AREA B GROUNDWATER PHASE II INVESTIGATION REPORT

AREA B GROUNDWATER INVESTIGATION
TRADEPOINT ATLANTIC
SPARROWS POINT, MARYLAND

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TABLE OF CONTENTS

1.0 INTRODUCTION 1
1.1. Site History 2
1.2. Objectives 2
2.0 ENVIRONMENTAL SETTING 3
2.1. Land Use and Surface Features 3
2.2. Regional Geology 4
2.3. Site Hydrogeology/Geology 4
3.0 SITE INVESTIGATION 6
3.1. Monitoring Well Locations 6
3.2. Well Inspection 7
3.3. Well Installation 7
3.4. Well Development 8
3.5. Water Level Measurements 8
3.6. Groundwater Sampling 9
3.7. Deviations from Sampling Plan 10
3.8. Management of Investigation-Derived Waste 11
4.0 ANALYTICAL RESULTS 12
4.1. Groundwater Conditions 12
4.1.1. Groundwater Conditions: Organic Compounds 12
4.1.2. Groundwater Conditions: Inorganic Constituents 13
4.1.3. Groundwater Conditions: Results Summary 13
4.2. Non-Aqueous Phase Liquid 15
5.0 DATA USABILITY ASSESSMENT 16
5.1. Data Verification 16
5.2. Data Validation 17
5.3. Data Usability 17
6.0 FINDINGS AND RECOMMENDATIONS 20
6.1. Nature and Extent of Groundwater Impacts 20
6.2. Potential Continuing Sources of Groundwater Contamination 24
6.3. Potential for Groundwater to Surface Water Impact 24
7.0 REFERENCES 25

TABLE OF CONTENTS
(CONT.)

FIGURES

Figure 1 Area A and Area B Parcel Map ..... Following Text
Figure 2 Source Plume Sampling Plan Summary ..... Following Text
Figure 3 1916 Shoreline Map ..... Following Text
Figure 4 Shallow Groundwater Sample Locations and Potentiometric Map ..... Following Text
Figure 5 Intermediate Groundwater Sample Locations and Potentiometric Map ..... Following Text
Figure GW-1 Shallow Zone Groundwater VOC Exceedances ..... Following Text
Figure GW-2 Intermediate and Lower Zone Groundwater VOC Exceedances ..... Following Text
Figure GW-3 Shallow Zone Groundwater SVOC Exceedances ..... Following Text
Figure GW-4 Intermediate and Lower Zone Groundwater SVOC Exceedances ... Following Text
Figure GW-5 Shallow Zone Groundwater TPH-DRO/GRO Exceedances ..... Following Text
Figure GW-6 Intermediate and Lower Zone Groundwater TPH-DRO Exceedances ..... Following Text
Figure GW-7 Shallow Zone Groundwater Inorganic Exceedances ..... Following Text
Figure GW-8 Intermediate and Lower Zone Groundwater Inorganic Exceedances ..... Following Text
Figure GW-9 Shallow Zone Vapor Intrusion Criteria Exceedances ..... Following Text
Figure GW-10 All Zones Ambient Water Quality Criteria Exceedances ..... Following Text

TABLE OF CONTENTS
(CONT.)

TABLES

Table 1 Historical Site Drawing Details ..... Following Text
Table 2 Field Shifted Boring Locations ..... Following Text
Table 3 Groundwater Elevation Data ..... Following Text
Table 4 TCLP Results for Solid IDW ..... Following Text
Table 5 TCLP Results for Liquid IDW ..... Following Text
Table 6 Summary of Organics Detected in Shallow Zone Groundwater ..... Following Text
Table 7 Summary of Organics Detected in Intermediate and Lower Zone Groundwater ..... Following Text
Table 8 Summary of Inorganics Detected in Shallow Zone Groundwater ..... Following Text
Table 9 Summary of Inorganics Detected in Intermediate and Lower Zone Groundwater ..... Following Text
Table 10 Summary of Groundwater COPCs ..... Following Text
Table 11 Vapor Intrusion Criteria Comparison ..... Following Text
Table 12 Ambient Water Quality Criteria Comparison ..... Following Text
Table 13 Cumulative Vapor Intrusion Comparison ..... Following Text
Table 14 Rejected Analytical Groundwater Results ..... Following Text

TABLE OF CONTENTS
(CONT.)

APPENDICES

Appendix A Well Construction Logs ..... Following Text
Appendix B Existing Well Construction Details ..... Following Text
Appendix C Soil Boring Logs ..... Following Text
Appendix D Well Inspection Forms ..... Following Text
Appendix E Well Development Logs ..... Following Text
Appendix F Groundwater Survey Data ..... Following Text
Appendix G Groundwater Purge Logs & YSI Calibration Logs ..... Following Text
Appendix H Parcel Specific IDW Drum Log ..... Following Text
Appendix I Vapor Intrusion Criteria Comparison – Detail ..... Following Text
Appendix J Ambient Water Quality Criteria Comparison – Detail ..... Following Text
Appendix K Summary of QA/QC Samples ..... Following Text
Appendix L Evaluation of Data Completeness ..... Following Text

ELECTRONIC ATTACHMENTS

Groundwater Laboratory Certificates of Analysis ..... Electronic Attachment
Groundwater Data Validation Reports ..... Electronic Attachment

1.0 INTRODUCTION

ARM Group Inc. (ARM), on behalf of EnviroAnalytics Group (EAG), has completed a comprehensive Area B Groundwater Investigation on a central portion of the Tradepoint Atlantic property. The Tradepoint Atlantic property consists of approximately 3,100 acres that has been divided into investigation areas A and B and associated parcels as shown in **Figure 1**. The Area B Groundwater Investigation area (the Site) is comprised of 1,105 acres of the approximately 2,175-acre Area B subdivision (see **Figure 1**). The Site is bounded to the west by the former Shipyard Industrial Complex and the Patapsco River, to the north by the Finishing Mills area (currently designated as Parcels B21, B22, and B6), Tin Mill Canal (currently designated as Parcel B16), to the south by the former Coke Oven Area (currently designated as Parcel B10) and the former Ore Yard Material Handling area and the Bedding Plant Material Handling area (currently designated as Parcel B13), and to the east by the Jones Creek and Old Road Bay.

The Groundwater Investigation was performed in accordance with procedures outlined in the approved Phase II Investigation Work Plan – Area B Groundwater Investigation. This Work Plan (dated October 6, 2015) was approved by the Maryland Department of the Environment and the United States Environmental Protection Agency via email on October 5, 2015 in compliance with requirements pursuant to the following:

- Administrative Consent Order (ACO) between Tradepoint Atlantic (formerly Sparrows Point Terminal, LLC) and the Maryland Department of the Environment (effective September 12, 2014); and

- Settlement Agreement and Covenant Not to Sue (SA) between Tradepoint Atlantic (formerly Sparrows Point Terminal, LLC) and the United States Environmental Protection Agency (effective November 25, 2014).

The Site 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 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.

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

1.1. SITE HISTORY

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

The Site was formerly occupied by iron and steel processes generally identified in the Description of Current Conditions Report (Rust 1998) as the Open Hearth Furnace Area, Primary Rolling Mills Area, and Blast Furnace Area. Other former operations include a power generation building and associated oil storage facilities, administrative and human resources buildings, a vehicle maintenance area, and areas occupied by a former employee town. By 2013, most buildings in these areas had been demolished with concrete slabs, if present, remaining on grade.

1.2. OBJECTIVES

The objectives of this investigation were to:

1. Determine the presence or absence of impacts to groundwater in the central portion of Area B,
2. Identify potential continuing sources of groundwater contamination, and
3. Characterize the quality of groundwater at the perimeter of the Site that potentially is discharging to surface water.

This report includes a summary of the work performed, including the environmental setting, site investigation methods, analytical results and data usability assessment, and findings and recommendations. **Figure 2** displays the potential contamination sources identified in the Area B Groundwater Investigation Work Plan, along with the monitoring wells proposed for sampling. This figure (a previous version of which was presented as Figure 3 in the Area B Groundwater Investigation Work Plan) represents the sampling plan justification for the investigation. Any deviations from the sampling plan presented in the approved Work Plan are identified herein.

2.0 ENVIRONMENTAL SETTING

2.1. LAND USE AND SURFACE FEATURES

The Tradepoint Atlantic property consists of the former Sparrows Point steel mill. According to the Phase I ESA prepared by Weaver Boos dated May 19, 2014, the property is zoned Manufacturing Heavy-Industrial Major (MH-IM). Surrounding property zoning classifications (beyond Tradepoint Atlantic) include the following: Manufacturing Light (ML); Resource Conservation (RC); Density Residential (DR); Business Roadside (BR); Business Major (BM); Business Local (BL); and Residential Office (RO). Light industrial and commercial properties are located northeast of the property and northwest of the property across Bear Creek. Residential areas of Edgemere and Fort Howard are located northeast of the property across Jones Creek and to the southeast across Old Road Bay, respectively. Residential and commercial areas of Dundalk are located northwest of the property across Bear Creek.

According to topographic maps provided by EAG, the Site rages in elevation of approximately zero (0) feet above mean sea level (amsl) to approximately 50 feet amsl. The highest elevations within the study area are located slightly north of the Ore Dock area in Parcels B5 and B18. The highest elevations are due to several stockpiles of stored materials in the southern portion of the study area. The Site is comprised of approximately 63% natural land and associated surface soils and 37% slag fill based on the approximate shoreline of the Sparrows Point Peninsula in 1916, as shown on **Figure 3** (adapted from Figure 2-20 in the DCC Report). In general, the subsurface geology includes slag fill materials overlying natural soils, which include fine-grained sediments (clays and silts) and coarse grained sediments (sands).

Overall, elevations are fairly level across the Site, with drainage in all directions from the Area B Groundwater Investigation study area. Surface water runoff is diverted and collected by a network of culverts, underground pipes, and drainage ditches, and discharged through permitted storm water outfalls. Storm water from the majority of the study area (Parcels B2, B3, B7, B10 and most of B5) is directed east and then discharged to Jones Creek and Old Road Bay via permitted Outfalls 001, 017, and 068. The small portion of Parcel B5 that is immediately adjacent to the Turning Basin is directed south to permitted Outfalls 055 and 056; which discharge to the Turning Basin. Storm water from Parcel B4 and the southern portion of Parcel B1 is directed to the west, and discharged to the Patapsco River via Outfalls 012 and 013. The northern portion of Parcel B1 is directed north to the Tin Mill Canal and Humphreys Creek Wastewater Treatment Plant and is discharged to Bear Creek through Outfall 014. The storm water discharges are covered under existing National Pollutant Discharge Elimination System (NPDES) discharge permits MD0001201 & MD0068462. A detailed discussion of the existing NPDES discharge locations is presented in the Stormwater Pollution Prevention Plan (SWPPP) developed for the Tradepoint Atlantic property by ARM dated July 28, 2016. Along the eastern edge, the Site slopes downward into Jones Creek, and the southern edge of the Site is partially

occupied by the deep-water port (Turning Basin) from the Patapsco River. These are the only areas where runoff may discharge directly to surface waters, without passing through a permitted outfall.

2.2. REGIONAL GEOLOGY

The Site is located within the Atlantic Coastal Plain Physiographic Province (Coastal Plain). The western boundary of the Coastal Plain is the "Fall Line", which separates the Coastal Plain from the Piedmont Plateau Province. The Fall Line runs from northeast to southwest along the western boundary of the Chesapeake Bay, passing through Elkton (MD), Havre de Grace (MD), Baltimore City (MD), and Laurel (MD). The eastern boundary of the Coastal Plain is the off-shore Continental Shelf.

The unconsolidated sediments beneath the Site belong to the Talbot Formation (Pleistocene), which is then underlain by the Cretaceous formations which comprise the Potomac Group (Patapsco Formation, Arundel Formation and the Patuxent Formation). The Potomac Group formations are comprised of unconsolidated sediments of varying thicknesses and types, which may be several hundred feet to several thousand feet thick. These unconsolidated formations may overly deeper Mesozoic and/or Precambrian bedrock. Depth to bedrock is approximately 700 feet within the Site.

2.3. SITE HYDROGEOLOGY/GEOLOGY

Three near-surface hydrogeologic, or groundwater, zones were identified from previous site investigations. According to the Site Wide Investigation Report of Nature & Extent of Releases to Groundwater from the Special Study Areas (SSAs) (URS 2005, revised 2007), these zones were designated shallow, intermediate, and lower. The hydrogeologic boundary elevations vary by several feet across the Sparrows Point facility.

The shallow water table below the Site occurs within recent sedimentary deposits or slag fill material, and includes the unconfined water table at the Site. Monitoring wells designated as shallow are screened within this shallow, unconfined unit. The "shallow" bottom-of-screen elevations generally range from +5 to -20 feet amsl. In some areas of the Site, the slag fill is directly underlain by and connected to the coarser grained beds or lenses within the Talbot Formation that comprise the Upper Talbot Channel Unit. In these areas, the slag fill and Upper Talbot Channel Units form a single groundwater flow system. In much of the investigation area, the slag fill material is underlain by finer-grained silts and clays that comprise the Talbot Clay Aquitard. In these areas, shallow groundwater flow may be separated from groundwater in any underlying coarse-grained beds or lenses.

The intermediate hydrogeologic zone includes the unconfined to partially confined groundwater in the Pleistocene Upper Talbot unit. The "intermediate" bottom-of-screen elevations generally

range from -20 to -50 feet amsl. The presence of clay and silt layers within the intermediate hydrogeologic zone likely retard the vertical recharge of groundwater from the upper fill material.

The lower hydrogeologic zone includes the confined groundwater in the Lower Talbot or Upper Patapsco Sand unit. The "lower" bottom-of-screen elevations generally range from -50 to -141 feet amsl. The lower hydrogeologic zone was not a primary focus in this groundwater investigation. Hydrogeologic zones at greater depth are known to exist based on a review of the regional geology; however, these deeper units are isolated from the upper three units and impacts have not been identified from former iron and steel operations.

Soil borings were advanced to depths in the shallow hydrogeologic zone ranging from 14 to 32 feet below the ground surface (bgs) to facilitate well installation. Soil borings were advanced to depths in the intermediate hydrogeologic zone ranging from 38 to 76 feet bgs. The soil borings were often advanced several feet lower than the final installation depth of the corresponding monitoring well. Historical shallow monitoring wells included in the Area B investigation were previously installed to depths between 12 and 23 feet bgs. Historical intermediate monitoring wells in the Area B investigation were previously installed to depths between 32 and 67 feet bgs, and historical lower zone monitoring wells included in the investigation were previously installed to depths between 78 and 125 feet bgs. Well construction logs for newly installed wells are provided in **Appendix A,** and the construction details for existing (historical) wells are provided in **Appendix B**. Soil boring logs are provided in **Appendix C**.

3.0 SITE INVESTIGATION

A total of 88 groundwater samples were collected for analysis between December 8, 2015 and March 31, 2016 as part of the Area B Groundwater Investigation. This groundwater investigation utilized methods and protocols that followed the procedures included in the Quality Assurance Project Plan (QAPP) dated October 2, 2015 (updated April 5, 2016) approved by the agencies to support the investigation and remediation of the Tradepoint Atlantic property. Information regarding the project organization, field activities and sampling methods, sampling equipment, sample handling and management procedures, the selected laboratory and analytical methods, quality control and quality assurance procedures, investigation-derived waste (IDW) management methods, and reporting requirements are described in detail in the approved Area B Groundwater Investigation Work Plan dated October 6, 2015, and the QAPP.

All site characterization activities were conducted under the site-specific health and safety plan (HASP) provided as Appendix C of the approved Work Plan.

3.1. MONITORING WELL LOCATIONS

Previous activities within and around the buildings and facilities located on the Tradepoint Atlantic property may have been historical sources of environmental contamination. Potential sources of releases to groundwater were located through a careful review of historical documents. Potential sources included, as applicable, 1) Recognized Environmental Conditions (RECs) shown on the REC Location Map provided in Weaver Boos' Phase I ESA, 2) additional findings (non-RECs) from the Phase I ESA which were identified as potential environmental concerns, 3) Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs) identified from the DCC Report prepared by Rust Environmental and Infrastructure, and 4) potential source targets based on a review of previous manufacturing activities.

Four (4) sets of historical drawings were reviewed to identify potential sampling targets from previous manufacturing activities at the Site. These drawings included the 5000 Set (Plant Arrangement), the 5100 Set (Plant Index), the 5500 Set (Plant Sewer Lines), and a set of drawings indicating coke oven gas distribution drip leg locations. Drip legs are points throughout the distribution system where coke oven gas condensate was removed from the gas pipelines. The condensate from the drip legs was typically discharged to drums, although it is possible some spilled out of the drums and on to the ground. A summary of the specific drawings covering the Site is presented in **Table 1**.

As described in the approved Area B Groundwater Investigation Work Plan, a biased approach was developed and utilized to locate groundwater monitoring wells within the Site. The goal of this approach was to place wells in locations that intersect the estimated plume areas from potential sources of groundwater contamination. A set of wells were located along the Area B

investigation boundary (perimeter wells) to characterize the quality of the groundwater migrating from the investigation area, and a second set of wells (near-field wells) were located within or downgradient of potential sources of contaminants to groundwater. Estimated plume areas for potential sources were delineated hydrogeologically downgradient of their locations using the historical groundwater contour map of the Site adapted from Figure 3-11: Shallow Hydrogeologic Zone Groundwater Flow Contours June 2004 from the Site Wide Investigation Report of Nature & Extent of Releases to Groundwater from the Special Study Areas prepared by URS, dated January 2005 (revised 2007). The report also presented a contour map based on December 2003 groundwater elevations showing a similar groundwater flow pattern. **Figure 2** displays the perimeter and near-field well locations in the Area B investigation area, along with the potential source areas identified prior to the investigation.

During the completion of fieldwork, it was necessary to shift some groundwater points from the approved locations given in the Work Plan, primarily due to access restrictions, refusal, and/or utility conflicts. **Table 2** provides the identification numbers of the monitoring wells, the hydrogeologic zone, the coordinates of the proposed locations, and the final surveyed coordinates. The distance and direction of all field shifts are given based on the proposed/final coordinates.

3.2. WELL INSPECTION

Thirty-seven (37) historical site-wide wells were selected for inclusion within the study area. These wells were inspected to determine their suitability for sampling. During the well inspections, the present condition of the monitoring well, casing, and pad were observed. If the well was still present and appeared to be in good condition, the depth to water and depth to bottom of the well were recorded and the well was included for sampling in the Area B Groundwater Investigation. After performing well inspections of the existing historical wells, 16 of those wells were present and determined to be potentially suitable for sampling without additional reconstruction prior to development. Of the remaining 21 locations which were observed to be in poor condition or destroyed, 17 wells located in the shallow or intermediate zones were repaired or replaced. Wells installed in the lower hydrogeologic zone were not replaced if significant damage was observed. Well inspection forms for all historical wells are included in **Appendix D**.

3.3. WELL INSTALLATION

A total of 73 monitoring wells were installed across the Area B Groundwater study area. Of these 73 wells, 56 were installed as monitoring wells in new locations. Of these 56 wells, 53 were screened in the shallow hydrogeologic zone and three were screened in the intermediate hydrogeologic zone. The remaining 17 wells were installed to replace damaged existing (historical) wells. Of these 17 wells, 10 were screened within the shallow hydrogeologic zone and seven were screened in the intermediate hydrogeologic zone. Monitoring well construction

activities were conducted in accordance with the procedures and methods referenced in **Field SOP Numbers 005, 012, 013, 014, 016, 019, and 020**. Well construction logs are provided in **Appendix A**.

3.4. WELL DEVELOPMENT

Each historical existing well that was sampled was first redeveloped according to procedures referenced in **Field SOP Number 018** provided in Appendix A of the QAPP. After redevelopment, the depth to bottom in each well was recorded to compare to the original drilled depth. Similarly, all newly installed wells were developed prior to sampling in accordance with the procedures referenced in **Field SOP Number 018**. Well Development Forms for the historical wells and newly installed monitoring wells have been included in **Appendix E**.

3.5. WATER LEVEL MEASUREMENTS

The groundwater monitoring wells used in this investigation were surveyed by a Maryland-licensed surveyor to obtain top of casing (TOC) elevation data. Supporting documentation from the surveys is included as **Appendix F**. A synoptic round of groundwater measurements was collected on April 8, 2016 from each well included in the monitoring network. Surveyed TOC and ground surface elevations for all applicable locations can be found in **Table 3**, along with the depth to water (DTW) measurements from this date. The hydrogeologic zones of each listed well are also indicated. The groundwater elevation data from these monitoring wells were used to create the groundwater contour maps indicating groundwater flow direction in the shallow and intermediate hydrogeologic zones (**Figure 4** and **Figure 5**, respectively).

As shown in **Figure 4**, there are three areas with relative high groundwater elevations (i.e., mounds) in the shallow hydrogeologic zone within the southern portion and one larger mounded region in the northeastern portion of the Area B investigation area. Groundwater appears to flow radially from these four mounds. Shallow groundwater appears to flow from the mound in the northeastern portion of the Site northwest towards the Tin Mill Canal, and southeast towards Jones Creek. Groundwater appears to flow westward toward Bear Creek/Patapsco River, eastward toward Jones Creek and Old Road Bay, and southward toward the Patapsco River from the three mounds in the southern half of Area B. The water table elevations decrease sharply in the northeastern portion and the south-central portions of the Site as groundwater encounters the original shoreline of Sparrows Point.

As shown in **Figure 5**, a radial flow pattern has been observed in the intermediate hydrogeologic zone within the Area B investigation area. There is a mound in the intermediate hydrogeologic zone observed in the central portion of the Sparrows Point Peninsula, roughly in the middle of the Site. Groundwater flows radially from this mounded area to the surrounding tidal water bodies to the east, west, and south, and to the Tin Mill Canal located to the north.

Groundwater elevation measurements were also collected from six existing (historical) wells in the lower hydrogeologic zone. Based on the limited data set, no groundwater contour figure was constructed for the lower hydrogeologic zone. However, a radial pattern also appears to be present in the lower hydrogeologic zone within the Area B investigation area based on the limited elevation measurements. The existing lower hydrogeologic zone well SW09-PZM068 had the highest observed groundwater elevation in this zone (9.24 feet amsl). The five historical monitoring wells closer to the perimeter of the Site varied in groundwater elevations from 0.34 feet amsl to -0.70 feet amsl. These relative measurements were consistent with several historical gauging events presented in the Site Wide Investigation Groundwater Study Report prepared by Bethlehem Steel Corporation dated December 20, 2001.

3.6. GROUNDWATER SAMPLING

A total of 88 samples were collected for the Area B Groundwater Investigation. Of the 88 total monitoring wells that were sampled as part of the study area, 71 were screened in the shallow hydrologic zone, 12 were screened in the intermediate hydrologic zone, and five were screened in the lower hydrologic zone.

Groundwater samples were collected in accordance with methods referenced in **Field SOP Number 007** provided in Appendix A of the QAPP; which employed the use of laboratory supplied sample containers and preservatives, a peristaltic pump, dedicated polyethylene tubing, and a YSI water quality meter with a flow-through cell. The sampling and purge logs have been included in **Appendix G**. Calibration of the YSI meter was performed before the start of each day of the sampling event, and a calibration post-check was completed at the end of the day. Appropriate documentation of the YSI meter calibration has also been included in **Appendix G**.

All groundwater samples were submitted to Pace Analytical Services, Inc. (PACE), and analyzed for Target Compound List (TCL) volatile organic compounds (VOCs) via USEPA Method 8260B, TCL semi-volatile organic compounds (SVOCs) via USEPA Methods 8270D and 8270D SIM, Target Analyte List (TAL) Metals via 6010C and 7470A (total and dissolved), hexavalent chromium (total) via USEPA Method 7196A, total petroleum hydrocarbon (TPH) diesel range organics (DRO) and gasoline range organics (GRO) via USEPA Methods 8015B and 8015D and cyanide (total) via USEPA Method 9012A. Groundwater samples submitted for analysis of dissolved TAL-Metals were filtered in the field with an in-line 0.45 micron filter. In addition, perimeter well locations were analyzed for polychlorinated biphenyls (PCBs) via USEPA Method 680. Sample containers, preservatives, and holding times for the sample analyses are listed in the QAPP Worksheet 19 & 30 – Sample Containers, Preservation, and Holding Times.

3.7. DEVIATIONS FROM SAMPLING PLAN

During the course of fieldwork, several deviations from the original sampling plan presented in the approved Area B Groundwater Investigation Work Plan dated October 6, 2015 were necessary based on the encountered field conditions. These deviations are documented below:

- During groundwater sampling, it was determined that one additional historical well (SW10-PZM085) was not suitable for sampling. It was noted that there were multiple structural blocks in the well on two separate sampling attempts (February 19, 2016 and March 30, 2016). During both attempts, the water level in the well was rapidly depleted and the water present in the well failed to recharge at a useable rate. Due to the narrow diameter of the well (0.5 inches), alternative sampling techniques were unavailable. Since lower zone wells that were found to be unusable were not to be replaced based on the approved Work Plan, sampling was abandoned at SW10-PZM085. This location did provide a groundwater elevation measurement.

- Monitoring well SG07-PZM007 was selected for sampling from the SG07- cluster installed to the south of the Pennwood Intake/Discharge Canal. Following the survey for determination of the final well coordinates, it was determined that the field investigation had performed the well inspection, development, and sampling on the nearby well SG07-PDM008, present in the same well cluster. This well is located approximately 300 feet to the southeast of the originally proposed sampling location. Both SG07-PZM007 and SG07-PDM008 were installed in the shallow hydrogeologic zone and were installed in the same vicinity south of the canal, and it was determined that well SG07-PDM008 was a suitable replacement for sampling. SG07-PZM007 was determined to be destroyed during unknown activities on the Site, as it could not be located by field personnel.

- Monitoring well TS10-PPM005 was selected for sampling in the Work Plan along the eastern coast of the Area B study area. Following the survey for determination of the final well coordinates, it was determined that the well IDs had been switched in the original Work Plan between TS10-PDM008 and TS10-PZM005 (both in the shallow hydrogeologic zone) located approximately 180 feet apart across several railways. The field investigation had performed the well inspection and development at the correct well location, to the west of the railway, but had mislabeled this location as TS10-PZM005. Upon discovery of the naming error, the well location was correctly re-labelled as TS10-PDM008, and groundwater sampling continued as planned. TS10-PZM005 was determined to be destroyed during unknown activities on the Site, as it could not be located by field personnel.

3.8. MANAGEMENT OF INVESTIGATION-DERIVED WASTE

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

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

The soil IDW generated during well installation was categorized based on the specific parcel in which the installation took place. Based on this grouping, composite samples were gathered from the Area B IDW soil drums for TCLP analysis following the completion of field activities. Following the analysis, the waste soil was characterized as non-hazardous. A list of all results from the soil TCLP procedure can be found in **Table 4**, which indicates no exceedances of TCLP criteria.

IDW drums containing aqueous materials were characterized by preparing composite samples from randomly selected drums. Each composite sample included aliquots from three individual drums that were chosen from a set of 30 drums being stored on-site at the date of collection. A total of eight aqueous composite samples were collected for TCLP analysis. A list of all results from the aqueous TCLP procedure can be found in **Table 5**, which indicates no exceedances of TCLP criteria.

The parcel specific IDW drum log from the Groundwater investigation is included as **Appendix H**. All IDW procedures were carried out in accordance with methods referenced in the QAPP Worksheet 21 – Field SOPs and Appendix A of the QAPP.

4.0 ANALYTICAL RESULTS

4.1. GROUNDWATER CONDITIONS

The analytical results for the detected parameters were compared to the site-specific project action limits (PALs) specified in the QAPP Worksheet 15 – Project Action Limits and Laboratory-Specific Detection/Quantitation Limits. The results are summarized in the attached **Table 6** (Shallow Zone Organics), **Table 7** (Intermediate and Lower Zone Organics), **Table 8** (Shallow Zone Inorganics), and **Table 9** (Intermediate and Lower Zone Inorganics). The laboratory's Certificates of Analysis (including Chains of Custody) and the Data Validation Reports have been included as electronic attachments to this report. The data validation reports contain a glossary of qualifiers for the final flags assigned to individual results in the attached summary tables.

4.1.1. Groundwater Conditions: Organic Compounds

As provided on **Table 6** and **Table 7**, several VOCs were identified above the laboratory's limits of detection (LODs) in groundwater samples collected from across the Site. Three VOCs (benzene, chloroform, and MTBE) exceeded the PALs in the shallow zone, with chloroform observed to be the most common exceedance (12 locations). A summary of the PAL exceedances in the shallow zone has been provided as **Figure GW-1**. Only chloroform exceeded its PAL in the intermediate hydrogeologic zone, and there were no VOC PAL exceedances in any lower zone well. A summary of the PAL exceedances in intermediate and lower zone locations has been provided as **Figure GW-2.**

Table 6 and **Table 7** provide summaries of SVOCs reported in groundwater above the laboratory's LODs. Nine SVOCs (1,4-dioxane, 1,1-biphenyl, benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[k]fluoranthene, indeno[1,2,3-c,d]pyrene, naphthalene, and pentachlorophenol) were detected above their respective PALs in the shallow zone wells, with benzo[a] anthracene observed to be the most common exceedance (24 locations). A summary of the PAL exceedances in the shallow zone has been provided as **Figure GW-3.** Four SVOCs (1,4-dioxane, benzo[a]anthracene, benzo[b]fluoranthene, and naphthalene) were detected above their respective PALs in intermediate zone wells. Three SVOCs (benzo[a]anthracene, benzo[b]fluoranthene, and indeno[1,2,3-c,d]pyrene) were detected above their respective PAL in the lower hydrogeologic zone, all in a single monitoring well (SW07-PZM108). A summary of the PAL exceedances in the intermediate and lower zones has been provided as **Figure GW-4.**

Table 6 and **Table 7** provide summaries of TPH-DRO/GRO reported in groundwater above the laboratory's LODs. In the shallow hydrogeologic zone, 53 PAL exceedances for DRO were observed along with two PAL exceedances for GRO (SW-055-MWS and SW13-PZM003). A

summary of the TPH PAL exceedances in the shallow zone wells has been provided on **Figure GW-5**. A total of 11 DRO PAL exceedances were noted in the intermediate zone, and three PAL exceedances were observed in the lower zone. GRO did not exceed its specified PAL in any samples collected from the intermediate or lower zones. A summary of the DRO PAL exceedances in intermediate and lower zone locations has been provided on **Figure GW-6**.

Samples collected from all shallow and intermediate wells installed around the perimeter of the Area B groundwater investigation area were analyzed for PCBs. There were no PCBs detected above the laboratory LODs in any of the groundwater samples collected for this study.

4.1.2. Groundwater Conditions: Inorganic Constituents

Table 8 and **Table 9** provide summaries of inorganic constituents detected above the LODs in the groundwater samples collected from across the Area B study area. A total of 10 inorganic parameters (total and dissolved compounds) were detected above their respective PALs in the shallow zone monitoring wells. The inorganic compounds included beryllium, cobalt, iron, lead, manganese, nickel, thallium, vanadium, hexavalent chromium, and total cyanide. Manganese (total) was the most common inorganic exceedance, with detections above the PAL in 26 shallow wells. A summary of the PAL exceedances in shallow zone groundwater locations has been provided as **Figure GW-7**. A total of four inorganic compounds (arsenic, cobalt, iron, and manganese) were detected above their respective PALs in the intermediate zone monitoring wells. Four compounds (iron, manganese, lead, and thallium) were identified as PAL exceedances in the lower zone. A summary of the PAL exceedances in the intermediate and lower zones has been provided as **Figure GW-8**.

The reported concentrations of total versus dissolved metals were comparable for the majority of the groundwater samples. For simplicity, the summary figures **GW-7** and **GW-8** do not include duplicate exceedances of total and dissolved metals at each sample location. If both total and dissolved concentrations exceeded the PAL for a specific compound, the value for total metals is displayed on the figure for each sample.

4.1.3. Groundwater Conditions: Results Summary

Constituents of potential concern (COPCs) were defined as any compound exhibiting at least one exceedance of its applicable PAL. **Table 10** presents a summary of the groundwater COPCs including the detection frequencies, maximum detections, and sample IDs of the maximum results. Since the individual sample locations and historical steel operations were not considered to represent a single exposure unit across the Area B study area, statistical analyses (ProUCL) were not completed for the groundwater COPCs. All groundwater data were screened to determine whether individual sample results may exceed the USEPA Vapor Intrusion (VI) Screening Levels (Target Cancer Risk (TCR) of 1E-5 and Target Hazard Quotient (THQ) of 1) as determined by the Vapor Intrusion Screening Level (VISL) Calculator version 3.5.1

(https://www.epa.gov/vaporintrusion). The PALs specified in the QAPP are based upon drinking water use, which is not a potential exposure pathway for groundwater at the Site. In addition, data from the perimeter wells were screened against the Numerical Criteria for Toxic Substances in Surface Waters (COMAR Section 26.08.02.03-2). This screening conservatively identifies parameters and locations that may present a concern with respect to discharges of groundwater to surface water; however, it should not be considered an indication of actual surface water quality in that it does not consider any mixing zone effect. Only perimeter well locations were screened against the COMAR surface water criteria since the results from these wells would be more representative of potential groundwater discharge to surface water, based on the proximity of the perimeter wells to the shoreline and adjacent surface waters. With respect to COMAR Section 26.08.02.03-2, the perimeter well samples were screened against the Aquatic Life Salt Water Chronic criteria as well as the Human Health for Consumption of Organism Only criteria. Also for conservative purposes in this screening evaluation, total cyanide results were used as opposed to free cyanide or cyanide amenable to chlorination as is specified in COMAR Section 26.08.02.03-2. The results of the sample screening against these criteria are summarized in **Table 11** (Vapor Intrusion) and **Table 12** (COMAR Section 26.08.02.03-2), with the exceedances of each criteria highlighted. The complete comparison tables for all individual results are included in **Appendix I** (Vapor Intrusion) and **Appendix J** (COMAR Section 26.08.02.03-2).

The only parameter which exceeded the VI THQ criteria was total cyanide, which was detected above the acceptable VI limit (3.5 µg/L) at 19 locations. Each of the cyanide exceedances occurred in the shallow hydrogeologic zone, with the highest detection (1,420 µg/L) observed at sample location SW-029-MWS. None of the individual sample results exceeded the VI TCR criteria. A cumulative VI risk analysis was also performed. Sample results were segregated based on cancer vs non-cancer risk, and a risk ratio was estimated for each detection by comparing the detected value to the VI TCR or THQ level. All detections were used in the evaluation of the cumulative cancer risk, and all detections exceeding 10% of the THQ level were included in the evaluation of non-cancer risk. Exceedances of the cumulative criteria would be noted if the total cancer risk exceeded 1E-5 or the Hazard Index (summed by target organ) exceeded 1 for any individual sample location. There was only one location (SW13-PZM003) within the Area B Groundwater study area where the screening level estimate of cumulative VI cancer risk was equal to 1E-5. Naphthalene and benzene were the primary analytes which contributed to the overall risk at this location. There were 19 locations where the screening level estimates of cumulative VI non-cancer hazard exceeded 1. The only analyte which contributed to all 19 of these exceedances was total cyanide. The results of the cumulative VI comparisons are provided in **Table 13**, with exceedances highlighted. All wells showing VI exceedances were completed in the shallow hydrogeologic zone. The well locations which exceeded the cumulative VI criteria are shown in **Figure GW-9**, along with the analytical results for the main compounds contributing to cumulative risk.

Results from 40 perimeter well locations were compared to the COMAR Section 26.08.02.03-2 Aquatic Life Salt Water Chronic criteria and Human Health for Consumption of Organism Only criteria, and 32 of the samples exceeded either criteria for at least one compound. Of the 40 perimeter sample locations, 21 exceeded at least one COMAR Section 26.08.02.03-2 Aquatic Life Salt Water Chronic criteria. A total of five analytes (total and dissolved compounds) exceeded the Aquatic Life Salt Water Chronic criteria (total cyanide, copper, lead, nickel, and zinc). Most of these exceedances occurred in the shallow hydrogeologic zone; however, one intermediate hydrogeologic zone location (SW-074-MWI) and two lower hydrogeologic zone locations (SW07-PZM108 and SW13-PZM111) also exceeded the aquatic life criteria. SW-074-MWI contained nickel above its specified criterion, and copper, nickel, and lead were detected in the lower hydrogeologic zone above the acceptable limits. Groundwater samples from 23 perimeter wells exceeded at least one COMAR Section 26.08.02.03-2 Human Health for Consumption of Organism Only criterion. Exceedances were noted in each of the hydrogeologic zones. A total of eight analytes (total and dissolved compounds) exceeded these criteria in the perimeter samples (arsenic, benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[k]fluoranthene, chrysene, total cyanide, and thallium). The SVOC exceedances were limited to three groundwater sample locations (SW-029-MWS, SW13-PZM003, and SW14-PZM004), all located in the shallow hydrogeologic zone. The perimeter well locations which exceeded the ambient water quality criteria are indicated in **Figure GW-10**, along with a summary of the exceedances. If both total and dissolved concentrations exceeded the criteria for a specific metal, the value for total metals is displayed on the figure for each sample.

4.2. NON-AQUEOUS PHASE LIQUID

Each groundwater monitoring well was checked for the presence of non-aqueous phase liquid (NAPL) during development in accordance with **Field SOP Number 018** provided in Appendix A of the QAPP. Again prior to sampling each monitoring well, an oil-water interface probe was used to check for the presence of NAPL in accordance with the methods provided in **Field SOP Number 019**. During the NAPL checks, free product was not detected in any monitoring well. Based on these observations, it was determined that NAPL was not present and additional delineation or action was not required.

5.0 DATA USABILITY ASSESSMENT

The approved site-wide QAPP specified a process for evaluating data usability in the context of meeting project goals. Specifically, the goal of the Groundwater Investigation is to determine if potentially hazardous substances or petroleum products (VOCs, SVOCs, PCBs, TAL metals, cyanide, or TPH-DRO/GRO) are present in Site media (groundwater) at concentrations that could pose an unacceptable risk to Site receptors. Individual results are compared to the Project Action Limits established in the QAPP (i.e., the most current USEPA RSLs) to identify the presence of constituents of potential concern in the groundwater.

Quality control (QC) samples were collected during field studies to evaluate field/laboratory variability. A summary of QA/QC samples associated with this investigation has been included as **Appendix K**. The following QC samples were 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 per twenty samples
  - Water – VOCs, SVOCs, Metals, TPH-DRO, TPH-GRO, PCBs, Hexavalent Chromium, and Cyanide
- Matrix Spike/Matrix Spike Duplicate – at a rate of one per twenty samples
  - Water – VOCs, SVOCs, Metals, TPH-DRO, TPH-GRO, PCBs, and Hexavalent Chromium
- Field Blank– at a rate of one per twenty samples
  - Water – VOCs, SVOCs, Metals, TPH-DRO, TPH-GRO, Hexavalent Chromium, and Cyanide

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

5.1. DATA VERIFICATION

A verification review was performed on documentation generated during sample collection and analysis. The verification included a review of field log books, field data sheets, and chain-of-custody (COC) forms to ensure that all planned samples were collected, and to ensure consistency with the field methods and decontamination procedures specified in the QAPP Worksheet 21 – Field SOPs and Appendix A of the QAPP. In addition, calibration logs were

reviewed to ensure that field equipment was calibrated and/or checked once per day. The logs have been provided in **Appendix G** (YSI calibration log).

The laboratory deliverables were reviewed to ensure that all records specified in the QAPP as well as necessary signatures and dates are present. Sample receipt records were reviewed to ensure that the sample condition upon receipt was noted, and any missing/broken sample containers (if any) were noted and reported according to plan. The data packages were compared to the COCs to verify that results were provided for all collected samples. The data package case narratives were reviewed to ensure that all exceptions (if any) are described.

5.2. DATA VALIDATION

USEPA Stage 2B data validation was completed for the environmental sample analyses performed by PACE and supporting Level IV Data Package information by Environmental Data Quality Inc. (EDQI).

Sample analyses have undergone an analytical quality assurance review to ensure adherence to the required protocols. The Stage 2B review was performed as outlined in "Guide for Labeling Externally Validated Laboratory Analytical Data for Superfund Use", EPA-540-R-08-005. Results were validated or qualified according to general guidance provided in "USEPA National Functional Guidelines for Inorganic Superfund Data Review (ISM02.1)", USEPA October 2013. Region III references this guidance for validation requirements. This document specifies procedures for validating data generated for Contract Laboratory Program (CLP) analyses. The approved QAPP dated April 5, 2016 and the quality control requirements specified in the methods and associated acceptance criteria were also used to evaluate the non-CLP data.

The full Data Validation Reports (DVRs) provided by EDQI have been included as electronic attachments.

5.3. DATA USABILITY

The data were evaluated with respect to the quality control elements of precision, bias, representativeness, comparability, completeness and sensitivity relative to data quality indicators and performance measurement criteria outlined in QAPP Worksheet 12 – Measurement Performance Criteria. The following discussion details deviation from the performance measurement criteria, and the impact on data quality and usability.

The measurement performance criteria of precision and bias were evaluated in the data validation process as described in the Data Validation Reports provided as electronic attachments. Where appropriate, potential limitations in the results have been indicated through final data flags. These flags indicate whether particular data points were quantitative estimates, biased high/low, associated with blank contamination, etc. Individual data flags are provided

with the results in the detection summary tables. A qualifier code glossary is included with each data validation report provided by EDQI. Particular results may have been marked with the "R" flag if the result was deemed to be unreliable and was not included in any further data evaluation. A summary of the results that were rejected during data validation has been provided on **Table 14**. A discussion of data completeness (the proportion of valid data) is included below.

Representativeness is a measure of how accurately and precisely the data describe the Site conditions. Representativeness of the samples submitted for analysis was ensured by adherence to standard sampling techniques and protocols, as well as appropriate sample preservation prior to analysis. Sampling was conducted in accordance with the QAPP Worksheet 21 – Field SOPs and Appendix A of the QAPP. Specific Field SOPs applicable to the assessment of representativeness include **Field SOP Numbers 006, 007, 010, 011, 012, 013, 014, 016, 017, 018, 019, 024, 026, and 027**. Review of the field notes and laboratory sample receipt records indicated that collection groundwater at the Site was representative, with no significant deviations from the SOPs.

Comparability describes the degree of confidence in comparing two sets of data. Comparability is maintained across multiple datasets by the use of consistent sampling and analytical methods across multiple project phases. Comparability of sample results was ensured through the use of approved standard sampling and analysis methods outlined in the QAPP. QA/QC protocols help to maintain the comparability of datasets, and in this case were assessed via blind duplicates, blank samples, and spiked samples, where applicable. No deviations from the QAPP were noted in the data set.

Sensitivity is a determination of whether the analytical methods and quantitation limits will satisfy the requirements of the project. The laboratory reports were reviewed to verify that reporting limits met the quantitation limits for specific analytes provided in QAPP Worksheet #15 – Project Action Limits and Laboratory-Specific Detection/Quantitation Limits. In general the laboratory reporting limits met the detection and quantitation limits specified in the QAPP.

Completeness is expressed as a ratio of the number of valid data points to the total number of analytical data results. Non-usable ("R" flagged) data results were determined through the data validation process. The approved QAPP specifies that the completeness of data is assessed by professional judgement, but should be greater than or equal to 90%. Data completeness for each compound is provided in **Appendix L**. Methyl acetate, 3,3'-dichlorobenzidine, and acetone were the only three compounds with completeness ratios below 90% in any of the hydrogeologic zones. Methyl acetate had a completeness score of 60% in the lower zone (with only 5 analytical samples), but methyl acetate was only slightly below the 90% completeness goal in the shallow zone (88.73%). Methyl acetate was only detected in one groundwater sample (SW-045-MWI) and it did not exceed the PAL. 3,3'-dichlorobenzidine had a completeness score below 90% in both the shallow and lower hydrogeologic zones, but this compound was not detected in any

groundwater samples and is not expected to be a site-related contaminant. Acetone was the only compound with an overall completeness value below 90% in all three groundwater zones (shallow, intermediate, and lower). Acetone was detected in only three shallow zone samples and only five intermediate zone samples, and none of these detections exceeded the PAL. Overall, the limited groundwater data for methyl acetate, 3,3'-dichlorobenzidine, and acetone do not constitute significant data gaps, and the groundwater data can be used as intended.

6.0 FINDINGS AND RECOMMENDATIONS

The objectives of this Phase II Groundwater Investigation were to identify the presence or absence of groundwater impacts, identify any potential continuing sources of groundwater contamination, and characterize potential groundwater to surface water discharges in a designated section of Area B (the Study Area). During the Area B Groundwater Investigation, a total of 88 groundwater samples were collected and analyzed to define the current conditions of groundwater and to assess the nature and extent of contamination. The sampling and analysis plan for the Area B Groundwater Investigation was developed to provide a representative survey of groundwater beneath the Site, with groundwater collection points distributed throughout Area B and around the perimeter. The monitoring well locations were positioned within or downgradient of features with the greatest potential for release of hazardous substances and/or petroleum products to the environment. Groundwater samples were analyzed for TCL-VOCs, TCL-SVOCs, TPH-DRO/GRO, TAL-Dissolved Metals, TAL-Metals (total), hexavalent chromium, and total cyanide. Perimeter wells were also analyzed for PCBs.

The samples collected during this study have provided analytical data regarding current conditions within the Site, and facilitated the identification of potential contaminant releases. The extent of groundwater impacts has been adequately characterized to support risk assessment and associated response action planning, if necessary, as well as future development planning. However, additional sampling is recommended in key areas of the Site to characterize the nature of the cyanide impacts and specifically the proportions of free cyanide and/or cyanide amenable to chlorination to determine if the levels of cyanide identified herein pose unacceptable risks to future workers via vapor intrusion and/or ambient water quality receptors via groundwater discharge.

6.1. NATURE AND EXTENT OF GROUNDWATER IMPACTS

VOCs were generally not found to be significant COPCs in the groundwater. Only three VOCs were detected above their respective PAL in the shallow zone samples. Chloroform exceeded its PAL in 12 of the shallow zone samples. The highest detection of chloroform was 31 µg/L in SW-058-MWS. Benzene exceeded its PAL in four shallow zone samples with the highest detection being 20.4 µg/L in SW13-PZM003. MTBE was detected above its PAL in only one shallow zone well (SW-056-MWS), only slightly above the applicable PAL. Chloroform was also detected above its PAL in four intermediate zone wells, and this compound was the only VOC that was detected above its PAL in the intermediate zone. The highest detection of chloroform in intermediate wells was 5.9 µg/L in SW06-PZM053. No significant vertical migration of VOCs between the shallow and the underlying hydrogeologic zones is evident. None of the VOC detections were found to exceed the VI or surface water quality criteria, and potable use of water will be restricted. The chloroform analytical results may be suspect because chloroform is a common laboratory artifact. Chloroform can also be found in potable tap water

as a by-product of disinfection, and there is the potential for releases of tap water from distribution systems present at the Site. Therefore, VOC impacts to groundwater are not of concern within the Study Area.

SVOC impacts were found to be widespread but generally of low concentration. Nine SVOCs (1,4-dioxane, 1,1-biphenyl, benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[k]fluoranthene, indeno[1,2,3-c,d]pyrene, naphthalene, and pentachlorophenol) were detected above their respective PALs in the shallow zone samples. Benzo[a]anthracene was detected above its PAL in the largest number of shallow zone samples (24), whereas, benzo[a]pyrene and benzo[k]fluoranthene were only detected above their PALs in one shallow zone sample (SW-029-MWS). Naphthalene at several locations, and pentachlorophenol in one sample, were the only SVOCs that were present at greater than trace concentrations (i.e., >3 ug/L). Four SVOCs were detected above their respective PALs in the intermediate zone samples (1,4-dioxane, benzo[a]anthracene, benzo[b]fluoranthene, and naphthalene). Benzo[a]anthracene was detected above its PAL in five intermediate monitoring wells, with the highest detection of 0.11 µg/L at TM03-PZM037. 1,4-dioxane was only detected above its PAL at one intermediate zone location (TM03-PZM037). There were three analytes detected above their respective PALs in the lower hydrogeologic zone (benzo[a]anthracene, benzo[b]fluoranthene, and indeno[1,2,3-c,d]pyrene). All exceedances were at a single isolated location (SW07-PZM108). There was only one location (SW13-PZM003) among all of the samples collected within the Area B Groundwater study area where SVOCs contributed to a potential vapor intrusion concern, where the potential cumulative VI cancer risk was equal to 1E-5. This exceedance was primarily caused by the concentration of naphthalene in conjunction with an additional benzene detection at this location. The surface water quality criteria for COMAR Section 26.08.02.03-2 Human Health for Consumption of Organism Only criteria were exceeded for several SVOCs in three of the shallow perimeter wells (Benzo[b]fluoranthene, Benzo[k]fluoranthene, and Benzo[a]pyrene in SW-029-MWS; Benzo[a]anthracene and Chrysene in SW13-PZM003; and Benzo[a]anthracene in SW14-PZM004). Each well with SVOC exceedances was located in the southwest corner of the Study Area. The greatest exceedance was by a factor of 15 for Benzo[b]fluoranthene in SW-029-MWS. Therefore, the concentrations of SVOCs in groundwater naturally discharging to surface water at the downgradient shoreline would not be expected to significantly impact surface water beyond a limited mixing zone area near a few wells.

DRO was detected above its PAL in 53 shallow zone groundwater samples, whereas, GRO was detected above its PAL in only two shallow zone groundwater samples (SW-055-MWS and SW13-PZM003). DRO was detected above its PAL in 11 intermediate zone wells and in three of the five lower zone groundwater samples (SW07-PZM108, SW09-PZM068, and SW13-PZM111). GRO was not detected above its PAL in either the intermediate or lower zone groundwater samples.

There were no PCB detections in any of the wells analyzed surrounding the perimeter of the Site. Therefore, PCBs have been determined to not be a significant environmental concern in groundwater at the Site.

A total of 10 inorganic compounds were detected above their respective PALs in the shallow zone monitoring wells. The following compounds were observed as inorganic PAL exceedances in the shallow zone samples: cyanide, hexavalent chromium, beryllium (total and dissolved), cobalt (total and dissolved), iron (total and dissolved), lead (total), manganese (total and dissolved), nickel (total and dissolved), thallium (total and dissolved), and vanadium (total and dissolved). In general, the total and dissolved metals results were comparable, indicating that the sample results are indicative of the actual metals concentration in the groundwater and are not significantly impacted by metals in entrained sediment or turbidity in the samples. Dissolved manganese was detected above its PAL in 24 samples, and total manganese exceeded the PAL in 25 shallow samples. The highest dissolved manganese concentration detected in the shallow zone was 11,200 µg/L at SW-046-MWS and SW-056-MWS, whereas, the highest total manganese concentration was 11,500 µg/L at SW-046-MWS. Cobalt was the next most common COPC (both total and dissolved), which exceeded its PAL in 20 shallow zone locations. The highest dissolved and total cobalt concentrations observed were 355 µg/L and 354 µg/L, respectively, both at SW-049-MWS. Cyanide was detected above its PAL in only four of the shallow zone wells, with the highest detection observed being 1,420 µg/L at SW-029-MWS. Nickel was only detected above its PAL in one shallow zone location (SW-049-MWS) with observed concentrations of 519 µg/L (dissolved) and 522 µg/L (total). Total lead was responsible for only one PAL exceedance, with a detection of 42.2 µg/L in SW-052-MWS.

A total of four inorganic compounds were detected above their respective PALs in the intermediate zone monitoring wells. The following compounds were observed as inorganic PAL exceedances in the intermediate zone samples: arsenic (total and dissolved), cobalt (total and dissolved), iron (total and dissolved), and manganese (total and dissolved). Manganese was detected above its PAL in all but one intermediate zone location (FM01-PZM041) with the highest observed detections of 3,860 µg/L (total) and 3,770 µg/L (dissolved) at SW09-PZM028. Iron was detected above its PAL in nine intermediate zone samples. The high detections were 64,700 µg/L (total) and 64,500 µg/L (dissolved) observed at SW15-PZM031. Arsenic was detected above the PAL at only three locations (FM01-PZM041, SW08-PZM053, and TM03-PZM037), and cobalt was observed above the PAL only in SW-074-MWI.

Four compounds were also detected above their PALs in the lower hydrogeologic zone. The following compounds were observed as inorganic PAL exceedances in the lower zone samples: manganese (total and dissolved), lead (total), iron (total and dissolved), and thallium (total). Manganese was again the most common groundwater COPC, and was detected in three groundwater samples from this zone. The highest manganese detections were observed at SW16-PZM067, with results of 1,960 µg/L and 1,880 µg/L for total and dissolved manganese,

respectively. The highest iron detections were observed at SW13-PZM111 with detections of 33,700 µg/L (total) and 21,000 µg/L (dissolved). Lead was only detected above its PAL in the lower hydrogeologic zone at one sample location, SW07-PZM108, with a detection of 35.7 µg/L. Thallium was only detected above its PAL in SW13-PZM111, with a detection of 3.4 µg/L. There were no inorganic PAL exceedances at lower zone sample location SW09-PZM068, but each of the other four wells had at least one inorganic exceedance.

The only analyte that exceeded the VISL for non-cancer Hazard Quotient was cyanide (19 locations), and all VISL exceedances were in the shallow hydrogeologic zone samples. The VISL for cyanide is 3.5 µg/L and the highest detection of cyanide was 1,420 µg/L at sample location SW-029-MWS.

Of the 40 perimeter sample locations, 21 exceeded the COMAR Section 26.08.02.03-2 Aquatic Life Salt Water Chronic criteria for at least one parameter. Only five analytes exceeded the Aquatic Life Salt Water Chronic criteria (cyanide, copper, nickel, zinc, and lead). Most of these exceedances occurred in the shallow hydrogeologic zone, however, one intermediate hydrogeologic zone location (SW-074-MWI) and two lower hydrogeologic zone locations (SW07-PZM108 and SW13-PZM111) also exceeded the applicable criteria. Copper, nickel, and/or lead were detected above the applicable criteria limits in the intermediate and lower hydrogeologic zones. At least one of the COMAR Section 26.08.02.03-2 Human Health for Consumption of Organism Only criteria were exceeded at 23 of the 40 perimeter sample locations. Only three inorganic analytes exceeded these criteria in perimeter sample locations (arsenic, cyanide, and thallium). Only arsenic was detected above the organism consumption criteria in the intermediate zone (SW-043-MWI, SW-074-MWI, and SW13-PZM025), and only thallium was detected above its criterion in the lower zone (SW13-PZM111).

Cyanide was the only analyte that exceeded either surface water quality criteria by a factor of more than 15. Excluding cyanide, nickel was the only compound to exceed the Salt Water Chronic criteria by greater than a factor of 10, while thallium and benzo[b]fluoranthene each exceeded the Consumption of Organism Only criteria by more than factor of 10. Cyanide appears to be the only potentially significant concern with respect to discharge of groundwater to surface water. As previously stated, this evaluation of ambient surface water criteria was based on total cyanide results as opposed to free cyanide or cyanide amenable to chlorination. This approach was conservative, and additional groundwater sampling is recommended at select perimeter wells to characterize the concentrations of free and/or amendable cyanide potentially entering surface water from natural downgradient movement of groundwater to the shoreline.

Upon completion of the Area B Groundwater Investigation, the presence and absence of groundwater impacts within the study area have been appropriately described. Vapor intrusion risks were evaluated and identified several locations in Area B which may be impacted by elevated cyanide. These areas are now defined, and should be addressed within the Response

and Development Plans produced to facilitate improvements on the property. Supplemental sampling should be completed in select areas to determine the extent to which cyanide in the groundwater is present as free cyanide that could contribute to vapor intrusion risks.

6.2. Potential Continuing Sources of Groundwater Contamination

Free product was not detected in any monitoring well during this investigation. Therefore, free product has not been identified as a possible source of continuing releases of dissolved petroleum hydrocarbons in the Study Area.

The levels of cyanide in the southwestern portion of the Study Area (SW-065-MWS and SW-029-MWS) indicate a potential for the presence of sources of continuing releases of contaminant mass to the groundwater within this area. Detections of cyanide in the other wells in this portion of the Site indicate the presence of a continuous cyanide plume, at much lower concentrations than are present in these two wells. Historically, total cyanide was detected in SW13-PZM003, the only historical well located within this southwestern area, at 120 ug/L in 2004. By comparison, the current concentration in this well is 9.9 ug/L, indicating that the concentrations have attenuated over time. However, given the time that has passed since operations ceased within this portion of the Site, and the relative mobility of cyanide in groundwater, it seems likely that a residual contaminant source would be required to sustain the high concentrations observed in SW-065-MWS and SW-029-MWS. The Phase II investigation of Parcel B18 (including the collection of additional groundwater samples) should include an evaluation of potential continuing sources of cyanide.

6.3. Potential for Groundwater to Surface Water Impact

Cyanide in groundwater may pose a potential issue for groundwater to surface water discharges based on the COMAR surface water quality standards. Exceedances within groundwater of surface water criteria were also noted for metals and a few SVOCs in the perimeter wells. Concentrations associated with these constituents are expected to be attenuated after further downgradient movement of groundwater and associated surface water mixing processes such that the potential for exceedances within surface water is not considered to be significant.

The location and extent of groundwater containing total cyanide concentrations exceeding the surface water quality criteria have been adequately defined to facilitate further evaluation of the potential for impact to the surrounding surface water bodies at the Site. As noted in COMAR 26.08.02.03-2, cyanide in surface water is to be measured as either free cyanide or cyanide amenable to chlorination. Therefore, additional groundwater sampling, primarily in the southwest corner of the Study Area, should be completed to characterize the proportions of free cyanide and/or cyanide amenable to chlorination.

7.0 REFERENCES

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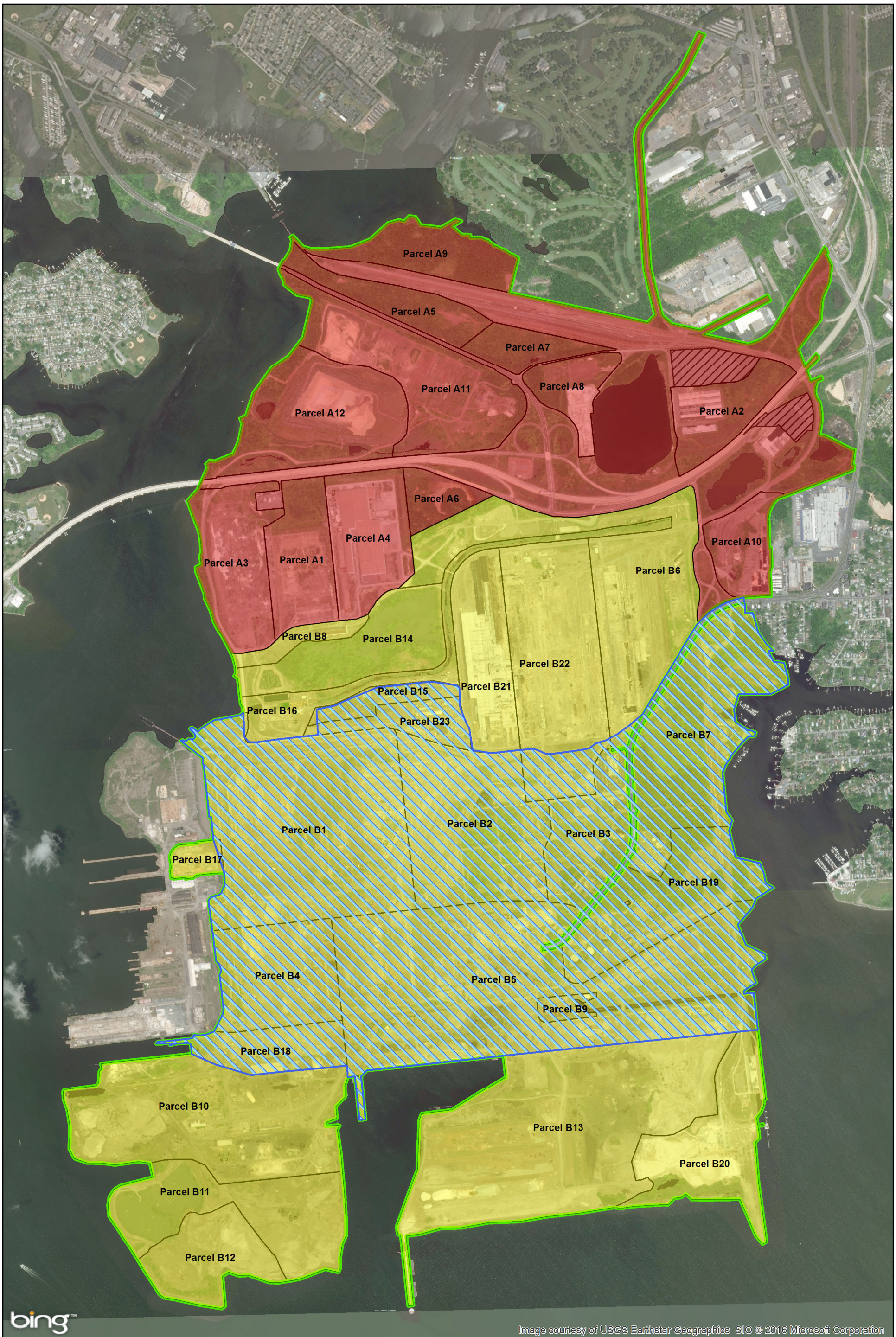
Weaver Boos Consultants (2014). *Phase I Environmental Site Assessment: Former RG Steel Facility*. Final Draft. May 19, 2014.

FIGURES



ARM Group Inc.
Earth Resource Engineers and Consultants

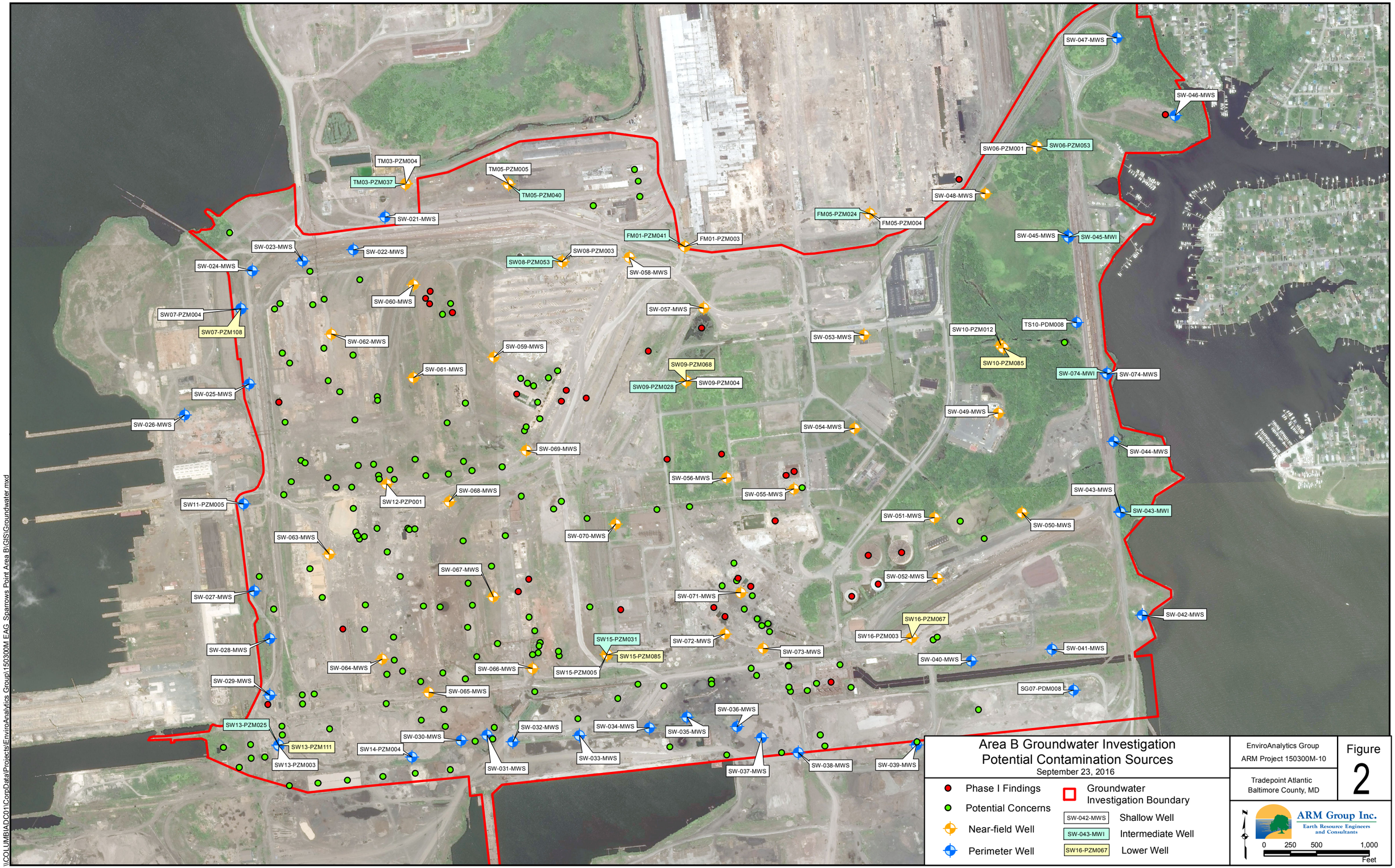
0 375 750 1,500 Feet

Groundwater Study Area
Site Boundary
Parcel Boundaries
Private Property
Area A
Area B

Tradepoint Atlantic
Area A and Area B Parcels
September 29, 2016

EnviroAnalytics Group	Tradepoint Atlantic
Area A: Project 150298M Area B: Project 150300M	Baltimore County, MD

Figure 1



Area B Groundwater Investigation
Potential Contamination Sources
September 23, 2016

- Phase I Findings
- Potential Concerns
- Near-field Well
- Perimeter Well
- Groundwater Investigation Boundary
- SW-042-MWS Shallow Well
- SW-043-MWI Intermediate Well
- SW16-PZM067 Lower Well

EnviroAnalytics Group
ARM Project 150300M-10

Tradepoint Atlantic
Baltimore County, MD

Figure 2

ARM Group Inc.
Earth Resource Engineers and Consultants

N

0 250 500 1,000 Feet

\\COLUMBIADC01\CorpData\Projects\EnviroAnalytics Group\150300M EAG_Sparrows Point Area B\GIS\Groundwater.mxd

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 1916
September 16, 2016

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

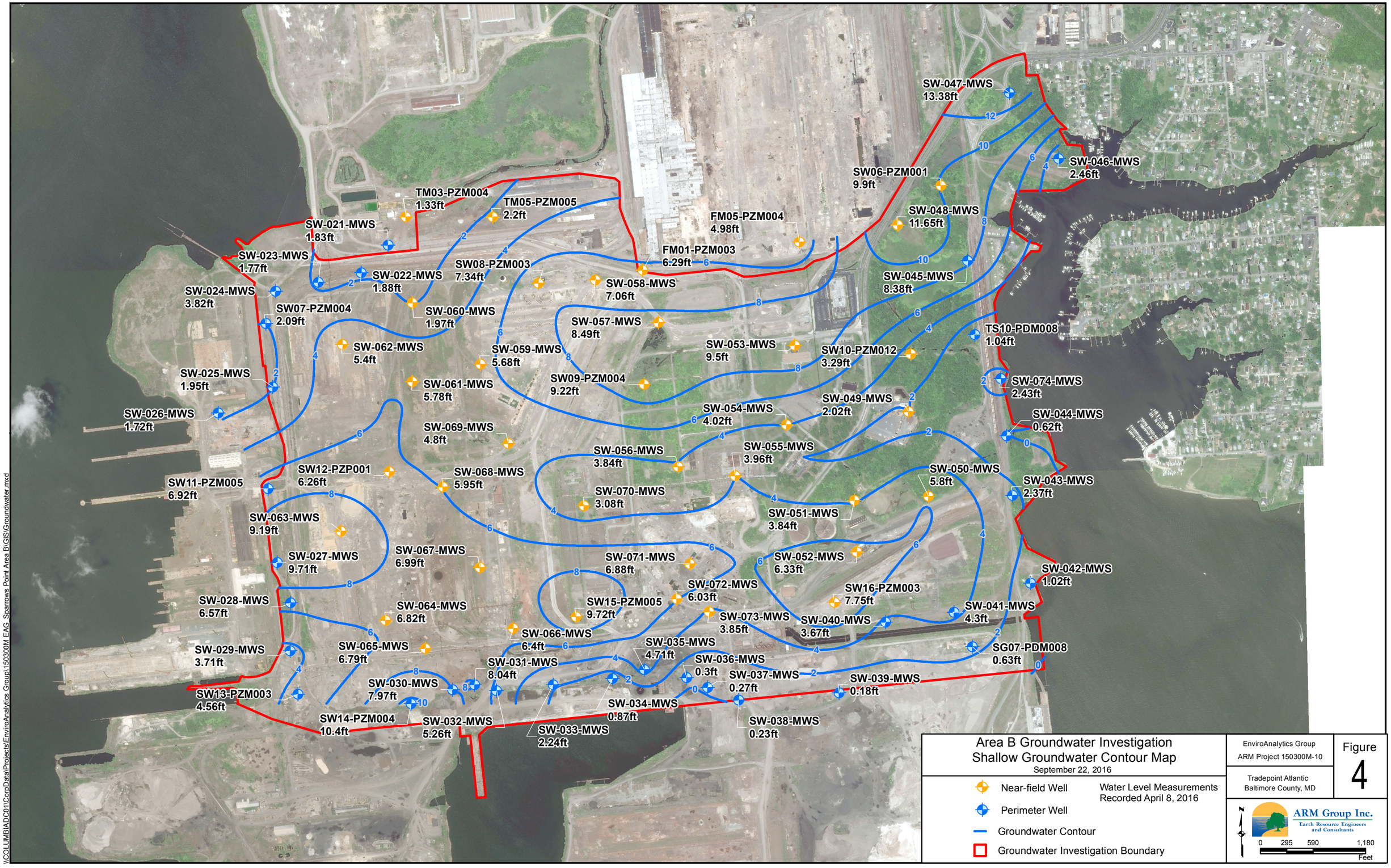
EnviroAnalytics Group

Tradepoint Atlantic

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

Baltimore County, MD

Figure 3



Area B Groundwater Investigation
Shallow Groundwater Contour Map
September 22, 2016

Near-field Well
Perimeter Well
Groundwater Contour
Groundwater Investigation Boundary

Water Level Measurements Recorded April 8, 2016

EnviroAnalytics Group
ARM Project 150300M-10

Tradepoint Atlantic
Baltimore County, MD

Figure 4

ARM Group Inc.
Earth Resource Engineers and Consultants

0 295 590 1,180 Feet

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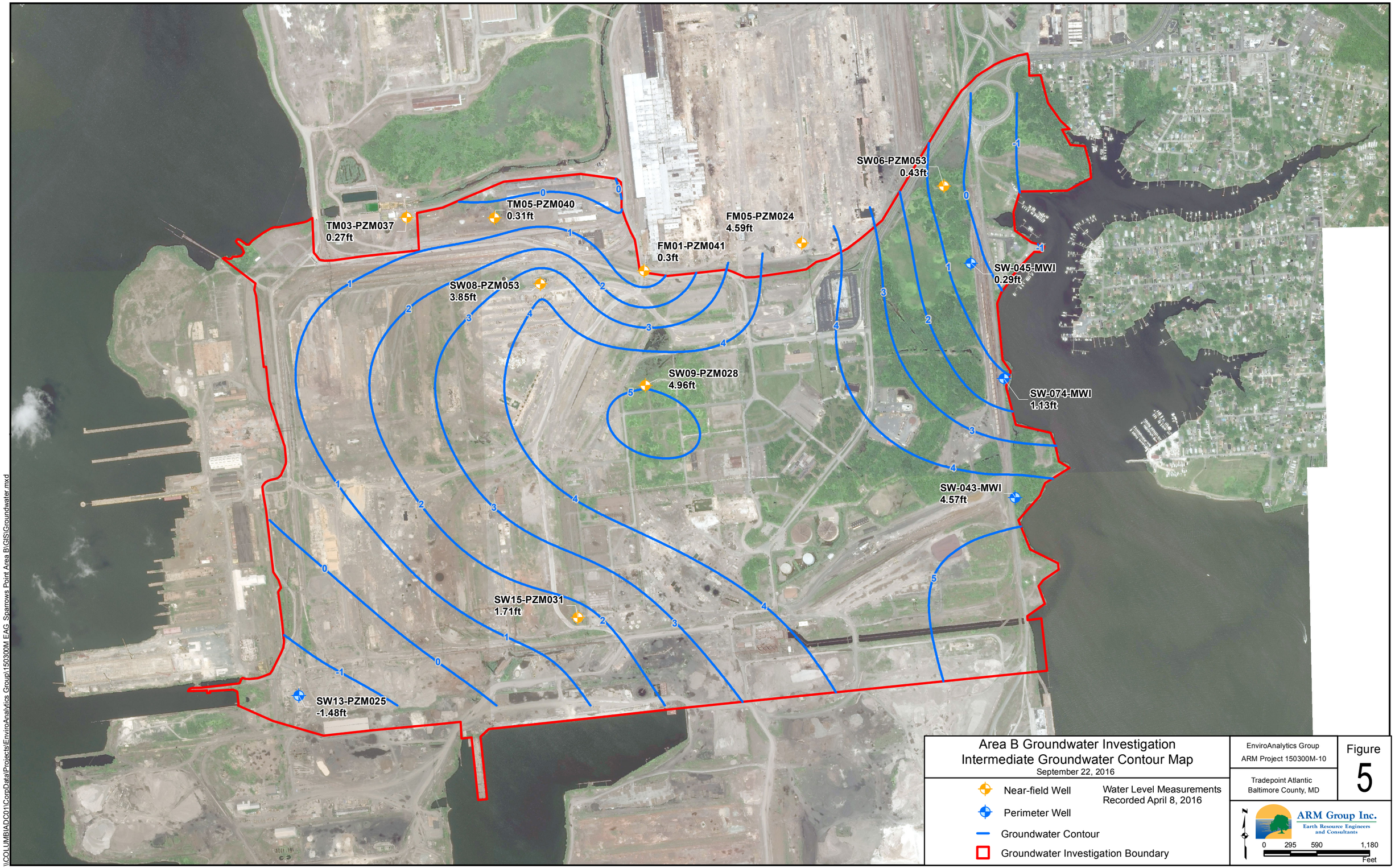
TM03-PZM037
0.27ft
TM05-PZM040
0.31ft
FM01-PZM041
0.3ft
FM05-PZM024
4.59ft
SW06-PZM053
0.43ft
SW08-PZM053
3.85ft
SW09-PZM028
4.96ft
SW15-PZM031
1.71ft
SW13-PZM025
-1.48ft
SW-045-MWI
0.29ft
SW-074-MWI
1.13ft
SW-043-MWI
4.57ft
Area B Groundwater Investigation
Intermediate Groundwater Contour Map
September 22, 2016
Near-field Well
Perimeter Well
Groundwater Contour
Groundwater Investigation Boundary
Water Level Measurements
Recorded April 8, 2016
EnviroAnalytics Group
ARM Project 150300M-10
Tradepoint Atlantic
Baltimore County, MD
Figure
5
ARM Group Inc.
Earth Resource Engineers and Consultants
0 295 590 1,180
Feet
\\COLUMBIADC01\CorpData\Projects\EnviroAnalytics Group\150300M EAG_Sparrows Point Area B\GIS\Groundwater.mxd

Area B Groundwater Investigation
Shallow - VOC Exceedances (ug/L)
September 21, 2016

EnviroAnalytics Group
ARM Project 150300M-10

Tradepoint Atlantic
Baltimore County, MD

Figure
GW-1

ARM Group Inc.
Earth Resource Engineers and Consultants

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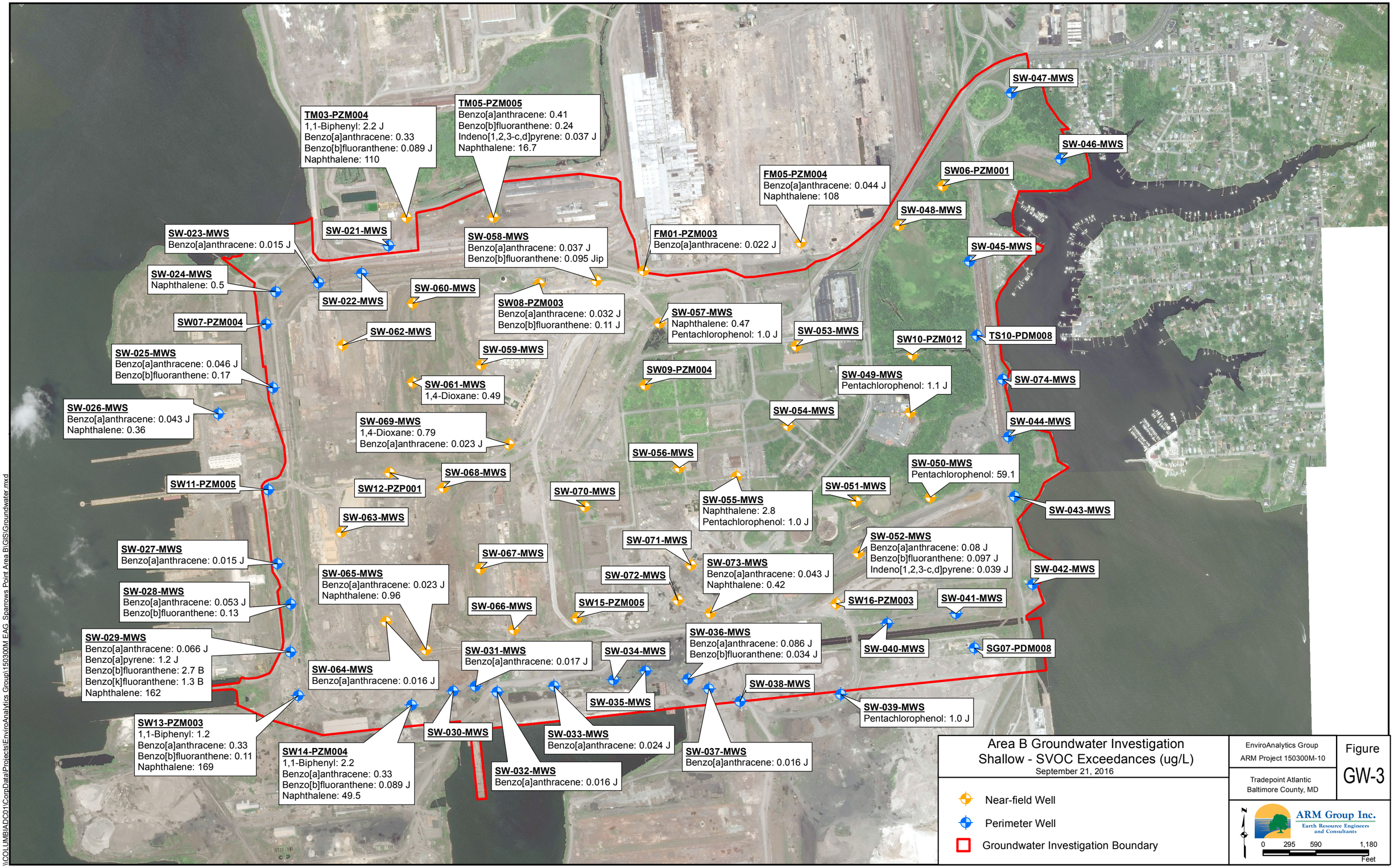
\\COLUMBIADC01\CorpData\Projects\EnviroAnalytics Group\150300M EAG_Sparrows Point Area B\GIS\Groundwater.mxd



Area B Groundwater Investigation
Shallow - SVOC Exceedances (ug/L)
September 21, 2016

EnviroAnalytics Group
ARM Project 150300M-10

Tradepoint Atlantic
Baltimore County, MD

Figure
GW-3

\\COLUMBIADC01\CorpData\Projects\EnviroAnalytics Group\150300M EAG_Sparrows Point Area B\GIS\Groundwater.mxd

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Area B Groundwater Investigation
Shallow - DRO&GRO Exceedances (ug/L)
September 23, 2016

Near-field Well
Perimeter Well
Groundwater Investigation Boundary

EnviroAnalytics Group
ARM Project 150300M-10

Tradepoint Atlantic
Baltimore County, MD

Figure
GW-5

ARM Group Inc.
Earth Resource Engineers and Consultants

0 295 590 1,180
Feet

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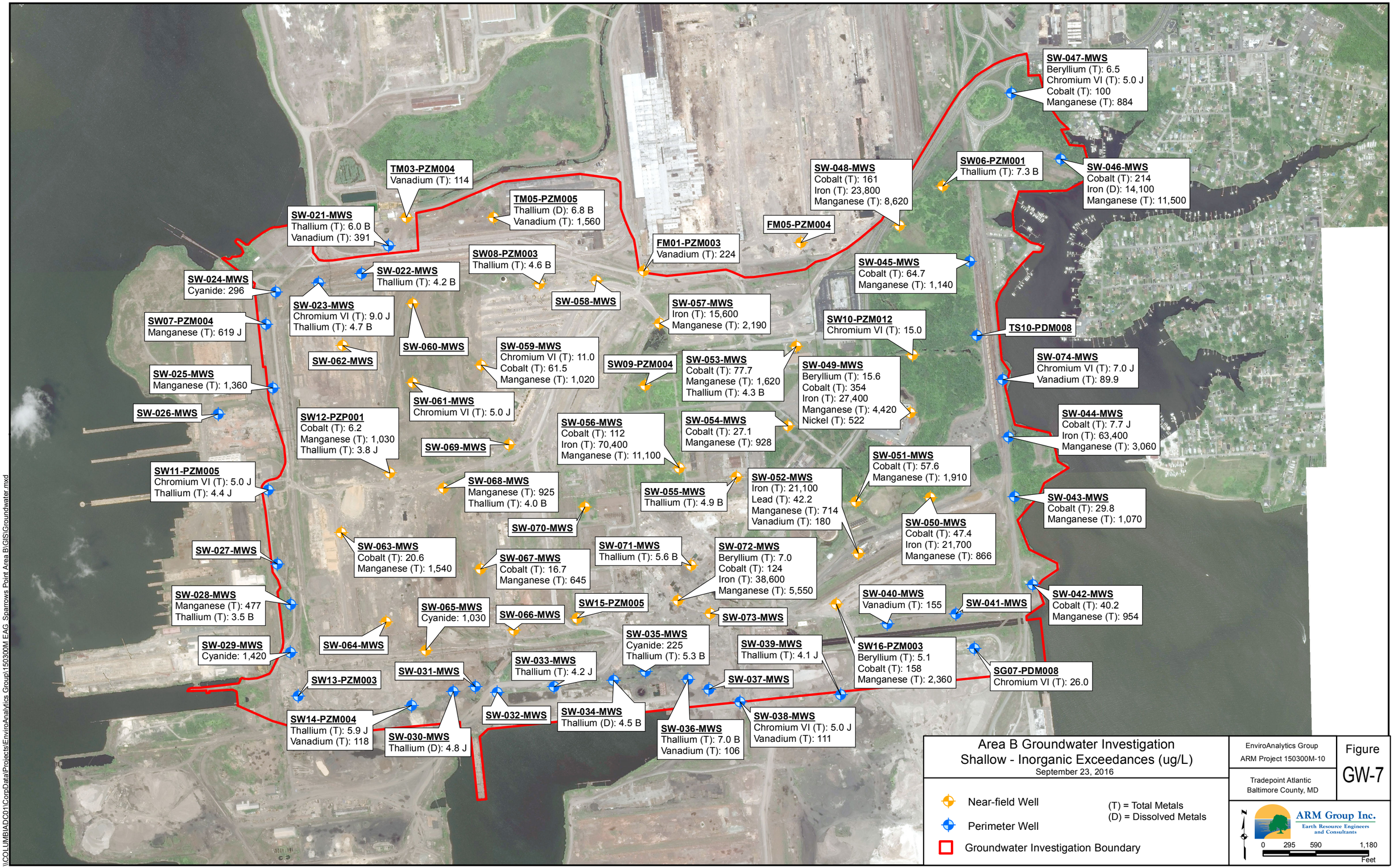
\\COLUMBIADC01\CorpData\Projects\EnviroAnalytics Group\150300M EAG Sparrows Point Area B\GIS\Groundwater.mxd



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Area B Groundwater Investigation
Intermediate/Lower - Inorganic Exceedances (ug/L)
September 23, 2016

Near-field Well
Perimeter Well
Groundwater Investigation Boundary
SW-043-MWI Intermediate Well
SW16-PZM067 Lower Well
(T) = Total Metals
(D) = Dissolved Metals

EnviroAnalytics Group
ARM Project 150300M-10

Tradepoint Atlantic
Baltimore County, MD

Figure
GW-8

ARM Group Inc.
Earth Resource Engineers and Consultants

N
0 295 590 1,180
Feet

\\COLUMBIADC01\CorpData\Projects\EnviroAnalytics Group\150300M EAG_Sparrows Point Area B\GIS\Groundwater.mxd

Area B Groundwater Investigation - Shallow Vapor Intrusion Criteria Exceedances (ug/L)
September 22, 2016

Near-field Well
Perimeter Well
Groundwater Investigation Boundary

EnviroAnalytics Group
ARM Project 150300M-10

Tradepoint Atlantic
Baltimore County, MD

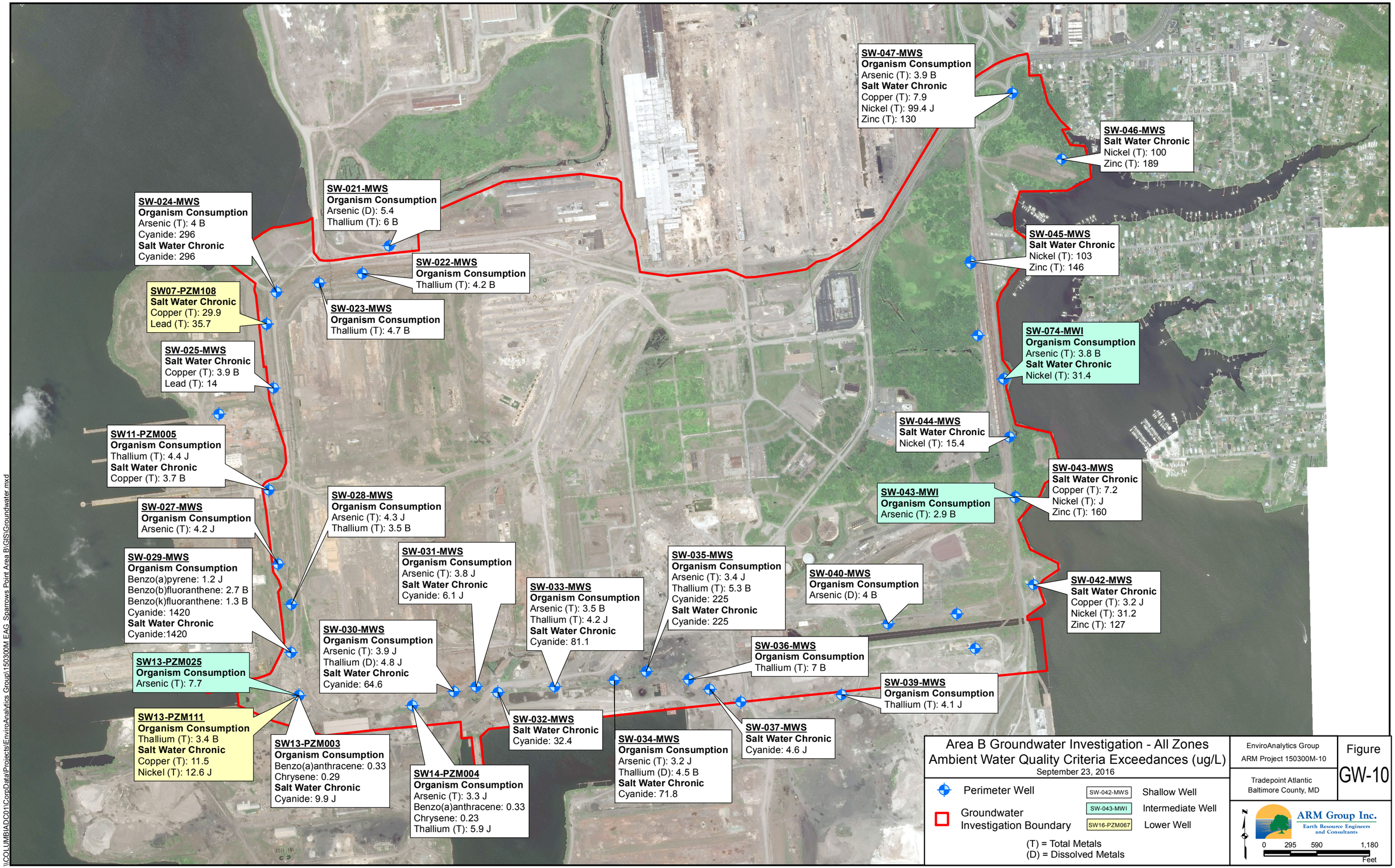
Figure
GW-9

ARM Group Inc.
Earth Resource Engineers and Consultants

N

0 295 590 1,180
Feet

\\COLUMBIADC01\CorpData\Projects\EnviroAnalytics Group\150300M EAG_Sparrows Point Area B\GIS\Groundwater.mxd



Area B Groundwater Investigation - All Zones
Ambient Water Quality Criteria Exceedances (ug/L)
September 23, 2016

EnviroAnalytics Group
ARM Project 150300M-10

Tradepoint Atlantic
Baltimore County, MD

Figure
GW-10

\\COLUMBIADC01\CorpData\Projects\EnviroAnalytics Group\150300M EAG Sparrows Point Area B\GIS\Groundwater.mxd

TABLES

TABLE 1 HISTORICAL SITE DRAWING DETAILS				
Set Name	Typical Features Shown	Drawing Number	Original Date Drawn	Latest Revision Date
Plant Arrangement	Roads, water bodies, building/structure footprints, electric lines, above-ground pipelines	5013	10/22/1958	3/12/1982
		5014	10/1/1959	3/12/1982
		5015	6/14/1957	3/12/1982
		5016	5/28/1958	3/12/1982
		5017	7/7/1958	3/12/1982
		5018	7/7/1958	3/12/1982
		5020	*Unknown*	3/9/1982
		5021	10/1/1958	3/11/1982
		5022	5/5/1958	3/11/1982
		5023	9/8/1958	3/11/1982
		5024	9/1/1958	3/11/1982
		5026	6/24/1958	3/11/1982
		5027	6/24/1959	3/11/1982
		5028	6/24/1959	3/11/1982
		5029	8/25/1959	3/11/1982
		5030	8/2/1958	3/11/1982
		5032	9/1/1958	3/11/1982
		5033	6/23/1958	3/11/1982
		5034	6/23/1958	3/19/1982
		5035	9/1/1958	3/19/1982
		5036	*Unknown*	3/11/1982
		5038	9/1/1958	3/11/1982
		5039	9/1/1958	3/11/1982
		5040	6/15/1958	3/19/1982
		5042	*Unknown*	3/11/1982
		5047	1/17/1966	3/11/1958

TABLE 1 HISTORICAL SITE DRAWING DETAILS				
Set Name	Typical Features Shown	Drawing Number	Original Date Drawn	Latest Revision Date
Plant Index	Roads, water bodies, demolished buildings/structures, electric lines, above-ground pipelines	5113	*Unknown*	3/12/2008
		5114	*Unknown*	8/14/2008
		5115	*Unknown*	9/4/2008
		5116	*Unknown*	8/14/2008
		5117	*Unknown*	8/14/2008
		5118	*Unknown*	8/14/2008
		5120	*Unknown*	6/26/2008
		5121	*Unknown*	11/7/2008
		5122	*Unknown*	11/7/2008
		5123	*Unknown*	11/7/2008
		5124	*Unknown*	5/3/2007
		5126	*Unknown*	9/27/2010
		5127	*Unknown*	8/14/2008
		5128	*Unknown*	12/14/2007
		5129	*Unknown*	9/10/2009
		5130	*Unknown*	6/26/2008
		5132	*Unknown*	8/15/2008
		5133	*Unknown*	7/9/2008
		5134	*Unknown*	1/8/2008
		5135	*Unknown*	7/11/2008
		5136	*Unknown*	1/9/2008
		5138	*Unknown*	1/10/2008
		5139	*Unknown*	1/16/2008
		5140	*Unknown*	8/15/2008
		5142	*Unknown*	11/10/2008
		5147	*Unknown*	11/10/2008

TABLE 1 HISTORICAL SITE DRAWING DETAILS				
Set Name	Typical Features Shown	Drawing Number	Original Date Drawn	Latest Revision Date
Plant Sewer Lines	Same as above plus trenches, sumps, underground piping (includes pipe materials)	5513	8/26/1959	1/22/1982
		5514	*Unknown*	1/22/1982
		5515	Oct-58	9/11/2008
		5516	9/1/1958	9/12/2008
		5517	8/21/1959	2/9/1982
		5518	1/21/1957	2/10/1982
		5520	*Unknown*	3/19/1992
		5521	9/30/1959	9/10/2008
		5522	*Unknown*	9/10/2008
		5523	*Unknown*	2/24/1982
		5524	*Unknown*	2/24/1982
		5526	8/24/1959	3/19/1992
		5527	*Unknown*	9/10/2008
		5528	*Unknown*	9/10/2008
		5529	8/26/1959	7/14/1992
		5530	8/15/1959	3/29/1976
		5532	*Unknown*	6/1/1976
		5533	8/25/1959	6/8/1976
		5534	8/28/1959	3/19/1976
		5535	*Unknown*	5/28/1976
		5536	3/24/1976	3/24/1976
		5538	*Unknown*	2/10/1975
		5539	8/28/1959	2/21/1975
		5540	6/15/1958	7/14/1991
		5542	9/11/1959	3/18/1976
		5547	9/16/1959	3/15/1976

TABLE 1 HISTORICAL SITE DRAWING DETAILS				
Set Name	Typical Features Shown	Drawing Number	Original Date Drawn	Latest Revision Date
Drip Legs	Coke Oven Gas Drip Legs Locations	5887	*Unknown*	Sept. 1988
		5888	*Unknown*	Sept. 1988
		5885B	*Unknown*	Sept. 1988
		5886B	*Unknown*	Sept. 1988

TABLE 2
ADJUSTED GROUNDWATER LOCATIONS

Location Name	Hydrogeologic Zone	Proposed Location		Final Location		Relocation Distance and Direction	
		Northing	Easting	Northing	Easting		
FM01-PZM003 *	Shallow	568252.05	1460279.37	568251.65	1460279.28	0	-
FM01-PZM041 *	Intermediate	568251.83	1460275.60	568251.76	1460275.61	0	-
FM05-PZM004	Shallow	568569.76	1462039.33	568565.69	1462040.51	4	SE
FM05-PZM024	Intermediate	568564.62	1462039.29	568578.67	1462043.77	15	NE
SW06-PZM001	Shallow	569204.40	1463626.61	569184.69	1463625.88	20	S
SW06-PZM053	Intermediate	569204.26	1463631.61	569188.45	1463637.32	17	S
SW07-PZM004 *	Shallow	567658.83	1456050.02	567658.52	1456050.21	0	-
SW07-PZM108 *	Lower	567665.21	1456049.01	567665.11	1456048.67	0	-
SW08-PZM003	Shallow	568112.13	1459112.16	568091.75	1458990.33	123	SW
SW08-PZM053	Intermediate	568107.67	1459113.28	568090.03	1458982.75	132	SW
SW09-PZM004 *	Shallow	566975.14	1460293.51	566974.91	1460293.5	0	-
SW09-PZM028	Intermediate	566975.97	1460287.92	566965.08	1460295.3	13	SE
SW09-PZM068 *	Lower	566970.99	1460290.85	566970.72	1460290.93	0	-
SW10-PZM012 *	Shallow	567312.89	1463288.22	567312.59	1463288.23	0	-
SW10-PZM085 *	Lower	567286.89	1463311.38	567286.63	1463311.33	0	-
SW11-PZM005	Shallow	565800.94	1456075.91	565794.79	1456073.98	6	S
SW12-PZP001	Shallow	565991.29	1457437.27	565989.17	1457438.18	2	S
SW13-PZM003	Shallow	563496.42	1456410.80	563493.91	1456407.34	4	SW
SW13-PZM025 *	Intermediate	563498.82	1456410.61	563498.66	1456410.45	0	-
SW13-PZM111 *	Lower	563502.98	1456409.71	563502.75	1456409.98	0	-
SW14-PZM004	Shallow	563388.18	1457679.01	563392.23	1457680.38	4	NE
SW15-PZM005 *	Shallow	564367.60	1459534.07	564367.29	1459534.16	0	-
SW15-PZM031	Intermediate	564372.67	1459531.62	564371.72	1459531.84	1	S
SW15-PZM085 *	Lower	564367.46	1459539.35	564367.22	1459539.25	0	-
SW16-PZM003 *	Shallow	564524.69	1462434.67	564524.42	1462434.76	0	-
SW16-PZM067 *	Lower	564528.79	1462441.87	564528.56	1462441.95	0	-
SW-021-MWS	Shallow	568521.59	1457408.63	568534.52	1457422.96	19	NE
SW-022-MWS	Shallow	568164.38	1457131.47	568222.29	1457122.05	60	N
SW-023-MWS	Shallow	568114.55	1456634.52	568116.87	1456637.37	4	NE
SW-024-MWS	Shallow	568015.74	1456141.84	568021.88	1456157.41	17	NE
SW-025-MWS	Shallow	566941.48	1456111.38	566943.92	1456126.02	15	E
SW-026-MWS	Shallow	566654.63	1455514.76	566649.66	1455514.08	5	S
SW-027-MWS	Shallow	564975.08	1456175.49	564973.53	1456177.11	2	SE
SW-028-MWS	Shallow	564523.55	1456226.00	564518.61	1456324.45	98	E
SW-029-MWS	Shallow	564031.75	1456262.59	563980.59	1456323.19	79	SE
SW-030-MWS	Shallow	563421.76	1458167.38	563547.95	1458146.61	128	NW
SW-031-MWS	Shallow	563477.02	1458398.96	563598.44	1458394.82	122	N
SW-032-MWS	Shallow	563515.78	1458641.10	563537.58	1458639.17	22	N
SW-033-MWS	Shallow	563545.79	1459221.40	563597.45	1459274.61	74	NE
SW-034-MWS	Shallow	563613.41	1459711.54	563668.32	1459941.32	236	NE
SW-035-MWS	Shallow	563606.75	1460299.40	563772.91	1460297.91	166	N
SW-036-MWS	Shallow	563607.67	1460639.68	563678.17	1460774.35	152	NE
SW-037-MWS	Shallow	563574.43	1461008.17	563571.81	1461007.95	3	S
SW-038-MWS	Shallow	563469.91	1461370.11	563432.87	1461357.62	39	SW
SW-039-MWS	Shallow	563504.64	1462491.63	563507.65	1462484.16	8	NW

TABLE 2
ADJUSTED GROUNDWATER LOCATIONS

Location Name	Hydrogeologic Zone	Proposed Location		Final Location		Relocation Distance and Direction	
		Northing	Easting	Northing	Easting		
SW-040-MWS	Shallow	564309.02	1463003.10	564306.40	1463005.67	4	SE
SW-041-MWS	Shallow	564416.61	1463774.06	564416.60	1463773.99	0	-
SW-042-MWS	Shallow	564741.66	1464630.98	564740.08	1464633.24	3	SE
SW-043-MWS	Shallow	565768.37	1464485.58	565729.24	1464430.00	68	SW
SW-043-MWI	Intermediate	565720.97	1464493.13	565719.77	1464429.47	64	W
SW-044-MWS	Shallow	566398.07	1464305.24	566398.36	1464363.35	58	E
SW-045-MWS	Shallow	568397.28	1463923.68	568357.88	1463927.89	40	S
SW-045-MWI	Intermediate	568345.48	1463932.16	568344.09	1463932.84	2	S
SW-046-MWS	Shallow	569502.73	1464945.24	569504.23	1464948.41	4	NE
SW-047-MWS	Shallow	570425.64	1464495.07	570242.63	1464394.66	209	SW
SW-048-MWS	Shallow	568743.56	1463037.88	568760.44	1463140.98	105	E
SW-049-MWS	Shallow	566679.87	1463248.83	566666.92	1463263.78	20	SE
SW-050-MWS	Shallow	565687.02	1463304.09	565719.62	1463489.52	188	E
SW-051-MWS	Shallow	565678.45	1462652.59	565671.75	1462655.02	7	SE.
SW-052-MWS	Shallow	565101.45	1462686.53	565095.06	1462682.05	8	SW
SW-053-MWS	Shallow	567416.26	1461986.33	567410.98	1461986.20	5	S
SW-054-MWS	Shallow	566520.01	1461891.81	566520.20	1461893.20	2	E
SW-055-MWS	Shallow	565945.70	1461316.04	565946.68	1461317.07	2	NE
SW-056-MWS	Shallow	566049.52	1460677.92	566048.47	1460677.32	1	SW
SW-057-MWS	Shallow	567667.48	1460454.33	567666.75	1460456.19	2	E
SW-058-MWS	Shallow	568141.74	1459725.28	568148.01	1459749.57	25	E
SW-059-MWS	Shallow	567200.18	1458459.86	567199.64	1458459.63	1	S
SW-060-MWS	Shallow	567892.70	1457693.47	567889.61	1457693.79	3	S
SW-061-MWS	Shallow	567006.27	1457693.47	567005.21	1457693.91	1	S
SW-062-MWS	Shallow	567427.94	1456825.51	567420.73	1456909.57	84	E
SW-063-MWS	Shallow	565318.17	1456888.17	565322.90	1456892.20	6	NE
SW-064-MWS	Shallow	564432.06	1457449.28	564322.36	1457393.54	123	SW
SW-065-MWS	Shallow	564026.51	1457840.95	564008.99	1457839.54	18	S
SW-066-MWS	Shallow	564240.21	1458825.69	564235.89	1458826.45	4	S
SW-067-MWS	Shallow	564946.81	1458456.94	564917.48	1458453.61	30	S
SW-068-MWS	Shallow	565841.95	1458027.08	565823.84	1458036.16	20	SE
SW-069-MWS	Shallow	566298.54	1458746.87	566309.02	1458770.00	25	NE
SW-070-MWS	Shallow	565619.40	1459609.72	565612.92	1459619.82	12	SE
SW-071-MWS	Shallow	564956.88	1460807.64	564957.19	1460809.42	2	E
SW-072-MWS	Shallow	564564.52	1460656.94	564563.01	1460661.22	5	SE
SW-073-MWS	Shallow	564427.02	1461023.61	564422.72	1461025.48	5	S
SW-074-MWS	Shallow	567027.28	1464305.25	567038.13	1464298.66	53	S
SW-074-MWI	Intermediate	567099.46	1464291.98	567047.75	1464301.55	12	NW
SG07-PDM008	Shallow	564025.65	1463980.46	564025.39	1463980.66	0	-
TM03-PZM004	Shallow	568855.17	1457622.30	568852.92	1457628.81	7	E
TM03-PZM037	Intermediate	568850.58	1457616.78	568849.3	1457622.17	6	E
TM05-PZM005	Shallow	568852.34	1458598.17	568837.4	1458595.64	15	S
TM05-PZM040	Intermediate	568847.87	1458598.51	568830.24	1458596.23	18	S
TS10-PDM008 *	Shallow	567530.20	1464010.17	567529.89	1464010.26	0	-

* Indicates an original historical well. Location was not shifted.

TABLE 3 GROUNDWATER ELEVATION DATA					
Location Name	Hydrogeologic Zone	TOC Elevation (feet AMSL)	Ground Elevation (feet AMSL)	Measured DTW (ft)	Groundwater Elevation (feet AMSL)
FM01-PZM003	Shallow	10.08	10.37	3.79	6.29
FM01-PZM041	Intermediate	9.91	10.24	9.61	0.30
FM05-PZM004	Shallow	14.48	11.73	9.50	4.98
FM05-PZM024	Intermediate	14.47	12.04	9.88	4.59
SW06-PZM001	Shallow	17.29	14.92	7.39	9.90
SW06-PZM053	Intermediate	16.75	14.59	16.32	0.43
SW07-PZM004	Shallow	14.52	12.02	12.43	2.09
SW07-PZM108	Lower	15.76	11.56	15.55	0.21
SW08-PZM003	Shallow	11.75	9.37	4.41	7.34
SW08-PZM053	Intermediate	12.02	9.67	8.17	3.85
SW09-PZM004	Shallow	13.16	10.34	3.94	9.22
SW09-PZM028	Intermediate	12.70	10.48	7.74	4.96
SW09-PZM068	Lower	13.31	10.32	4.07	9.24
SW10-PZM012	Shallow	7.91	4.82	4.62	3.29
SW10-PZM085	Lower	7.83	4.88	7.49	0.34
SW11-PZM005	Shallow	13.54	11.35	6.62	6.92
SW12-PZP001	Shallow	17.66	15.57	11.40	6.26
SW13-PZM003	Shallow	16.26	14.01	11.70	4.56
SW13-PZM025	Intermediate	15.59	13.56	17.07	-1.48
SW13-PZM111	Lower	15.37	13.66	15.71	-0.34
SW14-PZM004	Shallow	15.85	13.80	5.45	10.40
SW15-PZM005	Shallow	14.83	12.17	5.11	9.72
SW15-PZM031	Intermediate	14.90	12.02	13.19	1.71
SW15-PZM085	Lower	14.23	12.15	14.67	-0.44
SW16-PZM003	Shallow	14.94	12.80	7.19	7.75
SW16-PZM067	Lower	15.33	13.06	16.03	-0.70
SW-021-MWS	Shallow	12.83	10.42	11.00	1.83
SW-022-MWS	Shallow	14.31	12.20	12.43	1.88
SW-023-MWS	Shallow	14.66	12.79	12.89	1.77
SW-024-MWS	Shallow	14.03	11.62	10.21	3.82
SW-025-MWS	Shallow	13.16	11.03	11.21	1.95
SW-026-MWS	Shallow	11.51	8.61	9.79	1.72
SW-027-MWS	Shallow	16.98	14.33	7.27	9.71
SW-028-MWS	Shallow	15.59	13.20	9.02	6.57
SW-029-MWS	Shallow	15.75	13.15	12.04	3.71
SW-030-MWS	Shallow	14.72	12.32	6.75	7.97
SW-031-MWS	Shallow	13.41	10.93	5.37	8.04
SW-032-MWS	Shallow	12.64	10.49	7.38	5.26
SW-033-MWS	Shallow	10.28	10.59	8.04	2.24
SW-034-MWS	Shallow	12.62	10.16	11.75	0.87

TABLE 3 GROUNDWATER ELEVATION DATA					
Location Name	Hydrogeologic Zone	TOC Elevation (feet AMSL)	Ground Elevation (feet AMSL)	Measured DTW (ft)	Groundwater Elevation (feet AMSL)
SW-035-MWS	Shallow	13.43	11.06	8.72	4.71
SW-036-MWS	Shallow	13.38	10.82	13.08	0.30
SW-037-MWS	Shallow	13.28	10.96	13.01	0.27
SW-038-MWS	Shallow	16.28	13.76	16.05	0.23
SW-039-MWS	Shallow	19.91	17.91	19.73	0.18
SW-040-MWS	Shallow	13.01	11.16	9.34	3.67
SW-041-MWS	Shallow	13.47	11.80	9.17	4.30
SW-042-MWS	Shallow	7.40	7.78	6.38	1.02
SW-043-MWS	Shallow	10.26	8.53	7.89	2.37
SW-043-MWI	Intermediate	10.43	8.56	5.86	4.57
SW-044-MWS	Shallow	8.61	8.99	7.99	0.62
SW-045-MWS	Shallow	13.10	11.17	4.72	8.38
SW-045-MWI	Intermediate	12.86	10.92	12.57	0.29
SW-046-MWS	Shallow	9.80	10.13	7.34	2.46
SW-047-MWS	Shallow	20.24	20.56	6.86	13.38
SW-048-MWS	Shallow	16.73	14.27	5.08	11.65
SW-049-MWS	Shallow	11.55	11.89	9.53	2.02
SW-050-MWS	Shallow	10.62	8.04	4.82	5.80
SW-051-MWS	Shallow	13.40	10.99	9.56	3.84
SW-052-MWS	Shallow	13.88	11.49	7.55	6.33
SW-053-MWS	Shallow	13.84	14.06	4.34	9.50
SW-054-MWS	Shallow	13.35	10.89	9.33	4.02
SW-055-MWS	Shallow	11.87	9.28	7.91	3.96
SW-056-MWS	Shallow	11.52	8.72	7.68	3.84
SW-057-MWS	Shallow	12.31	12.62	3.82	8.49
SW-058-MWS	Shallow	11.45	11.75	4.39	7.06
SW-059-MWS	Shallow	15.99	13.64	10.31	5.68
SW-060-MWS	Shallow	14.12	12.20	12.15	1.97
SW-061-MWS	Shallow	15.83	13.65	10.05	5.78
SW-062-MWS	Shallow	16.81	14.39	11.41	5.40
SW-063-MWS	Shallow	19.98	17.54	10.79	9.19
SW-064-MWS	Shallow	17.39	15.15	10.57	6.82
SW-065-MWS	Shallow	12.27	12.57	5.48	6.79
SW-066-MWS	Shallow	13.02	10.77	6.62	6.40
SW-067-MWS	Shallow	14.85	12.66	7.86	6.99
SW-068-MWS	Shallow	16.87	14.55	10.92	5.95
SW-069-MWS	Shallow	16.56	14.23	11.76	4.80
SW-070-MWS	Shallow	11.17	9.10	8.09	3.08
SW-071-MWS	Shallow	16.63	14.25	9.75	6.88
SW-072-MWS	Shallow	14.60	12.02	8.57	6.03

TABLE 3 GROUNDWATER ELEVATION DATA					
Location Name	Hydrogeologic Zone	TOC Elevation (feet AMSL)	Ground Elevation (feet AMSL)	Measured DTW (ft)	Groundwater Elevation (feet AMSL)
SW-073-MWS	Shallow	14.76	12.43	10.91	3.85
SW-074-MWS	Shallow	11.32	8.79	8.89	2.43
SW-074-MWI	Intermediate	10.20	8.20	9.07	1.13
SG07-PDM008	Shallow	17.93	15.19	17.30	0.63
TM03-PZM004	Shallow	12.66	10.34	11.33	1.33
TM03-PZM037	Intermediate	12.08	10.38	11.81	0.27
TM05-PZM005	Shallow	12.76	10.62	10.56	2.20
TM05-PZM040	Intermediate	12.83	10.70	12.52	0.31
TS10-PDM008	Shallow	6.74	3.88	5.70	1.04

DTW = Depth to water
TOC = Top of casing
AMSL = Above mean sea level

TABLE 4
TCLP DETECTION FOR SOLID IDW

Location	Parameter	Result (mg/L)	TCLP Limit (mg/L)	TCLP Exceedance	Laboratory Flag	Laboratory LOQ (mg/L)
B1 Waste Disposal	1,1-Dichloroethene	0.05	0.7	no	U	0.05
B1 Waste Disposal	1,2-Dichloroethane	0.05	0.5	no	U	0.05
B1 Waste Disposal	1,4-Dichlorobenzene	0.5	7.5	no	U	0.5
B1 Waste Disposal	2,4,5-Trichlorophenol	5	400	no	U	5
B1 Waste Disposal	2,4,6-Trichlorophenol	0.1	2	no	U	0.1
B1 Waste Disposal	2,4-Dinitrotoluene	0.1	0.13	no	U	0.1
B1 Waste Disposal	2-Butanone (MEK)	5	200	no	U	5
B1 Waste Disposal	2-Methylphenol	2	200	no	U	2
B1 Waste Disposal	3&4-Methylphenol(m&p Cresol)	2	200	no	U	2
B1 Waste Disposal	Arsenic	0.0056	5	no	J	0.05
B1 Waste Disposal	Barium	0.26	100	no	J	1
B1 Waste Disposal	Benzene	0.05	0.5	no	U	0.05
B1 Waste Disposal	Cadmium	0.0011	1	no	J	0.05
B1 Waste Disposal	Carbon tetrachloride	0.05	0.5	no	U	0.05
B1 Waste Disposal	Chlorobenzene	1	100	no	U	1
B1 Waste Disposal	Chloroform	0.0041	6	no	J	0.5
B1 Waste Disposal	Chromium	0.002	5	no	J	0.05
B1 Waste Disposal	Hexachlorobenzene	0.1	0.13	no	U	0.1
B1 Waste Disposal	Hexachloroethane	0.5	3	no	U	0.5
B1 Waste Disposal	Lead	0.25	5	no	U	0.25
B1 Waste Disposal	Mercury	0.001	0.2	no	U	0.001
B1 Waste Disposal	Nitrobenzene	0.1	2	no	U	0.1
B1 Waste Disposal	Pentachlorophenol	5	100	no	U	5
B1 Waste Disposal	Selenium	0.1	1	no	U	0.1
B1 Waste Disposal	Silver	0.05	5	no	U	0.05
B1 Waste Disposal	Tetrachloroethene	0.05	0.7	no	U	0.05
B1 Waste Disposal	Trichloroethene	0.05	0.5	no	U	0.05
B1 Waste Disposal	Vinyl chloride	0.05	0.2	no	U	0.05
B2 Waste Disposal	1,1-Dichloroethene	0.05	0.7	no	U	0.05
B2 Waste Disposal	1,2-Dichloroethane	0.05	0.5	no	U	0.05
B2 Waste Disposal	1,4-Dichlorobenzene	0.5	7.5	no	U	0.5
B2 Waste Disposal	2,4,5-Trichlorophenol	5	400	no	U	5
B2 Waste Disposal	2,4,6-Trichlorophenol	0.1	2	no	U	0.1
B2 Waste Disposal	2,4-Dinitrotoluene	0.1	0.13	no	U	0.1
B2 Waste Disposal	2-Butanone (MEK)	5	200	no	U	5
B2 Waste Disposal	2-Methylphenol	2	200	no	U	2
B2 Waste Disposal	3&4-Methylphenol(m&p Cresol)	2	200	no	U	2
B2 Waste Disposal	Arsenic	0.0055	5	no	J	0.05
B2 Waste Disposal	Barium	0.37	100	no	J	1
B2 Waste Disposal	Benzene	0.05	0.5	no	U	0.05
B2 Waste Disposal	Cadmium	0.003	1	no	J	0.05
B2 Waste Disposal	Carbon tetrachloride	0.05	0.5	no	U	0.05
B2 Waste Disposal	Chlorobenzene	1	100	no	U	1
B2 Waste Disposal	Chloroform	0.5	6	no	U	0.5
B2 Waste Disposal	Chromium	0.05	5	no	U	0.05
B2 Waste Disposal	Hexachlorobenzene	0.1	0.13	no	U	0.1
B2 Waste Disposal	Hexachloroethane	0.5	3	no	U	0.5
B2 Waste Disposal	Lead	0.25	5	no	U	0.25
B2 Waste Disposal	Mercury	0.001	0.2	no	U	0.001
B2 Waste Disposal	Nitrobenzene	0.1	2	no	U	0.1
B2 Waste Disposal	Pentachlorophenol	5	100	no	U	5
B2 Waste Disposal	Selenium	0.1	1	no	U	0.1
B2 Waste Disposal	Silver	0.05	5	no	U	0.05
B2 Waste Disposal	Tetrachloroethene	0.05	0.7	no	U	0.05
B2 Waste Disposal	Trichloroethene	0.05	0.5	no	U	0.05
B2 Waste Disposal	Vinyl chloride	0.05	0.2	no	U	0.05
B4 Waste Disposal	1,1-Dichloroethene	0.05	0.7	no	U	0.05
B4 Waste Disposal	1,2-Dichloroethane	0.05	0.5	no	U	0.05
B4 Waste Disposal	1,4-Dichlorobenzene	0.5	7.5	no	U	0.5
B4 Waste Disposal	2,4,5-Trichlorophenol	5	400	no	U	5

TABLE 4
TCLP DETECTION FOR SOLID IDW

Location	Parameter	Result (mg/L)	TCLP Limit (mg/L)	TCLP Exceedance	Laboratory Flag	Laboratory LOQ (mg/L)
B4 Waste Disposal	2,4,6-Trichlorophenol	0.1	2	no	U	0.1
B4 Waste Disposal	2,4-Dinitrotoluene	0.1	0.13	no	U	0.1
B4 Waste Disposal	2-Butanone (MEK)	0.0657	200	no	J	5
B4 Waste Disposal	2-Methylphenol	2	200	no	U	2
B4 Waste Disposal	3&4-Methylphenol(m&p Cresol)	2	200	no	U	2
B4 Waste Disposal	Arsenic	0.05	5	no	U	0.05
B4 Waste Disposal	Barium	0.11	100	no	J	1
B4 Waste Disposal	Benzene	0.05	0.5	no	U	0.05
B4 Waste Disposal	Cadmium	0.0009	1	no	J	0.05
B4 Waste Disposal	Carbon tetrachloride	0.05	0.5	no	U	0.05
B4 Waste Disposal	Chlorobenzene	1	100	no	U	1
B4 Waste Disposal	Chloroform	0.5	6	no	U	0.5
B4 Waste Disposal	Chromium	0.012	5	no	J	0.05
B4 Waste Disposal	Hexachlorobenzene	0.1	0.13	no	U	0.1
B4 Waste Disposal	Hexachloroethane	0.5	3	no	U	0.5
B4 Waste Disposal	Lead	0.25	5	no	U	0.25
B4 Waste Disposal	Mercury	0.001	0.2	no	U	0.001
B4 Waste Disposal	Nitrobenzene	0.1	2	no	U	0.1
B4 Waste Disposal	Pentachlorophenol	5	100	no	U	5
B4 Waste Disposal	Selenium	0.1	1	no	U	0.1
B4 Waste Disposal	Silver	0.05	5	no	U	0.05
B4 Waste Disposal	Tetrachloroethene	0.05	0.7	no	U	0.05
B4 Waste Disposal	Trichloroethene	0.05	0.5	no	U	0.05
B4 Waste Disposal	Vinyl chloride	0.05	0.2	no	U	0.05
B5 Waste Disposal	1,1-Dichloroethene	0.05	0.7	no	U	0.05
B5 Waste Disposal	1,2-Dichloroethane	0.05	0.5	no	U	0.05
B5 Waste Disposal	1,4-Dichlorobenzene	0.5	7.5	no	U	0.5
B5 Waste Disposal	2,4,5-Trichlorophenol	5	400	no	U	5
B5 Waste Disposal	2,4,6-Trichlorophenol	0.1	2	no	U	0.1
B5 Waste Disposal	2,4-Dinitrotoluene	0.1	0.13	no	U	0.1
B5 Waste Disposal	2-Butanone (MEK)	5	200	no	U	5
B5 Waste Disposal	2-Methylphenol	2	200	no	U	2
B5 Waste Disposal	3&4-Methylphenol(m&p Cresol)	2	200	no	U	2
B5 Waste Disposal	Arsenic	0.0037	5	no	J	0.05
B5 Waste Disposal	Barium	0.12	100	no	J	1
B5 Waste Disposal	Benzene	0.05	0.5	no	U	0.05
B5 Waste Disposal	Cadmium	0.00098	1	no	J	0.05
B5 Waste Disposal	Carbon tetrachloride	0.05	0.5	no	U	0.05
B5 Waste Disposal	Chlorobenzene	1	100	no	U	1
B5 Waste Disposal	Chloroform	0.5	6	no	U	0.5
B5 Waste Disposal	Chromium	0.0093	5	no	J	0.05
B5 Waste Disposal	Hexachlorobenzene	0.1	0.13	no	U	0.1
B5 Waste Disposal	Hexachloroethane	0.5	3	no	U	0.5
B5 Waste Disposal	Lead	0.25	5	no	U	0.25
B5 Waste Disposal	Mercury	0.001	0.2	no	U	0.001
B5 Waste Disposal	Nitrobenzene	0.1	2	no	U	0.1
B5 Waste Disposal	Pentachlorophenol	5	100	no	U	5
B5 Waste Disposal	Selenium	0.016	1	no	J	0.1
B5 Waste Disposal	Silver	0.05	5	no	U	0.05
B5 Waste Disposal	Tetrachloroethene	0.05	0.7	no	U	0.05
B5 Waste Disposal	Trichloroethene	0.05	0.5	no	U	0.05
B5 Waste Disposal	Vinyl chloride	0.05	0.2	no	U	0.05
Parcel B5 Waste Chara.	1,1-Dichloroethene	0.05	0.7	no	U	0.05
Parcel B5 Waste Chara.	1,2-Dichloroethane	0.05	0.5	no	U	0.05
Parcel B5 Waste Chara.	1,4-Dichlorobenzene	0.5	7.5	no	U	0.5
Parcel B5 Waste Chara.	2,4,5-Trichlorophenol	5	400	no	U	5
Parcel B5 Waste Chara.	2,4,6-Trichlorophenol	0.1	2	no	U	0.1
Parcel B5 Waste Chara.	2,4-Dinitrotoluene	0.1	0.13	no	U	0.1
Parcel B5 Waste Chara.	2-Butanone (MEK)	5	200	no	U	5
Parcel B5 Waste Chara.	2-Methylphenol	2	200	no	U	2

TABLE 4
TCLP DETECTION FOR SOLID IDW

Location	Parameter	Result (mg/L)	TCLP Limit (mg/L)	TCLP Exceedance	Laboratory Flag	Laboratory LOQ (mg/L)
Parcel B5 Waste Chara.	3&4-Methylphenol(m&p Cresol)	2	200	no	U	2
Parcel B5 Waste Chara.	Arsenic	0.0048	5	no	J	0.05
Parcel B5 Waste Chara.	Barium	0.36	100	no	J	1
Parcel B5 Waste Chara.	Benzene	0.05	0.5	no	U	0.05
Parcel B5 Waste Chara.	Cadmium	0.0023	1	no	J	0.05
Parcel B5 Waste Chara.	Carbon tetrachloride	0.05	0.5	no	U	0.05
Parcel B5 Waste Chara.	Chlorobenzene	1	100	no	U	1
Parcel B5 Waste Chara.	Chloroform	0.5	6	no	U	0.5
Parcel B5 Waste Chara.	Chromium	0.0031	5	no	J	0.05
Parcel B5 Waste Chara.	Hexachlorobenzene	0.1	0.13	no	UL2	0.1
Parcel B5 Waste Chara.	Hexachloroethane	0.5	3	no	U	0.5
Parcel B5 Waste Chara.	Lead	0.0061	5	no	J	0.05
Parcel B5 Waste Chara.	Mercury	0.001	0.2	no	U	0.001
Parcel B5 Waste Chara.	Nitrobenzene	0.1	2	no	U	0.1
Parcel B5 Waste Chara.	Pentachlorophenol	5	100	no	U	5
Parcel B5 Waste Chara.	Selenium	0.0073	1	no	J	0.1
Parcel B5 Waste Chara.	Silver	0.00061	5	no	J	0.05
Parcel B5 Waste Chara.	Tetrachloroethene	0.05	0.7	no	U	0.05
Parcel B5 Waste Chara.	Trichloroethene	0.05	0.5	no	U	0.05
Parcel B5 Waste Chara.	Vinyl chloride	0.05	0.2	no	U	0.05
Parcel B7 Waste Chara.	1,1-Dichloroethene	0.05	0.7	no	U	0.05
Parcel B7 Waste Chara.	1,2-Dichloroethane	0.05	0.5	no	U	0.05
Parcel B7 Waste Chara.	1,4-Dichlorobenzene	0.5	7.5	no	U	0.5
Parcel B7 Waste Chara.	2,4,5-Trichlorophenol	5	400	no	U	5
Parcel B7 Waste Chara.	2,4,6-Trichlorophenol	0.1	2	no	U	0.1
Parcel B7 Waste Chara.	2,4-Dinitrotoluene	0.1	0.13	no	U	0.1
Parcel B7 Waste Chara.	2-Butanone (MEK)	5	200	no	U	5
Parcel B7 Waste Chara.	2-Methylphenol	2	200	no	U	2
Parcel B7 Waste Chara.	3&4-Methylphenol(m&p Cresol)	2	200	no	U	2
Parcel B7 Waste Chara.	Arsenic	0.0073	5	no	J	0.05
Parcel B7 Waste Chara.	Barium	0.35	100	no	J	1
Parcel B7 Waste Chara.	Benzene	0.05	0.5	no	U	0.05
Parcel B7 Waste Chara.	Cadmium	0.0018	1	no	J	0.05
Parcel B7 Waste Chara.	Carbon tetrachloride	0.05	0.5	no	U	0.05
Parcel B7 Waste Chara.	Chlorobenzene	1	100	no	U	1
Parcel B7 Waste Chara.	Chloroform	0.5	6	no	U	0.5
Parcel B7 Waste Chara.	Chromium	0.0016	5	no	J	0.05
Parcel B7 Waste Chara.	Hexachlorobenzene	0.1	0.13	no	UL2	0.1
Parcel B7 Waste Chara.	Hexachloroethane	0.5	3	no	U	0.5
Parcel B7 Waste Chara.	Lead	0.25	5	no	U	0.25
Parcel B7 Waste Chara.	Mercury	0.001	0.2	no	U	0.001
Parcel B7 Waste Chara.	Nitrobenzene	0.1	2	no	U	0.1
Parcel B7 Waste Chara.	Pentachlorophenol	5	100	no	U	5
Parcel B7 Waste Chara.	Selenium	0.0056	1	no	J	0.1
Parcel B7 Waste Chara.	Silver	0.00066	5	no	J	0.05
Parcel B7 Waste Chara.	Tetrachloroethene	0.05	0.7	no	UM1	0.05
Parcel B7 Waste Chara.	Trichloroethene	0.05	0.5	no	UM1	0.05
Parcel B7 Waste Chara.	Vinyl chloride	0.05	0.2	no	UM1	0.05

J = The positive result reported for this analyte is a quantitative estimate below the laboratory PQL.
Uxxx = The analyte was not detected in the sample. The numeric value represents the sample LOQ.
TCLP = Toxicity characteristic leaching procedure
LOQ = Limit of Quantitation

TABLE 5 TCLP RESULTS FOR LIQUID IDW						
Location ID	Parameter	Result (mg/L)	TCLP Limit (mg/L)	TCLP Exceedance	Laboratory Flag	Laboratory LOQ (mg/L)
Water Disposal 1	1,1-Dichloroethene	0.001	0.7	no	U	0.001
Water Disposal 1	1,2-Dichloroethane	0.001	0.5	no	U	0.001
Water Disposal 1	1,4-Dichlorobenzene	0.001	7.5	no	U	0.001
Water Disposal 1	2-Butanone (MEK)	0.01	200	no	U	0.01
Water Disposal 1	Arsenic	0.005	5	no	U	0.005
Water Disposal 1	Barium	0.0338	100	no		0.01
Water Disposal 1	Benzene	0.001	0.5	no	U	0.001
Water Disposal 1	Cadmium	0.0006	1	no	J	0.003
Water Disposal 1	Carbon tetrachloride	0.001	0.5	no	U	0.001
Water Disposal 1	Chlorobenzene	0.001	100	no	U	0.001
Water Disposal 1	Chloroform	0.001	6	no	U	0.001
Water Disposal 1	Chromium	0.0016	5	no	J	0.005
Water Disposal 1	Lead	0.005	5	no	U	0.005
Water Disposal 1	Mercury	0.0002	0.2	no	U	0.0002
Water Disposal 1	Selenium	0.008	1	no	U	0.008
Water Disposal 1	Silver	0.006	5	no	U	0.006
Water Disposal 1	Tetrachloroethene	0.001	0.7	no	U	0.001
Water Disposal 1	Trichloroethene	0.001	0.5	no	U	0.001
Water Disposal 1	Vinyl chloride	0.001	0.2	no	U	0.001
Water Disposal 2	1,1-Dichloroethene	0.001	0.7	no	U	0.001
Water Disposal 2	1,2-Dichloroethane	0.001	0.5	no	U	0.001
Water Disposal 2	1,4-Dichlorobenzene	0.001	7.5	no	U	0.001
Water Disposal 2	2-Butanone (MEK)	0.01	200	no	U	0.01
Water Disposal 2	Arsenic	0.005	5	no	U	0.005
Water Disposal 2	Barium	0.0811	100	no		0.01
Water Disposal 2	Benzene	0.001	0.5	no	U	0.001
Water Disposal 2	Cadmium	0.003	1	no	U	0.003
Water Disposal 2	Carbon tetrachloride	0.001	0.5	no	U	0.001
Water Disposal 2	Chlorobenzene	0.001	100	no	U	0.001
Water Disposal 2	Chloroform	0.0029	6	no		0.001
Water Disposal 2	Chromium	0.0012	5	no	J	0.005
Water Disposal 2	Lead	0.005	5	no	U	0.005
Water Disposal 2	Mercury	0.0002	0.2	no	U	0.0002
Water Disposal 2	Selenium	0.008	1	no	U	0.008
Water Disposal 2	Silver	0.006	5	no	U	0.006
Water Disposal 2	Tetrachloroethene	0.001	0.7	no	U	0.001
Water Disposal 2	Trichloroethene	0.001	0.5	no	U	0.001
Water Disposal 2	Vinyl chloride	0.001	0.2	no	U	0.001

TABLE 5 TCLP RESULTS FOR LIQUID IDW						
Location ID	Parameter	Result (mg/L)	TCLP Limit (mg/L)	TCLP Exceedance	Laboratory Flag	Laboratory LOQ (mg/L)
Water Disposal 3	1,1-Dichloroethene	0.001	0.7	no	U	0.001
Water Disposal 3	1,2-Dichloroethane	0.001	0.5	no	U	0.001
Water Disposal 3	1,4-Dichlorobenzene	0.001	7.5	no	U	0.001
Water Disposal 3	2-Butanone (MEK)	0.01	200	no	U	0.01
Water Disposal 3	Arsenic	0.005	5	no	U	0.005
Water Disposal 3	Barium	0.0051	100	no	J	0.01
Water Disposal 3	Benzene	0.001	0.5	no	U	0.001
Water Disposal 3	Cadmium	0.003	1	no	U	0.003
Water Disposal 3	Carbon tetrachloride	0.001	0.5	no	U	0.001
Water Disposal 3	Chlorobenzene	0.001	100	no	U	0.001
Water Disposal 3	Chloroform	0.0016	6	no		0.001
Water Disposal 3	Chromium	0.00085	5	no	J	0.005
Water Disposal 3	Lead	0.005	5	no	U	0.005
Water Disposal 3	Mercury	0.0002	0.2	no	U	0.0002
Water Disposal 3	Selenium	0.008	1	no	U	0.008
Water Disposal 3	Silver	0.006	5	no	U	0.006
Water Disposal 3	Tetrachloroethene	0.001	0.7	no	U	0.001
Water Disposal 3	Trichloroethene	0.001	0.5	no	U	0.001
Water Disposal 3	Vinyl chloride	0.001	0.2	no	U	0.001
Water Disposal 4	1,1-Dichloroethene	0.001	0.7	no	U	0.001
Water Disposal 4	1,2-Dichloroethane	0.001	0.5	no	U	0.001
Water Disposal 4	1,4-Dichlorobenzene	0.001	7.5	no	U	0.001
Water Disposal 4	2-Butanone (MEK)	0.01	200	no	U	0.01
Water Disposal 4	Arsenic	0.0094	5	no		0.005
Water Disposal 4	Barium	0.101	100	no		0.01
Water Disposal 4	Benzene	0.001	0.5	no	U	0.001
Water Disposal 4	Cadmium	0.003	1	no	U	0.003
Water Disposal 4	Carbon tetrachloride	0.001	0.5	no	U	0.001
Water Disposal 4	Chlorobenzene	0.001	100	no	U	0.001
Water Disposal 4	Chloroform	0.0024	6	no		0.001
Water Disposal 4	Chromium	0.0012	5	no	J	0.005
Water Disposal 4	Lead	0.005	5	no	U	0.005
Water Disposal 4	Mercury	0.0002	0.2	no	U	0.0002
Water Disposal 4	Selenium	0.008	1	no	U	0.008
Water Disposal 4	Silver	0.006	5	no	U	0.006
Water Disposal 4	Tetrachloroethene	0.001	0.7	no	U	0.001
Water Disposal 4	Trichloroethene	0.001	0.5	no	U	0.001
Water Disposal 4	Vinyl chloride	0.001	0.2	no	U	0.001

TABLE 5 TCLP RESULTS FOR LIQUID IDW						
Location ID	Parameter	Result (mg/L)	TCLP Limit (mg/L)	TCLP Exceedance	Laboratory Flag	Laboratory LOQ (mg/L)
Water Disposal 5	1,1-Dichloroethene	0.001	0.7	no	U	0.001
Water Disposal 5	1,2-Dichloroethane	0.001	0.5	no	U	0.001
Water Disposal 5	1,4-Dichlorobenzene	0.001	7.5	no	U	0.001
Water Disposal 5	2-Butanone (MEK)	0.01	200	no	U	0.01
Water Disposal 5	Arsenic	0.005	5	no	U	0.005
Water Disposal 5	Barium	0.398	100	no		0.01
Water Disposal 5	Benzene	0.001	0.5	no	U	0.001
Water Disposal 5	Cadmium	0.00058	1	no	J	0.003
Water Disposal 5	Carbon tetrachloride	0.001	0.5	no	U	0.001
Water Disposal 5	Chlorobenzene	0.001	100	no	U	0.001
Water Disposal 5	Chloroform	0.0039	6	no		0.001
Water Disposal 5	Chromium	0.0012	5	no	J	0.005
Water Disposal 5	Lead	0.005	5	no	U	0.005
Water Disposal 5	Mercury	0.0002	0.2	no	U	0.0002
Water Disposal 5	Selenium	0.008	1	no	U	0.008
Water Disposal 5	Silver	0.006	5	no	U	0.006
Water Disposal 5	Tetrachloroethene	0.001	0.7	no	U	0.001
Water Disposal 5	Trichloroethene	0.001	0.5	no	U	0.001
Water Disposal 5	Vinyl chloride	0.001	0.2	no	U	0.001
Water Disposal 6	1,1-Dichloroethene	0.001	0.7	no	U	0.001
Water Disposal 6	1,2-Dichloroethane	0.001	0.5	no	U	0.001
Water Disposal 6	1,4-Dichlorobenzene	0.001	7.5	no	U	0.001
Water Disposal 6	2-Butanone (MEK)	0.01	200	no	U	0.01
Water Disposal 6	Arsenic	0.005	5	no	U	0.005
Water Disposal 6	Barium	2.14	100	no		0.01
Water Disposal 6	Benzene	0.001	0.5	no	U	0.001
Water Disposal 6	Cadmium	0.001	1	no	J	0.003
Water Disposal 6	Carbon tetrachloride	0.001	0.5	no	U	0.001
Water Disposal 6	Chlorobenzene	0.001	100	no	U	0.001
Water Disposal 6	Chloroform	0.00058	6	no	J	0.001
Water Disposal 6	Chromium	0.005	5	no	U	0.005
Water Disposal 6	Lead	0.005	5	no	U	0.005
Water Disposal 6	Mercury	0.0002	0.2	no	U	0.0002
Water Disposal 6	Selenium	0.008	1	no	U	0.008
Water Disposal 6	Silver	0.006	5	no	U	0.006
Water Disposal 6	Tetrachloroethene	0.001	0.7	no	U	0.001
Water Disposal 6	Trichloroethene	0.001	0.5	no	U	0.001
Water Disposal 6	Vinyl chloride	0.001	0.2	no	U	0.001

TABLE 5 TCLP RESULTS FOR LIQUID IDW						
Location ID	Parameter	Result (mg/L)	TCLP Limit (mg/L)	TCLP Exceedance	Laboratory Flag	Laboratory LOQ (mg/L)
Water Disposal 7	1,1-Dichloroethene	0.001	0.7	no	U	0.001
Water Disposal 7	1,2-Dichloroethane	0.001	0.5	no	U	0.001
Water Disposal 7	1,4-Dichlorobenzene	0.001	7.5	no	U	0.001
Water Disposal 7	2-Butanone (MEK)	0.01	200	no	U	0.01
Water Disposal 7	Arsenic	0.005	5	no	U	0.005
Water Disposal 7	Barium	0.0889	100	no		0.01
Water Disposal 7	Benzene	0.001	0.5	no	U	0.001
Water Disposal 7	Cadmium	0.00067	1	no	J	0.003
Water Disposal 7	Carbon tetrachloride	0.001	0.5	no	U	0.001
Water Disposal 7	Chlorobenzene	0.001	100	no	U	0.001
Water Disposal 7	Chloroform	0.00075	6	no	J	0.001
Water Disposal 7	Chromium	0.005	5	no	U	0.005
Water Disposal 7	Lead	0.005	5	no	U	0.005
Water Disposal 7	Mercury	0.0002	0.2	no	U	0.0002
Water Disposal 7	Selenium	0.008	1	no	U	0.008
Water Disposal 7	Silver	0.006	5	no	U	0.006
Water Disposal 7	Tetrachloroethene	0.001	0.7	no	U	0.001
Water Disposal 7	Trichloroethene	0.00065	0.5	no	J	0.001
Water Disposal 7	Vinyl chloride	0.001	0.2	no	U	0.001
Water Disposal 8	1,1-Dichloroethene	0.001	0.7	no	U	0.001
Water Disposal 8	1,2-Dichloroethane	0.001	0.5	no	U	0.001
Water Disposal 8	1,4-Dichlorobenzene	0.001	7.5	no	U	0.001
Water Disposal 8	2-Butanone (MEK)	0.01	200	no	U	0.01
Water Disposal 8	Arsenic	0.005	5	no	U	0.005
Water Disposal 8	Barium	0.01	100	no	J	0.01
Water Disposal 8	Benzene	0.001	0.5	no	U	0.001
Water Disposal 8	Cadmium	0.003	1	no	U	0.003
Water Disposal 8	Carbon tetrachloride	0.001	0.5	no	U	0.001
Water Disposal 8	Chlorobenzene	0.001	100	no	U	0.001
Water Disposal 8	Chloroform	0.001	6	no	U	0.001
Water Disposal 8	Chromium	0.005	5	no	U	0.005
Water Disposal 8	Lead	0.005	5	no	U	0.005
Water Disposal 8	Mercury	0.0002	0.2	no	U	0.0002
Water Disposal 8	Selenium	0.008	1	no	U	0.008
Water Disposal 8	Silver	0.006	5	no	U	0.006
Water Disposal 8	Tetrachloroethene	0.001	0.7	no	U	0.001
Water Disposal 8	Trichloroethene	0.001	0.5	no	U	0.001
Water Disposal 8	Vinyl chloride	0.001	0.2	no	U	0.001

J = The positive result reported for this analyte is a quantitative estimate below the laboratory PQL.
U = The analyte was not detected in the sample. The numeric value represents the sample LOQ.
TCLP = Toxicity characteristic leaching procedure
LOQ = Limit of Quantitation

Table 6
Summary of Organics Detected
Area B Groundwater - Shallow
Tradepoint Atlantic
Sparrows Point, Maryland

Parameter	Units	PAL	FM01-PZM003	FM05-PZM004	SG07-PDM008	SW-021-MWS	SW-022-MWS	SW-023-MWS	SW-024-MWS	SW-025-MWS	SW-026-MWS	SW-027-MWS	SW-028-MWS
Volatile Organic Compounds													
1,1,1-Trichloroethane	µg/L	200	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	µg/L	2.7	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene	µg/L	7	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethene (Total)	µg/L	70	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
4-Methyl-2-pentanone (MIBK)	µg/L	1,200	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acetone	µg/L	14,000	10 R	10 R	10 R	10 U	10 U	10 R	10 R	10 R	10 R	10 R	10 R
Benzene	µg/L	5	1 U	**2.6**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	7.5	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Carbon disulfide	µg/L	810	1 U	**1.1**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.22	**27.9**	1 U	1 U	**4.7**	1 U	**2.5**	1 U	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	µg/L	70	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Cyclohexane	µg/L	13,000	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Ethylbenzene	µg/L	700	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Isopropylbenzene	µg/L	450	1 U	1 U	1 U	1 U	1 U	1 U	1 U	**0.29 J**	1 U	1 U	1 U
Methyl tert-butyl ether (MTBE)	µg/L	14	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Toluene	µg/L	1,000	1 U	**0.39 J**	1 U	1 U	1 U	1 U	**0.34 J**	1 U	1 U	1 U	1 U
Trichloroethene	µg/L	5	1 U	1 U	**3.8**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Xylenes	µg/L	10,000	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
Semi-Volatile Organic Compounds													
1,1-Biphenyl	µg/L	0.83	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dioxane	µg/L	0.46	0.1 U	**0.036 J**	0.1 U	0.1 U	**0.14**	**0.037 J**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
2,3,4,6-Tetrachlorophenol	µg/L	240	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2,4,5-Trichlorophenol	µg/L	1,200	2.6 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.6 U	2.5 U	2.5 U
2,4-Dimethylphenol	µg/L	360	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Chloronaphthalene	µg/L	750	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Methylnaphthalene	µg/L	36	0.1 U	**0.6**	**0.056 J**	0.1 U	**0.023 J**	0.1 U	**0.084 J**	0.1 U	**0.97**	0.1 U	0.1 U
2-Methylphenol	µg/L	930	1 U	**0.39 J**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
3&4-Methylphenol(m&p Cresol)	µg/L	930	2.1 U	**0.79 J**	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Acenaphthene	µg/L	530	0.1 U	**0.77**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	**0.12**	0.1 U	**0.51**
Acenaphthylene	µg/L	530	0.1 U	**0.12**	0.1 U	0.1 U	0.1 U	0.1 U	**0.041 J**	0.1 U	**0.02 J**	0.1 U	**0.018 J**
Acetophenone	µg/L	1,900	1 U	**0.37 J**	1 U	1 U	1 U	1 U	**0.36 J**	1 U	1 U	1 U	1 U
Anthracene	µg/L	1,800	**0.014 J**	**0.33**	0.1 U	**0.038 J**	**0.063 J**	**0.081 J**	**0.028 J**	**0.02 J**	**0.15**	**0.041 J**	**0.04 J**
Benzo[a]anthracene	µg/L	0.012	**0.022 J**	**0.044 J**	0.1 U	0.1 U	0.1 U	**0.015 J**	0.1 U	**0.046 J**	**0.043 J**	**0.015 J**	**0.053 J**
Benzo[a]pyrene	µg/L	0.2	**0.014 J**	**0.013 J**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	**0.046 J**	0.1 U	0.1 U	**0.033 J**
Benzo[b]fluoranthene	µg/L	0.034	0.1 U	**0.027 J**	0.1 U	0.1 U	0.1 U	**0.031 B**	0.1 U	**0.17**	0.1 U	**0.022 B**	**0.13**
Benzo[g,h,i]perylene	µg/L		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzo[k]fluoranthene	µg/L	0.34	0.1 U	**0.027 J**	0.1 U	0.1 U	0.1 U	**0.022 B**	0.1 U	**0.12**	0.1 U	0.1 U	**0.092 B**
bis(2-Ethylhexyl)phthalate	µg/L	6	1 U	**0.29 J**	**0.27 J**	1 U	1 U	1 U	1 U	1 U	**0.21 J**	1 U	1 U
Caprolactam	µg/L	9,900	2.6 UJ	2.5 U	2.5 UJ	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.6 UJ	2.5 U	2.5 U
Carbazole	µg/L		1 U	**1.9**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chrysene	µg/L	3.4	**0.012 J**	**0.024 J**	0.1 U	**0.012 J**	0.1 U	**0.0089 B**	0.1 U	**0.041 B**	**0.021 J**	0.1 U	**0.038 B**
Diethylphthalate	µg/L	15,000	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Di-n-butylphthalate	µg/L	900	1 U	**0.22 J**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Fluoranthene	µg/L	800	**0.059 J**	**0.38**	0.1 U	**0.018 J**	**0.031 J**	0.1 U	**0.039 J**	**0.032 J**	**0.051 J**	0.1 U	**0.2**
Fluorene	µg/L	290	0.1 U	**0.75**	**0.02 J**	0.1 U	0.1 U	0.1 U	**0.018 J**	0.1 U	**0.2**	0.1 U	0.1 U
Indeno[1,2,3-c,d]pyrene	µg/L	0.034	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Naphthalene	µg/L	0.17	**0.052 B**	**108**	**0.044 B**	**0.092 B**	**0.095 B**	**0.032 B**	**0.5**	**0.025 B**	**0.36**	**0.024 B**	**0.082 B**
Pentachlorophenol	µg/L	1	2.6 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.6 U	2.5 U	2.5 U
Phenanthrene	µg/L		**0.056 J**	**0.93**	**0.037 J**	**0.036 J**	**0.048 J**	0.1 U	0.1 U	**0.034 J**	**0.7**	0.1 U	**0.041 J**
Phenol	µg/L	5,800	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Pyrene	µg/L	120	**0.05 J**	**0.25**	0.1 U	**0.014 J**	**0.023 J**	0.1 U	**0.063 J**	**0.025 J**	**0.09 J**	0.1 U	**0.32**
TPH/Oil and Grease													
Diesel Range Organics	µg/L	47	**47.9 B**	**1,610**	**68.5 J**	101 UJ	**181 J**	**52.6 J**	**130 J**	102 UJ	**530 J**	**67.5 J**	**144 J**
Gasoline Range Organics	µg/L	47	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U

Table 6
Summary of Organics Detected
Area B Groundwater - Shallow
Tradepoint Atlantic
Sparrows Point, Maryland

Parameter	Units	PAL	SW-029-MWS	SW-030-MWS	SW-031-MWS	SW-032-MWS	SW-033-MWS	SW-034-MWS	SW-035-MWS	SW-036-MWS	SW-037-MWS	SW-038-MWS	SW-039-MWS
Volatile Organic Compounds													
1,1,1-Trichloroethane	µg/L	200	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	µg/L	2.7	**0.73 J**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene	µg/L	7	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethene (Total)	µg/L	70	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
4-Methyl-2-pentanone (MIBK)	µg/L	1,200	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acetone	µg/L	14,000	10 R	10 U	10 U	10 U	10 R	10 U	10 U	10 R	10 UJ	10 UJ	10 UJ
Benzene	µg/L	5	**3.6**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	7.5	1 U	1 U	1 U	1 U	**0.67 J**	1 U	1 U	1 U	1 U	1 U	1 U
Carbon disulfide	µg/L	810	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.22	1 U	1 U	1 U	**1.3**	1 U	1 U	1 U	**1.1**	**3**	1 U	1 U
cis-1,2-Dichloroethene	µg/L	70	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Cyclohexane	µg/L	13,000	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Ethylbenzene	µg/L	700	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	**0.58 J**	1 U	1 U
Isopropylbenzene	µg/L	450	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Methyl tert-butyl ether (MTBE)	µg/L	14	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Toluene	µg/L	1,000	**0.49 J**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene	µg/L	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	**0.6 J**	1 U	1 U
Xylenes	µg/L	10,000	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	**1.5 J**	3 U	3 U
Semi-Volatile Organic Compounds													
1,1-Biphenyl	µg/L	0.83	1 U	1 U	1.1 U	1.1 U	1 U	1 U	1.1 U	1 U	1 U	1 U	1 U
1,4-Dioxane	µg/L	0.46	**0.045 J**	**0.1**	**0.11**	**0.18**	**0.18**	**0.18**	0.11 U	**0.072 J**	**0.063 J**	**0.041 J**	0.1 U
2,3,4,6-Tetrachlorophenol	µg/L	240	1 U	1 U	1.1 U	1.1 U	1 U	1 U	1.1 U	1 U	1 U	1 U	1 U
2,4,5-Trichlorophenol	µg/L	1,200	2.5 U	2.6 U	2.6 U	2.6 U	2.5 U	2.6 U	2.6 U	2.5 U	2.6 U	2.5 U	2.5 U
2,4-Dimethylphenol	µg/L	360	1 U	1 U	1.1 U	1.1 U	1 U	1 U	1.1 U	1 U	1 U	1 U	1 U
2-Chloronaphthalene	µg/L	750	1 U	1 U	1.1 U	1.1 U	1 U	1 U	1.1 U	1 U	1 U	1 U	1 U
2-Methylnaphthalene	µg/L	36	**0.35**	0.1 U	**0.022 J**	0.11 U	**0.04 J**	0.1 U	0.11 U	**0.17**	0.1 U	**0.05 J**	**0.21**
2-Methylphenol	µg/L	930	1 U	1 U	1.1 U	1.1 U	1 U	1 U	1.1 U	1 U	1 U	1 U	1 U
3&4-Methylphenol(m&p Cresol)	µg/L	930	2 U	2.1 U	2.1 U	2.1 U	2 U	2 U	2.1 U	2 U	2.1 U	2 U	2 U
Acenaphthene	µg/L	530	**0.19**	0.1 U	**0.02 J**	**0.074 J**	**0.22**	**0.067 J**	**0.05 J**	**0.25**	0.1 U	**0.037 J**	**0.03 J**
Acenaphthylene	µg/L	530	**0.088 J**	0.1 U	0.11 U	0.11 U	0.1 U	0.1 U	0.11 U	0.1 U	0.1 U	0.1 U	0.1 U
Acetophenone	µg/L	1,900	**0.45 J**	1 U	1.1 U	1.1 U	1 U	1 U	1.1 U	1 U	1 U	1 U	1 U
Anthracene	µg/L	1,800	**0.083 J**	**0.026 J**	**0.058 J**	**0.036 J**	**0.061 J**	**0.022 J**	**0.046 J**	**0.21**	**0.018 J**	**0.09 J**	**0.046 J**
Benzo[a]anthracene	µg/L	0.012	**0.066 J**	0.1 U	**0.017 J**	**0.016 J**	**0.024 J**	0.1 U	0.11 U	**0.086 J**	**0.016 J**	0.1 U	0.1 UJ
Benzo[a]pyrene	µg/L	0.2	**1.2 J**	0.1 U	0.11 U	0.11 U	**0.011 J**	0.1 U	0.11 U	**0.012 J**	0.1 U	0.1 U	0.1 U
Benzo[b]fluoranthene	µg/L	0.034	**2.7 B**	0.1 U	0.11 U	0.11 U	**0.016 J**	0.1 U	0.11 U	**0.034 J**	0.1 U	0.1 U	0.1 U
Benzo[g,h,i]perylene	µg/L		**1.3 J**	0.1 U	0.11 U	0.11 U	0.1 U	0.1 U	0.11 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzo[k]fluoranthene	µg/L	0.34	**1.3 B**	0.1 U	0.11 U	0.11 U	**0.012 J**	0.1 U	0.11 U	**0.025 J**	0.1 U	0.1 U	0.1 U
bis(2-Ethylhexyl)phthalate	µg/L	6	1 U	1 U	1.1 U	1.1 U	1 U	1 U	1.1 U	1 U	1 U	1 U	1 U
Caprolactam	µg/L	9,900	2.5 U	2.6 U	2.6 U	2.6 U	2.5 U	2.6 U	2.6 U	2.5 U	2.6 U	2.5 U	2.5 U
Carbazole	µg/L		1 U	1 U	1.1 U	1.1 U	1 U	1 U	1.1 U	**0.61 J**	1 U	1 U	1 U
Chrysene	µg/L	3.4	**0.048 B**	0.1 U	**0.0091 J**	**0.01 J**	**0.013 J**	0.1 U	0.11 U	**0.061 J**	0.1 U	0.1 U	0.1 UJ
Diethylphthalate	µg/L	15,000	1 U	1 U	1.1 U	1.1 U	1 U	1 U	1.1 U	1 U	1 U	1 U	1 U
Di-n-butylphthalate	µg/L	900	1 U	1 U	1.1 U	1.1 U	1 U	1 U	1.1 U	1 U	1 U	1 U	1 U
Fluoranthene	µg/L	800	**0.091 J**	0.1 U	**0.038 J**	**0.046 J**	**0.088 J**	0.1 U	0.11 U	**0.72**	**0.029 J**	**0.015 J**	**0.026 J**
Fluorene	µg/L	290	**0.079 J**	0.1 U	**0.026 J**	**0.05 J**	**0.12**	0.1 U	0.11 U	**0.15**	0.1 U	**0.02 J**	**0.026 J**
Indeno[1,2,3-c,d]pyrene	µg/L	0.034	5.1 U	0.1 U	0.11 U	0.11 U	0.1 U	0.1 U	0.11 U	0.1 U	0.1 U	0.1 U	0.1 U
Naphthalene	µg/L	0.17	**162**	**0.027 B**	**0.037 B**	**0.086 B**	**0.1**	**0.067 B**	**0.13**	**0.16**	**0.055 B**	**0.099 B**	**0.11**
Pentachlorophenol	µg/L	1	2.5 U	2.6 U	2.6 U	2.6 U	2.5 U	2.6 U	**0.95 J**	2.5 U	2.6 U	2.5 U	**1 J**
Phenanthrene	µg/L		**0.08 J**	0.1 U	**0.12**	**0.099 J**	**0.24**	**0.02 J**	0.11 U	**1.1**	**0.027 J**	**0.033 J**	**0.11**
Phenol	µg/L	5,800	**0.32 J**	1 U	1.1 U	1.1 U	**0.29 J**	1 U	1.1 U	1 U	1 U	1 U	1 U
Pyrene	µg/L	120	**0.078 J**	0.1 U	**0.031 J**	**0.038 J**	**0.057 J**	0.1 U	0.11 U	**0.54**	**0.025 J**	0.1 U	**0.035 J**
TPH/Oil and Grease													
Diesel Range Organics	µg/L	47	**1,810 J**	**214 J**	**694 J**	106 UJ	**99.6 J**	**170 J**	**240 J**	**121 J**	**345 J**	**489 J**	**598 J**
Gasoline Range Organics	µg/L	47	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U

Table 6
Summary of Organics Detected
Area B Groundwater - Shallow
Tradepoint Atlantic
Sparrows Point, Maryland

Parameter	Units	PAL	SW-040-MWS	SW-041-MWS	SW-042-MWS	SW-043-MWS	SW-044-MWS	SW-045-MWS	SW-046-MWS	SW-047-MWS	SW-048-MWS	SW-049-MWS	SW-050-MWS
Volatile Organic Compounds													
1,1,1-Trichloroethane	µg/L	200	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	µg/L	2.7	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene	µg/L	7	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethene (Total)	µg/L	70	2 U	2 U	2 U	2 U	2 U	2 U	2 U	**0.58 J**	2 U	2 U	2 U
4-Methyl-2-pentanone (MIBK)	µg/L	1,200	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acetone	µg/L	14,000	10 U	10 U	10 U	10 UJ	10 U	**9.2 J**	10 R	10 UJ	10 U	10 U	10 U
Benzene	µg/L	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	7.5	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U
Carbon disulfide	µg/L	810	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.22	1 U	1 U	1 U	1 U	1 U	1 U	1 U	**6.1**	1 U	1 U	1 U
cis-1,2-Dichloroethene	µg/L	70	1 U	1 U	1 U	**0.42 J**	1 U	1 U	1 U	**0.58 J**	1 U	1 U	1 U
Cyclohexane	µg/L	13,000	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Ethylbenzene	µg/L	700	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Isopropylbenzene	µg/L	450	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Methyl tert-butyl ether (MTBE)	µg/L	14	1 U	**2.9**	1 U	1 U	1 U	**2.5**	1 U	1 U	1 U	1 U	1 U
Toluene	µg/L	1,000	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene	µg/L	5	1 U	1 U	1 U	**0.47 J**	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Xylenes	µg/L	10,000	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
Semi-Volatile Organic Compounds													
1,1-Biphenyl	µg/L	0.83	1 U	1.2 U	1.2 U	1 U	1.4 U	1.2 U	1 U	1 U	1.2 U	1.1 U	1 U
1,4-Dioxane	µg/L	0.46	0.1 U	**0.04 J**	0.1 U	0.1 U	0.11 U	0.11 U	0.1 U	0.1 U	0.1 U	0.11 U	**0.1 J**
2,3,4,6-Tetrachlorophenol	µg/L	240	1 U	1.2 U	1.2 U	1 U	1.4 U	1.2 U	1 U	1 U	1.2 U	1.1 U	**11.9**
2,4,5-Trichlorophenol	µg/L	1,200	2.5 U	3 U	3 U	2.6 U	3.4 U	3 U	2.6 U	2.6 U	3 U	2.6 U	**0.9 J**
2,4-Dimethylphenol	µg/L	360	1 U	1.2 U	1.2 U	1 U	1.4 U	1.2 U	1 U	1 U	1.2 U	1.1 U	1 U
2-Chloronaphthalene	µg/L	750	1 U	1.2 U	1.2 U	1 U	1.4 U	1.2 U	1 U	1 U	1.2 U	1.1 U	**0.83 J**
2-Methylnaphthalene	µg/L	36	0.1 U	0.1 U	0.1 U	0.1 U	0.11 U	0.11 U	0.1 U	0.1 U	0.1 U	0.11 U	**0.086 J**
2-Methylphenol	µg/L	930	1 U	1.2 U	1.2 U	1 U	1.4 U	1.2 U	1 U	1 U	1.2 U	1.1 U	1 U
3&4-Methylphenol(m&p Cresol)	µg/L	930	2 U	2.4 U	2.4 U	2 U	2.7 U	2.4 U	2.1 U	2.1 U	2.4 U	2.1 U	2 U
Acenaphthene	µg/L	530	0.1 U	0.1 U	0.1 U	0.1 U	0.11 U	0.11 U	0.1 U	0.1 U	0.1 U	0.11 U	0.11 U
Acenaphthylene	µg/L	530	0.1 U	0.1 U	0.1 U	0.1 U	0.11 U	0.11 U	0.1 U	0.1 U	0.1 U	0.11 U	0.11 U
Acetophenone	µg/L	1,900	1 U	1.2 U	1.2 U	1 U	1.4 U	1.2 U	1 U	1 U	1.2 U	1.1 U	1 U
Anthracene	µg/L	1,800	**0.019 J**	0.1 U	0.1 U	0.1 U	0.11 U	0.11 U	0.1 U	0.1 U	0.1 U	0.11 U	**0.014 J**
Benzo[a]anthracene	µg/L	0.012	0.1 U	0.1 U	0.1 U	0.1 U	0.11 U	0.11 U	0.1 U	0.1 U	0.1 U	0.11 U	0.11 U
Benzo[a]pyrene	µg/L	0.2	0.1 U	0.1 U	0.1 U	0.1 U	0.11 U	0.11 U	0.1 U	0.1 U	0.1 U	0.11 U	0.11 U
Benzo[b]fluoranthene	µg/L	0.034	0.1 U	0.1 U	0.1 U	0.1 U	0.11 U	0.11 U	0.1 U	0.1 U	0.1 U	0.11 U	0.11 U
Benzo[g,h,i]perylene	µg/L		0.1 U	0.1 U	0.1 U	0.1 U	0.11 U	0.11 U	0.1 U	0.1 U	0.1 U	0.11 U	0.11 U
Benzo[k]fluoranthene	µg/L	0.34	0.1 U	0.1 U	0.1 U	0.1 U	0.11 U	0.11 U	0.1 U	0.1 U	0.1 U	0.11 U	0.11 U
bis(2-Ethylhexyl)phthalate	µg/L	6	1 U	1.2 U	1.2 U	1 U	1.4 U	1.2 U	**0.47 B**	1 U	**0.69 J**	1.1 U	1 U
Caprolactam	µg/L	9,900	2.5 U	3 U	3 U	2.6 UJ	3.4 U	3 U	2.6 UJ	2.6 UJ	3 U	2.6 U	2.5 U
Carbazole	µg/L		1 UJ	1.2 UJ	1.2 UJ	1 U	1.4 UJ	1.2 UJ	1 U	1 U	1.2 UJ	1.1 UJ	1 UJ
Chrysene	µg/L	3.4	0.1 U	0.1 U	0.1 U	0.1 U	0.11 U	0.11 U	0.1 U	0.1 U	0.1 U	0.11 U	0.11 U
Diethylphthalate	µg/L	15,000	1 U	1.2 U	1.2 U	1 U	1.4 U	1.2 U	1 U	1 U	1.2 U	1.1 U	1 U
Di-n-butylphthalate	µg/L	900	1 U	1.2 U	1.2 UJ	1 U	1.4 U	1.2 U	1 U	1 U	1.2 U	1.1 U	1 U
Fluoranthene	µg/L	800	0.1 U	0.1 U	0.1 U	0.1 U	**0.024 J**	0.11 U	0.1 U	0.1 U	0.1 U	0.11 U	0.11 U
Fluorene	µg/L	290	0.1 U	0.1 U	0.1 U	0.1 U	0.11 U	0.11 U	0.1 U	0.1 U	0.1 U	0.11 U	0.11 U
Indeno[1,2,3-c,d]pyrene	µg/L	0.034	0.1 U	0.1 U	0.1 U	0.1 U	0.11 U	0.11 U	0.1 U	0.1 U	0.1 U	0.11 U	0.11 U
Naphthalene	µg/L	0.17	**0.033 B**	**0.029 B**	**0.061 B**	**0.044 B**	**0.091 B**	**0.038 B**	**0.035 B**	**0.045 B**	**0.038 B**	**0.059 B**	**0.16**
Pentachlorophenol	µg/L	1	2.5 U	3 U	3 U	2.6 U	3.4 U	3 U	2.6 U	2.6 U	3 U	**1.1 J**	**59.1**
Phenanthrene	µg/L		0.1 U	0.1 U	0.1 U	0.1 U	**0.017 J**	0.11 U	0.1 U	0.1 U	0.1 U	0.11 U	0.11 U
Phenol	µg/L	5,800	1 U	1.2 U	1.2 U	1 U	1.4 U	1.2 U	1 U	1 U	1.2 U	1.1 U	1 U
Pyrene	µg/L	120	0.1 U	0.1 U	0.1 U	0.1 U	0.11 U	0.11 U	0.1 U	0.1 U	0.1 U	0.11 U	0.11 U
TPH/Oil and Grease													
Diesel Range Organics	µg/L	47	**92.3 J**	**114 J**	103 UJ	**55 B**	**48.5 J**	104 UJ	102 UJ	**65 B**	**40.3 J**	104 UJ	118 UJ
Gasoline Range Organics	µg/L	47	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U

Table 6
Summary of Organics Detected
Area B Groundwater - Shallow
Tradepoint Atlantic
Sparrows Point, Maryland

Parameter	Units	PAL	SW-051-MWS	SW-052-MWS	SW-053-MWS	SW-054-MWS	SW-055-MWS	SW-056-MWS	SW-057-MWS	SW-058-MWS	SW-059-MWS	SW-060-MWS	SW-061-MWS
Volatile Organic Compounds													
1,1,1-Trichloroethane	µg/L	200	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	**4.1**
1,1-Dichloroethane	µg/L	2.7	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	**1.7**
1,1-Dichloroethene	µg/L	7	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	**0.39 J**
1,2-Dichloroethene (Total)	µg/L	70	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
4-Methyl-2-pentanone (MIBK)	µg/L	1,200	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acetone	µg/L	14,000	10 R	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 R	10 U	10 R
Benzene	µg/L	5	1 U	1 U	1 U	1 U	**7.7**	1 U	**14**	1 U	1 U	1 U	1 U
Bromomethane	µg/L	7.5	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U
Carbon disulfide	µg/L	810	1 U	1 U	1 U	1 U	1 U	1 U	**0.79 J**	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.22	1 U	1 U	1 U	1 U	1 U	1 U	1 U	**31**	1 U	1 U	1 U
cis-1,2-Dichloroethene	µg/L	70	**0.44 J**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Cyclohexane	µg/L	13,000	10 U	10 U	10 U	10 U	**7.9 J**	10 U	10 U	10 U	10 U	10 U	10 U
Ethylbenzene	µg/L	700	1 U	1 U	1 U	1 U	**20.3**	1 U	1 U	1 U	1 U	1 U	1 U
Isopropylbenzene	µg/L	450	1 U	1 U	1 U	1 U	**2.3**	1 U	1 U	1 U	1 U	1 U	1 U
Methyl tert-butyl ether (MTBE)	µg/L	14	1 U	1 U	1 U	1 U	**1.4**	**14.3**	1 U	1 U	1 U	1 U	1 U
Toluene	µg/L	1,000	1 U	1 U	1 U	1 U	**29.8**	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene	µg/L	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Xylenes	µg/L	10,000	3 U	3 U	3 U	3 U	**79.6**	3 U	3 U	3 U	3 U	3 U	3 U
Semi-Volatile Organic Compounds													
1,1-Biphenyl	µg/L	0.83	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dioxane	µg/L	0.46	**0.044 J**	0.1 U	0.1 U	0.1 U	0.1 U	**0.2**	**0.16**	0.1 U	**0.19**	**0.12**	**0.49**
2,3,4,6-Tetrachlorophenol	µg/L	240	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2,4,5-Trichlorophenol	µg/L	1,200	2.5 U	2.5 U	2.5 U	2.5 U	2.6 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
2,4-Dimethylphenol	µg/L	360	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Chloronaphthalene	µg/L	750	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Methylnaphthalene	µg/L	36	0.1 U	**0.031 J**	0.1 U	0.1 U	**0.83**	0.1 U	**0.14**	0.1 U	0.1 U	0.1 U	0.1 U
2-Methylphenol	µg/L	930	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
3&4-Methylphenol(m&p Cresol)	µg/L	930	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Acenaphthene	µg/L	530	0.1 U	0.1 U	0.1 U	0.1 U	**0.06 J**	0.1 U	**0.11**	0.1 U	0.1 U	0.1 U	0.1 U
Acenaphthylene	µg/L	530	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	**0.028 J**	0.1 U	0.1 U	0.1 U	0.1 U
Acetophenone	µg/L	1,900	1 U	1 U	1 U	1 U	**0.71 J**	1 U	1 U	1 U	1 U	1 U	1 U
Anthracene	µg/L	1,800	0.1 U	**0.062 J**	0.1 U	0.1 U	**0.049 J**	0.1 U	**0.042 J**	0.1 U	**0.049 J**	**0.053 J**	**0.046 J**
Benzo[a]anthracene	µg/L	0.012	0.1 U	**0.08 J**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	**0.037 J**	0.1 U	0.1 U	0.1 U
Benzo[a]pyrene	µg/L	0.2	0.1 U	**0.07 J**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	**0.021 J**	0.1 U	0.1 U	0.1 U
Benzo[b]fluoranthene	µg/L	0.034	0.1 U	**0.097 J**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	**0.095 Jip**	0.1 U	0.1 U	0.1 U
Benzo[g,h,i]perylene	µg/L		0.1 U	**0.058 J**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	**0.025 J**	0.1 U	0.1 U	0.1 U
Benzo[k]fluoranthene	µg/L	0.34	0.1 U	**0.057 J**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	**0.075 Jip**	0.1 U	0.1 U	0.1 U
bis(2-Ethylhexyl)phthalate	µg/L	6	1 U	1 U	1 U	1 U	1 U	**0.48 J**	**0.25 B**	1 U	1 U	**0.26 B**	1 U
Caprolactam	µg/L	9,900	2.5 U	2.5 U	2.5 U	2.5 U	2.6 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Carbazole	µg/L		1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chrysene	µg/L	3.4	0.1 U	**0.076 J**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	**0.046 J**	0.1 U	0.1 U	0.1 U
Diethylphthalate	µg/L	15,000	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Di-n-butylphthalate	µg/L	900	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Fluoranthene	µg/L	800	0.1 U	**0.1 J**	0.1 U	0.1 U	**0.025 J**	0.1 U	**0.049 J**	**0.039 J**	0.1 U	0.1 U	**0.011 J**
Fluorene	µg/L	290	**0.024 J**	0.1 U	0.1 U	0.1 U	**0.052 J**	0.1 U	**0.12**	0.1 U	0.1 U	0.1 U	0.1 U
Indeno[1,2,3-c,d]pyrene	µg/L	0.034	0.1 U	**0.039 J**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Naphthalene	µg/L	0.17	**0.024 B**	**0.068 B**	0.1 U	**0.018 B**	**2.8**	**0.019 B**	**0.47**	**0.022 B**	0.1 U	**0.053 B**	**0.03 B**
Pentachlorophenol	µg/L	1	2.5 U	2.5 U	2.5 U	2.5 U	**1 J**	2.5 U	**1 J**	2.5 U	2.5 U	**0.95 J**	2.5 U
Phenanthrene	µg/L		0.1 U	**0.067 J**	0.1 U	0.1 U	**0.087 J**	0.1 U	**0.12**	0.1 U	0.1 U	0.1 U	0.1 U
Phenol	µg/L	5,800	1 U	1 U	1 U	1 U	**0.36 J**	1 U	**0.42 J**	1 U	1 U	1 U	1 U
Pyrene	µg/L	120	0.1 U	**0.1 J**	0.1 U	0.1 U	**0.034 J**	0.1 U	**0.038 J**	**0.042 J**	0.1 U	0.1 U	0.1 U
TPH/Oil and Grease													
Diesel Range Organics	µg/L	47	**934 J**	**60.8 J**	**56.8 J**	103 UJ	**700 J**	**735 J**	**1,170 J**	105 UJ	**152 J**	**239 J**	**114 J**
Gasoline Range Organics	µg/L	47	200 U	200 U	200 U	200 U	**545**	200 U	200 U	200 U	200 U	200 U	200 U

Table 6
Summary of Organics Detected
Area B Groundwater - Shallow
Tradepoint Atlantic
Sparrows Point, Maryland

Parameter	Units	PAL	SW-062-MWS	SW-063-MWS	SW-064-MWS	SW-065-MWS	SW-066-MWS	SW-067-MWS	SW-068-MWS	SW-069-MWS	SW06-PZM001	SW-070-MWS	SW-071-MWS
Volatile Organic Compounds													
1,1,1-Trichloroethane	µg/L	200	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	µg/L	2.7	1 U	1 U	1 U	1 U	1 U	1 U	1 U	**0.98 J**	1 U	1 U	1 U
1,1-Dichloroethene	µg/L	7	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethene (Total)	µg/L	70	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
4-Methyl-2-pentanone (MIBK)	µg/L	1,200	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	**4.4 J**
Acetone	µg/L	14,000	10 R	10 U	10 R	10 R	10 UJ	10 U	10 U	10 U	10 R	10 R	**7.2 J**
Benzene	µg/L	5	1 U	1 U	1 U	**9.9**	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	7.5	1 U	1 UJ	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 U	1 U	1 U
Carbon disulfide	µg/L	810	1 U	1 U	1 U	**2.1**	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.22	1 U	1 U	1 U	**2.7**	**2**	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	µg/L	70	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Cyclohexane	µg/L	13,000	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Ethylbenzene	µg/L	700	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Isopropylbenzene	µg/L	450	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Methyl tert-butyl ether (MTBE)	µg/L	14	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Toluene	µg/L	1,000	1 U	1 U	1 U	**0.59 J**	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene	µg/L	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Xylenes	µg/L	10,000	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
Semi-Volatile Organic Compounds													
1,1-Biphenyl	µg/L	0.83	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dioxane	µg/L	0.46	0.1 U	**0.19**	**0.062 J**	**0.13**	0.1 U	0.1 U	**0.07 J**	**0.79**	0.1 U	**0.052 J**	0.1 U
2,3,4,6-Tetrachlorophenol	µg/L	240	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2,4,5-Trichlorophenol	µg/L	1,200	2.5 U	2.5 U	2.5 U	2.6 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
2,4-Dimethylphenol	µg/L	360	1 U	1 U	1 U	**2.7**	1 U	1 U	1 U	1 U	1 U	1 U	**1.4**
2-Chloronaphthalene	µg/L	750	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Methylnaphthalene	µg/L	36	0.1 U	0.1 U	0.1 U	**0.092 B**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	**0.24**
2-Methylphenol	µg/L	930	1 U	1 U	1 U	**0.63 J**	1 U	1 U	1 U	1 U	1 U	1 U	1 U
3&4-Methylphenol(m&p Cresol)	µg/L	930	2 U	2 U	2 U	**9.1**	2 U	2 U	2 U	2 U	2 U	2 U	**0.65 J**
Acenaphthene	µg/L	530	0.1 U	0.1 U	0.1 U	**0.035 B**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	**0.29**
Acenaphthylene	µg/L	530	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	**0.038 J**
Acetophenone	µg/L	1,900	1 U	1 U	1 U	**2.2**	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Anthracene	µg/L	1,800	**0.023 J**	**0.2**	**0.036 J**	**0.093 J**	**0.016 J**	0.1 U	0.1 U	**0.026 J**	0.1 U	0.1 U	**0.2**
Benzo[a]anthracene	µg/L	0.012	0.1 U	0.1 U	**0.016 J**	**0.023 J**	0.1 U	0.1 U	0.1 U	**0.023 J**	0.1 U	0.1 U	0.1 U
Benzo[a]pyrene	µg/L	0.2	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzo[b]fluoranthene	µg/L	0.034	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	**0.019 B**	0.1 U	0.1 U
Benzo[g,h,i]perylene	µg/L		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzo[k]fluoranthene	µg/L	0.34	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
bis(2-Ethylhexyl)phthalate	µg/L	6	1 U	**0.26 J**	1 U	1 U	1 U	**0.25 B**	1 U	1 U	1 U	1 U	**0.32 B**
Caprolactam	µg/L	9,900	2.5 U	2.5 U	2.5 U	2.6 UJ	2.5 U	**0.51 J**	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Carbazole	µg/L		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	**0.43 J**
Chrysene	µg/L	3.4	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	**0.013 J**	0.1 U	0.1 U	0.1 U
Diethylphthalate	µg/L	15,000	1 U	1 U	1 U	1 U	1 U	**2.1**	1 U	1 U	1 U	1 U	1 U
Di-n-butylphthalate	µg/L	900	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Fluoranthene	µg/L	800	0.1 U	0.1 U	**0.015 J**	**0.014 J**	0.1 U	0.1 U	0.1 U	**0.019 J**	0.1 U	0.1 U	**0.015 J**
Fluorene	µg/L	290	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	**0.11**
Indeno[1,2,3-c,d]pyrene	µg/L	0.034	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Naphthalene	µg/L	0.17	**0.022 B**	0.1 U	**0.13**	**0.96**	**0.022 B**	**0.043 B**	0.1 U	0.1 U	**0.053 B**	0.1 U	**0.16**
Pentachlorophenol	µg/L	1	2.5 U	2.5 U	2.5 U	2.6 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Phenanthrene	µg/L		0.1 U	0.1 U	**0.02 J**	**0.025 B**	0.1 U	0.1 U	0.1 U	**0.02 J**	0.1 U	0.1 U	**0.073 J**
Phenol	µg/L	5,800	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	**5.3 J**
Pyrene	µg/L	120	0.1 U	0.1 U	**0.014 J**	0.1 U	0.1 U	0.1 U	0.1 U	**0.017 J**	0.1 U	0.1 U	**0.029 J**
TPH/Oil and Grease													
Diesel Range Organics	µg/L	47	104 UJ	**664 J**	**93.2 J**	**667 J**	**188 J**	**103 J**	**122 J**	**270 J**	102 UJ	**48.8 J**	**3,120 J**
Gasoline Range Organics	µg/L	47	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U

Table 6
Summary of Organics Detected
Area B Groundwater - Shallow
Tradepoint Atlantic
Sparrows Point, Maryland

Parameter	Units	PAL	SW-072-MWS	SW-073-MWS	SW-074-MWS	SW07-PZM004	SW08-PZM003	SW09-PZM0004	SW10-PZM012	SW11-PZM005	SW12-PZP001	SW13-PZM003
Volatile Organic Compounds												
1,1,1-Trichloroethane	µg/L	200	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	µg/L	2.7	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene	µg/L	7	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethene (Total)	µg/L	70	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
4-Methyl-2-pentanone (MIBK)	µg/L	1,200	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acetone	µg/L	14,000	10 UJ	**6.8 J**	10 R	10 UJ	10 R	10 R	10 R	10 U	10 U	10 R
Benzene	µg/L	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	**20.4**
Bromomethane	µg/L	7.5	1 U	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 U	1 U	1 U
Carbon disulfide	µg/L	810	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.22	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	**2.2**
cis-1,2-Dichloroethene	µg/L	70	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Cyclohexane	µg/L	13,000	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Ethylbenzene	µg/L	700	1 U	**0.91 J**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	**2**
Isopropylbenzene	µg/L	450	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	**0.23 J**
Methyl tert-butyl ether (MTBE)	µg/L	14	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Toluene	µg/L	1,000	1 U	**0.71 J**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	**35.6**
Trichloroethene	µg/L	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Xylenes	µg/L	10,000	3 U	**4.1**	3 U	3 U	3 U	3 U	3 U	3 U	3 U	**47.7**
Semi-Volatile Organic Compounds												
1,1-Biphenyl	µg/L	0.83	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	**1.2**
1,4-Dioxane	µg/L	0.46	**0.071 J**	0.1 U	0.1 U	0.1 U	**0.16**	0.1 U	0.1 U	0.1 U	0.1 U	**0.14**
2,3,4,6-Tetrachlorophenol	µg/L	240	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2,4,5-Trichlorophenol	µg/L	1,200	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
2,4-Dimethylphenol	µg/L	360	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Chloronaphthalene	µg/L	750	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Methylnaphthalene	µg/L	36	0.1 U	**0.59**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	**12.2**
2-Methylphenol	µg/L	930	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	**0.43 J**
3&4-Methylphenol(m&p Cresol)	µg/L	930	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	**0.8 J**
Acenaphthene	µg/L	530	0.1 U	**0.37**	0.1 U	0.1 U	**0.033 J**	0.1 U	0.1 U	0.1 U	0.1 U	**0.64**
Acenaphthylene	µg/L	530	0.1 U	**0.023 J**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	**0.7**
Acetophenone	µg/L	1,900	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	**6.2**
Anthracene	µg/L	1,800	0.1 U	**0.28**	**0.11**	0.1 U	**0.023 J**	0.1 U	0.1 U	0.1 U	0.1 U	**2.1**
Benzo[a]anthracene	µg/L	0.012	0.1 U	**0.043 J**	0.1 U	0.1 U	**0.032 J**	0.1 U	0.1 U	0.1 U	0.1 U	**0.33**
Benzo[a]pyrene	µg/L	0.2	0.1 U	0.1 U	0.1 U	0.1 U	**0.029 J**	0.1 U	0.1 U	0.1 U	0.1 U	**0.04 J**
Benzo[b]fluoranthene	µg/L	0.034	0.1 U	0.1 U	0.1 U	0.1 U	**0.11 J**	0.1 U	0.1 U	0.1 U	0.1 U	**0.11**
Benzo[g,h,i]perylene	µg/L		0.1 U	0.1 U	0.1 U	0.1 U	0.1 UJ	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzo[k]fluoranthene	µg/L	0.34	0.1 U	0.1 U	0.1 U	0.1 U	**0.083 B**	0.1 U	0.1 U	0.1 U	0.1 U	**0.11**
bis(2-Ethylhexyl)phthalate	µg/L	6	1 U	1 U	1 U	1 U	1 U	1 U	**0.27 B**	1 U	1 UJ	1 U
Caprolactam	µg/L	9,900	2.5 U	2.5 U	2.5 U	2.5 UJ	2.5 U	2.5 UJ	2.5 UJ	2.5 U	2.5 U	2.5 U
Carbazole	µg/L		1 U	**0.23 J**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	**7.4**
Chrysene	µg/L	3.4	0.1 U	**0.03 J**	0.1 U	0.1 U	**0.028 B**	0.1 U	0.1 U	0.1 U	0.1 U	**0.29**
Diethylphthalate	µg/L	15,000	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Di-n-butylphthalate	µg/L	900	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Fluoranthene	µg/L	800	**0.011 J**	**0.42**	0.1 U	0.1 U	**0.014 J**	0.1 U	0.1 U	0.1 U	0.1 U	**3.5**
Fluorene	µg/L	290	0.1 U	**0.22**	0.1 U	0.1 U	**0.019 J**	0.1 U	0.1 U	0.1 U	0.1 U	**2.5**
Indeno[1,2,3-c,d]pyrene	µg/L	0.034	0.1 U	0.1 U	0.1 U	0.1 U	0.1 UJ	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Naphthalene	µg/L	0.17	**0.033 B**	**0.42**	0.1 U	**0.045 B**	**0.046 B**	**0.047 B**	**0.04 B**	**0.018 B**	0.1 U	**169**
Pentachlorophenol	µg/L	1	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Phenanthrene	µg/L		0.1 U	**0.63**	0.1 U	0.1 U	**0.018 J**	0.1 U	0.1 U	0.1 U	0.1 U	**9.7**
Phenol	µg/L	5,800	1 U	**0.27 J**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	**0.27 J**
Pyrene	µg/L	120	0.1 U	**0.42**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	**2.4**
TPH/Oil and Grease												
Diesel Range Organics	µg/L	47	**308 J**	**929 J**	**58.5 J**	101 UJ	**80.9 J**	**41.8 B**	**45.8 B**	101 UJ	**63 J**	**539 J**
Gasoline Range Organics	µg/L	47	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	**267**

Table 6
Summary of Organics Detected
Area B Groundwater - Shallow
Tradepoint Atlantic
Sparrows Point, Maryland

Parameter	Units	PAL	SW14-PZM004	SW15-PZM005	SW16-PZM003	TM03-PZM004	TM05-PZM005	TS10-PDM008
Volatile Organic Compounds								
1,1,1-Trichloroethane	µg/L	200	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	µg/L	2.7	1 U	1 U	**0.38 J**	1 U	1 U	1 U
1,1-Dichloroethene	µg/L	7	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethene (Total)	µg/L	70	2 U	2 U	2 U	2 U	2 U	2 U
4-Methyl-2-pentanone (MIBK)	µg/L	1,200	10 U	10 U	10 U	10 U	10 U	10 U
Acetone	µg/L	14,000	10 R	10 U	10 R	10 R	10 R	10 R
Benzene	µg/L	5	1 U	1 U	1 U	**1.1**	1 U	1 U
Bromomethane	µg/L	7.5	1 U	1 UJ	1 U	1 U	1 U	1 UJ
Carbon disulfide	µg/L	810	1 U	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.22	1 U	1 U	1 U	1 U	**1.8**	1 U
cis-1,2-Dichloroethene	µg/L	70	1 U	1 U	1 U	1 U	1 U	1 U
Cyclohexane	µg/L	13,000	10 U	10 U	10 U	10 U	10 U	10 U
Ethylbenzene	µg/L	700	1 U	1 U	1 U	1 U	1 U	1 U
Isopropylbenzene	µg/L	450	1 U	1 U	1 U	1 U	1 U	1 U
Methyl tert-butyl ether (MTBE)	µg/L	14	1 U	1 U	1 U	1 U	1 U	1 U
Toluene	µg/L	1,000	1 U	1 U	1 U	**0.7 J**	**0.36 J**	1 U
Trichloroethene	µg/L	5	1 U	1 U	1 U	1 U	1 U	1 U
Xylenes	µg/L	10,000	3 U	3 U	3 U	3 U	3 U	3 U
Semi-Volatile Organic Compounds								
1,1-Biphenyl	µg/L	0.83	**2.2**	1 U	1 U	**2.2 J**	**0.7 J**	1 U
1,4-Dioxane	µg/L	0.46	**0.27**	0.1 U	**0.36**	**0.044 J**	0.1 U	**0.21**
2,3,4,6-Tetrachlorophenol	µg/L	240	1 U	1 U	1 U	1 U	1 U	1 U
2,4,5-Trichlorophenol	µg/L	1,200	2.6 U	2.5 U	2.5 U	2.5 U	2.5 U	2.6 U
2,4-Dimethylphenol	µg/L	360	1 U	1 U	1 U	**0.26 J**	**0.36 J**	1 U
2-Chloronaphthalene	µg/L	750	1 U	1 U	1 U	1 U	1 U	1 U
2-Methylnaphthalene	µg/L	36	**12.8 J**	0.1 U	0.1 U	**11.7**	**4.1**	0.1 U
2-Methylphenol	µg/L	930	1 U	1 U	1 U	**0.19 J**	1 U	1 U
3&4-Methylphenol(m&p Cresol)	µg/L	930	2.1 U	2 U	2 U	**0.65 J**	**0.96 J**	2 U
Acenaphthene	µg/L	530	**25.7**	0.1 U	0.1 U	**2.6**	**4.1**	0.1 U
Acenaphthylene	µg/L	530	**0.61**	0.1 U	0.1 U	**5.3**	**0.56**	0.1 U
Acetophenone	µg/L	1,900	1 U	1 U	1 U	1 U	1 U	1 U
Anthracene	µg/L	1,800	**3.4**	0.1 U	**0.034 J**	**2.3**	**2.8**	0.1 U
Benzo[a]anthracene	µg/L	0.012	**0.33**	0.1 U	0.1 U	**0.33**	**0.41**	0.1 U
Benzo[a]pyrene	µg/L	0.2	**0.035 J**	0.1 U	0.1 U	**0.035 J**	**0.11**	0.1 U
Benzo[b]fluoranthene	µg/L	0.034	**0.089 J**	0.1 U	0.1 U	**0.089 J**	**0.24**	0.1 U
Benzo[g,h,i]perylene	µg/L		0.1 U	0.1 U	0.1 U	0.1 UJ	**0.04 J**	0.1 U
Benzo[k]fluoranthene	µg/L	0.34	**0.088 J**	0.1 U	0.1 U	**0.036 J**	**0.22**	0.1 U
bis(2-Ethylhexyl)phthalate	µg/L	6	1 U	1 U	1 U	**0.14 B**	1 U	1 U
Caprolactam	µg/L	9,900	2.6 UJ	2.5 U	2.5 UJ	2.5 U	2.5 U	2.6 UJ
Carbazole	µg/L		**12.1**	1 U	1 U	**15.9**	**10.7**	1 U
Chrysene	µg/L	3.4	**0.23**	0.1 U	0.1 U	**0.23**	**0.31**	0.1 U
Diethylphthalate	µg/L	15,000	1 U	1 U	1 U	1 U	1 U	1 U
Di-n-butylphthalate	µg/L	900	1 U	1 U	1 U	1 U	1 U	1 U
Fluoranthene	µg/L	800	**6.8 J**	0.1 U	**0.052 J**	**4.9**	**3.6**	0.1 U
Fluorene	µg/L	290	**11.4**	0.1 U	**0.061 J**	**8.9 J**	**5.2**	0.1 U
Indeno[1,2,3-c,d]pyrene	µg/L	0.034	0.1 U	0.1 U	0.1 U	0.1 UJ	**0.037 J**	0.1 U
Naphthalene	µg/L	0.17	**49.5**	**0.023 B**	**0.027 B**	**110**	**16.7**	**0.046 B**
Pentachlorophenol	µg/L	1	2.6 U	2.5 U	2.5 U	2.5 U	2.5 U	2.6 U
Phenanthrene	µg/L		**27.5**	0.1 U	**0.21**	**18.3**	**11.1**	0.1 U
Phenol	µg/L	5,800	**0.26 J**	1 U	1 U	**0.27 J**	**0.31 J**	1 U
Pyrene	µg/L	120	**4.2 J**	0.1 U	**0.038 J**	**3.6**	**2.3**	0.1 U
TPH/Oil and Grease								
Diesel Range Organics	µg/L	47	**522 J**	101 UJ	**225 J**	**583 J**	**262 J**	**75.5 B**
Gasoline Range Organics	µg/L	47	200 UJ	200 U	200 UJ	200 U	200 U	200 U

Data Validation Qualifier Code Glossary

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

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

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

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

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

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

NJ This analyte has been "tentatively" identified. The numeric value represents its approximate concentration.

Y This analyte coelutes with another target compound on the two chromatographic columns used for analysis.

R The results for this analyte are unreliable. Additional data is needed to confirm or disprove the presence of this compound/analyte in the sample.

Additional Notes

Bold values indicate a detection.

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

Additional Qualifier Keys can be view in the lab reports.

All Qualifier Keys may not be present in the table.

Table 7
Summary of Organics Detected
Area B Groundwater - Intermediate and Lower
Tradepoint Atlantic
Sparrows Point, Maryland

Parameter	Units	PAL	FM01-PZM041	FM05-PZM024	SW-043-MWI	SW-045-MWI	SW06-PZM053	SW-074-MWI	SW07-PZM108	SW08-PZM053	SW09-PZM028	SW09-PZM068	SW13-PZM025
Volatile Organic Compounds													
1,2-Dichloroethene (Total)	µg/L	70	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
2-Butanone (MEK)	µg/L	5,600	10 U	10 U	10 U	10 U	10 U	**7.2 J**	10 U	**4.7 J**	10 U	10 U	10 U
4-Methyl-2-pentanone (MIBK)	µg/L	1,200	10 U	10 U	10 U	10 U	**1.9 J**	10 U	10 U	10 U	10 U	10 U	10 U
Acetone	µg/L	14,000	10 R	**15.1 J**	**20.3**	**9.1 J**	10 R	**80.6**	10 R	**24.3 J**	10 R	10 R	10 U
Chloroform	µg/L	0.22	1 U	1 U	**2.6**	**2**	**5.9**	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	µg/L	70	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Methyl Acetate	µg/L	20,000	5 U	5 U	5 U	**2 J**	5 U	5 U	5 R	5 U	5 U	5 U	5 U
Methylene Chloride	µg/L	5	1 U	1 U	1 U	1 U	**1.4**	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene	µg/L	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Semi-Volatile Organic Compounds													
1,4-Dioxane	µg/L	0.46	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
2,4-Dimethylphenol	µg/L	360	1 U	1 U	1 U	1.2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Methylnaphthalene	µg/L	36	0.1 U	**0.07 J**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	**0.028 J**	**0.027 B**	**0.042 J**	0.1 U
Acenaphthene	µg/L	530	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	**0.032 B**	0.1 U	0.1 U
Acenaphthylene	µg/L	530	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Anthracene	µg/L	1,800	0.1 U	0.1 U	0.1 U	**0.034 J**	0.1 U	0.1 U	**0.014 J**	**0.021 J**	**0.017 J**	0.1 U	0.1 U
Benzo[a]anthracene	µg/L	0.012	0.1 U	0.1 U	0.1 U	0.1 U	**0.033 J**	0.1 U	**0.072 J**	**0.018 J**	**0.015 J**	0.1 U	0.1 U
Benzo[a]pyrene	µg/L	0.2	0.1 U	0.1 U	0.1 U	0.1 U	**0.035 J**	0.1 U	**0.068 J**	0.1 U	0.1 U	0.1 U	0.1 U
Benzo[b]fluoranthene	µg/L	0.034	0.1 U	0.1 U	0.1 U	0.1 U	**0.15**	0.1 U	**0.085 J**	**0.018 J**	0.1 U	0.1 U	0.1 U
Benzo[g,h,i]perylene	µg/L		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	**0.062 J**	0.1 U	0.1 U	0.1 U	0.1 U
Benzo[k]fluoranthene	µg/L	0.34	0.1 U	0.1 U	0.1 U	0.1 U	**0.1**	0.1 U	**0.047 J**	**0.014 J**	0.1 U	0.1 U	0.1 U
bis(2-Ethylhexyl)phthalate	µg/L	6	1 UJ	**0.23 J**	1 U	1.2 U	1 U	1 U	1 U	**0.13 B**	1 U	1 UJ	1 UJ
Caprolactam	µg/L	9,900	2.5 U	2.5 U	2.5 U	3 U	2.5 U	2.5 U	2.5 UJ	2.5 U	2.6 UJ	2.5 U	2.5 U
Carbazole	µg/L		1 U	1 U	1 U	1.2 UJ	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U
Chrysene	µg/L	3.4	0.1 U	0.1 U	0.1 U	0.1 U	**0.031 B**	0.1 U	**0.055 J**	**0.01 J**	0.1 U	0.1 U	0.1 U
Di-n-butylphthalate	µg/L	900	1 U	1 U	1 U	1.2 U	1 U	1 U	1 U	1 U	1 U	1 U	**0.1 J**
Fluoranthene	µg/L	800	0.1 U	0.1 U	0.1 U	0.1 U	**0.015 J**	0.1 U	**0.11**	**0.023 J**	**0.027 J**	0.1 U	0.1 U
Fluorene	µg/L	290	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	**0.022 B**	0.1 U	0.1 U
Indeno[1,2,3-c,d]pyrene	µg/L	0.034	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	**0.051 J**	0.1 U	0.1 U	0.1 U	0.1 U
Isophorone	µg/L	78	1 U	1 U	1 U	1.2 U	1 U	**0.49 J**	1 U	1 U	1 U	1 U	1 U
Naphthalene	µg/L	0.17	**0.023 B**	**4.8**	0.1 U	**0.027 B**	**0.024 B**	**0.059 B**	**0.042 B**	**0.065 B**	**0.084 B**	**0.091 B**	0.1 U
Phenanthrene	µg/L		0.1 U	**0.026 J**	0.1 U	0.1 U	0.1 U	0.1 U	**0.074 J**	**0.036 B**	**0.071 B**	0.1 U	**0.017 J**
Pyrene	µg/L	120	0.1 U	0.1 U	0.1 U	0.1 U	**0.013 J**	0.1 U	**0.11**	**0.013 J**	**0.021 J**	0.1 U	0.1 U
TPH/Oil and Grease													
Diesel Range Organics	µg/L	47	**49.6 J**	105 UJ	**191 J**	**141**	**48.8 J**	**122**	**80.9 J**	**611 J**	**81.6 J**	**104 J**	**49.4 J**

Table 7
Summary of Organics Detected
Area B Groundwater - Intermediate and Lower
Tradepoint Atlantic
Sparrows Point, Maryland

Parameter	Units	PAL	SW13-PZM111	SW15-PZM031	SW15-PZM085	SW16-PZM067	TM03-PZM037	TM05-PZM040
Volatile Organic Compounds								
1,2-Dichloroethene (Total)	µg/L	70	2 U	2 U	**0.57 B**	2 U	**1.3 J**	2 U
2-Butanone (MEK)	µg/L	5,600	10 U	10 U	10 U	10 U	10 U	10 U
4-Methyl-2-pentanone (MIBK)	µg/L	1,200	10 U	10 U	10 U	10 U	10 U	10 U
Acetone	µg/L	14,000	10 R	10 R	10 UJ	10 U	10 R	10 R
Chloroform	µg/L	0.22	1 U	1 U	1 U	1 U	**0.98 J**	1 U
cis-1,2-Dichloroethene	µg/L	70	1 U	1 U	**0.57 B**	1 U	**1.3**	1 U
Methyl Acetate	µg/L	20,000	5 R	5 U	5 U	5 U	5 U	5 U
Methylene Chloride	µg/L	5	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene	µg/L	5	1 U	1 U	1 U	1 U	**0.91 J**	1 U
Semi-Volatile Organic Compounds								
1,4-Dioxane	µg/L	0.46	0.1 U	**0.084 J**	0.1 U	0.1 U	**0.5**	0.1 U
2,4-Dimethylphenol	µg/L	360	1 U	1 U	1 U	1 U	1 U	**0.35 J**
2-Methylnaphthalene	µg/L	36	**0.1**	**0.037 J**	0.1 U	**0.023 J**	**0.58**	0.1 U
Acenaphthene	µg/L	530	**0.071 J**	**0.019 B**	0.1 U	0.1 U	**0.91**	**1.2**
Acenaphthylene	µg/L	530	0.1 U	0.1 U	0.1 U	0.1 U	**0.22**	**0.1**
Anthracene	µg/L	1,800	**0.027 J**	0.1 U	0.1 U	0.1 U	**1.1**	**0.089 J**
Benzo[a]anthracene	µg/L	0.012	0.1 U	0.1 U	0.1 U	0.1 U	**0.11**	**0.041 J**
Benzo[a]pyrene	µg/L	0.2	0.1 U	0.1 U	0.1 U	0.1 U	**0.011 J**	**0.0088 J**
Benzo[b]fluoranthene	µg/L	0.034	0.1 U	0.1 U	0.1 U	0.1 U	**0.04 J**	**0.026 J**
Benzo[g,h,i]perylene	µg/L		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzo[k]fluoranthene	µg/L	0.34	0.1 U	0.1 U	0.1 U	0.1 U	**0.036 J**	**0.022 J**
bis(2-Ethylhexyl)phthalate	µg/L	6	**1.1**	1 U	1 U	1 UJ	**0.16 B**	1 U
Caprolactam	µg/L	9,900	**0.24 J**	2.6 UJ	2.5 UJ	2.5 U	2.5 U	2.5 U
Carbazole	µg/L		1 U	1 U	1 U	1 U	**1.9**	**0.88 J**
Chrysene	µg/L	3.4	0.1 U	0.1 U	0.1 U	0.1 U	**0.11**	**0.03 J**
Di-n-butylphthalate	µg/L	900	1 U	1 U	1 U	1 U	**0.21 J**	1 U
Fluoranthene	µg/L	800	**0.04 J**	**0.013 J**	0.1 U	0.1 U	**2.1**	**0.45**
Fluorene	µg/L	290	**0.082 J**	**0.018 B**	0.1 U	0.1 U	**1.3**	**0.27**
Indeno[1,2,3-c,d]pyrene	µg/L	0.034	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Isophorone	µg/L	78	1 U	1 U	1 U	1 U	1 U	1 U
Naphthalene	µg/L	0.17	**0.14**	**0.13 B**	**0.045 B**	**0.032 B**	**3.4**	**1.1**
Phenanthrene	µg/L		**0.19**	**0.042 B**	0.1 U	0.1 U	**5.8**	**0.1 B**
Pyrene	µg/L	120	**0.029 J**	0.1 U	0.1 U	0.1 U	**1.3**	**0.27**
TPH/Oil and Grease								
Diesel Range Organics	µg/L	47	**134 J**	**122 J**	**34.9 B**	101 UJ	**335 J**	**116 J**

Data Validation Qualifier Code Glossary

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

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

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

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

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

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

NJ This analyte has been "tentatively" identified. The numeric value represents its approximate concentration.

Y This analyte coelutes with another target compound on the two chromatographic columns used for analysis.

R The results for this analyte are unreliable. Additional data is needed to confirm or disprove the presence of this compound/analyte in the sample.

Additional Notes

Bold values indicate a detection.

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

Additional Qualifier Keys can be view in the lab reports.

All Qualifier Keys may not be present in the table.

