-95-3	10/1/2001	10	ug/L	U	10
HI02-PZM006	Nitrobenzene	98-95-3	12/4/2001	10	ug/L	U	10
HI02-PZM006	Pentachloroethane	76-01-7	10/1/2001	50	ug/L	U	50
HI02-PZM006	Pentachloroethane	76-01-7	12/4/2001	50	ug/L	U	50
HI02-PZM006	Pentachlorophenol	87-86-5	10/1/2001	50	ug/L	U	50
HI02-PZM006	Pentachlorophenol	87-86-5	12/4/2001	50	ug/L	U	50
HI02-PZM006	Phenanthrene	85-01-8	10/1/2001	1.1	ug/L	J	
HI02-PZM006	Phenanthrene	85-01-8	12/4/2001	1.1	ug/L	J	10
HI02-PZM006	Phenol	108-95-2	10/1/2001	2.6	ug/L	J	
HI02-PZM006	Phenol	108-95-2	12/4/2001	2.6	ug/L	J	10
HI02-PZM006	Potassium	2023695	12/4/2001	43100	ug/L	J	519
HI02-PZM006	Pyrene	129-00-0	10/1/2001	10	ug/L	U	10
HI02-PZM006	Pyrene	129-00-0	12/4/2001	10	ug/L	U	10
HI02-PZM006	Pyridine	110-86-1	10/1/2001	20	ug/L	U	20
HI02-PZM006	Pyridine	110-86-1	12/4/2001	20	ug/L	U	20
HI02-PZM006	Selenium	7782-49-2	10/1/2001	3.2	ug/L	U	3.2
HI02-PZM006	Selenium	7782-49-2	12/4/2001	3.2	ug/L	U	3.2
HI02-PZM006	Silver	7440-22-4	10/1/2001	1.1	ug/L	U	1.1
HI02-PZM006	Silver	7440-22-4	12/4/2001	1.1	ug/L	B	0.75
HI02-PZM006	Sodium	7440-23-5	12/4/2001	68300	ug/L		15

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HI02-PZM006	Sulfate	18785-72-3	10/1/2001	198000	ug/L		
HI02-PZM006	Sulfate	14808-79-8	12/4/2001	198	mg/L		5
HI02-PZM006	Sulfide	9073-75-0	10/1/2001	1000	ug/L	U	1000
HI02-PZM006	Sulfide	18496-25-8	12/4/2001	1	mg/L	U	1
HI02-PZM006	Tetrachloroethene	127-18-4	10/1/2001	1	ug/L	U	1
HI02-PZM006	Tetrachloroethene	127-18-4	12/4/2001	1	ug/L	U	1
HI02-PZM006	Thallium	7440-28-0	10/1/2001	5.7	ug/L	U	5.7
HI02-PZM006	Thallium	7440-28-0	12/4/2001	5.7	ug/L	U	5.7
HI02-PZM006	Tin	7440-31-5	10/1/2001	28.8	ug/L	U	28.8
HI02-PZM006	Tin	7440-31-5	12/4/2001	28.8	ug/L	U	28.8
HI02-PZM006	Toluene	108-88-3	10/1/2001	0.67	ug/L	J	
HI02-PZM006	Toluene	108-88-3	12/4/2001	0.47	ug/L	J	1
HI02-PZM006	Toluene	108-88-3	12/4/2001	0.67	ug/L	J	1
HI02-PZM006	trans-1,2-Dichloroethene	156-60-5	10/1/2001	1	ug/L	U	1
HI02-PZM006	trans-1,2-Dichloroethene	156-60-5	12/4/2001	1	ug/L	U	1
HI02-PZM006	trans-1,3-Dichloropropene	10061-02-6	10/1/2001	1	ug/L	U	1
HI02-PZM006	trans-1,3-Dichloropropene	10061-02-6	12/4/2001	1	ug/L	U	1
HI02-PZM006	Trichloroethene	79-01-6	10/1/2001	1	ug/L	U	1
HI02-PZM006	Trichloroethene	79-01-6	12/4/2001	1	ug/L	U	1
HI02-PZM006	Vanadium	7440-62-2	10/1/2001	182	ug/L		
HI02-PZM006	Vanadium	7440-62-2	12/4/2001	182	ug/L		1.5
HI02-PZM006	Vinyl chloride	75-01-4	10/1/2001	2	ug/L	U	2
HI02-PZM006	Vinyl chloride	75-01-4	12/4/2001	2	ug/L	U	2
HI02-PZM006	Xylene, total	1330-20-7	12/4/2001	3	ug/L	U	3
HI02-PZM006	Xylene, total	1330-20-7	12/4/2001	0.97	ug/L	J	3
HI02-PZM006	Xylenes	1330-20-7	10/1/2001	0.97	ug/L	J	
HI02-PZM006	Zinc	7440-66-6	10/1/2001	2.1	ug/L	U	2.1
HI02-PZM006	Zinc	7440-66-6	12/4/2001	2.1	ug/L	B	1.5
HI07-PZM005	1,1,1,2-Tetrachloroethane	630-20-6	10/1/2001	1	ug/L	U	1
HI07-PZM005	1,1,1,2-Tetrachloroethane	630-20-6	11/28/2001	1	ug/L	U	1
HI07-PZM005	1,1,1,2-Tetrachloroethane	630-20-6	7/1/2004	1	ug/L	U	1
HI07-PZM005	1,1,1-Trichloroethane	71-55-6	10/1/2001	1	ug/L	U	1
HI07-PZM005	1,1,1-Trichloroethane	71-55-6	11/28/2001	1	ug/L	U	1