Table 8
Summary of Inorganics Detected
Area B Groundwater - Shallow
Tradepoint Atlantic
Sparrows Point, Maryland

Parameter	Units	PAL	FM01-PZM003	FM05-PZM004	SG07-PDM008	SW-021-MWS	SW-022-MWS	SW-023-MWS	SW-024-MWS	SW-025-MWS	SW-026-MWS	SW-027-MWS	SW-028-MWS
Metal (Total)													
Aluminum	µg/L	20,000	**118**	**658 J**	**892**	**576**	**325**	**806**	**182**	**125**	**726**	**32.8 J**	**180**
Antimony	µg/L	6	6 U	6 U	6 U	**3.3 J**	6 U	6 U	6 U	6 U	6 U	**3.8 J**	6 U
Arsenic	µg/L	10	5 U	**7.4**	5 U	5 U	5 U	5 U	**4 B**	5 U	5 U	**4.2 J**	**4.3 J**
Barium	µg/L	2,000	**25.8**	**28.4**	**56.2**	**71.4**	**65.3**	**23.4**	**39**	**69.4**	**54.9**	**32.4**	**68.6**
Beryllium	µg/L	4	1 U	1 U	1 U	**0.47 J**	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Cadmium	µg/L	5	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
Chromium	µg/L	100	**1.6 B**	**4.6 B**	**34.2**	**2.5 B**	**1.5 B**	**18.9**	**3.8 B**	**1.1 B**	**1.1 J**	**9.9**	**1.3 J**
Chromium VI	µg/L	0.035	10 U	10 U	**26**	10 U	10 U	**9 J**	10 U	10 U	10 U	10 U	10 U
Cobalt	µg/L	6	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Copper	µg/L	1,300	**1.7 B**	**1.9 B**	5 U	5 U	5 U	**3 B**	5 U	**3.9 B**	5 U	5 U	**2.3 B**
Iron	µg/L	14,000	**50 B**	**843**	70 U	**74.8**	**53.4 J**	**45.3 B**	**727**	**765**	**65.4 B**	**26.6 J**	**534**
Lead	µg/L	15	5 U	5 U	5 U	5 U	5 U	5 U	5 U	**14**	5 U	5 U	5 U
Manganese	µg/L	430	**7.6**	**38.5**	5 U	**19**	**15**	**4.2 J**	**264**	**1,360**	**11.2**	**1.8 B**	**477**
Mercury	µg/L	2	**0.06 B**	0.2 U	**0.06 B**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Nickel	µg/L	390	**0.71 J**	**3.1 B**	10 U	**0.85 B**	**0.78 B**	**1.4 B**	10 U	**0.8 B**	10 U	10 U	**1.2 B**
Selenium	µg/L	50	8 U	8 U	**8.8**	**5.2 B**	8 U	**11.1**	**3.6 B**	8 U	**4 B**	8 U	8 U
Silver	µg/L	94	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U
Thallium	µg/L	2	10 U	10 U	10 U	**6 B**	**4.2 B**	**4.7 B**	10 U	10 U	10 U	10 U	**3.5 B**
Vanadium	µg/L	86	**224**	**25.2**	**13.4**	**391**	**4.2 B**	**12.9**	**8.5**	5 U	5 U	**31.8**	**1.2 B**
Zinc	µg/L	6,000	10 U	**3.7 B**	10 U	**1.3 B**	**0.64 B**	**0.8 J**	**1.4 B**	**19.2**	**1.5 J**	**7.1 B**	**2.2 J**
Metal (Dissolved)													
Aluminum, Dissolve	µg/L	20,000	**102**	**103**	**884**	**512**	**267**	**804**	**149**	**21.5 J**	**582**	50 U	**22.1 B**
Antimony, Dissolve	µg/L	6	**2.6 B**	6 U	6 U	**2.8 J**	6 U	6 U	6 U	6 U	6 U	6 U	6 U
Arsenic, Dissolve	µg/L	10	5 U	**8.6**	5 U	**5.4**	5 U	5 U	**4 B**	5 U	5 U	5 U	**4.9 B**
Barium, Dissolve	µg/L	2,000	**25.7**	**26.9**	**56.5**	**62.3**	**58.3**	**22.7**	**34.5**	**69.3**	**52.2**	**34.2**	**63.3**
Beryllium, Dissolve	µg/L	4	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Cadmium, Dissolve	µg/L	5	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	**0.51 J**	3 U
Chromium, Dissolve	µg/L	100	**1.3 B**	**0.91 J**	**34.1**	**2.1 B**	**1.6 B**	**19.7**	**1.6 B**	5 U	**1 B**	**10.2**	**0.84 J**
Cobalt, Dissolve	µg/L	6	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Copper, Dissolve	µg/L	1,300	5 U	5 U	**2.1 B**	**2.1 J**	5 U	**3.1 B**	5 U	5 U	5 U	**3.1 B**	**2.5 B**
Iron, Dissolve	µg/L	14,000	**23.9 J**	**45.3 B**	70 U	**20.4 B**	**29.4 B**	**34.4 J**	**249**	**263**	**21.3 J**	**12.2 B**	**392**
Lead, Dissolve	µg/L	15	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Manganese, Dissolve	µg/L	430	**5.8 J**	**34.1**	5 U	**13.2**	**1.8 B**	**3.7 J**	**245**	**1,320**	**1.4 B**	**2.2 J**	**475**
Nickel, Dissolve	µg/L	390	10 U	**1.8 J**	10 U	10 U	10 U	**0.94 B**	**0.8 B**	**0.7 B**	**0.78 B**	**1.6 B**	**1.2 B**
Selenium, Dissolve	µg/L	50	8 U	8 U	**8.1**	8 U	8 U	**12.4**	8 U	8 U	8 U	**4.5 B**	8 U
Silver, Dissolve	µg/L	94	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 UJ	6 U	6 UJ	6 U
Thallium, Dissolve	µg/L	2	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	**4.8 J**
Vanadium, Dissolve	µg/L	86	**233**	**23**	**13.4**	**376**	**3.6 J**	**12.3**	**7.7**	5 U	5 U	**32.8**	**0.87 B**
Zinc, Dissolve	µg/L	6,000	**0.94 B**	**0.84 B**	10 U	10 U	10 U	10 U	**1.2 B**	**1.5 J**	10 U	**7.4 J**	10 U
Other													
Cyanide	µg/L	200	10 U	**9.3 J**	10 U	10 U	10 U	10 U	**296**	10 U	10 U	10 U	10 U

Table 8
Summary of Inorganics Detected
Area B Groundwater - Shallow
Tradepoint Atlantic
Sparrows Point, Maryland

Parameter	Units	PAL	SW-029-MWS	SW-030-MWS	SW-031-MWS	SW-032-MWS	SW-033-MWS	SW-034-MWS	SW-035-MWS	SW-036-MWS	SW-037-MWS	SW-038-MWS	SW-039-MWS
Metal (Total)													
Aluminum	µg/L	20,000	**56.1**	**766**	**320**	**266**	**881**	**249**	**124**	**636**	**770**	**250**	**125**
Antimony	µg/L	6	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U
Arsenic	µg/L	10	5 U	**3.9 J**	**3.8 J**	5 U	**3.5 B**	**3.2 J**	**3.4 J**	5 U	5 U	5 U	5 U
Barium	µg/L	2,000	**84.3**	**22.6**	**30.1**	**62**	**53**	**73.3**	**20.1**	**69.3**	**71.3**	**64.5**	**51.5**
Beryllium	µg/L	4	1 U	1 U	1 U	1 U	**0.34 J**	1 U	1 U	1 U	1 U	1 U	1 U
Cadmium	µg/L	5	**0.73 J**	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
Chromium	µg/L	100	**0.87 B**	5 U	**1.4 J**	**3.3 J**	**8.8**	**1.9 J**	**5.7**	**1.8 B**	**0.99 J**	**17.3**	**0.81 J**
Chromium VI	µg/L	0.035	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	**5 J**	10 U
Cobalt	µg/L	6	**2.9 J**	5 U	5 U	**5.2**	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Copper	µg/L	1,300	5 U	**1.9 B**	5 U	5 U	**2.5 J**	5 U	5 U	5 U	5 U	5 U	5 U
Iron	µg/L	14,000	**678**	**131**	**346**	**1,970**	**448**	**35 J**	**138**	**75.2**	**29.5 B**	70 U	**13 B**
Lead	µg/L	15	5 U	5 U	5 U	5 U	5 U	5 U	5 U	**4.6 B**	5 U	5 U	5 U
Manganese	µg/L	430	**167**	**4.7 B**	**46.7**	**336**	**14.6**	**5.7**	**5.6**	**68.7**	**11.3**	5 U	**1.6 B**
Mercury	µg/L	2	0.2 U	0.2 UJ	0.2 UJ	0.2 UJ	0.2 U	0.2 UJ	0.2 UJ	0.2 U	0.2 U	0.2 U	0.2 U
Nickel	µg/L	390	10 U	**1.6 B**	**2.8 B**	**4.6 B**	**1.2 B**	10 U	**0.73 B**	10 U	10 U	**0.93 J**	10 U
Selenium	µg/L	50	**6.8 B**	8 U	8 U	8 U	**4 B**	8 U	8 U	**6.8 B**	8 U	**4 J**	**5.4 J**
Silver	µg/L	94	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U
Thallium	µg/L	2	10 U	10 U	10 U	10 U	**4.2 J**	10 U	**5.3 B**	**7 B**	10 U	10 U	**4.1 J**
Vanadium	µg/L	86	**5 B**	**38.2**	**6.6**	**15.2**	**32.2**	**42.7**	**22.4**	**106**	**61.3**	**111**	**2.8 B**
Zinc	µg/L	6,000	**2.4 B**	**6.9 B**	**2.8 B**	**2.7 B**	**3.7 B**	10 U	**8.7 B**	**1.4 B**	10 U	10 U	10 U
Metal (Dissolved)													
Aluminum, Dissolve	µg/L	20,000	**42.4 J**	**698**	**83.5**	**93.8**	**49.8 J**	**224**	**126**	**363**	**699**	**249**	**120**
Antimony, Dissolve	µg/L	6	6 U	6 U	6 U	**2.4 B**	6 U	6 U	6 U	6 U	6 U	6 U	6 U
Arsenic, Dissolve	µg/L	10	5 U	**4.5 B**	**3.1 B**	5 U	**4.3 B**	5 U	**4.1 B**	5 U	5 U	5 U	5 U
Barium, Dissolve	µg/L	2,000	**85.8**	**21.6**	**29.4**	**57.6**	**47.1**	**69**	**21.7**	**65.6**	**67.3**	**64.3**	**51.4**
Beryllium, Dissolve	µg/L	4	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Cadmium, Dissolve	µg/L	5	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
Chromium, Dissolve	µg/L	100	5 U	5 U	5 U	**1.2 B**	**7.9**	**1.7 B**	**5.4**	**0.96 B**	**1 J**	**17.4**	5 U
Cobalt, Dissolve	µg/L	6	**1.9 B**	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Copper, Dissolve	µg/L	1,300	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Iron, Dissolve	µg/L	14,000	**595**	**29.9 J**	70 U	**59.9 J**	**38.8 B**	**34.2 J**	**102**	70 U	**13.9 B**	70 U	70 U
Lead, Dissolve	µg/L	15	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Manganese, Dissolve	µg/L	430	**183**	**0.92 J**	**40.4**	**98.6**	**2.3 B**	**3.6 J**	**3.3 J**	**2.3 B**	**1.4 B**	5 U	5 U
Nickel, Dissolve	µg/L	390	10 U	**3.6 B**	**1.7 B**	**3 B**	10 U	**0.82 B**	**0.71 B**	**1.2 B**	10 U	**0.99 B**	**1 B**
Selenium, Dissolve	µg/L	50	8 U	8 U	8 U	8 U	**4.2 B**	8 U	**5.6 J**	**5.6 B**	8 U	8 U	**3.7 J**
Silver, Dissolve	µg/L	94	6 UJ	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U
Thallium, Dissolve	µg/L	2	10 U	**4.8 J**	10 U	10 U	**6.1 B**	**4.5 B**	10 U	**4.7 B**	10 U	10 U	10 U
Vanadium, Dissolve	µg/L	86	**4.6 J**	**39.6**	**6.2**	**6.1**	**26.3**	**41.2**	**24.4**	**104**	**61.5**	**108**	**2.6 B**
Zinc, Dissolve	µg/L	6,000	**43.6**	**2.2 B**	**3.9 B**	10 U	**1.5 B**	**1.5 B**	**0.77 B**	10 U	**0.67 B**	**1.3 B**	**1.2 B**
Other													
Cyanide	µg/L	200	**1,420**	**64.6**	**6.1 J**	**32.4**	**81.1**	**71.8**	**225**	10 U	**4.6 J**	10 U	10 U

Table 8
Summary of Inorganics Detected
Area B Groundwater - Shallow
Tradepoint Atlantic
Sparrows Point, Maryland

Parameter	Units	PAL	SW-040-MWS	SW-041-MWS	SW-042-MWS	SW-043-MWS	SW-044-MWS	SW-045-MWS	SW-046-MWS	SW-047-MWS	SW-048-MWS	SW-049-MWS	SW-050-MWS
Metal (Total)													
Aluminum	µg/L	20,000	1,150 J	60	1,200	1,560	425	603	420	2,810	2,090	15,000	575
Antimony	µg/L	6	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U
Arsenic	µg/L	10	5 U	5 U	5 U	5 U	5 U	5 U	5 U	3.9 B	5 U	5 U	5 U
Barium	µg/L	2,000	18.1	18.7	16.4	21.7	108	20.5	28.4	44.3	27.2	18.7	18.5
Beryllium	µg/L	4	1 U	1 U	2.2	2.7	1 U	1.1	0.35 B	6.5	1.9	15.6	1.6
Cadmium	µg/L	5	3 U	3 U	0.61 B	0.79 B	1.1 B	0.86 B	1.1 J	1.5 J	1.1 B	3 B	3 U
Chromium	µg/L	100	10.7	5 U	5 U	1.1 B	5 U	5 U	5 U	1.6 J	5 U	2.7 B	0.97 B
Chromium VI	µg/L	0.035	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5 J	10 U	10 U	10 U
Cobalt	µg/L	6	5 U	5.9	40.2	29.8	7.7 J	64.7	214	100	161	354	47.4
Copper	µg/L	1,300	1.8 J	5 U	3.2 J	7.2	5 U	5 U	2.4 B	7.9	4 J	10.1	1.8 J
Iron	µg/L	14,000	1,500	12,600	4,110	10,700	63,400	1,010	12,600	83.2 B	23,800	27,400	21,700
Lead	µg/L	15	5 U	5 U	5 U	5 U	25 U	5 U	5 U	5 U	5 U	7.2	5 U
Manganese	µg/L	430	71.2	362	954	1,070	3,060	1,140	11,500	884	8,620	4,420	866
Mercury	µg/L	2	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.06 B	0.03 J	0.2 U	0.2 U	0.2 U
Nickel	µg/L	390	0.78 B	6.7 B	31.2	30.3 J	15.4	103	100	99.4 J	94.1	522	57.8
Selenium	µg/L	50	7.3 B	8 U	8 U	4 B	8 U	8 U	8 U	4 B	8 U	8 U	8 U
Silver	µg/L	94	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U
Thallium	µg/L	2	10 U	10 U	10 U	10 U	50 U	10 U	10 U	10 U	10 U	10 U	10 U
Vanadium	µg/L	86	155	0.58 J	0.82 J	1.1 B	2.7 J	0.74 J	3 B	1 B	2.6 J	2.5 J	0.82 J
Zinc	µg/L	6,000	1.9 J	20.7	127	160	37.4	146	189	130	214	1,250	109
Metal (Dissolved)													
Aluminum, Dissolve	µg/L	20,000	453	42.2 J	1,220	1,540	55.7	625	162	2,860	2,040	15,200	558
Antimony, Dissolve	µg/L	6	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U
Arsenic, Dissolve	µg/L	10	4 B	5 U	5 U	5 U	5 U	5 U	5 U	4.5 J	5 U	5 U	5 U
Barium, Dissolve	µg/L	2,000	16	19.4	16.9	22.1	91.1	20.1	27.1	42.9	26.1	17.5	19
Beryllium, Dissolve	µg/L	4	1 U	1 U	2.3	2.7	1 U	1.1	0.35 B	6.6	2.4	15.7	1.7
Cadmium, Dissolve	µg/L	5	3 U	3 U	0.54 B	0.79 J	1.3 B	0.74 B	1.2 J	1.4 B	1.4 B	2.7 B	0.57 B
Chromium, Dissolve	µg/L	100	3.3 B	5 U	5 U	1.1 J	5 U	5 U	5 U	0.98 B	5 U	2.5 B	0.93 B
Cobalt, Dissolve	µg/L	6	5 U	5.6	41.6	30.9	6.4 J	65.1	216	105	166	355	48.2
Copper, Dissolve	µg/L	1,300	5 U	5 U	2.8 J	7.4 B	5 U	5 U	5 U	7.8	3.3 J	8.5	2 J
Iron, Dissolve	µg/L	14,000	127	13,400	4,360	11,100	53,700	1,450	14,100	30.4 B	22,200	29,000	24,400
Lead, Dissolve	µg/L	15	5 U	5 U	5 U	5 U	25 U	5 U	5 U	5 U	3.4 B	5.8	5 U
Manganese, Dissolve	µg/L	430	62.4	362	982	1,170 J	3,430	1,100	11,200 J	850 J	8,510	4,870	868
Nickel, Dissolve	µg/L	390	0.82 B	6.3 B	32.7	30.3 J	14.4	105	100	106 J	93.6	519	60.7
Selenium, Dissolve	µg/L	50	8 U	8 U	8 U	8 U	8 U	8 U	8 U	8 U	8 U	8 U	4.2 B
Silver, Dissolve	µg/L	94	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U
Thallium, Dissolve	µg/L	2	10 U	10 U	10 U	10 U	50 U	10 U	10 U	10 U	10 U	10 U	10 U
Vanadium, Dissolve	µg/L	86	129	5 U	0.61 J	0.85 J	2.2 J	0.77 J	2.3 B	0.81 B	2.6 J	2.4 J	1.1 J
Zinc, Dissolve	µg/L	6,000	0.73 J	20	137	162	44	153	192	134 J	206	1,280	115
Other													
Cyanide	µg/L	200	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U

Table 8
Summary of Inorganics Detected
Area B Groundwater - Shallow
Tradepoint Atlantic
Sparrows Point, Maryland

Parameter	Units	PAL	SW-051-MWS	SW-052-MWS	SW-053-MWS	SW-054-MWS	SW-055-MWS	SW-056-MWS	SW-057-MWS	SW-058-MWS	SW-059-MWS	SW-060-MWS	SW-061-MWS
Metal (Total)													
Aluminum	µg/L	20,000	**2,340**	**12,300 J**	**248**	**621**	**2,320**	**420**	**537**	**295**	**223**	**455**	**338**
Antimony	µg/L	6	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U
Arsenic	µg/L	10	5 U	**4.2 B**	5 U	5 U	**7.5**	5 U	**3.7 J**	5 U	5 U	5 U	5 U
Barium	µg/L	2,000	**13**	**109**	**17.3**	**25.9**	**19.8**	**19.4**	**60.7**	**27.4**	**21.4**	**70.2**	**49.9**
Beryllium	µg/L	4	**1.8**	**0.46 J**	**2**	**2.4**	1 U	1 U	1 U	1 U	**1**	1 U	1 U
Cadmium	µg/L	5	**0.69 J**	**0.71 B**	**0.66 J**	3 U	3 U	**0.77 J**	3 U	3 U	3 U	3 U	3 U
Chromium	µg/L	100	**1.4 B**	**59.9**	5 U	5 U	**0.98 J**	**2.2 J**	**2.6 B**	**8.6**	**22.8**	**4.2 B**	**4 B**
Chromium VI	µg/L	0.035	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	**11**	10 U	**5 J**
Cobalt	µg/L	6	**57.6**	**2.3 J**	**77.7**	**27.1**	5 U	**112**	**3.7 J**	5 U	**61.5**	5 U	5 U
Copper	µg/L	1,300	5 U	**9.9**	5 U	5 U	5 U	**1.7 B**	5 U	5 U	5 U	5 U	5 U
Iron	µg/L	14,000	**9,350**	**21,100**	**5,040**	**4,530**	**107**	**70,400**	**15,600**	**451**	**498**	**14.2 B**	**53.2 B**
Lead	µg/L	15	5 U	**42.2**	5 U	5 U	5 U	5 U	5 U	**4.2 B**	5 U	5 U	5 U
Manganese	µg/L	430	**1,910**	**714**	**1,620**	**928**	**3.1 B**	**11,100**	**2,190**	**17.2**	**1,020**	**2.6 J**	**128**
Mercury	µg/L	2	0.2 UJ	0.2 U	0.2 UJ	0.2 UJ	0.2 UJ	0.2 UJ	0.2 UJ	0.2 UJ	0.2 UJ	0.2 UJ	0.2 UJ
Nickel	µg/L	390	**90.3**	**9.2 B**	**120**	**48**	**2.3 J**	**38.1**	**5.7 B**	10 U	**52.6**	10 U	10 U
Selenium	µg/L	50	8 U	**7.1 B**	8 U	**5.1 B**	**5.5 J**	8 U	8 U	8 U	**3.5 B**	**3.3 B**	**4.3 B**
Silver	µg/L	94	6 U	6 U	6 U	6 U	6 U	**1.7 B**	6 U	6 U	6 U	6 U	6 U
Thallium	µg/L	2	10 U	10 U	**4.3 B**	10 U	**4.9 B**	10 U	10 U	10 U	10 U	10 U	10 U
Vanadium	µg/L	86	5 U	**180**	5 U	5 U	**15.6**	5 U	**53.3**	**21.4**	**41.6**	**7.2**	**3.5 B**
Zinc	µg/L	6,000	**189**	**145**	**127**	**91**	**2.9 B**	**28.4**	**18.9**	**8.2 J**	**64.4**	**6.7 J**	**0.65 B**
Metal (Dissolved)													
Aluminum, Dissolve	µg/L	20,000	**1,730**	**53.2**	**172**	**515**	**2,200**	**33.4 B**	**38.1 J**	**51.4**	**134**	**412**	**192**
Antimony, Dissolve	µg/L	6	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U
Arsenic, Dissolve	µg/L	10	5 U	5 U	5 U	5 U	**5.9**	5 U	**6.4**	5 U	5 U	5 U	5 U
Barium, Dissolve	µg/L	2,000	**10.4**	**42.3**	**16.7**	**22.6**	**18.5**	**18.8**	**50.6**	**22.4**	**17.6**	**62.4**	**47.3**
Beryllium, Dissolve	µg/L	4	**1.6**	1 U	**1.8**	**2.2**	1 U	1 U	1 U	1 U	**0.84 J**	1 U	1 U
Cadmium, Dissolve	µg/L	5	**0.71 B**	3 U	**0.62 B**	**0.63 B**	3 U	**0.87 J**	3 U	3 U	**0.5 B**	3 U	**0.65 J**
Chromium, Dissolve	µg/L	100	**0.8 B**	**27.4**	**1.4 B**	**1.2 B**	5 U	**1 B**	**1.6 B**	**8.1**	**22.2**	**4.8 B**	**3.3 B**
Cobalt, Dissolve	µg/L	6	**49.8**	5 U	**85.6**	**25.5**	5 U	**114**	**2.9 J**	5 U	**49.6**	5 U	5 U
Copper, Dissolve	µg/L	1,300	**3.1 B**	5 U	**1.5 B**	**3.5 B**	5 U	5 U	5 U	**1.5 B**	**2 B**	5 U	5 U
Iron, Dissolve	µg/L	14,000	**7,700**	**52.4 B**	**4,900**	**3,600**	70 U	**65,100**	**13,600**	**19.4 B**	**310**	70 U	70 U
Lead, Dissolve	µg/L	15	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Manganese, Dissolve	µg/L	430	**1,700**	**3.1 J**	**1,870**	**848**	5 U	**11,200**	**2,110**	**2.9 B**	**827**	**2.4 B**	**123**
Nickel, Dissolve	µg/L	390	**83.5**	10 U	**128**	**46.3**	**2.8 B**	**38.8**	**4.7 B**	10 U	**45.2**	10 U	10 U
Selenium, Dissolve	µg/L	50	8 U	**7.4 B**	8 U	8 U	**6.2 B**	8 U	8 U	8 U	8 U	8 U	8 U
Silver, Dissolve	µg/L	94	6 U	6 U	**0.81 B**	6 U	6 U	**1.4 J**	**0.62 B**	6 U	6 U	6 U	6 U
Thallium, Dissolve	µg/L	2	10 U	10 U	10 U	10 U	**3.7 B**	10 U	10 U	10 U	10 U	10 U	10 U
Vanadium, Dissolve	µg/L	86	5 U	**81.9**	5 U	5 U	**15.2**	5 U	**29.3**	**17.7**	**39.2**	**6.2**	**3.2 B**
Zinc, Dissolve	µg/L	6,000	**173**	**0.71 J**	**135**	**87.3**	10 U	**28.3**	**3.2 B**	**0.93 B**	**52**	10 U	10 U
Other													
Cyanide	µg/L	200	10 U	10 U	10 U	10 U	**4 J**	10 U	10 U	10 U	10 U	10 U	10 U

Table 8
Summary of Inorganics Detected
Area B Groundwater - Shallow
Tradepoint Atlantic
Sparrows Point, Maryland

Parameter	Units	PAL	SW-062-MWS	SW-063-MWS	SW-064-MWS	SW-065-MWS	SW-066-MWS	SW-067-MWS	SW-068-MWS	SW-069-MWS	SW06-PZM001	SW-070-MWS	SW-071-MWS
Metal (Total)													
Aluminum	µg/L	20,000	**40.4 J**	**380**	**192 J**	**1,140**	**385**	**719**	**35.7 B**	**254**	**128**	**64.5**	**73.5**
Antimony	µg/L	6	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U
Arsenic	µg/L	10	5 U	**4.4 B**	5 U	**5.9**	**4.3 J**	5 U	5 U	**2.8 B**	5 U	5 U	5 U
Barium	µg/L	2,000	**58.4**	**65.3**	**61.9**	**53.1**	**37.6**	**23.6**	**84.6**	**28.8**	**28.3**	**78.4**	**49.2**
Beryllium	µg/L	4	1 U	1 U	1 U	1 U	1 U	**1.8**	1 U	1 U	1 U	1 U	1 U
Cadmium	µg/L	5	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
Chromium	µg/L	100	**2.3 B**	**1 J**	**1.9 B**	**0.89 J**	**6.5**	5 U	**1.4 J**	**1.4 J**	**0.91 B**	**2.3 B**	**1.1 B**
Chromium VI	µg/L	0.035	10 U	10 UJ	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Cobalt	µg/L	6	5 U	**20.6**	5 U	**1.2 J**	5 U	**16.7**	5 U	5 U	**1.6 B**	5 U	5 U
Copper	µg/L	1,300	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Iron	µg/L	14,000	**28.2 B**	**13,000**	**47.6 J**	**594**	**42.5 B**	**12,400**	**666**	**109**	**447**	**535**	**103**
Lead	µg/L	15	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Manganese	µg/L	430	**68**	**1,540**	**6.7**	**3.4 J**	**2 B**	**645**	**925**	**26.6**	**228**	**350**	**193**
Mercury	µg/L	2	0.2 UJ	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Nickel	µg/L	390	10 U	**9.7 B**	**0.66 B**	**1.6 B**	**0.81 B**	**19.1**	**1.3 B**	**1.6 B**	**7 B**	**0.98 B**	**0.73 J**
Selenium	µg/L	50	8 U	8 U	**5.6 B**	**3.1 B**	8 U	8 U	8 U	**5.8 B**	8 U	8 U	**11.2**
Silver	µg/L	94	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U
Thallium	µg/L	2	10 U	10 U	10 U	10 U	10 U	10 U	**4 B**	10 U	**7.3 B**	10 U	**5.6 B**
Vanadium	µg/L	86	**1.8 B**	5 U	**2.4 B**	**2.7 J**	**27.9**	5 U	5 U	**53.5**	**1.1 B**	**0.77 J**	**3.3 B**
Zinc	µg/L	6,000	**0.74 J**	**5.7 B**	**1.1 B**	**2.6 J**	**0.65 J**	**68.2**	**1.8 B**	**1.1 B**	**4.6 B**	**2.1 B**	10 U
Metal (Dissolved)													
Aluminum, Dissolve	µg/L	20,000	**26.6 B**	**62.7**	**72**	**1,100**	**358**	**652**	50 U	**204**	50 U	**21.1 J**	**45 J**
Antimony, Dissolve	µg/L	6	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U
Arsenic, Dissolve	µg/L	10	5 U	5 U	5 U	**7.1**	**5.6**	**3.5 B**	5 U	**5 B**	5 U	5 U	**4.7 B**
Barium, Dissolve	µg/L	2,000	**53.9**	**62.5**	**60.5**	**53.4**	**37.9**	**21.5**	**84.9**	**28.3**	**27.8**	**77.7**	**43.7**
Beryllium, Dissolve	µg/L	4	1 U	1 U	1 U	1 U	1 U	**1.7**	1 U	1 U	1 U	1 U	1 U
Cadmium, Dissolve	µg/L	5	**0.56 B**	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
Chromium, Dissolve	µg/L	100	**2.7 B**	**0.86 J**	**1.5 B**	**2.7 J**	**6**	5 U	**0.88 J**	**2 J**	**0.96 J**	**2.5 B**	**1.4 B**
Cobalt, Dissolve	µg/L	6	5 U	**20.1**	5 U	**1.5 J**	5 U	**15.8**	5 U	5 U	**1.4 B**	5 U	5 U
Copper, Dissolve	µg/L	1,300	5 U	5 U	5 U	5 U	5 U	**1.8 B**	5 U	5 U	5 U	5 U	5 U
Iron, Dissolve	µg/L	14,000	**14.3 B**	**11,700**	70 U	**504**	**12.3 B**	**11,400**	**630**	**28.2 J**	70 U	**217**	**45.6 B**
Lead, Dissolve	µg/L	15	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Manganese, Dissolve	µg/L	430	**66**	**1,510**	5 U	**1.7 J**	5 U	**625**	**934**	**19.8**	**203**	**321**	**186**
Nickel, Dissolve	µg/L	390	10 U	**9.7 B**	10 U	**2.6 B**	10 U	**19**	**1.4 B**	**2.4 B**	**7.1 B**	**0.93 B**	10 U
Selenium, Dissolve	µg/L	50	8 U	8 U	**6.6 J**	**5.3 J**	8 U	8 U	8 U	**5.6 B**	8 U	8 U	**4.8 J**
Silver, Dissolve	µg/L	94	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 UJ	6 U	6 U
Thallium, Dissolve	µg/L	2	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	**5.3 B**	10 U	10 U
Vanadium, Dissolve	µg/L	86	**1.4 J**	5 U	**2.3 B**	**2.7 B**	**27.5**	5 U	5 U	**49.9**	5 U	5 U	**2.5 J**
Zinc, Dissolve	µg/L	6,000	10 U	**5.2 B**	**0.95 B**	**2.5 B**	**0.63 B**	**68.5**	10 U	**2.5 B**	**4.4 J**	**1.4 B**	10 U
Other													
Cyanide	µg/L	200	10 U	10 U	10 U	**1,030**	**11.2**	10 U	10 U	**8.2 J**	10 U	10 U	**10.4**

Table 8
Summary of Inorganics Detected
Area B Groundwater - Shallow
Tradepoint Atlantic
Sparrows Point, Maryland

Parameter	Units	PAL	SW-072-MWS	SW-073-MWS	SW-074-MWS	SW07-PZM004	SW08-PZM003	SW09-PZM0004	SW10-PZM012	SW11-PZM005	SW12-PZP001	SW13-PZM003
Metal (Total)												
Aluminum	µg/L	20,000	**7,650**	**125**	**118**	**49.2 B**	**236**	**1,490**	**106**	**71.4**	**2,290**	**206 J**
Antimony	µg/L	6	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U
Arsenic	µg/L	10	5 U	5 U	5 U	5 U	**3.7 J**	5 U	5 U	5 U	5 U	5 U
Barium	µg/L	2,000	**16.9**	**149**	**30.6**	**31.5**	**20.3**	**72.8**	**28.4**	**50.1**	**55.7**	**64.2**
Beryllium	µg/L	4	**7**	1 U	1 U	1 U	1 U	**0.41 B**	1 U	1 U	1 U	1 U
Cadmium	µg/L	5	**1.1 J**	3 U	3 U	**0.5 J**	3 U	**1.5 J**	3 U	**0.77 B**	**0.62 J**	3 U
Chromium	µg/L	100	**1.4 J**	**8.8**	**8.6**	5 U	**1.5 J**	**2.2 B**	**17.2**	**3.6 B**	**3 B**	5 U
Chromium VI	µg/L	0.035	10 U	10 U	**7 J**	10 U	10 U	10 U	**15**	**5 J**	10 U	10 U
Cobalt	µg/L	6	**124**	5 U	**3.8 B**	**1.3 B**	5 U	**43.1**	5 U	**1 J**	**6.2**	5 U
Copper	µg/L	1,300	**4.8 J**	5 U	5 U	**2.2 B**	5 U	**8.8**	**1.7 B**	**3.7 B**	5 U	5 U
Iron	µg/L	14,000	**38,600**	70 U	**176**	**3,150**	**532**	**1,230**	**486**	**40.9 B**	**1,470**	**14.6 J**
Lead	µg/L	15	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Manganese	µg/L	430	**5,550**	5 U	**275**	**619 J**	**296**	**986**	**3.8 J**	**83.6**	**1,030**	**4.3 B**
Mercury	µg/L	2	0.2 U	0.2 U	0.2 UJ	0.2 U	0.2 U	**0.06 B**	**0.06 B**	0.2 U	0.2 U	0.2 U
Nickel	µg/L	390	**166**	**0.75 B**	**3.8 B**	10 U	**2.7 B**	**40.7**	**2.5 B**	**0.61 B**	**6 B**	10 U
Selenium	µg/L	50	8 U	**6.4 J**	**5.1 B**	8 U	8 U	8 U	8 U	8 U	**6.1 J**	**6 J**
Silver	µg/L	94	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U
Thallium	µg/L	2	10 U	10 U	10 U	10 U	**4.6 B**	10 U	10 U	**4.4 J**	**3.8 J**	10 U
Vanadium	µg/L	86	5 U	**17.7**	**89.9**	**0.65 B**	**1.4 B**	**4.6 B**	**14.4**	**12.4**	**4.3 B**	**0.85 B**
Zinc	µg/L	6,000	**411**	10 U	**5.5 B**	**2.2 B**	**11.2**	**66.1**	**3.9 B**	**13.5**	**50.1**	**0.72 B**
Metal (Dissolved)												
Aluminum, Dissolve	µg/L	20,000	**7,800**	**125**	**51**	50 U	50 U	**89**	50 U	**21.3 J**	50 U	**196**
Antimony, Dissolve	µg/L	6	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U
Arsenic, Dissolve	µg/L	10	5 U	5 U	5 U	5 U	**3.3 B**	5 U	5 U	5 U	5 U	5 U
Barium, Dissolve	µg/L	2,000	**16.5**	**150**	**27.8**	**28.4**	**18.9**	**73.8**	**28.5**	**48.8**	**47.9**	**65.7**
Beryllium, Dissolve	µg/L	4	**7.3**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Cadmium, Dissolve	µg/L	5	**0.93 J**	3 U	3 U	3 U	3 U	**1.8 J**	3 U	**0.68 J**	**0.65 J**	3 U
Chromium, Dissolve	µg/L	100	**0.85 J**	**9.7**	**8.3**	**0.9 B**	**0.86 J**	5 U	**15.6**	**3.2 B**	**0.97 B**	5 U
Cobalt, Dissolve	µg/L	6	**123**	5 U	**2.6 J**	**1.5 B**	5 U	**57.4**	5 U	**0.96 B**	**6.1**	5 U
Copper, Dissolve	µg/L	1,300	**4.9 J**	5 U	5 U	5 U	**2.3 B**	**5.9**	**1.6 B**	**4.2 J**	5 U	5 U
Iron, Dissolve	µg/L	14,000	**44,100**	**12.1 B**	70 U	**1,150**	**69.5 J**	**626**	70 U	**68.6 B**	**592**	70 U
Lead, Dissolve	µg/L	15	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Manganese, Dissolve	µg/L	430	**5,360**	5 U	**215**	**600 J**	**278**	**1,280 J**	**4 J**	**73.6**	**1,040**	5 U
Nickel, Dissolve	µg/L	390	**165**	**0.7 B**	**3.4 B**	10 U	**3.4 B**	**51.3**	**2.3 B**	**1 B**	**5.7 B**	10 U
Selenium, Dissolve	µg/L	50	8 U	**7.1 J**	8 U	8 U	8 U	8 U	8 U	**3.8 J**	8 U	8 U
Silver, Dissolve	µg/L	94	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U
Thallium, Dissolve	µg/L	2	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Vanadium, Dissolve	µg/L	86	5 U	**17.6**	**91**	5 U	**0.63 B**	**2.2 B**	**13**	**12.4**	**1 J**	**0.85 B**
Zinc, Dissolve	µg/L	6,000	**410**	**1.7 B**	**4.6 B**	10 U	10 U	**75.5**	**1.4 B**	**14.8**	**39**	**1.3 B**
Other												
Cyanide	µg/L	200	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	**59**	**9.9 J**

Table 8
Summary of Inorganics Detected
Area B Groundwater - Shallow
Tradepoint Atlantic
Sparrows Point, Maryland

Parameter	Units	PAL	SW14-PZM004	SW15-PZM005	SW16-PZM003	TM03-PZM004	TM05-PZM005	TS10-PDM008
Metal (Total)								
Aluminum	µg/L	20,000	**1,740**	**165**	**4,370**	**297 J**	**183**	**23 B**
Antimony	µg/L	6	6 U	6 U	6 U	6 U	**2.4 B**	6 U
Arsenic	µg/L	10	**3.3 J**	5 U	5 U	**4.5 J**	**3.1 J**	5 U
Barium	µg/L	2,000	**162**	**30.2**	**13.1**	**13.1**	**12.5**	**47.8**
Beryllium	µg/L	4	1 U	1 U	**5.1**	1 U	1 U	1 U
Cadmium	µg/L	5	3 U	3 U	**1.8 J**	**0.51 B**	3 U	**0.49 J**
Chromium	µg/L	100	**1.1 J**	**0.89 B**	**1.7 J**	**1 J**	**1.5 B**	**1.1 B**
Chromium VI	µg/L	0.035	10 U	**N/A**	10 U	10 U	10 U	10 U
Cobalt	µg/L	6	5 U	**4 J**	**158**	5 U	5 U	5 U
Copper	µg/L	1,300	**2.1 B**	**2.1 B**	**22.6**	**2.1 B**	5 U	**2.9 B**
Iron	µg/L	14,000	**41.1 B**	**899**	**8,680**	**44.2 J**	**114**	70 U
Lead	µg/L	15	5 U	5 U	5 U	5 U	**7**	5 U
Manganese	µg/L	430	**1.2 J**	**256**	**2,360**	**1.4 J**	**10.1**	**75.1**
Mercury	µg/L	2	0.2 U	**0.05 B**	**0.06 B**	0.2 U	0.2 U	**0.08 B**
Nickel	µg/L	390	**3 J**	**4.2 B**	**220 J**	10 U	**0.93 J**	**1.6 B**
Selenium	µg/L	50	8 U	8 U	8 U	**3.2 J**	8 U	8 U
Silver	µg/L	94	6 U	6 U	6 U	6 U	6 U	6 U
Thallium	µg/L	2	**5.9 J**	10 U	10 U	10 U	10 U	10 U
Vanadium	µg/L	86	**118**	5 U	**1.6 B**	**114**	**1,560**	**4 B**
Zinc	µg/L	6,000	10 U	**7.5 B**	**403**	**0.69 B**	**17**	10 U
Metal (Dissolved)								
Aluminum, Dissolve	µg/L	20,000	**1,850**	**144**	**4,260**	**283**	**150**	**18.4 B**
Antimony, Dissolve	µg/L	6	6 U	6 U	6 U	6 U	**3.2 B**	6 U
Arsenic, Dissolve	µg/L	10	**4.7 J**	5 U	5 U	**5.3**	**4 J**	5 U
Barium, Dissolve	µg/L	2,000	**164**	**30.7**	**13**	**12.5**	**11.7**	**51.6**
Beryllium, Dissolve	µg/L	4	1 U	1 U	**5.2**	**0.41 J**	1 U	1 U
Cadmium, Dissolve	µg/L	5	3 U	3 U	**1.6 J**	3 U	3 U	3 U
Chromium, Dissolve	µg/L	100	**1.7 B**	**0.79 B**	**1.8 B**	**0.95 B**	**1.3 B**	**1.1 B**
Cobalt, Dissolve	µg/L	6	5 U	**4.5 B**	**153**	5 U	5 U	5 U
Copper, Dissolve	µg/L	1,300	5 U	**1.9 J**	**18.8**	5 U	5 U	**1.5 B**
Iron, Dissolve	µg/L	14,000	**15.6 B**	**957**	**8,840**	**33.3 B**	**28.8 B**	70 U
Lead, Dissolve	µg/L	15	5 U	5 U	5 U	5 U	5 U	5 U
Manganese, Dissolve	µg/L	430	5 U	**273**	**2,280 J**	5 U	**2.3 J**	**79 J**
Nickel, Dissolve	µg/L	390	**3.1 B**	**3.6 B**	**212 J**	10 U	10 U	**1.6 B**
Selenium, Dissolve	µg/L	50	8 U	8 U	8 U	8 U	8 U	8 U
Silver, Dissolve	µg/L	94	6 U	6 U	6 U	6 U	6 U	6 U
Thallium, Dissolve	µg/L	2	10 U	10 U	10 U	10 U	**6.8 B**	10 U
Vanadium, Dissolve	µg/L	86	**125**	5 U	**1.4 B**	**119**	**1,560**	**3.7 B**
Zinc, Dissolve	µg/L	6,000	**0.64 J**	**8 B**	**388 J**	10 U	**1.5 B**	10 U
Other								
Cyanide	µg/L	200	10 U	10 U	10 U	**61.4**	**52.2**	10 U

Data Validation Qualifier Code Glossary

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

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

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

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

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

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

NJ This analyte has been "tentatively" identified. The numeric value represents its approximate concentration.

Y This analyte coelutes with another target compound on the two chromatographic columns used for analysis.

R The results for this analyte are unreliable. Additional data is needed to confirm or disprove the presence of this compound/analyte in the sample.

Additional Notes

Bold values indicate a detection.

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

Additional Qualifier Keys can be view in the lab reports.

All Qualifier Keys may not be present in the table.

Table 9
Summary of Inorganics Detected
Area B Groundwater - Intermediate and Lower
Tradepoint Atlantic
Sparrows Point, Maryland

Parameter	Units	PAL	FM01-PZM041	FM05-PZM024	SW-043-MWI	SW-045-MWI	SW06-PZM053	SW-074-MWI	SW07-PZM108	SW08-PZM053	SW09-PZM028	SW09-PZM068
Metal (Total)												
Aluminum	µg/L	20,000	**101**	50 U	**119**	**137**	**123**	**176**	**1,290**	**31.7 B**	**70**	**167**
Arsenic	µg/L	10	**40.6**	5 U	**2.9 B**	5 U	5 U	**3.8 B**	5 U	**12.3**	5 U	5 U
Barium	µg/L	2,000	**656**	**120**	**175**	**72.2**	**65.3**	**51.4**	**58.5**	**543**	**119**	**21.2**
Beryllium	µg/L	4	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Cadmium	µg/L	5	**0.65 J**	3 U	3 U	3 U	3 U	**0.64 J**	3 U	**0.95 B**	3 U	**0.7 J**
Chromium	µg/L	100	5 U	5 U	**1.3 J**	**1.1 B**	5 U	5 U	**9.3**	**1.3 J**	5 U	**1.2 J**
Cobalt	µg/L	6	5 U	5 U	**2 B**	5 U	5 U	**55.6**	**1.9 B**	25 U	5 U	5 U
Copper	µg/L	1,300	**2.2 J**	5 U	5 U	5 U	5 U	5 U	**29.9**	5 U	5 U	**2.4 J**
Iron	µg/L	14,000	**46,600**	**50,800**	**15,100**	**2,250**	**5,390**	**9,070**	**5,610**	**39,400**	**52,200**	**323**
Lead	µg/L	15	5 U	5 U	5 U	5 U	5 U	5 U	**35.7**	25 U	5 U	5 U
Manganese	µg/L	430	**137**	**2,560**	**1,010**	**385**	**671**	**2,420**	**399**	**1,570**	**3,860**	**41.8**
Mercury	µg/L	2	0.2 U	0.2 U	0.2 UJ	0.2 U	0.2 U	0.2 U	**0.06 B**	0.2 U	0.2 U	0.2 U
Nickel	µg/L	390	10 U	**0.93 B**	**5 B**	**1.5 J**	**1 B**	**31.4**	**7 B**	10 U	10 U	**1.3 B**
Selenium	µg/L	50	8 U	8 U	8 U	8 U	8 U	8 U	8 U	8 U	**5 B**	8 U
Silver	µg/L	94	6 U	6 U	**0.57 B**	6 U	6 U	6 U	6 U	6 U	**1.1 J**	6 U
Thallium	µg/L	2	10 U	10 U	10 U	10 U	10 U	10 U	10 U	50 U	10 U	10 U
Vanadium	µg/L	86	**2.1 B**	5 U	**0.93 J**	**1.8 B**	5 U	**2.2 J**	**4.2 B**	**0.97 J**	5 U	**2 B**
Zinc	µg/L	6,000	10 U	**1.9 B**	**6.9 B**	10 U	**2.6 B**	**34.4**	**52.4**	**0.91 B**	**1.7 J**	**3.5 B**
Metal (Dissolved)												
Aluminum, Dissolved	µg/L	20,000	50 U	50 U	**18.9 B**	**51.7**	50 U	**59.7**	50 U	**47.6 B**	**85.6**	**21.6 B**
Arsenic, Dissolved	µg/L	10	**35.8**	5 U	**3.3 B**	5 U	5 U	5 U	5 U	**14.8**	5 U	5 U
Barium, Dissolved	µg/L	2,000	**624**	**114**	**173**	**54.7**	**65.6**	**51.5**	**20.2**	**559**	**107**	**20.3**
Beryllium, Dissolved	µg/L	4	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Cadmium, Dissolved	µg/L	5	**0.53 J**	3 U	3 U	3 U	3 U	**0.63 B**	3 U	**0.8 B**	3 U	**0.78 J**
Chromium, Dissolved	µg/L	100	5 U	5 U	**1.3 B**	**1.1 B**	5 U	5 U	**3.1 B**	**1.3 J**	5 U	**1.1 B**
Cobalt, Dissolved	µg/L	6	5 U	5 U	**2 B**	5 U	5 U	**60.2**	5 U	25 U	5 U	5 U
Copper, Dissolved	µg/L	1,300	**2.4 J**	5 U	5 U	5 U	5 U	5 U	**1.8 B**	5 U	**3.3 B**	5 U
Iron, Dissolved	µg/L	14,000	**45,800**	**47,300**	**14,800**	**1,410**	**5,440**	**9,650**	**34.6 B**	**40,800**	**50,400**	**99.8**
Manganese, Dissolved	µg/L	430	**128**	**2,520**	**1,020**	**656**	**689**	**2,450**	**13.1 J**	**1,620**	**3,770**	**39.5**
Nickel, Dissolved	µg/L	390	10 U	10 U	**4.3 B**	**0.77 B**	10 U	**35.4**	10 U	10 U	**1.4 B**	**0.88 B**
Selenium, Dissolved	µg/L	50	8 U	8 U	8 U	**5.5 J**	8 U	8 U	8 U	8 U	**3.1 J**	8 U
Silver, Dissolved	µg/L	94	6 U	6 U	6 U	6 U	6 UJ	6 U	6 U	6 U	**1.5 J**	6 U
Vanadium, Dissolved	µg/L	86	**1.3 B**	5 U	5 U	**1.3 J**	5 U	**2.1 J**	**1 B**	**1.8 J**	**0.93 J**	**1.2 B**
Zinc, Dissolved	µg/L	6,000	10 U	**1.1 B**	**6.4 B**	10 U	**0.65 J**	**11.3**	10 U	**0.73 B**	**1.8 B**	**1.7 B**

Table 9
Summary of Inorganics Detected
Area B Groundwater - Intermediate and Lower
Tradepoint Atlantic
Sparrows Point, Maryland

Parameter	Units	PAL	SW13-PZM025	SW13-PZM111	SW15-PZM031	SW15-PZM085	SW16-PZM067	TM03-PZM037	TM05-PZM040
Metal (Total)									
Aluminum	µg/L	20,000	**23.7 J**	**1,280**	50 U	**94.6**	50 U	**38.4 B**	**77.8 J**
Arsenic	µg/L	10	**7.7**	5 U	**5.5**	5 U	5 U	**18.9**	5 U
Barium	µg/L	2,000	**123**	**70.7**	**405**	**90.2**	**28.2**	**123**	**101**
Beryllium	µg/L	4	1 U	**1**	1 U	1 U	1 U	1 U	1 U
Cadmium	µg/L	5	**0.81 J**	3 U	**0.49 J**	**0.5 B**	3 U	**0.87 B**	**0.77 J**
Chromium	µg/L	100	**0.98 B**	**17.4**	5 U	**1 B**	**0.84 B**	**1.1 J**	**1.1 B**
Cobalt	µg/L	6	**2.5 B**	**3 J**	5 U	5 U	5 U	5 U	5 U
Copper	µg/L	1,300	**2.1 J**	**11.5**	5 U	**1.8 B**	5 U	**2.6 B**	5 U
Iron	µg/L	14,000	**37,800**	**33,700**	**64,700**	**14,300**	**6,770**	**23,200**	**15,400**
Lead	µg/L	15	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Manganese	µg/L	430	**1,100**	**1,340**	**2,530**	**749 J**	**1,960**	**2,800**	**1,850**
Mercury	µg/L	2	0.2 U	**0.06 B**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Nickel	µg/L	390	**3.3 B**	**12.6 J**	**1.5 B**	**1.3 J**	10 U	**1 B**	10 U
Selenium	µg/L	50	8 U	8 U	**3.3 B**	8 U	8 U	8 U	8 U
Silver	µg/L	94	6 U	6 U	**1.3 J**	6 U	6 U	6 U	6 U
Thallium	µg/L	2	10 U	**3.4 B**	10 U	10 U	10 U	10 U	10 U
Vanadium	µg/L	86	5 U	**36.6**	5 U	**1.3 B**	5 U	5 U	**2.8 B**
Zinc	µg/L	6,000	10 U	**48.1**	**2.7 J**	**7.9 B**	10 U	**1.5 B**	**1.4 B**
Metal (Dissolved)									
Aluminum, Dissolved	µg/L	20,000	**23.6 B**	**24.5 B**	50 U	50 U	50 U	**21.6 J**	**23.2 J**
Arsenic, Dissolved	µg/L	10	**7.8**	5 U	**7.5**	5 U	5 U	**20.8**	**4.4 B**
Barium, Dissolved	µg/L	2,000	**121**	**52.5**	**420**	**86.8**	**27.4**	**125**	**106**
Beryllium, Dissolved	µg/L	4	1 U	**0.63 B**	1 U	1 U	1 U	**0.4 J**	1 U
Cadmium, Dissolved	µg/L	5	**0.62 B**	**0.66 J**	3 U	**0.54 B**	3 U	**0.74 B**	**0.83 B**
Chromium, Dissolved	µg/L	100	5 U	**0.91 B**	5 U	5 U	**0.83 B**	**1.2 B**	**1.5 B**
Cobalt, Dissolved	µg/L	6	**2.5 B**	**1.7 B**	5 U	5 U	5 U	5 U	25 U
Copper, Dissolved	µg/L	1,300	**1.6 J**	**2.5 B**	**3.4 B**	**1.8 B**	**8.8**	5 U	5 U
Iron, Dissolved	µg/L	14,000	**36,800**	**21,000**	**64,500**	**13,300**	**6,530**	**23,700**	**16,000**
Manganese, Dissolved	µg/L	430	**1,060**	**1,180 J**	**2,590**	**735 J**	**1,880**	**2,790**	**1,940**
Nickel, Dissolved	µg/L	390	**3.3 B**	**9 B**	**2.9 B**	**1.2 B**	10 U	10 U	10 U
Selenium, Dissolved	µg/L	50	8 U	8 U	8 U	8 U	8 U	8 U	8 U
Silver, Dissolved	µg/L	94	6 U	6 U	**1.3 J**	6 U	6 U	6 U	6 U
Vanadium, Dissolved	µg/L	86	5 U	**1.3 B**	**1.5 J**	**0.71 B**	5 U	5 U	**2.9 B**
Zinc, Dissolved	µg/L	6,000	**1.8 B**	**24.6 J**	**3.4 B**	**6.2 B**	10 U	10 U	**0.64 B**

Data Validation Qualifier Code Glossary

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

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

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

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

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

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

NJ This analyte has been "tentatively" identified. The numeric value represents its approximate concentration.

Y This analyte coelutes with another target compound on the two chromatographic columns used for analysis.

R The results for this analyte are unreliable. Additional data is needed to confirm or disprove the presence of this compound/analyte in the sample.

Additional Notes

Bold values indicate a detection.

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

Additional Qualifier Keys can be view in the lab reports.

All Qualifier Keys may not be present in the table.

TABLE 10
SUMMARY OF GROUNDWATER COPCs

Parameter	CAS#	Frequency of Detections (%)	Sample ID of Max Result	Unit	PAL Aqueous	Max Result
1,1-Biphenyl	92-52-4	5	TM03-PZM004/SW14-PZM004	µg/L	0.83	2.2
1,4-Dioxane	123-91-1	40	SW-069-MWS	µg/L	0.46	0.79
Arsenic (D)	7440-38-2	32	FM01-PZM041	µg/L	10	35.8
Arsenic (T)	7440-38-2	32	FM01-PZM041	µg/L	10	40.6
Benzene	71-43-2	80	SW13-PZM003	µg/L	5	20.4
Benzo[a]anthracene	56-55-3	34	TM05-PZM005	µg/L	0.012	0.41
Benzo[a]pyrene	50-32-8	20	SW-029-MWS	µg/L	0.2	1.2
Benzo[b]fluoranthene	205-99-2	24	SW-029-MWS	µg/L	0.034	2.7
Benzo[k]fluoranthene	207-08-9	22	SW-029-MWS	µg/L	0.34	1.3
Beryllium (D)	7440-41-7	20	SW-049-MWS	µg/L	4	15.7
Beryllium (T)	7440-41-7	23	SW-049-MWS	µg/L	4	15.6
Chloroform	67-66-3	18	SW-058-MWS	µg/L	0.22	31
Chromium VI (T)	18540-29-9	10	SG07-PDM008	µg/L	0.035	26
Cobalt (D)	7440-48-4	38	SW-049-MWS	µg/L	6	355
Cobalt (T)	7440-48-4	41	SW-049-MWS	µg/L	6	354
Cyanide	57-12-5	21	SW-029-MWS	µg/L	200	1420
Diesel Range Organics	DRO	81	SW-071-MWS	µg/L	47	3120
Gasoline Range Organics	GRO	2	SW-055-MWS	µg/L	47	545
Indeno[1,2,3-c,d]pyrene	193-39-5	3	SW07-PZM108	µg/L	0.034	0.051
Iron (D)	7439-89-6	84	SW-056-MWS	µg/L	14000	65100
Iron (T)	7439-89-6	95	SW-056-MWS	µg/L	14000	70400
Lead (T)	7439-92-1	8	SW-052-MWS	µg/L	15	42.2
Manganese (D)	7439-96-5	89	SW-046-MWS/SW-056-MWS	µg/L	430	11200
Manganese (T)	7439-96-5	97	SW-046-MWS	µg/L	430	11500
Methyl tert-butyl ether (MTBE)	1634-04-4	5	SW-056-MWS	µg/L	14	14.3
Naphthalene	91-20-3	89	SW13-PZM003	µg/L	0.17	169
Nickel (D)	7440-02-0	69	SW-049-MWS	µg/L	390	519
Nickel (T)	7440-02-0	76	SW-049-MWS	µg/L	390	522
Pentachlorophenol	87-86-5	8	SW-050-MWS	µg/L	1	59.1
Thallium (D)	7440-28-0	9	TM05-PZM005	µg/L	2	6.8
Thallium (T)	7440-28-0	20	SW06-PZM001	µg/L	2	7.3
Vanadium (D)	7440-62-2	24	TM05-PZM005	µg/L	86	1560
Vanadium (T)	7440-62-2	20	TM05-PZM005	µg/L	86	1560

(T) indicates total
(D) indicates dissolved

TABLE 11
VAPOR INTRUSION CRITERIA COMPARISON

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
FM05-PZM004	Cyanide	9.3	J	3.5	2.66	YES	NC
SW-024-MWS	Cyanide	296		3.5	84.57	YES	NC
SW-029-MWS	Cyanide	1420		3.5	405.71	YES	NC
SW-030-MWS	Cyanide	64.6		3.5	18.46	YES	NC
SW-031-MWS	Cyanide	6.1	J	3.5	1.74	YES	NC
SW-032-MWS	Cyanide	32.4		3.5	9.26	YES	NC
SW-033-MWS	Cyanide	81.1		3.5	23.17	YES	NC
SW-034-MWS	Cyanide	71.8		3.5	20.51	YES	NC
SW-035-MWS	Cyanide	225		3.5	64.29	YES	NC
SW-037-MWS	Cyanide	4.6	J	3.5	1.31	YES	NC
SW-055-MWS	Cyanide	4	J	3.5	1.14	YES	NC
SW-065-MWS	Cyanide	1030		3.5	294.29	YES	NC
SW-066-MWS	Cyanide	11.2		3.5	3.20	YES	NC
SW-069-MWS	Cyanide	8.2	J	3.5	2.34	YES	NC
SW-071-MWS	Cyanide	10.4		3.5	2.97	YES	NC
SW12-PZP001	Cyanide	59		3.5	16.86	YES	NC
SW13-PZM003	Cyanide	9.9	J	3.5	2.83	YES	NC
TM03-PZM004	Cyanide	61.4		3.5	17.54	YES	NC
TM05-PZM005	Cyanide	52.2		3.5	14.91	YES	NC

Highlight indicates exceedance of Vapor Intrusion criteria
NC indicates non-carcinogenic
J qualifier indicates the positive result reported for the analyte is a quantitative estimate

TABLE 12
AMBIENT WATER QUALITY CRITERIA COMPARISON

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW-021-MWS	Arsenic, Dissolve	5.4		1.4	YES	36	no
SW-021-MWS	Thallium	6	B	0.47	YES	N/A	no
SW-022-MWS	Thallium	4.2	B	0.47	YES	N/A	no
SW-023-MWS	Thallium	4.7	B	0.47	YES	N/A	no
SW-024-MWS	Arsenic	4	B	1.4	YES	36	no
SW-024-MWS	Arsenic, Dissolve	4	B	1.4	YES	36	no
SW-024-MWS	Cyanide	296		140	YES	1	YES
SW-025-MWS	Copper	3.9	B	N/A	no	3.1	YES
SW-025-MWS	Lead	14		N/A	no	8.1	YES
SW-027-MWS	Arsenic	4.2	J	1.4	YES	36	no
SW-028-MWS	Arsenic	4.3	J	1.4	YES	36	no
SW-028-MWS	Arsenic, Dissolve	4.9	B	1.4	YES	36	no
SW-028-MWS	Thallium	3.5	B	0.47	YES	N/A	no
SW-028-MWS	Thallium, Dissolve	4.8	J	0.47	YES	N/A	no
SW-029-MWS	Benzo[a]pyrene	1.2	J	0.18	YES	N/A	no
SW-029-MWS	Benzo[b]fluoranthene	2.7	B	0.18	YES	N/A	no
SW-029-MWS	Benzo[k]fluoranthene	1.3	B	0.18	YES	N/A	no
SW-029-MWS	Cyanide	1420		140	YES	1	YES
SW-030-MWS	Arsenic	3.9	J	1.4	YES	36	no
SW-030-MWS	Arsenic, Dissolve	4.5	B	1.4	YES	36	no
SW-030-MWS	Thallium, Dissolve	4.8	J	0.47	YES	N/A	no
SW-030-MWS	Cyanide	64.6		140	no	1	YES
SW-031-MWS	Arsenic	3.8	J	1.4	YES	36	no
SW-031-MWS	Arsenic, Dissolve	3.1	B	1.4	YES	36	no
SW-031-MWS	Cyanide	6.1	J	140	no	1	YES
SW-032-MWS	Cyanide	32.4		140	no	1	YES
SW-033-MWS	Arsenic	3.5	B	1.4	YES	36	no
SW-033-MWS	Arsenic, Dissolve	4.3	B	1.4	YES	36	no
SW-033-MWS	Thallium	4.2	J	0.47	YES	N/A	no
SW-033-MWS	Thallium, Dissolve	6.1	B	0.47	YES	N/A	no
SW-033-MWS	Cyanide	81.1		140	no	1	YES
SW-034-MWS	Arsenic	3.2	J	1.4	YES	36	no
SW-034-MWS	Thallium, Dissolve	4.5	B	0.47	YES	N/A	no
SW-034-MWS	Cyanide	71.8		140	no	1	YES
SW-035-MWS	Arsenic	3.4	J	1.4	YES	36	no
SW-035-MWS	Arsenic, Dissolve	4.1	B	1.4	YES	36	no
SW-035-MWS	Thallium	5.3	B	0.47	YES	N/A	no
SW-035-MWS	Cyanide	225		140	YES	1	YES
SW-036-MWS	Thallium	7	B	0.47	YES	N/A	no
SW-036-MWS	Thallium, Dissolve	4.7	B	0.47	YES	N/A	no
SW-037-MWS	Cyanide	4.6	J	140	no	1	YES
SW-039-MWS	Thallium	4.1	J	0.47	YES	N/A	no
SW-040-MWS	Arsenic, Dissolve	4	B	1.4	YES	36	no
SW-042-MWS	Copper	3.2	J	N/A	no	3.1	YES
SW-042-MWS	Nickel	31.2		4600	no	8.2	YES
SW-042-MWS	Nickel, Dissolve	32.7		4600	no	8.2	YES
SW-042-MWS	Zinc	127		26000	no	81	YES
SW-042-MWS	Zinc, Dissolve	137		26000	no	81	YES
SW-043-MWI	Arsenic	2.9	B	1.4	YES	36	no
SW-043-MWI	Arsenic, Dissolve	3.3	B	1.4	YES	36	no
SW-043-MWS	Copper	7.2		N/A	no	3.1	YES
SW-043-MWS	Copper, Dissolve	7.4	B	N/A	no	3.1	YES
SW-043-MWS	Nickel	30.3	J	4600	no	8.2	YES
SW-043-MWS	Nickel, Dissolve	30.3	J	4600	no	8.2	YES
SW-043-MWS	Zinc	160		26000	no	81	YES
SW-043-MWS	Zinc, Dissolve	162		26000	no	81	YES
SW-044-MWS	Nickel	15.4		4600	no	8.2	YES
SW-044-MWS	Nickel, Dissolve	14.4		4600	no	8.2	YES
SW-045-MWS	Nickel	103		4600	no	8.2	YES

TABLE 12
AMBIENT WATER QUALITY CRITERIA COMPARISON

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW-045-MWS	Nickel, Dissolve	105		4600	no	8.2	YES
SW-045-MWS	Zinc	146		26000	no	81	YES
SW-045-MWS	Zinc, Dissolve	153		26000	no	81	YES
SW-046-MWS	Nickel	100		4600	no	8.2	YES
SW-046-MWS	Nickel, Dissolve	100		4600	no	8.2	YES
SW-046-MWS	Zinc	189		26000	no	81	YES
SW-046-MWS	Zinc, Dissolve	192		26000	no	81	YES
SW-047-MWS	Arsenic	3.9	B	1.4	YES	36	no
SW-047-MWS	Arsenic, Dissolve	4.5	J	1.4	YES	36	no
SW-047-MWS	Copper	7.9		N/A	no	3.1	YES
SW-047-MWS	Copper, Dissolve	7.8		N/A	no	3.1	YES
SW-047-MWS	Nickel	99.4	J	4600	no	8.2	YES
SW-047-MWS	Nickel, Dissolve	106	J	4600	no	8.2	YES
SW-047-MWS	Zinc	130		26000	no	81	YES
SW-047-MWS	Zinc, Dissolve	134	J	26000	no	81	YES
SW-074-MWI	Arsenic	3.8	B	1.4	YES	36	no
SW-074-MWI	Nickel	31.4		4600	no	8.2	YES
SW-074-MWI	Nickel, Dissolve	35.4		4600	no	8.2	YES
SW07-PZM108	Copper	29.9		N/A	no	3.1	YES
SW07-PZM108	Lead	35.7		N/A	no	8.1	YES
SW11-PZM005	Thallium	4.4	J	0.47	YES	N/A	no
SW11-PZM005	Copper	3.7	B	N/A	no	3.1	YES
SW11-PZM005	Copper, Dissolve	4.2	J	N/A	no	3.1	YES
SW13-PZM003	Benzo[a]anthracene	0.33		0.18	YES	N/A	no
SW13-PZM003	Chrysene	0.29		0.18	YES	N/A	no
SW13-PZM003	Cyanide	9.9	J	140	no	1	YES
SW13-PZM025	Arsenic	7.7		1.4	YES	36	no
SW13-PZM025	Arsenic, Dissolve	7.8		1.4	YES	36	no
SW13-PZM111	Thallium	3.4	B	0.47	YES	N/A	no
SW13-PZM111	Copper	11.5		N/A	no	3.1	YES
SW13-PZM111	Nickel	12.6	J	4600	no	8.2	YES
SW13-PZM111	Nickel, Dissolve	9	B	4600	no	8.2	YES
SW14-PZM004	Arsenic	3.3	J	1.4	YES	36	no
SW14-PZM004	Arsenic, Dissolve	4.7	J	1.4	YES	36	no
SW14-PZM004	Benzo[a]anthracene	0.33		0.18	YES	N/A	no
SW14-PZM004	Chrysene	0.23		0.18	YES	N/A	no
SW14-PZM004	Thallium	5.9	J	0.47	YES	N/A	no

NA indicates no criteria
Yellow highlight indicates criteria exceedance
J qualifier indicates the positive result reported for the analyte is a quantitative estimate
B qualifier indicates the analyte was not detected substantially above the level of the associated method or field blank

TABLE 13
CUMULATIVE VAPOR INTRUSION COMPARISON

Parameter	Type	Organ Systems	FM01-PZM003	FM01-PZM041	FM05-PZM004	FM05-PZM024	SG07-PDM008	SW-021-MWS	SW-022-MWS	SW-023-MWS	SW-024-MWS
Cancerous Risk											
1,4-Dioxane	SVOC	liver; kidney	0	0	2.8E-12	0	0	0	1.08E-11	2.8E-12	0
Naphthalene	SVOC	whole body (decreased weight); kidney; thymus	2.6E-09	1.2E-09	5.4E-06	2.4E-07	2.2E-09	4.6E-09	4.8E-09	1.6E-09	2.5E-08
1,1-Dichloroethane	VOC	kidney, CNS	0	0	0	0	0	0	0	0	0
Benzene	VOC	blood; immune system	0	0	3.8E-07	0	0	0	0	0	0
Chloroform	VOC	liver	7.8E-06	0	0	0	0	1.3E-06	0	6.9E-07	0
Ethylbenzene	VOC	liver; kidney	0	0	0	0	0	0	0	0	0
Methyl tert-butyl ether (MTBE)	VOC	None Specified	0	0	0	0	0	0	0	0	0
Cumulative Vapor Intrusion - Target Cancer Risk =			8E-06	1E-09	6E-06	2E-07	2E-09	1E-06	5E-09	7E-07	3E-08
Non-Cancerous Risk											
Cyanide	Other	male reproductive	0	0	2.7	0	0	0	0	0	84.6
Cumulative Vapor Intrusion - Target Hazard Index =			0	0	3	0	0	0	0	0	85
Trichloroethene	VOC	thymus (immune); heart	0	0	0	0	0.2	0	0	0	0
Cumulative Vapor Intrusion - Target Hazard Index =			0	0	0	0	0.2	0	0	0	0

Values highlighted in red indicate exceedances of the cumulative vapor intrusion criteria:
TCR > 1E-05
THI > 1

TABLE 13
CUMULATIVE VAPOR INTRUSION COMPARISON

Parameter	Type	Organ Systems	SW-025-MWS	SW-026-MWS	SW-027-MWS	SW-028-MWS	SW-029-MWS	SW-030-MWS	SW-031-MWS	SW-032-MWS	SW-033-MWS
Cancerous Risk											
1,4-Dioxane	SVOC	liver; kidney	0	0	0	0	3.5E-12	7.7E-12	8.5E-12	1.4E-11	1.4E-11
Naphthalene	SVOC	whole body (decreased weight); kidney; thymus	1.3E-09	1.8E-08	1.2E-09	4.1E-09	8.1E-06	1.4E-09	1.9E-09	4.3E-09	5E-09
1,1-Dichloroethane	VOC	kidney, CNS	0	0	0	0	2.2E-08	0	0	0	0
Benzene	VOC	blood; immune system	0	0	0	0	5.2E-07	0	0	0	0
Chloroform	VOC	liver	0	0	0	0	0	0	0	3.6E-07	0
Ethylbenzene	VOC	liver; kidney	0	0	0	0	0	0	0	0	0
Methyl tert-butyl ether (MTBE)	VOC	None Specified	0	0	0	0	0	0	0	0	0
Cumulative Vapor Intrusion - Target Cancer Risk =			1E-09	2E-08	1E-09	4E-09	9E-06	1E-09	2E-09	4E-07	5E-09
Non-Cancerous Risk											
Cyanide	Other	male reproductive	0	0	0	0	405.7	18.5	1.7	9.3	23.2
Cumulative Vapor Intrusion - Target Hazard Index =			0	0	0	0	406	18	2	9	23
Trichloroethene	VOC	thymus (immune); heart	0	0	0	0	0	0	0	0	0
Cumulative Vapor Intrusion - Target Hazard Index =			0	0	0	0	0	0	0	0	0

Values highlighted in red indicate exceedances of the cumulative vapor intrusion criteria:
TCR > 1E-05
THI > 1

TABLE 13
CUMULATIVE VAPOR INTRUSION COMPARISON

Parameter	Type	Organ Systems	SW-034-MWS	SW-035-MWS	SW-036-MWS	SW-037-MWS	SW-038-MWS	SW-039-MWS	SW-040-MWS	SW-041-MWS	SW-042-MWS
Cancerous Risk											
1,4-Dioxane	SVOC	liver; kidney	1.4E-11	0	5.5E-12	4.8E-12	3.2E-12	0	0	3.1E-12	0
Naphthalene	SVOC	whole body (decreased weight); kidney; thymus	3.4E-09	6.5E-09	8.0E-09	2.8E-09	5.0E-09	5.5E-09	1.7E-09	1.5E-09	3.1E-09
1,1-Dichloroethane	VOC	kidney, CNS	0	0	0	0	0	0	0	0	0
Benzene	VOC	blood; immune system	0	0	0	0	0	0	0	0	0
Chloroform	VOC	liver	0	0	3.1E-07	8.3E-07	0	0	0	0	0
Ethylbenzene	VOC	liver; kidney	0	0	0	3.9E-08	0	0	0	0	0
Methyl tert-butyl ether (MTBE)	VOC	None Specified	0	0	0	0	0	0	0	1.5E-09	0
Cumulative Vapor Intrusion - Target Cancer Risk =			3E-09	7E-09	3E-07	9E-07	5E-09	6E-09	2E-09	3E-09	3E-09
Non-Cancerous Risk											
Cyanide	Other	male reproductive	20.5	64.3	0	1.3	0	0	0	0	0
Cumulative Vapor Intrusion - Target Hazard Index =			21	64	0	1	0	0	0	0	0
Trichloroethene	VOC	thymus (immune); heart	0	0	0	2.7E-02	0	0	0	0	0
Cumulative Vapor Intrusion - Target Hazard Index =			0	0	0	3E-02	0	0	0	0	0

Values highlighted in red indicate exceedances of the cumulative vapor intrusion criteria:
TCR > 1E-05
THI > 1

TABLE 13
CUMULATIVE VAPOR INTRUSION COMPARISON

Parameter	Type	Organ Systems	SW-043-MWI	SW-043-MWS	SW-044-MWS	SW-045-MWI	SW-045-MWS	SW-046-MWS	SW-047-MWS	SW-048-MWS	SW-049-MWS	SW-050-MWS
Cancerous Risk												
1,4-Dioxane	SVOC	liver; kidney	0	0	0	0	0	0	0	0	0	7.7E-12
Naphthalene	SVOC	whole body (decreased weight); kidney; thymus	0	2.2E-09	4.6E-09	1.4E-09	1.9E-09	1.8E-09	2.3E-09	1.9E-09	3.0E-09	8.0E-09
1,1-Dichloroethane	VOC	kidney, CNS	0	0	0	0	0	0	0	0	0	0
Benzene	VOC	blood; immune system	0	0	0	0	0	0	0	0	0	0
Chloroform	VOC	liver	7.2E-07	0	0	5.6E-07	0	0	1.7E-06	0	0	0
Ethylbenzene	VOC	liver; kidney	0	0	0	0	0	0	0	0	0	0
Methyl tert-butyl ether (MTBE)	VOC	None Specified	0	0	0	0	1.3E-09	0	0	0	0	0
Cumulative Vapor Intrusion - Target Cancer Risk =			7E-07	2E-09	5E-09	6E-07	3E-09	2E-09	2E-06	2E-09	3E-09	8E-09
Non-Cancerous Risk												
Cyanide	Other	male reproductive	0	0	0	0	0	0	0	0	0	0
Cumulative Vapor Intrusion - Target Hazard Index =			0	0	0	0	0	0	0	0	0	0
Trichloroethene	VOC	thymus (immune); heart	0	2.1E-02	0	0	0	0	0	0	0	0
Cumulative Vapor Intrusion - Target Hazard Index =			0	2E-02	0	0	0	0	0	0	0	0

Values highlighted in red indicate exceedances of the cumulative vapor intrusion criteria:
TCR > 1E-05
THI > 1

TABLE 13
CUMULATIVE VAPOR INTRUSION COMPARISON

Parameter	Type	Organ Systems	SW-051-MWS	SW-052-MWS	SW-053-MWS	SW-054-MWS	SW-055-MWS	SW-056-MWS	SW-057-MWS	SW-058-MWS	SW-059-MWS
Cancerous Risk											
1,4-Dioxane	SVOC	liver; kidney	3.4E-12	0	0	0	0	1.5E-11	1.2E-11	0	1.5E-11
Naphthalene	SVOC	whole body (decreased weight); kidney; thymus	1.2E-09	3.4E-09	0	9E-10	1.4E-07	9.5E-10	2.4E-08	1.1E-09	0
1,1-Dichloroethane	VOC	kidney, CNS	0	0	0	0	0	0	0	0	0
Benzene	VOC	blood; immune system	0	0	0	0	1.1E-06	0	2.03E-06	0	0
Chloroform	VOC	liver	0	0	0	0	0	0	0	8.6E-06	0
Ethylbenzene	VOC	liver; kidney	0	0	0	0	1.4E-06	0	0	0	0
Methyl tert-butyl ether (MTBE)	VOC	None Specified	0	0	0	0	7.0E-10	7.2E-09	0	0	0
Cumulative Vapor Intrusion - Target Cancer Risk =			1E-09	3E-09	0	9E-10	3E-06	8E-09	2E-06	9E-06	1E-11
Non-Cancerous Risk											
Cyanide	Other	male reproductive	0	0	0	0	1.1	0	0	0	0
Cumulative Vapor Intrusion - Target Hazard Index =			0	0	0	0	1	0	0	0	0
Trichloroethene	VOC	thymus (immune); heart	0	0	0	0	0	0	0	0	0
Cumulative Vapor Intrusion - Target Hazard Index =			0	0	0	0	0	0	0	0	0

Values highlighted in red indicate exceedances of the cumulative vapor intrusion criteria:
TCR > 1E-05
THI > 1

TABLE 13
CUMULATIVE VAPOR INTRUSION COMPARISON

Parameter	Type	Organ Systems	SW-060-MWS	SW-061-MWS	SW-062-MWS	SW-063-MWS	SW-064-MWS	SW-065-MWS	SW-066-MWS	SW-067-MWS	SW-068-MWS
Cancerous Risk											
1,4-Dioxane	SVOC	liver; kidney	9.2E-12	3.8E-11	0	1.5E-11	4.8E-12	1E-11	0	0	5.4E-12
Naphthalene	SVOC	whole body (decreased weight); kidney; thymus	2.7E-09	1.5E-09	1.1E-09	0	6.5E-09	4.8E-08	1.1E-09	2.2E-09	0
1,1-Dichloroethane	VOC	kidney, CNS	0	5.2E-08	0	0	0	0	0	0	0
Benzene	VOC	blood; immune system	0	0	0	0	0	1.4E-06	0	0	0
Chloroform	VOC	liver	0	0	0	0	0	7.5E-07	5.6E-07	0	0
Ethylbenzene	VOC	liver; kidney	0	0	0	0	0	0	0	0	0
Methyl tert-butyl ether (MTBE)	VOC	None Specified	0	0	0	0	0	0	0	0	0
Cumulative Vapor Intrusion - Target Cancer Risk =			3E-09	5E-08	1E-09	1E-11	7E-09	2E-06	6E-07	2E-09	5E-12
Non-Cancerous Risk											
Cyanide	Other	male reproductive	0	0	0	0	0	294.3	3.2	0	0
Cumulative Vapor Intrusion - Target Hazard Index =			0	0	0	0	0	294	3	0	0
Trichloroethene	VOC	thymus (immune); heart	0	0	0	0	0	0	0	0	0
Cumulative Vapor Intrusion - Target Hazard Index =			0	0	0	0	0	0	0	0	0

Values highlighted in red indicate exceedances of the cumulative vapor intrusion criteria:
TCR > 1E-05
THI > 1

TABLE 13
CUMULATIVE VAPOR INTRUSION COMPARISON

Parameter	Type	Organ Systems	SW-069-MWS	SW06-PZM001	SW06-PZM053	SW-070-MWS	SW-071-MWS	SW-072-MWS	SW-073-MWS	SW-074-MWI	SW-074-MWS
Cancerous Risk											
1,4-Dioxane	SVOC	liver; kidney	6.08E-11	0	0	4E-12	0	5.5E-12	0	0	0
Naphthalene	SVOC	whole body (decreased weight); kidney; thymus	0	2.7E-09	1.2E-09	0	8E-09	1.7E-09	2.1E-08	3.0E-09	0
1,1-Dichloroethane	VOC	kidney, CNS	3.0E-08	0	0	0	0	0	0	0	0
Benzene	VOC	blood; immune system	0	0	0	0	0	0	0	0	0
Chloroform	VOC	liver	0	0	1.6E-06	0	0	0	0	0	0
Ethylbenzene	VOC	liver; kidney	0	0	0	0	0	0	6.1E-08	0	0
Methyl tert-butyl ether (MTBE)	VOC	None Specified	0	0	0	0	0	0	0	0	0
Cumulative Vapor Intrusion - Target Cancer Risk =			3E-08	3E-09	2E-06	4E-12	8E-09	2E-09	8E-08	3E-09	0
Non-Cancerous Risk											
Cyanide	Other	male reproductive	2.3	0	0	0	3.0	0	0	0	0
Cumulative Vapor Intrusion - Target Hazard Index =			2	0	0	0	3	0	0	0	0
Trichloroethene	VOC	thymus (immune); heart	0	0	0	0	0	0	0	0	0
Cumulative Vapor Intrusion - Target Hazard Index =			0	0	0	0	0	0	0	0	0

Values highlighted in red indicate exceedances of the cumulative vapor intrusion criteria:
TCR > 1E-05
THI > 1

TABLE 13
CUMULATIVE VAPOR INTRUSION COMPARISON

Parameter	Type	Organ Systems	SW07-PZM004	SW07-PZM108	SW08-PZM003	SW08-PZM053	SW09-PZM0004	SW09-PZM028	SW09-PZM068	SW10-PZM012	SW11-PZM005
Cancerous Risk											
1,4-Dioxane	SVOC	liver; kidney	0	0	1.2E-11	0	0	0	0	0	0
Naphthalene	SVOC	whole body (decreased weight); kidney; thymus	2.3E-09	2.1E-09	2.3E-09	3.3E-09	2.4E-09	4.2E-09	4.6E-09	2E-09	9E-10
1,1-Dichloroethane	VOC	kidney, CNS	0	0	0	0	0	0	0	0	0
Benzene	VOC	blood; immune system	0	0	0	0	0	0	0	0	0
Chloroform	VOC	liver	0	0	0	0	0	0	0	0	0
Ethylbenzene	VOC	liver; kidney	0	0	0	0	0	0	0	0	0
Methyl tert-butyl ether (MTBE)	VOC	None Specified	0	0	0	0	0	0	0	0	0
Cumulative Vapor Intrusion - Target Cancer Risk =			2E-09	2E-09	2E-09	3E-09	2E-09	4E-09	5E-09	2E-09	9E-10
Non-Cancerous Risk											
Cyanide	Other	male reproductive	0	0	0	0	0	0	0	0	0
Cumulative Vapor Intrusion - Target Hazard Index =			0	0	0	0	0	0	0	0	0
Trichloroethene	VOC	thymus (immune); heart	0	0	0	0	0	0	0	0	0
Cumulative Vapor Intrusion - Target Hazard Index =			0	0	0	0	0	0	0	0	0

Values highlighted in red indicate exceedances of the cumulative vapor intrusion criteria:
TCR > 1E-05
THI > 1

TABLE 13
CUMULATIVE VAPOR INTRUSION COMPARISON

Parameter	Type	Organ Systems	SW12-PZP001	SW13-PZM003	SW13-PZM025	SW13-PZM111	SW14-PZM004	SW15-PZM005	SW15-PZM031	SW15-PZM085	SW16-PZM003
Cancerous Risk											
1,4-Dioxane	SVOC	liver; kidney	0	1.08E-11	0	0	2.08E-11	0	6.5E-12	0	2.8E-11
Naphthalene	SVOC	whole body (decreased weight); kidney; thymus	0	8.5E-06	0	7E-09	2.5E-06	1.2E-09	6.5E-09	2.3E-09	1.4E-09
1,1-Dichloroethane	VOC	kidney, CNS	0	0	0	0	0	0	0	0	1.2E-08
Benzene	VOC	blood; immune system	0	3.0E-06	0	0	0	0	0	0	0
Chloroform	VOC	liver	0	6.1E-07	0	0	0	0	0	0	0
Ethylbenzene	VOC	liver; kidney	0	1.3E-07	0	0	0	0	0	0	0
Methyl tert-butyl ether (MTBE)	VOC	None Specified	0	0	0	0	0	0	0	0	0
Cumulative Vapor Intrusion - Target Cancer Risk =			0	1E-05	0E+00	7E-09	2E-06	1E-09	7E-09	2E-09	1E-08
Non-Cancerous Risk											
Cyanide	Other	male reproductive	16.9	2.8	0	0	0	0	0	0	0
Cumulative Vapor Intrusion - Target Hazard Index =			17	3	0	0	0	0	0	0	0
Trichloroethene	VOC	thymus (immune); heart	0	0	0	0	0	0	0	0	0
Cumulative Vapor Intrusion - Target Hazard Index =			0	0	0	0	0	0	0	0	0

Values highlighted in red indicate exceedances of the cumulative vapor intrusion criteria:
TCR > 1E-05
THI > 1

TABLE 13
CUMULATIVE VAPOR INTRUSION COMPARISON

Parameter	Type	Organ Systems	SW16-PZM067	TM03-PZM004	TM03-PZM037	TM05-PZM005	TM05-PZM040	TS10-PDM008
Cancerous Risk								
1,4-Dioxane	SVOC	liver; kidney	0	3.4E-12	3.8E-11	0	0	1.6E-11
Naphthalene	SVOC	whole body (decreased weight); kidney; thymus	1.6E-09	5.5E-06	1.7E-07	8.4E-07	5.5E-08	2.3E-09
1,1-Dichloroethane	VOC	kidney, CNS	0	0	0	0	0	0
Benzene	VOC	blood; immune system	0	1.6E-07	0	0	0	0
Chloroform	VOC	liver	0	0	2.7E-07	5E-07	0	0
Ethylbenzene	VOC	liver; kidney	0	0	0	0	0	0
Methyl tert-butyl ether (MTBE)	VOC	None Specified	0	0	0	0	0	0
Cumulative Vapor Intrusion - Target Cancer Risk =			2E-09	6E-06	4E-07	1E-06	6E-08	2E-09
Non-Cancerous Risk								
Cyanide	Other	male reproductive	0	17.5	0	14.9	0	0
Cumulative Vapor Intrusion - Target Hazard Index =			0	18	0	15	0	0
Trichloroethene	VOC	thymus (immune); heart	0	0	4.1E-02	0	0	0
Cumulative Vapor Intrusion - Target Hazard Index =			0	0	4E-02	0	0	0

Values highlighted in red indicate exceedances of the cumulative vapor intrusion criteria:
TCR > 1E-05
THI > 1

EnviroAnalytics Group

Area B Groundwater Investigation
Table 14

Rejected Results for Groundwater

Parameter	Result	Units	PAL	Exceeds PAL?	Flag
Sample: *FM01-PZM003*					
3,3'-Dichlorobenzidine	1	µg/L	0.12	**YES**	R
Acetone	10	µg/L	14,000	no	R
Methyl Acetate	5	µg/L	20,000	no	R
Sample: *FM01-PZM041*					
Acetone	10	µg/L	14,000	no	R
Sample: *FM05-PZM004*					
Acetone	10	µg/L	14,000	no	R
Sample: *SG07-PDM008*					
3,3'-Dichlorobenzidine	1	µg/L	0.12	**YES**	R
Acetone	10	µg/L	14,000	no	R
Methyl Acetate	5	µg/L	20,000	no	R
Sample: *SW-023-MWS*					
Acetone	10	µg/L	14,000	no	R
Sample: *SW-024-MWS*					
Acetone	10	µg/L	14,000	no	R
Sample: *SW-025-MWS*					
Acetone	10	µg/L	14,000	no	R
Sample: *SW-026-MWS*					
Acetone	10	µg/L	14,000	no	R
Sample: *SW-027-MWS*					
Acetone	10	µg/L	14,000	no	R

Rejected Results for Groundwater

Parameter	Result	Units	PAL	Exceeds PAL?	Flag
Sample: *SW-028-MWS*					
Acetone	10	µg/L	14,000	no	R
Sample: *SW-029-MWS*					
Acetone	10	µg/L	14,000	no	R
Sample: *SW-033-MWS*					
Acetone	10	µg/L	14,000	no	R
Sample: *SW-036-MWS*					
Acetone	10	µg/L	14,000	no	R
Sample: *SW-043-MWS*					
3,3'-Dichlorobenzidine	1	µg/L	0.12	**YES**	R
Sample: *SW-046-MWS*					
3,3'-Dichlorobenzidine	1	µg/L	0.12	**YES**	R
Acetone	10	µg/L	14,000	no	R
Methyl Acetate	5	µg/L	20,000	no	R
Sample: *SW-047-MWS*					
3,3'-Dichlorobenzidine	1	µg/L	0.12	**YES**	R
Sample: *SW-051-MWS*					
Acetone	10	µg/L	14,000	no	R
Sample: *SW-059-MWS*					
Acetone	10	µg/L	14,000	no	R
Sample: *SW-061-MWS*					
Acetone	10	µg/L	14,000	no	R
Sample: *SW-062-MWS*					
Acetone	10	µg/L	14,000	no	R

Rejected Results for Groundwater

Parameter	Result	Units	PAL	Exceeds PAL?	Flag
Sample: *SW-064-MWS*					
Acetone	10	µg/L	14,000	no	R
Sample: *SW-065-MWS*					
Acetone	10	µg/L	14,000	no	R
Sample: *SW06-PZM001*					
Acetone	10	µg/L	14,000	no	R
Sample: *SW06-PZM053*					
Acetone	10	µg/L	14,000	no	R
Sample: *SW-070-MWS*					
Acetone	10	µg/L	14,000	no	R
Sample: *SW-071-MWS*					
3,3'-Dichlorobenzidine	1	µg/L	0.12	YES	R
4-Chloroaniline	1	µg/L	0.36	YES	R
Sample: *SW-074-MWS*					
Acetone	10	µg/L	14,000	no	R
Sample: *SW07-PZM004*					
3,3'-Dichlorobenzidine	1	µg/L	0.12	YES	R
Sample: *SW07-PZM108*					
3,3'-Dichlorobenzidine	1	µg/L	0.12	YES	R
Acetone	10	µg/L	14,000	no	R
Methyl Acetate	5	µg/L	20,000	no	R
Sample: *SW08-PZM003*					
Acetone	10	µg/L	14,000	no	R
Sample: *SW09-PZM0004*					
3,3'-Dichlorobenzidine	1	µg/L	0.12	YES	R

Rejected Results for Groundwater

Parameter	Result	Units	PAL	Exceeds PAL?	Flag
Sample: *SW09-PZM0004*					
Acetone	10	µg/L	14,000	no	R
Methyl Acetate	5	µg/L	20,000	no	R
Sample: *SW09-PZM028*					
Acetone	10	µg/L	14,000	no	R
Sample: *SW09-PZM068*					
Acetone	10	µg/L	14,000	no	R
Sample: *SW10-PZM012*					
3,3'-Dichlorobenzidine	1	µg/L	0.12	**YES**	R
Acetone	10	µg/L	14,000	no	R
Methyl Acetate	5	µg/L	20,000	no	R
Sample: *SW13-PZM003*					
Acetone	10	µg/L	14,000	no	R
Sample: *SW13-PZM111*					
3,3'-Dichlorobenzidine	1	µg/L	0.12	**YES**	R
Acetone	10	µg/L	14,000	no	R
Methyl Acetate	5	µg/L	20,000	no	R
Sample: *SW14-PZM004*					
3,3'-Dichlorobenzidine	1	µg/L	0.12	**YES**	R
Acetone	10	µg/L	14,000	no	R
Sample: *SW15-PZM005*					
3,3'-Dichlorobenzidine	1	µg/L	0.12	**YES**	R
Methyl Acetate	5	µg/L	20,000	no	R
Sample: *SW15-PZM031*					
Acetone	10	µg/L	14,000	no	R

Rejected Results for Groundwater

Parameter	Result	Units	PAL	Exceeds PAL?	Flag
Sample: *SW15-PZM085*					
3,3'-Dichlorobenzidine	1	µg/L	0.12	**YES**	R
Sample: *SW16-PZM003*					
3,3'-Dichlorobenzidine	1	µg/L	0.12	**YES**	R
Acetone	10	µg/L	14,000	no	R
Methyl Acetate	5	µg/L	20,000	no	R
Sample: *TM03-PZM004*					
Acetone	10	µg/L	14,000	no	R
Sample: *TM03-PZM037*					
Acetone	10	µg/L	14,000	no	R
Sample: *TM05-PZM005*					
Acetone	10	µg/L	14,000	no	R
Sample: *TM05-PZM040*					
Acetone	10	µg/L	14,000	no	R
Sample: *TS10-PDM008*					
3,3'-Dichlorobenzidine	1	µg/L	0.12	**YES**	R
Acetone	10	µg/L	14,000	no	R
Methyl Acetate	5	µg/L	20,000	no	R

APPENDIX A

ARM Group Inc.
Earth Resource Engineers and Consultants

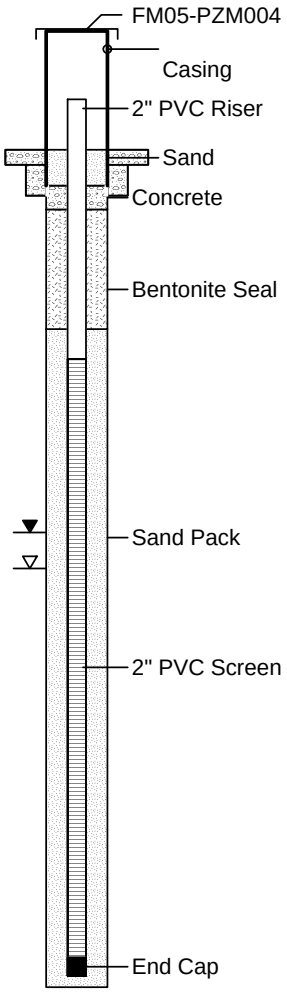
Well ID: FM05-PZM004

(page 1 of 1)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-6
ARM Representative	: Peter Vogel
Checked by	: Peter Vogel
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Ryan Sites
Drilling Equipment	: Diedrich-D120

Northing (ft.)	: 568565.69
Easting (ft.)	: 1462040.51
Date/Time Started	: 02/05/16 / 1300
Date/TIme Completed	: 02/05/16 / 1545
Surf. Elev. (ft. AMSL)	: 11.7
TOC Elev. (ft. AMSL)	: 14.48
Total Depth	: 16.49' (TOC)
Depth to Water (ft.)	: 9.0' (TOC) 02/08/16
Depth to Water (ft.)	: 9.6' (TOC) 03/04/16
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. 11.7	LITHOLOGIC DESCRIPTION
0	11.7	0-2' Silty SAND, brown, medium dense, with some gravel, dry (fill)
		2-8' Silty SAND, gray, dense to medium dense, some clay and slag gravel, moist (fill)
5	6.7	
		8-8.5' SAND, tan to dark gray, medium fine grained, wet
		8.5-10' Clayey SILT, gray to orangish brown, medium mottled
10	1.7	10-11' SAND, gray, stiff, fine to medium grained
		11-14' Clayey SILT, very stiff, gray to orangish brown, mottled
		End of Boring
15	-3.3	
20		



COMPLETION DETAILS

2x2' concrete pad
4.25" ID Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 inch ID
Riser Stickup (ags): 2.7'

Screen: Sch 40 PVC
Screen Diameter: 2 inch ID
Top of Screen: 3.5' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 1.0' Bottom: 3.0'
Filter Pack: DSI M2 Sand
Top: 3.0' Bottom: 14.0'

Monitoring Well Development
Date: 03/04/16 - 03/08/16
Purged Amount: 34
Well Volumes Removed: 31.2
Time Started/Completed:
03/04/16 to 03/08/16

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

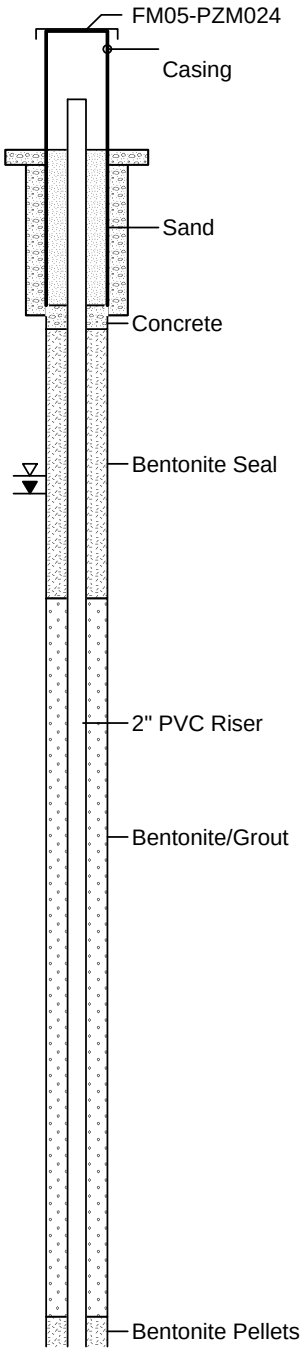
Well ID: FM05-PZM024

(page 1 of 2)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-6
ARM Representative	: William Mader, P.G.
Checked by	: William Mader, P.G.
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Ryan Sites
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 568578.67
Easting (ft)	: 1462043.77
Date/Time Started	: 02/24/16 / 1210
Date/Time Completed	: 02/24/16 /
Surf. Elev. (ft AMSL)	: 12.0
TOC Elev. (ft AMSL)	: 14.5
Total Depth (ft)	: 37.2' (TOC)
Depth to Water (ft)	: 8.6' (TOC) 02/24/16
Depth to Water (ft)	: 9.5' (TOC) 03/02/16
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. (ft.) 12.0	LITHOLOGIC DESCRIPTION
0	12	0-2' Silty SAND, brown, medium dense, with some gravel, dry (fill)
		2-8' Silty SAND, gray, dense to medium dense, some clay and slag gravel, moist (fill)
5	7	
		8-8.5' SAND, tan to dark gray, medium fine grained, wet
		8.5-10' Clayey SILT, gray to orangish brown, medium mottled
10	2	10-11' SAND, gray, stiff, fine to medium grained
		11-12' Clayey SILT, very stiff, gray to orangish brown, mottled
		12-12.6' Clayey SAND, light gray and reddish yellow, moist, stiff
		12.6-16' Lean CLAY-sandy CLAY, yellowish brown with chroma 2 gray and yellowish red redox, moist, stiff
15	-3	
		16-20' Sandy CLAY, light gray and strong reddish brown oxidation, moist, soft to very stiff, approx 1" grayish gravelly zone at 16.5' bgs
20		



COMPLETION DETAILS

2x2' concrete pad
4.25" Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 in
Riser Stickup (ags): 2.5'

Screen: Sch 40 PVC
Screen Diameter: 2 in
Top of Screen: 24.5' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 3.0' Bottom: 7.5'
Bentonite/Grout:
Top: 7.5' Bottom: 19.5'
Bentonite Pellets:
Top:19.5.' Bottom: 22.5'
Fine Sand: FilPro # 000
Top: 22.5' Bottom: 23.0'
Filter Pack: FilPro W.G.#2
Top: 23.0' Bottom: 38.0'

Monitoring Well Development
Date: 03/02/16
Purged Amount: 45 gal.
Well Volumes Removed: 9.9
Time Started/Completed: 1025/1425

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

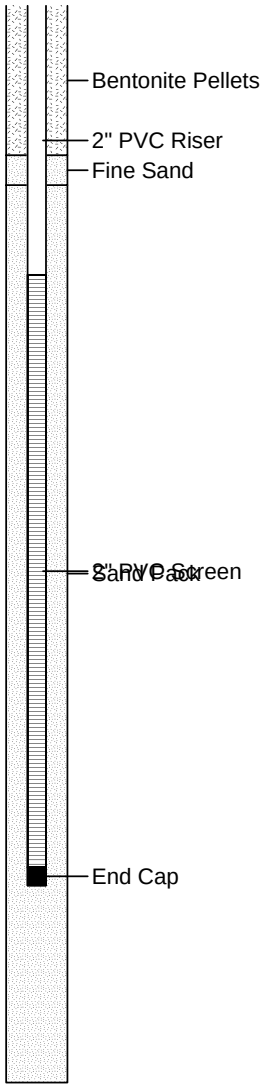
ARM Group Inc.
Earth Resource Engineers and Consultants

Well ID: FM05-PZM024

(page 2 of 2)

Project Name	: Sparrows Point	Northing (ft)	: 568578.67
Project Number	: 150300M-10-3	Easting (ft)	: 1462043.77
Client	: EnviroAnalytics Group	Date/Time Started	: 02/24/16 / 1210
Site	: Sparrows Point - Area B	Date/Time Completed	: 02/24/16 /
Borehole Location	: Parcel B-6	Surf. Elev. (ft AMSL)	: 12.0
ARM Representative	: William Mader, P.G.	TOC Elev. (ft AMSL)	: 14.5
Checked by	: William Mader, P.G.	Total Depth (ft)	: 37.2' (TOC)
Drilling Company	: Allied Well Drilling	Depth to Water (ft)	: 8.6' (TOC) 02/24/16
Driller	: Mike Waller, Ryan Sites	Depth to Water (ft)	: 9.5' (TOC) 03/02/16
Drilling Equipment	: Diedrich-D120	Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. (ft.) 12.0	LITHOLOGIC DESCRIPTION
20	-8	20-24' Clayey SILT, dark gray (5Y 4/1), soft, moist, low to medium plasticity, very soft and saturated from 22-23' bgs
		24-25.5' Clayey SILT, dark gray, soft, very moist
25	-13	
		25.5-26.5' Clayey SILT, dark gray, stiff, moist
		26.5-30' Clayey SILT, dark gray, very soft, very moist
30	-18	30-30.8' Silty SAND, brownish gray, loose, very moist
		30.8-32' Clayey SILT, dark gray, soft, very moist
		32-33' Silty SAND, brownish gray, loose, very moist
		33-34' Clayey SILT, dark gray trending to dark greenish gray, very soft, very moist
		34-34.9' Silty SAND, brownish gray, loose, very moist
35	-23	34.9-36' Clayey SILT, dark gray trending to dark greenish gray, very soft, very moist
		36-36.5' Silty SAND, brown gray, loose, very moist
		36.5-38' Clayey SILT, dark gray trending to dark greenish gray, very soft, very moist
		End of Boring
40		



COMPLETION DETAILS

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

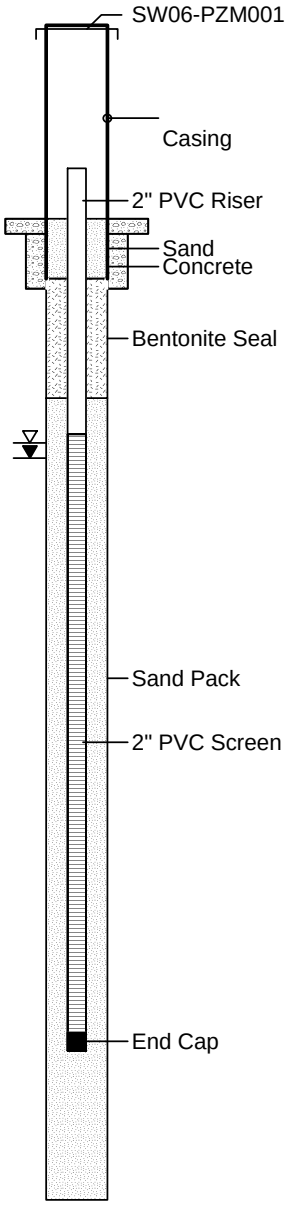
Well ID: SW06-PZM001

(page 1 of 1)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-7
ARM Representative	: William Mader, P.G.
Checked by	: William Mader, P.G.
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Ryan Sites
Drilling Equipment	: Diedrich-D120

Northing (ft.)	: 569184.69
Easting (ft.)	: 1463625.88
Date/Time Started	: 01/19/16 / 1000
Date/Time Completed	: 01/19/16 / 1210
Surf. Elev. (ft. AMSL)	: 14.9
TOC Elev. (ft. AMSL)	: 17.29
Total Depth (ft.)	: 16.4' (TOC)
Depth to Water (ft.)	: 6.5' (TOC) 01/19/16
Depth to Water (ft.)	: 6.25' (TOC) 01/28/16
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. 14.9	LITHOLOGIC DESCRIPTION
0	14.9	0-0.5' Sandy SILT, dark gray brown, soft, moist
		0.5-2' Silty SAND, strong brown, stiff, moist, no RMFs observed
		2-4' Silty SAND, strong brown to brown, very stiff, moist, common
		4-5.08' Silty SAND, strong brown to brown, loose, very moist, saturated
5	9.9	5.08-7.66' Silty SAND, pale gray to gray, loose, saturated, pale yellow oxidation
		7.66-8' SAND, dark yellowish red / reddish brown, loose, wet, Blackish yellow redoximorphic features
		8-10.5' SAND, dark reddish brown, loose, saturated, apparent black concretions
10	4.9	10.5-11' Clayey SAND, strong brownish-reddish yellow, stiff, very moist
		11-14' Clayey SILT, pale brown-gray, stiff to medium, redoximorphic features, very moist, some possible iron concentrations
15	-.1	
		End of Boring
20		



COMPLETION DETAILS

2x2' concrete pad
4.25" ID Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 inch ID
Riser Stickup (ags): 2.4'

Screen: Sch 40 PVC
Screen Diameter: 2 inch ID
Top of Screen: 3.6' bgs
Screen Amount: 10.3 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 1.0' Bottom: 3.0'
Filter Pack: FilPro WG#2
Top: 3.0' Bottom: 14.5'

Monitoring Well Development
Date: 01/28/16
Purged Amount: 30 gal.
Well Volumes Removed: 17.7
Time Started/Completed: 0942/1035

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags- above ground surface
bgs - below ground surface

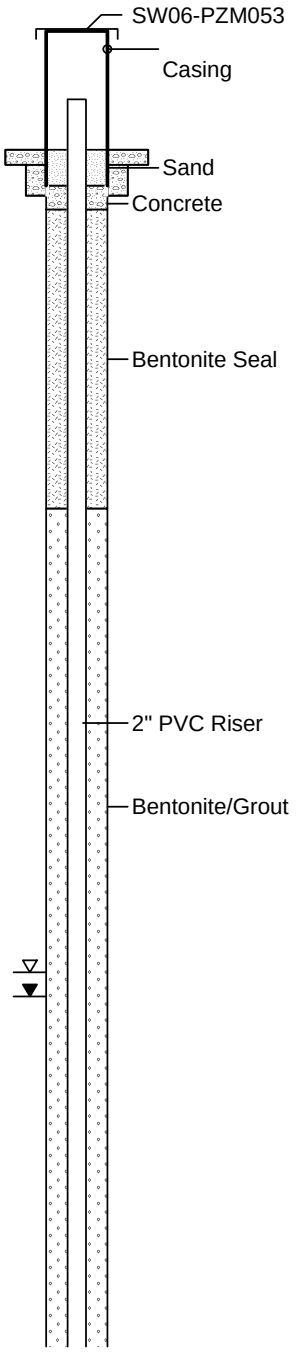
ARM Group Inc.
Earth Resource Engineers and Consultants

Well ID: SW06-PZM053

(page 1 of 4)

Project Name	: Sparrows Point	Northing (ft)	: 569188.45
Project Number	: 150300M-10-3	Easting (ft)	: 1463637.32
Client	: EnviroAnalytics Group	Date/Time Started	: 01/21/16 / 1510
Site	: Sparrows Point - Area B	Date/Time Completed	: 01/22/16 / 1245
Borehole Location	: Parcel B-7	Surf. Elev. (ft AMSL)	: 14.6
ARM Representative	: William Mader, P.G.	TOC Elev. (ft AMSL)	: 16.75
Checked by	: William Mader, P.G.	Total Depth (ft)	: 70.8' (TOC)
Drilling Company	: Allied Well Drilling	Depth to Water (ft)	: 16.7' (TOC) 01/22/16
Driller	: Mike Waller, Ryan Sites	Depth to Water (ft)	: 16.3' (TOC) 01/28/16
Drilling Equipment	: Diedrich-D120	Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. (ft.) 14.6	LITHOLOGIC DESCRIPTION	COMPLETION DETAILS
0	14.6	0-14' HSA Drilling Only - See SW06-PZM001 log	
5	9.6		
10	4.6		
15	-.4	14-17.6' Lean CLAY, pale gray to light gray, soft with yellowish brown and brown oxidation stains, cohesive, iron concretions	
		17.6-18' Lean CLAY, gray to dark gray (5Y 5/1-4/1), moist	
		18-24' Clayey SILT, gray to dark gray (5Y 5/1-4/1), moist, cohesive	
20			



2x2' concrete pad
4.25" Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 in
Riser Stickup (ags): 2.2'

Screen: Sch 40 PVC
Screen Diameter: 2 in
Top of Screen: 39.5' bgs
Screen Amount: 15.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 3.0' Bottom: 7.0'
Bentonite/Grout:
Top: 7.0 Bottom: 46.5'
Bentonite Pellets:
Top: 46.5' Bottom: 50.5
Fine Sand: FilPro #000
Top: 50.5' Bottom: 51.0'
Filter Pack: FilPro W.G2
Top: 51.0' Bottom: 68.5'

Monitoring Well Development
Date: 3/1/16
Purged Amount: 55 gal.
Well Volumes Removed: 8.8
Time Started/Completed: 1020/1230

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

Well ID: SW06-PZM053

Project Name	: Sparrows Point	Northing (ft)	: 569188.45
Project Number	: 150300M-10-3	Easting (ft)	: 1463637.32
Client	: EnviroAnalytics Group	Date/Time Started	: 01/21/16 / 1510
Site	: Sparrows Point - Area B	Date/Time Completed	: 01/22/16 / 1245
Borehole Location	: Parcel B-7	Surf. Elev. (ft AMSL)	: 14.6
ARM Representative	: William Mader, P.G.	TOC Elev. (ft AMSL)	: 16.75
Checked by	: William Mader, P.G.	Total Depth (ft)	: 70.8' (TOC)
Drilling Company	: Allied Well Drilling	Depth to Water (ft)	: 16.7' (TOC) 01/22/16
Driller	: Mike Waller, Ryan Sites	Depth to Water (ft)	: 16.3' (TOC) 01/28/16
Drilling Equipment	: Diedrich-D120	Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. (ft.) 14.6	LITHOLOGIC DESCRIPTION	COMPLETION DETAILS
20	-5.4		
		24-24.5' Silty SAND, gray to dark gray, loose, wet	
25	-10.4	24.5-25.5' SILT, gray to dark gray, loose, moist	
		25.5-26' Silty SAND, gray to dark gray, loose, wet	
		26-28' Fine to medium SAND, gray to dark gray, very moist to wet, loose	Bentonite/Grout
		28-38' Gray to dk gray and black, soft, near saturated, somewhat sandier at base	
30	-15.4		2" PVC Riser
35	-20.4		
		38-38.5' Silty SAND, dark gray, soft, moist to increasing fine sand	
		38.5-39' Silty SAND, dark gray, soft, saturated, some fine qtz gravels	
40			

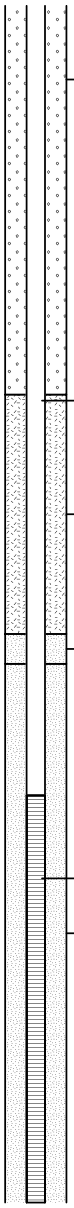
TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

Well ID: SW06-PZM053

Project Name	: Sparrows Point	Northing (ft)	: 569188.45
Project Number	: 150300M-10-3	Easting (ft)	: 1463637.32
Client	: EnviroAnalytics Group	Date/Time Started	: 01/21/16 / 1510
Site	: Sparrows Point - Area B	Date/Time Completed	: 01/22/16 / 1245
Borehole Location	: Parcel B-7	Surf. Elev. (ft AMSL)	: 14.6
ARM Representative	: William Mader, P.G.	TOC Elev. (ft AMSL)	: 16.75
Checked by	: William Mader, P.G.	Total Depth (ft)	: 70.8' (TOC)
Drilling Company	: Allied Well Drilling	Depth to Water (ft)	: 16.7' (TOC) 01/22/16
Driller	: Mike Waller, Ryan Sites	Depth to Water (ft)	: 16.3' (TOC) 01/28/16
Drilling Equipment	: Diedrich-D120	Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. (ft.) 14.6	LITHOLOGIC DESCRIPTION	COMPLETION DETAILS
40	-25.4	40-42' Clayey SILT, dark gray to dark greenish gray, medium, moist but less vs. above	
		42-44' As above, pale whitish shell debris in lower 10"	
45	-30.4	44-48' Clayey SILT, dark gray to greenish gray, very soft to soft, moist, pale whitish yellow shell debris	
50	-35.4	48-52' Clayey SILT, dark gray to dark greenish grey, soft, moist	
		52-54' Medium-coarse SAND, brown to brownish gray, fine rounded quartz gravel, loose, very moist	
55	-40.4	54-58' Fine to medium quartz GRAVEL, grayish brown, medium dense, very moist	
		58-62' Medium fine grained SAND, grayish brown-dark gray brown, loose, very moist, ~30% to ~10%fine Qtz gravels	
60			



TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

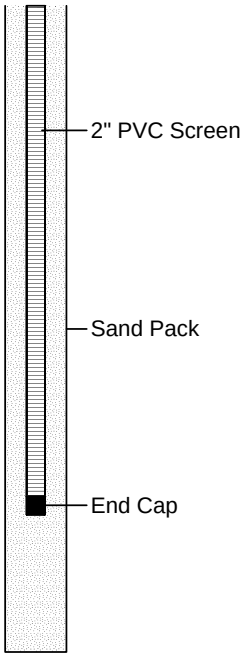
ARM Group Inc.
Earth Resource Engineers and Consultants

Well ID: SW06-PZM053

(page 4 of 4)

Project Name	: Sparrows Point	Northing (ft)	: 569188.45
Project Number	: 150300M-10-3	Easting (ft)	: 1463637.32
Client	: EnviroAnalytics Group	Date/Time Started	: 01/21/16 / 1510
Site	: Sparrows Point - Area B	Date/Time Completed	: 01/22/16 / 1245
Borehole Location	: Parcel B-7	Surf. Elev. (ft AMSL)	: 14.6
ARM Representative	: William Mader, P.G.	TOC Elev. (ft AMSL)	: 16.75
Checked by	: William Mader, P.G.	Total Depth (ft)	: 70.8' (TOC)
Drilling Company	: Allied Well Drilling	Depth to Water (ft)	: 16.7' (TOC) 01/22/16
Driller	: Mike Waller, Ryan Sites	Depth to Water (ft)	: 16.3' (TOC) 01/28/16
Drilling Equipment	: Diedrich-D120	Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. (ft.) 14.6	LITHOLOGIC DESCRIPTION	COMPLETION DETAILS
60	-45.4		
		62-64' No Recovery	
		64-64.7' Fine to medium SAND, grayish brown, loose, very moist/wet, with a few whitest Qtz Gravel	
65	-50.4	64.7-65.1' Silty SAND, dark greenish brown, loose, very moist to wet, trace organic fibers	
		65.1-66' Clay SILT, dark gray brown to stiff, very moist, many silver mica flakes	
		66-66.5' Silty SAND, grayish brown, loose, fine to medium sand, near saturated	
		66.5-68' Silty SAND and GRAVEL, light grayish brown, dense to very dense, wet	
70	-55.4		
		End of Boring	
75	-60.4		
80			



TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

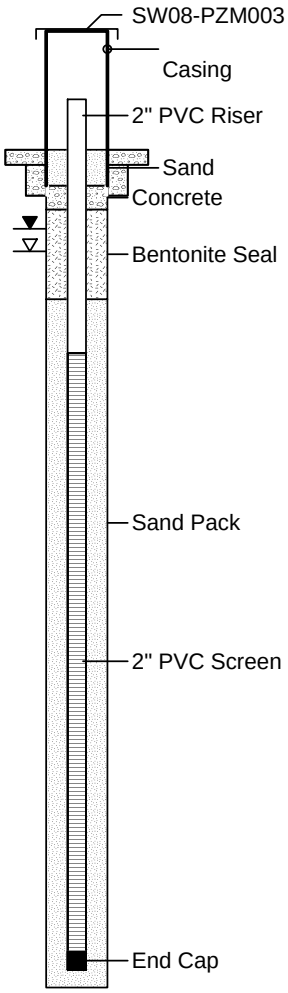
ARM Group Inc.
Earth Resource Engineers and Consultants

Well ID: SW08-PZM003

(page 1 of 1)

Project Name	: Sparrows Point	Northing (ft)	: 568091.75
Project Number	: 150300M-10-3	Easting (ft)	: 1458990.33
Client	: EnviroAnalytics Group	Date/Time Started	: 02/03/16 / 1330
Site	: Sparrows Point - Area B	Date/Time Completed	: 02/03/16 / 1545
Borehole Location	: Parcel B-2	Surf. Elev. (ft AMSL)	: 9.4
ARM Representative	: Peter Vogel	TOC Elev. (ft AMSL)	: 11.75
Checked by	: Peter Vogel	Total Depth (ft)	: 16.43' (TOC)
Drilling Company	: Allied Well Drilling	Depth to Water (ft)	: 3.92' (TOC) 02/03/16
Driller	: Mike Waller, Ryan Sites	Depth to Water (ft)	: 4.30' (TOC) 02/10/16
Drilling Equipment	: Diedrich-D120	Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. 9.4	LITHOLOGIC DESCRIPTION
0	9.4	0-2' Clayey SAND, black to gray, very stiff, with slag gravel (fill)
		2-4.5' Silty SAND, light gray, stiff, with clay
5	4.4	4.5-5.5' SAND, tan, medium stiff, fine grained
		5.5-7' Sandy SILT, light gray, very soft, with clay
		7-10' Clayey SILT to Silty SAND interbedded, tan to gray, soft, numerous large shell fragments
10	-.6	10-14' Silty SAND, gray, soft, fine grained with some small shell fragments
		End of Boring
15	-5.6	
20		



COMPLETION DETAILS

2x2' concrete pad
4.25" ID Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 inch ID
Riser Stickup (ags): 2.7'

Screen: Sch 40 PVC
Screen Diameter: 2 inch ID
Top of Screen: 3.4' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 1.0' Bottom: 2.5'
Filter Pack: DSI M2 Sand
Top: 2.5' Bottom: 14.0'

Monitoring Well Development
Date: 02/10/16
Purged Amount: 45
Well Volumes Removed: 37.5
Time Start/Completed: 1400/1440

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

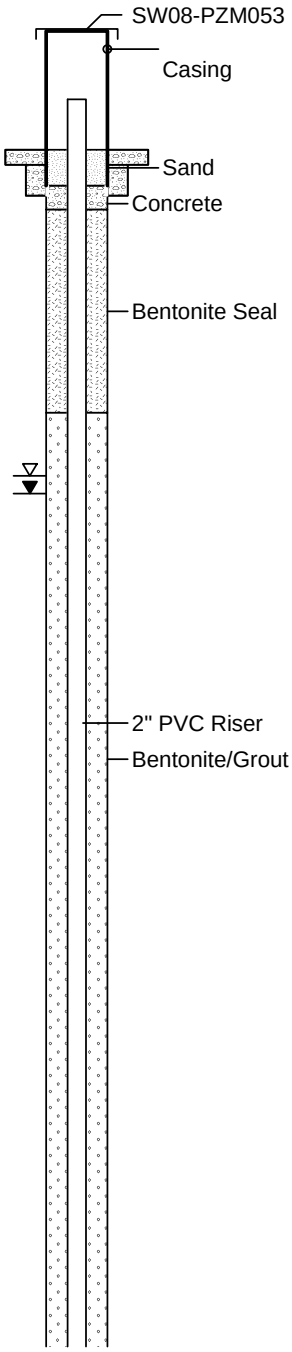
ARM Group Inc.
Earth Resource Engineers and Consultants

Well ID: SW08-PZM053

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-2
ARM Representative	: William Mader, P.G.
Checked by	: William Mader, P.G.
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Ryan Sites
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 568090.03
Easting (ft)	: 1458982.75
Date/Time Started	: 02/17/16 / 1220
Date/Time Completed	: 02/18/16 /
Surf. Elev. (ft AMSL)	: 9.7
TOC Elev. (ft AMSL)	: 12.02
Total Well Depth (ft)	: 45.4' (TOC)
Total Boring Depth (ft)	: 62.0'
Depth to Water (ft)	: 7.8' (TOC) 02/25/16
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. (ft.) 9.7	LITHOLOGIC DESCRIPTION
0	9.7	0-2' Clayey SAND, black to gray, very stiff, with slag gravel (fill)
		2-4.5' Silty SAND, light gray, stiff, with clay
5	4.7	4.5-5.5' SAND, tan, medium stiff, fine grained
		5.5-7' Sandy SILT, light gray, very soft, with clay
		7-10' Clayey SILT to Silty SAND interbedded, tan to gray, soft, numerous large shell fragments
10	-.3	10-14' Silty SAND, gray, soft, fine grained with some small shell fragments
		14-14.5' Silty SAND, dark gray, medium grained sand, loose, saturated
15	-5.3	14.5-15' Clayey SILT, dark gray, soft, saturated
		15-16' Silty SAND, dark gray, loose, saturated, abundant mica
		16-17.5' Medium grained Silty SAND, medium gray, loose, very moist, tiny shell fragments
		17.5-18.3' Clayey SILT, dark gray, soft
		18.3-18.8' Medium to coarse grained SAND, medium gray, quartz gravel, wet
20		18.8-20' Clayey SILT, dark gray, soft to medium, very moist



COMPLETION DETAILS

2x2' concrete pad
4.25" Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 in
Riser Stickup (ags): 2.4'

Screen: Sch 40 PVC
Screen Diameter: 2 in
Top of Screen: 33.0' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 1.0' Bottom: 4.4'
Bentonite/Grout:
Top: 4.4' Bottom: 28.9'
Bentonite Pellets:
Top: 28.9' Bottom: 31.0'
Fine Sand: FilPro #000
Top: 31.0' Bottom: 31.8'
Filter Pack: FilPro #2
Top: 31.8' Bottom: 45.0'

Monitoring Well Development
Date: 12/25/15
Purged Amount: 300 gal.
Well Volumes Removed: 49
Time Started/Completed: 1115/1536

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

An initial boring was drilled and logged to 62 ft. bgs., but then abandoned due to lack of a suitable monitoring interval from 44 to 62 feet depth. A second boring was then drilled, approximately 10 feet to the west to a total depth of 45 ft. bgs, for installation of the 2-inch ID PVC well. No sample logging was completed for the 45 ft. boring. The lithology information shown here is taken from the 62 ft.

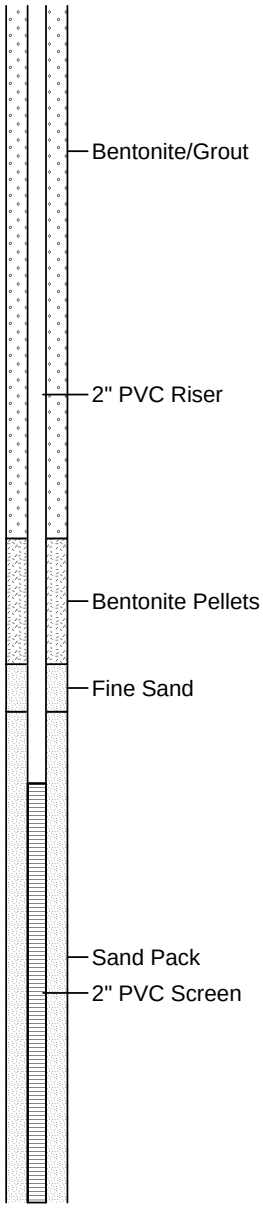
ARM Group Inc.
Earth Resource Engineers and Consultants

Well ID: SW08-PZM053

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-2
ARM Representative	: William Mader, P.G.
Checked by	: William Mader, P.G.
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Ryan Sites
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 568090.03
Easting (ft)	: 1458982.75
Date/Time Started	: 02/17/16 / 1220
Date/Time Completed	: 02/18/16 /
Surf. Elev. (ft AMSL)	: 9.7
TOC Elev. (ft AMSL)	: 12.02
Total Well Depth (ft)	: 45.4' (TOC)
Total Boring Depth (ft)	: 62.0'
Depth to Water (ft)	: 7.8' (TOC) 02/25/16
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. (ft.) 9.7	LITHOLOGIC DESCRIPTION
20	-10.3	20-20.8' Coarse grained SAND, grayish brown, loose, wet
		20.8-24' Clayey SILT, dark gray, soft to medium, very moist, two inclusions of dark red-brown rotted wood fibers
25	-15.3	24-28' Clayey SILT, dark gray (5Y 4/1), very soft to soft, saturated to very moist
		28-29' Silty SAND, gray to light brownish gray (2.5 Y 6/1-6/2), common yellowish brown oxidation, wet
30	-20.3	29-30' Clayey SAND, gray (2.5Y 6/1) medium, moist, many yellowish brown - brownish yellow oxidation coatings
		30-32' Clayey SILT, grayish brown, soft, common yellowish brown and 7.5 yellowish reddish brown clay coatings and oxidation, very moist
		32-33' Silty SAND to Clayey SAND, grayish brown, loose, moist
		33-34' Clayey SILT, grayish brown, soft, common yellowish brown and 7.5 yellowish reddish brown clay coatings and oxidation, very moist
35	-25.3	34-37' Silty SAND to SAND, grayish brown, loose, wet
		37-37.5' Clayey SILT, greenish brown, soft, very moist
		37.5-38' Silty SAND, mixed light olive brown (2.5Y 5/6)
		No recovery - Probable sand zone per driller
40		



COMPLETION DETAILS

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

An initial boring was drilled and logged to 62 ft. bgs., but then abandoned due to lack of a suitable monitoring interval from 44 to 62 feet depth. A second boring was then drilled, approximately 10 feet to the west to a total depth of 45 ft. bgs, for installation of the 2-inch ID PVC well. No sample logging was completed for the 45 ft. boring. The lithology information shown here is taken from the 62 ft.

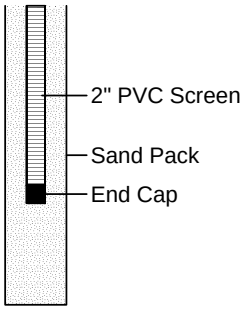
ARM Group Inc.
Earth Resource Engineers and Consultants

Well ID: SW08-PZM053

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-2
ARM Representative	: William Mader, P.G.
Checked by	: William Mader, P.G.
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Ryan Sites
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 568090.03
Easting (ft)	: 1458982.75
Date/Time Started	: 02/17/16 / 1220
Date/Time Completed	: 02/18/16 /
Surf. Elev. (ft AMSL)	: 9.7
TOC Elev. (ft AMSL)	: 12.02
Total Well Depth (ft)	: 45.4' (TOC)
Total Boring Depth (ft)	: 62.0'
Depth to Water (ft)	: 7.8' (TOC) 02/25/16
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. (ft.) 9.7	LITHOLOGIC DESCRIPTION	COMPLETION DETAILS
40	-30.3	40-40.33' SAND to Clayey SAND, brown, loose	
		40.33-42' Clayey SILT, dark grayish green (Gley 1-4/1), medium to stiff, very moist, shell debris, has apparent subvertical parting	
		42-44' Silty CLAY, dark greenish gray, medium, moist, numerous shell fragments	
45	-35.3	44-48' Silty CLAY, dark greenish gray, medium, moist, numerous shell fragments, sub-vertical thin sandy zone in upper 12" that is saturated at 46' bgs, rest of material is moist-very moist	
		48-62' Clayey SILT, dark greenish gray, very moist, soft to very soft	
50	-40.3		
55	-45.3		
60			



TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

An initial boring was drilled and logged to 62 ft. bgs., but then abandoned due to lack of a suitable monitoring interval from 44 to 62 feet depth. A second boring was then drilled, approximately 10 feet to the west to a total depth of 45 ft. bgs, for installation of the 2-inch ID PVC well. No sample logging was completed for the 45 ft. boring. The lithology information shown here is taken from the 62 ft.

ARM Group Inc.
Earth Resource Engineers and Consultants

Well ID: SW08-PZM053

(page 4 of 4)

Project Name	: Sparrows Point	Northing (ft)	: 568090.03
Project Number	: 150300M-10-3	Easting (ft)	: 1458982.75
Client	: EnviroAnalytics Group	Date/Time Started	: 02/17/16 / 1220
Site	: Sparrows Point - Area B	Date/Time Completed	: 02/18/16 /
Borehole Location	: Parcel B-2	Surf. Elev. (ft AMSL)	: 9.7
ARM Representative	: William Mader, P.G.	TOC Elev. (ft AMSL)	: 12.02
Checked by	: William Mader, P.G.	Total Well Depth (ft)	: 45.4' (TOC)
Drilling Company	: Allied Well Drilling	Total Boring Depth (ft)	: 62.0'
Driller	: Mike Waller, Ryan Sites	Depth to Water (ft)	: 7.8' (TOC) 02/25/16
Drilling Equipment	: Diedrich-D120	Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. (ft.) 9.7	LITHOLOGIC DESCRIPTION	COMPLETION DETAILS
60	-50.3		
		End of Boring	
65	-55.3		
70	-60.3		
75	-65.3		
80			

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

An initial boring was drilled and logged to 62 ft. bgs., but then abandoned due to lack of a suitable monitoring interval from 44 to 62 feet depth. A second boring was then drilled, approximately 10 feet to the west to a total depth of 45 ft. bgs, for installation of the 2-inch ID PVC well. No sample logging was completed for the 45 ft. boring. The lithology information shown here is taken from the 62 ft.

ARM Group Inc.
Earth Resource Engineers and Consultants

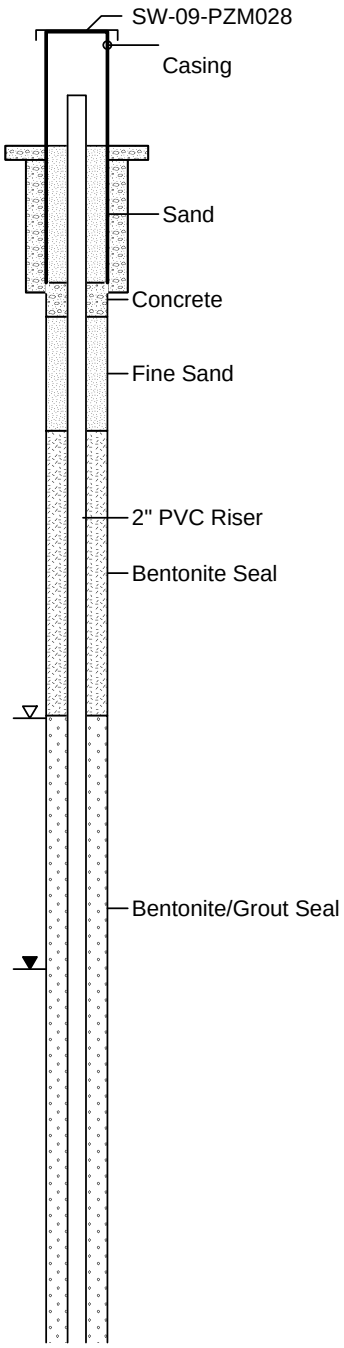
Well ID: SW-09-PZM028

(page 1 of 2)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-5
ARM Representative	: William Mader, P.G.
Checked by	: William Mader, P.G.
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Ryan Sites
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 566965.08
Easting (ft)	: 1460295.30
Date/Time Started	: 02/23/16 / 0900
Date/Time Completed	: 02/23/16 / 1430
Surf. Elev. (ft AMSL)	: 10.5
TOC Elev. (ft AMSL)	: 12.70
Total Depth (ft)	: 40.6' (TOC)
Depth to Water (ft)	: 17.1' (TOC) 02/23/16
Depth to Water (ft)	: 12.7' (TOC) 03/04/16
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. (ft.) 10.5	LITHOLOGIC DESCRIPTION
0	10.5	0-4' SILT to Silty SAND, very dark gray, wet, very soft, roots, pale yellowish brown oxidation
		4-6' Clayey SILT, pale gray brown, very soft to soft to medium to stiff, very moist, many high and low chr. RMFs
5	5.5	6-10' Clayey SAND to Silty SAND, pale gray to pale gray brown, medium to stiff, moist, many high and low chroma redoximorphic features
10	.5	10-10.5' Silty SAND, pale yellowish brown, very soft, wet, many redoximorphic features
		10.5-14' Silty CLAY, pale grayish, soft, moist, high chroma oxidation, very moist at 12' bgs
		14-16' Silty CLAY, dark gray (5Y 4/1), soft, very moist/wet, a few high chroma oxidations
15	-4.5	16-16.7' Silty SAND, pale brown, loose, saturated
		16.7-20' Silty CLAY, dark gray, very soft, very moist
20		20-22' Clayey SILT, dark gray, a thin near vertical zone with pale yellowish brown Silty SAND and plant stems



COMPLETION DETAILS

2x2' concrete pad
4.25" Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 in
Riser Stickup (ags): 2.2'

Screen: Sch 40 PVC
Screen Diameter: 2 in
Top of Screen: 29.7' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Fine Sand:
Top: 3.0' Bottom: 5.0'
Bentonite Seal: 3/8" Chips
Top 5.0' Bottom: 10.0'
Bentonite/Grout:
Top: 10.0' Bottom: 25.7'
Bentonite Plug: 3/8" Pellets
Top: 25.7' Bottom: 28.0'
Filter Pack: FilPro #000
Top: 28.0' Bottom: 28.6'
Filter Pack: FilPro #2
Top: 28.6' Bottom: 38.7'

Monitoring Well Development
Date: 03/04/16, 03/09/16
Purged Amount: 40 gal.
Well Volumes Removed: 9

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

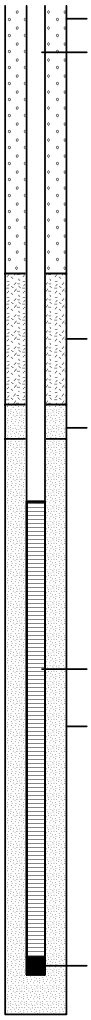
Well ID: SW-09-PZM028

(page 2 of 2)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-5
ARM Representative	: William Mader, P.G.
Checked by	: William Mader, P.G.
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Ryan Sites
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 566965.08
Easting (ft)	: 1460295.30
Date/Time Started	: 02/23/16 / 0900
Date/Time Completed	: 02/23/16 / 1430
Surf. Elev. (ft AMSL)	: 10.5
TOC Elev. (ft AMSL)	: 12.70
Total Depth (ft)	: 40.6' (TOC)
Depth to Water (ft)	: 17.1' (TOC) 02/23/16
Depth to Water (ft)	: 12.7' (TOC) 03/04/16
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. (ft.) 10.5	LITHOLOGIC DESCRIPTION
21	-10.5	
		22-27.8' Clayey SILT, dark gray, very soft, saturated, trace plant stems
26	-15.5	
		27.8-28.1' Clayey SAND, dark gray, loose, very moist
		28.1-30' Clayey SILT, dark gray, very soft, very moist-wet, 12" long coating of sand along side of sample-possible sand filled parting
		30-31' Silty SAND, brown gray to pale brownish gray, loose, moist, few subrounded quartz gravel
31	-20.5	31-32' Clayey SILT, dark gray, very soft, very moist
		32-32.25' Clayey SAND, dark gray
		32.25-33.75' Clayey SILT, dark gray, very soft, trace organics, very moist to wet
		33.75-36' Silty SAND, dark gray, medium dense
36	-25.5	36-38.25' Silty SAND, dark brownish gray, loose, saturated
		38.25-40' Clayey SILT, dark greenish gray, soft, very moist, pale, white, broken shell pieces
		End of Boring
41		



COMPLETION DETAILS

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

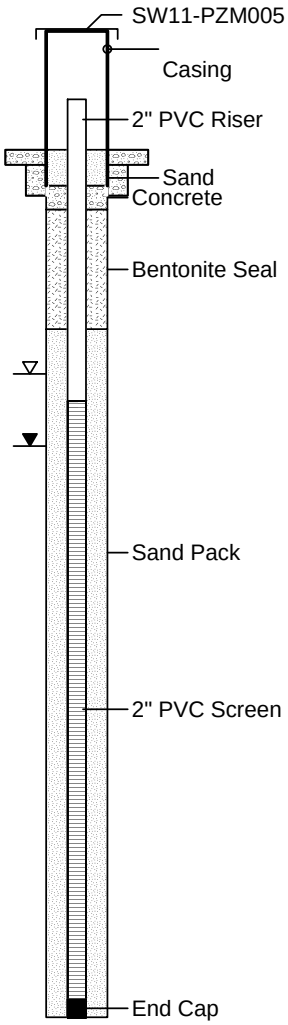
Well ID: SW11-PZM005

(page 1 of 1)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-1
ARM Representative	: Stewart Kabis
Checked by	: Eric Magdar
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Ryan Sites
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 565794.79
Easting (ft)	: 1456073.98
Date/Time Started	: 01/29/16 / 1250
Date/Time Completed	: 01/29/16 / 1510
Surf. Elev. (ft AMSL)	: 10.4
TOC Elev. (ft AMSL)	: 13.54
Total Depth (ft)	: 16.7' (TOC)
Depth to Water (ft)	: 7.2' (TOC) 01/29/16
Depth to Water (ft)	: 6.0' (TOC) 02/02/16

Depth (ft.)	Surf. Elev. 10.4	LITHOLOGIC DESCRIPTION
0	10.4	0-0.5' Dark brown, sandy SILT and topsoil, dry, medium dense, no odor
		0.5-2.0' Orange and grey sandy SILT, dry, medium dense, no odor
		2.0-4.0' Tan GRAVEL (slag), dry, loose, no odor
		4.0-6.0' Medium to dark grey, sandy GRAVEL(slag), moist, very loose, no odor
5	5.4	
		6.0-10.0' Orange and grey CLAY, dry stiff, no odor
10	.4	10.0-11.5' Tan SAND, wet, medium dense
		11.5-12.0' Tan clayey SAND, wet, medium dense
		12.0-13.0' Tan SAND, wet, medium dense
		13.0-14.5 Tan clayey SAND, wet, medium dense
15	-4.6	Boring Terminated at 14.5' bgs
20		



COMPLETION DETAILS

2x2' concrete pad
4.25" ID Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 inch ID
Riser Stickup (ags): 2.2'

Screen: Sch 40 PVC
Screen Diameter: 2 inch ID
Top of Screen: 4.2' bgs
Screen Amount: 10.3 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 1.0' Bottom: 3.0'
Filter Pack: DSI Sand M2
Top: 3.0' Bottom: 14.5'

Monitoring Well Development
Date:02/02/16
Purged Amount: 35 gal.
Well Volumes Removed: 20.6
Time Start/Completed: 1200/1305

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

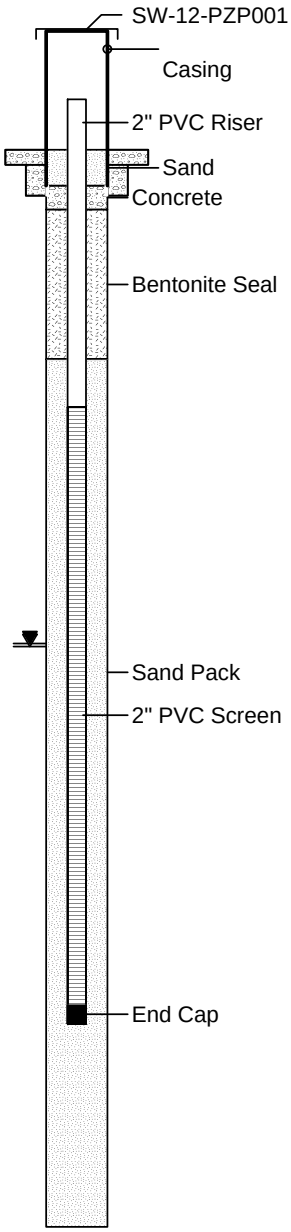
ARM Group Inc.
Earth Resource Engineers and Consultants

Well ID: SW12-PZP001

(page 1 of 1)

Project Name	: Sparrows Point	Northing (ft)	: 565989.17
Project Number	: 150300M-10-3	Easting (ft)	: 1457438.18
Client	: EnviroAnalytics Group	Date/Time Started	: 02/03/16 / 0930
Site	: Sparrows Point - Area B	Date/Time Completed	: 02/03/16 / 1200
Borehole Location	: Parcel B-1	Surf. Elev. (ft AMSL)	: 15.6
ARM Representative	: Peter Vogel	TOC Elev. (ft AMSL)	: 17.66
Checked by	: Peter Vogel	Total Depth (ft)	: 17.11' (TOC)
Drilling Company	: Allied Well Drilling	Depth to Water (ft)	: 10.65' (TOC) 02/04/16
Driller	: Mike Waller, Ryan Sites	Depth to Water (ft)	: 10.7' (TOC) 02/10/16
Drilling Equipment	: Diedrich-D120	Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. 15.6	LITHOLOGIC DESCRIPTION
0	15.6	0-2' Gravelly SAND, black to dark gray, medium dense, slag gravel, dry (fill)
		2-5' Sandy GRAVEL, greenish gray, medium dense, slag gravel, dry (fill)
5	10.6	5-6' Clayey SILT, tan, soft, with sand and slag gravel, moist (fill)
		6-8' Clayey SILT, dark brown, soft, with slag gravel, moist (fill)
		8-12.5' Clayey SILT, bluish gray to brown, soft to stiff, with sand, mottled, wet
10	5.6	
		12.5-14' Silty SAND, brown to light gray, stiff, fine grained sand with some clay, wet
		14-16' Clayey SILT, brown to light gray, very stiff, with some sand, mottled, wet
15	.6	
		16-18' Silty SAND, brown to light gray, soft, fine grained, wet
		End of Boring
20		



COMPLETION DETAILS

2x2' concrete pad
4.25" ID Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 inch ID
Riser Stickup (ags): 2.5'

Screen: Sch 40 PVC
Screen Diameter: 2 inch ID
Top of Screen: 4.3' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 1.0' Bottom: 3.5'
Filter Pack: DSI M2 Sand
Top: 3.5' Bottom: 18.0'

Monitoring Well Development
Date: 02/10/16
Purged Amount: 28
Well Volumes Removed: 28
Time Start/Completed: 1530/1650

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

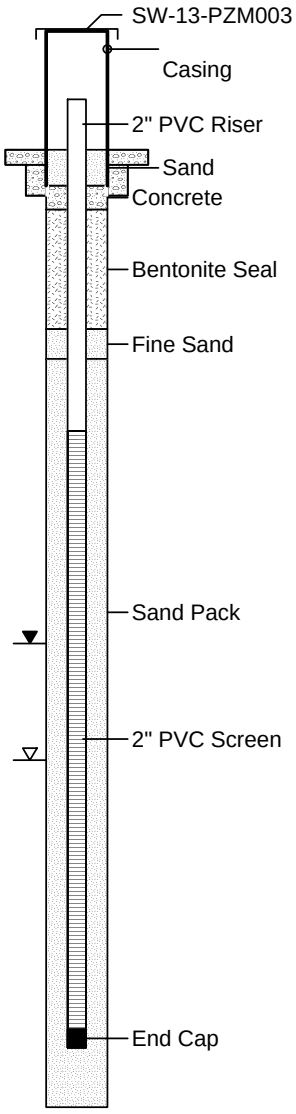
Well ID: SW13-PZM003

(page 1 of 1)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-4
ARM Representative	: Peter Vogel
Checked by	: Peter Vogel
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Ryan Sites
Drilling Equipment	: Diedrich-D120

Northing (ft.)	: 563493.91
Easting (ft.)	: 1456407.34
Date/Time Started	: 02/04/16 / 0930
Date/TIme Completed	: 02/04/16 / 1400
Surf. Elev. (ft. AMSL)	: 14.0
TOC Elev. (ft. AMSL)	: 16.26
Total Depth (ft.)	: 17.42' (TOC)
Depth to Water (ft.)	: 10.55 (TOC) 02/04/16
Depth to Water (ft.)	: 12.5' (TOC) 03/10/16
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. 14.0	LITHOLOGIC DESCRIPTION
0	14	0-2' Gravelly SAND, brown, very dense, moist (fill)
		2-8' Gravelly SAND, dark gray to black, loose to very loose, moist (fill)
5	9	
		8-10' Sandy GRAVEL, black, very dense, very strong creosote odor with shean, wet (fill)
10	4	10-12' Sandy GRAVEL, dark gray, very dense, strong creosote odor with shean (fill)
		12-14' SAND, bluish green, very dense, laminated, layered, wet (fill)
		14-16' Gravelly SAND, light gray, dense, wet (fill)
15	-1	
		End of Boring
20		



COMPLETION DETAILS

2x2' concrete pad
4.25" ID Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 inch ID
Riser Stickup (ags): 2.4'

Screen: Sch 40 PVC
Screen Diameter: 2 inch ID
Top of Screen: 4.7' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 1.0' Bottom: 3.0'
Fine Sand: FilterSil "000"
Top: 3.0' Bottom: 3.5'
Filter Pack: DSI M2 Sand
Top: 3.5' Bottom: 16.0'

Monitoring Well Development
Date: 03/10/16
Purged Amount: 20
Well Volumes Removed: 50
Time Started/Completed: 930/1030

TOC - Top of PVC Casing
AMSL - Above Mean Seal Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

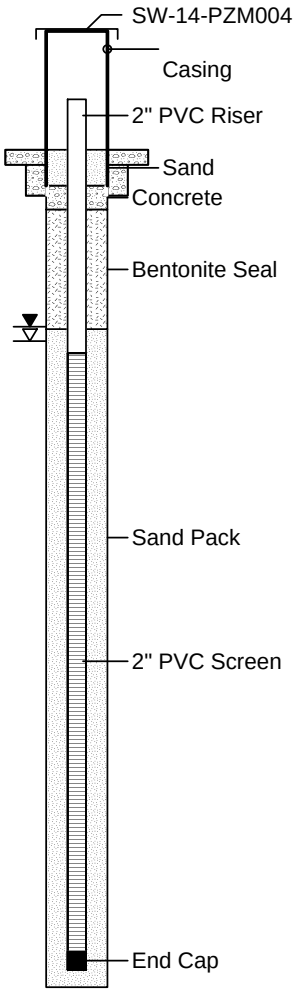
Well ID: SW14-PZM004

(page 1 of 1)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-4
ARM Representative	: Peter Vogel
Checked by	: Peter Vogel
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Ryan Sites
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 563392.23
Easting (ft)	: 1457680.38
Date/Time Started	: 02/05/16 / 0845
Date/Time Completed	: 02/05/16 / 1230
Surf. Elev. (ft AMSL)	: 13.8
TOC Elev. (ft AMSL)	: 15.85
Total Depth (ft)	: 16.39' (TOC)
Depth to Water (ft)	: 5.56' (TOC) 02/05/16
Depth to Water (ft)	: 5.8' (TOC) 03/09/16
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. 13.8	LITHOLOGIC DESCRIPTION
0	13.8	0-5' Sandy GRAVEL, dark gray, very dense, slag gravel, moist (fill)
		4-5' Wood debris, black, moist
5	8.8	5-6' SAND, dark gray, very dense, fine grained with some gravel (fill)
		6-8' Clayey SILT, gray to olive green, medium stiff, moist
		8-10' Clayey SILT, gray to orangish brown, stiff, moist
10	3.8	10-14' Silty SAND, light orangish brown, stiff to very stiff, fine grained with trace clay, wet
		End of Boring
15	-1.2	
20		



COMPLETION DETAILS

2x2' concrete pad
4.25" ID Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 inch ID
Riser Stickup (ags): 2.7'

Screen: Sch 40 PVC
Screen Diameter: 2 inch ID
Top of Screen: 3.4' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 1.0' Bottom: 3.0'
Filter Pack: DSI M2 Sand
Top: 3.0' Bottom: 14.0'

Monitoring Well Development
Date: 03/09/16
Purged Amount: 20
Well Volumes Removed: 11.8
Time Start/Completed: 1500/1600

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

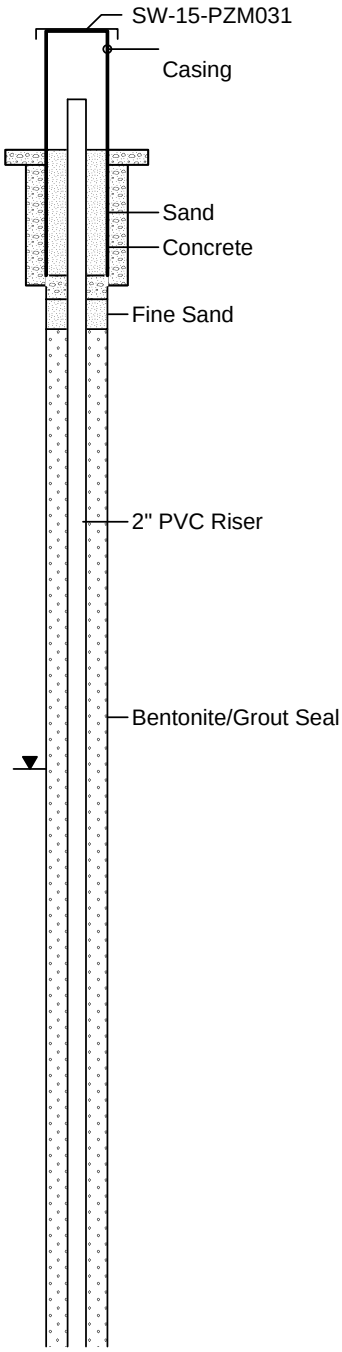
ARM Group Inc.
Earth Resource Engineers and Consultants

Well ID: SW-15-PZM031

(page 1 of 3)

Project Name	: Sparrows Point	Northing (ft)	: 564371.72
Project Number	: 150300M-10-3	Easting (ft)	: 1459531.84
Client	: EnviroAnalytics Group	Date/Time Started	: 02/26/16 / 1000
Site	: Sparrows Point - Area B	Date/Time Completed	: 02/26/16 / 1300
Borehole Location	: Parcel B-5	Surf. Elev. (ft AMSL)	: 12.0
ARM Representative	: William Mader, P.G.	TOC Elev. (ft AMSL)	: 14.90
Checked by	: William Mader, P.G.	Total Depth (ft)	: 52.2' (TOC)
Drilling Company	: Allied Well Drilling	Depth to Water (ft)	: 12.9' (TOC) 02/26/16
Driller	: Mike Waller, Ryan Sites	Depth to Water (ft)	: - - - - -
Drilling Equipment	: Diedrich-D120	Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. (ft.) 12.0	LITHOLOGIC DESCRIPTION
0	12	0-0.66' Silty SAND, dark reddish brown and black sandy slag, very stiff, moist
		0.66-2' Silty SAND, pale yellowish olive brown, dense, moist
		2-4' Clayey SAND, pale brown, stiff to very moist, many high and low chroma redoximorphic features
5	7	4-6' Silty SAND, pale grayish, stiff to very stiff, medium dense, moist, many high chroma reddish yellow oxidation
		6-8' Silty SAND, light olive gray, medium dense, very moist with a few brownish yellow oxidation stains
		8-10' Clayey SAND, light olive gray, loose to medium dense, saturated, many large reddish yellow oxidation coatings
10	2	10-11.5' Silty SAND, pale brownish, loose, saturated with many pale yellow oxidation coatings
		11.5-12' Clayey SILT, pale brown, stiff, oxidation
		12-13.3' Silty SAND, pale yellowish brown, loose, saturated, brownish yellow oxidation, subrounded-rounded gravel up to 1" diameter
15	-3	13.3-16' Lean CLAY, light gray, very soft, yellowish brown oxidation
		16-18' Lean CLAY to SILT, light grayish to medium gray, very soft, saturated, common to many reddish yellow oxidation
20		18-24' Clayey SILT, olive gray (5Y 4/2), very soft, very moist, very dark to gray black streaks - possible organics, becoming soft at 22' bgs



COMPLETION DETAILS

2x2' concrete pad
4.25" Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 in
Riser Stickup (ags): 2.9'

Screen: Sch 40 PVC
Screen Diameter: 2 in
Top of Screen: 39.3' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Fine Sand: FilPro #000
Top: 2.5' Bottom: 3.0'
Bentonite/Grout Seal:
Top 3.0' Bottom: 35.5'
Bentonite Plug: 3/8" Pellets
Top: 35.5' Bottom: 37.6'
Fine Sand: FilPro #000
Top: 37.6' Bottom: 38.1'
Filter Pack: FilPro #2
Top: 38.1' Bottom: 50.0'

Monitoring Well Development
Date:
Purged Amount: gal.
Well Volumes Removed:

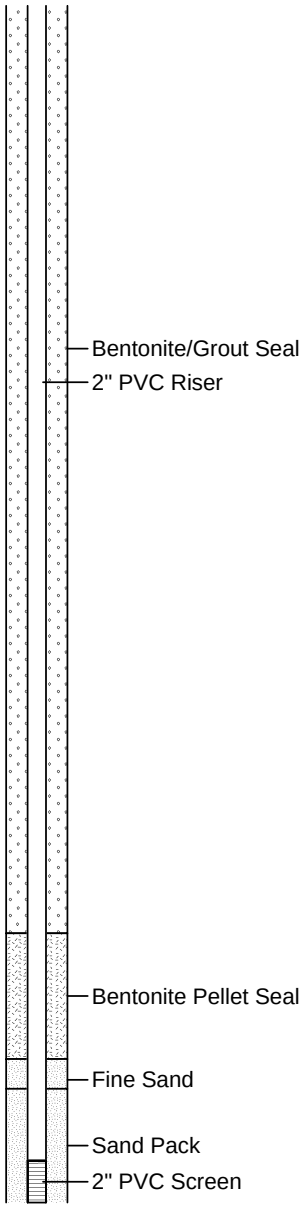
TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

Well ID: SW-15-PZM031

Project Name	: Sparrows Point	Northing (ft)	: 564371.72
Project Number	: 150300M-10-3	Easting (ft)	: 1459531.84
Client	: EnviroAnalytics Group	Date/Time Started	: 02/26/16 / 1000
Site	: Sparrows Point - Area B	Date/Time Completed	: 02/26/16 / 1300
Borehole Location	: Parcel B-5	Surf. Elev. (ft AMSL)	: 12.0
ARM Representative	: William Mader, P.G.	TOC Elev. (ft AMSL)	: 14.90
Checked by	: William Mader, P.G.	Total Depth (ft)	: 52.2' (TOC)
Drilling Company	: Allied Well Drilling	Depth to Water (ft)	: 12.9' (TOC) 02/26/16
Driller	: Mike Waller, Ryan Sites	Depth to Water (ft)	: - - - - -
Drilling Equipment	: Diedrich-D120	Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. (ft.) 12.0	LITHOLOGIC DESCRIPTION	COMPLETION DETAILS
20	-8		
		24-26' Clayey SILT, dark gray, very soft to medium, very moist, organic streaks and some apparent very tiny shell fragments	
25	-13		
		26-34' Clayey SILT, dark gray (2.5Y 4/1), soft, moist, organic streaks	
30	-18		
		34-35' Clayey SAND, dark gray, soft, moist	
35	-23		
		35-36' Clayey SILT, dark gray, very soft, very moist	
		36-40' Clayey SILT, dark gray, very soft, very moist to wet, green-black organic streaks	
40			



TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

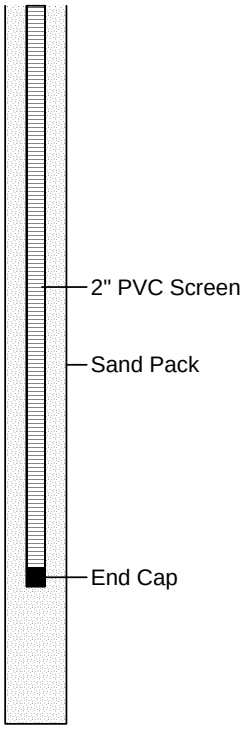
ARM Group Inc.
Earth Resource Engineers and Consultants

Well ID: SW-15-PZM031

(page 3 of 3)

Project Name	: Sparrows Point	Northing (ft)	: 564371.72
Project Number	: 150300M-10-3	Easting (ft)	: 1459531.84
Client	: EnviroAnalytics Group	Date/Time Started	: 02/26/16 / 1000
Site	: Sparrows Point - Area B	Date/Time Completed	: 02/26/16 / 1300
Borehole Location	: Parcel B-5	Surf. Elev. (ft AMSL)	: 12.0
ARM Representative	: William Mader, P.G.	TOC Elev. (ft AMSL)	: 14.90
Checked by	: William Mader, P.G.	Total Depth (ft)	: 52.2' (TOC)
Drilling Company	: Allied Well Drilling	Depth to Water (ft)	: 12.9' (TOC) 02/26/16
Driller	: Mike Waller, Ryan Sites	Depth to Water (ft)	: - - - - -
Drilling Equipment	: Diedrich-D120	Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. (ft.) 12.0	LITHOLOGIC DESCRIPTION	COMPLETION DETAILS
40	-28	40-48' Medium grained SAND, dark grayish brown, loose, very moist to saturated, with trace plant fibers at 42' bgs	
45	-33		
		No recovery - Probable sandy zone	
50	-38		
		End of Boring	
55	-43		
60			



TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

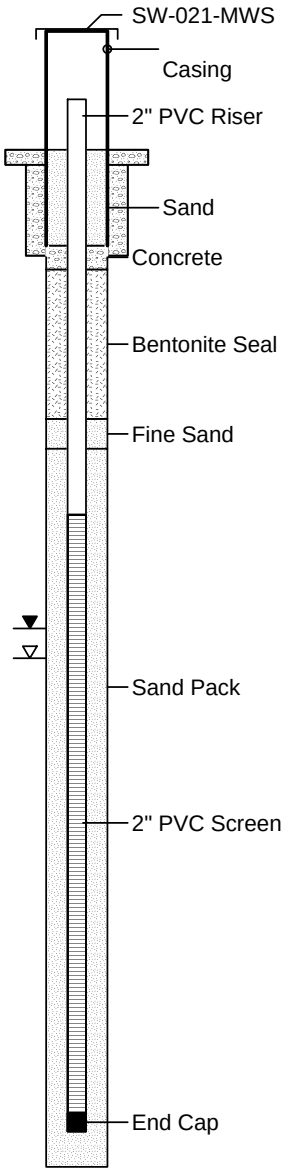
Well ID: SW-021-MWS

(page 1 of 1)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-15
ARM Representative	: Peter Vogel
Checked by	: Eric Magdar
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Ryan Sites
Drilling Equipment	: Diedrich-D120

Northing (ft.)	: 568534.52
Easting (ft.)	: 1457422.96
Date/TIme Started	: 01/15/16 / 0730
Date/Time Completed	: 01/15/16 / 1200
Surf. Elev. (ft. AMSL)	: 10.4
TOC Elev. (ft. AMSL)	: 12.83
Total Depth	: 18.99' (TOC)
Depth to Water (ft.)	: 10.64' (TOC) 01/15/16
Depth to Water (ft.)	: 11.00' (TOC) 01/22/16
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. 10.4	LITHOLOGIC DESCRIPTION
0	10.4	0-5' Gravelly SAND, black to dark gray, medium dense slag, moist (fill)
5	5.4	5-5.25' Gravelly SAND, tan, loose, possible concrete debris, moist (fill)
		5.25-11' Gravelly SAND, black to dark gray, slag, loose to medium dense, moist (fill)
10	.4	11-12' Gravelly SAND, black to dark gray, medium dense, with high sand content, wet (fill)
		12-14' Gravelly SAND, black to dark gray, very dense, some tan pieces of sandstone, wet (fill)
15	-4.6	14-18' Sandy GRAVEL, bluish gray, medium dense, slag, wet (fill)
		End of Boring
20		



COMPLETION DETAILS

2x2' concrete pad
4.25" ID Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 inch ID
Riser Stickup (ags): 2.5'

Screen: Sch 40 PVC
Screen Diameter: 2 inch ID
Top of Screen: 6.1' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 2.0' Bottom: 4.5'
Filter Pack: DSI M2 Sand
Top: 4.5' Bottom: 17.0'
Fine Sand: FilterSil "000"
Top: 4.5' Bottom: 5.0'

Monitoring Well Development
Date: 01/22/16
Purged Amount: 16 gal.
Well Voumes Removed: 12.2
Time Started/Completed: 1225/1300

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

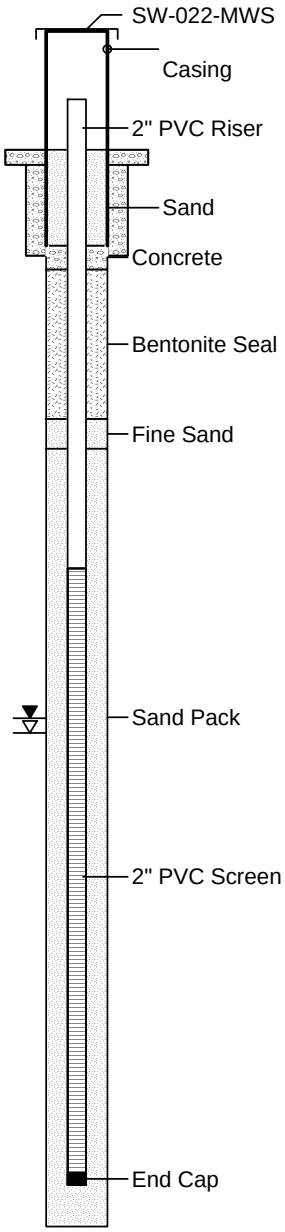
Well ID: SW-022-MWS

(page 1 of 1)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-1
ARM Representative	: Peter Vogel
Checked by	: Peter Vogel
Drilling Company	: Allied Well Drilling
Driller	: MIke Waller, Ryan Sites
Drilling Equipment	: Diedrich-D120

Northing (ft.)	: 568222.29
Easting (ft.)	: 1457122.05
Date/Time Started	: 01/15/16 / 1230
Date/TIme Completed	: 01/15/16 / 1630
Surf. Elev. (ft. AMSL)	: 12.2
TOC Elev. (ft. AMSL)	: 14.31
Total Depth (ft.)	: 19.91 (TOC)
Depth to Water (ft.)	: 12.05 (TOC) 01/15/16
Depth to Water (ft.)	: 12.3 (TOC) 01/22/16
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. 12.2	LITHOLOGIC DESCRIPTION
0	12.2	0-2' Gravelly SAND, dark brown to black, slag gravel, moist (fill)
		2-12' Gravelly SAND, light gray to white, loose to very dense, possible ash material, slag gravel, moist, (fill)
5	7.2	
10	2.2	
		12-18' Gravelly SAND, bluish gray, loose to very dense, slag gravel, wet (fill)
15	-2.8	
		End of Boring
20		



COMPLETION DETAILS

2x2' concrete pad
4.25" ID Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 inch ID
Riser Stickup (ags): 2.5'

Screen: Sch 40 PVC
Screen Diameter: 2 inch ID
Top of Screen: 7.0' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 2.0' Bottom: 4.5'
Filter Pack: DSI M2 Sand
Top: 4.5' Bottom: 18.0'
Fine Sand: FilterSil "000"
Top: 4.5' Bottom: 5.0'

Monitoirng Well Development
Date: 01/22/16
Purged Amount: 10 gal.
Well Volumes Removed:4.4
Time Started/Completed: 1042/1130

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

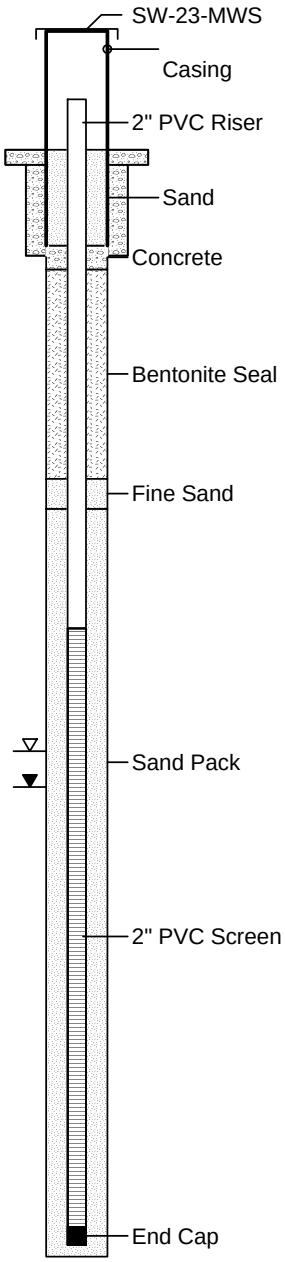
Well ID: SW-023-MWS

(page 1 of 1)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-1
ARM Representative	: Peter Vogel
Checked by	: Peter Vogel
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Ryan Sites
Drilling Equipment	: Diedrich-D120

Northing (ft.)	: 568116.87
Easting (ft.)	: 1456637.37
Date/Time Started	: 02/01/16 / 1145
Date/Time Completed	: 02/01/16 / 1500
Surf. Elev. (ft. AMSL)	: 12.8
TOC Elev. (ft. AMSL)	: 14.66
Total Depth	: 20.38' (TOC)
Depth to Water (ft.)	: 12.71' (TOC) 02/01/16
Depth to Water (ft.)	: 12.2' (TOC) 02/09/16
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. 12.8	LITHOLOGIC DESCRIPTION
0	12.8	0-1.5' SAND, dark brown, dense, fine grained with some slag gravel (fill)
		1.5-10' Sandy GRAVEL, light to dark bluish gray, loose to very dense, slag gravel (fill)
		some black sand at 4' bgs
5	7.8	
10	2.8	10-12' Gravelly SAND, light to dark bluish gray, very dense, slag gravel, wet (fill)
		12-14' SAND, dark grayish brown, soft, fine grained, wet
		14-14.5' SAND, tan to light gray, fine grained
15	-2.2	14.5-16' Sandy SILT, light brown to gray, with clay, medium stiff, mottled
		16-18.5' SAND, dark gray, very stiff, fine grained, with some fine gravel
		End of Boring
20		



COMPLETION DETAILS

2x2' concrete pad
4.25" ID Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 inch ID
Riser Stickup (ags): 2.1'

Screen: Sch 40 PVC
Screen Diameter: 2 inch ID
Top of Screen: 8.0' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 2.0' Bottom: 5.5'
Filter Pack: DSI M2 Sand
Top: 6.0' Bottom: 18.5'
Fine Sand: FilterSil "000"
Top: 5.5' Bottom: 6.0'

Monitoring Well Development
Date: 02/09/16
Purge Amount:30 gal.
Well Volumes Removed: 22.7
Time Started/Completed: 1125/1407

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

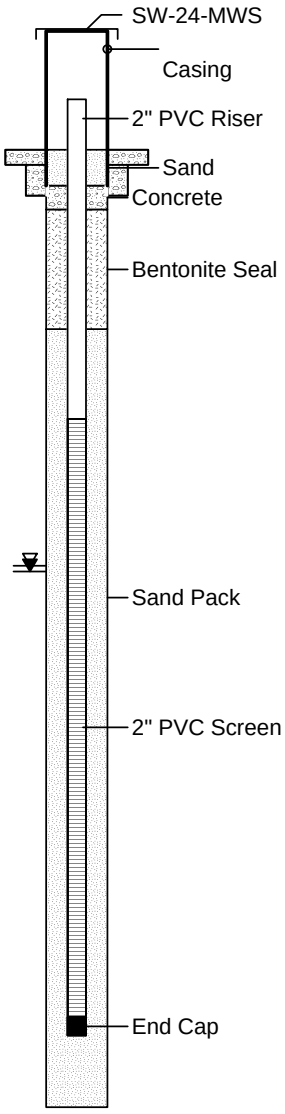
Well ID: SW-024-MWS

(page 1 of 1)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-1
ARM Representative	: Peter Vogel
Checked by	: Peter Vogel
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Ryan Sites
Drilling Equipment	: Diedrich-D120

Northing (ft.)	: 568021.88
Easting (ft.)	: 1456157.41
Date/Time Started	: 02/01/16 / 1530
Date/Time Completed	: 02/02/16 / 1200
Surf. Elev. (ft. AMSL)	: 11.6
TOC Elev. (ft. AMSL)	: 14.03
Total Depth (ft.)	: 17.60 (TOC)
Depth to Water (ft.)	: 9.91' (TOC) 02/02/16
Depth to Water (ft.)	: 9.85' (TOC) 02/04/16
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. 11.6	LITHOLOGIC DESCRIPTION
0	11.6	0-3.5' Gravelly SAND, dark gray to black, dense to medium dense (fill)
		3.5-7.5' SAND, light gray, very loose, fine to coarse grained (fill)
5	6.6	
		7.5-8' SAND, black, very loose, fine grained (fill)
		8-10' Silty SAND, light gray to brown, soft, with clay, mottled, wet
10	1.6	10-16' Clayey SILT, light gray to brown, soft to stiff wet, mottled
15	-3.4	
		End of Boring
20		



COMPLETION DETAILS

2x2' concrete pad
4.25" ID Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 inch ID
Riser Stickup (ags): 2.6'

Screen: Sch 40 PVC
Screen Diameter: 2 inch ID
Top of Screen: 4.5' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 1.0' Bottom: 3.0'
Filter Pack: DSI M2 Sand
Top: 3.0' Bottom: 15.0'

Monitoring Well Development
Date: 02/04/16
Purged Amount: 20 gal.
Well Volumes Removed: 15.4
Time Started/Completed: 1350/1420

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

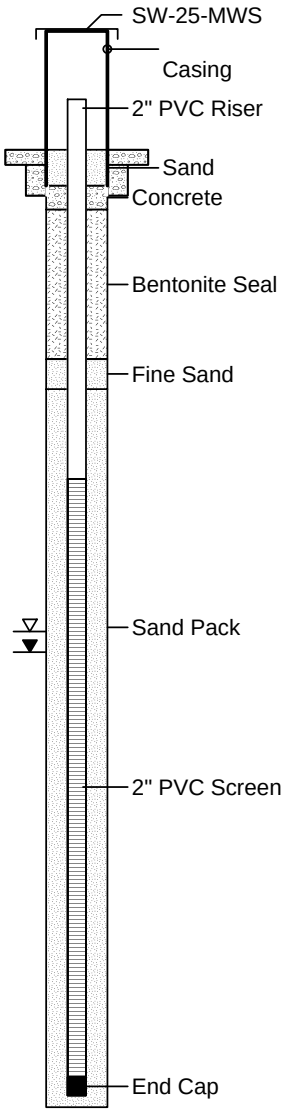
Well ID: SW-025-MWS

(page 1 of 1)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-1
ARM Representative	: Peter Vogel
Checked by	: Peter Vogel
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Ryan Sites
Drilling Equipment	: Diedrich-D120

Northing (ft.)	: 566943.92
Easting (ft.)	: 1456126.02
Date/Time Started	: 02/02/16 / 1200
Date/Time Completed	: 02/02/16 / 1530
Surf. Elev. (ft. AMSL)	: 11.0
TOC Elev. (ft. AMSL)	: 13.16
Total Depth (ft.)	: 18.43' (TOC)
Depth to Water (ft.)	: 10.93' (TOC) 02/02/16
Depth to Water (ft.)	: 10.6' (TOC) 02/04/16
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. 11.0	LITHOLOGIC DESCRIPTION
0	11	0-0.25' Asphalt
		0.25-2.5' Sandy GRAVEL, dark brown, dense (fill)
		2-5.5' Gravelly SAND, light gray, loose to medium dense, slag gravel (fill)
5	6	5.5-12' SAND, dark brown to dark gray, loose to medium dense, fine to coarse grained with slag gravel (fill)
10	1	12-14.5' SAND, black, loose, coarse grained with slag gravel, wet (fill)
15	-4	14.5-16' SAND, dark gray, medium dense, coarse grained with slag gravel, wet (fill)
		End of Boring
20		



COMPLETION DETAILS

2x2' concrete pad
4.25" ID Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 inch ID
Riser Stickup (ags): 2.5'

Screen: Sch 40 PVC
Screen Diameter: 2 inch ID
Top of Screen: 5.5' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 1.0' Bottom: 3.5'
Filter Pack: DSI M2 Sand
Top: 4.0' Bottom: 16.0'
Fine Sand: FilterSil "000"
Top: 3.5' Bottom: 4.0'

Monitoring Well Development
Date: 02/04/16
Purged Amount: 15 gal.
Well Volumes Removed: 11.5
Time Started/Completed: 1215/1315

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

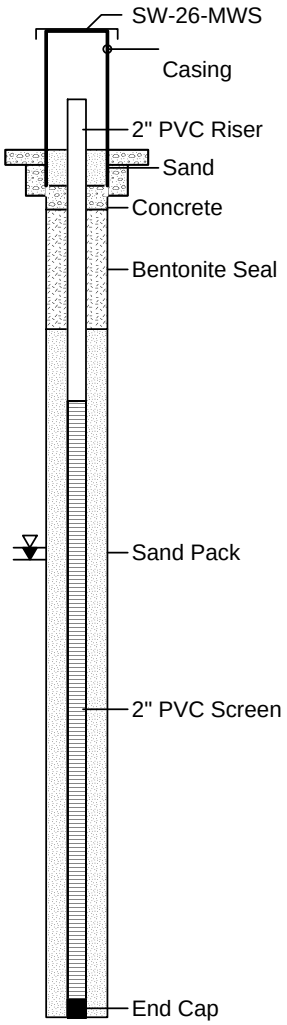
Well ID: SW-026-MWS

(page 1 of 1)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-17
ARM Representative	: William Mader, P.G.
Checked by	: William Mader, P.G.
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Ryan Sites
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 566649.66
Easting (ft)	: 1455514.08
Date/Time Started	: 01/29/16 / 0940
Date/Time Completed	: 01/29/16 / 1230
Surf. Elev. (ft AMSL)	: 8.6
TOC Elev. (ft AMSL)	: 11.51
Total Depth (ft)	: 17.0' (TOC)
Depth to Water (ft)	: 9.55' (TOC) 01/29/16
Depth to Water (ft)	: 9.3 (TOC) 02/18/16
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. (ft.) 8.6	LITHOLOGIC DESCRIPTION
0	8.6	0-1' Brick, slag, and some quartz gravels, reddish, dry, dense
		1-2' Quartz GRAVEL, pale white, yellow white, some gray slag, dry, medium dense
		2-4' Fine slag SAND, very dark reddish brown / brownish black, loose, some roots and rotted organics, moist
5	3.6	4-6' Brick, reddish, grayish, black, sandy, decomposed roots, grades to black, dark gray, brown slag, very hard, shale-like, moist
		6-8' Slag, bluish gray (Gley 2-5/5) and pale brown, hard, slightly moist
10	-1.4	8-13' Slag, bluish gray to black by 12', coarse to medium sized, dense, wet, saturated
		13-14.5' Silty sandy SLAG, dark bluish gray/bluish gray, medium dense, wet
15	-6.4	End of Boring
20		



COMPLETION DETAILS

2x2' concrete pad
4.25" Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 in
Riser Stickup (ags): 2.9'

Screen: Sch 40 PVC
Screen Diameter: 2 in
Top of Screen: 4.2' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 1.0' Bottom: 3.0'
Filter Pack: FilPro W.G. #2
Top: 3.0' Bottom: 14.5'

Monitoring Well Development
Date: 02/18/16
Purged Amount: 40 gal.
Well Volumes Removed: 33.6

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

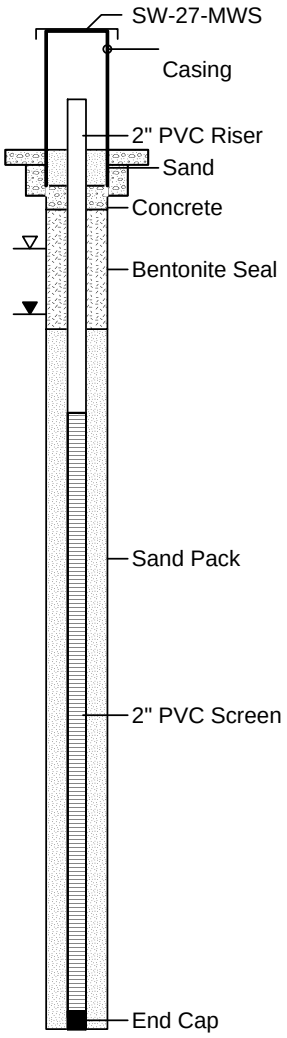
Well ID: SW-027-MWS

(page 1 of 1)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-4
ARM Representative	: William Mader, P.G.
Checked by	: William Mader, P.G.
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Ryan Sites
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 564973.53
Easting (ft)	: 1456177.11
Date/Time Started	: 01/28/16 / 1100
Date/Time Completed	: 01/28/16 / 1300
Surf. Elev. (ft AMSL)	: 14.3
TOC Elev. (ft AMSL)	: 16.98
Total Depth (ft)	: 17.4' (TOC)
Depth to Water (ft)	: 5.4' (TOC) 01/28/16
Depth to Water (ft)	: 4.4' (TOC) 02/02/16
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. (ft.) 14.3	LITHOLOGIC DESCRIPTION
0	14.3	0-1.5' Silty SAND and GRAVEL, dark brown, some gray slag, moist, dense
		1.5-2.25' Silty SAND, black, finer slag, very moist
		2.25-4' Silty SAND, strong yellow brown, loose, very moist
		4-6.83' Silty SAND, pale brown, very loose, saturated, fragments of reddish tile/brick at ~5' bgs
5	9.3	
		6.83-7.66' Lean-fat CLAY, light gray (2.5Y 7/1), stiiff, moist, cohesive, medium plastic
		7.66-8' Silty SAND, yellowish red with Chr 2 gray, moist
		8-11' Well graded SAND, yellow brown to dark yellow brown (7.5YR 5/6-4/6) loose to medium dense, wet, one lense of grayish clay
10	4.3	
		11-12' Sandy CLAY, dark yellow brown and light gray, very stiff, moist
		12-13.75' Silty SAND-SAND, yellow brown, loose, wet, no apparent RMFs, small white shell fragments
		13.75-14.7' Silty SAND-SAND, pale gray, loose, wet
15	-.7	End of Boring
20		



COMPLETION DETAILS

2x2' concrete pad
4.25" Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 in
Riser Stickup (ags): 2.7'

Screen: Sch 40 PVC
Screen Diameter: 2 in
Top of Screen: 4.4' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 1.0' Bottom: 3.0'
Filter Pack: FilPro W.G. #2
Top: 3.0' Bottom: 14.7'

Monitoring Well Development
Date: 02/02/16
Purged Amount: 25 gal.
Well Volumes Removed: 16.7
Time Started/Completed: 1300/1345

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

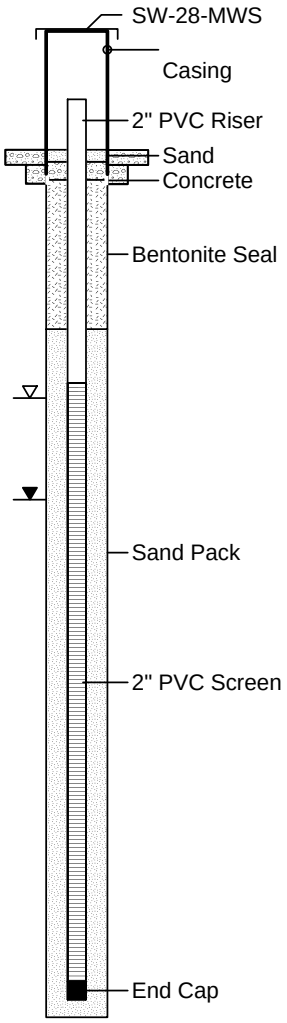
ARM Group Inc.
Earth Resource Engineers and Consultants

Well ID: SW-028-MWS

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-4
ARM Representative	: William Mader, P.G.
Checked by	: William Mader, P.G.
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Ryan Sites
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 564518.61
Easting (ft)	: 1456324.45
Date/Time Started	: 01/27/16 / 1100
Date/Time Completed	: 01/28/16 / 1030
Surf. Elev. (ft AMSL)	: 13.2
TOC Elev. (ft AMSL)	: 15.59
Total Depth (ft)	: 16.7' (TOC)
Depth to Water (ft)	: 8.6' (TOC) 01/28/16
Depth to Water (ft)	: 6.6' (TOC) 02/09/16
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. (ft.) 13.2	LITHOLOGIC DESCRIPTION
0	13.2	0-2' Silty SAND and GRAVEL, medium brown to dark brown to brown-black, loose to very dense, moist, slag material with organics
		2-4' SILTY SAND, black, very dense to loose, moist to very damp, fine slag, many shiny coal or slag gravels
		4-5.75' Silty SAND, very dark brown gray, loose, very moist
5	8.2	
		5.75-6' Silty SAND, olive gray to gray, as above
		6-8' Silty and clayey SAND, dark gray to olive gray (5Y 4/1-4/2), very loose, saturated, apparent pale gray reduction and dark organic streaks
		8-9.75' Silty SAND, olive gray, very stiff to stiff, very moist, common RMF
10	3.2	9.75-10' Silty SAND and SAND, greenish gray, medium dense, wet
		10-11.5' Silty SAND, olive gray to pale olive, loose to medium dense, wet, with olive yellow and gray RMFs
		11.5-12' Silt SAND and SAND, greenish gray, medium dense, wet
		12-13' Silty SAND and SAND, mixed green gray with many brown yellow oxidation, loose, wet
		13-14.5' Fat to lean CLAY, pale grayish to gray with many red yellow oxidation, stiff, moist
15	-1.8	End of Boring
20		



COMPLETION DETAILS

2x2' concrete pad
4.25" Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 in
Riser Stickup (ags): 2.4 '

Screen: Sch 40 PVC
Screen Diameter: 2 in
Top of Screen: 3.9' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 0.5' Bottom: 3.0'
Filter Pack: FilPro W.G. #2
Top: 3.0' Bottom: 14.5'

Monitoring Well Development
Date: 02/09/16
Purged Amount: 30 gal.
Well Volumes Removed: 18.6
Time Started/Completed: 1510/1640

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

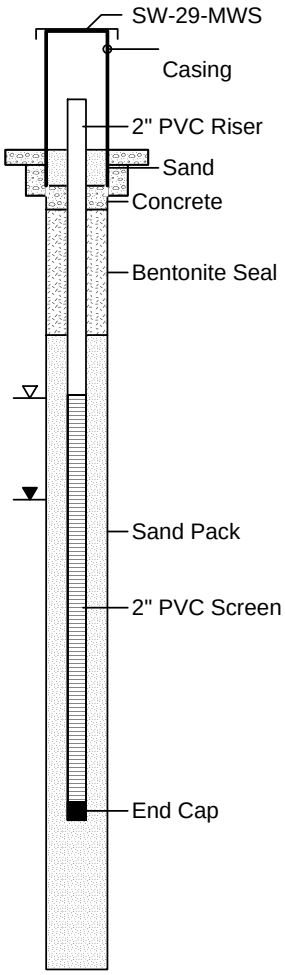
Well ID: SW-029-MWS

(page 1 of 1)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-4
ARM Representative	: William Mader, P.G.
Checked by	: William Mader, P.G.
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Ryan Sites
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 563980.59
Easting (ft)	: 1456323.19
Date/Time Started	: 01/27/16 / 1130
Date/Time Completed	: 01/27/16 / 1545
Surf. Elev. (ft AMSL)	: 13.2
TOC Elev. (ft AMSL)	: 15.75
Total Depth (ft)	: 13.7' (TOC)
Depth to Water (ft)	: 11.6' (TOC) 01/27/16
Depth to Water (ft)	: 11.6' (TOC) 01/29/16
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. (ft.) 13.2	LITHOLOGIC DESCRIPTION
0	13.2	0-2' Silty GRAVEL and SAND, gray brown, minor reddish (brick fragments), very dark, gray to black slag like material, dry to moist, very dense, slag slight reaction to HCl
		2-4' Silty GRAVEL and SAND, red yellow brown, some dark gray brown, medium dense, moist, slag slight reaction to HCl
		4-6' Silty GRAVEL and SAND, dark gray brown with some black, very moist, loose to very dense, metal fragment at bottom
5	8.2	
		6-8' Silty GRAVEL, bluish gray (Gley 2- 5/5) slag fragments, very hard, moist; grayish to bluish gray wet slag at 6.16' bgs
		8-10' Silty GRAVEL and SAND, bluish gray to dark gray slag, wet, medium dense
10	3.2	10-10.5' Silty GRAVEL and SAND, dark grayish slag, wet
		10.5-11.2' Extremely hard augering (assumed slag)
		End of Boring
15	-1.8	
20		



COMPLETION DETAILS

2x2' concrete pad
4.25" Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 in
Riser Stickup (ags): 2.6'

Screen: Sch 40 PVC
Screen Diameter: 2 in
Top of Screen: 4.1' bgs
Screen Amount: 7.1.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 1.0' Bottom: 3.1'
Filter Pack: FilPro W.G. #2
Top: 3.1' Bottom: 11.2'

Monitoring Well Development
Date: 02/09/16
Purged Amount: 5 gal.
Well Volumes Removed: 12.5
Time Started/Completed: 1240/1400

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

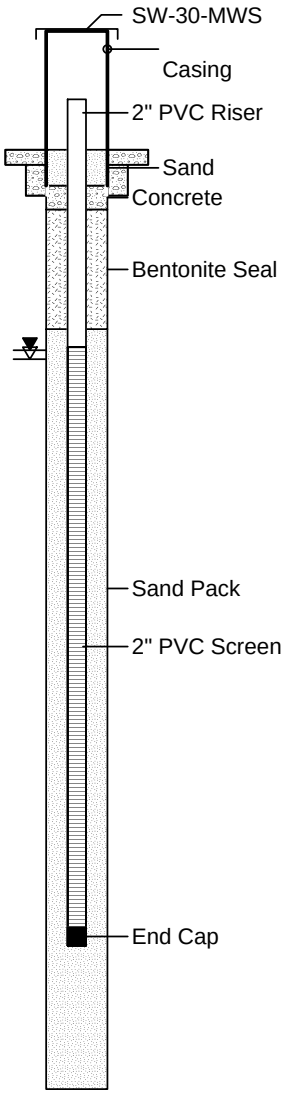
Well ID: SW-030-MWS

(page 1 of 1)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-5
ARM Representative	: Peter Vogel
Checked by	: Peter Vogel
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Ryan Sites
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 563547.95
Easting (ft)	: 1458146.61
Date/Time Started	: 01/07/16 / 1330
Date/Time Completed	: 01/07/16 / 1600
Surf. Elev. (ft AMSL)	: 12.3
TOC Elev. (ft AMSL)	: 14.72
Total Depth (ft)	: 15.7' (TOC)
Depth to Water (ft)	: 6.02' (TOC) 01/07/16
Depth to Water (ft)	: 6.1' (TOC) 01/19/16
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. 12.3	LITHOLOGIC DESCRIPTION
0	12.3	0-2' Silty SAND, reddish brown, medium dense, with some gray gravel, slag gravel to boulder sized, dry (fill)
		2-4' Silty SAND, reddish brown to dark gray, dense, with slag gravel, moist (fill)
		4-6' Sandy GRAVEL, orange brown, medium dense, wet (fill)
5	7.3	6-8' Clayey SILT, dark olive gray, medium stiff, wet
		8-10' SILT, light gray, medium stiff, with trace clay, wet
10	2.3	10-12' Clayey SILT, light gray to brown, stiff, mottled, wet
		12-14' SAND, light gray to light brown, very stiff, fine grained, wet
15	-2.7	End of Boring
20		



COMPLETION DETAILS

2x2' concrete pad
4.25" Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 inch ID
Riser Stickup (ags): 2.4'

Screen: Sch 40 PVC
Screen Diameter: 2 inch ID
Top of Screen: 3.3' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 1.0' Bottom: 3.0'
Filter Pack: DSI W2 Sand
Top: 3.0' Bottom: 15.7'

Monitoring Well Development
Date: 01/19/16
Purged Amount: 30 gal.
Well Volumes Removed: 18.8
TIme Started/Completed: 1315/1400

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

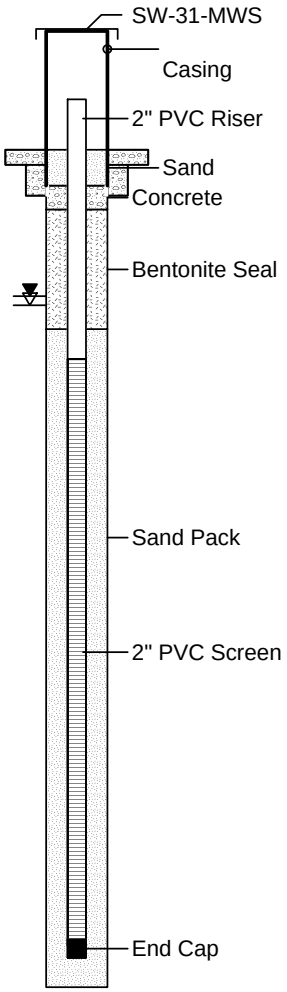
Well ID: SW-031-MWS

(page 1 of 1)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-5
ARM Representative	: Peter Vogel
Checked by	: Peter Vogel
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Ryan Sites
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 563598.44
Easting (ft)	: 1458394.82
Date/Time Started	: 01/05/16 / 1550
Date/Time Completed	: 01/07/16 / 0930
Surf. Elev. (ft AMSL)	: 10.9
TOC Elev. (ft AMSL)	: 13.41
Total Depth (ft)	: 16.34' (TOC)
Depth to Water (ft)	: 4.87' (TOC) 01/07/16
Depth to Water (ft)	: 5.0' (TOC) 01/19/16
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. 10.9	LITHOLOGIC DESCRIPTION
0	10.9	0-4' Gravelly SAND, dark gray to black, very dense, dry (fill)
5	5.9	4-6' Gravelly SAND, clayey, dark brown, medium dense, wet (fill)
		6-10' Sandy GRAVEL, dark to light gray, to dark red, very loose to dense, wet (fill)
10	.9	10-11' Gravelly SILT, clayey, dark gray, loose, wet (fill)
		11-14' Clayey SILT, dark gray, stiff to very stiff, wet
15	-4.1	End of Boring
		*First 4 boring attempts encountered refusal between 2' and 10' bgs
20		



COMPLETION DETAILS

2x2' concrete pad
4.25" ID Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 inch ID
Riser Stickup (ags): 2.6'

Screen: Sch 40 PVC
Screen Diameter: 2 inch ID
Top of Screen: 3.5' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 1.0' Bottom: 3.0'
Filter Pack: DSI W2 Sand
Top: 3.0' Bottom: 14.0'

Monitoring Well Development
Date:01/19/16
Purged Amount: 25 gal.
Well Volumes Removed: 13.2
Time Started/Completed: 1417/1512

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

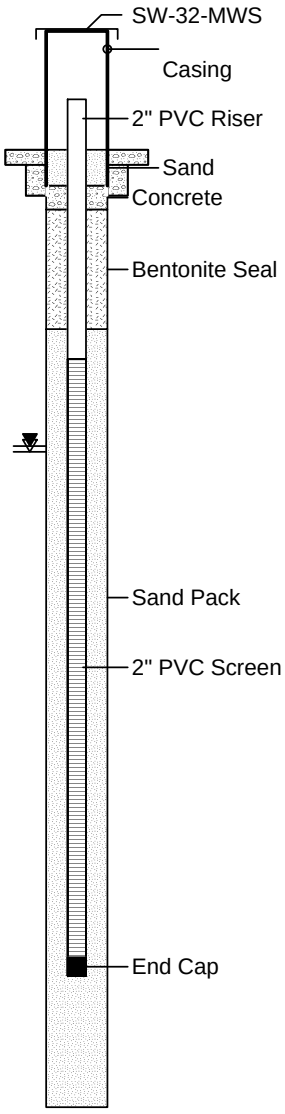
Well ID: SW-032-MWS

(page 1 of 1)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-5
ARM Representative	: Peter Vogel
Checked by	: Peter Vogel
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Ryan Sites
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 563537.58
Easting (ft)	: 1458639.17
Date/Time Started	: 01/05/16 / 1200
Date/Time Completed	: 01/05/16 / 1530
Surf. Elev. (ft AMSL)	: 10.5
TOC Elev. (ft AMSL)	: 12.64
Total Depth (ft)	: 16.49' (TOC)
Depth to Water (ft)	: 7.36' (TOC) 01/05/16
Depth to Water (ft)	: 7.4' (TOC) 01/19/16
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. 10.5	LITHOLOGIC DESCRIPTION
0	10.5	0-4' Gravelly SAND, black to brown, loose to dense, fine to medium grained sand, slag gravel, moist (fill)
		4-6' Gravelly SAND, black to brown to gray, medium dense, slag gravel (fill)
5	5.5	6-10' Gravelly SAND, gray to light gray, loose, wet (fill)
10	.5	10-12' Silty SAND, olive gray, medium stiff, fine grained with trace clay, some mottling
		12-14' Silty SAND, light gray to brown, very stiff, fine grained with trace clay, some mottling
15	-4.5	14-16' Clayey SILT, light gray to brown, stiff, some mottling
		End of Boring
20		



COMPLETION DETAILS

2x2' concrete pad
4.25" Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 inch ID
Riser Stickup (ags): 2.5'

Screen: Sch 40 PVC
Screen Diameter: 2 inch ID
Top of Screen: 3.5' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 1.0' Bottom: 3.0'
Filter Pack: DSI M2 Sand
Top: 3.0' Bottom: 14.5'

Monitoring Well Development
Date: 01/19/16
Purged Amount: 30 gal.
Well Volumes Removed:21.4
Time Started/Completed: 1151/1225

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

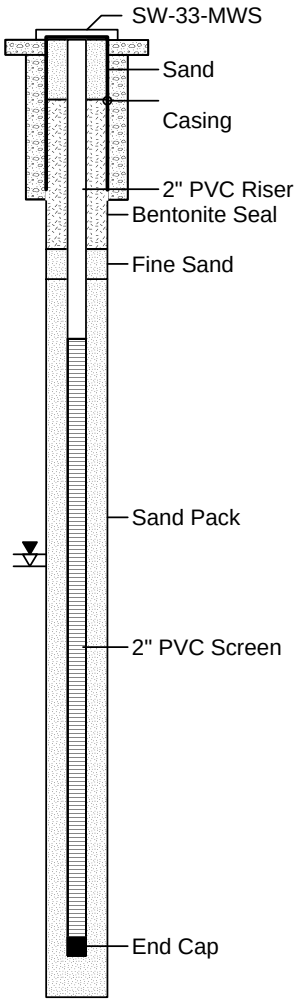
Well ID: SW-033-MWS

(page 1 of 1)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-5
ARM Representative	: Peter Vogel
Checked By	: Peter Vogel
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Ryan Sites
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 563597.45
Easting (ft)	: 1459274.61
Date/Time Started	: 02/02/16 / 1600
Date/Time Completed	: 02/02/16 / 1730
Surf. Elev. (ft AMSL)	: 10.6
TOC Elev. (ft AMSL)	: 10.28
Total Depth (ft)	: 15.7' (TOC)
Depth to Water (ft)	: 6.88' (TOC) 02/02/16
Depth to Water (ft)	: 7.1' (TOC) 02/09/16
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. 10.6	LITHOLOGIC DESCRIPTION
0	10.6	0-1.5' Gravelly SAND, dark brown to dark gray, medium dense, moist (fill) wood debris from 1.5-2.0'
		2-4' GRAVEL, light gray, medium dense, with dark brown gravelly sand, moist (fill) wood debris from 4.0-4.5'
5	5.6	4.5-6' Gravelly SAND, dark brown to dark gray, medium dense (fill)
		6-8' SAND, dark brown to gray, loose, fine to coarse grained with some fine gravel, moist (fill)
		8-12' SAND, light gray to light greenish gray, medium dense to very dense, fine to coarse grained with some slag gravel, wet (fill)
10	.6	
		12-14' Clayey SILT, dark gray, very soft, with organic plant material, wet
		14-15' Clayey SAND, light gray, very soft, fine grained
15	-4.4	15-16' Clayey SILT, light gray, very soft
		End of Boring
20		



COMPLETION DETAILS

2x2' concrete pad
8-inch Flush-mount
Protective Cover

Riser: Sch 40 PVC
Riser Diameter: 2 inch ID
Riser Stickup (ags): 2.5'
(flush-mount) -0.3

Screen: Sch 40 PVC
Screen Diameter: 2 inch ID
Top of Screen: 5.0' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 1.0' Bottom: 3.5'
Filter Pack: DSI M2 Sand
Top: 4.0' Bottom: 16.0'
Fine Sand: FilterSil "000"
Top: 3.5' Bottom: 4.0'

Monitoring Well Development
Date: 02/09/16
Purged Amount: 30 gal.
Well Volumes Removed: 27.2
Time Started/Completed:
1115/1203

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

Note - Monitoring Well was originally installed on 01/08/16. The well was damaged by snow plowing activity and was redrilled and reconstructed on 02/02/16.

ARM Group Inc.
Earth Resource Engineers and Consultants

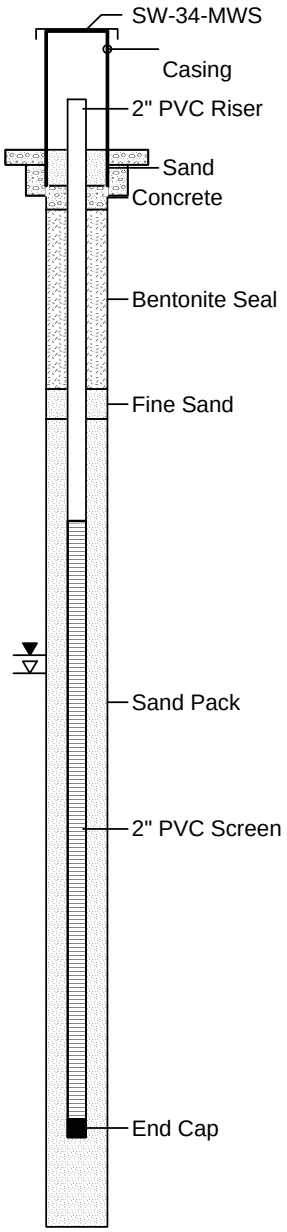
Well ID: SW-034-MWS

(page 1 of 1)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-5
ARM Representative	: Peter Vogel
Checked by	: Peter Vogel
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Ryan Sites
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 563668.32
Easting (ft)	: 1459941.32
Date/Time Started	: 01/08/16 / 1300
Date/Time Completed	: 01/08/16 / 1600
Surf. Elev. (ft AMSL)	: 10.2
TOC Elev. (ft AMSL)	: 12.62
Total Depth (ft)	: 18.90' (TOC)
Depth to Water (ft)	: 10.79' TOC (01/08/16)
Depth to Water (ft)	: 11.2' TOC (01/19/16)
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. 10.2	LITHOLOGIC DESCRIPTION
0	10.2	0-2' Gravelly SAND, dark brown to dark gray, loose, black sand 0-0.5' bgs, slag gravel, moist (fill)
		2-6' Gravelly SAND, dark brown to light greenish gray, medium to very dense, slag gravel, moist (fill)
5	5.2	6-10' Sandy GRAVEL, gray to greenish gray, medium to very dense, slag gravel, moist (fill)
10	.2	10-12.5' Sandy GRAVEL, greenish gray, medium dense, slag gravel, wet (fill)
		12.5-13' SAND, greenish gray, medium stiff, fine to coarse grained, wet
		13-14.5' SAND, black, medium stiff, fine grained, wet
15	-4.8	14.5-15' Clayey SILT, brown to gray, soft, mottled, wet
		15-17' Clayey SILT, light gray to brown, soft, mottled, wet
		17-18' Clayey SAND, light gray, medium stiff, fine grained, wet
		End of Boring
20		



COMPLETION DETAILS

2x2' concrete pad
4.25" ID Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 inch ID
Riser Stickup (ags): 2.4'

Screen: Sch 40 PVC
Screen Diameter: 2 inch ID
Top of Screen: 6.2' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 1.0' Bottom: 4.0'
Filter Pack: DSI M2 Sand
Top: 4.5' Bottom: 17.0'
Fine Sand: FilterSil "000"
Top: 4.0' Bottom: 4.5'

Monitoring Well Development
Date:01/19/16
Purged Amount: 15 gal.
Well Volumes Removed: 12.1
Time Started/Completed: 0930/1015

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

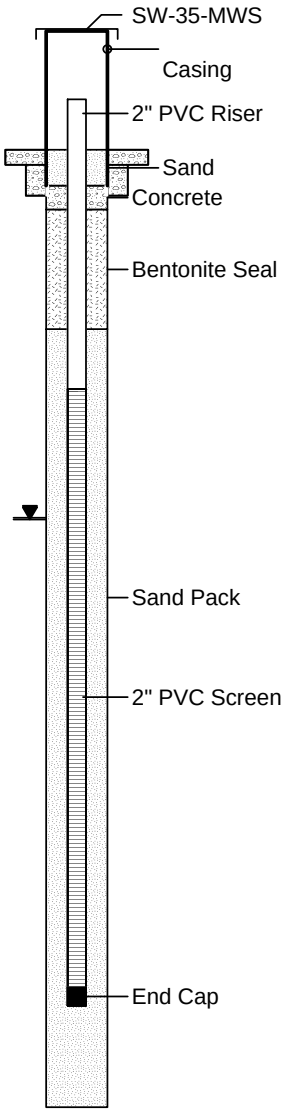
Well ID: SW-035-MWS

(page 1 of 1)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-5
ARM Representative	: Peter Vogel
Checked by	: Peter Vogel
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Ryan Sites
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 563772.91
Easting (ft)	: 1460297.91
Date/Time Started	: 01/11/16 / 1300
Date/Time Completed	: 01/11/16 / 1630
Surf. Elev. (ft AMSL)	: 11.0
TOC Elev. (ft AMSL)	: 13.43
Total Depth (ft)	: 16.79' (TOC)
Depth to Water (ft)	: 8.65' (TOC) 01/11/16
Depth to Water (ft)	: 8.7' (TOC) 01/18/16
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. 11.0	LITHOLOGIC DESCRIPTION
0	11	0-1.5' SAND, black, medium dense, fine to coarse grained, possible coal fines, moist (fill)
		1.5-3' Gravelly SAND, tan, very dense, moist (fill)
		3-3.5' Gravelly SAND, purplish gray, very dense, moist (fill)
		3.5-4.25' Gravelly SAND, gray to tan, very dense, moist (fill)
5	6	4.25-6' Gravelly SAND, black to gray, medium dense, bluish gray slag gravel, moist (fill)
		6-10' Gravelly SAND, yellowish brown, medium dense, wet (fill)
10	1	10-12' Sandy GRAVEL, gray to tan, medium dense, wet (fill)
		12-14' Gravelly SAND, dark gray, medium dense (fill)
15	-4	14-16' Gravelly SAND, black to tan, medium dense, medium to coarse grained, plastic trash debris in bottom of spoon (fill)
		End of Boring
20		



COMPLETION DETAILS

2x2' concrete pad
4.25" ID Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 inch ID
Riser Stickup (ags): 2.4'

Screen: Sch 40 PVC
Screen Diameter: 2 inch ID
Top of Screen: 4.0' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 1.0' Bottom: 3.0'
Filter Pack: DSI M2 Sand
Top: 3.0' Bottom: 15.0'

Monitoring Well Development
Date:01/18/16
Purged Amount: 30 gal.
Well Volumes Removed: 23
Time Started/Completed: 1445/1535

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

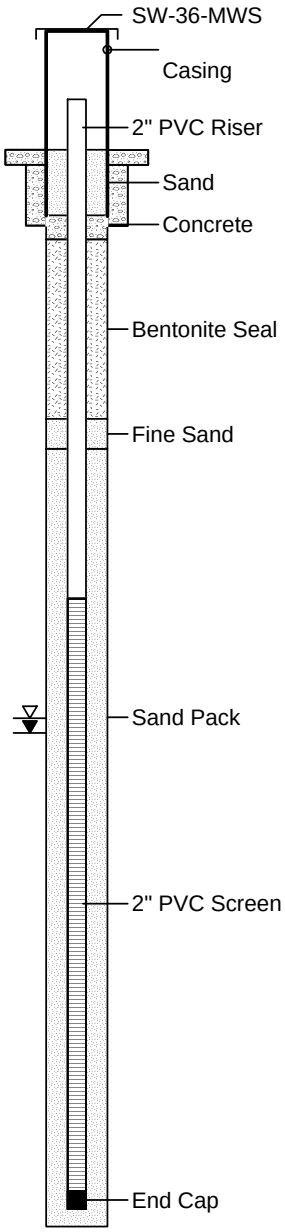
Well ID: SW-036-MWS

(page 1 of 1)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-5
ARM Representative	: Peter Vogel
Checked by	: Peter Vogel
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Ryan Sites
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 563678.17
Easting (ft)	: 1460774.35
Date/Time Started	: 01/12/16 / 1115
Date/Time Completed	: 01/12/16 / 1715
Surf. Elev. (ft AMSL)	: 10.8
TOC Elev. (ft AMSL)	: 13.38
Total Depth (ft)	: 19.97' (TOC)
Depth to Water (ft)	: 12.33' (TOC) 01/13/16
Depth to Water (ft)	: 13.0' (TOC) 01/29/16
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. 10.8	LITHOLOGIC DESCRIPTION
0	10.8	0-1.5' Gravelly SAND, black, very dense, fine to medium grained, dry (fill)
		1.5-7.5' Gravelly SAND, light to medium gray, slag gravel, dry, some dark brown rusty metal debris (fill)
5	5.8	
		7.5-8' Gravelly SAND, greenish gray, medium dense, dry (fill)
		8-10' Gravelly SAND, dark brown, very dense, slag gravel, moist (fill)
10	.8	10-16' Sandy GRAVEL, gray, very dense, slag gravel, wet (fill)
15	-4.2	
		16-18' Gravelly SAND, dark gray, loose, wet (fill)
		End of Boring
20		



COMPLETION DETAILS

2x2' concrete pad
4.25" ID Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 inch ID
Riser Stickup (ags): 2.5'

Screen: Sch 40 PVC
Screen Diameter: 2 inch ID
Top of Screen: 7.5' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 1.5' Bottom: 4.5'
Filter Pack: DSI M2 Sand
Top: 5.0' Bottom: 18.0'
Fine Sand: FilterSil "000"
Top: 4.5' Bottom: 5.0'

Monitoring Well Development
Date: 01/29/16
Purged Amount: 20 gal.
Well Volumes Removed: 20
Time Start/Completed: 0935/1030

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

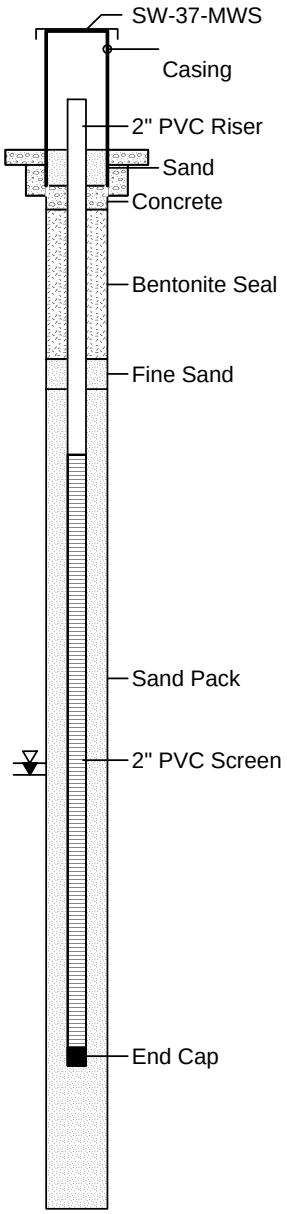
Well ID: SW-037-MWS

(page 1 of 1)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-5
ARM Representative	: William Mader, P.G.
Checked by	: William Mader, P.G.
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Austin Bonacum
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 563571.81
Easting (ft)	: 1461007.95
Date/Time Started	: 12/21/15 / 1440
Date/Time Completed	: 12/22/15 /
Surf. Elev. (ft AMSL)	: 11.0
TOC Elev. (ft AMSL)	: 13.28
Total Depth (ft)	: 17.7' (TOC)
Depth to Water (ft)	: 12.9' (TOC) 12/22/15
Depth to Water (ft)	: 12.7' (TOC) 01/18/16
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. (ft.) 11.0	LITHOLOGIC DESCRIPTION
0	11	0-1.75' Silty SAND and GRAVEL, Very dark gray (10YR 3/1), medium dense, moist, slag-like materials, medium reaction with HCl
		1.75-2.25' Silty GRAVEL, reddish brown and dark reddish brown (2.5YR 3/3), dry
		2.25-4' Silty GRAVEL, gray-graybrown, medium dense, slag like material, moist
5	6	4-10' Silty GRAVEL, mixed reddish brown, gray brown to dark gray slag, moist, moderate and strong reaction with HCl
10	1	10-12' Silty GRAVEL, gray-brown to gray, very dense, saturated, slag material, no reaction with HCl, slag pieces up to ~1"
		12-15.6' SAND, brown gray, loose, medium dense, very moist to saturated, no reaction with HCl
15	-4	15.6-16.1' Silty SAND, black to dark gray, fine sand, loose to medium dense, saturated
		End of Boring
20		



COMPLETION DETAILS

2x2' concrete pad
4.25" Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 in
Riser Stickup (ags): 2.3'

Screen: Sch 40 PVC
Screen Diameter: 2 in
Top of Screen: 5.1' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 1.0' Bottom: 3.5'
Fine Sand: FilPro #000
Top 3.5' Bottom 4.0'
Filter Pack: FilPro W.G. #2
Top: 4.0' Bottom: 16.1'

Monitoring Well Development
Date: 01/18/16
Purged Amount: 15 gal.
Well Volumes Removed: 18.8
Time Started/Completed: 1340/1426

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

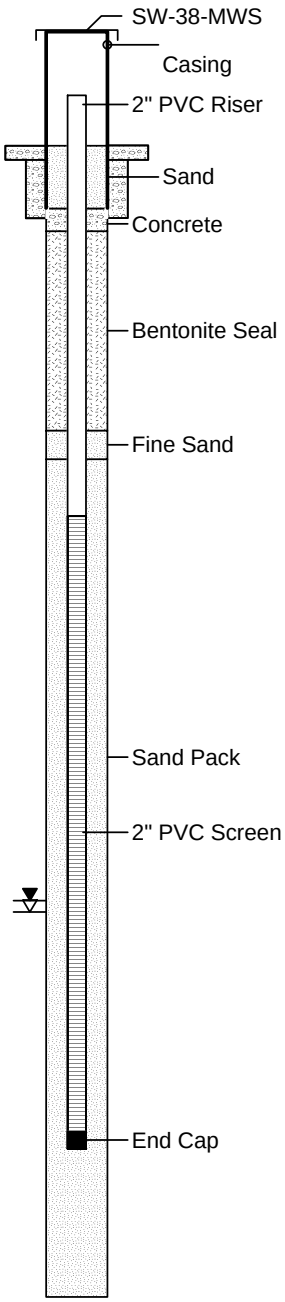
Well ID: SW-038-MWS

(page 1 of 1)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-5
ARM Representative	: William Mader, P.G.
Checked by	: William Mader, P.G.
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Austin Bonacum
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 563432.87
Easting (ft)	: 1461357.62
Date/Time Started	: 12/18/15 / 1320
Date/Time Completed	: 12/21/15 / 1400
Surf. Elev. (ft AMSL)	: 13.8
TOC Elev. (ft AMSL)	: 16.28
Total Depth (ft)	: 20.2' (TOC)
Depth to Water (ft)	: 15.9' (TOC) 12/21/15
Depth to Water (ft)	: 16.2' (TOC) 12./23/15
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. (ft.) 13.8	LITHOLOGIC DESCRIPTION
0	13.8	0-2' Silty SAND and GRAVEL, dark grayish with metal fragments, slight moist, dense to very dense
		2-4' Silty SAND and GRAVEL, dark reddish brown, dense to very dense, moist, reacts with HCl
5	8.8	4-6' Silty SAND and GRAVEL, dark reddish brown to gray to dark gray slag fragments, dense to very dense
		6-8' Silty SAND and GRAVEL, gray brown to whitish gray to gray-black to pale brown with some strong red oxidation, dense, moist
		8-10' Silty SAND, light brown to white to olive gray and white, moist, dense to very dense, to bright white
10	3.8	10-12' Silty GRAVEL, whitish to very light olive gray, slight moist, very dense slag, no reaction with HCl
		12-14' Silty GRAVEL, whitish, medium gray with some dark gray slag type material, very moist at base
		14-14.5' Silty GRAVEL, whitish to whitish gray, dense, slag type material, very moist to saturated
15	-1.2	14.5-16' Silty GRAVEL, very dark bluish gray (Gley 2-3/1) very dense, moist- apparent slag
		16-18' Silty GRAVEL, dark bluish gray, bluish gray and very dark bluish gray (Gley 2 3/1-5/1) saturated, medium dense slag, whitish inclusions
20		End of Boring



COMPLETION DETAILS

2x2' concrete pad
4.25" Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 in
Riser Stickup (ags): 2.5'

Screen: Sch 40 PVC
Screen Diameter: 2 in
Top of Screen: 6.5' bgs
Screen Amount: 11.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 1.0' Bottom: 5.0'
Fine Sand: FilPro #000
Top 5.0' Bottom 5.5' Filter Pack: FilPro W.G. #2 Top: 5.5' Bottom: 18'

Monitoring Well Development
Date: 01/18/16
Purged Amount: 15 gal.
Well Volumes Removed: 12
Time Started/Completed: 1245/1400

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

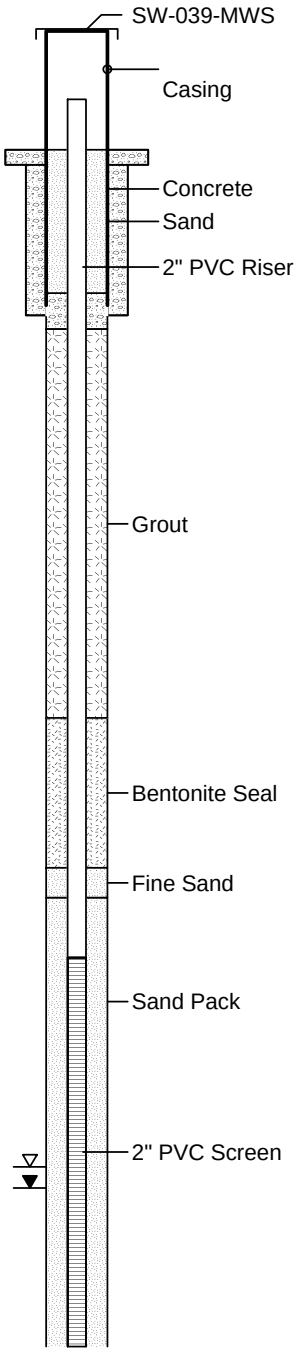
ARM Group Inc.
Earth Resource Engineers and Consultants

Well ID: SW-039-MWS

(page 1 of 2)

Project Name	: Sparrows Point	Northing (ft)	: 563507.65
Project Number	: 150300M-10-3	Easting (ft)	: 1462484.16
Client	: EnviroAnalytics Group	Date/Time Started	: 11/30/15 / 1520
Site	: Sparrows Point - Area B	Date/Time Completed	: 12/01/15 / 1300
Borehole Location	: Parcel B-5	Surf. Elev. (ft AMSL)	: 17.9
ARM Representative	: Peter Vogel	TOC Elev. (ft AMSL)	: 19.91
Checked by	: Peter Vogel	Total Depth (ft)	: 25.67' (TOC)
Drilling Company	: Allied Well Drilling	Depth to Water (ft)	: 19.37' TOC (12/03/15)
Driller	: MIke Waller, Austin Bonacum	Depth to Water (ft)	: 19.0' TOC (01/07/16)
Drilling Equipment	: Diedrich-D120	Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. 17.9	LITHOLOGIC DESCRIPTION
0	17.9	0-2' GRAVEL, dark reddish brown, very dense, fine to medium grained, with well graded sand and clay matrix, wet at top from rain and dry at bottom (fill)
		2-4' GRAVEL, gray, very dense, moist (fill)
		4-6' Clayey SILT, brown to gray, soft, mottled, moist (fill)
5	12.9	
		6-8' Sandy GRAVEL, light gray to white with some brown, medium dense, fine slag gravel, moist (fill)
		8-12' Sandy GRAVEL, light gray to tan, loose to very loose, moist (fill)
10	7.9	
		12-13' SILT, light gray to white, hard, possible ash fill, moist (fill)
		13-16' GRAVEL, gray, very dense to dense, slag gravel, moist (fill)
15	2.9	
		16-18' GRAVEL with SILT, gray slag gravel with light gray to white ash silt, loose, wet (fill)
		18-20' GRAVEL with SILT and SAND, light gray, medium dense, slag gravel, wet (fill)
20		



COMPLETION DETAILS

2x2' concrete pad
4.25" Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 in
Riser Stickup (ags): 2.0'

Screen: Sch 40 PVC
Screen Diameter: 2 in
Top of Screen: 13.5
Screen Amount: 10.0 lf
Slot Size: 0.020"

Grout: Cement/Bentonite Grout Mix
Top: 3.0' Bottom: 9.5'

Bentonite Seal: 3/8" chips
Top: 9.5' Bottom: 12.0'
Filter Pack: DSI M2 Sand
Top: 12.5' Bottom: 25.5'
Fine Sand: FilterSil "000"
Top: 12.0' Bottom: 12.5'

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

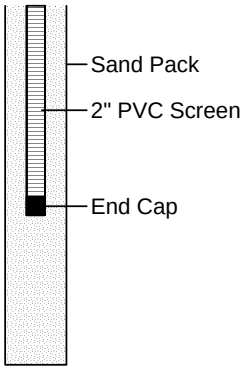
Well ID: SW-039-MWS

(page 2 of 2)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-5
ARM Representative	: Peter Vogel
Checked by	: Peter Vogel
Drilling Company	: Allied Well Drilling
Driller	: MIke Waller, Austin Bonacum
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 563507.65
Easting (ft)	: 1462484.16
Date/Time Started	: 11/30/15 / 1520
Date/Time Completed	: 12/01/15 / 1300
Surf. Elev. (ft AMSL)	: 17.9
TOC Elev. (ft AMSL)	: 19.91
Total Depth (ft)	: 25.67' (TOC)
Depth to Water (ft)	: 19.37' TOC (12/03/15)
Depth to Water (ft)	: 19.0' TOC (01/07/16)
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. 17.9	LITHOLOGIC DESCRIPTION	COMPLETION DETAILS
20	-2.1	20-22' GRAVEL with SILT and SAND, dark gray, medium dense, slag gravel, wet (fill)	
		22-25' GRAVEL with SILT and SAND, light gray to bluish gray, medium dense, slag gravel, wet (fill)	Monitoring Well Development Date: 01/07/16 Purged Amount: 45 gal. Well Volumes Remoed: 44 Time Started/Completed: 1600/1659
25	-7.1	25-26' SAND, gray, stiff, fine grained	
		End of Boring	
30	-12.1		
35	-17.1		
40			



TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

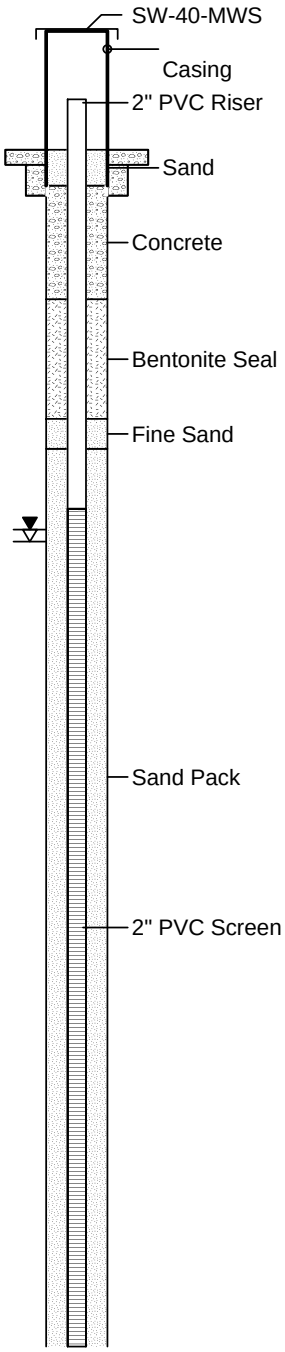
Well ID: SW-040-MWS

(page 1 of 2)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-5
ARM Representative	: Peter Vogel
Checked by	: Peter Vogel
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Austin Bonacum
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 564306.40
Easting (ft)	: 1463005.67
Date/Time Started	: 12/02/15 / 1330
Date/Time Completed	: 12/03/15 / 1000
Surf. Elev. (ft AMSL)	: 11.2
TOC Elev. (ft AMSL)	: 13.01
Total Depth (ft)	: 33.41' (TOC)
Depth to Water (ft)	: 8.36' (TOC) 12/08/15
Depth to Water (ft)	: 8.6' (TOC) 012/17/15
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. 11.2	LITHOLOGIC DESCRIPTION
0	11.2	0-2' GRAVEL with SAND and SILT, dark brown to light gray, medium dense, slag gravel, moist (fill)
		2-4' Clayey SILT, light brown to tan, stiff, mottled, wet (fill)
		4-6' GRAVEL, black to gray, loose, slag gravel, some sand and silt, moist (fill)
5	6.2	6-8' Clayey SILT with SAND, gray, medium stiff, wood debris in bottom of shoe, wet (fill)
		8-13' SILT, light gray, medium to very stiff, with some clay, mottled
10	1.2	
		13-17' SAND, orangish tan, very stiff, fine to medium grained, with trace fine gravel
15	-3.8	
		17-20' Clayey SILT, gray to brown, soft, with some iron laminations at 19' bgs
20		



COMPLETION DETAILS

2x2' concrete pad
4.25" Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 in
Riser Stickup (ags): 2.1'

Screen: Sch 40 PVC
Screen Diameter: 2 in
Top of Screen: 6.0' bgs
Screen Amount: 25.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 2.5' Bottom: 4.5'
Fine Sand: FilterSil "000"
Top: 4.5' Bottom: 5.0'
Filter Pack: DSI M2 Sand
Top: 5.0' Bottom: 32.0'

Monitoring Well Development
Date: 12/17/15
Purged Amount: 50 gal.
Well Volumes Removed: 12.3
TIme Started/Completed:
1215 / 1340

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

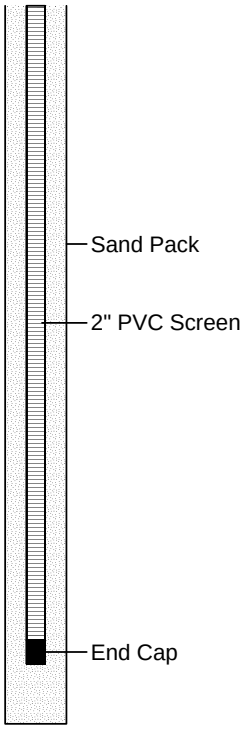
ARM Group Inc.
Earth Resource Engineers and Consultants

Well ID: SW-040-MWS

(page 2 of 2)

Project Name	: Sparrows Point	Northing (ft)	: 564306.40
Project Number	: 150300M-10-3	Easting (ft)	: 1463005.67
Client	: EnviroAnalytics Group	Date/Time Started	: 12/02/15 / 1330
Site	: Sparrows Point - Area B	Date/Time Completed	: 12/03/15 / 1000
Borehole Location	: Parcel B-5	Surf. Elev. (ft AMSL)	: 11.2
ARM Representative	: Peter Vogel	TOC Elev. (ft AMSL)	: 13.01
Checked by	: Peter Vogel	Total Depth (ft)	: 33.41' (TOC)
Drilling Company	: Allied Well Drilling	Depth to Water (ft)	: 8.36' (TOC) 12/08/15
Driller	: Mike Waller, Austin Bonacum	Depth to Water (ft)	: 8.6' (TOC) 012/17/15
Drilling Equipment	: Diedrich-D120	Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. 11.2	LITHOLOGIC DESCRIPTION
20	-8.8	20-21' Clayey SAND, tan, soft, fine to medium grained
		21-22' Clayey SILT, light gray, soft
		22-23' Clayey SAND, with gravel sized iron concretions, light brown, soft (possible fill)
		23-24' Clayey SILT, dark gray, soft
		24-25' Clayey SILT, light brown, very soft, with gravel sized iron concretions (possible fill)
25	-13.8	25-30.5' Clayey SILT, dark gray, very soft to medium stiff
30	-18.8	30.5-31.5' Clayey SAND, dark gray, medium stiff
		31.5-32' Clayey SILT, dark gray, medium stiff
		End of Boring
35	-23.8	
40		



COMPLETION DETAILS

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

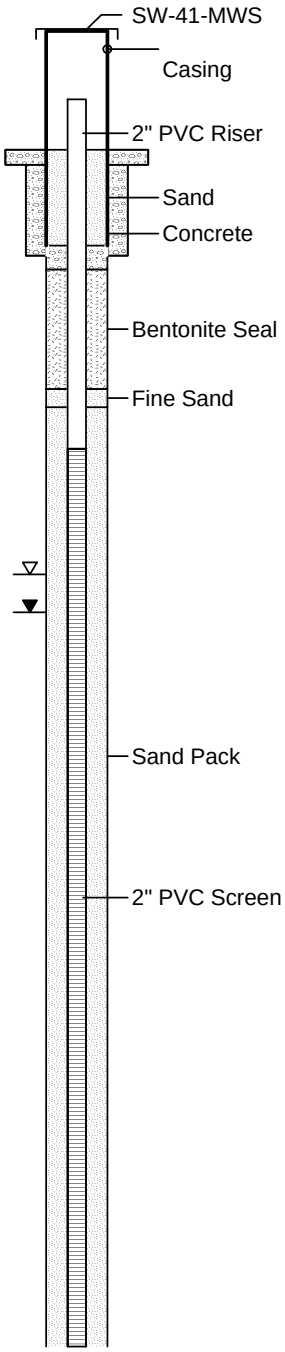
Well ID: SW-041-MWS

(page 1 of 2)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-5
ARM Representative	: Peter Vogel
Checked by	: Peter Vogel
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Austin Bonacum
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 564416.60
Easting (ft)	: 1463773.99
Date/Time Started	: 12/01/15 / 1430
Date/Time Completed	: 12/02/15 / 1045
Surf. Elev. (ft AMSL)	: 11.8
TOC Elev. (ft AMSL)	: 13.47
Total Depth (ft)	: 32.50' (TOC)
Depth to Water (ft)	: 9.53' (TOC) 12/03/15
Depth to Water (ft)	: 8.9' (TOC) 12/17/15
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. 11.8	LITHOLOGIC DESCRIPTION
0	11.8	0-2' GRAVEL, dark brown to black, dense, with sand and silt, multiple layers of brown and black, slag gravel, dry (fill)
		2-3.5' GRAVEL, gray to black, medium dense, with sand and silt, slag gravel, moist (fill)
		3.5-4.5' SAND, tan to white, medium dense, fine to coarse grained, moist (fill)
5	6.8	4.5-6' GRAVEL, brown to black, very dense, with sand and silt, moist (fill)
		6-8.5' SAND, gray to tan, very loose, fine to coarse grained, with some gravel, moist (fill)
		8.5-10' Silty CLAY, gray, very loose, with reddish brown wood debris, moist (fill)
10	1.8	10-11.5' SAND, gray to brown, very loose, fine to coarse grained, with wood debris, wet (fill)
		11.5-14' Clayey SILT, gray to olive gray, very soft (fill)
15	-3.2	14-16' SIlty SAND, tan, very loose, fine grained, with reddish brown wood debris, mottled, wet (fill)
		16-20' Clayey SILT, light gray, soft to medium stiff, mottled, wet (fill)
20		



COMPLETION DETAILS

2x2' concrete pad
4.25" Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 in
Riser Stickup (ags): 1.9'

Screen: Sch 40 PVC
Screen Diameter: 2 in
Top of Screen: 5.0' bgs
Screen Amount: 25.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 2.0' Bottom: 4.0'
Fine Sand: FilterSil "000"
Top: 4.0' Bottom: 4.3'
Filter Pack: DSI M2 Sand
Top: 4.3' Bottom: 31.5'

Monitoring Well Development
Date: 12/17/15
Purged Amount: 45 gal.
Well Volumes Removed: 11.9
Time Started/Completed: 0955/1120

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

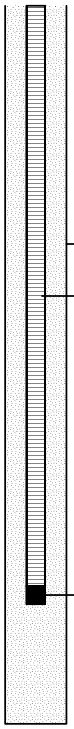
ARM Group Inc.
Earth Resource Engineers and Consultants

Well ID: SW-041-MWS

(page 2 of 2)

Project Name	: Sparrows Point	Northing (ft)	: 564416.60
Project Number	: 150300M-10-3	Easting (ft)	: 1463773.99
Client	: EnviroAnalytics Group	Date/Time Started	: 12/01/15 / 1430
Site	: Sparrows Point - Area B	Date/Time Completed	: 12/02/15 / 1045
Borehole Location	: Parcel B-5	Surf. Elev. (ft AMSL)	: 11.8
ARM Representative	: Peter Vogel	TOC Elev. (ft AMSL)	: 13.47
Checked by	: Peter Vogel	Total Depth (ft)	: 32.50' (TOC)
Drilling Company	: Allied Well Drilling	Depth to Water (ft)	: 9.53' (TOC) 12/03/15
Driller	: Mike Waller, Austin Bonacum	Depth to Water (ft)	: 8.9' (TOC) 12/17/15
Drilling Equipment	: Diedrich-D120	Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. 11.8	LITHOLOGIC DESCRIPTION	COMPLETION DETAILS
20	-8.2	20-24.5' Clayey SILT, light gray, soft to medium stiff, with fine to coarse grained sand and fine gravel, mottled, with wood fibers, moist (fill)	Sand Pack
25	-13.2	24.5-26' Clayey SILT, light gray, very soft, moist	2" PVC Screen
		26-32' Clayey SILT, dark gray, soft to medium stiff, moist	
30	-18.2		End Cap
		End of Boring	
35	-23.2		
40			



TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

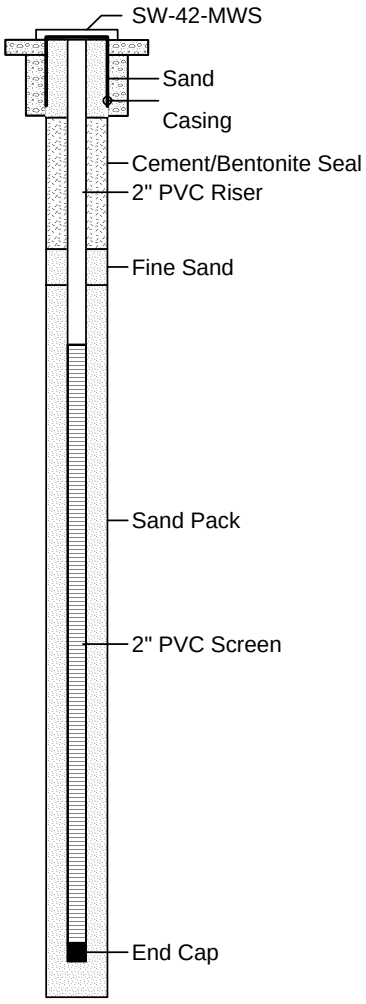
ARM Group Inc.
Earth Resource Engineers and Consultants

Well ID: SW-042-MWS

(page 1 of 1)

Project Name	: Sparrows Point	Northing (ft)	: 564740.08
Project Number	: 150300M-10-3	Easting (ft)	: 1464633.24
Client	: EnviroAnalytics Group	Date/Time Started	: 11/11/15 / 0800
Site	: Sparrows Point - Area B	Date/Time Completed	: 11/11/15 /
Borehole Location	: Parcel B-5	Surf. Elev. (ft AMSL)	: 7.8
ARM Representative	: William Mader, P.G.	TOC Elev. (ft AMSL)	: 7.40
Checked by	: William Mader, P.G.	Total Depth (ft)	: 15.6' (TOC)
Drilling Company	: Allied Well Drilling	Depth to Water (ft)	: 6.4' (TOC) 12/15/15
Driller	: Mike Waller, Austin Bonacum	Depth to Water (ft)	: 6.8' (TOC) 01/20/16
Drilling Equipment	: Diedrich-D120	Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. (ft.) 7.8	LITHOLOGIC DESCRIPTION
0	7.8	0-4' Slag, sand to gravel sized, dark gray to brown, very dense, dry
		4-6' Slag, sand to gravel sized, dark gray to brown, very dense, moist, redox colors present
5	2.8	6-8' Slag, olive gray/gray/dark gray, very dense, spoon sample dry, auger cuttings appear damp
		8-8.5' Clayey SAND, reddish yellow (7.5YR 6/8), medium stiff, Chr 2 gray reduction, moist
		8.5-10' Silty SAND to SAND, yellow brown/light brownish gray (10YR Chroma 5-2), medium dense, very moist
10	-2.2	10-12' SAND, very fine grained, yellow brown/gray brown, light gray to strong brown (7.5YR 5/8) in lower 4", moist, apparent organic laminations in upper part
		12-14' SAND to Clayey SAND to lean CLAY, strong brown (3") to gray (5Y 6/1) (5") to mottled gray and strong brown (12"), moist, soft-medium, stiff, wet
15	-7.2	14-16' Lean CLAY/Fat CLAY, gray (5Y 6/1-6/2), stiff, moist, with many strong Br, BY oxidation coatings/linings, no free water observed
		End of Boring
20		



COMPLETION DETAILS

2x2' concrete pad
8-inch Flush-Mount
Protective Cover

Riser: Sch 40 PVC
Riser Diameter: 2 in
Riser Stickup (ags): -0.4'
(Flush-Mount)

Screen: Sch 40 PVC
Screen Diameter: 2 in
Top of Screen: 5.1' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Cement/Bentonite Seal:
Top: 1.3' Bottom: 3.5'
Fine Sand:
Top 3.5' Bottom 4.1'
Filter Pack: FilPro W.G. #2
Top: 4.1' Bottom: 16.0'

Monitoring Well Development
Date: 12/15/15
Purged Amount: 25 gal.
Well Volumes Removed: 17
Time Started/Completed:
1510/1600

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

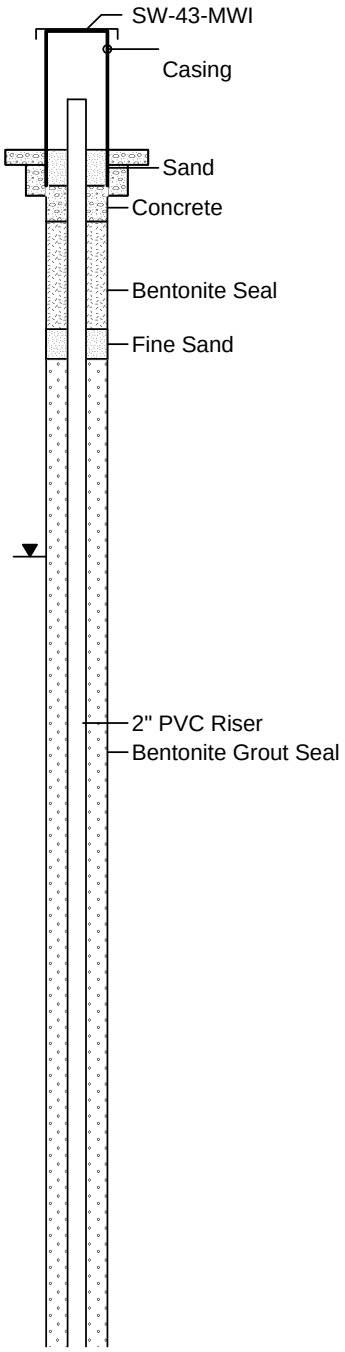
Well ID: SW-043-MWI

(page 1 of 3)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-5
ARM Representative	: William Mader, P.G.
Checked by	: William Mader, P.G.
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Austin Bonacum
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 565719.77
Easting (ft)	: 1464429.47
Date/Time Started	: 11/13/15 / 1415
Date/Time Completed	: 11/18/15 / 1600
Surf. Elev. (ft AMSL)	: 8.6
TOC Elev. (ft AMSL)	: 10.43
Total Depth (ft)	: 55.6' (TOC)
Depth to Water (ft)	: 8.6' (TOC) 12/22/15
Depth to Water (ft)	:
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. (ft.) 8.6	LITHOLOGIC DESCRIPTION
0	8.6	0-0.33' SILT, dark brown, soft, moist, no odor
		0.33-2' Sandy SILT, yellowish brown with common chroma 2-3 gray, stiff moist
		2-5.7' Sandy SILT, strong yellowish brown with common chroma 2 gray, slightly moist, silt grades to pale Br gray with many hi and low chroma redox, very stiff to hard, slightly moist
5	3.6	
		5.7-10' Sandy SILT-SAND, pale brown gray (& yellowish brown and yellow) very fine grained, wet with free water
10	-1.4	10-10.75' SAND, strong brown, trace pale brown, loose, wet
		10.75-12' Lean to fat CLAY, gray (10YR 7/1) with strong brown oxidation, moist
		12-13.2' Silty SAND, strong brown mottled, faintly whitish brown, reddish brown, loose, moist
		13.2-14' Lean to fat CLAY, gray (10YR 7/1) with strong brown oxidation, moist
15	-6.4	14-15' Lean CLAY, gray mottled with yellowish brown, dark red, moist, small oxidized shale frags, soft to medium
		15-16' Lean to fat CLAY, gray, massive, minor yellowish brown oxidation, moist, medium
		16-16.58' Pale yellowish brown-yellowish brown, loose, wet
		16.58-18' Clayey SILT, gray with intermixed dark reddish brown iron cemented laminations randomly oriented, moist, stiff
		18-18.83' Clayey SAND, yellowish brown, pale yellowish brown, loose, wet
20		18.83-20.66' Clayey SILT, gray with intermixed dark reddish brown iron cemented laminations randomly oriented, moist, stiff



COMPLETION DETAILS

2x2' concrete pad
4.25" Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 in
Riser Stickup (ags): 1.9'

Screen: Sch 40 PVC
Screen Diameter: 2 in
Top of Screen: 43.3' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Bentonite Seal:
Top: 1.2' Bottom: 3.0'
Fine Sand: Quikrete
Top: 3.0' Bottom: 3.5'
Bentonite/Grout Seal:
Top: 3.5 Bottom: 40.2'
Bentonite Seal:
Top: 40.2' Bottom: 41.4'
Fine Sand: Quikrete
Top: 41.4' Bottom: 42.8'
Filter Pack: FilPro W.G. #2 and DSI M2 Sand
Top: 42.8' Bottom: 54.3'

Monitoring Well Development
Date: 12/22/15
Purged Amount: 30 gal.
Well Volumes Removed: 3.9

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

Well ID: SW-043-MWI

(page 2 of 3)

Project Name	: Sparrows Point	Northing (ft)	: 565719.77
Project Number	: 150300M-10-3	Easting (ft)	: 1464429.47
Client	: EnviroAnalytics Group	Date/Time Started	: 11/13/15 / 1415
Site	: Sparrows Point - Area B	Date/Time Completed	: 11/18/15 / 1600
Borehole Location	: Parcel B-5	Surf. Elev. (ft AMSL)	: 8.6
ARM Representative	: William Mader, P.G.	TOC Elev. (ft AMSL)	: 10.43
Checked by	: William Mader, P.G.	Total Depth (ft)	: 55.6' (TOC)
Drilling Company	: Allied Well Drilling	Depth to Water (ft)	: 8.6' (TOC) 12/22/15
Driller	: Mike Waller, Austin Bonacum	Depth to Water (ft)	:
Drilling Equipment	: Diedrich-D120	Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. (ft.) 8.6	LITHOLOGIC DESCRIPTION	COMPLETION DETAILS
20	-11.4		
		20.66-22' SILT, gray to dark gray (2.5 Y 5/1-4/1) soft	
		22-26' SILT, dark gray (2.5 Y 11/1), soft to medium, very moist; moist and medium at 24' bgs	
25	-16.4		
		26-30' SILT, dark gray, very soft, saturated with free water, too soft for PP readings; very soft at 28' bgs; more dry at 29' bgs	Bentonite Grout Seal
30	-21.4	30-34' SILT-Sandy SILT, dark gray, soft to medium, moist, possible siltier,fine sand increasing	2" PVC Riser
		34-35.08' SILT and Clayey SAND, dark gray, soft, moist to very moist	
35	-26.4	35.08-35.5' Clayey SAND and SAND, dark gray, medium, very moist	
		35.5-36' SILT, dark gray, medium, very moist	
		36-38' SILT, dark gray, soft to medium, very moist, small inclusions of sand in upper 9", with trace rounded quartz	
		38-40' SILT, dark gray, very soft to soft, very moist to moist, ~2-3" lens of dark gray SC/SW including subrounded quartz gravel	
40			

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

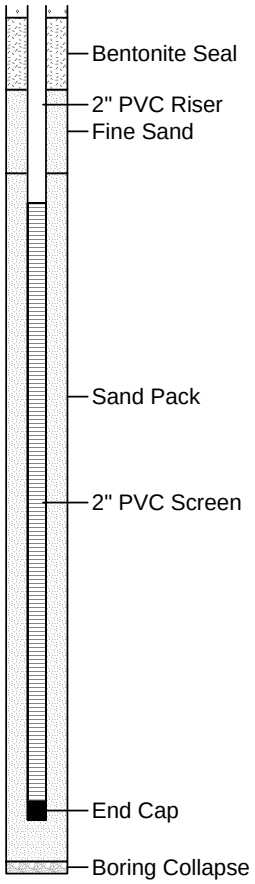
ARM Group Inc.
Earth Resource Engineers and Consultants

Well ID: SW-043-MWI

(page 3 of 3)

Project Name	: Sparrows Point	Northing (ft)	: 565719.77
Project Number	: 150300M-10-3	Easting (ft)	: 1464429.47
Client	: EnviroAnalytics Group	Date/Time Started	: 11/13/15 / 1415
Site	: Sparrows Point - Area B	Date/Time Completed	: 11/18/15 / 1600
Borehole Location	: Parcel B-5	Surf. Elev. (ft AMSL)	: 8.6
ARM Representative	: William Mader, P.G.	TOC Elev. (ft AMSL)	: 10.43
Checked by	: William Mader, P.G.	Total Depth (ft)	: 55.6' (TOC)
Drilling Company	: Allied Well Drilling	Depth to Water (ft)	: 8.6' (TOC) 12/22/15
Driller	: Mike Waller, Austin Bonacum	Depth to Water (ft)	:
Drilling Equipment	: Diedrich-D120	Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. (ft.) 8.6	LITHOLOGIC DESCRIPTION
40	-31.4	40-45.33' SILT, dark gray, very soft to soft, very moist, common streaks of blackish organics
45	-36.4	45.33-47.4' CLAY SILT, dark gray, medium, moist
		47.4-49.75' Silty SAND, medium dense, very dark gray brown, moist
50	-41.4	49.75-50' SILT, dark grayish, soft, very moist, low plasticity
		50-51.08' Silty SAND, very dark gray brown, very micaceous, soft, very moist
		51.08-52' SILT, dark greenish gray, soft, very moist, small whitish shell frags
		52-52.75' Silty SAND, very dark gray brown, very micaceous, soft, very moist
		52.75-54' SILT, dark greenish gray, soft, very moist, small whitish shell frags
55	-46.4	End of Boring
60		



COMPLETION DETAILS

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

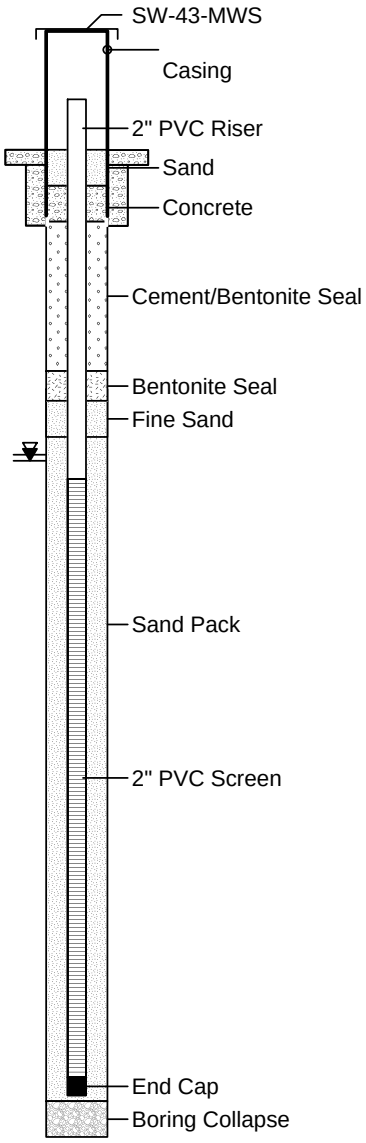
Well ID: SW-043-MWS

(page 1 of 1)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-5
ARM Representative	: William Mader, P.G.
Checked by	: William Mader, P.G.
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Austin Bonacum
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 565729.24
Easting (ft)	: 1464430.00
Date/Time Started	: 11/13/15 / 1000
Date/Time Completed	: 11/13/15 / 1345
Surf. Elev. (ft AMSL)	: 8.5
TOC Elev. (ft AMSL)	: 10.26
Total Depth (ft)	: 17.4' (TOC)
Depth to Water (ft)	: 6.8' (TOC) 12/11/15
Depth to Water (ft)	: 6.7' (TOC) 12/14/15
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. (ft.) 8.5	LITHOLOGIC DESCRIPTION
0	8.5	0-0.5' SILT with SAND, dark brown, soft, moist, no odor
		0.5-2' SILT with SAND, yellowish brown with common chroma 2-3, gray, stiff, moist
		2-4' SILT with SAND, yellowish brown with common chroma 2-3, gray, very stiff to hard, moist
		4-5' Sandy SILT to clayey SAND, strong yellowish brown, pale yellowish brown, chroma 2 gray, very stiff to hard, moist
5	3.5	5-6' Clayey SAND, pale yellowish brown 4 Chr2 gray, stiff, to very stiff, increasing moisture
		6-8' Silty SAND to SAND, alternating ~4" zones of pale brown gray and Ybr and yellow, fine grained sand, wet with free water at top of spoon
		8-9.5' SAND, primarily brownish yellow, yellowish brown, some gray, medium dense, moist, with rounded white quartz gravel
10	-1.5	9.5-10' SAND, strong brown (7.5YR 5/8), medium dense, moist
		10-11' Silty SAND, pale gray brown, hard to very stiff, moist
		11-11.33' Lean CLAY, strong brown, loose, very moist
		11.33-12' Lean CLAY, gray, very stiff to stiff, chroma 8 oxidation
		12-15.25' Strong brown, loose, medium dense, moist, a few pale yellow and gray lenses
15	-6.5	15.25-16' Clayey SAND, strong brown, pale brown, gray, stiff, moist, grades to mottled dark reddish brown and gray CL, stiff, moist
		End of Boring
20		



COMPLETION DETAILS

2x2' concrete pad
4.25" Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 in
Riser Stickup (ags): 1.7'

Screen: Sch 40 PVC
Screen Diameter: 2 in
Top of Screen: 5.5' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Cement/Bentonite Seal:
Top: 1.2' Bottom: 3.7'
Bentonite Seal: 3/8" chips
Top: 3.7' Bottom: 4.2'
Fine Sand: Quikrete
Top 4.2' Bottom 4.8'
Filter Pack: FilPro W.G. #2 and DSI M2 Sand
Top: 4.8' Bottom: 15.9'

Monitoring Well Development
Date: 12/11/15
Purged Amount: 50 gal.
Well Volumes Removed: 29.4
Time Started/Completed: 1310/1415

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

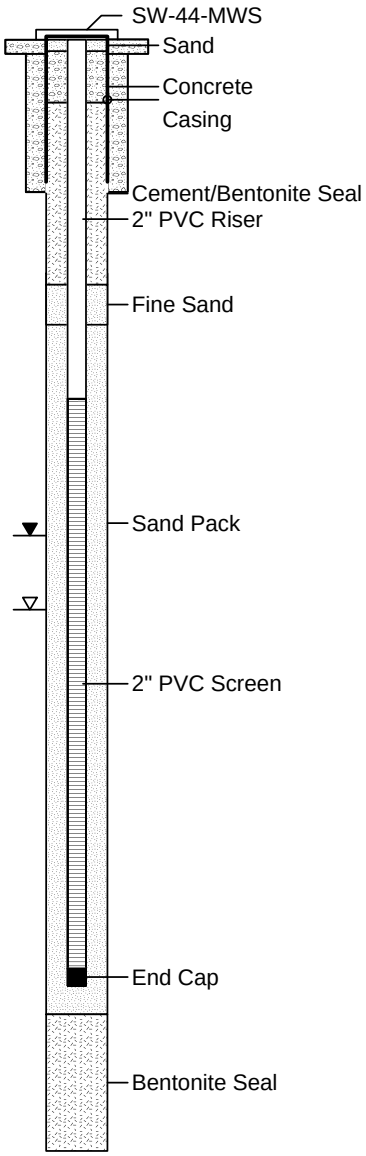
Well ID: SW-044-MWS

(page 1 of 1)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-7
ARM Representative	: William Mader, P.G.
Checked by	: William Mader, P.G.
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Austin Bonacum
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 566398.36
Easting (ft)	: 1464363.35
Date/Time Started	: 11/12/15 / 0840
Date/Time Completed	: 11/13/15 / 1630
Surf. Elev. (ft AMSL)	: 9.0
TOC Elev. (ft AMSL)	: 8.61
Total Depth (ft)	: 16.4' (TOC)
Depth to Water (ft)	: 8.3' (TOC) 12/15/16
Depth to Water (ft)	: 9.6' (TOC) 01/20/16
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. (ft.) 9.0	LITHOLOGIC DESCRIPTION
0	9	0-2' Silty GRAVEL, dark gray, grayish black, olive gray slag, dry, very dense
		2-5.08' Silty GRAVEL, dark gray, grayish black, olive gray slag, dry, medium dense
5	4	5.08-10.5' Silty GRAVEL and SAND, red (10R4/8) brick like material, appears dry, mixed with light brownish gray, med gr. sandstone, moist to wet at 8' bgs
10	-1	10.5-12' Silty SAND, dark olive gray and light gray, soft, very moist, fine root matter
		12-12.91' SILT, black organic matter, wet
		12.91-13.5' Silty SAND, dark gray-gray, soft, moist
		13.5-14' Clayey SILT, olive gray with yellowish and gray, soft, gray
15	-6	14-16' No Recovery - probable ML/CL
		16-18' Lean CLAY, light gray to light olive gray, soft, moist, common high chroma oxidation, low to medium plasticity
		18-20' Lean CLAY, light gray to light olive gray, stiff, moist, common high chroma oxidation, low to medium plasticity
20		End of Boring



COMPLETION DETAILS

2x2' concrete pad
8-inch Flush-Mount
Protective Cover

Riser: Sch 40 PVC
Riser Diameter: 2 in
Riser Stickup (ags): -0.40'
(Flush-Mount)

Screen: Sch 40 PVC
Screen Diameter: 2 in
Top of Screen: 6.3' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Cement/Bentonite Seal:
Top: 1.1' Bottom: 4.3'
Fine Sand:
Top: 4.3 Bottom: 5.0'
Filter Pack: FilPro W.G. #2
Top: 5.0' Bottom: 17.1'
Bentonite Seal: 3/8" Chips
Top: 17.1' Bottom: 19.5'

Monitoring Well Development
Date: 12/15/15
Purged Amount: 30 gal.
Well Volumes Removed: 22.8
Time Started/Completed:
1307/1520

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

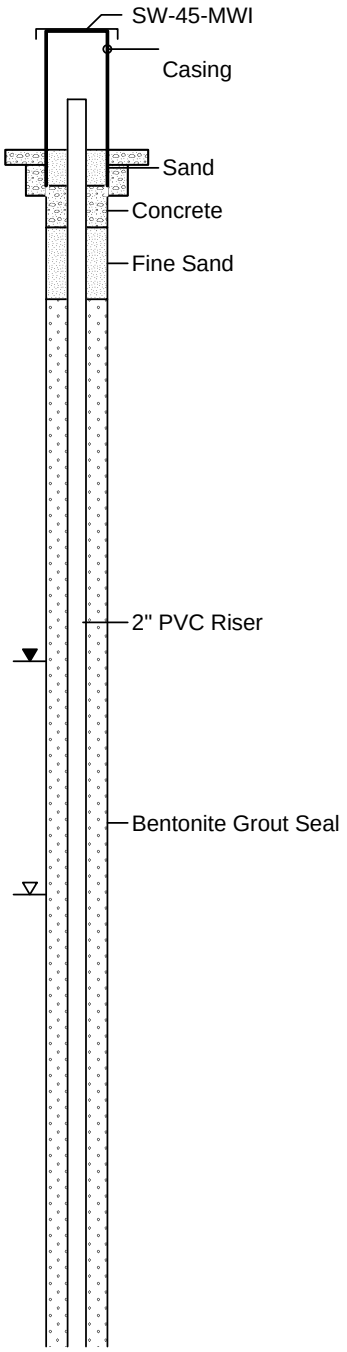
Well ID: SW-045-MWI

(page 1 of 4)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-7
ARM Representative	: William Mader, P.G.
Checked by	: William Mader, P.G.
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Austin Bonacum
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 568344.09
Easting (ft)	: 1463932.84
Date/Time Started	: 11/13/15 /
Date/Time Completed	: 11/16/15 /
Surf. Elev. (ft AMSL)	: 10.9
TOC Elev. (ft AMSL)	: 12.86
Total Depth (ft)	: 75.9' (TOC)
Depth to Water (ft)	: 8.6' (TOC) 11/16/15
Depth to Water (ft)	: 13.1' (TOC) 01/21/16
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. (ft.) 10.9	LITHOLOGIC DESCRIPTION
0	10.9	0-0.5' Silty Sand, brown, medium stiff, topsoil with roots
		0.5-3' Clayey SILT, light gray to light brown, medium stiff to stiff, mottling, moist
		3-5' SAND, light gray to brown, stiff to very stiff, fine grained, moist
5	5.9	5-6' SAND, reddish brown, stiff, fine grained, wet
		6-8' Silty CLAY, gray, stiff, moist
		8-9.5' SAND, reddish brown, medium stiff, fine to medium grained, wet
10	.9	9.5-10' Silty CLAY, gray, stiff
		10-13' Silty CLAY, gray, soft, with flaky iron particles (possible fill)
		13-23' Silty CLAY, gray, very soft to medium stiff, moist
15	-4.1	
20		



COMPLETION DETAILS

2x2' concrete pad
4.25" Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 in
Riser Stickup (ags): 1.9'

Screen: Sch 40 PVC
Screen Diameter: 2 in
Top of Screen: 63.7' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Bentonite/Portland Seal:
Top: 0.8' Bottom: 1.3'
Fine Sand:
Top: 1.3' Bottom: 2.5'
Bentonite/Grout Seal:
Top: 2.5' Bottom: 61.8'
Fine Sand: Quikrete Sand
Top: 61.8' Bottom: 62.4'
Filter Pack: FilPro W.G. #2
Top: 62.4' Bottom: 74.5'

Monitoring Well Development
Date: 01/05/16
Purged Amount: 50 gal.
Well Volumes Removed: 5.2

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

Well ID: SW-045-MWI

Project Name	: Sparrows Point	Northing (ft)	: 568344.09
Project Number	: 150300M-10-3	Easting (ft)	: 1463932.84
Client	: EnviroAnalytics Group	Date/Time Started	: 11/13/15 /
Site	: Sparrows Point - Area B	Date/Time Completed	: 11/16/15 /
Borehole Location	: Parcel B-7	Surf. Elev. (ft AMSL)	: 10.9
ARM Representative	: William Mader, P.G.	TOC Elev. (ft AMSL)	: 12.86
Checked by	: William Mader, P.G.	Total Depth (ft)	: 75.9' (TOC)
Drilling Company	: Allied Well Drilling	Depth to Water (ft)	: 8.6' (TOC) 11/16/15
Driller	: Mike Waller, Austin Bonacum	Depth to Water (ft)	: 13.1' (TOC) 01/21/16
Drilling Equipment	: Diedrich-D120	Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. (ft.) 10.9	LITHOLOGIC DESCRIPTION	COMPLETION DETAILS
20	-9.1		
		23-25' Clayey SILT, gray, very soft to medium stiff, moist	
25	-14.1	25-27' SAND, gray, soft, fine grained, wet	
		27-28.5' Silty CLAY to Clayey SILT, gray (2.5Y-3/1), soft	2" PVC Riser
		28.5-29' Clayey SAND, gray, soft, fine grained sand, ~2" clean fine grained gray sand seam at 28.8' bgs	
30	-19.1	29-35' Silty CLAY to Clayey SILT, gray (2.5Y-3/1), soft	Bentonite Grout Seal
35	-24.1	35-37' Clayey SILT, gray, soft 2" gray fine sand seam at 36.8' bgs	
		37-41' Clayey SILT to Silty CLAY, gray (2.5Y-3/1), soft	
40			

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

Well ID: SW-045-MWI

(page 3 of 4)

Project Name	: Sparrows Point	Northing (ft)	: 568344.09
Project Number	: 150300M-10-3	Easting (ft)	: 1463932.84
Client	: EnviroAnalytics Group	Date/Time Started	: 11/13/15 /
Site	: Sparrows Point - Area B	Date/Time Completed	: 11/16/15 /
Borehole Location	: Parcel B-7	Surf. Elev. (ft AMSL)	: 10.9
ARM Representative	: William Mader, P.G.	TOC Elev. (ft AMSL)	: 12.86
Checked by	: William Mader, P.G.	Total Depth (ft)	: 75.9' (TOC)
Drilling Company	: Allied Well Drilling	Depth to Water (ft)	: 8.6' (TOC) 11/16/15
Driller	: Mike Waller, Austin Bonacum	Depth to Water (ft)	: 13.1' (TOC) 01/21/16
Drilling Equipment	: Diedrich-D120	Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. (ft.) 10.9	LITHOLOGIC DESCRIPTION	COMPLETION DETAILS
40	-29.1		
		41-41.5' Clayey SILT, gray, medium stiff, with trace fine grained sand	
		41.5-42' Clayey SILT to Silty CLAY, gray, medium stiff	
		42-50' Clayey SILT to Silty CLAY, gray (2.5Y-3/1), soft to medium stiff, with shell material - bivalves throughout	
45	-34.1		2" PVC Riser
50	-39.1	50-56' Clayey SILT, very dark gray (5YR 3/1), moist, medium, low plasticity, massive soil structure	Bentonite Grout Seal
55	-44.1		
		56-58' As above except slight increase in clay	
		58-60' As above, slight clay increase vs. SS-28, low plasticity	
60			

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

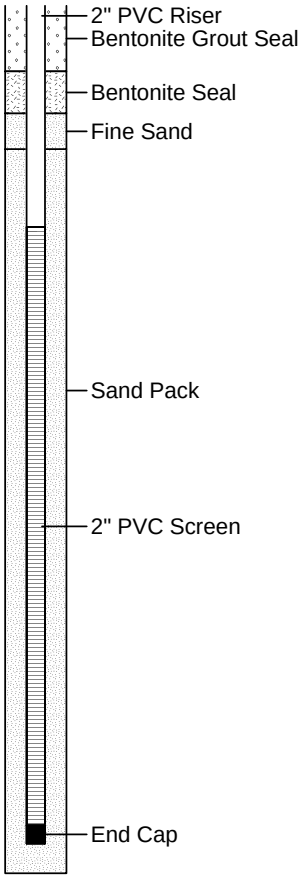
ARM Group Inc.
Earth Resource Engineers and Consultants

Well ID: SW-045-MWI

(page 4 of 4)

Project Name	: Sparrows Point	Northing (ft)	: 568344.09
Project Number	: 150300M-10-3	Easting (ft)	: 1463932.84
Client	: EnviroAnalytics Group	Date/Time Started	: 11/13/15 /
Site	: Sparrows Point - Area B	Date/Time Completed	: 11/16/15 /
Borehole Location	: Parcel B-7	Surf. Elev. (ft AMSL)	: 10.9
ARM Representative	: William Mader, P.G.	TOC Elev. (ft AMSL)	: 12.86
Checked by	: William Mader, P.G.	Total Depth (ft)	: 75.9' (TOC)
Drilling Company	: Allied Well Drilling	Depth to Water (ft)	: 8.6' (TOC) 11/16/15
Driller	: Mike Waller, Austin Bonacum	Depth to Water (ft)	: 13.1' (TOC) 01/21/16
Drilling Equipment	: Diedrich-D120	Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. (ft.) 10.9	LITHOLOGIC DESCRIPTION
60	-49.1	60-63.5' Clayey SILT, very dark gray (5YR 3/1), moist, medium, low plasticity, massive soil structure
		63.5-64' Silty SAND, very dark gravelly
		64-65' Moist, dense in place, abrupt contact, rounded to subrounded quartz gravel, rose, smokey, white
65	-54.1	65-66' Medium grained SAND, very dark gray, micaceous, with some silt, wet
		66-67.3' Medium grained SAND, dark gray, with some SILT and CLAY, moist to wet, medium dense
		67.3-68' Silty SAND, gray to blackish gray to brownish gray, sandy with subrounded quartz gravel
		68-69' Silty SAND, dark gray (2.5Y 3/1) medium to coarse grained medium dense moist to wet, massive
70	-59.1	69-72' Silty SAND, grayish brown-light olive brown, medium dense, moist to wet, massive
		72-74' Silty SAND to Clayey SAND to Clayey SILT, gray-brown/light olive brown to pale brown, brown dark yellowish brown, with grayish black seams or partings in horizontal layers, fining downward
		HSA only
75	-64.1	End of Boring
80		



COMPLETION DETAILS

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

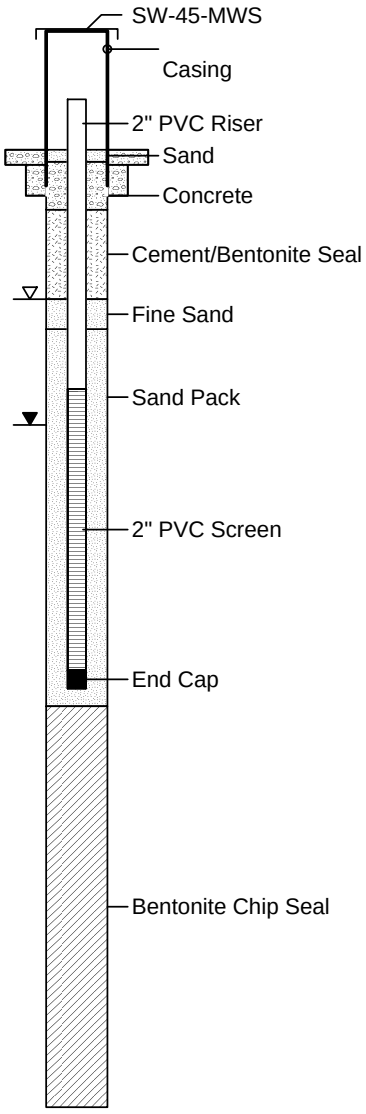
ARM Group Inc.
Earth Resource Engineers and Consultants

Well ID: SW-045-MWS

(page 1 of 1)

Project Name	: Sparrows Point	Northing (ft)	: 568357.88
Project Number	: 150300M-10-3	Easting (ft)	: 1463927.89
Client	: EnviroAnalytics Group	Date/Time Started	: 11/16/15 / 1405
Site	: Sparrows Point - Area B	Date/Time Completed	: 11/16/15 / 1705
Borehole Location	: Parcel B-7	Surf. Elev. (ft AMSL)	: 11.2
ARM Representative	: William Mader, P.G.	TOC Elev. (ft AMSL)	: 13.10
Checked by	: William Mader, P.G.	Total Depth (ft)	: 10.9' (TOC)
Drilling Company	: Allied Well Drilling	Depth to Water (ft)	: 6.4' (TOC) 11/16/15
Driller	: Mike Waller, Austin Bonacum	Depth to Water (ft)	: 4.3' (TOC) 01/05/16
Drilling Equipment	: Diedrich-D120	Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. (ft.) 11.2	LITHOLOGIC DESCRIPTION
0	11.2	0-0.5' SILT, dark brown, moist, soft
		0.5-1.5' Clayey SILT, light gray, pale gray brown, some yellowish brown oxidation, very stiff, dry, massive
		1.5-2' Clayey SILT, brown (10YR 4/3), medium, moist, common redox
		2-4' Clayey SILT, mottled light brown gray and yellowish brown, very stiff, moist
		4-5.42' Silty SAND, brown to strong, oxidized, loose to medium dense, moist to wet
5	6.2	
		5.42-6' Silty CLAY, strong brown with gray reduction colors, medium to stiff, moist, medium plasticity
		6-7.66' Silty SAND, brown to strong, oxidized, loose to medium dense, wet
		7.66-8' Lean CLAY, strong brown with gray reduction colors, medium to stiff, moist, medium plasticity
		8-9.5' Lean to fat CLAY, strong brown and light gray, redoximorphic features, medium to high plasticity, moist, medium
10	1.2	9.5-10' LEan CLAY, mixed brown, strong brown, gray, medium plasticity, moist
		10-12' Lean CLAY, pale gray brown and gray, soft to medium, wet to moist, low to medium plasticity
		12-14' Lean CLAY, light gray to gray, soft, wet to moist, low to medium plasticity
		14-16' SILT/Clayey SILT, dark gray, soft, medium to low plasticity, very moist, no free water
15	-3.8	
		End of Boring
20		



COMPLETION DETAILS

2x2' concrete pad
4.25" Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 in
Riser Stickup (ags): 1.9'

Screen: Sch 40 PVC
Screen Diameter: 2 in
Top of Screen: 4.0' bgs
Screen Amount: 5.0' lf
Slot Size: 0.020"

Cement/Bentonite Seal:
Top: 1.0' Bottom: 2.5'
Fine Sand:
Top 2.5' Bottom 3.0'
Filter Pack: FilPro W.G. #2
Top: 3.0' Bottom: 9.3'
Bentonite Chip Seal:
Top:9.3' Bottom: 16.0'

Monitoring Well Development
Date: 12/15/15
Purged Amount: 25 gal.
Well Volumes Removed: 17
Time Started/Completed: 1510/1600

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

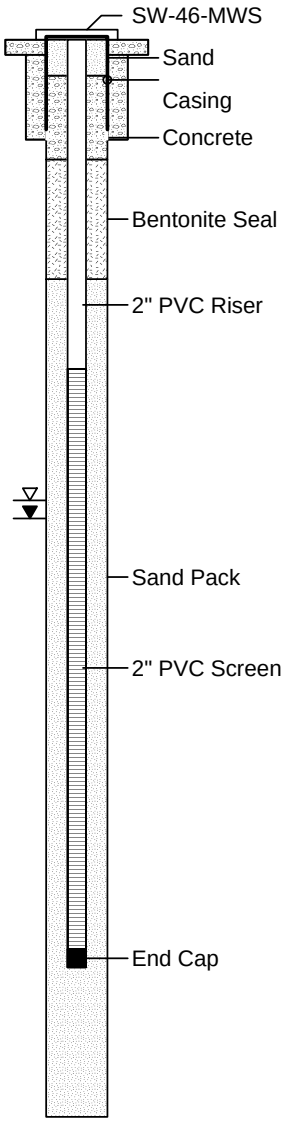
Well ID: SW-046-MWS

(page 1 of 1)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-7
ARM Representative	: Peter Vogel
Checked by	: Peter Vogel
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Austin Bonacum
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 569504.23
Easting (ft)	: 1464948.41
Date/Time Started	: 11/02/15 / 1400
Date/Time Completed	: 11/02/15 / 1600
Surf. Elev. (ft AMSL)	: 10.1
TOC Elev. (ft AMSL)	: 9.80
Total Depth (ft)	: 15.5' (bgs)
Depth to Water (ft)	: 8.0 (bgs) 11/03/15
Depth to Water (ft)	: 7.41' (TOC) 12/11/15
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. 10.1	LITHOLOGIC DESCRIPTION
0	10.1	0-1' Gravelly SAND, gray to black, dense, dry (fill)
		1-2' Sandy SILT, light gray with some brown, very stiff, fine grained, dry (fill)
		2-3' Silty SAND, light gray, very stiff, fine grained sand with trace clay, moist (fill)
		3-4' Clayey SAND, tan to light gray, stiff, with trace coarse sand to fine gravel, moist (fill)
5	5.1	4-14' Clayey SILT, light gray to brown, medium stiff to stiff, mottled, moist; 2" seam of dark brown gravelly sand at ~13' bgs, slag gravel (fill)
10	.1	
15	-4.9	14-16' SAND, light brown, stiff, fine grained, wet
		16-18' SAND, tan, fine grained, medium stiff, fine grained, trace fine well rounded gravel, wet
		End of Boring
20		



COMPLETION DETAILS

2x2' concrete pad
8-inch Flush-mount
Protective Cover

Riser: Sch 40 PVC
Riser Diameter: 2 in
Riser Stickup (ags): -0.3
(Flush- Mount)

Screen: Sch 40 PVC
Screen Diameter: 2 in
Top of Screen: 5.5' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 2.0' Bottom: 4.0'
Filter Pack: Filpro WG2
Top: 4.0' Bottom: 16.0'

Monitoring Well Development
Date: 11/09/15
Purged Amount: 50 gal.
Well Volumes Removed: 28
Time Started/Completed:
1515/1755

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

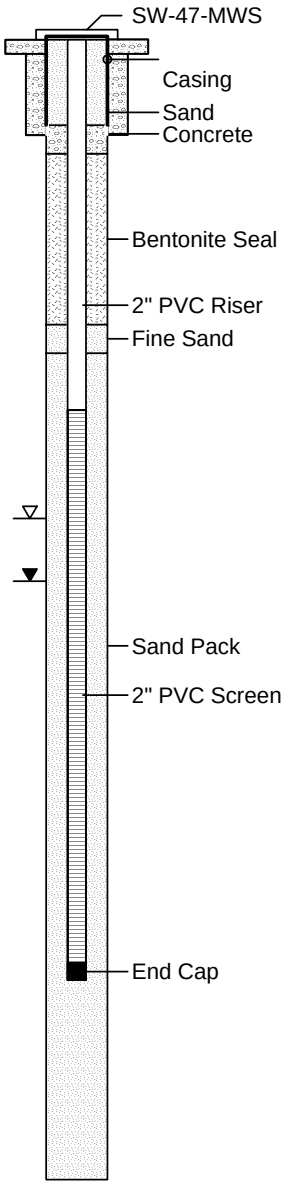
ARM Group Inc.
Earth Resource Engineers and Consultants

Well ID: SW-047-MWS

(page 1 of 1)

Project Name	: Sparrows Point	Northing (ft)	: 570242.63
Project Number	: 150300M-10-3	Easting (ft)	: 1464394.66
Client	: EnviroAnalytics Group	Date/Time Started	: 11/25/15 / 0915
Site	: Sparrows Point - Area B	Date/Time Completed	: 11/25/15 / 1200
Borehole Location	: Parcel B-7	Surf. Elev. (ft AMSL)	: 20.6
ARM Representative	: Peter Vogel	TOC Elev. (ft AMSL)	: 20.24
Checked by	: Peter Vogel	Total Depth (ft)	: 16.8' (bgs)
Drilling Company	: Allied Well Drilling	Depth to Water (ft)	: 9.5 (bgs) 11/30/15
Driller	: Mike Waller, Austin Bonacum	Depth to Water (ft)	: 8.4' (TOC) 12/11/15
Drilling Equipment	: Diedrich-D120	Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. 20.6	LITHOLOGIC DESCRIPTION
0	20.6	0-3.8' Gravelly SAND, dark brown, dense to medium dense fine to coarse grained, dry (fill)
		3.8-5' Clayey SILT, light brown to gray, stiff, mottled, moist
5	15.6	5-11' SILT, light brown to gray, very stiff, with trace clay, mottled, moist
10	10.6	grading to fine grained sand at 11' bgs
		11-13.5' Silty SAND, light brown to gray, very stiff, fine grained, wet
		13.5-14.5' SAND, orangish brown, medium stiff, fine grained
15	5.6	14.5-19' Clayey SILT, light brown to gray, moist
		with rusty iron particles and friable gravel sized material from 17-19' bgs (possible fill material)
		19-20' Clayey SILT, light brown to gray, medium stiff, wet
20		End of Boring



COMPLETION DETAILS

2x2' concrete pad
8-inch Flush-mount
Protective Cover

Riser: Sch 40 PVC
Riser Diameter: 2 in
Riser Stickup (ags): -0.3
(Flush-Mount)

Screen: Sch 40 PVC
Screen Diameter: 2 in
Top of Screen: 6.5' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 2.0' Bottom: 5.0'
Fine Sand: FilterSil "000"
Top: 5.0' Bottom: 5.5'
Filter Pack: DSI M2 Sand
Top: 5.5' Bottom: 17.5'

Monitoring Well Development
Date: 12/11/15
Purged Amount: 30 gal.
Well Volumes Removed: 21
Time Started/Completed:
1034/1140

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

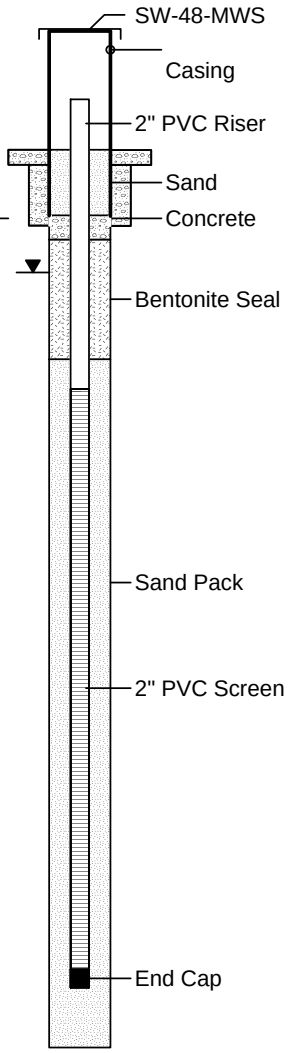
Well ID: SW-048-MWS

(page 1 of 1)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-7
ARM Representative	: Peter Vogel
Checked by	: Peter Vogel
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Austin Bonacum
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 568760.44
Easting (ft)	: 1463140.98
Date/Time Started	: 12/09/15 / 0830
Date/Time Completed	: 12/09/15 / 1100
Surf. Elev. (ft AMSL)	: 14.3
TOC Elev. (ft AMSL)	: 16.73
Total Depth (ft)	: 16.65' (TOC)
Depth to Water (ft)	: 4.53' (TOC) 12/09/15
Depth to Water (ft)	: 3.8' (TOC) 01/05/16
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. 14.3	LITHOLOGIC DESCRIPTION
0	14.3	0-1' Clayey SILT, light brown, soft, topsoil, grass surface, dry
		1-4' Clayey SILT, tan to light gray, medium stiff, mottling, moist
		4-5.5' Clayey SILT, gray to brown, medium stiff, mottling, moist
5	9.3	5.5-6.5' SAND, light gray, medium stiff, fine grained, wet
		6.5-8.5' Sandy SILT with CLAY, light gray to brown, medium stiff, mottling
		8.5-9' SAND, light gray to brown, stiff, fine grained
		9-10' Clayey SILT, light gray to brown, stiff, mottling
10	4.3	10-11' SAND, light brown, soft, fine grained with trace clay
		11-13.5' Clayey SILT, light gray to brown, soft to medium stiff, mottling, some fine sand stringers with trace clay
		13.5-15' Clayey SILT, light gray, medium stiff
15	-.7	End of Boring
20		



COMPLETION DETAILS

2x2' concrete pad
4.25" Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 in
Riser Stickup (ags): 2.5'

Screen: Sch 40 PVC
Screen Diameter: 2 in
Top of Screen: 4.0' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 1.5' Bottom: 3.5'
Filter Pack: DSI M2 Sand
Top: 3.5' Bottom: 15.0'

Monitoring Well Development
Date: 01/05/16
Purged Amount: 15
Well Volumes Removed: 7.1
Time Started/Completed: 1548/1700

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

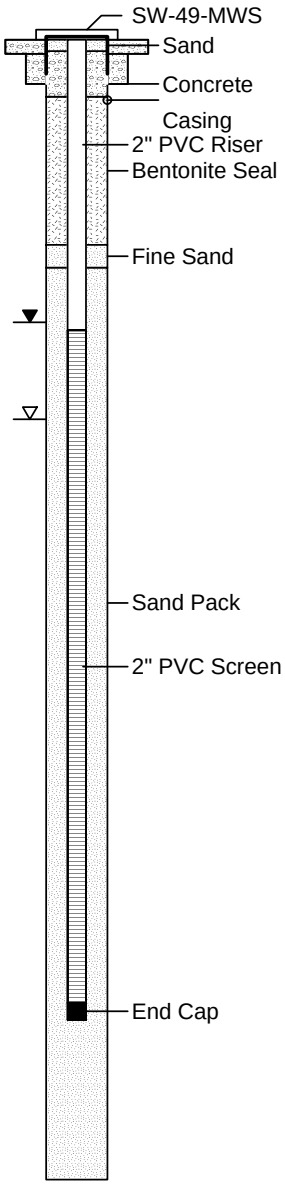
Well ID: SW-049-MWS

(page 1 of 1)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-7
ARM Representative	: William Mader, P.G.
Checked by	: William Mader, P.G.
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Austin Bonacum
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 566666.92
Easting (ft)	: 1463263.78
Date/Time Started	: 12/18/15 / 1035
Date/Time Completed	: 12/18/15 / 1300
Surf. Elev. (ft AMSL)	: 11.9
TOC Elev. (ft AMSL)	: 11.55
Total Depth (ft)	: 16.9' (TOC)
Depth to Water (ft)	: 5.3' (TOC) 01/20/16
Depth to Water (ft)	: 7.0' (TOC) 12/22/15
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. (ft.) 11.9	LITHOLOGIC DESCRIPTION
0	11.9	0-2' Silty SAND, brown to yellow brown, stiff, trace organics, ~12" of whitish gray gravels. moist
		2-5' Silty SAND and GRAVEL, grayish brown, very stiff, moist, many fine clear mica flakes, with small rounded quartz gravels
5	6.9	5-6' Clayey SILT, chroma 1/2 gray, very stiff, slightly moist, common olive-yellow oxidation
		6-8' Clayey SILT, gray, stiff, moist, with many brownish yellow and reddish yellow oxidation coatings, roots at base of SS sample
		8-10.83' Dark grayish with root material, very soft and very moist, two pieces of light gray slag like fragments at base
10	1.9	
		10.83-12' SAND, light gray then 4" brownish with redoximorphic features, some free water on side of sample
		12-14' SAND pale brown, loose, very moist with many reddish yellow/reddish yellow oxidation coatings, some chroma 2 at base
		14-16' CLAY SILT, gray, medium stiff, moist, minor reddish yellow oxidation
15	-3.1	
		16-18' CLAY SILT, light gray, soft, very moist, with extensive dark reddish black-brownish red oxidation, oxidation present in concretions or weak cemented lenses, very moist
		18-19.5' CLAY SILT, as above but with only moderate dark reddish brown-bownish red oxidation
20		19.5-20' Lean CLAY, dark gray, soft, no oxidation
		End of Boring



COMPLETION DETAILS

2x2' concrete pad
8-inch Flush-Mount
Protective Cover

Riser: Sch 40 PVC
Riser Diameter: 2 in
Riser Stickup (ags): -0.34'
(Flush-Mount)

Screen: Sch 40 PVC
Screen Diameter: 2 in
Top of Screen: 5.1' bgs
Screen Amount: 12.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 1.0' Bottom: 3.6'
Fine Sand:
Top: 3.6' Bottom: 4.0'
Filter Pack: FilPro W.G. #2
Top: 4.0' Bottom: 18.0'

Monitoring Well Development
Date: 12/22/15
Purged Amount: 45 gal.
Well Volumes Removed: 28
Time Started/Completed:
1550/1646

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

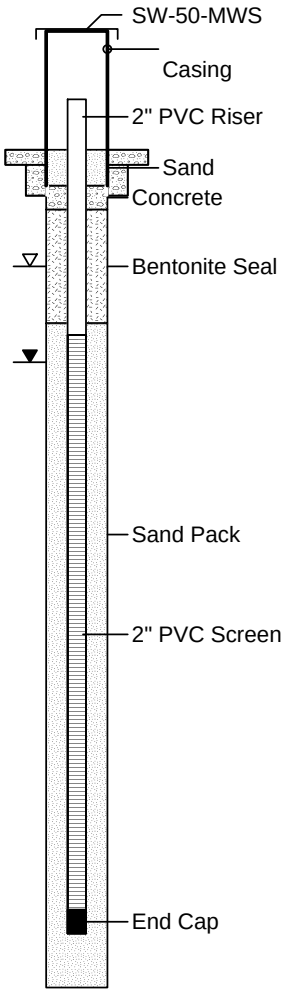
Well ID: SW-050-MWS

(page 1 of 1)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-7
ARM Representative	: Peter Vogel
Checked by	: Peter Vogel
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Austin Bonacum
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 565719.62
Easting (ft)	: 1463489.52
Date/Time Started	: 12/09/15 / 1200
Date/Time Completed	: 12/09/15 / 1330
Surf. Elev. (ft AMSL)	: 8.0
TOC Elev. (ft AMSL)	: 10.62
Total Depth (ft)	: 16.22 (TOC)
Depth to Water (ft)	: 4.78' (TOC) 12/09/15
Depth to Water (ft)	: 6.4' (TOC) 12/23/15
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. 8.0	LITHOLOGIC DESCRIPTION
0	8	0-2.5' Clayey SILT, grayish brown, stiff, with sand and gravel and wood debris, dry (fill)
		2.5-7' SILT, brown to gray, stiff, with trace clay, mottling, moist
5	3	
		7-8' Clayey SILT, gray, very stiff, wet
		8-9' SAND, gray, stiff, fine grained, wet
		9-10' SAND, tan, stiff, fine grained, wet
10	-2	10-11' SAND, gray, stiff, fine grained, wet
		11-12' Clayey SILT, gray to brown, medium stiff, mottling
		12-13.5' Silty SAND, light gray, medium stiff, fine grained, wet
		13.5-14' Clayey SILT, light gray, medium stiff
		End of Boring
15	-7	
20		



COMPLETION DETAILS

2x2' concrete pad
4.25" Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 in
Riser Stickup (ags): 2.8'

Screen: Sch 40 PVC
Screen Diameter: 2 in
Top of Screen: 3.1' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 1.0' Bottom: 2.9'
Filter Pack: DSI M2 Sand
Top: 2.9' Bottom: 14.0'

Monitoring Well Development
Date: 12/23/15
Purged Amount: 30 gal.
Well Volumes Removed: 19
Time Started/Completed: 1045 / 1140

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

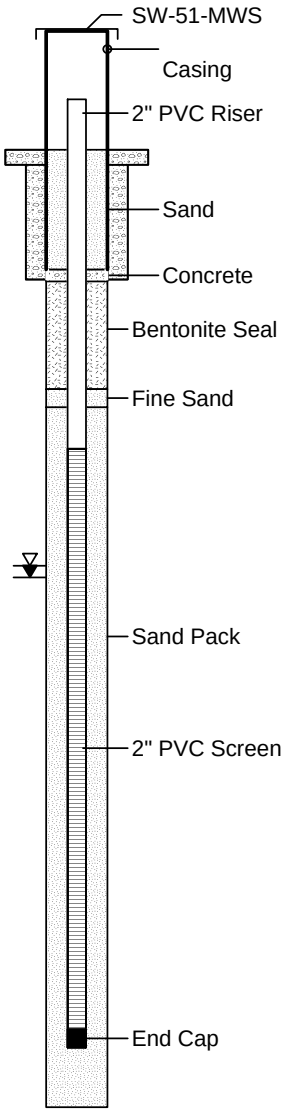
Well ID: SW-051-MWS

(page 1 of 1)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-7
ARM Representative	: Peter Vogel
Checked by	: Peter Vogel
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Austin Bonacum
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 565671.75
Easting (ft)	: 1462655.02
Date/Time Started	: 12/10/15 / 0800
Date/Time Completed	: 12/10/15 / 1100
Surf. Elev. (ft AMSL)	: 11.0
TOC Elev. (ft AMSL)	: 13.40
Total Depth (ft)	: 17.22' (TOC)
Depth to Water (ft)	: 9.95' (TOC) 12/10/15
Depth to Water (ft)	: 9.7' (TOC) 12/18/15
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. 11.0	LITHOLOGIC DESCRIPTION
0	11	0-2.5' Gravelly SAND, dark brown to black, very dense, slag gravel, dry (fill)
		2.5-4' Clayey SILT, gray, stiff, brown mottling, moist
		4-9' SILT, gray, stiff to very stiff, with trace clay, dry to moist
5	6	
		9-9.5' SAND, light gray to light brown, stiff, with some clay, moist
10	1	9.5-11.5' SAND, light gray to light brown, medium stiff, fine grained, wet
		11.5-12' Clayey SILT, light gray to brown, medium stiff, mottling
		12-13.5' SAND, light gray to brown, soft, fine grained, wet
		13.5-14' Clayey SILT, light gray to brown, soft, mottled
		14-16' Clayey SILT, gray, soft
15	-4	
		End of Boring
20		



COMPLETION DETAILS

2x2' concrete pad
4.25" Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 in
Riser Stickup (ags): 2.5'

Screen: Sch 40 PVC
Screen Diameter: 2 in
Top of Screen: 5.0' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 2.0' Bottom: 4.0'
Fine Sand: FilterSil "000"
Top: 4.0' Bottom: 4.3'
Filter Pack: DSI M2 Sand
Top: 4.3' Bottom: 16.0'

Monitoring Well Development
Date: 12/18/15
Purged Amount: 40 gal.
Well Volumes Removed: 32.7

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

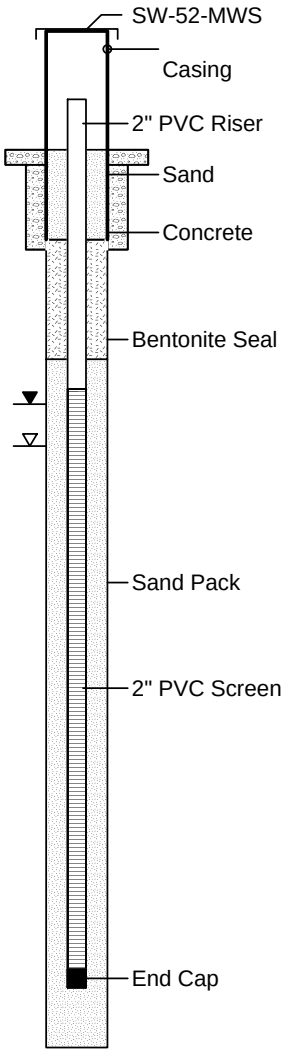
Well ID: SW-052-MWS

(page 1 of 1)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-7
ARM Representative	: Peter Vogel
Checked by	: Peter Vogel
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Austin Bonacum
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 565095.06
Easting (ft)	: 1462682.05
Date/Time Started	: 12/08/15 / 1230
Date/Time Completed	: 12/08/15 / 1600
Surf. Elev. (ft AMSL)	: 11.5
TOC Elev. (ft AMSL)	: 13.88
Total Depth (ft)	: 16.75' (TOC)
Depth to Water (ft)	: 6.77' (TOC) 12/08/15
Depth to Water (ft)	: 7.5' (TOC) 12/18/15
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. 11.5	LITHOLOGIC DESCRIPTION
0	11.5	0-2' Silty SAND with GRAVEL, dark gray to black to reddish brown, dense, slag gravel (fill)
		2-5.5' Gravelly SAND, gray to black, very dense to medium dense, slag gravel, wet (fill)
5	6.5	5.5-8' Clayey SILT, gray, stiff, mottled, wet
		8-11' SAND, gray with some brown, stiff, fine grained, wet
10	1.5	11-13.5' SAND, reddish brown, soft, fine grained, wet
		13.5-15' Clayey SILT, gray, soft, wet
15	-3.5	End of Boring
20		



COMPLETION DETAILS

2x2' concrete pad
4.25" Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 in
Riser Stickup (ags): 2.5'

Screen: Sch 40 PVC
Screen Diameter: 2 in
Top of Screen: 4.0' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 1.5' Bottom: 3.5'
Filter Pack: DSI Sand M2
Top: 3.5' Bottom: 15.0'

Monitoring Well Development
Date: 12/18/15
Purged Amount: 20 gal.
Well Volumes Removed: 13.5
Time Started/Completed: 1006/1126

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

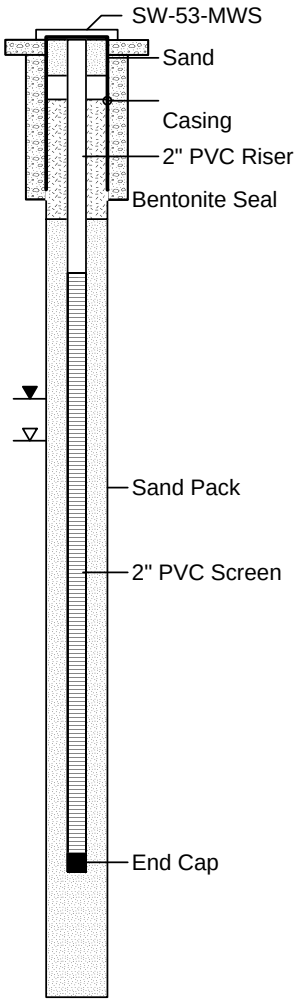
Well ID: SW-053-MWS

(page 1 of 1)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-3
ARM Representative	: Peter Vogel
Checked by	: Peter Vogel
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Austin Bonacum
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 567410.98
Easting (ft)	: 1461986.20
Date/Time Started	: 12/08/15 / 0900
Date/Time Completed	: 12/08/15 / 1200
Surf. Elev. (ft AMSL)	: 14.1
TOC Elev. (ft AMSL)	: 13.84
Total Depth (ft)	: 14.35' (TOC)
Depth to Water (ft)	: 4.01' (TOC) 12/09/15
Depth to Water (ft)	: 4.2' (TOC) 12/23/15
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. 14.1	LITHOLOGIC DESCRIPTION
0	14.1	0-0.5' Topsoil, brown, with grass and roots
		0.5-3' Sandy SILT with GRAVEL, brown to gray, stiff, slag gravel, dry (fill)
		3-4.5' Clayey SILT with GRAVEL, brown to gray, stiff, slag gravel, mottled, dry (fill)
5	9.1	4.5-7.5' Clayey SILT, gray, stiff to very stiff, mottled, moist
		7.5-9.5' SAND, gray, stiff, fine grained, wet
10	4.1	9.5-12' Clayey SILT, gray, very soft, wet
		12-14' Clayey SAND, gray, medium stiff, fine grained
15	-.9	14-16' Clayey SAND, gray, soft, fine grained, some dark brown clayey fine sand with coarse sand
		End of Boring
20		



COMPLETION DETAILS

2x2' concrete pad
8-inch Flush-mount
Protective Cover

Riser: Sch 40 PVC
Riser Diameter: 2 in
Riser Stickup (ags): -0.2
(Flush-mount)

Screen: Sch 40 PVC
Screen Diameter: 2 in
Top of Screen: 3.9' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 1.0' Bottom: 3.0'
Filter Pack: DSI M2 Sand
Top: 3.0' Bottom: 15.0'

Monitoring Well Development
Date: 12/23/15
Purged Amount: 15 gal.
Well Volumes Removed: 6.5
Time Started/Completed:
1140/1225

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

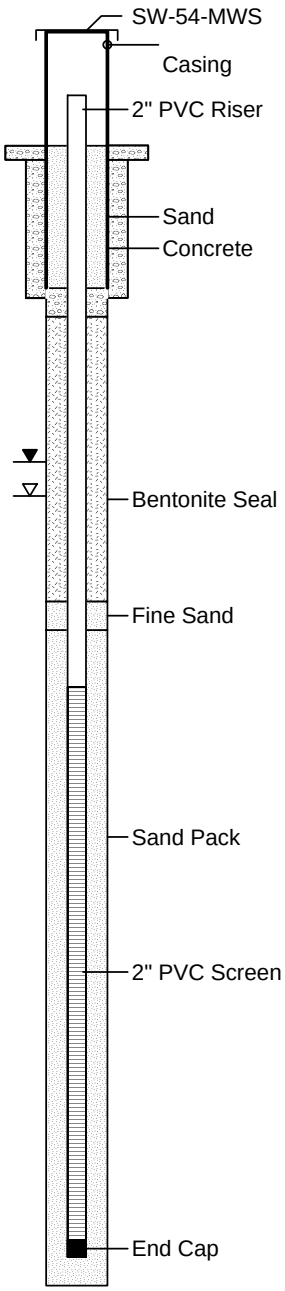
Well ID: SW-054-MWS

(page 1 of 1)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-2
ARM Representative	: Peter Vogel
Checked by	: Peter Vogel
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Austin Bonacum
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 566520.20
Easting (ft)	: 1461893.20
Date/Time Started	: 12/03/15 / 1245
Date/Time Completed	: 12/03/15 / 1530
Surf. Elev. (ft AMSL)	: 10.9
TOC Elev. (ft AMSL)	: 13.35
Total Depth (ft)	: 22.31' (TOC)
Depth to Water (ft)	: 8.3' (TOC) 12/03/15
Depth to Water (ft)	: 8.8' (TOC) 12/23/15
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. 10.9	LITHOLOGIC DESCRIPTION
0	10.9	0-0.5' Topsoil, dark brown, with grass and roots
		0.5-5' SAND, black to very dark brown, very loose to medium dense, with gravel and silt, slag gravel, dry (fill)
5	5.9	5-6' SILT, tan to brown, stiff, with trace clay, mottled, moist
		6-10' SILT, light gray to light brown, stiff to very stiff, with trace clay, moist
10	.9	10-11' Silty SAND, light gray to light brown, stiff, fine grained sand with trace clay, moist
		11-11.5' SAND, light gray, stiff, fine grained with some clay
		11.5-12.5' SAND, light gray, stiff, fine grained, wet
		12.5-14' Silty SAND, light gray, stiff, fine grained with trace clay, wet
		14-20' Clayey SILT, gray, soft to medium stiff, moist; layers of loose wet clayey silt with vegetation (fill)
15	-4.1	
20		End of Boring



COMPLETION DETAILS

2x2' concrete pad
4.25" Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 in
Riser Stickup (ags): 2.5'

Screen: Sch 40 PVC
Screen Diameter: 2 in
Top of Screen: 9.5' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 3.0' Bottom: 8.0'
Fine Sand: FilterSil "000"
Top: 8.0' Bottom: 8.5'
Filter Pack: DSI M2 Sand
Top: 8.5' Bottom: 20.0'

Monitoring Well Development
Date: 12/23/15
Purged Amount: 20 gal.
Well Volumes Removed: 11.2
Time Started/Completed: 1245/1435

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

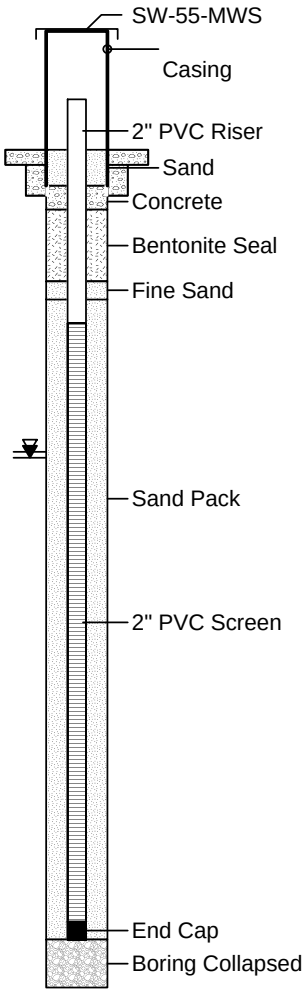
Well ID: SW-055-MWS

(page 1 of 1)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-2
ARM Representative	: William Mader, P.G.
Checked by	: William Mader, P.G.
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Austin Bonacum
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 565946.68
Easting (ft)	: 1461317.07
Date/Time Started	: 12/14/15 / 1510
Date/Time Completed	: 12/14/15 / 1610
Surf. Elev. (ft AMSL)	: 9.3
TOC Elev. (ft AMSL)	: 11.87
Total Depth (ft)	: 15.8' (TOC)
Depth to Water (ft)	: 7.7' (TOC) 01/06/16
Depth to Water (ft)	: 7.6' (TOC) 01/28/16
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. (ft.) 9.3	LITHOLOGIC DESCRIPTION
0	9.3	0-4.58' SLAG, dark brown, dense, possible limestone gravels, reacts strongly with HCl, slightly moist
5	4.3	4.58-6' SILT-Silty SAND, pale brown, stiff, moist with common redoximorphic features
		6-6.58' Silty SLAG, dark grayish, some light tan sandstone, soft, wet
		6.58-8' SILT, dark olive gray-dark gray (5Y 3/2-3/1), very moist, soft, some organics
		8-10' SILT-Silty SAND, light olive brown (2.5Y 5/2), soft to stiff, moist, common redoximorphic features, becomes sandier at base
10	-.7	10-12.5' Silty SAND, gray/reddish yellow, soft, moist grading to stiff to very stiff pale brown, less moist
		12.5-13.5' SAND, yellowish brown, moist
		13.5-14' Lean to fat CLAY, mixed chroma 2 gray and reddish yellow, moist
15	-5.7	End of Boring
20		



COMPLETION DETAILS

2x2' concrete pad
4.25" Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 in
Riser Stickup (ags): 2.6'

Screen: Sch 40 PVC
Screen Diameter: 2 in
Top of Screen: 2.9' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 1.0' Bottom: 2.2'
Fine Sand:
Top: 2.2' Bottom: 2.5'
Filter Pack: DSI Sand M2
Top: 2.5' Bottom: 13.2'

Monitoring Well Development
Date: 01/06/16
Purged Amount: 55 gal.
Well Volumes Removed: 42
Time Started/Completed: 0955/1131

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

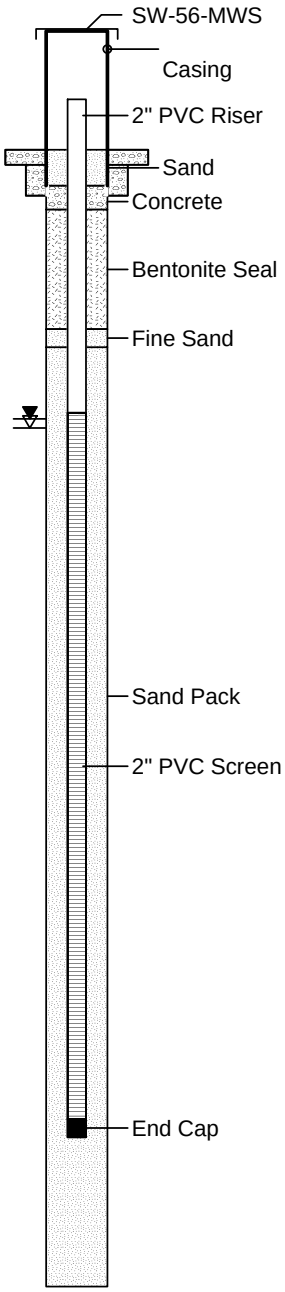
Well ID: SW-056-MWS

(page 1 of 1)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-2
ARM Representative	: William Mader, P.G.
Checked by	: William Mader, P.G.
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Austin Bonacum
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 566048.47
Easting (ft)	: 1460677.32
Date/Time Started	: 12/15/15 / 0950
Date/Time Completed	: 12/15/15 / 1100
Surf. Elev. (ft AMSL)	: 8.7
TOC Elev. (ft AMSL)	: 11.52
Total Depth (ft)	: 19.0' (TOC)
Depth to Water (ft)	: 7.2' (TOC) 01/06/16
Depth to Water (ft)	: 7.34' (TOC) 01/28/16
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. (ft.) 8.7	LITHOLOGIC DESCRIPTION
0	8.7	0-2.5' Silty SLAG GRAVEL, dark brown, medium brown, some gray dense to very dense, dry, strong reaction with HCl, slightly moist
		2.5-4.5' Silty SAND, reddish yellow grading to pale brown with many redoximorphic features, slightly moist, stiff
5	3.7	4.5-6' Sandy SILT, gray (5Y 5/1) soft, moist, common reddish brown, brown, reddish yellow organic and iron coatings, horizontal and diagonal partings
		6-8' Sandy SILT, gray (5Y 5/1), very soft-soft, very moist, thin lenses of organics and olive brown fine sand
		8-10' Sandy SILT to Silty SAND, brown-yellowish brown; stiff, moist, common to many redoximorphic features, moist, trace organic lenses
10	-1.3	10-12' Silty SAND-Clayey SAND, mixed chroma 2 gray and strong reddish yellow, hard, slightly moist
		12-16' Clayey SAND, mixed chroma 2 gray and strong reddish yellow, hard, slightly moist
15	-6.3	
		End of Boring
20		



COMPLETION DETAILS

2x2' concrete pad
4.25" Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 in
Riser Stickup (ags): 2.8'

Screen: Sch 40 PVC
Screen Diameter: 2 in
Top of Screen: 4.4' bgs
Screen Amount: 12.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 1.0' Bottom: 3.0'
Fine Sand: FilPro #000
Top: 3.0' Bottom: 3.3'
Filter Pack: DSI Sand M2
Top: 3.3' Bottom: 17.0'

Monitoring Well Development
Date: 01/06/16
Purged Amount: 7.5 gal.
Well Volumes Removed: 5.7
Time Started/Completed: 1200/1306

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

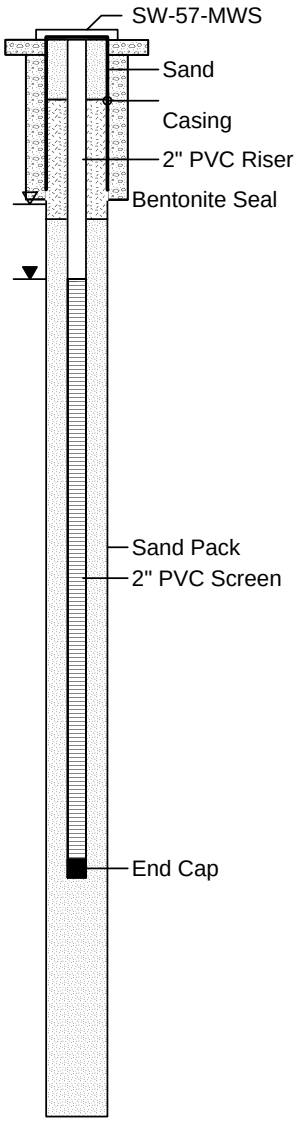
Well ID: SW-057-MWS

(page 1 of 1)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-2
ARM Representative	: Peter Vogel
Checked by	: Peter Vogel
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Austin Bonacum
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 567666.75
Easting (ft)	: 1460456.19
Date/Time Started	: 12/04/15 / 1000
Date/Time Completed	: 12/07/15 / 1100
Surf. Elev. (ft AMSL)	: 12.6
TOC Elev. (ft AMSL)	: 12.31
Total Depth (ft)	: 14.10' (bgs)
Depth to Water (ft)	: 4.10' (bgs) 12/08/15
Depth to Water (ft)	: 2.75' (TOC) 01/14/16
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. 12.6	LITHOLOGIC DESCRIPTION
0	12.6	0-6' Gravelly SAND, dark brown to light gray, very dense, slag gravel, dry (fill)
5	7.6	6-11' Clayey SILT, black to gray to light gray, stiff to soft, with slag gravel, moist (fill)
10	2.6	11-17.5' Clayey SILT, medium gray to gray, very soft to medium stiff, interbedded with black clayey silt (1-2" thick) and thin layers of sand, wet (possible fill)
15	-2.4	17.5-17.75' SAND, gray, medium stiff, fine grained 17.75-18' Clayey SILT, gray to brown, medium stiff, laminated and mottled End of Boring
20		



COMPLETION DETAILS

2x2' concrete pad
8-inch Flush-mount
Protective Cover

Riser: Sch 40 PVC
Riser Diameter: 2 in
Riser Stickup (ags): -0.3
(Flush-mount)

Screen: Sch 40 PVC
Screen Diameter: 2 in
Top of Screen: 4.0' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 1.0' Bottom: 3.0'
Filter Pack: DSI M2 Sand
Top: 3.0' Bottom: 18.0'

Monitoring Well Development
Date: 01/14/16
Purged Amount: 20 gal.
Well Volumes Removed: 10.5
Time Started/Completed:
1100/1208

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

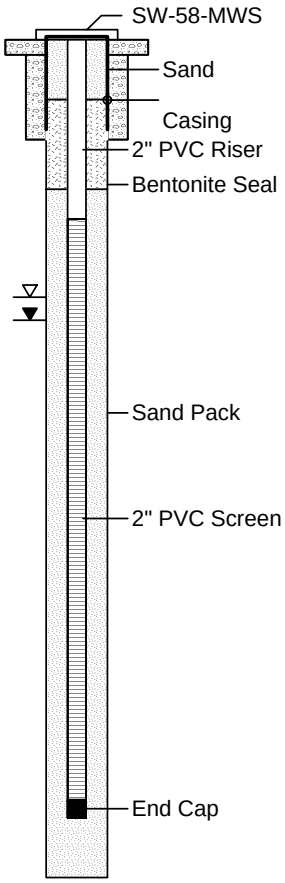
Well ID: SW-058-MWS

(page 1 of 1)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-2
ARM Representative	: Peter Vogel
Checked by	: Peter Vogel
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Austin Bonacum
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 568148.01
Easting (ft)	: 1459749.57
Date/Time Started	: 12/07/15 / 1145
Date/Time Completed	: 12/07/15 / 1400
Surf. Elev. (ft AMSL)	: 11.8
TOC Elev. (ft AMSL)	: 11.45
Total Depth (ft)	: 12.95' (TOC)
Depth to Water (ft)	: 4.69' (TOC) 12/08/15
Depth to Water (ft)	: 4.3' (TOC) 01/07/16
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. 11.8	LITHOLOGIC DESCRIPTION
0	11.8	0-1' Gravelly SAND, dark gray to brown, very dense, slag gravel, dry (fill)
		1-4' GRAVEL, gray, very dense, slag gravel (fill)
		4-8' Gravelly SAND, brown to gray to black, medium dense, gray slag gravel, moist (fill)
5	6.8	wet at 6' bgs
		8-10' Silty SAND, with some clay, gray to black, very soft, some slag gravel and shell fragments (fill)
10	1.8	10-13' Clayey SILT, dark gray, soft, with some gravel, wet (fill)
		13-14' Silty SAND, dark gray to black, soft, fine grained, with some gravel and shell fragments (fill)
		End of Boring
15	-3.2	
20		



COMPLETION DETAILS

2x2' concrete pad
8-inch Flush-mount
Protective Cover

Riser: Sch 40 PVC
Riser Diameter: 2 in
Riser Stickup (ags): -0.3
(Flush-mount)

Screen: Sch 40 PVC
Screen Diameter: 2 in
Top of Screen: 3.0' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 1.0' Bottom: 2.5'
Filter Pack: DSI M2 Sand
Top: 2.5' Bottom: 14.0'

Monitoring Well Development
Date: 01/07/16
Purged Amount: 40 gal.
Well Volumes Removed: 29.4
Time Started/Completed:
1150/1336

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

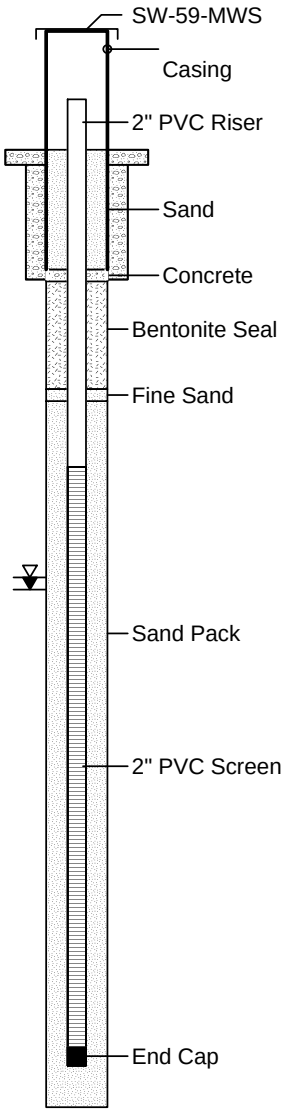
Well ID: SW-059-MWS

(page 1 of 1)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-1
ARM Representative	: Peter Vogel
Checked by	: Peter Vogel
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Austin Bonacum
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 567199.64
Easting (ft)	: 1458459.63
Date/Time Started	: 12/10/15 / 1200
Date/Time Completed	: 12/10/15 / 1445
Surf. Elev. (ft AMSL)	: 13.6
TOC Elev. (ft AMSL)	: 15.99
Total Depth (ft)	: 18.1' (TOC)
Depth to Water (ft)	: 10.17' (TOC) 12/11/15
Depth to Water (ft)	: 9.7' (TOC) 01/13/16
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. 13.6	LITHOLOGIC DESCRIPTION
0	13.6	0-3.5' Silty Sand, dark brown to gray, very dense, with slag gravel, dry (fill)
		white to light gray gravel (possible ash residue) at 3' bgs
		3.5-5' Gravelly SAND, black, medium dense, with melted metal fragments, dry (fill)
5	8.6	5-5.5' Gravelly SAND, brown, medium dense, moist (fill)
		5.5-7.5' Silty SAND, white to light gray, dense, with slag gravel (possible ash) moist (fill)
		7.5-8.5' Gravelly SAND, black with greenish tint, medium dense, moist (fill)
		8.5-9' Gravelly SAND, white to light gray crystalline material, medium dense, wet (fill)
		9-9.5' Gravelly SAND, purple, medium dense, wet (fill)
10	3.6	9.5-10.5' Gravelly SAND, black to dark gray, medium dense, slag gravel, wet (fill)
		10.5-11.5' Clayey SILT, olive gray, soft, wet
		11.5-14' SILT, gray to brown, soft, with some clay, mottling, wet
		14-16' Silty SAND, light gray to brown, stiff, fine grained, mottling, wet
15	-1.4	
		End of Boring
20		



COMPLETION DETAILS

2x2' concrete pad
4.25" Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 in
Riser Stickup (ags): 2.5'

Screen: Sch 40 PVC
Screen Diameter: 2 in
Top of Screen: 5.3' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 2.0' Bottom: 4.0'
Fine Sand: FilterSil "000"
Top: 4.0' Bottom: 4.2'
Filter Pack: DSI Sand M2
Top: 4.2' Bottom: 16.0'

Monitoring Well Development
Date: 01/13/16
Purged Amount: 25 gal.
Well Volumes Removed: 15.3
Time Started/Completed: 1120/1250

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

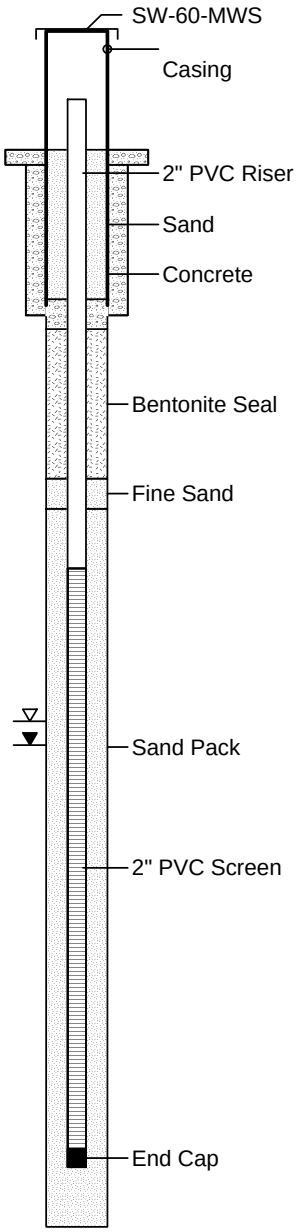
Well ID: SW-060-MWS

(page 1 of 1)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-1
ARM Representative	: Peter Vogel
Checked by	: Peter Vogel
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Austin Bonacum
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 567889.61
Easting (ft)	: 1457693.79
Date/Time Started	: 12/11/15 / 0830
Date/Time Completed	: 12/11/15 / 1145
Surf. Elev. (ft AMSL)	: 12.2
TOC Elev. (ft AMSL)	: 14.12
Total Depth (ft)	: 19.32' (TOC)
Depth to Water (ft)	: 11.99' (TOC) 12/11/15
Depth to Water (ft)	: 11.4' (TOC) 01/07/16
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. 12.2	LITHOLOGIC DESCRIPTION
0	12.2	0-1.5' Silty SAND, dark brown to black, very stiff, with slag gravel, dry (fill)
		1.5-2.5' Sandy SILT, clayey, brown to gray, very stiff, with slag gravel, moist (fill)
		2.5-6' Silty SAND, brown to tan to black, very stiff, with grayish green slag gravel, moist, (fill)
5	7.2	
		6-8' Silty SAND, gray to white, very dense, with slag gravel, wet (fill)
		8-10' Sandy GRAVEL, tan to dark gray, slag gravel, dry to moist, (fill)
10	2.2	10-18' Sandy GRAVEL, light gray with greenish tint, dense to very dense, slag gravel, wet (fill)
15	-2.8	
		End of Boring
20		



COMPLETION DETAILS

2x2' concrete pad
4.25" Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 in
Riser Stickup (ags): 2.0'

Screen: Sch 40 PVC
Screen Diameter: 2 in
Top of Screen: 7.0' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 3.0' Bottom: 5.5'
Fine Sand: FilterSil "000"
Top: 5.5' Bottom: 6.0'
Filter Pack: DSI M2 Sand
Top: 6.0' Bottom: 18.0'

Monitoring Well Development
Date: 01/07/16
Purged Amount: 30 gal.
Well Volumes Removed: 24.4
Time Started/Completed: 1400/1506

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

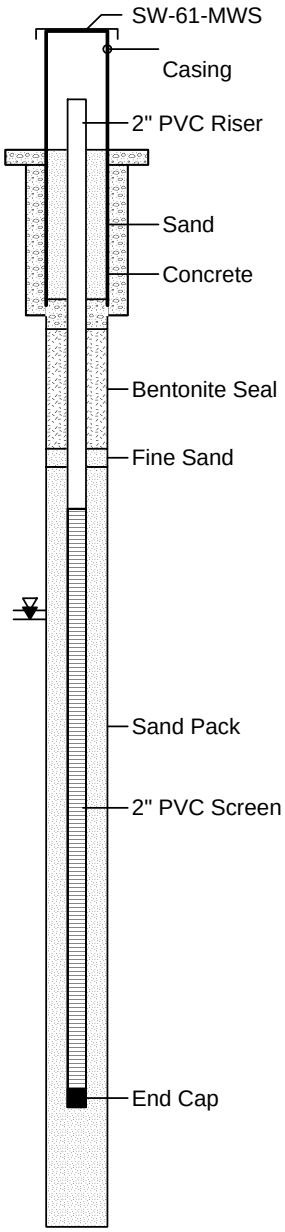
Well ID: SW-061-MWS

(page 1 of 1)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-1
ARM Representative	: Peter Vogel
Checked by	: Peter Vogel
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Austin Bonacum
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 567005.21
Easting (ft)	: 1457693.91
Date/Time Started	: 12/11/15 / 1200
Date/Time Completed	: 12/11/15 / 1500
Surf. Elev. (ft AMSL)	: 13.7
TOC Elev. (ft AMSL)	: 15.83
Total Depth (ft)	: 18.35' (TOC)
Depth to Water (ft)	: 9.95' (TOC) 12/11/15
Depth to Water (ft)	: 9.65' (TOC) 01/13/16
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. 13.7	LITHOLOGIC DESCRIPTION
0	13.7	0-4' Gravelly SAND, dark brown to black, medium to very dense, metal debris, dry to moist (fill)
		orangish red friable material at 3' bgs (2-3" thick)
		4-8' Silty SAND, gray to brown, medium dense, with some fine to coarse gravel particles, moist (fill)
5	8.7	
		8-9' SAND, tan, very soft, fine to coarse grained with fine quartz gravel, wet
		9-10' Silty SAND, dark greenish gray, very soft, with trace clay, wet
10	3.7	10-11' Silty SAND, gray, stiff, fine grained, wet
		11-12' Clayey SILT, gray to brown, stiff, mottled
		12-13' SAND, gray, stiff, fine to coarse grained with trace gravel, some shell fragments
		13-14' Clayey SILT, gray to brown, stiff, mottled
		14-15' Clayey SILT, gray, soft, with trace sand
15	-1.3	15-16' Silty SAND, tan, soft, fine grained, with some clay, wet
		16-18' Sandy SILT, clayey, gray to brown, medium stiff, mottled, with trace quartz gravels
		End of Boring
20		



COMPLETION DETAILS

2x2' concrete pad
4.25" Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 in
Riser Stickup (ags): 2.0'

Screen: Sch 40 PVC
Screen Diameter: 2 in
Top of Screen: 6.0' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 3.0' Bottom: 5.0'
Fine Sand: FilterSil "000"
Top: 5.0' Bottom: 5.3'
Filter Pack: DSI M2 Sand
Top: 5.3' Bottom: 17.0'

Monitoring Well Development
Date: 01/13/16
Purged Amount: 30 gal.
Well Volumes Removed: 21
Time Started/Completed: 0900/1050

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

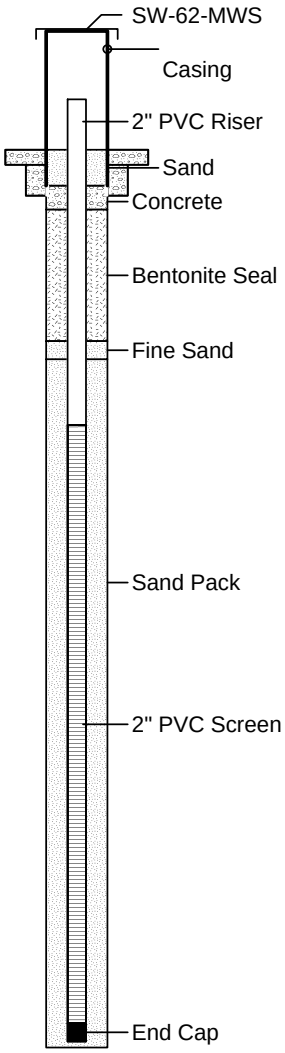
Well ID: SW-062-MWS

(page 1 of 1)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-1
ARM Representative	: William Mader, P.G.
Checked by	: William Mader, P.G.
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Austin Bonacum
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 567420.73
Easting (ft)	: 1456909.57
Date/Time Started	: 12/16/15 / 1330
Date/Time Completed	: 12/16/15 / 1415
Surf. Elev. (ft AMSL)	: 14.4
TOC Elev. (ft AMSL)	: 16.81
Total Depth (ft)	: 17.4' (TOC)
Depth to Water (ft)	: 11.0' (TOC) 01/12/16
Depth to Water (ft)	: 10.8' (TOC) 02/08/16
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. (ft.) 14.4	LITHOLOGIC DESCRIPTION
0	14.4	0-1' SLAG, grayish black, very dense, slightly moist
		1-2' Reddish crushed BRICK (0.16' seam) with pale brown,loose redoximorphic features, moist
		2-5' Silty SAND, pale brown to yellowish white grading to pale yellowish brown, loose, moist, no reaction with HCl
5	9.4	5-8' Silty SAND, pale brown, very moist, some yellowish reddish brown oxidation, medium reaction with HCl
		8-10' Silty SAND, pale brown to yellow brown, very loose, strong reaction with HCl, bottom 3" becomes dark grayish
10	4.4	10-11' Silty SAND, dark grayish black, very stiff, very moist
		11-12' Silty SAND to SILT, olive brown, stiff, very moist, no reaction with HCl
		12-14' Clayey SILT, mixed chroma with ~50% gray + strong yellowish brown and reddish yellow, stiff to very stiff, moist
		14-15' HSA only
15	-.6	End of Boring
20		



COMPLETION DETAILS

2x2' concrete pad
4.25" Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 in
Riser Stickup (ags): 2.4'

Screen: Sch 40 PVC
Screen Diameter: 2 in
Top of Screen: 4.6' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 1.0' Bottom: 3.2'
Fine Sand: FilPro #000
Top: 3.2' Bottom: 3.5'
Filter Pack: DSI M2 Sand
Top: 3.5' Bottom: 15.0'

Monitoring Well Development
Date: 01/12/16
Purged Amount: 25 gal.
Well Volumes Removed: 21.3
Time Started/Completed: 1415/1540

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

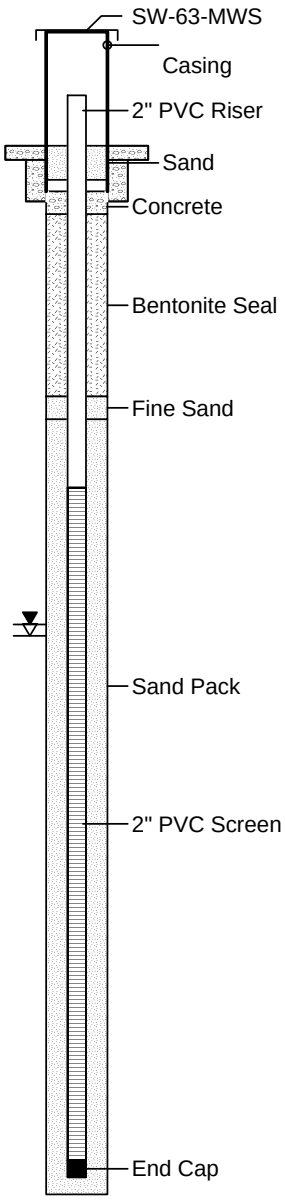
Well ID: SW-063-MWS

(page 1 of 1)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-4
ARM Representative	: William Mader, P.G.
Checked by	: William Mader, P.G.
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Austin Bonacum
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 565322.90
Easting (ft)	: 1456892.20
Date/Time Started	: 12/17/15 / 1220
Date/Time Completed	: 12/17/15 / 1310
Surf. Elev. (ft AMSL)	: 17.5
TOC Elev. (ft AMSL)	: 19.98
Total Depth (ft)	: 20.6' (TOC)
Depth to Water (ft)	: 10.7' (TOC) 01/12/16
Depth to Water (ft)	: 10.9' (TOC) 01/29/16
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. (ft.) 17.5	LITHOLOGIC DESCRIPTION
0	17.5	0-8' SLAG, mixed brown/dark brown, yellowish and near white; dense, slightly moist, only brownish slag material reacts with HCl (10% solution)
5	12.5	One piece of ¾" thick x 1x2" steel fragment at 7'
		8-8.91' SLAG, dark gray to black with some light brown/yellowish brown; wet
		8.91-10' Silty SAND-Clayey SAND, chroma 2 gray with common yellow oxidation, very stiff to stiff
10	7.5	10-12' Grades Clayey SAND to Clayey SILT, as above, moist, stiff to very stiff, very consolidated
		12-14' Clayey SILT, chroma 2 grayish with common yellowish oxidation; stiff, moist, appears very consolidated
15	2.5	14-16' Chroma 2 gray and ??? yellowish oxidation, stiff, becomes sandier with depth, moist to very moist, bottom 1-2" is SW
		16-18' Pale grayish with common yellowish oxidation, variably soft to stiff (SW and SC material), saturated
20		End of Boring



COMPLETION DETAILS

2x2' concrete pad
4.25" Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 in
Riser Stickup (ags): 2.4'

Screen: Sch 40 PVC
Screen Diameter: 2 in
Top of Screen: 6.0' bgs
Screen Amount: 12.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 1.2' Bottom: 4.4'
Fine Sand: FilPro #000
Top: 4.4' Bottom: 4.8'
Filter Pack: DSI Sand M2
Top: 4.8' Bottom: 18.4'

Monitoring Well Development
Date: 01/12/16
Purged Amount: 40 gal.
Well Volumes Removed: 26.1
Time Started/Completed: 1110/1310

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

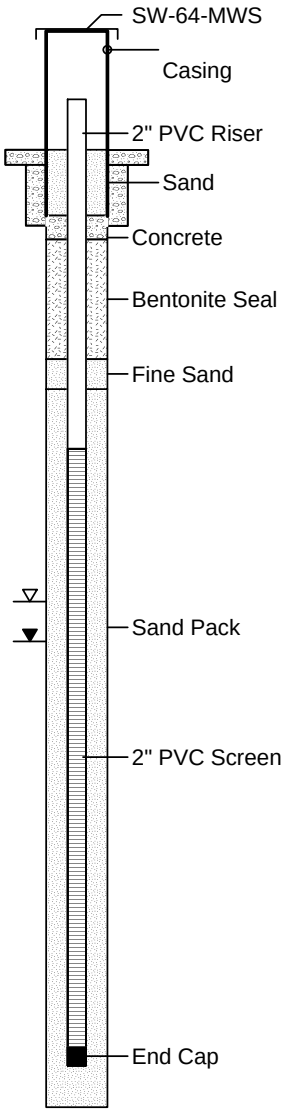
Well ID: SW-064-MWS

(page 1 of 1)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-4
ARM Representative	: Peter Vogel
Checked by	: Peter Vogel
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Ryan Sites
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 564322.36
Easting (ft)	: 1457393.5417.39
Date/Time Started	: 01/13/16 / 1315
Date/Time Completed	: 01/14/16 / 1100
Surf. Elev. (ft AMSL)	: 15.2
TOC Elev. (ft AMSL)	: 17.39
Total Depth (ft)	: 17.83' (TOC)
Depth to Water (ft)	: 9.97' (TOC) 01/14/16
Depth to Water (ft)	: 9.3' (TOC) 02/26/16
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. 15.2	LITHOLOGIC DESCRIPTION
0	15.2	0-3' Gravelly SAND, gray, very dense, slag gravel, moist (fill)
		3-7' SAND, light gray to white, medium dense, with some slag gravel, moist (fill)
5	10.2	
		7-9.5' Sandy GRAVEL, brown, medium dense, slag gravel, wet (fill)
10	5.2	9.5-10.5' Sandy GRAVEL, dark gray, very dense, slag gravel (fill)
		10.5-16' Gravelly SAND, light gray, dense to very dense, wet (fill)
15	.2	
		End of Boring
20		



COMPLETION DETAILS

2x2' concrete pad
4.25" Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 in
Riser Stickup (ags): 2.5'

Screen: Sch 40 PVC
Screen Diameter: 2 in
Top of Screen: 5.0' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 1.5' Bottom: 3.5'
Fine Sand: FilterSil "000"
Top: 3.5' Bottom: 4.0'
Filter Pack: DSI M2 Sand
Top: 4.0' Bottom: 16.0'

Monitoring Well Development
Date: 02/26/16
Purged Amount: 20
Well Volumes Removed: 15.4
Time Started/Completed: 1125/1240

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

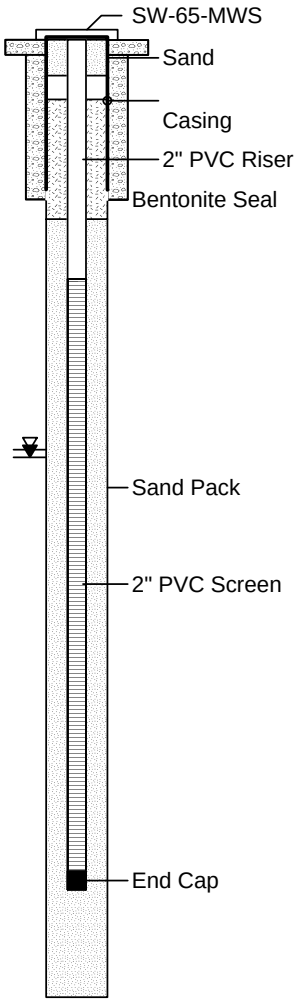
Well ID: SW-065-MWS

(page 1 of 1)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-4
ARM Representative	: Peter Vogel
Checked by	: Peter Vogel
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Ryan Sites
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 564008.99
Easting (ft)	: 1457839.54
Date/Time Started	: 01/13/16 / 0920
Date/Time Completed	: 01/13/16 / 1230
Surf. Elev. (ft AMSL)	: 12.6
TOC Elev. (ft AMSL)	: 12.27
Total Depth (ft)	: 14.4' (bgs)
Depth to Water (ft)	: 5.13' (bgs) 01/13/16
Depth to Water (ft)	: 5.0' (bgs) 02/18/16

Depth (ft.)	Surf. Elev. 12.6	LITHOLOGIC DESCRIPTION
0	12.6	0-2' Sandy GRAVEL, dark gray, dense, slag gravel, moist (fill)
		2-4' Gravelly SAND, dark brown, dense, slag gravel, moist (fiil)
		4-6' Gravelly SAND, dark gray, very dense, bluish gray slag gravel, moist (fill)
5	7.6	6-8' Gravelly SAND, black, dense, slag gravel, wet (fill)
		8-12' Clayey SILT, dark gray, soft, wet
10	2.6	
		12-16' Clayey SILT, medium brown, stiff to soft, mottled, wet
15	-2.4	
		End of Boring
20		



COMPLETION DETAILS

2x2' concrete pad
8-inch Flush-Mount
Protective Cover

Riser: Sch 40 PVC
Riser Diameter: 2 in
Riser Stickup (ags): -0.3
(Flush-mount)

Screen: Sch 40 PVC
Screen Diameter: 2 in
Top of Screen: 4.0' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 1.0' Bottom: 3.0'
Filter Pack: DSI M2 Sand
Top: 3.0' Bottom: 15.0'

Monitoring Well Development
Date: 02/18/16
Purged Amount: 50 gal.
Well Volumes Removed: 34

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

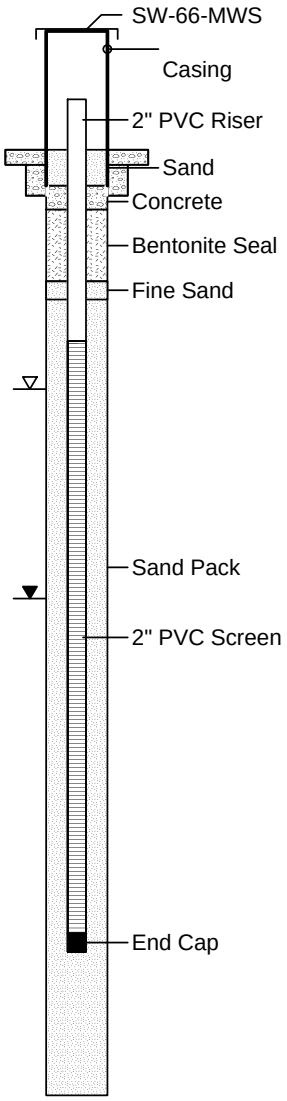
Well ID: SW-066-MWS

(page 1 of 1)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-5
ARM Representative	: William Mader, P.G.
Checked by	: William Mader, P.G.
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Austin Bonacum
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 564235.89
Easting (ft)	: 1458826.45
Date/Time Started	: 12/23/15 / 1050
Date/Time Completed	: 12/23/15 / 1130
Surf. Elev. (ft AMSL)	: 10.8
TOC Elev. (ft AMSL)	: 13.02
Total Depth (ft)	: 15.8' (TOC)
Depth to Water (ft)	: 9.7' (TOC) 12/23/15
Depth to Water (ft)	: 6.2' (TOC) 01/14/16
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. (ft.) 10.8	LITHOLOGIC DESCRIPTION
0	10.8	0-2.25' SLAG, black-dark gray, moist, medium to strong reaction with HCl
		2.25-4' Silty SAND Slag, yellowish brown, moist, medium reaction to HCl
		4-6' SLAG, light bluish gray grades to pale whitish, moist, no reaction with HCl
5	5.8	
		6-6.75' Sandy and Clayey SILT, yellowish brown, soft, moist, with grayish black slag, very moist
		6.75-8' SLAG, light bluish gray grades to pale whitish, moist, no reaction with HCl
		8-10' Clayey SILT, yellowish brown, very soft, saturated
10	.8	10-14' Clayey SILT, yellowish brown, stiff, common chroma 2 gray reduction, moist
15	-4.2	
		End of Boring
20		



COMPLETION DETAILS

2x2' concrete pad
4.25" Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 in
Riser Stickup (ags): 2.3'

Screen: Sch 40 PVC
Screen Diameter: 2 in
Top of Screen: 3.2' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 1.0' Bottom: 2.2'
Fine Sand: FilPro #000
Top: 2.2' Bottom: 2.5'
Filter Pack: DSI Sand M2
Top: 2.5' Bottom: 14.0'

Monitoring Well Development
Date: 01/14/16
Purged Amount: 25 gal.
Well Volumes Removed: 15.7
Time Started/Completed: 1455/1545

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

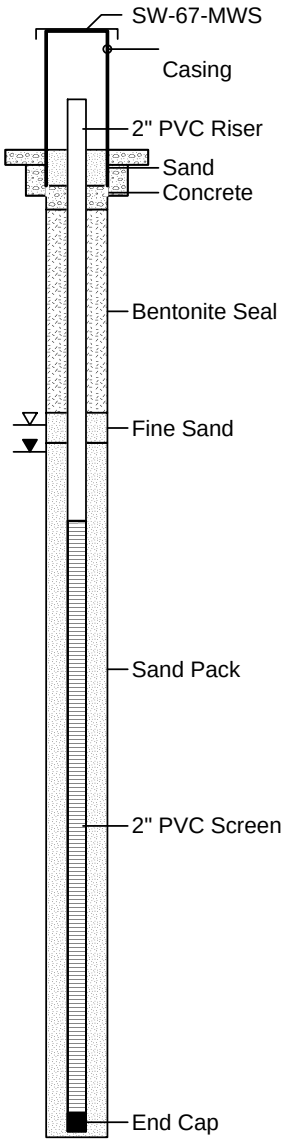
Well ID: SW-067-MWS

(page 1 of 1)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-5
ARM Representative	: Peter Vogel
Checked by	: Peter Vogel
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Austin Bonacum
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 564917.48
Easting (ft)	: 1458453.61
Date/Time Started	: 12/17/15 / 1340
Date/Time Completed	: 12/17/15 / 1720
Surf. Elev. (ft AMSL)	: 12.7
TOC Elev. (ft AMSL)	: 14.85
Total Depth (ft)	: 18.7' (TOC)
Depth to Water (ft)	: 7.15' (TOC) 01/15/16
Depth to Water (ft)	: 6.7' (TOC) 02/04/16
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. (ft.) 12.7	LITHOLOGIC DESCRIPTION
0	12.7	0-2.75' SLAG and FILL, gray brown to black to gray brown, very dense, very moist to wet
		2.75-4' SILT, pale yellowish brown with common chroma 2 gray, moist, stiff
5	7.7	4-6' Sandy SILT, yellowish brown-brownish yellow, stiff, moist common chroma 2-3 colorations
		6-8' Silty and Clayey SAND, yellowish brown-brownish yellow, stiff, moist, common chroma 2-4 colorations
10	2.7	8-10' Silty SAND, yellowish brown, strong yellowish brown to reddish yellow, very moist to saturated, medium dense
		10-12' Silty SAND and SAND, brown, pale yellowish brown, minor reddish yellow to chroma 1 gray toward base, common chroma 2-3 coloration, medium dense, saturated
		12-14' Silty SAND, pale brown, gray brown, medium dense, saturated, some chroma 1/2 gray
15	-2.3	14-16' Fat CLAY, gray, medium dense, very moist, with common yellowish red, yellowish brown oxidation
		16-16.5' HSA only
		End of Boring
20		



COMPLETION DETAILS

2x2' concrete pad
4.25" Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 in
Riser Stickup (ags): 2.2'

Screen: Sch 40 PVC
Screen Diameter: 2 in
Top of Screen: 6.2' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 1.0' Bottom: 4.4'
Fine Sand: FilPro #000
Top: 4.4' Bottom: 4.9'
Filter Pack: DSI M2 Sand
Top: 4.9' Bottom: 16.5'

Monitoring Well Development
Date: 01/15/16
Purged Amount: 60 gal.
Well Volumes Removed: 31.6

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

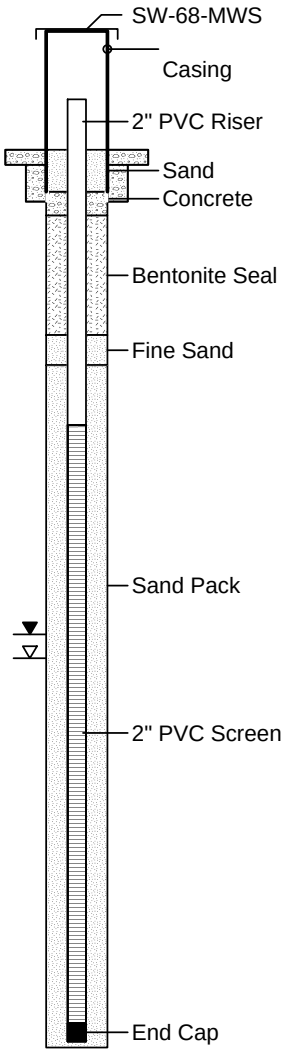
Well ID: SW-068-MWS

(page 1 of 1)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-1
ARM Representative	: Peter Vogel
Checked by	: Peter Vogel
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Austin Bonacum
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 565823.84
Easting (ft)	: 1458036.16
Date/Time Started	: 12/16/15 / 1015
Date/Time Completed	: 12/16/15 / 1100
Surf. Elev. (ft AMSL)	: 14.6
TOC Elev. (ft AMSL)	: 16.87
Total Depth (ft)	: 17.3' (TOC)
Depth to Water (ft)	: 10.3' (TOC) 01/14/16
Depth to Water (ft)	: 10.7' (TOC) 01/29/16
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. 14.6	LITHOLOGIC DESCRIPTION
0	14.6	0-2' SLAG, dark gray to dark reddish black (2.5 YR 3/1) very dense, slightly moist
		2-4.25' SLAG, dark reddish brown grading to light brown and very dark brown fine slag intermixed with bluish gray slag gravel, moist (5B 5/1)
5	9.6	4.25-6' SLAG, black, coaly, with some dark brown intermixed, moist, loose to medium dense
		6-6.25' Silty SAND and GRAVEL, pale brown, loose, moist, no odor
		6.25-6.83' Silty SAND and GRAVEL, dark gray-black, loose, moist
		6.83-7.25' Silty SAND and gRAVEL, brownish-red, medium dense, moist
		7.25-8' Silty SAND, olive brown/red brown, medium dense, moist
10	4.6	8-10' SLAG, dark reddish brown, medium dense, saturated with strong Br Red oxidation on slag pieces
		10-12' As above; loose to medium dense strong yellowish red oxidized zone ~ 11' bgs, becomes black at 12' bgs
		12-13' SLAG, dark reddish brown, loose, medium dense
		13-14' Silty and Clayey SAND, gray to pale gray to yellowish brown with redoximorphic features, loose to medium
		14-15' HSA only
15	-.4	End of Boring
20		



COMPLETION DETAILS

2x2' concrete pad
4.25" Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 in
Riser Stickup (ags): 2.3'

Screen: Sch 40 PVC
Screen Diameter: 2 in
Top of Screen: 4.6' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 1.1' Bottom: 3.1'
Fine Sand: FilPro #000
Top: 3.1' Bottom: 3.6'
Filter Pack: DSI M2 Sand
Top: 3.6 Bottom: 15.0'

Monitoring Well Development
Date: 01/04/16
Purged Amount: 30 gal.
Well Volumes Removed: 25
Time Started/Completed: 0900/1000

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

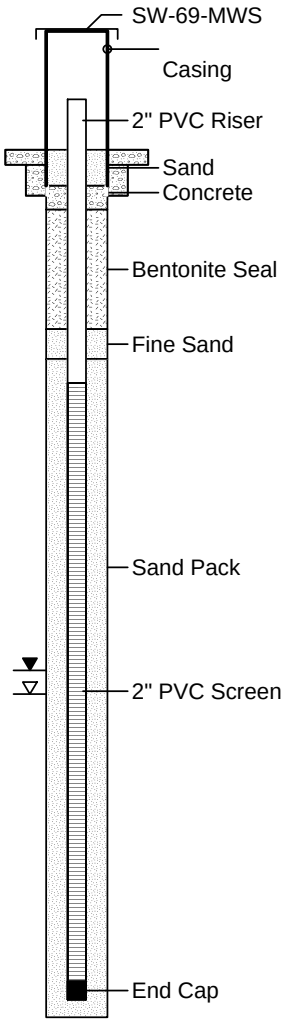
Well ID: SW-069-MWS

(page 1 of 1)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-1
ARM Representative	: Peter Vogel
Checked by	: Peter Vogel
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Austin Bonacum
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 566309.02
Easting (ft)	: 1458770.00
Date/Time Started	: 12/15/15 / 1220
Date/Time Completed	: 12/15/15 / 1430
Surf. Elev. (ft AMSL)	: 14.2
TOC Elev. (ft AMSL)	: 16.56
Total Depth (ft)	: 16.6' (TOC)
Depth to Water (ft)	: 10.9' (TOC) 01/13/16
Depth to Water (ft)	: 11.3' (TOC) 01/29/16
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. 14.2	LITHOLOGIC DESCRIPTION
0	14.2	0-2' SLAG, dark reddish brown, dense to very dense, slightly moist; reacts strong with HCl
		2-4' SLAG, pale brown, gray brown, medium dense, pale colors, moist, strong reaction HCl
		4-6' SLAG, mixed pale gray, black, dark brown, minor dark red, moist, slight reaction with HCl
5	9.2	
		6-8' SLAG, mixed dark brown, brownish-black with minor pinkish white, medium dense, moist, slight to no reaction with HCl
		8-10' SLAG, mixed pale brown, gray br, minor dk br, gray-white, very moist to wet, medium dense, slight HCl reaction
10	4.2	10-12' SLAG, blackish gray, medium dense, wet, strong reddish zone at base (~2" interval); no reaction with HCl
		12-14' As above, trace strong reddish color in upper 6" then blackish-gray throughout lower 12"
		14-14.5' HSA only
15	-.8	End of Boring
20		



COMPLETION DETAILS

2x2' concrete pad
4.25" Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 in
Riser Stickup (ags): 2.3'

Screen: Sch 40 PVC
Screen Diameter: 2 in
Top of Screen: 3.9' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 1.0' Bottom: 3.0'
Fine Sand: FilterSil "000"
Top: 3.0' Bottom: 3.3'
Filter Pack: DSI M2 Sand
Top: 3.3' Bottom: 14.5'

Monitoring Well Development
Date: 01/13/16
Purged Amount: 10 gal.
Well Volumes Removed: 10
Time Started/Completed: 1120/1250

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

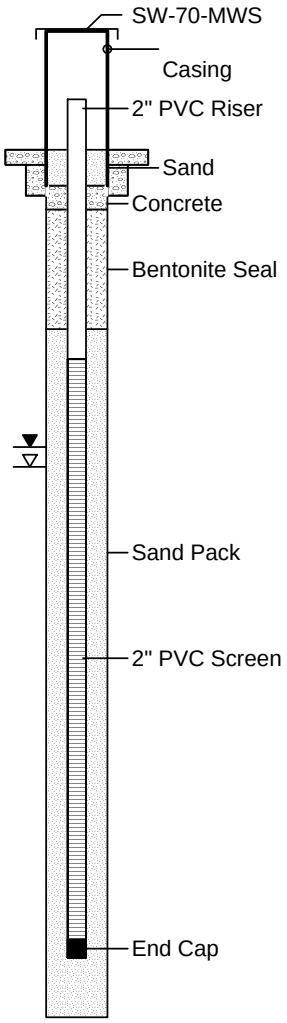
Well ID: SW-070-MWS

(page 1 of 1)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-5
ARM Representative	: Peter Vogel
Checked by	: Peter Vogel
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Ryan Sites
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 565612.92
Easting (ft)	: 1459619.82
Date/Time Started	: 01/04/16 / 1200
Date/Time Completed	: 01/04/16 / 1600
Surf. Elev. (ft AMSL)	: 9.1
TOC Elev. (ft AMSL)	: 11.17
Total Depth (ft)	: 16.30' (TOC)
Depth to Water (ft)	: 7.37' (TOC) 01/04/16
Depth to Water (ft)	: 7.7 (TOC) 01/19/16
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. 9.1	LITHOLOGIC DESCRIPTION
0	9.1	0-0.5' ML, DK gray brown, soft, moist (topsoil)
		0.5-2.0' ML/SM, Strong brown, stiff, moist, no RMFs observed (Native soil, no odor)
		2.0-4.0' ML/SM, Strong brown to brown, very stiff, moist, common (Native soil, no odor)
		4.0-5.08' SM/SW, Strong brown to brown, loose, very moist, saturated (No odor)
5	4.1	5.08-7.66' SM/SW, Pale gray to gray, loose, saturated, pale Y oxidation (No odor)
		7.66-8.0' SW, Dark YR/Rbr, loose, wet, Bk Y RMFs (No odor)
		8.0-10.5' SW, Dark RBr, loose, saturated, apparent black concentractions
10	-.9	10.5-11.0' SW-CL, Strong Br-Ry, stiff, very moist (No odor)
		11.0-14.0' CL-CH, Pale Br-gray, stiff to medium, RMFs, very moist, some possible Fe concentrations (No odor)
15	-5.9	End of Boring
20		



COMPLETION DETAILS

2x2' concrete pad
4.25" Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 in
Riser Stickup (ags): 2.5'

Screen: Sch 40 PVC
Screen Diameter: 2 in
Top of Screen: 3.5' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 1.0' Bottom: 3.0'
Filter Pack: DSI M2 Sand
Top: 3.0' Bottom: 14.5'

Monitoring Well Development
Date: 01/19/16
Purged Amount: 30
Well Volumes Removed: 21.4

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

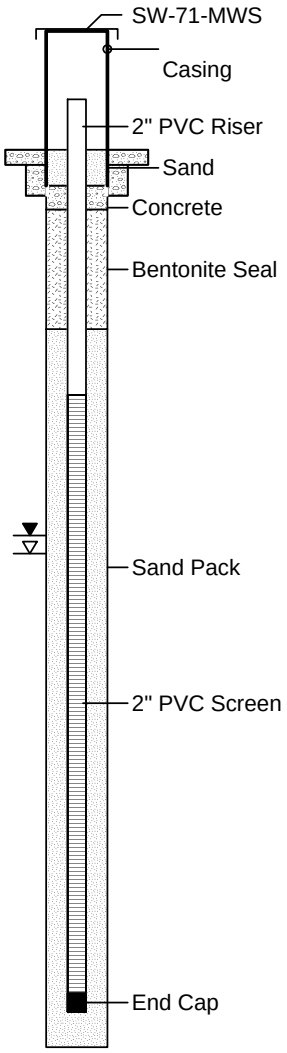
Well ID: SW-071-MWS

(page 1 of 1)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-5
ARM Representative	: Peter Vogel
Checked by	: Peter Vogel
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Ryan Sites
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 564957.19
Easting (ft)	: 1460809.42
Date/Time Started	: 01/14/16 / 1400
Date/Time Completed	: 01/14/16 / 1715
Surf. Elev. (ft AMSL)	: 14.3
TOC Elev. (ft AMSL)	: 16.63
Total Depth (ft)	: 17.10' (TOC)
Depth to Water (ft)	: 9.07' (TOC) 01/15/16
Depth to Water (ft)	: 9.4' (TOC) 01/28/16
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. 14.3	LITHOLOGIC DESCRIPTION
0	14.3	0-2' Gravelly SAND, tan, medium dense, dry, with concrete rubble (fill)
		2-7' Gravelly SAND, gray, very dense, with wood/timber, dry to moist (fill)
5	9.3	
		7-8' Silty SAND, gray, stiff, fine grained, wet (fill)
		8-9.5' Gravelly SAND, black, dense, wet (fill)
		9.5-10' Clayey SILT, tan, dense, with fine grained sand
10	4.3	10-12' SAND, tan to brown, very stiff, fine grained
		12-15' Clayey SILT, gray to light brown, medium stiff, mottled
15	-.7	End of Boring
20		



COMPLETION DETAILS

2x2' concrete pad
4.25" Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 in
Riser Stickup (ags): 2.6'

Screen: Sch 40 PVC
Screen Diameter: 2 in
Top of Screen: 4.1' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 1.0' Bottom: 3.0'
Filter Pack: DSI M2 Sand
Top: 3.0' Bottom: 15.0'

Monitoring Well Development
Date: 01/28/16
Purged Amount: 45 gal.
Well Volumes Removed: 34.5
Time Started/Completed: 1340/1440

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

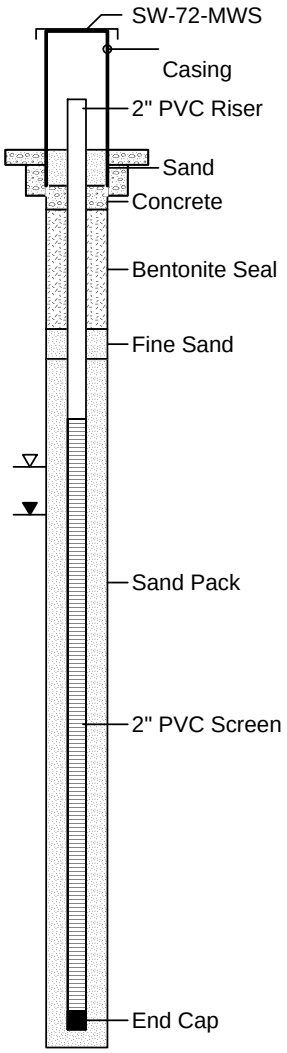
Well ID: SW-072-MWS

(page 1 of 1)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-B
ARM Representative	: William Mader, P.G.
Checked by	: William Mader, P.G.
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Austin Bonacum
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 564563.01
Easting (ft)	: 1460661.22
Date/Time Started	: 12/22/15 / 1120
Date/Time Completed	: 12/22/15 / 1350
Surf. Elev. (ft AMSL)	: 12.0
TOC Elev. (ft AMSL)	: 14.60
Total Depth (ft)	: 17.4' (TOC)
Depth to Water (ft)	: 8.6' (TOC) 12/22/15
Depth to Water (ft)	: 7.8' (TOC) 01/18/16
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. (ft.) 12.0	LITHOLOGIC DESCRIPTION
0	12	0-3.25' SLAG, gray brown, gray, very dense, moist, common fragments up to 1"
		3.25-6' SLAG, blackish-gray and gray, fine grained vs. above, moist
5	7	
		6-8' Clayey SILT, chroma 2 gray with minor yellowish brown and olive brown oxidation, very moist, medium plasticity
		8-10' Clayey SILT and Sandy SILT, gray brown (~4") to pale grayish yellow with yellowish brown oxidation, very stiff to medium dense, moist to saturated
10	2	10-12' Silty SAND-SAND, light gray with yellowish black oxidation grading to blackish yellowish red to reddish yellow, saturated, medium dense
		12-12.5' SAND, reddish yellow, loose, saturated, some gray
		12.5-14' Clayey SILT, light gray with many dark reddish brown iron concretions and yellowish brown oxidation, stiff, very moist
15	-3	14-16' HSA only
		End of Boring
20		



COMPLETION DETAILS

2x2' concrete pad
4.25" Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 in
Riser Stickup (ags): 2.6'

Screen: Sch 40 PVC
Screen Diameter: 2 in
Top of Screen: 4.5' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 1.0' Bottom: 3.0'
Fine Sand: FilPro #000
Top 3.0' Bottom 3.5'
Filter Pack: FilPro W.G. #2
Top: 3.5' Bottom: 15.0'

Monitoring Well Development
Date: 01/18/16
Purged Amount: 30 gal.
Well Volumes Removed: 20
Time Started/Completed: 1025/1140

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

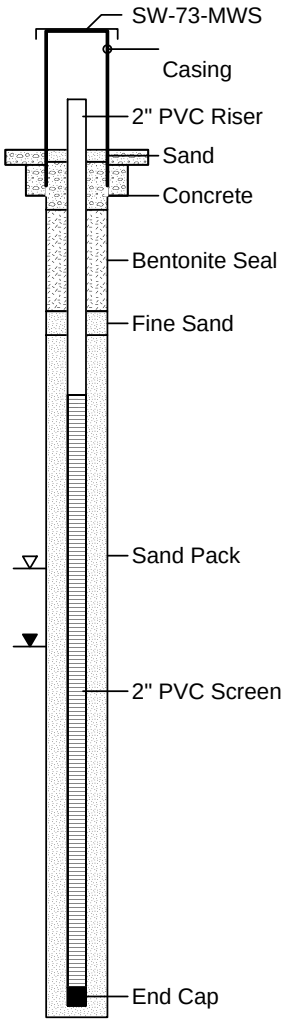
ARM Group Inc.
Earth Resource Engineers and Consultants

Well ID: SW-073-MWS

(page 1 of 1)

Project Name	: Sparrows Point	Northing (ft)	: 564422.72
Project Number	: 150300M-10-3	Easting (ft)	: 1461025.48
Client	: EnviroAnalytics Group	Date/Time Started	: 12/22/15 / 1440
Site	: Sparrows Point - Area B	Date/Time Completed	: 12/22/15 /
Borehole Location	: Parcel B-5	Surf. Elev. (ft AMSL)	: 12.4
ARM Representative	: William Mader, P.G.	TOC Elev. (ft AMSL)	: 14.76
Checked by	: William Mader, P.G.	Total Depth (ft)	: 16.6' (TOC)
Drilling Company	: Allied Well Drilling	Depth to Water (ft)	: 10.5' (TOC) 12/22/15
Driller	: Mike Waller, Austin Bonacum	Depth to Water (ft)	: 9.2' (TOC) 01/21/16
Drilling Equipment	: Diedrich-D120	Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. (ft.) 12.4	LITHOLOGIC DESCRIPTION
0	12.4	0-2' SLAG, dark grayish brown, moist, medium dense, very dense
		2-7' Silty GRAVEL and SAND, grayish brown, brown with dark olive gray, moist, poss low chroma RMFs
5	7.4	
		7-8' SLAG SAND, greenish black (Gley 1-5G-1-2.5/1), very dense, very moist
		8-11' SLAG SAND, very dark gray and greenish black, medium dense to dense, very moist, saturated at 10' bgs
10	2.4	
		11-12' SLAG SAND, light gray then greenish then strong reddish yellow oxidized; 1 rounded quartz gravel, moist, very dense
		12-13' SLAG SAND, mixed greenish gray and yellowish red sand
		13-14' Clayey SILT, grayish with abundant reddish yellow oxidation, stiff, moist
		14-14.5' HSA only
15	-2.6	End of Boring
20		



COMPLETION DETAILS

2x2' concrete pad
4.25" Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 in
Riser Stickup (ags): 2.3'

Screen: Sch 40 PVC
Screen Diameter: 2 in
Top of Screen: 4.1' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 1.0' Bottom: 2.7'
Fine Sand: FilPro #000
Top: 2.7' Bottom: 3.1'
Filter Pack: FilPro W.G. #2
Top: 3.1' Bottom: 14.5'

Monitoring Well Development
Date: 01/18/16
Purged Amount: 4 gal.
Well Volumes Removed: 3.3
Time Started/Completed: 1210/1255

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

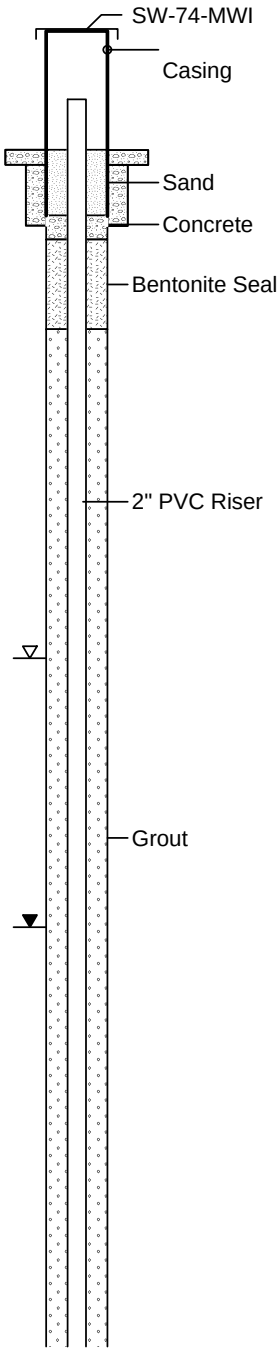
Well ID: SW-074-MWI

(page 1 of 4)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-7
ARM Representative	: Peter Vogel
Checked by	: Peter Vogel
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Austin Bonacum
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 567047.75
Easting (ft)	: 1464301.55
Date/Time Started	: 11/19/15 / 1340
Date/Time Completed	: 11/24/15 / 1630
Surf. Elev. (ft AMSL)	: 8.2
TOC Elev. (ft AMSL)	: 10.20
Total Depth (ft)	: 77.0' (TOC)
Depth to Water (ft)	: 14.99' (TOC) 11/25/15
Depth to Water (ft)	: 10.5' (TOC) 12/22/15
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. 8.2	LITHOLOGIC DESCRIPTION
0	8.2	0-4.5' SLAG, brownish gray, includes pieces up to 1.5", dry, dense to medium dense
5	3.2	4.5-6' Lean CLAY, yellowish brown/greyish brown grading to yellowish brown, moist, low plasticity
		6-7' Clayey SILT, pale yellowish gray, moist, low-medium plasticity, stiff
		7-8' Clayey and Silty SAND, brown, stiff to very stiff, moist, high and low chroma, redoximorphic features, low plasticitiy
		8-10' Clayey and Silty SAND, yellowish brown, stiff to hard, moist, high and low chroma, redoximorphic features very prominent, low plasticitiy
10	-1.8	10-11' Clayey and Silty SAND, yellowish brown, stiff, very moist, high and low chroma, sandier with depth
		11-12' Clayey SAND and SAND, strong brown, moist, with many redoximorphic features, med
		12-12.4' Clayey SAND, strong brown, very stiff, moist, many redoximorphic features
		12.4-14' Silty CLAY, highly mottled, chroma 1 and 2, gray and strong yellowish brown, stiff, medium plasticity
15	-6.8	14-16' Silty CLAY, pale gray, medium, very moist, common yellowish brown oxidation + iron nodules
		16-20' Silty CLAY, pale gray, stiff to medium, very moist with many redoximorphic features, medium plasticity, some dark R4 iron concretions
20		



COMPLETION DETAILS

2x2' concrete pad
4.25" ID Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 inch ID
Riser Stickup (ags): 2.1'

Screen: Sch 40 PVC
Screen Diameter: 2 inch ID
Top of Screen: 45.5' bgs
Screen Amount: 30.0 lf
Slot Size: 0.010"

Grout Seal:
Top: 3.0' Bottom: 41.3'
Bentonite Pellets:
Top: 41.3' Bottom: 43.5'
Fine Sand: FilterSil "000"
Top: 43.5' Bottom: 44.0
Filter Pack: DSI M1 Sand
Top: 44.0' Bottom: 76.0'

Monitoring Well Development
Date: 12/22/15
Purged Amount: 27 gal.
Well Volumes Removed: 2.5
Time Started/Completed: 930/1300

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

Well ID: SW-074-MWI

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-7
ARM Representative	: Peter Vogel
Checked by	: Peter Vogel
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Austin Bonacum
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 567047.75
Easting (ft)	: 1464301.55
Date/Time Started	: 11/19/15 / 1340
Date/Time Completed	: 11/24/15 / 1630
Surf. Elev. (ft AMSL)	: 8.2
TOC Elev. (ft AMSL)	: 10.20
Total Depth (ft)	: 77.0' (TOC)
Depth to Water (ft)	: 14.99' (TOC) 11/25/15
Depth to Water (ft)	: 10.5' (TOC) 12/22/15
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. 8.2	LITHOLOGIC DESCRIPTION	COMPLETION DETAILS
20	-11.8	20-24' Clayey SILT, dark gray (2.5 Y4/1) medium to soft, moist, low plasticity, siltier than above, trace tiny white shell fragments at bottom	
25	-16.8	24-28' Clayey SILT, dark gray, very soft to soft, wet, appears to be saturated zone, slaglike fragment at base of spoon	2" PVC Riser
30	-21.8	28-32' SILT, dark gray, medium to stiff, moist, low plasticity	Grout
		32-33.42' SILT, dark gray, very soft, wet, low plasticity	
		33.42-34' Sandy SILT, dark gray, loose-medium dense, very moist, some free water	
35	-26.8	34-35.33' SILT, dark gray, soft, moist-wet, low plasticity	
		35.33-35.75' Dark gray, loose, saturated	
		35.75-36' Sandy SILT, dark gray, soft, moist-wet, low plasticity	
		36-38' Clayey SILT, dark gray, soft, moist, low plasticity, one coarse sand vein noted - filled with water	
		38-40' Clayey SILT, dark gray (2.5-5Y 4/1), soft, moist, very moist, 1-5mm organic streaks	
40			

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

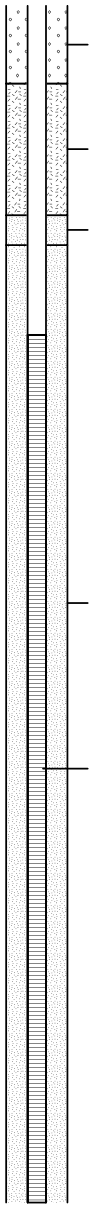
ARM Group Inc.
Earth Resource Engineers and Consultants

Well ID: SW-074-MWI

(page 3 of 4)

Project Name	: Sparrows Point	Northing (ft)	: 567047.75
Project Number	: 150300M-10-3	Easting (ft)	: 1464301.55
Client	: EnviroAnalytics Group	Date/Time Started	: 11/19/15 / 1340
Site	: Sparrows Point - Area B	Date/Time Completed	: 11/24/15 / 1630
Borehole Location	: Parcel B-7	Surf. Elev. (ft AMSL)	: 8.2
ARM Representative	: Peter Vogel	TOC Elev. (ft AMSL)	: 10.20
Checked by	: Peter Vogel	Total Depth (ft)	: 77.0' (TOC)
Drilling Company	: Allied Well Drilling	Depth to Water (ft)	: 14.99' (TOC) 11/25/15
Driller	: Mike Waller, Austin Bonacum	Depth to Water (ft)	: 10.5' (TOC) 12/22/15
Drilling Equipment	: Diedrich-D120	Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. 8.2	LITHOLOGIC DESCRIPTION
40	-31.8	40-44' Clayey SILT, dark gray (2.5-5Y 4/1), soft, very moist, low to medium plasticity
45	-36.8	44-46' Clayey SILT, dark gray, very soft, saturated, dark grayish/blackish slag piece at base of spoon
		46-47' SILT to Silty SAND, dark gray, very soft, very moist, low plasticity, incr. amounts of very fine sand
		47-48' Silty SAND, dark gray (10YR 4/1-3/1), moist, no plasticity, fine mica
50	-41.8	48-52' Clayey SILT, dark gray, soft, very moist, common pale yellow/white shell fragments
		52-54' As above with rounded quartz gravels, whitish brown shell fragments - react with HCL
55	-46.8	54-62' Clayey SILT, dark gray, soft, very moist, low plasticity, trace shells, bivalve mollusc shells
60		



COMPLETION DETAILS

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

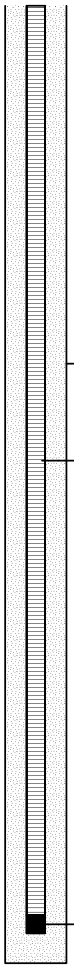
ARM Group Inc.
Earth Resource Engineers and Consultants

Well ID: SW-074-MWI

(page 4 of 4)

Project Name	: Sparrows Point	Northing (ft)	: 567047.75
Project Number	: 150300M-10-3	Easting (ft)	: 1464301.55
Client	: EnviroAnalytics Group	Date/Time Started	: 11/19/15 / 1340
Site	: Sparrows Point - Area B	Date/Time Completed	: 11/24/15 / 1630
Borehole Location	: Parcel B-7	Surf. Elev. (ft AMSL)	: 8.2
ARM Representative	: Peter Vogel	TOC Elev. (ft AMSL)	: 10.20
Checked by	: Peter Vogel	Total Depth (ft)	: 77.0' (TOC)
Drilling Company	: Allied Well Drilling	Depth to Water (ft)	: 14.99' (TOC) 11/25/15
Driller	: Mike Waller, Austin Bonacum	Depth to Water (ft)	: 10.5' (TOC) 12/22/15
Drilling Equipment	: Diedrich-D120	Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. 8.2	LITHOLOGIC DESCRIPTION	COMPLETION DETAILS
60	-51.8		
		62-64' Clayey SILT, dark gray, soft, very moist, low plasticity, common shell fragments, 1/2 pieces of bivalve	
		64-66' As above except very dark gray, observed small fragments of rotted wood	
65	-56.8		
		66-68' Lean CLAY, very dark gray, soft, medium plasticity, very moist, few tiny shell fragments	
		68-76' Lean CLAY, very dark gray, soft, medium plastic, very moist, no shell fragments	
70	-61.8		
75	-66.8		
		End of Boring	
80			



TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

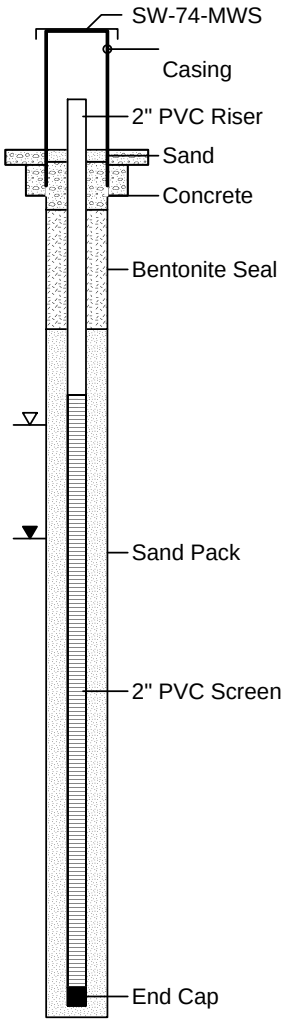
Well ID: SW-074-MWS

(page 1 of 1)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-7
ARM Representative	: William Mader, P.G.
Checked by	: William Mader, P.G.
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Ryan Sites
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 567038.13
Easting (ft)	: 1464298.66
Date/Time Started	: 01/18/16 / 1315
Date/Time Completed	: 01/18/16 / 1550
Surf. Elev. (ft AMSL)	: 8.8
TOC Elev. (ft AMSL)	: 11.32
Total Depth (ft)	: 16.9' (TOC)
Depth to Water (ft)	: 8.9' (TOC) 01/18/16
Depth to Water (ft)	: 6.0' (TOC) 01/20/16
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. (ft.) 8.8	LITHOLOGIC DESCRIPTION
0	8.8	0-4' SLAG, reddish brown and some dark gray, moist, dense, medium reaction to HCl, ~20% slag pieces up to 1/2"
		4-5' As above, mostly loose, slag fragments
5	3.8	5-6' SILT yellowish brown, moist, medium stiff , pale redoximorphic features
		6-8' Silty-Sandy CLAY, strong yellowish brown with stiff to very stiff, moist, many redoximorphic features, becoming more grayish at base
		8-8.83' Clayey SILT, yellowish brown-grayish brown, stiff, moist
		8.83-10' Sandy SILT, yellowish black-greenish brown, medium to stiff, very moist to moist
10	-1.2	10-13.5' Sandy SILT, blackish yellow to brownish red, medium dense, saturated
		13.5-14' Sandy SILT, mixed H gray and strong blackish yellow, stiff, moist
		14-14.5' HSA only
15	-6.2	End of Boring
20		



COMPLETION DETAILS

2x2' concrete pad
4.25" Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 in
Riser Stickup (ags): 2.5'

Screen: Sch 40 PVC
Screen Diameter: 2 in
Top of Screen: 4.1' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 1.0' Bottom: 3.0'
Filter Pack: FilPro-WG #2
Top: 3.0' Bottom: 14.5'

Monitoring Well Development
Date: 01/20/16
Purged Amount: 30 gal.
Well Volumes Removed: 16.6

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

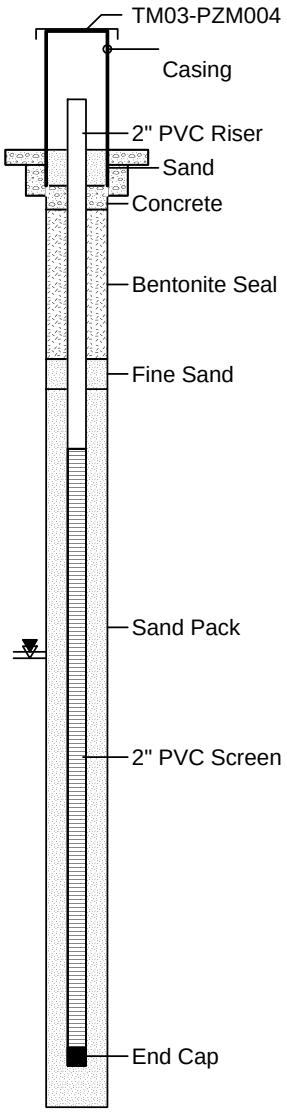
Well ID: TM03-PZM004

(page 1 of 1)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-15
ARM Representative	: Peter Vogel
Checked by	: Peter Vogel
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Ryan Sites
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 568852.92
Easting (ft)	: 1457628.81
Date/Time Started	: 02/08/16 / 1130
Date/Time Completed	: 02/08/16 / 1700
Surf. Elev. (ft AMSL)	: 10.3
TOC Elev. (ft AMSL)	: 12.66
Total Depth (ft)	: 18.00' (TOC)
Depth to Water (ft)	: 10.89' (TOC) 02/08/16
Depth to Water (ft)	: 11.0' (TOC) 02/26/16
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. 10.3	LITHOLOGIC DESCRIPTION
0	10.3	0-8' SAND, dark brown, medium dense to very dense, fine to coarse grained with some slag gravel, some bits of concrete, moist (fill)
5	5.3	
		8-12' Gravelly SAND, dark brown, medium dense to dense, fine to coarse grained sand, wet (fill)
10	.3	wood timber at 11.5' bgs
		12-14' Gravelly SAND, dark gray, loose, with steel wire fragments, wet (fill)
		14-16' Gravelly SAND, black, dense, with steel wire fragments, wet (fill)
15	-4.7	End of Boring
20		



COMPLETION DETAILS

2x2' concrete pad
4.25" Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 in
Riser Stickup (ags): 2.6'

Screen: Sch 40 PVC
Screen Diameter: 2 in
Top of Screen: 5.0' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 1.0' Bottom: 3.5'
Fine Sand: FilterSil "000"
Top: 3.5' Bottom: 4.0'
Filter Pack: DSI M2 Sand
Top: 4.0' Bottom: 16.0'

Monitoring Well Development
Date: 02/26/16
Purged Amount: 55.5
Well Volumes Removed: 49.9
Time Started/Completed: 1445/1545

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

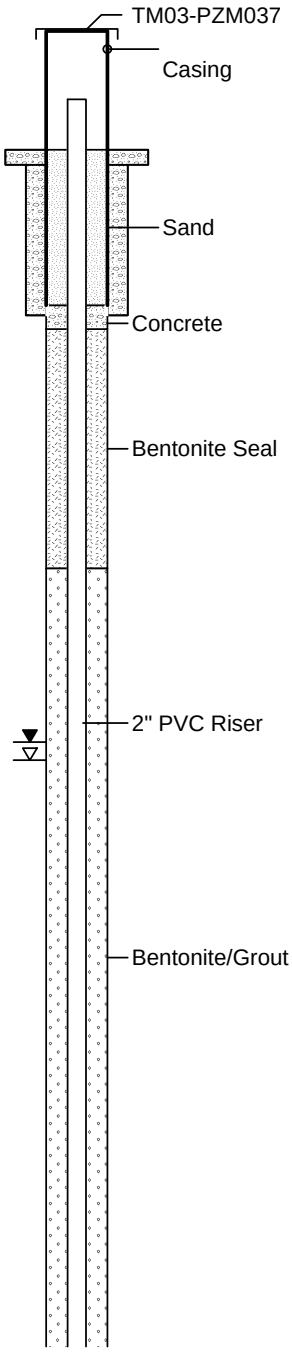
ARM Group Inc.
Earth Resource Engineers and Consultants

Well ID: TM03-PZM037

(page 1 of 3)

Project Name	: Sparrows Point	Northing (ft)	: 568849.30
Project Number	: 150300M-10-3	Easting (ft)	: 1457622.17
Client	: EnviroAnalytics Group	Date/Time Started	: 02/08/16 / 1130
Site	: Sparrows Point - Area B	Date/Time Completed	: 02/10/16 / 1700
Borehole Location	: Parcel B-15	Surf. Elev. (ft AMSL)	: 10.4
ARM Representative	: Peter Vogel	TOC Elev. (ft AMSL)	: 12.08
Checked by	: Peter Vogel	Total Depth (ft)	: 51.8' (TOC)
Drilling Company	: Allied Well Drilling	Depth to Water (ft)	: 11.8' (TOC) 02/11/16
Driller	: Mike Waller, Ryan Sites	Depth to Water (ft)	: 12.1' (TOC) 03/01/16
Drilling Equipment	: Diedrich-D120	Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. 10.4	LITHOLOGIC DESCRIPTION
0	10.4	0-8' SAND, dark brown, medium dense to very dense, fine to coarse grained with some slag gravel, some bits of concrete, moist (fill)
5	5.4	
		8-12' Gravelly SAND, dark brown, medium dense to dense, fine to coarse grained sand, wet (fill)
10	.4	wood timber at 11.5' bgs
		12-14' Gravelly SAND, dark gray, loose, with steel wire fragments, wet (fill)
		14-16' Gravelly SAND, black, dense, with steel wire fragments, wet (fill)
15	-4.6	
		16-18' Gravelly SAND, black to dark gray, very dense, some light gray to tan sandy material, slag gravel (fill)
		18-26' Gravelly SAND, black to dark gray to brown, very dense, slag gravel (fill)
20		wood timber fragments at 23' bgs



COMPLETION DETAILS

2x2' concrete pad
4.25" Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 in
Riser Stickup (ags): 2.0'

Screen: Sch 40 PVC
Screen Diameter: 2 in
Top of Screen: 39.5' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 3.0' Bottom: 7.0'
Bentonite/Grout:
Top: 7.0 Bottom: 35.5'
Bentonite Pellets:
Top: 35.5' Bottom: 37.5
Fine Sand: FilterSil "000"
Top: 37.5' Bottom: 38.0'
Filter Pack: DSI M2 Sand
Top: 38.0' Bottom: 50.0'

Monitoring Well Development
Date: 3/1/16
Purged Amount: 55 gal.
Well Volumes Removed: 8.8
Time Started/Completed: 1020/1230

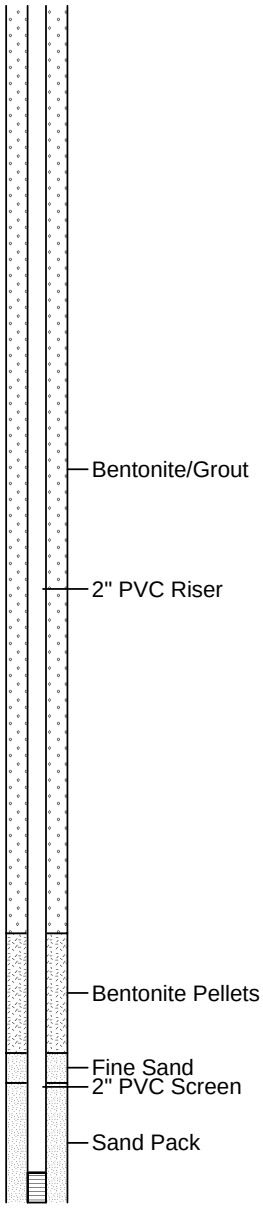
TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

Well ID: TM03-PZM037

Project Name	: Sparrows Point	Northing (ft)	: 568849.30
Project Number	: 150300M-10-3	Easting (ft)	: 1457622.17
Client	: EnviroAnalytics Group	Date/Time Started	: 02/08/16 / 1130
Site	: Sparrows Point - Area B	Date/Time Completed	: 02/10/16 / 1700
Borehole Location	: Parcel B-15	Surf. Elev. (ft AMSL)	: 10.4
ARM Representative	: Peter Vogel	TOC Elev. (ft AMSL)	: 12.08
Checked by	: Peter Vogel	Total Depth (ft)	: 51.8' (TOC)
Drilling Company	: Allied Well Drilling	Depth to Water (ft)	: 11.8' (TOC) 02/11/16
Driller	: Mike Waller, Ryan Sites	Depth to Water (ft)	: 12.1' (TOC) 03/01/16
Drilling Equipment	: Diedrich-D120	Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. 10.4	LITHOLOGIC DESCRIPTION	COMPLETION DETAILS
20	-9.6		
25	-14.6		
		26-30' Clayey SILT to Silty CLAY, olive gray, soft to very soft	
30	-19.6	30-31' Silty CLAY, olive gray, medium stiff, with shell material	
		31-32' Clayey SAND, olive gray, stiff, fine grained with shell material	
		32-33' SAND, gray to light brown, stiff, fine to medium grained with some clay and shell material	
		33-39' Silty CLAY, light gray to brown, medium stiff, mottled	
35	-24.6		
		39-40' SAND, brown, medium stiff, fine to medium grained, wet	
40			



TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

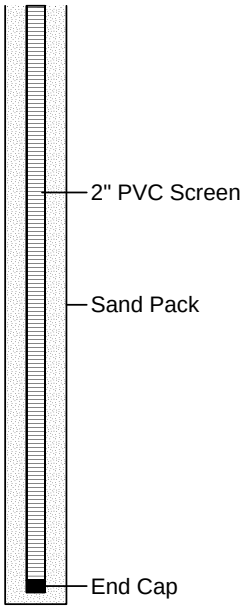
ARM Group Inc.
Earth Resource Engineers and Consultants

Well ID: TM03-PZM037

(page 3 of 3)

Project Name	: Sparrows Point	Northing (ft)	: 568849.30
Project Number	: 150300M-10-3	Easting (ft)	: 1457622.17
Client	: EnviroAnalytics Group	Date/Time Started	: 02/08/16 / 1130
Site	: Sparrows Point - Area B	Date/Time Completed	: 02/10/16 / 1700
Borehole Location	: Parcel B-15	Surf. Elev. (ft AMSL)	: 10.4
ARM Representative	: Peter Vogel	TOC Elev. (ft AMSL)	: 12.08
Checked by	: Peter Vogel	Total Depth (ft)	: 51.8' (TOC)
Drilling Company	: Allied Well Drilling	Depth to Water (ft)	: 11.8' (TOC) 02/11/16
Driller	: Mike Waller, Ryan Sites	Depth to Water (ft)	: 12.1' (TOC) 03/01/16
Drilling Equipment	: Diedrich-D120	Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. 10.4	LITHOLOGIC DESCRIPTION	COMPLETION DETAILS
40	-29.6	40-50' SAND, brown, stiff, fine to medium grained, with some fine gravel	
45	-34.6		
50	-39.6	End of Boring	
55	-44.6		
60			



TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

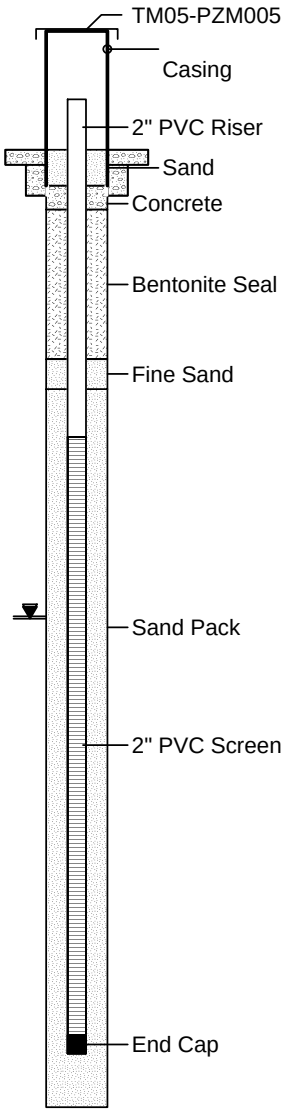
Well ID: TM05-PZM005

(page 1 of 1)

Project Name	: Sparrows Point
Project Number	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B-15
ARM Representative	: Peter Vogel
Checked by	: Peter Vogel
Drilling Company	: Allied Well Drilling
Driller	: Mike Waller, Ryan Sites
Drilling Equipment	: Diedrich-D120

Northing (ft)	: 568837.40
Easting (ft)	: 1458595.64
Date/Time Started	: 02/11/16 / 1130
Date/Time Completed	: 02/11/16 / 1420
Surf. Elev. (ft AMSL)	: 10.6
TOC Elev. (ft AMSL)	: 12.76
Total Depth (ft)	: 17.58' (TOC)
Depth to Water (ft)	: 10.14' (TOC) 02/12/16
Depth to Water (ft)	: 10.1' (TOC) 03/02/16
Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. 10.6	LITHOLOGIC DESCRIPTION
0	10.6	0-4' Gravelly SAND, gray, loose to medium dense, slag gravel, dry (fill)
		metal debris at 3' bgs
		4-7' Silty SAND, gray to dark brown, loose, with some gravel, moist (fill)
5	5.6	
		7-9.5' Gravelly SAND, gray to brown, medium dense to very dense, moist to wet (fill)
10	.6	9.5-12' Gravelly SAND, black, medium dense, some tan sandy gravel, wet (fill)
		12-15.5' Gravelly SAND, black, dense to medium dense, coarse grained, with some fine to medium grained sand (fill)
15	-4.4	15.5-16' Clayey SILT, gray to brown, stiff, with some coarse grained sand (fill)
		End of Boring
20		



COMPLETION DETAILS

2x2' concrete pad
4.25" Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 in
Riser Stickup (ags): 2.4'

Screen: Sch 40 PVC
Screen Diameter: 2 in
Top of Screen: 4.8' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 1.0' Bottom: 3.5'
Fine Sand: FilterSil "000"
Top: 3.5' Bottom: 4.0'
Filter Pack: DSI M2 Sand
Top: 4.0' Bottom: 16.0'

Monitoring Well Development
Date: 03/02/16
Purged Amount: 30 gal.
Well Volumes Removed: 27.2
Time Started/Completed: 1515/1615

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

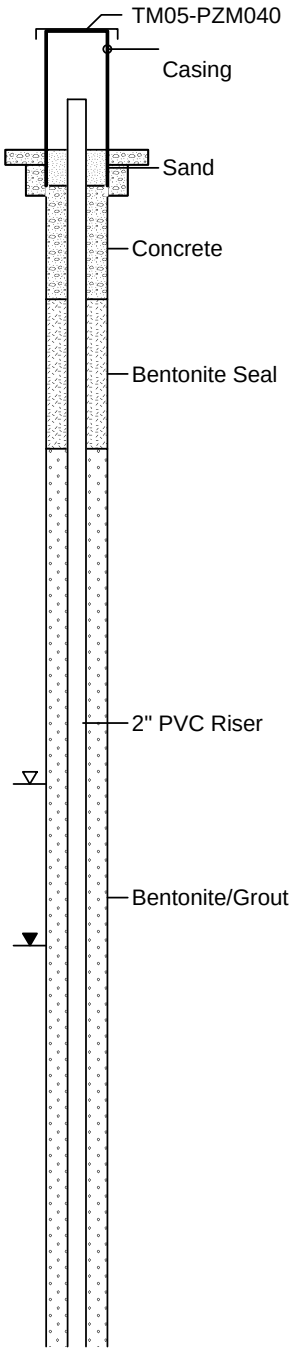
ARM Group Inc.
Earth Resource Engineers and Consultants

Well ID: TM05-PZM040

(page 1 of 3)

Project Name	: Sparrows Point	Northing (ft)	: 568830.24
Project Number	: 150300M-10-3	Easting (ft)	: 1458596.23
Client	: EnviroAnalytics Group	Date/Time Started	: 02/12/16 /
Site	: Sparrows Point - Area B	Date/Time Completed	: 02/16/16 / 1530
Borehole Location	: Parcel B-15	Surf. Elev. (ft AMSL)	: 10.7
ARM Representative	: William Mader, P.G.	TOC Elev. (ft AMSL)	: 12.83
Checked by	: William Mader, P.G.	Total Depth (ft)	: 53.3' (TOC)
Drilling Company	: Allied Well Drilling	Depth to Water (ft)	: 15.3' (TOC) 03/04/16
Driller	: Mike Waller, Ryan Sites	Depth to Water (ft)	: 12.6' (TOC) 03/29/16
Drilling Equipment	: Diedrich-D120	Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. (ft.) 10.7	LITHOLOGIC DESCRIPTION
0	10.7	0-4' Gravelly SAND, gray, loose to medium dense, slag, dry (fill) metal debris at 3' bgs
		4-7' Silty SAND, gray to dark brown, loose, with some gravel, moist (fill)
5	5.7	7-9.5' Gravelly SAND, gray to brown, medium dense to very dense, moist (fill)
10	.7	9.5-12' Gravelly SAND, medium dense, black, some tan sandy gravel, wet (fill)
		12-15.5' Gravelly SAND, black, dense to medium dense, coarse grained, with some fine to medium grained sand, wet (fill)
15	-4.3	15.5-16' Clayey SILT, gray to brown, stiff, with some coarse grained sand (fill)
		16-20' Gravellly SAND, dark gray, dense, fine to coarse grained, some tan sand and brick material, wet (fill)
20		



COMPLETION DETAILS

2x2' concrete pad
4.25" Protective Cover w/ Locking Lid
Weep hole approximately 6" above concrete pad

Riser: Sch 40 PVC
Riser Diameter: 2 in
Riser Stickup (ags): 2.1'

Screen: Sch 40 PVC
Screen Diameter: 2 in
Top of Screen: 39.5' bgs
Screen Amount: 10.0 lf
Slot Size: 0.020"

Bentonite Seal: 3/8" chips
Top: 2.5' Bottom: 5.0'
Bentonite/Grout:
Top: 5.0 Bottom: 36.5'
Bentonite Pellets:
Top: 36.5' Bottom: 39.0
Fine Sand: FilPro #000
Top: 39.0 Bottom: 39.5
Filter Pack: FilPro #2
Top: 39.5' Bottom: 51.0'

Monitoring Well Development
Date: 03/03/16 to 03/04/16
Purged Amount: 125 gal.
Well Volumes Removed: 19.5
Time Started/Completed:
1530 on 03/03/16 to
1145 on 03/04/16

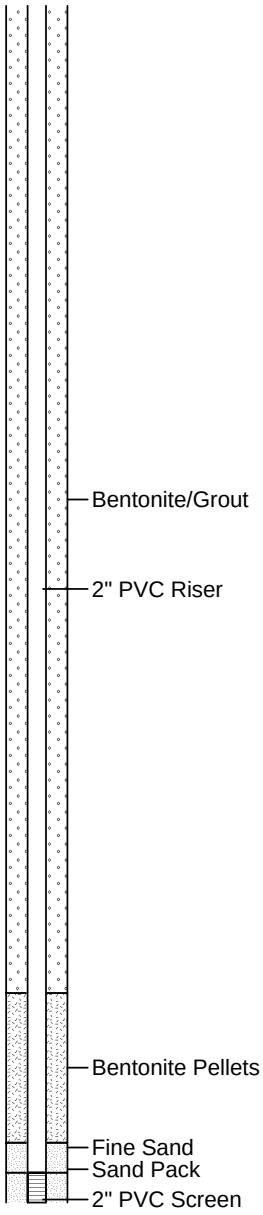
TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

Well ID: TM05-PZM040

Project Name	: Sparrows Point	Northing (ft)	: 568830.24
Project Number	: 150300M-10-3	Easting (ft)	: 1458596.23
Client	: EnviroAnalytics Group	Date/Time Started	: 02/12/16 /
Site	: Sparrows Point - Area B	Date/Time Completed	: 02/16/16 / 1530
Borehole Location	: Parcel B-15	Surf. Elev. (ft AMSL)	: 10.7
ARM Representative	: William Mader, P.G.	TOC Elev. (ft AMSL)	: 12.83
Checked by	: William Mader, P.G.	Total Depth (ft)	: 53.3' (TOC)
Drilling Company	: Allied Well Drilling	Depth to Water (ft)	: 15.3' (TOC) 03/04/16
Driller	: Mike Waller, Ryan Sites	Depth to Water (ft)	: 12.6' (TOC) 03/29/16
Drilling Equipment	: Diedrich-D120	Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. (ft.) 10.7	LITHOLOGIC DESCRIPTION	COMPLETION DETAILS
20	-9.3	20-29' Gravelly SAND, dark gray, loose to very dense, wet (fill)	
		Wood timber in spoon (24-26')	
25	-14.3	Large piece of steel in bottom of spoon (26-28')	
		29-30' Clayey SILT, dark gray, stiff, with shell material and some sand	
30	-19.3	30-32.5' Silty SAND, dark gray, stiff, fine to coarse grained	
		32.5-33' SAND, dark red, medium stiff, fine to medium grained	
		33-37' SAND, dark gray, stiff to very stiff, fine to medium grained	
35	-24.3		
		37-37.5' Sandy GRAVEL, light gray, medium dense, slag gravel (fill)	
		37.5-41' Clayey SILT, gray, soft	
40			



TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

ARM Group Inc.
Earth Resource Engineers and Consultants

Well ID: TM05-PZM040

(page 3 of 3)

Project Name	: Sparrows Point	Northing (ft)	: 568830.24
Project Number	: 150300M-10-3	Easting (ft)	: 1458596.23
Client	: EnviroAnalytics Group	Date/Time Started	: 02/12/16 /
Site	: Sparrows Point - Area B	Date/Time Completed	: 02/16/16 / 1530
Borehole Location	: Parcel B-15	Surf. Elev. (ft AMSL)	: 10.7
ARM Representative	: William Mader, P.G.	TOC Elev. (ft AMSL)	: 12.83
Checked by	: William Mader, P.G.	Total Depth (ft)	: 53.3' (TOC)
Drilling Company	: Allied Well Drilling	Depth to Water (ft)	: 15.3' (TOC) 03/04/16
Driller	: Mike Waller, Ryan Sites	Depth to Water (ft)	: 12.6' (TOC) 03/29/16
Drilling Equipment	: Diedrich-D120	Bit/Auger Size (in.)	: 7.75" OD (4.25" ID) HSA

Depth (ft.)	Surf. Elev. (ft.) 10.7	LITHOLOGIC DESCRIPTION	COMPLETION DETAILS
40	-29.3		
		41-42' SAND, gray to tan, very stiff, fine grained	
		42-44' Clayey SILT, gray, medium stiff, with shell material	
		44-44.5' SAND, gray to tan, medium stiff, fine grained	
45	-34.3	44.5-46' Clayey SILT, gray, medium stiff	Sand Pack 2" PVC Screen
		46-46.5' SAND, gray to tan, soft, fine grained	
		46.5-48' Silty CLAY, gray, soft, with shell material	
		48-50' Clayey SILT, gray, very stiff, with shell material	
50	-39.3	50-54' SAND, grayish tan, very stiff, fine to medium grained with some coarse sand	End Cap Boring Collapsed
		End of Boring	
55	-44.3		
60			

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

APPENDIX B

Existing Site-wide Well Construction Information

Well	Existing TOC Elevation (ft AMSL)	Intallation Method	Date Installed	Protection	Total Depth (ft)	Riser Length (ft)	Screen Length (ft)	Top of Screen Elevation (ft AMSL)	Bottom of Screen Elevation (ft AMSL)	Filter Pack Interval (ft)	Seal Interval (ft)	Grout Interval (ft)	Diameter (in)
Shallow Hydrogeologic Zone Wells													
FM01-PZM003	10.08	Hollow Stem Auger	9/21/2001	Flush mount	13.5	3.5	10	6.58	-3.42	2-13.5	0.5-2	0-0.5	2
SG07-PDM008	17.93	Hollow Stem Auger	8/3/2000	Steel Riser	23	13	10	1.93	-8.07	11-23	2-11	0-2	2
SW07-PZM004	14.52	Hollow Stem Auger	10/5/2000	Steel Riser	16	6	10	5.52	-4.48	4-16	3-4	0 - 3	2
SW09-PZM004	13.16	Hollow Stem Auger	10/5/2000	Steel Riser	14	4	10	6.16	-3.84	3-14	2-3	0 - 2	2
SW10-PZM012	7.91	Hollow Stem Auger	10/4/2000	Steel Riser	17	7	10	-2.09	-12.09	5-17	4-5	0 - 4	2
SW14-PZM004	15.85	Hollow Stem Auger	10/10/2000	Steel Riser	15	5	10	7.85	-2.15	3-15	2-3	0 - 2	
SW15-PZM005	14.83	Hollow Stem Auger	10/16/2000	Steel Riser	17	7	10	4.83	-5.17	5-17	4-5	0 - 4	2
SW16-PZM003	14.94	Hollow Stem Auger	10/17/2000	Steel Riser	15	5	10	6.94	-3.06	3-15	2-3	0 - 2	2
TS10-PDM008	6.74	Hollow Stem Auger	8/7/2000	Steel Riser	12	2	10	1.74	-8.26	1.5-12	1-2	0.5-1.5	2
Intermediate Hydrogeologic Zone Wells													
FM01-PZM041	9.91	Direct Push	9/19/2001	Flush mount	51	41	10	-31.09	-41.09	41-51	40-41	0-40	0.5
SW13-PZM025	15.59	Direct Push	10/10/2000	Flush Mount	39	36	3	-20.41	-23.41	36 - 39	35 - 36	0.5-35	0.5
Lower Hydrogeologic Zone Wells													
SW07-PZM108	15.76	Hollow Stem Auger	12/13 - 12/14/2000	Steel Riser	120	115	5	-102.24	-107.24	111 - 120	3 - 111	0 - 3	2
SW09-PZM068	13.31	Direct Push	10/23/2000	Steel Riser	78	75	3	-64.69	-67.69	75 - 78	74 - 75	0 - 74	0.5
SW10-PZM085	7.83	Direct Push	10/19/2000	Steel Riser	90	87	3	-82.17	-85.17	87 - 90	86 - 87	0 - 86	0.5
SW13-PZM111	15.37	Hollow Stem Auger	11/28/2000	Flush Mount	125	120	5	-104.63	-109.63	116 - 125	2 - 116	0.5 - 2	2
SW15-PZM085	14.23	Hollow Stem Auger	10/31/2000	Steel Riser	97	92	5	-80.77	-85.77	90 - 97	3-90	0 - 3	2
SW16-PZM067	15.33	Direct Push	10/24/2000	Steel Riser	79	76	3	-63.67	-66.67	76 - 79	75 - 76	0 - 75	0.5

* Well SW13-PZM003: Listed as flush mount, but determined to be stick-up during assessment

APPENDIX C

ARM Group Inc.
Earth Resource Engineers and Consultants

Boring ID: FM05-PZM004

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B6
Weather	: 30-40s F, overcast/clear
Date/Time Started	: 2/5/2016 - 13:00
Date/ Time Completed	: 2/5/2016 - 14:45
Logged By	: PNV
Checked By	: ESM

Driller	: Allied - MW/RS
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" OD (4.25" ID) HSA
Surface Elevation (ft)	: 11.7
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 14
Depth to Water (ft bgs)	: 6.3
Northing (US ft)	: 568565.69
Easting (US ft)	: 1462040.51

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0								
1	SS-1	100	0.4	-	6-6-8-8	0-2' Silty SAND, brown, medium dense, with some gravel, dry (fill)	SM	
2								
3	SS-2	100	7.5	-	15-24-20-13	2-8' Silty SAND, gray, dense to medium dense, some clay and slag gravel, moist (fill)	SM	
4								
5	SS-3	100	4.9	-	8-10-8-16			
6								
7	SS-4	100	6.6	-	17-7-4-4			
8						8-8.5' SAND, tan to dark gray, medium fine grained, wet	SP	Fill material to approximately 8' bgs
9	SS-5	83	0.7	-	1-3-4-4	8.5-10' Clayey SILT, gray to orangish brown, medium mottled	ML-CL	
10						10-11' SAND, gray, stiff, fine to medium grained	SW	
11	SS-6	100	0.5	-	4-6-7-10	11-14' Clayey SILT, very stiff, gray to orangish brown, mottled	ML-CL	
12								
13	SS-7	0	NA	-	9-9-9-10			
14						End of Boring		
15								
16								

ARM Group Inc.
Earth Resource Engineers and Consultants

Boring ID: FM05-PZM024

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B6
Weather	: 44 F, overcast/rain/wind
Date/Time Started	: 2/23/2016
Date/ Time Completed	: 2/24/2016
Logged By	: WFM
Checked By	: WFM

Driller	: Allied - MW
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" (4.25" ID) HSA
Surface Elevation (ft)	: 12.0
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 38
Depth to Water (ft TOC)	: 8.7
Northing (US ft)	: 568578.67
Easting (US ft)	: 1462043.77

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0–1	-	100	0.4	-	6-8-8-8	0-2' Silty SAND, brown, medium dense, with some gravel, dry (fill)	SM	No odors noted throughout boring 0-12' data obtained from FM05-PZM004
2–3	-	100	7.5	-	15-24-20-13	2-8' Silty SAND, gray, dense to medium dense, some clay and slag gravel, moist (fill)	SM	
4–5	-	100	4.9	-	8-10-8-16			
6–7	-	100	6.6	-	17-7-4-4			
8–9	-	83	0.7	-	1-3-4-4	8-8.5' SAND, tan to dark gray, medium fine grained, wet	SP	Fill material to approximately 8' bgs
						8.5-10' Clayey SILT, gray to orangish brown, medium mottled	ML-CL	
10–11	-	100	0.5	-	4-6-7-10	10-11' SAND, gray, stiff, fine to medium grained	SW	
						11-12' Clayey SILT, very stiff, gray to orangish brown, mottled	ML-CL	
12–13	SS-1	75	0.2	1.5	3-4-4-5	12-12.6' Clayey SAND, light gray and reddish yellow, moist, stiff	SC	
						12.6-16' Lean CLAY-sandy CLAY, yellowish brown with chroma 2 gray and yellowish red redox, moist, stiff	CL	Appears native at 12' bgs
14–15	SS-2	100	0.2	1.7	4-5-7-8			
16–17	SS-3	100	1.9	1.7	7-6-6-7	16-20' Sandy CLAY, light gray and strong reddish brown oxidation, moist, soft to very stiff, approx 1" grayish gravelly zone at 16.5' bgs	SC	
18–19	SS-4	0	0.4	-	2-2-2-3			

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Boring ID: FM05-PZM024

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B6
Weather	: 44 F, overcast/rain/wind
Date/Time Started	: 2/23/2016
Date/ Time Completed	: 2/24/2016
Logged By	: WFM
Checked By	: WFM

Driller	: Allied - MW
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" (4.25" ID) HSA
Surface Elevation (ft)	: 12.0
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 38
Depth to Water (ft TOC)	: 8.7
Northing (US ft)	: 568578.67
Easting (US ft)	: 1462043.77

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
20								
21	SS-5	100	0.3	0.5	2-2-3-4	20-24' Clayey SILT, dark gray (5Y 4/1), soft, moist, low to medium plasticity, very soft and saturated from 22-23' bgs	ML-CL	
22								
23	SS-6	100	0.6	0.5	4-4-5-8			
24								
25	SS-7	100	0.3	1.0	3-3-7-9	24-25.5' Clayey SILT, dark gray, soft, very moist		
26						25.5-26.5' Clayey SILT, dark gray, stiff, moist	SC-SM	
27	SS-8	75	0.5	0.4	3-2-3-2	26.5-30' Clayey SILT, dark gray, very soft, very moist	ML-CL	
28								
29	SS-9	100	0.5	0.5	WH-WH-2-2			
30						30-30.8' Silty SAND, brownish gray, loose, very moist	SM	
31	SS-10	100	0.6	0.4	2-1-2-3	30.8-32' Clayey SILT, dark gray, soft, very moist	ML-CL	
32						32-33' Silty SAND, brownish gray, loose, very moist	SM	
33	SS-11	100	0.6	0.3	2-1-1-2	33-34' Clayey SILT, dark gray trending to dark greenish gray, very soft, very moist	ML-CL	
34						34-34.9' Silty SAND, brownish gray, loose, very moist	SM	
35	SS-12	100	0.3	0.3	WH-WH-1-2	34.9-36' Clayey SILT, dark gray trending to dark greenish gray, very soft, very moist	ML-CL	
36						36-36.5' Silty SAND, brown gray, loose, very moist	SM-SW	
37	SS-13	100	0.4	0.8	2-1-2-3	36.5-38' Clayey SILT, dark gray trending to dark greenish gray, very soft, very moist	ML-CL	
38						End of Boring		
39								
40								

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Boring ID: SW-06-PZM001

(page 1 of 1)

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	:
Weather	: 16F, clear, windy
Date/Time Started	: 1/19/2016 - 10:00
Date/ Time Completed	: 1/20/2016
Logged By	: WFM
Checked By	: WFM

Driller	: Allied - MW
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" (4.25" ID) HSA
Surface Elevation (ft)	: 14.9
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 14
Depth to Water (ft TOC)	: 6.5
Northing (US ft)	: 569184.69
Easting (US ft)	: 1463625.88

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0						0-0.5' Sandy SILT, dark gray brown, soft, moist	ML	Topsoil
1	SS-1	58	0.8	1.5	3-3-6-5	0.5-2' Silty SAND, strong brown, stiff, moist, no RMFs observed	SM	Native soil No odor
2								
3	SS-2	79	0.2	2.2	3-5-6-6	2-4' Silty SAND, strong brown to brown, very stiff, moist, common	SM	Native soil No odor
4								
5	SS-3	79	0.1	-	6-5-4-3	4-5.08' Silty SAND, strong brown to brown, loose, very moist, saturated	SM	No odor
6						5.08-7.66' Silty SAND, pale gray to gray, loose, saturated, pale yellow oxidation	SM	
7	SS-4	100	2.6	-	2-3-3-2			No odor
8						7.66-8' SAND, dark yellowish red / reddish brown, loose, wet, Blackish yellow redoximorphic features	SW	
9	SS-5	67	0.7	-	1-2-1-2	8-10.5' SAND, dark reddish brown, loose, saturated, apparent black concretions	SW	No odor
10								No odor
11	SS-6	100	0.1	1.3	3-4-4-5	10.5-11' Clayey SAND, strong brownish-reddish yellow, stiff, very moist	SC	
12						11-14' Clayey SILT, pale brown-gray, stiff to medium, redoximorphic features, very moist, some possible iron concretions	CL	No odor
13	SS-7	50	0.2	1.0	4-3-4-4			
14						End of Boring		
15								
16								

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Boring ID: SW-06-PZM053

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B7
Borehole Location	:
Weather	: 20F, cloudy, windy
Date/Time Started	: 1/19/2016 - 13:45
Date/ Time Completed	: 1/21/2016
Logged By	: WFM
Checked By	: WFM

Driller	: Allied - MW
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" (4.25" ID) HSA
Surface Elevation (ft)	: 14.6
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 69.5
Depth to Water (ft TOC)	: 16.7
Northing (US ft)	: 569188.45
Easting (US ft)	: 1463637.32

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0								
1								
2								
3								
4								
5								
6								
7	HSA	HSA	-	-		0-14' HSA Drilling Only - See SW06-PZM001 log		
8								
9								
10								
11								
12								
13								
14								
15	SS-1	100	0.1	0.5	WOH-2-2-3	14-17.6' Lean CLAY, pale gray to light gray, soft with yellowish brown and brown oxidation stains, cohesive, iron concretions	CL	near saturation no odor
16								
17	SS-2	79	0.2	1.0	3-5-3-4			no odor
18						17.6-18' Lean CLAY, gray to dark gray (5Y 5/1-4/1), moist	CL	
19	SS-3	100	0.4	0.8	WH-3-2-3	18-24' Clayey SILT, gray to dark gray (5Y 5/1-4/1), moist, cohesive	CL-ML-ML	no odor
20								

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Boring ID: SW-06-PZM053

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B7
Borehole Location	:
Weather	: 20F, cloudy, windy
Date/Time Started	: 1/19/2016 - 13:45
Date/ Time Completed	: 1/21/2016
Logged By	: WFM
Checked By	: WFM

Driller	: Allied - MW
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" (4.25" ID) HSA
Surface Elevation (ft)	: 14.6
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 69.5
Depth to Water (ft TOC)	: 16.7
Northing (US ft)	: 569188.45
Easting (US ft)	: 1463637.32

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
20								
21	SS-4	100	0.4	1.0	6-5-5-5			no odor
22							CL-ML-ML	
23	SS-5	100	0.4	0.6	3-3-3-4			very soft no odor
24						24-24.5' Silty SAND, gray to dark gray, loose, wet	SW-SM	
25	SS-6	58	0.5	0.6	WH-WH-WH-1	24.5-25.5' SILT, gray to dark gray, loose, moist	ML	no odor
26						25.5-26' Silty SAND, gray to dark gray, loose, wet	SW-SM	
27	SS-7	100	0.4	-	3-3-5-7	26-28' Fine to medium SAND, gray to dark gray, very moist to wet, loose	SW	no odor
28								
29	SS-8	100	0.6	0.5	WH-WH-1-1	28-38' Clayey SILT, gray to dark gray and black, soft, near saturated, somewhat sandier at base, cohesive		no odor
30								
31	SS-9	100	0.6	0.5	2-2-1-2			no odor
32								
33	SS-10	100	0.6	0.4	4-4-3-2		ML	no odor
34								
35	SS-11	100	0.4	0.4	WH-1-2-2			no odor
36								
37	SS-12	100	0.4	0.3	2-3-2-3			no odor
38								
39	SS-13	100	0.3	0.6	1-1-1-3	38-38.5' Silty SAND, dark gray, soft, moist to increasing fine sand	ML-SM	
						38.5-39' Silty SAND, dark gray, soft, saturated, some fine qtz gravels	SM	no odor
40						39-40' SILT, dark gray to dark green gray, soft, cohesive, moist	ML	

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Boring ID: SW-06-PZM053

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B7
Borehole Location	:
Weather	: 20F, cloudy, windy
Date/Time Started	: 1/19/2016 - 13:45
Date/ Time Completed	: 1/21/2016
Logged By	: WFM
Checked By	: WFM

Driller	: Allied - MW
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" (4.25" ID) HSA
Surface Elevation (ft)	: 14.6
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 69.5
Depth to Water (ft TOC)	: 16.7
Northing (US ft)	: 569188.45
Easting (US ft)	: 1463637.32

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
40								
41	SS-14	100	0.3	1.1	2-3-4-5	40-42' Clayey SILT, dark gray to dark greenish gray, medium, moist but less vs. above	ML-CL	no odor
42								
43	SS-15	100	0.3	1.0	4-3-4-1	42-44' As above, pale whitish shell debris in lower 10"	ML-CL	no odor
44								
45	SS-16	100	0.4	0.6	WH-WH-1-1	44-48' Clayey SILT, dark gray to greenish gray, very soft to soft, moist, pale whitish yellow shell debris		no odor
46							ML-CL	
47	SS-17	100	0.3	0.5	3-3-4-3			no odor
48								
49	SS-18	100	0.4	0.5	WH-2-4-3	48-52' Clayey SILT, dark gray to dark greenish grey, soft, moist		no odor
50							ML-CL	
51	SS-19	100	0.3	0.5	5-7-2-3			no odor
52								
53	SS-20	100	0.3	-	4-5-5-5	52-54' Medium-coarse SAND, brown to brownish gray, fine rounded quartz gravel, loose, very moist	SW	no odor coarse at base
54								Gravel mix of RSR rose, grey yellowish quartz and some black finer gravels
55	SS-21	100	0.1	-	5-6-5-5	54-58' Fine to medium quartz GRAVEL, grayish brown, medium dense, very moist		
56							GW	
57	SS-22	75	0.1	-	1-3-3-6			no odor
58								
59	SS-23	50	0.8	-	3-7-7-7	58-62' Medium fine grained SAND, grayish brown-dark gray brown, loose, very moist, ~30% to ~10%fine Qtz gravels	SW	no odor
60								

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Boring ID: SW-06-PZM053

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B7
Borehole Location	:
Weather	: 20F, cloudy, windy
Date/Time Started	: 1/19/2016 - 13:45
Date/ Time Completed	: 1/21/2016
Logged By	: WFM
Checked By	: WFM

Driller	: Allied - MW
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" (4.25" ID) HSA
Surface Elevation (ft)	: 14.6
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 69.5
Depth to Water (ft TOC)	: 16.7
Northing (US ft)	: 569188.45
Easting (US ft)	: 1463637.32