HI07-PZM005	1,1,1-Trichloroethane	71-55-6	7/1/2004	1	ug/L	U	1
HI07-PZM005	1,1,2,2-Tetrachloroethane	79-34-5	10/1/2001	1	ug/L	U	1
HI07-PZM005	1,1,2,2-Tetrachloroethane	79-34-5	11/28/2001	1	ug/L	U	1
HI07-PZM005	1,1,2,2-Tetrachloroethane	79-34-5	7/1/2004	1	ug/L	U	1
HI07-PZM005	1,1,2-Trichloroethane	79-00-5	10/1/2001	1	ug/L	U	1
HI07-PZM005	1,1,2-Trichloroethane	79-00-5	11/28/2001	1	ug/L	U	1
HI07-PZM005	1,1,2-Trichloroethane	79-00-5	7/1/2004	1	ug/L	U	1
HI07-PZM005	1,1-Dichloroethane	75-34-3	10/1/2001	1	ug/L	U	1
HI07-PZM005	1,1-Dichloroethane	75-34-3	11/28/2001	1	ug/L	U	1
HI07-PZM005	1,1-Dichloroethane	75-34-3	7/1/2004	1	ug/L	U	1
HI07-PZM005	1,1-Dichloroethene	75-35-4	10/1/2001	1	ug/L	U	1
HI07-PZM005	1,1-Dichloroethene	75-35-4	11/28/2001	1	ug/L	U	1
HI07-PZM005	1,1-Dichloroethene	75-35-4	7/1/2004	1	ug/L	U	1
HI07-PZM005	1,2,4-Trichlorobenzene	120-82-1	10/1/2001	10	ug/L	U	10
HI07-PZM005	1,2,4-Trichlorobenzene	120-82-1	11/28/2001	10	ug/L	U	10
HI07-PZM005	1,2,4-Trichlorobenzene	120-82-1	7/1/2004	10	ug/L	U	10
HI07-PZM005	1,2-Dichlorobenzene	95-50-1	10/1/2001	10	ug/L	U	10
HI07-PZM005	1,2-Dichlorobenzene	95-50-1	11/28/2001	10	ug/L	U	10
HI07-PZM005	1,2-Dichlorobenzene	95-50-1	7/1/2004	10	ug/L	U	10
HI07-PZM005	1,2-Dichloroethane	107-06-2	10/1/2001	1	ug/L	U	1
HI07-PZM005	1,2-Dichloroethane	107-06-2	11/28/2001	1	ug/L	U	1
HI07-PZM005	1,2-Dichloroethane	107-06-2	7/1/2004	1	ug/L	U	1
HI07-PZM005	1,2-Dichloropropane	78-87-5	10/1/2001	1	ug/L	U	1
HI07-PZM005	1,2-Dichloropropane	78-87-5	11/28/2001	1	ug/L	U	1

Well	Chemical Analyte	CAS #	Sample Date	Result	Units	Qualifier	Detection Limit
HI07-PZM005	1,2-Dichloropropane	78-87-5	7/1/2004	1	ug/L	U	1
HI07-PZM005	1,3-Dichlorobenzene	541-73-1	10/1/2001	10	ug/L	U	10
HI07-PZM005	1,3-Dichlorobenzene	541-73-1	11/28/2001	10	ug/L	U	10
HI07-PZM005	1,3-Dichlorobenzene	541-73-1	7/1/2004	10	ug/L	U	10
HI07-PZM005	1,4-Dichlorobenzene	106-46-7	10/1/2001	10	ug/L	U	10
HI07-PZM005	1,4-Dichlorobenzene	106-46-7	11/28/2001	10	ug/L	U	10
HI07-PZM005	1,4-Dichlorobenzene	106-46-7	7/1/2004	10	ug/L	U	10
HI07-PZM005	2,2'-Oxybis(1-chloropropane)	108-60-1	11/28/2001	20	ug/L	U	20
HI07-PZM005	2,4,5-Trichlorophenol	95-95-4	10/1/2001	10	ug/L	U	10
HI07-PZM005	2,4,5-Trichlorophenol	95-95-4	11/28/2001	10	ug/L	U	10
HI07-PZM005	2,4,5-Trichlorophenol	95-95-4	7/1/2004	10	ug/L	U	10
HI07-PZM005	2,4,6-Trichlorophenol	88-06-2	10/1/2001	10	ug/L	U	10
HI07-PZM005	2,4,6-Trichlorophenol	88-06-2	11/28/2001	10	ug/L	U	10
HI07-PZM005	2,4,6-Trichlorophenol	88-06-2	7/1/2004	10	ug/L	U	10
HI07-PZM005	2,4-Dichlorophenol	120-83-2	10/1/2001	10	ug/L	U	10
HI07-PZM005	2,4-Dichlorophenol	120-83-2	11/28/2001	10	ug/L	U	10
HI07-PZM005	2,4-Dichlorophenol	120-83-2	7/1/2004	10	ug/L	U	10
HI07-PZM005	2,4-Dimethylphenol	105-67-9	10/1/2001	22	ug/L		
HI07-PZM005	2,4-Dimethylphenol	105-67-9	11/28/2001	22	ug/L		10
HI07-PZM005	2,4-Dimethylphenol	105-67-9	7/1/2004	14	ug/L		
HI07-PZM005	2,4-Dinitrophenol	51-28-5	10/1/2001	50	ug/L	U	50
HI07-PZM005	2,4-Dinitrophenol	51-28-5	11/28/2001	50	ug/L	U	50
HI07-PZM005	2,4-Dinitrophenol	51-28-5	7/1/2004	50	ug/L	U	50
HI07-PZM005	2,4-Dinitrotoluene	121-14-2	10/1/2001	10	ug/L	U	10
HI07-PZM005	2,4-Dinitrotoluene	121-14-2	11/28/2001	10	ug/L	U	10
HI07-PZM005	2,4-Dinitrotoluene	121-14-2	7/1/2004	10	ug/L	U	10
HI07-PZM005	2,6-Dinitrotoluene	606-20-2	10/1/2001	10	ug/L	U	10
HI07-PZM005	2,6-Dinitrotoluene	606-20-2	11/28/2001	10	ug/L	U	10
HI07-PZM005	2,6-Dinitrotoluene	606-20-2	7/1/2004	10	ug/L	U	10
HI07-PZM005	2-Butanone	78-93-3	11/28/2001	5	ug/L	U	5
HI07-PZM005	2-Butanone (MEK)	78-93-3	10/1/2001	5	ug/L	U	5
HI07-PZM005	2-Butanone (MEK)	78-93-3	7/1/2004	5	ug/L	U	5
HI07-PZM005	2-Chloronaphthalene	91-58-7	10/1/2001	10	ug/L	U	10
HI07-PZM005	2-Chloronaphthalene	91-58-7	11/28/2001	10	ug/L	U	10
HI07-PZM005	2-Chloronaphthalene	91-58-7	7/1/2004	10	ug/L	U	10
HI07-PZM005	2-Chlorophenol	95-57-8	10/1/2001	10	ug/L	U	10
HI07-PZM005	2-Chlorophenol	95-57-8	11/28/2001	10	ug/L	U	10
HI07-PZM005	2-Chlorophenol	95-57-8	7/1/2004	10	ug/L	U	10
HI07-PZM005	2-Hexanone	591-78-6	10/1/2001	5	ug/L	U	5
HI07-PZM005	2-Hexanone	591-78-6	11/28/2001	5	ug/L	U	5
HI07-PZM005	2-Hexanone	591-78-6	7/1/2004	5	ug/L	U	5
HI07-PZM005	2-Methylnaphthalene	91-57-6	10/1/2001	2.4	ug/L	J	
HI07-PZM005	2-Methylnaphthalene	91-57-6	11/28/2001	2.4	ug/L	J	10
HI07-PZM005	2-Methylnaphthalene	91-57-6	7/1/2004	10	ug/L	U	10
HI07-PZM005	2-Methylphenol	95-48-7	10/1/2001	0.94	ug/L	J	
HI07-PZM005	2-Methylphenol	95-48-7	11/28/2001	0.94	ug/L	J	10
HI07-PZM005	2-Methylphenol	95-48-7	7/1/2004	10	ug/L	U	10
HI07-PZM005	2-Nitrophenol	88-75-5	10/1/2001	10	ug/L	U	10
HI07-PZM005	2-Nitrophenol	88-75-5	11/28/2001	10	ug/L	U	10
HI07-PZM005	2-Nitrophenol	88-75-5	7/1/2004	10	ug/L	U	10
HI07-PZM005	3-&4-Methylphenol	108-39-4 and 106-44-5	10/1/2001	10	ug/L		
HI07-PZM005	3-&4-Methylphenol	108-39-4 and 106-44-5	7/1/2004	8.2	ug/L	J	
HI07-PZM005	3,3´-Dichlorobenzidine	91-94-1	10/1/2001	50	ug/L	U	50
HI07-PZM005	3,3´-Dichlorobenzidine	91-94-1	7/1/2004	20	ug/L	U	20
HI07-PZM005	3,3'-Dichlorobenzidine	91-94-1	11/28/2001	50	ug/L	U	50
HI07-PZM005	3,3'-Dimethylbenzidine	119-93-7	10/1/2001	50	ug/L	U	50
HI07-PZM005	3,3'-Dimethylbenzidine	119-93-7	11/28/2001	50	ug/L	U	50

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HI07-PZM005	3,3'-Dimethylbenzidine	119-93-7	7/1/2004	50	ug/L	U	50
HI07-PZM005	4,6-Dinitro-2-methylphenol	534-52-1	10/1/2001	50	ug/L	U	50
HI07-PZM005	4,6-Dinitro-2-methylphenol	534-52-1	11/28/2001	50	ug/L	U	50
HI07-PZM005	4,6-Dinitro-2-methylphenol	534-52-1	7/1/2004	50	ug/L	U	50
HI07-PZM005	4-Bromophenyl phenyl ether	101-55-3	10/1/2001	10	ug/L	U	10
HI07-PZM005	4-Bromophenyl phenyl ether	101-55-3	7/1/2004	10	ug/L	U	10
HI07-PZM005	4-Bromophenyl-phenylether	101-55-3	11/28/2001	10	ug/L	U	10
HI07-PZM005	4-Chloro-3-methylphenol	59-50-7	10/1/2001	10	ug/L	U	10
HI07-PZM005	4-Chloro-3-methylphenol	59-50-7	11/28/2001	10	ug/L	U	10
HI07-PZM005	4-Chloro-3-methylphenol	59-50-7	7/1/2004	10	ug/L	U	10
HI07-PZM005	4-Chlorophenyl phenyl ether	7005-72-3	10/1/2001	10	ug/L	U	10
HI07-PZM005	4-Chlorophenyl phenyl ether	7005-72-3	7/1/2004	10	ug/L	U	10
HI07-PZM005	4-Chlorophenyl-phenylether	7005-72-3	11/28/2001	10	ug/L	U	10
HI07-PZM005	4-Methyl-2-pentanone	108-10-1	11/28/2001	5	ug/L	U	5