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
60								
61	SS-24	100	0.5	-	4-7-8-10		SW	
62								
63	SS-25	0	-	-	10-9-22-33	62-64' No Recovery	-	
64								
						64-64.7' Fine to medium SAND, grayish brown, loose, very moist/wet, with a few whitest Qtz Gravel	SW	
65	SS-26	86	0.3	2.0	6-3-3-6	64.7-65.1' Silty SAND, dark greenish brown, loose, very moist to wet, trace organic fibers	SM	
						65.1-66' Clay SILT, dark gray brown to stiff, very moist, many silver mica flakes	ML-CL	
66								
						66-66.5' Silty SAND, grayish brown, loose, fine to medium sand, near saturated	SM	
67	SS-27	71	0.3	-	5-12-23-35	66.5-68' Silty SAND and GRAVEL, light grayish brown, dense to very dense, wet	SW-GM	
68						End of Boring		
69								
70								
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72								
73								
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80								

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Boring ID: SW08-PZM003

(page 1 of 1)

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B2
Weather	: Overcast, steady rain
Date/Time Started	: 2/3/2016 - 13:30
Date/ Time Completed	: 2/3/2016 - 15:00
Logged By	: PNV
Checked By	: ESM

Driller	: Allied - MW/RS
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" OD (4.25" ID) HSA
Surface Elevation (ft)	: 9.4
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 14
Depth to Water (ft bgs)	: 1.2
Northing (US ft)	: 568091.75
Easting (US ft)	: 1458990.33

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0								
1	SS-1	96	0.2	-	47-12-10-12	0-2' Clayey SAND, black to gray, very stiff, with slag gravel (fill)	SC	
2								Fill material to approximately 2' bgs
3	SS-2	79	0.0	-	5-7-7-7	2-4.5' Silty SAND, light gray, stiff, with clay	SM	
4								
5	SS-3	100	0.0	-	1-2-3-2	4.5-5.5' SAND, tan, medium stiff, fine grained	SP	
6						5.5-7' Sandy SILT, light gray, very soft, with clay	ML	
7	SS-4	63	0.0	-	WH-1-1-2	7-10' Clayey SILT to Silty SAND interbedded, tan to gray, soft, numerous large shell fragments	SM-ML-CL	
8								
9	SS-5	58	0.0	-	1-1-2-1			
10						10-14' Silty SAND, gray, soft, fine grained with some small shell fragments	SM	
11	SS-6	75	0.0	-	1-1-3-6			
12								
13	SS-7	100	0.0	-	1-1-2-5			
14						End of Boring		
15								
16								

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Boring ID: SW08-PZM053

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B2
Weather	: 40 F, clear, breezy
Date/Time Started	: 2/17/2016 - 12:20
Date/ Time Completed	: 2/18/2016 - 11:00
Logged By	: WFM
Checked By	: WFM

Driller	: Allied - MW
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" (4.25" ID) HSA
Surface Elevation (ft)	: 9.7
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 62
Depth to Water (ft TOC)	: 8.2
Northing (US ft)	: 568090.03
Easting (US ft)	: 1458982.75

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0–1	-	96	0.2	-	47-12-10-12	0-2' Clayey SAND, black to gray, very stiff, with slag gravel (fill)	SC	No odors noted throughout boring Fill material to approximately 2' bgs
2–3	-	79	0.0	-	5-7-7-7	2-4.5' Silty SAND, light gray, stiff, with clay	SM	
4–5	-	100	0.0	-	1-2-3-2	4.5-5.5' SAND, tan, medium stiff, fine grained	SP	
5–6						5.5-7' Sandy SILT, light gray, very soft, with clay	SW-ML	
6–7	-	63	0.0	-	WH-1-1-2	7-10' Clayey SILT to Silty SAND interbedded, tan to gray, soft, numerous large shell fragments	CL-ML-SM	
8–9	-	58	0.0	-	1-1-2-1			
10–11	-	75	0.0	-	1-1-3-6	10-14' Silty SAND, gray, soft, fine grained with some small shell fragments	SM	
12–13	-	100	0.0	-	1-1-2-5			0-14' data obtained from SW08-PZM003
14–15	SS-1	100	0.5	0.5	WH-1-1-1	14-14.5' Silty SAND, dark gray, medium grained sand, loose, saturated	SM	
						14.5-15' Clayey SILT, dark gray, soft, saturated	ML-CL	
15–16						15-16' Silty SAND, dark gray, loose, saturated, abundant mica	SM	
16–17	SS-2	100	0.7	-	1-1-2-3	16-17.5' Medium grained Silty SAND, medium gray, loose, very moist, tiny shell fragments	SM	
17–18						17.5-18.3' Clayey SILT, dark gray, soft	ML-CL	
18–19	SS-3	100	0.4	0.7	1-1-1-1	18.3-18.8' Medium to coarse grained SAND, medium gray, quartz gravel, wet	SW	
						18.8-20' Clayey SILT, dark gray, soft to medium, very moist	ML-CL	

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Boring ID: SW08-PZM053

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B2
Weather	: 40 F, clear, breezy
Date/Time Started	: 2/17/2016 - 12:20
Date/ Time Completed	: 2/18/2016 - 11:00
Logged By	: WFM
Checked By	: WFM

Driller	: Allied - MW
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" (4.25" ID) HSA
Surface Elevation (ft)	: 9.7
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 62
Depth to Water (ft TOC)	: 8.2
Northing (US ft)	: 568090.03
Easting (US ft)	: 1458982.75

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
20						20-20.8' Coarse grained SAND, grayish brown, loose, wet	SP	
21	SS-4	100	1.9	-	1-2-2-2	20.8-24' Clayey SILT, dark gray, soft to medium, very moist, two inclusions of dark red-brown rotted wood fibers	ML-CL	
22								
23	SS-5	100	0.3	-	2-1-1-2			
24						24-28' Clayey SILT, dark gray (5Y 4/1), very soft to soft, saturated to very moist	ML-CL	
25	SS-6	100	0.2	0.4	WH-WH-1-2			
26								
27	SS-7	100	0.4	0.3	2-3-2-2			
28						28-29' Silty SAND, gray to light brownish gray (2.5 Y 6/1-6/2), common yellowish brown oxidation, wet	SM	
29	SS-8	100	0.1	0.5	WH-WH-WH-2	29-30' Clayey SAND, gray (2.5Y 6/1) medium, moist, many yellowish brown - brownish yellow oxidation coatings	SC	
30						30-32' Clayey SILT, grayish brown, soft, common yellowish brown and 7.5 yellowish reddish brown clay coatings and oxidation, very moist	ML-CL	
31	SS-9	100	0.7	0.4	2-2-2-3			
32						32-33' Silty SAND to Clayey SAND, grayish brown, loose, moist	SM-SC	
33	SS-10	100	0.5	0.4	3-3-3-4	33-34' Clayey SILT, grayish brown, soft, common yellowish brown and 7.5 yellowish reddish brown clay coatings and oxidation, very moist	ML-CL	
34						34-37' Silty SAND to SAND, grayish brown, loose, wet	SM-SW	
35	SS-11	100	0.3	-	3-5-8-9			
36								
37	SS-12	100	0.2	0.5	3-3-4-5	37-37.5' Clayey SILT, greenish brown, soft, very moist	ML-CL	
						37.5-38' Silty SAND, mixed light olive brown (2.5Y 5/6)	SM	
38						No recovery - Probable sand zone per driller		
39	SS-13	0	-	-	6-4-7-7			
40								

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Boring ID: SW08-PZM053

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B2
Weather	: 40 F, clear, breezy
Date/Time Started	: 2/17/2016 - 12:20
Date/ Time Completed	: 2/18/2016 - 11:00
Logged By	: WFM
Checked By	: WFM

Driller	: Allied - MW
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" (4.25" ID) HSA
Surface Elevation (ft)	: 9.7
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 62
Depth to Water (ft TOC)	: 8.2
Northing (US ft)	: 568090.03
Easting (US ft)	: 1458982.75

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
40						40-40.33' SAND to Clayey SAND, brown, loose	SM-SC	
41	SS-14	100	0.9	1.1	6-9-9-9	40.33-42' Clayey SILT, dark grayish green (Gley 1-4/1), medium to stiff, very moist, shell debris, has apparent subvertical parting	ML-CL	
42								
43	SS-15	100	1.1	1.2	4-4-5-5	42-44' Silty CLAY, dark greenish gray, medium, moist, numerous shell fragments	CL	
44								
45	SS-16	100	1.2	0.75	2-3-3-4	44-48' Silty CLAY, dark greenish gray, medium, moist, numerous shell fragments, sub-vertical thin sandy zone in upper 12" that is saturated at 46' bgs, rest of material is moist-very moist		
46							CL	
47	SS-17	100	1.2	0.4	4-3-4-5			
48						48-62' Clayey SILT, dark greenish gray, very moist, soft to very soft		
49	SS-18	100	1.2	0.4	2-2-2-3			
50								
51	SS-19	100	0.8	0.5	3-3-3-4			Fine to coarse shell debris at 50-51'
52								Near saturated
53	SS-20	100	0.8	0.3	3-3-3-3			
54							CL-ML	Fine shell debris 54-56'
55	SS-21	100	1.6	0.5	2-2-3-3			
56								
57	SS-22	100	1.4	0.4	2-2-2-2			Wet
58								HSA stop at 58'
59	SS-23	100	2.0	0.6	WH-WH-2-4			Very moist
60								

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Boring ID: SW08-PZM053

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B2
Weather	: 40 F, clear, breezy
Date/Time Started	: 2/17/2016 - 12:20
Date/ Time Completed	: 2/18/2016 - 11:00
Logged By	: WFM
Checked By	: WFM

Driller	: Allied - MW
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" (4.25" ID) HSA
Surface Elevation (ft)	: 9.7
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 62
Depth to Water (ft TOC)	: 8.2
Northing (US ft)	: 568090.03
Easting (US ft)	: 1458982.75

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
60								
61	SS-24	100	1.7	0.8	1-3-3-3		CL-ML	
62						End of Boring		
63								
64								
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Boring ID: SW09-PZM028

(page 1 of 2)

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B2
Weather	: 45 F, mostly clear
Date/Time Started	: 2/22/2016 - 13:00
Date/ Time Completed	: 2/22/2016
Logged By	: WFM
Checked By	: WFM

Driller	: Allied - MW
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" (4.25" ID) HSA
Surface Elevation (ft)	: 10.5
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 40
Depth to Water (ft TOC)	: 7.3
Northing (US ft)	: 566965.08
Easting (US ft)	: 1460295.30

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0								
1	SS-1	80	0.1	-	WH-1-1-1	0-4' SILT to Silty SAND, very dark gray, wet, very soft, roots, pale yellowish brown oxidation	ML-SM	No odor
2								
3	SS-2	0	-	-	WH-2-2-2			
4								
5	SS-3	90	0.2	0.8	1-1-4-4	4-6' Clayey SILT, pale gray brown, very soft to soft to medium to stiff, very moist, many high and low chr. RMFs	ML-CL	No odor Wet; appears native
6								
7	SS-4	100	0.4	1.1	4-4-6-5	6-10' Clayey SAND to Silty SAND, pale gray to pale gray brown, medium to stiff, moist, many high and low chroma redoximorphic features	SC-SM	No odor Native alluvium
8								
9	SS-5	100	0.2	0.5	2-1-3-3			
10						10-10.5' Silty SAND, pale yellowish brown, very soft, wet, many redoximorphic features	SM	Wet No odor
11	SS-6	85	0.3	0.5	2-1-2-1	10.5-14' Silty CLAY, pale grayish, soft, moist, high chroma oxidation, very moist at 12' bgs	CL	
12								No odor
13	SS-7	75	0.2	0.6	2-2-1-2			
14								
15	SS-8	100	0.5	0.5	WH-WH-1-2	14-16' Silty CLAY, dark gray (5Y 4/1), soft, very moist/wet, a few high chroma oxidations	CL	No odor
16						16-16.7' Silty SAND, pale brown, loose, saturated	SM	No odor
17	SS-9	85	0.3	0.4	2-1-2-2	16.7-20' Silty CLAY, dark gray, very soft, very moist	ML-CL	
18								No odor
19	SS-10	100	0.4	<0.5	WH-WH-WH-WH			
20								

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Boring ID: SW09-PZM028

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B2
Weather	: 45 F, mostly clear
Date/Time Started	: 2/22/2016 - 13:00
Date/ Time Completed	: 2/22/2016
Logged By	: WFM
Checked By	: WFM

Driller	: Allied - MW
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" (4.25" ID) HSA
Surface Elevation (ft)	: 10.5
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 40
Depth to Water (ft TOC)	: 7.3
Northing (US ft)	: 566965.08
Easting (US ft)	: 1460295.30

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
20								
21	SS-11	100	0.4	<0.5	2-2-2-3	20-22' Clayey SILT, dark gray, a thin near vertical zone with pale yellowish brown Silty SAND and plant stems	CL-ML	No odor
22								
23	SS-12	100	0.7	<0.5	2-2-3-2	22-27.8' Clayey SILT, dark gray, very soft, saturated, trace plant stems		No odor
24								
25	SS-13	100	1.1	<0.5	WH-1-2-2		CL-ML	
26								
27	SS-14	100	1.2	<0.5	3-4-5-3			
28						27.8-28.1' Clayey SAND, dark gray, loose, very moist	SC	No odor
29	SS-15	100	1.2	<0.5	WH-WH-1-2	28.1-30' Clayey SILT, dark gray, very soft, very moist-wet, 12" long coating of sand along side of sample-possible sand filled parting	CL-ML	
30								
31	SS-16	100	1.2	0.5	2-2-2-2	30-31' Silty SAND, brown gray to pale brownish gray, loose, moist, few subrounded quartz gravel	SM	
						31-32' Clayey SILT, dark gray, very soft, very moist	CL-ML	
32						32-32.25' Clayey SAND, dark gray	SC	No odor
33	SS-17	100	1.2	<0.5	2-2-8-13	32.25-33.75' Clayey SILT, dark gray, very soft, trace organics, very moist to wet	CL-ML	
34						33.75-36' Silty SAND, dark gray, medium dense		
35	SS-18	0	-	-	2-2-3-4		SM	
36						36-38.25' Silty SAND, dark brownish gray, loose, saturated		No odor
37	SS-19	29	1.0	-	3-1-1-2		SM	
38								No odor
39	SS-20	100	0.8	0.4	1-2-2-3	38.25-40' Clayey SILT, dark greenish gray, soft, very moist, pale, white, broken shell pieces	CL-ML	
40								End of Boring

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Boring ID: SW11-PZM005

(page 1 of 1)

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B1
Weather	: 30F, overcast, very windy
Date/Time Started	: 1/29/2016 - 12:50
Date/ Time Completed	: 1/29/2016 - 15:00
Logged By	: SCK
Checked By	: ESM

Driller	: Allied - MW/RS
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" OD (4.25" ID) HSA
Surface Elevation (ft)	: 11.4
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 14
Depth to Water (ft bgs)	: 5.0
Northing (US ft)	: 565794.79
Easting (US ft)	: 1456073.98

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0						0-0.5' SILT, dark brown, organics and topsoil, medium dense, dry (fill)	ML	No odor
1	SS-1	100	0.5 0.3 0.3	-	4-5-5-8	0.5-2' Sandy SILT, orange and gray, medium dense, dry (fill)	ML	
2								No odor
3	SS-2	12	0.3	-	3-3-3-2	2-4' GRAVEL, tan, loose, slag gravel, dry (fill)	GM	
4								No odor
5	SS-3	54	0.7 0.4	-	1-2-38-4	4-6' Sandy GRAVEL, dark gray to gray, very loose, slag gravel, moist (fill)	GM	Fill material to approximately 6' bgs
6								No odor
7	SS-4	100	0.4 0.3 0.3	-	1-5-6-6	6-8' SILT, orange and gray, stiff, dry	ML	
8								No odor
9	SS-5	75	0.3 0.3 0.3	-	4-5-4-6	8-10' CLAY, orange and gray, stiff, dry	CH	
10								Water in spoon
11	SS-6	100	0.5 1.0 0.3	-	10-8-9-5	10-11.5' SAND, tan, medium dense, wet	SW	
						11.5-12' Clayey SAND, tan, medium dense, wet	SC	
12								Water in spoon
13	SS-7	100	0.5 0.3	-	5-6-5-9	12-13' SAND, tan, wet	SW	
						13-14' Clayey SAND, tan, medium dense	SC	
14						End of Boring		
15								
16								

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Boring ID: SW12-PZM001

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B1
Weather	: Overcast, light rain
Date/Time Started	: 2/3/2016 - 9:30
Date/ Time Completed	: 2/3/2016 - 12:00
Logged By	: PNV
Checked By	: ESM

Driller	: Allied - MW/RS
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" OD (4.25" ID) HSA
Surface Elevation (ft)	: 15.6
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 18
Depth to Water (ft bgs)	: 8.1
Northing (US ft)	: 565989.17
Easting (US ft)	: 1457438.18

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0–1	SS-1	96	0.4	-	5-11-13-9	0-2' Gravelly SAND, black to dark gray, medium dense, slag gravel, dry (fill)	SW	
2–4	SS-2	58	0.2	-	8-8-9-5	2-5' Sandy GRAVEL, greenish gray, medium dense, slag gravel, dry (fill)	GW	
4–5	SS-3	63	0.1	-	1-3-1-1			
5–6						5-6' Clayey SILT, tan, soft, with sand and slag gravel, moist (fill)	ML-CL	
6–7	SS-4	16	0.0	-	WH-1-2-1	6-8' Clayey SILT, dark brown, soft, with slag gravel, moist (fill)	ML-CL	
8–9	SS-5	100	0.0	-	1-1-2-4	8-12.5' Clayey SILT, bluish gray to brown, soft to stiff, with sand, mottled, wet	ML-CL	Fill material to approximately 8' bgs
10–11	SS-6	100	0.0	-	4-6-8-8			
12–13	SS-7	100	0.0	-	5-6-7-9	12.5-14' Silty SAND, brown to light gray, stiff, fine grained sand with some clay, wet	SM	
14–15	SS-8	100	0.0	-	4-11-9-6	14-16' Clayey SILT, brown to light gray, very stiff, with some sand, mottled, wet	ML-CL	
16–17	SS-9	83	0.1	-	2-2-2-2	16-18' Silty SAND, brown to light gray, soft, fine grained, wet	SM	Auger to 16' bgs Split spoon to 18' bgs
18–20						End of Boring		

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Boring ID: SW13-PZM003

(page 1 of 1)

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B4
Weather	: 50s F, overcast
Date/Time Started	: 2/4/2016 - 9:30
Date/ Time Completed	: 2/4/2016 - 13:00
Logged By	: PNV
Checked By	: ESM

Driller	: Allied - MW/RS
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" OD (4.25" ID) HSA
Surface Elevation (ft)	: 14.0
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 16
Depth to Water (ft bgs)	: 8.2
Northing (US ft)	: 563493.91
Easting (US ft)	: 1456407.34

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0–1	SS-1	38	0.2	-	20-50/3	0-2' Gravelly SAND, brown, very dense, moist (fill)	SW	
2–3	SS-2	46	0.3	-	6-6-1-2	2-8' Gravelly SAND, dark gray to black, loose to very loose, moist (fill)	SW	
4–5	SS-3	25	0.9	-	1-1-1-1			
6–7	SS-4	38	0.2	-	2-3-1-1			
8–9	SS-5	25	76.5	-	50/5	8-10' Sandy GRAVEL, black, very dense, very strong creosote odor with shean, wet (fill)	GW	Very strong creosote type odor
10–11	SS-6	29	365.0	-	50/4	10-12' Sandy GRAVEL, dark gray, very dense, strong creosote odor with shean (fill)	GW	
12–13	SS-7	16	582.0	-	50/4	12-14' SAND, bluish green, very dense, laminated, layered, wet (fill)	SW	
14–15	SS-8	88	40.2	-	20-20-20-15	14-16' Gravelly SAND, light gray, dense, wet (fill)	SW	Fill material > 16' bgs
16–18						End of Boring		

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Boring ID: SW14-PZM004

(page 1 of 1)

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B4
Weather	: 40s F, clear to overcast
Date/Time Started	: 2/5/2016 - 8:45
Date/ Time Completed	: 2/5/2016 - 11:30
Logged By	: PNV
Checked By	: ESM

Driller	: Allied - MW/RS
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" OD (4.25" ID) HSA
Surface Elevation (ft)	: 13.8
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 14
Depth to Water (ft bgs)	: 2.9
Northing (US ft)	: 563392.23
Easting (US ft)	: 1457680.38

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0								
1	SS-1	33	0.4	-	50/5	0-5' Sandy GRAVEL, dark gray, very dense, slag gravel, moist (fill)	GW	Hard drilling
2								
3	SS-2	21	17.7	-	47-50/1			
4								
5	SS-3	63	3.2	-	18-42-25-30	4-5' Wood debris, black, moist		
						5-6' SAND, dark gray, very dense, fine grained with some gravel (fill)	SP	
6								Fill material to approximately 6' bgs
7	SS-4	63	2.6	-	5-3-2-3	6-8' Clayey SILT, gray to olive green, medium stiff, moist	ML-CL	
8								
9	SS-5	100	1.8	-	4-5-6-9	8-10' Clayey SILT, gray to orangish brown, stiff, moist	ML-CL	
10								
11	SS-6	100	1.0	-	10-10-9-7	10-14' Silty SAND, light orangish brown, stiff to very stiff, fine grained with trace clay, wet	SM	
12								
13	SS-7	46	3.8	-	3-5-8-5			
14						End of Boring		
15								
16								

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Boring ID: SW15-PZM031

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B5
Weather	: 40 F, very windy
Date/Time Started	: 2/25/2016 - 10:45
Date/ Time Completed	: 2/25/2016
Logged By	: WFM
Checked By	: WFM

Driller	: Allied - MW
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" (4.25" ID) HSA
Surface Elevation (ft)	: 12.0
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 50
Depth to Water (ft TOC)	: 13.0
Northing (US ft)	: 564371.72
Easting (US ft)	: 1459531.84

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0								
						0-0.66' Silty SAND, dark reddish brown and black sandy slag, very stiff, moist	SM	No odors noted throughout boring
1	SS-1	75	0.6	2.5	2-5-6-7	0.66-2' Silty SAND, pale yellowish olive brown, dense, moist	SM	
2								
3	SS-2	100	0.3	1.0	3-3-4-6	2-4' Clayey SAND, pale brown, stiff to very moist, many high and low chroma redoximorphic features	SC	
4								
5	SS-3	67	0.3	1.9	2-4-5-7	4-6' Silty SAND, pale grayish, stiff to very stiff, medium dense, moist, many high chroma reddish yellow oxidation	SM	
6								
7	SS-4	100	1.3	-	5-7-9-10	6-8' Silty SAND, light olive gray, medium dense, very moist with a few brownish yellow oxidation stains	SM	
8								
9	SS-5	100	0.2	-	4-5-3-2	8-10' Clayey SAND, light olive gray, loose to medium dense, saturated, many large reddish yellow oxidation coatings	SC	
10								
11	SS-6	100	1.4	1.0	2-3-2-4	10-11.5' Silty SAND, pale brownish, loose, saturated with many pale yellow oxidation coatings	SM	
						11.5-12' Clayey SILT, pale brown, stiff, oxidation	CL	
12								
13	SS-7	100	0.3	-	3-2-1-2	12-13.3' Silty SAND, pale yellowish brown, loose, saturated, brownish yellow oxidation, subrounded-rounded gravel up to 1" diameter	SM	
						13.3-16' Lean CLAY, light gray, very soft, yellowish brown oxidation	CL	
14								
15	SS-8	0	-	-	WH-1-2-1			No recovery on SS-8
16								
17	SS-9	100	0.2	<0.4	2-1-2-2	16-18' Lean CLAY to SILT, light grayish to medium gray, very soft, saturated, common to many reddish yellow oxidation	CL-ML	
18								
19	SS-10	100	0.2	<0.4	WH-1-1-2	18-24' Clayey SILT, olive gray (5Y 4/2), very soft, very moist, very dark to gray black streaks - possible organics, becoming soft at 22' bgs	ML-CL	
20								

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Boring ID: SW15-PZM031

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B5
Weather	: 40 F, very windy
Date/Time Started	: 2/25/2016 - 10:45
Date/ Time Completed	: 2/25/2016
Logged By	: WFM
Checked By	: WFM

Driller	: Allied - MW
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" (4.25" ID) HSA
Surface Elevation (ft)	: 12.0
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 50
Depth to Water (ft TOC)	: 13.0
Northing (US ft)	: 564371.72
Easting (US ft)	: 1459531.84

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
20								
21	SS-11	100	0.2	<0.4	2-2-2-3			
22							ML-CL	
23	SS-12	100	0.3	0.5	3-3-3-4			
24								
25	SS-13	100	0.3	0.5	WH-1-2-2	24-26' Clayey SILT, dark gray, very soft to medium, very moist, organic streaks and some apparent very tiny shell fragments	ML-CL	
26								
27	SS-14	100	0.2	0.5	3-3-2-3	26-34' Clayey SILT, dark gray (2.5Y 4/1), soft, moist, organic streaks		
28								
29	SS-15	100	0.2	0.5	WH-1-2-2			
30							ML-CL	
31	SS-16	100	0.2	-	3-3-3-3			
32								
33	SS-17	100	0.3	0.8	5-5-6-6			
34						34-35' Clayey SAND, dark gray, soft, moist	SC	
35	SS-18	100	0.2	0.4	1-1-2-2	35-36' Clayey SILT, dark gray, very soft, very moist	ML-CL	
36						36-40' Clayey SILT, dark gray, very soft, very moist to wet, green-black organic streaks		
37	SS-19	100	0.2	0.3	1-3-3-3			
38							ML-CL	
39	SS-20	100	0.1	0.3	1-WH-2-3			
40								

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Boring ID: SW15-PZM031

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B5
Weather	: 40 F, very windy
Date/Time Started	: 2/25/2016 - 10:45
Date/ Time Completed	: 2/25/2016
Logged By	: WFM
Checked By	: WFM

Driller	: Allied - MW
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" (4.25" ID) HSA
Surface Elevation (ft)	: 12.0
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 50
Depth to Water (ft TOC)	: 13.0
Northing (US ft)	: 564371.72
Easting (US ft)	: 1459531.84

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
40								
41	SS-21	100	0.2	-	WH-1-1-1	40-48' Medium grained SAND, dark grayish brown, loose, very moist to saturated, with trace plant fibers at 42' bgs	SP	No odors
42								
43	SS-22	100	0.3	-	2-3-5-9			
44								
45	SS-23	25	0.2	-	1-1-2-3			
46								No odors
47	SS-24	54	0.6	-	7-8-8-3			
48								
49	SS-25	0	-	-	8-15-15-15	No recovery - Probable sandy zone		
50						End of Boring		
51								
52								
53								
54								
55								
56								
57								
58								
59								
60								

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Boring ID: SW-021-MWS

(page 1 of 1)

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B15
Weather	: 40s F, clear to p. cloudy
Date/Time Started	: 1/15/2016 - 9:30
Date/ Time Completed	: 1/15/2016 - 12:00
Logged By	: PNV
Checked By	: ESM

Driller	: Allied - MW/RS
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" OD (4.25" ID) HSA
Surface Elevation (ft)	: 10.4
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 18
Depth to Water (ft bgs)	: 8.1
Northing (US ft)	: 568534.52
Easting (US ft)	: 1457422.96

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0								
1	SS-1	58	1.2	-	5-8-10-14	0-5' Gravelly SAND, black to dark gray, medium dense slag, moist (fill)		
2								
3	SS-2	83	0.9	-	5-10-8-11		SW	
4								
5	SS-3	63	2.7	-	2-3-7-10		SW	
						5-5.25' Gravelly SAND, tan, loose, possible concrete debris, moist (fill)		
6						5.25-11' Gravelly SAND, black to dark gray, slag, loose to medium dense, moist (fill)		
7	SS-4	50	2.1	-	21-6-3-4			
8							SW	
9	SS-5	63	12.9	-	9-10-8-13			
10								
11	SS-6	83	14.3	-	15-7-7-11			
						11-12' Gravelly SAND, black to dark gray, medium dense, with high sand content, wet (fill)	SW	
12						12-14' Gravelly SAND, black to dark gray, very dense, some tan pieces of sandstone, wet (fill)		
13	SS-7	46	0.8	-	5-5-50/2		SW	
14						14-18' Sandy GRAVEL, bluish gray, medium dense, slag, wet (fill)		
15	SS-8	54	1.2	-	1-7-8-2			Fill material >18' bgs
16							GW	
17	SS-9	75	0.6	-	5-7-4-3			Auger to 17' bgs Split Spoon to 18' bgs
18						End of Boring		
19								
20								

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Boring ID: SW-022-MWS

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B1
Weather	: 40s F, Overcast
Date/Time Started	: 1/15/2016 - 12:30
Date/ Time Completed	: 1/15/2016 - 14:30
Logged By	: PNV
Checked By	: ESM

Driller	: Allied - MW/RS
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" OD (4.25" ID) HSA
Surface Elevation (ft)	: 12.2
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 18
Depth to Water (ft bgs)	: 9.8
Northing (US ft)	: 568222.29
Easting (US ft)	: 1457122.05

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0								
1	SS-1	63	0.0	-	5-4-5-5	0-2' Gravelly SAND, dark brown to black, slag gravel, moist (fill)	SW	
2								
3	SS-2	79	0.0	-	7-10-11-10	2-12' Gravelly SAND, light gray to white, loose to very dense, possible ash material, slag gravel, moist, (fill)		
4								
5	SS-3	67	0.7	-	7-8-13-11			
6								
7	SS-4	46	0.1	-	11-9-5-4		SW	
8								
9	SS-5	25	0.0	-	3-1-50/4			
10								Wet at 10' bgs
11	SS-6	46	0.3	-	2-2-3-2			
12								
13	SS-7	54	0.5	-	3-5-4-3	12-18' Gravelly SAND, bluish gray, loose to very dense, slag gravel, wet (fill)		
14								
15	SS-8	54	0.3	-	4-50/3		SW	
16								
17	SS-9	25	0.6	-	15-50/3			Fill material >18' bgs
18						End of Boring		
19								
20								

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Boring ID: SW-023-MWS

(page 1 of 1)

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B1
Weather	: 38F, overcast
Date/Time Started	: 2/1/2016 - 11:45
Date/ Time Completed	: 2/1/2016 - 14:15
Logged By	: PNV
Checked By	: ESM

Driller	: Allied - MW/RS
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" OD (4.25" ID) HSA
Surface Elevation (ft)	: 12.8
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 18.5
Depth to Water (ft bgs)	: 10.6
Northing (US ft)	: 568116.87
Easting (US ft)	: 1456637.37

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0–1	SS-1	100	7.8	-	20-20-15-15	0-1.5' SAND, dark brown, dense, fine grained with some slag gravel (fill)	SP	
1–2						1.5-10' Sandy GRAVEL, light to dark bluish gray, loose to very dense, slag gravel (fill)	GW	
2–3	SS-2	58	2.4	-	13-9-4-3			
3–4						some black sand at 4' bgs		
4–5	SS-3	50	0.8	-	3-4-3-2			
5–6								
6–7	SS-4	75	1.7	-	3-3-6-4			
7–8								Wet soils at 8' bgs
8–9	SS-5	13	1.0	-	50/3			
9–10								
10–11	SS-6	42	0.6	-	15-50/5	10-12' Gravelly SAND, light to dark bluish gray, very dense, slag gravel, wet (fill)	SW	
11–12								
12–13	SS-7	75	0.5	-	1-1-2-3	12-14' SAND, dark grayish brown, soft, fine grained, wet	SP	Fill material to approximately 12' bgs
13–14								
14–15	SS-8	100	0.5	-	1-2-3-5	14-14.5' SAND, tan to light gray, fine grained	SP	
						14.5-16' Sandy SILT, light brown to gray, with clay, medium stiff, mottled	ML	
15–16								
16–17	SS-9	75	0.0	-	6-9-9-9	16-18.5' SAND, dark gray, very stiff, fine grained, with some fine gravel	SP	
17–18	HSA	-	-	-	-			
18–19						End of Boring		
19–20								

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Boring ID: SW-024-MWS

(page 1 of 1)

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B1
Weather	: 39F, steady rain
Date/Time Started	: 2/1/2016 - 15:30
Date/ Time Completed	: 2/2/2016 - 11:00
Logged By	: PNV
Checked By	: ESM

Driller	: Allied - MW/RS
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" OD (4.25" ID) HSA
Surface Elevation (ft)	: 11.6
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 16
Depth to Water (ft bgs)	: 7.3
Northing (US ft)	: 568021.88
Easting (US ft)	: 1456157.41

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0								
1	SS-1	83	0.4	-	15-20-15-10	0-3.5' Gravelly SAND, dark gray to black, dense to medium dense (fill)	SW	
2								
3	SS-2	83	0.3	-	9-8-6-5			
4						3.5-7.5' SAND, light gray, very loose, fine to coarse grained (fill)	SW	
5	SS-3	96	0.3	-	3-2-2-1			
6								
7	SS-4	83	0.0	-	1-2-1-1			
						7.5-8' SAND, black, very loose, fine grained (fill)	SP	Fill material to approximately 8' bgs
8								Wet at 8' bgs
9	SS-5	100	0.5	-	WH-WH-2-3	8-10' Silty SAND, light gray to brown, soft, with clay, mottled, wet	SM	
10								
11	SS-6	100	0.8	-	3-4-5-3	10-16' Clayey SILT, light gray to brown, soft to stiff wet, mottled		
12								
13	SS-7	100	0.0	-	2-3-5-3		ML-CL	
14								
15	SS-8	100	0.0	-	WH-1-2-2			
16						End of Boring		
17								
18								

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Boring ID: SW-025-MWS

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B1
Weather	: 40F, clear
Date/Time Started	: 2/2/2016 - 12:00
Date/ Time Completed	: 2/2/2016 - 14:30
Logged By	: PNV
Checked By	: ESM

Driller	: Allied - MW/RS
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" OD (4.25" ID) HSA
Surface Elevation (ft)	: 11.0
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 16
Depth to Water (ft bgs)	: 8.4
Northing (US ft)	: 566943.92
Easting (US ft)	: 1456126.02

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0						0-0.25' Asphalt	-	
1	SS-1	100	3.1	-	47-42-22-8	0.25-2.5' Sandy GRAVEL, dark brown, dense (fill)	GW	
2						2-5.5' Gravelly SAND, light gray, loose to medium dense, slag gravel (fill)		
3	SS-2	100	1.8	-	17-7-8-7		SW	
4								
5	SS-3	71	3.9	-	3-4-2-2			
6						5.5-12' SAND, dark brown to dark gray, loose to medium dense, fine to coarse grained with slag gravel (fill)		
7	SS-4	66	37.5	-	14-7-12-9			
8								
9	SS-5	71	0.6	-	3-4-5-3		SW	Wet at 9' bgs
10								
11	SS-6	71	0.5	-	2-7-14-15			
12						12-14.5' SAND, black, loose, coarse grained with slag gravel, wet (fill)		
13	SS-7	100	11.6	-	11-4-5-9		SP	
14								
15	SS-8	83	9.1	-	6-7-16-7	14.5-16' SAND, dark gray, medium dense, coarse grained with slag gravel, wet (fill)	SP	Fill material >16' bgs
16						End of Boring		
17								
18								

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Boring ID: SW-026-MWS

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B17
Weather	: ~30F, clear, breezy
Date/Time Started	: 1/29/2016 - 9:40
Date/ Time Completed	: 1/29/2016 - 11:20
Logged By	: WFM
Checked By	: WFM

Driller	: Allied - MW
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" (4.25" ID) HSA
Surface Elevation (ft)	: 8.6
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 14.5
Depth to Water (ft TOC)	: 9.6
Northing (US ft)	: 566649.66
Easting (US ft)	: 1455514.08

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0								
	SS-1	100	0.1	-	25-25-12-7	0-1' Brick, slag, and some quartz gravels, reddish, dry, dense	GM	No odor Fill/slag
1						1-2' Quartz GRAVEL, pale white, yellow white, some gray slag, dry, medium dense	GM	No odor Fill/slag
2	SS-2	37.5	0.1	-	3-3-2-3	2-4' Fine slag SAND, very dark reddish brown / brownish black, loose, some roots and rotted organics, moist	SP	No odor
3								
4	SS-3	50	0.1	-	2-3-50/5	4-6' Brick, reddish, grayish, black, sandy, decomposed roots, grades to black, dark gray, brown slag, very hard, shale-like, moist	SM-GM	No odor Very hard - HSA 5-6'
5								
6	SS-4	29	0.1	-	27-50/1	6-8' Slag, bluish gray (Gley 2-5/5) and pale brown, hard, slightly moist	GW	No odor Slag
7								
8	SS-5	42	0.8	-	20-50/4	8-13' Slag, bluish gray to black by 12', coarse to medium sized, dense, wet, saturated	GM/GW	Free water on spoon Petroleum odor
9								
10	SS-6	88	2.7	-	49-44-6-3			Free water on spoon Petroleum odor
11								
12	SS-7	100	2.9	-	5-16-13-7			Free water on spoon Petroleum odor
13						13-14.5' Silty sandy SLAG, dark bluish gray/bluish gray, medium dense, wet	SM	
14	HSA	-	-	-	-			
						End of Boring		
15								
16								

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Boring ID: SW-027-MWS

(page 1 of 1)

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B4
Weather	: ~40F, clear, calm
Date/Time Started	: 1/28/2016 - 11:00
Date/ Time Completed	: 1/28/2016 - 12:15
Logged By	: WFM
Checked By	: WFM

Driller	: Allied - MW
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" (4.25" ID) HSA
Surface Elevation (ft)	: 14.3
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 14.7
Depth to Water (ft TOC)	: 5.4
Northing (US ft)	: 564973.53
Easting (US ft)	: 1456177.11

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0								
1	SS-1	100	0.3	-	8-32-12-6	0-1.5' Silty SAND and GRAVEL, dark brown, some gray slag, moist, dense	SM-GM	No odor No odor
2						1.5-2.25' Silty SAND, black, finer slag, very moist	SM	No odor
3	SS-2	63	0.3	-	3-3-4-5	2.25-4' Silty SAND, strong yellow brown, loose, very moist	SM	
4								
5	SS-3	50	0.3	-	1-3-1-1	4-6.83' Silty SAND, pale brown, very loose, saturated, fragments of reddish tile/brick at ~5' bgs	SM	Spoon wet/dropping water ~5' in hole No odor
6								
7	SS-4	100	0.1	NA-NA-2.5-NA	1-1-3-3	6.83-7.66' Lean-fat CLAY, light gray (2.5Y 7/1), stiiff, moist, cohesive, medium plastic	CL-CH	No odor
						7.66-8' Silty SAND, yellowish red with Chr 2 gray, moist	SM	No odor
8								
9	SS-5	100	0.1	-	7-1-3-3	8-11' Well graded SAND, yellow brown to dark yellow brown (7.5YR 5/6-4/6) loose to medium dense, wet, one lense of grayish clay	SW	No odor
10								No odor
11	SS-6	75	1.9	-	7-9-12-11	11-12' Sandy CLAY, dark yellow brown and light gray, very stiff, moist	CL	No odor
12								
13	SS-7	100	2.4	-	4-4-5-9	12-13.75' Silty SAND-SAND, yellow brown, loose, wet, no apparent RMFs, small white shell fragments	SM-SW	No odor
14						13.75-14.7' Silty SAND-SAND, pale gray, loose, wet	SM-SW	No odor
	HSA	-	-	-	-			
15						End of Boring		
16								

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Boring ID: SW-028-MWS

(page 1 of 1)

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B4
Weather	: ~40F, clear, breezy
Date/Time Started	: 1/27/2016 - 11:00
Date/ Time Completed	: 1/28/2016
Logged By	: WFM
Checked By	: PNV

Driller	: Allied - MW
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" (4.25" ID) HSA
Surface Elevation (ft)	: 13.2
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 14.5
Depth to Water (ft TOC)	: 13.9
Northing (US ft)	: 564518.61
Easting (US ft)	: 1456324.45

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0–1	SS-1	92	0.4	-	10-35-26-26	0-2' Silty SAND and GRAVEL, medium brown to dark brown to brown-black, loose to very dense, moist, slag material with organics	SM-GM	No odor Slight to mod reaction with HCl
2–3	SS-2	75	0.6	-	35-24-12-9	2-4' SILTY SAND, black, very dense to loose, moist to very damp, fine slag, many shiny coal or slag gravels	SM	No odor Slight to mod reaction with HCl
4–5	SS-3	83	0.7	-	2-3-3-2	4-5.75' Silty SAND, very dark brown gray, loose, very moist	SM	No odor Possible foundry sand material
6						5.75-6' Silty SAND, olive gray to gray, as above	SM	No odor Possible fill or alluvium to 14.5'
6–7	SS-4	83	0.5	-	1-2-2-2	6-8' Silty and clayey SAND, dark gray to olive gray (5Y 4/1-4/2), very loose, saturated, apparent pale gray reduction and dark organic streaks	SM-SC	
8–9	SS-5	83	3.4	2.2	3-3-5-6	8-9.75' Silty SAND, olive gray, very stiff to stiff, very moist, common RMF	SM	Moderate petroleum odor
10						9.75-10' Silty SAND and SAND, greenish gray, medium dense, wet	SM-SW	Possible petroleum odor
10–11	SS-6	83	3.1	-	7-6-7-11	10-11.5' Silty SAND, olive gray to pale olive, loose to medium dense, wet, with olive yellow and gray RMFs	SM	
11–12						11.5-12' Silt SAND and SAND, greenish gray, medium dense, wet	SM-SW	
12–13	SS-7	100	0.4	2.0	3-5-7-8	12-13' Silty SAND and SAND, mixed green gray with many brown yellow oxidation, loose, wet	SM-SW	
13–14						13-14.5' Fat to lean CLAY, pale grayish to gray with many red yellow oxidation, stiff, moist	CH-CL	
14	HSA	-	-	-	-			
15–16						End of Boring		

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Boring ID: SW-029-MWS

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B4
Weather	: 35F, overcast, breezy
Date/Time Started	: 1/27/2016 - 10:20
Date/ Time Completed	: 1/27/2016
Logged By	: WFM
Checked By	: WFM

Driller	: Allied - MW
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" (4.25" ID) HSA
Surface Elevation (ft)	: 13.2
Depth to Refusal (ft)	: Attempts 1-3: 5', 1', 11.2'
Total Depth (ft bgs)	: 11.2
Depth to Water (ft TOC)	: 11.6
Northing (US ft)	: 563980.59
Easting (US ft)	: 1456323.19

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0								
1	SS-1	88	0.8	-	18-29-27-20	0-2' Silty GRAVEL and SAND, gray brown, minor reddish (brick fragments), very dark, gray to black slag like material, dry to moist, very dense, slag slight reaction to HCl	GM-SM	Slag fill to 11.2' depth
2								
3	SS-2	63	1.8	-	6-9-13-24	2-4' Silty GRAVEL and SAND, red yellow brown, some dark gray brown, medium dense, moist, slag slight reaction to HCl	SM-GM	
4								
5	SS-3	29	9.0	-	5-5-50/4	4-6' Silty GRAVEL and SAND, dark gray brown with some black, very moist, loose to very dense, metal fragment at bottom	SM-GM	
6	SS-4	100	1.4	-	50/1	6-8' Silty GRAVEL, bluish gray (Gley 2- 5/5) slag fragments, very hard, moist; grayish to bluish gray wet slag at 6.16' bgs		
7	HSA	-	-	-	-		GM	
8								
9	SS-5	83	0.6	-	7-6-6-6	8-10' Silty GRAVEL and SAND, bluish gray to dark gray slag, wet, medium dense	GM-SM	No odor
10	SS-6	100	0.5	-	6-50/0	10-10.5' Silty GRAVEL and SAND, dark grayish slag, wet	SM-GM	Medium to strong petroleum odor
11	HSA	-	-	-	-	10.5-11.2' Extremely hard augering (assumed slag)	SM-GM	45 minutes to advance auger 0.7'
12						End of Boring		

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Boring ID: SW-030-MWS

(page 1 of 1)

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B5
Weather	: 30s F, clear
Date/Time Started	: 1/7/2016 - 13:30
Date/ Time Completed	: 1/7/2016 - 16:00
Logged By	: PNV
Checked By	: ESM

Driller	: Allied - MW/RS
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" OD (4.25" ID) HSA
Surface Elevation (ft)	: 12.3
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 14
Depth to Water (ft bgs)	: 3.4
Northing (US ft)	: 563547.95
Easting (US ft)	: 1458146.61

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0								
1	SS-1	100	1.5	-	10-17-12-24	0-2' Silty SAND, reddish brown, medium dense, with some gray gravel, slag gravel to boulder sized, dry (fill)	SM	
2								
3	SS-2	79	12.5	-	22-22-27-17	2-4' Silty SAND, reddish brown to dark gray, dense, with slag gravel, moist (fill)	SM	
4								
5	SS-3	63	0.5	-	6-8-6-5	4-6' Sandy GRAVEL, orange brown, medium dense, wet (fill)	GW	
6								Fill material to approximately 6' bgs
7	SS-4	71	0.4	-	8-4-3-4	6-8' Clayey SILT, dark olive gray, medium stiff, wet	ML-CL	
8								
9	SS-5	100	0.3	-	2-3-5-6	8-10' SILT, light gray, medium stiff, with trace clay, wet	ML	
10								
11	SS-6	100	0.3	-	8-6-8-11	10-12' Clayey SILT, light gray to brown, stiff, mottled, wet	ML-CL	
12								
13	SS-7	100	0.2	-	10-10-9-10	12-14' SAND, light gray to light brown, very stiff, fine grained, wet	SP	
14						End of Boring		
15								

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Boring ID: SW-031-MWS

(page 1 of 1)

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B5
Weather	: 30s F, clear
Date/Time Started	: 1/6/2016 - 16:00
Date/ Time Completed	: 1/7/2016 - 9:30
Logged By	: PNV
Checked By	: ESM

Driller	: Allied - MW/RS
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" OD (4.25" ID) HSA
Surface Elevation (ft)	: 10.9
Depth to Refusal (ft)	: *See note below
Total Depth (ft bgs)	: 14
Depth to Water (ft bgs)	: 2.3
Northing (US ft)	: 563598.44
Easting (US ft)	: 1458394.82

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0								
1	SS-1	25	2.3	-	50/3	0-4' Gravelly SAND, dark gray to black, very dense, dry (fill)	SW	
2								
3	SS-2	16	2.1	-	50/5			
4								
5	SS-3	42	2.7	-	7-9-3-3	4-6' Gravelly SAND, clayey, dark brown, medium dense, wet (fill)	SW	
6								
7	SS-4	83	0.8	-	10-25-13-12	6-10' Sandy GRAVEL, dark to light gray, to dark red, very loose to dense, wet (fill)	GW	
8								
9	SS-5	0	-	-	WH-1-1-2			
10								
11	SS-6	92	1.1	-	4-3-4-7	10-11' Gravelly SILT, clayey, dark gray, loose, wet (fill)	ML	Fill material to approximately 11' bgs
						11-14' Clayey SILT, dark gray, stiff to very stiff, wet	ML-CL	
12								
13	SS-7	100	0.4	-	6-6-11-10			
14						End of Boring		
15						*First 4 boring attempts encountered refusal between 2' and 10' bgs		
16								

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Boring ID: SW-032-MWS

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B5
Weather	: 30s F, clear
Date/Time Started	: 1/5/2016 - 12:00
Date/ Time Completed	: 1/5/2016
Logged By	: PNV
Checked By	: ESM

Driller	: Allied - MW/RS
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" OD (4.25" ID) HSA
Surface Elevation (ft)	: 10.5
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 16
Depth to Water (ft bgs)	: 4.9
Northing (US ft)	: 563537.58
Easting (US ft)	: 1458639.17

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0								
1	SS-1	42	7.3	-	2-23-15-18	0-4' Gravelly SAND, black to brown, loose to dense, fine to medium grained sand, slag gravel, moist (fill)	SW	
2								
3	SS-2	67	2.1	-	6-4-5-4			
4								
5	SS-3	71	9.1	-	2-3-24-37	4-6' Gravelly SAND, black to brown to gray, medium dense, slag gravel (fill)	SW	Wet at 5' bgs
6								
7	SS-4	67	10.2	-	2-5-7-20	6-10' Gravelly SAND, gray to light gray, loose, wet (fill)	SW	
8								
9	SS-5	100	2.3	-	2-1-4-50/3			
10								Fill material to approximately 10' bgs
11	SS-6	88	0.4	-	1-3-4-7	10-12' Silty SAND, olive gray, medium stiff, fine grained with trace clay, some mottling	SM	
12								
13	SS-7	100	0.3	-	8-10-11-14	12-14' Silty SAND, light gray to brown, very stiff, fine grained with trace clay, some mottling	SM	
14								
15	SS-8	92	0.4	-	3-4-5-7	14-16' Clayey SILT, light gray to brown, stiff, some mottling	ML-CL	Auger to 14.5' bgs Split spoon to 16' bgs
16						End of Boring		
17								
18								

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Boring ID: SW-033-MWS

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B5
Weather	: 30s F, overcast
Date/Time Started	: 1/8/2016 - 9:00
Date/ Time Completed	: 1/8/2016 - 12:15
Logged By	: PNV
Checked By	: ESM

Driller	: Allied - MW/RS
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" OD (4.25" ID) HSA
Surface Elevation (ft)	: 10.6
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 16
Depth to Water (ft bgs)	: 7.3
Northing (US ft)	: 563597.45
Easting (US ft)	: 1459274.61

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0								
1	SS-1	81	0.0	-	1-3-8-30	0-1.5' Gravelly SAND, dark brown to dark gray, medium dense, moist (fill) wood debris from 1.5-2.0'	SW	
2								
3	SS-2	58	0.6	-	7-11-11-7	2-4' GRAVEL, light gray, medium dense, with dark brown gravelly sand, moist (fill) wood debris from 4.0-4.5'	GW	
4								
5	SS-3	71	3.1	-	3-5-11-10	4.5-6' Gravelly SAND, dark brown to dark gray, medium dense (fill)	SW	
6								
7	SS-4	71	1.3	-	4-3-3-2	6-8' SAND, dark brown to gray, loose, fine to coarse grained with some fine gravel, moist (fill)	SW	
8								Wet at 8' bgs
9	SS-5	83	0.2	-	19-40-50/2	8-12' SAND, light gray to light greenish gray, medium dense to very dense, fine to coarse grained with some slag gravel, wet (fill)	SW	
10								
11	SS-6	58	0.6	-	24-12-1-1			
12								Fill material to approximately 12' bgs
13	SS-7	100	0.0	-	1-1-1-3	12-14' Clayey SILT, dark gray, very soft, with organic plant material, wet	ML-CL	
14								
15	SS-8	100	0.1	-	1-WH-WH-2	14-15' Clayey SAND, light gray, very soft, fine grained	SC	
						15-16' Clayey SILT, light gray, very soft	ML-CL	
16						End of Boring		
17								
18								

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Boring ID: SW-034-MWS

(page 1 of 1)

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B5
Weather	: 30s F, overcast
Date/Time Started	: 1/8/2016 - 13:00
Date/ Time Completed	: 1/8/2016 - 16:00
Logged By	: PNV
Checked By	: ESM

Driller	: Allied - MW/RS
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" OD (4.25" ID) HSA
Surface Elevation (ft)	: 10.2
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 17
Depth to Water (ft bgs)	: 8.4
Northing (US ft)	: 563668.32
Easting (US ft)	: 1459941.32

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0–1	SS-1	100	0.0	-	1-3-7-7	0-2' Gravelly SAND, dark brown to dark gray, loose, black sand 0-0.5' bgs, slag gravel, moist (fill)	SW	
2–4	SS-2	58	0.7	-	18-32-19-12	2-6' Gravelly SAND, dark brown to light greenish gray, medium to very dense, slag gravel, moist (fill)	SW	
4–6	SS-3	42	0.4	-	4-9-10-6			
6–8	SS-4	58	0.1	-	7-7-9-7	6-10' Sandy GRAVEL, gray to greenish gray, medium to very dense, slag gravel, moist (fill)	GW	Wet at 8' bgs
8–10	SS-5	25	0.2	-	30-50/1			
10–12	SS-6	63	0.1	-	6-3-27-6	10-12.5' Sandy GRAVEL, greenish gray, medium dense, slag gravel, wet (fill)	GW	
12–13	SS-7	71	0.1	-	7-3-4-3	12.5-13' SAND, greenish gray, medium stiff, fine to coarse grained, wet	SW	Fill material to approximately 12.5' bgs
13–14						13-14.5' SAND, black, medium stiff, fine grained, wet	SP	
14–15	SS-8	96	0.1	-	1-1-3-6	14.5-15' Clayey SILT, brown to gray, soft, mottled, wet	ML-CL	
15–16						15-17' Clayey SILT, light gray to brown, soft, mottled, wet	ML-CL	
16–17	SS-9	100	0.1	-	1-3-5-5			
17–18						17-18' Clayey SAND, light gray, medium stiff, fine grained, wet	SC	Auger to 17' bgs Split spoon to 18' bgs
18–20						End of Boring		

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Boring ID: SW-035-MWS

(page 1 of 1)

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B5
Weather	: 30s F, clear
Date/Time Started	: 1/11/2016 - 13:00
Date/ Time Completed	: 1/11/2016 - 16:30
Logged By	: PNV
Checked By	: ESM

Driller	: Allied - MW/RS
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" OD (4.25" ID) HSA
Surface Elevation (ft)	: 11.1
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 15
Depth to Water (ft bgs)	: 6.3
Northing (US ft)	: 563772.91
Easting (US ft)	: 1460297.91

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0–1	SS-1	75	0.1	-	4-7-20-20	0-1.5' SAND, black, medium dense, fine to coarse grained, possible coal fines, moist (fill)	SW	
1.5–3						1.5-3' Gravelly SAND, tan, very dense, moist (fill)	GW/SW	
2–3	SS-2	83	1.2	-	27-27-23-35			
3–3.5						3-3.5' Gravelly SAND, purplish gray, very dense, moist (fill)	GW/SW	
3.5–4.25						3.5-4.25' Gravelly SAND, gray to tan, very dense, moist (fill)	GW/SW	
4.25–5	SS-3	58	12.3	-	15-18-9-8	4.25-6' Gravelly SAND, black to gray, medium dense, bluish gray slag gravel, moist (fill)	GW/SW	
6–7	SS-4	33	1.4	-	3-5-8-7	6-10' Gravelly SAND, yellowish brown, medium dense, wet (fill)	GW/SW	
8–9	SS-5	0	-	-	7-8-4-3			
10–11	SS-6	29	2.0	-	10-7-10-6	10-12' Sandy GRAVEL, gray to tan, medium dense, wet (fill)	SW/GW	
12–13	SS-7	54	2.3	-	8-7-4-3	12-14' Gravelly SAND, dark gray, medium dense (fill)	GW/SW	
14–15	SS-8	83	1.5	-	6-5-6-4	14-16' Gravelly SAND, black to tan, medium dense, medium to coarse grained, plastic trash debris in bottom of spoon (fill)	GW/SP	Fill material >16' bgs Auger to 15' bgs Split spoon to 16' bgs
16						End of Boring		

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Boring ID: SW-036-MWS

(page 1 of 1)

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B5
Weather	: 30-40s F, overcast
Date/Time Started	: 1/12/2016 - 11:15
Date/ Time Completed	: 1/12/2016 - 17:15
Logged By	: PNV
Checked By	: ESM

Driller	: Allied - MW/RS
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" OD (4.25" ID) HSA
Surface Elevation (ft)	: 10.8
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 18
Depth to Water (ft bgs)	: 9.8
Northing (US ft)	: 563678.17
Easting (US ft)	: 1460774.35

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0								
1	SS-1	75	0.1	-	8-30-30-50/4	0-1.5' Gravelly SAND, black, very dense, fine to medium grained, dry (fill)	GW/SP	
2						1.5-7.5' Gravelly SAND, light to medium gray, slag gravel, dry, some dark brown rusty metal debris (fill)	GW/SW	
3	SS-2	0	-	-	-			
4								
5	SS-3	71	6.8	-	14-18-19-20			
6								
7	SS-4	50	9.6	-	14-8-16-22			
						7.5-8' Gravelly SAND, greenish gray, medium dense, dry (fill)	GW/SW	
8								
9	SS-5	33	0.3	-	10-50/4	8-10' Gravelly SAND, dark brown, very dense, slag gravel, moist (fill)	GW/SW	
10						10-16' Sandy GRAVEL, gray, very dense, slag gravel, wet (fill)	SW/GW	
11	SS-6	58	0.1	-	30-50-30-25			
12								
13	SS-7	67	0.4	-	4-20-50/2			
14								
15	SS-8	33	0.5	-	42-50/3			
16						16-18' Gravelly SAND, dark gray, loose, wet (fill)		
17	SS-9	83	0.1	-	1-3-4-5		GW/SW	Fill material >18' bgs
18						End of Boring		
19								
20								

ARM Group Inc.
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Boring ID: SW-037-MWS

(page 1 of 1)

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B5
Weather	: ~50s F, overcast
Date/Time Started	: 12/21/2015 - 14:40
Date/ Time Completed	: 12/21/2015 - 16:10
Logged By	: WFM
Checked By	: WFM

Driller	: Allied - MW
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" (4.25" ID) HSA
Surface Elevation (ft)	: 11.0
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 16.1
Depth to Water (ft TOC)	: 12.9
Northing (US ft)	: 563571.81
Easting (US ft)	: 1461007.95

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0–1	SS-1	96	0.1	-	4-8-12-50	0-1.75' Silty SAND and GRAVEL, Very dark gray (10YR 3/1), medium dense, moist, slag-like materials, medium reaction with HCl	SM-GM	No Odor
2						1.75-2.25' Silty GRAVEL, reddish brown and dark reddish brown (2.5YR 3/3), dry	GM	Metal debris
3	SS-2	75	0.6	-	11-11-10-9	2.25-4' Silty GRAVEL, gray-graybrown, medium dense, slag like material, moist	GM	No Odor Str reaction w/ HCl
4–5	SS-3	63	2.9	-	5-5-5-5	4-10' Silty GRAVEL, mixed reddish brown, gray brown to dark gray slag, moist, moderate and strong reaction with HCl	GM	No Odor Probable slag from 0-15.6' bgs
6–7	SS-4	67	5.2	-	11-7-7-12			No Odor
8–9	SS-5	63	0.1	-	4-5-5-7			No Odor
10–11	SS-6	92	0.1	-	50-45-42-34	10-12' Silty GRAVEL, gray-brown to gray, very dense, saturated, slag material, no reaction with HCl, slag pieces up to ~1"	GM	Spoon wet on exterior with free water inside No Odor
12–13	SS-7	67	0.1	-	7-2-2-10	12-15.6' SAND, brown gray, loose, medium dense, very moist to saturated, no reaction with HCl	SW	No Odor
14–15	SS-8	63	0.1	-	4-5-3-6			
16						15.6-16.1' Silty SAND, black to dark gray, fine sand, loose to medium dense, saturated	SM	Alluvium?
17–18						End of Boring		

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Boring ID: SW-038-MWS

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	:
Weather	: 42F, clear, windy
Date/Time Started	: 12/18/2015 - 13:20
Date/ Time Completed	: 12/20/2015 - 13:00
Logged By	: WFM
Checked By	: WFM

Driller	: Allied - MW
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" (4.25" ID) HSA
Surface Elevation (ft)	: 13.8
Depth to Refusal (ft)	: -
Total Depth (ft bgs)	: 18
Depth to Water (ft TOC)	: 15.9
Northing (US ft)	: 563432.87
Easting (US ft)	: 1461357.62

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0	SS-1	75	0.0	-	30-50/2	0-2' Silty SAND and GRAVEL, dark grayish with metal fragments, slight moist, dense to very dense	SM-GM	No odor Reacts with HCL
1	HSA	-	-	-	-			
2	SS-2	88	0.4	-	38-50/3	2-4' Silty SAND and GRAVEL, dark reddish brown, dense to very dense, moist, reacts with HCl	SM-GM	No odor Reacts with HCL
3	HSA	-	-	-	-			
4	SS-3	88	1.0	-	22-50/4	4-6' Silty SAND and GRAVEL, dark reddish brown to gray to dark gray slag fragments, dense to very dense	SM-GM	No odor RBr reacts with HCL Slag does not
5	HSA	-	-	-	-			
6	SS-4	92	0.0	-	22-15-12-12	6-8' Silty SAND and GRAVEL, gray brown to whitish gray to gray-black to pale brown with some strong red oxidation, dense, moist	SM-GM	No odor Some zones react with HCL
7								
8	SS-5	100	0.1	-	12-30-50/3	8-10' Silty SAND, light brown to white to olive gray and white, moist, dense to very dense, to bright white	SM	No odor No reaction with HCL
9	HSA	-	-	-	-			
10	SS-6	100	0.3	-	50/5	10-12' Silty GRAVEL, whitish to very light olive gray, slight moist, very dense slag, no reaction with HCl	GM	
11	HSA	-	-	-	-			
12	SS-7	100	0.3	-	50/3	12-14' Silty GRAVEL, whitish, medium gray with some dark gray slag type material, very moist at base	GM	No odor No reaction with HCL
13	HSA	-	-	-	-			
14	SS-8	100	0.2	-	22-40-50/3	14-14.5' Silty GRAVEL, whitish to whitish gray, dense, slag type material, very moist to saturated	GM	No odor No reaction with HCL
15						14.5-16' Silty GRAVEL, very dark bluish gray (Gley 2-3/1) very dense, moist- apparent slag	GM	
16	SS-9	100	0.0	-	4-2-6-4	16-18' Silty GRAVEL, dark bluish gray, bluish gray and very dark bluish gray (Gley 2 3/1-5/1) saturated, medium dense slag, whitish inclusions	GM	No odor No reaction with HCL
17								
18						End of Boring		
19								
20								

ARM Group Inc.
Earth Resource Engineers and Consultants

Boring ID: SW-039-MWS

(page 1 of 2)

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B5
Weather	: ~39 F, overcast, light rain
Date/Time Started	: 11/30/2015 - 15:00
Date/ Time Completed	: 12/1/2015 - 13:00
Logged By	: PNV
Checked By	: ESM

Driller	: Allied - MW/AB
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" OD (4.25" ID) HSA
Surface Elevation (ft)	: 17.9
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 26
Depth to Water (ft bgs)	: 17.4
Northing (US ft)	: 563507.65
Easting (US ft)	: 1462484.16

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0–1	SS-1	58	1.0	-	5-28-50/4	0-2' GRAVEL, dark reddish brown, very dense, fine to medium grained, with well graded sand and clay matrix, wet at top from rain and dry at bottom (fill)	GP-GC	
2–3	SS-2	0	-	-	-	2-4' GRAVEL, gray, very dense, moist (fill)	GW	
4–5	SS-3	75	1.5	-	1-2-2-5	4-6' Clayey SILT, brown to gray, soft, mottled, moist (fill)	ML-CL	
6–7	SS-4	79	0.2	-	9-7-4-3	6-8' Sandy GRAVEL, light gray to white with some brown, medium dense, fine slag gravel, moist (fill)	GP	
8–9	SS-5	38	0.5	-	3-5-4-6	8-12' Sandy GRAVEL, light gray to tan, loose to very loose, moist (fill)	GW	
10–11	SS-6	25	7.3	-	1-1-2-2			
12–13	SS-7	58	4.1	-	4-43-50/4	12-13' SILT, light gray to white, hard, possible ash fill, moist (fill)	ML	
						13-16' GRAVEL, gray, very dense to dense, slag gravel, moist (fill)	GW	
14–15	SS-8	67	3.8	-	27-25-7-5			
16–17	SS-9	88	23.2	-	17-8-7-12	16-18' GRAVEL with SILT, gray slag gravel with light gray to white ash silt, loose, wet (fill)	GM	
18–19	SS-10	71	3.5	-	20-10-3-5	18-20' GRAVEL with SILT and SAND, light gray, medium dense, slag gravel, wet (fill)	GW-GM	
20								

ARM Group Inc.
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Boring ID: SW-039-MWS

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B5
Weather	: ~39 F, overcast, light rain
Date/Time Started	: 11/30/2015 - 15:00
Date/ Time Completed	: 12/1/2015 - 13:00
Logged By	: PNV
Checked By	: ESM

Driller	: Allied - MW/AB
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" OD (4.25" ID) HSA
Surface Elevation (ft)	: 17.9
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 26
Depth to Water (ft bgs)	: 17.4
Northing (US ft)	: 563507.65
Easting (US ft)	: 1462484.16

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
20								
21	SS-11	71	1.3	-	6-14-14-10	20-22' GRAVEL with SILT and SAND, dark gray, medium dense, slag gravel, wet (fill)	GW-GM	
22								
23	SS-12	100	0.9	-	5-5-7-8	22-25' GRAVEL with SILT and SAND, light gray to bluish gray, medium dense, slag gravel, wet (fill)	GW-GM	Fill material to approximately 25' bgs
24								
25	SS-13	75	1.2	-	4-6-6-5	25-26' SAND, gray, stiff, fine grained	SP	Auger to 25.5' bgs Split spoon to 26' bgs
26						End of Boring		
27								
28								
29								
30								
31								
32								
33								
34								
35								
36								
37								
38								
39								
40								

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Boring ID: SW-040-MWS

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B5
Weather	: 40s F, overcast, steady rain
Date/Time Started	: 12/2/2015 - 13:30
Date/ Time Completed	: 12/2/2015 - 16:30
Logged By	: PNV
Checked By	: ESM

Driller	: Allied - MW/AB
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" OD (4.25" ID) HSA
Surface Elevation (ft)	: 11.2
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 32
Depth to Water (ft bgs)	: 6.3
Northing (US ft)	: 564306.40
Easting (US ft)	: 1463005.67

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0								
1	SS-1	75	0.0	-	3-16-13-32	0-2' GRAVEL with SAND and SILT, dark brown to light gray, medium dense, slag gravel, moist (fill)	GW	
2								
3	SS-2	79	0.0	-	9-4-5-5	2-4' Clayey SILT, light brown to tan, stiff, mottled, wet (fill)	ML-CL	
4								
5	SS-3	17	0.0	-	1-3-4-4	4-6' GRAVEL, black to gray, loose, slag gravel, some sand and silt, moist (fill)	GW	
6								
7	SS-4	29	0.0	-	6-4-4-6	6-8' Clayey SILT with SAND, gray, medium stiff, wood debris in bottom of shoe, wet (fill)	ML-CL	
8								
9	SS-5	79	0.0	-	3-4-4-5	8-13' SILT, light gray, medium to very stiff, with some clay, mottled	ML-CL	
10								
11	SS-6	100	0.0	-	7-10-10-10			
12								
13	SS-7	100	0.0	-	9-12-15-19			
14						13-17' SAND, orangish tan, very stiff, fine to medium grained, with trace fine gravel	SP	
15	SS-8	75	0.0	-	7-10-10-5			
16								
17	SS-9	100	0.0	-	2-2-2-3			
18						17-20' Clayey SILT, gray to brown, soft, with some iron laminations at 19' bgs	ML-CL	
19	SS-10	100	0.0	-	WH-2-2-2			
20								

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Boring ID: SW-040-MWS

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B5
Weather	: 40s F, overcast, steady rain
Date/Time Started	: 12/2/2015 - 13:30
Date/ Time Completed	: 12/2/2015 - 16:30
Logged By	: PNV
Checked By	: ESM

Driller	: Allied - MW/AB
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" OD (4.25" ID) HSA
Surface Elevation (ft)	: 11.2
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 32
Depth to Water (ft bgs)	: 6.3
Northing (US ft)	: 564306.40
Easting (US ft)	: 1463005.67

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
20								
21	SS-11	100	0.0	-	2-2-2-1	20-21' Clayey SAND, tan, soft, fine to medium grained	SC	
						21-22' Clayey SILT, light gray, soft	ML-CL	
22								
23	SS-12	100	0.0	-	2-2-2-2	22-23' Clayey SAND, with gravel sized iron concretions, light brown, soft (possible fill)	SC	
						23-24' Clayey SILT, dark gray, soft	ML-CL	
24								
25	SS-13	100	0.0	-	WH-WH-2-2	24-25' Clayey SILT, light brown, very soft, with gravel sized iron concretions (possible fill)	ML-CL	Fill material to approximately 25' bgs
						25-30.5' Clayey SILT, dark gray, very soft to medium stiff	ML-CL	
26								
27	SS-14	100	0.0	-	3-3-2-3			
28								
29	SS-15	100	0.0	-	WH-WH-2-3			
30								
31	SS-16	100	0.0	-	7-3-3-3	30.5-31.5' Clayey SAND, dark gray, medium stiff	SC	
						31.5-32' Clayey SILT, dark gray, medium stiff	ML-CL	
32						End of Boring		
33								
34								
35								
36								
37								
38								
39								
40								

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Boring ID: SW-041-MWS

(page 1 of 2)

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B5
Weather	: ~45 F, overcast, light rain
Date/Time Started	: 12/1/2015 - 14:30
Date/ Time Completed	: 12/2/2015 - 10:45
Logged By	: PNV
Checked By	: ESM

Driller	: Allied - MW/AB
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" OD (4.25" ID) HSA
Surface Elevation (ft)	: 11.8
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 31.5
Depth to Water (ft bgs)	: 7.2
Northing (US ft)	: 564416.60
Easting (US ft)	: 1463773.99

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0–1	SS-1	67	5.1	-	17-16-14-12	0-2' GRAVEL, dark brown to black, dense, with sand and silt, multiple layers of brown and black, slag gravel, dry (fill)	GW	
2–3	SS-2	54	1.1	-	8-7-6-5	2-3.5' GRAVEL, gray to black, medium dense, with sand and silt, slag gravel, moist (fill)	GW	
4						3.5-4.5' SAND, tan to white, medium dense, fine to coarse grained, moist (fill)	SW	
5	SS-3	50	14.9	-	2-11-50/4	4.5-6' GRAVEL, brown to black, very dense, with sand and silt, moist (fill)	GW	Augers dropped 0.5' at approximately 5.5' bgs
6–7	SS-4	58	2.5	-	4-1-3-1	6-8.5' SAND, gray to tan, very loose, fine to coarse grained, with some gravel, moist (fill)	SW	
8–9	SS-5	33	0.1	-	WH-WH-1-WH	8.5-10' Silty CLAY, gray, very loose, with reddish brown wood debris, moist (fill)	ML-CL	
10–11	SS-6	25	1.1	-	WH-WH-2-1	10-11.5' SAND, gray to brown, very loose, fine to coarse grained, with wood debris, wet (fill)	SW	
12–13	SS-7	46	0.1	-	WH-1-1-3	11.5-14' Clayey SILT, gray to olive gray, very soft (fill)	ML-CL	
14–15	SS-8	92	0.1	-	3-2-3-3	14-16' SIlty SAND, tan, very loose, fine grained, with reddish brown wood debris, mottled, wet (fill)	SM	
16–17	SS-9	100	0.1	-	1-1-2-3	16-20' Clayey SILT, light gray, soft to medium stiff, mottled, wet (fill)	ML-CL	
18–19	SS-10	100	0.1	-	3-2-3-4			
20								

HSA - hollow stem auger
bgs - below ground surface
PID - photoionization detector
PPM - parts per million

WH - weight of hammer
OD - outside diameter
ID - inside diameter

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Boring ID: SW-041-MWS

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B5
Weather	: ~45 F, overcast, light rain
Date/Time Started	: 12/1/2015 - 14:30
Date/ Time Completed	: 12/2/2015 - 10:45
Logged By	: PNV
Checked By	: ESM

Driller	: Allied - MW/AB
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" OD (4.25" ID) HSA
Surface Elevation (ft)	: 11.8
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 31.5
Depth to Water (ft bgs)	: 7.2
Northing (US ft)	: 564416.60
Easting (US ft)	: 1463773.99

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
20								
21	SS-11	75	0.1	-	1-1-2-3	20-24.5' Clayey SILT, light gray, soft to medium stiff, with fine to coarse grained sand and fine gravel, mottled, with wood fibers, moist (fill)	ML-CL	
22								
23	SS-12	100	0.1	-	3-4-4-3			
24								
25	SS-13	100	0.0	-	1-WH-WH-1	24.5-26' Clayey SILT, light gray, very soft, moist	ML-CL	Fill material to approximately 24.5' bgs
26								
27	SS-14	100	0.1	-	1-2-2-2	26-32' Clayey SILT, dark gray, soft to medium stiff, moist	ML-CL	
28								
29	SS-15	100	0.0	-	3-4-4-3			
30								
31	SS-16	100	-	-	WH-WH-2-3			Auger to 31.5' bgs Split spoon to 32' bgs
32						End of Boring		
33								
34								
35								
36								
37								
38								
39								
40								

HSA - hollow stem auger
bgs - below ground surface
PID - photoionization detector
PPM - parts per million

WH - weight of hammer
OD - outside diameter
ID - inside diameter

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Boring ID: SW-042-MWS

(page 1 of 1)

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B7
Weather	: 50-60 F, clear, breezy
Date/Time Started	: 11/11/2015 ~08:00
Date/ Time Completed	: 11/11/2015
Logged By	: WFM
Checked By	: WFM

Driller	: Allied - MW
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" (4.25" ID) HSA
Surface Elevation (ft)	: 7.8
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 16
Depth to Water (ft TOC)	: 6.84
Northing (US ft)	: 564740.08
Easting (US ft)	: 1464633.24

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0								
1	SS-1	100	4.0	NA	24-35-35-30	0-4' Slag, sand to gravel sized, dark gray to brown, very dense, dry	SM-GM	No odor Fill Moderate strong reaction (MSR) with HCl
2								
3	SS-2	90	2.3	NA	22-56/4			No odor Fill MSR with HCl Hard augering ~4' bgs
4								
5	SS-3	86	1.5	NA	7-14-50/3	4-6' Slag, sand to gravel sized, dark gray to brown, very dense, moist, redox colors present	SM-GM	Very hard augering Fill MSR with HCL
6								
7	SS-4	100	1.9	NA	50/4	6-8' Slag, olive gray/gray/dark gray, very dense, spoon sample dry, auger cuttings appear damp	SM-GM	No reaction with HCl Apparent fill No odor
8						8-8.5' Clayey SAND, reddish yellow (7.5YR 6/8), medium stiff, Chr 2 gray reduction, moist	SC	No odor
9	SS-5	96	0.4	1.8	4-7-9-10	8.5-10' Silty SAND to SAND, yellow brown/light brownish gray (10YR Chroma 5-2), medium dense, very moist	SM-SW	No odor No free water present
10								
11	SS-6	71	0.5	2.6	5-8-12-12	10-12' SAND, very fine grained, yellow brown/gray brown, light gray to strong brown (7.5YR 5/8) in lower 4", moist, apparent organic laminations in upper part	SP	No odor No free water present
12								
13	SS-7	83	0.4	1.5	4-5-6-4	12-14' SAND to Clayey SAND to lean CLAY, strong brown (3") to gray (5Y 6/1) (5") to mottled gray and strong brown (12"), moist, soft-medium, stiff, wet	SW-SC-CL	No odor
14								
15	SS-8	96	0.2	1.4	2-4-4-6	14-16' Lean CLAY/Fat CLAY, gray (5Y 6/1-6/2), stiff, moist, with many strong Br, BY oxidation coatings/linings, no free water observed	CL-CH	No odor
16						End of Boring		
17								
18								

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Boring ID: SW-043-MWI

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B7
Weather	:
Date/Time Started	: 11/13/2015 ~14:15
Date/ Time Completed	: 11/17/2015
Logged By	: WFM
Checked By	: WFM

Driller	: Allied - MW
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" (4.25" ID) HSA
Surface Elevation (ft)	: 8.6
Depth to Refusal (ft)	: -
Total Depth (ft bgs)	: 54
Depth to Water (ft TOC)	: 12.3
Northing (US ft)	: 565719.77
Easting (US ft)	: 1464429.47

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0						0-0.33' SILT, dark brown, soft, moist, no odor	ML	
1	SS-1	54	0.0	1.5	1-1-1-1	0.33-2' Sandy SILT, yellowish brown with common chroma 2-3 gray, stiff moist	ML	
2								
3	SS-2	100	0.0	3.4	3-4-7-10	2-5.7' Sandy SILT, strong yellowish brown with common chroma 2 gray, slightly moist, silt grades to pale Br gray with many hi and low chroma redox, very stiff to hard, slightly moist	ML	Moist
4								
5	SS-3	75	0.0	4.1	8-7-10-11			
6						5.7-10' Sandy SILT-SAND, pale brown gray (& yellowish brown and yellow) very fine grained, wet with free water	SM-SW	
7	SS-4	83	0.0	1.2	9-7-12-13			
8								
9	SS-5	79	0.0	-	6-10-10-7			
10						10-10.75' SAND, strong brown, trace pale brown, loose, wet	SW	Free Water No Odor
11	SS-6	67	1.3	1.0	2-3-3-3	10.75-12' Lean to Fat CLAY, gray (10YR 7/1) with strong brown oxidation, moist	CL-CH	Soft No Odor
12						12-13.2' Silty SAND, strong brown mottled, faintly whitish brown, reddish brown, loose, moist	SW	
13	SS-7	92	1.0	1.0	4-4-5-5	13.2-14' Lean to Fat CLAY, gray (10YR 7/1) with strong brown oxidation, moist	CL-CH	
14						14-15' Lean CLAY, gray mottled with yellowish brown, dark red, moist, small oxidized shale frags, soft to medium	CL	No Odor
15	SS-8	96	0.2	0.9	1-2-3-4	15-16' Lean to Fat CLAY, gray, massive, minor yellowish brown oxidation, moist, medium	CL-CH	
16						16-16.58' Pale yellowish brown-yellowish brown, loose, wet	SW-SM	Free Water No Odor
17	SS-9	100	0.3	1.5	3-4-4-4	16.58-18' Clayey SILT, gray with intermixed dark reddish brown iron cemented laminations randomly oriented, moist, stiff	ML	
18						18-18.83' Clayey SAND, yellowish brown, pale yellowish brown, loose, wet	SM-SC	No Odor
19	SS-10	100	0.3	0.5	3-3-3-3	18.83-20.66' Clayey SILT, gray with intermixed dark reddish brown iron cemented laminations randomly oriented, moist, stiff	ML-CL	
20								

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Boring ID: SW-043-MWI

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B7
Weather	:
Date/Time Started	: 11/13/2015 ~14:15
Date/ Time Completed	: 11/17/2015
Logged By	: WFM
Checked By	: WFM

Driller	: Allied - MW
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" (4.25" ID) HSA
Surface Elevation (ft)	: 8.6
Depth to Refusal (ft)	: -
Total Depth (ft bgs)	: 54
Depth to Water (ft TOC)	: 12.3
Northing (US ft)	: 565719.77
Easting (US ft)	: 1464429.47

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
20							ML-CL	
21	SS-11	100	0.1	0.4	1-2-2-3	20.66-22' SILT, gray to dark gray (2.5 Y 5/1-4/1) soft	ML-MH	Very Moist Low Plasticity
22						22-26' SILT, dark gray (2.5 Y 11/1), soft to medium, very moist; moist and medium at 24' bgs		No Free Water No Odor
23	SS-12	100	0.1	0.6	2-3-3-3			
24							ML-MH	No Free Water No Odor
25	SS-13	96	0.0	0.8	2-1-2-3			
26						26-30' SILT, dark gray, very soft, saturated with free water, too soft for PP readings; very soft at 28' bgs; more dry at 29' bgs		Apparent Saturated Zone
27	SS-14	54	0.1	-	3-4-4-4			
28							ML-MH	No Odor
29	SS-15	100	0.0	0.3	5-4-4-4			
30						30-34' SILT-Sandy SILT, dark gray, soft to medium, moist, possible siltier,fine sand increasing		No Odor
31	SS-16	100	0.2	0.6	2-3-3-4			
32							ML-MH	No Odor
33	SS-17	100	0.1	0.4	4-4-4-3			
34						34-35.08' SILT and Clayey SAND, dark gray, soft, moist to very moist	ML-SC	
35	SS-18	100	0.2	0.8	1-3-4-3	35.08-35.5' Clayey SAND and SAND, dark gray, medium, very moist	SW-SC	No Odor
							ML-MH	
36						35.5-36' SILT, dark gray, medium, very moist		No Odor
37	SS-19	83	0.2	0.5	3-3-3-4	36-38' SILT, dark gray, soft to medium, very moist, small inclusions of sand in upper 9", with trace rounded quartz	ML-MH	
38						38-40' SILT, dark gray, very soft to soft, very moist to moist, ~2-3" lens of dark gray SC/SW including subrounded quartz gravel		No Odor
39	SS-20	67	0.2	0.3	3-2-2-3		ML-MH	
40								

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Boring ID: SW-043-MWI

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B7
Weather	:
Date/Time Started	: 11/13/2015 ~14:15
Date/ Time Completed	: 11/17/2015
Logged By	: WFM
Checked By	: WFM

Driller	: Allied - MW
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" (4.25" ID) HSA
Surface Elevation (ft)	: 8.6
Depth to Refusal (ft)	: -
Total Depth (ft bgs)	: 54
Depth to Water (ft TOC)	: 12.3
Northing (US ft)	: 565719.77
Easting (US ft)	: 1464429.47

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
40								
41	SS-21	100	0.1	0.5	WH-WH-2-3	40-45.33' SILT, dark gray, very soft to soft, very moist, common streaks of blackish organics	ML-MH	No Odor
42								No Odor
43	SS-22	100	0.1	0.5	3-3-3-5			
44								No Odor
45	SS-23	100	0.2	0.6	1-2-3-4			
46						45.33-47.4' CLAY SILT, dark gray, medium, moist	ML-SC	No Odor
47	SS-24	100	0.2	0.2	4-6-6-7			
48						47.4-49.75' Silty SAND, medium dense, very dark gray brown, moist	SM-SW	No Odor
49	SS-25	100	0.1	0.5	4-3-2-3			
50						49.75-50' SILT, dark grayish, soft, very moist, low plasticity	ML-MH	No Odor
51	SS-26	100	0.1	0.3	WH-WH-WH-WH	50-51.08' Silty SAND, very dark gray brown, very micaceous, soft, very moist	SW-SM	
						51.08-52' SILT, dark greenish gray, soft, very moist, small whitish shell frags	ML-MH	
52						52-52.75' Silty SAND, very dark gray brown, very micaceous, soft, very moist	SW-SM	No Odor
53	SS-27	100	0.1	0.5	2-3-2-3	52.75-54' SILT, dark greenish gray, soft, very moist, small whitish shell frags	ML-MH	No Odor
54						End of Boring		
55								
56								
57								
58								
59								
60								

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Boring ID: SW-043-MWS

(page 1 of 1)

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B7
Weather	: 55F, clear, windy
Date/Time Started	: 11/13/2015 ~10:00
Date/ Time Completed	: 11/13/2015
Logged By	: WFM
Checked By	: WFM

Driller	: Allied - MW
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" (4.25" ID) HSA
Surface Elevation (ft)	: 8.5
Depth to Refusal (ft)	: -
Total Depth (ft bgs)	: 16.5
Depth to Water (ft TOC)	: 9.8
Northing (US ft)	: 565729.24
Easting (US ft)	: 1464430.00

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0						0-0.5' SILT with SAND, dark brown, soft, moist, no odor	ML	
1	SS-1	83	0.4	1.2	1-1-2-3	0.5-2' SILT with SAND, yellowish brown with common chroma 2-3, gray, stiff, moist	ML	Native Soil No Odor
2 3	SS-2	100	0.1	3.8	8-10-12-15	2-4' SILT with SAND, yellowish brown with common chroma 2-3, gray, very stiff to hard, moist	ML	
4 5	SS-3	83	0.1	3.1	9-10-9-9	4-5' Sandy SILT to clayey SAND, strong yellowish brown, pale yellowish brown, chroma 2 gray, very stiff to hard, moist	ML-SC	Very Fine Sand Componant No Odor
						5-6' Clayey SAND, pale yellowish brown 4 Chr2 gray, stiff, to very stiff, increasing moisture	SC	
6 7	SS-4	100	0.0	0.6	9-10-9-9	6-8' Silty SAND to SAND, alternating ~4" zones of pale brown gray and Ybr and yellow, fine grained sand, wet with free water at top of spoon	SM-SW	Free Water in Spoon No Odor
8 9	SS-5	100	0.0	-	10-8-5-6	8-9.5' SAND, primarily brownish yellow, yellowish brown, some gray, medium dense, moist, with rounded white quartz gravel	SW	Some Free Water in Top of Spoon No Odor
						9.5-10' SAND, strong brown (7.5YR 5/8), medium dense, moist	SW	
10 11	SS-6	83	NA	3.4	5-4-4-5	10-11' Silty SAND, pale gray brown, hard to very stiff, moist	SM	Exterior of Spoon Dry No Odors
						11-11.33' Lean CLAY, strong brown, loose, very moist	SW	
						11.33-12' Lean CLAY, gray, very stiff to stiff, chroma 8 oxidation	CL-CH	
12 13	SS-7	100	0.5	-	4-5-4-5	12-15.25' Strong brown, loose, medium dense, moist, a few pale yellow and gray lenses	SW	No Odor Very Wet
14 15	SS-8	83	NA	1.5	3-3-3-2			No Odor No Free Water
						15.25-16' Clayey SAND, strong brown, pale brown, gray, stiff, moist, grades to mottled dark reddish brown and gray CL, stiff, moist	SC-CL	
16						End of Boring		
17 18								

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Boring ID: SW-044-MWS

(page 1 of 1)

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B7
Weather	: 55F, light rain
Date/Time Started	: 11/12/2015 - 08:40
Date/ Time Completed	: 11/12/2015 - 15:00
Logged By	: WFM
Checked By	: WFM

Driller	: Allied - MW
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" (4.25" ID) HSA
Surface Elevation (ft)	: 9.0
Depth to Refusal (ft)	: -
Total Depth (ft bgs)	: 20
Depth to Water (ft TOC)	: 11.4
Northing (US ft)	: 566398.36
Easting (US ft)	: 1464363.35

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0–1	SS-1	79	1.0	-	28-32-26-20	0-2' Silty GRAVEL, dark gray, grayish black, olive gray slag, dry, very dense	GM	No Odor Fill Material
2–3	SS-2	54	11.5	-	10-13-6-22	2-5.08' Silty GRAVEL, dark gray, grayish black, olive gray slag, dry, medium dense	GM	Fill Material No Odor
4–5	SS-3	63	1.2	-	5-8-8-12			Fill Material No Odor
6–7	SS-4	67	0.5	-	5-4-2-2	5.08-10.5' Silty GRAVEL and SAND, red (10R4/8) brick like material, appears dry, mixed with light brownish gray, med gr. sandstone, moist to wet at 8' bgs	GM-SM	Fill Material No Odor
8–9	SS-5	54	0.3	-	4-4-8-20			Very Dense Spoon Bent No Odor
10–11	SS-6	17	0.4	0.5	18-6-5-3	10.5-12' Silty SAND, dark olive gray and light gray, soft, very moist, fine root matter	SM	Wet Slough Natrual Organic Odor
12–13	SS-7	63	0.5	0.7	2-2-2-3	12-12.91' SILT, black organic matter, wet	ML	
						12.91-13.5' Silty SAND, dark gray-gray, soft, moist	SM	Tree Roots/branches Rotted; Redox, Moist
14						13.5-14' Clayey SILT, olive gray with yellowish and gray, soft, gray	ML-CL	
15	SS-8	0	-	-	1-2-3-4	14-16' No Recovery - probable ML/CL	ML-CL	
16–17	SS-9	8	1.8	0.5	5-6-6-7	16-18' Lean CLAY, light gray to light olive gray, soft, moist, common high chroma oxidation, low to medium plasticity	CL	No Odor
18–19	SS-10	100	0.2	1.6	4-4-5-6	18-20' Lean CLAY, light gray to light olive gray, stiff, moist, common high chroma oxidation, low to medium plasticity	CL	No Odor No Standing Water After Drilling
20						End of Boring		

ARM Group Inc.
Earth Resource Engineers and Consultants

Boring ID: SW-045-MWI

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B7
Weather	: 60s-70s, Clear to rain
Date/Time Started	: 11/3/2015 ~14:15
Date/ Time Completed	: 11/5/2015 - 9:00
Logged By	: WFM
Checked By	: WFM

Driller	: Allied - MW
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" OD (4.25" ID) HSA
Surface Elevation (ft)	: 10.9
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 74.5
Depth to Water (ft TOC)	: 8.8
Northing (US ft)	: 568344.09
Easting (US ft)	: 1463932.84

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0						0-0.5' Silty Sand, brown, medium stiff, topsoil with roots	SM	
1	SS-1	92	0.1	-	1-3-4-5	0.5-3' Clayey SILT, light gray to light brown, medium stiff to stiff, mottling, moist	ML	
2								
3	SS-2	86	0.3	-	4-7-7-8	3-5' SAND, light gray to brown, stiff to very stiff, fine grained, moist	SP	
4								
5	SS-3	71	0.2	-	2-9-7-4	5-6' SAND, reddish brown, stiff, fine grained, wet	SP	
6								
7	SS-4	100	0.2	-	3-4-5-5	6-8' Silty CLAY, gray, stiff, moist	CL	
8								
9	SS-5	100	0.4	-	3-4-4-5	8-9.5' SAND, reddish brown, medium stiff, fine to medium grained, wet	SW	
						9.5-10' Silty CLAY, gray, stiff	CL	
10								
11	SS-6	100	0.1	-	1-2-2-2	10-13' Silty CLAY, gray, soft, with flaky iron particles (possible fill)	CL	
12								
13	SS-7	100	0.1	-	2-2-2-3	13-23' Silty CLAY, gray, very soft to medium stiff, moist	CL	
14								
15	SS-8	100	0.1	-	WH-WH-WH-2			
16								
17	SS-9	100	0.1	-	2-2-2-2			
18								
19	SS-10	100	0.1	-	2-3-2-3			
20								

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Boring ID: SW-045-MWI

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B7
Weather	: 60s-70s, Clear to rain
Date/Time Started	: 11/3/2015 ~14:15
Date/ Time Completed	: 11/5/2015 - 9:00
Logged By	: WFM
Checked By	: WFM

Driller	: Allied - MW
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" OD (4.25" ID) HSA
Surface Elevation (ft)	: 10.9
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 74.5
Depth to Water (ft TOC)	: 8.8
Northing (US ft)	: 568344.09
Easting (US ft)	: 1463932.84

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
20								
21	SS-11	100	0.1	-	1-1-1-2		CL	
22								
23	SS-12	100	0.1	-	2-3-3-3	23-25' Clayey SILT, gray, very soft to medium stiff, moist	ML-CL	
24								
25	SS-13	100	0.1	-	WH-WH-2-2	25-27' SAND, gray, soft, fine grained, wet	SP	
26								
27	SS-14	100	0.1	-	1-2-2-1	27-28.5' Silty CLAY to Clayey SILT, gray (2.5Y-3/1), soft	CL-ML	
28								
29	SS-15	100	0.3	0.4	2-2-2-3	28.5-29' Clayey SAND, gray, soft, fine grained sand, ~2" clean fine grained gray sand seam at 28.8' bgs	SC	
						29-35' Silty CLAY to Clayey SILT, gray (2.5Y-3/1), soft		
30								
31	SS-16	100	0.1	0.4	1-1-2-2			
32							CL-ML	
33	SS-17	100	0.1	0.4	1-2-2-2			
34								
35	SS-18	100	0.2	0.4	2-2-2-2	35-37' Clayey SILT, gray, soft		
36						2" gray fine sand seam at 36.8' bgs	ML	
37	SS-19	100	0.1	0.4	1-2-2-3	37-41' Clayey SILT to Silty CLAY, gray (2.5Y-3/1), soft		
38								
39	SS-20	100	0.1	0.4	2-2-2-3		ML-CL	
40								

ARM Group Inc.
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Boring ID: SW-045-MWI

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B7
Weather	: 60s-70s, Clear to rain
Date/Time Started	: 11/3/2015 ~14:15
Date/ Time Completed	: 11/5/2015 - 9:00
Logged By	: WFM
Checked By	: WFM

Driller	: Allied - MW
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" OD (4.25" ID) HSA
Surface Elevation (ft)	: 10.9
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 74.5
Depth to Water (ft TOC)	: 8.8
Northing (US ft)	: 568344.09
Easting (US ft)	: 1463932.84

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
40								
41	SS-21	100	0.1	0.4	2-2-3-4	41-41.5' Clayey SILT, gray, medium stiff, with trace fine grained sand	ML-CL ML	
42						41.5-42' Clayey SILT to Silty CLAY, gray, medium stiff	ML-CL	
43	SS-22	100	0.1	0.4	2-3-4-4	42-50' Clayey SILT to Silty CLAY, gray (2.5Y-3/1), soft to medium stiff, with shell material - bivalves throughout		
44								
45	SS-23	100	0.1	0.4	1-1-3-4			
46							ML-CL	
47	SS-24	100	0	0.4	2-2-2-3			
48								
49	SS-25	100	0	0.4	3-3-3-3			
50						50-56' Clayey SILT, very dark gray (5YR 3/1), moist, medium, low plasticity, massive soil structure		No Odor No Reaction with HCL
51	SS-26	100	0.7	0.6	1-1-2-3			
52								Shell debris at top of spoon only
53	SS-27	100	0.7	0.6	3-3-3-3		ML-MH	No Odor No reaction with HCL
54								No Reaction with HCL No Odor
55	SS-28	100	0.9	0.7	1-2-3-4			
56						56-58' As above except slight increase in clay		No Reaction with HCL No Odor
57	SS-29	100	0.5	0.6	3-4-3-4		ML-MH	
58						58-60' As above, slight clay increase vs. SS-28, low plasticity		No Reaction with HCL No Odor
59	SS-30	100	0.2	0.7	4-4-4-4		ML-MH	
60								

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Boring ID: SW-045-MWI

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B7
Weather	: 60s-70s, Clear to rain
Date/Time Started	: 11/3/2015 ~14:15
Date/ Time Completed	: 11/5/2015 - 9:00
Logged By	: WFM
Checked By	: WFM

Driller	: Allied - MW
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" OD (4.25" ID) HSA
Surface Elevation (ft)	: 10.9
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 74.5
Depth to Water (ft TOC)	: 8.8
Northing (US ft)	: 568344.09
Easting (US ft)	: 1463932.84

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
60								
61	SS-31	100	0.1	0.5	2-3-4-6	60-63.5' Clayey SILT, very dark gray (5YR 3/1), moist, medium, low plasticity, massive soil structure	ML-MH	No Reaction with HCL No Odor
62								
63	SS-32	100	-	0.5	5-6-36-35			No Free Water No Odor
64						63.5-64' Silty SAND, very dark gravelly	SW-SM	
65	SS-33	17	-	NA	1-1-3-1	64-65' Moist, dense in place, abrupt contact, rounded to subrounded quartz gravel, rose, smokey, white	SW-SM	
						65-66' Medium grained SAND, very dark gray, micaceous, with some silt, wet	SP	
66								
67	SS-34	100	-	NA	11-13-13-19	66-67.3' Medium grained SAND, dark gray, with some SILT and CLAY, moist to wet, medium dense	SM	No Odor
68						67.3-68' Silty SAND, gray to blackish gray to brownish gray, sandy with subrounded quartz gravel	SM	
69	SS-35	79	0.1	NA	2-7-8-16	68-69' Silty SAND, dark gray (2.5Y 3/1) medium to coarse grained medium dense moist to wet, massive	SM	Traces of Plant Fibers No Odor
70						69-72' Silty SAND, grayish brown-light olive brown, medium dense, moist to wet, massive	SM	
71	SS-36	46	0.1	NA	5-6-7-8			
72								
73	SS-37	79	0.0	NA	10-11-13-11	72-74' Silty SAND to Clayey SAND to Clayey SILT, gray-brown/light olive brown to pale brown, brown dark yellowish brown, with grayish black seams or partings in horizontal layers, fining downward	SM-SC CL-ML	Silt and Clay layers 1/4" and 1/2" Thick Moist, Wet No Odor
74	HSA	-	-	-	-	HSA only	CL-ML	74-74.5' HSA Only
						End of Boring		
75								
76								
77								
78								
79								
80								

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Boring ID: SW-045-MWS

(page 1 of 1)

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B7
Weather	: -
Date/Time Started	: 11/16/2015 - 14:05
Date/ Time Completed	: 11/16/2015 - 15:40
Logged By	: WFM
Checked By	: WFM

Driller	: Allied - MW
Drill Rig Type/Method	: CME 45 Track Rig
Bit/Auger Size	: 7.75" (4.25" ID) HSA
Surface Elevation (ft)	: 11.2
Depth to Refusal (ft)	:
Total Depth (ft bgs)	: 16
Depth to Water (ft TOC)	: 6.5
Northing (US ft)	: 568357.88
Easting (US ft)	: 1463927.89

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0						0-0.5' SILT, dark brown, moist, soft	ML	Probable Fill No Odor
1	SS-1	100	-	2.3	2-6-6-8	0.5-1.5' Clayey SILT, light gray, pale gray brown, some yellowish brown oxidation, very stiff, dry, massive	ML	Apears native No Odor
						1.5-2' Clayey SILT, brown (10YR 4/3), medium, moist, common redox	ML	
2	SS-2	34	-	3.7	9-10-11-13	2-4' Clayey SILT, mottled light brown gray and yellowish brown, very stiff, moist	ML	No Odor
4	SS-3	83	-	1.4	3-4-4-5	4-5.42' Silty SAND, brown to strong, oxidized, loose to medium dense, moist to wet	SM	Water/slough at top of spoon No Odor
5						5.42-6' Silty CLAY, strong brown with gray reduction colors, medium to stiff, moist, medium plasticity	CL	
6	SS-4	100	-	-	5-5-7-8	6-7.66' Silty SAND, brown to strong, oxidized, loose to medium dense, wet	SM	Wet with some free water No Odor
7						7.66-8' Lean CLAY, strong brown with gray reduction colors, medium to stiff, moist, medium plasticity	CL	No Odor
8	SS-5	100	-	0.9	2-4-9-5	8-9.5' Lean to Fat CLAY, strong brown and light gray, redoximorphic features, medium to high plasticity, moist, medium	CL-CH	No Odor
9						9.5-10' Lean CLAY, mixed brown, strong brown, gray, medium plasticity, moist	CL	No Odor
10	SS-6	100	-	0.5	3-3-3-3	10-12' Lean CLAY, pale gray brown and gray, soft to medium, wet to moist, low to medium plasticity	CL	
12	SS-7	100	-	0.5	3-3-3-2	12-14' Lean CLAY, light gray to gray, soft, wet to moist, low to medium plasticity	CL	No Odor
14	SS-8	100	-	0.3	WH-2-2-2	14-16' SILT/Clayey SILT, dark gray, soft, medium to low plasticity, very moist, no free water	ML-MH	No Odor
16						End of Boring		

ARM Group Inc.
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Boring ID: SW-046-MWS

(page 1 of 1)

Project Name	: Sparrows Point
ARM Project No.	: 150300M-8-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B7
Weather	: 70F, overcast
Date/Time Started	: 11/2/2015 - 14:00
Date/ Time Completed	: 11/2/2015 - 15:00
Logged By	: PNV
Checked By	: ESM

Driller	: Allied - MW/AB
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" OD (4.25" ID) HSA
Surface Elevation (ft)	: 10.1
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 18
Depth to Water (ft bgs)	: 8.0
Northing (US ft)	: 569504.23
Easting (US ft)	: 1464948.41

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0								
1	SS-1	88	0	-	35-25-12-14	0-1' Gravelly SAND, gray to black, dense, dry (fill)	SW	
						1-2' Sandy SILT, light gray with some brown, very stiff, fine grained, dry (fill)	ML	
2								
3	SS-2	69	0.2	-	8-9-5-6	2-3' Silty SAND, light gray, very stiff, fine grained sand with trace clay, moist (fill)	SM	
						3-4' Clayey SAND, tan to light gray, stiff, with trace coarse sand to fine gravel, moist (fill)	SC	
4								
5	SS-3	79	0.2	-	2-4-4-5	4-14' Clayey SILT, light gray to brown, medium stiff to stiff, mottled, moist; 2" seam of dark brown gravelly sand at ~13' bgs, slag gravel (fill)		
6								
7	SS-4	100	0.2	-	4-6-7-6			
8								Wet at 8' bgs
9	SS-5	100	0.2	-	6-6-7-7		ML-CL	
10								
11	SS-6	79	0.6	-	2-2-4-5			
12								
13	SS-7	100	0.2	-	4-7-7-7			
14								Fill material to approximately 14' bgs
15	SS-8	71	0.2	-	2-3-6-7	14-16' SAND, light brown, stiff, fine grained, wet	SP	
16								
17	SS-9	88	0.2	-	2-7-7-11	16-18' SAND, tan, fine grained, medium stiff, fine grained, trace fine well rounded gravel, wet	SP	Auger to 16' bgs Split spoon to 18' bgs
18						End of Boring		
19								
20								

HSA - hollow stem auger
bgs - below ground surface
PID - photoionization detector
PPM - parts per million

WH - weight of hammer
OD - outside diameter
ID - inside diameter

ARM Group Inc.
Earth Resource Engineers and Consultants

Boring ID: SW-047-MWS

(page 1 of 1)

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B7
Weather	: 50F, clear
Date/Time Started	: 11/25/2015 - 9:15
Date/ Time Completed	: 11/25/2015 - 11:30
Logged By	: PNV
Checked By	: ESM

Driller	: Allies - MW/AB
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" OD (4.25" ID) HSA
Surface Elevation (ft)	: 20.6
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 20
Depth to Water (ft bgs)	: 9.5
Northing (US ft)	: 570242.63
Easting (US ft)	: 1464394.66

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0								
1	SS-1	71	9.4	-	3-10-23-24	0-3.8' Gravelly SAND, dark brown, dense to medium dense fine to coarse grained, dry (fill)	SW	
2								
3	SS-2	63	0.3	-	12-14-9-6			
4						3.8-5' Clayey SILT, light brown to gray, stiff, mottled, moist	ML-CL	
5	SS-3	83	0.1	-	2-4-6-8	5-11' SILT, light brown to gray, very stiff, with trace clay, mottled, moist	ML	
6								
7	SS-4	100	0.5	-	7-9-11-9			
8								
9	SS-5	100	0.1	-	6-15-13-9			
10								
11	SS-6	85	1.6	-	6-7-10-8	grading to fine grained sand at 11' bgs		
12						11-13.5' Silty SAND, light brown to gray, very stiff, fine grained, wet	SM	
13	SS-7	88	2.0	-	3-7-14-6			
14						13.5-14.5' SAND, orangish brown, medium stiff, fine grained	SP	
15	SS-8	96	0.2	-	1-3-4-4	14.5-19' Clayey SILT, light brown to gray, moist	ML-CL	
16								
17	SS-9	100	0.3	-	2-4-3-4	with rusty iron particles and friable gravel sized material from 17-19' bgs (possible fill material)		'Fill material to possibly 19' bgs
18								
19	SS-10	96	0.2	-	3-5-4-3	19-20' Clayey SILT, light brown to gray, medium stiff, wet	ML-CL	Auger to 17.5' bgs Split spoon to 20' bgs
20								
						End of Boring		

ARM Group Inc.
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Boring ID: SW-048-MWS

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B7
Weather	: 50F, clear
Date/Time Started	: 12/9/2015 - 8:30
Date/ Time Completed	: 12/9/2015 - 11:00
Logged By	: PNV
Checked By	: ESM

Driller	: Allied - MW/AB
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" OD (4.25" ID) HSA
Surface Elevation (ft)	: 14.3
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 15
Depth to Water (ft bgs)	: 2.0
Northing (US ft)	: 568760.44
Easting (US ft)	: 1463140.98

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0						0-1' Clayey SILT, light brown, soft, topsoil, grass surface, dry	CL/ML	
1	SS-1	63	39.2	-	1-1-2-2	1-4' Clayey SILT, tan to light gray, medium stiff, mottling, moist	CL/ML	
2								
3	SS-2	92	0.2	-	3-4-3-2			
4						4-5.5' Clayey SILT, gray to brown, medium stiff, mottling, moist	CL/ML	
5	SS-3	83	0.4	-	1-2-3-5			
6						5.5-6.5' SAND, light gray, medium stiff, fine grained, wet	SP	
7	SS-4	100	0.3	-	3-3-4-5	6.5-8.5' Sandy SILT with CLAY, light gray to brown, medium stiff, mottling	ML	
8								
9	SS-5	100	0.4	-	3-4-5-6	8.5-9' SAND, light gray to brown, stiff, fine grained	SP	
						9-10' Clayey SILT, light gray to brown, stiff, mottling	CL/ML	
10						10-11' SAND, light brown, soft, fine grained with trace clay	SP	
11	SS-6	96	0.0	-	1-1-2-3	11-13.5' Clayey SILT, light gray to brown, soft to medium stiff, mottling, some fine sand stringers with trace clay	CL/ML	
12								
13	SS-7	100	0.1	-	3-3-3-3			
14						13.5-15' Clayey SILT, light gray, medium stiff	CL/ML	
	HSA	-	-	-	-			Split spoon to 14' bgs Auger to 15' bgs
15						End of Boring		
16								

ARM Group Inc.
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Boring ID: SW-049-MWS

(page 1 of 1)

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B7
Weather	: 45F, clear, windy
Date/Time Started	: 12/18/2015 - 10:55
Date/ Time Completed	: 12/18/2015
Logged By	: WFM
Checked By	: WFM

Driller	: Allied - MW
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" (4.25" ID) HSA
Surface Elevation (ft)	: 11.9
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 20
Depth to Water (ft TOC)	: 9.9
Northing (US ft)	: 566666.92
Easting (US ft)	: 1463263.78

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0–1	SS-1	75	2.9	1.3	1-2-5-6	0-2' Silty SAND, brown to yellow brown, stiff, trace organics, ~12" of whitish gray gravels. moist	SM	No odor Possible fill
2–4	SS-2	100	0.3	3.5	3-6-7-6	2-5' Silty SAND and GRAVEL, grayish brown, very stiff, moist, many fine clear mica flakes, with small rounded quartz gravels	SM-GM	No odor
4–5	SS-3	88	0.2	3.3	3-2-7-4			
5–6						5-6' Clayey SILT, chroma 1/2 gray, very stiff, slightly moist, common olive-yellow oxidation	ML-CL	No odor
6–7	SS-4	100	0.1	1.2	4-7-8-8	6-8' Clayey SILT, gray, stiff, moist, with many brownish yellow and reddish yellow oxidation coatings, roots at base of SS sample	ML-CL	No odor
8–9	SS-5	8	0.4	-	1-4-8-10	8-10.83' Clayey SILT, dark grayish with root material, very soft and very moist, two pieces of light gray slag like fragments at base	ML-CL	No odor
10–11	SS-6	96	0.6	0.5	7-8-10-10			No odor
						10.83-12' SAND, light gray then 4" brownish with redoximorphic features, some free water on side of sample	SW	No odor
12–13	SS-7	100	0.9	-	6-3-3-2	12-14' SAND pale brown, loose, very moist with many reddish yellow/reddish yellow oxidation coatings, some chroma 2 at base	SW	No odor 1 white round quartz gravel
14–15	SS-8	92	0.1	1.0	1-1-2-3	14-16' Clayey SILT, gray, medium stiff, moist, minor reddish yellow oxidation	ML-CL	No odor
16–17	SS-9	83	0.1	0.4	1-1-1-1	16-18' Clayey SILT, light gray, soft, very moist, with extensive dark reddish black-brownish red oxidation, oxidation present in concretions or weak cemented lenses, very moist	ML-CL	No odor
18–19	SS-10	92	0.3	0.4	2-2-2-2	18-19.5' Clayey SILT, as above but with only moderate dark reddish brown-bownish red oxidation	ML-CL	No odor
						19.5-20' Lean CLAY, dark gray, soft, no oxidation	CL-CH	No odor
20–22						End of Boring		

ARM Group Inc.
Earth Resource Engineers and Consultants

Boring ID: SW-050-MWS

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B7
Weather	: 50F, clear, breezy
Date/Time Started	: 12/9/2015 - 12:00
Date/ Time Completed	: 12/9/2015 - 13:30
Logged By	: PNV
Checked By	: ESM

Driller	: Allied - MW/AB
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" OD (4.25" ID) HSA
Surface Elevation (ft)	: 8.0
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 14
Depth to Water (ft bgs)	: 2.0
Northing (US ft)	: 565719.62
Easting (US ft)	: 1463489.52

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0								
1	SS-1	54	0.5	-	2-3-7-7	0-2.5' Clayey SILT, grayish brown, stiff, with sand and gravel and wood debris, dry (fill)	ML-CL	Fill material to approxmately 2.5' bgs
2								
3	SS-2	75	0.1	-	5-6-6-6	2.5-7' SILT, brown to gray, stiff, with trace clay, mottling, moist	ML	
4								
5	SS-3	92	0.1	-	3-6-6-8			
6								
7	SS-4	100	0.3	-	10-11-8-6	7-8' Clayey SILT, gray, very stiff, wet	ML-CL	
8						8-9' SAND, gray, stiff, fine grained, wet	SP	
9	SS-5	71	0.8	-	3-6-6-8	9-10' SAND, tan, stiff, fine grained, wet	SP	
10						10-11' SAND, gray, stiff, fine grained, wet	SP	
11	SS-6	100	1.1	-	5-4-4-6	11-12' Clayey SILT, gray to brown, medium stiff, mottling	ML-CL	
12						12-13.5' Silty SAND, light gray, medium stiff, fine grained, wet	SM	
13	SS-7	100	0.8	-	3-4-4-3			
14						13.5-14' Clayey SILT, light gray, medium stiff	ML-CL	
15						End of Boring		
16								

ARM Group Inc.
Earth Resource Engineers and Consultants

Boring ID: SW-051-MWS

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B7
Weather	: 50F, Clear
Date/Time Started	: 12/10/15 - 8:00
Date/ Time Completed	: 12/10/15 - 10:15
Logged By	: PNV
Checked By	: ESM

Driller	: Allied-MW/AB
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" OD (4.25" ID) HSA
Surface Elevation (ft)	: 11.0
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 16
Depth to Water (TOC)	: 7.5'
Northing (US ft)	: 565671.75
Easting (US ft)	: 1462655.02

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0–2	SS-1	67	0.0	-	9-23-38-4	0-2.5' Gravelly SAND, dark brown to black, very dense, slag gravel, dry (fill)	SW	Fill material to approximately 2.5' bgs
2–4	SS-2	71	1.9	-	5-6-5-8	2.5-4' Clayey SILT, gray, stiff, brown mottling, moist	ML-CL	
4–6	SS-3	88	0.5	-	4-6-9-7	4-9' SILT, gray, stiff to very stiff, with trace clay, dry to moist	ML	
6–8	SS-4	100	0.0	-	14-13-13-9			
8–9	SS-5	75	0.3	-	2-3-5-6			
9						9-9.5' SAND, light gray to light brown, stiff, with some clay, moist	SC	
9.5–11.5	SS-6	100	0.2	-	4-4-4-4	9.5-11.5' SAND, light gray to light brown, medium stiff, fine grained, wet	SP	
11.5–12						11.5-12' Clayey SILT, light gray to brown, medium stiff, mottling	ML-CL	
12–13.5	SS-7	100	0.3	-	2-2-2-3	12-13.5' SAND, light gray to brown, soft, fine grained, wet	SP	
13.5–14						13.5-14' Clayey SILT, light gray to brown, soft, mottled	ML-CL	
14–16	SS-8	100	-	-	1-1-1-2	14-16' Clayey SILT, gray, soft	ML-CL	
16						End of Boring		

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

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Boring ID: SW-052-MWS

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B7
Weather	: 50F, clear
Date/Time Started	: 12/8/15 - 12:30
Date/ Time Completed	: 12/8/15 - 15:00
Logged By	: PNV
Checked By	: ESM

Driller	: Allied - MW/AB
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" OD (4.25" ID) HSA
Surface Elevation (ft)	: 11.5
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 15
Depth to Water (ft bgs)	: 3.9
Northing (US ft)	: 565095.06
Easting (US ft)	: 1462682.05

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0								
1	SS-1	83	0.1	-	4-17-17-18	0-2' Silty SAND with GRAVEL, dark gray to black to reddish brown, dense, slag gravel (fill)	SM	
2								
3	SS-2	75	2.6	-	13-33-18-14	2-5.5' Gravelly SAND, gray to black, very dense to medium dense, slag gravel, wet (fill)	SW	
4								
5	SS-3	42	0.4	-	7-10-4-3			Fill material to approximately 5.5' bgs
6						5.5-8' Clayey SILT, gray, stiff, mottled, wet	ML-CL	
7	SS-4	83	0.9	-	4-4-6-8			
8								
9	SS-5	63	0.3	-	3-5-9-7	8-11' SAND, gray with some brown, stiff, fine grained, wet	SP	
10								
11	SS-6	58	0.2	-	11-6-4-4	11-13.5' SAND, reddish brown, soft, fine grained, wet	SP	
12								
13	SS-7	58	0.5	-	4-2-2-2			
14						13.5-15' Clayey SILT, gray, soft, wet	ML-CL	
	HSA	-	-	-	-			Split spoon to 14' bgs Auger to 15' bgs
15						End of Boring		
16								

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Boring ID: SW-053-MWS

(page 1 of 1)

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B3
Weather	: 50F, clear
Date/Time Started	: 12/8/15 - 9:00
Date/ Time Completed	: 12/8/15 - 10:30
Logged By	: PNV
Checked By	: ESM

Driller	: Allied - MW/AB
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" OD (4.25" ID) HSA
Surface Elevation (ft)	: 14.1
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 16
Depth to Water (ft bgs)	: 3.9'
Northing (US ft)	: 567410.98
Easting (US ft)	: 1461986.20

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0						0-0.5' Topsoil, brown, with grass and roots	SM	
1	SS-1	50	0.2	-	1-3-6-7	0.5-3' Sandy SILT with GRAVEL, brown to gray, stiff, slag gravel, dry (fill)	ML	
2								
3	SS-2	33	0.1	-	6-6-6-7	3-4.5' Clayey SILT with GRAVEL, brown to gray, stiff, slag gravel, mottled, dry (fill)	ML-CL	Fill material to approximately 4.5' bgs
4								
5	SS-3	100	0.0	-	3-5-7-10	4.5-7.5' Clayey SILT, gray, stiff to very stiff, mottled, moist	ML-CL	
6								
7	SS-4	100	0.2	-	9-8-10-10			
8						7.5-9.5' SAND, gray, stiff, fine grained, wet	SP	
9	SS-5	100	0.0	-	6-7-5-3			
10						9.5-12' Clayey SILT, gray, very soft, wet	ML-CL	
11	SS-6	13	0.0	-	1-WH-1-2			
12								
13	SS-7	100	0.0	-	2-2-3-3	12-14' Clayey SAND, gray, medium stiff, fine grained	SC	
14								
15	SS-8	-	-	-	1-1-2-7	14-16' Clayey SAND, gray, soft, fine grained, some dark brown clayey fine sand with coarse sand	SC	Auger to 15' bgs Split spoon to 16' bgs
16						End of Boring		
17								
18								

ARM Group Inc.
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Boring ID: SW-054-MWS

(page 1 of 1)

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B2
Weather	: 41F, clear
Date/Time Started	: 12/3/15 - 12:45
Date/ Time Completed	: 12/3/15 - 14:30
Logged By	: PNV
Checked By	: ESM

Driller	: Allied - MW/AB
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" OD (4.25" ID) HSA
Surface Elevation (ft)	: 10.9
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 20
Depth to Water (ft bgs)	: 5.8
Northing (US ft)	: 566520.20
Easting (US ft)	: 1461893.20

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0						0-0.5' Topsoil, dark brown, with grass and roots	ML	
1	SS-1	67	0.1	-	2-2-2-2	0.5-5' SAND, black to very dark brown, very loose to medium dense, with gravel and silt, slag gravel, dry (fill)	SW	
2								
3	SS-2	63	1.3	-	4-5-6-8			
4								
5	SS-3	50	0.1	-	4-3-4-5			
						5-6' SILT, tan to brown, stiff, with trace clay, mottled, moist	ML	
6						6-10' SILT, light gray to light brown, stiff to very stiff, with trace clay, moist	ML	
7	SS-4	100	0.2	-	4-6-8-14			
8								
9	SS-5	83	0.1	-	9-13-14-15			
10						10-11' Silty SAND, light gray to light brown, stiff, fine grained sand with trace clay, moist	SM	
11	SS-6	83	0.2	-	3-5-5-7	11-11.5' SAND, light gray, stiff, fine grained with some clay	SP	
12						11.5-12.5' SAND, light gray, stiff, fine grained, wet	SP	
13	SS-7	92	0.1	-	5-5-7-7	12.5-14' Silty SAND, light gray, stiff, fine grained with trace clay, wet	SM	
14						14-20' Clayey SILT, gray, soft to medium stiff, moist; layers of loose wet clayey silt with vegetation (fill)	ML-CL	
15	SS-8	100	0.0	-	1-2-2-2			
16								
17	SS-9	100	0.0	-	2-3-2-2			
18								
19	SS-10	100	0.0	-	2-2-2-1			Fill material > 20' bgs
20						End of Boring		
21								

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Boring ID: SW-055-MWS

(page 1 of 1)

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B2
Weather	:
Date/Time Started	: 12/14/2015
Date/ Time Completed	: 12/14/2015
Logged By	: WFM
Checked By	: WFM

Driller	: Allied - MW
Drill Rig Type/Method	: CME 45 Track Rig
Bit/Auger Size	: 7.75" (4.25" ID) HSA
Surface Elevation (ft)	: 9.3
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 14
Depth to Water (ft TOC)	: 7.9
Northing (US ft)	: 565946.68
Easting (US ft)	: 1461317.07

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0								
1	SS-1	86	0.9	-	11-9-16-15	0-4.58' SLAG, dark brown, dense, possible limestone gravels, reacts strongly with HCl, slightly moist	GM	Fill/Slag No odor
2								
3	SS-2	75	1.7	-	16-14-11-12			
4								
5	SS-3	63	1.5	2.5	10-6-3-5	4.58-6' SILT-Silty SAND, pale brown, stiff, moist with common redoximorphic features	ML-SM	Native alluvium No odor or fill
6						6-6.58' Silty SLAG, dark grayish, some light tan sandstone, soft, wet	GM	Possible slag slough Reacts with HCl
7	SS-4	63	1.9	0.3	4-2-1-1	6.58-8' SILT, dark olive gray-dark gray (5Y 3/2-3/1), very moist, soft, some organics	ML-MH	
8								
9	SS-5	75	1.5	1.2	WH-1-3-4	8-10' SILT-Silty SAND, light olive brown (2.5Y 5/2), soft to stiff, moist, common redoximorphic features, becomes sandier at base	ML-SM	No apparent odor on top Slight petroleum odor on bottom
10								
11	SS-6	100	1.0	1.7	2-3-6-12	10-12.5' Silty SAND, gray/reddish yellow, soft, moist grading to stiff to very stiff pale brown, less moist	SM	Slight petroleum odor throughout
12								
13	SS-7	67	1.4	1.7	16-7-8-6	12.5-13.5' SAND, yellowish brown, moist	SW	
14						13.5-14' Lean to Fat CLAY, mixed chroma 2 gray and reddish yellow, moist	CL-CH	
						End of Boring		
15								

ARM Group Inc.
Earth Resource Engineers and Consultants

Boring ID: SW-056-MWS

(page 1 of 1)

Project Name	: Sparrows Point
ARM Project No.	: 150300M-8-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B2
Weather	: 60F, overcast, breezy
Date/Time Started	: 12/14/15 - 16:15
Date/ Time Completed	: 12/15/15 - 09:30
Logged By	: WFM
Checked By	: WFM

Driller	: Allied - MW
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" (4.25" ID) HSA
Surface Elevation (ft)	: 8.7
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 17
Depth to Water (ft TOC)	: 7.34
Northing (US ft)	: 566048.47
Easting (US ft)	: 1460677.32

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0								
1	SS-1	100	0.7	-	25-26-29-20	0-2.5' Silty SLAG GRAVEL, dark brown, medium brown, some gray dense to very dense, dry, strong reaction with HCl, slightly moist	GM	Fill/slag No odor
2								
3	SS-2	92	0.1	-	10-8-7-7	2.5-4.5' Silty SAND, reddish yellow grading to pale brown with many redoximorphic features, slightly moist, stiff	SM	Fill/slag No odor
4								
5	SS-3	75	0.3	1.3	2-2-2-2	4.5-6' Sandy SILT, gray (5Y 5/1) soft, moist, common reddish brown, brown, reddish yellow organic and iron coatings, horizontal and diagonal partings	ML	Natural organic odor
6								
7	SS-4	96	0.2	0.4	2-3-2-WH	6-8' Sandy SILT, gray (5Y 5/1), very soft-soft, very moist, thin lenses of organics and olive brown fine sand	ML	Natural organic odor
8								
9	SS-5	75	0.2	1.0	1-2-1-3	8-10' Sandy SILT to Silty SAND, brown-yellowish brown; stiff, moist, common to many redoximorphic features, moist, trace organic lenses	ML-SM	No odor
10								
11	SS-6	75	0.0	4.3	4-5-7-9	10-12' Silty SAND-Clayey SAND, mixed chroma 2 gray and strong reddish yellow, hard, slightly moist	SM-SC	No odor
12								
13	SS-7	100	0.0	3.5	10-12-10-10	12-16' Clayey SAND, mixed chroma 2 gray and strong reddish yellow, hard, slightly moist	SC	No odor
14								
15	SS-8	86	0.0	3.5	1-2-3-6			No odor
16						End of Boring		
17								

ARM Group Inc.
Earth Resource Engineers and Consultants

Boring ID: SW-057-MWS

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B2
Weather	:
Date/Time Started	: 12/4/2015 - 10:00
Date/ Time Completed	: 12/7/2015 - 13:00
Logged By	: PNV
Checked By	: ESM

Driller	: Allied-MW/AB
Drill Rig Type/Method	: Diedrich B-120
Bit/Auger Size	: 7.75" OD (4.25" ID) HSA
Surface Elevation (ft)	: 12.6
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 18'
Depth to Water (ft)	: 4.1'
Northing (US ft)	: 567666.75
Easting (US ft)	: 1460456.19

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0								
1	SS-1	88	0.0	-	5-32-43-50/4	0-6' Gravelly SAND, dark brown to light gray, very dense, slag gravel, dry (fill)		
2								
3	SS-2	0	-	-	-		SW	
4								
5	SS-3	17	0.0	-	50/4			
6								
7	SS-4	79	0.4	-	3-4-6-6	6-11' Clayey SILT, black to gray to light gray, stiff to soft, with slag gravel, moist (fill)		
8								
9	SS-5	92	0.8	-	2-2-2-2		ML-CL	
10								
11	SS-6	100	8.4	-	3-4-3-3	11-17.5' Clayey SILT, medium gray to gray, very soft to medium stiff, interbedded with black clayey silt (1-2" thick) and thin layers of sand, wet (possible fill)		
12								
13	SS-7	100	3.8	-	2-2-1-2			
14								
15	SS-8	100	0.5	-	WH-WH-WH-1		ML-CL	
16								
17	SS-9	100	0.0	-	1-3-3-4			Fill material to approximately 17.5' bgs
						17.5-17.75' SAND, gray, medium stiff, fine grained	SP	
18						17.75-18' Clayey SILT, gray to brown, medium stiff, laminated and mottled	ML-CL	
19						End of Boring		
20								

ARM Group Inc.
Earth Resource Engineers and Consultants

Boring ID: SW-058-MWS

(page 1 of 1)

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B2
Weather	: 50F, clear
Date/Time Started	: 12/7/2015 - 11:45
Date/ Time Completed	: 12/7/2015 - 14:00
Logged By	: PNV
Checked By	: ESM

Driller	: Allied - MW/AB
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" OD (4.25" ID) HSA
Surface Elevation (ft)	: 11.8
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 14
Depth to Water (ft bgs)	: 4.8
Northing (US ft)	: 568148.01
Easting (US ft)	: 1459749.57

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0								
1	SS-1	100	0.1	-	8-24-44-40	0-1' Gravelly SAND, dark gray to brown, very dense, slag gravel, dry (fill)	SW	
						1-4' GRAVEL, gray, very dense, slag gravel (fill)	GW	
2								
3	SS-2	0	-	-	-			
4								
5	SS-3	67	0.1	-	8-12-8-7	4-8' Gravelly SAND, brown to gray to black, medium dense, gray slag gravel, moist (fill)	SW	Slight odor/ sheen in split-spoon samples at 6' bgs
6						wet at 6' bgs		
7	SS-4	58	9.6	-	14-16-6-2			
8								
9	SS-5	71	0.4	-	1-1-1-1	8-10' Silty SAND, with some clay, gray to black, very soft, some slag gravel and shell fragments (fill)	SM	
10								
11	SS-6	54	0.3	-	WH-1-2-1	10-13' Clayey SILT, dark gray, soft, with some gravel, wet (fill)	ML-CL	
12								
13	SS-7	63	0.0	-	2-2-2-2			
						13-14' Silty SAND, dark gray to black, soft, fine grained, with some gravel and shell fragments (fill)	SM	Fill material > 14' bgs
14						End of Boring		
15								
16								

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Boring ID: SW-059-MWS

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B1
Weather	: 50F, clear
Date/Time Started	: 12/10/2015 - 12:00
Date/ Time Completed	: 12/10/2015 - 14:45
Logged By	: PNV
Checked By	: ESM

Driller	: Allied - MW/AB
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" OD (4.25" ID) HSA
Surface Elevation (ft)	: 13.6
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 16
Depth to Water (ft bgs)	: 7.7
Northing (US ft)	: 567199.64
Easting (US ft)	: 1458459.63

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0								
1	SS-1	79	0.1	-	4-16-38-10	0-3.5' Silty Sand, dark brown to gray, very dense, with slag gravel, dry (fill)	SM	
2								
3	SS-2	88	0.4	-	9-13-10-9	white to light gray gravel (possible ash residue) at 3' bgs		
4						3.5-5' Gravelly SAND, black, medium dense, with melted metal fragments, dry (fill)	SW	
5	SS-3	79	0.4	-	9-8-10-10	5-5.5' Gravelly SAND, brown, medium dense, moist (fill)	SW	
6						5.5-7.5' Silty SAND, white to light gray, dense, with slag gravel (possible ash) moist (fill)	SM	
7	SS-4	83	0.1	-	13-16-16-19			
8						7.5-8.5' Gravelly SAND, black with greenish tint, medium dense, moist (fill)	SW	
9	SS-5	67	1.6	-	5-6-7-8	8.5-9' Gravelly SAND, white to light gray crystalline material, medium dense, wet (fill)	SW	
						9-9.5' Gravelly SAND, purple, medium dense, wet (fill)	SW	Fill material to approximately 10.5' bgs
10						9.5-10.5' Gravelly SAND, black to dark gray, medium dense, slag gravel, wet (fill)	SW	
11	SS-6	83	0.1	-	1-1-3-4	10.5-11.5' Clayey SILT, olive gray, soft, wet	ML-CL	
12						11.5-14' SILT, gray to brown, soft, with some clay, mottling, wet	ML	
13	SS-7	100	0.1	-	5-7-9-11			
14						14-16' Silty SAND, light gray to brown, stiff, fine grained, mottling, wet	SM	
15	SS-8	100	0.1	-	WH-3-7-7			
16						End of Boring		
17								
18								

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Boring ID: SW-060-MWS

(page 1 of 1)

Project Name	: Sparrows Point
ARM Project No.	: 150300M-8-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B1
Weather	: 50F, clear
Date/Time Started	: 12/11/2015 - 8:30
Date/ Time Completed	: 12/11/2015 - 11:45
Logged By	: PNV
Checked By	: ESM

Driller	: Allied - MW/AB
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" OD (4.25" ID) HSA
Surface Elevation (ft)	: 12.2
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 18
Depth to Water (ft bgs)	: 10
Northing (US ft)	: 567889.61
Easting (US ft)	: 1457693.79

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0								
1	SS-1	75	3.5	-	13-7-14-18	0-1.5' Silty SAND, dark brown to black, very stiff, with slag gravel, dry (fill)	SM	
2						1.5-2.5' Sandy SILT, clayey, brown to gray, very stiff, with slag gravel, moist (fill)	ML	
3	SS-2	67	1.5	-	7-10-10-7	2.5-6' Silty SAND, brown to tan to black, very stiff, with grayish green slag gravel, moist, (fill)	SM	
4								
5	SS-3	46	9.1	-	5-5-7-8			
6								
7	SS-4	75	0.1	-	24-14-34-50/2	6-8' Silty SAND, gray to white, very dense, with slag gravel, wet (fill)	SM	
8								
9	SS-5	75	0.1	-	28-34-43-12	8-10' Sandy GRAVEL, tan to dark gray, slag gravel, dry to moist, (fill)	SW-GW	
10								
11	SS-6	79	0.1	-	23-24-30-24	10-18' Sandy GRAVEL, light gray with greenish tint, dense to very dense, slag gravel, wet (fill)		
12								
13	SS-7	79	0.1	-	9-25-18-9			
14							SW-GW	
15	SS-8	63	0.1	-	3-24-27-12			
16								
17	SS-9	100	0.1	-	23-10-10-16			Fill Material > 18' bgs
18						End of Boring		
19								
20								

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Boring ID: SW-061-MWS

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B1
Weather	: 50F, clear
Date/Time Started	: 12/11/2015 - 12:00
Date/ Time Completed	: 12/11/2015 - 15:00
Logged By	: PNV
Checked By	: ESM

Driller	: Allied - MW/AB
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" OD (4.25" ID) HSA
Surface Elevation (ft)	: 13.7
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 18
Depth to Water (ft bgs)	: 8.0
Northing (US ft)	: 567005.21
Easting (US ft)	: 1457693.91

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0								
1	SS-1	46	0.9	-	3-28-30-14	0-4' Gravelly SAND, dark brown to black, medium to very dense, metal debris, dry to moist (fill)	SW	
2								
3	SS-2	83	0.3	-	13-12-11-26	orangish red friable material at 3' bgs (2-3" thick)		
4								
5	SS-3	17	3.6	-	27-17-7-3	4-8' Silty SAND, gray to brown, medium dense, with some fine to coarse gravel particles, moist (fill)	SM	
6								
7	SS-4	8	1.4	-	4-5-7-7			Fill material to approximately 8' bgs
8								
9	SS-5	100	0.0	-	2-1-1-2	8-9' SAND, tan, very soft, fine to coarse grained with fine quartz gravel, wet	SW	
						9-10' Silty SAND, dark greenish gray, very soft, with trace clay, wet	SM	
10								
11	SS-6	100	0.0	-	5-5-6-9	10-11' Silty SAND, gray, stiff, fine grained, wet	SP	
						11-12' Clayey SILT, gray to brown, stiff, mottled	ML-CL	
12								
13	SS-7	100	0.1	-	8-7-6-6	12-13' SAND, gray, stiff, fine to coarse grained with trace gravel, some shell fragments	SW	
						13-14' Clayey SILT, gray to brown, stiff, mottled	ML-CL	
14								
15	SS-8	75	0.1	-	4-1-2-3	14-15' Clayey SILT, gray, soft, with trace sand	ML-CL	
						15-16' Silty SAND, tan, soft, fine grained, with some clay, wet	SM	
16								
17	SS-9	50	0.1	-	2-3-3-3	16-18' Sandy SILT, clayey, gray to brown, medium stiff, mottled, with trace quartz gravels	ML	Auger to 17' bgs Split spoon to 18' bgs
18						End of Boring		
19								
20								

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Boring ID: SW-062-MWS

(page 1 of 1)

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B1
Weather	: Clear, dry, 50F
Date/Time Started	: 12/16/2015 - 12:10
Date/ Time Completed	: 12/16/2015 - 13:30
Logged By	: WFM
Checked By	: WFM

Driller	: Allied - MW
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" (4.25" ID) HSA
Surface Elevation (ft)	: 14.4
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 15
Depth to Water (ft TOC)	: 11.3
Northing (US ft)	: 567420.73
Easting (US ft)	: 1456909.57

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0								
	SS-1	75	105.1	-	18-25-11-8	0-1' SLAG, grayish black, very dense, slightly moist	GM	Slight petroleum odor Strong reaction with HCl
1						1-2' Reddish crushed BRICK (0.16' seam) with pale brown, loose redoximorphic features, moist	-	No reaction with HCl
2	SS-2	63	2.5	-	2-2-3-2	2-5' Silty SAND, pale brown to yellowish white grading to pale yellowish brown, loose, moist, no reaction with HCl	SM	No odor Fill sand
3								
4	SS-3	0	-	-	1-1-2-1			
5						5-8' Silty SAND, pale brown, very moist, some yellowish reddish brown oxidation, medium reaction with HCl	SM	No odor
6	SS-4	4	59.2	-	1-2-1-1			
7								
8	SS-5	75	3.3	-	1-WH-WH-1	8-10' Silty SAND, pale brown to yellow brown, very loose, strong reaction with HCl, bottom 3" becomes dark grayish	SM	Free water in spoon No odor No reaction with HCL Saturated sample
9								
10	SS-6	67	0.9	2.6	2-5-2-3	10-11' Silty SAND, dark grayish black, very stiff, very moist	SM	Natural organic odor
11						11-12' Silty SAND to SILT, olive brown, stiff, very moist, no reaction with HCl	SM-ML	
12	SS-7	75	0.2	1.5	2-5-6-6	12-14' Clayey SILT, mixed chroma with ~50% gray + strong yellowish brown and reddish yellow, stiff to very stiff, moist	ML-CL	No odor No reaction with HCL
13								
14	-	-	-	-	-	14-15' HSA only		
15						End of Boring		
16								

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Boring ID: SW-063-MWS

(page 1 of 2)

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B4
Weather	: 50F, overcast, light rain
Date/Time Started	: 12/17/15 - 8:15
Date/ Time Completed	: 12/17/15 - 12:10
Logged By	: WFM
Checked By	: WFM

Driller	: Allied - MW
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" (4.25" ID) HSA
Surface Elevation (ft)	: 17.5
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 18.4
Depth to Water (ft TOC)	: 11.2
Northing (US ft)	: 565322.90
Easting (US ft)	: 1456892.20

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0								
1	SS-1	100	0.6	-	11-11-14-26	0-8' SLAG, mixed brown/dark brown, yellowish and near white; dense, slightly moist, only brownish slag material reacts with HCl (10% solution)	GM	Slight petroleum odor
2								
3	SS-2	21	0.5	-	12-50/2			No odor
4								
5	SS-3	17	0.0	-	50/5			No odor
6								
7	SS-4	4	0.6	-	50/2	One piece of ¾" thick x 1x2" steel fragment at 7'		No odor
8								
9	SS-5	79	0.3	3.0	4-5-10-10	8-8.91' SLAG, dark gray to black with some light brown/yellowish brown; wet	GM	Free water No odor or HCL Rxn
						8.91-10' Silty SAND-Clayey SAND, chroma 2 gray with common yellow oxidation, very stiff to stiff	SM-SC	Very moist
10								
11	SS-6	86	0.0	2.5	2-9-12-14	10-12' Grades Clayey SAND to Clayey SILT, moist, stiff to very stiff, very consolidated	SC-MH	No odor
12								
13	SS-7	67	0.0	1.6	7-7-9-9	12-14' Clayey SILT-SILT, chroma 2 grayish with common yellowish oxidation; stiff, moist, appears very consolidated	MH	No odor
14								

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Boring ID: SW-063-MWS

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B4
Weather	: 50F, overcast, light rain
Date/Time Started	: 12/17/15 - 8:15
Date/ Time Completed	: 12/17/15 - 12:10
Logged By	: WFM
Checked By	: WFM

Driller	: Allied - MW
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" (4.25" ID) HSA
Surface Elevation (ft)	: 17.5
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 18.4
Depth to Water (ft TOC)	: 11.2
Northing (US ft)	: 565322.90
Easting (US ft)	: 1456892.20

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
14								
15	SS-8	24	0.2	1.4	1-3-7-10	14-16' SILT to Clayey SAND to SAND, chroma 2 gray and abundant yellowish oxidation, stiff, becomes sandier with depth, moist to very moist Bottom 1-2" is SW	MH-SC	No odor
16								
17	SS-9	23	0.9	1.0	7-10-10-10	16-18' Clayey SAND and SAND, pale grayish with common yellowish oxidation, variably soft to stiff (SW and SC material), saturated	SW	No odor
18						End of Boring		
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								

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Boring ID: SW-064-MWS

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B4
Weather	: 20s, clear
Date/Time Started	: 1/13/2016 - 13:15
Date/ Time Completed	: 1/14/2016
Logged By	: PNV
Checked By	: ESM

Driller	: Allied - MW/RS
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" OD (4.25" ID) HSA
Surface Elevation (ft)	: 15.2
Depth to Refusal (ft)	: 1',4',7'
Total Depth (ft bgs)	: 16
Depth to Water (ft bgs)	: 7.7
Northing (US ft)	: 564322.36
Easting (US ft)	: 1457393.54

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0								
1	SS-1	42	0.5	-	10-30-50/4	0-3' Gravelly SAND, gray, very dense, slag gravel, moist (fill)	SW	
2								
3	SS-2	0	-	-	50/4	3-7' SAND, light gray to white, medium dense, with some slag gravel, moist (fill)	SW	
4								
5	SS-3	100	0.1	-	4-7-7-5			
6								
7	SS-4	83	0.5	-	10-15-12-11	7-9.5' Sandy GRAVEL, brown, medium dense, slag gravel, wet (fill)	GW	
8								
9	SS-5	54	1.5	-	4-4-50/4			
10						9.5-10.5' Sandy GRAVEL, dark gray, very dense, slag gravel (fill)	GW	
11	SS-6	88	8.4	-	16-19-24-24	10.5-16' Gravelly SAND, light gray, dense to very dense, wet (fill)	SW	
12								
13	SS-7	71	1.7	-	4-27-16-15			
14								
15	SS-8	100	0.4	-	4-37-39-32			Fill material >16' bgs
16						End of Boring		
17								
18								

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Boring ID: SW-065-MWS

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B4
Weather	: 20s, clear
Date/Time Started	: 1/13/2016 - 9:20
Date/ Time Completed	: 1/13/2016 - 12:30
Logged By	: PNV
Checked By	: ESM

Driller	: Allied - MW/RS
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" OD (4.25" ID) HSA
Surface Elevation (ft)	: 12.6
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 16
Depth to Water (ft bgs)	: 5.1
Northing (US ft)	: 564008.99
Easting (US ft)	: 1457839.54

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0								
1	SS-1	71	0.4	-	2-18-14-26	0-2' Sandy GRAVEL, dark gray, dense, slag gravel, moist (fill)	GW	
2								
3	SS-2	88	2.0	-	16-24-18-23	2-4' Gravelly SAND, dark brown, dense, slag gravel, moist (fiil)	SW	
4								
5	SS-3	83	0.1	-	7-31-27-15	4-6' Gravelly SAND, dark gray, very dense, bluish gray slag gravel, moist (fill)	SW	
6								
7	SS-4	92	1.8	-	23-24-18-30	6-8' Gravelly SAND, black, dense, slag gravel, wet (fill)	SW	Fill material to approximately 8' bgs
8								
9	SS-5	75	1.2	-	1-2-2-3	8-12' Clayey SILT, dark gray, soft, wet		
10							ML-CL	
11	SS-6	100	0.1	-	1-2-2-7			
12								
13	SS-7	100	0.0	-	4-5-3-6	12-16' Clayey SILT, medium brown, stiff to soft, mottled, wet		
14							ML-CL	
15	SS-8	100	0.0	-	1-2-1-3			Auger to 15' bgs Split spoon to 16' bgs
16						End of Boring		
17								
18								

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Boring ID: SW-066-MWS

(page 1 of 1)

Project Name	: Sparrows Point
ARM Project No.	: 150300M-8-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B5
Weather	: 60F, overcast, rain
Date/Time Started	: 12/23/15 - 9:30
Date/ Time Completed	: 12/23/15 - 10:30
Logged By	: WFM
Checked By	: WFM

Driller	: Allied - MW
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" (4.25" ID) HSA
Surface Elevation (ft)	: 10.8
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 14
Depth to Water (ft TOC)	: 9.7
Northing (US ft)	: 564235.89
Easting (US ft)	: 1458826.45

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0								
1	SS-1	79	0.3	-	25-15-13-26	0-2.25' SLAG, black-dark gray, moist, medium to strong reaction with HCl	GM-SM	Slight petroleum odor
2								
3	SS-2	67	1.3	-	5-4-2-7	2.25-4' Silty SAND Slag, yellowish brown, moist, medium reaction to HCl	SM	No odor
4								
5	SS-3	75	0.1	-	10-3-10-5	4-6' SLAG, light bluish gray grades to pale whitish, moist, no reaction with HCl	SM-GM	No odor
6								
7	SS-4	79	0.2	-	2-18-18-42	6-6.75' Sandy and Clayey SILT, yellowish brown, soft, moist, with grayish black slag, very moist	ML-GM	No odor No reaction with HCl
						6.75-8' SLAG, light bluish gray grades to pale whitish, moist, no reaction with HCl	SM-GM	Base of slag at 8' depth
8								
9	SS-5	17	0.1	-	1-WH-WH-WH	8-10' Clayey SILT, yellowish brown, very soft, saturated	ML	Alluvium at 8'+
10								
11	SS-6	100	0.2	2.8	2-6-8-10	10-14' Clayey SILT, yellowish brown, stiff, common chroma 2 gray reduction, moist	ML	No odor
12								
13	SS-7	100	0.1	1.5	2-3-9-12			
14						End of Boring		
15								
16								

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Boring ID: SW-067-MWS

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B5
Weather	: 55F, overcast, light rain
Date/Time Started	: 12/17/2015 - 13:40
Date/ Time Completed	: 12/17/2015
Logged By	: WFM
Checked By	: WFM

Driller	: Allied - MW
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" (4.25" ID) HSA
Surface Elevation (ft)	: 12.7
Depth to Refusal (ft)	: -
Total Depth (ft bgs)	: 16.5
Depth to Water (ft TOC)	: 7.5
Northing (US ft)	: 564917.48
Easting (US ft)	: 1458453.61

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0								
1	SS-1	75	29.2	-	-	0-2.75' SLAG and FILL, gray brown to black to gray brown, very dense, very moist to wet	GM	No odor No counts recorded
2								
3	SS-2	71	3.9	1.5	4-9-4-12	2.75-4' SILT, pale yellowish brown with common chroma 2 gray, moist, stiff	MH	No odor Black organics at top
4								
5	SS-3	83	1.1	1.4	2-5-6-8	4-6' Sandy SILT, yellowish brown-brownish yellow, stiff, moist common chroma 2-3 colorations	MH-ML	No odor
6								
7	SS-4	71	0.4	1.3	5-7-9-9	6-8' Silty and Clayey SAND, yellowish brown-brownish yellow, stiff, moist, common chroma 2-4 colorations	SM-SC	No odor
8								
9	SS-5	88	0.1	-	4-5-6-5	8-10' Silty SAND, yellowish brown, strong yellowish brown to reddish yellow, very moist to saturated, medium dense	SM	No odor
10								
11	SS-6	100	0.1	-	4-5-8-7	10-12' Silty SAND and SAND, brown, pale yellowish brown, minor reddish yellow to chroma 1 gray toward base, common chroma 2-3 coloration, medium dense, saturated	SW-SM	No odor
12								
13	SS-7	92	0.3	-	4-3-9-6	12-14' Silty SAND, pale brown, gray brown, medium dense, saturated, some chroma 1/2 gray	SM	
14								
15	SS-8	92	0.2	0.7	1-1-3-3	14-16' Fat CLAY, gray, medium dense, very moist, with common yellowish red, yellowish brown oxidation	CH	
16	-	-	-	-	-	16-16.5' HSA only	CH	
17						End of Boring		
18								

ARM Group Inc.
Earth Resource Engineers and Consultants

Boring ID: SW-068-MWS

(page 1 of 1)

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B1
Weather	: 50F, clear, calm, dry
Date/Time Started	: 12/16/2015 - 8:00
Date/ Time Completed	: 12/16/2015
Logged By	: WFM
Checked By	: WFM

Driller	: Allied - MW
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" (4.25" ID) HSA
Surface Elevation (ft)	: 14.6
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 15.0
Depth to Water (ft TOC)	: 11.2
Northing (US ft)	: 565823.84
Easting (US ft)	: 1458036.16

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0								
1	SS-1	92	1.2	-	17-43-27-34	0-2' SLAG, dark gray to dark reddish black (2.5 YR 3/1) very dense, slightly moist	GM	no odor reacts with HCL Slag 0-13'
2								
3	SS-2	92	2.1	-	8-17-11-12	2-4.25' SLAG, dark reddish brown grading to light brown and very dark brown fine slag intermixed with bluish gray slag gravel, moist (5B 5/1)	GM	no odor reacts with HCL
4								
5	SS-3	75	0.5	-	5-3-3-7	4.25-6' SLAG, black, coaly, with some dark brown intermixed, moist, loose to medium dense	GM-SM	no odor reacts with HCl
6								
7	SS-4	83	0.6	-	4-7-9-11	6-6.25' Silty SAND and GRAVEL, pale brown, loose, moist, no odor	GM-SM	Mod reaction with HCl
						6.25-6.83' Silty SAND and GRAVEL, dark gray-black, loose, moist	GM-SM	No reaction with HCl
						6.83-7.25' Silty SAND and gRAVEL, brownish-red, medium dense, moist	GM-SM	Mod reaction with HCl
							SM	No reaction with HCl
8								
9	SS-5	79	22.0	-	10-6-6-7	7.25-8' Silty SAND, olive brown/red brown, medium dense, moist 8-10' SLAG, dark reddish brown, medium dense, saturated with strong Br Red oxidation on slag pieces	GM	free water in spoon no odor slag
10								
11	SS-6	75	18.8	-	4-3-3-5	10-12' SLAG, dark reddish brown, loose to medium dense strong yellowish red oxidized zone ~ 11' bgs, becomes black at 12' bgs	GM	no odor slag/fill no reaction with HCL
12								
13	SS-7	92	8.3	-	4-2-3-5	12-13' SLAG, dark reddish brown, loose, medium dense	GM	very moist no odor no reaction with HCL Alluvium at 13'
						13-14' Silty and Clayey SAND, gray to pale gray to yellowish brown with redoximorphic features, loose to medium	SM-SC	no odor
14	-	-	-	-	-	14-15' HSA only		
15						End of Boring		
16								

ARM Group Inc.
Earth Resource Engineers and Consultants

Boring ID: SW-069-MWS

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B1
Weather	: Clear, windy
Date/Time Started	: 12/15/2015 - 12:20
Date/ Time Completed	: 12/15/2015 - 13:30
Logged By	: WFM
Checked By	: WFM

Driller	: Allied - MW
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" (4.25" ID) HSA
Surface Elevation (ft)	: 14.2
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 14.5
Depth to Water (ft TOC)	: 12.1
Northing (US ft)	: 566309.02
Easting (US ft)	: 1458770.00

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0								
1	SS-1	83	0.8	-	17-28-36-34	0-2' SLAG, dark reddish brown, dense to very dense, slightly moist; reacts strong with HCl	GM	no odor
2								
3	SS-2	79	1.0	-	11-10-10-13	2-4' SLAG, pale brown, gray brown, medium dense, pale colors, moist, strong reaction HCl	GM	no odor blackish color at base
4								
5	SS-3	66	0.7	-	18-22-27-19	4-6' SLAG, mixed pale gray, black, dark brown, minor dark red, moist, slight reaction with HCl	GM	no odor
6								
7	SS-4	92	0.3	-	15-10-12-10	6-8' SLAG, mixed dark brown, brownish-black with minor pinkish white, medium dense, moist, slight to no reaction with HCl	GM	no odor
8								
9	SS-5	83	1.5	-	9-12-9-10	8-10' SLAG, mixed pale brown, gray br, minor dk br, gray-white, very moist to wet, medium dense, slight HCl reaction	GM	free water in spoon no odor HCL reaction
10								
11	SS-6	71	2.1	-	10-9-5-7	10-12' SLAG, blackish gray, medium dense, wet, strong reddish zone at base (~2" interval); no reaction with HCl	GM	no odor slag/fill
12								
13	SS-7	75	0.5	-	3-2-2-2	12-14' As above, trace strong reddish color in upper 6" then blackish-gray throughout lower 12"	GM	no odor slag/fill throughout
14	-	-	-	-	-	14-14.5' HSA only	GM	
15						End of Boring		

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Boring ID: SW-070-MWS

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B5
Weather	: 35 F, clear
Date/Time Started	: 1/4/2016 - 12:00
Date/ Time Completed	: 1/4/2016 - 13:30
Logged By	: PNV
Checked By	: ESM

Driller	: Allied - MW/RS
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" OD (4.25" ID) HSA
Surface Elevation (ft)	: 9.1
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 16
Depth to Water (ft bgs)	: 4.9
Northing (US ft)	: 565612.92
Easting (US ft)	: 1459619.82

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0								
1	SS-1	100	0.1	-	2-2-3-4	0-3.5' Gravelly Sand, dark gray to black, medium stiff, slag gravel, moist (fill)	SW	
2								
3	SS-2	100	0.1	-	2-3-4-2	black coal fines at 2' bgs		
4						3.5-4' SAND, brown, medium stiff, fine to medium grained, moist (fill)	SW	
5	SS-3	75	0.5	-	2-3-2-2	4-5.5' Gravelly SAND, black, medium stiff, moist (fill)	SW	
6						5.5-6' SAND, brown to gray, medium stiff, fine to medium grained, wet (fill)	SW	
7	SS-4	100	0.2	-	5-4-3-3	6-7' Gravelly SAND, dark gray to black, medium stiff, fine to medium grained, slag gravel, wet (fill)	SW	
						7-8' SILT, with sand and gravel, dark gray, medium stiff, wet (fill)	ML	Fill material to approximately 8' bgs
8								
9	SS-5	83	0.1	-	1-WH-WH-1	8-13.5' Clayey SILT, gray to brown, very soft to stiff, wet, mottled	ML-CL	
10								
11	SS-6	100	0.1	-	3-3-6-2			
12								
13	SS-7	100	0.3	-	6-6-8-12			
14						13.5-16' SILT, with some clay, gray to brown, stiff to medium stiff, mottled, wet	ML	
15	SS-8	67	0.1	-	1-2-5-5			Auger to 14.5' bgs Split spoon to 16' bgs
16						End of Boring		
17								
18								

ARM Group Inc.
Earth Resource Engineers and Consultants

Boring ID: SW-071-MWS

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B5
Weather	: 40s, clear
Date/Time Started	: 1/14/2016 - 14:00
Date/ Time Completed	: 1/14/2016 - 17:15
Logged By	: PNV
Checked By	: ESM

Driller	: Allied - MW/RS
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" OD (4.25" ID) HSA
Surface Elevation (ft)	: 14.3
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 15
Depth to Water (ft bgs)	: 6.5
Northing (US ft)	: 564957.19
Easting (US ft)	: 1460809.42

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0								
1	SS-1	42	0.4	-	12-10-11-15	0-2' Gravelly SAND, tan, medium dense, dry, with concrete rubble (fill)	SW	
2								
3	SS-2	21	5.3	-	6-50/3	2-7' Gravelly SAND, gray, very dense, with wood/timber, dry to moist (fill)	SW	
4								
5	SS-3	75	2.8	-	10-10-50/3			
6								
7	SS-4	75	11.5	-	3-5-6-6			Wet at 7' bgs
						7-8' Silty SAND, gray, stiff, fine grained, wet (fill)	SM	
8								
9	SS-5	83	0.3	-	13-17-16-10	8-9.5' Gravelly SAND, black, dense, wet (fill)	SW	
						9.5-10' Clayey SILT, tan, dense, with fine grained sand	ML-CL	FIll material to approximately 9.5' bgs
10								
11	SS-6	83	0.8	-	6-8-10-12	10-12' SAND, tan to brown, very stiff, fine grained	SP	
12								
13	SS-7	100	0.4	-	4-4-4-4	12-15' Clayey SILT, gray to light brown, medium stiff, mottled	ML-CL	
14	HSA	-	-	-	-			
15						End of Boring		
16								

ARM Group Inc.
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Boring ID: SW-072-MWS

(page 1 of 1)

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B7
Weather	:
Date/Time Started	: 12/22/2015 - 11:20
Date/ Time Completed	: 12/22/2015 - 13:00
Logged By	: WFM
Checked By	: WFM

Driller	: Allied - MW
Drill Rig Type/Method	: Dietrich B-120
Bit/Auger Size	: 7.75" (4.25" ID) HSA
Surface Elevation (ft)	: 12.0
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	:
Depth to Water (ft TOC)	: 8.6
Northing (US ft)	: 564563.01
Easting (US ft)	: 1460661.22

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0								
1	SS-1	75	2.6	-	8-19-22-35	0-3.25' SLAG, gray brown, gray, very dense, moist, common fragments up to 1"	GM-SM	No Odor Slag 0-6' Med. Reaction w/HCl
2								
3	SS-2	100	0.2	-	25-31-22-18			
4						3.25-6' SLAG, blackish-gray and gray, fine grained vs. above, moist	SM-GM	No Odor Minor HCl Reaction Less Dense
5	SS-3	79	0.3	-	6-10-12-7			
6								
7	SS-4	100	0.0	1.5	5-10-12-20	6-8' Clayey SILT, chroma 2 gray with minor yellowish brown and olive brown oxidation, very moist, medium plasticity	CL-ML	No Odor 1/2" slag at top
8								
9	SS-5	100	0.1	2.0	4-6-9-9-	8-10' Clayey SILT and Sandy SILT, gray brown (~4") to pale grayish yellow with yellowish brown oxidation, very stiff to medium dense, moist to saturated	ML-CL-SM	No Odor
10								
11	SS-6	71	0.1	-	7-9-6-7	10-12' Silty SAND-SAND, light gray with yellowish black oxidation grading to blackish yellowish red to reddish yellow, saturated, medium dense	SM-SW	No Odor Spoon exterior wet
12						12-12.5' SAND, reddish yellow, loose, saturated, some gray	SW	Strong YR at base
13	SS-7	100	0.2	1.2	4-5-5-6	12.5-14' Clayey SILT, light gray with many dark reddish brown iron concretions and yellowish brown oxidation, stiff, very moist	ML-CL	
14								
15	AU	-	-	-	-	14-16' HSA only	-	
16								
17						End of Boring		
18								

ARM Group Inc.
Earth Resource Engineers and Consultants

Boring ID: SW-073-MWS

(page 1 of 1)

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B7
Weather	: 50s F, rain
Date/Time Started	: 12/22/2015 - 14:40
Date/ Time Completed	: 12/22/2015
Logged By	: WFM
Checked By	: WFM

Driller	: Allied - MW
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" (4.25" ID) HSA
Surface Elevation (ft)	: 12.4
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 14.5
Depth to Water (ft TOC)	: 10.3
Northing (US ft)	: 564422.72
Easting (US ft)	: 1461025.48

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0								
1	SS-1	38	1.1	-	15-50/3	0-2' SLAG, dark grayish brown, moist, medium dense, very dense	SM	No Odor Slag 0-11'
2								
3	SS-2	79	1.4	-	15-8-13-17	2-7' Silty GRAVEL and SAND, grayish brown, brown with dark olive gray, moist, poss low chroma RMFs	GM-SM	No Odor Slight HCl Reaction
4								
5	SS-3	92	0.5	-	16-16-16-16			No Odor Slight HCl Reaction
6								
7	SS-4	100	0.7	-	20-28-30-24			No Odor/No Reaction
						7-8' SLAG SAND, greenish black (Gley 1-5G-1-2.5/1), very dense, very moist	SW	No Odor/No Reaction
8								
9	SS-5	100	1.3	-	10-13-11-13	8-11' SLAG SAND, very dark gray and greenish black, medium dense to dense, very moist, saturated at 10' bgs	SW	No Odor/No Reaction
10								
11	SS-6	100	0.6	-	5-19-31-32			No Odor/No Reaction
						11-12' SLAG SAND, light gray then greenish then strong reddish yellow oxidized; 1 rounded quartz gravel, moist, very dense	SW	No Odor/No Reaction
12								
13	SS-7	88	1.8	-	9-12-9-7	12-13' SLAG SAND, mixed greenish gray and yellowish red sand	SW	Possible petroleum odor No Reaction with HCl
						13-14' Clayey SILT, grayish with abundant reddish yellow oxidation, stiff, moist	ML-CL	
14	HSA	-	-	-	-	14-14.5' HSA only	-	
15						End of Boring		
16								

ARM Group Inc.
Earth Resource Engineers and Consultants

Boring ID: SW-074-MWI

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B7
Weather	: 50s F, rain
Date/Time Started	: 11/19/2015 - 13:45
Date/ Time Completed	: 11/20/2015
Logged By	: WFM
Checked By	: WFM

Driller	: Allied - MW
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" (4.25" ID) HSA
Surface Elevation (ft)	: 8.2
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 76
Depth to Water (ft TOC)	: 15.0
Northing (US ft)	: 567047.75
Easting (US ft)	: 1464301.55

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0								
1	SS-1	71	0.2	NA	22-18-7-6	0-4.5' SLAG, brownish gray, includes pieces up to 1.5", dry, dense to medium dense	GM	Fill No Odor Hard Slag fill to 4.5'
2								
3	SS-2	46	0.5	NA	6-5-6-7			
4								
5	SS-3	54	0.2	1.0	8-3-1-3	4.5-6' Lean CLAY, yellowish brown/greyish brown grading to yellowish brown, moist, low plasticity	CL	Alluvium at 4.5'+ No Odor
6								
7	SS-4	96	0.2	1.2	3-5-6-6	6-7' Clayey SILT, pale yellowish gray, moist, low-medium plasticity, stiff	CL-ML	No Odor
						7-8' Clayey and Silty SAND, brown, stiff to very stiff, moist, high and low chroma, redoximorphic features, low plasticitiy	SC-SM	
8								
9	SS-5	50	0.2	3.7	2-6-8-9	8-10' Clayey and Silty SAND, yellowish brown, stiff to hard, moist, high and low chroma, redoximorphic features very prominent, low plasticitiy	SC-SM	
10								
11	SS-6	83	0.5	1.7	3-6-9-12	10-11' Clayey and Silty SAND, yellowish brown, stiff, very moist, hi and low chroma, sandier with depth	SC-SM	Dense to Loose
						11-12' Clayey SAND and SAND, strong brown, moist, with many redoximorphic features, med	SC-SW	
12						12-12.4' Clayey SAND, strong brown, very stiff, moist, many redoximorphic features	SC	No Odor Moist
13	SS-7	100	0.1	1.8	2-2-5-5	12.4-14' Silty CLAY, highly mottled, chroma 1 and 2, gray and strong yellowish brown, stiff, medium plasticity	CL	
14								
15	SS-8	100	0.2	0.8	5-5-6-6	14-16' Silty CLAY, pale gray, medium, very moist, common yellowish brown oxidation + iron nodules	CL	
16								Some Free Water in pores/ped faces No Odor
17	SS-9	100	0.2	1.3	1-2-3-4	16-20' Silty CLAY, pale gray, stiff to medium, very moist with many redoximorphic features, medium plasticity, some dark R4 iron concretions	CL	
18								
19	SS-10	100	0.1	0.7	3-3-4-4			No Free Water Noted No Odor
20								

ARM Group Inc.
Earth Resource Engineers and Consultants

Boring ID: SW-074-MWI

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B7
Weather	: 50s F, rain
Date/Time Started	: 11/19/2015 - 13:45
Date/ Time Completed	: 11/20/2015
Logged By	: WFM
Checked By	: WFM

Driller	: Allied - MW
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" (4.25" ID) HSA
Surface Elevation (ft)	: 8.2
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 76
Depth to Water (ft TOC)	: 15.0
Northing (US ft)	: 567047.75
Easting (US ft)	: 1464301.55

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
20								
21	SS-11	100	0.1	0.5	WH-WH-WH-3	20-24' Clayey SILT, dark gray (2.5 Y4/1) medium to soft, moist, low plasticity, siltier than above, trace tiny white shell fragments at bottom	CL-ML	
22								
23	SS-12	100	0.3	0.6	2-3-3-3			
24								No Odor
25	SS-13	50	0.2	0.5	1-1-1-2	24-28' Clayey SILT, dark gray, very soft to soft, wet, appears to be saturated zone, slaglike fragment at base of spoon	CL-ML	No reaction with HCL No Odor
26								
27	SS-14	71	0.3	0.5	3-4-4-3			
28								No Odor
29	SS-15	100	0.2	1.0	1-1-1-3	28-32' SILT, dark gray, medium to stiff, moist, low plasticity	ML	
30								
31	SS-16	100	0.2	0.6	3-3-3-3			
32								No Odor
33	SS-17	100	0.4	0.3	2-7-6-4	32-33.42' SILT, dark gray, very soft, wet, low plasticity	ML	
						33.42-34' Silty SAND, dark gray, loose-medium dense, very moist, some free water	SM	
34								No Odor
35	SS-18	100	0.4	0.5	1-2-3-3	34-35.33' SILT, dark gray, soft, moist-wet, low plasticity	ML	
						35.33-35.75' Silty SAND, dark gray, loose, saturated	SM	
36						35.75-36' Sandy SILT, dark gray, soft, moist-wet, low plasticity	ML	No Odor
37	SS-19	88	0.3	0.5	3-3-3-4	36-38' Clayey SILT, dark gray, soft, moist, low plasticity, one coarse sand vein noted - filled with water	ML-CL	
38								No Odor
39	SS-20	100	0.3	0.5	NA-NA-2-3	38-40' Clayey SILT, dark gray (2.5-5Y 4/1), soft, moist, very moist, 1-5mm organic streaks	ML-CL	
40								No Odor

ARM Group Inc.
Earth Resource Engineers and Consultants

Boring ID: SW-074-MWI

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B7
Weather	: 50s F, rain
Date/Time Started	: 11/19/2015 - 13:45
Date/ Time Completed	: 11/20/2015
Logged By	: WFM
Checked By	: WFM

Driller	: Allied - MW
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" (4.25" ID) HSA
Surface Elevation (ft)	: 8.2
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 76
Depth to Water (ft TOC)	: 15.0
Northing (US ft)	: 567047.75
Easting (US ft)	: 1464301.55

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
40								No Odor
41	SS-21	100	0.5	0.5	3-2-3-4	40-44' Clayey SILT, dark gray (2.5-5Y 4/1), soft, very moist, low to medium plasticity		
42							ML/CL	No Odor
43	SS-22	100	0.3	0.5	3-3-3-4			
44								Slag reacts with HCL
45	SS-23	42	0.2	0.2	1-2-3-3	44-46' Clayey SILT, dark gray, very soft, saturated, dark grayish/blackish slag piece at base of spoon	ML/CL	
46								
47	SS-24	100	0.3	0.2	3-4-5-4	46-47' SILT to Silty SAND, dark gray, very soft, very moist, low plasticity, incr. amounts of very fine sand	ML-SM	
						47-48' Silty SAND, dark gray (10YR 4/1-3/1), moist, no plasticity, fine mica	SM	
48								
49	SS-25	100	0.2	0.3	1-1-3-4	48-52' Clayey SILT, dark gray, soft, very moist, common pale yellow/white shell fragments		
50							ML-CL	No Odor
51	SS-26	100	0.1	0.5	3-3-3-3			
52								
53	SS-27	100	0.3	0.4	3-3-3-4	52-54' As above with rounded quartz gravels, whitish brown shell fragments - react with HCL	ML-CL	
54								No Odor
55	SS-28	100	0.3	0.4	WH-1-1-2	54-62' Clayey SILT, dark gray, soft, very moist, low plasticity, trace shells, bivalve mollusc shells		
56								
57	SS-29	100	0.2	0.5	3-3-3-4		ML-CL	
58								No Odor
59	SS-30	100	0.2	0.5	1-1-3-4			
60								

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Boring ID: SW-074-MWI

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B7
Weather	: 50s F, rain
Date/Time Started	: 11/19/2015 - 13:45
Date/ Time Completed	: 11/20/2015
Logged By	: WFM
Checked By	: WFM

Driller	: Allied - MW
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" (4.25" ID) HSA
Surface Elevation (ft)	: 8.2
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 76
Depth to Water (ft TOC)	: 15.0
Northing (US ft)	: 567047.75
Easting (US ft)	: 1464301.55

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
60								
61	SS-31	100	0.2	0.5	3-3-4-4		ML-CL	
62								No Odor
63	SS-32	100	0.2	0.6	4-3-4-4	62-64' Clayey SILT, dark gray, soft, very moist, low plasticity, common shell fragments, 1/2 pieces of bivalve	ML/CL	
64								
65	SS-33	100	0.2	0.6	1-1-3-4	64-66' As above except very dark gray, observed small fragments of rotted wood	ML-CL	
66								No Odor
67	SS-34	100	0.3	0.7	WH-3-4-4	66-68' Lean CLAY, very dark gray, soft, medium plasticity, very moist, few tiny shell fragments	CL	
68								
69	SS-35	100	0.2	0.5	1-3-4-4	68-76' Lean CLAY, very dark gray, soft, medium plastic, very moist, no shell fragments		
70								No Odor
71	SS-36	100	0.1	0.5	3-5-4-5			
72							CL	
73	SS-37	100	0.2	0.5	3-3-6-6			
74								
75	SS-38	100	0.2	0.5	WH-WH-2-4			No Odor
76						End of Boring		
77								
78								
79								
80								

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Boring ID: SW-074-MWS

(page 1 of 1)

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B7
Weather	: 20F, clear, windy
Date/Time Started	: 1/18/2016 - 13:15
Date/ Time Completed	: 1/18/2016
Logged By	: WFM
Checked By	: WFM

Driller	: Allied - MW
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" (4.25" ID) HSA
Surface Elevation (ft)	: 8.8
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 14.5
Depth to Water (ft TOC)	: 8.9
Northing (US ft)	: 567038.13
Easting (US ft)	: 1464298.66

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0								
1	SS-1	100	2.5	-	15-15-17-25	0-4' SLAG, reddish brown and some dark gray, moist, dense, medium reaction to HCl, ~20% slag pieces up to 1/2"	GM	Slag 0-5'
2								
3	SS-2	11	0.4	-	50/5			
4								
5	SS-3	100	2.0	-	4-4-5-4	4-5' As above, loose	GM-GP	
						5-6' SILT yellowish brown, moist, medium stiff , pale redoximorphic features	ML	Alluvium at 5'
6								
7	SS-4	63	0.1	3.0	2-3-4-5	6-8' Silty-Sandy CLAY, strong yellowish brown with stiff to very stiff, moist, many redoximorphic features, becoming more grayish at base	ML-CL-CL-SM	
8								
						8-8.83' Clayey SILT, yellowish brown-grayish brown, stiff, moist	ML-CL	
9	SS-5	79	0.2	2.0	3-9-10-9	8.83-10' Sandy SILT, yellowish black-greenish brown, medium to stiff, very moist to moist	SM	
10								
11	SS-6	96	2.7	-	5-12-15-9	10-13.5' Sandy SILT, blackish yellow to brownish red, medium dense, saturated	SM	
12								
13	SS-7	100	17.3	-	2-3-5-5			
						13.5-14' Sandy SILT, mixed H gray and strong blackish yellow, stiff, moist	SM	
14	HSA	-	-	-	-	14-14.5' HSA only		
						End of Boring		
15								
16								

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Boring ID: TM03-PZM004

(page 1 of 1)

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B15
Weather	: 30-40sF, clear to overcast
Date/Time Started	: 2/8/2016 - 11:30
Date/ Time Completed	: 2/8/2016 - 15:30
Logged By	: PNV
Checked By	: ESM

Driller	: Allied - MW/RS
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" OD (4.25" ID) HSA
Surface Elevation (ft)	: 10.3
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 16
Depth to Water (ft bgs)	: 8.3
Northing (US ft)	: 568852.92
Easting (US ft)	: 1457628.81

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0								
1	SS-1	100	4.1	-	7-35-35-50/2	0-8' SAND, dark brown, medium dense to very dense, fine to coarse grained with some slag gravel, some bits of concrete, moist (fill)		
2								
3	SS-2	17	12.7	-	22-50/2			
4							SW	
5	SS-3	63	5.8	-	11-9-6-8			Hard drilling between 0-16' bgs
6								Multiple borings required to advance boring through fill material
7	SS-4	92	1.8	-	11-9-8-28			
8						8-12' Gravelly SAND, dark brown, medium dense to dense, fine to coarse grained sand, wet (fill)		
9	SS-5	67	1.2	-	11-8-22-13			
10							SW	
11	SS-6	71	4.5	-	12-11-12-17	wood timber at 11.5' bgs		
12						12-14' Gravelly SAND, dark gray, loose, with steel wire fragments, wet (fill)		
13	SS-7	50	2.5	-	2-3-4-17		SW	
14						14-16' Gravelly SAND, black, dense, with steel wire fragments, wet (fill)		
15	SS-8	38	7.7	-	11-27-12-8		SW	Fill material >16' bgs
16						End of Boring		
17								
18								

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Boring ID: TM03-PZM037

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B15
Weather	: 30-40sF, clear to overcast
Date/Time Started	: 2/8/2016 - 11:30
Date/ Time Completed	: 2/10/2016 - 11:30
Logged By	: PNV
Checked By	: ESM

Driller	: Allied - MW/RS
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" OD (4.25" ID) HSA
Surface Elevation (ft)	: 10.4
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 50
Depth to Water (ft bgs)	: 8.3
Northing (US ft)	: 568849.30
Easting (US ft)	: 1457622.17

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0								
1	SS-1	100	4.1	-	7-35-35-50/2	0-8' SAND, dark brown, medium dense to very dense, fine to coarse grained with some slag gravel, some bits of concrete, moist (fill)		
2								
3	SS-2	17	12.7	-	22-50/2			
4							SW	
5	SS-3	63	5.8	-	11-9-6-8			Hard drilling between 0-26' bgs
6								Multiple borings required to advance boring through fill material
7	SS-4	92	1.8	-	11-9-8-28			
8								
9	SS-5	67	1.2	-	11-8-22-13	8-12' Gravelly SAND, dark brown, medium dense to dense, fine to coarse grained sand, wet (fill)		
10							SW	
11	SS-6	71	4.5	-	12-11-12-17	wood timber at 11.5' bgs		
12								
13	SS-7	50	2.5	-	2-3-4-17	12-14' Gravelly SAND, dark gray, loose, with steel wire fragments, wet (fill)	SW	
14								
15	SS-8	38	7.7	-	11-27-12-8	14-16' Gravelly SAND, black, dense, with steel wire fragments, wet (fill)	SW	
16								
17	SS-9	96	1.5	-	40-25-40-32	16-18' Gravelly SAND, black to dark gray, very dense, some light gray to tan sandy material, slag gravel (fill)	SW	
18								
19	SS-10	46	3.3	-	35-50/3	18-26' Gravelly SAND, black to dark gray to brown, very dense, slag gravel (fill)	SW	
20								

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Boring ID: TM03-PZM037

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B15
Weather	: 30-40sF, clear to overcast
Date/Time Started	: 2/8/2016 - 11:30
Date/ Time Completed	: 2/10/2016 - 11:30
Logged By	: PNV
Checked By	: ESM

Driller	: Allied - MW/RS
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" OD (4.25" ID) HSA
Surface Elevation (ft)	: 10.4
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 50
Depth to Water (ft bgs)	: 8.3
Northing (US ft)	: 568849.30
Easting (US ft)	: 1457622.17

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
20								
21	SS-11	46	1.0	-	25-50/4	18-26' Gravelly SAND, black to dark gray to brown, very dense, slag gravel (fill)	SW	Fill material to approximately 26' bgs
22								
23	SS-12	25	2.3	-	50/3	wood timber fragments at 23' bgs		
24								
25	SS-13	100	22.3	-	27-50/5			
26								
27	SS-14	100	1.2	-	1-1-2-2	26-30' Clayey SILT to Silty CLAY, olive gray, soft to very soft	ML-CL	
28								
29	SS-15	100	0.9	-	WH-WH-2-3			
30								
31	SS-16	100	0.3	-	3-5-7-8	30-31' Silty CLAY, olive gray, medium stiff, with shell material	ML-CL	
						31-32' Clayey SAND, olive gray, stiff, fine grained with shell material	SC	
32								
33	SS-17	100	0.4	-	3-5-4-5	32-33' SAND, gray to light brown, stiff, fine to medium grained with some clay and shell material	SW	
						33-39' Silty CLAY, light gray to brown, medium stiff, mottled	ML-CL	
34								
35	SS-18	100	0.6	-	WH-3-3-3			
36								
37	SS-19	100	0.6	-	4-4-3-3			
38								
39	SS-20	100	1.2	-	1-3-5-15	39-40' SAND, brown, medium stiff, fine to medium grained, wet	SW	
40								

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Boring ID: TM03-PZM037

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B15
Weather	: 30-40sF, clear to overcast
Date/Time Started	: 2/8/2016 - 11:30
Date/ Time Completed	: 2/10/2016 - 11:30
Logged By	: PNV
Checked By	: ESM

Driller	: Allied - MW/RS
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" OD (4.25" ID) HSA
Surface Elevation (ft)	: 10.4
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 50
Depth to Water (ft bgs)	: 8.3
Northing (US ft)	: 568849.30
Easting (US ft)	: 1457622.17

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
40						40-50' SAND, brown, stiff, fine to medium grained, with some fine gravel	SW	
41	SS-21	92	0.6	-	2-3-7-5			
42								
43	SS-22	100	0.3	-	2-2-7-11			
44								
45	SS-23	75	0.6	-	2-6-4-4			
46								
47	SS-24	71	0.6	-	4-3-6-9			
48								
49	SS-25	100	0.8	-	7-15-6-5			Split spoon to 50' bgs Auger to 52' bgs to set well
50						End of Boring		
51								
52								
53								
54								
55								
56								
57								
58								
59								
60								

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Boring ID: TM05-PZM005

(page 1 of 1)

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B15
Weather	: 30s F, windy/overcast
Date/Time Started	: 2/11/2016 - 11:30
Date/ Time Completed	: 2/11/2016 - 13:30
Logged By	: PNV
Checked By	: ESM

Driller	: Allied - MW/RS
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" OD (4.25" ID) HSA
Surface Elevation (ft)	: 10.6
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 16
Depth to Water (ft bgs)	: 7.7
Northing (US ft)	: 568837.40
Easting (US ft)	: 1458595.64

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0								
1	SS-1	50	6.1	-	2-5-5-7	0-4' Gravelly SAND, gray, loose to medium dense, slag gravel, dry (fill)	SW	
2								
3	SS-2	63	8.0	-	10-7-9-5	metal debris at 3' bgs		
4								
5	SS-3	42	0.4	-	4-5-2-1	4-7' Silty SAND, gray to dark brown, loose, with some gravel, moist (fill)	SM	
6								
7	SS-4	46	8.5	-	4-15-29-50/3	7-9.5' Gravelly SAND, gray to brown, medium dense to very dense, moist to wet (fill)	SW	Wet sand at 8' bgs
8								
9	SS-5	50	0.8	-	4-8-10-4			
10						9.5-12' Gravelly SAND, black, medium dense, some tan sandy gravel, wet (fill)	SW	
11	SS-6	83	6.9	-	3-5-12-18			
12								
13	SS-7	67	3.6	-	6-20-18-11	12-15.5' Gravelly SAND, black, dense to medium dense, coarse grained, with some fine to medium grained sand (fill)	SW	
14								Sheen noted in SS-8
15	SS-8	63	4.8	-	16-5-9-3			
16						15.5-16' Clayey SILT, gray to brown, stiff, with some coarse grained sand (fill)	ML-CL	Fill material >16' bgs
						End of Boring		
17								
18								

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Boring ID: TM05-PZM040

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B15
Weather	: 30s F, windy/overcast
Date/Time Started	: 2/11/2016 - 15:10
Date/ Time Completed	: 2/12/2016 - 16:00
Logged By	: PNV
Checked By	: ESM

Driller	: Allied - Mike Waller
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" (4.25" ID) HSA
Surface Elevation (ft)	: 10.7
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 54
Depth to Water (ft bgs)	: 7.7
Northing (US ft)	: 568830.24
Easting (US ft)	: 1458596.23

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
0								
1	SS-1	50	6.1	-	2-5-5-7	0-4' Gravelly SAND, gray, loose to medium dense, slag, dry (fill)	SW	
2								
3	SS-2	63	8.0	-	10-7-9-5	metal debris at 3' bgs		
4								
5	SS-3	42	0.4	-	4-5-2-1	4-7' Silty SAND, gray to dark brown, loose, with some gravel, moist (fill)	SM	
6								
7	SS-4	46	8.5	-	4-15-29-50/3			
8						7-9.5' Gravelly SAND, gray to brown, medium dense to very dense, moist (fill)	SW	
9	SS-5	50	0.8	-	4-8-10-4			
10						9.5-12' Gravelly SAND, medium dense, black, some tan sandy gravel, wet (fill)	SW	
11	SS-6	83	6.9	-	3-5-12-18			
12								
13	SS-7	67	3.6	-	6-20-18-11	12-15.5' Gravelly SAND, black, dense to medium dense, coarse grained, with some fine to medium grained sand, wet (fill)	SW	
14								Sheen noted in SS-8ÿ
15	SS-8	63	4.8	-	16-5-9-3			
16						15.5-16' Clayey SILT, gray to brown, stiff, with some coarse grained sand (fill)	ML-CL	
17	SS-9	79	2.0	-	1-15-28-17	16-20' Gravellly SAND, dark gray, dense, fine to coarse grained, some tan sand and brick material, wet (fill)	SW	
18								
19	SS-10	71	2.6	-	28-15-5-7			
20								

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Boring ID: TM05-PZM040

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B15
Weather	: 30s F, windy/overcast
Date/Time Started	: 2/11/2016 - 15:10
Date/ Time Completed	: 2/12/2016 - 16:00
Logged By	: PNV
Checked By	: ESM

Driller	: Allied - Mike Waller
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" (4.25" ID) HSA
Surface Elevation (ft)	: 10.7
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 54
Depth to Water (ft bgs)	: 7.7
Northing (US ft)	: 568830.24
Easting (US ft)	: 1458596.23

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
20						20-29' Gravelly SAND, dark gray, loose to very dense, wet (fill)	SW	
21	SS-11	46	2.0	-	8-7-3-5			
22								
23	SS-12	83	3.2	-	5-8-5-8			
24						Wood timber in spoon (24-26')		
25	SS-13	21	95.7	-	11-4-4-4			
26						Large piece of steel in bottom of spoon (26-28')		
27	SS-14	17	6.7	-	4-12-29-50/4			
28								
29	SS-15	92	1.8	-	50-29-4-6	29-30' Clayey SILT, dark gray, stiff, with shell material and some sand	ML-CL	
30						30-32.5' Silty SAND, dark gray, stiff, fine to coarse grained	SM-SW	
31	SS-16	100	3.2	-	7-6-4-5			
32								
33	SS-17	100	1.2	-	4-3-4-6	32.5-33' SAND, dark red, medium stiff, fine to medium grained	SW	
34						33-37' SAND, dark gray, stiff to very stiff, fine to medium grained	SW	
35	SS-18	100	0.9	-	3-3-6-5			
36								
37	SS-19	100	1.4	-	5-10-6-4	37-37.5' Sandy GRAVEL, light gray, medium dense, slag gravel (fill)	GW	Fill material to approximately 37.5' bgs
38						37.5-41' Clayey SILT, gray, soft	ML-CL	
39	SS-20	100	1.7	-	WH-WH-2-5			
40								

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Boring ID: TM05-PZM040

Project Name	: Sparrows Point
ARM Project No.	: 150300M-10-3
Client	: EnviroAnalytics Group
Site	: Sparrows Point - Area B
Borehole Location	: Parcel B15
Weather	: 30s F, windy/overcast
Date/Time Started	: 2/11/2016 - 15:10
Date/ Time Completed	: 2/12/2016 - 16:00
Logged By	: PNV
Checked By	: ESM

Driller	: Allied - Mike Waller
Drill Rig Type/Method	: Diedrich D-120
Bit/Auger Size	: 7.75" (4.25" ID) HSA
Surface Elevation (ft)	: 10.7
Depth to Refusal (ft)	: NA
Total Depth (ft bgs)	: 54
Depth to Water (ft bgs)	: 7.7
Northing (US ft)	: 568830.24
Easting (US ft)	: 1458596.23

Depth (ft.)	Sample No:	Recovery (%)	PID (PPM):	PP Reading (tsf):	Blow Count	DESCRIPTION	USCS	REMARKS
40								
41	SS-21	100	0.0	-	8-11-8-9		ML-CL	
						41-42' SAND, gray to tan, very stiff, fine grained	SP	
42								
43	SS-22	100	0.0	-	5-3-5-5	42-44' Clayey SILT, gray, medium stiff, with shell material	ML-CL	
44						44-44.5' SAND, gray to tan, medium stiff, fine grained	SP	
45	SS-23	100	0.0	-	3-3-3-4	44.5-46' Clayey SILT, gray, medium stiff	ML-CL	
46						46-46.5' SAND, gray to tan, soft, fine grained	SP	
47	SS-24	100	0.0	-	WH-1-3-5	46.5-48' Silty CLAY, gray, soft, with shell material	ML-CL	
48								
49	SS-25	100	0.0	-	4-4-15-15	48-50' Clayey SILT, gray, very stiff, with shell material	ML-CL	
50								
51	SS-26	0	-	-	8-8-9-12	50-54' SAND, grayish tan, very stiff, fine to medium grained with some coarse sand	SW	
52								
53	SS-27	13	0.0	-	7-9-8-10			
54						End of Boring		
55								
56								
57								
58								
59								
60								

APPENDIX D

WELL INSPECTION FORM

Site: Sparrows Point: Area B Location of Well: W. Shop Road: Next to RR tracks

Project Number: 150300M Date: 9/14/2015

WELL INFORMATION

Well ID: FM01-PZM003 Well Permit No.: _____

Coordinates:

Latitude/Northing 568252.054 Longitude/Easting 1460279.365

Condition of Well Pad: Fair Flush Mount or Stick-Up? Flush

Well ID Marked? No If yes, where? _____

Locking cap? No Lock? No Diameter of Well: 2 in.

Structural integrity of well: Good; has broken cap (fell in well); good cover

WELL MEASUREMENTS

	Measured (Current)	Historic Reported
Depth to Water (feet BGS/TOC)	3.94 TOC; 4.13 BGS	
Depth to Bottom (feet BGS/TOC)	11.31 TOC; 11.51 BGS	13.5' BGS

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

Additional Comments: Well cap broke while replacing and a piece fell into well. Placed nitrile glove under cap to seal.

PICTURE OF WELL DURING INSPECTION

ARM Group Inc.

WELL INSPECTION FORM

Site: Sparrows Point: Area B Location of Well: Open gravel area

Project Number: 150300M Date: 9/14/2015

WELL INFORMATION

Well ID: FM05-PZM004 Well Permit No.: _____

Coordinates:

Latitude/Northing 568569.755 Longitude/Easting 1462039.327

Condition of Well Pad: NA Flush Mount or Stick-Up? Stick-up

Well ID Marked? NA If yes, where? _____

Locking cap? NA Lock? NA Diameter of Well: NA

Structural integrity of well: Could not locate well

WELL MEASUREMENTS

	Measured (Current)	Historic Reported
Depth to Water (feet BGS/TOC)		
Depth to Bottom (feet BGS/TOC)		14' BGS

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

Additional Comments: Could not locate well

PICTURE OF WELL DURING INSPECTION

WELL INSPECTION FORM

Site: Sparrows Point: Area B Location of Well: Off side of Canal Rd.; near mound

Project Number: 150300M Date: 9/15/2015

WELL INFORMATION

Well ID: SG07-PDM008 Well Permit No.: _____

Coordinates:

Latitude/Northing 564148.494 Longitude/Easting 1463674.708

Condition of Well Pad: Fair Flush Mount or Stick-Up? Stick-up

Well ID Marked? Yes If yes, where? Right side of outer casing

Locking cap? Yes Lock? Yes Diameter of Well: 2 in.

Structural integrity of well: Good

WELL MEASUREMENTS

	Measured (Current)	Historic Reported
Depth to Water (feet BGS/TOC)	17.44 TOC; 14.77 BGS	
Depth to Bottom (feet BGS/TOC)	25.41 TOC; 22.74 BGS	23' BGS

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

Additional Comments: _____

PICTURE OF WELL DURING INSPECTION

ARM Group Inc.

WELL INSPECTION FORM

Site: Sparrows Point: Area B Location of Well: Could not locate well

Project Number: 150300M Date: 9/14/2015

WELL INFORMATION

Well ID: SW06-PZM001 Well Permit No.: _____

Coordinates:

Latitude/Northing 569204.398 Longitude/Easting 1463626.61

Condition of Well Pad: NA Flush Mount or Stick-Up? NA

Well ID Marked? NA If yes, where? _____

Locking cap? NA Lock? NA Diameter of Well: NA

Structural integrity of well: NA (Could not locate well)

WELL MEASUREMENTS

	Measured (Current)	Historic Reported
Depth to Water (feet BGS/TOC)		
Depth to Bottom (feet BGS/TOC)		15' BGS

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

Additional Comments: Could not locate well; only broken PVC found.

PICTURE OF WELL DURING INSPECTION

ARM Group Inc.

WELL INSPECTION FORM

Site: Sparrows Point: Monitoring wells Location of Well: After RR, before fence

Project Number: 150300M Date: 9/15/2015

WELL INFORMATION

Well ID: SW07-PZM004 Well Permit No.: _____

Coordinates:

Latitude/Northing 567658.832 Longitude/Easting 1456050.022

Condition of Well Pad: Good Flush Mount or Stick-Up? Stick-up

Well ID Marked? No If yes, where? _____

Locking cap? Yes Lock? Yes Diameter of Well: 2 in.

Structural integrity of well: Good

WELL MEASUREMENTS

	Measured (Current)	Historic Reported
Depth to Water (feet BGS/TOC)	12.23 TOC; 9.78 BGS	
Depth to Bottom (feet BGS/TOC)	18.15 TOC; 15.70 BGS	16' BGS

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

Additional Comments: Black outer casing

PICTURE OF WELL DURING INSPECTION

ARM Group Inc.

WELL INSPECTION FORM

Site: Sparrows Point: Area B Location of Well: In marsh closer to hill

Project Number: 150300M Date: 9/14/2015

WELL INFORMATION

Well ID: SW08-PZM003 or SW08-PZM053 Well Permit No.: _____

Coordinates:

Latitude/Northing 568112.127/568107.673 Longitude/Easting 1459112.156/1459113.28

Condition of Well Pad: Under Water Flush Mount or Stick-Up? Stick-up

Well ID Marked? No If yes, where? _____

Locking cap? No Lock? No Diameter of Well: 2 in.

Structural integrity of well: Likely blocked/ could not identify water.

WELL MEASUREMENTS

	Measured (Current)	Historic Reported
Depth to Water (feet BGS/TOC)	NA (blocked?)	
Depth to Bottom (feet BGS/TOC)	2.85 TOC; 2.55 BGS	

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

Additional Comments: Well located in ditch surrounded by water

PICTURE OF WELL DURING INSPECTION

ARM Group Inc.

WELL INSPECTION FORM

Site: Sparrows Point: Area B Location of Well: Off 7th St.: Access Road

Project Number: 150300M Date: 9/14/2015

WELL INFORMATION

Well ID: SW09-PZM004 Well Permit No.: _____

Coordinates:

Latitude/Northing 566975.141 Longitude/Easting 1460293.513

Condition of Well Pad: Fair Flush Mount or Stick-Up? Stick-up

Well ID Marked? Yes If yes, where? Middle outer casing

Locking cap? Yes Lock? Yes Diameter of Well: 2 in.

Structural integrity of well: Good

WELL MEASUREMENTS

	Measured (Current)	Historic Reported
Depth to Water (feet BGS/TOC)	5.93 TOC; 3.14 BGS	
Depth to Bottom (feet BGS/TOC)	16.98 TOC; 13.19 BGS	14' BGS

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

Additional Comments: _____

PICTURE OF WELL DURING INSPECTION

ARM Group Inc.

WELL INSPECTION FORM

Site: Sparrows Point: Monitoring wells Location of Well: Access road next to fire station

Project Number: 150300M Date: 9/15/2015

WELL INFORMATION

Well ID: SW10-PZM012 Well Permit No.: _____

Coordinates:

Latitude/Northing 567312.891 Longitude/Easting 1463288.221

Condition of Well Pad: Fair Flush Mount or Stick-Up? Stick-up

Well ID Marked? Yes If yes, where? Front side of outside casing

Locking cap? Yes Lock? Yes Diameter of Well: 2 in.

Structural integrity of well: Good

WELL MEASUREMENTS

	Measured (Current)	Historic Reported
Depth to Water (feet BGS/TOC)	9.6 TOC; 6.56 BGS	
Depth to Bottom (feet BGS/TOC)	20.3 TOC; 17.26 BGS	17' BGS

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

Additional Comments: _____

PICTURE OF WELL DURING INSPECTION

ARM Group Inc.

WELL INSPECTION FORM

Site: Sparrows Point: Monitoring wells Location of Well: Could not locate

Project Number: 150300M Date: 9/15/2015

WELL INFORMATION

Well ID: SW11-PZM005 Well Permit No.: _____

Coordinates:

Latitude/Northing 565800.944 Longitude/Easting 1456075.911

Condition of Well Pad: NA Flush Mount or Stick-Up? NA

Well ID Marked? NA If yes, where? _____

Locking cap? NA Lock? NA Diameter of Well: NA

Structural integrity of well: NA

WELL MEASUREMENTS

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

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

Additional Comments: Cleared some vegetation and dug soil slightly; could not locate. Records indicate "Flush Mount".

PICTURE OF WELL DURING INSPECTION

ARM Group Inc.

WELL INSPECTION FORM

Site: Sparrows Point: Monitoring wells Location of Well: Could not locate well

Project Number: 150300M Date: 9/15/2015

WELL INFORMATION

Well ID: SW12-PZP001 Well Permit No.: _____

Coordinates:

Latitude/Northing 565991.29 Longitude/Easting 14157437.268

Condition of Well Pad: NA Flush Mount or Stick-Up? NA

Well ID Marked? NA If yes, where? _____

Locking cap? NA Lock? NA Diameter of Well: NA

Structural integrity of well: NA

WELL MEASUREMENTS

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

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

Additional Comments: Could not locate well; GPS shows location in middle of clear field with gravel

PICTURE OF WELL DURING INSPECTION

ARM Group Inc.

WELL INSPECTION FORM

Site: Sparrows Point: Monitoring wells Location of Well: Patch of grass; white voltage boxes

Project Number: 150300M Date: 9/15/2015

WELL INFORMATION

Well ID: SW13-PZM003 Well Permit No.: _____

Coordinates:

Latitude/Northing 563496.415 Longitude/Easting 1456410.803

Condition of Well Pad: Fair Flush Mount or Stick-Up? Stick-up

Well ID Marked? Yes If yes, where? Top riser cap

Locking cap? Yes Lock? Yes Diameter of Well: 2 in.

Structural integrity of well: Poor; tilted 30 degrees; Possible Blockage

WELL MEASUREMENTS

	Measured (Current)	Historic Reported
Depth to Water (feet BGS/TOC)		
Depth to Bottom (feet BGS/TOC)	Dry/Blocked	

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

Additional Comments: Well lid partially broken

PICTURE OF WELL DURING INSPECTION

ARM Group Inc.

WELL INSPECTION FORM

Site: Sparrows Point: Monitoring wells Location of Well: Could not locate

Project Number: 150300M Date: 9/15/2015

WELL INFORMATION

Well ID: SW14-PZM004 Well Permit No.: _____

Coordinates:

Latitude/Northing 563388.178 Longitude/Easting 1457679.013

Condition of Well Pad: NA Flush Mount or Stick-Up? NA

Well ID Marked? NA If yes, where? _____

Locking cap? NA Lock? NA Diameter of Well: NA

Structural integrity of well: NA

WELL MEASUREMENTS

	Measured (Current)	Historic Reported
Depth to Water (feet BGS/TOC)		
Depth to Bottom (feet BGS/TOC)		15' BGS

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

Additional Comments: Could not locate; area appears to have been demolished; possibly under rubble pile

PICTURE OF WELL DURING INSPECTION

ARM Group Inc.

WELL INSPECTION FORM

Site: Sparrows Point: Monitoring wells Location of Well: Near overhead pipe; Next to tree

Project Number: 150300M Date: 9/15/2015

WELL INFORMATION

Well ID: SW15-PZM005 Well Permit No.: _____

Coordinates:

Latitude/Northing 564367.598 Longitude/Easting 1459534.073

Condition of Well Pad: Fair Flush Mount or Stick-Up? Stick-up

Well ID Marked? No If yes, where? _____

Locking cap? Yes Lock? Yes Diameter of Well: 2 in.

Structural integrity of well: Good

WELL MEASUREMENTS

	Measured (Current)	Historic Reported
Depth to Water (feet BGS/TOC)	4.87 TOC; 2.28 BGS	
Depth to Bottom (feet BGS/TOC)	20.31 TOC; 17.72 BGS	17' BGS

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

Additional Comments: _____

PICTURE OF WELL DURING INSPECTION

ARM Group Inc.

WELL INSPECTION FORM

Site: Sparrows Point: Area B Location of Well: Near RR in patch of bushes; in road

Project Number: 150300M Date: 9/15/2015

WELL INFORMATION

Well ID: SW16-PZM003 Well Permit No.: _____

Coordinates:

Latitude/Northing 564524.689 Longitude/Easting 1462434.666

Condition of Well Pad: Fair Flush Mount or Stick-Up? Stick-up

Well ID Marked? No If yes, where? _____

Locking cap? Yes Lock? Yes Diameter of Well: 2 in.

Structural integrity of well: Good

WELL MEASUREMENTS

	Measured (Current)	Historic Reported
Depth to Water (feet BGS/TOC)	8.20 TOC; 6.08 BGS	
Depth to Bottom (feet BGS/TOC)	17.60 TOC; 15.48 BGS	15' BGS

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

Additional Comments: _____

PICTURE OF WELL DURING INSPECTION

ARM Group Inc.

WELL INSPECTION FORM

Site: Sparrows Point: Area B Location of Well: In small patch of grass near tower

Project Number: 150300M Date: 9/14/2015

WELL INFORMATION

Well ID: TM03-PZM004 Well Permit No.: _____

Coordinates:

Latitude/Northing 568855.1685 Longitude/Easting 1457622.3

Condition of Well Pad: Fair Flush Mount or Stick-Up? Stick-up

Well ID Marked? No If yes, where? _____

Locking cap? Yes Lock? Yes Diameter of Well: 2 in.

Structural integrity of well: Bad; well and casing bent completely flush with ground surface

WELL MEASUREMENTS

	Measured (Current)	Historic Reported
Depth to Water (feet BGS/TOC)		
Depth to Bottom (feet BGS/TOC)		15' BGS

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

Additional Comments: Could not measure due to bend

PICTURE OF WELL DURING INSPECTION

ARM Group Inc.

WELL INSPECTION FORM

Site: Sparrows Point: Area B Location of Well: In trees near bundle of RR ties

Project Number: 150300M Date: 9/14/2015

WELL INFORMATION

Well ID: TM05-PZM005 Well Permit No.: _____

Coordinates:

Latitude/Northing 568852.343 Longitude/Easting 1458598.173

Condition of Well Pad: Broken Flush Mount or Stick-Up? Stick-up

Well ID Marked? No If yes, where? _____

Locking cap? Yes Lock? Yes Diameter of Well: 2 in.

Structural integrity of well: Well bent past 45 degrees (straightened upright)

WELL MEASUREMENTS

	Measured (Current)	Historic Reported
Depth to Water (feet BGS/TOC)	11.86 TOC; 8.10 BGS	
Depth to Bottom (feet BGS/TOC)	16.67 TOC; 12.91 BGS	15'BGS

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

Additional Comments: Pulled well upright and took well measurements. PVC possibly broken or disconnected.

PICTURE OF WELL DURING INSPECTION

ARM Group Inc.

WELL INSPECTION FORM

Site: Sparrows Point: Monitoring wells Location of Well: In woods next to RR tracks

Project Number: 150300M Date: 9/15/2015

WELL INFORMATION

Well ID: TS10-PDM008 Well Permit No.: _____

Coordinates:

Latitude/Northing 567530.198 Longitude/Easting 1464010.165

Condition of well pad: Fair Flush Mount or Stick-Up? Stick-up

Well ID Marked? yes If yes, where? Side casing

Locking cap? Yes Lock? No Diameter of Well: 2 in.

Structural integrity of well: Good

WELL MEASUREMENTS

	Measured (Current)	Historic Reported
Depth to Water (feet BGS/TOC)	5.97' TOC; 3.29' BGS	-
Depth to Bottom (feet BGS/TOC)	13.19' TOC; 10.51' BGS	12' BGS

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

Additional Comments: _____

PICTURE OF WELL DURING INSPECTION

ARM Group Inc.

WELL INSPECTION FORM

Site: Sparrows Point: Area B Location of Well: W. Shop Road; Next to RR tracks

Project Number: 150300M Date: 9/14/2015

WELL INFORMATION

Well ID: FM01-PZM041 Well Permit No.: _____

Coordinates:

Latitude/Northing 568251.833 Longitude/Easting 1460275.595

Condition of Well Pad: Clear; soil area Flush Mount or Stick-Up? Flush

Well ID Marked? No If yes, where? _____

Locking cap? No Lock? No Diameter of Well: ½ in.

Structural integrity of well: Corroded seal

WELL MEASUREMENTS

	Measured (Current)	Historic Reported
Depth to Water (feet BGS/TOC)		
Depth to Bottom (feet BGS/TOC)		51' BGS

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

Additional Comments: Dug soil to uncover; could not measure. Well Cap painted fluorescent orange.

PICTURE OF WELL DURING INSPECTION

ARM Group Inc.

WELL INSPECTION FORM

Site: Sparrows Point: Area B Location of Well: Could not locate well

Project Number: 150300M Date: 9/14/2015

WELL INFORMATION

Well ID: FM05-PZM024 Well Permit No.: _____

Coordinates:

Latitude/Northing 568561.617 Longitude/Easting 1462039.291

Condition of Well Pad: NA Flush Mount or Stick-Up? NA

Well ID Marked? NA If yes, where? _____

Locking cap? NA Lock? NA Diameter of Well: NA

Structural integrity of well: NA (Could not locate well)

WELL MEASUREMENTS

	Measured (Current)	Historic Reported
Depth to Water (feet BGS/TOC)		
Depth to Bottom (feet BGS/TOC)		32' BGS

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

Additional Comments: Could not locate well

PICTURE OF WELL DURING INSPECTION

WELL INSPECTION FORM

Site: Sparrows Point: Area B Location of Well: Could not locate well

Project Number: 150300M Date: 9/14/2015

WELL INFORMATION

Well ID: SW06-PZM053 Well Permit No.: _____

Coordinates:

Latitude/Northing 569204.261 Longitude/Easting 1643631.605

Condition of Well Pad: NA Flush Mount or Stick-Up? NA

Well ID Marked? NA If yes, where? _____

Locking cap? NA Lock? NA Diameter of Well: NA

Structural integrity of well: NA

WELL MEASUREMENTS

	Measured (Current)	Historic Reported
Depth to Water (feet BGS/TOC)		
Depth to Bottom (feet BGS/TOC)		67' BGS

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

Additional Comments: Only found broken pvc in soil

PICTURE OF WELL DURING INSPECTION

ARM Group Inc.

WELL INSPECTION FORM

Site: Sparrows Point: Area B Location of Well: Could not locate

Project Number: 150300M Date: 9/14/2015

WELL INFORMATION

Well ID: SW08-PZM003/SW08-PZM053 Well Permit No.: _____

Coordinates:

Latitude/Northing 568112.127/568107.673 Longitude/Easting 1459112.156/1459113.28

Condition of Well Pad: NA Flush Mount or Stick-Up? NA

Well ID Marked? NA If yes, where? _____

Locking cap? NA Lock? NA Diameter of Well: NA

Structural integrity of well: Could not locate well

WELL MEASUREMENTS

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

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

Additional Comments: Could not locate well

PICTURE OF WELL DURING INSPECTION

ARM Group Inc.

WELL INSPECTION FORM

Site: Sparrows Point: Area B Location of Well: Off 7th St: Access road

Project Number: 150300M Date: 9/14/2015

WELL INFORMATION

Well ID: SW09-PZM028 Well Permit No.: _____

Coordinates:

Latitude/Northing 566975.977 Longitude/Easting 1460287.924

Condition of Well Pad: Fair Flush Mount or Stick-Up? Stick-up

Well ID Marked? Partially If yes, where? Middle outside exterior casing

Locking cap? Yes Lock? Yes Diameter of Well: ½ in

Structural integrity of well: Good

WELL MEASUREMENTS

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

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

Additional Comments: Diameter too small to measure

PICTURE OF WELL DURING INSPECTION

ARM Group Inc.

WELL INSPECTION FORM

Site: Sparrows Point: Monitoring wells Location of Well: Patch of bushes; white voltage boxes

Project Number: 150300M Date: 9/15/2015

WELL INFORMATION

Well ID: SW13-PZM025 Well Permit No.: _____

Coordinates:

Latitude/Northing 563498.818 Longitude/Easting 1456410.606

Condition of Well Pad: Fair Flush Mount or Stick-Up? Stick-up

Well ID Marked? No If yes, where? _____

Locking cap? Yes Lock? No Diameter of Well: ½ in.

Structural integrity of well: Good

WELL MEASUREMENTS

	Measured (Current)	Historic Reported
Depth to Water (feet BGS/TOC)		
Depth to Bottom (feet BGS/TOC)		39' BGS

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

Additional Comments: Could not measure due to diameter.