HI07-PZM005	4-Methyl-2-pentanone (MIBK)	108-10-1	10/1/2001	5	ug/L	U	5
HI07-PZM005	4-Methyl-2-pentanone (MIBK)	108-10-1	7/1/2004	5	ug/L	U	5
HI07-PZM005	4-Methylphenol	106-44-5	11/28/2001	10	ug/L		10
HI07-PZM005	4-Nitrophenol	100-02-7	10/1/2001	50	ug/L	U	50
HI07-PZM005	4-Nitrophenol	100-02-7	11/28/2001	50	ug/L	U	50
HI07-PZM005	4-Nitrophenol	100-02-7	7/1/2004	50	ug/L	U	50
HI07-PZM005	Acenaphthene	83-32-9	10/1/2001	0.85	ug/L	J	
HI07-PZM005	Acenaphthene	83-32-9	11/28/2001	0.85	ug/L	J	10
HI07-PZM005	Acenaphthene	83-32-9	7/1/2004	10	ug/L	U	10
HI07-PZM005	Acenaphthylene	208-96-8	10/1/2001	1.2	ug/L	J	
HI07-PZM005	Acenaphthylene	208-96-8	11/28/2001	1.2	ug/L	J	10
HI07-PZM005	Acenaphthylene	208-96-8	7/1/2004	10	ug/L	U	10
HI07-PZM005	Acetone	67-64-1	10/1/2001	10	ug/L	U	10
HI07-PZM005	Acetone	67-64-1	11/28/2001	10	ug/L	U	10
HI07-PZM005	Acetone	67-64-1	7/1/2004	6.8	ug/L		
HI07-PZM005	Amenable cyanide	AMENABLECN	11/28/2001	0.45	mg/L	J	0.002
HI07-PZM005	Anthracene	120-12-7	10/1/2001	10	ug/L	U	10
HI07-PZM005	Anthracene	120-12-7	11/28/2001	10	ug/L	U	10
HI07-PZM005	Anthracene	120-12-7	7/1/2004	10	ug/L	U	10
HI07-PZM005	Antimony	7440-36-0	10/1/2001	4.1	ug/L	U	4.1
HI07-PZM005	Antimony	7440-36-0	11/28/2001	4.1	ug/L	U	4.1
HI07-PZM005	Antimony	7440-36-0	7/1/2004	2	ug/L	U	2
HI07-PZM005	Antimony, dissolved	7440-36-0	7/1/2004	2	ug/L	U	2
HI07-PZM005	Aroclor-1016	12674-11-2	11/28/2001	1	ug/L	U	1
HI07-PZM005	Aroclor-1221	11104-28-2	11/28/2001	1	ug/L	U	1
HI07-PZM005	Aroclor-1232	11141-16-5	11/28/2001	1	ug/L	U	1
HI07-PZM005	Aroclor-1242	53469-21-9	11/28/2001	1	ug/L	U	1
HI07-PZM005	Aroclor-1248	12672-29-6	11/28/2001	1	ug/L	U	1
HI07-PZM005	Aroclor-1254	11097-69-1	11/28/2001	1	ug/L	U	1
HI07-PZM005	Aroclor-1260	11096-82-5	11/28/2001	1	ug/L	U	1
HI07-PZM005	Arsenic	7440-38-2	10/1/2001	2	ug/L	U	2
HI07-PZM005	Arsenic	7440-38-2	11/28/2001	2	ug/L	U	2
HI07-PZM005	Arsenic	7440-38-2	7/1/2004	5	ug/L	U	5
HI07-PZM005	Arsenic, dissolved	7440-38-2	7/1/2004	5	ug/L	U	5
HI07-PZM005	Barium	7440-39-3	10/1/2001	137	ug/L	J	
HI07-PZM005	Barium	7440-39-3	11/28/2001	137	ug/L	J	0.14
HI07-PZM005	Barium	7440-39-3	7/1/2004	110	ug/L		
HI07-PZM005	Barium, dissolved	7440-39-3	7/1/2004	110	ug/L		
HI07-PZM005	Benzene	71-43-2	10/1/2001	25	ug/L		
HI07-PZM005	Benzene	71-43-2	11/28/2001	25	ug/L		1
HI07-PZM005	Benzene	71-43-2	7/1/2004	16	ug/L		
HI07-PZM005	Benzo(a)anthracene	56-55-3	11/28/2001	10	ug/L	U	10
HI07-PZM005	Benzo(a)pyrene	50-32-8	11/28/2001	10	ug/L	U	10

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HI07-PZM005	Benzo(b)fluoranthene	205-99-2	11/28/2001	10	ug/L	U	10
HI07-PZM005	Benzo(g,h,i)perylene	191-24-2	11/28/2001	10	ug/L	U	10
HI07-PZM005	Benzo(k)fluoranthene	207-08-9	11/28/2001	10	ug/L	U	10
HI07-PZM005	Benzo[a]anthracene	56-55-3	10/1/2001	10	ug/L	U	10
HI07-PZM005	Benzo[a]anthracene	56-55-3	7/1/2004	10	ug/L	U	10
HI07-PZM005	Benzo[a]pyrene	50-32-8	10/1/2001	10	ug/L	U	10
HI07-PZM005	Benzo[a]pyrene	50-32-8	7/1/2004	10	ug/L	U	10
HI07-PZM005	Benzo[b]fluoranthene	205-99-2	10/1/2001	10	ug/L	U	10
HI07-PZM005	Benzo[b]fluoranthene	205-99-2	7/1/2004	10	ug/L	U	10