PICTURE OF WELL DURING INSPECTION

ARM Group Inc.

WELL INSPECTION FORM

Site: Sparrows Point: Area B Location of Well: Near overhead pipe

Project Number: 150300M Date: 9/15/2015

WELL INFORMATION

Well ID: SW15-PZM031 Well Permit No.: _____

Coordinates:

Latitude/Northing 564372.669 Longitude/Easting 1459531.619

Condition of Well Pad: Fair Flush Mount or Stick-Up? Stick-up

Well ID Marked? No If yes, where? _____

Locking cap? Yes Lock? Yes Diameter of Well: ½ in.

Structural integrity of well: Good

WELL MEASUREMENTS

	Measured (Current)	Historic Reported
Depth to Water (feet BGS/TOC)		
Depth to Bottom (feet BGS/TOC)		43' BGS

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

Additional Comments: Could not measure due to diameter

PICTURE OF WELL DURING INSPECTION

ARM Group Inc.

WELL INSPECTION FORM

Site: Sparrows Point: Area B Location of Well: In small patch of grass near tower

Project Number: 150300M Date: 9/14/2015

WELL INFORMATION

Well ID: TM03-PZM037 Well Permit No.: _____

Coordinates:

Latitude/Northing 568850.5805 Longitude/Easting 1457616.781

Condition of Well Pad: Fair Flush Mount or Stick-Up? Stick-up

Well ID Marked? No If yes, where? _____

Locking cap? Yes Lock? Yes Diameter of Well: ½ in.

Structural integrity of well: Well bent

WELL MEASUREMENTS

	Measured (Current)	Historic Reported
Depth to Water (feet BGS/TOC)		
Depth to Bottom (feet BGS/TOC)		48' BGS

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

Additional Comments: Could not measure due to diameter and bend

PICTURE OF WELL DURING INSPECTION

ARM Group Inc.

WELL INSPECTION FORM

Site: Sparrows Point: Area B Location of Well: Could not locate

Project Number: 150300M Date: 9/14/2015

WELL INFORMATION

Well ID: TM05-PZM040 orTM05-PZM069 Well Permit No.: _____

Coordinates:

Latitude/Northing 568847.867 or 568845.666 Longitude/Easting 1458598.509 or 1458593.769

Condition of well pad: NA Flush Mount or Stick-Up? NA

Well ID Marked? NA If yes, where? _____

Locking cap? NA Lock? NA Diameter of Well: NA

Structural integrity of well: Could not locate

WELL MEASUREMENTS

	Measured (Current)	Historic Reported
Depth to Water (feet BGS/TOC)		
Depth to Bottom (feet BGS/TOC)		80' or 50' BGS

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

Additional Comments: Could not locate well

PICTURE OF WELL DURING INSPECTION

WELL INSPECTION FORM

Site: Sparrows Point: Monitoring wells Location of Well: Could not locate well

Project Number: 150300M Date: 9/15/2015

WELL INFORMATION

Well ID: TS09-PDM008 Well Permit No.: _____

Coordinates:

Latitude/Northing 567097.148 Longitude/Easting 1464242.2

Condition of well pad: NA Flush Mount or Stick-Up? NA

Well ID Marked? NA If yes, where? _____

Locking cap? NA Lock? NA Diameter of Well: NA

Structural integrity of well: NA

WELL MEASUREMENTS

	Measured (Current)	Historic Reported
Depth to Water (feet BGS/TOC)		
Depth to Bottom (feet BGS/TOC)		17' BGS

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

Additional Comments: Well location adjacent to railroad tracks; which is being dug up. GPS puts the well under a pile of asphalt.

PICTURE OF WELL DURING INSPECTION

ARM Group Inc.

WELL INSPECTION FORM

Site: Sparrows Point: Monitoring wells Location of Well: After RR, before fence

Project Number: 150300M Date: 9/15/2015

WELL INFORMATION

Well ID: SW07-PZM108 Well Permit No.: _____

Coordinates:

Latitude/Northing 567665.21 Longitude/Easting 1456049.01

Condition of Well Pad: Good Flush Mount or Stick-Up? Stick-up

Well ID Marked? No If yes, where? _____

Locking cap? Yes Lock? Yes Diameter of Well: 2 in.

Structural integrity of well: Good; inner casing slightly tilted; no well cap

WELL MEASUREMENTS

	Measured (Current)	Historic Reported
Depth to Water (feet BGS/TOC)	15.96 TOC; 12.33 BGS	
Depth to Bottom (feet BGS/TOC)	124.45 TOC; 120.82	120' BGS

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

Additional Comments: _____

PICTURE OF WELL DURING INSPECTION

ARM Group Inc.

WELL INSPECTION FORM

Site: Sparrows Point: Area B Location of Well: Off 7th St: Access road

Project Number: 150300M Date: 9/14/2015

WELL INFORMATION

Well ID: SW09-PZM068 Well Permit No.: _____

Coordinates:

Latitude/Northing 566970.991 Longitude/Easting 1460290.85

Condition of Well Pad: Fair Flush Mount or Stick-Up? Stick-up

Well ID Marked? No If yes, where? _____

Locking cap? Yes Lock? Yes Diameter of Well: ½ in

Structural integrity of well: Good

WELL MEASUREMENTS

	Measured (Current)	Historic Reported
Depth to Water (feet BGS/TOC)		
Depth to Bottom (feet BGS/TOC)		78' BGS

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

Additional Comments: Diameter too small to measure

PICTURE OF WELL DURING INSPECTION

ARM Group Inc.

WELL INSPECTION FORM

Site: Sparrows Point: Monitoring wells Location of Well: Access road next to fire station

Project Number: 150300M Date: 9/15/2015

WELL INFORMATION

Well ID: SW10-PZM085 Well Permit No.: _____

Coordinates:

Latitude/Northing 567286.887 Longitude/Easting 1463311.377

Condition of Well Pad: Fair Flush Mount or Stick-Up? Stick-up

Well ID Marked? No If yes, where? _____

Locking cap? Yes Lock? Yes Diameter of Well: ½ in.

Structural integrity of well: Good

WELL MEASUREMENTS

	Measured (Current)	Historic Reported
Depth to Water (feet BGS/TOC)		
Depth to Bottom (feet BGS/TOC)		90' BGS

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

Additional Comments: Could not measure due to diameter.

PICTURE OF WELL DURING INSPECTION

ARM Group Inc.

WELL INSPECTION FORM

Site: Sparrows Point: Monitoring wells Location of Well: Could not locate

Project Number: 150300M Date: 9/15/2015

WELL INFORMATION

Well ID: SW11-PZM092 Well Permit No.: _____

Coordinates:

Latitude/Northing 565801.436 Longitude/Easting 1456083.477

Condition of Well Pad: NA Flush Mount or Stick-Up? NA

Well ID Marked? NA If yes, where? _____

Locking cap? NA Lock? NA Diameter of Well: NA

Structural integrity of well: NA

WELL MEASUREMENTS

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

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

Additional Comments: Cleared some vegetation and dug around the area; could not locate. Records indicate "Flush Mount".

PICTURE OF WELL DURING INSPECTION

ARM Group Inc.

WELL INSPECTION FORM

Site: Sparrows Point: Monitoring wells Location of Well: Could not locate well

Project Number: 150300M Date: 9/15/2015

WELL INFORMATION

Well ID: SW12-PZM100 Well Permit No.: _____

Coordinates:

Latitude/Northing 565989.874 Longitude/Easting 1457431.31

Condition of Well Pad: NA Flush Mount or Stick-Up? NA

Well ID Marked? NA If yes, where? _____

Locking cap? NA Lock? NA Diameter of Well: NA

Structural integrity of well: NA

WELL MEASUREMENTS

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

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

Additional Comments: Could not locate; GPS shows location in middle of clear field with Gravel.

PICTURE OF WELL DURING INSPECTION

WELL INSPECTION FORM

Site: Sparrows Point: Monitoring wells Location of Well: Patch of bushes; white elect. boxes

Project Number: 150300M Date: 9/15/2015

WELL INFORMATION

Well ID: SW13-PZM111 Well Permit No.: _____

Coordinates:

Latitude/Northing 563502.98 Longitude/Easting 1456409.706

Condition of Well Pad: Good Flush Mount or Stick-Up? Stick-up

Well ID Marked? No If yes, where? _____

Locking cap? Yes Lock? No Diameter of Well: 2 in.

Structural integrity of well: Good

WELL MEASUREMENTS

	Measured (Current)	Historic Reported
Depth to Water (feet BGS/TOC)	16.25 TOC; 14.72 BGS	
Depth to Bottom (feet BGS/TOC)	127.33 TOC; 125.80 BGS	125' BGS

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

Additional Comments: _____

PICTURE OF WELL DURING INSPECTION

ARM Group Inc.

WELL INSPECTION FORM

Site: Sparrows Point: Monitoring wells Location of Well: Could not locate

Project Number: 150300M Date: 9/15/2015

WELL INFORMATION

Well ID: SW14-PZM099 Well Permit No.: _____

Coordinates:

Latitude/Northing 563386.52 Longitude/Easting 1457671.2

Condition of Well Pad: NA Flush Mount or Stick-Up? NA

Well ID Marked? NA If yes, where? _____

Locking cap? NA Lock? NA Diameter of Well: NA

Structural integrity of well: NA (could not locate)

WELL MEASUREMENTS

	Measured (Current)	Historic Reported
Depth to Water (feet BGS/TOC)		
Depth to Bottom (feet BGS/TOC)		110' BGS

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

Additional Comments: Could not locate well. GPS shows should be under pile of rubble

Possible piece of well casing observed.

PICTURE OF WELL DURING INSPECTION

ARM Group Inc.

WELL INSPECTION FORM

Site: Sparrows Point: Area B Location of Well: Near overhead pipe

Project Number: 150300M Date: 9/15/2015

WELL INFORMATION

Well ID: SW15-PZM085 Well Permit No.: _____

Coordinates:

Latitude/Northing 564367.461 Longitude/Easting 1459539.351

Condition of Well Pad: Good Flush Mount or Stick-Up? Stick-up

Well ID Marked? No If yes, where? _____

Locking cap? Yes Lock? Yes Diameter of Well: 2 in.

Structural integrity of well: Good

WELL MEASUREMENTS

	Measured (Current)	Historic Reported
Depth to Water (feet BGS/TOC)	15.12 TOC; 13.15 BGS	
Depth to Bottom (feet BGS/TOC)	102.2 TOC; 100.23 BGS	97' BGS

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

Additional Comments: _____

PICTURE OF WELL DURING INSPECTION

ARM Group Inc.

WELL INSPECTION FORM

Site: Sparrows Point: Area B Location of Well: In small patch of bushes near RR tracks

Project Number: 150300M Date: 9/15/2015

WELL INFORMATION

Well ID: SW16-PZM067 Well Permit No.: _____

Coordinates:

Latitude/Northing 564528.79 Longitude/Easting 1462441.872

Condition of Wall Pad: Fair Flush Mount or Stick-Up? Stick-up

Well ID Marked? No If yes, where? _____

Locking cap? Yes Lock? Yes Diameter of Well: ½ in.

Structural integrity of well: Good

WELL MEASUREMENTS

	Measured (Current)	Historic Reported
Depth to Water (feet BGS/TOC)		
Depth to Bottom (feet BGS/TOC)		79' BGS

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

Additional Comments: Could not measure due to diameter

PICTURE OF WELL DURING INSPECTION

ARM Group Inc.

WELL INSPECTION FORM

Site: Sparrows Point: Area B Location of Well: In trees near bundle of RR ties

Project Number: 150300M Date: 9/14/2015

WELL INFORMATION

Well ID: TM05-PZM040 or TM05-PZM069 Well Permit No.: _____

Coordinates:

Latitude/Northing 568847.867/568845.666 Longitude/Easting 1458598.609/1458593.769

Condition of well pad: Buried Flush Mount or Stick-Up? Stick-up

Well ID Marked? No If yes, where? _____

Locking cap? Yes Lock? Yes Diameter of Well: ½ in.

Structural integrity of well: Well bent past 45 degrees (did not straighten)

WELL MEASUREMENTS

	Measured (Current)	Historic Reported
Depth to Water (feet BGS/TOC)		
Depth to Bottom (feet BGS/TOC)		80' or 50' BGS

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

Additional Comments: Could not measure well due to diameter and tilt.

PICTURE OF WELL DURING INSPECTION

ARM Group Inc.

APPENDIX E

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)
Monitoring Well Development Form – Surge and Pump Method

Well ID: FM01-P7M003 **Well Permit No.:** _____

ARM Project No.: 150300M Client: **EnviroAnalytics Group** Well Location: Area B, Parcel _____	Date/Time Started: 12 / 1 Date/Time Completed: 12 / 1 Weather/Site Conditions: Rain 43° F	Developed by: Jesse Company: Allied Checked by: Jesse

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 3.5 to 13.5
Well riser/screen material: *PVC*	Sandpack Interval: 2 to 13.5
Difference between Grd and TOC: (+ / -)	Measured Total Depth of Well When Installed (F): (See Original Well Construction Diagram) 13.5

B. Wetted Bore Volume Determination:

Well (PVC) Diameter: 2.0 in.	Well Total Depth (from TOC): 11.3 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to static water level: 4 ft. (C)
Petroleum/product present? *Y* or *N* Thickness (ft.): _____	Height of Water Column: (B - C) 7.3 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F – B): 2.2 ft.	Wetted Bore Volume: (A x D) 1.1 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: 1" surge block PVC

Event No.	Screen Interval (ft.)	No. of Surge Strokes	Volume Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	0-5	5	3	2.25	dark gray sandy silt
2	5-11	5	35	26.51	dark gray sandy silt to light clear
		Cumulative Totals:	38 gals	28.76	

Final Depth to Water (from TOC): 4 ft

Thickness of any sediment remaining in well: 1.7

Sparrows Point Terminal
Monitoring Well Development Form – Surge and Pump Method
Well ID:_____ **Date:** _____

ID numbers of IDW drums generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter, and/or Oil-Water Interface Probe
- ☐ Surge Block and 2 inch ID PVC casing extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 To 3 Clean Five-Gallon Bucket
- ☐ 55-Gallon drum(s) for development water. Drum non-hazardous waste labeling supplies.
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon all equipment that goes down-hole per appropriate Standard Operating Procedure (SOP)
- ☐ Staging down-hole equipment, tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

_____
_____
_____
_____
_____

F. Signatures:

Field Representative (s): Jesse Zagurski **(Print)** [signature] **(Sign)**
12-1-15 **(Date)**

_____ **(Print)** _____ **(Sign)**

_____ **(Date)**

All depths reported are from reference notch in top of TOC.
All measurements made in 10^{ths} of feet.

TOC = Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: FM01-041 PZM **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: ~~[illegible]~~ 2/8/16 / 12:00pm	Developed by: Corey Cormican
Client: **EnviroAnalytics Group**	Date/Time Completed: 2/8/16 / 1:15pm	Company: Allied Well
Well Location: Area B, Parcel _____	Weather/Site Conditions: 43° / sun	Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 10' to _____
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+ / -) 0	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 51.

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 50.7 ft. (B)
~~Well (PVC) Volume: 0.163 gal./ft. (A)~~ 0.0102	Depth to Static Water Level (TOC): 9.3 ft. (C)
Petroleum/Product Present? *Y* or *N.* Thickness (ft.): _____	Height of Water Column: (B - C) 41.4 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): .3 ft.	Wetted Bore Volume: (A x D) 0.42 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: No Surge Required

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	10'	0	5	11.9	Tan, some silt, No odor clear @ 11.9 vol
		Cumulative Totals: (Minimum of 3 Well Volumes)	5	11.9	

Final Depth to Water (from TOC): 9.3

Thickness of Any Sediment Remaining in Well: 0

All depths reported are from reference notch in top of TOC.

Well ID: FM01-P2MX041
Date: 2/8/16

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

_____
_____
_____
_____
_____
_____

F. Signatures

Field Representative(s): Corey Cormican _____ 2/8/16

Print Name	Signature	Date
Corey Cormican		2/8/16

All depths reported are from reference notch in top of TOC.
All measurements made in 10^{ths} of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: FM 05 - PZM004 **Well Permit No.:** _____

ARM Project No.: 150300M Client: **EnviroAnalytics Group** Well Location: Area B, Parcel B6	Date/Time Started: 2-10-16 / 11:40 Date/Time Completed: ~~2-10-16~~ 2/18/16 / Weather/Site Conditions: 34° cloudy	Developed by: Dawn leon Company: Allied well Checked by:

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 3.5 to 13.5
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+ / -) 2.5	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 16.5

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 16.5 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 9.3 ft. (C)
Petroleum/Product Present? *Y* or *N* Thickness (ft.): _____	Height of Water Column: (B - C) 7.2 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 0 ft.	Wetted Bore Volume: (A x D) 1.2 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: PVC Surge Block

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	9.3.14.3	5	7	5.8	Grey, silt, No odor Not clear @ 5.8 vol
2	9.3-14.5	10	5		Brown silt, small amount silt, not clear @
3	9.3-14.5	10	3		
		Cumulative Totals: (Minimum of 3 Well Volumes)			

Final Depth to Water (from TOC): _____

Thickness of Any Sediment Remaining in Well: _____

All depths reported are from reference notch in top of TOC.

Well ID: FM05-PZM005
Date: 2-10-16

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

_____
_____
_____
_____
_____
_____

F. Signatures

Field Representative(s): Jose David Leon (Print Name) [signature] (Signature) 2-10-16 (Date)

_____ (Print Name) _____ (Signature) _____ (Date)

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: Fm05-P2M004 **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 3/4/16 / 0737	Developed by: L. Perrin / L. Glumac
Client: ~~EA~~ EnviroAnalytics Group	Date/Time Completed: 3/4/16 / 0834	Company: ARM Group Inc
Well Location: Area B, Parcel B6	Weather/Site Conditions: Snowing	Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: _____ to _____
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+ / -) 2.4 ft	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram)

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 16.25 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 9.55 ft. (C)
Petroleum/Product Present? *Y* or *N* Thickness (ft.): _____	Height of Water Column: (B - C) 6.7 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): _____ ft.	Wetted Bore Volume: (A x D) 1.09 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: _____

Event No.	Screen Interval (ft.)	No. of Surge Strokes	Volume of ~~Water~~ bailer Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1.					Clear / no odor
2					Slight yellow tinge / odor
3					Slightly yellow tinge / no odor
4					light yellow / no odor
5					light yellow / slight odor
		Cumulative Totals: (Minimum of 3 Well Volumes)			

Final Depth to Water (from TOC): 16.0

Thickness of Any Sediment Remaining in Well: _____

All depths reported are from reference notch in top of TOC.

	6.	slightly turbid, light/med yellow/no odor
	7	mod. turbid, med. yellow/beige, slight odor
	8.	mod. turbid, med. yellow/beige, no odor
	9.	mod. turbid, med. yellow/beige, no odor
	10.	mod. turbid, light beige, no odor
	11.	mod. turbid, med. beige. odor (mod)
	12.	mod turbid, med. beige, odor (mod)
	13.	mod. turbid, light amber, odor (mod)
	14.	mod. turbid, light amber; odor (mod)
	15.	mod. turbid, light amber; odor (mod)
	16.	mod. turbid, med. beige, odor (mod)
	17.	high/mod. turbid, med beige, odor (mod)
5 gallons	18.	mod. turbid, light beige, slight odor
	19.	mod turbid, light beige, mod odor
	20.	High turbid, med beige/light brown, strong odor
	21.	high turbid, med. brown, strong odor
not full volumes	22.	very High turbid. med. brown, strong odor
	23.	very high turbid. med. brown, odor (mod)
	24.	High turbid. med. brown, odor (mod)
	25.	High turbid, med. brown, odor (light)
	26.	very high turbid, med. brown, odor (light)
	27.	High turbid, med. brown, odor (light)
	28.	High turbid. med. brown, odor (light)
	29.	High turbid. med. brown odor (light)
less than 1/4	30	High turbid, med brown, odor (light)
	31	" " " "
	32	" " " "
	33	" " " "

2-4hr water level @1134 → 11.21

6-12hr water level @1533 → 9.77

Well ID: FM05-PZM004
Date: 3/4/16

ID Numbers of IDW Drums Generated:

1. Drum vol before: ~~1.11 cu.ft.~~ 1.63 cu ft.
2. Drum Vol After: ~~1.52 cu.ft.~~ 2.23 cu ft.
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

F. Signatures

	Print Name	Signature	Date
Field Representative(s):	Lisa Perrin	[signature]	3/4/16
	Leandra Glumac	[signature]	3/4/16

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: FM05-PZM004 **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 3/7/16 /0740	Developed by: L. Perrin
Client: **EnviroAnalytics Group**	Date/Time Completed: 0820	Company: L. Gluma C
Well Location: Area B, Parcel B6	Weather/Site Conditions: Sunny, 30s	ARM Group
		Checked by:

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: _____ to _____
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+ / -)	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram)

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 16.28 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 9.65 ft. (C)
Petroleum/Product Present? *Y* or *N*. Thickness (ft.): _____	Height of Water Column: (B - C) _____ ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): _____ ft.	Wetted Bore Volume: (A x D) _____ gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: _____

Event No.	Screen Interval (ft.)	No. of Surge Strokes	Volume of Water Removed ~~(gal.)~~ Bailer	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1.					clear, odor, low turbidity
2.					slightly off white, low turb, odor
3.					slightly off white, low turb, odor
4.					light yellow, low turb, odor
5.					light brown, mod turb, odor
		Cumulative Totals: (Minimum of 3 Well Volumes)			

3/7/16 1/2 full

Final Depth to Water (from TOC): 15.86

Thickness of Any Sediment Remaining in Well: _____

All depths reported are from reference notch in top of TOC.

Well ID: _____

Date: _____

ID Numbers of IDW Drums Generated:

1. Before: 2.23 cu. ft.
2. After: 3.86 cu. ft.
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

_____

F. Signatures

	Print Name	Signature	Date
Field Representative(s):	Lisa Perrin	[signature]	3/7/16
	Leandra Glumac	[signature]	3/7/16

All depths reported are from reference notch in top of TOC.
All measurements made in 10^{ths} of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

Well ID: _____

Date: _____

ID Numbers of IDW Drums Generated:

1. Drum vol: 4.55 cu.ft.
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

_____

_____

_____

_____

_____

_____

F. Signatures

Field Representative(s): Lisa Perrin (Print Name) _____ (Signature) 3/8/16 (Date)

Leandra Glumac (Print Name) _____ (Signature) 3/8/16 (Date)

All depths reported are from reference notch in top of TOC.
All measurements made in 10^{ths} of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: FM05-PZM004 **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 3/8/16 0720	Developed by: L. Perrin
Client: **EnviroAnalytics Group**	Date/Time Completed: _____ / _____	Company: L. Glumac
Well Location: Area B, Parcel B6	Weather/Site Conditions: Sunny, 50s	ARM Group
		Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: _____ to _____
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+ / -)	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram)

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 16.27 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 9.68 ft. (C)
Petroleum/Product Present? *Y* or *N*. Thickness (ft.): _____	Height of Water Column: (B - C) _____ ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): _____ ft.	Wetted Bore Volume: (A x D) _____ gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: _____

Event No.	Screen Interval (ft.)	No. of Surge Strokes	~~Volume of Water Removed (gal.)~~ 1 bailer volume	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other	
1.					light yellow, low turbidity, med-high odor	(full)
2.					light yellow, low turbidity moderate odor	"
3.					light yellow, low turbidity, moderate to low odor	"
4.					light yellow, low turb. mod to low odor	"
5.					light yellow, low turb, mod to low odor	(1/2 full)
		Cumulative Totals: (Minimum of 3 Well Volumes)				

Final Depth to Water (from TOC): _____

Thickness of Any Sediment Remaining in Well: _____

All depths reported are from reference notch in top of TOC.

6. light yellow, low turb, mod to low odor (full)
7. yellow, med turb, mod to low odor "
8. yellow, med turb, light odor "
9. yellow, med turb, light odor "
10. yellow, med turb, light odor "
11. yellow, med turb, slight odor "
12. yellow, med turb, slight odor (½ full)
13. dark yellow, med turb, slight odor "
14. dark yellow, med turb, slight odor (¼ full)
15. dark yellow, med turb, light to mod odor (½ full)
16. dark yellow, med turb, light to mod odor (¾ full)
17. dark yellow, med turb, light to mod odor (½ full)
18. dark yellow, med turb, mod odor "
19. dark yellow, med turb, mod odor (¼ full)
20. dark yellow, med turb, mod to high odor (½ full)
21. dark yellow, med turb, mod odor "
22. dark yellow, med turb, mod odor "
23. dark yellow, med turb, mod odor (¼ full)
24. dark yellow, med turb, mod odor "
25. darker yellow, med turb, mod odor "
26. light brown, med turb, mod odor "
27. light brown, turb, mod odor "
28. light brown, turb, mod odor "
29. brown, turb, mod odor "
30. brown, turb, mod odor (<¼ full)
31. brown, turb, mod odor "
32. mod dark brown, turb, mod odor "
33. mod dark brown, turb, mod odor "
34. mod dark brown, turb, mod odor "
35. mod dark brown, turb, mod odor "
36. mod dark brown, turb, mod odor "

2-4 hr DTW 10.46 @ 1148
6-12 hr DTW 9.89 @ 1426

DTW 15.94
DTB 16.28
Drum depth ~~15~~ 1.45 ft
Drum vol = 4.55

6. beige, mod turb, odor (full)

7. beige, mod turb, odor "

8. beige, mod turb, odor "

9. light brown, mod turb, odor "

10. light brown, mod turb, odor "

11. medium brown, turbid, odor "

12. medium brown, turbid, odor "

13. medium brown, turbid, odor (3/4 full)

14. dium brown (slightly darker), turbid, odor (full)

15. brown, turbid, odor "

16. brown, turbid, odor (1/4 full)

17. brown, turbid, odor (1/2 full)

18. brown, turbid, odor (1/4 full)

19. slightly darker brown, turbid, odor (1/2 full)

20. amber brown, turbid, odor "

21. amber brown, turbid, odor "

22. orange/brown, turbid, odor "

23. orange/brown, turbid, odor "

24. darker orange/brown, turbid, odor (1/4 full)

25. orange/brown, turbid, odor (1/2 full)

26. darker orange/brown, turbid, odor "

27. dark orange/brown, turbid, odor (1/2 full)

28. dark orange/brown, turbid, odor (1/4 full)

29. dark orange/brown, turbid, odor "

30. dark orange/brown, turbid, odor "

31. dark orange/brown, turbid, odor "

32. dark orange/brown, turbid, odor "

33. dark orange/brown, turbid, odor (<1/4 full)

34. dark orange/brown, turbid, odor "

35. dark orange/brown, turbid, odor "

36. dark orange/brown, turbid, odor "

37. dark orange/brown, turbid, odor "

38. dark orange/brown, turbid, odor

end depth to water 15.86

end depth to bottom 16.26

Datum: 1.29 ft deep

2-4 hr DTW: 10.41 @ 1221

6-12 hr DTW: 9.83 @ 1510

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: FM05-P2M-024 **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 3/2/16 / 10:25am	Developed by: Corey Cormican
Client: **EnviroAnalytics Group**	Date/Time Completed: 3/2/16 / 2:25pm	Company: Allied well
Well Location: Area B, Parcel _____	Weather/Site Conditions: 38°/sun/windy	Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 24.5 to 34.5
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+ / -) 2.5	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 37.2

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 37.2 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 9.5 ft. (C)
Petroleum/Product Present? *Y* or *N*: Thickness (ft.): _____	Height of Water Column: (B - C) 27.7 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 0 ft.	Wetted Bore Volume: (A x D) 4.5 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: PVC Surge Block

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	24.5-29.5	5	15	3.3	Brown, silt, No odor Not Clear
2	29.5-34.5	5	15	3.3	Brown, silt, No odor Not Clear
3	34.5-37.5	5	15	3.3	Brown, some silt, No odor Clear @ 9.9 vol
		Cumulative Totals: (Minimum of 3 Well Volumes)	45	9.9	

Final Depth to Water (from TOC): 9.5

Thickness of Any Sediment Remaining in Well: 0

All depths reported are from reference notch in top of TOC.

Well ID: FM05-PZM-021
Date: 3/2/16

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

1 Drum, 45' Poly Tubing, 250 gal purge was not Completed due to Decision from ARM on time it was taking to Complete. Removed Approx. 75-85 gal. of purge water. 2 Drums / Total of 3 Drums between Dev. & Purge.

F. Signatures

Field Representative(s): Corey Cormican [signature] 3/2/16

Print Name | Signature | Date

_____ _____ _____

Print Name | Signature | Date

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

SG07-PDM008

Sparrows Point Terminal (SPT)
Monitoring Well Development Form – Surge and Pump Method

Well ID: SG07-PZM007 **Well Permit No.:** _____

ARM Project No.: 150300M Client: **EnviroAnalytics Group** Well Location: Area B, Parcel B5	Date/Time Started: 11/19/15 Date/Time Completed: 11/19/15 244 Weather/Site Conditions: RAIN/WINDY	Developed by: RoB ZIEMBA Company: ALLIED WELL DRILLING Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: ~10 to ~19
Well riser/screen material: *PVC*	Sandpack Interval: 7 to 19
Difference between Grd and TOC: (+ / -) 33"	Measured Total Depth of Well When Installed (F): ? (See Original Well Construction Diagram)

B. Wetted Bore Volume Determination:

Well (PVC) Diameter: 2.0 in.	Well Total Depth (from TOC): 25.5' ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to static water level: 17.4' ft. (C)
Petroleum/product present? *Y* or *N*. Thickness (ft.): ~~N~~	Height of Water Column: (B - C) 8.1 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F – B): _____ ft.	Wetted Bore Volume: (A x D) 1.32 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: _____.

Event No.	Screen Interval (ft.)	No. of Surge Strokes	Volume Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
	17-25	5	3 GAL	2.27	DARK GREY
	17-25	5	3 GAL	2.27	MEDIUM GREY
	17-25	5	3 GAL	2.27	LIGHTER GREY → CLEAR
	17-25	8	35 GAL	26.51	CLEAR
		Cumulative Totals:	44 GAL	33.32	

Final Depth to Water (from TOC): 17.6'

Thickness of any sediment remaining in well: _____

Well ID:_____ **Date:** _____

ID numbers of IDW drums generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter, and/or Oil-Water Interface Probe
- ☐ Surge Block and 2 inch ID PVC casing extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 To 3 Clean Five-Gallon Bucket
- ☐ 55-Gallon drum(s) for development water. Drum non-hazardous waste labeling supplies.
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon all equipment that goes down-hole per appropriate Standard Operating Procedure (SOP)
- ☐ Staging down-hole equipment, tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

ON FIRST 2 SURGING EVENTS WATER RAPIDLY CLEARED (IN LESS THAN 1 GAL PUMPED). GREY TINT TO WATER POSSIBLY FROM BENTONITE SEAL LAYER.

F. Signatures:

Field Representative (s): Rob Ziemba **(Print)** _____ **(Sign)**

11/19/15 **(Date)**

_____ **(Print)** _____ **(Sign)**

_____ **(Date)**

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet.

TOC = Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW-021-MW05 **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 1/22/16 / 12:25	Developed by: Corey Cormican
Client: **EnviroAnalytics Group**	Date/Time Completed: 1/22/16 / 1:00	Company:
Well Location: Area B, Parcel _____	Weather/Site Conditions: 28°/overcast	Allied well
		Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 6.1 to 16.1
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+/-) 2.5	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 16.5

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 19 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 11 ft. (C)
Petroleum/Product Present? Y or N Thickness (ft.): _____	Height of Water Column: (B - C) 8 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 0 ft.	Wetted Bore Volume: (A x D) 1.3 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: _____

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	11'-16'	5	5.5	4.2	Dark brown, silt, no odor clear @ 4.2 vol
2	16'-19'	5	10.5	8	semi brown, silt, no odor clear @ 8 vol
	Cumulative Totals: (Minimum of 3 Well Volumes)		16	12.2	

Final Depth to Water (from TOC): 11'

Thickness of Any Sediment Remaining in Well: 0

All depths reported are from reference notch in top of TOC.

Well ID: SW-021-MWS
Date: 1/22/16

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

1 Drum, 25' poly Tubing

F. Signatures

	Print Name	Signature	Date
Field Representative(s):	Corey Cormican	[signature]	1/22/16

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW-022-MWS **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 1/22/16 / 10:42	Developed by: Corey Cormican
Client: **EnviroAnalytics Group**	Date/Time Completed: 1/22/16 / 11:30	Company: Allied well
Well Location: Area B, Parcel _____	Weather/Site Conditions: 26°/overcast	Checked by: _____

A. Well Construction Details

Well Cover Type: (*Stick-up*) or *Flush-Mount*	PVC Screen Interval: 7.0 to 17.0
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+ / -) 2.5	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 19.9

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 19.8 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 12.3 ft. (C)
Petroleum/Product Present? *Y* or (*N*) Thickness (ft.): _____	Height of Water Column: (B - C) 7.5 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 1" ft.	Wetted Bore Volume: (A x D) 1.2 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: _____

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	12.3-17.3	5	5	4.2	Grey, silt, No odor Clear @ 4.2 vol
2	17.3-19.8	5	5	4.2	Grey, silt, No odor Clear @ 4.2 vol
	Cumulative Totals: (Minimum of 3 Well Volumes)		10	4.4	

Final Depth to Water (from TOC): 12.3

Thickness of Any Sediment Remaining in Well: 1"

All depths reported are from reference notch in top of TOC.

Well ID: SW-022-MWS
Date: 1/22/16

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

1 Drum, 30' Poly tubing

F. Signatures

Field Representative(s): Corey Cormican (Print Name) _____ (Signature) 1/22/16 (Date)

_____ (Print Name) _____ (Signature) _____ (Date)

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW-023-MWS **Well Permit No.:** _____

ARM Project No.: 150300M Client: **EnviroAnalytics Group** Well Location: Area B, Parcel _____	Date/Time Started: 2/9/16 / 1125 pm Date/Time Completed: 2/9/16 / 207 Weather/Site Conditions: 34°/snow	Developed by: Corey Cormican Company: Allied well Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 8.0 to 18.0
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+ / -) 2.1	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 20.4

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 20.3 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 12.2 ft. (C)
Petroleum/Product Present? *Y or N.* Thickness (ft.): _____	Height of Water Column: (B - C) 8.1 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): .1 ft.	Wetted Bore Volume: (A x D) 1.32 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: _____

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	12.2-17.2	5	15	11.36	Grey, heavy silt, No odor Clear @ 11.36 Vol
2	17.2-20.3	5	15	11.36	Gray, silt, No odor Clear @ 11.36 Vol
Cumulative Totals: (Minimum of 3 Well Volumes)			30	22.72	

Scanned by CamScanner

Well ID: SW-023-MW05
Date: 2/9/16

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

1 Drum, 25' Poly tubing

F. Signatures

Field Representative(s): Corey Cormican (Print Name) [signature] (Signature) 2/9/16 (Date)

_____ (Print Name) _____ (Signature) _____ (Date)

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

Scanned by CamScanner

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW-024-MW5 **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 2/4/16 / 1:50 pm	Developed by: Corey Cormicean
Client: **EnviroAnalytics Group**	Date/Time Completed: 2/4/16 / _____	Company: Allied well
Well Location: Area B, Parcel _____	Weather/Site Conditions: 48°/overcast	Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 4.5 to 14.5
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+ / -) 2.6	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 17.6

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 17.6 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 9.85 ft. (C)
Petroleum/Product Present? *Y* or *N*. Thickness (ft.): _____	Height of Water Column: (B - C) 7.8 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): _____ ft.	Wetted Bore Volume: (A x D) 1.3 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: _____

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	9.9-14.9	5	10	7.7	Tan, silt, No odor ~~Clear~~ Not Clear @ 7.7 vol
2	14.9-17.6	5	10	7.7	Tan, silt, No odor Clear @ 7.7 vol
		Cumulative Totals: (Minimum of 3 Well Volumes)			

Final Depth to Water (from TOC): 10.1

Thickness of Any Sediment Remaining in Well: 0

All depths reported are from reference notch in top of TOC.

Well ID: SW-024-MWS
Date: 2/4/16

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

2 Bags Concrete, 5' Protective steel well casing, 1 bag #2 Sand, [redacted] 25' Poly tubing

F. Signatures

Field Representative(s): Corey Cormican | [signature] | 2/4/16

Print Name | Signature | Date

Print Name | Signature | Date

All depths reported are from reference notch in top of TOC.
All measurements made in 10^{ths} of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW-025-MWS **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 2/4/16 / 12:15pm	Developed by: Corey Cormican
Client: **EnviroAnalytics Group**	Date/Time Completed: 2/4/16 / 1:15pm	Company: Allied well
Well Location: Area B, Parcel _____	Weather/Site Conditions: 48°/overcast	Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 5.5 to 15.5
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+ / -) 2.5	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 18.3

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): [redacted] ft. (B) [redacted] 18.4
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 10.6 ft. (C)
Petroleum/Product Present? *Y* or *N*. Thickness (ft.): _____	Height of Water Column: (B - C) 7.8 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 0 ft.	Wetted Bore Volume: (A x D) 1.3 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: _____

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	10.6-15.6	5	15	11.5	Black, silt, No odor Clear @ 11.5 vol
2	15.6-18.3	5			Black, silt, No odor clear @
	Cumulative Totals: (Minimum of 3 Well Volumes)				

Final Depth to Water (from TOC): 10.9

Thickness of Any Sediment Remaining in Well: 0

All depths reported are from reference notch in top of TOC.

Well ID: SW-025-MWS
Date: 2/4/16

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

2 Bags Concrete, 5' steel protective well casing, 1 bag #2 sand, 25' poly tubing

F. Signatures

Field Representative(s):

Print Name	Signature	Date
	Corey Carmican	2/4/16

All depths reported are from reference notch in top of TOC.
All measurements made in 10^{ths} of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW-026-MW **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 2/18/16 / 1107	Developed by: ROB ZIEMBA
Client: EnviroAnalytics Group	Date/Time Completed: _____ / _____	Company: ALLIED
Well Location: Area B, Parcel _____	Weather/Site Conditions: 32°F, HIGH WIND	Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 4.2 to 14.5
Well riser/screen material: *PVC*	Sandpack Interval: 3 to 14.5
Difference between Ground Surface and TOC: (+ / -) 3'	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 17'

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 16.6 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 9.3 ft. (C)
Petroleum/Product Present? *Y* or *N* Thickness (ft.): ~	Height of Water Column: (B - C) 7.3 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 4 ft.	Wetted Bore Volume: (A x D) 1.19 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: PVC SURGE BLOCK

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
~~1~~	~~4.2-9.2~~	~~10~~			~~VERY DARK GREY, FINE GREY SILT, LARGE AMOUNT FINE GREY SAND~~
1	9.2-14.5	10	5 GAL		↓
2	9.2-14.5	10	5 GAL		VERY DARK GREY, FINE SILTY GREY SAND, SLIGHT SULFUR SMELL
3	9.2-14.5	10	10 GAL		↓
4	9.2-14.5	10	20 GAL		MEDIUM GREY, LITTLE SILT → CLEAR WATER
	Cumulative Totals: (Minimum of 3 Well Volumes)		40 GAL		

Final Depth to Water (from TOC): 9.6'

Thickness of Any Sediment Remaining in Well: 0'

All depths reported are from reference notch in top of TOC.

Well ID: GW-026 MW3
Date: 2/18/16

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

STRONG SULFUROUS ODOR.

REPAIRED DAMAGED PVC RISER

F. Signatures

Field Representative(s): MB ZIEMMA (Print Name) [signature] (Signature) 2/18/16 (Date)

Print Name _____ Signature _____ Date _____

All depths reported are from reference notch in top of TOC.
All measurements made in 10^{ths} of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW-027-MW5 Well Permit No.: _____

ARM Project No.: 150300M	Date/Time Started: 2/2/16/2:00pm	Developed by: Corey Cormican
Client: EnviroAnalytics Group	Date/Time Completed: 2/2/16/2:45pm	Company: Allied well
Well Location: Area B, Parcel _____	Weather/Site Conditions: 45°/sun	Checked by: _____

A. Well Construction Details

Well Cover Type: (Stick-up) or *Flush-Mount*	PVC Screen Interval: 4.4 to 14.4
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+ / -) 2.7	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 17.4

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 17.5 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 4.4 ft. (C)
Petroleum/Product Present? *Y* or (*N*) Thickness (ft.): _____	Height of Water Column: (B - C) 13.1 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 0 ft.	Wetted Bore Volume: (A x D) 2.1 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: _____

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	5-10	5	10	4.8	Tan, sandy silt, No odor Not clear @ 4.8 Vol
2	10-15	5	10	4.8	Tan, sandy silt, No odor Not clear @ 4.8 Vol
3.	15-17.5	5	15	7.1	Tan, sandy silt, No odor ~~clear~~ clear @ 7.1 Vol
		Cumulative Totals: (Minimum of 3 Well Volumes)			

Final Depth to Water (from TOC): 4.4

Thickness of Any Sediment Remaining in Well: 0

All depths reported are from reference notch in top of TOC.

Well ID: SWO27-MW5
Date: 2/2/16

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

5' steel protective well casing, 2 bags Concrete, 1 bag of Sand, 25' Poly tubing

F. Signatures

Field Representative(s): Corey Cormican (Print Name) _____ (Signature) 2/2/16 (Date)

_____ (Print Name) _____ (Signature) _____ (Date)

All depths reported are from reference notch in top of TOC.
All measurements made in 10^{ths} of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW-028-MWS **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 2/9/16 / 3:40	Developed by: Corey Cormican
Client: EnviroAnalytics Group	Date/Time Completed: 2/9/16 / 4:40	Company: Allied well
Well Location: Area B, Parcel _____	Weather/Site Conditions: 37°/ Rain	Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 3.9 to 13.9
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+ / -) 2.5	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 16.7

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 16.8 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 6.6 ft. (C)
Petroleum/Product Present? *Y or N.* Thickness (ft.): _____	Height of Water Column: (B - C) 10.2 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 0 ft.	Wetted Bore Volume: (A x D) 1.6 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: PVC Surge Block

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	6.6-11.6	5	15	9.3	Grey, s: 17, No odor Clear @ 9.3 vol
2	11.6-16.7	5	15	9.3	Grey, s: 11, No odor Clear @ 9.3 vol
		Cumulative Totals: (Minimum of 3 Well Volumes)	30		

Final Depth to Water (from TOC): 13.7

Thickness of Any Sediment Remaining in Well: 0

All depths reported are from reference notch in top of TOC.

Scanned by CamScanner

Well ID: SW-028-MWS
Date: 2/9/16

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

1 Drum 20' Poly tubing

F. Signatures

Field Representative(s): Corey Cormican (Print Name) _____ (Signature) 2/9/16 (Date)

_____ (Print Name) _____ (Signature) _____ (Date)

All depths reported are from reference notch in top of TOC.
All measurements made in 10^{ths} of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

Scanned by CamScanner

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW-029-MWS **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 1/29/16 / 12:40 pm	Developed by: Corey Cormican
Client: **EnviroAnalytics Group**	Date/Time Completed: 1/29/16 / 2:00pm	Company: Allied Well
Well Location: Area B, Parcel _____	Weather/Site Conditions: 38° / Sun	Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 4.1 to 11.2
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+ / -) 2.5	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 13.7

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 13.9 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 11.6 ft. (C)
Petroleum/Product Present? *Y* or *N* Thickness (ft.): _____	Height of Water Column: (B - C) 2.3 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 0 ft.	Wetted Bore Volume: (A x D) .4 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: PVC Surge Block

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	11.6 - 13.9	5	5	12.5	Gray, silt, No odor clear @ 12.5 vol
	Cumulative Totals: (Minimum of 3 Well Volumes)				

Final Depth to Water (from TOC): 11.6

Thickness of Any Sediment Remaining in Well: 0

All depths reported are from reference notch in top of TOC.

Well ID: SW-029-MWs
Date: 1/29/16

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

_____

_____

_____

_____

_____

_____

F. Signatures

Field Representative(s): Corey Cormican [signature] 1-29-16

Print Name | Signature | Date

_____ _____ _____

Print Name | Signature | Date

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: @ SW-030-MW5 **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 1/19/16 13:15pm	Developed by: Corey Cormican
Client: **EnviroAnalytics Group**	Date/Time Completed: 1/19/16 14:00pm	Company: Allied well
Well Location: Area B, Parcel B5	Weather/Site Conditions: 26°/windy/sun	Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 3.3 to 13.3
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+/-) 2.6	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 16.2

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 16 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 6.1 ft. (C)
Petroleum/Product Present? Y or N Thickness (ft.): _____	Height of Water Column: (B - C) 9.9 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 2" ft.	Wetted Bore Volume: (A x D) 1.6 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: _____

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	5	6.1-11.1	15	9.4	Black, silty, no odor, clear @ 9.4
2	5	11.1-16	15	9.4	Black, silty, no odor, clear @ 9.4
		Cumulative Totals: (Minimum of 3 Well Volumes)	30	18.8	

Final Depth to Water (from TOC): 4.3

Thickness of Any Sediment Remaining in Well: 1"

All depths reported are from reference notch in top of TOC.

Well ID: SW-030-MW5
Date: 1/19/16

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

1 Drum, 25' Poly Tubing

F. Signatures

Field Representative(s): Corey Cormican (Print Name) [signature] (Signature) 1/19/16 (Date)

_____ (Print Name) _____ (Signature) _____ (Date)

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW-031-MWS **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 1/19/16/2:17pm	Developed by: Corey Cormican
Client: **EnviroAnalytics Group**	Date/Time Completed: 1/19/16/3:12pm	Company:
Well Location: Area B, Parcel B5	Weather/Site Conditions: 26°/windy/sun	Allied Well
		Checked by:

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 3.5 to 13.5
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+ / -) 2.6	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 16.2

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 16.4 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 5 ft. (C)
Petroleum/Product Present? *Y or N* (N) Thickness (ft.): _____	Height of Water Column: (B - C) 11.4 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 0 ft.	Wetted Bore Volume: (A x D) 1.9 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: _____

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	5-10	5	15	7.9	Light brown, silty, no odor Clear @ 7.9 vol
2	10-15	5	10	5.3	Light brown, silty, no odor Clear @ 5.3
		Cumulative Totals: (Minimum of 3 Well Volumes)	25	13.2	

Final Depth to Water (from TOC): _____

Thickness of Any Sediment Remaining in Well: _____

All depths reported are from reference notch in top of TOC.

Well ID: SED-031-MW3
Date: 1/19/16

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

1 Drum, 25' Poly tubing

F. Signatures

	Print Name	Signature	Date
Field Representative(s):	Corey Cormican	[signature]	1/19/16

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW-032-MWS **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 1/19/16/11:51	Developed by: Corey Carmicon
Client: **EnviroAnalytics Group**	Date/Time Completed: 1/19/16/	Company: Allied well
Well Location: Area B, Parcel B5	Weather/Site Conditions: 21°/windy/sun	Checked by:

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 35 to 135
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+ / -) 2.5	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 16.5

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 16.2 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 7.4 ft. (C)
Petroleum/Product Present? *Y* or *N.* Thickness (ft.): _____	Height of Water Column: (B - C) 8.8 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 3" ft.	Wetted Bore Volume: (A x D) 1.4 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: _____

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	5	7.4-12.4	15	10.7	Brown, silty, No odor, clear @ 10.7 vol
2	5	12.4-16.2	15	10.7	Brown, silt, No odor, clear @ 10.7 vol
		Cumulative Totals: (Minimum of 3 Well Volumes)	30	21.4	

Final Depth to Water (from TOC): 7.4

Thickness of Any Sediment Remaining in Well: 1"

All depths reported are from reference notch in top of TOC.

Well ID: SW-032-MWS
Date: 1/19/16

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

1 Drum, Finished 500' spoil of poly tubing

F. Signatures

Field Representative(s): Corey Cormican [signature] 1/19/16

Print Name | Signature | Date

Print Name | Signature | Date

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW-033-MWS **Well Permit No.:** _____

ARM Project No.: 150300M Client: **EnviroAnalytics Group** Well Location: Area B, Parcel _____	Date/Time Started: 2/9/16 / 11:15 pm Date/Time Completed: 2/9/16 / 12:03 pm Weather/Site Conditions: 36°/ snow	Developed by: Corey Comican Company: Alliedwell Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 5.0 to 15.0
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+ / -) 2.5	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 18.2

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 16.4 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 9.6 ft. (C)
Petroleum/Product Present? *Y* or *N* Thickness (ft.): _____	Height of Water Column: (B - C) 6.8 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 1.10' ft.	Wetted Bore Volume: (A x D) 1.1 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: PVC surgeblock

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	9.6-14.6	5	15	13.6	Dark gray, lot of silt, no odor clear @ 13.6 vol
2	14.6-16.4	5	15	13.6	
	Cumulative Totals: (Minimum of 3 Well Volumes)		30	27.2	

Final Depth to Water (from TOC): 9.65

Thickness of Any Sediment Remaining in Well: 0

[illegible] from reference notch in top of TOC.

Scanned by CamScanner

Well ID: SW-033-MWS
Date: 2/9/16

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

1 Drum, 25' poly tubing

F. Signatures

Field Representative(s): Corey Cormican (Print Name) _____ (Signature) 2/9/16 (Date)

_____ (Print Name) _____ (Signature) _____ (Date)

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

Scanned by CamScanner

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW-034-MW5 **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 1/19/16/9:30	Developed by: Corey Cormican
Client: **EnviroAnalytics Group**	Date/Time Completed: 1/19/16/10:15	Company: Allied well
Well Location: Area B, Parcel B5	Weather/Site Conditions: 14°/windy/cold	Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 6.2 to 16.2
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+ / -) 2.4	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 18.9

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 18.8 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 11.2 ft. (C)
Petroleum/Product Present? *Y* or *N* Thickness (ft.): _____	Height of Water Column: (B - C) 7.6 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 1" ft.	Wetted Bore Volume: (A x D) 1.24 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: _____

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	11.2-16.2	5	8	6.5	Grey, silty, No odor, cleared @ 6.5 vol.
2	16.2-18.8	5	7	5.6	Grey, silty, no odor, clear @ 5.6 vol
		Cumulative Totals: (Minimum of 3 Well Volumes)	15	12.1	

Final Depth to Water (from TOC): 11.4

Thickness of Any Sediment Remaining in Well: 0

All depths reported are from reference notch in top of TOC.

Well ID: SW-034-MWS
Date: 1/19/16

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

1 Drum, 25' Poly tubing

F. Signatures

Field Representative(s): Cora Cormican (Print Name) [signature] (Signature) 1/19/16 (Date)

_____ (Print Name) _____ (Signature) _____ (Date)

All depths reported are from reference notch in top of TOC.
All measurements made in 10^{ths} of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW-035-MWS **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 1/18/16 / 2:45	Developed by: Cory Cormican
Client: **EnviroAnalytics Group**	Date/Time Completed: 1/18/16 / 3:35	Company: Allied Well
Well Location: Area B, Parcel B5	Weather/Site Conditions: 23° / windy / sun	Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 4.0 to 14.0
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+ / -) 2.4	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 16.8

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 16.7 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 8.7 ft. (C)
Petroleum/Product Present? *Y* or *N* Thickness (ft.): _____	Height of Water Column: (B - C) 8 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 1" ft.	Wetted Bore Volume: (A x D) 1.3 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: _____

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	8.7 – 13.7	5	15	11.5	Black, Heavy silt, No odor
2	13.7 – 16.7	5	15	11.5	Black, Heavy silt, No odor
	Cumulative Totals: (Minimum of 3 Well Volumes)		30	23	

Final Depth to Water (from TOC): 12.8

Thickness of Any Sediment Remaining in Well: 1"

All depths reported are from reference notch in top of TOC.

Well ID: SW-635-MW5
Date: 1/18/16

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

1 - Drum, 25' Poly tubing

F. Signatures

Field Representative(s): Corey Cormican (Print Name) _____ (Signature) 1/18/16 (Date)

_____ (Print Name) _____ (Signature) _____ (Date)

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW-036-MW5 **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 1/29/16 / 9:35am	Developed by: Corey Cormican
Client: EnviroAnalytics Group	Date/Time Completed: 1/29/16 / 10:30	Company: Allied Well
Well Location: Area B, Parcel _____	Weather/Site Conditions: 36° / sun	Checked by:

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 7.0 to 17.0
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+ / -) 2.4	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 20

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 19.11 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 13 ft. (C)
Petroleum/Product Present? *Y* or *N*. Thickness (ft.): _____	Height of Water Column: (B - C) 6.11 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 1" ft.	Wetted Bore Volume: (A x D) 1.0 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: PVC Surge Block

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	13'-18'	5	10	10	Gray, silt, No odor Clear @ 10 Vol
2	18'-20'	5	10	10	Gray, silt, No odor Clear @ 10 vol
		Cumulative Totals: (Minimum of 3 Well Volumes)	20	20	

Final Depth to Water (from TOC): 12.4

Thickness of Any Sediment Remaining in Well: 0

All depths reported are from reference notch in top of TOC.

Well ID: SW-036-MWS
Date: 1/29/16

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

_____

F. Signatures

Field Representative(s): Corey Cormican | [signature] | 1/29/16

Print Name | Signature | Date

_____ | _____ | _____

Print Name | Signature | Date

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW-037-MWS **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 1/18/16 / 1:40 pm	Developed by: Corey Cormicen
Client: **EnviroAnalytics Group**	Date/Time Completed: 1/18/16 / 2:26 pm	Company: Allied well
Well Location: Area B, Parcel B5	Weather/Site Conditions: 23°/windy/sun	Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 5.1 to 15.3
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+ / -) 2.4	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 18.0

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 17.8 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 12.7 ft. (C)
Petroleum/Product Present? *Y* or *N.* Thickness (ft.): _____	Height of Water Column: (B - C) 5.1 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 2" ft.	Wetted Bore Volume: (A x D) .8 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: _____

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	12.7-17.7	5	15	18.8	Grey, silt, No odor
	Cumulative Totals: (Minimum of 3 Well Volumes)		15	18.8	

Final Depth to Water (from TOC): 12.7

Thickness of Any Sediment Remaining in Well: 1"

All depths reported are from reference notch in top of TOC.

Well ID: SW-037-MW5
Date: 1/18/16

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

1 Drum, 30' poly tubing

F. Signatures

Field Representative(s): Corey Cormican — Print Name; Signature; Date 1/18/16

Print Name; Signature; Date

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW-038-MW3 **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 12/23/15 / 1245	Developed by: Rob Ziomba
Client: **EnviroAnalytics Group**	Date/Time Completed: 12/27 / 1200	Company: Allied
Well Location: Area B, Parcel _____	Weather/Site Conditions: 59° / RAIN w/ POG	Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 7' to 18'
Well riser/screen material: PVC	Sandpack Interval: 5' to 18'
Difference between Ground Surface and TOC: (+ / -) +2.7	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 18'

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 20' ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 16.2' ft. (C)
Petroleum/Product Present? *Y* or N Thickness (ft.): _____	Height of Water Column: (B - C) 3.8' ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 0 ft.	Wetted Bore Volume: (A x D) 1.27 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: _____

Event No.	Screen Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	7-12	10	5	4	Blue-grey, silver grey sediment
2	12-18	10	5	4	Blue-grey, silver grey sediment
3	12-18	10	5	4	light grey → clear
		Cumulative Totals: (Minimum of 3 Well Volumes)	15	12	

Final Depth to Water (from TOC): 16.9

Thickness of Any Sediment Remaining in Well: 0

All depths reported are from reference notch in top of TOC.

Well ID: SW-038-MW3
Date: 12/23/15

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

_____
_____
_____
_____
_____
_____

F. Signatures

Field Representative(s): Rob Ziempt (Print Name) _____ (Signature) 12/23/15 (Date)

_____ (Print Name) _____ (Signature) _____ (Date)

All depths reported are from reference notch in top of TOC.
All measurements made in 10^{ths} of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

SW-039-MWS

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW-039-MWS **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 1/7/16 / 400	Developed by: Rob Ziemba
Client: **EnviroAnalytics Group**	Date/Time Completed: 1/7/16 / 459	Company: Allied
Well Location: Area B, Parcel _____	Weather/Site Conditions: 29° F	Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 13.5 to 23.5
Well riser/screen material: *PVC*	Sandpack Interval: 12. to 25.5
Difference between Ground Surface and TOC: (+ / -) +2'	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 25.7

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 25.2' ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 19 ft. (C)
Petroleum/Product Present? *Y* or *N*. Thickness (ft.): _____	Height of Water Column: (B - C) 6.2' ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): _____ ft.	Wetted Bore Volume: (A x D) 1.01 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: _____

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	13.5-18.5	10	5		Dark grey water extremely high amount med sand
2	18.5-23.5	10	5		Dark grey water extremely high amount med sand
3	18.5-23.5	10	10		↓
4	18.5-23.5	10	10		
5	18.5-23.5	10	15		Dark grey water small amount sand → clear
	Cumulative Totals: (Minimum of 3 Well Volumes)		45		

Final Depth to Water (from TOC): 19

Thickness of Any Sediment Remaining in Well: 0

All depths reported are from reference notch in top of TOC.

Well ID: SW-039-MWS
Date: 1/7/16

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

EACH PUMPING INTERVAL EXTREMELY SANDY BUT RAPIDLY CLEARS UP, ONLY TO PRODUCE MORE SAND ON NEXT SURGING.

F. Signatures

Field Representative(s): RB Ziembra [signature] 1/7/16

Print Name | Signature | Date

Print Name | Signature | Date

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW-040-MW5 **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 12/17/15 1215	Developed by: RB ZIOMBA
Client: **EnviroAnalytics Group**	Date/Time Completed: 12/17/15 140	Company: ALLIED WEL
Well Location: Area B, Parcel 35	Weather/Site Conditions: 51°/RAIN	Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 6' to 31'
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+ / -) +2.1'	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 33.4

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 33.4' ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 8.6' ft. (C)
Petroleum/Product Present? *Y* or *N* Thickness (ft.): _____	Height of Water Column: (B - C) 24.8' ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 0 ft.	Wetted Bore Volume: (A x D) 4.04' gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: _____

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	6-11	10	5 GAL	1.23	DARK GREY, LOT OF SEDIMENT. SULFUR SMELL
2	11-16	10	5 GAL	1.23	DARK GREY, LOT OF SED. SULFUR SMELL
3	16-21	10	5 GAL	1.23	DARK GREY ~~SED~~ LOT OF SED. SULFUR
4	21-26	10	5 GAL	1.23	BROWNISH, LESS SEDIMENT
5	26-31	10	30 GAL	7.38	LIGHT BROWN → CLEAR
		Cumulative Totals: (Minimum of 3 Well Volumes)	50 GAL	12.3	

Final Depth to Water (from TOC): 22.8'

Thickness of Any Sediment Remaining in Well: 0

All depths reported are from reference notch in top of TOC.

Well ID: SW-040-MW5
Date: 12/17/15

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

SULFUROUS ODOR, LOT OF FINE BROWN SILTY SAND

F. Signatures

	Print Name	Signature	Date
Field Representative(s):	Rob Ziembr	[signature]	12/17/15

All depths reported are from reference notch in top of TOC.
All measurements made in 10^{ths} of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: gw-041-mw5 **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 12/17/15 955	Developed by: Bob Ziemba
Client: **EnviroAnalytics Group**	Date/Time Completed: 12/17/15 1120	Company: Allied
Well Location: Area B, Parcel B5	Weather/Site Conditions: 55°/RAIN	Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 5' to 30'
Well riser/screen material: PVC	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+/-) +1.9'	Measured Total Depth of Well When Installed (TOC) (F); (See Original Well Construction Diagram) 32.1'

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 32.1 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 8.9 ft. (C)
Petroleum/Product Present? *Y* or N. Thickness (ft.): _____	Height of Water Column: (B - C) 23.2 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): N/A ft.	Wetted Bore Volume: (A x D) 3.78 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: _____

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	5-10	5	5 GAL		DARK GREY, FINE BROWN SILTY SAND
2	10-15	10	5 GAL		MEDIUM GREY FINE BROWN SAND
3	15-20	10	5 GAL		DARK GREY, FINE BROWN SAND
4	20-25	10	5 GAL		LIGHT BROWN SOME SAND
5	25-30	10	25 GAL		LIGHT BROWN → TRANSLUCENT
		Cumulative Totals: (Minimum of 3 Well Volumes)	45 GAL		

Final Depth to Water (from TOC): 22.2'

Thickness of Any Sediment Remaining in Well: 0

All depths reported are from reference notch in top of TOC.

Well ID: SW-04-MWS

Date: _____

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

WATER DIDNT GET 100% CLEAR STILL FAINTLY MILKY, NO SUSPENDED SEDIMENT.

F. Signatures

Field Representative(s): RB Ziemba [signature] 12/17/15

Print Name | Signature | Date

_____ _____ _____

Print Name | Signature | Date

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW-042-MWS **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 12/15/15 710	Developed by: Rob Ziemp
Client: **EnviroAnalytics Group**	Date/Time Completed: 12/15/15 1400	Company: Allied Well
Well Location: Area B, Parcel B7	Weather/Site Conditions: 58°F/sunny/windy	Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 5.1' to 15.1'
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+/-) −4.5"	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram)

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 14.9 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 6.4 ft. (C)
Petroleum/Product Present? *Y* or *N* Thickness (ft.): _____	Height of Water Column: (B - C) 8.5 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 0.2' ft.	Wetted Bore Volume: (A x D) 1.38 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: _____

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	5.1-10.1	5	5 GAL	3.6	LIGHT BROWN / SOME SAND
2	10.1-15.1	5	5 GAL	3.6	DARKER BROWN / LOT OF FINE BROWN SAND
3	10.1-15.1	10	15 GAL	10.8	LIGHT BROWN → CLEAR
		Cumulative Totals: (Minimum of 3 Well Volumes)	25 GAL	17	

Final Depth to Water (from TOC): 15'

Thickness of Any Sediment Remaining in Well: 0

All depths reported are from reference notch in top of TOC.

Well ID: SW-042-MWS
Date: _____

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

Very fine brown sand, near dry during 3rd pump

F. Signatures

Field Representative(s): Rob Zionba [signature] 12/15/15

Print Name | Signature | Date

_____ _____ _____

Print Name | Signature | Date

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW-043-MW I **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 12/22/15 / 195	Developed by: Bob Ziemba
Client: **EnviroAnalytics Group**	Date/Time Completed: 12/22/15 / _____	Company: Allied
Well Location: Area B, Parcel B7	Weather/Site Conditions: 60° Cloudy	Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 43.3 to 53.3
Well riser/screen material: PVC	Sandpack Interval: 41.3 to 54.3
Difference between Ground Surface and TOC: (+/-) 1.9'	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) ~~54.3~~ 55'

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 55' ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 8.6' ft. (C)
Petroleum/Product Present? *Y* or N. Thickness (ft.): _____	Height of Water Column: (B - C) 46.4 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 0 ft.	Wetted Bore Volume: (A x D) 7.5 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: _____

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	43.3-48.3	10	10 GAL	1.3	DARK GREY, SLIGHT MARSHY SMELL SMALL AMOUNT GREY SILT
2	48.3-53.3	10	10 GAL	1.3	DARK GREY WATER, LOT OF GREY SILT
3	48.3-53.3	10	10 GAL	1.3	LIGHT GREY → CLEAR
		Cumulative Totals: (Minimum of 3 Well Volumes)	30	3.9	

Final Depth to Water (from TOC): 53'

Thickness of Any Sediment Remaining in Well: 0

All depths reported are from reference notch in top of TOC.

Well ID: SW-043-MW5
Date: 12/22/15

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

WELL RUNNING OUT OF WATER DURING 2ND + 3RD SURGE/PUMP INTERVALS, WAIT TO RECHARGE.

F. Signatures

	Print Name	Signature	Date
Field Representative(s):	[illegible]	RAB Ziemba	12/22/15

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW-043-MWS **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 12/11/15 / 1:10 p.m.	Developed by: Rob Ziemba
Client: **EnviroAnalytics Group**	Date/Time Completed: 12/11/15 / 2:15	Company: Allied
Well Location: Area B, Parcel B7	Weather/Site Conditions: 55° / overcast	Checked by:

A. Well Construction Details

Well Cover Type: (*Stick-up*) or *Flush-Mount*	PVC Screen Interval: 5.5' to 15.5'
Well riser/screen material: (*PVC*)	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+/-) +2.1'	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 17.4'

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 17.4 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 6.8 ft. (C)
Petroleum/Product Present? *Y* or (*N*) Thickness (ft.): _____	Height of Water Column: (B - C) 10.6 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): N/A ft.	Wetted Bore Volume: (A x D) 1.7 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: _____

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	5.5 - 10.5	5	5	2.94	Light brown / Coarse sed.
2	10.5 - 15.5	5	5	2.94	LIGHT TAN, some SEDIMENT
3	10.5 - 15.5	10	40 GAL	23.52	LIGHT TAN → CLEAR
		Cumulative Totals: (Minimum of 3 Well Volumes)	50 GAL	29.40	

Final Depth to Water (from TOC): 15.3

Thickness of Any Sediment Remaining in Well: N/A

All depths reported are from reference notch in top of TOC.

Well ID: SW-043-MW5
Date: 12/11/15

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

Well req'd full drum to clear.

F. Signatures

Field Representative(s): Rob Ziomba (Print Name) _____ (Signature) 12/11/15 (Date)

_____ Print Name _____ Signature _____ Date

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: GW-044-MW5 **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 12/15/15 107	Developed by: Bob Ziemba
Client: **EnviroAnalytics Group**	Date/Time Completed: 12/15/15 220	Company: Allied
Well Location: Area B, Parcel 07	Weather/Site Conditions: 60° / light wind	Checked by:

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 6.3' to 16.3'
Well riser/screen material: *PVC*	Sandpack Interval: 4.3' to 17.1'
Difference between Ground Surface and TOC: (+/-) −3"	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram)

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 16.3 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 8.3 ft. (C)
Petroleum/Product Present? Y or N Thickness (ft.): _____	Height of Water Column: (B - C) 8' ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 0 ft.	Wetted Bore Volume: (A x D) 1.3* gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: _____

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	6.3-11.3'	5	5 GAL	3.8	medium tan / some sediment
2	11.3-16.3'	5	5 GAL	3.8	lighter tan / some sediment
3	11.3'-16.3'	10	20 GAL	15.2	light tan → mostly clear
		Cumulative Totals: (Minimum of 3 Well Volumes)	30 GAL	22.8	

Final Depth to Water (from TOC): 12.4'

Thickness of Any Sediment Remaining in Well: 0

All depths reported are from reference notch in top of TOC.

Well ID: SW-044-MW3
Date: 12/15/15

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

very little sediment, light brown and very fine

F. Signatures

Field Representative(s): Rob Tremper (Print Name) [signature] (Signature) 12/15/15 (Date)

_____ Print Name _____ Signature _____ Date

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW-045-MW F **Well Permit No.:** _____

ARM Project No.: 150300M Client: **EnviroAnalytics Group** Well Location: Area B, Parcel _____	Date/Time Started: 1/5/16 / 11/PM Date/Time Completed: 1/5/16 / 230 Weather/Site Conditions: 25°F	Developed by: Rob Ziembr Company: Allied Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 63.7 to 73.3
Well riser/screen material: *PVC*	Sandpack Interval: 61.8 to 74.5
Difference between Ground Surface and TOC: (+/-) + 2'	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) NOT NOTED

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 72.5 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 13 ft. (C)
Petroleum/Product Present? *Y* or *N.* Thickness (ft.): _____	Height of Water Column: (B - C) 59.5 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 2' ft.	Wetted Bore Volume: (A x D) 9.69 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: _____

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	63.7-68.7	10	10	1.03	Dark grey, sulfur smell grey sediment
2	68.7-73.3	10	10	1.03	Dark grey, sulfur smell grey sediment
3	68.7-73.3	10	30	3.09	Grey water → clear sulfur smell
		Cumulative Totals: (Minimum of 3 Well Volumes)	50	5.15	

Final Depth to Water (from TOC): 13.5

Thickness of Any Sediment Remaining in Well: 0

All depths reported are from reference notch in top of TOC.

Well ID: SW-045 [illegible]
Date: 1/5/15

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

FINAL DEPTH 75.5 (TOC)

LARGE AMOUNT OF INITIAL SEDIMENT.

PREVALENT SULFUR ODOR.

F. Signatures

Field Representative(s): Rob Zienba (Print Name) [signature] (Signature) 1/5/16 (Date)

_____ (Print Name) _____ (Signature) _____ (Date)

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW-045MWS **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 1/5/16 / 1140	Developed by: Chris Ziemba
Client: **EnviroAnalytics Group**	Date/Time Completed: 1/5/16 / 1258	Company: ALLIED
Well Location: Area B, Parcel _____	Weather/Site Conditions: 25° F	Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 4' to 9'
Well riser/screen material: *PVC*	Sandpack Interval: 2.5' to 9.3'
Difference between Ground Surface and TOC: (+ / -) 2'	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) NOT NOTED ON AS-BUILT

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 10.8 (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 4.3 ft. (C)
Petroleum/Product Present? *Y* or *N*. Thickness (ft.): N	Height of Water Column: (B - C) 6.5 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): _____ ft.	Wetted Bore Volume: (A x D) 1.05 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: _____

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	4-9	10	5 GAL	4.76	DARK GREY, STRONG SULFUR SMELL, FINE GREY SEDIMENT
2	4-9	10	6 GAL	~~4.76~~ 5.71	DARK GREY → CLEAR STRONG SULFUR SMELL
		Cumulative Totals: (Minimum of 3 Well Volumes)	11	~~4.52~~ 10.47	

Final Depth to Water (from TOC): 8.5'

Thickness of Any Sediment Remaining in Well: 1"

All depths reported are from reference notch in top of TOC.

Well ID: SW-045-MW5
Date: 1/5/16

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

well volume purged quickly, recharge not fast enough to keep up w/ pump. multiple stops required to let well refill. Heavy sulfur smell.

F. Signatures

Field Representative(s): [signature] (Print Name) RB Ziemba (Signature) 1/5/16 (Date)

_____ (Print Name) _____ (Signature) _____ (Date)

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

WEM

MONITORING WELL DEVELOPMENT

Job Number: 150300 M

Monitoring Well No: SW-046-MWS

Job Name: Sparrows Point

Date: 11/9/15

Field Personnel: A. Boncum / WFM

Time: 1515 hrs

Weather/Temp: Overcast, ~50F

Well Volume (gal/ft.) (A) per well casing size:

1-inch = 0.041 gal/ft. 1.5-inch = 0.092 gal/ft. 2-inch = 0.163 gal/ft.

3-inch = 0.367 gal/ft. 4-inch = 0.653 gal/ft. 6-inch = 1.47 gal/ft.

Well Diameter: 2 in. ID (PVC)

1 Well Volume: (A x D) 1.8 gal (E)

Well Volume per foot: 0.163 gal/ft. (A)

5 Well Volumes: (5 x E) 9.0 gal

Well Casing Stick-up: ≈0.25 ft.

Total Gallons Removed: ~50 gal (~28 bore volumes)

Depth to Water (DTW): 5.0 ft. (B)
from Top of Casing (TOC) → PVC

Purging Method:

Pumped ✓ Bailed _____

Total Depth (TD): ~~5.0~~ 15.9 ft. (C)
from Top of Casing (TOC) → PVC

Height of Water Column: (C-B)
10.9 ft. (D)

NOTES:

~~15.58~~
~~2.70~~
~~18.28~~

- No free petro lean product on surface. No obs. sediment @ based on total depth measurement.

(A) - 1715 hrs - begin - pump 4 gal - v. cldy YBr

(B) - 1715-1725 hrs - pump 20 gal - clears to mod. YBr

- 1725-1755 - pump 25 gal - clears to light YBr

- new concrete well pad installed today

15.58
+0.27
15.85

(A) - surge @ top of well screen w/ surge block - 10 times over
(B) - " @ middles " " " " " ~3-5 ft.
(A) - pump @ middle of screen. (B) pump @ bottom of screen.

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW-047-MWS **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 12/11/15 / 10:34am	Developed by: Rob Z.
Client: **EnviroAnalytics Group**	Date/Time Completed: 12/11/15 / 11:40	Company: Allied
Well Location: Area B, Parcel B7	Weather/Site Conditions: 50°/Cloudy	Checked by: RO

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 6.5 to 16.5
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+/-) 2"	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 16.8'

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 16.9 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 8.4 ft. (C)
Petroleum/Product Present? *Y* or *N* Thickness (ft.): _____	Height of Water Column: (B - C) 8.5 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): N/A ft.	Wetted Bore Volume: (A x D) 1.39 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: _____

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	6.5-11.5	5	5	3.65	Light brown/tan some sediment
2	11.5-16.5	5	5	3.60	Light brown/tan some sediment
3	11.5-16.5	10	20	14.38	VERY LIGHT TAN → CLEAR
		Cumulative Totals: (Minimum of 3 Well Volumes)	30		

Final Depth to Water (from TOC): 11 FT

Thickness of Any Sediment Remaining in Well: N/A

All depths reported are from reference notch in top of TOC.

Well ID: SW-047-MW5
Date: 12/11/15

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

WELL NAT DRY 3x TIMES ON FINAL PUMPING.

F. Signatures

Field Representative(s): Rob Ziemba (Print Name) [signature] (Signature) 12/11/15 (Date)

_____ (Print Name) _____ (Signature) _____ (Date)

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW-048-MWS **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 1/5/16 / 348	Developed by: R B Ziembr
Client: **EnviroAnalytics Group**	Date/Time Completed: 1/5/16 /	Company: Allied
Well Location: Area B, Parcel _____	Weather/Site Conditions: 29°F	Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 4 to 14'
Well riser/screen material: *PVC*	Sandpack Interval: 3.5' to 15'
Difference between Ground Surface and TOC: (+ / -) ~~30~~ 30"	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 16.7'

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 16.7 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 3.8' ft. (C)
Petroleum/Product Present? *Y* or *N*. Thickness (ft.): N	Height of Water Column: (B - C) 12.9' ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 0 ft.	Wetted Bore Volume: (A x D) 2.10 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: _____

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	4-9	10	5	2.38	Light brown water, small amount fine tan sand
2	9-14	10	5	2.38	Light brown water
3	9-14	10	5	2.38	Light brown water → clear
		Cumulative Totals: (Minimum of 3 Well Volumes)	15	7.14	

Final Depth to Water (from TOC): 14.2

Thickness of Any Sediment Remaining in Well: 0

All depths reported are from reference notch in top of TOC.

Well ID: _____

Date: _____

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

well pumping out of water after each surge interval

F. Signatures

	Print Name	Signature	Date
Field Representative(s):	Rob Ziemba	[signature]	1/5/16

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW-049-MWS **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 12/22/15 350	Developed by: Rob Ziemba
Client: **EnviroAnalytics Group**	Date/Time Completed: 12/22/15 446	Company: Allied well
Well Location: Area B, Parcel _____	Weather/Site Conditions: 60°F / Cloudy	Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 5.1 to 17.2
Well riser/screen material: *PVC*	Sandpack Interval: 3.6 to 17.2
Difference between Ground Surface and TOC: (+ / -) -.3'	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 17.2

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 17.2' ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 7' ft. (C)
Petroleum/Product Present? *Y* or *N* Thickness (ft.): _____	Height of Water Column: (B - C) 10.2' ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 0 ft.	Wetted Bore Volume: (A x D) 1.6 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: _____

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	5.1-10.1	10	5 GAL	3.12	LIGHT BROWN WATER SOME FINE SILTY SAND
2	10.1-17.2	10	10 GAL	6.25	LIGHT BROWN WATER FINE SILTY SAND
3	10.1-17.2	10	30 GAL	18.75	LIGHT BROWN WATER SMALL AMOUNT FINE SAND CLEAR
		Cumulative Totals: (Minimum of 3 Well Volumes)	45 GAL	28.12	

Final Depth to Water (from TOC): 9.1'

Thickness of Any Sediment Remaining in Well: 0

All depths reported are from reference notch in top of TOC.

Well ID: ~~SW-049-MW~~
Date: 12/22/15
SW-049-r

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

LARGE PUMP VOLUME REQUIRED FOR WATER TO CLEAR UP + REMOVE SAND.

F. Signatures

	Print Name	Signature	Date
Field Representative(s):	Rob Ziemba	[signature]	12/22/15

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW-050-MW3 **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 12/23/15 1045	Developed by: RUB ZIEMBA
Client: **EnviroAnalytics Group**	Date/Time Completed: 12/23/15 1140	Company: ALLION
Well Location: Area B, Parcel _____	Weather/Site Conditions: 55° / FOG + RAIN	Checked by: _____

A. Well Construction Details

Well Cover Type: Stick-up or *Flush-Mount*	PVC Screen Interval: 3.1 to 13.1'
Well riser/screen material: PVC	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+) / - 2.8'	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 16.2

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 16.1 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 6.4 ft. (C)
Petroleum/Product Present? Yes (No) Thickness (ft.): _____	Height of Water Column: (B - C) 9.7 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): .1' ft.	Wetted Bore Volume: (A x D) 1.58 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: _____

Event No.	Screen Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	3.1-8.1	10	5 GAL		LIGHT BROWN WATER, FINE SILTY SAND
2	8.1-13.1	10	5 GAL		LIGHT BROWN WATER W/ OF FINE BROWN SAND
3	8.1-13.1	10	20 GAL		LIGHTER [illegible]
		Cumulative Totals: (Minimum of 3 Well Volumes)	30		

Final Depth to Water (from TOC): 13.3'

Thickness of Any Sediment Remaining in Well: 0

All depths reported are from reference notch in top of TOC.

Well ID: _____

Date: _____

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☑ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☑ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

FAST WATER RECHARGE

F. Signatures

Field Representative(s): Rob Ziemba (Print Name) _____ (Signature) 12/23/15 (Date)

Print Name _____ Signature _____ Date _____

All depths reported are from reference notch in top of TOC.
All measurements made in 10^{ths} of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW-051-MWS **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 12/18/15	Developed by: Rob Ziemba
Client: **EnviroAnalytics Group**	Date/Time Completed: 12/18/15	Company: Allied well
Well Location: Area B, Parcel B7	Weather/Site Conditions: 43°/windy/cloudy	Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 5' to 15'
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+/-) +2.5'	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 17.2

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 17.2' ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 9.7' ft. (C)
Petroleum/Product Present? Y or N Thickness (ft.): _____	Height of Water Column: (B - C) 7.5 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 0 ft.	Wetted Bore Volume: (A x D) 1.22 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: _____

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	5-10	10	5	4.09	Light brown water, large amount fine silty sand
2	10-15	10	5	4.09	Light brown water, large amount silty fine sand
3	10-15	10	5	4.09	Light brown water large amount fine silty sand
4	10-15	10	5	4.09	Light brown water some fine silty sand
5	10-15	10	20	16.36	Pale brown translucent → clear
		Cumulative Totals: (Minimum of 3 Well Volumes)	40	32.72	

Final Depth to Water (from TOC): 14.6'

Thickness of Any Sediment Remaining in Well: 0

All depths reported are from reference notch in top of TOC.

Well ID: ~~SW-057~~ SW-057-MW5
Date: 12/18/15

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

_____
_____
_____
_____
_____
_____

F. Signatures

Field Representative(s): Rob Ziemba (Print Name) _____ (Signature) 12/18/15 (Date)

_____ Print Name _____ Signature _____ Date

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW-052-MW5 **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 12/18/15 / 1006	Developed by: Rob Ziemba
Client: **EnviroAnalytics Group**	Date/Time Completed: 12/18/15 / 1126	Company: Allied Venture
Well Location: Area B, Parcel B7	Weather/Site Conditions: 42°F / cloudy	Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 4' to 14'
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+/-) +2.5'	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 16.8'

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): ft. (B) 16.6
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 7.5 ft. (C)
Petroleum/Product Present? *Y or N* Thickness (ft.): _____	Height of Water Column: (B - C) 9.1 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 0.2 ft.	Wetted Bore Volume: (A x D) 1.48 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: _____

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	4-9	5	5 GAL	3.37	Light Brown water, large amount fine silty brown sand
2	9-14	10	5 GAL	3.37	Light Brown water, silty brown sand
3	9-14	10	5 GAL	3.37	Light Brown water, little bit silty sand
4	9-14	10	5 GAL	3.37	Pale translucent brown → clear
		Cumulative Totals: (Minimum of 3 Well Volumes)	20	13.48	

Final Depth to Water (from TOC): 10.5'

Thickness of Any Sediment Remaining in Well: 0

All depths reported are from reference notch in top of TOC.

Well ID: SW-052-MW5

Date: _____

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

well dry after pumping 12 gal, paused in 3rd and 4th pump intervals for well to recharge

F. Signatures

Field Representative(s): Rob Ziemba (Print Name) [signature] (Signature) 12/18/15 (Date)

_____ Print Name _____ Signature _____ Date

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW-53-MWS **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 12/23/15 11:40am	Developed by: Corey Cormican
Client: **EnviroAnalytics Group**	Date/Time Completed: 12/23/15 12:25pm	Company: Allied well drilling
Well Location: Area B, Parcel _____	Weather/Site Conditions: Rain/cloudy	Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 3.9 to 13.9
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+ / -) +1"	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram)

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 14.3 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 4.2 ft. (C)
Petroleum/Product Present? *Y* or *N* Thickness (ft.): _____	Height of Water Column: (B - C) 14.1 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 1" ft.	Wetted Bore Volume: (A x D) 2.3 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: _____

Event No.	Screen Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	3.9	5	5	2.17	Dark brown, No odor, Cloudy, sed.
2	8.9	5	5	2.17	Dark brown, No odor, cloudy, sed.
3	13.9	5	5	2.17	Dark brown, No odor, cloudy, sed.
		Cumulative Totals: (Minimum of 3 Well Volumes)	15	6.5	

Final Depth to Water (from TOC): 14.1

Thickness of Any Sediment Remaining in Well: 2"

All depths reported are from reference notch in top of TOC.

Well ID: SW-053-MWS
Date: 12/23/15

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

_____
_____
_____
_____
_____
_____

F. Signatures

Field Representative(s): Corey Cormican (Print Name) [signature] (Signature) 12/23/15 (Date)

_____ (Print Name) _____ (Signature) _____ (Date)

All depths reported are from reference notch in top of TOC.
All measurements made in 10^{ths} of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW-054-MWS **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 12/23/15 12:45pm	Developed by: Corey Cormican
Client: **EnviroAnalytics Group**	Date/Time Completed: 12/23/15 12:35pm	Company: Allied well drilling
Well Location: Area B, Parcel _____	Weather/Site Conditions: Rain/Cloudy	Checked by: _____

A. Well Construction Details

Well Cover Type: (*Stick-up*) or *Flush-Mount*	PVC Screen Interval: 9.5 to 19.5
Well riser/screen material: (*PVC*)	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+/-) 2.5'	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram)

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 22.5 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 8.8 ft. (C)
Petroleum/Product Present? *Y* or (*N*) Thickness (ft.): _____	Height of Water Column: (B - C) 10.9 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 2" ft.	Wetted Bore Volume: (A x D) 1.8 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: _____

Event No.	Screen Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	4.5	5	5	2.8	Grey, cloudy, No odor, sed.
2	9.5	5	5	2.8	Grey, cloudy, No odor, sed
3	14.5	5	5	2.8	Grey, cloudy, No odor, sed
4	19.5	5	5	2.8	Grey, cloudy, No odor, sed
		Cumulative Totals: (Minimum of 3 Well Volumes)	20	11.2	

Final Depth to Water (from TOC): 21.5

Thickness of Any Sediment Remaining in Well: 1

All depths reported are from reference notch in top of TOC.

Well ID: SW-051-MWS
Date: 12/23/15

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

_____
_____
_____
_____
_____
_____

F. Signatures

Field Representative(s): Corey Cormican (Print Name) _____ (Signature) 12/23/15 (Date)

_____ (Print Name) _____ (Signature) _____ (Date)

All depths reported are from reference notch in top of TOC.
All measurements made in 10^{ths} of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: GW-055-MWS **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 1/6/16 / 955	Developed by: Rob Ziemba
Client: **EnviroAnalytics Group**	Date/Time Completed: 1/6/16 / 1131	Company: Allied
Well Location: Area B, Parcel _____	Weather/Site Conditions: 21°F	Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 7.9 to 12.9
Well riser/screen material: *PVC*	Sandpack Interval: 2.2 to 13.2
Difference between Ground Surface and TOC: (+/-) 2.6'	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 13.2'

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 15.7 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 7.7 ft. (C)
Petroleum/Product Present? *Y* or *N.* Thickness (ft.): _____	Height of Water Column: (B - C) 8' ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 0 ft.	Wetted Bore Volume: (A x D) 1.3 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: _____

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	2.9-7.9	10	5		Light brown water, very large qty fine brown sand
2	7.9-12.9	10	5		Light brown water, extremely large qty fine brown sand
3	7.9-12.9	10	15		Light brown water, large qty light brown sand
4	7.9-12.9	10	15		Light brown water, large amount fine brown sand
5	7.9-12.9	10	15		Light brown water, minimal fine sand → clear, no sand
		Cumulative Totals: (Minimum of 3 Well Volumes)	55		

Final Depth to Water (from TOC): 7.9'

Thickness of Any Sediment Remaining in Well: 15.9'

All depths reported are from reference notch in top of TOC.

Well ID: SW-055-MWS
Date: 1/6/16

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

EXTREMELY HIGH AMOUNT OF FINE BROWN SILTY SAND PRODUCED UP UNTIL LAST SAMPLE INTERVAL. WELL RECHARGE VERY SLOW AT FIRST (WELL OUT OF WATER AT END OF FIRST PUMPING), RECHARGE DRAMATICALLY INCREASED AS SAMPLING CONTINUED.

F. Signatures

	Print Name	Signature	Date
Field Representative(s):	ROB ZIEMBA	[signature]	1/6/16

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: GW-056-MWS **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 1/6/16 / 1200	Developed by: Rob Ziemba
Client: **EnviroAnalytics Group**	Date/Time Completed: 1/6/16 / 1206	Company: Allied
Well Location: Area B, Parcel _____	Weather/Site Conditions: 32°F	Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 4.4 to 16.4
Well riser/screen material: PVC	Sandpack Interval: 3 to 17
Difference between Ground Surface and TOC: (+/-) +3'	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 19.5

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 19.2 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 7.2 ft. (C)
Petroleum/Product Present? *Y or N* Thickness (ft.): _____	Height of Water Column: (B - C) 8' ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): ~~.25~~ 3' ft.	Wetted Bore Volume: (A x D) 1.3 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: _____

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	4.4-9.4	10	5	3.8	Light Brown water small amounts silty sand
2	9.4-16.4	10	2.5	1.9	Light Brown water
3					
		Cumulative Totals: (Minimum of 3 Well Volumes)	7.5	5.7	

Final Depth to Water (from TOC): 19.1

Thickness of Any Sediment Remaining in Well: .4'

All depths reported are from reference notch in top of TOC.

Well ID: SW-056-MWS
Date: 1/6/16

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

WELL DRY AFTER 7.5 GAL PUMPED. EXTREMELY SLOW RECHARGE. CANNOT COMPLETE DEVELOPMENT

F. Signatures

Field Representative(s): RB Ziembra [signature] 1/6/16

Print Name | Signature | Date

Print Name | Signature | Date

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW-057-MWS **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 1/14/16/11:00am	Developed by: Corey Carrigan
Client: **EnviroAnalytics Group**	Date/Time Completed: 1/14/16/12:08	Company:
Well Location: Area B, Parcel B2	Weather/Site Conditions:	Allied Well
	24°, sun	Checked by:

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 4 to 14
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+ / -) -0.1	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 14

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 14.3 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 2.75 ft. (C)
Petroleum/Product Present? *Y* or *N* Thickness (ft.): _____	Height of Water Column: (B - C) 11.4 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 0 ft.	Wetted Bore Volume: (A x D) 1.9 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: _____

Event No.	Screen Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	4-9	5	15	7.9	Brown, silty, no odor
2	9-~~8~~ 14	5	5	2.6	Brown, silty, no odor
		Cumulative Totals: (Minimum of 3 Well Volumes)			

Final Depth to Water (from TOC): 12.1

Thickness of Any Sediment Remaining in Well: 2"

All depths reported are from reference notch in top of T

Well ID: SW-057-MWS
Date: 1/14/16

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

used 1 Drum, well already had pad.

F. Signatures

Field Representative(s): Corey Cormican (Print Name) [signature] (Signature) 1/14/16 (Date)

_____ (Print Name) _____ (Signature) _____ (Date)

's reported are from reference notch in top of TOC.
rements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW-~~[illegible]~~058-MWS **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 1/7/16 / 1150	Developed by: Rob Ziemba
Client: **EnviroAnalytics Group**	Date/Time Completed: 1/7/16 / 136	Company: Allied
Well Location: Area B, Parcel _____	Weather/Site Conditions: 35°F	Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 3 to 13
Well riser/screen material: *PVC*	Sandpack Interval: 2.5 to 14
Difference between Ground Surface and TOC: (+ / -) -.3'	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 13'

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 12.7 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 4.3 ft. (C)
Petroleum/Product Present? Y or N Thickness (ft.): _____	Height of Water Column: (B - C) 8.4 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 0 ft.	Wetted Bore Volume: (A x D) 1.36 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: _____

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	3-8	10	5		DARK GREY, SOME DARK GREY SANDY SILT
2	8-13	10	5		DARK GREY, LITTLE AMOUNT FINE SANDY SILT
3	8-13	10	10		"
4	8-13	10	10		"
5	8-13	10	10		DARK GREY, SOME FINE SAND → CLEAR, NO SAND
		Cumulative Totals: (Minimum of 3 Well Volumes)	40		

Final Depth to Water (from TOC): 4.4'

Thickness of Any Sediment Remaining in Well: 0

All depths reported are from reference notch in top of TOC.

Well ID: SW-658mws
Date: 1/7/16

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

LARGE QUANTITIES FINE SANDY SILT, VERY DARK GREY IN COLOR. MANY GALLONS REQUIRED TO GET CLEAN WATER.

TRIMMED 3' OFF WELL PVC TO GET DOWN UNDER MANHOLE

F. Signatures

	Print Name	Signature	Date
Field Representative(s):	Rob Ziemba	[signature]	1/7/16

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW-059-MWS **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 1/13/16 / 11:20	Developed by: Corey Carmichael
Client: **EnviroAnalytics Group**	Date/Time Completed: 1/13/16 / 12:50	Company: Allied Well
Well Location: Area B, Parcel _____	Weather/Site Conditions: 22°, windy, sun	Checked by: _____

A. Well Construction Details

Well Cover Type: (*Stick-up*) or *Flush-Mount*	PVC Screen Interval: 5.3 to 15.3
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+/-) 2.6	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 18.1

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 18.1 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 9.7 ft. (C)
Petroleum/Product Present? *Y* or (*N*) Thickness (ft.): _____	Height of Water Column: (B - C) 8.4 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 0 ft.	Wetted Bore Volume: (A x D) 1.63 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: PVC surge block

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	9.7-14.7	5	10	6.13	Tan, some silt, No odor
2	14.7-18.1	5	15	9.2	Tan, No odor
		Cumulative Totals: (Minimum of 3 Well Volumes)			

Final Depth to Water (from TOC): 18.1

Thickness of Any Sediment Remaining in Well: 0

All depths reported are from reference notch in top of TOC.

Well ID: 059-MWS
Date: 1/13/16

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

Cut off 1' of protective steel casing

Used 2 Bags Concrete, 1 Bag of sand, 5' protective steel casing, 1 drum, ½ gal winter Concrete Mix

F. Signatures

Field Representative(s): _____ _____ _____
Print Name Signature Date

_____ _____ _____
Print Name Signature Date

All depths reported are from reference notch in top of TOC.
All measurements made in 10^{ths} of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW-060-MWS **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 1/7/16 / 200	Developed by: RB Ziemba
Client: **EnviroAnalytics Group**	Date/Time Completed: 1/7/16 / 306	Company: Allied
Well Location: Area B, Parcel _____	Weather/Site Conditions: 37°F	Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 7 to 17
Well riser/screen material: *PVC*	Sandpack Interval: 5.5 to 18
Difference between Ground Surface and TOC: (+ / -) +2.1'	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 19.3'

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): ~~[illegible]~~ 19' ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 11.4' ft. (C)
Petroleum/Product Present? *Y* or ~~*N*~~ Thickness (ft.): _____	Height of Water Column: (B - C) 7.6' ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): .3' ft.	Wetted Bore Volume: (A x D) 1.23 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: _____

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	7-12	10	5 GAL		DARK BLUISH-GREY WATER SMALL AMOUT GREY SILT
2	12-17	10	5 GAL		DARK BLUISH ~~WATER~~ GREY WATER
3	12-17	10	20 GAL		DARK BLUISH WATER → RAPIDLY CLEAR
		Cumulative Totals: (Minimum of 3 Well Volumes)	30 GAL		

Final Depth to Water (from TOC): 11.6'

Thickness of Any Sediment Remaining in Well: 0

All depths reported are from reference notch in top of TOC.

Well ID: SW-060-MWS
Date: 1/7/16

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

WATER RAPIDLY CLEARED AT END OF EACH INTERVAL

F. Signatures

Field Representative(s): RoB Ziembat [signature] 1/7/16

Print Name | Signature | Date

Print Name | Signature | Date

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW-06 (-MWS **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 1/13/16 / 9:00am	Developed by: Corey Cormican
Client: **EnviroAnalytics Group**	Date/Time Completed: 1/13/16 / 10:50am	Company:
Well Location: Area B, Parcel B1	Weather/Site Conditions:	Allied well
	21°, windy, sun	Checked by: _____

A. Well Construction Details

Well Cover Type: (*Stick-up*) or *Flush-Mount*	PVC Screen Interval: 6 to 16
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+ / -) 2'	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 18.4

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 18.4 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 9.6½ ft. (C)
Petroleum/Product Present? *Y* or (*N*) Thickness (ft.): _____	Height of Water Column: (B - C) 8.75 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 0 ft.	Wetted Bore Volume: (A x D) 1.43 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: _____

Event No.	Screen Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	9.6 - 14.6	5	15	10.5	Brown, silty, no odor
2	14.6 - 18.4	5	15	10.5	Brown/clear silty, no odor
		Cumulative Totals: (Minimum of 3 Well Volumes)	30	21	

Final Depth to Water (from TOC): 18.4

Thickness of Any Sediment Remaining in Well: 0

All depths reported are from reference notch in top of TC

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

Cut off 17" Protective Steel Casing

Used 2 bags Concrete, 1 Bag sand, 6 Gal. Distilled water, 1 Drum, ½ Gal winter Concrete Mix, 5' protective steel casing

F. Signatures

Field Representative(s): _____ _____ _____
Print Name Signature Date

_____ _____ _____
Print Name Signature Date

epths reported are from reference notch in top of TOC.
easurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW-062-MWS **Well Permit No.:** _____

ARM Project No.: 150300M Client: **EnviroAnalytics Group** Well Location: Area B, Parcel B1	Date/Time Started: 1/12/16 12:15pm Date/Time Completed: 1/12/16 13:40pm. Weather/Site Conditions: 42° overcast, windy	Developed by: Corey Cormican Company: Allied well Checked by: _____

A. Well Construction Details

Well Cover Type: (Stick-up) or *Flush-Mount*	PVC Screen Interval: 4.6 to 14.6
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+ / -) 2.6'	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 15

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 17.3 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 11 ft. (C)
Petroleum/Product Present? *Y* or (*N*) Thickness (ft.): _____	Height of Water Column: (B - C) 6.3 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 0 ft.	Wetted Bore Volume: (A x D) 1.0269 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: _____

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	11'-16'	5	15	14.6	Brown, silty, no odor
2	11'-16'	5	10	9.7	Tan/clear, semi silty, no odor
	Cumulative Totals: (Minimum of 3 Well Volumes)		25	21.3	

Final Depth to Water (from TOC): 17.2

Thickness of Any Sediment Remaining in Well: 1"

All depths reported are from reference notch in top of TOC.

Well ID SW-062-MW5
Date: 1-12-16

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

Cut 16" off steel stick-up casing. Took total depth @ top of casing got a measurment of (17.3) original well construction had well depth @ (15')

used 2 Bags of concrete, 1 bag of sand, (1) 5' stick up well casing, 1 Drum

F. Signatures

Field Representative(s): _____ _____ _____
Print Name Signature Date

_____ _____ _____
Print Name Signature Date

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW-063-MWS **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 1/12/16 / 11:10 a.m.	Developed by: Corey Cormican
Client: **EnviroAnalytics Group**	Date/Time Completed: 1/12/16 / 1:10 pm	Company: Allied well
Well Location: Area B, Parcel B4	Weather/Site Conditions: 36° overcast, windy	Checked by: _____

A. Well Construction Details

Well Cover Type: (*Stick-up*) or *Flush-Mount*	PVC Screen Interval: 6.0 to 18.0
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+/-) 2' 6½"	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 20.9

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): _____ ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 10.7 ft. (C)
Petroleum/Product Present? *Y* or *N*. Thickness (ft.): _____	Height of Water Column: (B - C) 9.4 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 8" ft.	Wetted Bore Volume: (A x D) 1.5322 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: _____

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	6'-11'	5	15	9.8	
2	11'-18'	5	15	9.8	
3	11'-18'	5	10	6.5	
		Cumulative Totals: (Minimum of 3 Well Volumes)	40	26.1	

Final Depth to Water (from TOC): 20.6'

Thickness of Any Sediment Remaining in Well: 5"

All depths reported are from reference notch in top of TOC.

Well ID: SW-063 MWS
Date: 1-12-16

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

Cut 19" off steel stick-up Casing

used 2 bags of concrete, 1 Bag of sand, 1 5' stick-up casing 1 Drum

F. Signatures

Field Representative(s): _____ _____ _____
Print Name Signature Date

_____ _____ _____
Print Name Signature Date

All depths reported are from reference notch in top of TOC.
All measurements made in 10^{ths} of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW-064-MWS **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 2-26-16 / 11:25am	Developed by: Corey C.
Client: **EnviroAnalytics Group**	Date/Time Completed: 2-26-16 / 12:40pm	Company: Allied well
Well Location: Area B, Parcel _____	Weather/Site Conditions: 37°/sun, windy	Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 5.0 to 15.0
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+ / -) 25	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 17.8

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 17.5 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 9.3 ft. (C)
Petroleum/Product Present? *Y* or *N* Thickness (ft.): _____	Height of Water Column: (B - C) 8.2 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 3" ft.	Wetted Bore Volume: (A x D) 1.3 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: PVC Surge Block

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	9.3-14.3	5	10	7.7	Grey, some silt, No odor Clear @ 7.7 vol
2	14.3-17.5	5	10	7.7	Grey, some silt, No odor Clear @ 7.7 vol
	Cumulative Totals: (Minimum of 3 Well Volumes)		20	15.4	

Final Depth to Water (from TOC): 7.5

Thickness of Any Sediment Remaining in Well: 0

All depths reported are from reference notch in top of TOC.

Well ID: SW-064-MWS
Date: 2-26-16

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

_____
_____
_____
_____
_____
_____

F. Signatures

Field Representative(s):

Print Name	Signature	Date
	Corey C.	2-26-16

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW-065-MW5 **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 2/18/16 / 240 PM	Developed by: RB ZIEMBA
Client: **EnviroAnalytics Group**	Date/Time Completed: _____ / _____	Company: ALLIED
Well Location: Area B, Parcel _____	Weather/Site Conditions: 32°F / thick mud	Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 4 to 14
Well riser/screen material: *PVC*	Sandpack Interval: 3 to 15
Difference between Ground Surface and TOC: (+ / -) 2.9'	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 16.9

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 16.7 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 7.5 ft. (C)
Petroleum/Product Present? *Y or N* Thickness (ft.): _____	Height of Water Column: (B - C) 9.2 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): .2 ft.	Wetted Bore Volume: (A x D) 1.49 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: PVC Surge Block

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	4-9	10	5 GAL		BROWNISH GRAY FINE SILTY SAND ACRID ODOR.
2	9-14	10	5 GAL		GREY BROWN WATER LARGE AMOUNT FINE SILTY SAND ACRID ODOR
3	9-14	10	10 GAL		GREY BROWN WATER, LARGE AMOUNT SILTY BROWN SAND
4	9-14	10	10 GAL		GREY BROWN WATER, LARGE AMOUNT SILTY BROWN SAND
5	9-14	10	20 GAL		~~[illegible]~~ BROWN WATER → VERY PALE TAN WATER, no SILT
		Cumulative Totals: (Minimum of 3 Well Volumes)	50 GAL		

Final Depth to Water (from TOC): 7.5

Thickness of Any Sediment Remaining in Well: 0'

All depths reported are from reference notch in top of TOC.

Well ID: SW-065-MW3
Date: 2/18/16

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

LARGE AMOUNT FINE SILTY BROWN SAND UNTIL ALMOST END OF DEVELOPMENT. WATER AT END VERY PALE TRANSLUCENT TAN.

F. Signatures

Field Representative(s): ROB ZIEMPA (Print Name) _____ (Signature) 2/18/16 (Date)

_____ (Print Name) _____ (Signature) _____ (Date)

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SCO-066-MWS **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 1/14/16 2:55 pm	Developed by: Corey Carmican
Client: **EnviroAnalytics Group**	Date/Time Completed: 1/14/16 3:45 pm	Company: Allied cocll
Well Location: Area B, Parcel B5	Weather/Site Conditions: 46°, sun	Checked by: _____

A. Well Construction Details

Well Cover Type: (*Stick-up*) or *Flush-Mount*	PVC Screen Interval: 3.2 to 13.4
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+ / -) 2.6	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 16

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 16 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 6.2 ft. (C)
Petroleum/Product Present? *Y* or (*N*) Thickness (ft.): _____	Height of Water Column: (B - C) 9.8 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): _____ ft.	Wetted Bore Volume: (A x D) 1.6 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: _____

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	6.2-11.2	5	15	9.4	Brown, silty, No odor
2	11.2-15.2	5	10	6.3	Brown, silty, No odor
	Cumulative Totals: (Minimum of 3 Well Volumes)				

Final Depth to Water (from TOC): 3.6

Thickness of Any Sediment Remaining in Well: 0

All depths reported are from reference notch in top of TOC.

Well ID: SW-066-MW5
Date: 1/14/16

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

Cut off 12" steel Protective Casing

used 2 bags concrete, 5' steel protective casing
1, Bag sand

F. Signatures

Field Representative(s): Cory Cormican (Print Name) [signature] (Signature) 1/14/16 (Date)

_____ (Print Name) _____ (Signature) _____ (Date)

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW-067-MW3 **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 1/15/16 9:45	Developed by: Cory Cormier
Client: **EnviroAnalytics Group**	Date/Time Completed: 1/15/16	Company: Allied well
Well Location: Area B, Parcel B5	Weather/Site Conditions: 36°, sun	Checked by:

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 6.2 to 16.2
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+ / -) 2.4	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 18.8

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 18.5 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 7.15 ft. (C)
Petroleum/Product Present? *Y* or *N.* Thickness (ft.): _____	Height of Water Column: (B - C) 11.35 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 3" ft.	Wetted Bore Volume: (A x D) 1.9 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: _____

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	7.2-12.2	5	30	15.8	Brown, silty, no odor
2	12.2-17.2	5	30	15.8	Brown, silty, no odor
	Cumulative Totals: (Minimum of 3 Well Volumes)		60	31.6	

Final Depth to Water (from TOC): 4.2

Thickness of Any Sediment Remaining in Well: 1"

All depths reported are from reference notch in top of TOC.

Well ID: SW-067-MW5
Date: 1/15/16

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

Cut off 17" steel protective well casing

used 2 bags Concrete, 1 Drum, Finished 500 foot Roll of poly tubing, 6 gal Distilled water, 1 bag of Sand

F. Signatures

Field Representative(s): Corey Cormican — 1-15-16

Print Name	Signature	Date
Corey Cormican		1-15-16

All depths reported are from reference notch in top of TOC.
All measurements made in 10^{ths} of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW-068-MW5 **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 1/14/10 9:00am	Developed by: Cory Carmean
Client: **EnviroAnalytics Group**	Date/Time Completed: 1/14/10 / 10:00am	Company:
Well Location: Area B, Parcel B2	Weather/Site Conditions:	Allied well
	29°, sun	Checked by:

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 6.2 to 16.2
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+ / -) 2.4	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 18.9

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 17.5 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 10.3 ft. (C)
Petroleum/Product Present? *Y or N* Thickness (ft.): _____	Height of Water Column: (B - C) 7.2 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 1.4 ft.	Wetted Bore Volume: (A x D) 1.2 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: _____

Event No.	Screen Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	10.3-15.3	5	15	12.5	Black, silty, no odor
2	15.3-17.5	5	15	12.5	Black, silty, no odor
		Cumulative Totals: (Minimum of 3 Well Volumes)	30	25	

Final Depth to Water (from TOC): 17.6

Thickness of Any Sediment Remaining in Well: 1

All depths reported are from reference notch in top of TOC.

Well ID: SW-068-MWS
Date: 1/14/16

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

Cut off 15" Protective steel casing

used 2 bags concrete, 6 gal Distilled water, 1 bag sand, 5' steel protective well casing

F. Signatures

Field Representative(s): Corey Cormican (Print Name) [signature] (Signature) 1/14/16 (Date)

_____ (Print Name) _____ (Signature) _____ (Date)

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW-069-MWS **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 1/13/16 / 2:55pm	Developed by: Corey Carmichael
Client: **EnviroAnalytics Group**	Date/Time Completed: 1/13/16 / 3:40pm	Company: Allied Work
Well Location: Area B, Parcel _____	Weather/Site Conditions: 28°, sun, windy	Checked by: _____

A. Well Construction Details

Well Cover Type: (Stick-up) or *Flush-Mount*	PVC Screen Interval: 3.9 to 13.9
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+ / -) 2.5'	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 14.9

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 16.8 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 10.9 ft. (C)
Petroleum/Product Present? Y or (N) Thickness (ft.): _____	Height of Water Column: (B - C) 5.9 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 0 ft.	Wetted Bore Volume: (A x D) 1 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: _____

Event No.	Screen Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	10.9 - 15.9	5	10	10	Black, silty, no odor
		Cumulative Totals: (Minimum of 3 Well Volumes)	10	10	

Final Depth to Water (from TOC): 16.8

Thickness of Any Sediment Remaining in Well: 0

All depths reported are from reference notch in top of TOC.

Well ID: SW-069-MWS
Date: 1/13/16

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

Cut off 16" Protective steel Casing

Used 2 bags Concrete, 1 Bag sand, 5' Protective steel casing, ½ gallon winter concrete mix, 1 Drum well Depth at install was (14.9) My measurement was (16.8)

F. Signatures

Field Representative(s): _____ Print Name _____ Signature _____ Date

_____ Print Name _____ Signature _____ Date

All depths reported are from reference notch in top of TOC.
All measurements made in 10^{ths} of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW06-PZM001 **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 1/28/16 / 9:42	Developed by: Corey Cormican
Client: **EnviroAnalytics Group**	Date/Time Completed: 1/28/16 / 10:35	Company: Allied well
Well Location: Area B, Parcel _____	Weather/Site Conditions: 19°/sun	Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 3.6 to 13.6
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+ / -) 2.5	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 16.4

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 16.5 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 6.25 ft. (C)
Petroleum/Product Present? *Y* or *N* Thickness (ft.): _____	Height of Water Column: (B - C) 10.25 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 0 ft.	Wetted Bore Volume: (A x D) 1.7 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: PVC surge block

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	6.25-11.25	5	10	5.9	Tan, silt, no odor Did not clear after 5.9 vol
2	11.25-16.25	5	20	11.8	Tan, silt, no odor clear @ 11.8 vol.
		Cumulative Totals: (Minimum of 3 Well Volumes)	30	17.7	

Final Depth to Water (from TOC): 6.5

Thickness of Any Sediment Remaining in Well: 0

All depths reported are from reference notch in top of TOC.

Well ID: SWOG-PZM001

Date: 1/28/16

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

1 Drum, 20' Polytubing, 5' steel protective Casing, 2 bags of Concrete, 1 Bag of sand

F. Signatures

Field Representative(s): Corey Cormicon

Print Name	Signature	Date
Corey Cormicon	[signature]	1/28/16

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW06-PZM053 **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 1/28/16/10:50	Developed by: Corey Cormican
Client: **EnviroAnalytics Group**	Date/Time Completed: 1/28/16/12:35	Company: Allied well
Well Location: Area B, Parcel _____	Weather/Site Conditions: 28° / Sun	Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 53.2 to 68.2
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+ / -) 2.3	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 70.8

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 71.5 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 16.3 ft. (C)
Petroleum/Product Present? *Y* or *N.* Thickness (ft.): _____	Height of Water Column: (B - C) 55.2 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): _____ ft.	Wetted Bore Volume: (A x D) 9.0 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: PVC surge block

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	53-58	5	10	1.1	Gray, silt, No odor clear @ 1 vol.
2	58-63	5	10	1.1	Gray, silt, No odor clear @ 1 vol.
3	63-68	5	10	1.1	Gray, silt, No odor clear @ 1 vol
		Cumulative Totals: (Minimum of 3 Well Volumes)	30	3.3	

Final Depth to Water (from TOC): 16.4

Thickness of Any Sediment Remaining in Well: 0

All depths reported are from reference notch in top of TOC.

Well ID: SW06-PZM053
Date: 1/28/16

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

1 Drum, 100' poly tubing, 5' Protective steel casing, 2 Bags of Concrete, 1 bag of Sand

F. Signatures

Field Representative(s): Corey Cormican _____ 1/28/16
Print Name Signature Date

_____ _____ _____
Print Name Signature Date

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW-070-MW5 **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 1/19/16 / 10:45	Developed by Corey Cormican
Client: **EnviroAnalytics Group**	Date/Time Completed: 1/19/16 /	Company: Allied well
Well Location: Area B, Parcel B5	Weather/Site Conditions: 16°/ windy/sun	Checked by:

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 3.5 to 13.5
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+ / -) 2.5	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 16.3

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 16.1 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 7.7 ft. (C)
Petroleum/Product Present? *Y* or (N) Thickness (ft.): _____	Height of Water Column: (B - C) 8.4 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 2" ft.	Wetted Bore Volume: (A x D) 1.4 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: _____

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	7.7 - 12.7	5	15	10.7	Black, silty, no odor clearer 10.7 vol.
2	12.7 - 16.1	5	15	10.7	
	Cumulative Totals: (Minimum of 3 Well Volumes)		30	21.4	

Final Depth to Water (from TOC): 8.0

Thickness of Any Sediment Remaining in Well: 0

All depths reported are from reference notch in top of TOC.

Well ID: SW-070-MW5
Date: 1/19/16

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

1 Drum, 25' Poly tubing

F. Signatures

	Print Name	Signature	Date
Field Representative(s):	Corey Cormican		1/19/16

All depths reported are from reference notch in top of TOC.
All measurements made in 10^{ths} of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW-071-MW5 **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 1/28/16 / 1:40pm	Developed by: Corey Cormican
Client: **EnviroAnalytics Group**	Date/Time Completed: 1/28/16 / 2:40pm	Company: Allied Well
Well Location: Area B, Parcel _____	Weather/Site Conditions: 38°/Sun	Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 4.1 to 14.1
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+ / -) 2.6	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 17.1

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 17.1 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 9.4 ft. (C)
Petroleum/Product Present? *Y* or *N.* Thickness (ft.): _____	Height of Water Column: (B - C) 7.7 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 0 ft.	Wetted Bore Volume: (A x D) 1.3 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: PVC Surge Block

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	10-15	5	15	11.5	Gray, silt, No odor still not clear @ 11.5 vol
2	15-17.1	5	15	11.5	Gray, silt, No odor still not clear @ 11.5 vol
3	15-17.5	5	15	11.5	Gray, silt, No odor 70% clear at 23 vol
		Cumulative Totals: (Minimum of 3 Well Volumes)	45		

Final Depth to Water (from TOC): 9.4

Thickness of Any Sediment Remaining in Well: 0

All depths reported are from reference notch in top of TOC.

Well ID: SW-071-MW5
Date: 1/28/16

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

_____

F. Signatures

Field Representative(s): Corey Cormican _____ 1/28/16

Print Name	Signature	Date
Corey Cormican		1/28/16

All depths reported are from reference notch in top of TOC.
All measurements made in 10^{ths} of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW0-072-MW3 **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 11/18/16 / 10:25	Developed by: Corey Cormican
Client: **EnviroAnalytics Group**	Date/Time Completed: 11/18/16 / 15:40	Company: Allied well
Well Location: Area B, Parcel B5	Weather/Site Conditions: 18°/sunny/windy	Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 4.5 to 14.7
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+ / -) 2.7	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 17.4

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 17.3 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 7.8 ft. (C)
Petroleum/Product Present? *Y* or *N*. Thickness (ft.): _____	Height of Water Column: (B - C) 9.5 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 1" ft.	Wetted Bore Volume: (A x D) 1.5 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: _____

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	7.8 - 12.8	5	15	10	Tan, silt, No odor
2	12.8 - 17.4	5	15	10	Tan, silt, No odor
	Cumulative Totals: (Minimum of 3 Well Volumes)		30	20	

Final Depth to Water (from TOC): 7.1

Thickness of Any Sediment Remaining in Well: 0

All depths reported are from reference notch in top of TOC.

Well ID: SW-017C-MW
Date: 1/18/16

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

used 30' poly tubing, 1 Drum

F. Signatures

Field Representative(s): Corey Cormican (Print Name) _____ (Signature) 1/18/16 (Date)

_____ (Print Name) _____ (Signature) _____ (Date)

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW-73-MWS **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 1/18/16 / 12:10	Developed by: Corey Carnicom
Client: **EnviroAnalytics Group**	Date/Time Completed: 1/18/16 / 12:55	Company: Allied Well
Well Location: Area B, Parcel B5	Weather/Site Conditions: 21° / windy / sun	Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 4.1 to 14.3
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+ / -) 2.4	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 16.7

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 16.9 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 9.8 ft. (C)
Petroleum/Product Present? *Y* or *N* (N) Thickness (ft.): _____	Height of Water Column: (B - C) 7.1 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 0 ft.	Wetted Bore Volume: (A x D) 1.2 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: _____

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	8.98-14.8	5	4	3.3	clear, silty, no odor
	Cumulative Totals: (Minimum of 3 Well Volumes)		4	3.3	

Final Depth to Water (from TOC): 6.6

Thickness of Any Sediment Remaining in Well: 0

All depths reported are from reference notch in top of TOC.

Well ID: SW-073-MWS
Date: 1/18/16

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

1 Drum, 26' poly tubing

F. Signatures

Field Representative(s): Corey Cornican

Print Name	Signature	Date
Corey Cornican		1/18/16

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW-074-MW I **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 12/22/15/930	Developed by: Rob Ziemba
Client: **EnviroAnalytics Group**	Date/Time Completed: 12/22/15 1PM	Company: Allied
Well Location: Area B, Parcel B7	Weather/Site Conditions: 54° / RAIN	Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 45.5 to 75.5
Well riser/screen material: *PVC*	Sandpack Interval: 43.5 to 76
Difference between Ground Surface and TOC: (+/-) 2'.4	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 77'

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 77' ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 10'.5 ft. (C)
Petroleum/Product Present? *Y* or *N* Thickness (ft.): _____	Height of Water Column: (B - C) 66.5 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 0 ft.	Wetted Bore Volume: (A x D) 10.83 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: _____

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	45.5 - 50.5	10	11	1	Dark grey, small blue rotten fish veg. medium gray sediment
2	50.5 - 55.5	10	11	1	Dark grey, small of rotten organics, medium grey sediment
3	55.5 - 65.5	10	5	0.5	Light grey, minimal sediment rotten organics odor,
		Cumulative Totals: (Minimum of 3 Well Volumes)	27	2.5	

Final Depth to Water (from TOC): 69.5

Thickness of Any Sediment Remaining in Well: 0

All depths reported are from reference notch in top of TOC.

Well ID: SW-074-MW

Date: _____

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

STRONG FISHY SMELL OF ROTTEN ORGANIC MATTER.
WELL DRY DURING 3RD PUMP EVENT, EXTREMELY
SLOW RECHARGE.

F. Signatures

Field Representative(s): Rob Ziemba (Print Name) [signature] (Signature) 12/28/15 (Date)

_____ Print Name _____ Signature _____ Date

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW-C'74-MWS **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 1/20/91 10:00am	Developed by: Corey Corrigan
Client: **EnviroAnalytics Group**	Date/Time Completed: 1/20/91	Company: Allied Well
Well Location: Area B, Parcel _____	Weather/Site Conditions: 21°/windy/sun	Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 4.1 to 14.3
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+/-) 2.6	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 14.5

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 17 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 6 ft. (C)
Petroleum/Product Present? *Y* or *N.* Thickness (ft.): _____	Height of Water Column: (B - C) 11 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 0 ft.	Wetted Bore Volume: (A x D) 1.8 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: _____

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	6'-11'	5	15	8.3	Yellowish sandy Brown, silt, No odor Did not clear
2	11'-16'	5	15	8.3	Yellowish Brown, silt, No odor Clear @ 8.3
		Cumulative Totals: (Minimum of 3 Well Volumes)	30	16.6	

Final Depth to Water (from TOC): 15.9

Thickness of Any Sediment Remaining in Well: 0

All depths reported are from reference notch in top of TOC.

Well ID: SW-074-MWS
Date: 1/20/16

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

1 Drum, 25' Poly tubing

F. Signatures

Field Representative(s): Corey Cormican — Print Name | [signature] — Signature | 1/20/16 — Date

_____ Print Name | _____ Signature | _____ Date

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)
Monitoring Well Development Form – Surge and Pump Method

Well ID: SW07-P2M004 **Well Permit No.:** _____

ARM Project No.: 150300M Client: **EnviroAnalytics Group** Well Location: Area B, Parcel _____	Date/Time Started: 12 / 1 Date/Time Completed: 12/1 Weather/Site Conditions: Rain 43°F	Developed by: Jesse Company: Allied Checked by: Jesse

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 10 to 16
Well riser/screen material: *PVC*	Sandpack Interval: 4 to 16
Difference between Grd and TOC: (+ / -)	Measured Total Depth of Well When Installed (F): (See Original Well Construction Diagram) 16'

B. Wetted Bore Volume Determination:

Well (PVC) Diameter: 2.0 in.	Well Total Depth (from TOC): 19 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to static water level: 13.4 ft. (C)
Petroleum/product present? *Y* or *N* Thickness (ft.): _____	Height of Water Column: (B - C) 5.6 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F – B): _____ ft.	Wetted Bore Volume: (A x D) .91 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: 1" Surge block PVC

Event No.	Screen Interval (ft.)	No. of Surge Strokes	Volume Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	5-18.5	5	3 gal	2.27	Dark brown blackish sand silt
2	13-18	5	3 gal	2.27	Dark brown to medium sandy silt
3	18-19	5	35 gals	26.51	Med. to light brown to clear
		Cumulative Totals:	41 gals.	31.05	

Final Depth to Water (from TOC): 13.4

Thickness of any sediment remaining in well: 0

Well ID:_____ **Date:** _____

ID numbers of IDW drums generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter, and/or Oil-Water Interface Probe
- ☐ Surge Block and 2 inch ID PVC casing extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 To 3 Clean Five-Gallon Bucket
- ☐ 55-Gallon drum(s) for development water. Drum non-hazardous waste labeling supplies.
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon all equipment that goes down-hole per appropriate Standard Operating Procedure (SOP)
- ☐ Staging down-hole equipment, tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

_____

_____

_____

_____

_____

F. Signatures:

Field Representative (s): Jesse Zagami **(Print)** [signature] **(Sign)**

12-1-15 **(Date)**

_____ **(Print)** _____ **(Sign)**

_____ **(Date)**

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet.

TOC = Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW07-PZM108 **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 12 / 2	Developed by: Jesse
Client: **EnviroAnalytics Group**	Date/Time Completed: 12 / 2	Company: Allied
Well Location: Area B, Parcel 1	Weather/Site Conditions: Rain 49°F	Checked by: Jesse

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 115 to 120
Well riser/screen material: *PVC*	Sandpack Interval: 111 to 120
Difference between Ground Surface and TOC: (+ / -)	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 120'

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 125.1 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 16.5 ft. (C)
Petroleum/Product Present? *Y* or *N* Thickness (ft.): _____	Height of Water Column: (B - C) 108.6 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): _____ ft.	Wetted Bore Volume: (A x D) 17.7 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: 1" PVC Surge Block

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	110-115	5	3 gal	2.27	dark brown sandy silt
2	115-120	5	3 gal	2.27	Med brown tanish sandy silt
3	120-125	5	35 gals	26.51	clear
		Cumulative Totals: (Minimum of 3 Well Volumes)	41 gals	31.05	

Final Depth to Water (from TOC): 17'

Thickness of Any Sediment Remaining in Well: _____

All depths reported are from reference notch in top of TOC.

Well ID: _____

Date: _____

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

_____

_____

_____

_____

_____

_____

F. Signatures

Field Representative(s): Jesse Zagami [signature] 12/2/15

Print Name | Signature | Date

_____ _____ _____

Print Name | Signature | Date

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW08-PZ0003 **Well Permit No.:** _____

ARM Project No.: 150300M Client: **EnviroAnalytics Group** Well Location: Area B, Parcel B2	Date/Time Started: 2/25/16 / 1001 Date/Time Completed: 2/25/16 / 11AM Weather/Site Conditions: 44°, HIGH WIND	Developed by: BOB ZIEMBA Company: ALLIED WELL Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 3.4 to 13.4
Well riser/screen material: *PVC*	Sandpack Interval: 2.5 to 14
Difference between Ground Surface and TOC: (+ / -) 2.75'	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 16.4'

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 16.4 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 4' ft. (C)
Petroleum/Product Present? Y or N Thickness (ft.): _____	Height of Water Column: (B - C) 12.4' ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 0 ft.	Wetted Bore Volume: (A x D) 2.02 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: 2" PVC Surge Block

Event No.	Screen Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	3.4-8.4	10	5 GAL	2.47	DARK GREY WATER, STRONG SULFUR SMELL, SOME SILTY GREY SAND
2	8.4-13.4	10	5 GAL	2.47	DARK GREY WATER, SULFUR ODOR SMALL AMOUNT SILTY GREY SAND
3	8.4-13.4	10	10 GAL	4.94	DARK GREY WATER → TRANSLUCENT TAN, SMALL AMOUNT SAND
4	8.4-13.4	10	10 GAL	4.94	DARK GREY WATER → TRANSLUCENT TAN.
5	8.4-13.4	10	20 GAL	9.88	DARK GREY WATER → 90% CLEAR.
		Cumulative Totals: (Minimum of 3 Well Volumes)	50 GAL	24.75	

Final Depth to Water (from TOC): 4.8'

Thickness of Any Sediment Remaining in Well: 0

All depths reported are from reference notch in top of TOC.

Well ID: SW08-PZ002

Date: _____

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

WELL DEVELOPED TO 90-95% CLARITY, VERY PALE TAN SHADE TO WATER, WOULDN'T CLEAR UP PAST THAT POINT.

F. Signatures

	Print Name	Signature	Date
Field Representative(s):	[illegible]	Rob Ziemba	2/25/16

All depths reported are from reference notch in top of TOC.
All measurements made in 10^{ths} of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW08-PZM053 **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 1115 / 2/25/11	Developed by: Rob Ziemba
Client: EnviroAnalytics Group	Date/Time Completed: 336 PM / 2/25/11	Company: Allied well
Well Location: Area B, Parcel B2	Weather/Site Conditions: 40°F / High wind	Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 33' to ~~45~~ 43'
Well riser/screen material: *PVC*	Sandpack Interval: 31' to 45'
Difference between Ground Surface and TOC: (+/-) 2.3'	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 45.7

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 45.3' ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 7.8 ft. (C)
Petroleum/Product Present? *Y* or *N*. Thickness (ft.): _____	Height of Water Column: (B - C) 37.5 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): .4' ft.	Wetted Bore Volume: (A x D) 6.11 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: 2" PVC surge block

Event No.	Screen Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	33-38	10	10	1.63	Greyish Brown water ~~Large Amount Brown sand~~
2	38-43	10	10	1.63	Greyish Brown water minimal sand
3	38-43	10	15	2.45	Lighter Brown water minimal sand
4	38-43	10	25	4.09	Light Brown water → clear
5			250	40.91	Clear Pale water
		Cumulative Totals: (Minimum of 3 Well Volumes)	~~90 gal~~ 300 gal	~~8.18~~ 49.09	

Final Depth to Water (from TOC): 16.6

Thickness of Any Sediment Remaining in Well: 45.4

All depths reported are from reference notch in top of TOC.

Well ID: SW08 - PZ005

Date: _____

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

PUMPED 250 EXTRA GALLONS PER BILL, EXTRA WATER USED TO WASH SAND THRU TREMIE WHILE BUILDING WELL.

F. Signatures

Field Representative(s): ROB ZIEMBA (Print Name) _____ (Signature) 2/25/16 (Date)

_____ (Print Name) _____ (Signature) _____ (Date)

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)
Monitoring Well Development Form – Surge and Pump Method

Well ID: SW09-PM004 **Well Permit No.:** _____

ARM Project No.: 150300M Client: **EnviroAnalytics Group** Well Location: Area B, Parcel _____	Date/Time Started: 11-24 / 12:34 Date/Time Completed: 11-24 / 2:00 Weather/Site Conditions: Sunny 44°F	Developed by: Jesse Z Company: Allied Checked by: _____

A. Well Construction Details

Well Cover Type: (Stick-up) or *Flush-Mount*	PVC Screen Interval: 5' to 14'
Well riser/screen material: *PVC*	Sandpack Interval: 3 to 14'
Difference between Grd and TOC: (+/-) 8"	Measured Total Depth of Well When Installed (F): (See Original Well Construction Diagram) 14'

B. Wetted Bore Volume Determination:

Well (PVC) Diameter: 2.0 in.	Well Total Depth (from TOC): 17.7 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to static water level: 4 ft. (C)
Petroleum/product present? *Y* or (*N*) Thickness (ft.): _____	Height of Water Column: (B - C) 13.7 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F – B): _____ ft.	Wetted Bore Volume: (A x D) 2.2 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: PVC Surge Block 1" PVC Pipe

Event No.	Screen Interval (ft.)	No. of Surge Strokes	Volume Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	0-5	5	3 gal	2.27	grey to light Brown Sandy silt
2	0-10	5	3 gal	2.27	tan to Brown Sandy Silt
3	0-14	5	3 gals	2.27	tan light Brown sandy Silt
4	0-14	5	35 gals	26.51	light Brown sandy Silt to Clear
		Cumulative Totals:	44 gals	33.32	

Final Depth to Water (from TOC): 5'.8"

Thickness of any sediment remaining in well: _____

Well ID: SW-09- P2M 004 Date: _____

ID numbers of IDW drums generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter, and/or Oil-Water Interface Probe
- ☐ Surge Block and 2 inch ID PVC casing extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 To 3 Clean Five-Gallon Bucket
- ☐ 55-Gallon drum(s) for development water. Drum non-hazardous waste labeling supplies.
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon all equipment that goes down-hole per appropriate Standard Operating Procedure (SOP)
- ☐ Staging down-hole equipment, tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

_____

_____

_____

_____

_____

F. Signatures:

Field Representative (s): _____ **(Print)** _____ **(Sign)**

_____ **(Date)**

_____ **(Print)** _____ **(Sign)**

_____ **(Date)**

All depths reported are from reference notch in top of TOC.
All measurements made in 10^{ths} of feet.

TOC = Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW09-PZM-028 **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 3/4/16 / 2:50pm	Developed by: Corey Cormican
Client: **EnviroAnalytics Group**	Date/Time Completed: 3/9/16 / 1:15pm	Company: Allied well
Well Location: Area B, Parcel _____	Weather/Site Conditions: 40°/overcast	Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 29.7 to 37.7
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+ / -) 2.6	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 40.6

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 40 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 12.7 ft. (C)
Petroleum/Product Present? *Y* or *N* Thickness (ft.): _____	Height of Water Column: (B - C) 27.3 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): .6 ft.	Wetted Bore Volume: (A x D) 4.4 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: PVC Surge block

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	29.7-37.7	5	20	4.5	Grey, Heavy silt, No odor, Not Clear
2	29.7-37.7	5	20	4.5	Grey, some silt, No odor, Clear @ 9 vol
		Cumulative Totals: (Minimum of 3 Well Volumes)	40	9	

Final Depth to Water (from TOC): 12.10

Thickness of Any Sediment Remaining in Well: .2

All depths reported are from reference notch in top of TOC.

Well ID: SW09-PZM-028
Date: 3/4/16

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

6, Drums, 250 gal. Purge Complete.

F. Signatures

Field Representative(s): Corey Cormican [signature] 3/4/16

Print Name | Signature | Date

Print Name | Signature | Date

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW09-PZM06B **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 02/5/16 / 12:00pm	Developed by: Corey Cormican
Client: **EnviroAnalytics Group**	Date/Time Completed: 2/5/16 / 1:50 pm	Company:
Well Location: Area B, Parcel _____	Weather/Site Conditions: 35°/overcast	Allied well
		Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 3' to _____
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+ / -) 2.6	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 78'

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 79.6' ft. (B)
~~Well (PVC) Volume: 0.163 gal/ft. (A)~~ 0.0102	Depth to Static Water Level (TOC): 2.11 ft. (C)
Petroleum/Product Present? *Y* or *N* Thickness (ft.): _____	Height of Water Column: (B - C) 77.49 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 0 ft.	Wetted Bore Volume: (A x D) .8 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: No Surge Required

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1			3	3.75	Clear w/organics 100% clear @ 3.7 Vol
		Cumulative Totals: (Minimum of 3 Well Volumes)	3	3.75	

Final Depth to Water (from TOC): 77.5

Thickness of Any Sediment Remaining in Well: 0

All depths reported are from reference notch in top of TOC.

Well ID: SW09-PZM0068
Date: 2/5/16

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

_____
_____
_____
_____
_____
_____

F. Signatures

Field Representative(s): Corey Cormican _____ 2/5/16
Print Name Signature Date

_____ _____ _____
Print Name Signature Date

All depths reported are from reference notch in top of TOC.
All measurements made in 10^{ths} of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)
Monitoring Well Development Form – Surge and Pump Method

Well ID: SW10-PZ002 **Well Permit No.:** _____

ARM Project No.: 150300M Client: **EnviroAnalytics Group** Well Location: Area B, Parcel B7	Date/Time Started: 11/20/15 1125 Date/Time Completed: 11/20/15 1250 Weather/Site Conditions: 50°F / CLEAR SKY	Developed by: ROB ZIEMBA Company: ALLIED ENV. Checked by:

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 7' to 17'
Well riser/screen material: *PVC*	Sandpack Interval: 5' to 17'
Difference between Grd and TOC: (+ / -)	Measured Total Depth of Well When Installed (F): (See Original Well Construction Diagram) 17'

B. Wetted Bore Volume Determination:

Well (PVC) Diameter: 2.0 in.	Well Total Depth (from TOC): 20.1 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to static water level: 7.5 ft. (C)
Petroleum/product present? *Y* or *N*. Thickness (ft.): N	Height of Water Column: (B - C) 12.6 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F – B): 2.1 ft.	Wetted Bore Volume: (A x D) 2.053 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: 1" PVC Riser, PVC Surge Block

Event No.	Screen Interval (ft.)	No. of Surge Strokes	Volume Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	7-10'	5	4.25	2.07	Light Brown water
2	10'-15'	5	4.25	2.07	Light Brown water w/ some very fine silty sand
3	15'-20'	5	4.25	2.07	very light Brown water w/ very fine silty Brown sand
4	15-20'	10	4.25	2.07	Lighter Brown water w/ fine Brown silt sand
5	15-20	10	23	11.203	very light Brown water turned clear
		Cumulative Totals:	40 GAL	19.48	

Final Depth to Water (from TOC): well manway

Thickness of any sediment remaining in well: 0

Sparrows Point Terminal
Monitoring Well Development Form – Surge and Pump Method
Well ID: SW10-PZMOTE **Date:** 11/20/15

ID numbers of IDW drums generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter, and/or Oil-Water Interface Probe
- ☐ Surge Block and 2 inch ID PVC casing extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 To 3 Clean Five-Gallon Bucket
- ☐ 55-Gallon drum(s) for development water. Drum non-hazardous waste labeling supplies.
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon all equipment that goes down-hole per appropriate Standard Operating Procedure (SOP)
- ☐ Staging down-hole equipment, tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

LIGHT BROWN WATER w/ VERY FINE SILTY BROWN SAND, NO ODOR TO WATER AFTER 25 GAL PUMPED, WELL RAN DRY, LET WELL RECHARGE, PUMPED ADDITIONAL 15 GAL UNTIL CLEAR.

F. Signatures:

Field Representative (s): ROB ZEMBA **(Print)** _____ **(Sign)**
11/20/15 **(Date)**
_____ **(Print)** _____ **(Sign)**
_____ **(Date)**

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet.

TOC = Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW10-PZM085 **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 2/8/16 / 12:00	Developed by: Corey Cormican
Client: **EnviroAnalytics Group**	Date/Time Completed: 2/8/16 / 14:00	Company: Allied well
Well Location: Area B, Parcel _____	Weather/Site Conditions: 42°/ sun	Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 3' to _____
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+ / -)	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 90.

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 79.93 ft. (B)
Well (PVC) Volume: ~~0.163 gal./ft. (A)~~ 0.0102	Depth to Static Water Level (TOC): 16.2 ft. (C)
Petroleum/Product Present? *Y* or *N* Thickness (ft.): _____	Height of Water Column: (B - C) 63.73 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): _____ ft.	Wetted Bore Volume: (A x D) .65 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: No Surge Required

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1			3	4.6	Clear from start to Finish
		Cumulative Totals: (Minimum of 3 Well Volumes)	3	4.6	

Final Depth to Water (from TOC): 32.8

Thickness of Any Sediment Remaining in Well: 0

All depths reported are from reference notch in top of TOC.

Well ID: SW10-PZM1085
Date: 2/8/16

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

_____

F. Signatures

Field Representative(s): Corey Cornicon

Print Name	Signature	Date
Corey Cornicon		2/8/16

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW-11-PZM005 **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 2/2/16 / 12:00pm	Developed by: Corey Cormican
Client: EnviroAnalytics Group	Date/Time Completed: 2/2/16 / 1:05pm	Company: Allied Well
Well Location: Area B, Parcel _____	Weather/Site Conditions: 46°/sun	Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 4.2 to 14.2
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+ / -) 2.2	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 16.7

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 16.6 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 6 ft. (C)
Petroleum/Product Present? *Y or N* Thickness (ft.): _____	Height of Water Column: (B - C) 10.6 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 1" ft.	Wetted Bore Volume: (A x D) 1.7 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: _____

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	6-11	5	10	5.9	Tan, silt, No odor Not clear @ 5.9 vol
2	11-16	5	25	14.7	Tan, silt, No odor clear @ 14.7 vol
	Cumulative Totals: (Minimum of 3 Well Volumes)				

Final Depth to Water (from TOC): 9.3

Thickness of Any Sediment Remaining in Well: 0

All depths reported are from reference notch in top of TOC.

Well ID: SW11-PZM005
Date: 2/2/16

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

1 Protective steel well Casing, 2 bags Concrete, 2 bags Sand, 20' Poly tubing

F. Signatures

Field Representative(s): Corey Cormican (Print Name) [signature] (Signature) 2/2/16 (Date)

_____ (Print Name) _____ (Signature) _____ (Date)

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW 12-PZP 001 **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 2-10-16 / 3.30	Developed by: DAVID Leon
Client: **EnviroAnalytics Group**	Date/Time Completed: 2-10-16 / 4.50	Company: Allied well
Well Location: Area B, Parcel B1	Weather/Site Conditions: 35° Mostly cloudy	Checked by:

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 4.7 to 14.7
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+ / -) 2.2	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 16

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 17.1 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 10.7 ft. (C)
Petroleum/Product Present? Y or N Thickness (ft.): _____	Height of Water Column: (B - C) 6.4 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 0 ft.	Wetted Bore Volume: (A x D) 1. gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: _____

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	6.9 11.9	5	15	15	Gray tan silt not clear
2	11.9-17.1	5	13	13	Gray tan silt clearing 13 vol
		Cumulative Totals: (Minimum of 3 Well Volumes)	28	28	

Final Depth to Water (from TOC): 14.2

Thickness of Any Sediment Remaining in Well: 0

All depths reported are from reference notch in top of TOC.

Well ID: SW12-PZP001
Date: _____

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

1 Drum 25' Poly tubing

F. Signatures

Field Representative(s): Corey Cormican [signature] 2/10/16

Print Name | Signature | Date

_____ _____ _____

Print Name | Signature | Date

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW13-PZM-003 **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 3/10/16 / 9:30am	Developed by: Corey Cormican
Client: **EnviroAnalytics Group**	Date/Time Completed: 3/10/16 / 10:30am	Company: Allied Well
Well Location: Area B, Parcel _____	Weather/Site Conditions: 64°/Sun	Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 4.7 to 14.7
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+ / -) 2.4	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 17.4

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 14.7 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 12.5 ft. (C)
Petroleum/Product Present? Y or N Thickness (ft.): _____	Height of Water Column: (B - C) 2.2 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 0 ft.	Wetted Bore Volume: (A x D) 0.4 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: PVC Surge block

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	12.5-14.7	5	20	50	Tan/gray - silt, Heavy strong creosote odor, clear @ 35 vol
		Cumulative Totals: (Minimum of 3 Well Volumes)	20	50	

Final Depth to Water (from TOC): 12.5

Thickness of Any Sediment Remaining in Well: 0

All depths reported are from reference notch in top of TOC.

Well ID: SW13-PZM1-003
Date: 3/10/16

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

Inteface probe did not read any contaminates
1, Drum - 25' poly tubing

F. Signatures

Field Representative(s): Cory Cormican — Print Name; [signature] — Signature; 3/10/16 — Date

_____ Print Name; _____ Signature; _____ Date

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW 13 - PZM025 **Well Permit No.:** _____

ARM Project No.: 150300M Client: **EnviroAnalytics Group** Well Location: Area B, Parcel B48	Date/Time Started: 2-10-16 / 930 Date/Time Completed: 2-10-16 / 10:30 Weather/Site Conditions: 32° windy - cool - cloudy	Developed by: DAVID Lean Company: Allied Well Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: [redacted] to 3'
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+ / -) 2.5	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 39.0

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 42.5 ft. (B)
Well (PVC) Volume: ~~0.163 gal~~/ft. (A) 0.0102	Depth to Static Water Level (TOC): 16.5 ft. (C)
Petroleum/Product Present? *Y* or *N* Thickness (ft.): ND	Height of Water Column: (B - C) 26. ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 0 ft.	Wetted Bore Volume: (A x D) 0.3 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: No surge Required

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
			5	16.	Grey, Some Silt, No odor Clear @ 16 vol
		Cumulative Totals: (Minimum of 3 Well Volumes)	15	16	

Final Depth to Water (from TOC): 16.5

Thickness of Any Sediment Remaining in Well: 0

All depths reported are from reference notch in top of TOC.

Well ID: SW 13-PZM025
Date: 2-10-16

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

1 Drum, 65' 1/4" Poly tubing

F. Signatures

Field Representative(s): [redacted] Jose DAVID Leon [signature] 02-10-16

Print Name | Signature | Date

_____ _____ _____

Print Name | Signature | Date

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW13-PZMW1 **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 12 / 2	Developed by: Jesse
Client: **EnviroAnalytics Group**	Date/Time Completed: 12 / 2	Company: Allied
Well Location: Area B, Parcel 4	Weather/Site Conditions: Rain 50° F	Checked by: Jesse

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 120 to 125
Well riser/screen material: *PVC* 2"	Sandpack Interval: 116 to 125
Difference between Ground Surface and TOC: (+ / -)	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 125

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 127.8 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 15.7 ft. (C)
Petroleum/Product Present? *Y* or *N*. Thickness (ft.): _____	Height of Water Column: (B - C) 112.1 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): _____ ft.	Wetted Bore Volume: (A x D) 18.27 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: 1" PVC surge Block

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	110-115	5	3 gal	2.27	light Brown to clear
2	115-120	5	3 gal	2.27	Cloudy to clear
3	120-125	5	3 gal	2.27	Cloudy to Clear
4	125-127.8	5	35 gal	26.51	Cloudy to clear
		Cumulative Totals: (Minimum of 3 Well Volumes)	44 gals	33.37	

Final Depth to Water (from TOC): 15.3

Thickness of Any Sediment Remaining in Well: _____

All depths reported are from reference notch in top of TOC.

Well ID: _____

Date: _____

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

_____

_____

_____

_____

_____

_____

F. Signatures

Field Representative(s): Jesse Zagurski (Print Name) _____ (Signature) 12/2/15 (Date)

_____ Print Name _____ Signature _____ Date

All depths reported are from reference notch in top of TOC.
All measurements made in 10^{ths} of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW 14-PZM-004 **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 3/9/14 / 3:00pm	Developed by: Cory Cormican
Client: **EnviroAnalytics Group**	Date/Time Completed: 3/9/14 / 4:00pm	Company: Allied well
Well Location: Area B, Parcel _____	Weather/Site Conditions: 81°/Sun	Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 3.4 to 13.4
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+ / -) 2.7	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 16.4

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 16.3 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 5.8 ft. (C)
Petroleum/Product Present? *Y or N* Thickness (ft.): _____	Height of Water Column: (B - C) 10.5 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): .1 ft.	Wetted Bore Volume: (A x D) 1.7 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: PVC Surge Block

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
~~1~~	~~3.4-13.1~~				
1	5.8-10.8	5	10	5.9	Tan, Heavy silt, No odor, Not clear
2	10.8-13.4	5	10	5.9	Tan, some silt, No odor, clear @ 11.8 vol
		Cumulative Totals: (Minimum of 3 Well Volumes)	20	11.8	

Final Depth to Water (from TOC): 3.7

Thickness of Any Sediment Remaining in Well: 0

All depths reported are from reference notch in top of TOC.

Well ID: SW14-PZM1-004
Date: 3/9/16

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

1 Drum, 25' poly tubing, 2 bags Concrete, 1-5' steel protective well Casing, 1 bag #2 sand

F. Signatures

	Print Name	Signature	Date
Field Representative(s):	[illegible]	Corey Cormican	3/9/16

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)
Monitoring Well Development Form – Surge and Pump Method

Well ID: SWLS-PZM005 **Well Permit No.:** _____

ARM Project No.: 150300M Client: **EnviroAnalytics Group** Well Location: Area B, Parcel _____	Date/Time Started: 11/24/10:34 Date/Time Completed: 11/24/12:00 Weather/Site Conditions: Sunny 44°F	Developed by: Jesse Z. Company: Allied Checked by: _____

A. Well Construction Details

Well Cover Type: (Stick-up) or *Flush-Mount*	PVC Screen Interval: ~~8'~~ 7' (PNU) to 17'
Well riser/screen material: (PVC)	Sandpack Interval: ~~7'~~ 5' to 17'
Difference between Grd and TOC: (+/-) 6"	Measured Total Depth of Well When Installed (F): (See Original Well Construction Diagram) 17'

B. Wetted Bore Volume Determination:

Well (PVC) Diameter: 2.0 in.	Well Total Depth (from TOC): 20.9 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to static water level: 4.7 ft. (C)
Petroleum/product present? *Y* or (*N*) Thickness (ft.): _____	Height of Water Column: (B - C) 16.2 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F – B): _____ ft.	Wetted Bore Volume: (A x D) 2.5 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: PVC Surge Block 1" PVC

Event No.	Screen Interval (ft.)	No. of Surge Strokes	Volume Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	0-5	5	3 gal	2.27	Reddish light Brown Sandy Silt
2	5-10	5	3 gal	2.27	light to Medium Brown Sandy Silt
3	10-15	5	3 gal	2.27	Medium Brown Sandy Silt
4	15-20	5	35 gal	26.51	clear
		Cumulative Totals:	44 gals	33.32	

Final Depth to Water (from TOC): ~~20.9~~ 13.6

Thickness of any sediment remaining in well: _____

Well ID: SW-15-P2M005 Date: _____

ID numbers of IDW drums generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter, and/or Oil-Water Interface Probe
- ☐ Surge Block and 2 inch ID PVC casing extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 To 3 Clean Five-Gallon Bucket
- ☐ 55-Gallon drum(s) for development water. Drum non-hazardous waste labeling supplies.
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon all equipment that goes down-hole per appropriate Standard Operating Procedure (SOP)
- ☐ Staging down-hole equipment, tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

_____

_____

_____

_____

_____

F. Signatures:

Field Representative (s): _____ **(Print)** _____ **(Sign)**

_____ **(Date)**

_____ **(Print)** _____ **(Sign)**

_____ **(Date)**

All depths reported are from reference notch in top of TOC.
All measurements made in 10^{ths} of feet.

TOC = Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: Sw-15-PZM-031 **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 3/3/16 / 2:45pm	Developed by: Corey Cormican
Client: **EnviroAnalytics Group**	Date/Time Completed: 3/3/16 / 3:50pm	Company: Allied Weld
Well Location: Area B, Parcel _____	Weather/Site Conditions: 45°/overcast	Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 39.3 to 49.3
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+ / -) 2.6	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 52.2

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 52.2 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 17 ft. (C)
Petroleum/Product Present? *Y* or *N*. Thickness (ft.): _____	Height of Water Column: (B - C) 35.2 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 0 ft.	Wetted Bore Volume: (A x D) 5.8 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: PVC Surge Block

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	39.3 - 49.3	5	18	3.1	Tan, A lot of silt, No odor, Not clear
2	39.3 - 49.3	5	30	5.1	Tan, A lot of silt, No odor, Not clear
3	39.3 - 49.3	5	20	3.4	Tan, A lot of silt, No odor, Clear @ 11.6
		Cumulative Totals: (Minimum of 3 Well Volumes)	68	11.6	

Final Depth to Water (from TOC): 22

hickness of Any Sediment Remaining in Well: 0

All depths reported are from reference notch in top of TOC.

Well ID: SW15-PZN1-031
Date: 3/3/16

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

_____

_____

_____

_____

_____

_____

F. Signatures

Field Representative(s): Corey Cormican [signature] 3/3/16

Print Name | Signature | Date

_____ _____ _____

Print Name | Signature | Date

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SWIS-92M085 **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 12 / 2	Developed by: Jesse
Client: **EnviroAnalytics Group**	Date/Time Completed: 12 / 2	Company: Allied
Well Location: Area B, Parcel 5	Weather/Site Conditions: Rain 50°F	Checked by: Jesse

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 92 to 97
Well riser/screen material: *PVC* 2"	Sandpack Interval: 90 to 97
Difference between Ground Surface and TOC: (+ / -)	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 97

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 103.9 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 14.9 ft. (C)
Petroleum/Product Present? *Y* or *N* Thickness (ft.): _____	Height of Water Column: (B - C) 89 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): _____ ft.	Wetted Bore Volume: (A x D) 2.42 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: 1" PVC Surge Block

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	88-92	5	3 gal	2.27	Clear
2	92-97	5	3 gal	2.27	light gray cloudy to clear
3	97-103	5	35 gal	26.51	Clear
		Cumulative Totals: (Minimum of 3 Well Volumes)	41 gals	31.05	

Final Depth to Water (from TOC): 15.3

Thickness of Any Sediment Remaining in Well: _____

All depths reported are from reference notch in top of TOC.

Well ID: _____

Date: _____

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

_____

_____

_____

_____

_____

_____

F. Signatures

Field Representative(s): Jesse Zagemi [signature] 12-2-15

Print Name | Signature | Date

_____ _____ _____

Print Name | Signature | Date

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW16-PZM003 **Well Permit No.:** _____

ARM Project No.: 150300M Client: **EnviroAnalytics Group** Well Location: Area B, Parcel B5	Date/Time Started: 11/20/15 150PM Date/Time Completed: 11/20/15 307 Weather/Site Conditions: 53°F / CLEAR SKY	Developed by: ROB ZIEMBA Company: ALLIED ENV Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 5' to 15'
Well riser/screen material: *PVC*	Sandpack Interval: 3' to 15'
Difference between Grd and TOC: (+/-) 3.1'	Measured Total Depth of Well When Installed (F): (See Original Well Construction Diagram) 15'

B. Wetted Bore Volume Determination:

Well (PVC) Diameter: 2.0 in.	Well Total Depth (from TOC): 14.4' ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to static water level: 7' ft. (C)
Petroleum/product present? *Y* or *N* Thickness (ft.): _____	Height of Water Column: (B - C) 7.4' ft. (D)
Initial Thickness of Sediment in Bottom of Well (F – B) 0.6 ft.	Wetted Bore Volume: (A x D) 1.20 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: PVC SURGE BLOCK, 1" PVC RISER

Event No.	Screen Interval (ft.)	No. of Surge Strokes	Volume Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	5-10'	5	2.5 GAL	2.08	DARK REDDISH-BROWN WATER w/ VISIBLY SUSPENDED PARTICULATE
2	10-15'	5	2.5 GAL	2.08	TAN WATER w/ FINE TAN SAND MIXED w/ RUST FLAKES
3	10-15'	5	2.5 GAL	2.08	PALE TAN WATER w/ FINE TAN SAND w/ RUST FLAKES
4	10-15'	6	3 GAL	2.5	PALE TAN WATER w/ VERY FINE TAN SAND
5	10-15'	10	39.5 GAL	32.91	VERY PALE TAN WATER → CLEAR
		Cumulative Totals:	50	41.65	

Final Depth to Water (from TOC): 13.1'

Thickness of any sediment remaining in well: 0

Well ID: SW16-PZM003 Date: 11/20/15

ID numbers of IDW drums generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter, and/or Oil-Water Interface Probe
- ☐ Surge Block and 2 inch ID PVC casing extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 To 3 Clean Five-Gallon Bucket
- ☐ 55-Gallon drum(s) for development water. Drum non-hazardous waste labeling supplies.
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon all equipment that goes down-hole per appropriate Standard Operating Procedure (SOP)
- ☐ Staging down-hole equipment, tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

PUMPED ~~[illegible]~~ ~~[illegible]~~ LOTS OF FINE TAN SAND W/ VARIED SMALL PARTICULATES MIXED IN OUT DURING ~~[illegible]~~ INITIAL SURGINGS, LATER ~~CLEARED~~ TURNED TO ONLY CLOUDY WATER, THEN CLEARED ENTIRELY

F. Signatures:

Field Representative (s): ROB ZIEMBA (Print) [signature] (Sign)

11/20/15 (Date)

_____ (Print) _____ (Sign)

_____ (Date)

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet.

TOC = Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: SW16-PZM067 **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 2/5/16/9:15am	Developed by: Corey/Cormican
Client: **EnviroAnalytics Group**	Date/Time Completed: 2/5/16/11:15am	Company: Allied well
Well Location: Area B, Parcel _____	Weather/Site Conditions: 30°/overcast	Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 3' to _____
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+ / -) 2.5	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 79

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 82.5' ft. (B)
Well (PVC) ~~Volume: 0.163 gal./ft. (A)~~ 0.0102	Depth to Static Water Level (TOC): 15.95' ft. (C)
Petroleum/Product Present? *Y* or *N* Thickness (ft.): _____	Height of Water Column: (B - C) 66.55' ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 0 ft.	Wetted Bore Volume: (A x D) .7 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: No Surge Required

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1			5	7.1	Gray, some silt, No odor Clear @ 7.1 Vol
		Cumulative Totals: (Minimum of 3 Well Volumes)	5	7.1	

Final Depth to Water (from TOC): 64.25'

Thickness of Any Sediment Remaining in Well: 0

All depths reported are from reference notch in top of TOC.

Well ID: SW16-PZM067
Date: 2-5-16

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

_____

F. Signatures

Field Representative(s): Corey Cormican (Print Name) _____ (Signature) 2-5-16 (Date)

_____ (Print Name) _____ (Signature) _____ (Date)

All depths reported are from reference notch in top of TOC.
All measurements made in 10^{ths} of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: IM03-PCM-004 **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 2/26/16 / 2:45pm	Developed by: Corey Cormican
Client: **EnviroAnalytics Group**	Date/Time Completed: 2/26/16 / 3:45pm	Company:
Well Location: Area B, Parcel _____	Weather/Site Conditions: 38°/sun/windy	Allied well
		Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 5.0 to 15.0
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+ / -) 2.6	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 18.0

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 18.0 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 11 ft. (C)
Petroleum/Product Present? *Y or N* Thickness (ft.): _____	Height of Water Column: (B - C) 7 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 0 ft.	Wetted Bore Volume: (A x D) 1.1 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: _____

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	11-16	5	10	9	Black, A lot of silt, No odor, Did not clear
2	16-18	5	10	9	Black, A lot of silt, No odor, Did not clear
3	16-18	5	35	31.9	Black, A lot of silt, No odor, Clear @ 31.9 vol
		Cumulative Totals: (Minimum of 3 Well Volumes)	55.5	49.9	

Final Depth to Water (from TOC): 7

Thickness of Any Sediment Remaining in Well: 0

All depths reported are from reference notch in top of TOC.

Well ID: TM03-PZM-004
Date: 2/26/16

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

_____

_____

_____

_____

_____

_____

F. Signatures

Field Representative(s): Corey Cormican [signature] 2/26/16

Print Name | Signature | Date

_____ _____ _____

Print Name | Signature | Date

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: TM03-PZM-037 **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 3-1-16 / 10:20am	Developed by: Corey C
Client: **EnviroAnalytics Group**	Date/Time Completed: 3-1-16 / 12:30pm	Company: Allied well
Well Location: Area B, Parcel _____	Weather/Site Conditions: 57°/sun	Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 39.5 to 49.5
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+ / -) 2.5	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 51.8

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 49.7 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 12.1 ft. (C)
Petroleum/Product Present? *Y* or *N.* Thickness (ft.): _____	Height of Water Column: (B - C) 37.6 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 2.11' ft.	Wetted Bore Volume: (A x D) 6.1 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: PVC Surge Block

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	39.5-49.5	5	15	2.4	Brown, silty, No odor Not clear
2	39.5-49.5	5	25	4	Brown, silty, No odor Not clear
3	39.5-49.5	5	15	2.4	slightly little Brown, silt, No odor clear @ 8.8 vol
Cumulative Totals: (Minimum of 3 Well Volumes)			55 gal	8.8	

Final Depth to Water (from TOC): 12.1

Thickness of Any Sediment Remaining in Well: 1

All depths reported are from reference notch in top of TOC.

Well ID: TM03-PZM-037
Date: 3/1/16

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

6 Drums, 65' Poly tubing, 250 gal. purge Complete

F. Signatures

Field Representative(s): Corey C. (Print Name) _____ (Signature) 3/1/16 (Date)

_____ Print Name _____ Signature _____ Date

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: TMOS-PZM-005 **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 3/2/16 / 3:15pm	Developed by: Corey Cormican
Client: **EnviroAnalytics Group**	Date/Time Completed: 3/2/16 / 4:15pm	Company: Allied well
Well Location: Area B, Parcel _____	Weather/Site Conditions: 40°/sun/windy	Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 4.8 to 14.8
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+ / -) 2.4	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 17.6

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 17.1 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 10.1 ft. (C)
Petroleum/Product Present? *Y* or *N*. Thickness (ft.): _____	Height of Water Column: (B - C) 7 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): .5 ft.	Wetted Bore Volume: (A x D) 1.1 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: PVC Surge block

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	10.1-15.1	5	15	13.6	Dark Brown, silt, No odor Heavy Not clear
2	10.1-15.1	5	15	13.6	Brown, silt, No odor Some Clear @ 27.2 vo
	Cumulative Totals: (Minimum of 3 Well Volumes)		30	27.2	

Final Depth to Water (from TOC): 10.1

Thickness of Any Sediment Remaining in Well: .2

All depths reported are from reference notch in top of TOC.

Well ID: TM05-PZM-005
Date: 3/2/16

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

1 Drum, 25' Poly Tubing

F. Signatures

Field Representative(s): Corey Cormican [signature] 3/2/16

Print Name | Signature | Date

Print Name | Signature | Date

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: TM05-PZM-0410 **Well Permit No.:** _____

ARM Project No.: 150300M	Date/Time Started: 3/3/16 1:30pm	Developed by: Corey Cormier
Client: **EnviroAnalytics Group**	Date/Time Completed: 3/4/16 10:45am	Company: Allied Well
Well Location: Area B, Parcel _____	Weather/Site Conditions: 52°/overcast	Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 40.7 to 50.7
Well riser/screen material: *PVC*	Sandpack Interval: _____ to _____
Difference between Ground Surface and TOC: (+ / -) 2.5	Measured Total Depth of Well When Installed (TOC) (F): (See Original Well Construction Diagram) 53.5

B. Wetted Bore Volume Determination

Well (PVC) Diameter: 2.0 in.	Well Total Depth (TOC): 53.5 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to Static Water Level (TOC): 15.3 ft. (C)
Petroleum/Product Present? *Y or N* Thickness (ft.): _____	Height of Water Column: (B - C) 38.2 ft. (D)
Initial Thickness of Sediment in Bottom of Well (F - B): 0 ft.	Wetted Bore Volume: (A x D) 6.2 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: PVC Surge Block

Event No.	~~Screen~~ Surge Interval (ft.)	No. of Surge Strokes	Volume of Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	40.7-50.7	5	30	4.8	Black, Heavy silt, No odor, Not clear
2	40.7-50.7	5	20	3.2	Black, Heavy silt, No odor, Not clear
3	40.7-50.7	5	20	3.2	Slightly Black, Heavy silt, No odor, Clear @ 11.2 vol
		Cumulative Totals: (Minimum of 3 Well Volumes)	70	11.2	

Final Depth to Water (from TOC): 20.7

Thickness of Any Sediment Remaining in Well: 0

All depths reported are from reference notch in top of TOC.

Well ID: TM05-PZM-040
Date: 3/3/16

ID Numbers of IDW Drums Generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter and/or Oil-Water Interface Probe
- ☐ Surge Block and 2-inch ID PVC Casing Extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 to 3 Clean Five-gallon Buckets
- ☐ 55-gallon Drum(s) for Development Water; Drum Non-hazardous Waste Labeling Supplies
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon All Equipment that Goes Down-hole per Appropriate Standard Operating Procedure (SOP)
- ☐ Staging Down-hole Equipment, Tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

_____

_____

_____

_____

_____

_____

F. Signatures

Field Representative(s): Corey Cornicar [signature] 3/3/16

Print Name Signature Date

_____ _____ _____

Print Name Signature Date

All depths reported are from reference notch in top of TOC.
All measurements made in 10ths of feet

TOC = from Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

ARM Group Inc.

Earth Resource Engineers and Consultants

TS10-PDM008

Sparrows Point Terminal (SPT)

Monitoring Well Development Form – Surge and Pump Method

Well ID: TS10-PDM005 **Well Permit No.:** _____

ARM Project No.: 150300M Client: **EnviroAnalytics Group** Well Location: Area B, Parcel B7	Date/Time Started: 11/20/15 / 10:10 Am Date/Time Completed: 11/24/15 / 11:15 Am Weather/Site Conditions: 50°F / clear sky	Developed by: Rob Zieman Company: Allied ENV Checked by: _____

A. Well Construction Details

Well Cover Type: *Stick-up* or *Flush-Mount*	PVC Screen Interval: 4' to 14'
Well riser/screen material: PVC	Sandpack Interval: 3' to 14'
Difference between Grd and TOC: (+/-) 2.6'	Measured Total Depth of Well When Installed (F): (See Original Well Construction Diagram) 14'

B. Wetted Bore Volume Determination:

Well (PVC) Diameter: 2.0 in.	Well Total Depth (from TOC): 13.2 ft. (B)
Well (PVC) Volume: 0.163 gal./ft. (A)	Depth to static water level: 5.6' ft. (C)
Petroleum/product present? *Y or N* Thickness (ft.): _____	Height of Water Column: (B - C) 7.6' ft. (D)
Initial Thickness of Sediment in Bottom of Well (F – B): 1.2' ft.	Wetted Bore Volume: (A x D) 1.23 gal. (E)

C. Surge and Pump Event Summary Data

Description of Surge Equipment: 1" PVC Riser, PVC surge block

Event No.	Screen Interval (ft.)	No. of Surge Strokes	Volume Water Removed (gal.)	Bore Volumes of Water Removed	Qualitative Description of Color/Turbidity/Odors/Other
1	4'-8'	5	2.5GAL	2.03	very dark grey significant sediment (fine grey)
2	8-11'	5	2.5GAL	2.03	dark grey water w/ some amount of fine grey sand
3	10-14'	5	5GAL	4.06	dark grey water, some amount grey fine sand
4	9-14'	5	5GAL	4.06	medium cloudy, less sediment than previous event
5	9-14'	10	35GAL	28.42	light grey, appreciably clear
		Cumulative Totals:	50GAL	40.6	

Final Depth to Water (from TOC): 5.4 FT

Thickness of any sediment remaining in well: 0

Well ID: TS10-PDM005

TS10-PDM008

Date: 11/20/15

ID numbers of IDW drums generated:

1. _____
2. _____
3. _____

D. Checklists

Equipment Check List:

- ☐ Original Well Construction Diagram
- ☐ Well Development Form
- ☐ Clean Weighted Tape for Determining Total Well Depth and Depth to Any Sediment or Possible Blockages Within the Well
- ☐ Water Level Meter, and/or Oil-Water Interface Probe
- ☐ Surge Block and 2 inch ID PVC casing extensions
- ☐ Appropriate Pump
- ☐ Disposable Pump Tubing
- ☐ Clean Paper Towels
- ☐ Alconox Detergent
- ☐ Clean Brushes for Decontamination Work
- ☐ Distilled Water for Rinsing Equipment
- ☐ 2 New, Clean Spray Bottles for Spray Distilled Water
- ☐ 2 To 3 Clean Five-Gallon Bucket
- ☐ 55-Gallon drum(s) for development water. Drum non-hazardous waste labeling supplies.
- ☐ Personal Protective Equipment Per Health and Safety Plan

Quality Control Procedures Include:

- ☐ Decon all equipment that goes down-hole per appropriate Standard Operating Procedure (SOP)
- ☐ Staging down-hole equipment, tubing, etc. on Clean Plastic Sheeting
- ☐ _____

E. Notes/Comments

Ended Depth of well 14.4'. Purge water smelled strongly of salt marsh water (salty smell w/ smell of decaying vegetation). Water cleared @ middle of last purge volume.

F. Signatures:

Field Representative (s): Rob Ziemba (Print) _____ (Sign)

11/20/15 (Date)

_____ (Print) _____ (Sign)

_____ (Date)

All depths reported are from reference notch in top of TOC.
All measurements made in 10^{ths} of feet.

TOC = Top of PVC Casing
Grd = Ground Surface
TD = Total Depth

APPENDIX F

TRIAD ENGINEERING, INC.

MD | OH | PA | VA | WV

TRIAD Listens, Designs & Delivers

April 1, 2016

Mr. James Calenda
EnviroAnalytis Group, LLC
1650 Des Peres Road, Suite 303
St. Louis, MO 63131

Re: Sparrows Point Well Survey
Sparrows Point, MD
Triad Engineering Job No. 03-15-0343

Mr. Calenda:
Below are the specified surveyed wells, date of last field work completed on March 31, 2016. The coordinate values shown were derived from G.P.S. observations based on National Geodetic Surveys stations “GIS 1”, PID AC7684 and “GIS 2”, PID AC7685 which purport to be on NAD83(2011) Maryland Grid coordinate system with NAVD88 (AMSL) elevations.

DESCRIPTION	NORTHING	EASTING	TOP CASING ELEVATION	GROUND AT WELL ELEVATION
RW01-PZM020	572285.02	1456497.40	12.72	10.15
RW02-PZM000	572167.62	1456601.84	12.39	10.05
RW02-PZM020	572158.64	1456606.28	13.02	10.27
RW03-PZM003	572259.59	1456590.24	10.87	10.31
RW04-PZM003	572273.38	1456415.50	11.11	10.27
RW05-PZP001	572192.49	1456509.88	13.03	10.76
RW06-PZM001	572173.11	1456427.80	12.17	10.20
RW07-PZM004	572145.46	1456308.46	13.70	10.61
RW07-PZM017	572137.29	1456311.82	12.94	10.71
RW08-PZM003	572100.62	1456449.49	11.38	10.76
RW09-PZM004	572065.65	1456324.72	13.67	10.76
RW10-PZM004	572028.98	1456365.53	10.92	11.22
RW10-PZM020	572016.81	1456385.68	11.86	11.47
RW10-PZM065	572031.12	1456376.20	10.75	10.98
RW11-PZM004	572016.05	1456486.05	13.79	11.11
RW12-PZM004	572051.83	1456593.90	13.88	11.16
RW13-PZM020	571971.43	1456592.59	13.05	11.17
RW14-PZM020	572204.47	1456202.53	13.60	11.24
RW15-PZM020	571989.55	1456088.94	12.17	11.84
RW16-PZM020	571861.44	1456127.25	13.89	11.65
RW17-PZM019	571801.70	1456321.19	13.73	11.43
RW18-PZM047	572418.32	1456080.56	15.69	13.70

RW19-PZM020	571975.38	1455960.61	13.53	11.28
RW19-PZM050	571973.56	1455966.33	12.95	11.17
RW19-PZP003	571981.70	1455964.46	13.49	11.16
RW20-PZM020	571694.60	1456021.05	13.03	11.14
RW20-PZM050	571704.36	1456022.96	11.87	11.09
RW20-PZP000	571705.48	1456018.60	13.54	11.06
RW21-PZM023	571512.69	1456045.20	12.93	10.86
RW-RW89	572109.51	1456513.71	11.35	10.97
RW-RW90	572154.39	1456467.19	11.08	10.55
RW-RW93	NOT INSTALLED			
RW-RW95	572243.17	1456479.97	12.62	10.81
RW-RW97	572070.55	1456523.86	13.08	10.93
RW-RWBW-20	WELL CASING DAMAGED, COULD NOT SURVEY (SEE FIGURE 1.0)			14.04
RW-RWBW-21	572425.20	1456092.04	15.11	14.75
SW03-PZM003	571205.39	1456735.24	14.54	10.93
SW03-PZM060	571201.38	1456738.70	14.93	10.92
TS04-PDM004	571781.18	1456010.86	13.69	11.10
TS04-PPM007	571713.99	1455885.63	10.20	10.24
TS04-PZM023	571723.19	1455884.69	10.05	10.30
SW-061-MWS	567005.21	1457693.91	15.83	13.65
SW-059-MWS	567199.64	1458459.63	15.99	13.64
SW-060-MWS	567889.61	1457693.79	14.12	12.20
SW-051-MWS	565671.75	1462655.02	13.40	10.99
SW-049-MWS	566666.92	1463263.78	11.55	11.89
SW-050-MWS	565719.62	1463489.52	10.62	8.04
SW-066-MWS	564235.89	1458826.45	13.02	10.77
SW-071-MWS	564957.19	1460809.42	16.63	14.25
SW-072-MWS	564563.01	1460661.22	14.60	12.02
SW-073-MWS	564422.72	1461025.48	14.76	12.43
SW-065-MWS	564008.99	1457839.54	12.27	12.57
SW-057-MWS	567666.75	1460456.19	12.31	12.62
SW-058-MWS	568148.01	1459749.57	11.45	11.75
SW-056-MWS	566048.47	1460677.32	11.52	8.72
SW-054-MWS	566520.20	1461893.20	13.35	10.89
SW-055-MWS	565946.68	1461317.07	11.87	9.28
SW-053-MWS	567410.98	1461986.20	13.84	14.06
SW-037-MWS	563571.81	1461007.95	13.28	10.96
SW-035-MWS	563772.91	1460297.91	13.43	11.06
SW-034-MWS	563668.32	1459941.32	12.62	10.16
SW-032-MWS	563537.58	1458639.17	12.64	10.49
SW-027-MWS	564973.53	1456177.11	16.98	14.33
SW-028-MWS	564518.61	1456324.45	15.59	13.20

SW-021-MWS	568534.52	1457422.96	12.83	10.42
SW-022-MWS	568222.29	1457122.05	14.31	12.20
SW-023-MWS	568116.87	1456637.37	14.66	12.79
SW-024-MWS	568021.88	1456157.41	14.03	11.62
SW-025-MWS	566943.92	1456126.02	13.16	11.03
SW-026-MWS	566649.66	1455514.08	11.51	8.61
SW-040-MWS	564306.40	1463005.67	13.01	11.16
SW-041-MWS	564416.60	1463773.99	13.47	11.80
SW-042-MWS	564740.08	1464633.24	7.40	7.78
SW-043-MWS	565729.24	1464430.00	10.26	8.53
SW-044-MWS	566398.36	1464363.35	8.61	8.99
SW-048-MWS	568760.44	1463140.98	16.73	14.27
SW-046-MWS	569504.23	1464948.41	9.80	10.13
SW-047-MWS	570242.63	1464394.66	20.24	20.56
SW-038-MWS	563432.87	1461357.62	16.28	13.76
SW-039-MWS	563507.65	1462484.16	19.91	17.91
SW-031-MWS	563598.44	1458394.82	13.41	10.93
SW-070-MWS	565612.92	1459619.82	11.17	9.10
SW-052-MWS	565095.06	1462682.05	13.88	11.49
SW-045-MWS	568357.88	1463927.89	13.10	11.17
SW-043-MWI	565719.77	1464429.47	10.43	8.56
SW-045-MWI	568344.09	1463932.84	12.86	10.92
SW-074-MWI	567047.75	1464301.55	10.20	8.20
SW-036-MWS	563678.17	1460774.35	13.38	10.82
SW-033-MWS	563597.45	1459274.61	10.28	10.59
SW-030-MWS	563547.95	1458146.61	14.72	12.32
SW-074-MWS	567038.13	1464298.66	11.32	8.79
SW-062-MWS	567420.73	1456909.57	16.81	14.39
SW-063-MWS	565322.90	1456892.20	19.98	17.54
SW-067-MWS	564917.48	1458453.61	14.85	12.66
SW-068-MWS	565823.84	1458036.16	16.87	14.55
SW-069-MWS	566309.02	1458770.00	16.56	14.23
SW-029-MWS	563980.59	1456323.19	15.75	13.15
SW-064-MWS	564322.36	1457393.54	17.39	15.15
FM01-PZM003	568251.65	1460279.28	10.08	10.37
FM01-PZM041	568251.76	1460275.61	9.91	10.24
FM05-PZM004	568565.69	1462040.51	14.48	11.73
FM05-PZM024	568578.67	1462043.77	14.47	12.04
SG07-PZM007	NOT INSTALLED			
SW06-PZM001	569184.69	1463625.88	17.29	14.92
SW06-PZM053	569188.45	1463637.32	16.75	14.59
SW07-PZM004	567658.52	1456050.21	14.52	12.02

SW07-PZM108	567665.11	1456048.67	15.76	11.56
SW08-PZM003	568091.75	1458990.33	11.75	9.37
SW08-PZM053	568090.03	1458982.75	12.02	9.67
SW09-PZM004	566974.91	1460293.50	13.16	10.34
SW09-PZM028	566965.08	1460295.30	12.70	10.48
SW09-PZM068	566970.72	1460290.93	13.31	10.32
NO DESC.	566975.78	1460287.86	13.03	10.17
SW10-PZM012	567312.59	1463288.23	7.91	4.82
SW10-PZM085	567286.63	1463311.33	7.83	4.88
SW11-PZM005	565794.79	1456073.98	13.54	11.35
SW12-PZP001	565989.17	1457438.18	17.66	15.57
SW13-PZM003	563493.91	1456407.34	16.26	14.01
SW13-PZM025	563498.66	1456410.45	15.59	13.56
SW13-PZM111	563502.75	1456409.98	15.37	13.66
SW14-PZM004	563392.23	1457680.38	15.85	13.80
SW15-PZM005	564367.29	1459534.16	14.83	12.17
SW15-PZM031	564371.72	1459531.84	14.90	12.02
SW15-PZM085	564367.22	1459539.25	14.23	12.15
NO DESC.	564374.63	1459537.53	14.50	12.19
SW16-PZM003	564524.42	1462434.76	14.94	12.80
SW16-PZM067	564528.56	1462441.95	15.33	13.06
TM03-PZM004	568852.92	1457628.81	12.66	10.34
TM03-PZM037	568849.30	1457622.17	12.08	10.38
TM05-PZM005	568837.40	1458595.64	12.76	10.62
TM05-PZM040	568830.24	1458596.23	12.83	10.70
TS10-PDM008	567529.89	1464010.26	6.74	3.88
SG07 PD	564025.39	1463980.66	17.93	15.19

Figure 1.0: RW-RWBW-20 Photographs

APPENDIX G

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW investigation	Project Number: 150300m
Well Number: FM01-PZM003	Date: 12-10-15
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft): 11.83	QED Controller Settings:
Depth to Water (ft) 3.93	Flow Rate (mL/min) 0.050 gal/min
Height of Water Column (ft):	Length of time Purged (min) 20

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1313	0.25	16.90	9.23	0.467	1.46	-384.5	363	Cloudy
1318	0.50	16.78	9.40	0.416	0.68	-383.8	305	
1323	0.75	16.49	9.50	0.384	0.75	-350.9	149	
1328	1.00	16.44	9.54	0.370	0.87	-337.9	78.7	
1333	1.25	16.42	9.55	0.369	0.88	-329.0	27.0	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
FM01-PZM003	1335	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2 - 1 L Amber	none	Y
		TAL-Metals	1 - 250 mL Plastic	HNO3 ~~none~~	Y
		Oil and Grease	1 - 1 L Amber	HCL	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	none	Y
		Cyanide	1 - 250 mL Plastic	NaOH ~~none~~	Y
Matrix Spike present? NO		Dissolved metals	1 - 250 mL Plastic	HNO3	Y
Duplicate assessed? NO					

Sampled By: L. Perrin Comments:

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M-10-3
Well Number: FM01-PZM041	Date: 2/18/16
Well Diameter (in): 1/2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 9.83	Flow Rate (mL/min) 500mL/min
Height of Water Column (ft):	Length of time Purged (min)

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
0823	0	11.92	4.98	4.502	6.71	-4.8	41.2	gray color
0828	0.5	13.57	6.87	5.134	1.03	-145.2	18.8	
0833	1.0	13.64	7.04	5.125	0.71	-152.4	5.89	clear
0838	1.5	13.79	7.13	5.112	0.57	-154.8	5.62	
0843	2.0	13.95	7.18	5.104	0.47	-153.9	4.04	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
FM01-PZM041	0848	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	N
Matrix Spike present?					
Duplicate assessed?					

Sampled By: LMG

Comments: Dissolved metals are Field Filtered

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft

_____ ft x _____ gal/ft = _____ (gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M-10-3
Well Number: FM05-PZM004	Date: 3/28/16
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 9.79	Flow Rate (mL/min) 250mL/min
Height of Water Column (ft):	Length of time Purged (min) 70

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1347	0	23.95	10.04	0.752	2.30	-130	93.8	
1352	0.2	22.33	10.26	0.773	1.67	-183	75.6	10.62 ft DTW
1357	0.4	20.77	10.30	0.794	1.68	-194	73.0	10.85 ft DTW
1402	0.6	19.92	10.31	0.807	1.72	-197	43.4	11.02 ft DTW
1407	0.8	19.31	10.25	0.825	1.74	-199	36.8	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
FM05-PZM004	1412	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	N
Matrix Spike present?					
Duplicate assessed?					

Sampled By: LMG

Comments: Dissolved metals are Field Filtered
DO was not properly calibrated

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft
_____ ft x _____ gal/ft = _____ (gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300 M-10-3
Well Number: FM05 - PZM024	Date: 3/28/16
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 9.62	Flow Rate (mL/min) 400 mL/min
Height of Water Column (ft):	Length of time Purged (min) 30

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1201	0	20.61	8.95	0.432	16.95	-181	135	
1206	0.5	18.28	7.01	0.434	8.79	-162	55.4	clear
1211	1.0	18.18	6.98	0.436	7.53	-151	23.7	
1216	1.4	18.34	6.97	0.435	7.09	-145	34.4	
1221	1.9	18.50	6.99	0.438	7.10	-144	17.5	
1226	2.4	18.62	7.01	0.443	6.93	-144	18.7	
1231	2.9	18.68	7.06	0.445	6.74	-145	17.1	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
FM05-PZM024	1236	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	N
Matrix Spike present?					
Duplicate assessed? YES					

Sampled By: LMG

Comments: Dissolved metals are Field Filtered

DO was not properly calibrated

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

SG07-PDM008

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW investigation	Project Number: 150300m
Well Number: SG07-PZM007	Date: 12-9-15
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft): 25.51	QED Controller Settings:
Depth to Water (ft) 17.77	Flow Rate (~~mL/min~~) 0.05 gal/min
Height of Water Column (ft): ~~26~~ 7.74	Length of time Purged (min) 15

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
		17.15	11.70					
1328	0.50	~~16.57~~	~~3.81~~	1.728	6.46	-344.6	28.8	
1333	0.75	16.81	11.71	1.705	6.19	-346.0	15.24	
1338	1.00	16.53	11.70	1.694	5.96	-347.4	7.62	
1343	1.25	16.80	11.69	1.677	5.85	-345.6	4.34	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SG07-PZM007	1345	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2 - 1 L Amber	none	Y
		TAL-Metals	1 - 250 mL Plastic	HNO3 ~~none~~	Y
		Oil and Grease	1 - 1L Amber	HCL	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	none	Y
		Cyanide	1 - 250 mL Plastic	NaOH ~~none~~	Y
Matrix Spike present? NO		Dissolved ~~Pb~~ metals	1 - 250 mL Plastic	HNO3	Y
Duplicate assessed? NO		PCBs	2 - 1L Amber	none	Y

Sampled By: L. Perrin Comments:

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M
Well Number: SW-021-MWS	Date: 2-4-16
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 10.60	Flow Rate (mL/min) 500 mL/min
Height of Water Column (ft):	Length of time Purged (min) 25

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
0820	0	15.07	10.13	1.146	9.43	-32.8	137	
0825	0.5	15.25	10.79	1.230	2.54	81.9	69.8	
0830	1.1	15.10	10.81	1.197	2.56	-103.5	26.3	
0835	1.75	15.08	10.89	1.197	2.43	-120.7	12.9	
0840	2.5	15.09	10.93	1.198	2.37	-129.9	9.38	
0845	3.1	15.09	10.101	1.207	2.23	-135.8	6.38	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW-021-MWS	0850	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	Y
Matrix Spike present?					
Duplicate assessed? Yes					

Sampled By: MG

Comments: Dissolved metals are Field Filtered

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group I
Earth Resource Engineers and Cons

Project Name: Area B GW Investigation	Project Number: 150300M
Well Number: SW-022-MWS	Date: 2-4-16
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 11.95	Flow Rate (mL/min) 500 mL/min
Height of Water Column (ft):	Length of time Purged (min) 25

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
0959	0	16.41	11.32	3.351	7.94	-168.4	138	
1004	0.5	17.08	12.43	3.378	1.59	-269.0	105	
1009	1.1	17.13	12.47	3.581	0.90	-263.4	17.0	
1014	1.75	17.14	12.46	3.635	0.79	-261.3	9.82	
1019	2.4	17.14	12.45	3.657	0.73	-255.5	4.98	
1024	2.9	17.15	12.44	3.684	0.68	-256.0	3.15	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW-022-MWS	1029	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	Y
Matrix Spike present?					
Duplicate assessed?					

Sampled By: LMG

Comments: Dissolved metals are Field Filtered

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1
_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation
Project Number: 150300M-10-3
Well Number: SW-023-MWS
Date: 2-12-16
Well Diameter (in): 2
One Well Volume (gal):
Total Depth (ft):
QED Controller Settings:
Depth to Water (ft) 12.31
Flow Rate (mL/min) 500 mL/min
Height of Water Column (ft):
Length of time Purged (min) 35

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1105	0	13.82	8.46	0.695	16.72	-180.4	53.2	
1110	0.5	14.64	10.21	0.730	1.42	-228.6	61.7	
1115	1.0	14.79	11.44	0.687	2.11	-195.8	19.9	
1120	1.5	14.69	11.65	0.715	3.24	-162.5	9.76	
1125	2.1	14.67	11.72	0.728	3.94	-147.0	6.37	
1130	2.7	14.67	11.76	0.734	4.35	-137.6	4.74	
1135	3.25	14.78	11.77	0.740	4.56	-133.6	3.37	
1140	3.80	14.64	11.76	0.743	4.72	-130.5	1.60	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW-023-MWS	1145	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	

Matrix Spike present?
Duplicate assessed?

Sampled By: LMG

Comments: Dissolved metals are Field Filtered

Casing Volume: 1" I.D. = 0.041 gal/ft - 2" I.D. = 0.163 gal/ft - 4" I.D. = 0.653 gal/ft - 6" I.D. = 1.47 gal/ft
_____ ft x _____ gal/ft = _____ (gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M-10-3
Well Number: SW-024-MWS	Date: 2-10-16
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 10.07	Flow Rate (mL/min) 500mL/min
Height of Water Column (ft):	Length of time Purged (min) 40

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1435	0	13.50	9.35	7.121	15.60	-124.8	81.8	clear
1440	0.5	14.97	8.05	7.486	1.42	-60.4	33.2	
1445	1.1	15.10	7.43	6.850	1.25	-17.4	12.5	
1450	1.75	14.75	7.24	5.562	1.85	-11.6	3.86	
1455	2.25	14.74	7.23	4.719	1.79	-24.4	2.51	
1500	2.80	14.75	7.21	4.264	1.60	-42.8	2.29	
1505	3.40	14.83	7.31	3.935	1.34	-61.7	2.34	
1510	4.0	14.72	7.35	3.742	1.21	-71.7	2.66	
1515	4.5	14.84	7.41	3.577	1.1	-74.9		

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW-024-MWS	1520	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	Y
Matrix Spike present?					
Duplicate assessed?					

Sampled By: LMG

Comments: Dissolved metals are Field Filtered

Casing Volume: 1" I.D. = 0.041 gal/ft - 2" I.D. = 0.163 gal/ft - 4" I.D. = 0.653 gal/ft - 6" I.D. = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M-10-3
Well Number: SW-025-MWS	Date: 2-11-16
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 10.50	Flow Rate (mL/min) 500 mL/min
Height of Water Column (ft):	Length of time Purged (min) 20

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
0830	0	13.89	8.78	1.883	4.65	24.7	240	gray/brown color
0835	0.9	14.41	8.68	1.834	1.13	-136.5	63.4	
0840	1.1	14.79	8.52	1.819	0.79	-179.8	23.7	
0845	1.7	14.67	8.46	1.813	0.63	-187.2	14.9	
0850	2.25	14.68	8.41	1.812	0.56	-190.1	9.49	clear

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW-025-MWS	0855	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	Y
Matrix Spike present?					
Duplicate assessed?					

Sampled By: UMG

Comments: Dissolved metals are Field Filtered

Casing Volume: 1" I.D. = 0.041 gal/ft - 2" I.D. = 0.163 gal/ft - 4" I.D. = 0.653 gal/ft - 6" I.D. = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M-10-3
Well Number: SW-026-MW5	Date: 3/30/16
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 9.71	Flow Rate (mL/min) 400 mL/min
Height of Water Column (ft):	Length of time Purged (min) 30

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1033	0	14.03	5.16	0.586	5.52	9	480	gray
1038	0.5	15.82	7.11	0.609	2.64	13	120	
1043	1.0	15.60	7.43	0.614	2.49	23	49.6	
1048	1.5	15.43	7.50	0.617	2.46	2	31.5	
1053	2.0	15.35	7.55	0.619	2.41	-15	21.8	
1058	2.5	15.31	7.61	0.628	2.28	-25	14.8	
1103	3.0	15.31	7.62	0.628	2.30	-19	10.8	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW-026-MW5	1108	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	Y
Matrix Spike present?					
Duplicate assessed?					

Sampled By: LMG

Comments: Dissolved metals are Field Filtered

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M-10-3
Well Number: SW-027-MWS	Date: 2-11-16
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 4.51	Flow Rate (mL/min) 500 ml/min
Height of Water Column (ft):	Length of time Purged (min) 20

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
0939	0	7.77	8.05	1.359	17.73	-28.8		turbidity meter not working
0944	0.5	8.63	8.15	1.392	4.78	-16.2		
0949	1.0	8.88	8.07	1.377	6.10	-3.1		
0954	1.5	8.84	8.02	1.378	6.15	5.3		
0959	2.1	8.93	7.97	1.374	6.12	12.2		

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW-027-MWS	1004	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	Y
Matrix Spike present?					
Duplicate assessed?					

Sampled By: LMG

Comments: Dissolved metals are Field Filtered

Casing Volume: 1" I.D. = 0.041 gal/ft - 2" I.D. = 0.163 gal/ft - 4" I.D. = 0.653 gal/ft - 6" I.D. = 1.47 gal/ft
_____ ft x _____ gal/ft = _____ (gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300 M-10-3
Well Number: SW-028-MWS	Date: 2-12-16
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 6.91	Flow Rate (mL/min) 500 mL/min
Height of Water Column (ft):	Length of time Purged (min) 30

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
0846	0	12.15	7.81	0.821	8.84	61.3	18.2	Clear
0851	0.5	11.78	7.29	0.732	4.69	45.8	15.8	
0856	1.0	11.58	7.35	0.765	3.98	-25.9	24.5	
0901	1.6	11.48	7.42	0.762	3.66	-66.1	27.6	
0906	2.2	11.55	7.45	0.758	3.36	-80.0	22.8	
0911	2.75	11.76	7.52	0.755	3.16	-91.3	15.8	
0916	3.4	11.77	7.56	0.754	2.98	-98.5	14.0	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW-028-MWS	0921	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	Y
Matrix Spike present?					
Duplicate assessed?					

Sampled By: LMG

Comments: Dissolved metals are Field Filtered

Casing Volume: 1" I.D. = 0.041 gal/ft - 2" I.D. = 0.163 gal/ft - 4" I.D. = 0.653 gal/ft - 6" I.D. = 1.47 gal/ft
_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M-10-3
Well Number: SW-029-MWS	Date: 2-11-16
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 11.0	Flow Rate (mL/min) 500 mL/min
Height of Water Column (ft):	Length of time Purged (min) 35

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1421	0	12.34	7.99	2.572	18.60	-204.3	199	yellow color
1426	0.5	14.29	10.09	5.342	1.40	-307.2	62.9	
1431	1.1	14.48	10.01	5.284	0.61	-308.3	11.7	Clear
1436	1.7	14.58	9.75	5.246	0.46	-300.2	9.27	
1441	2.25	14.60	9.51	5.235	0.38	-293.7	5.74	
1446	2.75	14.67	9.32	5.242	0.35	-292.3	4.72	
1451	3.30	14.87	9.21	5.255	0.30	-295.6	4.37	
1456	3.75	14.85	9.11	5.277	0.27	-300.9	3.64	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW-029-MWS	1501	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	Y
Matrix Spike present?					
Duplicate assessed?					

Sampled By: LMG

Comments: Dissolved metals are Field Filtered

Casing Volume: 1" I.D. = 0.041 gal/ft - 2" I.D. = 0.163 gal/ft - 4" I.D. = 0.653 gal/ft - 6" I.D. = 1.47 gal/ft
_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW investigation	Project Number: 150 300M
Well Number: SW-030-MW5	Date: 2-1-16
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 5.30	Flow Rate (mL/min) 500 mL/min
Height of Water Column (ft):	Length of time Purged (min) 25

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance ( )	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1429	0.1	12.20	10.92	0.922	8.89	-103.5	421	
1434	0.6	11.92	11.51	1.324	2.95	-148.9	143	
1439	1.1	11.75	11.48	1.306	1.95	-163.8	36.1	
1444	1.7	11.71	11.48	1.294	1.42	-174.0	17.3	
1449	2.25	11.74	11.50	1.278	1.15	-182.3	11.3	
1454	2.8	11.74	11.49	1.264	0.85	-176.0	8.88	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW-030-MW5	1505	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	Y
Matrix Spike present?					
Duplicate assessed?					

Sampled By: LMG

Comments: Dissolved metals are Field Filtered

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M
Well Number: SW-031-MW5	Date: 2-1-16
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 4.03	Flow Rate (mL/min) 500mL/min
Height of Water Column (ft):	Length of time Purged (min) 25

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1320	0	11.39	9.89	1.472	9.60	-111.6	616	
1325	0.5	10.72	9.71	1.533	3.76	-149.2	346	
1330	1.1	9.67	9.71	1.532	2.31	-163.9	101	
1335	1.8	9.24	9.83	1.525	1.71	-170.9	55.6	
1340	2.5	9.23	9.87	1.525	1.47	-175.4	35.6	
1345	3.0	9.18	9.87	1.524	1.32	-179.3	20.4	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW-031-MW5	1350	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	Y
Matrix Spike present?					
Duplicate assessed?					

Sampled By: LMG

Comments: Dissolved metals are Field Filtered

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300 M
Well Number: SW-032-MWS	Date: 2-1-16
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 7.25	Flow Rate (mL/min) 500 mL/min
Height of Water Column (ft):	Length of time Purged (min) 35

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
0846	0.1	15.08	7.20	9.340	8.57	-96.1	515	
0851	0.7	13.55	6.52	6.341	2.91	-92.2	177	
0856	1.25	12.01	8.165	2.703	1.60	-275.3	37.2	significantly less turbid
0901	1.8	11.86	9.35	2.540	1.11	-177.2	16.2	
0906	2.5	11.84	9.68	2.504	0.92	-167.7	12.2	
0911	3.1	11.91	9.91	2.465	0.79	-156.0	8.00	
0916	3.75	11.88	10.00	2.465	0.72	-135.2	6.82	
0921	4.2	11.78	10.09	2.447	0.64	-123.8	7.97	very clear
~~0926~~								

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW-032-MWS	0926	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	Y
Matrix Spike present?					
Duplicate assessed?					

Sampled By: LMG

Comments: Dissolved metals are Field Filtered

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M-10-3
Well Number: SW-033-MWS	Date: 2-10-16
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 9.66	Flow Rate (mL/min) 500 mL/min
Height of Water Column (ft):	Length of time Purged (min) 20

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
0953	0	11.99	9.73	1.907	19.27	-49.6	429	cloudy
0958	0.5	12.64	10.62	2.149	2.88	-106.2	293	
1003	1.0	11.93	10.59	2.143	2.13	-108.2	83.1	
1008	1.5	11.94	10.53	2.130	1.93	-114.2	52.5	
1013	2.2	11.87	10.47	2.123	1.66	-123.6	41.1	significantly clearer

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW-033-MWS	1018	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	Y
Matrix Spike present?					
Duplicate assessed?					

Sampled By: MG

Comments: Dissolved metals are Field Filtered

Casing Volume: 1" I.D. = 0.041 gal/ft - 2" I.D. = 0.163 gal/ft - 4" I.D. = 0.653 gal/ft - 6" I.D. = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M
Well Number: SW-034-MWS	Date: 2-1-16
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 11.27	Flow Rate (mL/min) 500mL/min
Height of Water Column (ft):	Length of time Purged (min) 20

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1103	0	14.53	10.24	1.872	7.38	-171.8	259	gray/cloudy turbidity
1108	0.55	15.01	11.25	2.251	2.64	-211.8	73.4	
1113	1.15	15.05	11.21	2.216	1.73	-200.2	17.1	very low turbidity/clear
1118	1.75	15.14	11.18	2.209	1.30	-199.7	4.41	
1123	2.4	15.20	11.18	2.210	1.05	-201.4	2.26	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW-034-MWS	1128	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	Y
Matrix Spike present?					
Duplicate assessed?					

Sampled By: LMG

Comments: Dissolved metals are Field Filtered

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M
Well Number: SW-035-MWS	Date: 2-1-16
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 8.51	Flow Rate (mL/min) 500mL/min
Height of Water Column (ft):	Length of time Purged (min) 30

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1207	0	14.27	10.09	1.468	8.61	-72.2	702	brown/cloudy turbid
1212	0.6	13.95	10.06	1.577	4.38	-85.9	225	
1217	1.2	13.90	10.20	1.578	3.64	-97.3	102	
1222	1.75	13.88	10.37	1.579	3.08	-110.7	40.9	less turbid
1227	2.45	13.87	10.46	1.568	2.60	-118.9	16.9	
1232	3.0	13.83	10.51	1.553	2.21	-125.7	6.53	very clear
1237	3.6	13.80	10.59	1.546	1.96	-133.5	5.04	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW-035-MWS	1242	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	Y
Matrix Spike present?					
Duplicate assessed?					

Sampled By: LMG

Comments: Dissolved metals are Field Filtered
DO did not stabilize

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft
_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M-10-3
Well Number: SW-036-MWS	Date: 2-10-16
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 12.02	Flow Rate (mL/min) 500mL/min
Height of Water Column (ft):	Length of time Purged (min) 20

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
0837	0	13.07	6.92	2.283	8.70	-164.7	155	
0842	0.5	13.55	11.23	2.521	1.47	-281.4	173	
0847	1.0	13.62	11.47	2.525	0.90	-261.5	87.2	
0852	1.5	13.60	11.54	2.507	0.72	-275.5	33.6	
0857	2.1	13.48	11.56	2.498	0.63	-274.1	18.5	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW-036-MWS	0902	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	Y
Matrix Spike present?					
Duplicate assessed?					

Sampled By: LMG

Comments: Dissolved metals are Field Filtered

Casing Volume: 1" I.D. = 0.041 gal/ft - 2" I.D. = 0.163 gal/ft - 4" I.D. = 0.653 gal/ft - 6" I.D. = 1.47 gal/ft
_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M
Well Number: SW-037-MWS	Date: 2-2-16
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 12.60	Flow Rate (mL/min) 500mL/min
Height of Water Column (ft):	Length of time Purged (min) 20

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
0828	0	14.70	10.23	2.455	7.96	-150.4	152	
0833	0.5	15.05	11.38	2.450	1.63	-220.7	90.9	
0838	1.0	15.09	11.62	2.448	1.03	-242.5	34.8	
0843	1.55	15.17	11.61	2.441	0.99	-250.1	14.8	
0848	2.2	15.22	11.62	2.431	0.71	-257.3	8.75	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW-037-MWS	0853	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	Y
Matrix Spike present?					
Duplicate assessed?					

Sampled By: LMG

Comments: Dissolved metals are Field Filtered

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M
Well Number: SW-038-MWS	Date: 2-2-16
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 15.64	Flow Rate (mL/min) 500 mL/min
Height of Water Column (ft):	Length of time Purged (min) 35

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
0942	0	13.87	11.74	3.523	9.59	-108.9	20.3	very clear; low turbidity
0947	0.5	14.57	12.20	3.628	8.02	-128.8	2.57	
0952	1.1	14.82	12.34	3.765	7.38	-166.2	1.18	
0957	1.75	14.85	12.38	3.892	6.62	-184.0	1.32	
1002	2.25	14.88	12.39	3.953	6.13	-190.6	0.89	
1007	3.0	14.85	12.39	4.005	5.73	-194.0	0.62	
1012	3.6	14.89	12.41	4.026	5.44	-195.0	0.46	
1017	4.2	14.90	12.41	4.058	5.31	-198.6	0.34	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW-038-MWS	1022	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	Y
Matrix Spike present?					
Duplicate assessed?					

Sampled By: LMG

Comments: Dissolved metals are Field Filtered

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M
Well Number: SW-039-MW5	Date: 2-2-16
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 19.47	Flow Rate (mL/min) 500 mL/min
Height of Water Column (ft):	Length of time Purged (min) 25

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1101	0	15.22	11.02	6.438	8.96	-192.9	218	white color/cloudy
1106	0.5	15.67	11.91	6.605	2.49	-233.5	115	
1111	1.0	15.70	12.09	6.662	1.24	-227.2	43.9	significantly less turbid
1116	1.55	15.71	12.28	6.685	0.82	-225.9	16.5	
1121	2.05	15.59	12.39	6.737	0.68	-227.1	6.39	
1126	2.6	15.62	12.46	6.759	0.58	-227.1	3.54	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW-039-MW5	1131	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	Y
Matrix Spike present?					
Duplicate assessed?					

Sampled By: LMG

Comments: Dissolved metals are Field Filtered

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M
Well Number: SW-040-MW5	Date: 1-22-16
Well Diameter (in):	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 9.31	Flow Rate (mL/min) 500 mL/min
Height of Water Column (ft):	Length of time Purged (min) 40 min

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1049	0.1	14.83	2.18	0.912	6.36	-142.6	264	
1054	0.5	14.04	-2.39	1.008	0.77	-144.4	134	
1059	1.1	14.10	-2.75	0.816	0.94	-116.5	147	
1104	1.75	13.52	-2.12	0.679	1.61	-162.7	171	
1109	2.5	13.55	0.55	0.588	2.13	-181.6	137	
1114	3.0	13.33	1.52	0.566	2.45	-148.6	116	
1119	3.7	13.25	1.66	0.568	2.57	-120.7	93.6	
1124	4.25	13.16	2.12	0.573	3.01	-105.2	73.5	
1129	4.8	13.32	1.85	0.574	2.98	-94.3	63.7	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW-040-MW5	1132	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	Y
Matrix Spike present?					
Duplicate assessed?					

Sampled By: LMG

Comments: Dissolved metals are Field Filtered
pH calibration was off
DO & ORP did not stabilize

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft
_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M
Well Number: SW-041-MW5	Date: 1-19-16
Well Diameter (in):	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 8.86	Flow Rate (mL/min) 500 mL/min
Height of Water Column (ft):	Length of time Purged (min) 45 min

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm³)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1418	0	13.56	7.42	2.832	~~34.77~~	-113.2	80.1	
1423	0.8	14.53	6.82	2.076	0.96	-84.8	42.2	
1428	1.5	14.33	6.10	1.378	1.02	2.9	20.3	
1433	1.9	14.60	5.76	1.331	0.94	28.2	24.1	
1438	2.5	14.54	5.56	1.302	0.92	42.2	17.0	
1443	3.1	14.31	5.52	1.302	0.89	46.1	12.5	
1448	3.8	14.41	5.44	1.291	0.79	50.2	14.1	
1453	4.3	14.36	5.41	1.290	0.63	55.9	11.0	
1458	4.8	14.24	5.40	1.293	0.57	57.5	6.57	
1503	5.4	14.41	5.41	1.289	0.53	59.2	6.02	
~~1508~~								
~~1513~~								

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW-041-MW5	1515	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2 - 1 L Amber	none	Y
		TAL-Metals dissolved	1 - 250 mL Plastic	~~none~~ HNO3	Y
		Oil and Grease			N
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	none	Y
		Cyanide	1 - 250 mL Plastic	~~none~~ NaOH	Y
Matrix Spike present?		PCBs	2 - 1L Amber	none	Y
Duplicate assessed?					

Sampled By: LG Comments:

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M
Well Number: SW-042-MWS	Date: 1-20-16
Well Diameter (in):	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 6.84	Flow Rate (mL/min) 500 mL/min
Height of Water Column (ft):	Length of time Purged (min) 25 min

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH ±.1 (s.u.)	Specific Conductance ±10% (mS/cm)	Dissolved Oxygen ±.3 (mg/L)	ORP ±10 (mV)	Turbidity (NTU)	Comments
1012	0	13.42	5.10	1.353	4.98	237.9	6.19	
~~1017~~ 1017	~~[illegible]~~ 0.5	14.74	4.54	1.361	2.19	249.1	6.77	
1022	1.0	14.89	4.41	1.370	1.81	246.1	4.34	
1027	1.5	14.93	4.34	1.366	1.39	255.1	3.71	
1032	2.25	15.00	4.29	1.365	0.99	266.5	2.50	
1037	2.75	16.03	4.26	1.364	0.82	270.8	1.99	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW-042-MWS	1050	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2 - 1 L Amber	none	Y
		TAL-Metals dissolved	1 - 250 mL Plastic	~~none~~ HNO_3	Y
		Oil and Grease			N
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	none	Y
		Cyanide	1 - 250 mL Plastic	~~none~~ NaOH	Y
Matrix Spike present?		PCBs	2 - 1 L Amber	None	Y
Duplicate assessed?					

Sampled By: LG Comments:

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M
Well Number: SW-043-MW1	Date: 1-28-16
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft)	Flow Rate (mL/min) 500 mL/min
Height of Water Column (ft):	Length of time Purged (min)

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance ( )	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW-043-MW1	1429	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	Y
Matrix Spike present?		pH			Y
Duplicate assessed?					Y

Sampled By: LMG

Comments: Dissolved metals are Field Filtered
original log lost due to high winds

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft
_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300m
Well Number: SW043-MWS	Date: 12-14-15
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft): 17.51	QED Controller Settings:
Depth to Water (ft) 6.67	Flow Rate (mL/min) 0.037 gal/min
Height of Water Column (ft):	Length of time Purged (min) 15

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1518	0.25	15.16	4.07	0.674	3.2	-259.0	33.9	
1523	0.40	15.16	4.07	0.668	3.0	-269.0	22.2	
1528	0.60	15.14	4.07	0.665	2.6	-249.4	19.6	
1533	0.80	15.15	4.07	0.663	3.3	-221.9	15.4	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW043-MWS	1540	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	Y
Matrix Spike present? NO					
Duplicate assessed? NO					

Sampled By: LLP

Comments: Dissolved metals are Field Filtered

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M
Well Number: SW-044-MW5	Date: 1-20-16
Well Diameter (in):	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 9.60	Flow Rate (mL/min) 500 mL/min
Height of Water Column (ft):	Length of time Purged (min) 20 min

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1125	0	13.88	6.01	14.16	3.67	36.9	482	Very turbid
1130	0.75	14.06	6.17	14.55	1.71	12.9	175	
1135	1.25	13.95	6.27	14.28	1.33	-5.4	X	turbidity "LO error"
1140	1.75	14.13	6.29	14.24	1.08	-16.5	X	"
1145	2.3	14.07	6.17	14.27	0.91	-9.4	X	"

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW-044-MW5	1201	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2 - 1 L Amber	none	Y
		TAL-Metals Dissolved	1 - 250 mL Plastic	~~none~~ HNO_3	Y
		Oil and Grease			N
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	none	Y
		Cyanide	1 - 250 mL Plastic	~~none~~ NaOH	Y
Matrix Spike present?		FB	2 - 1 L Amber	none	Y
Duplicate assessed?					