HI07-PZM005	Benzo[g,h,i]perylene	191-24-2	10/1/2001	10	ug/L	U	10
HI07-PZM005	Benzo[g,h,i]perylene	191-24-2	7/1/2004	10	ug/L	U	10
HI07-PZM005	Benzo[k]fluoranthene	207-08-9	10/1/2001	10	ug/L	U	10
HI07-PZM005	Benzo[k]fluoranthene	207-08-9	7/1/2004	10	ug/L	U	10
HI07-PZM005	Beryllium	7440-41-7	10/1/2001	2.9	ug/L	U	2.9
HI07-PZM005	Beryllium	7440-41-7	11/28/2001	2.9	ug/L	B	0.4
HI07-PZM005	Beryllium	7440-41-7	7/1/2004	1	ug/L	U	1
HI07-PZM005	Beryllium, dissolved	7440-41-7	7/1/2004	1	ug/L	U	1
HI07-PZM005	Bicarbonate	71-52-3	12/19/2000	10	mg/L	U	10
HI07-PZM005	bis(2-Chloroethoxy)methane	111-91-1	10/1/2001	10	ug/L	U	10
HI07-PZM005	bis(2-Chloroethoxy)methane	111-91-1	11/28/2001	10	ug/L	U	10
HI07-PZM005	bis(2-Chloroethoxy)methane	111-91-1	7/1/2004	10	ug/L	U	10
HI07-PZM005	bis(2-Chloroethyl)ether	111-44-4	10/1/2001	10	ug/L	U	10
HI07-PZM005	bis(2-Chloroethyl)ether	111-44-4	11/28/2001	10	ug/L	U	10
HI07-PZM005	bis(2-Chloroethyl)ether	111-44-4	7/1/2004	10	ug/L	U	10
HI07-PZM005	bis(2-Ethylhexyl)phthalate	117-81-7	10/1/2001	10	ug/L	U	10
HI07-PZM005	bis(2-Ethylhexyl)phthalate	117-81-7	11/28/2001	10	ug/L	U	10
HI07-PZM005	bis(2-Ethylhexyl)phthalate	117-81-7	7/1/2004	10	ug/L	U	10
HI07-PZM005	Bromoform	75-25-2	10/1/2001	1	ug/L	U	1
HI07-PZM005	Bromoform	75-25-2	11/28/2001	1	ug/L	U	1
HI07-PZM005	Bromoform	75-25-2	7/1/2004	1	ug/L	U	1
HI07-PZM005	Butylbenzylphthalate	85-68-7	10/1/2001	10	ug/L	U	10
HI07-PZM005	Butylbenzylphthalate	85-68-7	11/28/2001	10	ug/L	U	10
HI07-PZM005	Butylbenzylphthalate	85-68-7	7/1/2004	10	ug/L	U	10
HI07-PZM005	Cadmium	7440-43-9	10/1/2001	0.63	ug/L	U	0.63
HI07-PZM005	Cadmium	7440-43-9	11/28/2001	0.63	ug/L	U	0.63
HI07-PZM005	Cadmium	7440-43-9	7/1/2004	1	ug/L	U	1
HI07-PZM005	Cadmium, dissolved	7440-43-9	7/1/2004	1	ug/L	U	1
HI07-PZM005	Calcium	7440-70-2	12/19/2000	210	mg/L		0.5
HI07-PZM005	Carbon disulfide	75-15-0	10/1/2001	1	ug/L	U	1
HI07-PZM005	Carbon disulfide	75-15-0	11/28/2001	1	ug/L	U	1
HI07-PZM005	Carbon disulfide	75-15-0	7/1/2004	1	ug/L	U	1
HI07-PZM005	Carbon tetrachloride	56-23-5	10/1/2001	1	ug/L	U	1
HI07-PZM005	Carbon tetrachloride	56-23-5	11/28/2001	1	ug/L	U	1
HI07-PZM005	Carbon tetrachloride	56-23-5	7/1/2004	1	ug/L	U	1
HI07-PZM005	Chloride	16887-00-6	10/1/2000	68000	ug/L		
HI07-PZM005	Chloride	16887-00-6	12/19/2000	68	mg/L		1
HI07-PZM005	Chlorobenzene	108-90-7	10/1/2001	1	ug/L	U	1
HI07-PZM005	Chlorobenzene	108-90-7	11/28/2001	1	ug/L	U	1
HI07-PZM005	Chlorobenzene	108-90-7	7/1/2004	1	ug/L	UL	1
HI07-PZM005	Chloroethane	75-00-3	10/1/2001	2	ug/L	U	2
HI07-PZM005	Chloroethane	75-00-3	11/28/2001	2	ug/L	U	2
HI07-PZM005	Chloroethane	75-00-3	7/1/2004	1	ug/L	U	1
HI07-PZM005	Chloroform	67-66-3	10/1/2001	1	ug/L	U	1
HI07-PZM005	Chloroform	67-66-3	11/28/2001	1	ug/L	U	1
HI07-PZM005	Chloroform	67-66-3	7/1/2004	1	ug/L	U	1
HI07-PZM005	Chromium	7440-47-3	10/1/2001	5.3	ug/L		
HI07-PZM005	Chromium	7440-47-3	11/28/2001	5.3	ug/L		1.1

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HI07-PZM005	Chromium	7440-47-3	7/1/2004	13	ug/L	U	13
HI07-PZM005	Chromium, dissolved	7440-47-3	7/1/2004	12	ug/L	U	12
HI07-PZM005	Chrysene	218-01-9	10/1/2001	10	ug/L	U	10
HI07-PZM005	Chrysene	218-01-9	11/28/2001	10	ug/L	U	10
HI07-PZM005	Chrysene	218-01-9	7/1/2004	10	ug/L	U	10
HI07-PZM005	cis-1,3-Dichloropropene	10061-01-5	10/1/2001	1	ug/L	U	1
HI07-PZM005	cis-1,3-Dichloropropene	10061-01-5	11/28/2001	1	ug/L	U	1
HI07-PZM005	cis-1,3-Dichloropropene	10061-01-5	7/1/2004	1	ug/L	U	1
HI07-PZM005	Cobalt	7440-48-4	10/1/2001	0.86	ug/L	U	0.86
HI07-PZM005	Cobalt	7440-48-4	11/28/2001	0.86	ug/L	U	0.86
HI07-PZM005	Cobalt	7440-48-4	7/1/2004	0.7	ug/L	J	
HI07-PZM005	Cobalt, dissolved	7440-48-4	7/1/2004	0.7	ug/L	J	
HI07-PZM005	Copper	7440-50-8	10/1/2001	7.5	ug/L	U	7.5
HI07-PZM005	Copper	7440-50-8	11/28/2001	7.5	ug/L	B	0.77
HI07-PZM005	Copper	7440-50-8	7/1/2004	2	ug/L	J	
HI07-PZM005	Copper, dissolved	7440-50-8	7/1/2004	2	ug/L	U	2
HI07-PZM005	Cyanide, amenable	57-12-5	10/1/2001	450	ug/L	J	
HI07-PZM005	Cyanide, available	57-12-5	7/1/2004	2	ug/L	U	2
HI07-PZM005	Cyanide, total	57-12-5	7/1/2004	20	ug/L		
HI07-PZM005	Dibenz(a,h)anthracene	53-70-3	11/28/2001	10	ug/L	U	10
HI07-PZM005	Dibenz[a,h]anthracene	53-70-3	10/1/2001	10	ug/L	U	10
HI07-PZM005	Dibenz[a,h]anthracene	53-70-3	7/1/2004	10	ug/L	U	10
HI07-PZM005	Dibenzofuran	132-64-9	10/1/2001	0.91	ug/L	J	
HI07-PZM005	Dibenzofuran	132-64-9	11/28/2001	0.91	ug/L	J	10
HI07-PZM005	Dibenzofuran	132-64-9	7/1/2004	10	ug/L	U	10
HI07-PZM005	Diethylphthalate	84-66-2	10/1/2001	10	ug/L	U	10
HI07-PZM005	Diethylphthalate	84-66-2	11/28/2001	10	ug/L	U	10
HI07-PZM005	Diethylphthalate	84-66-2	7/1/2004	10	ug/L	U	10
HI07-PZM005	Dimethyl phthalate	131-11-3	11/28/2001	10	ug/L	U	10
HI07-PZM005	Dimethylphthalate	131-11-3	10/1/2001	10	ug/L	U	10
HI07-PZM005	Dimethylphthalate	131-11-3	7/1/2004	10	ug/L	U	10
HI07-PZM005	Di-n-butylphthalate	84-74-2	10/1/2001	10	ug/L	U	10
HI07-PZM005	Di-n-butylphthalate	84-74-2	11/28/2001	10	ug/L	U	10
HI07-PZM005	Di-n-butylphthalate	84-74-2	7/1/2004	10	ug/L	U	10
HI07-PZM005	Di-n-octylphthalate	117-84-0	10/1/2001	10	ug/L	U	10
HI07-PZM005	Di-n-octylphthalate	117-84-0	11/28/2001	10	ug/L	U	10
HI07-PZM005	Di-n-octylphthalate	117-84-0	7/1/2004	10	ug/L	U	10
HI07-PZM005	Ethylbenzene	100-41-4	10/1/2001	0.43	ug/L	J	
HI07-PZM005	Ethylbenzene	100-41-4	11/28/2001	0.43	ug/L	J	1
HI07-PZM005	Ethylbenzene	100-41-4	7/1/2004	1	ug/L	U	1
HI07-PZM005	Fluoranthene	206-44-0	10/1/2001	1	ug/L	J	
HI07-PZM005	Fluoranthene	206-44-0	11/28/2001	1	ug/L	J	10
HI07-PZM005	Fluoranthene	206-44-0	7/1/2004	10	ug/L	U	10
HI07-PZM005	Fluorene	86-73-7	10/1/2001	1.2	ug/L	J	
HI07-PZM005	Fluorene	86-73-7	11/28/2001	1.2	ug/L	J	10
HI07-PZM005	Fluorene	86-73-7	7/1/2004	10	ug/L	U	10
HI07-PZM005	Hexachlorobenzene	118-74-1	10/1/2001	10	ug/L	U	10
HI07-PZM005	Hexachlorobenzene	118-74-1	11/28/2001	10	ug/L	U	10
HI07-PZM005	Hexachlorobenzene	118-74-1	7/1/2004	10	ug/L	U	10
HI07-PZM005	Hexachlorobutadiene	87-68-3	10/1/2001	10	ug/L	U	10
HI07-PZM005	Hexachlorobutadiene	87-68-3	11/28/2001	10	ug/L	U	10
HI07-PZM005	Hexachlorobutadiene	87-68-3	7/1/2004	10	ug/L	U	10
HI07-PZM005	Hexachlorocyclopentadiene	77-47-4	10/1/2001	50	ug/L	U	50
HI07-PZM005	Hexachlorocyclopentadiene	77-47-4	11/28/2001	50	ug/L	U	50