Sampled By: LMG Comments: Very high conductivity

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M
Well Number: SW-045-MW1	Date: 1-21-16
Well Diameter (in):	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 13.09	Flow Rate (mL/min) 500 mL/min
Height of Water Column (ft):	Length of time Purged (min) 45 min

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
0907	0.1	11.08	11.27	1.604	12.42	102.9	60.4	
0912	0.6	12.44	12.30	1.823	2.89	23.9	41.6	
0917	1.0	12.84	12.30	1.697	2.17	1.8	41.4	
0922	1.75	12.87	12.25	1.533	1.90	-15.8	51.4	
0927	2.3	12.85	12.14	1.310	1.59	-39.3	51.7	
0932	3.0	12.84	11.95	1.092	1.33	-53.3	44.5	
0937	3.5	12.89	11.66	0.874	1.10	-68.0	51.4	
0942	4.0	12.99	11.62	0.851	1.01	-71.8	51.0	
0947	4.5	12.99	11.32	0.759	0.87	-75.6	52.3	
0952	5.0	12.95	11.09	0.712	0.79	-79.0	45.9	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW-045-MW1	1002	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2 - 1 L Amber	none	Y
		TAL-Metals Dissolved	1 - 250 mL Plastic	~~none~~ HNO3	Y
		Oil and Grease			N
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	none	Y
		Cyanide	1 - 250 mL Plastic	~~none~~ NaOH	Y
Matrix Spike present?		PCBs	2-1 L Amber	none	Y
Duplicate assessed?					

Sampled By: LMG Comments: pH & DO did not stabilize

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M
Well Number: SW-045-MWS	Date: 1-20-16
Well Diameter (in):	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 5.07	Flow Rate (mL/min) 500 mL/min
Height of Water Column (ft):	Length of time Purged (min) 30 min

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1427	0.1	9.18	4.54	0.751	12.28	214.9	153	
1432	0.5	9.35	4.71	0.621	1.19	233.9	41.9	
1437	1.2	9.36	4.73	0.6116	0.86	233.7	30.3	
1442	1.75	9.31	4.82	0.621	2.06	199.3	38.9	
1447	2.5	9.42	4.88	0.622	2.57	179.4	27.6	
1452	3.0	9.37	4.93	0.625	2.02	169.6	19.6	
1457	3.5	9.49	4.96	0.626	2.16	160.7	15.3	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW-045-MWS	1510	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2 - 1 L Amber	none	Y
		TAL-Metals Dissolved	1 - 250 mL Plastic	~~none~~ HNO_3	Y
		Oil and Grease			N
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	none	Y
		Cyanide	1 - 250 mL Plastic	~~none~~ NaOH	Y
Matrix Spike present?		PCBs	2 - 1 L Amber	none	Y
Duplicate assessed?					

Sampled By: LMG Comments: DO did not stabilize

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area 8 GW Invest.	Project Number: 150300m
Well Number: SW-046-MW05	Date: 12-10-15
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft): 15.73	QED Controller Settings:
Depth to Water (ft) 7.41	Flow Rate (~~mL/min~~) 0.050 gal/min
Height of Water Column (ft):	Length of time Purged (min) 1.5

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1150	0.25	17.10	5.55	0.880	3.50	-312.6	299	
1155	0.50	17.11	5.17	1.018	2.09	-329.6	219	
1200	0.75	17.03	5.13	1.025	1.89	-331.2	143	
1205	1.00	17.13	5.11	1.038	1.77	-335.5	116	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW-046-MW5	1210	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals	1 - 250 mL Plastic	HNO3 ~~none~~	Y
		Oil and Grease	1- 1L Amber	HCL	Y
		TPH-DRO	2- 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	none	Y
		Cyanide	1 - 250 mL Plastic	NaOH ~~none~~	Y
Matrix Spike present? NO		Dissolved metals	1-250mL Plast	HNO3	Y
Duplicate assessed? NO		PCB	2 - 1L Ambers	none	Y

Sampled By: L. Perrin Comments:

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300m
Well Number: SW047-MWS	Date: 12-14-15
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft): 16.91	QED Controller Settings:
Depth to Water (ft) 8.52	Flow Rate (mL/min) 0.05 gal/min
Height of Water Column (ft):	Length of time Purged (min) 15

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1150	0.25	17.04	4.39	2.075	34.6	-217.7	47.8	Clear
1155	0.40	17.00	4.39	2.077	32.8	-209.8	41.9	
1200	0.65	16.95	4.40	2.078	30.0	-203.6	36.3	
1205	1.00	16.93	4.39	2.077	28.9	-201.1	21.8	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW047-MWS	1215	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	Y
Matrix Spike present? yes					
Matrix Duplicate assessed? yes					

Sampled By: Li Perrin

Comments: Dissolved metals are Field Filtered

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M
Well Number: SW-048-MW5	Date: 1/21/16
Well Diameter (in):	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 4.27	Flow Rate (mL/min) 500 mL/min
Height of Water Column (ft):	Length of time Purged (min) 40 min

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1045	0.1	10.51	9.20	2.198	17.68	150.7	50.3	
1050	0.55	10.60	5.04	2.298	5.28	348.7	14.1	
1055	1.15	10.53	4.16	2.311	4.99	358.9	10.5	
1100	1.80	10.67	3.97	2.318	4.56	332.6	8.85	
1105	2.30	10.75	3.93	2.317	4.01	313.7	7.59	
1110	2.9	10.81	3.96	2.318	3.54	301.2	7.43	
1115	3.4	11.11	3.97	2.309	2.92	285.5	8.75	
1120	4.0	10.95	4.03	2.318	2.82	282.6	10.3	
1125	4.6	11.26	4.00	2.310	2.31	275.8	9.44	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW-048-MW5	1130	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2 - 1 L Amber	none	Y
		TAL-Metals Dissolved	1 - 250 mL Plastic	~~none~~ HNO_3	Y
		Oil and Grease			N
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	none	Y
		Cyanide	1 - 250 mL Plastic	~~none~~ NaOH	Y
Matrix Spike present?					
Duplicate assessed? Yes					

Sampled By: LMG Comments: Duplicate DO did not stabilize

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M
Well Number: SW-049-MW5	Date: 1-20-16
Well Diameter (in):	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 5.28	Flow Rate (mL/min) 500 mL/min
Height of Water Column (ft):	Length of time Purged (min) 20 min

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1337	0.2	14.19	4.04	3.187	5.32	244.8	345	
1342	0.7	14.63	3.90	3.246	1.86	255.7	345	
1347	1.2	14.88	3.87	3.263	1.44	258.7	145	
1352	1.75	14.97	3.82	3.273	1.13	255.7	98.0	
1357	2.45	14.97	3.76	3.297	0.98	251.7	59.9	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW-049-MW5	1407	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2 - 1 L Amber	none	Y
		TAL-Metals Dissolved	1 - 250 mL Plastic	~~none~~ HNO_3	Y
		Oil and Grease			N
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	none	Y
		Cyanide	1 - 250 mL Plastic	~~none~~ NaOH	Y
Matrix Spike present?					
Duplicate assessed?					

Sampled By: LMG Comments:

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150200M
Well Number: SW-050-MW5	Date: 1-20-16
Well Diameter (in):	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 4.71	Flow Rate (mL/min) 500 mL/min
Height of Water Column (ft):	Length of time Purged (min) 20 min

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm³)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
12:32	0.3	10.73	5.37	1.444	3.13	136.8	248	
12:37	1.1	11.21	4.84	1.339	1.85	177.5	16.4	
12:42	1.7	11.31	4.78	1.324	1.35	178.1	8.96	
12:47	2.3	11.20	4.74	1.338	1.15	171.1	5.52	
12:52	3.0	11.19	4.76	1.324	0.95	176.9	5.46	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW-050-MW5	1305	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2 1 L Amber	none	Y
		TAL-Metals dissolved	1 - 250 mL Plastic	~~none~~ HNO_3	Y
		Oil and Grease			N
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	none	Y
		Cyanide	1 - 250 mL Plastic	~~none~~ NaOH	Y
Matrix Spike present?					
Duplicate assessed?					

Sampled By: LMG Comments:

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M
Well Number: SW-051-MWS	Date: 2-8-16
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 8.92	Flow Rate (mL/min) 500mL/min
Height of Water Column (ft):	Length of time Purged (min) 25

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1154	0	13.99	5.22	1.303	8.81	196.7	62.1	clear/low turbidity
1159	0.5	13.97	4.08	1.358	1.19	273.0	52.2	
1204	1.1	13.86	3.91	1.425	1.24	279.3	29.7	
1209	1.75	13.78	3.86	1.429	0.88	280.4	22.2	
1214	2.3	13.78	3.84	1.432	0.72	281.1	14.6	
1219	2.9	13.86	3.82	1.443	0.60	281.1	9.01	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW-051-MWS	1224	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	N
Matrix Spike present?					
Duplicate assessed?					

Sampled By: LMG

Comments: Dissolved metals are Field Filtered

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M
Well Number: SW-052-MW5	Date: 1-22-16
Well Diameter (in):	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 7.26	Flow Rate (mL/min) 500mL/min
Height of Water Column (ft):	Length of time Purged (min) 30 min

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
0904	0.1	9.67	6.18	1.261	5.76	105.5	591	very turbid
0909	0.7	11.36	4.11	1.469	8.98	66.6	279	
0914	1.4	11.38	3.84	1.469	8.48	71.2	186	
0919	2.2	11.48	3.44	1.468	8.31	73.8	156	
0924	2.75	11.70	3.09	1.466	8.16	74.9	108	
0929	3.30	11.83	2.76	1.465	8.08	75.7	75.5	
0934	4.0	11.75	2.59	1.465	8.11	76.1	51.6	clear liquid

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW-052-MW5	0943	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	N
Matrix Spike present?					
Duplicate assessed?					

Sampled By: LMG

Comments: Dissolved metals are Field Filtered
pH calibration was off; sample was turbid.

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft
_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M
Well Number: SW-053-MWS	Date: 2-5-16
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 2.32	Flow Rate (mL/min) 500 mL/min
Height of Water Column (ft):	Length of time Purged (min)

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance mS/cm	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1235	0	10.47	5.26	1.196	14.04	106.7	91.5	
1240	0.5	11.49	5.76	1.5713	1.77	81.7	40.0	
1245	1.1	11.83	5.78	1.515	1.35	79.0	16.9	
1250	1.75	11.71	5.76	1.523	1.18	80.3	11.4	
1255	2.4	11.92	5.74	1.516	0.97	81.6	6.62	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW-053-MWS	1300	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	N
Matrix Spike present?					
Duplicate assessed?					

Sampled By: LMG

Comments: Dissolved metals are Field Filtered
Red/orange "flakes" in purge/sample water

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft
_____ ft x _____ gal/ft = _____ (gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M
Well Number: SW-054-MWS	Date: 2-5-14
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 8.41	Flow Rate (mL/min) 500 mL/min
Height of Water Column (ft):	Length of time Purged (min) 25

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1128	0	11.30	7.39	1.888	36.73	-9.0	144	
1133	0.5	12.23	5.37	1.972	1.88	144.8	21.6	
1138	1.1	12.23	5.07	1.974	1.38	157.9	13.7	
1143	1.75	12.55	4.91	1.965	1.20	172.3	10.3	
1148	2.3	12.59	4.84	1.961	1.01	180.0	8.10	
1153	3.0	12.52	4.81	1.962	0.85	184.5	5.28	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW-054-MWS	1158	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	N
Matrix Spike present?					
Duplicate assessed?					

Sampled By: LMG

Comments: Dissolved metals are Field Filtered

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M
Well Number: SW-055-MW5	Date: 1-28-16
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 7.63	Flow Rate (mL/min) 500 mL/min
Height of Water Column (ft):	Length of time Purged (min) 30

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1234	0.2	14.26	–	1.322	12.60	-39.0	362	very turbid
1239	0.6	14.18	–	1.413	1.77	-148.5	172	
1244	1.1	14.16	–	1.512	1.61	-169.0	53.2	lower turbidity
1249	1.7	14.14	–	1.564	1.12	-182.7	26.3	
1254	2.3	14.07	–	1.591	1.00	-193.3	15.6	very clear
1259	2.8	14.15	–	1.610	0.89	-199.2	8.42	
1304	3.5	14.15	–	1.628	0.82	-202.9	9.78	
~~1309~~								

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW-055-MW5	1306	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	N
Matrix Spike present?		pH			Y
Duplicate assessed?					

Sampled By: LMG

Comments: Dissolved metals are Field Filtered

pH probe inoperable

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 1503001M
Well Number: SW-056-MWS	Date: 1-28-16
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 7.34	Flow Rate (mL/min) 500 ml/min
Height of Water Column (ft):	Length of time Purged (min) 30

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
0945	0.2	14.04	—	2.075	11.85	132.9	92.5	
0950	1.0	13.71	—	2.133	3.28	108.6	86.8	
0955	1.55	13.15	—	2.147	1.90	109.3	63.1	
1000	2.1	12.92	—	2.157	1.43	109.8	43.5	
1005	2.7	12.81	—	2.152	1.12	111.7	35.6	
1010	3.25	13.04	—	2.157	0.94	106.2	37.6	
1015	3.75	13.50	—	2.168	0.85	93.5	41.5	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW-056-MWS	1020	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	N
Matrix Spike present?		pH			Y
Duplicate assessed?					

Sampled By: LMG

Comments: Dissolved metals are Field Filtered
pH probe inoperable

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft
_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: ~~15033~~ 150300M
Well Number: SW-057-MWS	Date: 2-5-16
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 3.1	Flow Rate (mL/min) 500 mL/min
Height of Water Column (ft):	Length of time Purged (min) 30

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
0839	0	13.21	8.73	3.995	8.98	-217.8	89.8	
0844	0.5	13.39	7.11	4.024	1.29	-138.7	13.4	Clear; low turbidity
0849	1.2	12.84	6.98	3.938	1.05	-134.3	16.2	
0854	1.9	13.27	6.89	4.104	0.88	-126.7	22.1	
0859	2.5	12.44	7.32	3.159	0.94	-157.6	52.8	
0904	3.2	12.83	7.32	3.476	0.80	-140.6	40.8	
0909	3.75	~~13.34~~ 13.34	7.23	3.691	0.67	-134.9	28.1	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW-057-MWS	0914	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	N
Matrix Spike present?					
Duplicate assessed?					

Sampled By: LMG

Comments: Dissolved metals are Field Filtered

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M
Well Number: SW-058-MW5	Date: 2-5-16
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 5.8	Flow Rate (mL/min) 500mL/min
Height of Water Column (ft):	Length of time Purged (min) 20

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1004	0	10.25	8.28	0.878	16.41	-82.9	353	
1009	0.6	9.55	8.75	0.785	7.86	-82.0	155	
1014	1.25	8.77	8.70	0.757	7.68	-68.4	58.2	
1019	1.75	8.53	8.65	0.746	7.42	-61.2	36.0	
1024	2.5	8.40	8.65	0.740	7.48	-57.5	25.2	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW-058-MW5	1029	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	N
Matrix Spike present?					
Duplicate assessed?					

Sampled By: MG

Comments: Dissolved metals are Field Filtered

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M
Well Number: SW-059-MWS	Date: 2-8-16
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 9.28	Flow Rate (mL/min) 500mL/min
Height of Water Column (ft):	Length of time Purged (min) 30

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1025	0	15.21	8.59	2.635	9.71	-49.7	782	cloudy/yellow color
1030	0.5	15.07	6.08	2.702	1.11	77.0	438	
1035	1.0	14.61	5.58	2.622	1.07	100.9	175	
1040	1.6	14.47	5.60	2.197	1.20	101.2	83.9	
1045	2.25	14.36	5.72	1.972	1.46	95.9	40.7	
1050	2.8	14.31	5.83	1.810	1.58	92.3	29.3	clear
1055	3.25	14.30	5.92	1.744	1.67	88.1	15.6	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW-059-MWS	1100	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	N
Matrix Spike present?					
Duplicate assessed?					

Sampled By: LMG

Comments: Dissolved metals are Field Filtered

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M
Well Number: SW-060-MW5	Date: 2-5-16
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 11.35	Flow Rate (mL/min) 500 ml/min
Height of Water Column (ft):	Length of time Purged (min) 20

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1344	0	14.68	11.17	2.930	14.67	-139.3	16.4	
1349	0.5	15.51	12.31	3.241	1.76	-241.2	4.46	very clear
1354	1.0	15.66	12.34	3.280	1.35	-243.8	2.49	
1359	1.5	15.63	12.34	3.291	1.22	-241.9	1.20	
1404	2.2	15.53	12.33	3.297	1.09	-241.7	0.85	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW-060-MW5	1409	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	N
Matrix Spike present?					
Duplicate assessed?					

Sampled By: LMG

Comments: Dissolved metals are Field Filtered

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M
Well Number: SW-061-MWS	Date: 2-8-16
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 9.29	Flow Rate (mL/min) 500mL/min
Height of Water Column (ft):	Length of time Purged (min) 25

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
0919	0	13.26	8.03	3.374	9.30	-96.9	494	cloudy
0922	0.5	14.77	8.06	3.535	1.21	-121.5	135	slight odor
0927	1.2	14.64	8.42	3.212	0.83	-165.7	51.5	
0932	1.75	14.54	9.79	2.824	1.06	-172.3	31.5	clear
0937	2.3	14.56	9.90	2.842	1.08	-163.5	17.8	
0942	3.0	14.54	9.82	2.911	0.98	-159.5	10.2	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW-061-MWS	0947	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	N
Matrix Spike present?					
Duplicate assessed?					

Sampled By: LMG

Comments: Dissolved metals are Field Filtered

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M
Well Number: SW-062-MWS	Date: 2-8-16
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 10.80	Flow Rate (mL/min) 500 mL/min
Height of Water Column (ft):	Length of time Purged (min) 20

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance mS/cm	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
0819	0	14.74	8.67	1.781	5.17	19.1	114	
0824	0.5	15.20	8.34	1.705	1.53	9.7	34.6	
0829	1.0	15.35	8.11	1.683	1.25	8.9	17.6	
0834	1.5	15.33	8.05	1.671	1.17	4.6	9.38	
0839	2.1	15.32	8.02	1.661	1.17	-0.6	6.54	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW-062-MWS	0844	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	N
Matrix Spike present?					
Duplicate assessed?					

Sampled By: LMG

Comments: Dissolved metals are Field Filtered

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name:	Project Number:
Well Number: SW-063-MW5	Date: 1-29-16
Well Diameter (in):	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 10.85	Flow Rate (mL/min)
Height of Water Column (ft):	Length of time Purged (min)

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance ( )	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1213	0.2	15.38	—	1.377	8.63	-188.6	61.3	
1218	0.8	13.94	—	1.552	6.80	-138.3	22.2	
1223	1.3	14.14	—	1.652	0.99	-163.3	18.4	
1228	1.7	14.21	—	1.554	0.75	-130.0	6.35	
1233	2.5	14.30	—	1.561	0.54	-125.7	4.81	
1238	3.0	14.29	—	1.557	0.53	-125.0	4.19	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW-063-MW5	1241	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	N
Matrix Spike present?		pH			Y
Duplicate assessed?					Y

Sampled By: LMG

Comments: Dissolved metals are Field Filtered

Casing Volume: 1" I.D. = 0.041 gal/ft - 2" I.D. = 0.163 gal/ft - 4" I.D. = 0.653 gal/ft - 6" I.D. = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M-10-3
Well Number: SW-064-MWS	Date: 3/28/16
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 10.34	Flow Rate (mL/min) 400 mL/min
Height of Water Column (ft):	Length of time Purged (min) 40

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.) 0.1	Specific Conductance (mS/cm) 3%	Dissolved Oxygen (mg/L) 0.3	ORP (mV) 10	Turbidity (NTU) 10%	Comments
0900	0.0	—	—	—	—	—	—	cloudy/gray
0904	0.4	19.62	11.97	1.83	2.25	-249	932	
0909	0.8	16.80	11.96	2.26	4.47	-278	356	
0914	1.2	16.2	11.94	2.41	6.28	-287	146	
0919	1.75	16.04	11.96	2.47	5.11	-290	293	
0924	2.25	15.93	11.95	2.53	4.58	-293	263	
0929	2.7	15.80	11.94	2.57	4.19	-298	161	
0934	3.1	15.71	11.93	2.58	5.62	-295	77.4	
0939	3.5	15.64	11.97	2.58	3.68	-302	71.3	
0944	4.0	15.55	11.97	2.61	3.37	-297	23.7	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW-064-MWS	0949	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	N
Matrix Spike present?					
Duplicate assessed?					

Sampled By: LMh

Comments: Dissolved metals are Field Filtered
DO was not properly calibrated
DO did not stabilize after 40 minutes

Casing Volume: 1" I.D. = 0.041 gal/ft - 2" I.D. = 0.163 gal/ft - 4" I.D. = 0.653 gal/ft - 6" I.D. = 1.47 gal/ft
_____ft x _____ gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M-10-3
Well Number: SW-065-MW5	Date: 3/30/16
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 5.35	Flow Rate (mL/min) 500 mL/min
Height of Water Column (ft):	Length of time Purged (min) 30

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1435	0	18.48	10.16	0.973	4.12	-331	386	odor present/gray
1440	0.5	18.12	9.38	1.02	1.93	-287	262	color
1445	1.0	17.79	9.59	1.04	1.90	-283	183	
1450	1.5	17.49	9.50	1.06	1.89	-279	86.2	
1455	2.0	17.28	9.67	1.07	1.89	-275	48.4	
1500	2.5	17.14	9.77	1.07	1.90	-273	17.8	
1505	3.0	17.02	9.79	1.07	1.89	-271	8.6	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW-065-MW5	1510	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	N
Matrix Spike present?					
Duplicate assessed?					

Sampled By: LMG

Comments: Dissolved metals are Field Filtered

Casing Volume: 1" I.D. = 0.041 gal/ft - 2" I.D. = 0.163 gal/ft - 4" I.D. = 0.653 gal/ft - 6" I.D. = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M
Well Number: SW-066-MWS	Date: 2-2-16
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 5.92	Flow Rate (mL/min) 500mL/min
Height of Water Column (ft):	Length of time Purged (min) 40

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance mS/cm	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1428	0	13.05	5.54	1.186	10.52	43.7	159	brown colour/turbid
1433	0.6	12.18	8.22	1.259	4.53	28.3	216	
1438	1.25	11.50	10.35	1.235	3.72	6.4	130	
1443	2.0	11.50	10.94	1.240	3.40	-12.7	80.6	
1448	2.55	11.45	9.79	1.254	3.23	-25.9	50.6	
1453	3.2	11.43	10.08	1.269	3.02	-50.7	36.3	
1458	3.75	11.40	10.39	1.281	2.82	-79.6	21.0	clear
1503	4.3	11.37	10.46	1.298	2.65	-93.7	13.1	
1508	5.0	11.32	10.60	1.309	2.64	-105.2	5.98	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW-066-MWS	1513	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	N
Matrix Spike present?					
Duplicate assessed?					

Sampled By: LMG

Comments: Dissolved metals are Field Filtered

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M
Well Number: SW-067-MWS	Date: 2-4-16
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 6.70	Flow Rate (mL/min) 500 mL/min
Height of Water Column (ft):	Length of time Purged (min)

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1341	0	1353	8.87	1.001	13.86	-150.3	90	
1346	0.5	14.36	6.53	0.907	1.47	98.7	31.3	
1351	1.1	14.35	5.68	0.890	1.00	123.7	16.5	
1356	1.75	14.48	5.25	0.886	0.83	147.1	10.7	
1401	2.4	14.50	4.97	0.886	0.75	162.0	5.78	
1406	3.0	14.51	4.80	0.885	0.68	167.5	3.30	
1411	3.6	14.72	4.71	0.882	0.65	169.8	3.16	
1416	4.25	14.72	4.65	0.883	0.63	176.9	2.88	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW-067-MWS	1421	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	N
Matrix Spike present?					
Duplicate assessed?					

Sampled By: LMG

Comments: Dissolved metals are Field Filtered

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name:	Project Number: 150300M
Well Number: SW-068-MW5	Date: 1-29-16
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 13.74	Flow Rate (mL/min) 500 mL/min
Height of Water Column (ft):	Length of time Purged (min) 30

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
0915	0	12.48	—	0.841	7.79	190.3	380	
0920	0.5	14.04	—	1.179	1.81	85.4	179	
0925	1.0	14.29	—	1.141	1.03	-60.9	44.4	
0930	1.5	14.62	—	1.147	0.79	-170.4	17.4	
0935	2.0	14.86	—	1.145	0.94	-167.1	3.93	
0940	2.5	14.98	—	1.144	0.84	-184.7	2.08	
0945	3.0	15.01	—	1.143	0.74	-197.3	2.01	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW-068-MW5	0950	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	N
Matrix Spike present?		pH			Y
Duplicate assessed?					

Sampled By: LMG

Comments: Dissolved metals are Field Filtered

pH probe inoperable

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name:	Project Number: 150300M
Well Number: SW-069-MW5	Date: 1-29-16
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 11.49	Flow Rate (mL/min) 500 mL/min
Height of Water Column (ft):	Length of time Purged (min)

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance mS/cm	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1332	0	14.62	—	1.472	8.95	-59.7	117	
1337	0.5	14.99	—	1.516	2.90	-81.2	86.5	
1342	1.1	15.25	—	1.528	1.45	-83.2	45.7	
1347	1.75	15.27	—	1.532	0.95	-82.2	21.3	
1352	2.3	15.38	—	1.535	0.91	-82.0	10.5	
1357	2.9	15.39	—	1.534	0.82	-81.5		

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW-069-MW5	1402	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	N
Matrix Spike present?		pH			Y
Duplicate assessed?					

Sampled By: LMG

Comments: Dissolved metals are Field Filtered
pH probe inoperable purge water color gray/black

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft
_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M-10-3
Well Number: SWD6-PZM001	Date: 2-11-16
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 5.36	Flow Rate (mL/min) 500 mL/min
Height of Water Column (ft):	Length of time Purged (min) 25

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1121	0	11.07	8.50	0.633	15.64	-18.9		brown color
1126	0.5	9.35	6.77	1.169	2.52	43.8		
1131	1.0	9.42	6.45	1.111	1.61	57.2		
1136	1.5	9.48	6.31	1.077	1.26	67.1		
1141	2.1	9.41	6.22	1.064	1.11	74.1		
1146	2.75	9.52	6.18	1.050	0.97	79.3		

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SWD6-PZM001	1151	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	N
Matrix Spike present?					
Duplicate assessed?					

Sampled By: [illegible]

Comments: Dissolved metals are Field Filtered
turbidity meter inoperable
MS/MSD collected

Casing Volume: 1" I.D. = 0.041 gal/ft - 2" I.D. = 0.163 gal/ft - 4" I.D. = 0.653 gal/ft - 6" I.D. = 1.47 gal/ft
_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M-10-3
Well Number: SW06-PZM053	Date: 2-11-16
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 16.01	Flow Rate (mL/min) 500 ml/min
Height of Water Column (ft):	Length of time Purged (min) 20

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance mS/cm	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1306	0	10.11	6.69	0.462	17.40	51.2	120	
1311	0.5	11.87	7.37	0.871	1.71	-118.8	19.1	clear
1316	1.0	11.97	7.51	0.872	1.06	-149.1	10.9	
1321	1.6	11.86	7.65	0.868	0.81	-160.9	8.54	
1326	2.2	12.03	7.64	0.867	0.67	-167.5	5.66	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW06-PZM053	1331	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	N
Matrix Spike present?					
Duplicate assessed?					

Sampled By: LMG

Comments: Dissolved metals are Field Filtered

Casing Volume: 1" I.D. = 0.041 gal/ft - 2" I.D. = 0.163 gal/ft - 4" I.D. = 0.653 gal/ft - 6" I.D. = 1.47 gal/ft
_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M-10-3
Well Number: SW-070-MW5	Date: 2-10-16
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 7.30	Flow Rate (mL/min) 500 mL/min
Height of Water Column (ft):	Length of time Purged (min) 25

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1121	0	13.09	9.03	0.999	10.71	-115.6	508	brown/yellow colour
1126	1.0	14.07	8.03	1.702	1.74	-92.5	175	
1131	1.5	13.70	7.58	1.707	1.36	-82.5	91.5	
1136	2.0	13.62	7.42	1.718	1.25	-79.1	61.6	
1141	2.5	13.36	7.34	1.720	1.14	-77.5	35.7	Clear
1146	3.0	13.16	7.29	1.726	1.07	-76.2	24.3	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW-070-MW5	1151	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	N
Matrix Spike present?					
Duplicate assessed? YES					

Sampled By: LMG

Comments: Dissolved metals are Field Filtered

Casing Volume: 1" I.D. = 0.041 gal/ft - 2" I.D. = 0.163 gal/ft - 4" I.D. = 0.653 gal/ft - 6" I.D. = 1.47 gal/ft
_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M
Well Number: SW-071-MWS	Date: 2-4-16
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft): [redacted]	QED Controller Settings:
Depth to Water (ft) 9.70	Flow Rate (mL/min) 500 ml/min
Height of Water Column (ft):	Length of time Purged (min) 20

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1145	0	15.32	10.57	4.673	12.86	-92.0	306	yellow color.
1150	0.5	15.32	9.89	4.849	1.72	-128.7	102	
1155	1.1	14.80	9.62	4.846	1.01	-145.4	49.7	
1200	1.75	14.64	9.51	4.839	0.81	-151.6	36.9	
1205	2.45	14.57	9.45	4.838	0.74	-157.2	28.0	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW-071-MWS	1210	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	N
Matrix Spike present?					
Duplicate assessed?					

Sampled By: LMG

Comments: Dissolved metals are Field Filtered
MS/MSD collected

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft
_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300 M
Well Number: SW-072-MWS	Date: 2-2-16
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 7.08	Flow Rate (mL/min) 500 mL/min
Height of Water Column (ft):	Length of time Purged (min) 35

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1317	0	15.32	9.39	3.976	27.68	-131.9	10.7	
1322	0.5	15.39	6.40	4.024	2.19	230.7	29.0	
1327	1.1	15.40	5.24	4.040	1.15	281.2	21.0	
1332	1.7	15.55	4.75	4.039	0.84	262.9	16.2	
1337	2.4	15.47	4.37	4.029	0.70	283.7	16.9	
1342	2.9	15.66	4.20	4.023	0.61	286.6	14.0	
1347	3.5	15.79	4.12	4.031	0.55	282.2	9.79	
1352	4.0	15.58	4.05	4.019	0.50	282.3	12.4	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW-072-MWS	1357	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	N
Matrix Spike present?					
Duplicate assessed?					

Sampled By: LMG

Comments: Dissolved metals are Field Filtered

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M
Well Number: SW-073-MWS	Date: 2-2-16
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 8.34	Flow Rate (mL/min) 500 mL/min
Height of Water Column (ft):	Length of time Purged (min) 25

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1224	0	14.71	12.15	6.484	9.03	-174.9	4.03	
1229	0.55	14.17	12.07	6.646	3.97	-213.2	3.06	
1234	1.2	14.14	12.09	6.848	3.11	-220.9	2.13	
1239	1.75	14.20	12.19	6.941	2.67	-226.5	1.32	
1244	2.5	14.19	12.25	7.096	2.37	-230.1	1.06	
1249	3.1	14.27	12.30	7.241	2.30	-230.2	0.86	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW-073-MWS	1254	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	N
Matrix Spike present?					
Duplicate assessed?					

Sampled By: LMG

Comments: Dissolved metals are Field Filtered

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M
Well Number: SW-074-MW1	Date: 1-21-16
Well Diameter (in):	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 9.20	Flow Rate (mL/min) 500 mL/min
Height of Water Column (ft):	Length of time Purged (min) 15 min

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1246	0.1	13.57	5.93	2.007	16.29	24.3	36.9	
1251	0.6	14.40	6.70	2.052	0.90	-56.9	27.0	
1256	1.2	14.64	6.76	2.100	0.85	-69.5	20.7	
1301	1.7	14.66	6.76	2.153	0.89	-73.2	15.1	
~~1306~~								
~~1311~~								

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW-074-MW1	1310	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2 - 1 L Amber	none	Y
		TAL-Metals Dissolved	1 - 250 mL Plastic	~~none~~ HNO_3	Y
		Oil and Grease			N
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	none	Y
		Cyanide	1 - 250 mL Plastic	~~none~~ NaOH	Y
Matrix Spike present?		PCBs	2-1 L Amber	none	Y
Duplicate assessed?					

Sampled By: LMG Comments:

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M
Well Number: SW-074-MWS	Date: 2-8-16
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 7.84	Flow Rate (mL/min) 500 mL/min
Height of Water Column (ft):	Length of time Purged (min)

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1303	0	13.52	5.28	3.143	14.46	134.7	249	brown color/turbid
1308	0.5	12.66	6.08	3.101	~~[illegible]~~ 7.70	93.5	54.5	clear
1313	1.1	12.88	6.31	3.079	7.85	73.8	31.3	
1318	1.7	12.93	6.44	3.065	7.53	72.2	19.2	
1323	2.25	13.19	6.48	3.041	7.05	78.0	9.08	
1328	2.8	13.38	6.52	3.036	6.77	84.1	6.56	
1333	3.3	13.33	6.49	3.014	6.44	90.2	4.97	
~~1338~~								
~~1343~~								

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW-074-MWS	1338	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	Y
Matrix Spike present?					
Duplicate assessed?					

Sampled By: LMG

Comments: Dissolved metals are Field Filtered

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B Sitewide GW Investigation	Project Number: 150300m
Well Number: SW07-PZM004	Date: ~~12-9-15~~ 12-10-15
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft): >100	QED Controller Settings:
Depth to Water (ft) 16.00	Flow Rate ~~(mL/min)~~ 0.038 gal/min
Height of Water Column (ft):	Length of time Purged (min) 20

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/m)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1113	0.25	17.76	7.57	0.649	4.40	-296.8	9.48	
1118	0.50	17.61	~~7.6~~ 7.56	0.652	1.08	-338.8	8.71	
1123	0.60	17.74	7.56	0.652	0.84	-337.0	8.60	
1128	0.75	17.84	7.57	0.653	0.56	-344.0	7.01	
1133	1.00	17.96	7.56	0.654	0.41	-341.1	6.42	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW07-PZM004	1135	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2 - 1 L Amber	none	Y
		TAL-Metals	1 - 250 mL Plastic	HNO3 ~~none~~	Y
		Oil and Grease	1-1L Amber	HCL	Y
		TPH-DRO	2-1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	none	Y
		Cyanide	1 - 250 mL Plastic	NaOH ~~none~~	Y
Matrix Spike present? NO		Dissolved metals	1-250 mL Plastic	~~HCL~~ HNO3	Y
Duplicate assessed? NO					

Sampled By: L. Perrin Comments:

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Sampling	Project Number: 150300m
Well Number: SW07 - PZM ~~004~~ 108	Date: 12-9-15
Well Diameter (in): 2	One Well Volume (gal): 0.98
Total Depth (ft): 18.18	QED Controller Settings:
Depth to Water (ft) 12.19	Flow Rate (~~mL/min~~) gal/min 0.05
Height of Water Column (ft): 5.99	Length of time Purged (min) 15

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1444	0.50	17.45	7.78	0.703	2.21	-308.4	443	Cloudy / Brown
1449	0.75	17.11	7.71	0.670	2.73	-302.4	242	
1454	1.00	16.87	7.70	0.665	2.94	-297.1	100	
1459	1.25	16.90	7.66	0.663	3.18	-301.9	55	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW07-PZM108	1500	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2 - 1 L Amber	none	Y
		TAL-Metals	1 - 250 mL Plastic	HNO3 ~~none~~	Y
		Oil and Grease	1 - 1L Amber	HCL	Y
		TPH-DRO	1 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	none	Y
		Cyanide	1 - 250 mL Plastic	NaOH ~~none~~	Y
Matrix Spike present? NO		Dissolved metals	1-250mL Plastic	HNO3	Y
Duplicate assessed? NO		PCB	2-1 L Amber	none	Y

Sampled By: L. Perrin Comments:

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft

5.99 ~~0.163~~ ft x 0.163 gal/ft = 0.98 (gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M-15-3
Well Number: SW08-PZM003	Date: 2-12-16
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 4.61	Flow Rate (mL/min) 500 ml/min
Height of Water Column (ft):	Length of time Purged (min) 22

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance mS/cm	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1008	0	11.93	8.40	0.443	23.03	-91.8	187	
1013	0.5	11.52	8.47	0.863	1.91	-194.8	148	
1018	1.1	11.44	8.49	0.860	1.22	-189.5	79.8	
1023	1.7	11.46	8.49	0.860	0.95	-190.5	51.1	
1028	2.4	11.57	8.50	0.862	0.79	-190.2	25.3	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW08-PZM003	1033	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	N
Matrix Spike present?					
Duplicate assessed?					

Sampled By: LMG

Comments: Dissolved metals are Field Filtered

Casing Volume: 1" I.D. = 0.041 gal/ft - 2" I.D. = 0.163 gal/ft - 4" I.D. = 0.653 gal/ft - 6" I.D. = 1.47 gal/ft
_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M-10-3
Well Number: SW08-PZM053	Date: 3/29/16
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 8.19	Flow Rate (mL/min) 400 mL/min
Height of Water Column (ft):	Length of time Purged (min) 40

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1108	0	16.79	7.18	6.36	6.21	-148	14.2	very clear/slight yellow tint
1113	0.5	15.79	6.98	6.63	4.13	-143	7.9	
1118	1.0	15.86	6.98	6.65	3.33	-143	7.6	
1123	1.5	16.09	6.97	6.74	5.32	-151	5.6	
1128	2.0	16.21	6.97	6.83	4.05	-155	5.4	
1133	2.5	16.19	6.99	6.92	3.55	-159	3.3	
1138	3.0	16.23	7.05	7.22	4.04	-165	2.7	gray/green color
1143	3.5	16.24	7.03	7.25	3.65	-168	3.0	
1148	4.0	16.25	7.03	7.27	3.59	-169	3.7	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW08-PZM053	1153	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	N
Matrix Spike present?					
Duplicate assessed?					

Sampled By: LMG

Comments: Dissolved metals are Field Filtered
DO was not properly calibrated
DO did not stabalize

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft
_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Sampling	Project Number: 150300m
Well Number: SW09-PZM004	Date: 12-10-15
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft): 17.11	QED Controller Settings:
Depth to Water (ft) 3.81	Flow Rate ~~(mL/min)~~ 0.050 gal/min
Height of Water Column (ft):	Length of time Purged (min) 20

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
~~1019~~	~~0.25~~	~~12.37~~	~~7.30~~	~~0.011~~	~~10.37~~	~~-241.3~~	~~611~~	~~was not running~~
1024	1.00	14.81	6.99	0.965	1.62	-362.2	611	cloudy, white
1029	1.25	14.74	6.94	0.969	1.45	-362.2	412	
1034	1.50	14.74	6.90	1.021	2.38	-366.6	315	
1039	1.75	14.94	6.82	1.025	1.59	-364.0	261	
1044	2.00	15.06	6.78	1.051	1.56	-366.2	208	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW09-PZM004	1045	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2-1 L Amber	none	Y
		TAL-Metals	1 - 250 mL Plastic	HNO3 ~~none~~	Y
		Oil and Grease	1-1L Amber	HCL	Y
		TPH-DRO	2-1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	none	Y
		Cyanide	1 - 250 mL Plastic	NaOH ~~none~~	Y
Matrix Spike present? No		Dissolved metals	1-250mL Plastic	HNO3	Y
Duplicate assessed? No					Y

Sampled By: L. Perrin Comments:

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M-10-3
Well Number: SW09-PZM028	Date: 3/30/16
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 7.71	Flow Rate (mL/min) 400 mL/min
Height of Water Column (ft):	Length of time Purged (min) 25

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance mS/cm	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
0912	0	12.31	4.26	0.313	7.74	135	7.4	clear
0917	0.5	12.46	3.69	0.208	3.94	166	5.8	
0922	1.0	12.64	3.70	0.225	5.03	165	4.7	
0927	1.5	12.88	3.80	0.221	4.68	159	3.8	
0932	2.0	13.13	3.88	0.219	4.64	160	4.4	
0937	2.5	13.18	3.98	0.220	4.58	158	8.4	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW09-PZM028	0942	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	N
Matrix Spike present?					
Duplicate assessed?					

Sampled By: LMG

Comments: Dissolved metals are Field Filtered

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M-10-3
Well Number: SW09-PZM068	Date: 2/18/16
Well Diameter (in): 1/2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 3.09	Flow Rate (mL/min) 100 mL/min
Height of Water Column (ft):	Length of time Purged (min)

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
0957	0	9.99	7.56	1.732	10.31	-16.6	7.82	clear/flow~500mL/min
1002	0.5	10.45	7.37	1.864	1.76	-12.3	95.2	cloudy/sediment
1007								purged dry/changed tubing
1033	0	9.32	7.86	0.952	10.70	-23.8	491	cloudy/flow ~250mL/min
1038	0.3	10.04	7.38	1.820	3.19	-4.0	187	
1043								purged dry
1054	0	9.32	7.89	0.859	11.57	-10.3	284	flow ~100mL/min
1059	0.1	6.73	7.54	1.746	9.76	-9.3	172	
1104	0.2	6.66	7.38	1.724	5.95	-6.4	158	
1109	0.3	6.80	7.35	1.717	5.46	-7.5	103	
1114	0.4	6.64	7.39	1.721	5.40	-9.5	71.2	
1119	0.5	6.60	7.40	1.724	5.62	-9.6	55.0	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW09-PZM068	1124	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	N
Matrix Spike present?					
Duplicate assessed?					

Sampled By: LMG

Comments: Dissolved metals are Field Filtered

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: AreaB GW investigation	Project Number: 150300m
Well Number: SW10 - PZM012	Date: 12-10-15
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft): 20.41	QED Controller Settings:
Depth to Water (ft) 6.74	Flow Rate (~~mL/min~~) 0.05 gal/min
Height of Water Column (ft):	Length of time Purged (min) 15

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.) 6.72	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1433	0.25	14.87	~~[illegible]~~	0.469	6.22	-297.3	24.5	
1438	0.50	14.77	6.70	0.470	6.02	-297.5	23.8	
1443	0.75	14.74	6.69	0.470	5.92	-298.4	21.6	
1448	1.00	14.72	6.67	0.470	5.79	-300.1	13.6	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW10-PZM012	1450	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2 - 1 L Amber	none	Y
		TAL-Metals	1 - 250 mL Plastic	HNO3 ~~none~~	Y
		Oil and Grease	1 - 1L Amber	HCL	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	none	Y
		Cyanide	1 - 250 mL Plastic	NaOH ~~none~~	Y
Matrix Spike present? No		Dissolved metals	1-250 mL Plastic	HNO3	Y
Duplicate assessed? No					

Sampled By: L. Perrin Comments:

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft
_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M-10-3
Well Number: SW 10- PZM085	Date: 2-19-16
Well Diameter (in): 1/2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 7.25	Flow Rate (mL/min) ~~500 mL/min~~
Height of Water Column (ft):	Length of time Purged (min)

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1009	0	12.00	7.20	0.905	11.37	-50.7	58.4	
1014	Purged	Dry; would not recharge						
1019								
1024								

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW10-PZM085		TCL-VOCs	3 - 40 mL VOA	HCL	
		TCL-SVOCs	2- 1 L Amber	none	
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	
		TPH-DRO	2 - 1 L Amber	none	
		TPH-GRO	3 - 40 mL VOA	HCL	
		Hexavalent Chromium	1 - 250 mL Plastic	None	
		Cyanide	1 - 250 mL Plastic	NAOH	
		PCBs	2 - 1 L Amber	none	
Matrix Spike present?					
Duplicate assessed?					

Sampled By: LMG

Comments: Dissolved metals are Field Filtered
multiple structural blocks throughout well

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft
_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M-10-3
Well Number: SW10-PZM085	Date: 3/30/16
Well Diameter (in): 1/2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 11.20	Flow Rate (mL/min) 100 mL/min to 50mL/min
Height of Water Column (ft):	Length of time Purged (min)

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1220	0	15.91	6.07	0.412	4.67	236	19.9	flow rate 100 mL/min
1225	~0.1	15.77	7.70	0.318	2.98	198	17.1	
1230	~0.15	15.79	7.51	0.440	2.68	-53	15.6	Δ flow rate to 50 mL/min yielded no water DTW 9.3 ft

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
		TCL-VOCs	3 - 40 mL VOA	HCL	
		TCL-SVOCs	2- 1 L Amber	none	
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	
		TPH-DRO	2 - 1 L Amber	none	
		TPH-GRO	3 - 40 mL VOA	HCL	
		Hexavalent Chromium	1 - 250 mL Plastic	None	
		Cyanide	1 - 250 mL Plastic	NAOH	
		PCBs	2 - 1 L Amber	none	
Matrix Spike present?					
Duplicate assessed?					

Sampled By: _____

Comments: Dissolved metals are Field Filtered
purge volume not consitent; gaps of air bubbles in between gaps of water.

Casing Volume: 1" I.D. = 0.041 gal/ft - 2" I.D. = 0.163 gal/ft - 4" I.D. = 0.653 gal/ft - 6" I.D. = 1.47 gal/ft
_____ft x _____gal/ft = _____(gal)

G

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M-10-3
Well Number: SW11-PZM005	Date: 2-17-16
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 5.99	Flow Rate (mL/min) 500 ml/min
Height of Water Column (ft):	Length of time Purged (min) 35

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
0833	0	12.93	5.40	1.156	10.38	153.8	174	
0838	0.5	11.93	5.55	1.160	4.85	143.0	85.8	clear
0843	1.0	11.29	5.85	1.152	5.03	123.0	43.1	
0848	1.5	10.95	6.08	1.145	5.43	109.5	30.5	
0853	2.0	10.85	6.31	1.142	5.67	97.7	22.3	
0858	2.6	10.77	6.48	1.144	5.90	88.0	13.4	
0903	3.2	10.57	6.58	1.146	6.08	79.9	8.59	
0908	3.75	10.63	6.64	1.141	6.09	74.0	6.94	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW11-PZM005	0911	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	Y
Matrix Spike present?					
Duplicate assessed?					

Sampled By: LMG

Comments: Dissolved metals are Field Filtered

Casing Volume: 1" I.D. = 0.041 gal/ft - 2" I.D. = 0.163 gal/ft - 4" I.D. = 0.653 gal/ft - 6" I.D. = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M-10-3
Well Number: SW12-PZP001	Date: 9-19-16
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 10.77	Flow Rate (mL/min) 500 mL/min
Height of Water Column (ft):	Length of time Purged (min) 35

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1000	0.	14.11	7.39	1.618	13.93	24.2	25.0	clear
1005	0.5	14.05	6.64	1.632	4.77	52.6	22.0	
1010	1.0	14.10	6.51	1.633	4.03	58.6	34.8	
1015	1.5	14.12	6.45	1.687	3.30	60.3	253	cloudy
1020	2.1	14.22	6.41	1.725	2.73	52.3	138	
1025	2.7	14.27	6.40	1.755	2.27	31.8	121	
1030	3.25	14.45	6.42	1.763	2.12	22.5	66.1	
1035	3.75	14.38	6.40	1.771	1.98	21.4	41.0	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW12-PZP001	1040	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	N
Matrix Spike present?					
Duplicate assessed?					

Sampled By: LMG

Comments: Dissolved metals are Field Filtered

Casing Volume: 1" I.D. = 0.041 gal/ft - 2" I.D. = 0.163 gal/ft - 4" I.D. = 0.653 gal/ft - 6" I.D. = 1.47 gal/ft
_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M-10-3
Well Number: SW13-PZM003	Date: 3/28/16
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 11.49	Flow Rate (mL/min) 400mL/min
Height of Water Column (ft):	Length of time Purged (min) 40 min

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	0.1 pH (s.u.)	Specific 3% Conductance (mS/cm)	Dissolved 10% Oxygen (mg/L)	10 ORP (mV)	10% Turbidity (NTU)	Comments
1027	0	15.13	11.96	2.016	15.16	-224	79.0	clear
1032	0.5	15.41	11.89	2.04	13.11	-247	23.0	
1037	1.0	15.53	11.90	2.04	9.76	-252	18.3	
1042	1.45	15.69	11.94	2.03	8.42	-248	13.4	
1047	1.9	15.78	11.99	2.02	7.54	-254	8.9	
1052	2.4	15.89	12.08	2.02	6.77	-259	7.2	
1057	2.9	15.99	12.20	2.01	5.94	-267	6.2	
1102	3.5	16.12	12.27	2.01	5.37	-276	5.9	
1107	4.0	16.30	12.34	2.00	4.95	-275	5.8	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW13-PZM003	1112	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	Y
Matrix Spike present?					
Duplicate assessed?					

Sampled By: LMG

Comments: Dissolved metals are Field Filtered
DO was not properly calibrated
DO did not stabilize after 40 minutes

Casing Volume: 1" I.D. = 0.041 gal/ft - 2" I.D. = 0.163 gal/ft - 4" I.D. = 0.653 gal/ft - 6" I.D. = 1.47 gal/ft
_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M-10-3
Well Number: SW13-PZM025	Date: 2-19-16
Well Diameter (in): 1/2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 17.46	Flow Rate (mL/min) 500mL/min
Height of Water Column (ft):	Length of time Purged (min)

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
0805	0	14.83	5.49	7.325	8.33	-67.1	52.8	initially clear, then
0810	0.5	15.22	6.32	7.033	1.53	-114.0	38.2	very gray/brown/cloudy
0815	1.0	15.38	6.40	6.973	1.00	-106.8	7.58	clear
0820	1.4	15.58	6.43	6.941	0.79	-102.2	4.76	
0825	1.75	15.63	6.46	6.937	0.67	-101.6	3.36	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW13-PZM025	0830	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	Y
Matrix Spike present?					
Duplicate assessed?					

Sampled By: JMG

Comments: Dissolved metals are Field Filtered

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW sampling	Project Number: 150300m
Well Number: SW13-PZM111	Date: 12-9-15
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft): >100.5	QED Controller Settings:
Depth to Water (ft) 16.52	Flow Rate ~~(mL/min)~~ 0.05 gal/min
Height of Water Column (ft):	Length of time Purged (min) 15

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
932	0.25	15.95	7.07	1.065	2.12	-381.8	194	
937	0.50	16.08	7.07	1.064	1.42	-378.8	221	
942	0.75	15.97	7.08	1.065	1.29	-386.7	227	
947	1.00	15.95	7.09	1.066	0.99	-383.2	272	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW13-PZM111	0950	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals	1 - 250 mL Plastic	HNO3 ~~none~~	Y
		Oil and Grease	1-1L Amber	HCL	Y
		TPH-DRO	2- 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	none	Y
		Cyanide	1 - 250 mL Plastic	NaOH ~~none~~	Y
Matrix Spike present? No		Dissolved Metals	1-250 mL Plastic	HNO3	Y
Duplicate assessed? NO		PCB	2-1L Amber	none	Y

Sampled By: L. Perrin Comments:

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M-10-3
Well Number: SW14-PZM004	Date: 3/31/16
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 7.21	Flow Rate (mL/min) 500mL/min
Height of Water Column (ft):	Length of time Purged (min)

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
0741	0	17.00	11.09	1.86	3.94	53	12.7	clear
0746	0.6	16.07	11.40	1.88	2.10	-161	6.2	
0751	1.2	15.42	11.38	1.96	2.18	-164	7.4	
0756	1.8	14.79	11.43	1.99	2.30	-165	5.6	
0801	2.4	14.46	11.66	2.03	2.31	-169	6.2	
0806	3.0	14.13	11.73	2.05	2.29	-177	3.9	
0811	3.6	13.90	11.77	2.06	2.47	-180	1.6	
0816	4.2	13.85	11.77	2.06	2.38	-185	0.7	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW14-PZM004	0826	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	~~N~~ Y
Matrix Spike present?					
Duplicate assessed?					

Sampled By: LMG

Comments: Dissolved metals are Field Filtered

MS/MSD

Casing Volume: 1" I.D. = 0.041 gal/ft - 2" I.D. = 0.163 gal/ft - 4" I.D. = 0.653 gal/ft - 6" I.D. = 1.47 gal/ft
_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW sampling	Project Number: 150300m
Well Number: SW15-PZM005	Date: 12-8-15
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft): 20.30	QED Controller Settings:
Depth to Water (ft) 4.70	Flow Rate (~~mL/min~~) 0.05 gall/min
Height of Water Column (ft):	Length of time Purged (min) 25

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1356	0.25	~~18.30~~ 15.48	6.00	0.44 ~~0.018~~	~~[illegible]~~ 2.64	-309.5	11.3	
1401	0.50	15.53	5.97	0.425	2.60 ~~[illegible]~~	-310.5	18.9	
1406	0.75	15.61	5.90	0.386	2.15	-304.1	8.02	
1411	1.00	15.59	5.91	0.364	1.48	-309.8	7.34	
1416	1.25	15.60	5.91	0.358	1.46	-311.6	8.18	
1421	1.50	15.50	5.90	0.355	1.44	-318.1	5.40	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW15-PZM005	1430	TCL-VOCs	3 - 40 mL VOA	HCL	
		TCL-SVOCs	2 - 1 L Amber	none	
		TAL-Metals	1 - 250 mL Plastic	HNO3 ~~none~~	
		Oil and Grease	1 - amber	HCl	
		TPH-DRO	2 - 1 L Amber	none	
		TPH-GRO	3 - 40 mL VOA	HCL	
		Hexavalent Chromium	1 - 250 mL Plastic	~~HNO3~~ ~~none~~ none	
		Cyanide	1 - 250 mL Plastic	NaOH none	
Matrix Spike present? No		Dis. metals	1 - 250 mL Plastic	~~HCl~~ HNO3	
Duplicate assessed? No					

Sampled By: LPerrin Comments:

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M-10-3
Well Number: SW15-PZM031	Date: 3/30/16
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 13.40	Flow Rate (mL/min) 400 mL/min
Height of Water Column (ft):	Length of time Purged (min) 35

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1316	0	18.56	7.39	0.624	6.75	43	37.8	clear
1321	0.4	18.45	6.90	0.583	4.56	-59	28.9	
1326	0.8	18.25	6.93	0.657	4.02	-63	22.3	
1331	1.3	18.05	7.26	0.771	3.97	-108	17.6	
1336	1.7	17.88	7.08	0.959	4.04	-135	15.1	
1341	2.4	17.74	7.08	1.05	4.05	-134	13.9	
1346	2.9	17.60	7.10	1.08	4.10	-135	11.8	
1351	3.4	17.53	7.10	1.09	4.11	-130	11.8	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW15-PZM031	1356	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	N
Matrix Spike present?					
Duplicate assessed?					

Sampled By: LML

Comments: Dissolved metals are Field Filtered

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300m
Well Number: SW15-PZM085	Date: ~~12-8-15~~ 12-11-15
Well Diameter (in): 2	One Well Volume (gal): 14.19
Total Depth (ft): 102.53	QED Controller Settings:
Depth to Water (ft) 15.47	Flow Rate ~~(mL/min)~~ 0.050 gal/min
Height of Water Column (ft): 87.06	Length of time Purged (min) 15

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
948	0.50	15.32	6.69	0.701	1.70	-331.5	15.5	
953	0.75	15.58	6.74	0.702	1.56	-330.8	17.5	
958	1.00	15.60	6.76	0.702	1.50	-330.7	16.9	
1003	1.25	15.64	6.78	0.703	1.44	-334.9	16.1	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW15-PZM085	1005	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2 - 1 L Amber	none	Y
		TAL-Metals	1 - 250 mL Plastic	HNO3 ~~none~~	Y
		Oil and Grease	1 - 1L Amber	HCL	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	none	Y
		Cyanide	1 - 250 mL Plastic	NaOH ~~none~~	Y
Matrix Spike present? NO		Dissolved metals	1-250 mL Plastic	HNO3	Y
Duplicate assessed? NO					

Sampled By: L. Perrin Comments:

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft

87.06 ft x 0.163 gal/ft = 14.19 (gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW sampling	Project Number: 150300m
Well Number: SW16-PZM003	Date: 12-9-15
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft): 17.84	QED Controller Settings:
Depth to Water (ft) 6.39	Flow Rate (~~mL/min~~) 0.05 gal/min
Height of Water Column (ft): 11.45	Length of time Purged (min) 15

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1112	0.25	16.38	3.95	1.457	2.96	-293.1	84.0	
1117	~~0.0~~0.5	16.41	3.92	1.464	2.74	-277.3	66.6	
1122	0.75	16.51	3.91	1.476	2.55	-271.1	69.6	
1127	1.00	16.51	3.91	1.476	2.55	-271.0	65.3	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW16-PZM003	1130	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2 - 1 L Amber	none	Y
		TAL-Metals	1 - 250 mL Plastic	HNO3 none	Y
		Oil and Grease	1 - 1 L Amber	~~H~~ HCL	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	none	Y
		Cyanide	1 - 250 mL Plastic	NaOH none	Y
Matrix Spike present? NO		Dissolved metals	1-250 mL Plastic	HNO3	Y
Duplicate assessed? yes					

Sampled By: L. Perrin Comments: * Plus 15 bottles for dup

Casing Volume: **1" I.D. =** 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft
_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M-10-3
Well Number: SW 116-PZM067	Date: 2-17-16
Well Diameter (in): 1/2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 16.39	Flow Rate (mL/min) 500 mL/min
Height of Water Column (ft):	Length of time Purged (min) 20

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1352	0	15.89	7.58	0.515	18.00	-140.7	34.7	clear
1357	0.5	14.82	7.08	0.907	1.57	-153.5	10.4	
1402	1.0	15.02	7.00	0.890	0.80	-153.8	2.67	
1407	1.5	14.87	6.98	0.887	0.64	-148.1	3.15	
1412	2.1	14.81	6.95	0.882	0.55	-146.1	4.39	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
SW116-PZM067	1417	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	N
Matrix Spike present?					
Duplicate assessed?					

Sampled By: LMG

Comments: Dissolved metals are Field Filtered

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M-10-3
Well Number: TM03-PZM004	Date: 3/29/16
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 11.20	Flow Rate (mL/min) 400 mL/m
Height of Water Column (ft):	Length of time Purged (min) 40

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
0848	0	13.90	10.94	0.737	5.75	-264	187	
0853	0.5	13.89	9.97	0.639	2.06	-158	97.0	gray color
0858	1.0	13.88	9.28	0.623	1.99	-104	48.7	
0903	1.5	13.91	9.05	0.610	1.95	-75	23.9	
0908	2.0	14.00	8.99	0.607	1.92	-39	16.8	
0913	2.5	14.07	8.97	0.595	1.91	-18	14.9	
0918	3.0	14.15	8.94	0.594	1.98	3	14.7	
0923	3.5	14.22	8.89	0.605	1.93	3	10.6	
0928	4.0	14.29	9.64	0.589	1.94	-128	9.1	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
TM03-PZM004	0933	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	N
Matrix Spike present?					
Duplicate assessed?					

Sampled By: LMG

Comments: Dissolved metals are Field Filtered MS/MSD

DO was not properly calibrated

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300 M-10-3
Well Number: TM03-PZM037	Date: 3/29/16
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 11.87	Flow Rate (mL/min) 500 mL/min
Height of Water Column (ft):	Length of time Purged (min) 40 min

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
0739	0.6	11.76	7.52	2.39	3.68	-122	13.9	
0744	1.2	13.38	7.64	2.60	2.32	-228	13.3	
0749	1.8	14.16	7.36	2.88	3.04	-206	12.9	
0754	2.4	14.61	7.34	3.26	2.98	-201	13.6	
0759	3.0	14.89	7.88	3.56	3.34	-252	13.2	
0804	3.6	14.96	8.00	3.63	3.22	-266	12.2	
0809	4.2	15.03	8.00	3.77	3.64	-262	11.4	
0814	4.8	14.80	7.98	3.65	3.42	-258	10.7	
0819	5.4	14.68	7.92	3.64	3.29	-251	9.9	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
TM03-PZM037	0824	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	N
Matrix Spike present?					
Duplicate assessed?					

Sampled By: LMG

Comments: Dissolved metals are Field Filtered
DO was not properly calibrated

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft
_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300M-10-3
Well Number: TM05-PZM005	Date: 3/29/16
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 8.62	Flow Rate (mL/min) 400 ml/min
Height of Water Column (ft):	Length of time Purged (min) 15

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance mS/cm	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1458	0	17.47	11.37	0.586	8.12	-90	51.9	
1503	0.5	14.78	11.47	0.517	6.61	-184	56.0	
1508	1.0	14.57	11.46	0.514	6.33	-184	19.2	
1513	1.5	14.46	11.42	0.505	6.09	-179	10.5	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
TM05-PZM005	1518	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	N
Matrix Spike present?					
Duplicate assessed?					

Sampled By: LMG

Comments: Dissolved metals are Field Filtered
DO was not properly calibrated

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft
_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW Investigation	Project Number: 150300.M-10-3
Well Number: TM05-PZM040	Date: 3/29/16
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft):	QED Controller Settings:
Depth to Water (ft) 12.61	Flow Rate (mL/min) 400 mL/min
Height of Water Column (ft):	Length of time Purged (min) ~~20~~ 15

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1410	0	18.81	7.84	3.68	4.87	-160	16.9	clear
1415	0.5	18.62	7.58	3.70	2.97	-159	15.8	
1420	1.0	18.40	7.52	3.77	2.92	-162	15.8	
1425	1.5	18.20	7.47	3.72	2.94	-164	15.3	
~~1430~~								

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
TM05-PZM040	1430	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	N
Matrix Spike present?					
Duplicate assessed?					

Sampled By: LMG

Comments: Dissolved metals are Field Filtered

DO was not properly calibrated

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

Low Flow Sampling

ARM Group Inc.
Earth Resource Engineers and Consultants

Project Name: Area B GW investigation	Project Number: 150300m
Well Number: TS10-PDM008	Date: 12-10-15
Well Diameter (in): 2	One Well Volume (gal):
Total Depth (ft): 14.96	QED Controller Settings:
Depth to Water (ft) 5.81	Flow Rate ~~(mL/min)~~ 0.05 gal/min
Height of Water Column (ft):	Length of time Purged (min) 15

WELL PURGING RECORD

Time	Volume Purged (gallons)	Temp (°C)	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Comments
1552	0.25	12.89	8.87	2.954	0.76	-385.0	47.1	
1557	0.50	12.32	8.92	2.109	0.58	-387.6	16.2	
1602	0.75	12.13	8.92	1.958	0.56	-390.1	10.1	Sulfur Smell
1607	1.00	12.05	8.93	1.858	0.47	-391.1	5.71	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter	Container	Perservative	Y/N
TS10-PDM008	1610	TCL-VOCs	3 - 40 mL VOA	HCL	Y
		TCL-SVOCs	2- 1 L Amber	none	Y
		TAL-Metals (Total)	1 - 250 mL Plastic	HNO3	Y
		TAL-Metals (Dissolved)	1 - 250 mL Plastic	HNO3	Y
		TPH-DRO	2 - 1 L Amber	none	Y
		TPH-GRO	3 - 40 mL VOA	HCL	Y
		Hexavalent Chromium	1 - 250 mL Plastic	None	Y
		Cyanide	1 - 250 mL Plastic	NAOH	Y
		PCBs	2 - 1 L Amber	none	Y
Matrix Spike present? NO		Oil + Grease	1-1 L Amber	HCl	Y
Duplicate assessed? NO					Y

Sampled By: L. Perrin

Comments: Dissolved metals are Field Filtered

Casing Volume: **1" I.D.** = 0.041 gal/ft - **2" I.D.** = 0.163 gal/ft - **4" I.D.** = 0.653 gal/ft - **6" I.D.** = 1.47 gal/ft

_____ft x _____gal/ft = _____(gal)

TABLE 1
MULTIPARAMETER CALIBRATION LOG

Project Name Area B GW Investigation Date 12/8/15
Weather Sunny, 40s
Calibrated by L. Perrin Instrument 2100Q Turbidmeter YSI
Serial Number 2840 YSI, 26435 Turbidmeter

Parameters	Morning Calibration	Morning Temperature (F)	End of Day Calibration Check	End of Day Temperature (F)
Specific Conductance Standard #1	1.410	41	1.443	50
Specific Conductance Standard #2	--	41	--	50
pH (7)	7.05	41	7.06	50
pH (4)	3.96	41	3.96	50
pH(10)	9.98	41	10.04	50
ORP Zobel Solution	240.1	41	243.0	50
Dissolved Oxygen 100% water saturated air mg/L	100.9%	41	94.6%	50
Dissolved Oxygen Zero Dissolved Oxygen Solution mg/L	--	41	--	50
Barometric Pressure mm Hg	767.1	NA	¥	NA
Turbidity #1 (20 NTU)	19.6	41	19.5	50
Turbidity #2 (100 NTU)	99.8	41	90.1¥	50
Turbidity #3 (800 NTU)	798	41	819	50

¥Turbidity is outside of the post-calibration acceptance criteria. Barometeric pressure was not recorded during post-calibration. sDO was recorded in %. Values displayed on field purge logs may be inaccurate.

TABLE 1
MULTIPARAMETER CALIBRATION LOG

Project Name Area B GW Sampling Date 12/9/15
Weather Cloudy, 30s
Calibrated by L. Perrin Instrument 2100Q Turbidmeter YSI
Serial Number 2840 YSI, 26435 Turbidmeter

Parameters	Morning Calibration	Morning Temperature (F)	End of Day Calibration Check	End of Day Temperature (F)
Specific Conductance Standard #1	1.419	34	1.421	54
Specific Conductance Standard #2	--	34	--	54
pH (7)	6.99	34	7.07	54
pH (4)	4.00	34	4.04	54
pH(10)	9.98	34	10.01	54
ORP Zobel Solution	240.1	34	240.5	54
Dissolved Oxygen 100% water saturated air mg/L	100%	34	97.2%	54
Dissolved Oxygen Zero Dissolved Oxygen Solution mg/L	--	34	--	54
Barometric Pressure mm Hg	766.2	NA	762.9	NA
Turbidity #1 (20 NTU)	20.4	34	20.5	54
Turbidity #2 (100 NTU)	101	34	108[¥]	54
Turbidity #3 (800 NTU)	815	34	790	54

[¥]Turbidity is outside of the post-calibration acceptance criteria. DO was recorded as %. Values displayed on field purge logs may be inaccurate.

TABLE 1
MULTIPARAMETER CALIBRATION LOG

Project Name Area B GW Investigation Date 12/10/15
Weather Sunny
Calibrated by L. Perrin Instrument 2100Q Turbidimeter, YSI 600 X LM
Serial Number 2840 YSI, 26435 Turbidimeter

Parameters	Morning Calibration	Morning Temperature (F)	End of Day Calibration Check	End of Day Temperature (F)
Specific Conductance Standard #1	1.413	39	1.376	55
Specific Conductance Standard #2	--	--	--	--
pH (7)	6.99	39	6.94	55
pH (4)	4.00	39	3.91	55
pH(10)	9.97	39	10.04	55
ORP Zobel Solution	240.1	39	246.7	55
Dissolved Oxygen 100% water saturated air mg/L	100.5%	39	103.8%	55
Dissolved Oxygen Zero Dissolved Oxygen Solution mg/L	--	--	--	--
Barometric Pressure mm Hg	763.3	NA	761.9	NA
Turbidity #1 (20 NTU)	19.9	39	20.6	55
Turbidity #2 (100 NTU)	99.0	39	105	55
Turbidity #3 (800 NTU)	796	39	805	55

¥DO was recorded as %. Values displayed on field purge logs may be inaccurate.

TABLE 1
MULTIPARAMETER CALIBRATION LOG

Project Name Area B GW Investigation Date 12/11/15
Weather Sunny
Calibrated by L. Perrin Instrument YSI turbidimeter
Serial Number 2840 YSI, 26435 Turbidimeter

Parameters	Morning Calibration	Morning Temperature (F)	End of Day Calibration Check	End of Day Temperature (F)
Specific Conductance Standard #1	1.413	39	1.442[¥]	54
Specific Conductance Standard #2	--	--	--	--
pH (7)	7.00	39	7.13	54
pH (4)	4.00	39	4.05	54
pH(10)	10.00	39	10.02	54
ORP Zobel Solution	240.3	39	242.5	54
Dissolved Oxygen 100% water saturated air mg/L	100.3%	39	80.9%	54
Dissolved Oxygen Zero Dissolved Oxygen Solution mg/L	--	--	--	--
Barometric Pressure mm Hg	762.6	NA	762.5	NA
Turbidity #1 (20 NTU)	20.0	39	21.2[¥]	54
Turbidity #2 (100 NTU)	99.5	39	105	54
Turbidity #3 (800 NTU)	784	39	816	54

[¥] Low turbidity and specific conductance is outside of the post-calibration acceptance criteria. DO was recorded as %. Values displayed on field purge logs may be inaccurate.

TABLE 1
MULTIPARAMETER CALIBRATION LOG

Project Name Area B GW Investigation Date 12/14/15
Weather Cloudy, 50s
Calibrated by L. Perrin Instrument YSI/Turbidimeter
Serial Number 2840 YSI, 26435 Turbidimeter

Parameters	Morning Calibration	Morning Temperature (F)	End of Day Calibration Check	End of Day Temperature (F)
Specific Conductance Standard #1	1.413	59	1.383	63
Specific Conductance Standard #2	--	--	--	--
pH (7)	7.00	59	7.09	63
pH (4)	4.00	59	4.18	63
pH(10)	10.01	59	10.08	63
ORP Zobel Solution	240.0	59	233.7	63
Dissolved Oxygen 100% water saturated air mg/L	100.0%	59	13.1%	63
Dissolved Oxygen Zero Dissolved Oxygen Solution mg/L	--	--	--	--
Barometric Pressure mm Hg	760.0	NA	754.0	NA
Turbidity #1 (20 NTU)	20.0	57	21.5[¥]	63
Turbidity #2 (100 NTU)	101	57	102	63
Turbidity #3 (800 NTU)	807	57	808	63

[¥]Turbidity is outside of the post-calibration acceptance criteria. DO was recorded as % . Values displayed on field purge logs may be inaccurate.

TABLE 1
MULTIPARAMETER CALIBRATION LOG

Project Name 150300M Area B GW Investigation Date 1-29-16
Weather Windy 30s
Calibrated by Leandra Glumac Instrument YSI Turbidity meter
Serial Number 22096 YSI
E007634 turbidity

Parameters	Morning Calibration	Morning Temperature	End of Day Calibration Check	End of Day Temperature
Specific Conductance Standard #1	1.647¥	24	0.938¥	40
Specific Conductance Standard #2		24		40
pH (7)	--	24	--	40
pH (4)	-9.99¥	24	--	40
pH(10)	--	24	--	40
ORP Zobel Solution	--	24	--	40
Dissolved Oxygen 100% water saturated air mg/L	--	24	--	40
Dissolved Oxygen Zero Dissolved Oxygen Solution mg/L		24		40
Barometric Pressure mm Hg	751.59 mm Hg 29.58 in Hg	NA	754.13 mm Hg 29.69 in Hg	NA
Turbidity #1 (0.1 NTU)	0.1	24	0.45¥	40
Turbidity #2 (15 NTU)	15	24	16	40
Turbidity #3 (100 NTU)	100	24	116¥	40
Turbidity #4 (750 NTU)	750	24	846¥	40

¥Specific conductance, turbidity, and pH is outside of the post-calibration acceptance criteria. DO was not recorded. Values displayed on field purge logs may be inaccurate.

TABLE 1
MULTIPARAMETER CALIBRATION LOG

Project Name 150300M Area B GW Investigation Date 2-1-16
Weather Coudy 50s
Calibrated by LMG Instrument YSI/Turbidity
Serial Number RFW 24631 YSI
E0007634 turbidity

Parameters	Morning Calibration	Morning Temperature	End of Day Calibration Check	End of Day Temperature
Specific Conductance Standard #1	1.409 mmho/cm 0.748	47	3.176¥	45 (estimate)
Specific Conductance Standard #2	--	47	--	45 (estimate)
pH (7)	6.78	47	6.93	45 (estimate)
pH (4)	4.10	47	3.90	45 (estimate)
pH(10)	10.12	47	10.10	45 (estimate)
ORP Zobel Solution	--	47	--	45 (estimate)
Dissolved Oxygen 100% water saturated air mg/L	15.48¥	47	9.10¥	45 (estimate)
Dissolved Oxygen Zero Dissolved Oxygen Solution mg/L	--	47	--	45 (estimate)
Barometric Pressure mm Hg	757.68 29.83 in Hg	NA	760.73 29.95 in Hg	45 (estimate)
Turbidity #1 (0.1 NTU)	0.1	47	0.16	45 (estimate)
Turbidity #2 (15 NTU)	15	47	14.5	45 (estimate)
Turbidity #3 (100 NTU)	100	47	102	45 (estimate)
Turbidity #4 (750 NTU)	750	47	763	45 (estimate)

¥Specific conductance and DO is outside of the post-calibration acceptance criteria. Values displayed on field purge logs may be inaccurate.

TABLE 1
MULTIPARAMETER CALIBRATION LOG

Project Name 150300M Area B GW Investigation Date 2-2-16
Weather Sunny 30s
Calibrated by LMG Instrument YSI/turbidity
Serial Number RFW 24631 YSI
E0007634 turbidity

Parameters	Morning Calibration	Morning Temperature	End of Day Calibration Check	End of Day Temperature
Specific Conductance Standard #1	1.588¥	32	3.419¥	48
Specific Conductance Standard #2	--	32	--	48
pH (7) ¥	7.07	32	7.40	48
pH (4) ¥	3.31¥	32	3.76	48
pH(10) ¥	10.13	32	9.38	48
ORP Zobel Solution	--	32	--	48
Dissolved Oxygen 100% water saturated air mg/L	8.88¥	32	9.51¥	48
Dissolved Oxygen Zero Dissolved Oxygen Solution mg/L	--	32	--	48
Barometric Pressure mm Hg	769.37 mm Hg 30.29 in Hg	32	770.636 mm Hg 30.34 in Hg	48
Turbidity #1 (0.1 NTU)	0.10	32	0.25¥	48
Turbidity #2 (15 NTU)	15	32	16.8	48
Turbidity #3 (100 NTU)	100	32	110	48
Turbidity #4 (750 NTU)	750	32	791	48

¥Specific conductance and DO is outside of the post-calibration acceptance criteria. pH Unit gives erroneous pH values if moved (faulty connection). Values displayed on field purge logs may be inaccurate.

TABLE 1
MULTIPARAMETER CALIBRATION LOG

Project Name 150300M Area B GW Investigation Date 2-4-16
Weather Cloudy 40s
Calibrated by LMG Instrument YSI/turbidity
Serial Number RFW 24631 YSI
E0007634 turbidity

Parameters	Morning Calibration	Morning Temperature	End of Day Calibration Check	End of Day Temperature
Specific Conductance Standard #1	0.720[¥]	47	2.359[¥]	48
Specific Conductance Standard #2	--	47	--	48
pH (7)	6.84	47	6.88	48
pH (4)	4.29	47	3.91	48
pH(10)	10.02	47	10.04	48
ORP Zobel Solution	--	47	--	48
Dissolved Oxygen 100% water saturated air mg/L	10.28[¥]	47	10.14[¥]	48
Dissolved Oxygen Zero Dissolved Oxygen Solution mg/L	--	47	--	48
Barometric Pressure mm Hg	761.75 mm Hg 29.99 in Hg	47	763.78 mm Hg 30.07 in Hg	48
Turbidity #1 (0.1 NTU)	0.1	47	0.19	48
Turbidity #2 (15 NTU)	15	47	15.3	48
Turbidity #3 (100 NTU)	100	47	102	48
Turbidity #4 (750 NTU)	750	47	753	48

[¥]Specific conductance and DO is outside of the post-calibration acceptance criteria. Values displayed on field purge logs may be inaccurate.

TABLE 1
MULTIPARAMETER CALIBRATION LOG

Project Name 150300M Area B GW Investigation Date 2-5-16
Weather rainy/cloudy 30s
Calibrated by LMG Instrument YSI, turbidity meter
Serial Number RFW24631 YSI
E0007634 turbidity

Parameters	Morning Calibration	Morning Temperature	End of Day Calibration Check	End of Day Temperature
Specific Conductance Standard #1	1.589¥	36	1.726¥	43
Specific Conductance Standard #2	--	36	--	43
pH (7)	6.94	36	7.62	43
pH (4)	3.89	36	4.36	43
pH(10)	10.17	36	10.32	43
ORP Zobel Solution	--	36	--	43
Dissolved Oxygen 100% water saturated air mg/L	9.69¥	36	9.84¥	43
Dissolved Oxygen Zero Dissolved Oxygen Solution mg/L	--	36	--	43
Barometric Pressure mm Hg	765.56 30.14 in Hg	36	768.60 30.26 in Hg	43
Turbidity #1 (0.1 NTU)	0.1	36	0.18	43
Turbidity #2 (15 NTU)	15	36	13.7	43
Turbidity #3 (100 NTU)	100	36	94.2¥	43
Turbidity #4 (750 NTU)	750	36	726	43

¥Specific conductance, turbidity, and DO is outside of the post-calibration acceptance criteria. Values displayed on field purge logs may be inaccurate.

TABLE 1
MULTIPARAMETER CALIBRATION LOG

Project Name 150300M Area B GW Investigation Date 2-8-16
Weather Cloudy 30s
Calibrated by LMG Instrument YSI/turbidity
Serial Number RFW24631 YSI
E0007634 turbidity

Parameters	Morning Calibration	Morning Temperature	End of Day Calibration Check	End of Day Temperature
Specific Conductance Standard #1	1.611¥	34	2.027¥	46
Specific Conductance Standard #2	--	34	--	46
pH (7)	6.92	34	7.11	46
pH (4)	3.95	34	4.15	46
pH(10)	10.15	34	10.03	46
ORP Zobel Solution	--	34	--	46
Dissolved Oxygen 100% water saturated air mg/L	10.65¥	34	8.75¥	46
Dissolved Oxygen Zero Dissolved Oxygen Solution mg/L	--	34	--	46
Barometric Pressure mm Hg	756.92 29.80 in Hg	34	755.40 29.73 in Hg	46
Turbidity #1 (0.1 NTU)	0.1	34	0.78¥	46
Turbidity #2 (15 NTU)	15	34	19.2¥	46
Turbidity #3 (100 NTU)	100	34	111¥	46
Turbidity #4 (750 NTU)	750	34	798¥	46

¥Specific conductance, turbidity, and DO is outside of the post-calibration acceptance criteria. Values displayed on field purge logs may be inaccurate.

TABLE 1
MULTIPARAMETER CALIBRATION LOG

Project Name 150300M-10-3 Area B GW Investigation Date 2-10-16
Weather Windy 20s
Calibrated by LMG Instrument YSI/turbidity
Serial Number RFW 24631 YSI
E0007634 turbidity

Parameters	Morning Calibration	Morning Temperature	End of Day Calibration Check	End of Day Temperature
Specific Conductance Standard #1	1.967¥	30	2.846¥	36
Specific Conductance Standard #2	--	30	--	36
pH (7)	7.15	30	7.29	36
pH (4)	3.56¥	30	3.98	36
pH(10)	10.18	30	10.03	36
ORP Zobel Solution	--	30	--	36
Dissolved Oxygen 100% water saturated air mg/L	9.22¥	30	8.52¥	36
Dissolved Oxygen Zero Dissolved Oxygen Solution mg/L	--	30	--	36
Barometric Pressure mm Hg	755.65 29.75 in Hg	30	757.17 29.81 in Hg	36
Turbidity #1 (0.1 NTU)	0.1	30	0.35¥	36
Turbidity #2 (15 NTU)	15	30	23.2¥	36
Turbidity #3 (100 NTU)	100	30	129¥	36
Turbidity #4 (750 NTU)	750	30	882¥	36

¥Specific conductance, turbidity, and DO is outside of the post-calibration acceptance criteria. Values displayed on field purge logs may be inaccurate.

TABLE 1
MULTIPARAMETER CALIBRATION LOG

Project Name 150300M-10-3 Area B GW Investigation Date 2-11-16
Weather Windy 20s
Calibrated by LMG Instrument YSI/turbidity
Serial Number RFW 24631 YSI
E0007634 turbidity

Parameters	Morning Calibration	Morning Temperature	End of Day Calibration Check	End of Day Temperature
Specific Conductance Standard #1	1.427	21	2.481¥	28
Specific Conductance Standard #2	--	21	--	28
pH (7)	6.92	21	7.03	28
pH (4)	3.78	21	4.02	28
pH(10)	10.07	21	10.01	28
ORP Zobel Solution	--	21	--	28
Dissolved Oxygen 100% water saturated air mg/L	10.61¥	21	12.78¥	28
Dissolved Oxygen Zero Dissolved Oxygen Solution mg/L	--	21	--	28
Barometric Pressure mm Hg	763.27 30.05 in Hg	21	30.12 in Hg	28
Turbidity #1 (0.1 NTU)	0.1	21	0.31¥	28
Turbidity #2 (15 NTU)	15	21	19.8	28
Turbidity #3 (100 NTU)	100	21	117¥	28
Turbidity #4 (750 NTU)	750	21	831¥	28

¥Specific conductance, turbidity, and DO is outside of the post-calibration acceptance criteria. Values displayed on field purge logs may be inaccurate.

TABLE 1
MULTIPARAMETER CALIBRATION LOG

Project Name 150300M-10-3 Area B GW Investigation Date 2-12-16
Weather Cloudy 10s
Calibrated by LMG Instrument YSI/turbidity
Serial Number RFW 24631 YSI
E0007634 turbidity

Parameters	Morning Calibration	Morning Temperature	End of Day Calibration Check	End of Day Temperature
Specific Conductance Standard #1	3.392¥	18	0.812¥	27
Specific Conductance Standard #2	--	18	--	27
pH (7)	7.09	18	6.98	27
pH (4)	4.11	18	3.97	27
pH(10)	9.88	18	9.81	27
ORP Zobel Solution	--	18	--	27
Dissolved Oxygen 100% water saturated air mg/L	8.75¥	18	10.29¥	27
Dissolved Oxygen Zero Dissolved Oxygen Solution mg/L	--	18	--	27
Barometric Pressure mm Hg	770.38 30.33 in Hg	18	765.05 30.12 in Hg	27
Turbidity #1 (0.1 NTU)	0.1	18	0.20¥	27
Turbidity #2 (15 NTU)	15	18	15.7	27
Turbidity #3 (100 NTU)	100	18	103	27
Turbidity #4 (750 NTU)	750	18	767	27

¥Specific conductance, low turbidity, and DO is outside of the post-calibration acceptance criteria. Values displayed on field purge logs may be inaccurate.

TABLE 1
MULTIPARAMETER CALIBRATION LOG

Project Name 150300M-10-3 Areab B GW Investigation Date 2/17/16
Weather Cloudy, 30s
Calibrated by LMG Instrument YSI/turbidity
Serial Number RFW 24631 YSI
E0007634 turbidity

Parameters	Morning Calibration	Morning Temperature	End of Day Calibration Check	End of Day Temperature
Specific Conductance Standard #1	0.987¥	32	2.592¥	46
Specific Conductance Standard #2	--	32	--	46
pH (7)	7.05	32	7.30	46
pH (4)	3.64	32	4.08	46
pH(10)	10.30	32	9.91	46
ORP Zobel Solution	--	32	--	46
Dissolved Oxygen 100% water saturated air mg/L	8.96¥	32	9.45¥	46
Dissolved Oxygen Zero Dissolved Oxygen Solution mg/L	--	32	--	46
Barometric Pressure mm Hg	762.00 30.00 in Hg	32	764.03 30.08 in Hg	46
Turbidity #1 (0.1 NTU)	0.1	32	0.21¥	46
Turbidity #2 (15 NTU)	15	32	15.2	46
Turbidity #3 (100 NTU)	100	32	99.6	46
Turbidity #4 (750 NTU)	750	32	748	46

¥Specific conductance, low turbidity, and DO is outside of the post-calibration acceptance criteria. Values displayed on field purge logs may be inaccurate.

TABLE 1
MULTIPARAMETER CALIBRATION LOG

Project Name 150300M-10-3 Area B GW Investigation Date 2/18/16
Weather Windy, 20s
Calibrated by LMG Instrument YSI/turbidity meter
Serial Number RFW 24631 YSI
E0007634 turbidity

Parameters	Morning Calibration	Morning Temperature	End of Day Calibration Check	End of Day Temperature
Specific Conductance Standard #1	2.603¥	28	1.836¥	36
Specific Conductance Standard #2	--	28	--	36
pH (7)	7.34	28	7.18	36
pH (4)	3.43¥	28	4.07	36
pH(10)	9.78	28	10.37	36
ORP Zobel Solution	--	28	--	36
Dissolved Oxygen 100% water saturated air mg/L	12.89¥	28	7.54¥	36
Dissolved Oxygen Zero Dissolved Oxygen Solution mg/L	--	28	--	36
Barometric Pressure mm Hg	772.67 30.42 in Hg	28	775.21 30.52 in	36
Turbidity #1 (0.1 NTU)	0.1	28	0.61¥	36
Turbidity #2 (15 NTU)	15	28	15.6	36
Turbidity #3 (100 NTU)	100	28	100	36
Turbidity #4 (750 NTU)	750	28	747	36

¥Specific conductance, low turbidity, DO, and pH is outside of the post-calibration acceptance criteria. Values displayed on field purge logs may be inaccurate.

TABLE 1
MULTIPARAMETER CALIBRATION LOG

Project Name 150300M-10-3 Area B GW Investigation Date 2/19/16
Weather overcast, 20s
Calibrated by LMG Instrument YSI/turbidity
Serial Number RFW 24631 YSI
E0007634 turbidity

Parameters	Morning Calibration	Morning Temperature	End of Day Calibration Check	End of Day Temperature
Specific Conductance Standard #1	0.940¥	21	3.365¥	32
Specific Conductance Standard #2	--	21	--	32
pH (7)	7.08	21	7.39	32
pH (4)	3.31¥	21	3.97	32
pH(10)	10.54	21	9.86	32
ORP Zobel Solution	--	21	--	32
Dissolved Oxygen 100% water saturated air mg/L	8.81¥	21	8.22¥	32
Dissolved Oxygen Zero Dissolved Oxygen Solution mg/L	--	21	--	32
Barometric Pressure mm Hg	777.24 30.60 in Hg	21	777.24 30.60 in Hg	32
Turbidity #1 (0.1 NTU)	0.1	21	0.41¥	32
Turbidity #2 (15 NTU)	15	21	15.0	32
Turbidity #3 (100 NTU)	100	21	99.1	32
Turbidity #4 (750 NTU)	750	21	743	32

¥Specific conductance, DO, low turbidity and pH is outside of the post-calibration acceptance criteria. Values displayed on field purge logs may be inaccurate.

TABLE 1
MULTIPARAMETER CALIBRATION LOG

Project Name 150300M-10-3 Area B GW Investigation Date 3/28/16
Weather rain, 40s
Calibrated by LMG Instrument Horiba
Serial Number U-5000 Series, EAG owned

Parameters	Morning Calibration	Morning Temperature	End of Day Calibration Check	End of Day Temperature
Specific Conductance Standard #1 (0.000 mS/cm)	0.000	48 ^{o}F	--	65 ^{o}F
Specific Conductance Standard #2 (1.49 mS/cm)		48 ^{o}F	1.39	65 ^{o}F
pH (7)		48 ^{o}F	7.54	65 ^{o}F
pH (4)	3.22¥	48 ^{o}F	4.57¥	65 ^{o}F
pH(10)	9.82	48 ^{o}F	10.46	65 ^{o}F
ORP Zobel Solution		48 ^{o}F		65 ^{o}F
Dissolved Oxygen 100% water saturated air mg/L	-	48 ^{o}F	13.24¥	65 ^{o}F
Dissolved Oxygen Zero Dissolved Oxygen Solution mg/L		48 ^{o}F		65 ^{o}F
Barometric Pressure mm Hg		48 ^{o}F	29.67 in Hg 753.62 mm	65 ^{o}F
Turbidity #1 (0.1 NTU)	-	48 ^{o}F	-	65 ^{o}F
Turbidity #2 (15 NTU)	-	48 ^{o}F	-	65 ^{o}F
Turbidity #3 (100 NTU)	-	48 ^{o}F	-	65 ^{o}F
Turbidity #4 (750 NTU)	-	48 ^{o}F	-	65 ^{o}F

¥DO and pH are outside of the post-calibration acceptance criteria. Values displayed on field purge logs may be inaccurate.

TABLE 1
MULTIPARAMETER CALIBRATION LOG

Project Name Area B GW Investigation Date 3/29/16
Weather Sunny, windy 40s
Calibrated by LMG Instrument Horiba
Serial Number U-5000 Series, EAG owned

Parameters	Morning Calibration	Morning Temperature	End of Day Calibration Check	End of Day Temperature
Specific Conductance Standard #1	4.47 mS/cm	47 ^{o}F	1.48 mS/cm[¥]	61
Specific Conductance Standard #2	--	47 ^{o}F		61
pH (7)	--	47 ^{o}F	7.24	61
pH (4)	4.00	47 ^{o}F	4.12	61
pH(10)	--	47 ^{o}F	10.17	61
ORP Zobel Solution	--	47 ^{o}F	--	61
Dissolved Oxygen 100% water saturated air mg/L	9.30 mg/L[¥]	47 ^{o}F	--[¥]	61
Dissolved Oxygen Zero Dissolved Oxygen Solution mg/L	--	47 ^{o}F	--	61
Barometric Pressure mm Hg	762.25	NA	30.1 in Hg (estimated)	NA
Turbidity #1 (0.1 NTU)	-	47 ^{o}F	--	61
Turbidity #2 (15 NTU)	--	47 ^{o}F	--	61
Turbidity #3 (100 NTU)	--	47 ^{o}F	--	61
Turbidity #4 (750 NTU)				

[¥]Specific conductance and DO is outside of the post-calibration acceptance criteria. Values displayed on field purge logs may be inaccurate.

TABLE 1
MULTIPARAMETER CALIBRATION LOG

Project Name Area B GW Investigation Date 3/30/16
Weather Sunny, 40s
Calibrated by LMG Instrument Horiba
Serial Number U-5000 Series, EAG owned

Parameters	Morning Calibration	Morning Temperature	End of Day Calibration Check	End of Day Temperature
Specific Conductance Standard #1	4.51 mS/cm	42 ^{o}F	4.66 mS/cm[¥]	55
Specific Conductance Standard #2	--	42 ^{o}F	--	55
pH (7)	--	42 ^{o}F	--	55
pH (4)	4.00	42 ^{o}F	4.08	55
pH(10)	--	42 ^{o}F	--	55
ORP Zobel Solution	--	42 ^{o}F	--	55
Dissolved Oxygen 100% water saturated air mg/L	11.24[¥]	42 ^{o}F	9.67[¥]	55
Dissolved Oxygen Zero Dissolved Oxygen Solution mg/L	--	42 ^{o}F	--	55
Barometric Pressure mm Hg	30.4 in Hg (estimated)	NA	30.3 in Hg (estimated)	NA
Turbidity #1 (0.1 NTU)	0.1	42 ^{o}F	0.0	55
Turbidity #2 (15 NTU)	--	42 ^{o}F	--	55
Turbidity #3 (100 NTU)	--	42 ^{o}F	--	55
Turbidity #4 (750 NTU)				

[¥]DO and specific conductance is outside of the post-calibration acceptance criteria. Values displayed on field purge logs may be inaccurate.

APPENDIX H

Area B - IDW Drum Log
Groundwater Investigation

Drum ID	Designation	Parcel Activity	Contents	Open Date
28-Hexane-10/13/15-B	Hazardous	Area B	Hexane	10/13/2015
27-N. Acid-10/13/15-B	Non-haz.	Area B	Nitric Acid	10/13/2015
SW-046-MWS	Non-haz.	Parcel B-7	Soil	11/2/2015
69-DW-11/2/15-B	Non-haz.	Area B	Pit water	11/2/2015
70 DW-11/3/15-B	Non-haz.	Area B	Pit water	11/3/2015
63-Soil-11/5/15-B	Non-haz.	Parcel B7	Soil	11/5/2015
64-Soil-11/5/15-B	Non-haz.	Parcel B7	Soil	11/5/2015
65-PPE-11/9/15-B	Non-haz.	Area B	PPE	11/9/2015
72 GW-11/9/15-B	Non-haz.	Area B	ATN Water	11/9/2015
74-DW-11/10/15-B	Non-haz.	Parcel B7	Decon water	11/10/2015
75-DW-11/10/15-B	Non-haz.	Parcel B7	Decon water	11/10/2015
73-PPE-11/10/15-B	Non-haz.	Parcel B7	PPE	11/10/2015
71 DW-11/10/15-B	Non-haz.	Area B	Pit water	11/10/2015
76-DW-11/10/15-B	Non-haz.	Parcel B7	DW & Sludge	11/10/2015
79-Soil-11/11/15-B5	Non-haz.	Parcel B5	Soil	11/11/2015
100-DW-11/11/15-B7	Non-haz.	Parcel B7	Decon water	11/11/2015
99-DW-11/11/15-B7	Non-haz.	Parcel B7	Decon water	11/11/2015
98-DW-11/11/15-B7	Non-haz.	Parcel B7	Decon water	11/11/2015
97-DW-11/11/15-B7	Non-haz.	Parcel B7	Decon water	11/11/2015
96-DW-11/11/15-B7	Non-haz.	Parcel B7	Decon water	11/11/2015
95-DW-11/11/15-B7	Non-haz.	Parcel B7	Decon water	11/11/2015
94-DW-11/11/15-B7	Non-haz.	Parcel B7	Decon water	11/11/2015
84-Soil-11/12/15-B7	Non-haz.	Parcel B7	Soil	11/12/2015
102-Water-11/13/15-B7	Non-haz.	Parcel B7	Decon water	11/13/2015

Drum ID	Designation	Parcel Activity	Contents	Open Date
83-GW-11/13/15-B5	Non-haz.	Parcel B5	Ground water	11/13/2015
101-Water-11/13/15-B7	Non-haz.	Parcel B7	Decon water	11/13/2015
80-Soil-11/13/15-B5	Non-haz.	Parcel B5	Soil	11/13/2015
81-Soil-11/13/15-B5	Non-haz.	Parcel B5	Soil	11/13/2015
103-Water-11/13/15-B7	Non-haz.	Parcel B7	Water	11/14/2015
216-Sludge-11/15/15	Non-haz.	Area B Decon	Pit sludge	11/15/2015
104-Water-11/13/15-B7	Non-haz.	Parcel B7	Water	11/15/2015
105-Water-11/13/15-B7	Non-haz.	Parcel B7	Water	11/16/2015
86-GW-11/16/15-B7	Non-haz.	Parcel B7	Ground water	11/16/2015
87-GW-11/16/15-B7	Non-haz.	Parcel B7		11/16/2015
85-Soil-11/16/15-B7	Non-haz.	Parcel B7	Soil	11/16/2015
106-Water-11/13/15-B7	Non-haz.	Parcel B7	Water	11/17/2015
82-Soil-11/12/15-B5	Non-haz.	Parcel B5	Soil	11/19/2015
88-Soil-11/19/15-B7	Non-haz.	Parcel B7	Soil	11/19/2015
89-Soil-11/20/15-B7	Non-haz.	Parcel B7	Soil	11/20/2015
107-Water-11/20/15-B7	Non-haz.	Parcel B7	Water	11/20/2015
108-Decon water-11/20/15-B5	Non-haz.	Parcel B5	Decon water	11/20/2015
109-Water-11/20/15-B7	Non-haz.	Parcel B7	Water	11/20/2015
124-S-11/24/15-B7	Non-haz.	Parcel B7	Soil	11/24/2015
123-S-11/24/15-B7	Non-haz.	Parcel B7	Soil	11/24/2015
125-S-11/25/15-B7	Non-haz.	Parcel B7	Soil	11/25/2015
137-S-12/1/15-B5	Non-haz.	Parcel B5	Soil	12/1/2015
138-S-12/2/15-B5	Non-haz.	Parcel B5	Soil	12/2/2015
139-S-12/2/15-B5	Non-haz.	Parcel B5	Soil	12/2/2015
140-S-12/3/15-B5	Non-haz.	Parcel B5	Soil	12/3/2015
141-S-12/4/15-B5	Non-haz.	Parcel B5	Soil	12/4/2015
142-S-12/7/15-B5	Non-haz.	Parcel B5	Soil	12/7/2015
151-S-12/8/15-B3	Non-haz.	Parcel B3	Soil	12/8/2015

Drum ID	Designation	Parcel Activity	Contents	Open Date
152-S-12/8/15-B7	Non-haz.	Parcel B7	Soil	12/8/2015
153-S-12/9/15-B7	Non-haz.	Parcel B7	Soil	12/9/2015
154-S-12/9/15-B7	Non-haz.	Parcel B7	Soil	12/9/2015
182-Decon water-12/11/15-B7	Non-haz.	Parcel B7	Decon water	12/11/2015
183-Decon water-12/11/15-B7	Non-haz.	Parcel B7	Decon water	12/11/2015
301-PPE-12/11/15-Area B GW	Non-haz.	Area B GW invest.	PPe	12/11/2015
300-Purge water-12/11/15-Area B GW	Non-haz.	Area B GW invest.	Purge water	12/11/2015
176-DW-12/14/15-B1	Non-haz.	Parcel B1	Decon water	12/14/2015
177-DW-12/14/15-B1	Non-haz.	Parcel B1	Decon water	12/14/2015
178-DW-12/14/15-B1	Non-haz.	Parcel B1	Decon water	12/14/2015
179-S-12/14/15-B2	Non-haz.	Parcel B2	Soil	12/14/2015
175-DW-12/14/15-B1	Non-haz.	Parcel B1	Decon water	12/14/2015
184-Decon water-12/15/15-B7	Non-haz.	Parcel B7	Decon water	12/14/2015
185-Decon water-12/15/15-B7	Non-haz.	Parcel B7	Decon water	12/14/2015
174-DW-12/14/15-B1	Non-haz.	Parcel B1	Decon water	12/14/2015
173-DW-12/14/15-B1	Non-haz.	Parcel B1	Decon water	12/14/2015
180-S-12/15/15-B2	Non-haz.	Parcel B2	Soil	12/15/2015
206-Decon water-12/15/15	Non-haz.	Parcel B7	Decon water	12/15/2015
181-S-12/15/15-B1	Non-haz.	Parcel B1	Soil	12/15/2015
187-S-12/16/15-B1	Non-haz.	Parcel B1	Soil	12/16/2015
192-Decon water-12/16/15-B1	Non-haz.	Parcel B1	Decon water	12/16/2015
193-Decon water-12/16/15-B1	Non-haz.	Parcel B1	Decon water	12/16/2015
191-Decon water-12/16/15-B1	Non-haz.	Parcel B1	Decon water	12/16/2015
190-Decon water-12/16/15-B1	Non-haz.	Parcel B1	Decon water	12/16/2015
188-Decon water-12/16/15-B1	Non-haz.	Parcel B1	Decon water	12/16/2015
186-S-12/16/15-B1	Non-haz.	Parcel B1	Soil	12/16/2015
189-Decon water-12/16/15-B1	Non-haz.	Parcel B1	Decon water	12/16/2015
194-S-12/17/15-B4	Non-haz.	Parcel B4	Soil	12/17/2015

Drum ID	Designation	Parcel Activity	Contents	Open Date
195-S-12/17/15-B5	Non-haz.	Parcel B5	Soil	12/17/2015
199-Decon water-12/17/15-B5	Non-haz.	Parcel B5	Decon water	12/17/2015
200-Decon water-12-17/15-B5	Non-haz.	Parcel B5	Decon water	12/17/2015
196-S-12/18/15-B7	Non-haz.	Parcel B7	Soil	12/18/2015
197-S-12/18/15-B5	Non-haz.	Parcel B5	Soil	12/18/2015
202-Decon water-12/18/15-B7	Non-haz.	Parcel B7	Decon water	12/18/2015
201-Decon water-12/18/15-B7	Non-haz.	Parcel B7	Decon water	12/18/2015
309-Nitric acid-12/21/15-B5	Non-haz.	Area B5	Nitric Acid	12/21/2015
308-Decon water-12/21/15-B5	Non-haz.	Area B5	Decon water	12/21/2015
307-Soil-12/21/15-B5	Non-haz.	Area B5	Soil	12/21/2015
306-Liners-12/21/15-B5	Non-haz.	Area B5	Liners	12/21/2015
305-PPE-12/21/15-B5	Non-haz.	Area B5	PPE	12/21/2015
198-S-12/21/15-B5	Non-haz.	Parcel B5	Soil	12/21/2015
203-Soil-12/22/15-B5	Non-haz.	Parcel B5	Soil	12/22/2015
207-Decon water-12/22/15	Non-haz.	Parcel B7	Decon water	12/22/2015
204-Soil-12/22/15-B5	Non-haz.	Parcel B5	Soil	12/22/2015
208-Decon water-12/22/15	Non-haz.	Parcel B7	Decon water	12/22/2015
234-Decon water-12/23/15-B	Non-haz.	Area B Decon	Decon water	12/23/2015
229-Decon water-12/23/15-B	Non-haz.	Area B Decon	Decon water	12/23/2015
230-Decon water-12/23/15-B	Non-haz.	Area B Decon	Decon water	12/23/2015
231-Decon water-12/23/15-B	Non-haz.	Area B Decon	Decon water	12/23/2015
232-Decon water-12/23/15-B	Non-haz.	Area B Decon	Decon water	12/23/2015
233-Decon water-12/23/15-B	Non-haz.	Area B Decon	Decon water	12/23/2015
228-Decon water-12/23/15-B	Non-haz.	Area B Decon	Decon water	12/23/2015
235-Decon water-12/23/15-B	Non-haz.	Area B Decon	Decon water	12/23/2015
236-Decon water-12/23/15-B	Non-haz.	Area B Decon	Decon water	12/23/2015
237-Decon water-12/23/15-B	Non-haz.	Area B Decon	Decon water	12/23/2015
238-Decon water-12/23/15-B	Non-haz.	Area B Decon	Decon water	12/23/2015

Drum ID	Designation	Parcel Activity	Contents	Open Date
227-Decon water-12/23/15-B	Non-haz.	Area B Decon	Decon water	12/23/2015
240-Decon water-12/23/15-B	Non-haz.	Area B Decon	Decon water	12/23/2015
220-Decon water-12/23/15-B	Non-haz.	Area B Decon	Decon water	12/23/2015
241-Decon water-12/23/15-B	Non-haz.	Area B Decon	Decon water	12/23/2015
239-Decon water-12/23/15-B	Non-haz.	Area B Decon	Decon water	12/23/2015
219-Decon water-12/23/15-B	Non-haz.	Area B Decon	Decon water	12/23/2015
205-Soil-12/23/15-B5	Non-haz.	Parcel B5	Soil	12/23/2015
209-Decon water-12/23/15	Non-haz.	Parcel B5	Decon water	12/23/2015
210-Decon water-12/23/15	Non-haz.	Parcel B7	Decon water	12/23/2015
211-Decon water-12/23/15	Non-haz.	B5 drilling	Decon water	12/23/2015
213-Decon water-12/23/15	Non-haz.	B5 drilling	Decon water	12/23/2015
215-Decon water-12/23/15	Non-haz.	B5 drilling	Decon water	12/23/2015
222-Decon water-12/23/15-B	Non-haz.	Area B Decon	Decon water	12/23/2015
218-Decon water-12/23/15-B	Non-haz.	Area B Decon	Decon water	12/23/2015
226-Decon water-12/23/15-B	Non-haz.	Area B Decon	Decon water	12/23/2015
214-Decon water-12/23/15	Non-haz.	B5 drilling	Decon water	12/23/2015
221-Decon water-12/23/15-B	Non-haz.	Area B Decon	Decon water	12/23/2015
242-Decon water-12/23/15-B	Non-haz.	Area B Decon	Decon water	12/23/2015
223-Decon water-12/23/15-B	Non-haz.	Area B Decon	Decon water	12/23/2015
224-Decon water-12/23/15-B	Non-haz.	Area B Decon	Decon water	12/23/2015
225-Decon water-12/23/15-B	Non-haz.	Area B Decon	Decon water	12/23/2015
217-Decon water-12/23/15-B	Non-haz.	Area B Decon	Decon water	12/23/2015
246-Soil-12/23/16-B3	Non-haz.	Parcel B3	Soil	12/23/2015
247-Soil-12/23/16-B2	Non-haz.	Parcel B2	Soil	12/23/2015
243-Decon water-12/23/15-B	Non-haz.	Area B Decon	Decon water	12/23/2015
212-Decon water-12/23/15	Non-haz.	B5 drilling	Decon water	12/23/2015
310-Soil-1/4/16-B5	Non-haz.	Area B5	Soil	1/4/2016
245-Soil-1/4/16-B5	Non-haz.	Parcel B5	Soil	1/4/2016

Drum ID	Designation	Parcel Activity	Contents	Open Date
311-PPE-1/4/16-B5	Non-haz.	Area B5	PPE	1/4/2016
251-GW-1/5/16-B7	Non-haz.	Parcel B7	Decon water	1/5/2016
312-Liners-1/5/16-B5	Non-haz.	Area B5	Liners	1/5/2016
313-PPE-1/5/16-B5	Non-haz.	Area B5	PPE	1/5/2016
253-GW-1/5/16-B7	Non-haz.	Parcel B7	Decon water	1/5/2016
250-GW-1/5/16-B7	Non-haz.	Parcel B7	Decon water	1/5/2016
248-Soil-1/5/16-B5	Non-haz.	Parcel B5	Soil	1/5/2016
254-GW-1/6/16-B2	Non-haz.	Parcel B2	Decon water	1/6/2016
314-Soil-1/6/16-B5	Non-haz.	Area B5	Soil	1/6/2016
244-Soil-1/6/16-B5	Non-haz.	Parcel B5	Soil	1/6/2016
252-GW-1/6/16-B2	Non-haz.	Parcel B2	Decon water	1/6/2016
256-GW-1/7/16-B2	Non-haz.	Parcel B2	Decon water	1/7/2016
315-Decon water-1/7/16-B5	Non-haz.	Area B5	Decon water	1/7/2016
257-GW-1/7/16-B1	Non-haz.	Parcel B1	Decon water	1/7/2016
255-GW-1/7/16-B5	Non-haz.	Parcel B5	Decon water	1/7/2016
249-Soil-1/7/16-B5	Non-haz.	Parcel B5	Soil	1/7/2016
259-S-1/8/16-B5	Non-haz.	Parcel B5	Soil	1/8/2016
316-PPE-1/8/16-B5	Non-haz.	Area B5	PPE	1/8/2016
258-S-1/8/16-B5	Non-haz.	Parcel B5	Soil	1/8/2016
260-S-1/11/16-B5	Non-haz.	Parcel B5	Soil	1/11/2016
318-Soil-1/12/16-B5	Non-haz.	Area B5	Soil	1/12/2016
261-S-1/12/16-B5	Non-haz.	Parcel B5	Soil	1/12/2016
318-Soil-1/12/16-B5	Non-haz.	Area B5	Liners	1/12/2016
317-PPE-1/12/16-B5	Non-haz.	Area B5	PPE	1/12/2016
262-GW-1/12/16-B1	Non-haz.	Parcel B1	Purge water	1/12/2016
263-GW-1/12/16-B4	Non-haz.	Parcel B4	Purge water	1/12/2016
319-Liners-1/12/16-B5	Non-haz.	Area B5	Soil	1/13/2016
264-S-1/13/16-B4	Non-haz.	Parcel B4	Soil	1/13/2016

Drum ID	Designation	Parcel Activity	Contents	Open Date
321-Liners-1/14/16	Non-haz.	Area B5	Liners	1/14/2016
265-S-1/14/16-B4	Non-haz.	Parcel B4	Soil	1/14/2016
266-S-1/14/16-B5	Non-haz.	Parcel B5	Soil	1/14/2016
293-GW-1/15/16-B	Non-haz.	Area B	Decon water	1/15/2016
292-GW-1/15/16-B	Non-haz.	Area B	Decon water	1/15/2016
283-GW-1/15/16-B	Non-haz.	Area B	Decon water	1/15/2016
282-GW-1/15/16-B	Non-haz.	Area B	Decon water	1/15/2016
322-PPE-1/15/16-B5	Non-haz.	Area B5	PPE	1/15/2016
291-GW-1/15/16-B	Non-haz.	Area B	Decon water	1/15/2016
323-Soil-1/15/16-B5	Non-haz.	Area B5	Soil	1/15/2016
294-GW-1/15/16-B	Non-haz.	Area B	Decon water	1/15/2016
275-GW-1/15/16-B5	Non-haz.	Parcel B5	Ground water	1/15/2016
273-S-1/15/16-B15	Non-haz.	Parcel B15	Soil	1/15/2016
274-S-1/15/16-B1	Non-haz.	Parcel B1	Soil	1/15/2016
279-GW-1/18/16-B5	Non-haz.	Parcel B5	Ground water	1/18/2016
276-S-1-1/18/16-B7	Non-haz.	Parcel B7	Soil	1/18/2016
277-GW-1/18/16-B5	Non-haz.	Parcel B5	Ground water	1/18/2016
278-GW-1/18/16-B5	Non-haz.	Parcel B5	Ground water	1/18/2016
280-GW-1/18/16-B5	Non-haz.	Parcel B5	Ground water	1/18/2016
288-GW-1/19/16-B5	Non-haz.	Parcel B5	Decon water	1/19/2016
324-Liners-1/19/16-B5	Non-haz.	Area B5	Liners	1/19/2016
286-GW-1/19/16-B5	Non-haz.	Parcel B5	Decon water	1/19/2016
429-1/19/16-B7	Non-haz.	Parcel B7	Soil	1/19/2016
281-S-1/19/16-B7	Non-haz.	Parcel B7	Soil	1/19/2016
287-GW-1/19/16-B5	Non-haz.	Parcel B5	Decon water	1/19/2016
285-GW-1/19/16-B5	Non-haz.	Parcel B5	Decon water	1/19/2016
325-Decon water-1/19/16-B5	Non-haz.	Area B5	Decon water	1/19/2016
284-GW-1/19/16-B4	Non-haz.	Parcel B4	Decon water	1/19/2016

Drum ID	Designation	Parcel Activity	Contents	Open Date
290-GW-1/20/16-B7	Non-haz.	Parcel B7	Decon water	1/20/2016
326-PPE-1/20/16-B5	Non-haz.	Area B5	PPE	1/20/2016
327-Soil-1/20/16-B5	Non-haz.	Area B5	Soil	1/20/2016
289-GW-1/20/16-B5	Non-haz.	Parcel B5	Decon water	1/20/2016
295-Soil-1/21/16-B7	Non-haz.	Parcel B7	Soil	1/21/2016
329-PPE-1/21/16-Area B GW	Non-haz.	Area B GW	PPE	1/21/2016
328-Purge water-1/21/16-Area B GW	Non-haz.	Area B GW	Purge water	1/21/2016
296-GW-1/22/16-B14	Non-haz.	Parcel B14	Decon water	1/22/2016
297-GW-1/22/16-B1	Non-haz.	Parcel B1	Decon water	1/22/2016
299-S-1/27/16-B4	Non-haz.	Parcel B4	Soil/Slag	1/27/2016
298-S-1/27/16-B4	Non-haz.	Parcel B4	Soil/Slag	1/27/2016
440-Decon water-1/28/16	Non-haz.	Area B	Decon water	1/28/2016
423-GW-1/29/16-B5	Non-haz.	Parcel B5	Ground water	1/28/2016
441-Decon water-1/28/16	Non-haz.	Area B	Decon water	1/28/2016
404-S-1/28/16-B4	Non-haz.	Parcel B4	Soil	1/28/2016
400-GW-2/28/16-B5	Non-haz.	Parcel B5	Ground water	1/28/2016
402-GW-1/28/16-B7	Non-haz.	Parcel B7	Ground water	1/28/2016
419-Decon water-1/28/16	Non-haz.	Area B	Decon water	1/28/2016
438-Decon water-1/28/16	Non-haz.	Area B	Decon water	1/28/2016
437-Decon water-1/28/16	Non-haz.	Area B	Decon water	1/28/2016
413-Decon water-1/28/16	Non-haz.	Area B	Decon water	1/28/2016
414-Decon water-1/28/16	Non-haz.	Area B	Decon water	1/28/2016
415-Decon water-1/28/16	Non-haz.	Area B	Decon water	1/28/2016
416-Decon water-1/28/16	Non-haz.	Area B	Decon water	1/28/2016
417-Decon water-1/28/16	Non-haz.	Area B	Decon water	1/28/2016
418-Decon water-1/28/16	Non-haz.	Area B	Decon water	1/28/2016
401-GW-1/28/16-B7	Non-haz.	Parcel B7	Ground water	1/28/2016
426-GW-1/29/16-B4	Non-haz.	Parcel B4	Ground water	1/29/2016

Drum ID	Designation	Parcel Activity	Contents	Open Date
405-S-1/29/16-B1	Non-haz.	Parcel B1	Soil	1/29/2016
403-S-1/29/16-B17	Non-haz.	Parcel B17	Soil	1/29/2016
430-Decon water-2/1/16	Non-haz.	Area B	Decon water	2/1/2016
432-Decon water-2/1/16	Non-haz.	Area B	Decon water	2/1/2016
433-Decon water-2/1/16	Non-haz.	Area B	Decon water	2/1/2016
434-Decon water-2/1/16	Non-haz.	Area B	Decon water	2/1/2016
435-Decon water-2/1/16	Non-haz.	Area B	Decon water	2/1/2016
436-Decon water-2/1/16	Non-haz.	Area B	Decon water	2/1/2016
439-Decon water-2/1/16	Non-haz.	Area B	Decon water	2/1/2016
407-S-2/1/16-B1	Non-haz.	Parcel B1	Soil	2/1/2016
330-Purge water-2/1/16-Area B GW	Non-haz.	Area B GW	Purge water	2/1/2016
406-S-2/1/16-B1	Non-haz.	Parcel B1	Soil	2/1/2016
332-Liners-2/2/16-B5	Non-haz.	Area B5	Liners	2/2/2016
331-Soil-2/1/16-B5	Non-haz.	Area B5	Soil	2/2/2016
425-GW-2/2/16-B4	Non-haz.	Parcel B4	Ground water	2/2/2016
424-GW-2/2/16-B1	Non-haz.	Parcel B1	Ground water	2/2/2016
408-S-2/2/16-B1	Non-haz.	Parcel B1	Soil	2/2/2016
409-S-2/3/16-B1	Non-haz.	Parcel B1	Soil	2/3/2016
422-Decon water-2/3/16	Non-haz.	Area B	Decon water	2/3/2016
421-Decon water-2/3/16	Non-haz.	Area B	Decon water	2/3/2016
420-Decon water-2/3/16	Non-haz.	Area B	Decon water	2/3/2016
410-S-2/3/16-B2	Non-haz.	Parcel B2	Soil	2/3/2016
482-S-2/3/16	Non-haz.	Area B	Decon Pit Sludge	2/3/2016
428-2/4/16-B1	Non-haz.	Parcel B1	Ground water	2/4/2016
427-2/4/16-B1	Non-haz.	Parcel B1	Ground water	2/4/2016
411-S-2/4/16-B4	Non-haz.	Parcel B4	Soil	2/4/2016
448-Decon water-2/5/16	Non-haz.	Area B	Decon water	2/5/2016
431-S-2/5/16-B6	Non-haz.	Parcel B6	Soil	2/5/2016

Drum ID	Designation	Parcel Activity	Contents	Open Date
450-Decon water-2/5/16	Non-haz.	Area B	Decon water	2/5/2016
449-Decon water-2/5/16	Non-haz.	Area B	Decon water	2/5/2016
443-Decon water-2/5/16	Non-haz.	Area B	Decon water	2/5/2016
447-Decon water-2/5/16	Non-haz.	Area B	Decon water	2/5/2016
446-Decon water-2/5/16	Non-haz.	Area B	Decon water	2/5/2016
445-Decon water-2/5/16	Non-haz.	Area B	Decon water	2/5/2016
444-Decon water-2/5/16	Non-haz.	Area B	Decon water	2/5/2016
442-Purge water-2/5/16	Non-haz.	Area B	Purge water	2/5/2016
453-S-2/8/16-B15	Non-haz.	Parcel B15	Soil	2/8/2016
455-GW-2/9/16-B4	Non-haz.	Parcel B4	Purge water	2/9/2016
453-GW-2/9/16-B5	Non-haz.	Parcel B5	Purge water	2/9/2016
456-GW-2/9/16-B1	Non-haz.	Parcel B1	Purge water	2/9/2016
457-GW-2/10/16-B2	Non-haz.	Parcel B2	Purge water	2/10/2016
264-GW-2/10/16-B6	Non-haz.	Parcel B6	Purge water	2/10/2016
458-S-2/10/16-B15	Non-haz.	Parcel B15	Soil	2/10/2016
390-GW-2/10/16-B1	Non-haz.	Parcel B1	Purge water	2/10/2016
334-Purge water-2/11/16-Area B GW	Non-haz.	Area B	Purge water	2/11/2016
459-S-2/11/16-B15	Non-haz.	Parcel B15	Soil	2/11/2016
460-S-2/12/16-B15	Non-haz.	Parcel B15	Soil	2/12/2016
461-S-2/17/16-B2	Non-haz.	Parcel B2	Soil	2/17/2016
464-S-2/18/16-B2	Non-haz.	Parcel B2	Soil	2/18/2016
462-S-2/18/16-B2	Non-haz.	Parcel B2	Soil	2/18/2016
463-2/18/16-B2	Non-haz.	Parcel B2	Soil	2/18/2016
471-GW-2/18/16-B4	Non-haz.	Parcel B4	Ground water	2/18/2016
472-GW-2/18/16-B17	Non-haz.	Parcel B17	Ground water	2/18/2016
479-DW-2/22/16-B2	Non-haz.	Parcel B2	Decon water	2/22/2016
477-DW-2/22/16-B2	Non-haz.	Parcel B2	Decon water	2/22/2016
476-DW-2/22/16-B2	Non-haz.	Parcel B2	Decon water	2/22/2016

Drum ID	Designation	Parcel Activity	Contents	Open Date
475-DW-2/22/16-B2	Non-haz.	Parcel B2	Decon water	2/22/2016
474-DW-2/22/16-B2	Non-haz.	Parcel B2	Decon water	2/22/2016
473-DW-2/22/16-B2	Non-haz.	Parcel B2	Decon water	2/22/2016
466-S-2/22/16-B2	Non-haz.	Parcel B2	Soil	2/22/2016
478-DW-2/22/16-B2	Non-haz.	Parcel B2	Decon water	2/22/2016
465-S-2/22/16-B2	Non-haz.	Parcel B2	Soil	2/22/2016
467-S-2/23/16-B6	Non-haz.	Parcel B6	Soil	2/23/2016
468-S-2/23/16-B6	Non-haz.	Parcel B6	Soil	2/23/2016
469-S-2/25/16-B5	Non-haz.	Parcel B5	Soil	2/25/2016
365-GW-2/25/16-B2	Non-haz.	Parcel B2	Purge water	2/25/2016
371-GW-2/25/16-B2	Non-haz.	Parcel B2	Purge water	2/25/2016
370-GW-2/25/16-B2	Non-haz.	Parcel B2	Purge water	2/25/2016
369-GW-2/25/16-B2	Non-haz.	Parcel B2	Purge water	2/25/2016
368-GW-2/25/16-B2	Non-haz.	Parcel B2	Purge water	2/25/2016
367-GW-2/25/16-B2	Non-haz.	Parcel B2	Purge water	2/25/2016
470-S-2/25/16-B5	Non-haz.	Parcel B5	Soil	2/25/2016
366-GW-2/25/16-B2	Non-haz.	Parcel B2	Purge water	2/25/2016
480-GW-2/26/16-B4	Non-haz.	Parcel B4	Ground water	2/26/2016
481-GW-2/26/16-B15	Non-haz.	Parcel B15	Ground water	2/26/2016
335-Soil-2/29/16-B4	Non-haz.	Parcel B4	Soil	2/29/2016
339-Nitric Acid-2/29/16-B4	Non-haz.	Parcel B4	Nitric Acid	2/29/2016
338-Decon water-2/29/16-B4	Non-haz.	Parcel B4	Decon water	2/29/2016
336-PPE-2/29/16-B4	Non-haz.	Parcel B4	PPE	2/29/2016
337-Liners-2/29/16-B4	Non-haz.	Parcel B4	Liners	2/29/2016
357-GW-3/1/16-B15	Non-haz.	Parcel B15	Purge water	3/1/2016
361-GW-3/1/16-B15	Non-haz.	Parcel B15	Purge water	3/1/2016
360-GW-3/1/16-B15	Non-haz.	Parcel B15	Purge water	3/1/2016
359-GW-3/1/16-B15	Non-haz.	Parcel B15	Purge water	3/1/2016

Drum ID	Designation	Parcel Activity	Contents	Open Date
358-GW-3/1/16-B15	Non-haz.	Parcel B15	Purge water	3/1/2016
387-GW-3/1/16-B15	Non-haz.	Parcel B15	Purge water	3/1/2016
388-GW-3/2/16-B15	Non-haz.	Parcel B15	Purge water	3/2/2016
389-GW-3/2/16-B5	Non-haz.	Parcel B5	Purge water	3/2/2016
362-GW-3/2/16-B6	Non-haz.	Parcel B6	Purge water	3/2/2016
363-GW-3/2/16-B6	Non-haz.	Parcel B6	Purge water	3/2/2016
355-GW-3/3/16-B5	Non-haz.	Parcel B5	Purge water	3/3/2016
354-GW-3/3/16-B5	Non-haz.	Parcel B5	Purge water	3/3/2016
340-PPE-3/3/16-B4	Non-haz.	Parcel B4	PPE	3/3/2016
385-GW-3/3/16-B5	Non-haz.	Parcel B5	Purge water	3/3/2016
356-GW-3/3/16-B5	Non-haz.	Parcel B5	Purge water	3/3/2016
342-Soil-3/4/16-B4	Non-haz.	Parcel B4	Soil	3/4/2016
386-GW-3/4/16-B5	Non-haz.	Parcel B5	Purge water	3/4/2016
384-GW-3/4/16-B15	Non-haz.	Parcel B15	Purge water	3/4/2016
382-GW-3/4/16-B15	Non-haz.	Parcel B15	Purge water	3/4/2016
381-GW-3/4/16-B15	Non-haz.	Parcel B15	Purge water	3/4/2016
380-GW-3/4/16-B15	Non-haz.	Parcel B15	Purge water	3/4/2016
379-GW-3/4/16-B2	Non-haz.	Parcel B2	Purge water	3/4/2016
378-GW-3/4/16-B2	Non-haz.	Parcel B2	Purge water	3/4/2016
383-GW-3/4/16-B15	Non-haz.	Parcel B15	Purge water	3/4/2016
343-PPE-3/8/16-B4	Non-haz.	Parcel B4	PPE	3/8/2016
341-PPE-3/8/16-B1	Non-haz.	Parcel B1	PPE	3/8/2016
374-GW-3/9/16-B2	Non-haz.	Parcel B2	Purge water	3/9/2016
377-GW-3/9/16-B2	Non-haz.	Parcel B2	Purge water	3/9/2016
375-GW-3/9/16-B2	Non-haz.	Parcel B2	Purge water	3/9/2016
373-GW-3/9/16-B18	Non-haz.	Parcel B18	Purge water	3/9/2016
376-GW-3/9/16-B2	Non-haz.	Parcel B2	Purge water	3/9/2016
372-GW-3/10/16-B18	Non-haz.	Parcel B18	Purge water	3/10/2016

Drum ID	Designation	Parcel Activity	Contents	Open Date
345-Liners-3/10/16-B1	Non-haz.	Parcel B1	Liners	3/10/2016
344-Soil-3/10/16-B1	Non-haz.	Parcel B1	Soil	3/10/2016
347-Liners-3/11/16-B1	Non-haz.	Parcel B1	Liners	3/11/2016
346-Soil-3/11/16-B1	Non-haz.	Parcel B1	Soil	3/11/2016
348-Soil-3/14/16-B1	Non-haz.	Parcel B1	Soil	3/14/2016
350-Liners-3/15/16	Non-haz.	Parcel B1	Liners	3/15/2016
349-PPE-3/15/16	Non-haz.	Parcel B1	PPE	3/15/2016
351-Soil-3/16/16-B1	Non-haz.	Parcel B1	Soil	3/16/2016
392-Soil-3/21/16-B1	Non-haz.	Parcel B1	Soil	3/21/2016
391-Soil-3/22/16-B1	Non-haz.	Parcel B1	Soil	3/22/2016
393-PPE-3/22/16-B1	Non-haz.	Parcel B1	PPE	3/22/2016
394-Liners-3/22/16-B1	Non-haz.	Parcel B1	Liners	3/22/2016

APPENDIX I

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
FM01-PZM003	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
FM01-PZM003	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
FM01-PZM003	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
FM01-PZM003	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
FM01-PZM003	1,1-Biphenyl	1	U	140	0.00	no	NC
FM01-PZM003	1,1-Dichloroethane	1	U	330	0.00	no	C
FM01-PZM003	1,1-Dichloroethene	1	U	820	0.00	no	NC
FM01-PZM003	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
FM01-PZM003	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
FM01-PZM003	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
FM01-PZM003	1,2-Dibromo-3-chloropropane	5	UJ	3.4	0.00	no	C
FM01-PZM003	1,2-Dibromoethane	1	U	7.7	0.00	no	C
FM01-PZM003	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
FM01-PZM003	1,2-Dichloroethane	1	U	98	0.00	no	C
FM01-PZM003	1,2-Dichloropropane	1	U	110	0.00	no	C
FM01-PZM003	1,4-Dichlorobenzene	1	U	110	0.00	no	C
FM01-PZM003	1,4-Dioxane	0.1	U	130000	0.00	no	C
FM01-PZM003	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
FM01-PZM003	2,4,5-Trichlorophenol	2.6	U	N/A	0.00	no	N/A
FM01-PZM003	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
FM01-PZM003	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
FM01-PZM003	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
FM01-PZM003	2,4-Dinitrophenol	2.6	UJ	N/A	0.00	no	N/A
FM01-PZM003	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
FM01-PZM003	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
FM01-PZM003	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
FM01-PZM003	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
FM01-PZM003	2-Chlorophenol	1	U	N/A	0.00	no	N/A
FM01-PZM003	2-Hexanone	10	U	34000	0.00	no	NC
FM01-PZM003	2-Methylnaphthalene	0.1	U	N/A	0.00	no	N/A
FM01-PZM003	2-Methylphenol	1	U	N/A	0.00	no	N/A
FM01-PZM003	2-Nitroaniline	2.6	U	N/A	0.00	no	N/A
FM01-PZM003	3,3'-Dichlorobenzidine	1	R	N/A	0.00	no	N/A
FM01-PZM003	4-Chloroaniline	1	U	N/A	0.00	no	N/A
FM01-PZM003	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
FM01-PZM003	4-Nitroaniline	2.6	UJ	N/A	0.00	no	N/A
FM01-PZM003	Acenaphthene	0.1	U	N/A	0.00	no	N/A
FM01-PZM003	Acetone	10	R	95000000	0.00	no	NC
FM01-PZM003	Acetophenone	1	U	N/A	0.00	no	N/A
FM01-PZM003	Aluminum	118		N/A	0.00	no	N/A
FM01-PZM003	Aluminum, Dissolve	102		N/A	0.00	no	N/A
FM01-PZM003	Anthracene	0.014	J	N/A	0.00	no	N/A
FM01-PZM003	Antimony	6	U	N/A	0.00	no	N/A
FM01-PZM003	Antimony, Dissolve	2.6	B	N/A	0.00	no	N/A
FM01-PZM003	Arsenic	5	U	N/A	0.00	no	N/A
FM01-PZM003	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
FM01-PZM003	Barium	25.8		N/A	0.00	no	N/A
FM01-PZM003	Barium, Dissolve	25.7		N/A	0.00	no	N/A
FM01-PZM003	Benzaldehyde	1	U	N/A	0.00	no	N/A
FM01-PZM003	Benzene	1	U	69	0.00	no	C
FM01-PZM003	Benzo[a]anthracene	0.022	J	NVT	0.00	no	C
FM01-PZM003	Benzo[a]pyrene	0.014	J	N/A	0.00	no	N/A
FM01-PZM003	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
FM01-PZM003	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
FM01-PZM003	Beryllium	1	U	N/A	0.00	no	N/A
FM01-PZM003	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
FM01-PZM003	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
FM01-PZM003	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
FM01-PZM003	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
FM01-PZM003	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A
FM01-PZM003	Bromodichloromethane	1	U	38	0.00	no	C
FM01-PZM003	Bromoform	1	UJ	5100	0.00	no	C
FM01-PZM003	Bromomethane	1	UJ	73	0.00	no	NC
FM01-PZM003	Cadmium	3	U	N/A	0.00	no	N/A

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
FM01-PZM003	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A
FM01-PZM003	Caprolactam	2.6	UJ	N/A	0.00	no	N/A
FM01-PZM003	Carbon disulfide	1	U	5200	0.00	no	NC
FM01-PZM003	Carbon tetrachloride	1	U	18	0.00	no	C
FM01-PZM003	Chlorobenzene	1	U	1700	0.00	no	NC
FM01-PZM003	Chloroethane	1	U	97000	0.00	no	NC
FM01-PZM003	Chloroform	27.9		36	0.78	no	C
FM01-PZM003	Chloromethane	1	UJ	1100	0.00	no	NC
FM01-PZM003	Chromium	1.6	B	N/A	0.00	no	N/A
FM01-PZM003	Chromium VI	10	U	N/A	0.00	no	N/A
FM01-PZM003	Chromium, Dissolve	1.3	B	N/A	0.00	no	N/A
FM01-PZM003	Chrysene	0.012	J	N/A	0.00	no	N/A
FM01-PZM003	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
FM01-PZM003	Cobalt	5	U	N/A	0.00	no	N/A
FM01-PZM003	Cobalt, Dissolve	5	U	N/A	0.00	no	N/A
FM01-PZM003	Copper	1.7	B	N/A	0.00	no	N/A
FM01-PZM003	Copper, Dissolve	5	U	N/A	0.00	no	N/A
FM01-PZM003	Cyanide	10	U	3.5	0.00	no	NC
FM01-PZM003	Cyclohexane	10	U	4300	0.00	no	NC
FM01-PZM003	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
FM01-PZM003	Dibromochloromethane	1	U	N/A	0.00	no	N/A
FM01-PZM003	Dichlorodifluoromethane	1	U	31	0.00	no	NC
FM01-PZM003	Diethylphthalate	1	U	N/A	0.00	no	N/A
FM01-PZM003	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
FM01-PZM003	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
FM01-PZM003	Ethylbenzene	1	U	150	0.00	no	C
FM01-PZM003	Fluoranthene	0.059	J	N/A	0.00	no	N/A
FM01-PZM003	Fluorene	0.1	U	N/A	0.00	no	N/A
FM01-PZM003	Hexachlorobenzene	1	U	3.8	0.00	no	C
FM01-PZM003	Hexachlorobutadiene	1	U	13	0.00	no	C
FM01-PZM003	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
FM01-PZM003	Hexachloroethane	1	U	70	0.00	no	C
FM01-PZM003	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
FM01-PZM003	Iron	50	B	N/A	0.00	no	N/A
FM01-PZM003	Iron, Dissolve	23.9	J	N/A	0.00	no	N/A
FM01-PZM003	Isophorone	1	U	N/A	0.00	no	N/A
FM01-PZM003	Isopropylbenzene	1	U	3700	0.00	no	NC
FM01-PZM003	Lead	5	U	N/A	0.00	no	N/A
FM01-PZM003	Lead, Dissolve	5	U	N/A	0.00	no	N/A
FM01-PZM003	Manganese	7.6		N/A	0.00	no	N/A
FM01-PZM003	Manganese, Dissolve	5.8	J	N/A	0.00	no	N/A
FM01-PZM003	Mercury	0.06	B	3.7	0.02	no	NC
FM01-PZM003	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
FM01-PZM003	Methyl Acetate	5	R	N/A	0.00	no	N/A
FM01-PZM003	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
FM01-PZM003	Methylene Chloride	1	U	20000	0.00	no	NC
FM01-PZM003	Naphthalene	0.052	B	200	0.00	no	C
FM01-PZM003	Nickel	0.71	J	N/A	0.00	no	N/A
FM01-PZM003	Nickel, Dissolve	10	U	N/A	0.00	no	N/A
FM01-PZM003	Nitrobenzene	1	U	3100	0.00	no	C
FM01-PZM003	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
FM01-PZM003	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
FM01-PZM003	Pentachlorophenol	2.6	U	N/A	0.00	no	N/A
FM01-PZM003	Phenol	1	U	N/A	0.00	no	N/A
FM01-PZM003	Pyrene	0.05	J	N/A	0.00	no	N/A
FM01-PZM003	Selenium	8	U	N/A	0.00	no	N/A
FM01-PZM003	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
FM01-PZM003	Silver	6	U	N/A	0.00	no	N/A
FM01-PZM003	Silver, Dissolve	6	U	N/A	0.00	no	N/A
FM01-PZM003	Styrene	1	U	39000	0.00	no	NC
FM01-PZM003	Tetrachloroethene	1	U	240	0.00	no	NC
FM01-PZM003	Thallium	10	U	N/A	0.00	no	N/A
FM01-PZM003	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
FM01-PZM003	Toluene	1	U	81000	0.00	no	NC

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
FM01-PZM003	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
FM01-PZM003	Trichloroethene	1	U	22	0.00	no	NC
FM01-PZM003	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
FM01-PZM003	Vanadium	224		N/A	0.00	no	N/A
FM01-PZM003	Vanadium, Dissolve	233		N/A	0.00	no	N/A
FM01-PZM003	Vinyl chloride	1	U	25	0.00	no	C
FM01-PZM003	Xylenes	3	U	1600	0.00	no	NC
FM01-PZM003	Zinc	10	U	N/A	0.00	no	N/A
FM01-PZM003	Zinc, Dissolve	0.94	B	N/A	0.00	no	N/A
FM01-PZM041	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
FM01-PZM041	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
FM01-PZM041	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
FM01-PZM041	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
FM01-PZM041	1,1-Biphenyl	1	U	140	0.00	no	NC
FM01-PZM041	1,1-Dichloroethane	1	U	330	0.00	no	C
FM01-PZM041	1,1-Dichloroethene	1	U	820	0.00	no	NC
FM01-PZM041	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
FM01-PZM041	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
FM01-PZM041	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
FM01-PZM041	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
FM01-PZM041	1,2-Dibromoethane	1	U	7.7	0.00	no	C
FM01-PZM041	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
FM01-PZM041	1,2-Dichloroethane	1	U	98	0.00	no	C
FM01-PZM041	1,2-Dichloropropane	1	U	110	0.00	no	C
FM01-PZM041	1,4-Dichlorobenzene	1	U	110	0.00	no	C
FM01-PZM041	1,4-Dioxane	0.1	U	130000	0.00	no	C
FM01-PZM041	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
FM01-PZM041	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
FM01-PZM041	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
FM01-PZM041	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
FM01-PZM041	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
FM01-PZM041	2,4-Dinitrophenol	2.5	U	N/A	0.00	no	N/A
FM01-PZM041	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
FM01-PZM041	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
FM01-PZM041	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
FM01-PZM041	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
FM01-PZM041	2-Chlorophenol	1	U	N/A	0.00	no	N/A
FM01-PZM041	2-Hexanone	10	U	34000	0.00	no	NC
FM01-PZM041	2-Methylnaphthalene	0.1	U	N/A	0.00	no	N/A
FM01-PZM041	2-Methylphenol	1	U	N/A	0.00	no	N/A
FM01-PZM041	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
FM01-PZM041	3,3'-Dichlorobenzidine	1	UJ	N/A	0.00	no	N/A
FM01-PZM041	4-Chloroaniline	1	U	N/A	0.00	no	N/A
FM01-PZM041	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
FM01-PZM041	4-Nitroaniline	2.5	U	N/A	0.00	no	N/A
FM01-PZM041	Acenaphthene	0.1	U	N/A	0.00	no	N/A
FM01-PZM041	Acetone	10	R	95000000	0.00	no	NC
FM01-PZM041	Acetophenone	1	U	N/A	0.00	no	N/A
FM01-PZM041	Aluminum	101		N/A	0.00	no	N/A
FM01-PZM041	Aluminum, Dissolve	50	U	N/A	0.00	no	N/A
FM01-PZM041	Anthracene	0.1	U	N/A	0.00	no	N/A
FM01-PZM041	Antimony	6	U	N/A	0.00	no	N/A
FM01-PZM041	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
FM01-PZM041	Arsenic	40.6		N/A	0.00	no	N/A
FM01-PZM041	Arsenic, Dissolve	35.8		N/A	0.00	no	N/A
FM01-PZM041	Barium	656		N/A	0.00	no	N/A
FM01-PZM041	Barium, Dissolve	624		N/A	0.00	no	N/A
FM01-PZM041	Benzaldehyde	1	U	N/A	0.00	no	N/A
FM01-PZM041	Benzene	1	U	69	0.00	no	C
FM01-PZM041	Benzo[a]anthracene	0.1	U	NVT	0.00	no	C
FM01-PZM041	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
FM01-PZM041	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
FM01-PZM041	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
FM01-PZM041	Beryllium	1	U	N/A	0.00	no	N/A

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
FM01-PZM041	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
FM01-PZM041	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
FM01-PZM041	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
FM01-PZM041	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
FM01-PZM041	bis(2-Ethylhexyl)phthalate	1	UJ	N/A	0.00	no	N/A
FM01-PZM041	Bromodichloromethane	1	U	38	0.00	no	C
FM01-PZM041	Bromoform	1	U	5100	0.00	no	C
FM01-PZM041	Bromomethane	1	U	73	0.00	no	NC
FM01-PZM041	Cadmium	0.65	J	N/A	0.00	no	N/A
FM01-PZM041	Cadmium, Dissolve	0.53	J	N/A	0.00	no	N/A
FM01-PZM041	Caprolactam	2.5	U	N/A	0.00	no	N/A
FM01-PZM041	Carbon disulfide	1	U	5200	0.00	no	NC
FM01-PZM041	Carbon tetrachloride	1	U	18	0.00	no	C
FM01-PZM041	Chlorobenzene	1	U	1700	0.00	no	NC
FM01-PZM041	Chloroethane	1	U	97000	0.00	no	NC
FM01-PZM041	Chloroform	1	U	36	0.00	no	C
FM01-PZM041	Chloromethane	1	U	1100	0.00	no	NC
FM01-PZM041	Chromium	5	U	N/A	0.00	no	N/A
FM01-PZM041	Chromium VI	10	U	N/A	0.00	no	N/A
FM01-PZM041	Chromium, Dissolve	5	U	N/A	0.00	no	N/A
FM01-PZM041	Chrysene	0.1	U	N/A	0.00	no	N/A
FM01-PZM041	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
FM01-PZM041	Cobalt	5	U	N/A	0.00	no	N/A
FM01-PZM041	Cobalt, Dissolve	5	U	N/A	0.00	no	N/A
FM01-PZM041	Copper	2.2	J	N/A	0.00	no	N/A
FM01-PZM041	Copper, Dissolve	2.4	J	N/A	0.00	no	N/A
FM01-PZM041	Cyanide	10	U	3.5	0.00	no	NC
FM01-PZM041	Cyclohexane	10	U	4300	0.00	no	NC
FM01-PZM041	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
FM01-PZM041	Dibromochloromethane	1	U	N/A	0.00	no	N/A
FM01-PZM041	Dichlorodifluoromethane	1	U	31	0.00	no	NC
FM01-PZM041	Diethylphthalate	1	U	N/A	0.00	no	N/A
FM01-PZM041	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
FM01-PZM041	Di-n-ocytlphthalate	1	UJ	N/A	0.00	no	N/A
FM01-PZM041	Ethylbenzene	1	U	150	0.00	no	C
FM01-PZM041	Fluoranthene	0.1	U	N/A	0.00	no	N/A
FM01-PZM041	Fluorene	0.1	U	N/A	0.00	no	N/A
FM01-PZM041	Hexachlorobenzene	1	U	3.8	0.00	no	C
FM01-PZM041	Hexachlorobutadiene	1	U	13	0.00	no	C
FM01-PZM041	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
FM01-PZM041	Hexachloroethane	1	U	70	0.00	no	C
FM01-PZM041	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
FM01-PZM041	Iron	46600		N/A	0.00	no	N/A
FM01-PZM041	Iron, Dissolve	45800		N/A	0.00	no	N/A
FM01-PZM041	Isophorone	1	U	N/A	0.00	no	N/A
FM01-PZM041	Isopropylbenzene	1	U	3700	0.00	no	NC
FM01-PZM041	Lead	5	U	N/A	0.00	no	N/A
FM01-PZM041	Lead, Dissolve	5	U	N/A	0.00	no	N/A
FM01-PZM041	Manganese	137		N/A	0.00	no	N/A
FM01-PZM041	Manganese, Dissolve	128		N/A	0.00	no	N/A
FM01-PZM041	Mercury	0.2	U	3.7	0.00	no	NC
FM01-PZM041	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
FM01-PZM041	Methyl Acetate	5	U	N/A	0.00	no	N/A
FM01-PZM041	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
FM01-PZM041	Methylene Chloride	1	U	20000	0.00	no	NC
FM01-PZM041	Naphthalene	0.023	B	200	0.00	no	C
FM01-PZM041	Nickel	10	U	N/A	0.00	no	N/A
FM01-PZM041	Nickel, Dissolve	10	U	N/A	0.00	no	N/A
FM01-PZM041	Nitrobenzene	1	U	3100	0.00	no	C
FM01-PZM041	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
FM01-PZM041	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
FM01-PZM041	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
FM01-PZM041	Phenol	1	U	N/A	0.00	no	N/A
FM01-PZM041	Pyrene	0.1	U	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
FM01-PZM041	Selenium	8	U	N/A	0.00	no	N/A
FM01-PZM041	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
FM01-PZM041	Silver	6	U	N/A	0.00	no	N/A
FM01-PZM041	Silver, Dissolve	6	U	N/A	0.00	no	N/A
FM01-PZM041	Styrene	1	U	39000	0.00	no	NC
FM01-PZM041	Tetrachloroethene	1	U	240	0.00	no	NC
FM01-PZM041	Thallium	10	U	N/A	0.00	no	N/A
FM01-PZM041	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
FM01-PZM041	Toluene	1	U	81000	0.00	no	NC
FM01-PZM041	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
FM01-PZM041	Trichloroethene	1	U	22	0.00	no	NC
FM01-PZM041	Trichlorofluoromethane	1	UJ	N/A	0.00	no	N/A
FM01-PZM041	Vanadium	2.1	B	N/A	0.00	no	N/A
FM01-PZM041	Vanadium, Dissolve	1.3	B	N/A	0.00	no	N/A
FM01-PZM041	Vinyl chloride	1	U	25	0.00	no	C
FM01-PZM041	Xylenes	3	U	1600	0.00	no	NC
FM01-PZM041	Zinc	10	U	N/A	0.00	no	N/A
FM01-PZM041	Zinc, Dissolve	10	U	N/A	0.00	no	N/A
FM05-PZM004	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
FM05-PZM004	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
FM05-PZM004	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
FM05-PZM004	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
FM05-PZM004	1,1-Biphenyl	1	U	140	0.00	no	NC
FM05-PZM004	1,1-Dichloroethane	1	U	330	0.00	no	C
FM05-PZM004	1,1-Dichloroethene	1	U	820	0.00	no	NC
FM05-PZM004	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
FM05-PZM004	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
FM05-PZM004	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
FM05-PZM004	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
FM05-PZM004	1,2-Dibromoethane	1	U	7.7	0.00	no	C
FM05-PZM004	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
FM05-PZM004	1,2-Dichloroethane	1	U	98	0.00	no	C
FM05-PZM004	1,2-Dichloropropane	1	U	110	0.00	no	C
FM05-PZM004	1,4-Dichlorobenzene	1	U	110	0.00	no	C
FM05-PZM004	1,4-Dioxane	0.036	J	130000	0.00	no	C
FM05-PZM004	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
FM05-PZM004	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
FM05-PZM004	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
FM05-PZM004	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
FM05-PZM004	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
FM05-PZM004	2,4-Dinitrophenol	2.5	U	N/A	0.00	no	N/A
FM05-PZM004	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
FM05-PZM004	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
FM05-PZM004	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
FM05-PZM004	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
FM05-PZM004	2-Chlorophenol	1	U	N/A	0.00	no	N/A
FM05-PZM004	2-Hexanone	10	U	34000	0.00	no	NC
FM05-PZM004	2-Methylnaphthalene	0.6		N/A	0.00	no	N/A
FM05-PZM004	2-Methylphenol	0.39	J	N/A	0.00	no	N/A
FM05-PZM004	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
FM05-PZM004	3,3'-Dichlorobenzidine	1	U	N/A	0.00	no	N/A
FM05-PZM004	4-Chloroaniline	1	U	N/A	0.00	no	N/A
FM05-PZM004	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
FM05-PZM004	4-Nitroaniline	2.5	U	N/A	0.00	no	N/A
FM05-PZM004	Acenaphthene	0.77		N/A	0.00	no	N/A
FM05-PZM004	Acetone	10	R	95000000	0.00	no	NC
FM05-PZM004	Acetophenone	0.37	J	N/A	0.00	no	N/A
FM05-PZM004	Aluminum	658	J	N/A	0.00	no	N/A
FM05-PZM004	Aluminum, Dissolve	103		N/A	0.00	no	N/A
FM05-PZM004	Anthracene	0.33		N/A	0.00	no	N/A
FM05-PZM004	Antimony	6	U	N/A	0.00	no	N/A
FM05-PZM004	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
FM05-PZM004	Arsenic	7.4		N/A	0.00	no	N/A
FM05-PZM004	Arsenic, Dissolve	8.6		N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
FM05-PZM004	Barium	28.4		N/A	0.00	no	N/A
FM05-PZM004	Barium, Dissolve	26.9		N/A	0.00	no	N/A
FM05-PZM004	Benzaldehyde	1	U	N/A	0.00	no	N/A
FM05-PZM004	Benzene	2.6		69	0.04	no	C
FM05-PZM004	Benzo[a]anthracene	0.044	J	NVT	0.00	no	C
FM05-PZM004	Benzo[a]pyrene	0.013	J	N/A	0.00	no	N/A
FM05-PZM004	Benzo[b]fluoranthene	0.027	J	N/A	0.00	no	N/A
FM05-PZM004	Benzo[k]fluoranthene	0.027	J	N/A	0.00	no	N/A
FM05-PZM004	Beryllium	1	U	N/A	0.00	no	N/A
FM05-PZM004	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
FM05-PZM004	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
FM05-PZM004	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
FM05-PZM004	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
FM05-PZM004	bis(2-Ethylhexyl)phthalate	0.29	J	N/A	0.00	no	N/A
FM05-PZM004	Bromodichloromethane	1	U	38	0.00	no	C
FM05-PZM004	Bromoform	1	U	5100	0.00	no	C
FM05-PZM004	Bromomethane	1	U	73	0.00	no	NC
FM05-PZM004	Cadmium	3	U	N/A	0.00	no	N/A
FM05-PZM004	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A
FM05-PZM004	Caprolactam	2.5	U	N/A	0.00	no	N/A
FM05-PZM004	Carbon disulfide	1.1		5200	0.00	no	NC
FM05-PZM004	Carbon tetrachloride	1	U	18	0.00	no	C
FM05-PZM004	Chlorobenzene	1	U	1700	0.00	no	NC
FM05-PZM004	Chloroethane	1	U	97000	0.00	no	NC
FM05-PZM004	Chloroform	1	U	36	0.00	no	C
FM05-PZM004	Chloromethane	1	U	1100	0.00	no	NC
FM05-PZM004	Chromium	4.6	B	N/A	0.00	no	N/A
FM05-PZM004	Chromium VI	10	U	N/A	0.00	no	N/A
FM05-PZM004	Chromium, Dissolve	0.91	J	N/A	0.00	no	N/A
FM05-PZM004	Chrysene	0.024	J	N/A	0.00	no	N/A
FM05-PZM004	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
FM05-PZM004	Cobalt	5	U	N/A	0.00	no	N/A
FM05-PZM004	Cobalt, Dissolve	5	U	N/A	0.00	no	N/A
FM05-PZM004	Copper	1.9	B	N/A	0.00	no	N/A
FM05-PZM004	Copper, Dissolve	5	U	N/A	0.00	no	N/A
FM05-PZM004	Cyanide	9.3	J	3.5	2.66	YES	NC
FM05-PZM004	Cyclohexane	10	U	4300	0.00	no	NC
FM05-PZM004	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
FM05-PZM004	Dibromochloromethane	1	U	N/A	0.00	no	N/A
FM05-PZM004	Dichlorodifluoromethane	1	U	31	0.00	no	NC
FM05-PZM004	Diethylphthalate	1	U	N/A	0.00	no	N/A
FM05-PZM004	Di-n-butylphthalate	0.22	J	N/A	0.00	no	N/A
FM05-PZM004	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
FM05-PZM004	Ethylbenzene	1	U	150	0.00	no	C
FM05-PZM004	Fluoranthene	0.38		N/A	0.00	no	N/A
FM05-PZM004	Fluorene	0.75		N/A	0.00	no	N/A
FM05-PZM004	Hexachlorobenzene	1	U	3.8	0.00	no	C
FM05-PZM004	Hexachlorobutadiene	1	U	13	0.00	no	C
FM05-PZM004	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
FM05-PZM004	Hexachloroethane	1	U	70	0.00	no	C
FM05-PZM004	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
FM05-PZM004	Iron	843		N/A	0.00	no	N/A
FM05-PZM004	Iron, Dissolve	45.3	B	N/A	0.00	no	N/A
FM05-PZM004	Isophorone	1	U	N/A	0.00	no	N/A
FM05-PZM004	Isopropylbenzene	1	U	3700	0.00	no	NC
FM05-PZM004	Lead	5	U	N/A	0.00	no	N/A
FM05-PZM004	Lead, Dissolve	5	U	N/A	0.00	no	N/A
FM05-PZM004	Manganese	38.5		N/A	0.00	no	N/A
FM05-PZM004	Manganese, Dissolve	34.1		N/A	0.00	no	N/A
FM05-PZM004	Mercury	0.2	U	3.7	0.00	no	NC
FM05-PZM004	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
FM05-PZM004	Methyl Acetate	5	U	N/A	0.00	no	N/A
FM05-PZM004	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
FM05-PZM004	Methylene Chloride	1	U	20000	0.00	no	NC

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
FM05-PZM004	Naphthalene	108		200	0.54	no	C
FM05-PZM004	Nickel	3.1	B	N/A	0.00	no	N/A
FM05-PZM004	Nickel, Dissolve	1.8	J	N/A	0.00	no	N/A
FM05-PZM004	Nitrobenzene	1	U	3100	0.00	no	C
FM05-PZM004	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
FM05-PZM004	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
FM05-PZM004	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
FM05-PZM004	Phenol	1	U	N/A	0.00	no	N/A
FM05-PZM004	Pyrene	0.25		N/A	0.00	no	N/A
FM05-PZM004	Selenium	8	U	N/A	0.00	no	N/A
FM05-PZM004	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
FM05-PZM004	Silver	6	U	N/A	0.00	no	N/A
FM05-PZM004	Silver, Dissolve	6	U	N/A	0.00	no	N/A
FM05-PZM004	Styrene	1	U	39000	0.00	no	NC
FM05-PZM004	Tetrachloroethene	1	U	240	0.00	no	NC
FM05-PZM004	Thallium	10	U	N/A	0.00	no	N/A
FM05-PZM004	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
FM05-PZM004	Toluene	0.39	J	81000	0.00	no	NC
FM05-PZM004	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
FM05-PZM004	Trichloroethene	1	U	22	0.00	no	NC
FM05-PZM004	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
FM05-PZM004	Vanadium	25.2		N/A	0.00	no	N/A
FM05-PZM004	Vanadium, Dissolve	23		N/A	0.00	no	N/A
FM05-PZM004	Vinyl chloride	1	U	25	0.00	no	C
FM05-PZM004	Xylenes	3	U	1600	0.00	no	NC
FM05-PZM004	Zinc	3.7	B	N/A	0.00	no	N/A
FM05-PZM004	Zinc, Dissolve	0.84	B	N/A	0.00	no	N/A
FM05-PZM024	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
FM05-PZM024	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
FM05-PZM024	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
FM05-PZM024	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
FM05-PZM024	1,1-Biphenyl	1	U	140	0.00	no	NC
FM05-PZM024	1,1-Dichloroethane	1	U	330	0.00	no	C
FM05-PZM024	1,1-Dichloroethene	1	U	820	0.00	no	NC
FM05-PZM024	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
FM05-PZM024	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
FM05-PZM024	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
FM05-PZM024	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
FM05-PZM024	1,2-Dibromoethane	1	U	7.7	0.00	no	C
FM05-PZM024	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
FM05-PZM024	1,2-Dichloroethane	1	U	98	0.00	no	C
FM05-PZM024	1,2-Dichloropropane	1	U	110	0.00	no	C
FM05-PZM024	1,4-Dichlorobenzene	1	U	110	0.00	no	C
FM05-PZM024	1,4-Dioxane	0.1	U	130000	0.00	no	C
FM05-PZM024	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
FM05-PZM024	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
FM05-PZM024	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
FM05-PZM024	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
FM05-PZM024	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
FM05-PZM024	2,4-Dinitrophenol	2.5	U	N/A	0.00	no	N/A
FM05-PZM024	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
FM05-PZM024	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
FM05-PZM024	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
FM05-PZM024	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
FM05-PZM024	2-Chlorophenol	1	U	N/A	0.00	no	N/A
FM05-PZM024	2-Hexanone	10	U	34000	0.00	no	NC
FM05-PZM024	2-Methylnaphthalene	0.07	J	N/A	0.00	no	N/A
FM05-PZM024	2-Methylphenol	1	U	N/A	0.00	no	N/A
FM05-PZM024	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
FM05-PZM024	3,3'-Dichlorobenzidine	1	U	N/A	0.00	no	N/A
FM05-PZM024	4-Chloroaniline	1	U	N/A	0.00	no	N/A
FM05-PZM024	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
FM05-PZM024	4-Nitroaniline	2.5	U	N/A	0.00	no	N/A
FM05-PZM024	Acenaphthene	0.1	U	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
FM05-PZM024	Acetone	15.1	J	95000000	0.00	no	NC
FM05-PZM024	Acetophenone	1	U	N/A	0.00	no	N/A
FM05-PZM024	Aluminum	50	U	N/A	0.00	no	N/A
FM05-PZM024	Aluminum, Dissolve	50	U	N/A	0.00	no	N/A
FM05-PZM024	Anthracene	0.1	U	N/A	0.00	no	N/A
FM05-PZM024	Antimony	6	U	N/A	0.00	no	N/A
FM05-PZM024	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
FM05-PZM024	Arsenic	5	U	N/A	0.00	no	N/A
FM05-PZM024	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
FM05-PZM024	Barium	120		N/A	0.00	no	N/A
FM05-PZM024	Barium, Dissolve	114		N/A	0.00	no	N/A
FM05-PZM024	Benzaldehyde	1	U	N/A	0.00	no	N/A
FM05-PZM024	Benzene	1	U	69	0.00	no	C
FM05-PZM024	Benzo[a]anthracene	0.1	U	NVT	0.00	no	C
FM05-PZM024	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
FM05-PZM024	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
FM05-PZM024	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
FM05-PZM024	Beryllium	1	U	N/A	0.00	no	N/A
FM05-PZM024	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
FM05-PZM024	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
FM05-PZM024	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
FM05-PZM024	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
FM05-PZM024	bis(2-Ethylhexyl)phthalate	0.23	J	N/A	0.00	no	N/A
FM05-PZM024	Bromodichloromethane	1	U	38	0.00	no	C
FM05-PZM024	Bromoform	1	U	5100	0.00	no	C
FM05-PZM024	Bromomethane	1	U	73	0.00	no	NC
FM05-PZM024	Cadmium	3	U	N/A	0.00	no	N/A
FM05-PZM024	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A
FM05-PZM024	Caprolactam	2.5	U	N/A	0.00	no	N/A
FM05-PZM024	Carbon disulfide	1	U	5200	0.00	no	NC
FM05-PZM024	Carbon tetrachloride	1	U	18	0.00	no	C
FM05-PZM024	Chlorobenzene	1	U	1700	0.00	no	NC
FM05-PZM024	Chloroethane	1	U	97000	0.00	no	NC
FM05-PZM024	Chloroform	1	U	36	0.00	no	C
FM05-PZM024	Chloromethane	1	U	1100	0.00	no	NC
FM05-PZM024	Chromium	5	U	N/A	0.00	no	N/A
FM05-PZM024	Chromium VI	10	U	N/A	0.00	no	N/A
FM05-PZM024	Chromium, Dissolve	5	U	N/A	0.00	no	N/A
FM05-PZM024	Chrysene	0.1	U	N/A	0.00	no	N/A
FM05-PZM024	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
FM05-PZM024	Cobalt	5	U	N/A	0.00	no	N/A
FM05-PZM024	Cobalt, Dissolve	5	U	N/A	0.00	no	N/A
FM05-PZM024	Copper	5	U	N/A	0.00	no	N/A
FM05-PZM024	Copper, Dissolve	5	U	N/A	0.00	no	N/A
FM05-PZM024	Cyanide	10	U	3.5	0.00	no	NC
FM05-PZM024	Cyclohexane	10	U	4300	0.00	no	NC
FM05-PZM024	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
FM05-PZM024	Dibromochloromethane	1	U	N/A	0.00	no	N/A
FM05-PZM024	Dichlorodifluoromethane	1	U	31	0.00	no	NC
FM05-PZM024	Diethylphthalate	1	U	N/A	0.00	no	N/A
FM05-PZM024	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
FM05-PZM024	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
FM05-PZM024	Ethylbenzene	1	U	150	0.00	no	C
FM05-PZM024	Fluoranthene	0.1	U	N/A	0.00	no	N/A
FM05-PZM024	Fluorene	0.1	U	N/A	0.00	no	N/A
FM05-PZM024	Hexachlorobenzene	1	U	3.8	0.00	no	C
FM05-PZM024	Hexachlorobutadiene	1	U	13	0.00	no	C
FM05-PZM024	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
FM05-PZM024	Hexachloroethane	1	U	70	0.00	no	C
FM05-PZM024	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
FM05-PZM024	Iron	50800		N/A	0.00	no	N/A
FM05-PZM024	Iron, Dissolve	47300		N/A	0.00	no	N/A
FM05-PZM024	Isophorone	1	U	N/A	0.00	no	N/A
FM05-PZM024	Isopropylbenzene	1	U	3700	0.00	no	NC

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
FM05-PZM024	Lead	5	U	N/A	0.00	no	N/A
FM05-PZM024	Lead, Dissolve	5	U	N/A	0.00	no	N/A
FM05-PZM024	Manganese	2560		N/A	0.00	no	N/A
FM05-PZM024	Manganese, Dissolve	2520		N/A	0.00	no	N/A
FM05-PZM024	Mercury	0.2	U	3.7	0.00	no	NC
FM05-PZM024	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
FM05-PZM024	Methyl Acetate	5	U	N/A	0.00	no	N/A
FM05-PZM024	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
FM05-PZM024	Methylene Chloride	1	U	20000	0.00	no	NC
FM05-PZM024	Naphthalene	4.8		200	0.02	no	C
FM05-PZM024	Nickel	0.93	B	N/A	0.00	no	N/A
FM05-PZM024	Nickel, Dissolve	10	U	N/A	0.00	no	N/A
FM05-PZM024	Nitrobenzene	1	U	3100	0.00	no	C
FM05-PZM024	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
FM05-PZM024	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
FM05-PZM024	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
FM05-PZM024	Phenol	1	U	N/A	0.00	no	N/A
FM05-PZM024	Pyrene	0.1	U	N/A	0.00	no	N/A
FM05-PZM024	Selenium	8	U	N/A	0.00	no	N/A
FM05-PZM024	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
FM05-PZM024	Silver	6	U	N/A	0.00	no	N/A
FM05-PZM024	Silver, Dissolve	6	U	N/A	0.00	no	N/A
FM05-PZM024	Styrene	1	U	39000	0.00	no	NC
FM05-PZM024	Tetrachloroethene	1	U	240	0.00	no	NC
FM05-PZM024	Thallium	10	U	N/A	0.00	no	N/A
FM05-PZM024	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
FM05-PZM024	Toluene	1	U	81000	0.00	no	NC
FM05-PZM024	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
FM05-PZM024	Trichloroethene	1	U	22	0.00	no	NC
FM05-PZM024	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
FM05-PZM024	Vanadium	5	U	N/A	0.00	no	N/A
FM05-PZM024	Vanadium, Dissolve	5	U	N/A	0.00	no	N/A
FM05-PZM024	Vinyl chloride	1	U	25	0.00	no	C
FM05-PZM024	Xylenes	3	U	1600	0.00	no	NC
FM05-PZM024	Zinc	1.9	B	N/A	0.00	no	N/A
FM05-PZM024	Zinc, Dissolve	1.1	B	N/A	0.00	no	N/A
SG07-PDM008	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SG07-PDM008	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SG07-PDM008	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SG07-PDM008	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SG07-PDM008	1,1-Biphenyl	1	U	140	0.00	no	NC
SG07-PDM008	1,1-Dichloroethane	1	U	330	0.00	no	C
SG07-PDM008	1,1-Dichloroethene	1	U	820	0.00	no	NC
SG07-PDM008	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SG07-PDM008	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SG07-PDM008	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SG07-PDM008	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SG07-PDM008	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SG07-PDM008	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SG07-PDM008	1,2-Dichloroethane	1	U	98	0.00	no	C
SG07-PDM008	1,2-Dichloropropane	1	U	110	0.00	no	C
SG07-PDM008	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SG07-PDM008	1,4-Dioxane	0.1	U	130000	0.00	no	C
SG07-PDM008	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SG07-PDM008	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
SG07-PDM008	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SG07-PDM008	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SG07-PDM008	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SG07-PDM008	2,4-Dinitrophenol	2.5	U	N/A	0.00	no	N/A
SG07-PDM008	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SG07-PDM008	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SG07-PDM008	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SG07-PDM008	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SG07-PDM008	2-Chlorophenol	1	U	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SG07-PDM008	2-Hexanone	10	U	34000	0.00	no	NC
SG07-PDM008	2-Methylnaphthalene	0.056	J	N/A	0.00	no	N/A
SG07-PDM008	2-Methylphenol	1	U	N/A	0.00	no	N/A
SG07-PDM008	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SG07-PDM008	3,3'-Dichlorobenzidine	1	R	N/A	0.00	no	N/A
SG07-PDM008	4-Chloroaniline	1	UJ	N/A	0.00	no	N/A
SG07-PDM008	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SG07-PDM008	4-Nitroaniline	2.5	UJ	N/A	0.00	no	N/A
SG07-PDM008	Acenaphthene	0.1	U	N/A	0.00	no	N/A
SG07-PDM008	Acetone	10	R	95000000	0.00	no	NC
SG07-PDM008	Acetophenone	1	U	N/A	0.00	no	N/A
SG07-PDM008	Aluminum	892		N/A	0.00	no	N/A
SG07-PDM008	Aluminum, Dissolve	884		N/A	0.00	no	N/A
SG07-PDM008	Anthracene	0.1	U	N/A	0.00	no	N/A
SG07-PDM008	Antimony	6	U	N/A	0.00	no	N/A
SG07-PDM008	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SG07-PDM008	Arsenic	5	U	N/A	0.00	no	N/A
SG07-PDM008	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SG07-PDM008	Barium	56.2		N/A	0.00	no	N/A
SG07-PDM008	Barium, Dissolve	56.5		N/A	0.00	no	N/A
SG07-PDM008	Benzaldehyde	1	U	N/A	0.00	no	N/A
SG07-PDM008	Benzene	1	U	69	0.00	no	C
SG07-PDM008	Benzo[a]anthracene	0.1	U	NVT	0.00	no	C
SG07-PDM008	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SG07-PDM008	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
SG07-PDM008	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SG07-PDM008	Beryllium	1	U	N/A	0.00	no	N/A
SG07-PDM008	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SG07-PDM008	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SG07-PDM008	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SG07-PDM008	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SG07-PDM008	bis(2-Ethylhexyl)phthalate	0.27	J	N/A	0.00	no	N/A
SG07-PDM008	Bromodichloromethane	1	U	38	0.00	no	C
SG07-PDM008	Bromoform	1	U	5100	0.00	no	C
SG07-PDM008	Bromomethane	1	U	73	0.00	no	NC
SG07-PDM008	Cadmium	3	U	N/A	0.00	no	N/A
SG07-PDM008	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A
SG07-PDM008	Caprolactam	2.5	UJ	N/A	0.00	no	N/A
SG07-PDM008	Carbon disulfide	1	U	5200	0.00	no	NC
SG07-PDM008	Carbon tetrachloride	1	U	18	0.00	no	C
SG07-PDM008	Chlorobenzene	1	U	1700	0.00	no	NC
SG07-PDM008	Chloroethane	1	U	97000	0.00	no	NC
SG07-PDM008	Chloroform	1	U	36	0.00	no	C
SG07-PDM008	Chloromethane	1	UJ	1100	0.00	no	NC
SG07-PDM008	Chromium	34.2		N/A	0.00	no	N/A
SG07-PDM008	Chromium VI	26		N/A	0.00	no	N/A
SG07-PDM008	Chromium, Dissolve	34.1		N/A	0.00	no	N/A
SG07-PDM008	Chrysene	0.1	U	N/A	0.00	no	N/A
SG07-PDM008	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SG07-PDM008	Cobalt	5	U	N/A	0.00	no	N/A
SG07-PDM008	Cobalt, Dissolve	5	U	N/A	0.00	no	N/A
SG07-PDM008	Copper	5	U	N/A	0.00	no	N/A
SG07-PDM008	Copper, Dissolve	2.1	B	N/A	0.00	no	N/A
SG07-PDM008	Cyanide	10	U	3.5	0.00	no	NC
SG07-PDM008	Cyclohexane	10	U	4300	0.00	no	NC
SG07-PDM008	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SG07-PDM008	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SG07-PDM008	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SG07-PDM008	Diethylphthalate	1	U	N/A	0.00	no	N/A
SG07-PDM008	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SG07-PDM008	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SG07-PDM008	Ethylbenzene	1	U	150	0.00	no	C
SG07-PDM008	Fluoranthene	0.1	U	N/A	0.00	no	N/A
SG07-PDM008	Fluorene	0.02	J	N/A	0.00	no	N/A

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SG07-PDM008	Hexachlorobenzene	1	U	3.8	0.00	no	C
SG07-PDM008	Hexachlorobutadiene	1	U	13	0.00	no	C
SG07-PDM008	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SG07-PDM008	Hexachloroethane	1	U	70	0.00	no	C
SG07-PDM008	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SG07-PDM008	Iron	70	U	N/A	0.00	no	N/A
SG07-PDM008	Iron, Dissolve	70	U	N/A	0.00	no	N/A
SG07-PDM008	Isophorone	1	U	N/A	0.00	no	N/A
SG07-PDM008	Isopropylbenzene	1	U	3700	0.00	no	NC
SG07-PDM008	Lead	5	U	N/A	0.00	no	N/A
SG07-PDM008	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SG07-PDM008	Manganese	5	U	N/A	0.00	no	N/A
SG07-PDM008	Manganese, Dissolve	5	U	N/A	0.00	no	N/A
SG07-PDM008	Mercury	0.06	B	3.7	0.02	no	NC
SG07-PDM008	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SG07-PDM008	Methyl Acetate	5	R	N/A	0.00	no	N/A
SG07-PDM008	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SG07-PDM008	Methylene Chloride	1	U	20000	0.00	no	NC
SG07-PDM008	Naphthalene	0.044	B	200	0.00	no	C
SG07-PDM008	Nickel	10	U	N/A	0.00	no	N/A
SG07-PDM008	Nickel, Dissolve	10	U	N/A	0.00	no	N/A
SG07-PDM008	Nitrobenzene	1	U	3100	0.00	no	C
SG07-PDM008	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SG07-PDM008	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SG07-PDM008	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
SG07-PDM008	Phenol	1	U	N/A	0.00	no	N/A
SG07-PDM008	Pyrene	0.1	U	N/A	0.00	no	N/A
SG07-PDM008	Selenium	8.8		N/A	0.00	no	N/A
SG07-PDM008	Selenium, Dissolve	8.1		N/A	0.00	no	N/A
SG07-PDM008	Silver	6	U	N/A	0.00	no	N/A
SG07-PDM008	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SG07-PDM008	Styrene	1	U	39000	0.00	no	NC
SG07-PDM008	Tetrachloroethene	1	U	240	0.00	no	NC
SG07-PDM008	Thallium	10	U	N/A	0.00	no	N/A
SG07-PDM008	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SG07-PDM008	Toluene	1	U	81000	0.00	no	NC
SG07-PDM008	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SG07-PDM008	Trichloroethene	3.8		22	0.17	no	NC
SG07-PDM008	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SG07-PDM008	Vanadium	13.4		N/A	0.00	no	N/A
SG07-PDM008	Vanadium, Dissolve	13.4		N/A	0.00	no	N/A
SG07-PDM008	Vinyl chloride	1	U	25	0.00	no	C
SG07-PDM008	Xylenes	3	U	1600	0.00	no	NC
SG07-PDM008	Zinc	10	U	N/A	0.00	no	N/A
SG07-PDM008	Zinc, Dissolve	10	U	N/A	0.00	no	N/A
SW-021-MWS	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW-021-MWS	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW-021-MWS	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW-021-MWS	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW-021-MWS	1,1-Biphenyl	1	U	140	0.00	no	NC
SW-021-MWS	1,1-Dichloroethane	1	U	330	0.00	no	C
SW-021-MWS	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW-021-MWS	1,2,3-Trichlorobenzene	2	UJ	N/A	0.00	no	N/A
SW-021-MWS	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW-021-MWS	1,2,4-Trichlorobenzene	1	UJ	150	0.00	no	NC
SW-021-MWS	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW-021-MWS	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW-021-MWS	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW-021-MWS	1,2-Dichloroethane	1	U	98	0.00	no	C
SW-021-MWS	1,2-Dichloropropane	1	U	110	0.00	no	C
SW-021-MWS	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW-021-MWS	1,4-Dioxane	0.1	U	130000	0.00	no	C
SW-021-MWS	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW-021-MWS	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-021-MWS	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW-021-MWS	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW-021-MWS	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW-021-MWS	2,4-Dinitrophenol	2.5	UJ	N/A	0.00	no	N/A
SW-021-MWS	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-021-MWS	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-021-MWS	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW-021-MWS	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW-021-MWS	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW-021-MWS	2-Hexanone	10	U	34000	0.00	no	NC
SW-021-MWS	2-Methylnaphthalene	0.1	U	N/A	0.00	no	N/A
SW-021-MWS	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW-021-MWS	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-021-MWS	3,3'-Dichlorobenzidine	1	U	N/A	0.00	no	N/A
SW-021-MWS	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW-021-MWS	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW-021-MWS	4-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-021-MWS	Acenaphthene	0.1	U	N/A	0.00	no	N/A
SW-021-MWS	Acetone	10	U	95000000	0.00	no	NC
SW-021-MWS	Acetophenone	1	U	N/A	0.00	no	N/A
SW-021-MWS	Aluminum	576		N/A	0.00	no	N/A
SW-021-MWS	Aluminum, Dissolve	512		N/A	0.00	no	N/A
SW-021-MWS	Anthracene	0.038	J	N/A	0.00	no	N/A
SW-021-MWS	Antimony	3.3	J	N/A	0.00	no	N/A
SW-021-MWS	Antimony, Dissolve	2.8	J	N/A	0.00	no	N/A
SW-021-MWS	Arsenic	5	U	N/A	0.00	no	N/A
SW-021-MWS	Arsenic, Dissolve	5.4		N/A	0.00	no	N/A
SW-021-MWS	Barium	71.4		N/A	0.00	no	N/A
SW-021-MWS	Barium, Dissolve	62.3		N/A	0.00	no	N/A
SW-021-MWS	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW-021-MWS	Benzene	1	U	69	0.00	no	C
SW-021-MWS	Benzo[a]anthracene	0.1	U	NVT	0.00	no	C
SW-021-MWS	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW-021-MWS	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-021-MWS	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-021-MWS	Beryllium	0.47	J	N/A	0.00	no	N/A
SW-021-MWS	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW-021-MWS	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW-021-MWS	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW-021-MWS	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW-021-MWS	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A
SW-021-MWS	Bromodichloromethane	1	U	38	0.00	no	C
SW-021-MWS	Bromoform	1	U	5100	0.00	no	C
SW-021-MWS	Bromomethane	1	U	73	0.00	no	NC
SW-021-MWS	Cadmium	3	U	N/A	0.00	no	N/A
SW-021-MWS	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A
SW-021-MWS	Caprolactam	2.5	U	N/A	0.00	no	N/A
SW-021-MWS	Carbon disulfide	1	U	5200	0.00	no	NC
SW-021-MWS	Carbon tetrachloride	1	U	18	0.00	no	C
SW-021-MWS	Chlorobenzene	1	U	1700	0.00	no	NC
SW-021-MWS	Chloroethane	1	U	97000	0.00	no	NC
SW-021-MWS	Chloroform	4.7		36	0.13	no	C
SW-021-MWS	Chloromethane	1	U	1100	0.00	no	NC
SW-021-MWS	Chromium	2.5	B	N/A	0.00	no	N/A
SW-021-MWS	Chromium VI	10	U	N/A	0.00	no	N/A
SW-021-MWS	Chromium, Dissolve	2.1	B	N/A	0.00	no	N/A
SW-021-MWS	Chrysene	0.012	J	N/A	0.00	no	N/A
SW-021-MWS	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-021-MWS	Cobalt	5	U	N/A	0.00	no	N/A
SW-021-MWS	Cobalt, Dissolve	5	U	N/A	0.00	no	N/A
SW-021-MWS	Copper	5	U	N/A	0.00	no	N/A
SW-021-MWS	Copper, Dissolve	2.1	J	N/A	0.00	no	N/A
SW-021-MWS	Cyanide	10	U	3.5	0.00	no	NC
SW-021-MWS	Cyclohexane	10	U	4300	0.00	no	NC

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-021-MWS	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW-021-MWS	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW-021-MWS	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW-021-MWS	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW-021-MWS	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW-021-MWS	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW-021-MWS	Ethylbenzene	1	U	150	0.00	no	C
SW-021-MWS	Fluoranthene	0.018	J	N/A	0.00	no	N/A
SW-021-MWS	Fluorene	0.1	U	N/A	0.00	no	N/A
SW-021-MWS	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW-021-MWS	Hexachlorobutadiene	1	U	13	0.00	no	C
SW-021-MWS	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW-021-MWS	Hexachloroethane	1	U	70	0.00	no	C
SW-021-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW-021-MWS	Iron	74.8		N/A	0.00	no	N/A
SW-021-MWS	Iron, Dissolve	20.4	B	N/A	0.00	no	N/A
SW-021-MWS	Isophorone	1	U	N/A	0.00	no	N/A
SW-021-MWS	Isopropylbenzene	1	U	3700	0.00	no	NC
SW-021-MWS	Lead	5	U	N/A	0.00	no	N/A
SW-021-MWS	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW-021-MWS	Manganese	19		N/A	0.00	no	N/A
SW-021-MWS	Manganese, Dissolve	13.2		N/A	0.00	no	N/A
SW-021-MWS	Mercury	0.2	U	3.7	0.00	no	NC
SW-021-MWS	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW-021-MWS	Methyl Acetate	5	UJ	N/A	0.00	no	N/A
SW-021-MWS	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW-021-MWS	Methylene Chloride	1	U	20000	0.00	no	NC
SW-021-MWS	Naphthalene	0.092	B	200	0.00	no	C
SW-021-MWS	Nickel	0.85	B	N/A	0.00	no	N/A
SW-021-MWS	Nickel, Dissolve	10	U	N/A	0.00	no	N/A
SW-021-MWS	Nitrobenzene	1	U	3100	0.00	no	C
SW-021-MWS	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW-021-MWS	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW-021-MWS	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
SW-021-MWS	Phenol	1	U	N/A	0.00	no	N/A
SW-021-MWS	Pyrene	0.014	J	N/A	0.00	no	N/A
SW-021-MWS	Selenium	5.2	B	N/A	0.00	no	N/A
SW-021-MWS	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW-021-MWS	Silver	6	U	N/A	0.00	no	N/A
SW-021-MWS	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW-021-MWS	Styrene	1	U	39000	0.00	no	NC
SW-021-MWS	Tetrachloroethene	1	U	240	0.00	no	NC
SW-021-MWS	Thallium	6	B	N/A	0.00	no	N/A
SW-021-MWS	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW-021-MWS	Toluene	1	U	81000	0.00	no	NC
SW-021-MWS	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-021-MWS	Trichloroethene	1	U	22	0.00	no	NC
SW-021-MWS	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW-021-MWS	Vanadium	391		N/A	0.00	no	N/A
SW-021-MWS	Vanadium, Dissolve	376		N/A	0.00	no	N/A
SW-021-MWS	Vinyl chloride	1	U	25	0.00	no	C
SW-021-MWS	Xylenes	3	U	1600	0.00	no	NC
SW-021-MWS	Zinc	1.3	B	N/A	0.00	no	N/A
SW-021-MWS	Zinc, Dissolve	10	U	N/A	0.00	no	N/A
SW-022-MWS	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW-022-MWS	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW-022-MWS	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW-022-MWS	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW-022-MWS	1,1-Biphenyl	1	U	140	0.00	no	NC
SW-022-MWS	1,1-Dichloroethane	1	U	330	0.00	no	C
SW-022-MWS	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW-022-MWS	1,2,3-Trichlorobenzene	2	UJ	N/A	0.00	no	N/A
SW-022-MWS	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW-022-MWS	1,2,4-Trichlorobenzene	1	UJ	150	0.00	no	NC

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-022-MWS	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW-022-MWS	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW-022-MWS	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW-022-MWS	1,2-Dichloroethane	1	U	98	0.00	no	C
SW-022-MWS	1,2-Dichloropropane	1	U	110	0.00	no	C
SW-022-MWS	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW-022-MWS	1,4-Dioxane	0.14		130000	0.00	no	C
SW-022-MWS	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW-022-MWS	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
SW-022-MWS	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW-022-MWS	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW-022-MWS	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW-022-MWS	2,4-Dinitrophenol	2.5	UJ	N/A	0.00	no	N/A
SW-022-MWS	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-022-MWS	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-022-MWS	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW-022-MWS	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW-022-MWS	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW-022-MWS	2-Hexanone	10	U	34000	0.00	no	NC
SW-022-MWS	2-Methylnaphthalene	0.023	J	N/A	0.00	no	N/A
SW-022-MWS	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW-022-MWS	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-022-MWS	3,3'-Dichlorobenzidine	1	U	N/A	0.00	no	N/A
SW-022-MWS	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW-022-MWS	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW-022-MWS	4-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-022-MWS	Acenaphthene	0.1	U	N/A	0.00	no	N/A
SW-022-MWS	Acetone	10	U	95000000	0.00	no	NC
SW-022-MWS	Acetophenone	1	U	N/A	0.00	no	N/A
SW-022-MWS	Aluminum	325		N/A	0.00	no	N/A
SW-022-MWS	Aluminum, Dissolve	267		N/A	0.00	no	N/A
SW-022-MWS	Anthracene	0.063	J	N/A	0.00	no	N/A
SW-022-MWS	Antimony	6	U	N/A	0.00	no	N/A
SW-022-MWS	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW-022-MWS	Arsenic	5	U	N/A	0.00	no	N/A
SW-022-MWS	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SW-022-MWS	Barium	65.3		N/A	0.00	no	N/A
SW-022-MWS	Barium, Dissolve	58.3		N/A	0.00	no	N/A
SW-022-MWS	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW-022-MWS	Benzene	1	U	69	0.00	no	C
SW-022-MWS	Benzo[a]anthracene	0.1	U	NVT	0.00	no	C
SW-022-MWS	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW-022-MWS	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-022-MWS	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-022-MWS	Beryllium	1	U	N/A	0.00	no	N/A
SW-022-MWS	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW-022-MWS	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW-022-MWS	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW-022-MWS	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW-022-MWS	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A
SW-022-MWS	Bromodichloromethane	1	U	38	0.00	no	C
SW-022-MWS	Bromoform	1	U	5100	0.00	no	C
SW-022-MWS	Bromomethane	1	U	73	0.00	no	NC
SW-022-MWS	Cadmium	3	U	N/A	0.00	no	N/A
SW-022-MWS	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A
SW-022-MWS	Caprolactam	2.5	U	N/A	0.00	no	N/A
SW-022-MWS	Carbon disulfide	1	U	5200	0.00	no	NC
SW-022-MWS	Carbon tetrachloride	1	U	18	0.00	no	C
SW-022-MWS	Chlorobenzene	1	U	1700	0.00	no	NC
SW-022-MWS	Chloroethane	1	U	97000	0.00	no	NC
SW-022-MWS	Chloroform	1	U	36	0.00	no	C
SW-022-MWS	Chloromethane	1	U	1100	0.00	no	NC
SW-022-MWS	Chromium	1.5	B	N/A	0.00	no	N/A
SW-022-MWS	Chromium VI	10	U	N/A	0.00	no	N/A

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-022-MWS	Chromium, Dissolve	1.6	B	N/A	0.00	no	N/A
SW-022-MWS	Chrysene	0.1	U	N/A	0.00	no	N/A
SW-022-MWS	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-022-MWS	Cobalt	5	U	N/A	0.00	no	N/A
SW-022-MWS	Cobalt, Dissolve	5	U	N/A	0.00	no	N/A
SW-022-MWS	Copper	5	U	N/A	0.00	no	N/A
SW-022-MWS	Copper, Dissolve	5	U	N/A	0.00	no	N/A
SW-022-MWS	Cyanide	10	U	3.5	0.00	no	NC
SW-022-MWS	Cyclohexane	10	U	4300	0.00	no	NC
SW-022-MWS	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW-022-MWS	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW-022-MWS	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW-022-MWS	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW-022-MWS	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW-022-MWS	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW-022-MWS	Ethylbenzene	1	U	150	0.00	no	C
SW-022-MWS	Fluoranthene	0.031	J	N/A	0.00	no	N/A
SW-022-MWS	Fluorene	0.1	U	N/A	0.00	no	N/A
SW-022-MWS	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW-022-MWS	Hexachlorobutadiene	1	U	13	0.00	no	C
SW-022-MWS	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW-022-MWS	Hexachloroethane	1	U	70	0.00	no	C
SW-022-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW-022-MWS	Iron	53.4	J	N/A	0.00	no	N/A
SW-022-MWS	Iron, Dissolve	29.4	B	N/A	0.00	no	N/A
SW-022-MWS	Isophorone	1	U	N/A	0.00	no	N/A
SW-022-MWS	Isopropylbenzene	1	U	3700	0.00	no	NC
SW-022-MWS	Lead	5	U	N/A	0.00	no	N/A
SW-022-MWS	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW-022-MWS	Manganese	15		N/A	0.00	no	N/A
SW-022-MWS	Manganese, Dissolve	1.8	B	N/A	0.00	no	N/A
SW-022-MWS	Mercury	0.2	U	3.7	0.00	no	NC
SW-022-MWS	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW-022-MWS	Methyl Acetate	5	UJ	N/A	0.00	no	N/A
SW-022-MWS	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW-022-MWS	Methylene Chloride	1	U	20000	0.00	no	NC
SW-022-MWS	Naphthalene	0.095	B	200	0.00	no	C
SW-022-MWS	Nickel	0.78	B	N/A	0.00	no	N/A
SW-022-MWS	Nickel, Dissolve	10	U	N/A	0.00	no	N/A
SW-022-MWS	Nitrobenzene	1	U	3100	0.00	no	C
SW-022-MWS	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW-022-MWS	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW-022-MWS	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
SW-022-MWS	Phenol	1	U	N/A	0.00	no	N/A
SW-022-MWS	Pyrene	0.023	J	N/A	0.00	no	N/A
SW-022-MWS	Selenium	8	U	N/A	0.00	no	N/A
SW-022-MWS	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW-022-MWS	Silver	6	U	N/A	0.00	no	N/A
SW-022-MWS	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW-022-MWS	Styrene	1	U	39000	0.00	no	NC
SW-022-MWS	Tetrachloroethene	1	U	240	0.00	no	NC
SW-022-MWS	Thallium	4.2	B	N/A	0.00	no	N/A
SW-022-MWS	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW-022-MWS	Toluene	1	U	81000	0.00	no	NC
SW-022-MWS	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-022-MWS	Trichloroethene	1	U	22	0.00	no	NC
SW-022-MWS	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW-022-MWS	Vanadium	4.2	B	N/A	0.00	no	N/A
SW-022-MWS	Vanadium, Dissolve	3.6	J	N/A	0.00	no	N/A
SW-022-MWS	Vinyl chloride	1	U	25	0.00	no	C
SW-022-MWS	Xylenes	3	U	1600	0.00	no	NC
SW-022-MWS	Zinc	0.64	B	N/A	0.00	no	N/A
SW-022-MWS	Zinc, Dissolve	10	U	N/A	0.00	no	N/A
SW-023-MWS	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-023-MWS	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW-023-MWS	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW-023-MWS	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW-023-MWS	1,1-Biphenyl	1	U	140	0.00	no	NC
SW-023-MWS	1,1-Dichloroethane	1	U	330	0.00	no	C
SW-023-MWS	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW-023-MWS	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW-023-MWS	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW-023-MWS	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW-023-MWS	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW-023-MWS	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW-023-MWS	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW-023-MWS	1,2-Dichloroethane	1	U	98	0.00	no	C
SW-023-MWS	1,2-Dichloropropane	1	U	110	0.00	no	C
SW-023-MWS	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW-023-MWS	1,4-Dioxane	0.037	J	130000	0.00	no	C
SW-023-MWS	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW-023-MWS	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
SW-023-MWS	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW-023-MWS	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW-023-MWS	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW-023-MWS	2,4-Dinitrophenol	2.5	U	N/A	0.00	no	N/A
SW-023-MWS	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-023-MWS	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-023-MWS	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW-023-MWS	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW-023-MWS	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW-023-MWS	2-Hexanone	10	U	34000	0.00	no	NC
SW-023-MWS	2-Methylnaphthalene	0.1	U	N/A	0.00	no	N/A
SW-023-MWS	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW-023-MWS	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-023-MWS	3,3'-Dichlorobenzidine	1	U	N/A	0.00	no	N/A
SW-023-MWS	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW-023-MWS	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW-023-MWS	4-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-023-MWS	Acenaphthene	0.1	U	N/A	0.00	no	N/A
SW-023-MWS	Acetone	10	R	95000000	0.00	no	NC
SW-023-MWS	Acetophenone	1	U	N/A	0.00	no	N/A
SW-023-MWS	Aluminum	806		N/A	0.00	no	N/A
SW-023-MWS	Aluminum, Dissolve	804		N/A	0.00	no	N/A
SW-023-MWS	Anthracene	0.081	J	N/A	0.00	no	N/A
SW-023-MWS	Antimony	6	U	N/A	0.00	no	N/A
SW-023-MWS	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW-023-MWS	Arsenic	5	U	N/A	0.00	no	N/A
SW-023-MWS	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SW-023-MWS	Barium	23.4		N/A	0.00	no	N/A
SW-023-MWS	Barium, Dissolve	22.7		N/A	0.00	no	N/A
SW-023-MWS	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW-023-MWS	Benzene	1	U	69	0.00	no	C
SW-023-MWS	Benzo[a]anthracene	0.015	J	NVT	0.00	no	C
SW-023-MWS	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW-023-MWS	Benzo[b]fluoranthene	0.031	B	N/A	0.00	no	N/A
SW-023-MWS	Benzo[k]fluoranthene	0.022	B	N/A	0.00	no	N/A
SW-023-MWS	Beryllium	1	U	N/A	0.00	no	N/A
SW-023-MWS	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW-023-MWS	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW-023-MWS	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW-023-MWS	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW-023-MWS	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A
SW-023-MWS	Bromodichloromethane	1	U	38	0.00	no	C
SW-023-MWS	Bromoform	1	U	5100	0.00	no	C
SW-023-MWS	Bromomethane	1	U	73	0.00	no	NC
SW-023-MWS	Cadmium	3	U	N/A	0.00	no	N/A
SW-023-MWS	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-023-MWS	Caprolactam	2.5	U	N/A	0.00	no	N/A
SW-023-MWS	Carbon disulfide	1	U	5200	0.00	no	NC
SW-023-MWS	Carbon tetrachloride	1	U	18	0.00	no	C
SW-023-MWS	Chlorobenzene	1	U	1700	0.00	no	NC
SW-023-MWS	Chloroethane	1	U	97000	0.00	no	NC
SW-023-MWS	Chloroform	2.5		36	0.07	no	C
SW-023-MWS	Chloromethane	1	U	1100	0.00	no	NC
SW-023-MWS	Chromium	18.9		N/A	0.00	no	N/A
SW-023-MWS	Chromium VI	9	J	N/A	0.00	no	N/A
SW-023-MWS	Chromium, Dissolve	19.7		N/A	0.00	no	N/A
SW-023-MWS	Chrysene	0.0089	B	N/A	0.00	no	N/A
SW-023-MWS	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-023-MWS	Cobalt	5	U	N/A	0.00	no	N/A
SW-023-MWS	Cobalt, Dissolve	5	U	N/A	0.00	no	N/A
SW-023-MWS	Copper	3	B	N/A	0.00	no	N/A
SW-023-MWS	Copper, Dissolve	3.1	B	N/A	0.00	no	N/A
SW-023-MWS	Cyanide	10	U	3.5	0.00	no	NC
SW-023-MWS	Cyclohexane	10	U	4300	0.00	no	NC
SW-023-MWS	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW-023-MWS	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW-023-MWS	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW-023-MWS	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW-023-MWS	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW-023-MWS	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW-023-MWS	Ethylbenzene	1	U	150	0.00	no	C
SW-023-MWS	Fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-023-MWS	Fluorene	0.1	U	N/A	0.00	no	N/A
SW-023-MWS	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW-023-MWS	Hexachlorobutadiene	1	U	13	0.00	no	C
SW-023-MWS	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW-023-MWS	Hexachloroethane	1	U	70	0.00	no	C
SW-023-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW-023-MWS	Iron	45.3	B	N/A	0.00	no	N/A
SW-023-MWS	Iron, Dissolve	34.4	J	N/A	0.00	no	N/A
SW-023-MWS	Isophorone	1	U	N/A	0.00	no	N/A
SW-023-MWS	Isopropylbenzene	1	U	3700	0.00	no	NC
SW-023-MWS	Lead	5	U	N/A	0.00	no	N/A
SW-023-MWS	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW-023-MWS	Manganese	4.2	J	N/A	0.00	no	N/A
SW-023-MWS	Manganese, Dissolve	3.7	J	N/A	0.00	no	N/A
SW-023-MWS	Mercury	0.2	U	3.7	0.00	no	NC
SW-023-MWS	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW-023-MWS	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW-023-MWS	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW-023-MWS	Methylene Chloride	1	U	20000	0.00	no	NC
SW-023-MWS	Naphthalene	0.032	B	200	0.00	no	C
SW-023-MWS	Nickel	1.4	B	N/A	0.00	no	N/A
SW-023-MWS	Nickel, Dissolve	0.94	B	N/A	0.00	no	N/A
SW-023-MWS	Nitrobenzene	1	U	3100	0.00	no	C
SW-023-MWS	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW-023-MWS	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW-023-MWS	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
SW-023-MWS	Phenol	1	U	N/A	0.00	no	N/A
SW-023-MWS	Pyrene	0.1	U	N/A	0.00	no	N/A
SW-023-MWS	Selenium	11.1		N/A	0.00	no	N/A
SW-023-MWS	Selenium, Dissolve	12.4		N/A	0.00	no	N/A
SW-023-MWS	Silver	6	U	N/A	0.00	no	N/A
SW-023-MWS	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW-023-MWS	Styrene	1	U	39000	0.00	no	NC
SW-023-MWS	Tetrachloroethene	1	U	240	0.00	no	NC
SW-023-MWS	Thallium	4.7	B	N/A	0.00	no	N/A
SW-023-MWS	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW-023-MWS	Toluene	1	U	81000	0.00	no	NC
SW-023-MWS	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-023-MWS	Trichloroethene	1	U	22	0.00	no	NC
SW-023-MWS	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW-023-MWS	Vanadium	12.9		N/A	0.00	no	N/A
SW-023-MWS	Vanadium, Dissolve	12.3		N/A	0.00	no	N/A
SW-023-MWS	Vinyl chloride	1	U	25	0.00	no	C
SW-023-MWS	Xylenes	3	U	1600	0.00	no	NC
SW-023-MWS	Zinc	0.8	J	N/A	0.00	no	N/A
SW-023-MWS	Zinc, Dissolve	10	U	N/A	0.00	no	N/A
SW-024-MWS	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW-024-MWS	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW-024-MWS	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW-024-MWS	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW-024-MWS	1,1-Biphenyl	1	U	140	0.00	no	NC
SW-024-MWS	1,1-Dichloroethane	1	U	330	0.00	no	C
SW-024-MWS	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW-024-MWS	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW-024-MWS	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW-024-MWS	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW-024-MWS	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW-024-MWS	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW-024-MWS	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW-024-MWS	1,2-Dichloroethane	1	U	98	0.00	no	C
SW-024-MWS	1,2-Dichloropropane	1	U	110	0.00	no	C
SW-024-MWS	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW-024-MWS	1,4-Dioxane	0.1	U	130000	0.00	no	C
SW-024-MWS	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW-024-MWS	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
SW-024-MWS	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW-024-MWS	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW-024-MWS	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW-024-MWS	2,4-Dinitrophenol	2.5	U	N/A	0.00	no	N/A
SW-024-MWS	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-024-MWS	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-024-MWS	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW-024-MWS	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW-024-MWS	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW-024-MWS	2-Hexanone	10	U	34000	0.00	no	NC
SW-024-MWS	2-Methylnaphthalene	0.084	J	N/A	0.00	no	N/A
SW-024-MWS	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW-024-MWS	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-024-MWS	3,3'-Dichlorobenzidine	1	UJ	N/A	0.00	no	N/A
SW-024-MWS	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW-024-MWS	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW-024-MWS	4-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-024-MWS	Acenaphthene	0.1	U	N/A	0.00	no	N/A
SW-024-MWS	Acetone	10	R	95000000	0.00	no	NC
SW-024-MWS	Acetophenone	0.36	J	N/A	0.00	no	N/A
SW-024-MWS	Aluminum	182		N/A	0.00	no	N/A
SW-024-MWS	Aluminum, Dissolve	149		N/A	0.00	no	N/A
SW-024-MWS	Anthracene	0.028	J	N/A	0.00	no	N/A
SW-024-MWS	Antimony	6	U	N/A	0.00	no	N/A
SW-024-MWS	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW-024-MWS	Arsenic	4	B	N/A	0.00	no	N/A
SW-024-MWS	Arsenic, Dissolve	4	B	N/A	0.00	no	N/A
SW-024-MWS	Barium	39		N/A	0.00	no	N/A
SW-024-MWS	Barium, Dissolve	34.5		N/A	0.00	no	N/A
SW-024-MWS	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW-024-MWS	Benzene	1	U	69	0.00	no	C
SW-024-MWS	Benzo[a]anthracene	0.1	U	NVT	0.00	no	C
SW-024-MWS	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW-024-MWS	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-024-MWS	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-024-MWS	Beryllium	1	U	N/A	0.00	no	N/A
SW-024-MWS	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-024-MWS	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW-024-MWS	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW-024-MWS	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW-024-MWS	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A
SW-024-MWS	Bromodichloromethane	1	U	38	0.00	no	C
SW-024-MWS	Bromoform	1	U	5100	0.00	no	C
SW-024-MWS	Bromomethane	1	U	73	0.00	no	NC
SW-024-MWS	Cadmium	3	U	N/A	0.00	no	N/A
SW-024-MWS	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A
SW-024-MWS	Caprolactam	2.5	U	N/A	0.00	no	N/A
SW-024-MWS	Carbon disulfide	1	U	5200	0.00	no	NC
SW-024-MWS	Carbon tetrachloride	1	U	18	0.00	no	C
SW-024-MWS	Chlorobenzene	1	U	1700	0.00	no	NC
SW-024-MWS	Chloroethane	1	U	97000	0.00	no	NC
SW-024-MWS	Chloroform	1	U	36	0.00	no	C
SW-024-MWS	Chloromethane	1	U	1100	0.00	no	NC
SW-024-MWS	Chromium	3.8	B	N/A	0.00	no	N/A
SW-024-MWS	Chromium VI	10	U	N/A	0.00	no	N/A
SW-024-MWS	Chromium, Dissolve	1.6	B	N/A	0.00	no	N/A
SW-024-MWS	Chrysene	0.1	U	N/A	0.00	no	N/A
SW-024-MWS	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-024-MWS	Cobalt	5	U	N/A	0.00	no	N/A
SW-024-MWS	Cobalt, Dissolve	5	U	N/A	0.00	no	N/A
SW-024-MWS	Copper	5	U	N/A	0.00	no	N/A
SW-024-MWS	Copper, Dissolve	5	U	N/A	0.00	no	N/A
SW-024-MWS	Cyanide	296		3.5	84.57	YES	NC
SW-024-MWS	Cyclohexane	10	U	4300	0.00	no	NC
SW-024-MWS	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW-024-MWS	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW-024-MWS	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW-024-MWS	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW-024-MWS	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW-024-MWS	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW-024-MWS	Ethylbenzene	1	U	150	0.00	no	C
SW-024-MWS	Fluoranthene	0.039	J	N/A	0.00	no	N/A
SW-024-MWS	Fluorene	0.018	J	N/A	0.00	no	N/A
SW-024-MWS	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW-024-MWS	Hexachlorobutadiene	1	U	13	0.00	no	C
SW-024-MWS	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW-024-MWS	Hexachloroethane	1	U	70	0.00	no	C
SW-024-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW-024-MWS	Iron	727		N/A	0.00	no	N/A
SW-024-MWS	Iron, Dissolve	249		N/A	0.00	no	N/A
SW-024-MWS	Isophorone	1	U	N/A	0.00	no	N/A
SW-024-MWS	Isopropylbenzene	1	U	3700	0.00	no	NC
SW-024-MWS	Lead	5	U	N/A	0.00	no	N/A
SW-024-MWS	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW-024-MWS	Manganese	264		N/A	0.00	no	N/A
SW-024-MWS	Manganese, Dissolve	245		N/A	0.00	no	N/A
SW-024-MWS	Mercury	0.2	U	3.7	0.00	no	NC
SW-024-MWS	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW-024-MWS	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW-024-MWS	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW-024-MWS	Methylene Chloride	1	U	20000	0.00	no	NC
SW-024-MWS	Naphthalene	0.5		200	0.00	no	C
SW-024-MWS	Nickel	10	U	N/A	0.00	no	N/A
SW-024-MWS	Nickel, Dissolve	0.8	B	N/A	0.00	no	N/A
SW-024-MWS	Nitrobenzene	1	U	3100	0.00	no	C
SW-024-MWS	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW-024-MWS	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW-024-MWS	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
SW-024-MWS	Phenol	1	U	N/A	0.00	no	N/A
SW-024-MWS	Pyrene	0.063	J	N/A	0.00	no	N/A
SW-024-MWS	Selenium	3.6	B	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-024-MWS	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW-024-MWS	Silver	6	U	N/A	0.00	no	N/A
SW-024-MWS	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW-024-MWS	Styrene	1	U	39000	0.00	no	NC
SW-024-MWS	Tetrachloroethene	1	U	240	0.00	no	NC
SW-024-MWS	Thallium	10	U	N/A	0.00	no	N/A
SW-024-MWS	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW-024-MWS	Toluene	0.34	J	81000	0.00	no	NC
SW-024-MWS	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-024-MWS	Trichloroethene	1	U	22	0.00	no	NC
SW-024-MWS	Trichlorofluoromethane	1	UJ	N/A	0.00	no	N/A
SW-024-MWS	Vanadium	8.5		N/A	0.00	no	N/A
SW-024-MWS	Vanadium, Dissolve	7.7		N/A	0.00	no	N/A
SW-024-MWS	Vinyl chloride	1	U	25	0.00	no	C
SW-024-MWS	Xylenes	3	U	1600	0.00	no	NC
SW-024-MWS	Zinc	1.4	B	N/A	0.00	no	N/A
SW-024-MWS	Zinc, Dissolve	1.2	B	N/A	0.00	no	N/A
SW-025-MWS	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW-025-MWS	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW-025-MWS	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW-025-MWS	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW-025-MWS	1,1-Biphenyl	1	U	140	0.00	no	NC
SW-025-MWS	1,1-Dichloroethane	1	U	330	0.00	no	C
SW-025-MWS	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW-025-MWS	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW-025-MWS	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW-025-MWS	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW-025-MWS	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW-025-MWS	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW-025-MWS	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW-025-MWS	1,2-Dichloroethane	1	U	98	0.00	no	C
SW-025-MWS	1,2-Dichloropropane	1	U	110	0.00	no	C
SW-025-MWS	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW-025-MWS	1,4-Dioxane	0.1	U	130000	0.00	no	C
SW-025-MWS	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW-025-MWS	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
SW-025-MWS	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW-025-MWS	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW-025-MWS	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW-025-MWS	2,4-Dinitrophenol	2.5	U	N/A	0.00	no	N/A
SW-025-MWS	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-025-MWS	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-025-MWS	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW-025-MWS	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW-025-MWS	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW-025-MWS	2-Hexanone	10	U	34000	0.00	no	NC
SW-025-MWS	2-Methylnaphthalene	0.1	U	N/A	0.00	no	N/A
SW-025-MWS	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW-025-MWS	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-025-MWS	3,3'-Dichlorobenzidine	1	U	N/A	0.00	no	N/A
SW-025-MWS	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW-025-MWS	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW-025-MWS	4-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-025-MWS	Acenaphthene	0.1	U	N/A	0.00	no	N/A
SW-025-MWS	Acetone	10	R	95000000	0.00	no	NC
SW-025-MWS	Acetophenone	1	U	N/A	0.00	no	N/A
SW-025-MWS	Aluminum	125		N/A	0.00	no	N/A
SW-025-MWS	Aluminum, Dissolve	21.5	J	N/A	0.00	no	N/A
SW-025-MWS	Anthracene	0.02	J	N/A	0.00	no	N/A
SW-025-MWS	Antimony	6	U	N/A	0.00	no	N/A
SW-025-MWS	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW-025-MWS	Arsenic	5	U	N/A	0.00	no	N/A
SW-025-MWS	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SW-025-MWS	Barium	69.4		N/A	0.00	no	N/A

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-025-MWS	Barium, Dissolve	69.3		N/A	0.00	no	N/A
SW-025-MWS	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW-025-MWS	Benzene	1	U	69	0.00	no	C
SW-025-MWS	Benzo[a]anthracene	0.046	J	NVT	0.00	no	C
SW-025-MWS	Benzo[a]pyrene	0.046	J	N/A	0.00	no	N/A
SW-025-MWS	Benzo[b]fluoranthene	0.17		N/A	0.00	no	N/A
SW-025-MWS	Benzo[k]fluoranthene	0.12		N/A	0.00	no	N/A
SW-025-MWS	Beryllium	1	U	N/A	0.00	no	N/A
SW-025-MWS	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW-025-MWS	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW-025-MWS	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW-025-MWS	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW-025-MWS	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A
SW-025-MWS	Bromodichloromethane	1	U	38	0.00	no	C
SW-025-MWS	Bromoform	1	U	5100	0.00	no	C
SW-025-MWS	Bromomethane	1	U	73	0.00	no	NC
SW-025-MWS	Cadmium	3	U	N/A	0.00	no	N/A
SW-025-MWS	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A
SW-025-MWS	Caprolactam	2.5	U	N/A	0.00	no	N/A
SW-025-MWS	Carbon disulfide	1	U	5200	0.00	no	NC
SW-025-MWS	Carbon tetrachloride	1	U	18	0.00	no	C
SW-025-MWS	Chlorobenzene	1	U	1700	0.00	no	NC
SW-025-MWS	Chloroethane	1	U	97000	0.00	no	NC
SW-025-MWS	Chloroform	1	U	36	0.00	no	C
SW-025-MWS	Chloromethane	1	U	1100	0.00	no	NC
SW-025-MWS	Chromium	1.1	B	N/A	0.00	no	N/A
SW-025-MWS	Chromium VI	10	U	N/A	0.00	no	N/A
SW-025-MWS	Chromium, Dissolve	5	U	N/A	0.00	no	N/A
SW-025-MWS	Chrysene	0.041	B	N/A	0.00	no	N/A
SW-025-MWS	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-025-MWS	Cobalt	5	U	N/A	0.00	no	N/A
SW-025-MWS	Cobalt, Dissolve	5	U	N/A	0.00	no	N/A
SW-025-MWS	Copper	3.9	B	N/A	0.00	no	N/A
SW-025-MWS	Copper, Dissolve	5	U	N/A	0.00	no	N/A
SW-025-MWS	Cyanide	10	U	3.5	0.00	no	NC
SW-025-MWS	Cyclohexane	10	U	4300	0.00	no	NC
SW-025-MWS	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW-025-MWS	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW-025-MWS	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW-025-MWS	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW-025-MWS	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW-025-MWS	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW-025-MWS	Ethylbenzene	1	U	150	0.00	no	C
SW-025-MWS	Fluoranthene	0.032	J	N/A	0.00	no	N/A
SW-025-MWS	Fluorene	0.1	U	N/A	0.00	no	N/A
SW-025-MWS	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW-025-MWS	Hexachlorobutadiene	1	U	13	0.00	no	C
SW-025-MWS	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW-025-MWS	Hexachloroethane	1	U	70	0.00	no	C
SW-025-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW-025-MWS	Iron	765		N/A	0.00	no	N/A
SW-025-MWS	Iron, Dissolve	263		N/A	0.00	no	N/A
SW-025-MWS	Isophorone	1	U	N/A	0.00	no	N/A
SW-025-MWS	Isopropylbenzene	0.29	J	3700	0.00	no	NC
SW-025-MWS	Lead	14		N/A	0.00	no	N/A
SW-025-MWS	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW-025-MWS	Manganese	1360		N/A	0.00	no	N/A
SW-025-MWS	Manganese, Dissolve	1320		N/A	0.00	no	N/A
SW-025-MWS	Mercury	0.2	U	3.7	0.00	no	NC
SW-025-MWS	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW-025-MWS	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW-025-MWS	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW-025-MWS	Methylene Chloride	1	U	20000	0.00	no	NC
SW-025-MWS	Naphthalene	0.025	B	200	0.00	no	C

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-025-MWS	Nickel	0.8	B	N/A	0.00	no	N/A
SW-025-MWS	Nickel, Dissolve	0.7	B	N/A	0.00	no	N/A
SW-025-MWS	Nitrobenzene	1	U	3100	0.00	no	C
SW-025-MWS	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW-025-MWS	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW-025-MWS	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
SW-025-MWS	Phenol	1	U	N/A	0.00	no	N/A
SW-025-MWS	Pyrene	0.025	J	N/A	0.00	no	N/A
SW-025-MWS	Selenium	8	U	N/A	0.00	no	N/A
SW-025-MWS	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW-025-MWS	Silver	6	U	N/A	0.00	no	N/A
SW-025-MWS	Silver, Dissolve	6	UJ	N/A	0.00	no	N/A
SW-025-MWS	Styrene	1	U	39000	0.00	no	NC
SW-025-MWS	Tetrachloroethene	1	U	240	0.00	no	NC
SW-025-MWS	Thallium	10	U	N/A	0.00	no	N/A
SW-025-MWS	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW-025-MWS	Toluene	1	U	81000	0.00	no	NC
SW-025-MWS	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-025-MWS	Trichloroethene	1	U	22	0.00	no	NC
SW-025-MWS	Trichlorofluoromethane	1	UJ	N/A	0.00	no	N/A
SW-025-MWS	Vanadium	5	U	N/A	0.00	no	N/A
SW-025-MWS	Vanadium, Dissolve	5	U	N/A	0.00	no	N/A
SW-025-MWS	Vinyl chloride	1	U	25	0.00	no	C
SW-025-MWS	Xylenes	3	U	1600	0.00	no	NC
SW-025-MWS	Zinc	19.2		N/A	0.00	no	N/A
SW-025-MWS	Zinc, Dissolve	1.5	J	N/A	0.00	no	N/A
SW-026-MWS	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW-026-MWS	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW-026-MWS	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW-026-MWS	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW-026-MWS	1,1-Biphenyl	1	U	140	0.00	no	NC
SW-026-MWS	1,1-Dichloroethane	1	U	330	0.00	no	C
SW-026-MWS	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW-026-MWS	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW-026-MWS	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW-026-MWS	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW-026-MWS	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW-026-MWS	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW-026-MWS	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW-026-MWS	1,2-Dichloroethane	1	U	98	0.00	no	C
SW-026-MWS	1,2-Dichloropropane	1	U	110	0.00	no	C
SW-026-MWS	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW-026-MWS	1,4-Dioxane	0.1	U	130000	0.00	no	C
SW-026-MWS	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW-026-MWS	2,4,5-Trichlorophenol	2.6	U	N/A	0.00	no	N/A
SW-026-MWS	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW-026-MWS	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW-026-MWS	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW-026-MWS	2,4-Dinitrophenol	2.6	U	N/A	0.00	no	N/A
SW-026-MWS	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-026-MWS	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-026-MWS	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW-026-MWS	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW-026-MWS	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW-026-MWS	2-Hexanone	10	U	34000	0.00	no	NC
SW-026-MWS	2-Methylnaphthalene	0.97		N/A	0.00	no	N/A
SW-026-MWS	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW-026-MWS	2-Nitroaniline	2.6	U	N/A	0.00	no	N/A
SW-026-MWS	3,3'-Dichlorobenzidine	1	U	N/A	0.00	no	N/A
SW-026-MWS	4-Chloroaniline	1	UJ	N/A	0.00	no	N/A
SW-026-MWS	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW-026-MWS	4-Nitroaniline	2.6	U	N/A	0.00	no	N/A
SW-026-MWS	Acenaphthene	0.12		N/A	0.00	no	N/A
SW-026-MWS	Acetone	10	R	95000000	0.00	no	NC

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-026-MWS	Acetophenone	1	U	N/A	0.00	no	N/A
SW-026-MWS	Aluminum	726		N/A	0.00	no	N/A
SW-026-MWS	Aluminum, Dissolve	582		N/A	0.00	no	N/A
SW-026-MWS	Anthracene	0.15		N/A	0.00	no	N/A
SW-026-MWS	Antimony	6	U	N/A	0.00	no	N/A
SW-026-MWS	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW-026-MWS	Arsenic	5	U	N/A	0.00	no	N/A
SW-026-MWS	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SW-026-MWS	Barium	54.9		N/A	0.00	no	N/A
SW-026-MWS	Barium, Dissolve	52.2		N/A	0.00	no	N/A
SW-026-MWS	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW-026-MWS	Benzene	1	U	69	0.00	no	C
SW-026-MWS	Benzo[a]anthracene	0.043	J	NVT	0.00	no	C
SW-026-MWS	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW-026-MWS	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-026-MWS	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-026-MWS	Beryllium	1	U	N/A	0.00	no	N/A
SW-026-MWS	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW-026-MWS	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW-026-MWS	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW-026-MWS	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW-026-MWS	bis(2-Ethylhexyl)phthalate	0.21	J	N/A	0.00	no	N/A
SW-026-MWS	Bromodichloromethane	1	U	38	0.00	no	C
SW-026-MWS	Bromoform	1	U	5100	0.00	no	C
SW-026-MWS	Bromomethane	1	U	73	0.00	no	NC
SW-026-MWS	Cadmium	3	U	N/A	0.00	no	N/A
SW-026-MWS	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A
SW-026-MWS	Caprolactam	2.6	UJ	N/A	0.00	no	N/A
SW-026-MWS	Carbon disulfide	1	U	5200	0.00	no	NC
SW-026-MWS	Carbon tetrachloride	1	U	18	0.00	no	C
SW-026-MWS	Chlorobenzene	1	U	1700	0.00	no	NC
SW-026-MWS	Chloroethane	1	U	97000	0.00	no	NC
SW-026-MWS	Chloroform	1	U	36	0.00	no	C
SW-026-MWS	Chloromethane	1	U	1100	0.00	no	NC
SW-026-MWS	Chromium	1.1	J	N/A	0.00	no	N/A
SW-026-MWS	Chromium VI	10	U	N/A	0.00	no	N/A
SW-026-MWS	Chromium, Dissolve	1	B	N/A	0.00	no	N/A
SW-026-MWS	Chrysene	0.021	J	N/A	0.00	no	N/A
SW-026-MWS	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-026-MWS	Cobalt	5	U	N/A	0.00	no	N/A
SW-026-MWS	Cobalt, Dissolve	5	U	N/A	0.00	no	N/A
SW-026-MWS	Copper	5	U	N/A	0.00	no	N/A
SW-026-MWS	Copper, Dissolve	5	U	N/A	0.00	no	N/A
SW-026-MWS	Cyanide	10	U	3.5	0.00	no	NC
SW-026-MWS	Cyclohexane	10	U	4300	0.00	no	NC
SW-026-MWS	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW-026-MWS	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW-026-MWS	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW-026-MWS	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW-026-MWS	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW-026-MWS	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW-026-MWS	Ethylbenzene	1	U	150	0.00	no	C
SW-026-MWS	Fluoranthene	0.051	J	N/A	0.00	no	N/A
SW-026-MWS	Fluorene	0.2		N/A	0.00	no	N/A
SW-026-MWS	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW-026-MWS	Hexachlorobutadiene	1	U	13	0.00	no	C
SW-026-MWS	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW-026-MWS	Hexachloroethane	1	U	70	0.00	no	C
SW-026-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW-026-MWS	Iron	65.4	B	N/A	0.00	no	N/A
SW-026-MWS	Iron, Dissolve	21.3	J	N/A	0.00	no	N/A
SW-026-MWS	Isophorone	1	U	N/A	0.00	no	N/A
SW-026-MWS	Isopropylbenzene	1	U	3700	0.00	no	NC
SW-026-MWS	Lead	5	U	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-026-MWS	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW-026-MWS	Manganese	11.2		N/A	0.00	no	N/A
SW-026-MWS	Manganese, Dissolve	1.4	B	N/A	0.00	no	N/A
SW-026-MWS	Mercury	0.2	U	3.7	0.00	no	NC
SW-026-MWS	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW-026-MWS	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW-026-MWS	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW-026-MWS	Methylene Chloride	1	U	20000	0.00	no	NC
SW-026-MWS	Naphthalene	0.36		200	0.00	no	C
SW-026-MWS	Nickel	10	U	N/A	0.00	no	N/A
SW-026-MWS	Nickel, Dissolve	0.78	B	N/A	0.00	no	N/A
SW-026-MWS	Nitrobenzene	1	U	3100	0.00	no	C
SW-026-MWS	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW-026-MWS	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW-026-MWS	Pentachlorophenol	2.6	U	N/A	0.00	no	N/A
SW-026-MWS	Phenol	1	U	N/A	0.00	no	N/A
SW-026-MWS	Pyrene	0.09	J	N/A	0.00	no	N/A
SW-026-MWS	Selenium	4	B	N/A	0.00	no	N/A
SW-026-MWS	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW-026-MWS	Silver	6	U	N/A	0.00	no	N/A
SW-026-MWS	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW-026-MWS	Styrene	1	U	39000	0.00	no	NC
SW-026-MWS	Tetrachloroethene	1	UJ	240	0.00	no	NC
SW-026-MWS	Thallium	10	U	N/A	0.00	no	N/A
SW-026-MWS	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW-026-MWS	Toluene	1	U	81000	0.00	no	NC
SW-026-MWS	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-026-MWS	Trichloroethene	1	U	22	0.00	no	NC
SW-026-MWS	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW-026-MWS	Vanadium	5	U	N/A	0.00	no	N/A
SW-026-MWS	Vanadium, Dissolve	5	U	N/A	0.00	no	N/A
SW-026-MWS	Vinyl chloride	1	U	25	0.00	no	C
SW-026-MWS	Xylenes	3	U	1600	0.00	no	NC
SW-026-MWS	Zinc	1.5	J	N/A	0.00	no	N/A
SW-026-MWS	Zinc, Dissolve	10	U	N/A	0.00	no	N/A
SW-027-MWS	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW-027-MWS	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW-027-MWS	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW-027-MWS	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW-027-MWS	1,1-Biphenyl	1	U	140	0.00	no	NC
SW-027-MWS	1,1-Dichloroethane	1	U	330	0.00	no	C
SW-027-MWS	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW-027-MWS	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW-027-MWS	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW-027-MWS	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW-027-MWS	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW-027-MWS	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW-027-MWS	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW-027-MWS	1,2-Dichloroethane	1	U	98	0.00	no	C
SW-027-MWS	1,2-Dichloropropane	1	U	110	0.00	no	C
SW-027-MWS	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW-027-MWS	1,4-Dioxane	0.1	U	130000	0.00	no	C
SW-027-MWS	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW-027-MWS	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
SW-027-MWS	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW-027-MWS	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW-027-MWS	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW-027-MWS	2,4-Dinitrophenol	2.5	U	N/A	0.00	no	N/A
SW-027-MWS	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-027-MWS	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-027-MWS	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW-027-MWS	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW-027-MWS	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW-027-MWS	2-Hexanone	10	U	34000	0.00	no	NC

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-027-MWS	2-Methylnaphthalene	0.1	U	N/A	0.00	no	N/A
SW-027-MWS	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW-027-MWS	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-027-MWS	3,3'-Dichlorobenzidine	1	U	N/A	0.00	no	N/A
SW-027-MWS	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW-027-MWS	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW-027-MWS	4-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-027-MWS	Acenaphthene	0.1	U	N/A	0.00	no	N/A
SW-027-MWS	Acetone	10	R	95000000	0.00	no	NC
SW-027-MWS	Acetophenone	1	U	N/A	0.00	no	N/A
SW-027-MWS	Aluminum	32.8	J	N/A	0.00	no	N/A
SW-027-MWS	Aluminum, Dissolve	50	U	N/A	0.00	no	N/A
SW-027-MWS	Anthracene	0.041	J	N/A	0.00	no	N/A
SW-027-MWS	Antimony	3.8	J	N/A	0.00	no	N/A
SW-027-MWS	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW-027-MWS	Arsenic	4.2	J	N/A	0.00	no	N/A
SW-027-MWS	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SW-027-MWS	Barium	32.4		N/A	0.00	no	N/A
SW-027-MWS	Barium, Dissolve	34.2		N/A	0.00	no	N/A
SW-027-MWS	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW-027-MWS	Benzene	1	U	69	0.00	no	C
SW-027-MWS	Benzo[a]anthracene	0.015	J	NVT	0.00	no	C
SW-027-MWS	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW-027-MWS	Benzo[b]fluoranthene	0.022	B	N/A	0.00	no	N/A
SW-027-MWS	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-027-MWS	Beryllium	1	U	N/A	0.00	no	N/A
SW-027-MWS	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW-027-MWS	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW-027-MWS	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW-027-MWS	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW-027-MWS	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A
SW-027-MWS	Bromodichloromethane	1	U	38	0.00	no	C
SW-027-MWS	Bromoform	1	U	5100	0.00	no	C
SW-027-MWS	Bromomethane	1	U	73	0.00	no	NC
SW-027-MWS	Cadmium	3	U	N/A	0.00	no	N/A
SW-027-MWS	Cadmium, Dissolve	0.51	J	N/A	0.00	no	N/A
SW-027-MWS	Caprolactam	2.5	U	N/A	0.00	no	N/A
SW-027-MWS	Carbon disulfide	1	U	5200	0.00	no	NC
SW-027-MWS	Carbon tetrachloride	1	U	18	0.00	no	C
SW-027-MWS	Chlorobenzene	1	U	1700	0.00	no	NC
SW-027-MWS	Chloroethane	1	U	97000	0.00	no	NC
SW-027-MWS	Chloroform	1	U	36	0.00	no	C
SW-027-MWS	Chloromethane	1	U	1100	0.00	no	NC
SW-027-MWS	Chromium	9.9		N/A	0.00	no	N/A
SW-027-MWS	Chromium VI	10	U	N/A	0.00	no	N/A
SW-027-MWS	Chromium, Dissolve	10.2		N/A	0.00	no	N/A
SW-027-MWS	Chrysene	0.1	U	N/A	0.00	no	N/A
SW-027-MWS	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-027-MWS	Cobalt	5	U	N/A	0.00	no	N/A
SW-027-MWS	Cobalt, Dissolve	5	U	N/A	0.00	no	N/A
SW-027-MWS	Copper	5	U	N/A	0.00	no	N/A
SW-027-MWS	Copper, Dissolve	3.1	B	N/A	0.00	no	N/A
SW-027-MWS	Cyanide	10	U	3.5	0.00	no	NC
SW-027-MWS	Cyclohexane	10	U	4300	0.00	no	NC
SW-027-MWS	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW-027-MWS	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW-027-MWS	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW-027-MWS	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW-027-MWS	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW-027-MWS	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW-027-MWS	Ethylbenzene	1	U	150	0.00	no	C
SW-027-MWS	Fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-027-MWS	Fluorene	0.1	U	N/A	0.00	no	N/A
SW-027-MWS	Hexachlorobenzene	1	U	3.8	0.00	no	C

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-027-MWS	Hexachlorobutadiene	1	U	13	0.00	no	C
SW-027-MWS	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW-027-MWS	Hexachloroethane	1	U	70	0.00	no	C
SW-027-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW-027-MWS	Iron	26.6	J	N/A	0.00	no	N/A
SW-027-MWS	Iron, Dissolve	12.2	B	N/A	0.00	no	N/A
SW-027-MWS	Isophorone	1	U	N/A	0.00	no	N/A
SW-027-MWS	Isopropylbenzene	1	U	3700	0.00	no	NC
SW-027-MWS	Lead	5	U	N/A	0.00	no	N/A
SW-027-MWS	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW-027-MWS	Manganese	1.8	B	N/A	0.00	no	N/A
SW-027-MWS	Manganese, Dissolve	2.2	J	N/A	0.00	no	N/A
SW-027-MWS	Mercury	0.2	U	3.7	0.00	no	NC
SW-027-MWS	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW-027-MWS	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW-027-MWS	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW-027-MWS	Methylene Chloride	1	U	20000	0.00	no	NC
SW-027-MWS	Naphthalene	0.024	B	200	0.00	no	C
SW-027-MWS	Nickel	10	U	N/A	0.00	no	N/A
SW-027-MWS	Nickel, Dissolve	1.6	B	N/A	0.00	no	N/A
SW-027-MWS	Nitrobenzene	1	U	3100	0.00	no	C
SW-027-MWS	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW-027-MWS	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW-027-MWS	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
SW-027-MWS	Phenol	1	U	N/A	0.00	no	N/A
SW-027-MWS	Pyrene	0.1	U	N/A	0.00	no	N/A
SW-027-MWS	Selenium	8	U	N/A	0.00	no	N/A
SW-027-MWS	Selenium, Dissolve	4.5	B	N/A	0.00	no	N/A
SW-027-MWS	Silver	6	U	N/A	0.00	no	N/A
SW-027-MWS	Silver, Dissolve	6	UJ	N/A	0.00	no	N/A
SW-027-MWS	Styrene	1	U	39000	0.00	no	NC
SW-027-MWS	Tetrachloroethene	1	U	240	0.00	no	NC
SW-027-MWS	Thallium	10	U	N/A	0.00	no	N/A
SW-027-MWS	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW-027-MWS	Toluene	1	U	81000	0.00	no	NC
SW-027-MWS	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-027-MWS	Trichloroethene	1	U	22	0.00	no	NC
SW-027-MWS	Trichlorofluoromethane	1	UJ	N/A	0.00	no	N/A
SW-027-MWS	Vanadium	31.8		N/A	0.00	no	N/A
SW-027-MWS	Vanadium, Dissolve	32.8		N/A	0.00	no	N/A
SW-027-MWS	Vinyl chloride	1	U	25	0.00	no	C
SW-027-MWS	Xylenes	3	U	1600	0.00	no	NC
SW-027-MWS	Zinc	7.1	B	N/A	0.00	no	N/A
SW-027-MWS	Zinc, Dissolve	7.4	J	N/A	0.00	no	N/A
SW-028-MWS	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW-028-MWS	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW-028-MWS	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW-028-MWS	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW-028-MWS	1,1-Biphenyl	1	U	140	0.00	no	NC
SW-028-MWS	1,1-Dichloroethane	1	U	330	0.00	no	C
SW-028-MWS	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW-028-MWS	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW-028-MWS	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW-028-MWS	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW-028-MWS	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW-028-MWS	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW-028-MWS	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW-028-MWS	1,2-Dichloroethane	1	U	98	0.00	no	C
SW-028-MWS	1,2-Dichloropropane	1	U	110	0.00	no	C
SW-028-MWS	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW-028-MWS	1,4-Dioxane	0.1	U	130000	0.00	no	C
SW-028-MWS	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW-028-MWS	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
SW-028-MWS	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-028-MWS	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW-028-MWS	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW-028-MWS	2,4-Dinitrophenol	2.5	U	N/A	0.00	no	N/A
SW-028-MWS	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-028-MWS	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-028-MWS	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW-028-MWS	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW-028-MWS	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW-028-MWS	2-Hexanone	10	U	34000	0.00	no	NC
SW-028-MWS	2-Methylnaphthalene	0.1	U	N/A	0.00	no	N/A
SW-028-MWS	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW-028-MWS	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-028-MWS	3,3'-Dichlorobenzidine	1	U	N/A	0.00	no	N/A
SW-028-MWS	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW-028-MWS	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW-028-MWS	4-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-028-MWS	Acenaphthene	0.51		N/A	0.00	no	N/A
SW-028-MWS	Acetone	10	R	95000000	0.00	no	NC
SW-028-MWS	Acetophenone	1	U	N/A	0.00	no	N/A
SW-028-MWS	Aluminum	180		N/A	0.00	no	N/A
SW-028-MWS	Aluminum, Dissolve	22.1	B	N/A	0.00	no	N/A
SW-028-MWS	Anthracene	0.04	J	N/A	0.00	no	N/A
SW-028-MWS	Antimony	6	U	N/A	0.00	no	N/A
SW-028-MWS	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW-028-MWS	Arsenic	4.3	J	N/A	0.00	no	N/A
SW-028-MWS	Arsenic, Dissolve	4.9	B	N/A	0.00	no	N/A
SW-028-MWS	Barium	68.6		N/A	0.00	no	N/A
SW-028-MWS	Barium, Dissolve	63.3		N/A	0.00	no	N/A
SW-028-MWS	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW-028-MWS	Benzene	1	U	69	0.00	no	C
SW-028-MWS	Benzo[a]anthracene	0.053	J	NVT	0.00	no	C
SW-028-MWS	Benzo[a]pyrene	0.033	J	N/A	0.00	no	N/A
SW-028-MWS	Benzo[b]fluoranthene	0.13		N/A	0.00	no	N/A
SW-028-MWS	Benzo[k]fluoranthene	0.092	B	N/A	0.00	no	N/A
SW-028-MWS	Beryllium	1	U	N/A	0.00	no	N/A
SW-028-MWS	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW-028-MWS	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW-028-MWS	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW-028-MWS	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW-028-MWS	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A
SW-028-MWS	Bromodichloromethane	1	U	38	0.00	no	C
SW-028-MWS	Bromoform	1	U	5100	0.00	no	C
SW-028-MWS	Bromomethane	1	U	73	0.00	no	NC
SW-028-MWS	Cadmium	3	U	N/A	0.00	no	N/A
SW-028-MWS	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A
SW-028-MWS	Caprolactam	2.5	U	N/A	0.00	no	N/A
SW-028-MWS	Carbon disulfide	1	U	5200	0.00	no	NC
SW-028-MWS	Carbon tetrachloride	1	U	18	0.00	no	C
SW-028-MWS	Chlorobenzene	1	U	1700	0.00	no	NC
SW-028-MWS	Chloroethane	1	U	97000	0.00	no	NC
SW-028-MWS	Chloroform	1	U	36	0.00	no	C
SW-028-MWS	Chloromethane	1	U	1100	0.00	no	NC
SW-028-MWS	Chromium	1.3	J	N/A	0.00	no	N/A
SW-028-MWS	Chromium VI	10	U	N/A	0.00	no	N/A
SW-028-MWS	Chromium, Dissolve	0.84	J	N/A	0.00	no	N/A
SW-028-MWS	Chrysene	0.038	B	N/A	0.00	no	N/A
SW-028-MWS	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-028-MWS	Cobalt	5	U	N/A	0.00	no	N/A
SW-028-MWS	Cobalt, Dissolve	5	U	N/A	0.00	no	N/A
SW-028-MWS	Copper	2.3	B	N/A	0.00	no	N/A
SW-028-MWS	Copper, Dissolve	2.5	B	N/A	0.00	no	N/A
SW-028-MWS	Cyanide	10	U	3.5	0.00	no	NC
SW-028-MWS	Cyclohexane	10	U	4300	0.00	no	NC
SW-028-MWS	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-028-MWS	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW-028-MWS	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW-028-MWS	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW-028-MWS	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW-028-MWS	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW-028-MWS	Ethylbenzene	1	U	150	0.00	no	C
SW-028-MWS	Fluoranthene	0.2		N/A	0.00	no	N/A
SW-028-MWS	Fluorene	0.1	U	N/A	0.00	no	N/A
SW-028-MWS	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW-028-MWS	Hexachlorobutadiene	1	U	13	0.00	no	C
SW-028-MWS	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW-028-MWS	Hexachloroethane	1	U	70	0.00	no	C
SW-028-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW-028-MWS	Iron	534		N/A	0.00	no	N/A
SW-028-MWS	Iron, Dissolve	392		N/A	0.00	no	N/A
SW-028-MWS	Isophorone	1	U	N/A	0.00	no	N/A
SW-028-MWS	Isopropylbenzene	1	U	3700	0.00	no	NC
SW-028-MWS	Lead	5	U	N/A	0.00	no	N/A
SW-028-MWS	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW-028-MWS	Manganese	477		N/A	0.00	no	N/A
SW-028-MWS	Manganese, Dissolve	475		N/A	0.00	no	N/A
SW-028-MWS	Mercury	0.2	U	3.7	0.00	no	NC
SW-028-MWS	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW-028-MWS	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW-028-MWS	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW-028-MWS	Methylene Chloride	1	U	20000	0.00	no	NC
SW-028-MWS	Naphthalene	0.082	B	200	0.00	no	C
SW-028-MWS	Nickel	1.2	B	N/A	0.00	no	N/A
SW-028-MWS	Nickel, Dissolve	1.2	B	N/A	0.00	no	N/A
SW-028-MWS	Nitrobenzene	1	U	3100	0.00	no	C
SW-028-MWS	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW-028-MWS	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW-028-MWS	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
SW-028-MWS	Phenol	1	U	N/A	0.00	no	N/A
SW-028-MWS	Pyrene	0.32		N/A	0.00	no	N/A
SW-028-MWS	Selenium	8	U	N/A	0.00	no	N/A
SW-028-MWS	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW-028-MWS	Silver	6	U	N/A	0.00	no	N/A
SW-028-MWS	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW-028-MWS	Styrene	1	U	39000	0.00	no	NC
SW-028-MWS	Tetrachloroethene	1	U	240	0.00	no	NC
SW-028-MWS	Thallium	3.5	B	N/A	0.00	no	N/A
SW-028-MWS	Thallium, Dissolve	4.8	J	N/A	0.00	no	N/A
SW-028-MWS	Toluene	1	U	81000	0.00	no	NC
SW-028-MWS	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-028-MWS	Trichloroethene	1	U	22	0.00	no	NC
SW-028-MWS	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW-028-MWS	Vanadium	1.2	B	N/A	0.00	no	N/A
SW-028-MWS	Vanadium, Dissolve	0.87	B	N/A	0.00	no	N/A
SW-028-MWS	Vinyl chloride	1	U	25	0.00	no	C
SW-028-MWS	Xylenes	3	U	1600	0.00	no	NC
SW-028-MWS	Zinc	2.2	J	N/A	0.00	no	N/A
SW-028-MWS	Zinc, Dissolve	10	U	N/A	0.00	no	N/A
SW-029-MWS	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW-029-MWS	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW-029-MWS	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW-029-MWS	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW-029-MWS	1,1-Biphenyl	1	U	140	0.00	no	NC
SW-029-MWS	1,1-Dichloroethane	0.73	J	330	0.00	no	C
SW-029-MWS	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW-029-MWS	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW-029-MWS	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW-029-MWS	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW-029-MWS	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-029-MWS	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW-029-MWS	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW-029-MWS	1,2-Dichloroethane	1	U	98	0.00	no	C
SW-029-MWS	1,2-Dichloropropane	1	U	110	0.00	no	C
SW-029-MWS	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW-029-MWS	1,4-Dioxane	0.045	J	130000	0.00	no	C
SW-029-MWS	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW-029-MWS	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
SW-029-MWS	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW-029-MWS	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW-029-MWS	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW-029-MWS	2,4-Dinitrophenol	2.5	U	N/A	0.00	no	N/A
SW-029-MWS	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-029-MWS	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-029-MWS	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW-029-MWS	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW-029-MWS	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW-029-MWS	2-Hexanone	10	U	34000	0.00	no	NC
SW-029-MWS	2-Methylnaphthalene	0.35		N/A	0.00	no	N/A
SW-029-MWS	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW-029-MWS	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-029-MWS	3,3'-Dichlorobenzidine	1	U	N/A	0.00	no	N/A
SW-029-MWS	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW-029-MWS	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW-029-MWS	4-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-029-MWS	Acenaphthene	0.19		N/A	0.00	no	N/A
SW-029-MWS	Acetone	10	R	95000000	0.00	no	NC
SW-029-MWS	Acetophenone	0.45	J	N/A	0.00	no	N/A
SW-029-MWS	Aluminum	56.1		N/A	0.00	no	N/A
SW-029-MWS	Aluminum, Dissolve	42.4	J	N/A	0.00	no	N/A
SW-029-MWS	Anthracene	0.083	J	N/A	0.00	no	N/A
SW-029-MWS	Antimony	6	U	N/A	0.00	no	N/A
SW-029-MWS	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW-029-MWS	Arsenic	5	U	N/A	0.00	no	N/A
SW-029-MWS	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SW-029-MWS	Barium	84.3		N/A	0.00	no	N/A
SW-029-MWS	Barium, Dissolve	85.8		N/A	0.00	no	N/A
SW-029-MWS	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW-029-MWS	Benzene	3.6		69	0.05	no	C
SW-029-MWS	Benzo[a]anthracene	0.066	J	NVT	0.00	no	C
SW-029-MWS	Benzo[a]pyrene	1.2	J	N/A	0.00	no	N/A
SW-029-MWS	Benzo[b]fluoranthene	2.7	B	N/A	0.00	no	N/A
SW-029-MWS	Benzo[k]fluoranthene	1.3	B	N/A	0.00	no	N/A
SW-029-MWS	Beryllium	1	U	N/A	0.00	no	N/A
SW-029-MWS	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW-029-MWS	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW-029-MWS	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW-029-MWS	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW-029-MWS	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A
SW-029-MWS	Bromodichloromethane	1	U	38	0.00	no	C
SW-029-MWS	Bromoform	1	U	5100	0.00	no	C
SW-029-MWS	Bromomethane	1	U	73	0.00	no	NC
SW-029-MWS	Cadmium	0.73	J	N/A	0.00	no	N/A
SW-029-MWS	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A
SW-029-MWS	Caprolactam	2.5	U	N/A	0.00	no	N/A
SW-029-MWS	Carbon disulfide	1	U	5200	0.00	no	NC
SW-029-MWS	Carbon tetrachloride	1	U	18	0.00	no	C
SW-029-MWS	Chlorobenzene	1	U	1700	0.00	no	NC
SW-029-MWS	Chloroethane	1	U	97000	0.00	no	NC
SW-029-MWS	Chloroform	1	U	36	0.00	no	C
SW-029-MWS	Chloromethane	1	U	1100	0.00	no	NC
SW-029-MWS	Chromium	0.87	B	N/A	0.00	no	N/A
SW-029-MWS	Chromium VI	10	U	N/A	0.00	no	N/A
SW-029-MWS	Chromium, Dissolve	5	U	N/A	0.00	no	N/A

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-029-MWS	Chrysene	0.048	B	N/A	0.00	no	N/A
SW-029-MWS	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-029-MWS	Cobalt	2.9	J	N/A	0.00	no	N/A
SW-029-MWS	Cobalt, Dissolve	1.9	B	N/A	0.00	no	N/A
SW-029-MWS	Copper	5	U	N/A	0.00	no	N/A
SW-029-MWS	Copper, Dissolve	5	U	N/A	0.00	no	N/A
SW-029-MWS	Cyanide	1420		3.5	405.71	YES	NC
SW-029-MWS	Cyclohexane	10	U	4300	0.00	no	NC
SW-029-MWS	Dibenz[a,h]anthracene	5.1	U	N/A	0.00	no	N/A
SW-029-MWS	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW-029-MWS	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW-029-MWS	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW-029-MWS	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW-029-MWS	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW-029-MWS	Ethylbenzene	1	U	150	0.00	no	C
SW-029-MWS	Fluoranthene	0.091	J	N/A	0.00	no	N/A
SW-029-MWS	Fluorene	0.079	J	N/A	0.00	no	N/A
SW-029-MWS	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW-029-MWS	Hexachlorobutadiene	1	U	13	0.00	no	C
SW-029-MWS	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW-029-MWS	Hexachloroethane	1	U	70	0.00	no	C
SW-029-MWS	Indeno[1,2,3-c,d]pyrene	5.1	U	N/A	0.00	no	N/A
SW-029-MWS	Iron	678		N/A	0.00	no	N/A
SW-029-MWS	Iron, Dissolve	595		N/A	0.00	no	N/A
SW-029-MWS	Isophorone	1	U	N/A	0.00	no	N/A
SW-029-MWS	Isopropylbenzene	1	U	3700	0.00	no	NC
SW-029-MWS	Lead	5	U	N/A	0.00	no	N/A
SW-029-MWS	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW-029-MWS	Manganese	167		N/A	0.00	no	N/A
SW-029-MWS	Manganese, Dissolve	183		N/A	0.00	no	N/A
SW-029-MWS	Mercury	0.2	U	3.7	0.00	no	NC
SW-029-MWS	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW-029-MWS	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW-029-MWS	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW-029-MWS	Methylene Chloride	1	U	20000	0.00	no	NC
SW-029-MWS	Naphthalene	162		200	0.81	no	C
SW-029-MWS	Nickel	10	U	N/A	0.00	no	N/A
SW-029-MWS	Nickel, Dissolve	10	U	N/A	0.00	no	N/A
SW-029-MWS	Nitrobenzene	1	U	3100	0.00	no	C
SW-029-MWS	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW-029-MWS	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW-029-MWS	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
SW-029-MWS	Phenol	0.32	J	N/A	0.00	no	N/A
SW-029-MWS	Pyrene	0.078	J	N/A	0.00	no	N/A
SW-029-MWS	Selenium	6.8	B	N/A	0.00	no	N/A
SW-029-MWS	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW-029-MWS	Silver	6	U	N/A	0.00	no	N/A
SW-029-MWS	Silver, Dissolve	6	UJ	N/A	0.00	no	N/A
SW-029-MWS	Styrene	1	U	39000	0.00	no	NC
SW-029-MWS	Tetrachloroethene	1	U	240	0.00	no	NC
SW-029-MWS	Thallium	10	U	N/A	0.00	no	N/A
SW-029-MWS	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW-029-MWS	Toluene	0.49	J	81000	0.00	no	NC
SW-029-MWS	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-029-MWS	Trichloroethene	1	U	22	0.00	no	NC
SW-029-MWS	Trichlorofluoromethane	1	UJ	N/A	0.00	no	N/A
SW-029-MWS	Vanadium	5	B	N/A	0.00	no	N/A
SW-029-MWS	Vanadium, Dissolve	4.6	J	N/A	0.00	no	N/A
SW-029-MWS	Vinyl chloride	1	U	25	0.00	no	C
SW-029-MWS	Xylenes	3	U	1600	0.00	no	NC
SW-029-MWS	Zinc	2.4	B	N/A	0.00	no	N/A
SW-029-MWS	Zinc, Dissolve	43.6		N/A	0.00	no	N/A
SW-030-MWS	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW-030-MWS	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-030-MWS	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW-030-MWS	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW-030-MWS	1,1-Biphenyl	1	U	140	0.00	no	NC
SW-030-MWS	1,1-Dichloroethane	1	U	330	0.00	no	C
SW-030-MWS	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW-030-MWS	1,2,3-Trichlorobenzene	2	UJ	N/A	0.00	no	N/A
SW-030-MWS	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW-030-MWS	1,2,4-Trichlorobenzene	1	UJ	150	0.00	no	NC
SW-030-MWS	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW-030-MWS	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW-030-MWS	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW-030-MWS	1,2-Dichloroethane	1	U	98	0.00	no	C
SW-030-MWS	1,2-Dichloropropane	1	U	110	0.00	no	C
SW-030-MWS	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW-030-MWS	1,4-Dioxane	0.1		130000	0.00	no	C
SW-030-MWS	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW-030-MWS	2,4,5-Trichlorophenol	2.6	U	N/A	0.00	no	N/A
SW-030-MWS	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW-030-MWS	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW-030-MWS	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW-030-MWS	2,4-Dinitrophenol	2.6	U	N/A	0.00	no	N/A
SW-030-MWS	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-030-MWS	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-030-MWS	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW-030-MWS	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW-030-MWS	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW-030-MWS	2-Hexanone	10	U	34000	0.00	no	NC
SW-030-MWS	2-Methylnaphthalene	0.1	U	N/A	0.00	no	N/A
SW-030-MWS	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW-030-MWS	2-Nitroaniline	2.6	U	N/A	0.00	no	N/A
SW-030-MWS	3,3'-Dichlorobenzidine	1	U	N/A	0.00	no	N/A
SW-030-MWS	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW-030-MWS	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW-030-MWS	4-Nitroaniline	2.6	U	N/A	0.00	no	N/A
SW-030-MWS	Acenaphthene	0.1	U	N/A	0.00	no	N/A
SW-030-MWS	Acetone	10	U	95000000	0.00	no	NC
SW-030-MWS	Acetophenone	1	U	N/A	0.00	no	N/A
SW-030-MWS	Aluminum	766		N/A	0.00	no	N/A
SW-030-MWS	Aluminum, Dissolve	698		N/A	0.00	no	N/A
SW-030-MWS	Anthracene	0.026	J	N/A	0.00	no	N/A
SW-030-MWS	Antimony	6	U	N/A	0.00	no	N/A
SW-030-MWS	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW-030-MWS	Arsenic	3.9	J	N/A	0.00	no	N/A
SW-030-MWS	Arsenic, Dissolve	4.5	B	N/A	0.00	no	N/A
SW-030-MWS	Barium	22.6		N/A	0.00	no	N/A
SW-030-MWS	Barium, Dissolve	21.6		N/A	0.00	no	N/A
SW-030-MWS	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW-030-MWS	Benzene	1	U	69	0.00	no	C
SW-030-MWS	Benzo[a]anthracene	0.1	U	NVT	0.00	no	C
SW-030-MWS	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW-030-MWS	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-030-MWS	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-030-MWS	Beryllium	1	U	N/A	0.00	no	N/A
SW-030-MWS	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW-030-MWS	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW-030-MWS	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW-030-MWS	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW-030-MWS	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A
SW-030-MWS	Bromodichloromethane	1	U	38	0.00	no	C
SW-030-MWS	Bromoform	1	U	5100	0.00	no	C
SW-030-MWS	Bromomethane	1	U	73	0.00	no	NC
SW-030-MWS	Cadmium	3	U	N/A	0.00	no	N/A
SW-030-MWS	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A
SW-030-MWS	Caprolactam	2.6	U	N/A	0.00	no	N/A

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-030-MWS	Carbon disulfide	1	U	5200	0.00	no	NC
SW-030-MWS	Carbon tetrachloride	1	U	18	0.00	no	C
SW-030-MWS	Chlorobenzene	1	U	1700	0.00	no	NC
SW-030-MWS	Chloroethane	1	U	97000	0.00	no	NC
SW-030-MWS	Chloroform	1	U	36	0.00	no	C
SW-030-MWS	Chloromethane	1	UJ	1100	0.00	no	NC
SW-030-MWS	Chromium	5	U	N/A	0.00	no	N/A
SW-030-MWS	Chromium VI	10	U	N/A	0.00	no	N/A
SW-030-MWS	Chromium, Dissolve	5	U	N/A	0.00	no	N/A
SW-030-MWS	Chrysene	0.1	U	N/A	0.00	no	N/A
SW-030-MWS	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-030-MWS	Cobalt	5	U	N/A	0.00	no	N/A
SW-030-MWS	Cobalt, Dissolve	5	U	N/A	0.00	no	N/A
SW-030-MWS	Copper	1.9	B	N/A	0.00	no	N/A
SW-030-MWS	Copper, Dissolve	5	U	N/A	0.00	no	N/A
SW-030-MWS	Cyanide	64.6		3.5	18.46	YES	NC
SW-030-MWS	Cyclohexane	10	U	4300	0.00	no	NC
SW-030-MWS	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW-030-MWS	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW-030-MWS	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW-030-MWS	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW-030-MWS	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW-030-MWS	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW-030-MWS	Ethylbenzene	1	U	150	0.00	no	C
SW-030-MWS	Fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-030-MWS	Fluorene	0.1	U	N/A	0.00	no	N/A
SW-030-MWS	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW-030-MWS	Hexachlorobutadiene	1	U	13	0.00	no	C
SW-030-MWS	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW-030-MWS	Hexachloroethane	1	U	70	0.00	no	C
SW-030-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW-030-MWS	Iron	131		N/A	0.00	no	N/A
SW-030-MWS	Iron, Dissolve	29.9	J	N/A	0.00	no	N/A
SW-030-MWS	Isophorone	1	U	N/A	0.00	no	N/A
SW-030-MWS	Isopropylbenzene	1	U	3700	0.00	no	NC
SW-030-MWS	Lead	5	U	N/A	0.00	no	N/A
SW-030-MWS	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW-030-MWS	Manganese	4.7	B	N/A	0.00	no	N/A
SW-030-MWS	Manganese, Dissolve	0.92	J	N/A	0.00	no	N/A
SW-030-MWS	Mercury	0.2	UJ	3.7	0.00	no	NC
SW-030-MWS	Mercury, Dissolve	0.2	UJ	3.7	0.00	no	NC
SW-030-MWS	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW-030-MWS	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW-030-MWS	Methylene Chloride	1	U	20000	0.00	no	NC
SW-030-MWS	Naphthalene	0.027	B	200	0.00	no	C
SW-030-MWS	Nickel	1.6	B	N/A	0.00	no	N/A
SW-030-MWS	Nickel, Dissolve	3.6	B	N/A	0.00	no	N/A
SW-030-MWS	Nitrobenzene	1	U	3100	0.00	no	C
SW-030-MWS	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW-030-MWS	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW-030-MWS	Pentachlorophenol	2.6	U	N/A	0.00	no	N/A
SW-030-MWS	Phenol	1	U	N/A	0.00	no	N/A
SW-030-MWS	Pyrene	0.1	U	N/A	0.00	no	N/A
SW-030-MWS	Selenium	8	U	N/A	0.00	no	N/A
SW-030-MWS	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW-030-MWS	Silver	6	U	N/A	0.00	no	N/A
SW-030-MWS	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW-030-MWS	Styrene	1	U	39000	0.00	no	NC
SW-030-MWS	Tetrachloroethene	1	U	240	0.00	no	NC
SW-030-MWS	Thallium	10	U	N/A	0.00	no	N/A
SW-030-MWS	Thallium, Dissolve	4.8	J	N/A	0.00	no	N/A
SW-030-MWS	Toluene	1	U	81000	0.00	no	NC
SW-030-MWS	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-030-MWS	Trichloroethene	1	U	22	0.00	no	NC

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-030-MWS	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW-030-MWS	Vanadium	38.2		N/A	0.00	no	N/A
SW-030-MWS	Vanadium, Dissolve	39.6		N/A	0.00	no	N/A
SW-030-MWS	Vinyl chloride	1	U	25	0.00	no	C
SW-030-MWS	Xylenes	3	U	1600	0.00	no	NC
SW-030-MWS	Zinc	6.9	B	N/A	0.00	no	N/A
SW-030-MWS	Zinc, Dissolve	2.2	B	N/A	0.00	no	N/A
SW-031-MWS	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW-031-MWS	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW-031-MWS	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW-031-MWS	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW-031-MWS	1,1-Biphenyl	1.1	U	140	0.00	no	NC
SW-031-MWS	1,1-Dichloroethane	1	U	330	0.00	no	C
SW-031-MWS	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW-031-MWS	1,2,3-Trichlorobenzene	2	UJ	N/A	0.00	no	N/A
SW-031-MWS	1,2,4,5-Tetrachlorobenzene	1.1	U	N/A	0.00	no	N/A
SW-031-MWS	1,2,4-Trichlorobenzene	1	UJ	150	0.00	no	NC
SW-031-MWS	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW-031-MWS	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW-031-MWS	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW-031-MWS	1,2-Dichloroethane	1	U	98	0.00	no	C
SW-031-MWS	1,2-Dichloropropane	1	U	110	0.00	no	C
SW-031-MWS	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW-031-MWS	1,4-Dioxane	0.11		130000	0.00	no	C
SW-031-MWS	2,3,4,6-Tetrachlorophenol	1.1	U	N/A	0.00	no	N/A
SW-031-MWS	2,4,5-Trichlorophenol	2.6	U	N/A	0.00	no	N/A
SW-031-MWS	2,4,6-Trichlorophenol	1.1	U	N/A	0.00	no	N/A
SW-031-MWS	2,4-Dichlorophenol	1.1	U	N/A	0.00	no	N/A
SW-031-MWS	2,4-Dimethylphenol	1.1	U	N/A	0.00	no	N/A
SW-031-MWS	2,4-Dinitrophenol	2.6	U	N/A	0.00	no	N/A
SW-031-MWS	2,4-Dinitrotoluene	1.1	U	N/A	0.00	no	N/A
SW-031-MWS	2,6-Dinitrotoluene	1.1	U	N/A	0.00	no	N/A
SW-031-MWS	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW-031-MWS	2-Chloronaphthalene	1.1	U	N/A	0.00	no	N/A
SW-031-MWS	2-Chlorophenol	1.1	U	N/A	0.00	no	N/A
SW-031-MWS	2-Hexanone	10	U	34000	0.00	no	NC
SW-031-MWS	2-Methylnaphthalene	0.022	J	N/A	0.00	no	N/A
SW-031-MWS	2-Methylphenol	1.1	U	N/A	0.00	no	N/A
SW-031-MWS	2-Nitroaniline	2.6	U	N/A	0.00	no	N/A
SW-031-MWS	3,3'-Dichlorobenzidine	1.1	U	N/A	0.00	no	N/A
SW-031-MWS	4-Chloroaniline	1.1	U	N/A	0.00	no	N/A
SW-031-MWS	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW-031-MWS	4-Nitroaniline	2.6	U	N/A	0.00	no	N/A
SW-031-MWS	Acenaphthene	0.02	J	N/A	0.00	no	N/A
SW-031-MWS	Acetone	10	U	95000000	0.00	no	NC
SW-031-MWS	Acetophenone	1.1	U	N/A	0.00	no	N/A
SW-031-MWS	Aluminum	320		N/A	0.00	no	N/A
SW-031-MWS	Aluminum, Dissolve	83.5		N/A	0.00	no	N/A
SW-031-MWS	Anthracene	0.058	J	N/A	0.00	no	N/A
SW-031-MWS	Antimony	6	U	N/A	0.00	no	N/A
SW-031-MWS	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW-031-MWS	Arsenic	3.8	J	N/A	0.00	no	N/A
SW-031-MWS	Arsenic, Dissolve	3.1	B	N/A	0.00	no	N/A
SW-031-MWS	Barium	30.1		N/A	0.00	no	N/A
SW-031-MWS	Barium, Dissolve	29.4		N/A	0.00	no	N/A
SW-031-MWS	Benzaldehyde	1.1	U	N/A	0.00	no	N/A
SW-031-MWS	Benzene	1	U	69	0.00	no	C
SW-031-MWS	Benzo[a]anthracene	0.017	J	NVT	0.00	no	C
SW-031-MWS	Benzo[a]pyrene	0.11	U	N/A	0.00	no	N/A
SW-031-MWS	Benzo[b]fluoranthene	0.11	U	N/A	0.00	no	N/A
SW-031-MWS	Benzo[k]fluoranthene	0.11	U	N/A	0.00	no	N/A
SW-031-MWS	Beryllium	1	U	N/A	0.00	no	N/A
SW-031-MWS	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW-031-MWS	bis(2-chloroethoxy)methane	1.1	U	N/A	0.00	no	N/A

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-031-MWS	bis(2-Chloroethyl)ether	1.1	U	530	0.00	no	C
SW-031-MWS	bis(2-Chloroisopropyl)ether	1.1	U	N/A	0.00	no	N/A
SW-031-MWS	bis(2-Ethylhexyl)phthalate	1.1	U	N/A	0.00	no	N/A
SW-031-MWS	Bromodichloromethane	1	U	38	0.00	no	C
SW-031-MWS	Bromoform	1	U	5100	0.00	no	C
SW-031-MWS	Bromomethane	1	U	73	0.00	no	NC
SW-031-MWS	Cadmium	3	U	N/A	0.00	no	N/A
SW-031-MWS	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A
SW-031-MWS	Caprolactam	2.6	U	N/A	0.00	no	N/A
SW-031-MWS	Carbon disulfide	1	U	5200	0.00	no	NC
SW-031-MWS	Carbon tetrachloride	1	U	18	0.00	no	C
SW-031-MWS	Chlorobenzene	1	U	1700	0.00	no	NC
SW-031-MWS	Chloroethane	1	U	97000	0.00	no	NC
SW-031-MWS	Chloroform	1	U	36	0.00	no	C
SW-031-MWS	Chloromethane	1	UJ	1100	0.00	no	NC
SW-031-MWS	Chromium	1.4	J	N/A	0.00	no	N/A
SW-031-MWS	Chromium VI	10	U	N/A	0.00	no	N/A
SW-031-MWS	Chromium, Dissolve	5	U	N/A	0.00	no	N/A
SW-031-MWS	Chrysene	0.0091	J	N/A	0.00	no	N/A
SW-031-MWS	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-031-MWS	Cobalt	5	U	N/A	0.00	no	N/A
SW-031-MWS	Cobalt, Dissolve	5	U	N/A	0.00	no	N/A
SW-031-MWS	Copper	5	U	N/A	0.00	no	N/A
SW-031-MWS	Copper, Dissolve	5	U	N/A	0.00	no	N/A
SW-031-MWS	Cyanide	6.1	J	3.5	1.74	YES	NC
SW-031-MWS	Cyclohexane	10	U	4300	0.00	no	NC
SW-031-MWS	Dibenz[a,h]anthracene	0.11	U	N/A	0.00	no	N/A
SW-031-MWS	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW-031-MWS	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW-031-MWS	Diethylphthalate	1.1	U	N/A	0.00	no	N/A
SW-031-MWS	Di-n-butylphthalate	1.1	U	N/A	0.00	no	N/A
SW-031-MWS	Di-n-ocytlphthalate	1.1	U	N/A	0.00	no	N/A
SW-031-MWS	Ethylbenzene	1	U	150	0.00	no	C
SW-031-MWS	Fluoranthene	0.038	J	N/A	0.00	no	N/A
SW-031-MWS	Fluorene	0.026	J	N/A	0.00	no	N/A
SW-031-MWS	Hexachlorobenzene	1.1	U	3.8	0.00	no	C
SW-031-MWS	Hexachlorobutadiene	1.1	U	13	0.00	no	C
SW-031-MWS	Hexachlorocyclopentadiene	1.1	U	0.79	0.00	no	NC
SW-031-MWS	Hexachloroethane	1.1	U	70	0.00	no	C
SW-031-MWS	Indeno[1,2,3-c,d]pyrene	0.11	U	N/A	0.00	no	N/A
SW-031-MWS	Iron	346		N/A	0.00	no	N/A
SW-031-MWS	Iron, Dissolve	70	U	N/A	0.00	no	N/A
SW-031-MWS	Isophorone	1.1	U	N/A	0.00	no	N/A
SW-031-MWS	Isopropylbenzene	1	U	3700	0.00	no	NC
SW-031-MWS	Lead	5	U	N/A	0.00	no	N/A
SW-031-MWS	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW-031-MWS	Manganese	46.7		N/A	0.00	no	N/A
SW-031-MWS	Manganese, Dissolve	40.4		N/A	0.00	no	N/A
SW-031-MWS	Mercury	0.2	UJ	3.7	0.00	no	NC
SW-031-MWS	Mercury, Dissolve	0.2	UJ	3.7	0.00	no	NC
SW-031-MWS	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW-031-MWS	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW-031-MWS	Methylene Chloride	1	U	20000	0.00	no	NC
SW-031-MWS	Naphthalene	0.037	B	200	0.00	no	C
SW-031-MWS	Nickel	2.8	B	N/A	0.00	no	N/A
SW-031-MWS	Nickel, Dissolve	1.7	B	N/A	0.00	no	N/A
SW-031-MWS	Nitrobenzene	1.1	U	3100	0.00	no	C
SW-031-MWS	N-Nitroso-di-n-propylamine	1.1	U	N/A	0.00	no	N/A
SW-031-MWS	N-Nitrosodiphenylamine	1.1	U	N/A	0.00	no	N/A
SW-031-MWS	Pentachlorophenol	2.6	U	N/A	0.00	no	N/A
SW-031-MWS	Phenol	1.1	U	N/A	0.00	no	N/A
SW-031-MWS	Pyrene	0.031	J	N/A	0.00	no	N/A
SW-031-MWS	Selenium	8	U	N/A	0.00	no	N/A
SW-031-MWS	Selenium, Dissolve	8	U	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-031-MWS	Silver	6	U	N/A	0.00	no	N/A
SW-031-MWS	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW-031-MWS	Styrene	1	U	39000	0.00	no	NC
SW-031-MWS	Tetrachloroethene	1	U	240	0.00	no	NC
SW-031-MWS	Thallium	10	U	N/A	0.00	no	N/A
SW-031-MWS	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW-031-MWS	Toluene	1	U	81000	0.00	no	NC
SW-031-MWS	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-031-MWS	Trichloroethene	1	U	22	0.00	no	NC
SW-031-MWS	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW-031-MWS	Vanadium	6.6		N/A	0.00	no	N/A
SW-031-MWS	Vanadium, Dissolve	6.2		N/A	0.00	no	N/A
SW-031-MWS	Vinyl chloride	1	U	25	0.00	no	C
SW-031-MWS	Xylenes	3	U	1600	0.00	no	NC
SW-031-MWS	Zinc	2.8	B	N/A	0.00	no	N/A
SW-031-MWS	Zinc, Dissolve	3.9	B	N/A	0.00	no	N/A
SW-032-MWS	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW-032-MWS	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW-032-MWS	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW-032-MWS	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW-032-MWS	1,1-Biphenyl	1.1	U	140	0.00	no	NC
SW-032-MWS	1,1-Dichloroethane	1	U	330	0.00	no	C
SW-032-MWS	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW-032-MWS	1,2,3-Trichlorobenzene	2	UJ	N/A	0.00	no	N/A
SW-032-MWS	1,2,4,5-Tetrachlorobenzene	1.1	U	N/A	0.00	no	N/A
SW-032-MWS	1,2,4-Trichlorobenzene	1	UJ	150	0.00	no	NC
SW-032-MWS	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW-032-MWS	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW-032-MWS	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW-032-MWS	1,2-Dichloroethane	1	U	98	0.00	no	C
SW-032-MWS	1,2-Dichloropropane	1	U	110	0.00	no	C
SW-032-MWS	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW-032-MWS	1,4-Dioxane	0.18		130000	0.00	no	C
SW-032-MWS	2,3,4,6-Tetrachlorophenol	1.1	U	N/A	0.00	no	N/A
SW-032-MWS	2,4,5-Trichlorophenol	2.6	U	N/A	0.00	no	N/A
SW-032-MWS	2,4,6-Trichlorophenol	1.1	U	N/A	0.00	no	N/A
SW-032-MWS	2,4-Dichlorophenol	1.1	U	N/A	0.00	no	N/A
SW-032-MWS	2,4-Dimethylphenol	1.1	U	N/A	0.00	no	N/A
SW-032-MWS	2,4-Dinitrophenol	2.6	U	N/A	0.00	no	N/A
SW-032-MWS	2,4-Dinitrotoluene	1.1	U	N/A	0.00	no	N/A
SW-032-MWS	2,6-Dinitrotoluene	1.1	U	N/A	0.00	no	N/A
SW-032-MWS	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW-032-MWS	2-Chloronaphthalene	1.1	U	N/A	0.00	no	N/A
SW-032-MWS	2-Chlorophenol	1.1	U	N/A	0.00	no	N/A
SW-032-MWS	2-Hexanone	10	U	34000	0.00	no	NC
SW-032-MWS	2-Methylnaphthalene	0.11	U	N/A	0.00	no	N/A
SW-032-MWS	2-Methylphenol	1.1	U	N/A	0.00	no	N/A
SW-032-MWS	2-Nitroaniline	2.6	U	N/A	0.00	no	N/A
SW-032-MWS	3,3'-Dichlorobenzidine	1.1	U	N/A	0.00	no	N/A
SW-032-MWS	4-Chloroaniline	1.1	U	N/A	0.00	no	N/A
SW-032-MWS	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW-032-MWS	4-Nitroaniline	2.6	U	N/A	0.00	no	N/A
SW-032-MWS	Acenaphthene	0.074	J	N/A	0.00	no	N/A
SW-032-MWS	Acetone	10	U	95000000	0.00	no	NC
SW-032-MWS	Acetophenone	1.1	U	N/A	0.00	no	N/A
SW-032-MWS	Aluminum	266		N/A	0.00	no	N/A
SW-032-MWS	Aluminum, Dissolve	93.8		N/A	0.00	no	N/A
SW-032-MWS	Anthracene	0.036	J	N/A	0.00	no	N/A
SW-032-MWS	Antimony	6	U	N/A	0.00	no	N/A
SW-032-MWS	Antimony, Dissolve	2.4	B	N/A	0.00	no	N/A
SW-032-MWS	Arsenic	5	U	N/A	0.00	no	N/A
SW-032-MWS	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SW-032-MWS	Barium	62		N/A	0.00	no	N/A
SW-032-MWS	Barium, Dissolve	57.6		N/A	0.00	no	N/A

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-032-MWS	Benzaldehyde	1.1	U	N/A	0.00	no	N/A
SW-032-MWS	Benzene	1	U	69	0.00	no	C
SW-032-MWS	Benzo[a]anthracene	0.016	J	NVT	0.00	no	C
SW-032-MWS	Benzo[a]pyrene	0.11	U	N/A	0.00	no	N/A
SW-032-MWS	Benzo[b]fluoranthene	0.11	U	N/A	0.00	no	N/A
SW-032-MWS	Benzo[k]fluoranthene	0.11	U	N/A	0.00	no	N/A
SW-032-MWS	Beryllium	1	U	N/A	0.00	no	N/A
SW-032-MWS	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW-032-MWS	bis(2-chloroethoxy)methane	1.1	U	N/A	0.00	no	N/A
SW-032-MWS	bis(2-Chloroethyl)ether	1.1	U	530	0.00	no	C
SW-032-MWS	bis(2-Chloroisopropyl)ether	1.1	U	N/A	0.00	no	N/A
SW-032-MWS	bis(2-Ethylhexyl)phthalate	1.1	U	N/A	0.00	no	N/A
SW-032-MWS	Bromodichloromethane	1	U	38	0.00	no	C
SW-032-MWS	Bromoform	1	U	5100	0.00	no	C
SW-032-MWS	Bromomethane	1	U	73	0.00	no	NC
SW-032-MWS	Cadmium	3	U	N/A	0.00	no	N/A
SW-032-MWS	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A
SW-032-MWS	Caprolactam	2.6	U	N/A	0.00	no	N/A
SW-032-MWS	Carbon disulfide	1	U	5200	0.00	no	NC
SW-032-MWS	Carbon tetrachloride	1	U	18	0.00	no	C
SW-032-MWS	Chlorobenzene	1	U	1700	0.00	no	NC
SW-032-MWS	Chloroethane	1	U	97000	0.00	no	NC
SW-032-MWS	Chloroform	1.3		36	0.04	no	C
SW-032-MWS	Chloromethane	1	UJ	1100	0.00	no	NC
SW-032-MWS	Chromium	3.3	J	N/A	0.00	no	N/A
SW-032-MWS	Chromium VI	10	U	N/A	0.00	no	N/A
SW-032-MWS	Chromium, Dissolve	1.2	B	N/A	0.00	no	N/A
SW-032-MWS	Chrysene	0.01	J	N/A	0.00	no	N/A
SW-032-MWS	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-032-MWS	Cobalt	5.2		N/A	0.00	no	N/A
SW-032-MWS	Cobalt, Dissolve	5	U	N/A	0.00	no	N/A
SW-032-MWS	Copper	5	U	N/A	0.00	no	N/A
SW-032-MWS	Copper, Dissolve	5	U	N/A	0.00	no	N/A
SW-032-MWS	Cyanide	32.4		3.5	9.26	YES	NC
SW-032-MWS	Cyclohexane	10	U	4300	0.00	no	NC
SW-032-MWS	Dibenz[a,h]anthracene	0.11	U	N/A	0.00	no	N/A
SW-032-MWS	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW-032-MWS	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW-032-MWS	Diethylphthalate	1.1	U	N/A	0.00	no	N/A
SW-032-MWS	Di-n-butylphthalate	1.1	U	N/A	0.00	no	N/A
SW-032-MWS	Di-n-ocytlphthalate	1.1	U	N/A	0.00	no	N/A
SW-032-MWS	Ethylbenzene	1	U	150	0.00	no	C
SW-032-MWS	Fluoranthene	0.046	J	N/A	0.00	no	N/A
SW-032-MWS	Fluorene	0.05	J	N/A	0.00	no	N/A
SW-032-MWS	Hexachlorobenzene	1.1	U	3.8	0.00	no	C
SW-032-MWS	Hexachlorobutadiene	1.1	U	13	0.00	no	C
SW-032-MWS	Hexachlorocyclopentadiene	1.1	U	0.79	0.00	no	NC
SW-032-MWS	Hexachloroethane	1.1	U	70	0.00	no	C
SW-032-MWS	Indeno[1,2,3-c,d]pyrene	0.11	U	N/A	0.00	no	N/A
SW-032-MWS	Iron	1970		N/A	0.00	no	N/A
SW-032-MWS	Iron, Dissolve	59.9	J	N/A	0.00	no	N/A
SW-032-MWS	Isophorone	1.1	U	N/A	0.00	no	N/A
SW-032-MWS	Isopropylbenzene	1	U	3700	0.00	no	NC
SW-032-MWS	Lead	5	U	N/A	0.00	no	N/A
SW-032-MWS	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW-032-MWS	Manganese	336		N/A	0.00	no	N/A
SW-032-MWS	Manganese, Dissolve	98.6		N/A	0.00	no	N/A
SW-032-MWS	Mercury	0.2	UJ	3.7	0.00	no	NC
SW-032-MWS	Mercury, Dissolve	0.2	UJ	3.7	0.00	no	NC
SW-032-MWS	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW-032-MWS	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW-032-MWS	Methylene Chloride	1	U	20000	0.00	no	NC
SW-032-MWS	Naphthalene	0.086	B	200	0.00	no	C
SW-032-MWS	Nickel	4.6	B	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-032-MWS	Nickel, Dissolve	3	B	N/A	0.00	no	N/A
SW-032-MWS	Nitrobenzene	1.1	U	3100	0.00	no	C
SW-032-MWS	N-Nitroso-di-n-propylamine	1.1	U	N/A	0.00	no	N/A
SW-032-MWS	N-Nitrosodiphenylamine	1.1	U	N/A	0.00	no	N/A
SW-032-MWS	Pentachlorophenol	2.6	U	N/A	0.00	no	N/A
SW-032-MWS	Phenol	1.1	U	N/A	0.00	no	N/A
SW-032-MWS	Pyrene	0.038	J	N/A	0.00	no	N/A
SW-032-MWS	Selenium	8	U	N/A	0.00	no	N/A
SW-032-MWS	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW-032-MWS	Silver	6	U	N/A	0.00	no	N/A
SW-032-MWS	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW-032-MWS	Styrene	1	U	39000	0.00	no	NC
SW-032-MWS	Tetrachloroethene	1	U	240	0.00	no	NC
SW-032-MWS	Thallium	10	U	N/A	0.00	no	N/A
SW-032-MWS	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW-032-MWS	Toluene	1	U	81000	0.00	no	NC
SW-032-MWS	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-032-MWS	Trichloroethene	1	U	22	0.00	no	NC
SW-032-MWS	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW-032-MWS	Vanadium	15.2		N/A	0.00	no	N/A
SW-032-MWS	Vanadium, Dissolve	6.1		N/A	0.00	no	N/A
SW-032-MWS	Vinyl chloride	1	U	25	0.00	no	C
SW-032-MWS	Xylenes	3	U	1600	0.00	no	NC
SW-032-MWS	Zinc	2.7	B	N/A	0.00	no	N/A
SW-032-MWS	Zinc, Dissolve	10	U	N/A	0.00	no	N/A
SW-033-MWS	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW-033-MWS	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW-033-MWS	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW-033-MWS	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW-033-MWS	1,1-Biphenyl	1	U	140	0.00	no	NC
SW-033-MWS	1,1-Dichloroethane	1	U	330	0.00	no	C
SW-033-MWS	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW-033-MWS	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW-033-MWS	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW-033-MWS	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW-033-MWS	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW-033-MWS	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW-033-MWS	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW-033-MWS	1,2-Dichloroethane	1	U	98	0.00	no	C
SW-033-MWS	1,2-Dichloropropane	1	U	110	0.00	no	C
SW-033-MWS	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW-033-MWS	1,4-Dioxane	0.18		130000	0.00	no	C
SW-033-MWS	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW-033-MWS	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
SW-033-MWS	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW-033-MWS	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW-033-MWS	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW-033-MWS	2,4-Dinitrophenol	2.5	U	N/A	0.00	no	N/A
SW-033-MWS	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-033-MWS	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-033-MWS	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW-033-MWS	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW-033-MWS	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW-033-MWS	2-Hexanone	10	U	34000	0.00	no	NC
SW-033-MWS	2-Methylnaphthalene	0.04	J	N/A	0.00	no	N/A
SW-033-MWS	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW-033-MWS	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-033-MWS	3,3'-Dichlorobenzidine	1	UJ	N/A	0.00	no	N/A
SW-033-MWS	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW-033-MWS	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW-033-MWS	4-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-033-MWS	Acenaphthene	0.22		N/A	0.00	no	N/A
SW-033-MWS	Acetone	10	R	95000000	0.00	no	NC
SW-033-MWS	Acetophenone	1	U	N/A	0.00	no	N/A

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-033-MWS	Aluminum	881		N/A	0.00	no	N/A
SW-033-MWS	Aluminum, Dissolve	49.8	J	N/A	0.00	no	N/A
SW-033-MWS	Anthracene	0.061	J	N/A	0.00	no	N/A
SW-033-MWS	Antimony	6	U	N/A	0.00	no	N/A
SW-033-MWS	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW-033-MWS	Arsenic	3.5	B	N/A	0.00	no	N/A
SW-033-MWS	Arsenic, Dissolve	4.3	B	N/A	0.00	no	N/A
SW-033-MWS	Barium	53		N/A	0.00	no	N/A
SW-033-MWS	Barium, Dissolve	47.1		N/A	0.00	no	N/A
SW-033-MWS	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW-033-MWS	Benzene	1	U	69	0.00	no	C
SW-033-MWS	Benzo[a]anthracene	0.024	J	NVT	0.00	no	C
SW-033-MWS	Benzo[a]pyrene	0.011	J	N/A	0.00	no	N/A
SW-033-MWS	Benzo[b]fluoranthene	0.016	J	N/A	0.00	no	N/A
SW-033-MWS	Benzo[k]fluoranthene	0.012	J	N/A	0.00	no	N/A
SW-033-MWS	Beryllium	0.34	J	N/A	0.00	no	N/A
SW-033-MWS	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW-033-MWS	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW-033-MWS	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW-033-MWS	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW-033-MWS	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A
SW-033-MWS	Bromodichloromethane	1	U	38	0.00	no	C
SW-033-MWS	Bromoform	1	U	5100	0.00	no	C
SW-033-MWS	Bromomethane	0.67	J	73	0.01	no	NC
SW-033-MWS	Cadmium	3	U	N/A	0.00	no	N/A
SW-033-MWS	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A
SW-033-MWS	Caprolactam	2.5	U	N/A	0.00	no	N/A
SW-033-MWS	Carbon disulfide	1	U	5200	0.00	no	NC
SW-033-MWS	Carbon tetrachloride	1	U	18	0.00	no	C
SW-033-MWS	Chlorobenzene	1	U	1700	0.00	no	NC
SW-033-MWS	Chloroethane	1	U	97000	0.00	no	NC
SW-033-MWS	Chloroform	1	U	36	0.00	no	C
SW-033-MWS	Chloromethane	1	U	1100	0.00	no	NC
SW-033-MWS	Chromium	8.8		N/A	0.00	no	N/A
SW-033-MWS	Chromium VI	10	U	N/A	0.00	no	N/A
SW-033-MWS	Chromium, Dissolve	7.9		N/A	0.00	no	N/A
SW-033-MWS	Chrysene	0.013	J	N/A	0.00	no	N/A
SW-033-MWS	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-033-MWS	Cobalt	5	U	N/A	0.00	no	N/A
SW-033-MWS	Cobalt, Dissolve	5	U	N/A	0.00	no	N/A
SW-033-MWS	Copper	2.5	J	N/A	0.00	no	N/A
SW-033-MWS	Copper, Dissolve	5	U	N/A	0.00	no	N/A
SW-033-MWS	Cyanide	81.1		3.5	23.17	YES	NC
SW-033-MWS	Cyclohexane	10	U	4300	0.00	no	NC
SW-033-MWS	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW-033-MWS	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW-033-MWS	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW-033-MWS	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW-033-MWS	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW-033-MWS	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW-033-MWS	Ethylbenzene	1	U	150	0.00	no	C
SW-033-MWS	Fluoranthene	0.088	J	N/A	0.00	no	N/A
SW-033-MWS	Fluorene	0.12		N/A	0.00	no	N/A
SW-033-MWS	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW-033-MWS	Hexachlorobutadiene	1	U	13	0.00	no	C
SW-033-MWS	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW-033-MWS	Hexachloroethane	1	U	70	0.00	no	C
SW-033-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW-033-MWS	Iron	448		N/A	0.00	no	N/A
SW-033-MWS	Iron, Dissolve	38.8	B	N/A	0.00	no	N/A
SW-033-MWS	Isophorone	1	U	N/A	0.00	no	N/A
SW-033-MWS	Isopropylbenzene	1	U	3700	0.00	no	NC
SW-033-MWS	Lead	5	U	N/A	0.00	no	N/A
SW-033-MWS	Lead, Dissolve	5	U	N/A	0.00	no	N/A

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-033-MWS	Manganese	14.6		N/A	0.00	no	N/A
SW-033-MWS	Manganese, Dissolve	2.3	B	N/A	0.00	no	N/A
SW-033-MWS	Mercury	0.2	U	3.7	0.00	no	NC
SW-033-MWS	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW-033-MWS	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW-033-MWS	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW-033-MWS	Methylene Chloride	1	U	20000	0.00	no	NC
SW-033-MWS	Naphthalene	0.1		200	0.00	no	C
SW-033-MWS	Nickel	1.2	B	N/A	0.00	no	N/A
SW-033-MWS	Nickel, Dissolve	10	U	N/A	0.00	no	N/A
SW-033-MWS	Nitrobenzene	1	U	3100	0.00	no	C
SW-033-MWS	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW-033-MWS	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW-033-MWS	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
SW-033-MWS	Phenol	0.29	J	N/A	0.00	no	N/A
SW-033-MWS	Pyrene	0.057	J	N/A	0.00	no	N/A
SW-033-MWS	Selenium	4	B	N/A	0.00	no	N/A
SW-033-MWS	Selenium, Dissolve	4.2	B	N/A	0.00	no	N/A
SW-033-MWS	Silver	6	U	N/A	0.00	no	N/A
SW-033-MWS	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW-033-MWS	Styrene	1	U	39000	0.00	no	NC
SW-033-MWS	Tetrachloroethene	1	U	240	0.00	no	NC
SW-033-MWS	Thallium	4.2	J	N/A	0.00	no	N/A
SW-033-MWS	Thallium, Dissolve	6.1	B	N/A	0.00	no	N/A
SW-033-MWS	Toluene	1	U	81000	0.00	no	NC
SW-033-MWS	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-033-MWS	Trichloroethene	1	U	22	0.00	no	NC
SW-033-MWS	Trichlorofluoromethane	1	UJ	N/A	0.00	no	N/A
SW-033-MWS	Vanadium	32.2		N/A	0.00	no	N/A
SW-033-MWS	Vanadium, Dissolve	26.3		N/A	0.00	no	N/A
SW-033-MWS	Vinyl chloride	1	U	25	0.00	no	C
SW-033-MWS	Xylenes	3	U	1600	0.00	no	NC
SW-033-MWS	Zinc	3.7	B	N/A	0.00	no	N/A
SW-033-MWS	Zinc, Dissolve	1.5	B	N/A	0.00	no	N/A
SW-034-MWS	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW-034-MWS	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW-034-MWS	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW-034-MWS	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW-034-MWS	1,1-Biphenyl	1	U	140	0.00	no	NC
SW-034-MWS	1,1-Dichloroethane	1	U	330	0.00	no	C
SW-034-MWS	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW-034-MWS	1,2,3-Trichlorobenzene	2	UJ	N/A	0.00	no	N/A
SW-034-MWS	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW-034-MWS	1,2,4-Trichlorobenzene	1	UJ	150	0.00	no	NC
SW-034-MWS	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW-034-MWS	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW-034-MWS	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW-034-MWS	1,2-Dichloroethane	1	U	98	0.00	no	C
SW-034-MWS	1,2-Dichloropropane	1	U	110	0.00	no	C
SW-034-MWS	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW-034-MWS	1,4-Dioxane	0.18		130000	0.00	no	C
SW-034-MWS	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW-034-MWS	2,4,5-Trichlorophenol	2.6	U	N/A	0.00	no	N/A
SW-034-MWS	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW-034-MWS	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW-034-MWS	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW-034-MWS	2,4-Dinitrophenol	2.6	U	N/A	0.00	no	N/A
SW-034-MWS	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-034-MWS	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-034-MWS	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW-034-MWS	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW-034-MWS	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW-034-MWS	2-Hexanone	10	U	34000	0.00	no	NC
SW-034-MWS	2-Methylnaphthalene	0.1	U	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-034-MWS	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW-034-MWS	2-Nitroaniline	2.6	U	N/A	0.00	no	N/A
SW-034-MWS	3,3'-Dichlorobenzidine	1	U	N/A	0.00	no	N/A
SW-034-MWS	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW-034-MWS	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW-034-MWS	4-Nitroaniline	2.6	U	N/A	0.00	no	N/A
SW-034-MWS	Acenaphthene	0.067	J	N/A	0.00	no	N/A
SW-034-MWS	Acetone	10	U	95000000	0.00	no	NC
SW-034-MWS	Acetophenone	1	U	N/A	0.00	no	N/A
SW-034-MWS	Aluminum	249		N/A	0.00	no	N/A
SW-034-MWS	Aluminum, Dissolve	224		N/A	0.00	no	N/A
SW-034-MWS	Anthracene	0.022	J	N/A	0.00	no	N/A
SW-034-MWS	Antimony	6	U	N/A	0.00	no	N/A
SW-034-MWS	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW-034-MWS	Arsenic	3.2	J	N/A	0.00	no	N/A
SW-034-MWS	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SW-034-MWS	Barium	73.3		N/A	0.00	no	N/A
SW-034-MWS	Barium, Dissolve	69		N/A	0.00	no	N/A
SW-034-MWS	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW-034-MWS	Benzene	1	U	69	0.00	no	C
SW-034-MWS	Benzo[a]anthracene	0.1	U	NVT	0.00	no	C
SW-034-MWS	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW-034-MWS	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-034-MWS	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-034-MWS	Beryllium	1	U	N/A	0.00	no	N/A
SW-034-MWS	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW-034-MWS	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW-034-MWS	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW-034-MWS	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW-034-MWS	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A
SW-034-MWS	Bromodichloromethane	1	U	38	0.00	no	C
SW-034-MWS	Bromoform	1	U	5100	0.00	no	C
SW-034-MWS	Bromomethane	1	U	73	0.00	no	NC
SW-034-MWS	Cadmium	3	U	N/A	0.00	no	N/A
SW-034-MWS	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A
SW-034-MWS	Caprolactam	2.6	U	N/A	0.00	no	N/A
SW-034-MWS	Carbon disulfide	1	U	5200	0.00	no	NC
SW-034-MWS	Carbon tetrachloride	1	U	18	0.00	no	C
SW-034-MWS	Chlorobenzene	1	U	1700	0.00	no	NC
SW-034-MWS	Chloroethane	1	U	97000	0.00	no	NC
SW-034-MWS	Chloroform	1	U	36	0.00	no	C
SW-034-MWS	Chloromethane	1	UJ	1100	0.00	no	NC
SW-034-MWS	Chromium	1.9	J	N/A	0.00	no	N/A
SW-034-MWS	Chromium VI	10	U	N/A	0.00	no	N/A
SW-034-MWS	Chromium, Dissolve	1.7	B	N/A	0.00	no	N/A
SW-034-MWS	Chrysene	0.1	U	N/A	0.00	no	N/A
SW-034-MWS	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-034-MWS	Cobalt	5	U	N/A	0.00	no	N/A
SW-034-MWS	Cobalt, Dissolve	5	U	N/A	0.00	no	N/A
SW-034-MWS	Copper	5	U	N/A	0.00	no	N/A
SW-034-MWS	Copper, Dissolve	5	U	N/A	0.00	no	N/A
SW-034-MWS	Cyanide	71.8		3.5	20.51	YES	NC
SW-034-MWS	Cyclohexane	10	U	4300	0.00	no	NC
SW-034-MWS	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW-034-MWS	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW-034-MWS	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW-034-MWS	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW-034-MWS	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW-034-MWS	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW-034-MWS	Ethylbenzene	1	U	150	0.00	no	C
SW-034-MWS	Fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-034-MWS	Fluorene	0.1	U	N/A	0.00	no	N/A
SW-034-MWS	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW-034-MWS	Hexachlorobutadiene	1	U	13	0.00	no	C

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-034-MWS	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW-034-MWS	Hexachloroethane	1	U	70	0.00	no	C
SW-034-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW-034-MWS	Iron	35	J	N/A	0.00	no	N/A
SW-034-MWS	Iron, Dissolve	34.2	J	N/A	0.00	no	N/A
SW-034-MWS	Isophorone	1	U	N/A	0.00	no	N/A
SW-034-MWS	Isopropylbenzene	1	U	3700	0.00	no	NC
SW-034-MWS	Lead	5	U	N/A	0.00	no	N/A
SW-034-MWS	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW-034-MWS	Manganese	5.7		N/A	0.00	no	N/A
SW-034-MWS	Manganese, Dissolve	3.6	J	N/A	0.00	no	N/A
SW-034-MWS	Mercury	0.2	UJ	3.7	0.00	no	NC
SW-034-MWS	Mercury, Dissolve	0.2	UJ	3.7	0.00	no	NC
SW-034-MWS	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW-034-MWS	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW-034-MWS	Methylene Chloride	1	U	20000	0.00	no	NC
SW-034-MWS	Naphthalene	0.067	B	200	0.00	no	C
SW-034-MWS	Nickel	10	U	N/A	0.00	no	N/A
SW-034-MWS	Nickel, Dissolve	0.82	B	N/A	0.00	no	N/A
SW-034-MWS	Nitrobenzene	1	U	3100	0.00	no	C
SW-034-MWS	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW-034-MWS	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW-034-MWS	Pentachlorophenol	2.6	U	N/A	0.00	no	N/A
SW-034-MWS	Phenol	1	U	N/A	0.00	no	N/A
SW-034-MWS	Pyrene	0.1	U	N/A	0.00	no	N/A
SW-034-MWS	Selenium	8	U	N/A	0.00	no	N/A
SW-034-MWS	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW-034-MWS	Silver	6	U	N/A	0.00	no	N/A
SW-034-MWS	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW-034-MWS	Styrene	1	U	39000	0.00	no	NC
SW-034-MWS	Tetrachloroethene	1	U	240	0.00	no	NC
SW-034-MWS	Thallium	10	U	N/A	0.00	no	N/A
SW-034-MWS	Thallium, Dissolve	4.5	B	N/A	0.00	no	N/A
SW-034-MWS	Toluene	1	U	81000	0.00	no	NC
SW-034-MWS	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-034-MWS	Trichloroethene	1	U	22	0.00	no	NC
SW-034-MWS	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW-034-MWS	Vanadium	42.7		N/A	0.00	no	N/A
SW-034-MWS	Vanadium, Dissolve	41.2		N/A	0.00	no	N/A
SW-034-MWS	Vinyl chloride	1	U	25	0.00	no	C
SW-034-MWS	Xylenes	3	U	1600	0.00	no	NC
SW-034-MWS	Zinc	10	U	N/A	0.00	no	N/A
SW-034-MWS	Zinc, Dissolve	1.5	B	N/A	0.00	no	N/A
SW-035-MWS	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW-035-MWS	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW-035-MWS	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW-035-MWS	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW-035-MWS	1,1-Biphenyl	1.1	U	140	0.00	no	NC
SW-035-MWS	1,1-Dichloroethane	1	U	330	0.00	no	C
SW-035-MWS	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW-035-MWS	1,2,3-Trichlorobenzene	2	UJ	N/A	0.00	no	N/A
SW-035-MWS	1,2,4,5-Tetrachlorobenzene	1.1	U	N/A	0.00	no	N/A
SW-035-MWS	1,2,4-Trichlorobenzene	1	UJ	150	0.00	no	NC
SW-035-MWS	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW-035-MWS	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW-035-MWS	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW-035-MWS	1,2-Dichloroethane	1	U	98	0.00	no	C
SW-035-MWS	1,2-Dichloropropane	1	U	110	0.00	no	C
SW-035-MWS	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW-035-MWS	1,4-Dioxane	0.11	U	130000	0.00	no	C
SW-035-MWS	2,3,4,6-Tetrachlorophenol	1.1	U	N/A	0.00	no	N/A
SW-035-MWS	2,4,5-Trichlorophenol	2.6	U	N/A	0.00	no	N/A
SW-035-MWS	2,4,6-Trichlorophenol	1.1	U	N/A	0.00	no	N/A
SW-035-MWS	2,4-Dichlorophenol	1.1	U	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-035-MWS	2,4-Dimethylphenol	1.1	U	N/A	0.00	no	N/A
SW-035-MWS	2,4-Dinitrophenol	2.6	U	N/A	0.00	no	N/A
SW-035-MWS	2,4-Dinitrotoluene	1.1	U	N/A	0.00	no	N/A
SW-035-MWS	2,6-Dinitrotoluene	1.1	U	N/A	0.00	no	N/A
SW-035-MWS	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW-035-MWS	2-Chloronaphthalene	1.1	U	N/A	0.00	no	N/A
SW-035-MWS	2-Chlorophenol	1.1	U	N/A	0.00	no	N/A
SW-035-MWS	2-Hexanone	10	U	34000	0.00	no	NC
SW-035-MWS	2-Methylnaphthalene	0.11	U	N/A	0.00	no	N/A
SW-035-MWS	2-Methylphenol	1.1	U	N/A	0.00	no	N/A
SW-035-MWS	2-Nitroaniline	2.6	U	N/A	0.00	no	N/A
SW-035-MWS	3,3'-Dichlorobenzidine	1.1	U	N/A	0.00	no	N/A
SW-035-MWS	4-Chloroaniline	1.1	U	N/A	0.00	no	N/A
SW-035-MWS	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW-035-MWS	4-Nitroaniline	2.6	U	N/A	0.00	no	N/A
SW-035-MWS	Acenaphthene	0.05	J	N/A	0.00	no	N/A
SW-035-MWS	Acetone	10	U	95000000	0.00	no	NC
SW-035-MWS	Acetophenone	1.1	U	N/A	0.00	no	N/A
SW-035-MWS	Aluminum	124		N/A	0.00	no	N/A
SW-035-MWS	Aluminum, Dissolve	126		N/A	0.00	no	N/A
SW-035-MWS	Anthracene	0.046	J	N/A	0.00	no	N/A
SW-035-MWS	Antimony	6	U	N/A	0.00	no	N/A
SW-035-MWS	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW-035-MWS	Arsenic	3.4	J	N/A	0.00	no	N/A
SW-035-MWS	Arsenic, Dissolve	4.1	B	N/A	0.00	no	N/A
SW-035-MWS	Barium	20.1		N/A	0.00	no	N/A
SW-035-MWS	Barium, Dissolve	21.7		N/A	0.00	no	N/A
SW-035-MWS	Benzaldehyde	1.1	U	N/A	0.00	no	N/A
SW-035-MWS	Benzene	1	U	69	0.00	no	C
SW-035-MWS	Benzo[a]anthracene	0.11	U	NVT	0.00	no	C
SW-035-MWS	Benzo[a]pyrene	0.11	U	N/A	0.00	no	N/A
SW-035-MWS	Benzo[b]fluoranthene	0.11	U	N/A	0.00	no	N/A
SW-035-MWS	Benzo[k]fluoranthene	0.11	U	N/A	0.00	no	N/A
SW-035-MWS	Beryllium	1	U	N/A	0.00	no	N/A
SW-035-MWS	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW-035-MWS	bis(2-chloroethoxy)methane	1.1	U	N/A	0.00	no	N/A
SW-035-MWS	bis(2-Chloroethyl)ether	1.1	U	530	0.00	no	C
SW-035-MWS	bis(2-Chloroisopropyl)ether	1.1	U	N/A	0.00	no	N/A
SW-035-MWS	bis(2-Ethylhexyl)phthalate	1.1	U	N/A	0.00	no	N/A
SW-035-MWS	Bromodichloromethane	1	U	38	0.00	no	C
SW-035-MWS	Bromoform	1	U	5100	0.00	no	C
SW-035-MWS	Bromomethane	1	U	73	0.00	no	NC
SW-035-MWS	Cadmium	3	U	N/A	0.00	no	N/A
SW-035-MWS	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A
SW-035-MWS	Caprolactam	2.6	U	N/A	0.00	no	N/A
SW-035-MWS	Carbon disulfide	1	U	5200	0.00	no	NC
SW-035-MWS	Carbon tetrachloride	1	U	18	0.00	no	C
SW-035-MWS	Chlorobenzene	1	U	1700	0.00	no	NC
SW-035-MWS	Chloroethane	1	U	97000	0.00	no	NC
SW-035-MWS	Chloroform	1	U	36	0.00	no	C
SW-035-MWS	Chloromethane	1	UJ	1100	0.00	no	NC
SW-035-MWS	Chromium	5.7		N/A	0.00	no	N/A
SW-035-MWS	Chromium VI	10	U	N/A	0.00	no	N/A
SW-035-MWS	Chromium, Dissolve	5.4		N/A	0.00	no	N/A
SW-035-MWS	Chrysene	0.11	U	N/A	0.00	no	N/A
SW-035-MWS	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-035-MWS	Cobalt	5	U	N/A	0.00	no	N/A
SW-035-MWS	Cobalt, Dissolve	5	U	N/A	0.00	no	N/A
SW-035-MWS	Copper	5	U	N/A	0.00	no	N/A
SW-035-MWS	Copper, Dissolve	5	U	N/A	0.00	no	N/A
SW-035-MWS	Cyanide	225		3.5	64.29	YES	NC
SW-035-MWS	Cyclohexane	10	U	4300	0.00	no	NC
SW-035-MWS	Dibenz[a,h]anthracene	0.11	U	N/A	0.00	no	N/A
SW-035-MWS	Dibromochloromethane	1	U	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-035-MWS	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW-035-MWS	Diethylphthalate	1.1	U	N/A	0.00	no	N/A
SW-035-MWS	Di-n-butylphthalate	1.1	U	N/A	0.00	no	N/A
SW-035-MWS	Di-n-ocytlphthalate	1.1	U	N/A	0.00	no	N/A
SW-035-MWS	Ethylbenzene	1	U	150	0.00	no	C
SW-035-MWS	Fluoranthene	0.11	U	N/A	0.00	no	N/A
SW-035-MWS	Fluorene	0.11	U	N/A	0.00	no	N/A
SW-035-MWS	Hexachlorobenzene	1.1	U	3.8	0.00	no	C
SW-035-MWS	Hexachlorobutadiene	1.1	U	13	0.00	no	C
SW-035-MWS	Hexachlorocyclopentadiene	1.1	U	0.79	0.00	no	NC
SW-035-MWS	Hexachloroethane	1.1	U	70	0.00	no	C
SW-035-MWS	Indeno[1,2,3-c,d]pyrene	0.11	U	N/A	0.00	no	N/A
SW-035-MWS	Iron	138		N/A	0.00	no	N/A
SW-035-MWS	Iron, Dissolve	102		N/A	0.00	no	N/A
SW-035-MWS	Isophorone	1.1	U	N/A	0.00	no	N/A
SW-035-MWS	Isopropylbenzene	1	U	3700	0.00	no	NC
SW-035-MWS	Lead	5	U	N/A	0.00	no	N/A
SW-035-MWS	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW-035-MWS	Manganese	5.6		N/A	0.00	no	N/A
SW-035-MWS	Manganese, Dissolve	3.3	J	N/A	0.00	no	N/A
SW-035-MWS	Mercury	0.2	UJ	3.7	0.00	no	NC
SW-035-MWS	Mercury, Dissolve	0.2	UJ	3.7	0.00	no	NC
SW-035-MWS	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW-035-MWS	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW-035-MWS	Methylene Chloride	1	U	20000	0.00	no	NC
SW-035-MWS	Naphthalene	0.13		200	0.00	no	C
SW-035-MWS	Nickel	0.73	B	N/A	0.00	no	N/A
SW-035-MWS	Nickel, Dissolve	0.71	B	N/A	0.00	no	N/A
SW-035-MWS	Nitrobenzene	1.1	U	3100	0.00	no	C
SW-035-MWS	N-Nitroso-di-n-propylamine	1.1	U	N/A	0.00	no	N/A
SW-035-MWS	N-Nitrosodiphenylamine	1.1	U	N/A	0.00	no	N/A
SW-035-MWS	Pentachlorophenol	0.95	J	N/A	0.00	no	N/A
SW-035-MWS	Phenol	1.1	U	N/A	0.00	no	N/A
SW-035-MWS	Pyrene	0.11	U	N/A	0.00	no	N/A
SW-035-MWS	Selenium	8	U	N/A	0.00	no	N/A
SW-035-MWS	Selenium, Dissolve	5.6	J	N/A	0.00	no	N/A
SW-035-MWS	Silver	6	U	N/A	0.00	no	N/A
SW-035-MWS	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW-035-MWS	Styrene	1	U	39000	0.00	no	NC
SW-035-MWS	Tetrachloroethene	1	U	240	0.00	no	NC
SW-035-MWS	Thallium	5.3	B	N/A	0.00	no	N/A
SW-035-MWS	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW-035-MWS	Toluene	1	U	81000	0.00	no	NC
SW-035-MWS	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-035-MWS	Trichloroethene	1	U	22	0.00	no	NC
SW-035-MWS	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW-035-MWS	Vanadium	22.4		N/A	0.00	no	N/A
SW-035-MWS	Vanadium, Dissolve	24.4		N/A	0.00	no	N/A
SW-035-MWS	Vinyl chloride	1	U	25	0.00	no	C
SW-035-MWS	Xylenes	3	U	1600	0.00	no	NC
SW-035-MWS	Zinc	8.7	B	N/A	0.00	no	N/A
SW-035-MWS	Zinc, Dissolve	0.77	B	N/A	0.00	no	N/A
SW-036-MWS	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW-036-MWS	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW-036-MWS	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW-036-MWS	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW-036-MWS	1,1-Biphenyl	1	U	140	0.00	no	NC
SW-036-MWS	1,1-Dichloroethane	1	U	330	0.00	no	C
SW-036-MWS	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW-036-MWS	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW-036-MWS	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW-036-MWS	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW-036-MWS	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW-036-MWS	1,2-Dibromoethane	1	U	7.7	0.00	no	C

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-036-MWS	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW-036-MWS	1,2-Dichloroethane	1	U	98	0.00	no	C
SW-036-MWS	1,2-Dichloropropane	1	U	110	0.00	no	C
SW-036-MWS	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW-036-MWS	1,4-Dioxane	0.072	J	130000	0.00	no	C
SW-036-MWS	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW-036-MWS	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
SW-036-MWS	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW-036-MWS	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW-036-MWS	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW-036-MWS	2,4-Dinitrophenol	2.5	U	N/A	0.00	no	N/A
SW-036-MWS	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-036-MWS	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-036-MWS	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW-036-MWS	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW-036-MWS	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW-036-MWS	2-Hexanone	10	U	34000	0.00	no	NC
SW-036-MWS	2-Methylnaphthalene	0.17		N/A	0.00	no	N/A
SW-036-MWS	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW-036-MWS	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-036-MWS	3,3'-Dichlorobenzidine	1	UJ	N/A	0.00	no	N/A
SW-036-MWS	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW-036-MWS	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW-036-MWS	4-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-036-MWS	Acenaphthene	0.25		N/A	0.00	no	N/A
SW-036-MWS	Acetone	10	R	95000000	0.00	no	NC
SW-036-MWS	Acetophenone	1	U	N/A	0.00	no	N/A
SW-036-MWS	Aluminum	636		N/A	0.00	no	N/A
SW-036-MWS	Aluminum, Dissolve	363		N/A	0.00	no	N/A
SW-036-MWS	Anthracene	0.21		N/A	0.00	no	N/A
SW-036-MWS	Antimony	6	U	N/A	0.00	no	N/A
SW-036-MWS	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW-036-MWS	Arsenic	5	U	N/A	0.00	no	N/A
SW-036-MWS	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SW-036-MWS	Barium	69.3		N/A	0.00	no	N/A
SW-036-MWS	Barium, Dissolve	65.6		N/A	0.00	no	N/A
SW-036-MWS	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW-036-MWS	Benzene	1	U	69	0.00	no	C
SW-036-MWS	Benzo[a]anthracene	0.086	J	NVT	0.00	no	C
SW-036-MWS	Benzo[a]pyrene	0.012	J	N/A	0.00	no	N/A
SW-036-MWS	Benzo[b]fluoranthene	0.034	J	N/A	0.00	no	N/A
SW-036-MWS	Benzo[k]fluoranthene	0.025	J	N/A	0.00	no	N/A
SW-036-MWS	Beryllium	1	U	N/A	0.00	no	N/A
SW-036-MWS	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW-036-MWS	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW-036-MWS	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW-036-MWS	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW-036-MWS	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A
SW-036-MWS	Bromodichloromethane	1	U	38	0.00	no	C
SW-036-MWS	Bromoform	1	U	5100	0.00	no	C
SW-036-MWS	Bromomethane	1	U	73	0.00	no	NC
SW-036-MWS	Cadmium	3	U	N/A	0.00	no	N/A
SW-036-MWS	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A
SW-036-MWS	Caprolactam	2.5	U	N/A	0.00	no	N/A
SW-036-MWS	Carbon disulfide	1	U	5200	0.00	no	NC
SW-036-MWS	Carbon tetrachloride	1	U	18	0.00	no	C
SW-036-MWS	Chlorobenzene	1	U	1700	0.00	no	NC
SW-036-MWS	Chloroethane	1	U	97000	0.00	no	NC
SW-036-MWS	Chloroform	1.1		36	0.03	no	C
SW-036-MWS	Chloromethane	1	U	1100	0.00	no	NC
SW-036-MWS	Chromium	1.8	B	N/A	0.00	no	N/A
SW-036-MWS	Chromium VI	10	U	N/A	0.00	no	N/A
SW-036-MWS	Chromium, Dissolve	0.96	B	N/A	0.00	no	N/A
SW-036-MWS	Chrysene	0.061	J	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-036-MWS	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-036-MWS	Cobalt	5	U	N/A	0.00	no	N/A
SW-036-MWS	Cobalt, Dissolve	5	U	N/A	0.00	no	N/A
SW-036-MWS	Copper	5	U	N/A	0.00	no	N/A
SW-036-MWS	Copper, Dissolve	5	U	N/A	0.00	no	N/A
SW-036-MWS	Cyanide	10	U	3.5	0.00	no	NC
SW-036-MWS	Cyclohexane	10	U	4300	0.00	no	NC
SW-036-MWS	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW-036-MWS	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW-036-MWS	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW-036-MWS	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW-036-MWS	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW-036-MWS	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW-036-MWS	Ethylbenzene	1	U	150	0.00	no	C
SW-036-MWS	Fluoranthene	0.72		N/A	0.00	no	N/A
SW-036-MWS	Fluorene	0.15		N/A	0.00	no	N/A
SW-036-MWS	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW-036-MWS	Hexachlorobutadiene	1	U	13	0.00	no	C
SW-036-MWS	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW-036-MWS	Hexachloroethane	1	U	70	0.00	no	C
SW-036-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW-036-MWS	Iron	75.2		N/A	0.00	no	N/A
SW-036-MWS	Iron, Dissolve	70	U	N/A	0.00	no	N/A
SW-036-MWS	Isophorone	1	U	N/A	0.00	no	N/A
SW-036-MWS	Isopropylbenzene	1	U	3700	0.00	no	NC
SW-036-MWS	Lead	4.6	B	N/A	0.00	no	N/A
SW-036-MWS	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW-036-MWS	Manganese	68.7		N/A	0.00	no	N/A
SW-036-MWS	Manganese, Dissolve	2.3	B	N/A	0.00	no	N/A
SW-036-MWS	Mercury	0.2	U	3.7	0.00	no	NC
SW-036-MWS	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW-036-MWS	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW-036-MWS	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW-036-MWS	Methylene Chloride	1	U	20000	0.00	no	NC
SW-036-MWS	Naphthalene	0.16		200	0.00	no	C
SW-036-MWS	Nickel	10	U	N/A	0.00	no	N/A
SW-036-MWS	Nickel, Dissolve	1.2	B	N/A	0.00	no	N/A
SW-036-MWS	Nitrobenzene	1	U	3100	0.00	no	C
SW-036-MWS	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW-036-MWS	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW-036-MWS	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
SW-036-MWS	Phenol	1	U	N/A	0.00	no	N/A
SW-036-MWS	Pyrene	0.54		N/A	0.00	no	N/A
SW-036-MWS	Selenium	6.8	B	N/A	0.00	no	N/A
SW-036-MWS	Selenium, Dissolve	5.6	B	N/A	0.00	no	N/A
SW-036-MWS	Silver	6	U	N/A	0.00	no	N/A
SW-036-MWS	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW-036-MWS	Styrene	1	U	39000	0.00	no	NC
SW-036-MWS	Tetrachloroethene	1	U	240	0.00	no	NC
SW-036-MWS	Thallium	7	B	N/A	0.00	no	N/A
SW-036-MWS	Thallium, Dissolve	4.7	B	N/A	0.00	no	N/A
SW-036-MWS	Toluene	1	U	81000	0.00	no	NC
SW-036-MWS	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-036-MWS	Trichloroethene	1	U	22	0.00	no	NC
SW-036-MWS	Trichlorofluoromethane	1	UJ	N/A	0.00	no	N/A
SW-036-MWS	Vanadium	106		N/A	0.00	no	N/A
SW-036-MWS	Vanadium, Dissolve	104		N/A	0.00	no	N/A
SW-036-MWS	Vinyl chloride	1	U	25	0.00	no	C
SW-036-MWS	Xylenes	3	U	1600	0.00	no	NC
SW-036-MWS	Zinc	1.4	B	N/A	0.00	no	N/A
SW-036-MWS	Zinc, Dissolve	10	U	N/A	0.00	no	N/A
SW-037-MWS	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW-037-MWS	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW-037-MWS	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	UJ	6100	0.00	no	NC

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-037-MWS	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW-037-MWS	1,1-Biphenyl	1	U	140	0.00	no	NC
SW-037-MWS	1,1-Dichloroethane	1	U	330	0.00	no	C
SW-037-MWS	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW-037-MWS	1,2,3-Trichlorobenzene	2	UJ	N/A	0.00	no	N/A
SW-037-MWS	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW-037-MWS	1,2,4-Trichlorobenzene	1	UJ	150	0.00	no	NC
SW-037-MWS	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW-037-MWS	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW-037-MWS	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW-037-MWS	1,2-Dichloroethane	1	U	98	0.00	no	C
SW-037-MWS	1,2-Dichloropropane	1	U	110	0.00	no	C
SW-037-MWS	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW-037-MWS	1,4-Dioxane	0.063	J	130000	0.00	no	C
SW-037-MWS	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW-037-MWS	2,4,5-Trichlorophenol	2.6	U	N/A	0.00	no	N/A
SW-037-MWS	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW-037-MWS	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW-037-MWS	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW-037-MWS	2,4-Dinitrophenol	2.6	U	N/A	0.00	no	N/A
SW-037-MWS	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-037-MWS	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-037-MWS	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW-037-MWS	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW-037-MWS	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW-037-MWS	2-Hexanone	10	U	34000	0.00	no	NC
SW-037-MWS	2-Methylnaphthalene	0.1	U	N/A	0.00	no	N/A
SW-037-MWS	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW-037-MWS	2-Nitroaniline	2.6	U	N/A	0.00	no	N/A
SW-037-MWS	3,3'-Dichlorobenzidine	1	U	N/A	0.00	no	N/A
SW-037-MWS	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW-037-MWS	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW-037-MWS	4-Nitroaniline	2.6	U	N/A	0.00	no	N/A
SW-037-MWS	Acenaphthene	0.1	U	N/A	0.00	no	N/A
SW-037-MWS	Acetone	10	UJ	95000000	0.00	no	NC
SW-037-MWS	Acetophenone	1	U	N/A	0.00	no	N/A
SW-037-MWS	Aluminum	770		N/A	0.00	no	N/A
SW-037-MWS	Aluminum, Dissolve	699		N/A	0.00	no	N/A
SW-037-MWS	Anthracene	0.018	J	N/A	0.00	no	N/A
SW-037-MWS	Antimony	6	U	N/A	0.00	no	N/A
SW-037-MWS	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW-037-MWS	Arsenic	5	U	N/A	0.00	no	N/A
SW-037-MWS	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SW-037-MWS	Barium	71.3		N/A	0.00	no	N/A
SW-037-MWS	Barium, Dissolve	67.3		N/A	0.00	no	N/A
SW-037-MWS	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW-037-MWS	Benzene	1	U	69	0.00	no	C
SW-037-MWS	Benzo[a]anthracene	0.016	J	NVT	0.00	no	C
SW-037-MWS	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW-037-MWS	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-037-MWS	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-037-MWS	Beryllium	1	U	N/A	0.00	no	N/A
SW-037-MWS	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW-037-MWS	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW-037-MWS	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW-037-MWS	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW-037-MWS	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A
SW-037-MWS	Bromodichloromethane	1	U	38	0.00	no	C
SW-037-MWS	Bromoform	1	U	5100	0.00	no	C
SW-037-MWS	Bromomethane	1	U	73	0.00	no	NC
SW-037-MWS	Cadmium	3	U	N/A	0.00	no	N/A
SW-037-MWS	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A
SW-037-MWS	Caprolactam	2.6	U	N/A	0.00	no	N/A
SW-037-MWS	Carbon disulfide	1	U	5200	0.00	no	NC

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-037-MWS	Carbon tetrachloride	1	U	18	0.00	no	C
SW-037-MWS	Chlorobenzene	1	U	1700	0.00	no	NC
SW-037-MWS	Chloroethane	1	U	97000	0.00	no	NC
SW-037-MWS	Chloroform	3		36	0.08	no	C
SW-037-MWS	Chloromethane	1	U	1100	0.00	no	NC
SW-037-MWS	Chromium	0.99	J	N/A	0.00	no	N/A
SW-037-MWS	Chromium VI	10	U	N/A	0.00	no	N/A
SW-037-MWS	Chromium, Dissolve	1	J	N/A	0.00	no	N/A
SW-037-MWS	Chrysene	0.1	U	N/A	0.00	no	N/A
SW-037-MWS	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-037-MWS	Cobalt	5	U	N/A	0.00	no	N/A
SW-037-MWS	Cobalt, Dissolve	5	U	N/A	0.00	no	N/A
SW-037-MWS	Copper	5	U	N/A	0.00	no	N/A
SW-037-MWS	Copper, Dissolve	5	U	N/A	0.00	no	N/A
SW-037-MWS	Cyanide	4.6	J	3.5	1.31	YES	NC
SW-037-MWS	Cyclohexane	10	U	4300	0.00	no	NC
SW-037-MWS	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW-037-MWS	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW-037-MWS	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW-037-MWS	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW-037-MWS	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW-037-MWS	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW-037-MWS	Ethylbenzene	0.58	J	150	0.00	no	C
SW-037-MWS	Fluoranthene	0.029	J	N/A	0.00	no	N/A
SW-037-MWS	Fluorene	0.1	U	N/A	0.00	no	N/A
SW-037-MWS	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW-037-MWS	Hexachlorobutadiene	1	U	13	0.00	no	C
SW-037-MWS	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW-037-MWS	Hexachloroethane	1	U	70	0.00	no	C
SW-037-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW-037-MWS	Iron	29.5	B	N/A	0.00	no	N/A
SW-037-MWS	Iron, Dissolve	13.9	B	N/A	0.00	no	N/A
SW-037-MWS	Isophorone	1	U	N/A	0.00	no	N/A
SW-037-MWS	Isopropylbenzene	1	U	3700	0.00	no	NC
SW-037-MWS	Lead	5	U	N/A	0.00	no	N/A
SW-037-MWS	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW-037-MWS	Manganese	11.3		N/A	0.00	no	N/A
SW-037-MWS	Manganese, Dissolve	1.4	B	N/A	0.00	no	N/A
SW-037-MWS	Mercury	0.2	U	3.7	0.00	no	NC
SW-037-MWS	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW-037-MWS	Methyl Acetate	5	UJ	N/A	0.00	no	N/A
SW-037-MWS	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW-037-MWS	Methylene Chloride	1	U	20000	0.00	no	NC
SW-037-MWS	Naphthalene	0.055	B	200	0.00	no	C
SW-037-MWS	Nickel	10	U	N/A	0.00	no	N/A
SW-037-MWS	Nickel, Dissolve	10	U	N/A	0.00	no	N/A
SW-037-MWS	Nitrobenzene	1	U	3100	0.00	no	C
SW-037-MWS	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW-037-MWS	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW-037-MWS	Pentachlorophenol	2.6	U	N/A	0.00	no	N/A
SW-037-MWS	Phenol	1	U	N/A	0.00	no	N/A
SW-037-MWS	Pyrene	0.025	J	N/A	0.00	no	N/A
SW-037-MWS	Selenium	8	U	N/A	0.00	no	N/A
SW-037-MWS	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW-037-MWS	Silver	6	U	N/A	0.00	no	N/A
SW-037-MWS	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW-037-MWS	Styrene	1	U	39000	0.00	no	NC
SW-037-MWS	Tetrachloroethene	1	U	240	0.00	no	NC
SW-037-MWS	Thallium	10	U	N/A	0.00	no	N/A
SW-037-MWS	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW-037-MWS	Toluene	1	U	81000	0.00	no	NC
SW-037-MWS	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-037-MWS	Trichloroethene	0.6	J	22	0.03	no	NC
SW-037-MWS	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-037-MWS	Vanadium	61.3		N/A	0.00	no	N/A
SW-037-MWS	Vanadium, Dissolve	61.5		N/A	0.00	no	N/A
SW-037-MWS	Vinyl chloride	1	U	25	0.00	no	C
SW-037-MWS	Xylenes	1.5	J	1600	0.00	no	NC
SW-037-MWS	Zinc	10	U	N/A	0.00	no	N/A
SW-037-MWS	Zinc, Dissolve	0.67	B	N/A	0.00	no	N/A
SW-038-MWS	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW-038-MWS	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW-038-MWS	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	UJ	6100	0.00	no	NC
SW-038-MWS	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW-038-MWS	1,1-Biphenyl	1	U	140	0.00	no	NC
SW-038-MWS	1,1-Dichloroethane	1	U	330	0.00	no	C
SW-038-MWS	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW-038-MWS	1,2,3-Trichlorobenzene	2	UJ	N/A	0.00	no	N/A
SW-038-MWS	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW-038-MWS	1,2,4-Trichlorobenzene	1	UJ	150	0.00	no	NC
SW-038-MWS	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW-038-MWS	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW-038-MWS	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW-038-MWS	1,2-Dichloroethane	1	U	98	0.00	no	C
SW-038-MWS	1,2-Dichloropropane	1	U	110	0.00	no	C
SW-038-MWS	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW-038-MWS	1,4-Dioxane	0.041	J	130000	0.00	no	C
SW-038-MWS	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW-038-MWS	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
SW-038-MWS	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW-038-MWS	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW-038-MWS	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW-038-MWS	2,4-Dinitrophenol	2.5	U	N/A	0.00	no	N/A
SW-038-MWS	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-038-MWS	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-038-MWS	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW-038-MWS	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW-038-MWS	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW-038-MWS	2-Hexanone	10	U	34000	0.00	no	NC
SW-038-MWS	2-Methylnaphthalene	0.05	J	N/A	0.00	no	N/A
SW-038-MWS	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW-038-MWS	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-038-MWS	3,3'-Dichlorobenzidine	1	U	N/A	0.00	no	N/A
SW-038-MWS	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW-038-MWS	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW-038-MWS	4-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-038-MWS	Acenaphthene	0.037	J	N/A	0.00	no	N/A
SW-038-MWS	Acetone	10	UJ	95000000	0.00	no	NC
SW-038-MWS	Acetophenone	1	U	N/A	0.00	no	N/A
SW-038-MWS	Aluminum	250		N/A	0.00	no	N/A
SW-038-MWS	Aluminum, Dissolve	249		N/A	0.00	no	N/A
SW-038-MWS	Anthracene	0.09	J	N/A	0.00	no	N/A
SW-038-MWS	Antimony	6	U	N/A	0.00	no	N/A
SW-038-MWS	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW-038-MWS	Arsenic	5	U	N/A	0.00	no	N/A
SW-038-MWS	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SW-038-MWS	Barium	64.5		N/A	0.00	no	N/A
SW-038-MWS	Barium, Dissolve	64.3		N/A	0.00	no	N/A
SW-038-MWS	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW-038-MWS	Benzene	1	U	69	0.00	no	C
SW-038-MWS	Benzo[a]anthracene	0.1	U	NVT	0.00	no	C
SW-038-MWS	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW-038-MWS	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-038-MWS	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-038-MWS	Beryllium	1	U	N/A	0.00	no	N/A
SW-038-MWS	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW-038-MWS	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW-038-MWS	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-038-MWS	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW-038-MWS	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A
SW-038-MWS	Bromodichloromethane	1	U	38	0.00	no	C
SW-038-MWS	Bromoform	1	U	5100	0.00	no	C
SW-038-MWS	Bromomethane	1	U	73	0.00	no	NC
SW-038-MWS	Cadmium	3	U	N/A	0.00	no	N/A
SW-038-MWS	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A
SW-038-MWS	Caprolactam	2.5	U	N/A	0.00	no	N/A
SW-038-MWS	Carbon disulfide	1	U	5200	0.00	no	NC
SW-038-MWS	Carbon tetrachloride	1	U	18	0.00	no	C
SW-038-MWS	Chlorobenzene	1	U	1700	0.00	no	NC
SW-038-MWS	Chloroethane	1	U	97000	0.00	no	NC
SW-038-MWS	Chloroform	1	U	36	0.00	no	C
SW-038-MWS	Chloromethane	1	U	1100	0.00	no	NC
SW-038-MWS	Chromium	17.3		N/A	0.00	no	N/A
SW-038-MWS	Chromium VI	5	J	N/A	0.00	no	N/A
SW-038-MWS	Chromium, Dissolve	17.4		N/A	0.00	no	N/A
SW-038-MWS	Chrysene	0.1	U	N/A	0.00	no	N/A
SW-038-MWS	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-038-MWS	Cobalt	5	U	N/A	0.00	no	N/A
SW-038-MWS	Cobalt, Dissolve	5	U	N/A	0.00	no	N/A
SW-038-MWS	Copper	5	U	N/A	0.00	no	N/A
SW-038-MWS	Copper, Dissolve	5	U	N/A	0.00	no	N/A
SW-038-MWS	Cyanide	10	U	3.5	0.00	no	NC
SW-038-MWS	Cyclohexane	10	U	4300	0.00	no	NC
SW-038-MWS	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW-038-MWS	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW-038-MWS	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW-038-MWS	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW-038-MWS	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW-038-MWS	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW-038-MWS	Ethylbenzene	1	U	150	0.00	no	C
SW-038-MWS	Fluoranthene	0.015	J	N/A	0.00	no	N/A
SW-038-MWS	Fluorene	0.02	J	N/A	0.00	no	N/A
SW-038-MWS	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW-038-MWS	Hexachlorobutadiene	1	U	13	0.00	no	C
SW-038-MWS	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW-038-MWS	Hexachloroethane	1	U	70	0.00	no	C
SW-038-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW-038-MWS	Iron	70	U	N/A	0.00	no	N/A
SW-038-MWS	Iron, Dissolve	70	U	N/A	0.00	no	N/A
SW-038-MWS	Isophorone	1	U	N/A	0.00	no	N/A
SW-038-MWS	Isopropylbenzene	1	U	3700	0.00	no	NC
SW-038-MWS	Lead	5	U	N/A	0.00	no	N/A
SW-038-MWS	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW-038-MWS	Manganese	5	U	N/A	0.00	no	N/A
SW-038-MWS	Manganese, Dissolve	5	U	N/A	0.00	no	N/A
SW-038-MWS	Mercury	0.2	U	3.7	0.00	no	NC
SW-038-MWS	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW-038-MWS	Methyl Acetate	5	UJ	N/A	0.00	no	N/A
SW-038-MWS	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW-038-MWS	Methylene Chloride	1	U	20000	0.00	no	NC
SW-038-MWS	Naphthalene	0.099	B	200	0.00	no	C
SW-038-MWS	Nickel	0.93	J	N/A	0.00	no	N/A
SW-038-MWS	Nickel, Dissolve	0.99	B	N/A	0.00	no	N/A
SW-038-MWS	Nitrobenzene	1	U	3100	0.00	no	C
SW-038-MWS	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW-038-MWS	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW-038-MWS	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
SW-038-MWS	Phenol	1	U	N/A	0.00	no	N/A
SW-038-MWS	Pyrene	0.1	U	N/A	0.00	no	N/A
SW-038-MWS	Selenium	4	J	N/A	0.00	no	N/A
SW-038-MWS	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW-038-MWS	Silver	6	U	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-038-MWS	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW-038-MWS	Styrene	1	U	39000	0.00	no	NC
SW-038-MWS	Tetrachloroethene	1	U	240	0.00	no	NC
SW-038-MWS	Thallium	10	U	N/A	0.00	no	N/A
SW-038-MWS	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW-038-MWS	Toluene	1	U	81000	0.00	no	NC
SW-038-MWS	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-038-MWS	Trichloroethene	1	U	22	0.00	no	NC
SW-038-MWS	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW-038-MWS	Vanadium	111		N/A	0.00	no	N/A
SW-038-MWS	Vanadium, Dissolve	108		N/A	0.00	no	N/A
SW-038-MWS	Vinyl chloride	1	U	25	0.00	no	C
SW-038-MWS	Xylenes	3	U	1600	0.00	no	NC
SW-038-MWS	Zinc	10	U	N/A	0.00	no	N/A
SW-038-MWS	Zinc, Dissolve	1.3	B	N/A	0.00	no	N/A
SW-039-MWS	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW-039-MWS	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW-039-MWS	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	UJ	6100	0.00	no	NC
SW-039-MWS	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW-039-MWS	1,1-Biphenyl	1	U	140	0.00	no	NC
SW-039-MWS	1,1-Dichloroethane	1	U	330	0.00	no	C
SW-039-MWS	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW-039-MWS	1,2,3-Trichlorobenzene	2	UJ	N/A	0.00	no	N/A
SW-039-MWS	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW-039-MWS	1,2,4-Trichlorobenzene	1	UJ	150	0.00	no	NC
SW-039-MWS	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW-039-MWS	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW-039-MWS	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW-039-MWS	1,2-Dichloroethane	1	U	98	0.00	no	C
SW-039-MWS	1,2-Dichloropropane	1	U	110	0.00	no	C
SW-039-MWS	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW-039-MWS	1,4-Dioxane	0.1	U	130000	0.00	no	C
SW-039-MWS	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW-039-MWS	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
SW-039-MWS	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW-039-MWS	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW-039-MWS	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW-039-MWS	2,4-Dinitrophenol	2.5	U	N/A	0.00	no	N/A
SW-039-MWS	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-039-MWS	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-039-MWS	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW-039-MWS	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW-039-MWS	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW-039-MWS	2-Hexanone	10	U	34000	0.00	no	NC
SW-039-MWS	2-Methylnaphthalene	0.21		N/A	0.00	no	N/A
SW-039-MWS	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW-039-MWS	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-039-MWS	3,3'-Dichlorobenzidine	1	U	N/A	0.00	no	N/A
SW-039-MWS	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW-039-MWS	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW-039-MWS	4-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-039-MWS	Acenaphthene	0.03	J	N/A	0.00	no	N/A
SW-039-MWS	Acetone	10	UJ	95000000	0.00	no	NC
SW-039-MWS	Acetophenone	1	U	N/A	0.00	no	N/A
SW-039-MWS	Aluminum	125		N/A	0.00	no	N/A
SW-039-MWS	Aluminum, Dissolve	120		N/A	0.00	no	N/A
SW-039-MWS	Anthracene	0.046	J	N/A	0.00	no	N/A
SW-039-MWS	Antimony	6	U	N/A	0.00	no	N/A
SW-039-MWS	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW-039-MWS	Arsenic	5	U	N/A	0.00	no	N/A
SW-039-MWS	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SW-039-MWS	Barium	51.5		N/A	0.00	no	N/A
SW-039-MWS	Barium, Dissolve	51.4		N/A	0.00	no	N/A
SW-039-MWS	Benzaldehyde	1	U	N/A	0.00	no	N/A

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-039-MWS	Benzene	1	U	69	0.00	no	C
SW-039-MWS	Benzo[a]anthracene	0.1	UJ	NVT	0.00	no	C
SW-039-MWS	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW-039-MWS	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-039-MWS	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-039-MWS	Beryllium	1	U	N/A	0.00	no	N/A
SW-039-MWS	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW-039-MWS	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW-039-MWS	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW-039-MWS	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW-039-MWS	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A
SW-039-MWS	Bromodichloromethane	1	U	38	0.00	no	C
SW-039-MWS	Bromoform	1	U	5100	0.00	no	C
SW-039-MWS	Bromomethane	1	U	73	0.00	no	NC
SW-039-MWS	Cadmium	3	U	N/A	0.00	no	N/A
SW-039-MWS	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A
SW-039-MWS	Caprolactam	2.5	U	N/A	0.00	no	N/A
SW-039-MWS	Carbon disulfide	1	U	5200	0.00	no	NC
SW-039-MWS	Carbon tetrachloride	1	U	18	0.00	no	C
SW-039-MWS	Chlorobenzene	1	U	1700	0.00	no	NC
SW-039-MWS	Chloroethane	1	U	97000	0.00	no	NC
SW-039-MWS	Chloroform	1	U	36	0.00	no	C
SW-039-MWS	Chloromethane	1	U	1100	0.00	no	NC
SW-039-MWS	Chromium	0.81	J	N/A	0.00	no	N/A
SW-039-MWS	Chromium VI	10	U	N/A	0.00	no	N/A
SW-039-MWS	Chromium, Dissolve	5	U	N/A	0.00	no	N/A
SW-039-MWS	Chrysene	0.1	UJ	N/A	0.00	no	N/A
SW-039-MWS	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-039-MWS	Cobalt	5	U	N/A	0.00	no	N/A
SW-039-MWS	Cobalt, Dissolve	5	U	N/A	0.00	no	N/A
SW-039-MWS	Copper	5	U	N/A	0.00	no	N/A
SW-039-MWS	Copper, Dissolve	5	U	N/A	0.00	no	N/A
SW-039-MWS	Cyanide	10	U	3.5	0.00	no	NC
SW-039-MWS	Cyclohexane	10	U	4300	0.00	no	NC
SW-039-MWS	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW-039-MWS	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW-039-MWS	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW-039-MWS	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW-039-MWS	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW-039-MWS	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW-039-MWS	Ethylbenzene	1	U	150	0.00	no	C
SW-039-MWS	Fluoranthene	0.026	J	N/A	0.00	no	N/A
SW-039-MWS	Fluorene	0.026	J	N/A	0.00	no	N/A
SW-039-MWS	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW-039-MWS	Hexachlorobutadiene	1	U	13	0.00	no	C
SW-039-MWS	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW-039-MWS	Hexachloroethane	1	U	70	0.00	no	C
SW-039-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW-039-MWS	Iron	13	B	N/A	0.00	no	N/A
SW-039-MWS	Iron, Dissolve	70	U	N/A	0.00	no	N/A
SW-039-MWS	Isophorone	1	U	N/A	0.00	no	N/A
SW-039-MWS	Isopropylbenzene	1	U	3700	0.00	no	NC
SW-039-MWS	Lead	5	U	N/A	0.00	no	N/A
SW-039-MWS	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW-039-MWS	Manganese	1.6	B	N/A	0.00	no	N/A
SW-039-MWS	Manganese, Dissolve	5	U	N/A	0.00	no	N/A
SW-039-MWS	Mercury	0.2	U	3.7	0.00	no	NC
SW-039-MWS	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW-039-MWS	Methyl Acetate	5	UJ	N/A	0.00	no	N/A
SW-039-MWS	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW-039-MWS	Methylene Chloride	1	U	20000	0.00	no	NC
SW-039-MWS	Naphthalene	0.11		200	0.00	no	C
SW-039-MWS	Nickel	10	U	N/A	0.00	no	N/A
SW-039-MWS	Nickel, Dissolve	1	B	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-039-MWS	Nitrobenzene	1	U	3100	0.00	no	C
SW-039-MWS	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW-039-MWS	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW-039-MWS	Pentachlorophenol	1	J	N/A	0.00	no	N/A
SW-039-MWS	Phenol	1	U	N/A	0.00	no	N/A
SW-039-MWS	Pyrene	0.035	J	N/A	0.00	no	N/A
SW-039-MWS	Selenium	5.4	J	N/A	0.00	no	N/A
SW-039-MWS	Selenium, Dissolve	3.7	J	N/A	0.00	no	N/A
SW-039-MWS	Silver	6	U	N/A	0.00	no	N/A
SW-039-MWS	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW-039-MWS	Styrene	1	U	39000	0.00	no	NC
SW-039-MWS	Tetrachloroethene	1	U	240	0.00	no	NC
SW-039-MWS	Thallium	4.1	J	N/A	0.00	no	N/A
SW-039-MWS	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW-039-MWS	Toluene	1	U	81000	0.00	no	NC
SW-039-MWS	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-039-MWS	Trichloroethene	1	U	22	0.00	no	NC
SW-039-MWS	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW-039-MWS	Vanadium	2.8	B	N/A	0.00	no	N/A
SW-039-MWS	Vanadium, Dissolve	2.6	B	N/A	0.00	no	N/A
SW-039-MWS	Vinyl chloride	1	U	25	0.00	no	C
SW-039-MWS	Xylenes	3	U	1600	0.00	no	NC
SW-039-MWS	Zinc	10	U	N/A	0.00	no	N/A
SW-039-MWS	Zinc, Dissolve	1.2	B	N/A	0.00	no	N/A
SW-040-MWS	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW-040-MWS	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW-040-MWS	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW-040-MWS	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW-040-MWS	1,1-Biphenyl	1	U	140	0.00	no	NC
SW-040-MWS	1,1-Dichloroethane	1	U	330	0.00	no	C
SW-040-MWS	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW-040-MWS	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW-040-MWS	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW-040-MWS	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW-040-MWS	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW-040-MWS	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW-040-MWS	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW-040-MWS	1,2-Dichloroethane	1	U	98	0.00	no	C
SW-040-MWS	1,2-Dichloropropane	1	U	110	0.00	no	C
SW-040-MWS	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW-040-MWS	1,4-Dioxane	0.1	U	130000	0.00	no	C
SW-040-MWS	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW-040-MWS	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
SW-040-MWS	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW-040-MWS	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW-040-MWS	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW-040-MWS	2,4-Dinitrophenol	2.5	U	N/A	0.00	no	N/A
SW-040-MWS	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-040-MWS	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-040-MWS	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW-040-MWS	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW-040-MWS	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW-040-MWS	2-Hexanone	10	U	34000	0.00	no	NC
SW-040-MWS	2-Methylnaphthalene	0.1	U	N/A	0.00	no	N/A
SW-040-MWS	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW-040-MWS	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-040-MWS	3,3'-Dichlorobenzidine	1	U	N/A	0.00	no	N/A
SW-040-MWS	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW-040-MWS	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW-040-MWS	4-Nitroaniline	2.5	UJ	N/A	0.00	no	N/A
SW-040-MWS	Acenaphthene	0.1	U	N/A	0.00	no	N/A
SW-040-MWS	Acetone	10	U	95000000	0.00	no	NC
SW-040-MWS	Acetophenone	1	U	N/A	0.00	no	N/A
SW-040-MWS	Aluminum	1150	J	N/A	0.00	no	N/A

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-040-MWS	Aluminum, Dissolve	453		N/A	0.00	no	N/A
SW-040-MWS	Anthracene	0.019	J	N/A	0.00	no	N/A
SW-040-MWS	Antimony	6	U	N/A	0.00	no	N/A
SW-040-MWS	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW-040-MWS	Arsenic	5	U	N/A	0.00	no	N/A
SW-040-MWS	Arsenic, Dissolve	4	B	N/A	0.00	no	N/A
SW-040-MWS	Barium	18.1		N/A	0.00	no	N/A
SW-040-MWS	Barium, Dissolve	16		N/A	0.00	no	N/A
SW-040-MWS	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW-040-MWS	Benzene	1	U	69	0.00	no	C
SW-040-MWS	Benzo[a]anthracene	0.1	U	NVT	0.00	no	C
SW-040-MWS	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW-040-MWS	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-040-MWS	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-040-MWS	Beryllium	1	U	N/A	0.00	no	N/A
SW-040-MWS	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW-040-MWS	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW-040-MWS	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW-040-MWS	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW-040-MWS	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A
SW-040-MWS	Bromodichloromethane	1	U	38	0.00	no	C
SW-040-MWS	Bromoform	1	U	5100	0.00	no	C
SW-040-MWS	Bromomethane	1	U	73	0.00	no	NC
SW-040-MWS	Cadmium	3	U	N/A	0.00	no	N/A
SW-040-MWS	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A
SW-040-MWS	Caprolactam	2.5	U	N/A	0.00	no	N/A
SW-040-MWS	Carbon disulfide	1	U	5200	0.00	no	NC
SW-040-MWS	Carbon tetrachloride	1	U	18	0.00	no	C
SW-040-MWS	Chlorobenzene	1	U	1700	0.00	no	NC
SW-040-MWS	Chloroethane	1	U	97000	0.00	no	NC
SW-040-MWS	Chloroform	1	U	36	0.00	no	C
SW-040-MWS	Chloromethane	1	U	1100	0.00	no	NC
SW-040-MWS	Chromium	10.7		N/A	0.00	no	N/A
SW-040-MWS	Chromium VI	10	U	N/A	0.00	no	N/A
SW-040-MWS	Chromium, Dissolve	3.3	B	N/A	0.00	no	N/A
SW-040-MWS	Chrysene	0.1	U	N/A	0.00	no	N/A
SW-040-MWS	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-040-MWS	Cobalt	5	U	N/A	0.00	no	N/A
SW-040-MWS	Cobalt, Dissolve	5	U	N/A	0.00	no	N/A
SW-040-MWS	Copper	1.8	J	N/A	0.00	no	N/A
SW-040-MWS	Copper, Dissolve	5	U	N/A	0.00	no	N/A
SW-040-MWS	Cyanide	10	U	3.5	0.00	no	NC
SW-040-MWS	Cyclohexane	10	U	4300	0.00	no	NC
SW-040-MWS	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW-040-MWS	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW-040-MWS	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW-040-MWS	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW-040-MWS	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW-040-MWS	Di-n-ocytlphthalate	1	UJ	N/A	0.00	no	N/A
SW-040-MWS	Ethylbenzene	1	U	150	0.00	no	C
SW-040-MWS	Fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-040-MWS	Fluorene	0.1	U	N/A	0.00	no	N/A
SW-040-MWS	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW-040-MWS	Hexachlorobutadiene	1	U	13	0.00	no	C
SW-040-MWS	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW-040-MWS	Hexachloroethane	1	U	70	0.00	no	C
SW-040-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW-040-MWS	Iron	1500		N/A	0.00	no	N/A
SW-040-MWS	Iron, Dissolve	127		N/A	0.00	no	N/A
SW-040-MWS	Isophorone	1	U	N/A	0.00	no	N/A
SW-040-MWS	Isopropylbenzene	1	U	3700	0.00	no	NC
SW-040-MWS	Lead	5	U	N/A	0.00	no	N/A
SW-040-MWS	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW-040-MWS	Manganese	71.2		N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-040-MWS	Manganese, Dissolve	62.4		N/A	0.00	no	N/A
SW-040-MWS	Mercury	0.2	U	3.7	0.00	no	NC
SW-040-MWS	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW-040-MWS	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW-040-MWS	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW-040-MWS	Methylene Chloride	1	U	20000	0.00	no	NC
SW-040-MWS	Naphthalene	0.033	B	200	0.00	no	C
SW-040-MWS	Nickel	0.78	B	N/A	0.00	no	N/A
SW-040-MWS	Nickel, Dissolve	0.82	B	N/A	0.00	no	N/A
SW-040-MWS	Nitrobenzene	1	U	3100	0.00	no	C
SW-040-MWS	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW-040-MWS	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW-040-MWS	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
SW-040-MWS	Phenol	1	U	N/A	0.00	no	N/A
SW-040-MWS	Pyrene	0.1	U	N/A	0.00	no	N/A
SW-040-MWS	Selenium	7.3	B	N/A	0.00	no	N/A
SW-040-MWS	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW-040-MWS	Silver	6	U	N/A	0.00	no	N/A
SW-040-MWS	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW-040-MWS	Styrene	1	U	39000	0.00	no	NC
SW-040-MWS	Tetrachloroethene	1	U	240	0.00	no	NC
SW-040-MWS	Thallium	10	U	N/A	0.00	no	N/A
SW-040-MWS	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW-040-MWS	Toluene	1	U	81000	0.00	no	NC
SW-040-MWS	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-040-MWS	Trichloroethene	1	U	22	0.00	no	NC
SW-040-MWS	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW-040-MWS	Vanadium	155		N/A	0.00	no	N/A
SW-040-MWS	Vanadium, Dissolve	129		N/A	0.00	no	N/A
SW-040-MWS	Vinyl chloride	1	U	25	0.00	no	C
SW-040-MWS	Xylenes	3	U	1600	0.00	no	NC
SW-040-MWS	Zinc	1.9	J	N/A	0.00	no	N/A
SW-040-MWS	Zinc, Dissolve	0.73	J	N/A	0.00	no	N/A
SW-041-MWS	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW-041-MWS	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW-041-MWS	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	UJ	6100	0.00	no	NC
SW-041-MWS	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW-041-MWS	1,1-Biphenyl	1.2	U	140	0.00	no	NC
SW-041-MWS	1,1-Dichloroethane	1	U	330	0.00	no	C
SW-041-MWS	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW-041-MWS	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW-041-MWS	1,2,4,5-Tetrachlorobenzene	1.2	U	N/A	0.00	no	N/A
SW-041-MWS	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW-041-MWS	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW-041-MWS	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW-041-MWS	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW-041-MWS	1,2-Dichloroethane	1	U	98	0.00	no	C
SW-041-MWS	1,2-Dichloropropane	1	U	110	0.00	no	C
SW-041-MWS	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW-041-MWS	1,4-Dioxane	0.04	J	130000	0.00	no	C
SW-041-MWS	2,3,4,6-Tetrachlorophenol	1.2	U	N/A	0.00	no	N/A
SW-041-MWS	2,4,5-Trichlorophenol	3	U	N/A	0.00	no	N/A
SW-041-MWS	2,4,6-Trichlorophenol	1.2	U	N/A	0.00	no	N/A
SW-041-MWS	2,4-Dichlorophenol	1.2	U	N/A	0.00	no	N/A
SW-041-MWS	2,4-Dimethylphenol	1.2	U	N/A	0.00	no	N/A
SW-041-MWS	2,4-Dinitrophenol	3	U	N/A	0.00	no	N/A
SW-041-MWS	2,4-Dinitrotoluene	1.2	U	N/A	0.00	no	N/A
SW-041-MWS	2,6-Dinitrotoluene	1.2	U	N/A	0.00	no	N/A
SW-041-MWS	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW-041-MWS	2-Chloronaphthalene	1.2	U	N/A	0.00	no	N/A
SW-041-MWS	2-Chlorophenol	1.2	U	N/A	0.00	no	N/A
SW-041-MWS	2-Hexanone	10	U	34000	0.00	no	NC
SW-041-MWS	2-Methylnaphthalene	0.1	U	N/A	0.00	no	N/A
SW-041-MWS	2-Methylphenol	1.2	U	N/A	0.00	no	N/A

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-041-MWS	2-Nitroaniline	3	U	N/A	0.00	no	N/A
SW-041-MWS	3,3'-Dichlorobenzidine	1.2	U	N/A	0.00	no	N/A
SW-041-MWS	4-Chloroaniline	1.2	U	N/A	0.00	no	N/A
SW-041-MWS	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW-041-MWS	4-Nitroaniline	3	UJ	N/A	0.00	no	N/A
SW-041-MWS	Acenaphthene	0.1	U	N/A	0.00	no	N/A
SW-041-MWS	Acetone	10	U	95000000	0.00	no	NC
SW-041-MWS	Acetophenone	1.2	U	N/A	0.00	no	N/A
SW-041-MWS	Aluminum	60		N/A	0.00	no	N/A
SW-041-MWS	Aluminum, Dissolve	42.2	J	N/A	0.00	no	N/A
SW-041-MWS	Anthracene	0.1	U	N/A	0.00	no	N/A
SW-041-MWS	Antimony	6	U	N/A	0.00	no	N/A
SW-041-MWS	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW-041-MWS	Arsenic	5	U	N/A	0.00	no	N/A
SW-041-MWS	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SW-041-MWS	Barium	18.7		N/A	0.00	no	N/A
SW-041-MWS	Barium, Dissolve	19.4		N/A	0.00	no	N/A
SW-041-MWS	Benzaldehyde	1.2	U	N/A	0.00	no	N/A
SW-041-MWS	Benzene	1	U	69	0.00	no	C
SW-041-MWS	Benzo[a]anthracene	0.1	U	NVT	0.00	no	C
SW-041-MWS	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW-041-MWS	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-041-MWS	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-041-MWS	Beryllium	1	U	N/A	0.00	no	N/A
SW-041-MWS	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW-041-MWS	bis(2-chloroethoxy)methane	1.2	U	N/A	0.00	no	N/A
SW-041-MWS	bis(2-Chloroethyl)ether	1.2	U	530	0.00	no	C
SW-041-MWS	bis(2-Chloroisopropyl)ether	1.2	U	N/A	0.00	no	N/A
SW-041-MWS	bis(2-Ethylhexyl)phthalate	1.2	U	N/A	0.00	no	N/A
SW-041-MWS	Bromodichloromethane	1	U	38	0.00	no	C
SW-041-MWS	Bromoform	1	U	5100	0.00	no	C
SW-041-MWS	Bromomethane	1	U	73	0.00	no	NC
SW-041-MWS	Cadmium	3	U	N/A	0.00	no	N/A
SW-041-MWS	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A
SW-041-MWS	Caprolactam	3	U	N/A	0.00	no	N/A
SW-041-MWS	Carbon disulfide	1	U	5200	0.00	no	NC
SW-041-MWS	Carbon tetrachloride	1	UJ	18	0.00	no	C
SW-041-MWS	Chlorobenzene	1	U	1700	0.00	no	NC
SW-041-MWS	Chloroethane	1	U	97000	0.00	no	NC
SW-041-MWS	Chloroform	1	U	36	0.00	no	C
SW-041-MWS	Chloromethane	1	U	1100	0.00	no	NC
SW-041-MWS	Chromium	5	U	N/A	0.00	no	N/A
SW-041-MWS	Chromium VI	10	U	N/A	0.00	no	N/A
SW-041-MWS	Chromium, Dissolve	5	U	N/A	0.00	no	N/A
SW-041-MWS	Chrysene	0.1	U	N/A	0.00	no	N/A
SW-041-MWS	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-041-MWS	Cobalt	5.9		N/A	0.00	no	N/A
SW-041-MWS	Cobalt, Dissolve	5.6		N/A	0.00	no	N/A
SW-041-MWS	Copper	5	U	N/A	0.00	no	N/A
SW-041-MWS	Copper, Dissolve	5	U	N/A	0.00	no	N/A
SW-041-MWS	Cyanide	10	U	3.5	0.00	no	NC
SW-041-MWS	Cyclohexane	10	U	4300	0.00	no	NC
SW-041-MWS	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW-041-MWS	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW-041-MWS	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW-041-MWS	Diethylphthalate	1.2	U	N/A	0.00	no	N/A
SW-041-MWS	Di-n-butylphthalate	1.2	U	N/A	0.00	no	N/A
SW-041-MWS	Di-n-ocytlphthalate	1.2	UJ	N/A	0.00	no	N/A
SW-041-MWS	Ethylbenzene	1	U	150	0.00	no	C
SW-041-MWS	Fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-041-MWS	Fluorene	0.1	U	N/A	0.00	no	N/A
SW-041-MWS	Hexachlorobenzene	1.2	U	3.8	0.00	no	C
SW-041-MWS	Hexachlorobutadiene	1.2	U	13	0.00	no	C
SW-041-MWS	Hexachlorocyclopentadiene	1.2	U	0.79	0.00	no	NC

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-041-MWS	Hexachloroethane	1.2	U	70	0.00	no	C
SW-041-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW-041-MWS	Iron	12600		N/A	0.00	no	N/A
SW-041-MWS	Iron, Dissolve	13400		N/A	0.00	no	N/A
SW-041-MWS	Isophorone	1.2	U	N/A	0.00	no	N/A
SW-041-MWS	Isopropylbenzene	1	U	3700	0.00	no	NC
SW-041-MWS	Lead	5	U	N/A	0.00	no	N/A
SW-041-MWS	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW-041-MWS	Manganese	362		N/A	0.00	no	N/A
SW-041-MWS	Manganese, Dissolve	362		N/A	0.00	no	N/A
SW-041-MWS	Mercury	0.2	U	3.7	0.00	no	NC
SW-041-MWS	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW-041-MWS	Methyl Acetate	5	UJ	N/A	0.00	no	N/A
SW-041-MWS	Methyl tert-butyl ether (MTBE)	2.9		20000	0.00	no	C
SW-041-MWS	Methylene Chloride	1	U	20000	0.00	no	NC
SW-041-MWS	Naphthalene	0.029	B	200	0.00	no	C
SW-041-MWS	Nickel	6.7	B	N/A	0.00	no	N/A
SW-041-MWS	Nickel, Dissolve	6.3	B	N/A	0.00	no	N/A
SW-041-MWS	Nitrobenzene	1.2	U	3100	0.00	no	C
SW-041-MWS	N-Nitroso-di-n-propylamine	1.2	U	N/A	0.00	no	N/A
SW-041-MWS	N-Nitrosodiphenylamine	1.2	U	N/A	0.00	no	N/A
SW-041-MWS	Pentachlorophenol	3	U	N/A	0.00	no	N/A
SW-041-MWS	Phenol	1.2	U	N/A	0.00	no	N/A
SW-041-MWS	Pyrene	0.1	U	N/A	0.00	no	N/A
SW-041-MWS	Selenium	8	U	N/A	0.00	no	N/A
SW-041-MWS	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW-041-MWS	Silver	6	U	N/A	0.00	no	N/A
SW-041-MWS	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW-041-MWS	Styrene	1	U	39000	0.00	no	NC
SW-041-MWS	Tetrachloroethene	1	U	240	0.00	no	NC
SW-041-MWS	Thallium	10	U	N/A	0.00	no	N/A
SW-041-MWS	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW-041-MWS	Toluene	1	U	81000	0.00	no	NC
SW-041-MWS	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-041-MWS	Trichloroethene	1	U	22	0.00	no	NC
SW-041-MWS	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW-041-MWS	Vanadium	0.58	J	N/A	0.00	no	N/A
SW-041-MWS	Vanadium, Dissolve	5	U	N/A	0.00	no	N/A
SW-041-MWS	Vinyl chloride	1	U	25	0.00	no	C
SW-041-MWS	Xylenes	3	U	1600	0.00	no	NC
SW-041-MWS	Zinc	20.7		N/A	0.00	no	N/A
SW-041-MWS	Zinc, Dissolve	20		N/A	0.00	no	N/A
SW-042-MWS	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW-042-MWS	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW-042-MWS	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW-042-MWS	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW-042-MWS	1,1-Biphenyl	1.2	U	140	0.00	no	NC
SW-042-MWS	1,1-Dichloroethane	1	U	330	0.00	no	C
SW-042-MWS	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW-042-MWS	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW-042-MWS	1,2,4,5-Tetrachlorobenzene	1.2	U	N/A	0.00	no	N/A
SW-042-MWS	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW-042-MWS	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW-042-MWS	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW-042-MWS	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW-042-MWS	1,2-Dichloroethane	1	U	98	0.00	no	C
SW-042-MWS	1,2-Dichloropropane	1	U	110	0.00	no	C
SW-042-MWS	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW-042-MWS	1,4-Dioxane	0.1	U	130000	0.00	no	C
SW-042-MWS	2,3,4,6-Tetrachlorophenol	1.2	U	N/A	0.00	no	N/A
SW-042-MWS	2,4,5-Trichlorophenol	3	U	N/A	0.00	no	N/A
SW-042-MWS	2,4,6-Trichlorophenol	1.2	U	N/A	0.00	no	N/A
SW-042-MWS	2,4-Dichlorophenol	1.2	U	N/A	0.00	no	N/A
SW-042-MWS	2,4-Dimethylphenol	1.2	U	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-042-MWS	2,4-Dinitrophenol	3	U	N/A	0.00	no	N/A
SW-042-MWS	2,4-Dinitrotoluene	1.2	U	N/A	0.00	no	N/A
SW-042-MWS	2,6-Dinitrotoluene	1.2	U	N/A	0.00	no	N/A
SW-042-MWS	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW-042-MWS	2-Chloronaphthalene	1.2	U	N/A	0.00	no	N/A
SW-042-MWS	2-Chlorophenol	1.2	U	N/A	0.00	no	N/A
SW-042-MWS	2-Hexanone	10	U	34000	0.00	no	NC
SW-042-MWS	2-Methylnaphthalene	0.1	U	N/A	0.00	no	N/A
SW-042-MWS	2-Methylphenol	1.2	U	N/A	0.00	no	N/A
SW-042-MWS	2-Nitroaniline	3	U	N/A	0.00	no	N/A
SW-042-MWS	3,3'-Dichlorobenzidine	1.2	U	N/A	0.00	no	N/A
SW-042-MWS	4-Chloroaniline	1.2	U	N/A	0.00	no	N/A
SW-042-MWS	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW-042-MWS	4-Nitroaniline	3	UJ	N/A	0.00	no	N/A
SW-042-MWS	Acenaphthene	0.1	U	N/A	0.00	no	N/A
SW-042-MWS	Acetone	10	U	95000000	0.00	no	NC
SW-042-MWS	Acetophenone	1.2	U	N/A	0.00	no	N/A
SW-042-MWS	Aluminum	1200		N/A	0.00	no	N/A
SW-042-MWS	Aluminum, Dissolve	1220		N/A	0.00	no	N/A
SW-042-MWS	Anthracene	0.1	U	N/A	0.00	no	N/A
SW-042-MWS	Antimony	6	U	N/A	0.00	no	N/A
SW-042-MWS	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW-042-MWS	Arsenic	5	U	N/A	0.00	no	N/A
SW-042-MWS	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SW-042-MWS	Barium	16.4		N/A	0.00	no	N/A
SW-042-MWS	Barium, Dissolve	16.9		N/A	0.00	no	N/A
SW-042-MWS	Benzaldehyde	1.2	U	N/A	0.00	no	N/A
SW-042-MWS	Benzene	1	U	69	0.00	no	C
SW-042-MWS	Benzo[a]anthracene	0.1	U	NVT	0.00	no	C
SW-042-MWS	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW-042-MWS	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-042-MWS	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-042-MWS	Beryllium	2.2		N/A	0.00	no	N/A
SW-042-MWS	Beryllium, Dissolve	2.3		N/A	0.00	no	N/A
SW-042-MWS	bis(2-chloroethoxy)methane	1.2	U	N/A	0.00	no	N/A
SW-042-MWS	bis(2-Chloroethyl)ether	1.2	U	530	0.00	no	C
SW-042-MWS	bis(2-Chloroisopropyl)ether	1.2	U	N/A	0.00	no	N/A
SW-042-MWS	bis(2-Ethylhexyl)phthalate	1.2	U	N/A	0.00	no	N/A
SW-042-MWS	Bromodichloromethane	1	U	38	0.00	no	C
SW-042-MWS	Bromoform	1	U	5100	0.00	no	C
SW-042-MWS	Bromomethane	1	U	73	0.00	no	NC
SW-042-MWS	Cadmium	0.61	B	N/A	0.00	no	N/A
SW-042-MWS	Cadmium, Dissolve	0.54	B	N/A	0.00	no	N/A
SW-042-MWS	Caprolactam	3	U	N/A	0.00	no	N/A
SW-042-MWS	Carbon disulfide	1	U	5200	0.00	no	NC
SW-042-MWS	Carbon tetrachloride	1	U	18	0.00	no	C
SW-042-MWS	Chlorobenzene	1	U	1700	0.00	no	NC
SW-042-MWS	Chloroethane	1	U	97000	0.00	no	NC
SW-042-MWS	Chloroform	1	U	36	0.00	no	C
SW-042-MWS	Chloromethane	1	U	1100	0.00	no	NC
SW-042-MWS	Chromium	5	U	N/A	0.00	no	N/A
SW-042-MWS	Chromium VI	10	U	N/A	0.00	no	N/A
SW-042-MWS	Chromium, Dissolve	5	U	N/A	0.00	no	N/A
SW-042-MWS	Chrysene	0.1	U	N/A	0.00	no	N/A
SW-042-MWS	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-042-MWS	Cobalt	40.2		N/A	0.00	no	N/A
SW-042-MWS	Cobalt, Dissolve	41.6		N/A	0.00	no	N/A
SW-042-MWS	Copper	3.2	J	N/A	0.00	no	N/A
SW-042-MWS	Copper, Dissolve	2.8	J	N/A	0.00	no	N/A
SW-042-MWS	Cyanide	10	U	3.5	0.00	no	NC
SW-042-MWS	Cyclohexane	10	U	4300	0.00	no	NC
SW-042-MWS	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW-042-MWS	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW-042-MWS	Dichlorodifluoromethane	1	U	31	0.00	no	NC

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-042-MWS	Diethylphthalate	1.2	U	N/A	0.00	no	N/A
SW-042-MWS	Di-n-butylphthalate	1.2	UJ	N/A	0.00	no	N/A
SW-042-MWS	Di-n-ocytlphthalate	1.2	U	N/A	0.00	no	N/A
SW-042-MWS	Ethylbenzene	1	U	150	0.00	no	C
SW-042-MWS	Fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-042-MWS	Fluorene	0.1	U	N/A	0.00	no	N/A
SW-042-MWS	Hexachlorobenzene	1.2	U	3.8	0.00	no	C
SW-042-MWS	Hexachlorobutadiene	1.2	U	13	0.00	no	C
SW-042-MWS	Hexachlorocyclopentadiene	1.2	U	0.79	0.00	no	NC
SW-042-MWS	Hexachloroethane	1.2	U	70	0.00	no	C
SW-042-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW-042-MWS	Iron	4110		N/A	0.00	no	N/A
SW-042-MWS	Iron, Dissolve	4360		N/A	0.00	no	N/A
SW-042-MWS	Isophorone	1.2	U	N/A	0.00	no	N/A
SW-042-MWS	Isopropylbenzene	1	U	3700	0.00	no	NC
SW-042-MWS	Lead	5	U	N/A	0.00	no	N/A
SW-042-MWS	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW-042-MWS	Manganese	954		N/A	0.00	no	N/A
SW-042-MWS	Manganese, Dissolve	982		N/A	0.00	no	N/A
SW-042-MWS	Mercury	0.2	U	3.7	0.00	no	NC
SW-042-MWS	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW-042-MWS	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW-042-MWS	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW-042-MWS	Methylene Chloride	1	U	20000	0.00	no	NC
SW-042-MWS	Naphthalene	0.061	B	200	0.00	no	C
SW-042-MWS	Nickel	31.2		N/A	0.00	no	N/A
SW-042-MWS	Nickel, Dissolve	32.7		N/A	0.00	no	N/A
SW-042-MWS	Nitrobenzene	1.2	U	3100	0.00	no	C
SW-042-MWS	N-Nitroso-di-n-propylamine	1.2	U	N/A	0.00	no	N/A
SW-042-MWS	N-Nitrosodiphenylamine	1.2	U	N/A	0.00	no	N/A
SW-042-MWS	Pentachlorophenol	3	U	N/A	0.00	no	N/A
SW-042-MWS	Phenol	1.2	U	N/A	0.00	no	N/A
SW-042-MWS	Pyrene	0.1	U	N/A	0.00	no	N/A
SW-042-MWS	Selenium	8	U	N/A	0.00	no	N/A
SW-042-MWS	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW-042-MWS	Silver	6	U	N/A	0.00	no	N/A
SW-042-MWS	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW-042-MWS	Styrene	1	U	39000	0.00	no	NC
SW-042-MWS	Tetrachloroethene	1	U	240	0.00	no	NC
SW-042-MWS	Thallium	10	U	N/A	0.00	no	N/A
SW-042-MWS	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW-042-MWS	Toluene	1	U	81000	0.00	no	NC
SW-042-MWS	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-042-MWS	Trichloroethene	1	U	22	0.00	no	NC
SW-042-MWS	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW-042-MWS	Vanadium	0.82	J	N/A	0.00	no	N/A
SW-042-MWS	Vanadium, Dissolve	0.61	J	N/A	0.00	no	N/A
SW-042-MWS	Vinyl chloride	1	U	25	0.00	no	C
SW-042-MWS	Xylenes	3	U	1600	0.00	no	NC
SW-042-MWS	Zinc	127		N/A	0.00	no	N/A
SW-042-MWS	Zinc, Dissolve	137		N/A	0.00	no	N/A
SW-043-MWI	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW-043-MWI	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW-043-MWI	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW-043-MWI	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW-043-MWI	1,1-Biphenyl	1	U	140	0.00	no	NC
SW-043-MWI	1,1-Dichloroethane	1	U	330	0.00	no	C
SW-043-MWI	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW-043-MWI	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW-043-MWI	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW-043-MWI	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW-043-MWI	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW-043-MWI	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW-043-MWI	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-043-MWI	1,2-Dichloroethane	1	U	98	0.00	no	C
SW-043-MWI	1,2-Dichloropropane	1	U	110	0.00	no	C
SW-043-MWI	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW-043-MWI	1,4-Dioxane	0.1	U	130000	0.00	no	C
SW-043-MWI	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW-043-MWI	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
SW-043-MWI	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW-043-MWI	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW-043-MWI	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW-043-MWI	2,4-Dinitrophenol	2.5	U	N/A	0.00	no	N/A
SW-043-MWI	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-043-MWI	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-043-MWI	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW-043-MWI	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW-043-MWI	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW-043-MWI	2-Hexanone	10	U	34000	0.00	no	NC
SW-043-MWI	2-Methylnaphthalene	0.1	U	N/A	0.00	no	N/A
SW-043-MWI	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW-043-MWI	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-043-MWI	3,3'-Dichlorobenzidine	1	U	N/A	0.00	no	N/A
SW-043-MWI	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW-043-MWI	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW-043-MWI	4-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-043-MWI	Acenaphthene	0.1	U	N/A	0.00	no	N/A
SW-043-MWI	Acetone	20.3		95000000	0.00	no	NC
SW-043-MWI	Acetophenone	1	U	N/A	0.00	no	N/A
SW-043-MWI	Aluminum	119		N/A	0.00	no	N/A
SW-043-MWI	Aluminum, Dissolve	18.9	B	N/A	0.00	no	N/A
SW-043-MWI	Anthracene	0.1	U	N/A	0.00	no	N/A
SW-043-MWI	Antimony	6	U	N/A	0.00	no	N/A
SW-043-MWI	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW-043-MWI	Arsenic	2.9	B	N/A	0.00	no	N/A
SW-043-MWI	Arsenic, Dissolve	3.3	B	N/A	0.00	no	N/A
SW-043-MWI	Barium	175		N/A	0.00	no	N/A
SW-043-MWI	Barium, Dissolve	173		N/A	0.00	no	N/A
SW-043-MWI	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW-043-MWI	Benzene	1	U	69	0.00	no	C
SW-043-MWI	Benzo[a]anthracene	0.1	U	NVT	0.00	no	C
SW-043-MWI	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW-043-MWI	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-043-MWI	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-043-MWI	Beryllium	1	U	N/A	0.00	no	N/A
SW-043-MWI	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW-043-MWI	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW-043-MWI	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW-043-MWI	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW-043-MWI	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A
SW-043-MWI	Bromodichloromethane	1	U	38	0.00	no	C
SW-043-MWI	Bromoform	1	U	5100	0.00	no	C
SW-043-MWI	Bromomethane	1	UJ	73	0.00	no	NC
SW-043-MWI	Cadmium	3	U	N/A	0.00	no	N/A
SW-043-MWI	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A
SW-043-MWI	Caprolactam	2.5	U	N/A	0.00	no	N/A
SW-043-MWI	Carbon disulfide	1	U	5200	0.00	no	NC
SW-043-MWI	Carbon tetrachloride	1	U	18	0.00	no	C
SW-043-MWI	Chlorobenzene	1	U	1700	0.00	no	NC
SW-043-MWI	Chloroethane	1	U	97000	0.00	no	NC
SW-043-MWI	Chloroform	2.6		36	0.07	no	C
SW-043-MWI	Chloromethane	1	UJ	1100	0.00	no	NC
SW-043-MWI	Chromium	1.3	J	N/A	0.00	no	N/A
SW-043-MWI	Chromium VI	10	U	N/A	0.00	no	N/A
SW-043-MWI	Chromium, Dissolve	1.3	B	N/A	0.00	no	N/A
SW-043-MWI	Chrysene	0.1	U	N/A	0.00	no	N/A
SW-043-MWI	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-043-MWI	Cobalt	2	B	N/A	0.00	no	N/A
SW-043-MWI	Cobalt, Dissolve	2	B	N/A	0.00	no	N/A
SW-043-MWI	Copper	5	U	N/A	0.00	no	N/A
SW-043-MWI	Copper, Dissolve	5	U	N/A	0.00	no	N/A
SW-043-MWI	Cyanide	10	U	3.5	0.00	no	NC
SW-043-MWI	Cyclohexane	10	U	4300	0.00	no	NC
SW-043-MWI	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW-043-MWI	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW-043-MWI	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW-043-MWI	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW-043-MWI	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW-043-MWI	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW-043-MWI	Ethylbenzene	1	U	150	0.00	no	C
SW-043-MWI	Fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-043-MWI	Fluorene	0.1	U	N/A	0.00	no	N/A
SW-043-MWI	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW-043-MWI	Hexachlorobutadiene	1	U	13	0.00	no	C
SW-043-MWI	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW-043-MWI	Hexachloroethane	1	U	70	0.00	no	C
SW-043-MWI	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW-043-MWI	Iron	15100		N/A	0.00	no	N/A
SW-043-MWI	Iron, Dissolve	14800		N/A	0.00	no	N/A
SW-043-MWI	Isophorone	1	U	N/A	0.00	no	N/A
SW-043-MWI	Isopropylbenzene	1	U	3700	0.00	no	NC
SW-043-MWI	Lead	5	U	N/A	0.00	no	N/A
SW-043-MWI	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW-043-MWI	Manganese	1010		N/A	0.00	no	N/A
SW-043-MWI	Manganese, Dissolve	1020		N/A	0.00	no	N/A
SW-043-MWI	Mercury	0.2	UJ	3.7	0.00	no	NC
SW-043-MWI	Mercury, Dissolve	0.2	UJ	3.7	0.00	no	NC
SW-043-MWI	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW-043-MWI	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW-043-MWI	Methylene Chloride	1	U	20000	0.00	no	NC
SW-043-MWI	Naphthalene	0.1	U	200	0.00	no	C
SW-043-MWI	Nickel	5	B	N/A	0.00	no	N/A
SW-043-MWI	Nickel, Dissolve	4.3	B	N/A	0.00	no	N/A
SW-043-MWI	Nitrobenzene	1	U	3100	0.00	no	C
SW-043-MWI	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW-043-MWI	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW-043-MWI	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
SW-043-MWI	Phenol	1	U	N/A	0.00	no	N/A
SW-043-MWI	Pyrene	0.1	U	N/A	0.00	no	N/A
SW-043-MWI	Selenium	8	U	N/A	0.00	no	N/A
SW-043-MWI	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW-043-MWI	Silver	0.57	B	N/A	0.00	no	N/A
SW-043-MWI	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW-043-MWI	Styrene	1	U	39000	0.00	no	NC
SW-043-MWI	Tetrachloroethene	1	U	240	0.00	no	NC
SW-043-MWI	Thallium	10	U	N/A	0.00	no	N/A
SW-043-MWI	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW-043-MWI	Toluene	1	U	81000	0.00	no	NC
SW-043-MWI	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-043-MWI	Trichloroethene	1	U	22	0.00	no	NC
SW-043-MWI	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW-043-MWI	Vanadium	0.93	J	N/A	0.00	no	N/A
SW-043-MWI	Vanadium, Dissolve	5	U	N/A	0.00	no	N/A
SW-043-MWI	Vinyl chloride	1	U	25	0.00	no	C
SW-043-MWI	Xylenes	3	U	1600	0.00	no	NC
SW-043-MWI	Zinc	6.9	B	N/A	0.00	no	N/A
SW-043-MWI	Zinc, Dissolve	6.4	B	N/A	0.00	no	N/A
SW-043-MWS	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW-043-MWS	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW-043-MWS	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW-043-MWS	1,1,2-Trichloroethane	1	U	26	0.00	no	NC

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-043-MWS	1,1-Biphenyl	1	U	140	0.00	no	NC
SW-043-MWS	1,1-Dichloroethane	1	U	330	0.00	no	C
SW-043-MWS	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW-043-MWS	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW-043-MWS	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW-043-MWS	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW-043-MWS	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW-043-MWS	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW-043-MWS	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW-043-MWS	1,2-Dichloroethane	1	U	98	0.00	no	C
SW-043-MWS	1,2-Dichloropropane	1	U	110	0.00	no	C
SW-043-MWS	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW-043-MWS	1,4-Dioxane	0.1	U	130000	0.00	no	C
SW-043-MWS	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW-043-MWS	2,4,5-Trichlorophenol	2.6	U	N/A	0.00	no	N/A
SW-043-MWS	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW-043-MWS	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW-043-MWS	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW-043-MWS	2,4-Dinitrophenol	2.6	UJ	N/A	0.00	no	N/A
SW-043-MWS	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-043-MWS	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-043-MWS	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW-043-MWS	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW-043-MWS	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW-043-MWS	2-Hexanone	10	U	34000	0.00	no	NC
SW-043-MWS	2-Methylnaphthalene	0.1	U	N/A	0.00	no	N/A
SW-043-MWS	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW-043-MWS	2-Nitroaniline	2.6	U	N/A	0.00	no	N/A
SW-043-MWS	3,3'-Dichlorobenzidine	1	R	N/A	0.00	no	N/A
SW-043-MWS	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW-043-MWS	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW-043-MWS	4-Nitroaniline	2.6	UJ	N/A	0.00	no	N/A
SW-043-MWS	Acenaphthene	0.1	U	N/A	0.00	no	N/A
SW-043-MWS	Acetone	10	UJ	95000000	0.00	no	NC
SW-043-MWS	Acetophenone	1	U	N/A	0.00	no	N/A
SW-043-MWS	Aluminum	1560		N/A	0.00	no	N/A
SW-043-MWS	Aluminum, Dissolve	1540		N/A	0.00	no	N/A
SW-043-MWS	Anthracene	0.1	U	N/A	0.00	no	N/A
SW-043-MWS	Antimony	6	U	N/A	0.00	no	N/A
SW-043-MWS	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW-043-MWS	Arsenic	5	U	N/A	0.00	no	N/A
SW-043-MWS	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SW-043-MWS	Barium	21.7		N/A	0.00	no	N/A
SW-043-MWS	Barium, Dissolve	22.1		N/A	0.00	no	N/A
SW-043-MWS	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW-043-MWS	Benzene	1	U	69	0.00	no	C
SW-043-MWS	Benzo[a]anthracene	0.1	U	NVT	0.00	no	C
SW-043-MWS	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW-043-MWS	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-043-MWS	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-043-MWS	Beryllium	2.7		N/A	0.00	no	N/A
SW-043-MWS	Beryllium, Dissolve	2.7		N/A	0.00	no	N/A
SW-043-MWS	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW-043-MWS	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW-043-MWS	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW-043-MWS	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A
SW-043-MWS	Bromodichloromethane	1	U	38	0.00	no	C
SW-043-MWS	Bromoform	1	U	5100	0.00	no	C
SW-043-MWS	Bromomethane	1	U	73	0.00	no	NC
SW-043-MWS	Cadmium	0.79	B	N/A	0.00	no	N/A
SW-043-MWS	Cadmium, Dissolve	0.79	J	N/A	0.00	no	N/A
SW-043-MWS	Caprolactam	2.6	UJ	N/A	0.00	no	N/A
SW-043-MWS	Carbon disulfide	1	U	5200	0.00	no	NC
SW-043-MWS	Carbon tetrachloride	1	U	18	0.00	no	C

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-043-MWS	Chlorobenzene	1	U	1700	0.00	no	NC
SW-043-MWS	Chloroethane	1	U	97000	0.00	no	NC
SW-043-MWS	Chloroform	1	U	36	0.00	no	C
SW-043-MWS	Chloromethane	1	U	1100	0.00	no	NC
SW-043-MWS	Chromium	1.1	B	N/A	0.00	no	N/A
SW-043-MWS	Chromium VI	10	U	N/A	0.00	no	N/A
SW-043-MWS	Chromium, Dissolve	1.1	J	N/A	0.00	no	N/A
SW-043-MWS	Chrysene	0.1	U	N/A	0.00	no	N/A
SW-043-MWS	cis-1,2-Dichloroethene	0.42	J	N/A	0.00	no	N/A
SW-043-MWS	Cobalt	29.8		N/A	0.00	no	N/A
SW-043-MWS	Cobalt, Dissolve	30.9		N/A	0.00	no	N/A
SW-043-MWS	Copper	7.2		N/A	0.00	no	N/A
SW-043-MWS	Copper, Dissolve	7.4	B	N/A	0.00	no	N/A
SW-043-MWS	Cyanide	10	U	3.5	0.00	no	NC
SW-043-MWS	Cyclohexane	10	U	4300	0.00	no	NC
SW-043-MWS	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW-043-MWS	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW-043-MWS	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW-043-MWS	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW-043-MWS	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW-043-MWS	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW-043-MWS	Ethylbenzene	1	U	150	0.00	no	C
SW-043-MWS	Fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-043-MWS	Fluorene	0.1	U	N/A	0.00	no	N/A
SW-043-MWS	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW-043-MWS	Hexachlorobutadiene	1	U	13	0.00	no	C
SW-043-MWS	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW-043-MWS	Hexachloroethane	1	U	70	0.00	no	C
SW-043-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW-043-MWS	Iron	10700		N/A	0.00	no	N/A
SW-043-MWS	Iron, Dissolve	11100		N/A	0.00	no	N/A
SW-043-MWS	Isophorone	1	U	N/A	0.00	no	N/A
SW-043-MWS	Isopropylbenzene	1	U	3700	0.00	no	NC
SW-043-MWS	Lead	5	U	N/A	0.00	no	N/A
SW-043-MWS	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW-043-MWS	Manganese	1070		N/A	0.00	no	N/A
SW-043-MWS	Manganese, Dissolve	1170	J	N/A	0.00	no	N/A
SW-043-MWS	Mercury	0.2	U	3.7	0.00	no	NC
SW-043-MWS	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW-043-MWS	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW-043-MWS	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW-043-MWS	Methylene Chloride	1	U	20000	0.00	no	NC
SW-043-MWS	Naphthalene	0.044	B	200	0.00	no	C
SW-043-MWS	Nickel	30.3	J	N/A	0.00	no	N/A
SW-043-MWS	Nickel, Dissolve	30.3	J	N/A	0.00	no	N/A
SW-043-MWS	Nitrobenzene	1	U	3100	0.00	no	C
SW-043-MWS	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW-043-MWS	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW-043-MWS	Pentachlorophenol	2.6	U	N/A	0.00	no	N/A
SW-043-MWS	Phenol	1	U	N/A	0.00	no	N/A
SW-043-MWS	Pyrene	0.1	U	N/A	0.00	no	N/A
SW-043-MWS	Selenium	4	B	N/A	0.00	no	N/A
SW-043-MWS	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW-043-MWS	Silver	6	U	N/A	0.00	no	N/A
SW-043-MWS	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW-043-MWS	Styrene	1	U	39000	0.00	no	NC
SW-043-MWS	Tetrachloroethene	1	U	240	0.00	no	NC
SW-043-MWS	Thallium	10	U	N/A	0.00	no	N/A
SW-043-MWS	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW-043-MWS	Toluene	1	U	81000	0.00	no	NC
SW-043-MWS	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-043-MWS	Trichloroethene	0.47	J	22	0.02	no	NC
SW-043-MWS	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW-043-MWS	Vanadium	1.1	B	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-043-MWS	Vanadium, Dissolve	0.85	J	N/A	0.00	no	N/A
SW-043-MWS	Vinyl chloride	1	U	25	0.00	no	C
SW-043-MWS	Xylenes	3	U	1600	0.00	no	NC
SW-043-MWS	Zinc	160		N/A	0.00	no	N/A
SW-043-MWS	Zinc, Dissolve	162		N/A	0.00	no	N/A
SW-044-MWS	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW-044-MWS	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW-044-MWS	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW-044-MWS	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW-044-MWS	1,1-Biphenyl	1.4	U	140	0.00	no	NC
SW-044-MWS	1,1-Dichloroethane	1	U	330	0.00	no	C
SW-044-MWS	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW-044-MWS	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW-044-MWS	1,2,4,5-Tetrachlorobenzene	1.4	U	N/A	0.00	no	N/A
SW-044-MWS	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW-044-MWS	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW-044-MWS	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW-044-MWS	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW-044-MWS	1,2-Dichloroethane	1	U	98	0.00	no	C
SW-044-MWS	1,2-Dichloropropane	1	U	110	0.00	no	C
SW-044-MWS	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW-044-MWS	1,4-Dioxane	0.11	U	130000	0.00	no	C
SW-044-MWS	2,3,4,6-Tetrachlorophenol	1.4	U	N/A	0.00	no	N/A
SW-044-MWS	2,4,5-Trichlorophenol	3.4	U	N/A	0.00	no	N/A
SW-044-MWS	2,4,6-Trichlorophenol	1.4	U	N/A	0.00	no	N/A
SW-044-MWS	2,4-Dichlorophenol	1.4	U	N/A	0.00	no	N/A
SW-044-MWS	2,4-Dimethylphenol	1.4	U	N/A	0.00	no	N/A
SW-044-MWS	2,4-Dinitrophenol	3.4	U	N/A	0.00	no	N/A
SW-044-MWS	2,4-Dinitrotoluene	1.4	U	N/A	0.00	no	N/A
SW-044-MWS	2,6-Dinitrotoluene	1.4	U	N/A	0.00	no	N/A
SW-044-MWS	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW-044-MWS	2-Chloronaphthalene	1.4	U	N/A	0.00	no	N/A
SW-044-MWS	2-Chlorophenol	1.4	U	N/A	0.00	no	N/A
SW-044-MWS	2-Hexanone	10	U	34000	0.00	no	NC
SW-044-MWS	2-Methylnaphthalene	0.11	U	N/A	0.00	no	N/A
SW-044-MWS	2-Methylphenol	1.4	U	N/A	0.00	no	N/A
SW-044-MWS	2-Nitroaniline	3.4	U	N/A	0.00	no	N/A
SW-044-MWS	3,3'-Dichlorobenzidine	1.4	U	N/A	0.00	no	N/A
SW-044-MWS	4-Chloroaniline	1.4	UJ	N/A	0.00	no	N/A
SW-044-MWS	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW-044-MWS	4-Nitroaniline	3.4	U	N/A	0.00	no	N/A
SW-044-MWS	Acenaphthene	0.11	U	N/A	0.00	no	N/A
SW-044-MWS	Acetone	10	U	95000000	0.00	no	NC
SW-044-MWS	Acetophenone	1.4	U	N/A	0.00	no	N/A
SW-044-MWS	Aluminum	425		N/A	0.00	no	N/A
SW-044-MWS	Aluminum, Dissolve	55.7		N/A	0.00	no	N/A
SW-044-MWS	Anthracene	0.11	U	N/A	0.00	no	N/A
SW-044-MWS	Antimony	6	U	N/A	0.00	no	N/A
SW-044-MWS	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW-044-MWS	Arsenic	5	U	N/A	0.00	no	N/A
SW-044-MWS	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SW-044-MWS	Barium	108		N/A	0.00	no	N/A
SW-044-MWS	Barium, Dissolve	91.1		N/A	0.00	no	N/A
SW-044-MWS	Benzaldehyde	1.4	U	N/A	0.00	no	N/A
SW-044-MWS	Benzene	1	U	69	0.00	no	C
SW-044-MWS	Benzo[a]anthracene	0.11	U	NVT	0.00	no	C
SW-044-MWS	Benzo[a]pyrene	0.11	U	N/A	0.00	no	N/A
SW-044-MWS	Benzo[b]fluoranthene	0.11	U	N/A	0.00	no	N/A
SW-044-MWS	Benzo[k]fluoranthene	0.11	U	N/A	0.00	no	N/A
SW-044-MWS	Beryllium	1	U	N/A	0.00	no	N/A
SW-044-MWS	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW-044-MWS	bis(2-chloroethoxy)methane	1.4	U	N/A	0.00	no	N/A
SW-044-MWS	bis(2-Chloroethyl)ether	1.4	U	530	0.00	no	C
SW-044-MWS	bis(2-Chloroisopropyl)ether	1.4	U	N/A	0.00	no	N/A

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-044-MWS	bis(2-Ethylhexyl)phthalate	1.4	U	N/A	0.00	no	N/A
SW-044-MWS	Bromodichloromethane	1	U	38	0.00	no	C
SW-044-MWS	Bromoform	1	U	5100	0.00	no	C
SW-044-MWS	Bromomethane	1	U	73	0.00	no	NC
SW-044-MWS	Cadmium	1.1	B	N/A	0.00	no	N/A
SW-044-MWS	Cadmium, Dissolve	1.3	B	N/A	0.00	no	N/A
SW-044-MWS	Caprolactam	3.4	U	N/A	0.00	no	N/A
SW-044-MWS	Carbon disulfide	1	U	5200	0.00	no	NC
SW-044-MWS	Carbon tetrachloride	1	U	18	0.00	no	C
SW-044-MWS	Chlorobenzene	1	U	1700	0.00	no	NC
SW-044-MWS	Chloroethane	1	U	97000	0.00	no	NC
SW-044-MWS	Chloroform	1	U	36	0.00	no	C
SW-044-MWS	Chloromethane	1	U	1100	0.00	no	NC
SW-044-MWS	Chromium	5	U	N/A	0.00	no	N/A
SW-044-MWS	Chromium VI	10	U	N/A	0.00	no	N/A
SW-044-MWS	Chromium, Dissolve	5	U	N/A	0.00	no	N/A
SW-044-MWS	Chrysene	0.11	U	N/A	0.00	no	N/A
SW-044-MWS	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-044-MWS	Cobalt	7.7	J	N/A	0.00	no	N/A
SW-044-MWS	Cobalt, Dissolve	6.4	J	N/A	0.00	no	N/A
SW-044-MWS	Copper	5	U	N/A	0.00	no	N/A
SW-044-MWS	Copper, Dissolve	5	U	N/A	0.00	no	N/A
SW-044-MWS	Cyanide	10	U	3.5	0.00	no	NC
SW-044-MWS	Cyclohexane	10	U	4300	0.00	no	NC
SW-044-MWS	Dibenz[a,h]anthracene	0.11	U	N/A	0.00	no	N/A
SW-044-MWS	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW-044-MWS	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW-044-MWS	Diethylphthalate	1.4	U	N/A	0.00	no	N/A
SW-044-MWS	Di-n-butylphthalate	1.4	U	N/A	0.00	no	N/A
SW-044-MWS	Di-n-ocytlphthalate	1.4	UJ	N/A	0.00	no	N/A
SW-044-MWS	Ethylbenzene	1	U	150	0.00	no	C
SW-044-MWS	Fluoranthene	0.024	J	N/A	0.00	no	N/A
SW-044-MWS	Fluorene	0.11	U	N/A	0.00	no	N/A
SW-044-MWS	Hexachlorobenzene	1.4	U	3.8	0.00	no	C
SW-044-MWS	Hexachlorobutadiene	1.4	U	13	0.00	no	C
SW-044-MWS	Hexachlorocyclopentadiene	1.4	U	0.79	0.00	no	NC
SW-044-MWS	Hexachloroethane	1.4	U	70	0.00	no	C
SW-044-MWS	Indeno[1,2,3-c,d]pyrene	0.11	U	N/A	0.00	no	N/A
SW-044-MWS	Iron	63400		N/A	0.00	no	N/A
SW-044-MWS	Iron, Dissolve	53700		N/A	0.00	no	N/A
SW-044-MWS	Isophorone	1.4	U	N/A	0.00	no	N/A
SW-044-MWS	Isopropylbenzene	1	U	3700	0.00	no	NC
SW-044-MWS	Lead	25	U	N/A	0.00	no	N/A
SW-044-MWS	Lead, Dissolve	25	U	N/A	0.00	no	N/A
SW-044-MWS	Manganese	3060		N/A	0.00	no	N/A
SW-044-MWS	Manganese, Dissolve	3430		N/A	0.00	no	N/A
SW-044-MWS	Mercury	0.2	U	3.7	0.00	no	NC
SW-044-MWS	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW-044-MWS	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW-044-MWS	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW-044-MWS	Methylene Chloride	1	U	20000	0.00	no	NC
SW-044-MWS	Naphthalene	0.091	B	200	0.00	no	C
SW-044-MWS	Nickel	15.4		N/A	0.00	no	N/A
SW-044-MWS	Nickel, Dissolve	14.4		N/A	0.00	no	N/A
SW-044-MWS	Nitrobenzene	1.4	U	3100	0.00	no	C
SW-044-MWS	N-Nitroso-di-n-propylamine	1.4	U	N/A	0.00	no	N/A
SW-044-MWS	N-Nitrosodiphenylamine	1.4	U	N/A	0.00	no	N/A
SW-044-MWS	Pentachlorophenol	3.4	U	N/A	0.00	no	N/A
SW-044-MWS	Phenol	1.4	U	N/A	0.00	no	N/A
SW-044-MWS	Pyrene	0.11	U	N/A	0.00	no	N/A
SW-044-MWS	Selenium	8	U	N/A	0.00	no	N/A
SW-044-MWS	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW-044-MWS	Silver	6	U	N/A	0.00	no	N/A
SW-044-MWS	Silver, Dissolve	6	U	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-044-MWS	Styrene	1	U	39000	0.00	no	NC
SW-044-MWS	Tetrachloroethene	1	U	240	0.00	no	NC
SW-044-MWS	Thallium	50	U	N/A	0.00	no	N/A
SW-044-MWS	Thallium, Dissolve	50	U	N/A	0.00	no	N/A
SW-044-MWS	Toluene	1	U	81000	0.00	no	NC
SW-044-MWS	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-044-MWS	Trichloroethene	1	U	22	0.00	no	NC
SW-044-MWS	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW-044-MWS	Vanadium	2.7	J	N/A	0.00	no	N/A
SW-044-MWS	Vanadium, Dissolve	2.2	J	N/A	0.00	no	N/A
SW-044-MWS	Vinyl chloride	1	U	25	0.00	no	C
SW-044-MWS	Xylenes	3	U	1600	0.00	no	NC
SW-044-MWS	Zinc	37.4		N/A	0.00	no	N/A
SW-044-MWS	Zinc, Dissolve	44		N/A	0.00	no	N/A
SW-045-MWI	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW-045-MWI	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW-045-MWI	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW-045-MWI	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW-045-MWI	1,1-Biphenyl	1.2	U	140	0.00	no	NC
SW-045-MWI	1,1-Dichloroethane	1	U	330	0.00	no	C
SW-045-MWI	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW-045-MWI	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW-045-MWI	1,2,4,5-Tetrachlorobenzene	1.2	U	N/A	0.00	no	N/A
SW-045-MWI	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW-045-MWI	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW-045-MWI	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW-045-MWI	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW-045-MWI	1,2-Dichloroethane	1	U	98	0.00	no	C
SW-045-MWI	1,2-Dichloropropane	1	U	110	0.00	no	C
SW-045-MWI	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW-045-MWI	1,4-Dioxane	0.1	U	130000	0.00	no	C
SW-045-MWI	2,3,4,6-Tetrachlorophenol	1.2	U	N/A	0.00	no	N/A
SW-045-MWI	2,4,5-Trichlorophenol	3	U	N/A	0.00	no	N/A
SW-045-MWI	2,4,6-Trichlorophenol	1.2	U	N/A	0.00	no	N/A
SW-045-MWI	2,4-Dichlorophenol	1.2	U	N/A	0.00	no	N/A
SW-045-MWI	2,4-Dimethylphenol	1.2	U	N/A	0.00	no	N/A
SW-045-MWI	2,4-Dinitrophenol	3	U	N/A	0.00	no	N/A
SW-045-MWI	2,4-Dinitrotoluene	1.2	U	N/A	0.00	no	N/A
SW-045-MWI	2,6-Dinitrotoluene	1.2	U	N/A	0.00	no	N/A
SW-045-MWI	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW-045-MWI	2-Chloronaphthalene	1.2	U	N/A	0.00	no	N/A
SW-045-MWI	2-Chlorophenol	1.2	U	N/A	0.00	no	N/A
SW-045-MWI	2-Hexanone	10	U	34000	0.00	no	NC
SW-045-MWI	2-Methylnaphthalene	0.1	U	N/A	0.00	no	N/A
SW-045-MWI	2-Methylphenol	1.2	U	N/A	0.00	no	N/A
SW-045-MWI	2-Nitroaniline	3	U	N/A	0.00	no	N/A
SW-045-MWI	3,3'-Dichlorobenzidine	1.2	U	N/A	0.00	no	N/A
SW-045-MWI	4-Chloroaniline	1.2	U	N/A	0.00	no	N/A
SW-045-MWI	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW-045-MWI	4-Nitroaniline	3	UJ	N/A	0.00	no	N/A
SW-045-MWI	Acenaphthene	0.1	U	N/A	0.00	no	N/A
SW-045-MWI	Acetone	9.1	J	95000000	0.00	no	NC
SW-045-MWI	Acetophenone	1.2	U	N/A	0.00	no	N/A
SW-045-MWI	Aluminum	137		N/A	0.00	no	N/A
SW-045-MWI	Aluminum, Dissolve	51.7		N/A	0.00	no	N/A
SW-045-MWI	Anthracene	0.034	J	N/A	0.00	no	N/A
SW-045-MWI	Antimony	6	U	N/A	0.00	no	N/A
SW-045-MWI	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW-045-MWI	Arsenic	5	U	N/A	0.00	no	N/A
SW-045-MWI	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SW-045-MWI	Barium	72.2		N/A	0.00	no	N/A
SW-045-MWI	Barium, Dissolve	54.7		N/A	0.00	no	N/A
SW-045-MWI	Benzaldehyde	1.2	U	N/A	0.00	no	N/A
SW-045-MWI	Benzene	1	U	69	0.00	no	C

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-045-MWI	Benzo[a]anthracene	0.1	U	NVT	0.00	no	C
SW-045-MWI	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW-045-MWI	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-045-MWI	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-045-MWI	Beryllium	1	U	N/A	0.00	no	N/A
SW-045-MWI	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW-045-MWI	bis(2-chloroethoxy)methane	1.2	U	N/A	0.00	no	N/A
SW-045-MWI	bis(2-Chloroethyl)ether	1.2	U	530	0.00	no	C
SW-045-MWI	bis(2-Chloroisopropyl)ether	1.2	U	N/A	0.00	no	N/A
SW-045-MWI	bis(2-Ethylhexyl)phthalate	1.2	U	N/A	0.00	no	N/A
SW-045-MWI	Bromodichloromethane	1	U	38	0.00	no	C
SW-045-MWI	Bromoform	1	U	5100	0.00	no	C
SW-045-MWI	Bromomethane	1	U	73	0.00	no	NC
SW-045-MWI	Cadmium	3	U	N/A	0.00	no	N/A
SW-045-MWI	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A
SW-045-MWI	Caprolactam	3	U	N/A	0.00	no	N/A
SW-045-MWI	Carbon disulfide	1	U	5200	0.00	no	NC
SW-045-MWI	Carbon tetrachloride	1	U	18	0.00	no	C
SW-045-MWI	Chlorobenzene	1	U	1700	0.00	no	NC
SW-045-MWI	Chloroethane	1	U	97000	0.00	no	NC
SW-045-MWI	Chloroform	2		36	0.06	no	C
SW-045-MWI	Chloromethane	1	U	1100	0.00	no	NC
SW-045-MWI	Chromium	1.1	B	N/A	0.00	no	N/A
SW-045-MWI	Chromium VI	10	U	N/A	0.00	no	N/A
SW-045-MWI	Chromium, Dissolve	1.1	B	N/A	0.00	no	N/A
SW-045-MWI	Chrysene	0.1	U	N/A	0.00	no	N/A
SW-045-MWI	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-045-MWI	Cobalt	5	U	N/A	0.00	no	N/A
SW-045-MWI	Cobalt, Dissolve	5	U	N/A	0.00	no	N/A
SW-045-MWI	Copper	5	U	N/A	0.00	no	N/A
SW-045-MWI	Copper, Dissolve	5	U	N/A	0.00	no	N/A
SW-045-MWI	Cyanide	10	U	3.5	0.00	no	NC
SW-045-MWI	Cyclohexane	10	U	4300	0.00	no	NC
SW-045-MWI	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW-045-MWI	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW-045-MWI	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW-045-MWI	Diethylphthalate	1.2	U	N/A	0.00	no	N/A
SW-045-MWI	Di-n-butylphthalate	1.2	U	N/A	0.00	no	N/A
SW-045-MWI	Di-n-ocytlphthalate	1.2	UJ	N/A	0.00	no	N/A
SW-045-MWI	Ethylbenzene	1	U	150	0.00	no	C
SW-045-MWI	Fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-045-MWI	Fluorene	0.1	U	N/A	0.00	no	N/A
SW-045-MWI	Hexachlorobenzene	1.2	U	3.8	0.00	no	C
SW-045-MWI	Hexachlorobutadiene	1.2	U	13	0.00	no	C
SW-045-MWI	Hexachlorocyclopentadiene	1.2	U	0.79	0.00	no	NC
SW-045-MWI	Hexachloroethane	1.2	U	70	0.00	no	C
SW-045-MWI	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW-045-MWI	Iron	2250		N/A	0.00	no	N/A
SW-045-MWI	Iron, Dissolve	1410		N/A	0.00	no	N/A
SW-045-MWI	Isophorone	1.2	U	N/A	0.00	no	N/A
SW-045-MWI	Isopropylbenzene	1	U	3700	0.00	no	NC
SW-045-MWI	Lead	5	U	N/A	0.00	no	N/A
SW-045-MWI	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW-045-MWI	Manganese	385		N/A	0.00	no	N/A
SW-045-MWI	Manganese, Dissolve	656		N/A	0.00	no	N/A
SW-045-MWI	Mercury	0.2	U	3.7	0.00	no	NC
SW-045-MWI	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW-045-MWI	Methyl Acetate	2	J	N/A	0.00	no	N/A
SW-045-MWI	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW-045-MWI	Methylene Chloride	1	U	20000	0.00	no	NC
SW-045-MWI	Naphthalene	0.027	B	200	0.00	no	C
SW-045-MWI	Nickel	1.5	J	N/A	0.00	no	N/A
SW-045-MWI	Nickel, Dissolve	0.77	B	N/A	0.00	no	N/A
SW-045-MWI	Nitrobenzene	1.2	U	3100	0.00	no	C

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-045-MWI	N-Nitroso-di-n-propylamine	1.2	U	N/A	0.00	no	N/A
SW-045-MWI	N-Nitrosodiphenylamine	1.2	U	N/A	0.00	no	N/A
SW-045-MWI	Pentachlorophenol	3	U	N/A	0.00	no	N/A
SW-045-MWI	Phenol	1.2	U	N/A	0.00	no	N/A
SW-045-MWI	Pyrene	0.1	U	N/A	0.00	no	N/A
SW-045-MWI	Selenium	8	U	N/A	0.00	no	N/A
SW-045-MWI	Selenium, Dissolve	5.5	J	N/A	0.00	no	N/A
SW-045-MWI	Silver	6	U	N/A	0.00	no	N/A
SW-045-MWI	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW-045-MWI	Styrene	1	U	39000	0.00	no	NC
SW-045-MWI	Tetrachloroethene	1	U	240	0.00	no	NC
SW-045-MWI	Thallium	10	U	N/A	0.00	no	N/A
SW-045-MWI	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW-045-MWI	Toluene	1	U	81000	0.00	no	NC
SW-045-MWI	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-045-MWI	Trichloroethene	1	U	22	0.00	no	NC
SW-045-MWI	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW-045-MWI	Vanadium	1.8	B	N/A	0.00	no	N/A
SW-045-MWI	Vanadium, Dissolve	1.3	J	N/A	0.00	no	N/A
SW-045-MWI	Vinyl chloride	1	U	25	0.00	no	C
SW-045-MWI	Xylenes	3	U	1600	0.00	no	NC
SW-045-MWI	Zinc	10	U	N/A	0.00	no	N/A
SW-045-MWI	Zinc, Dissolve	10	U	N/A	0.00	no	N/A
SW-045-MWS	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW-045-MWS	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW-045-MWS	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW-045-MWS	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW-045-MWS	1,1-Biphenyl	1.2	U	140	0.00	no	NC
SW-045-MWS	1,1-Dichloroethane	1	U	330	0.00	no	C
SW-045-MWS	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW-045-MWS	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW-045-MWS	1,2,4,5-Tetrachlorobenzene	1.2	U	N/A	0.00	no	N/A
SW-045-MWS	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW-045-MWS	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW-045-MWS	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW-045-MWS	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW-045-MWS	1,2-Dichloroethane	1	U	98	0.00	no	C
SW-045-MWS	1,2-Dichloropropane	1	U	110	0.00	no	C
SW-045-MWS	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW-045-MWS	1,4-Dioxane	0.11	U	130000	0.00	no	C
SW-045-MWS	2,3,4,6-Tetrachlorophenol	1.2	U	N/A	0.00	no	N/A
SW-045-MWS	2,4,5-Trichlorophenol	3	U	N/A	0.00	no	N/A
SW-045-MWS	2,4,6-Trichlorophenol	1.2	U	N/A	0.00	no	N/A
SW-045-MWS	2,4-Dichlorophenol	1.2	U	N/A	0.00	no	N/A
SW-045-MWS	2,4-Dimethylphenol	1.2	U	N/A	0.00	no	N/A
SW-045-MWS	2,4-Dinitrophenol	3	U	N/A	0.00	no	N/A
SW-045-MWS	2,4-Dinitrotoluene	1.2	U	N/A	0.00	no	N/A
SW-045-MWS	2,6-Dinitrotoluene	1.2	U	N/A	0.00	no	N/A
SW-045-MWS	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW-045-MWS	2-Chloronaphthalene	1.2	U	N/A	0.00	no	N/A
SW-045-MWS	2-Chlorophenol	1.2	U	N/A	0.00	no	N/A
SW-045-MWS	2-Hexanone	10	U	34000	0.00	no	NC
SW-045-MWS	2-Methylnaphthalene	0.11	U	N/A	0.00	no	N/A
SW-045-MWS	2-Methylphenol	1.2	U	N/A	0.00	no	N/A
SW-045-MWS	2-Nitroaniline	3	U	N/A	0.00	no	N/A
SW-045-MWS	3,3'-Dichlorobenzidine	1.2	U	N/A	0.00	no	N/A
SW-045-MWS	4-Chloroaniline	1.2	U	N/A	0.00	no	N/A
SW-045-MWS	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW-045-MWS	4-Nitroaniline	3	UJ	N/A	0.00	no	N/A
SW-045-MWS	Acenaphthene	0.11	U	N/A	0.00	no	N/A
SW-045-MWS	Acetone	9.2	J	95000000	0.00	no	NC
SW-045-MWS	Acetophenone	1.2	U	N/A	0.00	no	N/A
SW-045-MWS	Aluminum	603		N/A	0.00	no	N/A
SW-045-MWS	Aluminum, Dissolve	625		N/A	0.00	no	N/A

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-045-MWS	Anthracene	0.11	U	N/A	0.00	no	N/A
SW-045-MWS	Antimony	6	U	N/A	0.00	no	N/A
SW-045-MWS	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW-045-MWS	Arsenic	5	U	N/A	0.00	no	N/A
SW-045-MWS	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SW-045-MWS	Barium	20.5		N/A	0.00	no	N/A
SW-045-MWS	Barium, Dissolve	20.1		N/A	0.00	no	N/A
SW-045-MWS	Benzaldehyde	1.2	U	N/A	0.00	no	N/A
SW-045-MWS	Benzene	1	U	69	0.00	no	C
SW-045-MWS	Benzo[a]anthracene	0.11	U	NVT	0.00	no	C
SW-045-MWS	Benzo[a]pyrene	0.11	U	N/A	0.00	no	N/A
SW-045-MWS	Benzo[b]fluoranthene	0.11	U	N/A	0.00	no	N/A
SW-045-MWS	Benzo[k]fluoranthene	0.11	U	N/A	0.00	no	N/A
SW-045-MWS	Beryllium	1.1		N/A	0.00	no	N/A
SW-045-MWS	Beryllium, Dissolve	1.1		N/A	0.00	no	N/A
SW-045-MWS	bis(2-chloroethoxy)methane	1.2	U	N/A	0.00	no	N/A
SW-045-MWS	bis(2-Chloroethyl)ether	1.2	U	530	0.00	no	C
SW-045-MWS	bis(2-Chloroisopropyl)ether	1.2	U	N/A	0.00	no	N/A
SW-045-MWS	bis(2-Ethylhexyl)phthalate	1.2	U	N/A	0.00	no	N/A
SW-045-MWS	Bromodichloromethane	1	U	38	0.00	no	C
SW-045-MWS	Bromoform	1	U	5100	0.00	no	C
SW-045-MWS	Bromomethane	1	U	73	0.00	no	NC
SW-045-MWS	Cadmium	0.86	B	N/A	0.00	no	N/A
SW-045-MWS	Cadmium, Dissolve	0.74	B	N/A	0.00	no	N/A
SW-045-MWS	Caprolactam	3	U	N/A	0.00	no	N/A
SW-045-MWS	Carbon disulfide	1	U	5200	0.00	no	NC
SW-045-MWS	Carbon tetrachloride	1	U	18	0.00	no	C
SW-045-MWS	Chlorobenzene	1	U	1700	0.00	no	NC
SW-045-MWS	Chloroethane	1	U	97000	0.00	no	NC
SW-045-MWS	Chloroform	1	U	36	0.00	no	C
SW-045-MWS	Chloromethane	1	U	1100	0.00	no	NC
SW-045-MWS	Chromium	5	U	N/A	0.00	no	N/A
SW-045-MWS	Chromium VI	10	U	N/A	0.00	no	N/A
SW-045-MWS	Chromium, Dissolve	5	U	N/A	0.00	no	N/A
SW-045-MWS	Chrysene	0.11	U	N/A	0.00	no	N/A
SW-045-MWS	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-045-MWS	Cobalt	64.7		N/A	0.00	no	N/A
SW-045-MWS	Cobalt, Dissolve	65.1		N/A	0.00	no	N/A
SW-045-MWS	Copper	5	U	N/A	0.00	no	N/A
SW-045-MWS	Copper, Dissolve	5	U	N/A	0.00	no	N/A
SW-045-MWS	Cyanide	10	U	3.5	0.00	no	NC
SW-045-MWS	Cyclohexane	10	U	4300	0.00	no	NC
SW-045-MWS	Dibenz[a,h]anthracene	0.11	U	N/A	0.00	no	N/A
SW-045-MWS	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW-045-MWS	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW-045-MWS	Diethylphthalate	1.2	U	N/A	0.00	no	N/A
SW-045-MWS	Di-n-butylphthalate	1.2	U	N/A	0.00	no	N/A
SW-045-MWS	Di-n-ocytlphthalate	1.2	UJ	N/A	0.00	no	N/A
SW-045-MWS	Ethylbenzene	1	U	150	0.00	no	C
SW-045-MWS	Fluoranthene	0.11	U	N/A	0.00	no	N/A
SW-045-MWS	Fluorene	0.11	U	N/A	0.00	no	N/A
SW-045-MWS	Hexachlorobenzene	1.2	U	3.8	0.00	no	C
SW-045-MWS	Hexachlorobutadiene	1.2	U	13	0.00	no	C
SW-045-MWS	Hexachlorocyclopentadiene	1.2	U	0.79	0.00	no	NC
SW-045-MWS	Hexachloroethane	1.2	U	70	0.00	no	C
SW-045-MWS	Indeno[1,2,3-c,d]pyrene	0.11	U	N/A	0.00	no	N/A
SW-045-MWS	Iron	1010		N/A	0.00	no	N/A
SW-045-MWS	Iron, Dissolve	1450		N/A	0.00	no	N/A
SW-045-MWS	Isophorone	1.2	U	N/A	0.00	no	N/A
SW-045-MWS	Isopropylbenzene	1	U	3700	0.00	no	NC
SW-045-MWS	Lead	5	U	N/A	0.00	no	N/A
SW-045-MWS	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW-045-MWS	Manganese	1140		N/A	0.00	no	N/A
SW-045-MWS	Manganese, Dissolve	1100		N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-045-MWS	Mercury	0.2	U	3.7	0.00	no	NC
SW-045-MWS	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW-045-MWS	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW-045-MWS	Methyl tert-butyl ether (MTBE)	2.5		20000	0.00	no	C
SW-045-MWS	Methylene Chloride	1	U	20000	0.00	no	NC
SW-045-MWS	Naphthalene	0.038	B	200	0.00	no	C
SW-045-MWS	Nickel	103		N/A	0.00	no	N/A
SW-045-MWS	Nickel, Dissolve	105		N/A	0.00	no	N/A
SW-045-MWS	Nitrobenzene	1.2	U	3100	0.00	no	C
SW-045-MWS	N-Nitroso-di-n-propylamine	1.2	U	N/A	0.00	no	N/A
SW-045-MWS	N-Nitrosodiphenylamine	1.2	U	N/A	0.00	no	N/A
SW-045-MWS	Pentachlorophenol	3	U	N/A	0.00	no	N/A
SW-045-MWS	Phenol	1.2	U	N/A	0.00	no	N/A
SW-045-MWS	Pyrene	0.11	U	N/A	0.00	no	N/A
SW-045-MWS	Selenium	8	U	N/A	0.00	no	N/A
SW-045-MWS	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW-045-MWS	Silver	6	U	N/A	0.00	no	N/A
SW-045-MWS	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW-045-MWS	Styrene	1	U	39000	0.00	no	NC
SW-045-MWS	Tetrachloroethene	1	U	240	0.00	no	NC
SW-045-MWS	Thallium	10	U	N/A	0.00	no	N/A
SW-045-MWS	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW-045-MWS	Toluene	1	U	81000	0.00	no	NC
SW-045-MWS	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-045-MWS	Trichloroethene	1	U	22	0.00	no	NC
SW-045-MWS	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW-045-MWS	Vanadium	0.74	J	N/A	0.00	no	N/A
SW-045-MWS	Vanadium, Dissolve	0.77	J	N/A	0.00	no	N/A
SW-045-MWS	Vinyl chloride	1	U	25	0.00	no	C
SW-045-MWS	Xylenes	3	U	1600	0.00	no	NC
SW-045-MWS	Zinc	146		N/A	0.00	no	N/A
SW-045-MWS	Zinc, Dissolve	153		N/A	0.00	no	N/A
SW-046-MWS	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW-046-MWS	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW-046-MWS	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW-046-MWS	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW-046-MWS	1,1-Biphenyl	1	U	140	0.00	no	NC
SW-046-MWS	1,1-Dichloroethane	1	U	330	0.00	no	C
SW-046-MWS	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW-046-MWS	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW-046-MWS	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW-046-MWS	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW-046-MWS	1,2-Dibromo-3-chloropropane	5	UJ	3.4	0.00	no	C
SW-046-MWS	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW-046-MWS	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW-046-MWS	1,2-Dichloroethane	1	U	98	0.00	no	C
SW-046-MWS	1,2-Dichloropropane	1	U	110	0.00	no	C
SW-046-MWS	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW-046-MWS	1,4-Dioxane	0.1	U	130000	0.00	no	C
SW-046-MWS	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW-046-MWS	2,4,5-Trichlorophenol	2.6	U	N/A	0.00	no	N/A
SW-046-MWS	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW-046-MWS	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW-046-MWS	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW-046-MWS	2,4-Dinitrophenol	2.6	UJ	N/A	0.00	no	N/A
SW-046-MWS	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-046-MWS	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-046-MWS	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW-046-MWS	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW-046-MWS	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW-046-MWS	2-Hexanone	10	U	34000	0.00	no	NC
SW-046-MWS	2-Methylnaphthalene	0.1	U	N/A	0.00	no	N/A
SW-046-MWS	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW-046-MWS	2-Nitroaniline	2.6	U	N/A	0.00	no	N/A