HI07-PZM005	Hexachlorocyclopentadiene	77-47-4	7/1/2004	10	ug/L	U	10
HI07-PZM005	Hexachloroethane	67-72-1	10/1/2001	10	ug/L	U	10
HI07-PZM005	Hexachloroethane	67-72-1	11/28/2001	10	ug/L	U	10

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HI07-PZM005	Hexachloroethane	67-72-1	7/1/2004	10	ug/L	U	10
HI07-PZM005	Indeno(1,2,3-cd)pyrene	193-39-5	11/28/2001	10	ug/L	U	10
HI07-PZM005	Indeno[1,2,3-cd]pyrene	193-39-5	10/1/2001	10	ug/L	U	10
HI07-PZM005	Indeno[1,2,3-cd]pyrene	193-39-5	7/1/2004	10	ug/L	U	10
HI07-PZM005	Iron	7439-89-6	10/1/2000	300	ug/L		
HI07-PZM005	Iron	7439-89-6	12/19/2000	0.3	mg/L		0.1
HI07-PZM005	Iron	7439-89-6	7/1/2004	100	ug/L	U	100
HI07-PZM005	Isophorone	78-59-1	10/1/2001	10	ug/L	U	10
HI07-PZM005	Isophorone	78-59-1	11/28/2001	10	ug/L	U	10
HI07-PZM005	Isophorone	78-59-1	7/1/2004	10	ug/L	U	10
HI07-PZM005	Lead	7439-92-1	10/1/2001	4.8	ug/L		
HI07-PZM005	Lead	7439-92-1	11/28/2001	4.8	ug/L		1.8
HI07-PZM005	Lead	7439-92-1	7/1/2004	1	ug/L	U	1
HI07-PZM005	Lead, dissolved	7439-92-1	7/1/2004	1	ug/L	U	1
HI07-PZM005	Magnesium	7439-95-4	12/19/2000	0.1	mg/L		0.1
HI07-PZM005	Manganese	7439-96-5	12/19/2000	0.03	mg/L		0.01
HI07-PZM005	Mercury	7439-97-6	10/1/2001	0.054	ug/L	U	0.054
HI07-PZM005	Mercury	7439-97-6	11/28/2001	0.054	ug/L	U	0.054
HI07-PZM005	Mercury	7439-97-6	7/1/2004	0.2	ug/L	U	0.2
HI07-PZM005	Mercury, dissolved	7439-97-6	7/1/2004	0.2	ug/L	U	0.2
HI07-PZM005	Methylene chloride	75-09-2	10/1/2001	2	ug/L	U	2
HI07-PZM005	Methylene chloride	75-09-2	11/28/2001	2	ug/L	U	2
HI07-PZM005	Methylene chloride	75-09-2	7/1/2004	2.1	ug/L	U	2.1
HI07-PZM005	Naphthalene	91-20-3	10/1/2001	40	ug/L		
HI07-PZM005	Naphthalene	91-20-3	11/28/2001	40	ug/L		10
HI07-PZM005	Naphthalene	91-20-3	7/1/2004	16	ug/L		
HI07-PZM005	Nickel	7440-02-0	10/1/2001	5.1	ug/L	J	
HI07-PZM005	Nickel	7440-02-0	11/28/2001	5.1	ug/L	J	2.4
HI07-PZM005	Nickel	7440-02-0	7/1/2004	13	ug/L		
HI07-PZM005	Nickel, dissolved	7440-02-0	7/1/2004	13	ug/L		
HI07-PZM005	Nitrobenzene	98-95-3	10/1/2001	10	ug/L	U	10
HI07-PZM005	Nitrobenzene	98-95-3	11/28/2001	10	ug/L	U	10
HI07-PZM005	Nitrobenzene	98-95-3	7/1/2004	10	ug/L	U	10
HI07-PZM005	Pentachloroethane	76-01-7	10/1/2001	50	ug/L	U	50
HI07-PZM005	Pentachloroethane	76-01-7	11/28/2001	50	ug/L	U	50
HI07-PZM005	Pentachloroethane	76-01-7	7/1/2004	50	ug/L	U	50
HI07-PZM005	Pentachlorophenol	87-86-5	10/1/2001	50	ug/L	U	50
HI07-PZM005	Pentachlorophenol	87-86-5	11/28/2001	50	ug/L	U	50
HI07-PZM005	Pentachlorophenol	87-86-5	7/1/2004	50	ug/L	U	50
HI07-PZM005	Phenanthrene	85-01-8	10/1/2001	3	ug/L	J	
HI07-PZM005	Phenanthrene	85-01-8	11/28/2001	3	ug/L	J	10
HI07-PZM005	Phenanthrene	85-01-8	7/1/2004	10	ug/L	U	10
HI07-PZM005	Phenol	108-95-2	10/1/2001	4.8	ug/L	J	
HI07-PZM005	Phenol	108-95-2	11/28/2001	4.8	ug/L	J	10
HI07-PZM005	Phenol	108-95-2	7/1/2004	10	ug/L	U	10
HI07-PZM005	Potassium	2023695	12/19/2000	38	mg/L		0.1
HI07-PZM005	Pyrene	129-00-0	10/1/2001	10	ug/L	U	10
HI07-PZM005	Pyrene	129-00-0	11/28/2001	10	ug/L	U	10
HI07-PZM005	Pyrene	129-00-0	7/1/2004	10	ug/L	U	10
HI07-PZM005	Pyridine	110-86-1	10/1/2001	4.1	ug/L	J	
HI07-PZM005	Pyridine	110-86-1	11/28/2001	4.1	ug/L	J	20
HI07-PZM005	Pyridine	110-86-1	7/1/2004	20	ug/L	U	20
HI07-PZM005	Selenium	7782-49-2	10/1/2001	3.2	ug/L	U	3.2
HI07-PZM005	Selenium	7782-49-2	11/28/2001	3.2	ug/L	U	3.2
HI07-PZM005	Selenium	7782-49-2	7/1/2004	5	ug/L	J	
HI07-PZM005	Selenium, dissolved	7782-49-2	7/1/2004	5	ug/L	U	5
HI07-PZM005	Silver	7440-22-4	10/1/2001	0.75	ug/L	U	0.75

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HI07-PZM005	Silver	7440-22-4	11/28/2001	0.75	ug/L	U	0.75
HI07-PZM005	Silver	7440-22-4	7/1/2004	5	ug/L	U	5
HI07-PZM005	Silver, dissolved	7440-22-4	7/1/2004	5	ug/L	U	5
HI07-PZM005	Sodium	7440-23-5	12/19/2000	42	mg/L		0.5
HI07-PZM005	Sulfate	18785-72-3	10/1/2000	110000	ug/L		
HI07-PZM005	Sulfate	14808-79-8	12/19/2000	110	mg/L		5
HI07-PZM005	Sulfide	9073-75-0	10/1/2001	1000	ug/L	U	1000
HI07-PZM005	Sulfide	18496-25-8	11/28/2001	1	mg/L	U	1
HI07-PZM005	Sulfide	9073-75-0	7/1/2004	1000	ug/L	UL	1000
HI07-PZM005	Tetrachloroethene	127-18-4	10/1/2001	1	ug/L	U	1
HI07-PZM005	Tetrachloroethene	127-18-4	11/28/2001	1	ug/L	U	1
HI07-PZM005	Tetrachloroethene	127-18-4	7/1/2004	1	ug/L	UL	1
HI07-PZM005	Thallium	7440-28-0	10/1/2001	5.7	ug/L	U	5.7
HI07-PZM005	Thallium	7440-28-0	11/28/2001	5.7	ug/L	U	5.7
HI07-PZM005	Thallium	7440-28-0	7/1/2004	2.6	ug/L		
HI07-PZM005	Thallium, dissolved	7440-28-0	7/1/2004	1.6	ug/L		
HI07-PZM005	Tin	7440-31-5	10/1/2001	28.8	ug/L	U	28.8
HI07-PZM005	Tin	7440-31-5	11/28/2001	28.8	ug/L	U	28.8
HI07-PZM005	Tin	7440-31-5	7/1/2004	730	ug/L		
HI07-PZM005	Tin, dissolved	7440-31-5	7/1/2004	770	ug/L		
HI07-PZM005	Toluene	108-88-3	10/1/2001	7.9	ug/L		
HI07-PZM005	Toluene	108-88-3	11/28/2001	7.9	ug/L		1
HI07-PZM005	Toluene	108-88-3	7/1/2004	4.6	ug/L		
HI07-PZM005	Total dissolved solids (TDS)	TDS	12/19/2000	790	mg/L		20
HI07-PZM005	trans-1,2-Dichloroethene	156-60-5	10/1/2001	1	ug/L	U	1
HI07-PZM005	trans-1,2-Dichloroethene	156-60-5	11/28/2001	1	ug/L	U	1
HI07-PZM005	trans-1,2-Dichloroethene	156-60-5	7/1/2004	1	ug/L	U	1
HI07-PZM005	trans-1,3-Dichloropropene	10061-02-6	10/1/2001	1	ug/L	U	1
HI07-PZM005	trans-1,3-Dichloropropene	10061-02-6	11/28/2001	1	ug/L	U	1
HI07-PZM005	trans-1,3-Dichloropropene	10061-02-6	7/1/2004	1	ug/L	U	1
HI07-PZM005	Trichloroethene	79-01-6	10/1/2001	1	ug/L	U	1
HI07-PZM005	Trichloroethene	79-01-6	11/28/2001	1	ug/L	U	1
HI07-PZM005	Trichloroethene	79-01-6	7/1/2004	1	ug/L	UL	1
HI07-PZM005	Vanadium	7440-62-2	10/1/2001	36.7	ug/L	J	
HI07-PZM005	Vanadium	7440-62-2	11/28/2001	36.7	ug/L	J	1.5
HI07-PZM005	Vanadium	7440-62-2	7/1/2004	20	ug/L		
HI07-PZM005	Vanadium, dissolved	7440-62-2	7/1/2004	29	ug/L		
HI07-PZM005	Vinyl chloride	75-01-4	10/1/2001	2	ug/L	U	2
HI07-PZM005	Vinyl chloride	75-01-4	11/28/2001	2	ug/L	U	2
HI07-PZM005	Vinyl chloride	75-01-4	7/1/2004	1	ug/L	U	1
HI07-PZM005	Xylene, total	1330-20-7	11/28/2001	9.4	ug/L		3
HI07-PZM005	Xylenes	1330-20-7	10/1/2001	9.4	ug/L		
HI07-PZM005	Xylenes	1330-20-7	7/1/2004	5.6	ug/L		
HI07-PZM005	Zinc	7440-66-6	10/1/2001	14.2	ug/L	J	
HI07-PZM005	Zinc	7440-66-6	11/28/2001	14.2	ug/L	J	1.5
HI07-PZM005	Zinc	7440-66-6	7/1/2004	10	ug/L	U	10
HI07-PZM005	Zinc, dissolved	7440-66-6	7/1/2004	10	ug/L	U	10