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-046-MWS	3,3'-Dichlorobenzidine	1	R	N/A	0.00	no	N/A
SW-046-MWS	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW-046-MWS	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW-046-MWS	4-Nitroaniline	2.6	UJ	N/A	0.00	no	N/A
SW-046-MWS	Acenaphthene	0.1	U	N/A	0.00	no	N/A
SW-046-MWS	Acetone	10	R	95000000	0.00	no	NC
SW-046-MWS	Acetophenone	1	U	N/A	0.00	no	N/A
SW-046-MWS	Aluminum	420		N/A	0.00	no	N/A
SW-046-MWS	Aluminum, Dissolve	162		N/A	0.00	no	N/A
SW-046-MWS	Anthracene	0.1	U	N/A	0.00	no	N/A
SW-046-MWS	Antimony	6	U	N/A	0.00	no	N/A
SW-046-MWS	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW-046-MWS	Arsenic	5	U	N/A	0.00	no	N/A
SW-046-MWS	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SW-046-MWS	Barium	28.4		N/A	0.00	no	N/A
SW-046-MWS	Barium, Dissolve	27.1		N/A	0.00	no	N/A
SW-046-MWS	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW-046-MWS	Benzene	1	U	69	0.00	no	C
SW-046-MWS	Benzo[a]anthracene	0.1	U	NVT	0.00	no	C
SW-046-MWS	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW-046-MWS	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-046-MWS	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-046-MWS	Beryllium	0.35	B	N/A	0.00	no	N/A
SW-046-MWS	Beryllium, Dissolve	0.35	B	N/A	0.00	no	N/A
SW-046-MWS	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW-046-MWS	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW-046-MWS	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW-046-MWS	bis(2-Ethylhexyl)phthalate	0.47	B	N/A	0.00	no	N/A
SW-046-MWS	Bromodichloromethane	1	U	38	0.00	no	C
SW-046-MWS	Bromoform	1	UJ	5100	0.00	no	C
SW-046-MWS	Bromomethane	1	UJ	73	0.00	no	NC
SW-046-MWS	Cadmium	1.1	J	N/A	0.00	no	N/A
SW-046-MWS	Cadmium, Dissolve	1.2	J	N/A	0.00	no	N/A
SW-046-MWS	Caprolactam	2.6	UJ	N/A	0.00	no	N/A
SW-046-MWS	Carbon disulfide	1	U	5200	0.00	no	NC
SW-046-MWS	Carbon tetrachloride	1	U	18	0.00	no	C
SW-046-MWS	Chlorobenzene	1	U	1700	0.00	no	NC
SW-046-MWS	Chloroethane	1	U	97000	0.00	no	NC
SW-046-MWS	Chloroform	1	U	36	0.00	no	C
SW-046-MWS	Chloromethane	1	UJ	1100	0.00	no	NC
SW-046-MWS	Chromium	5	U	N/A	0.00	no	N/A
SW-046-MWS	Chromium VI	10	U	N/A	0.00	no	N/A
SW-046-MWS	Chromium, Dissolve	5	U	N/A	0.00	no	N/A
SW-046-MWS	Chrysene	0.1	U	N/A	0.00	no	N/A
SW-046-MWS	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-046-MWS	Cobalt	214		N/A	0.00	no	N/A
SW-046-MWS	Cobalt, Dissolve	216		N/A	0.00	no	N/A
SW-046-MWS	Copper	2.4	B	N/A	0.00	no	N/A
SW-046-MWS	Copper, Dissolve	5	U	N/A	0.00	no	N/A
SW-046-MWS	Cyanide	10	U	3.5	0.00	no	NC
SW-046-MWS	Cyclohexane	10	U	4300	0.00	no	NC
SW-046-MWS	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW-046-MWS	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW-046-MWS	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW-046-MWS	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW-046-MWS	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW-046-MWS	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW-046-MWS	Ethylbenzene	1	U	150	0.00	no	C
SW-046-MWS	Fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-046-MWS	Fluorene	0.1	U	N/A	0.00	no	N/A
SW-046-MWS	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW-046-MWS	Hexachlorobutadiene	1	U	13	0.00	no	C
SW-046-MWS	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW-046-MWS	Hexachloroethane	1	U	70	0.00	no	C

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-046-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW-046-MWS	Iron	12600		N/A	0.00	no	N/A
SW-046-MWS	Iron, Dissolve	14100		N/A	0.00	no	N/A
SW-046-MWS	Isophorone	1	U	N/A	0.00	no	N/A
SW-046-MWS	Isopropylbenzene	1	U	3700	0.00	no	NC
SW-046-MWS	Lead	5	U	N/A	0.00	no	N/A
SW-046-MWS	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW-046-MWS	Manganese	11500		N/A	0.00	no	N/A
SW-046-MWS	Manganese, Dissolve	11200	J	N/A	0.00	no	N/A
SW-046-MWS	Mercury	0.06	B	3.7	0.02	no	NC
SW-046-MWS	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW-046-MWS	Methyl Acetate	5	R	N/A	0.00	no	N/A
SW-046-MWS	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW-046-MWS	Methylene Chloride	1	U	20000	0.00	no	NC
SW-046-MWS	Naphthalene	0.035	B	200	0.00	no	C
SW-046-MWS	Nickel	100		N/A	0.00	no	N/A
SW-046-MWS	Nickel, Dissolve	100		N/A	0.00	no	N/A
SW-046-MWS	Nitrobenzene	1	U	3100	0.00	no	C
SW-046-MWS	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW-046-MWS	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW-046-MWS	Pentachlorophenol	2.6	U	N/A	0.00	no	N/A
SW-046-MWS	Phenol	1	U	N/A	0.00	no	N/A
SW-046-MWS	Pyrene	0.1	U	N/A	0.00	no	N/A
SW-046-MWS	Selenium	8	U	N/A	0.00	no	N/A
SW-046-MWS	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW-046-MWS	Silver	6	U	N/A	0.00	no	N/A
SW-046-MWS	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW-046-MWS	Styrene	1	U	39000	0.00	no	NC
SW-046-MWS	Tetrachloroethene	1	U	240	0.00	no	NC
SW-046-MWS	Thallium	10	U	N/A	0.00	no	N/A
SW-046-MWS	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW-046-MWS	Toluene	1	U	81000	0.00	no	NC
SW-046-MWS	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-046-MWS	Trichloroethene	1	U	22	0.00	no	NC
SW-046-MWS	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW-046-MWS	Vanadium	3	B	N/A	0.00	no	N/A
SW-046-MWS	Vanadium, Dissolve	2.3	B	N/A	0.00	no	N/A
SW-046-MWS	Vinyl chloride	1	U	25	0.00	no	C
SW-046-MWS	Xylenes	3	U	1600	0.00	no	NC
SW-046-MWS	Zinc	189		N/A	0.00	no	N/A
SW-046-MWS	Zinc, Dissolve	192		N/A	0.00	no	N/A
SW-047-MWS	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW-047-MWS	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW-047-MWS	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW-047-MWS	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW-047-MWS	1,1-Biphenyl	1	U	140	0.00	no	NC
SW-047-MWS	1,1-Dichloroethane	1	U	330	0.00	no	C
SW-047-MWS	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW-047-MWS	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW-047-MWS	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW-047-MWS	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW-047-MWS	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW-047-MWS	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW-047-MWS	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW-047-MWS	1,2-Dichloroethane	1	U	98	0.00	no	C
SW-047-MWS	1,2-Dichloropropane	1	U	110	0.00	no	C
SW-047-MWS	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW-047-MWS	1,4-Dioxane	0.1	U	130000	0.00	no	C
SW-047-MWS	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW-047-MWS	2,4,5-Trichlorophenol	2.6	U	N/A	0.00	no	N/A
SW-047-MWS	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW-047-MWS	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW-047-MWS	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW-047-MWS	2,4-Dinitrophenol	2.6	UJ	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-047-MWS	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-047-MWS	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-047-MWS	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW-047-MWS	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW-047-MWS	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW-047-MWS	2-Hexanone	10	U	34000	0.00	no	NC
SW-047-MWS	2-Methylnaphthalene	0.1	U	N/A	0.00	no	N/A
SW-047-MWS	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW-047-MWS	2-Nitroaniline	2.6	U	N/A	0.00	no	N/A
SW-047-MWS	3,3'-Dichlorobenzidine	1	R	N/A	0.00	no	N/A
SW-047-MWS	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW-047-MWS	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW-047-MWS	4-Nitroaniline	2.6	UJ	N/A	0.00	no	N/A
SW-047-MWS	Acenaphthene	0.1	U	N/A	0.00	no	N/A
SW-047-MWS	Acetone	10	UJ	95000000	0.00	no	NC
SW-047-MWS	Acetophenone	1	U	N/A	0.00	no	N/A
SW-047-MWS	Aluminum	2810		N/A	0.00	no	N/A
SW-047-MWS	Aluminum, Dissolve	2860		N/A	0.00	no	N/A
SW-047-MWS	Anthracene	0.1	U	N/A	0.00	no	N/A
SW-047-MWS	Antimony	6	U	N/A	0.00	no	N/A
SW-047-MWS	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW-047-MWS	Arsenic	3.9	B	N/A	0.00	no	N/A
SW-047-MWS	Arsenic, Dissolve	4.5	J	N/A	0.00	no	N/A
SW-047-MWS	Barium	44.3		N/A	0.00	no	N/A
SW-047-MWS	Barium, Dissolve	42.9		N/A	0.00	no	N/A
SW-047-MWS	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW-047-MWS	Benzene	1	U	69	0.00	no	C
SW-047-MWS	Benzo[a]anthracene	0.1	U	NVT	0.00	no	C
SW-047-MWS	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW-047-MWS	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-047-MWS	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-047-MWS	Beryllium	6.5		N/A	0.00	no	N/A
SW-047-MWS	Beryllium, Dissolve	6.6		N/A	0.00	no	N/A
SW-047-MWS	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW-047-MWS	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW-047-MWS	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW-047-MWS	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A
SW-047-MWS	Bromodichloromethane	1	U	38	0.00	no	C
SW-047-MWS	Bromoform	1	U	5100	0.00	no	C
SW-047-MWS	Bromomethane	1	U	73	0.00	no	NC
SW-047-MWS	Cadmium	1.5	J	N/A	0.00	no	N/A
SW-047-MWS	Cadmium, Dissolve	1.4	B	N/A	0.00	no	N/A
SW-047-MWS	Caprolactam	2.6	UJ	N/A	0.00	no	N/A
SW-047-MWS	Carbon disulfide	1	U	5200	0.00	no	NC
SW-047-MWS	Carbon tetrachloride	1	U	18	0.00	no	C
SW-047-MWS	Chlorobenzene	1	U	1700	0.00	no	NC
SW-047-MWS	Chloroethane	1	U	97000	0.00	no	NC
SW-047-MWS	Chloroform	6.1		36	0.17	no	C
SW-047-MWS	Chloromethane	1	U	1100	0.00	no	NC
SW-047-MWS	Chromium	1.6	J	N/A	0.00	no	N/A
SW-047-MWS	Chromium VI	5	J	N/A	0.00	no	N/A
SW-047-MWS	Chromium, Dissolve	0.98	B	N/A	0.00	no	N/A
SW-047-MWS	Chrysene	0.1	U	N/A	0.00	no	N/A
SW-047-MWS	cis-1,2-Dichloroethene	0.58	J	N/A	0.00	no	N/A
SW-047-MWS	Cobalt	100		N/A	0.00	no	N/A
SW-047-MWS	Cobalt, Dissolve	105		N/A	0.00	no	N/A
SW-047-MWS	Copper	7.9		N/A	0.00	no	N/A
SW-047-MWS	Copper, Dissolve	7.8		N/A	0.00	no	N/A
SW-047-MWS	Cyanide	10	U	3.5	0.00	no	NC
SW-047-MWS	Cyclohexane	10	U	4300	0.00	no	NC
SW-047-MWS	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW-047-MWS	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW-047-MWS	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW-047-MWS	Diethylphthalate	1	U	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-047-MWS	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW-047-MWS	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW-047-MWS	Ethylbenzene	1	U	150	0.00	no	C
SW-047-MWS	Fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-047-MWS	Fluorene	0.1	U	N/A	0.00	no	N/A
SW-047-MWS	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW-047-MWS	Hexachlorobutadiene	1	U	13	0.00	no	C
SW-047-MWS	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW-047-MWS	Hexachloroethane	1	U	70	0.00	no	C
SW-047-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW-047-MWS	Iron	83.2	B	N/A	0.00	no	N/A
SW-047-MWS	Iron, Dissolve	30.4	B	N/A	0.00	no	N/A
SW-047-MWS	Isophorone	1	U	N/A	0.00	no	N/A
SW-047-MWS	Isopropylbenzene	1	U	3700	0.00	no	NC
SW-047-MWS	Lead	5	U	N/A	0.00	no	N/A
SW-047-MWS	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW-047-MWS	Manganese	884		N/A	0.00	no	N/A
SW-047-MWS	Manganese, Dissolve	850	J	N/A	0.00	no	N/A
SW-047-MWS	Mercury	0.03	J	3.7	0.01	no	NC
SW-047-MWS	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW-047-MWS	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW-047-MWS	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW-047-MWS	Methylene Chloride	1	U	20000	0.00	no	NC
SW-047-MWS	Naphthalene	0.045	B	200	0.00	no	C
SW-047-MWS	Nickel	99.4	J	N/A	0.00	no	N/A
SW-047-MWS	Nickel, Dissolve	106	J	N/A	0.00	no	N/A
SW-047-MWS	Nitrobenzene	1	U	3100	0.00	no	C
SW-047-MWS	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW-047-MWS	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW-047-MWS	Pentachlorophenol	2.6	U	N/A	0.00	no	N/A
SW-047-MWS	Phenol	1	U	N/A	0.00	no	N/A
SW-047-MWS	Pyrene	0.1	U	N/A	0.00	no	N/A
SW-047-MWS	Selenium	4	B	N/A	0.00	no	N/A
SW-047-MWS	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW-047-MWS	Silver	6	U	N/A	0.00	no	N/A
SW-047-MWS	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW-047-MWS	Styrene	1	U	39000	0.00	no	NC
SW-047-MWS	Tetrachloroethene	1	U	240	0.00	no	NC
SW-047-MWS	Thallium	10	U	N/A	0.00	no	N/A
SW-047-MWS	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW-047-MWS	Toluene	1	U	81000	0.00	no	NC
SW-047-MWS	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-047-MWS	Trichloroethene	1	U	22	0.00	no	NC
SW-047-MWS	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW-047-MWS	Vanadium	1	B	N/A	0.00	no	N/A
SW-047-MWS	Vanadium, Dissolve	0.81	B	N/A	0.00	no	N/A
SW-047-MWS	Vinyl chloride	1	U	25	0.00	no	C
SW-047-MWS	Xylenes	3	U	1600	0.00	no	NC
SW-047-MWS	Zinc	130		N/A	0.00	no	N/A
SW-047-MWS	Zinc, Dissolve	134	J	N/A	0.00	no	N/A
SW-048-MWS	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW-048-MWS	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW-048-MWS	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW-048-MWS	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW-048-MWS	1,1-Biphenyl	1.2	U	140	0.00	no	NC
SW-048-MWS	1,1-Dichloroethane	1	U	330	0.00	no	C
SW-048-MWS	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW-048-MWS	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW-048-MWS	1,2,4,5-Tetrachlorobenzene	1.2	U	N/A	0.00	no	N/A
SW-048-MWS	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW-048-MWS	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW-048-MWS	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW-048-MWS	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW-048-MWS	1,2-Dichloroethane	1	U	98	0.00	no	C

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-048-MWS	1,2-Dichloropropane	1	U	110	0.00	no	C
SW-048-MWS	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW-048-MWS	1,4-Dioxane	0.1	U	130000	0.00	no	C
SW-048-MWS	2,3,4,6-Tetrachlorophenol	1.2	U	N/A	0.00	no	N/A
SW-048-MWS	2,4,5-Trichlorophenol	3	U	N/A	0.00	no	N/A
SW-048-MWS	2,4,6-Trichlorophenol	1.2	U	N/A	0.00	no	N/A
SW-048-MWS	2,4-Dichlorophenol	1.2	U	N/A	0.00	no	N/A
SW-048-MWS	2,4-Dimethylphenol	1.2	U	N/A	0.00	no	N/A
SW-048-MWS	2,4-Dinitrophenol	3	U	N/A	0.00	no	N/A
SW-048-MWS	2,4-Dinitrotoluene	1.2	U	N/A	0.00	no	N/A
SW-048-MWS	2,6-Dinitrotoluene	1.2	U	N/A	0.00	no	N/A
SW-048-MWS	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW-048-MWS	2-Chloronaphthalene	1.2	U	N/A	0.00	no	N/A
SW-048-MWS	2-Chlorophenol	1.2	U	N/A	0.00	no	N/A
SW-048-MWS	2-Hexanone	10	U	34000	0.00	no	NC
SW-048-MWS	2-Methylnaphthalene	0.1	U	N/A	0.00	no	N/A
SW-048-MWS	2-Methylphenol	1.2	U	N/A	0.00	no	N/A
SW-048-MWS	2-Nitroaniline	3	U	N/A	0.00	no	N/A
SW-048-MWS	3,3'-Dichlorobenzidine	1.2	U	N/A	0.00	no	N/A
SW-048-MWS	4-Chloroaniline	1.2	U	N/A	0.00	no	N/A
SW-048-MWS	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW-048-MWS	4-Nitroaniline	3	UJ	N/A	0.00	no	N/A
SW-048-MWS	Acenaphthene	0.1	U	N/A	0.00	no	N/A
SW-048-MWS	Acetone	10	U	95000000	0.00	no	NC
SW-048-MWS	Acetophenone	1.2	U	N/A	0.00	no	N/A
SW-048-MWS	Aluminum	2090		N/A	0.00	no	N/A
SW-048-MWS	Aluminum, Dissolve	2040		N/A	0.00	no	N/A
SW-048-MWS	Anthracene	0.1	U	N/A	0.00	no	N/A
SW-048-MWS	Antimony	6	U	N/A	0.00	no	N/A
SW-048-MWS	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW-048-MWS	Arsenic	5	U	N/A	0.00	no	N/A
SW-048-MWS	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SW-048-MWS	Barium	27.2		N/A	0.00	no	N/A
SW-048-MWS	Barium, Dissolve	26.1		N/A	0.00	no	N/A
SW-048-MWS	Benzaldehyde	1.2	U	N/A	0.00	no	N/A
SW-048-MWS	Benzene	1	U	69	0.00	no	C
SW-048-MWS	Benzo[a]anthracene	0.1	U	NVT	0.00	no	C
SW-048-MWS	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW-048-MWS	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-048-MWS	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-048-MWS	Beryllium	1.9		N/A	0.00	no	N/A
SW-048-MWS	Beryllium, Dissolve	2.4		N/A	0.00	no	N/A
SW-048-MWS	bis(2-chloroethoxy)methane	1.2	U	N/A	0.00	no	N/A
SW-048-MWS	bis(2-Chloroethyl)ether	1.2	U	530	0.00	no	C
SW-048-MWS	bis(2-Chloroisopropyl)ether	1.2	U	N/A	0.00	no	N/A
SW-048-MWS	bis(2-Ethylhexyl)phthalate	0.69	J	N/A	0.00	no	N/A
SW-048-MWS	Bromodichloromethane	1	U	38	0.00	no	C
SW-048-MWS	Bromoform	1	U	5100	0.00	no	C
SW-048-MWS	Bromomethane	1	U	73	0.00	no	NC
SW-048-MWS	Cadmium	1.1	B	N/A	0.00	no	N/A
SW-048-MWS	Cadmium, Dissolve	1.4	B	N/A	0.00	no	N/A
SW-048-MWS	Caprolactam	3	U	N/A	0.00	no	N/A
SW-048-MWS	Carbon disulfide	1	U	5200	0.00	no	NC
SW-048-MWS	Carbon tetrachloride	1	U	18	0.00	no	C
SW-048-MWS	Chlorobenzene	1	U	1700	0.00	no	NC
SW-048-MWS	Chloroethane	1	U	97000	0.00	no	NC
SW-048-MWS	Chloroform	1	U	36	0.00	no	C
SW-048-MWS	Chloromethane	1	U	1100	0.00	no	NC
SW-048-MWS	Chromium	5	U	N/A	0.00	no	N/A
SW-048-MWS	Chromium VI	10	U	N/A	0.00	no	N/A
SW-048-MWS	Chromium, Dissolve	5	U	N/A	0.00	no	N/A
SW-048-MWS	Chrysene	0.1	U	N/A	0.00	no	N/A
SW-048-MWS	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-048-MWS	Cobalt	161		N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-048-MWS	Cobalt, Dissolve	166		N/A	0.00	no	N/A
SW-048-MWS	Copper	4	J	N/A	0.00	no	N/A
SW-048-MWS	Copper, Dissolve	3.3	J	N/A	0.00	no	N/A
SW-048-MWS	Cyanide	10	U	3.5	0.00	no	NC
SW-048-MWS	Cyclohexane	10	U	4300	0.00	no	NC
SW-048-MWS	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW-048-MWS	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW-048-MWS	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW-048-MWS	Diethylphthalate	1.2	U	N/A	0.00	no	N/A
SW-048-MWS	Di-n-butylphthalate	1.2	U	N/A	0.00	no	N/A
SW-048-MWS	Di-n-ocytlphthalate	1.2	UJ	N/A	0.00	no	N/A
SW-048-MWS	Ethylbenzene	1	U	150	0.00	no	C
SW-048-MWS	Fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-048-MWS	Fluorene	0.1	U	N/A	0.00	no	N/A
SW-048-MWS	Hexachlorobenzene	1.2	U	3.8	0.00	no	C
SW-048-MWS	Hexachlorobutadiene	1.2	U	13	0.00	no	C
SW-048-MWS	Hexachlorocyclopentadiene	1.2	U	0.79	0.00	no	NC
SW-048-MWS	Hexachloroethane	1.2	U	70	0.00	no	C
SW-048-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW-048-MWS	Iron	23800		N/A	0.00	no	N/A
SW-048-MWS	Iron, Dissolve	22200		N/A	0.00	no	N/A
SW-048-MWS	Isophorone	1.2	U	N/A	0.00	no	N/A
SW-048-MWS	Isopropylbenzene	1	U	3700	0.00	no	NC
SW-048-MWS	Lead	5	U	N/A	0.00	no	N/A
SW-048-MWS	Lead, Dissolve	3.4	B	N/A	0.00	no	N/A
SW-048-MWS	Manganese	8620		N/A	0.00	no	N/A
SW-048-MWS	Manganese, Dissolve	8510		N/A	0.00	no	N/A
SW-048-MWS	Mercury	0.2	U	3.7	0.00	no	NC
SW-048-MWS	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW-048-MWS	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW-048-MWS	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW-048-MWS	Methylene Chloride	1	U	20000	0.00	no	NC
SW-048-MWS	Naphthalene	0.038	B	200	0.00	no	C
SW-048-MWS	Nickel	94.1		N/A	0.00	no	N/A
SW-048-MWS	Nickel, Dissolve	93.6		N/A	0.00	no	N/A
SW-048-MWS	Nitrobenzene	1.2	U	3100	0.00	no	C
SW-048-MWS	N-Nitroso-di-n-propylamine	1.2	U	N/A	0.00	no	N/A
SW-048-MWS	N-Nitrosodiphenylamine	1.2	U	N/A	0.00	no	N/A
SW-048-MWS	Pentachlorophenol	3	U	N/A	0.00	no	N/A
SW-048-MWS	Phenol	1.2	U	N/A	0.00	no	N/A
SW-048-MWS	Pyrene	0.1	U	N/A	0.00	no	N/A
SW-048-MWS	Selenium	8	U	N/A	0.00	no	N/A
SW-048-MWS	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW-048-MWS	Silver	6	U	N/A	0.00	no	N/A
SW-048-MWS	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW-048-MWS	Styrene	1	U	39000	0.00	no	NC
SW-048-MWS	Tetrachloroethene	1	U	240	0.00	no	NC
SW-048-MWS	Thallium	10	U	N/A	0.00	no	N/A
SW-048-MWS	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW-048-MWS	Toluene	1	U	81000	0.00	no	NC
SW-048-MWS	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-048-MWS	Trichloroethene	1	U	22	0.00	no	NC
SW-048-MWS	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW-048-MWS	Vanadium	2.6	J	N/A	0.00	no	N/A
SW-048-MWS	Vanadium, Dissolve	2.6	J	N/A	0.00	no	N/A
SW-048-MWS	Vinyl chloride	1	U	25	0.00	no	C
SW-048-MWS	Xylenes	3	U	1600	0.00	no	NC
SW-048-MWS	Zinc	214		N/A	0.00	no	N/A
SW-048-MWS	Zinc, Dissolve	206		N/A	0.00	no	N/A
SW-049-MWS	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW-049-MWS	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW-049-MWS	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW-049-MWS	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW-049-MWS	1,1-Biphenyl	1.1	U	140	0.00	no	NC

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-049-MWS	1,1-Dichloroethane	1	U	330	0.00	no	C
SW-049-MWS	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW-049-MWS	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW-049-MWS	1,2,4,5-Tetrachlorobenzene	1.1	U	N/A	0.00	no	N/A
SW-049-MWS	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW-049-MWS	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW-049-MWS	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW-049-MWS	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW-049-MWS	1,2-Dichloroethane	1	U	98	0.00	no	C
SW-049-MWS	1,2-Dichloropropane	1	U	110	0.00	no	C
SW-049-MWS	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW-049-MWS	1,4-Dioxane	0.11	U	130000	0.00	no	C
SW-049-MWS	2,3,4,6-Tetrachlorophenol	1.1	U	N/A	0.00	no	N/A
SW-049-MWS	2,4,5-Trichlorophenol	2.6	U	N/A	0.00	no	N/A
SW-049-MWS	2,4,6-Trichlorophenol	1.1	U	N/A	0.00	no	N/A
SW-049-MWS	2,4-Dichlorophenol	1.1	U	N/A	0.00	no	N/A
SW-049-MWS	2,4-Dimethylphenol	1.1	U	N/A	0.00	no	N/A
SW-049-MWS	2,4-Dinitrophenol	2.6	U	N/A	0.00	no	N/A
SW-049-MWS	2,4-Dinitrotoluene	1.1	U	N/A	0.00	no	N/A
SW-049-MWS	2,6-Dinitrotoluene	1.1	U	N/A	0.00	no	N/A
SW-049-MWS	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW-049-MWS	2-Chloronaphthalene	1.1	U	N/A	0.00	no	N/A
SW-049-MWS	2-Chlorophenol	1.1	U	N/A	0.00	no	N/A
SW-049-MWS	2-Hexanone	10	U	34000	0.00	no	NC
SW-049-MWS	2-Methylnaphthalene	0.11	U	N/A	0.00	no	N/A
SW-049-MWS	2-Methylphenol	1.1	U	N/A	0.00	no	N/A
SW-049-MWS	2-Nitroaniline	2.6	U	N/A	0.00	no	N/A
SW-049-MWS	3,3'-Dichlorobenzidine	1.1	U	N/A	0.00	no	N/A
SW-049-MWS	4-Chloroaniline	1.1	U	N/A	0.00	no	N/A
SW-049-MWS	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW-049-MWS	4-Nitroaniline	2.6	UJ	N/A	0.00	no	N/A
SW-049-MWS	Acenaphthene	0.11	U	N/A	0.00	no	N/A
SW-049-MWS	Acetone	10	U	95000000	0.00	no	NC
SW-049-MWS	Acetophenone	1.1	U	N/A	0.00	no	N/A
SW-049-MWS	Aluminum	15000		N/A	0.00	no	N/A
SW-049-MWS	Aluminum, Dissolve	15200		N/A	0.00	no	N/A
SW-049-MWS	Anthracene	0.11	U	N/A	0.00	no	N/A
SW-049-MWS	Antimony	6	U	N/A	0.00	no	N/A
SW-049-MWS	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW-049-MWS	Arsenic	5	U	N/A	0.00	no	N/A
SW-049-MWS	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SW-049-MWS	Barium	18.7		N/A	0.00	no	N/A
SW-049-MWS	Barium, Dissolve	17.5		N/A	0.00	no	N/A
SW-049-MWS	Benzaldehyde	1.1	U	N/A	0.00	no	N/A
SW-049-MWS	Benzene	1	U	69	0.00	no	C
SW-049-MWS	Benzo[a]anthracene	0.11	U	NVT	0.00	no	C
SW-049-MWS	Benzo[a]pyrene	0.11	U	N/A	0.00	no	N/A
SW-049-MWS	Benzo[b]fluoranthene	0.11	U	N/A	0.00	no	N/A
SW-049-MWS	Benzo[k]fluoranthene	0.11	U	N/A	0.00	no	N/A
SW-049-MWS	Beryllium	15.6		N/A	0.00	no	N/A
SW-049-MWS	Beryllium, Dissolve	15.7		N/A	0.00	no	N/A
SW-049-MWS	bis(2-chloroethoxy)methane	1.1	U	N/A	0.00	no	N/A
SW-049-MWS	bis(2-Chloroethyl)ether	1.1	U	530	0.00	no	C
SW-049-MWS	bis(2-Chloroisopropyl)ether	1.1	U	N/A	0.00	no	N/A
SW-049-MWS	bis(2-Ethylhexyl)phthalate	1.1	U	N/A	0.00	no	N/A
SW-049-MWS	Bromodichloromethane	1	U	38	0.00	no	C
SW-049-MWS	Bromoform	1	U	5100	0.00	no	C
SW-049-MWS	Bromomethane	1	U	73	0.00	no	NC
SW-049-MWS	Cadmium	3	B	N/A	0.00	no	N/A
SW-049-MWS	Cadmium, Dissolve	2.7	B	N/A	0.00	no	N/A
SW-049-MWS	Caprolactam	2.6	U	N/A	0.00	no	N/A
SW-049-MWS	Carbon disulfide	1	U	5200	0.00	no	NC
SW-049-MWS	Carbon tetrachloride	1	U	18	0.00	no	C
SW-049-MWS	Chlorobenzene	1	U	1700	0.00	no	NC

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-049-MWS	Chloroethane	1	U	97000	0.00	no	NC
SW-049-MWS	Chloroform	1	U	36	0.00	no	C
SW-049-MWS	Chloromethane	1	U	1100	0.00	no	NC
SW-049-MWS	Chromium	2.7	B	N/A	0.00	no	N/A
SW-049-MWS	Chromium VI	10	U	N/A	0.00	no	N/A
SW-049-MWS	Chromium, Dissolve	2.5	B	N/A	0.00	no	N/A
SW-049-MWS	Chrysene	0.11	U	N/A	0.00	no	N/A
SW-049-MWS	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-049-MWS	Cobalt	354		N/A	0.00	no	N/A
SW-049-MWS	Cobalt, Dissolve	355		N/A	0.00	no	N/A
SW-049-MWS	Copper	10.1		N/A	0.00	no	N/A
SW-049-MWS	Copper, Dissolve	8.5		N/A	0.00	no	N/A
SW-049-MWS	Cyanide	10	U	3.5	0.00	no	NC
SW-049-MWS	Cyclohexane	10	U	4300	0.00	no	NC
SW-049-MWS	Dibenz[a,h]anthracene	0.11	U	N/A	0.00	no	N/A
SW-049-MWS	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW-049-MWS	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW-049-MWS	Diethylphthalate	1.1	U	N/A	0.00	no	N/A
SW-049-MWS	Di-n-butylphthalate	1.1	U	N/A	0.00	no	N/A
SW-049-MWS	Di-n-ocytlphthalate	1.1	UJ	N/A	0.00	no	N/A
SW-049-MWS	Ethylbenzene	1	U	150	0.00	no	C
SW-049-MWS	Fluoranthene	0.11	U	N/A	0.00	no	N/A
SW-049-MWS	Fluorene	0.11	U	N/A	0.00	no	N/A
SW-049-MWS	Hexachlorobenzene	1.1	U	3.8	0.00	no	C
SW-049-MWS	Hexachlorobutadiene	1.1	U	13	0.00	no	C
SW-049-MWS	Hexachlorocyclopentadiene	1.1	U	0.79	0.00	no	NC
SW-049-MWS	Hexachloroethane	1.1	U	70	0.00	no	C
SW-049-MWS	Indeno[1,2,3-c,d]pyrene	0.11	U	N/A	0.00	no	N/A
SW-049-MWS	Iron	27400		N/A	0.00	no	N/A
SW-049-MWS	Iron, Dissolve	29000		N/A	0.00	no	N/A
SW-049-MWS	Isophorone	1.1	U	N/A	0.00	no	N/A
SW-049-MWS	Isopropylbenzene	1	U	3700	0.00	no	NC
SW-049-MWS	Lead	7.2		N/A	0.00	no	N/A
SW-049-MWS	Lead, Dissolve	5.8		N/A	0.00	no	N/A
SW-049-MWS	Manganese	4420		N/A	0.00	no	N/A
SW-049-MWS	Manganese, Dissolve	4870		N/A	0.00	no	N/A
SW-049-MWS	Mercury	0.2	U	3.7	0.00	no	NC
SW-049-MWS	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW-049-MWS	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW-049-MWS	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW-049-MWS	Methylene Chloride	1	U	20000	0.00	no	NC
SW-049-MWS	Naphthalene	0.059	B	200	0.00	no	C
SW-049-MWS	Nickel	522		N/A	0.00	no	N/A
SW-049-MWS	Nickel, Dissolve	519		N/A	0.00	no	N/A
SW-049-MWS	Nitrobenzene	1.1	U	3100	0.00	no	C
SW-049-MWS	N-Nitroso-di-n-propylamine	1.1	U	N/A	0.00	no	N/A
SW-049-MWS	N-Nitrosodiphenylamine	1.1	U	N/A	0.00	no	N/A
SW-049-MWS	Pentachlorophenol	1.1	J	N/A	0.00	no	N/A
SW-049-MWS	Phenol	1.1	U	N/A	0.00	no	N/A
SW-049-MWS	Pyrene	0.11	U	N/A	0.00	no	N/A
SW-049-MWS	Selenium	8	U	N/A	0.00	no	N/A
SW-049-MWS	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW-049-MWS	Silver	6	U	N/A	0.00	no	N/A
SW-049-MWS	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW-049-MWS	Styrene	1	U	39000	0.00	no	NC
SW-049-MWS	Tetrachloroethene	1	U	240	0.00	no	NC
SW-049-MWS	Thallium	10	U	N/A	0.00	no	N/A
SW-049-MWS	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW-049-MWS	Toluene	1	U	81000	0.00	no	NC
SW-049-MWS	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-049-MWS	Trichloroethene	1	U	22	0.00	no	NC
SW-049-MWS	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW-049-MWS	Vanadium	2.5	J	N/A	0.00	no	N/A
SW-049-MWS	Vanadium, Dissolve	2.4	J	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-049-MWS	Vinyl chloride	1	U	25	0.00	no	C
SW-049-MWS	Xylenes	3	U	1600	0.00	no	NC
SW-049-MWS	Zinc	1250		N/A	0.00	no	N/A
SW-049-MWS	Zinc, Dissolve	1280		N/A	0.00	no	N/A
SW-050-MWS	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW-050-MWS	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW-050-MWS	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW-050-MWS	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW-050-MWS	1,1-Biphenyl	1	U	140	0.00	no	NC
SW-050-MWS	1,1-Dichloroethane	1	U	330	0.00	no	C
SW-050-MWS	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW-050-MWS	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW-050-MWS	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW-050-MWS	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW-050-MWS	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW-050-MWS	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW-050-MWS	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW-050-MWS	1,2-Dichloroethane	1	U	98	0.00	no	C
SW-050-MWS	1,2-Dichloropropane	1	U	110	0.00	no	C
SW-050-MWS	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW-050-MWS	1,4-Dioxane	0.1	J	130000	0.00	no	C
SW-050-MWS	2,3,4,6-Tetrachlorophenol	11.9		N/A	0.00	no	N/A
SW-050-MWS	2,4,5-Trichlorophenol	0.9	J	N/A	0.00	no	N/A
SW-050-MWS	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW-050-MWS	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW-050-MWS	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW-050-MWS	2,4-Dinitrophenol	2.5	U	N/A	0.00	no	N/A
SW-050-MWS	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-050-MWS	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-050-MWS	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW-050-MWS	2-Chloronaphthalene	0.83	J	N/A	0.00	no	N/A
SW-050-MWS	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW-050-MWS	2-Hexanone	10	U	34000	0.00	no	NC
SW-050-MWS	2-Methylnaphthalene	0.086	J	N/A	0.00	no	N/A
SW-050-MWS	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW-050-MWS	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-050-MWS	3,3'-Dichlorobenzidine	1	U	N/A	0.00	no	N/A
SW-050-MWS	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW-050-MWS	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW-050-MWS	4-Nitroaniline	2.5	UJ	N/A	0.00	no	N/A
SW-050-MWS	Acenaphthene	0.11	U	N/A	0.00	no	N/A
SW-050-MWS	Acetone	10	U	95000000	0.00	no	NC
SW-050-MWS	Acetophenone	1	U	N/A	0.00	no	N/A
SW-050-MWS	Aluminum	575		N/A	0.00	no	N/A
SW-050-MWS	Aluminum, Dissolve	558		N/A	0.00	no	N/A
SW-050-MWS	Anthracene	0.014	J	N/A	0.00	no	N/A
SW-050-MWS	Antimony	6	U	N/A	0.00	no	N/A
SW-050-MWS	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW-050-MWS	Arsenic	5	U	N/A	0.00	no	N/A
SW-050-MWS	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SW-050-MWS	Barium	18.5		N/A	0.00	no	N/A
SW-050-MWS	Barium, Dissolve	19		N/A	0.00	no	N/A
SW-050-MWS	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW-050-MWS	Benzene	1	U	69	0.00	no	C
SW-050-MWS	Benzo[a]anthracene	0.11	U	NVT	0.00	no	C
SW-050-MWS	Benzo[a]pyrene	0.11	U	N/A	0.00	no	N/A
SW-050-MWS	Benzo[b]fluoranthene	0.11	U	N/A	0.00	no	N/A
SW-050-MWS	Benzo[k]fluoranthene	0.11	U	N/A	0.00	no	N/A
SW-050-MWS	Beryllium	1.6		N/A	0.00	no	N/A
SW-050-MWS	Beryllium, Dissolve	1.7		N/A	0.00	no	N/A
SW-050-MWS	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW-050-MWS	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW-050-MWS	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW-050-MWS	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-050-MWS	Bromodichloromethane	1	U	38	0.00	no	C
SW-050-MWS	Bromoform	1	U	5100	0.00	no	C
SW-050-MWS	Bromomethane	1	U	73	0.00	no	NC
SW-050-MWS	Cadmium	3	U	N/A	0.00	no	N/A
SW-050-MWS	Cadmium, Dissolve	0.57	B	N/A	0.00	no	N/A
SW-050-MWS	Caprolactam	2.5	U	N/A	0.00	no	N/A
SW-050-MWS	Carbon disulfide	1	U	5200	0.00	no	NC
SW-050-MWS	Carbon tetrachloride	1	U	18	0.00	no	C
SW-050-MWS	Chlorobenzene	1	U	1700	0.00	no	NC
SW-050-MWS	Chloroethane	1	U	97000	0.00	no	NC
SW-050-MWS	Chloroform	1	U	36	0.00	no	C
SW-050-MWS	Chloromethane	1	U	1100	0.00	no	NC
SW-050-MWS	Chromium	0.97	B	N/A	0.00	no	N/A
SW-050-MWS	Chromium VI	10	U	N/A	0.00	no	N/A
SW-050-MWS	Chromium, Dissolve	0.93	B	N/A	0.00	no	N/A
SW-050-MWS	Chrysene	0.11	U	N/A	0.00	no	N/A
SW-050-MWS	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-050-MWS	Cobalt	47.4		N/A	0.00	no	N/A
SW-050-MWS	Cobalt, Dissolve	48.2		N/A	0.00	no	N/A
SW-050-MWS	Copper	1.8	J	N/A	0.00	no	N/A
SW-050-MWS	Copper, Dissolve	2	J	N/A	0.00	no	N/A
SW-050-MWS	Cyanide	10	U	3.5	0.00	no	NC
SW-050-MWS	Cyclohexane	10	U	4300	0.00	no	NC
SW-050-MWS	Dibenz[a,h]anthracene	0.11	U	N/A	0.00	no	N/A
SW-050-MWS	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW-050-MWS	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW-050-MWS	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW-050-MWS	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW-050-MWS	Di-n-ocytlphthalate	1	UJ	N/A	0.00	no	N/A
SW-050-MWS	Ethylbenzene	1	U	150	0.00	no	C
SW-050-MWS	Fluoranthene	0.11	U	N/A	0.00	no	N/A
SW-050-MWS	Fluorene	0.11	U	N/A	0.00	no	N/A
SW-050-MWS	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW-050-MWS	Hexachlorobutadiene	1	U	13	0.00	no	C
SW-050-MWS	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW-050-MWS	Hexachloroethane	1	U	70	0.00	no	C
SW-050-MWS	Indeno[1,2,3-c,d]pyrene	0.11	U	N/A	0.00	no	N/A
SW-050-MWS	Iron	21700		N/A	0.00	no	N/A
SW-050-MWS	Iron, Dissolve	24400		N/A	0.00	no	N/A
SW-050-MWS	Isophorone	1	U	N/A	0.00	no	N/A
SW-050-MWS	Isopropylbenzene	1	U	3700	0.00	no	NC
SW-050-MWS	Lead	5	U	N/A	0.00	no	N/A
SW-050-MWS	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW-050-MWS	Manganese	866		N/A	0.00	no	N/A
SW-050-MWS	Manganese, Dissolve	868		N/A	0.00	no	N/A
SW-050-MWS	Mercury	0.2	U	3.7	0.00	no	NC
SW-050-MWS	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW-050-MWS	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW-050-MWS	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW-050-MWS	Methylene Chloride	1	U	20000	0.00	no	NC
SW-050-MWS	Naphthalene	0.16		200	0.00	no	C
SW-050-MWS	Nickel	57.8		N/A	0.00	no	N/A
SW-050-MWS	Nickel, Dissolve	60.7		N/A	0.00	no	N/A
SW-050-MWS	Nitrobenzene	1	U	3100	0.00	no	C
SW-050-MWS	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW-050-MWS	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW-050-MWS	Pentachlorophenol	59.1		N/A	0.00	no	N/A
SW-050-MWS	Phenol	1	U	N/A	0.00	no	N/A
SW-050-MWS	Pyrene	0.11	U	N/A	0.00	no	N/A
SW-050-MWS	Selenium	8	U	N/A	0.00	no	N/A
SW-050-MWS	Selenium, Dissolve	4.2	B	N/A	0.00	no	N/A
SW-050-MWS	Silver	6	U	N/A	0.00	no	N/A
SW-050-MWS	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW-050-MWS	Styrene	1	U	39000	0.00	no	NC

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-050-MWS	Tetrachloroethene	1	U	240	0.00	no	NC
SW-050-MWS	Thallium	10	U	N/A	0.00	no	N/A
SW-050-MWS	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW-050-MWS	Toluene	1	U	81000	0.00	no	NC
SW-050-MWS	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-050-MWS	Trichloroethene	1	U	22	0.00	no	NC
SW-050-MWS	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW-050-MWS	Vanadium	0.82	J	N/A	0.00	no	N/A
SW-050-MWS	Vanadium, Dissolve	1.1	J	N/A	0.00	no	N/A
SW-050-MWS	Vinyl chloride	1	U	25	0.00	no	C
SW-050-MWS	Xylenes	3	U	1600	0.00	no	NC
SW-050-MWS	Zinc	109		N/A	0.00	no	N/A
SW-050-MWS	Zinc, Dissolve	115		N/A	0.00	no	N/A
SW-051-MWS	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW-051-MWS	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW-051-MWS	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW-051-MWS	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW-051-MWS	1,1-Biphenyl	1	U	140	0.00	no	NC
SW-051-MWS	1,1-Dichloroethane	1	U	330	0.00	no	C
SW-051-MWS	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW-051-MWS	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW-051-MWS	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW-051-MWS	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW-051-MWS	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW-051-MWS	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW-051-MWS	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW-051-MWS	1,2-Dichloroethane	1	U	98	0.00	no	C
SW-051-MWS	1,2-Dichloropropane	1	U	110	0.00	no	C
SW-051-MWS	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW-051-MWS	1,4-Dioxane	0.044	J	130000	0.00	no	C
SW-051-MWS	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW-051-MWS	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
SW-051-MWS	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW-051-MWS	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW-051-MWS	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW-051-MWS	2,4-Dinitrophenol	2.5	U	N/A	0.00	no	N/A
SW-051-MWS	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-051-MWS	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-051-MWS	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW-051-MWS	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW-051-MWS	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW-051-MWS	2-Hexanone	10	U	34000	0.00	no	NC
SW-051-MWS	2-Methylnaphthalene	0.1	U	N/A	0.00	no	N/A
SW-051-MWS	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW-051-MWS	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-051-MWS	3,3'-Dichlorobenzidine	1	UJ	N/A	0.00	no	N/A
SW-051-MWS	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW-051-MWS	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW-051-MWS	4-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-051-MWS	Acenaphthene	0.1	U	N/A	0.00	no	N/A
SW-051-MWS	Acetone	10	R	95000000	0.00	no	NC
SW-051-MWS	Acetophenone	1	U	N/A	0.00	no	N/A
SW-051-MWS	Aluminum	2340		N/A	0.00	no	N/A
SW-051-MWS	Aluminum, Dissolve	1730		N/A	0.00	no	N/A
SW-051-MWS	Anthracene	0.1	U	N/A	0.00	no	N/A
SW-051-MWS	Antimony	6	U	N/A	0.00	no	N/A
SW-051-MWS	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW-051-MWS	Arsenic	5	U	N/A	0.00	no	N/A
SW-051-MWS	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SW-051-MWS	Barium	13		N/A	0.00	no	N/A
SW-051-MWS	Barium, Dissolve	10.4		N/A	0.00	no	N/A
SW-051-MWS	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW-051-MWS	Benzene	1	U	69	0.00	no	C
SW-051-MWS	Benzo[a]anthracene	0.1	U	NVT	0.00	no	C

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-051-MWS	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW-051-MWS	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-051-MWS	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-051-MWS	Beryllium	1.8		N/A	0.00	no	N/A
SW-051-MWS	Beryllium, Dissolve	1.6		N/A	0.00	no	N/A
SW-051-MWS	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW-051-MWS	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW-051-MWS	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW-051-MWS	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A
SW-051-MWS	Bromodichloromethane	1	U	38	0.00	no	C
SW-051-MWS	Bromoform	1	U	5100	0.00	no	C
SW-051-MWS	Bromomethane	1	U	73	0.00	no	NC
SW-051-MWS	Cadmium	0.69	J	N/A	0.00	no	N/A
SW-051-MWS	Cadmium, Dissolve	0.71	B	N/A	0.00	no	N/A
SW-051-MWS	Caprolactam	2.5	U	N/A	0.00	no	N/A
SW-051-MWS	Carbon disulfide	1	U	5200	0.00	no	NC
SW-051-MWS	Carbon tetrachloride	1	U	18	0.00	no	C
SW-051-MWS	Chlorobenzene	1	U	1700	0.00	no	NC
SW-051-MWS	Chloroethane	1	U	97000	0.00	no	NC
SW-051-MWS	Chloroform	1	U	36	0.00	no	C
SW-051-MWS	Chloromethane	1	U	1100	0.00	no	NC
SW-051-MWS	Chromium	1.4	B	N/A	0.00	no	N/A
SW-051-MWS	Chromium VI	10	U	N/A	0.00	no	N/A
SW-051-MWS	Chromium, Dissolve	0.8	B	N/A	0.00	no	N/A
SW-051-MWS	Chrysene	0.1	U	N/A	0.00	no	N/A
SW-051-MWS	cis-1,2-Dichloroethene	0.44	J	N/A	0.00	no	N/A
SW-051-MWS	Cobalt	57.6		N/A	0.00	no	N/A
SW-051-MWS	Cobalt, Dissolve	49.8		N/A	0.00	no	N/A
SW-051-MWS	Copper	5	U	N/A	0.00	no	N/A
SW-051-MWS	Copper, Dissolve	3.1	B	N/A	0.00	no	N/A
SW-051-MWS	Cyanide	10	U	3.5	0.00	no	NC
SW-051-MWS	Cyclohexane	10	U	4300	0.00	no	NC
SW-051-MWS	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW-051-MWS	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW-051-MWS	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW-051-MWS	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW-051-MWS	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW-051-MWS	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW-051-MWS	Ethylbenzene	1	U	150	0.00	no	C
SW-051-MWS	Fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-051-MWS	Fluorene	0.024	J	N/A	0.00	no	N/A
SW-051-MWS	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW-051-MWS	Hexachlorobutadiene	1	U	13	0.00	no	C
SW-051-MWS	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW-051-MWS	Hexachloroethane	1	U	70	0.00	no	C
SW-051-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW-051-MWS	Iron	9350		N/A	0.00	no	N/A
SW-051-MWS	Iron, Dissolve	7700		N/A	0.00	no	N/A
SW-051-MWS	Isophorone	1	U	N/A	0.00	no	N/A
SW-051-MWS	Isopropylbenzene	1	U	3700	0.00	no	NC
SW-051-MWS	Lead	5	U	N/A	0.00	no	N/A
SW-051-MWS	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW-051-MWS	Manganese	1910		N/A	0.00	no	N/A
SW-051-MWS	Manganese, Dissolve	1700		N/A	0.00	no	N/A
SW-051-MWS	Mercury	0.2	UJ	3.7	0.00	no	NC
SW-051-MWS	Mercury, Dissolve	0.2	UJ	3.7	0.00	no	NC
SW-051-MWS	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW-051-MWS	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW-051-MWS	Methylene Chloride	1	U	20000	0.00	no	NC
SW-051-MWS	Naphthalene	0.024	B	200	0.00	no	C
SW-051-MWS	Nickel	90.3		N/A	0.00	no	N/A
SW-051-MWS	Nickel, Dissolve	83.5		N/A	0.00	no	N/A
SW-051-MWS	Nitrobenzene	1	U	3100	0.00	no	C
SW-051-MWS	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-051-MWS	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW-051-MWS	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
SW-051-MWS	Phenol	1	U	N/A	0.00	no	N/A
SW-051-MWS	Pyrene	0.1	U	N/A	0.00	no	N/A
SW-051-MWS	Selenium	8	U	N/A	0.00	no	N/A
SW-051-MWS	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW-051-MWS	Silver	6	U	N/A	0.00	no	N/A
SW-051-MWS	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW-051-MWS	Styrene	1	U	39000	0.00	no	NC
SW-051-MWS	Tetrachloroethene	1	U	240	0.00	no	NC
SW-051-MWS	Thallium	10	U	N/A	0.00	no	N/A
SW-051-MWS	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW-051-MWS	Toluene	1	U	81000	0.00	no	NC
SW-051-MWS	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-051-MWS	Trichloroethene	1	U	22	0.00	no	NC
SW-051-MWS	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW-051-MWS	Vanadium	5	U	N/A	0.00	no	N/A
SW-051-MWS	Vanadium, Dissolve	5	U	N/A	0.00	no	N/A
SW-051-MWS	Vinyl chloride	1	U	25	0.00	no	C
SW-051-MWS	Xylenes	3	U	1600	0.00	no	NC
SW-051-MWS	Zinc	189		N/A	0.00	no	N/A
SW-051-MWS	Zinc, Dissolve	173		N/A	0.00	no	N/A
SW-052-MWS	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW-052-MWS	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW-052-MWS	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW-052-MWS	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW-052-MWS	1,1-Biphenyl	1	U	140	0.00	no	NC
SW-052-MWS	1,1-Dichloroethane	1	U	330	0.00	no	C
SW-052-MWS	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW-052-MWS	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW-052-MWS	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW-052-MWS	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW-052-MWS	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW-052-MWS	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW-052-MWS	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW-052-MWS	1,2-Dichloroethane	1	U	98	0.00	no	C
SW-052-MWS	1,2-Dichloropropane	1	U	110	0.00	no	C
SW-052-MWS	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW-052-MWS	1,4-Dioxane	0.1	U	130000	0.00	no	C
SW-052-MWS	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW-052-MWS	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
SW-052-MWS	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW-052-MWS	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW-052-MWS	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW-052-MWS	2,4-Dinitrophenol	2.5	U	N/A	0.00	no	N/A
SW-052-MWS	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-052-MWS	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-052-MWS	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW-052-MWS	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW-052-MWS	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW-052-MWS	2-Hexanone	10	U	34000	0.00	no	NC
SW-052-MWS	2-Methylnaphthalene	0.031	J	N/A	0.00	no	N/A
SW-052-MWS	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW-052-MWS	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-052-MWS	3,3'-Dichlorobenzidine	1	U	N/A	0.00	no	N/A
SW-052-MWS	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW-052-MWS	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW-052-MWS	4-Nitroaniline	2.5	UJ	N/A	0.00	no	N/A
SW-052-MWS	Acenaphthene	0.1	U	N/A	0.00	no	N/A
SW-052-MWS	Acetone	10	U	95000000	0.00	no	NC
SW-052-MWS	Acetophenone	1	U	N/A	0.00	no	N/A
SW-052-MWS	Aluminum	12300	J	N/A	0.00	no	N/A
SW-052-MWS	Aluminum, Dissolve	53.2		N/A	0.00	no	N/A
SW-052-MWS	Anthracene	0.062	J	N/A	0.00	no	N/A

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-052-MWS	Antimony	6	U	N/A	0.00	no	N/A
SW-052-MWS	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW-052-MWS	Arsenic	4.2	B	N/A	0.00	no	N/A
SW-052-MWS	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SW-052-MWS	Barium	109		N/A	0.00	no	N/A
SW-052-MWS	Barium, Dissolve	42.3		N/A	0.00	no	N/A
SW-052-MWS	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW-052-MWS	Benzene	1	U	69	0.00	no	C
SW-052-MWS	Benzo[a]anthracene	0.08	J	NVT	0.00	no	C
SW-052-MWS	Benzo[a]pyrene	0.07	J	N/A	0.00	no	N/A
SW-052-MWS	Benzo[b]fluoranthene	0.097	J	N/A	0.00	no	N/A
SW-052-MWS	Benzo[k]fluoranthene	0.057	J	N/A	0.00	no	N/A
SW-052-MWS	Beryllium	0.46	J	N/A	0.00	no	N/A
SW-052-MWS	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW-052-MWS	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW-052-MWS	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW-052-MWS	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW-052-MWS	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A
SW-052-MWS	Bromodichloromethane	1	U	38	0.00	no	C
SW-052-MWS	Bromoform	1	U	5100	0.00	no	C
SW-052-MWS	Bromomethane	1	U	73	0.00	no	NC
SW-052-MWS	Cadmium	0.71	B	N/A	0.00	no	N/A
SW-052-MWS	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A
SW-052-MWS	Caprolactam	2.5	U	N/A	0.00	no	N/A
SW-052-MWS	Carbon disulfide	1	U	5200	0.00	no	NC
SW-052-MWS	Carbon tetrachloride	1	U	18	0.00	no	C
SW-052-MWS	Chlorobenzene	1	U	1700	0.00	no	NC
SW-052-MWS	Chloroethane	1	U	97000	0.00	no	NC
SW-052-MWS	Chloroform	1	U	36	0.00	no	C
SW-052-MWS	Chloromethane	1	U	1100	0.00	no	NC
SW-052-MWS	Chromium	59.9		N/A	0.00	no	N/A
SW-052-MWS	Chromium VI	10	U	N/A	0.00	no	N/A
SW-052-MWS	Chromium, Dissolve	27.4		N/A	0.00	no	N/A
SW-052-MWS	Chrysene	0.076	J	N/A	0.00	no	N/A
SW-052-MWS	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-052-MWS	Cobalt	2.3	J	N/A	0.00	no	N/A
SW-052-MWS	Cobalt, Dissolve	5	U	N/A	0.00	no	N/A
SW-052-MWS	Copper	9.9		N/A	0.00	no	N/A
SW-052-MWS	Copper, Dissolve	5	U	N/A	0.00	no	N/A
SW-052-MWS	Cyanide	10	U	3.5	0.00	no	NC
SW-052-MWS	Cyclohexane	10	U	4300	0.00	no	NC
SW-052-MWS	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW-052-MWS	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW-052-MWS	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW-052-MWS	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW-052-MWS	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW-052-MWS	Di-n-ocytlphthalate	1	UJ	N/A	0.00	no	N/A
SW-052-MWS	Ethylbenzene	1	U	150	0.00	no	C
SW-052-MWS	Fluoranthene	0.1	J	N/A	0.00	no	N/A
SW-052-MWS	Fluorene	0.1	U	N/A	0.00	no	N/A
SW-052-MWS	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW-052-MWS	Hexachlorobutadiene	1	U	13	0.00	no	C
SW-052-MWS	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW-052-MWS	Hexachloroethane	1	U	70	0.00	no	C
SW-052-MWS	Indeno[1,2,3-c,d]pyrene	0.039	J	N/A	0.00	no	N/A
SW-052-MWS	Iron	21100		N/A	0.00	no	N/A
SW-052-MWS	Iron, Dissolve	52.4	B	N/A	0.00	no	N/A
SW-052-MWS	Isophorone	1	U	N/A	0.00	no	N/A
SW-052-MWS	Isopropylbenzene	1	U	3700	0.00	no	NC
SW-052-MWS	Lead	42.2		N/A	0.00	no	N/A
SW-052-MWS	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW-052-MWS	Manganese	714		N/A	0.00	no	N/A
SW-052-MWS	Manganese, Dissolve	3.1	J	N/A	0.00	no	N/A
SW-052-MWS	Mercury	0.2	U	3.7	0.00	no	NC

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-052-MWS	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW-052-MWS	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW-052-MWS	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW-052-MWS	Methylene Chloride	1	U	20000	0.00	no	NC
SW-052-MWS	Naphthalene	0.068	B	200	0.00	no	C
SW-052-MWS	Nickel	9.2	B	N/A	0.00	no	N/A
SW-052-MWS	Nickel, Dissolve	10	U	N/A	0.00	no	N/A
SW-052-MWS	Nitrobenzene	1	U	3100	0.00	no	C
SW-052-MWS	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW-052-MWS	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW-052-MWS	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
SW-052-MWS	Phenol	1	U	N/A	0.00	no	N/A
SW-052-MWS	Pyrene	0.1	J	N/A	0.00	no	N/A
SW-052-MWS	Selenium	7.1	B	N/A	0.00	no	N/A
SW-052-MWS	Selenium, Dissolve	7.4	B	N/A	0.00	no	N/A
SW-052-MWS	Silver	6	U	N/A	0.00	no	N/A
SW-052-MWS	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW-052-MWS	Styrene	1	U	39000	0.00	no	NC
SW-052-MWS	Tetrachloroethene	1	U	240	0.00	no	NC
SW-052-MWS	Thallium	10	U	N/A	0.00	no	N/A
SW-052-MWS	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW-052-MWS	Toluene	1	U	81000	0.00	no	NC
SW-052-MWS	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-052-MWS	Trichloroethene	1	U	22	0.00	no	NC
SW-052-MWS	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW-052-MWS	Vanadium	180		N/A	0.00	no	N/A
SW-052-MWS	Vanadium, Dissolve	81.9		N/A	0.00	no	N/A
SW-052-MWS	Vinyl chloride	1	U	25	0.00	no	C
SW-052-MWS	Xylenes	3	U	1600	0.00	no	NC
SW-052-MWS	Zinc	145		N/A	0.00	no	N/A
SW-052-MWS	Zinc, Dissolve	0.71	J	N/A	0.00	no	N/A
SW-053-MWS	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW-053-MWS	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW-053-MWS	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW-053-MWS	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW-053-MWS	1,1-Biphenyl	1	U	140	0.00	no	NC
SW-053-MWS	1,1-Dichloroethane	1	U	330	0.00	no	C
SW-053-MWS	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW-053-MWS	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW-053-MWS	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW-053-MWS	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW-053-MWS	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW-053-MWS	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW-053-MWS	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW-053-MWS	1,2-Dichloroethane	1	U	98	0.00	no	C
SW-053-MWS	1,2-Dichloropropane	1	U	110	0.00	no	C
SW-053-MWS	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW-053-MWS	1,4-Dioxane	0.1	U	130000	0.00	no	C
SW-053-MWS	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW-053-MWS	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
SW-053-MWS	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW-053-MWS	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW-053-MWS	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW-053-MWS	2,4-Dinitrophenol	2.5	UJ	N/A	0.00	no	N/A
SW-053-MWS	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-053-MWS	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-053-MWS	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW-053-MWS	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW-053-MWS	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW-053-MWS	2-Hexanone	10	U	34000	0.00	no	NC
SW-053-MWS	2-Methylnaphthalene	0.1	U	N/A	0.00	no	N/A
SW-053-MWS	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW-053-MWS	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-053-MWS	3,3'-Dichlorobenzidine	1	U	N/A	0.00	no	N/A

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-053-MWS	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW-053-MWS	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW-053-MWS	4-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-053-MWS	Acenaphthene	0.1	U	N/A	0.00	no	N/A
SW-053-MWS	Acetone	10	U	95000000	0.00	no	NC
SW-053-MWS	Acetophenone	1	U	N/A	0.00	no	N/A
SW-053-MWS	Aluminum	248		N/A	0.00	no	N/A
SW-053-MWS	Aluminum, Dissolve	172		N/A	0.00	no	N/A
SW-053-MWS	Anthracene	0.1	U	N/A	0.00	no	N/A
SW-053-MWS	Antimony	6	U	N/A	0.00	no	N/A
SW-053-MWS	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW-053-MWS	Arsenic	5	U	N/A	0.00	no	N/A
SW-053-MWS	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SW-053-MWS	Barium	17.3		N/A	0.00	no	N/A
SW-053-MWS	Barium, Dissolve	16.7		N/A	0.00	no	N/A
SW-053-MWS	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW-053-MWS	Benzene	1	U	69	0.00	no	C
SW-053-MWS	Benzo[a]anthracene	0.1	U	NVT	0.00	no	C
SW-053-MWS	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW-053-MWS	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-053-MWS	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-053-MWS	Beryllium	2		N/A	0.00	no	N/A
SW-053-MWS	Beryllium, Dissolve	1.8		N/A	0.00	no	N/A
SW-053-MWS	bis(2-chloroethoxy)methane	1	UJ	N/A	0.00	no	N/A
SW-053-MWS	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW-053-MWS	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW-053-MWS	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A
SW-053-MWS	Bromodichloromethane	1	U	38	0.00	no	C
SW-053-MWS	Bromoform	1	U	5100	0.00	no	C
SW-053-MWS	Bromomethane	1	U	73	0.00	no	NC
SW-053-MWS	Cadmium	0.66	J	N/A	0.00	no	N/A
SW-053-MWS	Cadmium, Dissolve	0.62	B	N/A	0.00	no	N/A
SW-053-MWS	Caprolactam	2.5	U	N/A	0.00	no	N/A
SW-053-MWS	Carbon disulfide	1	U	5200	0.00	no	NC
SW-053-MWS	Carbon tetrachloride	1	U	18	0.00	no	C
SW-053-MWS	Chlorobenzene	1	U	1700	0.00	no	NC
SW-053-MWS	Chloroethane	1	U	97000	0.00	no	NC
SW-053-MWS	Chloroform	1	U	36	0.00	no	C
SW-053-MWS	Chloromethane	1	U	1100	0.00	no	NC
SW-053-MWS	Chromium	5	U	N/A	0.00	no	N/A
SW-053-MWS	Chromium VI	10	U	N/A	0.00	no	N/A
SW-053-MWS	Chromium, Dissolve	1.4	B	N/A	0.00	no	N/A
SW-053-MWS	Chrysene	0.1	U	N/A	0.00	no	N/A
SW-053-MWS	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-053-MWS	Cobalt	77.7		N/A	0.00	no	N/A
SW-053-MWS	Cobalt, Dissolve	85.6		N/A	0.00	no	N/A
SW-053-MWS	Copper	5	U	N/A	0.00	no	N/A
SW-053-MWS	Copper, Dissolve	1.5	B	N/A	0.00	no	N/A
SW-053-MWS	Cyanide	10	U	3.5	0.00	no	NC
SW-053-MWS	Cyclohexane	10	U	4300	0.00	no	NC
SW-053-MWS	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW-053-MWS	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW-053-MWS	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW-053-MWS	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW-053-MWS	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW-053-MWS	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW-053-MWS	Ethylbenzene	1	U	150	0.00	no	C
SW-053-MWS	Fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-053-MWS	Fluorene	0.1	U	N/A	0.00	no	N/A
SW-053-MWS	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW-053-MWS	Hexachlorobutadiene	1	U	13	0.00	no	C
SW-053-MWS	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW-053-MWS	Hexachloroethane	1	U	70	0.00	no	C
SW-053-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-053-MWS	Iron	5040		N/A	0.00	no	N/A
SW-053-MWS	Iron, Dissolve	4900		N/A	0.00	no	N/A
SW-053-MWS	Isophorone	1	U	N/A	0.00	no	N/A
SW-053-MWS	Isopropylbenzene	1	U	3700	0.00	no	NC
SW-053-MWS	Lead	5	U	N/A	0.00	no	N/A
SW-053-MWS	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW-053-MWS	Manganese	1620		N/A	0.00	no	N/A
SW-053-MWS	Manganese, Dissolve	1870		N/A	0.00	no	N/A
SW-053-MWS	Mercury	0.2	UJ	3.7	0.00	no	NC
SW-053-MWS	Mercury, Dissolve	0.2	UJ	3.7	0.00	no	NC
SW-053-MWS	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW-053-MWS	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW-053-MWS	Methylene Chloride	1	U	20000	0.00	no	NC
SW-053-MWS	Naphthalene	0.1	U	200	0.00	no	C
SW-053-MWS	Nickel	120		N/A	0.00	no	N/A
SW-053-MWS	Nickel, Dissolve	128		N/A	0.00	no	N/A
SW-053-MWS	Nitrobenzene	1	U	3100	0.00	no	C
SW-053-MWS	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW-053-MWS	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW-053-MWS	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
SW-053-MWS	Phenol	1	U	N/A	0.00	no	N/A
SW-053-MWS	Pyrene	0.1	U	N/A	0.00	no	N/A
SW-053-MWS	Selenium	8	U	N/A	0.00	no	N/A
SW-053-MWS	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW-053-MWS	Silver	6	U	N/A	0.00	no	N/A
SW-053-MWS	Silver, Dissolve	0.81	B	N/A	0.00	no	N/A
SW-053-MWS	Styrene	1	U	39000	0.00	no	NC
SW-053-MWS	Tetrachloroethene	1	U	240	0.00	no	NC
SW-053-MWS	Thallium	4.3	B	N/A	0.00	no	N/A
SW-053-MWS	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW-053-MWS	Toluene	1	U	81000	0.00	no	NC
SW-053-MWS	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-053-MWS	Trichloroethene	1	U	22	0.00	no	NC
SW-053-MWS	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW-053-MWS	Vanadium	5	U	N/A	0.00	no	N/A
SW-053-MWS	Vanadium, Dissolve	5	U	N/A	0.00	no	N/A
SW-053-MWS	Vinyl chloride	1	U	25	0.00	no	C
SW-053-MWS	Xylenes	3	U	1600	0.00	no	NC
SW-053-MWS	Zinc	127		N/A	0.00	no	N/A
SW-053-MWS	Zinc, Dissolve	135		N/A	0.00	no	N/A
SW-054-MWS	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW-054-MWS	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW-054-MWS	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW-054-MWS	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW-054-MWS	1,1-Biphenyl	1	U	140	0.00	no	NC
SW-054-MWS	1,1-Dichloroethane	1	U	330	0.00	no	C
SW-054-MWS	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW-054-MWS	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW-054-MWS	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW-054-MWS	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW-054-MWS	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW-054-MWS	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW-054-MWS	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW-054-MWS	1,2-Dichloroethane	1	U	98	0.00	no	C
SW-054-MWS	1,2-Dichloropropane	1	U	110	0.00	no	C
SW-054-MWS	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW-054-MWS	1,4-Dioxane	0.1	U	130000	0.00	no	C
SW-054-MWS	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW-054-MWS	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
SW-054-MWS	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW-054-MWS	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW-054-MWS	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW-054-MWS	2,4-Dinitrophenol	2.5	UJ	N/A	0.00	no	N/A
SW-054-MWS	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-054-MWS	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-054-MWS	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW-054-MWS	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW-054-MWS	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW-054-MWS	2-Hexanone	10	U	34000	0.00	no	NC
SW-054-MWS	2-Methylnaphthalene	0.1	U	N/A	0.00	no	N/A
SW-054-MWS	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW-054-MWS	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-054-MWS	3,3'-Dichlorobenzidine	1	U	N/A	0.00	no	N/A
SW-054-MWS	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW-054-MWS	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW-054-MWS	4-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-054-MWS	Acenaphthene	0.1	U	N/A	0.00	no	N/A
SW-054-MWS	Acetone	10	U	95000000	0.00	no	NC
SW-054-MWS	Acetophenone	1	U	N/A	0.00	no	N/A
SW-054-MWS	Aluminum	621		N/A	0.00	no	N/A
SW-054-MWS	Aluminum, Dissolve	515		N/A	0.00	no	N/A
SW-054-MWS	Anthracene	0.1	U	N/A	0.00	no	N/A
SW-054-MWS	Antimony	6	U	N/A	0.00	no	N/A
SW-054-MWS	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW-054-MWS	Arsenic	5	U	N/A	0.00	no	N/A
SW-054-MWS	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SW-054-MWS	Barium	25.9		N/A	0.00	no	N/A
SW-054-MWS	Barium, Dissolve	22.6		N/A	0.00	no	N/A
SW-054-MWS	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW-054-MWS	Benzene	1	U	69	0.00	no	C
SW-054-MWS	Benzo[a]anthracene	0.1	U	NVT	0.00	no	C
SW-054-MWS	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW-054-MWS	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-054-MWS	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-054-MWS	Beryllium	2.4		N/A	0.00	no	N/A
SW-054-MWS	Beryllium, Dissolve	2.2		N/A	0.00	no	N/A
SW-054-MWS	bis(2-chloroethoxy)methane	1	UJ	N/A	0.00	no	N/A
SW-054-MWS	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW-054-MWS	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW-054-MWS	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A
SW-054-MWS	Bromodichloromethane	1	U	38	0.00	no	C
SW-054-MWS	Bromoform	1	U	5100	0.00	no	C
SW-054-MWS	Bromomethane	1	U	73	0.00	no	NC
SW-054-MWS	Cadmium	3	U	N/A	0.00	no	N/A
SW-054-MWS	Cadmium, Dissolve	0.63	B	N/A	0.00	no	N/A
SW-054-MWS	Caprolactam	2.5	U	N/A	0.00	no	N/A
SW-054-MWS	Carbon disulfide	1	U	5200	0.00	no	NC
SW-054-MWS	Carbon tetrachloride	1	U	18	0.00	no	C
SW-054-MWS	Chlorobenzene	1	U	1700	0.00	no	NC
SW-054-MWS	Chloroethane	1	U	97000	0.00	no	NC
SW-054-MWS	Chloroform	1	U	36	0.00	no	C
SW-054-MWS	Chloromethane	1	U	1100	0.00	no	NC
SW-054-MWS	Chromium	5	U	N/A	0.00	no	N/A
SW-054-MWS	Chromium VI	10	U	N/A	0.00	no	N/A
SW-054-MWS	Chromium, Dissolve	1.2	B	N/A	0.00	no	N/A
SW-054-MWS	Chrysene	0.1	U	N/A	0.00	no	N/A
SW-054-MWS	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-054-MWS	Cobalt	27.1		N/A	0.00	no	N/A
SW-054-MWS	Cobalt, Dissolve	25.5		N/A	0.00	no	N/A
SW-054-MWS	Copper	5	U	N/A	0.00	no	N/A
SW-054-MWS	Copper, Dissolve	3.5	B	N/A	0.00	no	N/A
SW-054-MWS	Cyanide	10	U	3.5	0.00	no	NC
SW-054-MWS	Cyclohexane	10	U	4300	0.00	no	NC
SW-054-MWS	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW-054-MWS	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW-054-MWS	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW-054-MWS	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW-054-MWS	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-054-MWS	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW-054-MWS	Ethylbenzene	1	U	150	0.00	no	C
SW-054-MWS	Fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-054-MWS	Fluorene	0.1	U	N/A	0.00	no	N/A
SW-054-MWS	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW-054-MWS	Hexachlorobutadiene	1	U	13	0.00	no	C
SW-054-MWS	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW-054-MWS	Hexachloroethane	1	U	70	0.00	no	C
SW-054-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW-054-MWS	Iron	4530		N/A	0.00	no	N/A
SW-054-MWS	Iron, Dissolve	3600		N/A	0.00	no	N/A
SW-054-MWS	Isophorone	1	U	N/A	0.00	no	N/A
SW-054-MWS	Isopropylbenzene	1	U	3700	0.00	no	NC
SW-054-MWS	Lead	5	U	N/A	0.00	no	N/A
SW-054-MWS	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW-054-MWS	Manganese	928		N/A	0.00	no	N/A
SW-054-MWS	Manganese, Dissolve	848		N/A	0.00	no	N/A
SW-054-MWS	Mercury	0.2	UJ	3.7	0.00	no	NC
SW-054-MWS	Mercury, Dissolve	0.2	UJ	3.7	0.00	no	NC
SW-054-MWS	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW-054-MWS	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW-054-MWS	Methylene Chloride	1	U	20000	0.00	no	NC
SW-054-MWS	Naphthalene	0.018	B	200	0.00	no	C
SW-054-MWS	Nickel	48		N/A	0.00	no	N/A
SW-054-MWS	Nickel, Dissolve	46.3		N/A	0.00	no	N/A
SW-054-MWS	Nitrobenzene	1	U	3100	0.00	no	C
SW-054-MWS	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW-054-MWS	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW-054-MWS	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
SW-054-MWS	Phenol	1	U	N/A	0.00	no	N/A
SW-054-MWS	Pyrene	0.1	U	N/A	0.00	no	N/A
SW-054-MWS	Selenium	5.1	B	N/A	0.00	no	N/A
SW-054-MWS	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW-054-MWS	Silver	6	U	N/A	0.00	no	N/A
SW-054-MWS	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW-054-MWS	Styrene	1	U	39000	0.00	no	NC
SW-054-MWS	Tetrachloroethene	1	U	240	0.00	no	NC
SW-054-MWS	Thallium	10	U	N/A	0.00	no	N/A
SW-054-MWS	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW-054-MWS	Toluene	1	U	81000	0.00	no	NC
SW-054-MWS	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-054-MWS	Trichloroethene	1	U	22	0.00	no	NC
SW-054-MWS	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW-054-MWS	Vanadium	5	U	N/A	0.00	no	N/A
SW-054-MWS	Vanadium, Dissolve	5	U	N/A	0.00	no	N/A
SW-054-MWS	Vinyl chloride	1	U	25	0.00	no	C
SW-054-MWS	Xylenes	3	U	1600	0.00	no	NC
SW-054-MWS	Zinc	91		N/A	0.00	no	N/A
SW-054-MWS	Zinc, Dissolve	87.3		N/A	0.00	no	N/A
SW-055-MWS	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW-055-MWS	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW-055-MWS	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW-055-MWS	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW-055-MWS	1,1-Biphenyl	1	U	140	0.00	no	NC
SW-055-MWS	1,1-Dichloroethane	1	U	330	0.00	no	C
SW-055-MWS	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW-055-MWS	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW-055-MWS	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW-055-MWS	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW-055-MWS	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW-055-MWS	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW-055-MWS	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW-055-MWS	1,2-Dichloroethane	1	U	98	0.00	no	C
SW-055-MWS	1,2-Dichloropropane	1	U	110	0.00	no	C

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-055-MWS	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW-055-MWS	1,4-Dioxane	0.1	U	130000	0.00	no	C
SW-055-MWS	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW-055-MWS	2,4,5-Trichlorophenol	2.6	U	N/A	0.00	no	N/A
SW-055-MWS	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW-055-MWS	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW-055-MWS	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW-055-MWS	2,4-Dinitrophenol	2.6	U	N/A	0.00	no	N/A
SW-055-MWS	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-055-MWS	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-055-MWS	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW-055-MWS	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW-055-MWS	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW-055-MWS	2-Hexanone	10	U	34000	0.00	no	NC
SW-055-MWS	2-Methylnaphthalene	0.83		N/A	0.00	no	N/A
SW-055-MWS	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW-055-MWS	2-Nitroaniline	2.6	U	N/A	0.00	no	N/A
SW-055-MWS	3,3'-Dichlorobenzidine	1	U	N/A	0.00	no	N/A
SW-055-MWS	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW-055-MWS	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW-055-MWS	4-Nitroaniline	2.6	U	N/A	0.00	no	N/A
SW-055-MWS	Acenaphthene	0.06	J	N/A	0.00	no	N/A
SW-055-MWS	Acetone	10	U	95000000	0.00	no	NC
SW-055-MWS	Acetophenone	0.71	J	N/A	0.00	no	N/A
SW-055-MWS	Aluminum	2320		N/A	0.00	no	N/A
SW-055-MWS	Aluminum, Dissolve	2200		N/A	0.00	no	N/A
SW-055-MWS	Anthracene	0.049	J	N/A	0.00	no	N/A
SW-055-MWS	Antimony	6	U	N/A	0.00	no	N/A
SW-055-MWS	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW-055-MWS	Arsenic	7.5		N/A	0.00	no	N/A
SW-055-MWS	Arsenic, Dissolve	5.9		N/A	0.00	no	N/A
SW-055-MWS	Barium	19.8		N/A	0.00	no	N/A
SW-055-MWS	Barium, Dissolve	18.5		N/A	0.00	no	N/A
SW-055-MWS	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW-055-MWS	Benzene	7.7		69	0.11	no	C
SW-055-MWS	Benzo[a]anthracene	0.1	U	NVT	0.00	no	C
SW-055-MWS	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW-055-MWS	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-055-MWS	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-055-MWS	Beryllium	1	U	N/A	0.00	no	N/A
SW-055-MWS	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW-055-MWS	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW-055-MWS	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW-055-MWS	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW-055-MWS	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A
SW-055-MWS	Bromodichloromethane	1	U	38	0.00	no	C
SW-055-MWS	Bromoform	1	U	5100	0.00	no	C
SW-055-MWS	Bromomethane	1	UJ	73	0.00	no	NC
SW-055-MWS	Cadmium	3	U	N/A	0.00	no	N/A
SW-055-MWS	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A
SW-055-MWS	Caprolactam	2.6	U	N/A	0.00	no	N/A
SW-055-MWS	Carbon disulfide	1	U	5200	0.00	no	NC
SW-055-MWS	Carbon tetrachloride	1	U	18	0.00	no	C
SW-055-MWS	Chlorobenzene	1	U	1700	0.00	no	NC
SW-055-MWS	Chloroethane	1	U	97000	0.00	no	NC
SW-055-MWS	Chloroform	1	U	36	0.00	no	C
SW-055-MWS	Chloromethane	1	UJ	1100	0.00	no	NC
SW-055-MWS	Chromium	0.98	J	N/A	0.00	no	N/A
SW-055-MWS	Chromium VI	10	U	N/A	0.00	no	N/A
SW-055-MWS	Chromium, Dissolve	5	U	N/A	0.00	no	N/A
SW-055-MWS	Chrysene	0.1	U	N/A	0.00	no	N/A
SW-055-MWS	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-055-MWS	Cobalt	5	U	N/A	0.00	no	N/A
SW-055-MWS	Cobalt, Dissolve	5	U	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-055-MWS	Copper	5	U	N/A	0.00	no	N/A
SW-055-MWS	Copper, Dissolve	5	U	N/A	0.00	no	N/A
SW-055-MWS	Cyanide	4	J	3.5	1.14	YES	NC
SW-055-MWS	Cyclohexane	7.9	J	4300	0.00	no	NC
SW-055-MWS	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW-055-MWS	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW-055-MWS	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW-055-MWS	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW-055-MWS	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW-055-MWS	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW-055-MWS	Ethylbenzene	20.3		150	0.14	no	C
SW-055-MWS	Fluoranthene	0.025	J	N/A	0.00	no	N/A
SW-055-MWS	Fluorene	0.052	J	N/A	0.00	no	N/A
SW-055-MWS	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW-055-MWS	Hexachlorobutadiene	1	U	13	0.00	no	C
SW-055-MWS	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW-055-MWS	Hexachloroethane	1	U	70	0.00	no	C
SW-055-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW-055-MWS	Iron	107		N/A	0.00	no	N/A
SW-055-MWS	Iron, Dissolve	70	U	N/A	0.00	no	N/A
SW-055-MWS	Isophorone	1	U	N/A	0.00	no	N/A
SW-055-MWS	Isopropylbenzene	2.3		3700	0.00	no	NC
SW-055-MWS	Lead	5	U	N/A	0.00	no	N/A
SW-055-MWS	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW-055-MWS	Manganese	3.1	B	N/A	0.00	no	N/A
SW-055-MWS	Manganese, Dissolve	5	U	N/A	0.00	no	N/A
SW-055-MWS	Mercury	0.2	UJ	3.7	0.00	no	NC
SW-055-MWS	Mercury, Dissolve	0.2	UJ	3.7	0.00	no	NC
SW-055-MWS	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW-055-MWS	Methyl tert-butyl ether (MTBE)	1.4		20000	0.00	no	C
SW-055-MWS	Methylene Chloride	1	U	20000	0.00	no	NC
SW-055-MWS	Naphthalene	2.8		200	0.01	no	C
SW-055-MWS	Nickel	2.3	J	N/A	0.00	no	N/A
SW-055-MWS	Nickel, Dissolve	2.8	B	N/A	0.00	no	N/A
SW-055-MWS	Nitrobenzene	1	U	3100	0.00	no	C
SW-055-MWS	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW-055-MWS	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW-055-MWS	Pentachlorophenol	1	J	N/A	0.00	no	N/A
SW-055-MWS	Phenol	0.36	J	N/A	0.00	no	N/A
SW-055-MWS	Pyrene	0.034	J	N/A	0.00	no	N/A
SW-055-MWS	Selenium	5.5	J	N/A	0.00	no	N/A
SW-055-MWS	Selenium, Dissolve	6.2	B	N/A	0.00	no	N/A
SW-055-MWS	Silver	6	U	N/A	0.00	no	N/A
SW-055-MWS	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW-055-MWS	Styrene	1	U	39000	0.00	no	NC
SW-055-MWS	Tetrachloroethene	1	U	240	0.00	no	NC
SW-055-MWS	Thallium	4.9	B	N/A	0.00	no	N/A
SW-055-MWS	Thallium, Dissolve	3.7	B	N/A	0.00	no	N/A
SW-055-MWS	Toluene	29.8		81000	0.00	no	NC
SW-055-MWS	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-055-MWS	Trichloroethene	1	U	22	0.00	no	NC
SW-055-MWS	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW-055-MWS	Vanadium	15.6		N/A	0.00	no	N/A
SW-055-MWS	Vanadium, Dissolve	15.2		N/A	0.00	no	N/A
SW-055-MWS	Vinyl chloride	1	U	25	0.00	no	C
SW-055-MWS	Xylenes	79.6		1600	0.05	no	NC
SW-055-MWS	Zinc	2.9	B	N/A	0.00	no	N/A
SW-055-MWS	Zinc, Dissolve	10	U	N/A	0.00	no	N/A
SW-056-MWS	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW-056-MWS	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW-056-MWS	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW-056-MWS	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW-056-MWS	1,1-Biphenyl	1	U	140	0.00	no	NC
SW-056-MWS	1,1-Dichloroethane	1	U	330	0.00	no	C

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-056-MWS	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW-056-MWS	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW-056-MWS	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW-056-MWS	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW-056-MWS	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW-056-MWS	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW-056-MWS	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW-056-MWS	1,2-Dichloroethane	1	U	98	0.00	no	C
SW-056-MWS	1,2-Dichloropropane	1	U	110	0.00	no	C
SW-056-MWS	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW-056-MWS	1,4-Dioxane	0.2		130000	0.00	no	C
SW-056-MWS	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW-056-MWS	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
SW-056-MWS	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW-056-MWS	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW-056-MWS	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW-056-MWS	2,4-Dinitrophenol	2.5	U	N/A	0.00	no	N/A
SW-056-MWS	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-056-MWS	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-056-MWS	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW-056-MWS	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW-056-MWS	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW-056-MWS	2-Hexanone	10	U	34000	0.00	no	NC
SW-056-MWS	2-Methylnaphthalene	0.1	U	N/A	0.00	no	N/A
SW-056-MWS	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW-056-MWS	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-056-MWS	3,3'-Dichlorobenzidine	1	U	N/A	0.00	no	N/A
SW-056-MWS	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW-056-MWS	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW-056-MWS	4-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-056-MWS	Acenaphthene	0.1	U	N/A	0.00	no	N/A
SW-056-MWS	Acetone	10	U	95000000	0.00	no	NC
SW-056-MWS	Acetophenone	1	U	N/A	0.00	no	N/A
SW-056-MWS	Aluminum	420		N/A	0.00	no	N/A
SW-056-MWS	Aluminum, Dissolve	33.4	B	N/A	0.00	no	N/A
SW-056-MWS	Anthracene	0.1	U	N/A	0.00	no	N/A
SW-056-MWS	Antimony	6	U	N/A	0.00	no	N/A
SW-056-MWS	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW-056-MWS	Arsenic	5	U	N/A	0.00	no	N/A
SW-056-MWS	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SW-056-MWS	Barium	19.4		N/A	0.00	no	N/A
SW-056-MWS	Barium, Dissolve	18.8		N/A	0.00	no	N/A
SW-056-MWS	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW-056-MWS	Benzene	1	U	69	0.00	no	C
SW-056-MWS	Benzo[a]anthracene	0.1	U	NVT	0.00	no	C
SW-056-MWS	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW-056-MWS	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-056-MWS	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-056-MWS	Beryllium	1	U	N/A	0.00	no	N/A
SW-056-MWS	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW-056-MWS	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW-056-MWS	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW-056-MWS	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW-056-MWS	bis(2-Ethylhexyl)phthalate	0.48	J	N/A	0.00	no	N/A
SW-056-MWS	Bromodichloromethane	1	U	38	0.00	no	C
SW-056-MWS	Bromoform	1	U	5100	0.00	no	C
SW-056-MWS	Bromomethane	1	UJ	73	0.00	no	NC
SW-056-MWS	Cadmium	0.77	J	N/A	0.00	no	N/A
SW-056-MWS	Cadmium, Dissolve	0.87	J	N/A	0.00	no	N/A
SW-056-MWS	Caprolactam	2.5	U	N/A	0.00	no	N/A
SW-056-MWS	Carbon disulfide	1	U	5200	0.00	no	NC
SW-056-MWS	Carbon tetrachloride	1	U	18	0.00	no	C
SW-056-MWS	Chlorobenzene	1	U	1700	0.00	no	NC
SW-056-MWS	Chloroethane	1	U	97000	0.00	no	NC

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-056-MWS	Chloroform	1	U	36	0.00	no	C
SW-056-MWS	Chloromethane	1	UJ	1100	0.00	no	NC
SW-056-MWS	Chromium	2.2	J	N/A	0.00	no	N/A
SW-056-MWS	Chromium VI	10	U	N/A	0.00	no	N/A
SW-056-MWS	Chromium, Dissolve	1	B	N/A	0.00	no	N/A
SW-056-MWS	Chrysene	0.1	U	N/A	0.00	no	N/A
SW-056-MWS	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-056-MWS	Cobalt	112		N/A	0.00	no	N/A
SW-056-MWS	Cobalt, Dissolve	114		N/A	0.00	no	N/A
SW-056-MWS	Copper	1.7	B	N/A	0.00	no	N/A
SW-056-MWS	Copper, Dissolve	5	U	N/A	0.00	no	N/A
SW-056-MWS	Cyanide	10	U	3.5	0.00	no	NC
SW-056-MWS	Cyclohexane	10	U	4300	0.00	no	NC
SW-056-MWS	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW-056-MWS	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW-056-MWS	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW-056-MWS	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW-056-MWS	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW-056-MWS	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW-056-MWS	Ethylbenzene	1	U	150	0.00	no	C
SW-056-MWS	Fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-056-MWS	Fluorene	0.1	U	N/A	0.00	no	N/A
SW-056-MWS	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW-056-MWS	Hexachlorobutadiene	1	U	13	0.00	no	C
SW-056-MWS	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW-056-MWS	Hexachloroethane	1	U	70	0.00	no	C
SW-056-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW-056-MWS	Iron	70400		N/A	0.00	no	N/A
SW-056-MWS	Iron, Dissolve	65100		N/A	0.00	no	N/A
SW-056-MWS	Isophorone	1	U	N/A	0.00	no	N/A
SW-056-MWS	Isopropylbenzene	1	U	3700	0.00	no	NC
SW-056-MWS	Lead	5	U	N/A	0.00	no	N/A
SW-056-MWS	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW-056-MWS	Manganese	11100		N/A	0.00	no	N/A
SW-056-MWS	Manganese, Dissolve	11200		N/A	0.00	no	N/A
SW-056-MWS	Mercury	0.2	UJ	3.7	0.00	no	NC
SW-056-MWS	Mercury, Dissolve	0.2	UJ	3.7	0.00	no	NC
SW-056-MWS	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW-056-MWS	Methyl tert-butyl ether (MTBE)	14.3		20000	0.00	no	C
SW-056-MWS	Methylene Chloride	1	U	20000	0.00	no	NC
SW-056-MWS	Naphthalene	0.019	B	200	0.00	no	C
SW-056-MWS	Nickel	38.1		N/A	0.00	no	N/A
SW-056-MWS	Nickel, Dissolve	38.8		N/A	0.00	no	N/A
SW-056-MWS	Nitrobenzene	1	U	3100	0.00	no	C
SW-056-MWS	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW-056-MWS	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW-056-MWS	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
SW-056-MWS	Phenol	1	U	N/A	0.00	no	N/A
SW-056-MWS	Pyrene	0.1	U	N/A	0.00	no	N/A
SW-056-MWS	Selenium	8	U	N/A	0.00	no	N/A
SW-056-MWS	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW-056-MWS	Silver	1.7	B	N/A	0.00	no	N/A
SW-056-MWS	Silver, Dissolve	1.4	J	N/A	0.00	no	N/A
SW-056-MWS	Styrene	1	U	39000	0.00	no	NC
SW-056-MWS	Tetrachloroethene	1	U	240	0.00	no	NC
SW-056-MWS	Thallium	10	U	N/A	0.00	no	N/A
SW-056-MWS	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW-056-MWS	Toluene	1	U	81000	0.00	no	NC
SW-056-MWS	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-056-MWS	Trichloroethene	1	U	22	0.00	no	NC
SW-056-MWS	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW-056-MWS	Vanadium	5	U	N/A	0.00	no	N/A
SW-056-MWS	Vanadium, Dissolve	5	U	N/A	0.00	no	N/A
SW-056-MWS	Vinyl chloride	1	U	25	0.00	no	C

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-056-MWS	Xylenes	3	U	1600	0.00	no	NC
SW-056-MWS	Zinc	28.4		N/A	0.00	no	N/A
SW-056-MWS	Zinc, Dissolve	28.3		N/A	0.00	no	N/A
SW-057-MWS	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW-057-MWS	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW-057-MWS	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW-057-MWS	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW-057-MWS	1,1-Biphenyl	1	U	140	0.00	no	NC
SW-057-MWS	1,1-Dichloroethane	1	U	330	0.00	no	C
SW-057-MWS	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW-057-MWS	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW-057-MWS	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW-057-MWS	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW-057-MWS	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW-057-MWS	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW-057-MWS	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW-057-MWS	1,2-Dichloroethane	1	U	98	0.00	no	C
SW-057-MWS	1,2-Dichloropropane	1	U	110	0.00	no	C
SW-057-MWS	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW-057-MWS	1,4-Dioxane	0.16		130000	0.00	no	C
SW-057-MWS	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW-057-MWS	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
SW-057-MWS	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW-057-MWS	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW-057-MWS	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW-057-MWS	2,4-Dinitrophenol	2.5	UJ	N/A	0.00	no	N/A
SW-057-MWS	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-057-MWS	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-057-MWS	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW-057-MWS	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW-057-MWS	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW-057-MWS	2-Hexanone	10	U	34000	0.00	no	NC
SW-057-MWS	2-Methylnaphthalene	0.14		N/A	0.00	no	N/A
SW-057-MWS	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW-057-MWS	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-057-MWS	3,3'-Dichlorobenzidine	1	U	N/A	0.00	no	N/A
SW-057-MWS	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW-057-MWS	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW-057-MWS	4-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-057-MWS	Acenaphthene	0.11		N/A	0.00	no	N/A
SW-057-MWS	Acetone	10	U	95000000	0.00	no	NC
SW-057-MWS	Acetophenone	1	U	N/A	0.00	no	N/A
SW-057-MWS	Aluminum	537		N/A	0.00	no	N/A
SW-057-MWS	Aluminum, Dissolve	38.1	J	N/A	0.00	no	N/A
SW-057-MWS	Anthracene	0.042	J	N/A	0.00	no	N/A
SW-057-MWS	Antimony	6	U	N/A	0.00	no	N/A
SW-057-MWS	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW-057-MWS	Arsenic	3.7	J	N/A	0.00	no	N/A
SW-057-MWS	Arsenic, Dissolve	6.4		N/A	0.00	no	N/A
SW-057-MWS	Barium	60.7		N/A	0.00	no	N/A
SW-057-MWS	Barium, Dissolve	50.6		N/A	0.00	no	N/A
SW-057-MWS	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW-057-MWS	Benzene	14		69	0.20	no	C
SW-057-MWS	Benzo[a]anthracene	0.1	U	NVT	0.00	no	C
SW-057-MWS	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW-057-MWS	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-057-MWS	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-057-MWS	Beryllium	1	U	N/A	0.00	no	N/A
SW-057-MWS	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW-057-MWS	bis(2-chloroethoxy)methane	1	UJ	N/A	0.00	no	N/A
SW-057-MWS	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW-057-MWS	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW-057-MWS	bis(2-Ethylhexyl)phthalate	0.25	B	N/A	0.00	no	N/A
SW-057-MWS	Bromodichloromethane	1	U	38	0.00	no	C

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-057-MWS	Bromoform	1	U	5100	0.00	no	C
SW-057-MWS	Bromomethane	1	U	73	0.00	no	NC
SW-057-MWS	Cadmium	3	U	N/A	0.00	no	N/A
SW-057-MWS	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A
SW-057-MWS	Caprolactam	2.5	U	N/A	0.00	no	N/A
SW-057-MWS	Carbon disulfide	0.79	J	5200	0.00	no	NC
SW-057-MWS	Carbon tetrachloride	1	U	18	0.00	no	C
SW-057-MWS	Chlorobenzene	1	U	1700	0.00	no	NC
SW-057-MWS	Chloroethane	1	U	97000	0.00	no	NC
SW-057-MWS	Chloroform	1	U	36	0.00	no	C
SW-057-MWS	Chloromethane	1	U	1100	0.00	no	NC
SW-057-MWS	Chromium	2.6	B	N/A	0.00	no	N/A
SW-057-MWS	Chromium VI	10	U	N/A	0.00	no	N/A
SW-057-MWS	Chromium, Dissolve	1.6	B	N/A	0.00	no	N/A
SW-057-MWS	Chrysene	0.1	U	N/A	0.00	no	N/A
SW-057-MWS	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-057-MWS	Cobalt	3.7	J	N/A	0.00	no	N/A
SW-057-MWS	Cobalt, Dissolve	2.9	J	N/A	0.00	no	N/A
SW-057-MWS	Copper	5	U	N/A	0.00	no	N/A
SW-057-MWS	Copper, Dissolve	5	U	N/A	0.00	no	N/A
SW-057-MWS	Cyanide	10	U	3.5	0.00	no	NC
SW-057-MWS	Cyclohexane	10	U	4300	0.00	no	NC
SW-057-MWS	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW-057-MWS	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW-057-MWS	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW-057-MWS	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW-057-MWS	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW-057-MWS	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW-057-MWS	Ethylbenzene	1	U	150	0.00	no	C
SW-057-MWS	Fluoranthene	0.049	J	N/A	0.00	no	N/A
SW-057-MWS	Fluorene	0.12		N/A	0.00	no	N/A
SW-057-MWS	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW-057-MWS	Hexachlorobutadiene	1	U	13	0.00	no	C
SW-057-MWS	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW-057-MWS	Hexachloroethane	1	U	70	0.00	no	C
SW-057-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW-057-MWS	Iron	15600		N/A	0.00	no	N/A
SW-057-MWS	Iron, Dissolve	13600		N/A	0.00	no	N/A
SW-057-MWS	Isophorone	1	U	N/A	0.00	no	N/A
SW-057-MWS	Isopropylbenzene	1	U	3700	0.00	no	NC
SW-057-MWS	Lead	5	U	N/A	0.00	no	N/A
SW-057-MWS	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW-057-MWS	Manganese	2190		N/A	0.00	no	N/A
SW-057-MWS	Manganese, Dissolve	2110		N/A	0.00	no	N/A
SW-057-MWS	Mercury	0.2	UJ	3.7	0.00	no	NC
SW-057-MWS	Mercury, Dissolve	0.2	UJ	3.7	0.00	no	NC
SW-057-MWS	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW-057-MWS	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW-057-MWS	Methylene Chloride	1	U	20000	0.00	no	NC
SW-057-MWS	Naphthalene	0.47		200	0.00	no	C
SW-057-MWS	Nickel	5.7	B	N/A	0.00	no	N/A
SW-057-MWS	Nickel, Dissolve	4.7	B	N/A	0.00	no	N/A
SW-057-MWS	Nitrobenzene	1	U	3100	0.00	no	C
SW-057-MWS	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW-057-MWS	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW-057-MWS	Pentachlorophenol	1	J	N/A	0.00	no	N/A
SW-057-MWS	Phenol	0.42	J	N/A	0.00	no	N/A
SW-057-MWS	Pyrene	0.038	J	N/A	0.00	no	N/A
SW-057-MWS	Selenium	8	U	N/A	0.00	no	N/A
SW-057-MWS	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW-057-MWS	Silver	6	U	N/A	0.00	no	N/A
SW-057-MWS	Silver, Dissolve	0.62	B	N/A	0.00	no	N/A
SW-057-MWS	Styrene	1	U	39000	0.00	no	NC
SW-057-MWS	Tetrachloroethene	1	U	240	0.00	no	NC

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-057-MWS	Thallium	10	U	N/A	0.00	no	N/A
SW-057-MWS	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW-057-MWS	Toluene	1	U	81000	0.00	no	NC
SW-057-MWS	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-057-MWS	Trichloroethene	1	U	22	0.00	no	NC
SW-057-MWS	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW-057-MWS	Vanadium	53.3		N/A	0.00	no	N/A
SW-057-MWS	Vanadium, Dissolve	29.3		N/A	0.00	no	N/A
SW-057-MWS	Vinyl chloride	1	U	25	0.00	no	C
SW-057-MWS	Xylenes	3	U	1600	0.00	no	NC
SW-057-MWS	Zinc	18.9		N/A	0.00	no	N/A
SW-057-MWS	Zinc, Dissolve	3.2	B	N/A	0.00	no	N/A
SW-058-MWS	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW-058-MWS	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW-058-MWS	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW-058-MWS	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW-058-MWS	1,1-Biphenyl	1	U	140	0.00	no	NC
SW-058-MWS	1,1-Dichloroethane	1	U	330	0.00	no	C
SW-058-MWS	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW-058-MWS	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW-058-MWS	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW-058-MWS	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW-058-MWS	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW-058-MWS	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW-058-MWS	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW-058-MWS	1,2-Dichloroethane	1	U	98	0.00	no	C
SW-058-MWS	1,2-Dichloropropane	1	U	110	0.00	no	C
SW-058-MWS	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW-058-MWS	1,4-Dioxane	0.1	U	130000	0.00	no	C
SW-058-MWS	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW-058-MWS	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
SW-058-MWS	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW-058-MWS	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW-058-MWS	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW-058-MWS	2,4-Dinitrophenol	2.5	UJ	N/A	0.00	no	N/A
SW-058-MWS	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-058-MWS	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-058-MWS	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW-058-MWS	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW-058-MWS	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW-058-MWS	2-Hexanone	10	U	34000	0.00	no	NC
SW-058-MWS	2-Methylnaphthalene	0.1	U	N/A	0.00	no	N/A
SW-058-MWS	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW-058-MWS	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-058-MWS	3,3'-Dichlorobenzidine	1	U	N/A	0.00	no	N/A
SW-058-MWS	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW-058-MWS	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW-058-MWS	4-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-058-MWS	Acenaphthene	0.1	U	N/A	0.00	no	N/A
SW-058-MWS	Acetone	10	U	95000000	0.00	no	NC
SW-058-MWS	Acetophenone	1	U	N/A	0.00	no	N/A
SW-058-MWS	Aluminum	295		N/A	0.00	no	N/A
SW-058-MWS	Aluminum, Dissolve	51.4		N/A	0.00	no	N/A
SW-058-MWS	Anthracene	0.1	U	N/A	0.00	no	N/A
SW-058-MWS	Antimony	6	U	N/A	0.00	no	N/A
SW-058-MWS	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW-058-MWS	Arsenic	5	U	N/A	0.00	no	N/A
SW-058-MWS	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SW-058-MWS	Barium	27.4		N/A	0.00	no	N/A
SW-058-MWS	Barium, Dissolve	22.4		N/A	0.00	no	N/A
SW-058-MWS	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW-058-MWS	Benzene	1	U	69	0.00	no	C
SW-058-MWS	Benzo[a]anthracene	0.037	J	NVT	0.00	no	C
SW-058-MWS	Benzo[a]pyrene	0.021	J	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-058-MWS	Benzo[b]fluoranthene	0.095	Jip	N/A	0.00	no	N/A
SW-058-MWS	Benzo[k]fluoranthene	0.075	Jip	N/A	0.00	no	N/A
SW-058-MWS	Beryllium	1	U	N/A	0.00	no	N/A
SW-058-MWS	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW-058-MWS	bis(2-chloroethoxy)methane	1	UJ	N/A	0.00	no	N/A
SW-058-MWS	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW-058-MWS	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW-058-MWS	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A
SW-058-MWS	Bromodichloromethane	1	U	38	0.00	no	C
SW-058-MWS	Bromoform	1	U	5100	0.00	no	C
SW-058-MWS	Bromomethane	1	U	73	0.00	no	NC
SW-058-MWS	Cadmium	3	U	N/A	0.00	no	N/A
SW-058-MWS	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A
SW-058-MWS	Caprolactam	2.5	U	N/A	0.00	no	N/A
SW-058-MWS	Carbon disulfide	1	U	5200	0.00	no	NC
SW-058-MWS	Carbon tetrachloride	1	U	18	0.00	no	C
SW-058-MWS	Chlorobenzene	1	U	1700	0.00	no	NC
SW-058-MWS	Chloroethane	1	U	97000	0.00	no	NC
SW-058-MWS	Chloroform	31		36	0.86	no	C
SW-058-MWS	Chloromethane	1	U	1100	0.00	no	NC
SW-058-MWS	Chromium	8.6		N/A	0.00	no	N/A
SW-058-MWS	Chromium VI	10	U	N/A	0.00	no	N/A
SW-058-MWS	Chromium, Dissolve	8.1		N/A	0.00	no	N/A
SW-058-MWS	Chrysene	0.046	J	N/A	0.00	no	N/A
SW-058-MWS	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-058-MWS	Cobalt	5	U	N/A	0.00	no	N/A
SW-058-MWS	Cobalt, Dissolve	5	U	N/A	0.00	no	N/A
SW-058-MWS	Copper	5	U	N/A	0.00	no	N/A
SW-058-MWS	Copper, Dissolve	1.5	B	N/A	0.00	no	N/A
SW-058-MWS	Cyanide	10	U	3.5	0.00	no	NC
SW-058-MWS	Cyclohexane	10	U	4300	0.00	no	NC
SW-058-MWS	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW-058-MWS	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW-058-MWS	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW-058-MWS	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW-058-MWS	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW-058-MWS	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW-058-MWS	Ethylbenzene	1	U	150	0.00	no	C
SW-058-MWS	Fluoranthene	0.039	J	N/A	0.00	no	N/A
SW-058-MWS	Fluorene	0.1	U	N/A	0.00	no	N/A
SW-058-MWS	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW-058-MWS	Hexachlorobutadiene	1	U	13	0.00	no	C
SW-058-MWS	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW-058-MWS	Hexachloroethane	1	U	70	0.00	no	C
SW-058-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW-058-MWS	Iron	451		N/A	0.00	no	N/A
SW-058-MWS	Iron, Dissolve	19.4	B	N/A	0.00	no	N/A
SW-058-MWS	Isophorone	1	U	N/A	0.00	no	N/A
SW-058-MWS	Isopropylbenzene	1	U	3700	0.00	no	NC
SW-058-MWS	Lead	4.2	B	N/A	0.00	no	N/A
SW-058-MWS	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW-058-MWS	Manganese	17.2		N/A	0.00	no	N/A
SW-058-MWS	Manganese, Dissolve	2.9	B	N/A	0.00	no	N/A
SW-058-MWS	Mercury	0.2	UJ	3.7	0.00	no	NC
SW-058-MWS	Mercury, Dissolve	0.2	UJ	3.7	0.00	no	NC
SW-058-MWS	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW-058-MWS	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW-058-MWS	Methylene Chloride	1	U	20000	0.00	no	NC
SW-058-MWS	Naphthalene	0.022	B	200	0.00	no	C
SW-058-MWS	Nickel	10	U	N/A	0.00	no	N/A
SW-058-MWS	Nickel, Dissolve	10	U	N/A	0.00	no	N/A
SW-058-MWS	Nitrobenzene	1	U	3100	0.00	no	C
SW-058-MWS	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW-058-MWS	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-058-MWS	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
SW-058-MWS	Phenol	1	U	N/A	0.00	no	N/A
SW-058-MWS	Pyrene	0.042	J	N/A	0.00	no	N/A
SW-058-MWS	Selenium	8	U	N/A	0.00	no	N/A
SW-058-MWS	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW-058-MWS	Silver	6	U	N/A	0.00	no	N/A
SW-058-MWS	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW-058-MWS	Styrene	1	U	39000	0.00	no	NC
SW-058-MWS	Tetrachloroethene	1	U	240	0.00	no	NC
SW-058-MWS	Thallium	10	U	N/A	0.00	no	N/A
SW-058-MWS	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW-058-MWS	Toluene	1	U	81000	0.00	no	NC
SW-058-MWS	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-058-MWS	Trichloroethene	1	U	22	0.00	no	NC
SW-058-MWS	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW-058-MWS	Vanadium	21.4		N/A	0.00	no	N/A
SW-058-MWS	Vanadium, Dissolve	17.7		N/A	0.00	no	N/A
SW-058-MWS	Vinyl chloride	1	U	25	0.00	no	C
SW-058-MWS	Xylenes	3	U	1600	0.00	no	NC
SW-058-MWS	Zinc	8.2	J	N/A	0.00	no	N/A
SW-058-MWS	Zinc, Dissolve	0.93	B	N/A	0.00	no	N/A
SW-059-MWS	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW-059-MWS	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW-059-MWS	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW-059-MWS	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW-059-MWS	1,1-Biphenyl	1	U	140	0.00	no	NC
SW-059-MWS	1,1-Dichloroethane	1	U	330	0.00	no	C
SW-059-MWS	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW-059-MWS	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW-059-MWS	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW-059-MWS	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW-059-MWS	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW-059-MWS	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW-059-MWS	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW-059-MWS	1,2-Dichloroethane	1	U	98	0.00	no	C
SW-059-MWS	1,2-Dichloropropane	1	U	110	0.00	no	C
SW-059-MWS	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW-059-MWS	1,4-Dioxane	0.19		130000	0.00	no	C
SW-059-MWS	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW-059-MWS	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
SW-059-MWS	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW-059-MWS	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW-059-MWS	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW-059-MWS	2,4-Dinitrophenol	2.5	U	N/A	0.00	no	N/A
SW-059-MWS	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-059-MWS	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-059-MWS	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW-059-MWS	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW-059-MWS	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW-059-MWS	2-Hexanone	10	U	34000	0.00	no	NC
SW-059-MWS	2-Methylnaphthalene	0.1	U	N/A	0.00	no	N/A
SW-059-MWS	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW-059-MWS	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-059-MWS	3,3'-Dichlorobenzidine	1	UJ	N/A	0.00	no	N/A
SW-059-MWS	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW-059-MWS	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW-059-MWS	4-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-059-MWS	Acenaphthene	0.1	U	N/A	0.00	no	N/A
SW-059-MWS	Acetone	10	R	95000000	0.00	no	NC
SW-059-MWS	Acetophenone	1	U	N/A	0.00	no	N/A
SW-059-MWS	Aluminum	223		N/A	0.00	no	N/A
SW-059-MWS	Aluminum, Dissolve	134		N/A	0.00	no	N/A
SW-059-MWS	Anthracene	0.049	J	N/A	0.00	no	N/A
SW-059-MWS	Antimony	6	U	N/A	0.00	no	N/A

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-059-MWS	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW-059-MWS	Arsenic	5	U	N/A	0.00	no	N/A
SW-059-MWS	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SW-059-MWS	Barium	21.4		N/A	0.00	no	N/A
SW-059-MWS	Barium, Dissolve	17.6		N/A	0.00	no	N/A
SW-059-MWS	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW-059-MWS	Benzene	1	U	69	0.00	no	C
SW-059-MWS	Benzo[a]anthracene	0.1	U	NVT	0.00	no	C
SW-059-MWS	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW-059-MWS	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-059-MWS	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-059-MWS	Beryllium	1		N/A	0.00	no	N/A
SW-059-MWS	Beryllium, Dissolve	0.84	J	N/A	0.00	no	N/A
SW-059-MWS	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW-059-MWS	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW-059-MWS	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW-059-MWS	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A
SW-059-MWS	Bromodichloromethane	1	U	38	0.00	no	C
SW-059-MWS	Bromoform	1	U	5100	0.00	no	C
SW-059-MWS	Bromomethane	1	U	73	0.00	no	NC
SW-059-MWS	Cadmium	3	U	N/A	0.00	no	N/A
SW-059-MWS	Cadmium, Dissolve	0.5	B	N/A	0.00	no	N/A
SW-059-MWS	Caprolactam	2.5	U	N/A	0.00	no	N/A
SW-059-MWS	Carbon disulfide	1	U	5200	0.00	no	NC
SW-059-MWS	Carbon tetrachloride	1	U	18	0.00	no	C
SW-059-MWS	Chlorobenzene	1	U	1700	0.00	no	NC
SW-059-MWS	Chloroethane	1	U	97000	0.00	no	NC
SW-059-MWS	Chloroform	1	U	36	0.00	no	C
SW-059-MWS	Chloromethane	1	U	1100	0.00	no	NC
SW-059-MWS	Chromium	22.8		N/A	0.00	no	N/A
SW-059-MWS	Chromium VI	11		N/A	0.00	no	N/A
SW-059-MWS	Chromium, Dissolve	22.2		N/A	0.00	no	N/A
SW-059-MWS	Chrysene	0.1	U	N/A	0.00	no	N/A
SW-059-MWS	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-059-MWS	Cobalt	61.5		N/A	0.00	no	N/A
SW-059-MWS	Cobalt, Dissolve	49.6		N/A	0.00	no	N/A
SW-059-MWS	Copper	5	U	N/A	0.00	no	N/A
SW-059-MWS	Copper, Dissolve	2	B	N/A	0.00	no	N/A
SW-059-MWS	Cyanide	10	U	3.5	0.00	no	NC
SW-059-MWS	Cyclohexane	10	U	4300	0.00	no	NC
SW-059-MWS	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW-059-MWS	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW-059-MWS	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW-059-MWS	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW-059-MWS	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW-059-MWS	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW-059-MWS	Ethylbenzene	1	U	150	0.00	no	C
SW-059-MWS	Fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-059-MWS	Fluorene	0.1	U	N/A	0.00	no	N/A
SW-059-MWS	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW-059-MWS	Hexachlorobutadiene	1	U	13	0.00	no	C
SW-059-MWS	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW-059-MWS	Hexachloroethane	1	U	70	0.00	no	C
SW-059-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW-059-MWS	Iron	498		N/A	0.00	no	N/A
SW-059-MWS	Iron, Dissolve	310		N/A	0.00	no	N/A
SW-059-MWS	Isophorone	1	U	N/A	0.00	no	N/A
SW-059-MWS	Isopropylbenzene	1	U	3700	0.00	no	NC
SW-059-MWS	Lead	5	U	N/A	0.00	no	N/A
SW-059-MWS	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW-059-MWS	Manganese	1020		N/A	0.00	no	N/A
SW-059-MWS	Manganese, Dissolve	827		N/A	0.00	no	N/A
SW-059-MWS	Mercury	0.2	UJ	3.7	0.00	no	NC
SW-059-MWS	Mercury, Dissolve	0.2	UJ	3.7	0.00	no	NC

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-059-MWS	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW-059-MWS	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW-059-MWS	Methylene Chloride	1	U	20000	0.00	no	NC
SW-059-MWS	Naphthalene	0.1	U	200	0.00	no	C
SW-059-MWS	Nickel	52.6		N/A	0.00	no	N/A
SW-059-MWS	Nickel, Dissolve	45.2		N/A	0.00	no	N/A
SW-059-MWS	Nitrobenzene	1	U	3100	0.00	no	C
SW-059-MWS	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW-059-MWS	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW-059-MWS	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
SW-059-MWS	Phenol	1	U	N/A	0.00	no	N/A
SW-059-MWS	Pyrene	0.1	U	N/A	0.00	no	N/A
SW-059-MWS	Selenium	3.5	B	N/A	0.00	no	N/A
SW-059-MWS	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW-059-MWS	Silver	6	U	N/A	0.00	no	N/A
SW-059-MWS	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW-059-MWS	Styrene	1	U	39000	0.00	no	NC
SW-059-MWS	Tetrachloroethene	1	U	240	0.00	no	NC
SW-059-MWS	Thallium	10	U	N/A	0.00	no	N/A
SW-059-MWS	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW-059-MWS	Toluene	1	U	81000	0.00	no	NC
SW-059-MWS	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-059-MWS	Trichloroethene	1	U	22	0.00	no	NC
SW-059-MWS	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW-059-MWS	Vanadium	41.6		N/A	0.00	no	N/A
SW-059-MWS	Vanadium, Dissolve	39.2		N/A	0.00	no	N/A
SW-059-MWS	Vinyl chloride	1	U	25	0.00	no	C
SW-059-MWS	Xylenes	3	U	1600	0.00	no	NC
SW-059-MWS	Zinc	64.4		N/A	0.00	no	N/A
SW-059-MWS	Zinc, Dissolve	52		N/A	0.00	no	N/A
SW-060-MWS	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW-060-MWS	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW-060-MWS	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW-060-MWS	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW-060-MWS	1,1-Biphenyl	1	U	140	0.00	no	NC
SW-060-MWS	1,1-Dichloroethane	1	U	330	0.00	no	C
SW-060-MWS	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW-060-MWS	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW-060-MWS	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW-060-MWS	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW-060-MWS	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW-060-MWS	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW-060-MWS	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW-060-MWS	1,2-Dichloroethane	1	U	98	0.00	no	C
SW-060-MWS	1,2-Dichloropropane	1	U	110	0.00	no	C
SW-060-MWS	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW-060-MWS	1,4-Dioxane	0.12		130000	0.00	no	C
SW-060-MWS	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW-060-MWS	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
SW-060-MWS	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW-060-MWS	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW-060-MWS	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW-060-MWS	2,4-Dinitrophenol	2.5	UJ	N/A	0.00	no	N/A
SW-060-MWS	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-060-MWS	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-060-MWS	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW-060-MWS	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW-060-MWS	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW-060-MWS	2-Hexanone	10	U	34000	0.00	no	NC
SW-060-MWS	2-Methylnaphthalene	0.1	U	N/A	0.00	no	N/A
SW-060-MWS	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW-060-MWS	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-060-MWS	3,3'-Dichlorobenzidine	1	U	N/A	0.00	no	N/A
SW-060-MWS	4-Chloroaniline	1	U	N/A	0.00	no	N/A

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-060-MWS	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW-060-MWS	4-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-060-MWS	Acenaphthene	0.1	U	N/A	0.00	no	N/A
SW-060-MWS	Acetone	10	U	95000000	0.00	no	NC
SW-060-MWS	Acetophenone	1	U	N/A	0.00	no	N/A
SW-060-MWS	Aluminum	455		N/A	0.00	no	N/A
SW-060-MWS	Aluminum, Dissolve	412		N/A	0.00	no	N/A
SW-060-MWS	Anthracene	0.053	J	N/A	0.00	no	N/A
SW-060-MWS	Antimony	6	U	N/A	0.00	no	N/A
SW-060-MWS	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW-060-MWS	Arsenic	5	U	N/A	0.00	no	N/A
SW-060-MWS	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SW-060-MWS	Barium	70.2		N/A	0.00	no	N/A
SW-060-MWS	Barium, Dissolve	62.4		N/A	0.00	no	N/A
SW-060-MWS	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW-060-MWS	Benzene	1	U	69	0.00	no	C
SW-060-MWS	Benzo[a]anthracene	0.1	U	NVT	0.00	no	C
SW-060-MWS	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW-060-MWS	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-060-MWS	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-060-MWS	Beryllium	1	U	N/A	0.00	no	N/A
SW-060-MWS	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW-060-MWS	bis(2-chloroethoxy)methane	1	UJ	N/A	0.00	no	N/A
SW-060-MWS	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW-060-MWS	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW-060-MWS	bis(2-Ethylhexyl)phthalate	0.26	B	N/A	0.00	no	N/A
SW-060-MWS	Bromodichloromethane	1	U	38	0.00	no	C
SW-060-MWS	Bromoform	1	U	5100	0.00	no	C
SW-060-MWS	Bromomethane	1	U	73	0.00	no	NC
SW-060-MWS	Cadmium	3	U	N/A	0.00	no	N/A
SW-060-MWS	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A
SW-060-MWS	Caprolactam	2.5	U	N/A	0.00	no	N/A
SW-060-MWS	Carbon disulfide	1	U	5200	0.00	no	NC
SW-060-MWS	Carbon tetrachloride	1	U	18	0.00	no	C
SW-060-MWS	Chlorobenzene	1	U	1700	0.00	no	NC
SW-060-MWS	Chloroethane	1	U	97000	0.00	no	NC
SW-060-MWS	Chloroform	1	U	36	0.00	no	C
SW-060-MWS	Chloromethane	1	U	1100	0.00	no	NC
SW-060-MWS	Chromium	4.2	B	N/A	0.00	no	N/A
SW-060-MWS	Chromium VI	10	U	N/A	0.00	no	N/A
SW-060-MWS	Chromium, Dissolve	4.8	B	N/A	0.00	no	N/A
SW-060-MWS	Chrysene	0.1	U	N/A	0.00	no	N/A
SW-060-MWS	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-060-MWS	Cobalt	5	U	N/A	0.00	no	N/A
SW-060-MWS	Cobalt, Dissolve	5	U	N/A	0.00	no	N/A
SW-060-MWS	Copper	5	U	N/A	0.00	no	N/A
SW-060-MWS	Copper, Dissolve	5	U	N/A	0.00	no	N/A
SW-060-MWS	Cyanide	10	U	3.5	0.00	no	NC
SW-060-MWS	Cyclohexane	10	U	4300	0.00	no	NC
SW-060-MWS	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW-060-MWS	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW-060-MWS	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW-060-MWS	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW-060-MWS	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW-060-MWS	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW-060-MWS	Ethylbenzene	1	U	150	0.00	no	C
SW-060-MWS	Fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-060-MWS	Fluorene	0.1	U	N/A	0.00	no	N/A
SW-060-MWS	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW-060-MWS	Hexachlorobutadiene	1	U	13	0.00	no	C
SW-060-MWS	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW-060-MWS	Hexachloroethane	1	U	70	0.00	no	C
SW-060-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW-060-MWS	Iron	14.2	B	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-060-MWS	Iron, Dissolve	70	U	N/A	0.00	no	N/A
SW-060-MWS	Isophorone	1	U	N/A	0.00	no	N/A
SW-060-MWS	Isopropylbenzene	1	U	3700	0.00	no	NC
SW-060-MWS	Lead	5	U	N/A	0.00	no	N/A
SW-060-MWS	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW-060-MWS	Manganese	2.6	J	N/A	0.00	no	N/A
SW-060-MWS	Manganese, Dissolve	2.4	B	N/A	0.00	no	N/A
SW-060-MWS	Mercury	0.2	UJ	3.7	0.00	no	NC
SW-060-MWS	Mercury, Dissolve	0.2	UJ	3.7	0.00	no	NC
SW-060-MWS	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW-060-MWS	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW-060-MWS	Methylene Chloride	1	U	20000	0.00	no	NC
SW-060-MWS	Naphthalene	0.053	B	200	0.00	no	C
SW-060-MWS	Nickel	10	U	N/A	0.00	no	N/A
SW-060-MWS	Nickel, Dissolve	10	U	N/A	0.00	no	N/A
SW-060-MWS	Nitrobenzene	1	U	3100	0.00	no	C
SW-060-MWS	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW-060-MWS	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW-060-MWS	Pentachlorophenol	0.95	J	N/A	0.00	no	N/A
SW-060-MWS	Phenol	1	U	N/A	0.00	no	N/A
SW-060-MWS	Pyrene	0.1	U	N/A	0.00	no	N/A
SW-060-MWS	Selenium	3.3	B	N/A	0.00	no	N/A
SW-060-MWS	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW-060-MWS	Silver	6	U	N/A	0.00	no	N/A
SW-060-MWS	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW-060-MWS	Styrene	1	U	39000	0.00	no	NC
SW-060-MWS	Tetrachloroethene	1	U	240	0.00	no	NC
SW-060-MWS	Thallium	10	U	N/A	0.00	no	N/A
SW-060-MWS	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW-060-MWS	Toluene	1	U	81000	0.00	no	NC
SW-060-MWS	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-060-MWS	Trichloroethene	1	U	22	0.00	no	NC
SW-060-MWS	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW-060-MWS	Vanadium	7.2		N/A	0.00	no	N/A
SW-060-MWS	Vanadium, Dissolve	6.2		N/A	0.00	no	N/A
SW-060-MWS	Vinyl chloride	1	U	25	0.00	no	C
SW-060-MWS	Xylenes	3	U	1600	0.00	no	NC
SW-060-MWS	Zinc	6.7	J	N/A	0.00	no	N/A
SW-060-MWS	Zinc, Dissolve	10	U	N/A	0.00	no	N/A
SW-061-MWS	1,1,1-Trichloroethane	4.1		31000	0.00	no	NC
SW-061-MWS	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW-061-MWS	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW-061-MWS	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW-061-MWS	1,1-Biphenyl	1	U	140	0.00	no	NC
SW-061-MWS	1,1-Dichloroethane	1.7		330	0.01	no	C
SW-061-MWS	1,1-Dichloroethene	0.39	J	820	0.00	no	NC
SW-061-MWS	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW-061-MWS	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW-061-MWS	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW-061-MWS	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW-061-MWS	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW-061-MWS	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW-061-MWS	1,2-Dichloroethane	1	U	98	0.00	no	C
SW-061-MWS	1,2-Dichloropropane	1	U	110	0.00	no	C
SW-061-MWS	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW-061-MWS	1,4-Dioxane	0.49		130000	0.00	no	C
SW-061-MWS	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW-061-MWS	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
SW-061-MWS	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW-061-MWS	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW-061-MWS	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW-061-MWS	2,4-Dinitrophenol	2.5	U	N/A	0.00	no	N/A
SW-061-MWS	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-061-MWS	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-061-MWS	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW-061-MWS	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW-061-MWS	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW-061-MWS	2-Hexanone	10	U	34000	0.00	no	NC
SW-061-MWS	2-Methylnaphthalene	0.1	U	N/A	0.00	no	N/A
SW-061-MWS	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW-061-MWS	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-061-MWS	3,3'-Dichlorobenzidine	1	UJ	N/A	0.00	no	N/A
SW-061-MWS	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW-061-MWS	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW-061-MWS	4-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-061-MWS	Acenaphthene	0.1	U	N/A	0.00	no	N/A
SW-061-MWS	Acetone	10	R	95000000	0.00	no	NC
SW-061-MWS	Acetophenone	1	U	N/A	0.00	no	N/A
SW-061-MWS	Aluminum	338		N/A	0.00	no	N/A
SW-061-MWS	Aluminum, Dissolve	192		N/A	0.00	no	N/A
SW-061-MWS	Anthracene	0.046	J	N/A	0.00	no	N/A
SW-061-MWS	Antimony	6	U	N/A	0.00	no	N/A
SW-061-MWS	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW-061-MWS	Arsenic	5	U	N/A	0.00	no	N/A
SW-061-MWS	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SW-061-MWS	Barium	49.9		N/A	0.00	no	N/A
SW-061-MWS	Barium, Dissolve	47.3		N/A	0.00	no	N/A
SW-061-MWS	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW-061-MWS	Benzene	1	U	69	0.00	no	C
SW-061-MWS	Benzo[a]anthracene	0.1	U	NVT	0.00	no	C
SW-061-MWS	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW-061-MWS	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-061-MWS	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-061-MWS	Beryllium	1	U	N/A	0.00	no	N/A
SW-061-MWS	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW-061-MWS	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW-061-MWS	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW-061-MWS	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW-061-MWS	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A
SW-061-MWS	Bromodichloromethane	1	U	38	0.00	no	C
SW-061-MWS	Bromoform	1	U	5100	0.00	no	C
SW-061-MWS	Bromomethane	1	U	73	0.00	no	NC
SW-061-MWS	Cadmium	3	U	N/A	0.00	no	N/A
SW-061-MWS	Cadmium, Dissolve	0.65	J	N/A	0.00	no	N/A
SW-061-MWS	Caprolactam	2.5	U	N/A	0.00	no	N/A
SW-061-MWS	Carbon disulfide	1	U	5200	0.00	no	NC
SW-061-MWS	Carbon tetrachloride	1	U	18	0.00	no	C
SW-061-MWS	Chlorobenzene	1	U	1700	0.00	no	NC
SW-061-MWS	Chloroethane	1	U	97000	0.00	no	NC
SW-061-MWS	Chloroform	1	U	36	0.00	no	C
SW-061-MWS	Chloromethane	1	U	1100	0.00	no	NC
SW-061-MWS	Chromium	4	B	N/A	0.00	no	N/A
SW-061-MWS	Chromium VI	5	J	N/A	0.00	no	N/A
SW-061-MWS	Chromium, Dissolve	3.3	B	N/A	0.00	no	N/A
SW-061-MWS	Chrysene	0.1	U	N/A	0.00	no	N/A
SW-061-MWS	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-061-MWS	Cobalt	5	U	N/A	0.00	no	N/A
SW-061-MWS	Cobalt, Dissolve	5	U	N/A	0.00	no	N/A
SW-061-MWS	Copper	5	U	N/A	0.00	no	N/A
SW-061-MWS	Copper, Dissolve	5	U	N/A	0.00	no	N/A
SW-061-MWS	Cyanide	10	U	3.5	0.00	no	NC
SW-061-MWS	Cyclohexane	10	U	4300	0.00	no	NC
SW-061-MWS	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW-061-MWS	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW-061-MWS	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW-061-MWS	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW-061-MWS	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW-061-MWS	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-061-MWS	Ethylbenzene	1	U	150	0.00	no	C
SW-061-MWS	Fluoranthene	0.011	J	N/A	0.00	no	N/A
SW-061-MWS	Fluorene	0.1	U	N/A	0.00	no	N/A
SW-061-MWS	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW-061-MWS	Hexachlorobutadiene	1	U	13	0.00	no	C
SW-061-MWS	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW-061-MWS	Hexachloroethane	1	U	70	0.00	no	C
SW-061-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW-061-MWS	Iron	53.2	B	N/A	0.00	no	N/A
SW-061-MWS	Iron, Dissolve	70	U	N/A	0.00	no	N/A
SW-061-MWS	Isophorone	1	U	N/A	0.00	no	N/A
SW-061-MWS	Isopropylbenzene	1	U	3700	0.00	no	NC
SW-061-MWS	Lead	5	U	N/A	0.00	no	N/A
SW-061-MWS	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW-061-MWS	Manganese	128		N/A	0.00	no	N/A
SW-061-MWS	Manganese, Dissolve	123		N/A	0.00	no	N/A
SW-061-MWS	Mercury	0.2	UJ	3.7	0.00	no	NC
SW-061-MWS	Mercury, Dissolve	0.2	UJ	3.7	0.00	no	NC
SW-061-MWS	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW-061-MWS	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW-061-MWS	Methylene Chloride	1	U	20000	0.00	no	NC
SW-061-MWS	Naphthalene	0.03	B	200	0.00	no	C
SW-061-MWS	Nickel	10	U	N/A	0.00	no	N/A
SW-061-MWS	Nickel, Dissolve	10	U	N/A	0.00	no	N/A
SW-061-MWS	Nitrobenzene	1	U	3100	0.00	no	C
SW-061-MWS	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW-061-MWS	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW-061-MWS	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
SW-061-MWS	Phenol	1	U	N/A	0.00	no	N/A
SW-061-MWS	Pyrene	0.1	U	N/A	0.00	no	N/A
SW-061-MWS	Selenium	4.3	B	N/A	0.00	no	N/A
SW-061-MWS	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW-061-MWS	Silver	6	U	N/A	0.00	no	N/A
SW-061-MWS	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW-061-MWS	Styrene	1	U	39000	0.00	no	NC
SW-061-MWS	Tetrachloroethene	1	U	240	0.00	no	NC
SW-061-MWS	Thallium	10	U	N/A	0.00	no	N/A
SW-061-MWS	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW-061-MWS	Toluene	1	U	81000	0.00	no	NC
SW-061-MWS	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-061-MWS	Trichloroethene	1	U	22	0.00	no	NC
SW-061-MWS	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW-061-MWS	Vanadium	3.5	B	N/A	0.00	no	N/A
SW-061-MWS	Vanadium, Dissolve	3.2	B	N/A	0.00	no	N/A
SW-061-MWS	Vinyl chloride	1	U	25	0.00	no	C
SW-061-MWS	Xylenes	3	U	1600	0.00	no	NC
SW-061-MWS	Zinc	0.65	B	N/A	0.00	no	N/A
SW-061-MWS	Zinc, Dissolve	10	U	N/A	0.00	no	N/A
SW-062-MWS	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW-062-MWS	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW-062-MWS	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW-062-MWS	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW-062-MWS	1,1-Biphenyl	1	U	140	0.00	no	NC
SW-062-MWS	1,1-Dichloroethane	1	U	330	0.00	no	C
SW-062-MWS	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW-062-MWS	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW-062-MWS	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW-062-MWS	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW-062-MWS	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW-062-MWS	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW-062-MWS	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW-062-MWS	1,2-Dichloroethane	1	U	98	0.00	no	C
SW-062-MWS	1,2-Dichloropropane	1	U	110	0.00	no	C
SW-062-MWS	1,4-Dichlorobenzene	1	U	110	0.00	no	C

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-062-MWS	1,4-Dioxane	0.1	U	130000	0.00	no	C
SW-062-MWS	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW-062-MWS	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
SW-062-MWS	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW-062-MWS	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW-062-MWS	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW-062-MWS	2,4-Dinitrophenol	2.5	U	N/A	0.00	no	N/A
SW-062-MWS	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-062-MWS	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-062-MWS	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW-062-MWS	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW-062-MWS	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW-062-MWS	2-Hexanone	10	U	34000	0.00	no	NC
SW-062-MWS	2-Methylnaphthalene	0.1	U	N/A	0.00	no	N/A
SW-062-MWS	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW-062-MWS	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-062-MWS	3,3'-Dichlorobenzidine	1	UJ	N/A	0.00	no	N/A
SW-062-MWS	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW-062-MWS	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW-062-MWS	4-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-062-MWS	Acenaphthene	0.1	U	N/A	0.00	no	N/A
SW-062-MWS	Acetone	10	R	95000000	0.00	no	NC
SW-062-MWS	Acetophenone	1	U	N/A	0.00	no	N/A
SW-062-MWS	Aluminum	40.4	J	N/A	0.00	no	N/A
SW-062-MWS	Aluminum, Dissolve	26.6	B	N/A	0.00	no	N/A
SW-062-MWS	Anthracene	0.023	J	N/A	0.00	no	N/A
SW-062-MWS	Antimony	6	U	N/A	0.00	no	N/A
SW-062-MWS	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW-062-MWS	Arsenic	5	U	N/A	0.00	no	N/A
SW-062-MWS	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SW-062-MWS	Barium	58.4		N/A	0.00	no	N/A
SW-062-MWS	Barium, Dissolve	53.9		N/A	0.00	no	N/A
SW-062-MWS	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW-062-MWS	Benzene	1	U	69	0.00	no	C
SW-062-MWS	Benzo[a]anthracene	0.1	U	NVT	0.00	no	C
SW-062-MWS	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW-062-MWS	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-062-MWS	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-062-MWS	Beryllium	1	U	N/A	0.00	no	N/A
SW-062-MWS	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW-062-MWS	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW-062-MWS	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW-062-MWS	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW-062-MWS	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A
SW-062-MWS	Bromodichloromethane	1	U	38	0.00	no	C
SW-062-MWS	Bromoform	1	U	5100	0.00	no	C
SW-062-MWS	Bromomethane	1	U	73	0.00	no	NC
SW-062-MWS	Cadmium	3	U	N/A	0.00	no	N/A
SW-062-MWS	Cadmium, Dissolve	0.56	B	N/A	0.00	no	N/A
SW-062-MWS	Caprolactam	2.5	U	N/A	0.00	no	N/A
SW-062-MWS	Carbon disulfide	1	U	5200	0.00	no	NC
SW-062-MWS	Carbon tetrachloride	1	U	18	0.00	no	C
SW-062-MWS	Chlorobenzene	1	U	1700	0.00	no	NC
SW-062-MWS	Chloroethane	1	U	97000	0.00	no	NC
SW-062-MWS	Chloroform	1	U	36	0.00	no	C
SW-062-MWS	Chloromethane	1	U	1100	0.00	no	NC
SW-062-MWS	Chromium	2.3	B	N/A	0.00	no	N/A
SW-062-MWS	Chromium VI	10	U	N/A	0.00	no	N/A
SW-062-MWS	Chromium, Dissolve	2.7	B	N/A	0.00	no	N/A
SW-062-MWS	Chrysene	0.1	U	N/A	0.00	no	N/A
SW-062-MWS	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-062-MWS	Cobalt	5	U	N/A	0.00	no	N/A
SW-062-MWS	Cobalt, Dissolve	5	U	N/A	0.00	no	N/A
SW-062-MWS	Copper	5	U	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-062-MWS	Copper, Dissolve	5	U	N/A	0.00	no	N/A
SW-062-MWS	Cyanide	10	U	3.5	0.00	no	NC
SW-062-MWS	Cyclohexane	10	U	4300	0.00	no	NC
SW-062-MWS	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW-062-MWS	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW-062-MWS	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW-062-MWS	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW-062-MWS	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW-062-MWS	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW-062-MWS	Ethylbenzene	1	U	150	0.00	no	C
SW-062-MWS	Fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-062-MWS	Fluorene	0.1	U	N/A	0.00	no	N/A
SW-062-MWS	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW-062-MWS	Hexachlorobutadiene	1	U	13	0.00	no	C
SW-062-MWS	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW-062-MWS	Hexachloroethane	1	U	70	0.00	no	C
SW-062-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW-062-MWS	Iron	28.2	B	N/A	0.00	no	N/A
SW-062-MWS	Iron, Dissolve	14.3	B	N/A	0.00	no	N/A
SW-062-MWS	Isophorone	1	U	N/A	0.00	no	N/A
SW-062-MWS	Isopropylbenzene	1	U	3700	0.00	no	NC
SW-062-MWS	Lead	5	U	N/A	0.00	no	N/A
SW-062-MWS	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW-062-MWS	Manganese	68		N/A	0.00	no	N/A
SW-062-MWS	Manganese, Dissolve	66		N/A	0.00	no	N/A
SW-062-MWS	Mercury	0.2	UJ	3.7	0.00	no	NC
SW-062-MWS	Mercury, Dissolve	0.2	UJ	3.7	0.00	no	NC
SW-062-MWS	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW-062-MWS	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW-062-MWS	Methylene Chloride	1	U	20000	0.00	no	NC
SW-062-MWS	Naphthalene	0.022	B	200	0.00	no	C
SW-062-MWS	Nickel	10	U	N/A	0.00	no	N/A
SW-062-MWS	Nickel, Dissolve	10	U	N/A	0.00	no	N/A
SW-062-MWS	Nitrobenzene	1	U	3100	0.00	no	C
SW-062-MWS	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW-062-MWS	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW-062-MWS	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
SW-062-MWS	Phenol	1	U	N/A	0.00	no	N/A
SW-062-MWS	Pyrene	0.1	U	N/A	0.00	no	N/A
SW-062-MWS	Selenium	8	U	N/A	0.00	no	N/A
SW-062-MWS	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW-062-MWS	Silver	6	U	N/A	0.00	no	N/A
SW-062-MWS	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW-062-MWS	Styrene	1	U	39000	0.00	no	NC
SW-062-MWS	Tetrachloroethene	1	U	240	0.00	no	NC
SW-062-MWS	Thallium	10	U	N/A	0.00	no	N/A
SW-062-MWS	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW-062-MWS	Toluene	1	U	81000	0.00	no	NC
SW-062-MWS	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-062-MWS	Trichloroethene	1	U	22	0.00	no	NC
SW-062-MWS	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW-062-MWS	Vanadium	1.8	B	N/A	0.00	no	N/A
SW-062-MWS	Vanadium, Dissolve	1.4	J	N/A	0.00	no	N/A
SW-062-MWS	Vinyl chloride	1	U	25	0.00	no	C
SW-062-MWS	Xylenes	3	U	1600	0.00	no	NC
SW-062-MWS	Zinc	0.74	J	N/A	0.00	no	N/A
SW-062-MWS	Zinc, Dissolve	10	U	N/A	0.00	no	N/A
SW-063-MWS	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW-063-MWS	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW-063-MWS	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW-063-MWS	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW-063-MWS	1,1-Biphenyl	1	U	140	0.00	no	NC
SW-063-MWS	1,1-Dichloroethane	1	U	330	0.00	no	C
SW-063-MWS	1,1-Dichloroethene	1	U	820	0.00	no	NC

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-063-MWS	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW-063-MWS	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW-063-MWS	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW-063-MWS	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW-063-MWS	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW-063-MWS	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW-063-MWS	1,2-Dichloroethane	1	U	98	0.00	no	C
SW-063-MWS	1,2-Dichloropropane	1	U	110	0.00	no	C
SW-063-MWS	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW-063-MWS	1,4-Dioxane	0.19		130000	0.00	no	C
SW-063-MWS	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW-063-MWS	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
SW-063-MWS	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW-063-MWS	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW-063-MWS	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW-063-MWS	2,4-Dinitrophenol	2.5	U	N/A	0.00	no	N/A
SW-063-MWS	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-063-MWS	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-063-MWS	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW-063-MWS	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW-063-MWS	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW-063-MWS	2-Hexanone	10	U	34000	0.00	no	NC
SW-063-MWS	2-Methylnaphthalene	0.1	U	N/A	0.00	no	N/A
SW-063-MWS	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW-063-MWS	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-063-MWS	3,3'-Dichlorobenzidine	1	U	N/A	0.00	no	N/A
SW-063-MWS	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW-063-MWS	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW-063-MWS	4-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-063-MWS	Acenaphthene	0.1	U	N/A	0.00	no	N/A
SW-063-MWS	Acetone	10	U	95000000	0.00	no	NC
SW-063-MWS	Acetophenone	1	U	N/A	0.00	no	N/A
SW-063-MWS	Aluminum	380		N/A	0.00	no	N/A
SW-063-MWS	Aluminum, Dissolve	62.7		N/A	0.00	no	N/A
SW-063-MWS	Anthracene	0.2		N/A	0.00	no	N/A
SW-063-MWS	Antimony	6	U	N/A	0.00	no	N/A
SW-063-MWS	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW-063-MWS	Arsenic	4.4	B	N/A	0.00	no	N/A
SW-063-MWS	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SW-063-MWS	Barium	65.3		N/A	0.00	no	N/A
SW-063-MWS	Barium, Dissolve	62.5		N/A	0.00	no	N/A
SW-063-MWS	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW-063-MWS	Benzene	1	U	69	0.00	no	C
SW-063-MWS	Benzo[a]anthracene	0.1	U	NVT	0.00	no	C
SW-063-MWS	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW-063-MWS	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-063-MWS	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-063-MWS	Beryllium	1	U	N/A	0.00	no	N/A
SW-063-MWS	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW-063-MWS	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW-063-MWS	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW-063-MWS	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW-063-MWS	bis(2-Ethylhexyl)phthalate	0.26	J	N/A	0.00	no	N/A
SW-063-MWS	Bromodichloromethane	1	U	38	0.00	no	C
SW-063-MWS	Bromoform	1	U	5100	0.00	no	C
SW-063-MWS	Bromomethane	1	UJ	73	0.00	no	NC
SW-063-MWS	Cadmium	3	U	N/A	0.00	no	N/A
SW-063-MWS	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A
SW-063-MWS	Caprolactam	2.5	U	N/A	0.00	no	N/A
SW-063-MWS	Carbon disulfide	1	U	5200	0.00	no	NC
SW-063-MWS	Carbon tetrachloride	1	U	18	0.00	no	C
SW-063-MWS	Chlorobenzene	1	U	1700	0.00	no	NC
SW-063-MWS	Chloroethane	1	U	97000	0.00	no	NC
SW-063-MWS	Chloroform	1	U	36	0.00	no	C

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-063-MWS	Chloromethane	1	UJ	1100	0.00	no	NC
SW-063-MWS	Chromium	1	J	N/A	0.00	no	N/A
SW-063-MWS	Chromium VI	10	UJ	N/A	0.00	no	N/A
SW-063-MWS	Chromium, Dissolve	0.86	J	N/A	0.00	no	N/A
SW-063-MWS	Chrysene	0.1	U	N/A	0.00	no	N/A
SW-063-MWS	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-063-MWS	Cobalt	20.6		N/A	0.00	no	N/A
SW-063-MWS	Cobalt, Dissolve	20.1		N/A	0.00	no	N/A
SW-063-MWS	Copper	5	U	N/A	0.00	no	N/A
SW-063-MWS	Copper, Dissolve	5	U	N/A	0.00	no	N/A
SW-063-MWS	Cyanide	10	U	3.5	0.00	no	NC
SW-063-MWS	Cyclohexane	10	U	4300	0.00	no	NC
SW-063-MWS	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW-063-MWS	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW-063-MWS	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW-063-MWS	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW-063-MWS	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW-063-MWS	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW-063-MWS	Ethylbenzene	1	U	150	0.00	no	C
SW-063-MWS	Fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-063-MWS	Fluorene	0.1	U	N/A	0.00	no	N/A
SW-063-MWS	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW-063-MWS	Hexachlorobutadiene	1	U	13	0.00	no	C
SW-063-MWS	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW-063-MWS	Hexachloroethane	1	U	70	0.00	no	C
SW-063-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW-063-MWS	Iron	13000		N/A	0.00	no	N/A
SW-063-MWS	Iron, Dissolve	11700		N/A	0.00	no	N/A
SW-063-MWS	Isophorone	1	U	N/A	0.00	no	N/A
SW-063-MWS	Isopropylbenzene	1	U	3700	0.00	no	NC
SW-063-MWS	Lead	5	U	N/A	0.00	no	N/A
SW-063-MWS	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW-063-MWS	Manganese	1540		N/A	0.00	no	N/A
SW-063-MWS	Manganese, Dissolve	1510		N/A	0.00	no	N/A
SW-063-MWS	Mercury	0.2	U	3.7	0.00	no	NC
SW-063-MWS	Mercury, Dissolve	0.2	UJ	3.7	0.00	no	NC
SW-063-MWS	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW-063-MWS	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW-063-MWS	Methylene Chloride	1	U	20000	0.00	no	NC
SW-063-MWS	Naphthalene	0.1	U	200	0.00	no	C
SW-063-MWS	Nickel	9.7	B	N/A	0.00	no	N/A
SW-063-MWS	Nickel, Dissolve	9.7	B	N/A	0.00	no	N/A
SW-063-MWS	Nitrobenzene	1	U	3100	0.00	no	C
SW-063-MWS	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW-063-MWS	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW-063-MWS	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
SW-063-MWS	Phenol	1	U	N/A	0.00	no	N/A
SW-063-MWS	Pyrene	0.1	U	N/A	0.00	no	N/A
SW-063-MWS	Selenium	8	U	N/A	0.00	no	N/A
SW-063-MWS	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW-063-MWS	Silver	6	U	N/A	0.00	no	N/A
SW-063-MWS	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW-063-MWS	Styrene	1	U	39000	0.00	no	NC
SW-063-MWS	Tetrachloroethene	1	U	240	0.00	no	NC
SW-063-MWS	Thallium	10	U	N/A	0.00	no	N/A
SW-063-MWS	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW-063-MWS	Toluene	1	U	81000	0.00	no	NC
SW-063-MWS	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-063-MWS	Trichloroethene	1	U	22	0.00	no	NC
SW-063-MWS	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW-063-MWS	Vanadium	5	U	N/A	0.00	no	N/A
SW-063-MWS	Vanadium, Dissolve	5	U	N/A	0.00	no	N/A
SW-063-MWS	Vinyl chloride	1	U	25	0.00	no	C
SW-063-MWS	Xylenes	3	U	1600	0.00	no	NC

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-063-MWS	Zinc	5.7	B	N/A	0.00	no	N/A
SW-063-MWS	Zinc, Dissolve	5.2	B	N/A	0.00	no	N/A
SW-064-MWS	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW-064-MWS	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW-064-MWS	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW-064-MWS	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW-064-MWS	1,1-Biphenyl	1	U	140	0.00	no	NC
SW-064-MWS	1,1-Dichloroethane	1	U	330	0.00	no	C
SW-064-MWS	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW-064-MWS	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW-064-MWS	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW-064-MWS	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW-064-MWS	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW-064-MWS	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW-064-MWS	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW-064-MWS	1,2-Dichloroethane	1	U	98	0.00	no	C
SW-064-MWS	1,2-Dichloropropane	1	U	110	0.00	no	C
SW-064-MWS	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW-064-MWS	1,4-Dioxane	0.062	J	130000	0.00	no	C
SW-064-MWS	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW-064-MWS	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
SW-064-MWS	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW-064-MWS	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW-064-MWS	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW-064-MWS	2,4-Dinitrophenol	2.5	U	N/A	0.00	no	N/A
SW-064-MWS	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-064-MWS	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-064-MWS	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW-064-MWS	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW-064-MWS	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW-064-MWS	2-Hexanone	10	U	34000	0.00	no	NC
SW-064-MWS	2-Methylnaphthalene	0.1	U	N/A	0.00	no	N/A
SW-064-MWS	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW-064-MWS	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-064-MWS	3,3'-Dichlorobenzidine	1	U	N/A	0.00	no	N/A
SW-064-MWS	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW-064-MWS	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW-064-MWS	4-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-064-MWS	Acenaphthene	0.1	U	N/A	0.00	no	N/A
SW-064-MWS	Acetone	10	R	95000000	0.00	no	NC
SW-064-MWS	Acetophenone	1	U	N/A	0.00	no	N/A
SW-064-MWS	Aluminum	192	J	N/A	0.00	no	N/A
SW-064-MWS	Aluminum, Dissolve	72		N/A	0.00	no	N/A
SW-064-MWS	Anthracene	0.036	J	N/A	0.00	no	N/A
SW-064-MWS	Antimony	6	U	N/A	0.00	no	N/A
SW-064-MWS	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW-064-MWS	Arsenic	5	U	N/A	0.00	no	N/A
SW-064-MWS	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SW-064-MWS	Barium	61.9		N/A	0.00	no	N/A
SW-064-MWS	Barium, Dissolve	60.5		N/A	0.00	no	N/A
SW-064-MWS	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW-064-MWS	Benzene	1	U	69	0.00	no	C
SW-064-MWS	Benzo[a]anthracene	0.016	J	NVT	0.00	no	C
SW-064-MWS	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW-064-MWS	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-064-MWS	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-064-MWS	Beryllium	1	U	N/A	0.00	no	N/A
SW-064-MWS	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW-064-MWS	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW-064-MWS	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW-064-MWS	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW-064-MWS	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A
SW-064-MWS	Bromodichloromethane	1	U	38	0.00	no	C
SW-064-MWS	Bromoform	1	U	5100	0.00	no	C

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-064-MWS	Bromomethane	1	U	73	0.00	no	NC
SW-064-MWS	Cadmium	3	U	N/A	0.00	no	N/A
SW-064-MWS	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A
SW-064-MWS	Caprolactam	2.5	U	N/A	0.00	no	N/A
SW-064-MWS	Carbon disulfide	1	U	5200	0.00	no	NC
SW-064-MWS	Carbon tetrachloride	1	U	18	0.00	no	C
SW-064-MWS	Chlorobenzene	1	U	1700	0.00	no	NC
SW-064-MWS	Chloroethane	1	U	97000	0.00	no	NC
SW-064-MWS	Chloroform	1	U	36	0.00	no	C
SW-064-MWS	Chloromethane	1	U	1100	0.00	no	NC
SW-064-MWS	Chromium	1.9	B	N/A	0.00	no	N/A
SW-064-MWS	Chromium VI	10	U	N/A	0.00	no	N/A
SW-064-MWS	Chromium, Dissolve	1.5	B	N/A	0.00	no	N/A
SW-064-MWS	Chrysene	0.1	U	N/A	0.00	no	N/A
SW-064-MWS	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-064-MWS	Cobalt	5	U	N/A	0.00	no	N/A
SW-064-MWS	Cobalt, Dissolve	5	U	N/A	0.00	no	N/A
SW-064-MWS	Copper	5	U	N/A	0.00	no	N/A
SW-064-MWS	Copper, Dissolve	5	U	N/A	0.00	no	N/A
SW-064-MWS	Cyanide	10	U	3.5	0.00	no	NC
SW-064-MWS	Cyclohexane	10	U	4300	0.00	no	NC
SW-064-MWS	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW-064-MWS	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW-064-MWS	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW-064-MWS	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW-064-MWS	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW-064-MWS	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW-064-MWS	Ethylbenzene	1	U	150	0.00	no	C
SW-064-MWS	Fluoranthene	0.015	J	N/A	0.00	no	N/A
SW-064-MWS	Fluorene	0.1	U	N/A	0.00	no	N/A
SW-064-MWS	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW-064-MWS	Hexachlorobutadiene	1	U	13	0.00	no	C
SW-064-MWS	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW-064-MWS	Hexachloroethane	1	U	70	0.00	no	C
SW-064-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW-064-MWS	Iron	47.6	J	N/A	0.00	no	N/A
SW-064-MWS	Iron, Dissolve	70	U	N/A	0.00	no	N/A
SW-064-MWS	Isophorone	1	U	N/A	0.00	no	N/A
SW-064-MWS	Isopropylbenzene	1	U	3700	0.00	no	NC
SW-064-MWS	Lead	5	U	N/A	0.00	no	N/A
SW-064-MWS	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW-064-MWS	Manganese	6.7		N/A	0.00	no	N/A
SW-064-MWS	Manganese, Dissolve	5	U	N/A	0.00	no	N/A
SW-064-MWS	Mercury	0.2	U	3.7	0.00	no	NC
SW-064-MWS	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW-064-MWS	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW-064-MWS	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW-064-MWS	Methylene Chloride	1	U	20000	0.00	no	NC
SW-064-MWS	Naphthalene	0.13		200	0.00	no	C
SW-064-MWS	Nickel	0.66	B	N/A	0.00	no	N/A
SW-064-MWS	Nickel, Dissolve	10	U	N/A	0.00	no	N/A
SW-064-MWS	Nitrobenzene	1	U	3100	0.00	no	C
SW-064-MWS	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW-064-MWS	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW-064-MWS	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
SW-064-MWS	Phenol	1	U	N/A	0.00	no	N/A
SW-064-MWS	Pyrene	0.014	J	N/A	0.00	no	N/A
SW-064-MWS	Selenium	5.6	B	N/A	0.00	no	N/A
SW-064-MWS	Selenium, Dissolve	6.6	J	N/A	0.00	no	N/A
SW-064-MWS	Silver	6	U	N/A	0.00	no	N/A
SW-064-MWS	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW-064-MWS	Styrene	1	U	39000	0.00	no	NC
SW-064-MWS	Tetrachloroethene	1	U	240	0.00	no	NC
SW-064-MWS	Thallium	10	U	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-064-MWS	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW-064-MWS	Toluene	1	U	81000	0.00	no	NC
SW-064-MWS	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-064-MWS	Trichloroethene	1	U	22	0.00	no	NC
SW-064-MWS	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW-064-MWS	Vanadium	2.4	B	N/A	0.00	no	N/A
SW-064-MWS	Vanadium, Dissolve	2.3	B	N/A	0.00	no	N/A
SW-064-MWS	Vinyl chloride	1	U	25	0.00	no	C
SW-064-MWS	Xylenes	3	U	1600	0.00	no	NC
SW-064-MWS	Zinc	1.1	B	N/A	0.00	no	N/A
SW-064-MWS	Zinc, Dissolve	0.95	B	N/A	0.00	no	N/A
SW-065-MWS	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW-065-MWS	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW-065-MWS	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW-065-MWS	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW-065-MWS	1,1-Biphenyl	1	U	140	0.00	no	NC
SW-065-MWS	1,1-Dichloroethane	1	U	330	0.00	no	C
SW-065-MWS	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW-065-MWS	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW-065-MWS	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW-065-MWS	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW-065-MWS	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW-065-MWS	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW-065-MWS	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW-065-MWS	1,2-Dichloroethane	1	U	98	0.00	no	C
SW-065-MWS	1,2-Dichloropropane	1	U	110	0.00	no	C
SW-065-MWS	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW-065-MWS	1,4-Dioxane	0.13		130000	0.00	no	C
SW-065-MWS	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW-065-MWS	2,4,5-Trichlorophenol	2.6	U	N/A	0.00	no	N/A
SW-065-MWS	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW-065-MWS	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW-065-MWS	2,4-Dimethylphenol	2.7		N/A	0.00	no	N/A
SW-065-MWS	2,4-Dinitrophenol	2.6	U	N/A	0.00	no	N/A
SW-065-MWS	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-065-MWS	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-065-MWS	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW-065-MWS	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW-065-MWS	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW-065-MWS	2-Hexanone	10	U	34000	0.00	no	NC
SW-065-MWS	2-Methylnaphthalene	0.092	B	N/A	0.00	no	N/A
SW-065-MWS	2-Methylphenol	0.63	J	N/A	0.00	no	N/A
SW-065-MWS	2-Nitroaniline	2.6	U	N/A	0.00	no	N/A
SW-065-MWS	3,3'-Dichlorobenzidine	1	U	N/A	0.00	no	N/A
SW-065-MWS	4-Chloroaniline	1	UJ	N/A	0.00	no	N/A
SW-065-MWS	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW-065-MWS	4-Nitroaniline	2.6	U	N/A	0.00	no	N/A
SW-065-MWS	Acenaphthene	0.035	B	N/A	0.00	no	N/A
SW-065-MWS	Acetone	10	R	95000000	0.00	no	NC
SW-065-MWS	Acetophenone	2.2		N/A	0.00	no	N/A
SW-065-MWS	Aluminum	1140		N/A	0.00	no	N/A
SW-065-MWS	Aluminum, Dissolve	1100		N/A	0.00	no	N/A
SW-065-MWS	Anthracene	0.093	J	N/A	0.00	no	N/A
SW-065-MWS	Antimony	6	U	N/A	0.00	no	N/A
SW-065-MWS	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW-065-MWS	Arsenic	5.9		N/A	0.00	no	N/A
SW-065-MWS	Arsenic, Dissolve	7.1		N/A	0.00	no	N/A
SW-065-MWS	Barium	53.1		N/A	0.00	no	N/A
SW-065-MWS	Barium, Dissolve	53.4		N/A	0.00	no	N/A
SW-065-MWS	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW-065-MWS	Benzene	9.9		69	0.14	no	C
SW-065-MWS	Benzo[a]anthracene	0.023	J	NVT	0.00	no	C
SW-065-MWS	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW-065-MWS	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-065-MWS	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-065-MWS	Beryllium	1	U	N/A	0.00	no	N/A
SW-065-MWS	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW-065-MWS	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW-065-MWS	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW-065-MWS	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW-065-MWS	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A
SW-065-MWS	Bromodichloromethane	1	U	38	0.00	no	C
SW-065-MWS	Bromoform	1	U	5100	0.00	no	C
SW-065-MWS	Bromomethane	1	U	73	0.00	no	NC
SW-065-MWS	Cadmium	3	U	N/A	0.00	no	N/A
SW-065-MWS	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A
SW-065-MWS	Caprolactam	2.6	UJ	N/A	0.00	no	N/A
SW-065-MWS	Carbon disulfide	2.1		5200	0.00	no	NC
SW-065-MWS	Carbon tetrachloride	1	U	18	0.00	no	C
SW-065-MWS	Chlorobenzene	1	U	1700	0.00	no	NC
SW-065-MWS	Chloroethane	1	U	97000	0.00	no	NC
SW-065-MWS	Chloroform	2.7		36	0.08	no	C
SW-065-MWS	Chloromethane	1	U	1100	0.00	no	NC
SW-065-MWS	Chromium	0.89	J	N/A	0.00	no	N/A
SW-065-MWS	Chromium VI	10	U	N/A	0.00	no	N/A
SW-065-MWS	Chromium, Dissolve	2.7	J	N/A	0.00	no	N/A
SW-065-MWS	Chrysene	0.1	U	N/A	0.00	no	N/A
SW-065-MWS	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-065-MWS	Cobalt	1.2	J	N/A	0.00	no	N/A
SW-065-MWS	Cobalt, Dissolve	1.5	J	N/A	0.00	no	N/A
SW-065-MWS	Copper	5	U	N/A	0.00	no	N/A
SW-065-MWS	Copper, Dissolve	5	U	N/A	0.00	no	N/A
SW-065-MWS	Cyanide	1030		3.5	294.29	YES	NC
SW-065-MWS	Cyclohexane	10	U	4300	0.00	no	NC
SW-065-MWS	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW-065-MWS	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW-065-MWS	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW-065-MWS	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW-065-MWS	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW-065-MWS	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW-065-MWS	Ethylbenzene	1	U	150	0.00	no	C
SW-065-MWS	Fluoranthene	0.014	J	N/A	0.00	no	N/A
SW-065-MWS	Fluorene	0.1	U	N/A	0.00	no	N/A
SW-065-MWS	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW-065-MWS	Hexachlorobutadiene	1	U	13	0.00	no	C
SW-065-MWS	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW-065-MWS	Hexachloroethane	1	U	70	0.00	no	C
SW-065-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW-065-MWS	Iron	594		N/A	0.00	no	N/A
SW-065-MWS	Iron, Dissolve	504		N/A	0.00	no	N/A
SW-065-MWS	Isophorone	1	U	N/A	0.00	no	N/A
SW-065-MWS	Isopropylbenzene	1	U	3700	0.00	no	NC
SW-065-MWS	Lead	5	U	N/A	0.00	no	N/A
SW-065-MWS	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW-065-MWS	Manganese	3.4	J	N/A	0.00	no	N/A
SW-065-MWS	Manganese, Dissolve	1.7	J	N/A	0.00	no	N/A
SW-065-MWS	Mercury	0.2	U	3.7	0.00	no	NC
SW-065-MWS	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW-065-MWS	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW-065-MWS	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW-065-MWS	Methylene Chloride	1	U	20000	0.00	no	NC
SW-065-MWS	Naphthalene	0.96		200	0.00	no	C
SW-065-MWS	Nickel	1.6	B	N/A	0.00	no	N/A
SW-065-MWS	Nickel, Dissolve	2.6	B	N/A	0.00	no	N/A
SW-065-MWS	Nitrobenzene	1	U	3100	0.00	no	C
SW-065-MWS	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW-065-MWS	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW-065-MWS	Pentachlorophenol	2.6	U	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-065-MWS	Phenol	1	U	N/A	0.00	no	N/A
SW-065-MWS	Pyrene	0.1	U	N/A	0.00	no	N/A
SW-065-MWS	Selenium	3.1	B	N/A	0.00	no	N/A
SW-065-MWS	Selenium, Dissolve	5.3	J	N/A	0.00	no	N/A
SW-065-MWS	Silver	6	U	N/A	0.00	no	N/A
SW-065-MWS	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW-065-MWS	Styrene	1	U	39000	0.00	no	NC
SW-065-MWS	Tetrachloroethene	1	UJ	240	0.00	no	NC
SW-065-MWS	Thallium	10	U	N/A	0.00	no	N/A
SW-065-MWS	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW-065-MWS	Toluene	0.59	J	81000	0.00	no	NC
SW-065-MWS	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-065-MWS	Trichloroethene	1	U	22	0.00	no	NC
SW-065-MWS	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW-065-MWS	Vanadium	2.7	J	N/A	0.00	no	N/A
SW-065-MWS	Vanadium, Dissolve	2.7	B	N/A	0.00	no	N/A
SW-065-MWS	Vinyl chloride	1	U	25	0.00	no	C
SW-065-MWS	Xylenes	3	U	1600	0.00	no	NC
SW-065-MWS	Zinc	2.6	J	N/A	0.00	no	N/A
SW-065-MWS	Zinc, Dissolve	2.5	B	N/A	0.00	no	N/A
SW-066-MWS	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW-066-MWS	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW-066-MWS	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	UJ	6100	0.00	no	NC
SW-066-MWS	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW-066-MWS	1,1-Biphenyl	1	U	140	0.00	no	NC
SW-066-MWS	1,1-Dichloroethane	1	U	330	0.00	no	C
SW-066-MWS	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW-066-MWS	1,2,3-Trichlorobenzene	2	UJ	N/A	0.00	no	N/A
SW-066-MWS	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW-066-MWS	1,2,4-Trichlorobenzene	1	UJ	150	0.00	no	NC
SW-066-MWS	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW-066-MWS	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW-066-MWS	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW-066-MWS	1,2-Dichloroethane	1	U	98	0.00	no	C
SW-066-MWS	1,2-Dichloropropane	1	U	110	0.00	no	C
SW-066-MWS	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW-066-MWS	1,4-Dioxane	0.1	U	130000	0.00	no	C
SW-066-MWS	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW-066-MWS	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
SW-066-MWS	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW-066-MWS	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW-066-MWS	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW-066-MWS	2,4-Dinitrophenol	2.5	U	N/A	0.00	no	N/A
SW-066-MWS	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-066-MWS	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-066-MWS	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW-066-MWS	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW-066-MWS	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW-066-MWS	2-Hexanone	10	U	34000	0.00	no	NC
SW-066-MWS	2-Methylnaphthalene	0.1	U	N/A	0.00	no	N/A
SW-066-MWS	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW-066-MWS	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-066-MWS	3,3'-Dichlorobenzidine	1	U	N/A	0.00	no	N/A
SW-066-MWS	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW-066-MWS	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW-066-MWS	4-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-066-MWS	Acenaphthene	0.1	U	N/A	0.00	no	N/A
SW-066-MWS	Acetone	10	UJ	95000000	0.00	no	NC
SW-066-MWS	Acetophenone	1	U	N/A	0.00	no	N/A
SW-066-MWS	Aluminum	385		N/A	0.00	no	N/A
SW-066-MWS	Aluminum, Dissolve	358		N/A	0.00	no	N/A
SW-066-MWS	Anthracene	0.016	J	N/A	0.00	no	N/A
SW-066-MWS	Antimony	6	U	N/A	0.00	no	N/A
SW-066-MWS	Antimony, Dissolve	6	U	N/A	0.00	no	N/A

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-066-MWS	Arsenic	4.3	J	N/A	0.00	no	N/A
SW-066-MWS	Arsenic, Dissolve	5.6		N/A	0.00	no	N/A
SW-066-MWS	Barium	37.6		N/A	0.00	no	N/A
SW-066-MWS	Barium, Dissolve	37.9		N/A	0.00	no	N/A
SW-066-MWS	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW-066-MWS	Benzene	1	U	69	0.00	no	C
SW-066-MWS	Benzo[a]anthracene	0.1	U	NVT	0.00	no	C
SW-066-MWS	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW-066-MWS	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-066-MWS	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-066-MWS	Beryllium	1	U	N/A	0.00	no	N/A
SW-066-MWS	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW-066-MWS	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW-066-MWS	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW-066-MWS	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW-066-MWS	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A
SW-066-MWS	Bromodichloromethane	1	U	38	0.00	no	C
SW-066-MWS	Bromoform	1	U	5100	0.00	no	C
SW-066-MWS	Bromomethane	1	U	73	0.00	no	NC
SW-066-MWS	Cadmium	3	U	N/A	0.00	no	N/A
SW-066-MWS	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A
SW-066-MWS	Caprolactam	2.5	U	N/A	0.00	no	N/A
SW-066-MWS	Carbon disulfide	1	U	5200	0.00	no	NC
SW-066-MWS	Carbon tetrachloride	1	U	18	0.00	no	C
SW-066-MWS	Chlorobenzene	1	U	1700	0.00	no	NC
SW-066-MWS	Chloroethane	1	U	97000	0.00	no	NC
SW-066-MWS	Chloroform	2		36	0.06	no	C
SW-066-MWS	Chloromethane	1	U	1100	0.00	no	NC
SW-066-MWS	Chromium	6.5		N/A	0.00	no	N/A
SW-066-MWS	Chromium VI	10	U	N/A	0.00	no	N/A
SW-066-MWS	Chromium, Dissolve	6		N/A	0.00	no	N/A
SW-066-MWS	Chrysene	0.1	U	N/A	0.00	no	N/A
SW-066-MWS	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-066-MWS	Cobalt	5	U	N/A	0.00	no	N/A
SW-066-MWS	Cobalt, Dissolve	5	U	N/A	0.00	no	N/A
SW-066-MWS	Copper	5	U	N/A	0.00	no	N/A
SW-066-MWS	Copper, Dissolve	5	U	N/A	0.00	no	N/A
SW-066-MWS	Cyanide	11.2		3.5	3.20	YES	NC
SW-066-MWS	Cyclohexane	10	U	4300	0.00	no	NC
SW-066-MWS	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW-066-MWS	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW-066-MWS	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW-066-MWS	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW-066-MWS	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW-066-MWS	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW-066-MWS	Ethylbenzene	1	U	150	0.00	no	C
SW-066-MWS	Fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-066-MWS	Fluorene	0.1	U	N/A	0.00	no	N/A
SW-066-MWS	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW-066-MWS	Hexachlorobutadiene	1	U	13	0.00	no	C
SW-066-MWS	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW-066-MWS	Hexachloroethane	1	U	70	0.00	no	C
SW-066-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW-066-MWS	Iron	42.5	B	N/A	0.00	no	N/A
SW-066-MWS	Iron, Dissolve	12.3	B	N/A	0.00	no	N/A
SW-066-MWS	Isophorone	1	U	N/A	0.00	no	N/A
SW-066-MWS	Isopropylbenzene	1	U	3700	0.00	no	NC
SW-066-MWS	Lead	5	U	N/A	0.00	no	N/A
SW-066-MWS	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW-066-MWS	Manganese	2	B	N/A	0.00	no	N/A
SW-066-MWS	Manganese, Dissolve	5	U	N/A	0.00	no	N/A
SW-066-MWS	Mercury	0.2	U	3.7	0.00	no	NC
SW-066-MWS	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW-066-MWS	Methyl Acetate	5	UJ	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-066-MWS	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW-066-MWS	Methylene Chloride	1	U	20000	0.00	no	NC
SW-066-MWS	Naphthalene	0.022	B	200	0.00	no	C
SW-066-MWS	Nickel	0.81	B	N/A	0.00	no	N/A
SW-066-MWS	Nickel, Dissolve	10	U	N/A	0.00	no	N/A
SW-066-MWS	Nitrobenzene	1	U	3100	0.00	no	C
SW-066-MWS	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW-066-MWS	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW-066-MWS	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
SW-066-MWS	Phenol	1	U	N/A	0.00	no	N/A
SW-066-MWS	Pyrene	0.1	U	N/A	0.00	no	N/A
SW-066-MWS	Selenium	8	U	N/A	0.00	no	N/A
SW-066-MWS	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW-066-MWS	Silver	6	U	N/A	0.00	no	N/A
SW-066-MWS	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW-066-MWS	Styrene	1	U	39000	0.00	no	NC
SW-066-MWS	Tetrachloroethene	1	U	240	0.00	no	NC
SW-066-MWS	Thallium	10	U	N/A	0.00	no	N/A
SW-066-MWS	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW-066-MWS	Toluene	1	U	81000	0.00	no	NC
SW-066-MWS	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-066-MWS	Trichloroethene	1	U	22	0.00	no	NC
SW-066-MWS	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW-066-MWS	Vanadium	27.9		N/A	0.00	no	N/A
SW-066-MWS	Vanadium, Dissolve	27.5		N/A	0.00	no	N/A
SW-066-MWS	Vinyl chloride	1	U	25	0.00	no	C
SW-066-MWS	Xylenes	3	U	1600	0.00	no	NC
SW-066-MWS	Zinc	0.65	J	N/A	0.00	no	N/A
SW-066-MWS	Zinc, Dissolve	0.63	B	N/A	0.00	no	N/A
SW-067-MWS	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW-067-MWS	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW-067-MWS	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW-067-MWS	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW-067-MWS	1,1-Biphenyl	1	U	140	0.00	no	NC
SW-067-MWS	1,1-Dichloroethane	1	U	330	0.00	no	C
SW-067-MWS	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW-067-MWS	1,2,3-Trichlorobenzene	2	UJ	N/A	0.00	no	N/A
SW-067-MWS	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW-067-MWS	1,2,4-Trichlorobenzene	1	UJ	150	0.00	no	NC
SW-067-MWS	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW-067-MWS	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW-067-MWS	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW-067-MWS	1,2-Dichloroethane	1	U	98	0.00	no	C
SW-067-MWS	1,2-Dichloropropane	1	U	110	0.00	no	C
SW-067-MWS	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW-067-MWS	1,4-Dioxane	0.1	U	130000	0.00	no	C
SW-067-MWS	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW-067-MWS	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
SW-067-MWS	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW-067-MWS	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW-067-MWS	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW-067-MWS	2,4-Dinitrophenol	2.5	UJ	N/A	0.00	no	N/A
SW-067-MWS	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-067-MWS	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-067-MWS	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW-067-MWS	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW-067-MWS	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW-067-MWS	2-Hexanone	10	U	34000	0.00	no	NC
SW-067-MWS	2-Methylnaphthalene	0.1	U	N/A	0.00	no	N/A
SW-067-MWS	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW-067-MWS	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-067-MWS	3,3'-Dichlorobenzidine	1	U	N/A	0.00	no	N/A
SW-067-MWS	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW-067-MWS	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-067-MWS	4-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-067-MWS	Acenaphthene	0.1	U	N/A	0.00	no	N/A
SW-067-MWS	Acetone	10	U	95000000	0.00	no	NC
SW-067-MWS	Acetophenone	1	U	N/A	0.00	no	N/A
SW-067-MWS	Aluminum	719		N/A	0.00	no	N/A
SW-067-MWS	Aluminum, Dissolve	652		N/A	0.00	no	N/A
SW-067-MWS	Anthracene	0.1	U	N/A	0.00	no	N/A
SW-067-MWS	Antimony	6	U	N/A	0.00	no	N/A
SW-067-MWS	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW-067-MWS	Arsenic	5	U	N/A	0.00	no	N/A
SW-067-MWS	Arsenic, Dissolve	3.5	B	N/A	0.00	no	N/A
SW-067-MWS	Barium	23.6		N/A	0.00	no	N/A
SW-067-MWS	Barium, Dissolve	21.5		N/A	0.00	no	N/A
SW-067-MWS	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW-067-MWS	Benzene	1	U	69	0.00	no	C
SW-067-MWS	Benzo[a]anthracene	0.1	U	NVT	0.00	no	C
SW-067-MWS	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW-067-MWS	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-067-MWS	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-067-MWS	Beryllium	1.8		N/A	0.00	no	N/A
SW-067-MWS	Beryllium, Dissolve	1.7		N/A	0.00	no	N/A
SW-067-MWS	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW-067-MWS	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW-067-MWS	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW-067-MWS	bis(2-Ethylhexyl)phthalate	0.25	B	N/A	0.00	no	N/A
SW-067-MWS	Bromodichloromethane	1	U	38	0.00	no	C
SW-067-MWS	Bromoform	1	U	5100	0.00	no	C
SW-067-MWS	Bromomethane	1	U	73	0.00	no	NC
SW-067-MWS	Cadmium	3	U	N/A	0.00	no	N/A
SW-067-MWS	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A
SW-067-MWS	Caprolactam	0.51	J	N/A	0.00	no	N/A
SW-067-MWS	Carbon disulfide	1	U	5200	0.00	no	NC
SW-067-MWS	Carbon tetrachloride	1	U	18	0.00	no	C
SW-067-MWS	Chlorobenzene	1	U	1700	0.00	no	NC
SW-067-MWS	Chloroethane	1	U	97000	0.00	no	NC
SW-067-MWS	Chloroform	1	U	36	0.00	no	C
SW-067-MWS	Chloromethane	1	U	1100	0.00	no	NC
SW-067-MWS	Chromium	5	U	N/A	0.00	no	N/A
SW-067-MWS	Chromium VI	10	U	N/A	0.00	no	N/A
SW-067-MWS	Chromium, Dissolve	5	U	N/A	0.00	no	N/A
SW-067-MWS	Chrysene	0.1	U	N/A	0.00	no	N/A
SW-067-MWS	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-067-MWS	Cobalt	16.7		N/A	0.00	no	N/A
SW-067-MWS	Cobalt, Dissolve	15.8		N/A	0.00	no	N/A
SW-067-MWS	Copper	5	U	N/A	0.00	no	N/A
SW-067-MWS	Copper, Dissolve	1.8	B	N/A	0.00	no	N/A
SW-067-MWS	Cyanide	10	U	3.5	0.00	no	NC
SW-067-MWS	Cyclohexane	10	U	4300	0.00	no	NC
SW-067-MWS	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW-067-MWS	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW-067-MWS	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW-067-MWS	Diethylphthalate	2.1		N/A	0.00	no	N/A
SW-067-MWS	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW-067-MWS	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW-067-MWS	Ethylbenzene	1	U	150	0.00	no	C
SW-067-MWS	Fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-067-MWS	Fluorene	0.1	U	N/A	0.00	no	N/A
SW-067-MWS	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW-067-MWS	Hexachlorobutadiene	1	U	13	0.00	no	C
SW-067-MWS	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW-067-MWS	Hexachloroethane	1	U	70	0.00	no	C
SW-067-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW-067-MWS	Iron	12400		N/A	0.00	no	N/A
SW-067-MWS	Iron, Dissolve	11400		N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-067-MWS	Isophorone	1	U	N/A	0.00	no	N/A
SW-067-MWS	Isopropylbenzene	1	U	3700	0.00	no	NC
SW-067-MWS	Lead	5	U	N/A	0.00	no	N/A
SW-067-MWS	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW-067-MWS	Manganese	645		N/A	0.00	no	N/A
SW-067-MWS	Manganese, Dissolve	625		N/A	0.00	no	N/A
SW-067-MWS	Mercury	0.2	U	3.7	0.00	no	NC
SW-067-MWS	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW-067-MWS	Methyl Acetate	5	UJ	N/A	0.00	no	N/A
SW-067-MWS	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW-067-MWS	Methylene Chloride	1	U	20000	0.00	no	NC
SW-067-MWS	Naphthalene	0.043	B	200	0.00	no	C
SW-067-MWS	Nickel	19.1		N/A	0.00	no	N/A
SW-067-MWS	Nickel, Dissolve	19		N/A	0.00	no	N/A
SW-067-MWS	Nitrobenzene	1	U	3100	0.00	no	C
SW-067-MWS	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW-067-MWS	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW-067-MWS	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
SW-067-MWS	Phenol	1	U	N/A	0.00	no	N/A
SW-067-MWS	Pyrene	0.1	U	N/A	0.00	no	N/A
SW-067-MWS	Selenium	8	U	N/A	0.00	no	N/A
SW-067-MWS	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW-067-MWS	Silver	6	U	N/A	0.00	no	N/A
SW-067-MWS	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW-067-MWS	Styrene	1	U	39000	0.00	no	NC
SW-067-MWS	Tetrachloroethene	1	U	240	0.00	no	NC
SW-067-MWS	Thallium	10	U	N/A	0.00	no	N/A
SW-067-MWS	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW-067-MWS	Toluene	1	U	81000	0.00	no	NC
SW-067-MWS	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-067-MWS	Trichloroethene	1	U	22	0.00	no	NC
SW-067-MWS	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW-067-MWS	Vanadium	5	U	N/A	0.00	no	N/A
SW-067-MWS	Vanadium, Dissolve	5	U	N/A	0.00	no	N/A
SW-067-MWS	Vinyl chloride	1	U	25	0.00	no	C
SW-067-MWS	Xylenes	3	U	1600	0.00	no	NC
SW-067-MWS	Zinc	68.2		N/A	0.00	no	N/A
SW-067-MWS	Zinc, Dissolve	68.5		N/A	0.00	no	N/A
SW-068-MWS	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW-068-MWS	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW-068-MWS	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW-068-MWS	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW-068-MWS	1,1-Biphenyl	1	U	140	0.00	no	NC
SW-068-MWS	1,1-Dichloroethane	1	U	330	0.00	no	C
SW-068-MWS	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW-068-MWS	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW-068-MWS	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW-068-MWS	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW-068-MWS	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW-068-MWS	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW-068-MWS	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW-068-MWS	1,2-Dichloroethane	1	U	98	0.00	no	C
SW-068-MWS	1,2-Dichloropropane	1	U	110	0.00	no	C
SW-068-MWS	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW-068-MWS	1,4-Dioxane	0.07	J	130000	0.00	no	C
SW-068-MWS	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW-068-MWS	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
SW-068-MWS	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW-068-MWS	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW-068-MWS	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW-068-MWS	2,4-Dinitrophenol	2.5	U	N/A	0.00	no	N/A
SW-068-MWS	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-068-MWS	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-068-MWS	2-Butanone (MEK)	10	U	9400000	0.00	no	NC

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-068-MWS	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW-068-MWS	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW-068-MWS	2-Hexanone	10	U	34000	0.00	no	NC
SW-068-MWS	2-Methylnaphthalene	0.1	U	N/A	0.00	no	N/A
SW-068-MWS	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW-068-MWS	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-068-MWS	3,3'-Dichlorobenzidine	1	U	N/A	0.00	no	N/A
SW-068-MWS	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW-068-MWS	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW-068-MWS	4-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-068-MWS	Acenaphthene	0.1	U	N/A	0.00	no	N/A
SW-068-MWS	Acetone	10	U	95000000	0.00	no	NC
SW-068-MWS	Acetophenone	1	U	N/A	0.00	no	N/A
SW-068-MWS	Aluminum	35.7	B	N/A	0.00	no	N/A
SW-068-MWS	Aluminum, Dissolve	50	U	N/A	0.00	no	N/A
SW-068-MWS	Anthracene	0.1	U	N/A	0.00	no	N/A
SW-068-MWS	Antimony	6	U	N/A	0.00	no	N/A
SW-068-MWS	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW-068-MWS	Arsenic	5	U	N/A	0.00	no	N/A
SW-068-MWS	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SW-068-MWS	Barium	84.6		N/A	0.00	no	N/A
SW-068-MWS	Barium, Dissolve	84.9		N/A	0.00	no	N/A
SW-068-MWS	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW-068-MWS	Benzene	1	U	69	0.00	no	C
SW-068-MWS	Benzo[a]anthracene	0.1	U	NVT	0.00	no	C
SW-068-MWS	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW-068-MWS	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-068-MWS	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-068-MWS	Beryllium	1	U	N/A	0.00	no	N/A
SW-068-MWS	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW-068-MWS	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW-068-MWS	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW-068-MWS	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW-068-MWS	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A
SW-068-MWS	Bromodichloromethane	1	U	38	0.00	no	C
SW-068-MWS	Bromoform	1	U	5100	0.00	no	C
SW-068-MWS	Bromomethane	1	UJ	73	0.00	no	NC
SW-068-MWS	Cadmium	3	U	N/A	0.00	no	N/A
SW-068-MWS	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A
SW-068-MWS	Caprolactam	2.5	U	N/A	0.00	no	N/A
SW-068-MWS	Carbon disulfide	1	U	5200	0.00	no	NC
SW-068-MWS	Carbon tetrachloride	1	U	18	0.00	no	C
SW-068-MWS	Chlorobenzene	1	U	1700	0.00	no	NC
SW-068-MWS	Chloroethane	1	U	97000	0.00	no	NC
SW-068-MWS	Chloroform	1	U	36	0.00	no	C
SW-068-MWS	Chloromethane	1	UJ	1100	0.00	no	NC
SW-068-MWS	Chromium	1.4	J	N/A	0.00	no	N/A
SW-068-MWS	Chromium VI	10	U	N/A	0.00	no	N/A
SW-068-MWS	Chromium, Dissolve	0.88	J	N/A	0.00	no	N/A
SW-068-MWS	Chrysene	0.1	U	N/A	0.00	no	N/A
SW-068-MWS	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-068-MWS	Cobalt	5	U	N/A	0.00	no	N/A
SW-068-MWS	Cobalt, Dissolve	5	U	N/A	0.00	no	N/A
SW-068-MWS	Copper	5	U	N/A	0.00	no	N/A
SW-068-MWS	Copper, Dissolve	5	U	N/A	0.00	no	N/A
SW-068-MWS	Cyanide	10	U	3.5	0.00	no	NC
SW-068-MWS	Cyclohexane	10	U	4300	0.00	no	NC
SW-068-MWS	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW-068-MWS	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW-068-MWS	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW-068-MWS	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW-068-MWS	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW-068-MWS	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW-068-MWS	Ethylbenzene	1	U	150	0.00	no	C

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-068-MWS	Fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-068-MWS	Fluorene	0.1	U	N/A	0.00	no	N/A
SW-068-MWS	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW-068-MWS	Hexachlorobutadiene	1	U	13	0.00	no	C
SW-068-MWS	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW-068-MWS	Hexachloroethane	1	U	70	0.00	no	C
SW-068-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW-068-MWS	Iron	666		N/A	0.00	no	N/A
SW-068-MWS	Iron, Dissolve	630		N/A	0.00	no	N/A
SW-068-MWS	Isophorone	1	U	N/A	0.00	no	N/A
SW-068-MWS	Isopropylbenzene	1	U	3700	0.00	no	NC
SW-068-MWS	Lead	5	U	N/A	0.00	no	N/A
SW-068-MWS	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW-068-MWS	Manganese	925		N/A	0.00	no	N/A
SW-068-MWS	Manganese, Dissolve	934		N/A	0.00	no	N/A
SW-068-MWS	Mercury	0.2	U	3.7	0.00	no	NC
SW-068-MWS	Mercury, Dissolve	0.2	UJ	3.7	0.00	no	NC
SW-068-MWS	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW-068-MWS	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW-068-MWS	Methylene Chloride	1	U	20000	0.00	no	NC
SW-068-MWS	Naphthalene	0.1	U	200	0.00	no	C
SW-068-MWS	Nickel	1.3	B	N/A	0.00	no	N/A
SW-068-MWS	Nickel, Dissolve	1.4	B	N/A	0.00	no	N/A
SW-068-MWS	Nitrobenzene	1	U	3100	0.00	no	C
SW-068-MWS	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW-068-MWS	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW-068-MWS	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
SW-068-MWS	Phenol	1	U	N/A	0.00	no	N/A
SW-068-MWS	Pyrene	0.1	U	N/A	0.00	no	N/A
SW-068-MWS	Selenium	8	U	N/A	0.00	no	N/A
SW-068-MWS	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW-068-MWS	Silver	6	U	N/A	0.00	no	N/A
SW-068-MWS	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW-068-MWS	Styrene	1	U	39000	0.00	no	NC
SW-068-MWS	Tetrachloroethene	1	U	240	0.00	no	NC
SW-068-MWS	Thallium	4	B	N/A	0.00	no	N/A
SW-068-MWS	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW-068-MWS	Toluene	1	U	81000	0.00	no	NC
SW-068-MWS	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-068-MWS	Trichloroethene	1	U	22	0.00	no	NC
SW-068-MWS	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW-068-MWS	Vanadium	5	U	N/A	0.00	no	N/A
SW-068-MWS	Vanadium, Dissolve	5	U	N/A	0.00	no	N/A
SW-068-MWS	Vinyl chloride	1	U	25	0.00	no	C
SW-068-MWS	Xylenes	3	U	1600	0.00	no	NC
SW-068-MWS	Zinc	1.8	B	N/A	0.00	no	N/A
SW-068-MWS	Zinc, Dissolve	10	U	N/A	0.00	no	N/A
SW-069-MWS	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW-069-MWS	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW-069-MWS	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW-069-MWS	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW-069-MWS	1,1-Biphenyl	1	U	140	0.00	no	NC
SW-069-MWS	1,1-Dichloroethane	0.98	J	330	0.00	no	C
SW-069-MWS	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW-069-MWS	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW-069-MWS	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW-069-MWS	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW-069-MWS	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW-069-MWS	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW-069-MWS	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW-069-MWS	1,2-Dichloroethane	1	U	98	0.00	no	C
SW-069-MWS	1,2-Dichloropropane	1	U	110	0.00	no	C
SW-069-MWS	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW-069-MWS	1,4-Dioxane	0.79		130000	0.00	no	C

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-069-MWS	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW-069-MWS	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
SW-069-MWS	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW-069-MWS	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW-069-MWS	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW-069-MWS	2,4-Dinitrophenol	2.5	U	N/A	0.00	no	N/A
SW-069-MWS	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-069-MWS	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-069-MWS	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW-069-MWS	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW-069-MWS	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW-069-MWS	2-Hexanone	10	U	34000	0.00	no	NC
SW-069-MWS	2-Methylnaphthalene	0.1	U	N/A	0.00	no	N/A
SW-069-MWS	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW-069-MWS	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-069-MWS	3,3'-Dichlorobenzidine	1	U	N/A	0.00	no	N/A
SW-069-MWS	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW-069-MWS	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW-069-MWS	4-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-069-MWS	Acenaphthene	0.1	U	N/A	0.00	no	N/A
SW-069-MWS	Acetone	10	U	95000000	0.00	no	NC
SW-069-MWS	Acetophenone	1	U	N/A	0.00	no	N/A
SW-069-MWS	Aluminum	254		N/A	0.00	no	N/A
SW-069-MWS	Aluminum, Dissolve	204		N/A	0.00	no	N/A
SW-069-MWS	Anthracene	0.026	J	N/A	0.00	no	N/A
SW-069-MWS	Antimony	6	U	N/A	0.00	no	N/A
SW-069-MWS	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW-069-MWS	Arsenic	2.8	B	N/A	0.00	no	N/A
SW-069-MWS	Arsenic, Dissolve	5	B	N/A	0.00	no	N/A
SW-069-MWS	Barium	28.8		N/A	0.00	no	N/A
SW-069-MWS	Barium, Dissolve	28.3		N/A	0.00	no	N/A
SW-069-MWS	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW-069-MWS	Benzene	1	U	69	0.00	no	C
SW-069-MWS	Benzo[a]anthracene	0.023	J	NVT	0.00	no	C
SW-069-MWS	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW-069-MWS	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-069-MWS	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-069-MWS	Beryllium	1	U	N/A	0.00	no	N/A
SW-069-MWS	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW-069-MWS	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW-069-MWS	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW-069-MWS	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW-069-MWS	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A
SW-069-MWS	Bromodichloromethane	1	U	38	0.00	no	C
SW-069-MWS	Bromoform	1	U	5100	0.00	no	C
SW-069-MWS	Bromomethane	1	UJ	73	0.00	no	NC
SW-069-MWS	Cadmium	3	U	N/A	0.00	no	N/A
SW-069-MWS	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A
SW-069-MWS	Caprolactam	2.5	U	N/A	0.00	no	N/A
SW-069-MWS	Carbon disulfide	1	U	5200	0.00	no	NC
SW-069-MWS	Carbon tetrachloride	1	U	18	0.00	no	C
SW-069-MWS	Chlorobenzene	1	U	1700	0.00	no	NC
SW-069-MWS	Chloroethane	1	U	97000	0.00	no	NC
SW-069-MWS	Chloroform	1	U	36	0.00	no	C
SW-069-MWS	Chloromethane	1	UJ	1100	0.00	no	NC
SW-069-MWS	Chromium	1.4	J	N/A	0.00	no	N/A
SW-069-MWS	Chromium VI	10	U	N/A	0.00	no	N/A
SW-069-MWS	Chromium, Dissolve	2	J	N/A	0.00	no	N/A
SW-069-MWS	Chrysene	0.013	J	N/A	0.00	no	N/A
SW-069-MWS	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-069-MWS	Cobalt	5	U	N/A	0.00	no	N/A
SW-069-MWS	Cobalt, Dissolve	5	U	N/A	0.00	no	N/A
SW-069-MWS	Copper	5	U	N/A	0.00	no	N/A
SW-069-MWS	Copper, Dissolve	5	U	N/A	0.00	no	N/A

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-069-MWS	Cyanide	8.2	J	3.5	2.34	YES	NC
SW-069-MWS	Cyclohexane	10	U	4300	0.00	no	NC
SW-069-MWS	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW-069-MWS	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW-069-MWS	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW-069-MWS	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW-069-MWS	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW-069-MWS	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW-069-MWS	Ethylbenzene	1	U	150	0.00	no	C
SW-069-MWS	Fluoranthene	0.019	J	N/A	0.00	no	N/A
SW-069-MWS	Fluorene	0.1	U	N/A	0.00	no	N/A
SW-069-MWS	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW-069-MWS	Hexachlorobutadiene	1	U	13	0.00	no	C
SW-069-MWS	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW-069-MWS	Hexachloroethane	1	U	70	0.00	no	C
SW-069-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW-069-MWS	Iron	109		N/A	0.00	no	N/A
SW-069-MWS	Iron, Dissolve	28.2	J	N/A	0.00	no	N/A
SW-069-MWS	Isophorone	1	U	N/A	0.00	no	N/A
SW-069-MWS	Isopropylbenzene	1	U	3700	0.00	no	NC
SW-069-MWS	Lead	5	U	N/A	0.00	no	N/A
SW-069-MWS	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW-069-MWS	Manganese	26.6		N/A	0.00	no	N/A
SW-069-MWS	Manganese, Dissolve	19.8		N/A	0.00	no	N/A
SW-069-MWS	Mercury	0.2	U	3.7	0.00	no	NC
SW-069-MWS	Mercury, Dissolve	0.2	UJ	3.7	0.00	no	NC
SW-069-MWS	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW-069-MWS	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW-069-MWS	Methylene Chloride	1	U	20000	0.00	no	NC
SW-069-MWS	Naphthalene	0.1	U	200	0.00	no	C
SW-069-MWS	Nickel	1.6	B	N/A	0.00	no	N/A
SW-069-MWS	Nickel, Dissolve	2.4	B	N/A	0.00	no	N/A
SW-069-MWS	Nitrobenzene	1	U	3100	0.00	no	C
SW-069-MWS	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW-069-MWS	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW-069-MWS	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
SW-069-MWS	Phenol	1	U	N/A	0.00	no	N/A
SW-069-MWS	Pyrene	0.017	J	N/A	0.00	no	N/A
SW-069-MWS	Selenium	5.8	B	N/A	0.00	no	N/A
SW-069-MWS	Selenium, Dissolve	5.6	B	N/A	0.00	no	N/A
SW-069-MWS	Silver	6	U	N/A	0.00	no	N/A
SW-069-MWS	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW-069-MWS	Styrene	1	U	39000	0.00	no	NC
SW-069-MWS	Tetrachloroethene	1	U	240	0.00	no	NC
SW-069-MWS	Thallium	10	U	N/A	0.00	no	N/A
SW-069-MWS	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW-069-MWS	Toluene	1	U	81000	0.00	no	NC
SW-069-MWS	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-069-MWS	Trichloroethene	1	U	22	0.00	no	NC
SW-069-MWS	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW-069-MWS	Vanadium	53.5		N/A	0.00	no	N/A
SW-069-MWS	Vanadium, Dissolve	49.9		N/A	0.00	no	N/A
SW-069-MWS	Vinyl chloride	1	U	25	0.00	no	C
SW-069-MWS	Xylenes	3	U	1600	0.00	no	NC
SW-069-MWS	Zinc	1.1	B	N/A	0.00	no	N/A
SW-069-MWS	Zinc, Dissolve	2.5	B	N/A	0.00	no	N/A
SW06-PZM001	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW06-PZM001	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW06-PZM001	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW06-PZM001	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW06-PZM001	1,1-Biphenyl	1	U	140	0.00	no	NC
SW06-PZM001	1,1-Dichloroethane	1	U	330	0.00	no	C
SW06-PZM001	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW06-PZM001	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW06-PZM001	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW06-PZM001	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW06-PZM001	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW06-PZM001	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW06-PZM001	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW06-PZM001	1,2-Dichloroethane	1	U	98	0.00	no	C
SW06-PZM001	1,2-Dichloropropane	1	U	110	0.00	no	C
SW06-PZM001	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW06-PZM001	1,4-Dioxane	0.1	U	130000	0.00	no	C
SW06-PZM001	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW06-PZM001	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
SW06-PZM001	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW06-PZM001	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW06-PZM001	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW06-PZM001	2,4-Dinitrophenol	2.5	U	N/A	0.00	no	N/A
SW06-PZM001	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW06-PZM001	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW06-PZM001	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW06-PZM001	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW06-PZM001	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW06-PZM001	2-Hexanone	10	U	34000	0.00	no	NC
SW06-PZM001	2-Methylnaphthalene	0.1	U	N/A	0.00	no	N/A
SW06-PZM001	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW06-PZM001	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW06-PZM001	3,3'-Dichlorobenzidine	1	U	N/A	0.00	no	N/A
SW06-PZM001	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW06-PZM001	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW06-PZM001	4-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW06-PZM001	Acenaphthene	0.1	U	N/A	0.00	no	N/A
SW06-PZM001	Acetone	10	R	95000000	0.00	no	NC
SW06-PZM001	Acetophenone	1	U	N/A	0.00	no	N/A
SW06-PZM001	Aluminum	128		N/A	0.00	no	N/A
SW06-PZM001	Aluminum, Dissolve	50	U	N/A	0.00	no	N/A
SW06-PZM001	Anthracene	0.1	U	N/A	0.00	no	N/A
SW06-PZM001	Antimony	6	U	N/A	0.00	no	N/A
SW06-PZM001	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW06-PZM001	Arsenic	5	U	N/A	0.00	no	N/A
SW06-PZM001	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SW06-PZM001	Barium	28.3		N/A	0.00	no	N/A
SW06-PZM001	Barium, Dissolve	27.8		N/A	0.00	no	N/A
SW06-PZM001	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW06-PZM001	Benzene	1	U	69	0.00	no	C
SW06-PZM001	Benzo[a]anthracene	0.1	U	NVT	0.00	no	C
SW06-PZM001	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW06-PZM001	Benzo[b]fluoranthene	0.019	B	N/A	0.00	no	N/A
SW06-PZM001	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW06-PZM001	Beryllium	1	U	N/A	0.00	no	N/A
SW06-PZM001	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW06-PZM001	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW06-PZM001	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW06-PZM001	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW06-PZM001	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A
SW06-PZM001	Bromodichloromethane	1	U	38	0.00	no	C
SW06-PZM001	Bromoform	1	U	5100	0.00	no	C
SW06-PZM001	Bromomethane	1	U	73	0.00	no	NC
SW06-PZM001	Cadmium	3	U	N/A	0.00	no	N/A
SW06-PZM001	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A
SW06-PZM001	Caprolactam	2.5	U	N/A	0.00	no	N/A
SW06-PZM001	Carbon disulfide	1	U	5200	0.00	no	NC
SW06-PZM001	Carbon tetrachloride	1	U	18	0.00	no	C
SW06-PZM001	Chlorobenzene	1	U	1700	0.00	no	NC
SW06-PZM001	Chloroethane	1	U	97000	0.00	no	NC
SW06-PZM001	Chloroform	1	U	36	0.00	no	C
SW06-PZM001	Chloromethane	1	U	1100	0.00	no	NC

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW06-PZM001	Chromium	0.91	B	N/A	0.00	no	N/A
SW06-PZM001	Chromium VI	10	U	N/A	0.00	no	N/A
SW06-PZM001	Chromium, Dissolve	0.96	J	N/A	0.00	no	N/A
SW06-PZM001	Chrysene	0.1	U	N/A	0.00	no	N/A
SW06-PZM001	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW06-PZM001	Cobalt	1.6	B	N/A	0.00	no	N/A
SW06-PZM001	Cobalt, Dissolve	1.4	B	N/A	0.00	no	N/A
SW06-PZM001	Copper	5	U	N/A	0.00	no	N/A
SW06-PZM001	Copper, Dissolve	5	U	N/A	0.00	no	N/A
SW06-PZM001	Cyanide	10	U	3.5	0.00	no	NC
SW06-PZM001	Cyclohexane	10	U	4300	0.00	no	NC
SW06-PZM001	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW06-PZM001	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW06-PZM001	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW06-PZM001	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW06-PZM001	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW06-PZM001	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW06-PZM001	Ethylbenzene	1	U	150	0.00	no	C
SW06-PZM001	Fluoranthene	0.1	U	N/A	0.00	no	N/A
SW06-PZM001	Fluorene	0.1	U	N/A	0.00	no	N/A
SW06-PZM001	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW06-PZM001	Hexachlorobutadiene	1	UJ	13	0.00	no	C
SW06-PZM001	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW06-PZM001	Hexachloroethane	1	U	70	0.00	no	C
SW06-PZM001	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW06-PZM001	Iron	447		N/A	0.00	no	N/A
SW06-PZM001	Iron, Dissolve	70	U	N/A	0.00	no	N/A
SW06-PZM001	Isophorone	1	U	N/A	0.00	no	N/A
SW06-PZM001	Isopropylbenzene	1	U	3700	0.00	no	NC
SW06-PZM001	Lead	5	U	N/A	0.00	no	N/A
SW06-PZM001	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW06-PZM001	Manganese	228		N/A	0.00	no	N/A
SW06-PZM001	Manganese, Dissolve	203		N/A	0.00	no	N/A
SW06-PZM001	Mercury	0.2	U	3.7	0.00	no	NC
SW06-PZM001	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW06-PZM001	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW06-PZM001	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW06-PZM001	Methylene Chloride	1	U	20000	0.00	no	NC
SW06-PZM001	Naphthalene	0.053	B	200	0.00	no	C
SW06-PZM001	Nickel	7	B	N/A	0.00	no	N/A
SW06-PZM001	Nickel, Dissolve	7.1	B	N/A	0.00	no	N/A
SW06-PZM001	Nitrobenzene	1	U	3100	0.00	no	C
SW06-PZM001	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW06-PZM001	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW06-PZM001	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
SW06-PZM001	Phenol	1	U	N/A	0.00	no	N/A
SW06-PZM001	Pyrene	0.1	U	N/A	0.00	no	N/A
SW06-PZM001	Selenium	8	U	N/A	0.00	no	N/A
SW06-PZM001	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW06-PZM001	Silver	6	U	N/A	0.00	no	N/A
SW06-PZM001	Silver, Dissolve	6	UJ	N/A	0.00	no	N/A
SW06-PZM001	Styrene	1	U	39000	0.00	no	NC
SW06-PZM001	Tetrachloroethene	1	U	240	0.00	no	NC
SW06-PZM001	Thallium	7.3	B	N/A	0.00	no	N/A
SW06-PZM001	Thallium, Dissolve	5.3	B	N/A	0.00	no	N/A
SW06-PZM001	Toluene	1	U	81000	0.00	no	NC
SW06-PZM001	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW06-PZM001	Trichloroethene	1	U	22	0.00	no	NC
SW06-PZM001	Trichlorofluoromethane	1	UJ	N/A	0.00	no	N/A
SW06-PZM001	Vanadium	1.1	B	N/A	0.00	no	N/A
SW06-PZM001	Vanadium, Dissolve	5	U	N/A	0.00	no	N/A
SW06-PZM001	Vinyl chloride	1	U	25	0.00	no	C
SW06-PZM001	Xylenes	3	U	1600	0.00	no	NC
SW06-PZM001	Zinc	4.6	B	N/A	0.00	no	N/A

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW06-PZM001	Zinc, Dissolve	4.4	J	N/A	0.00	no	N/A
SW06-PZM053	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW06-PZM053	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW06-PZM053	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW06-PZM053	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW06-PZM053	1,1-Biphenyl	1	U	140	0.00	no	NC
SW06-PZM053	1,1-Dichloroethane	1	U	330	0.00	no	C
SW06-PZM053	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW06-PZM053	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW06-PZM053	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW06-PZM053	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW06-PZM053	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW06-PZM053	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW06-PZM053	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW06-PZM053	1,2-Dichloroethane	1	U	98	0.00	no	C
SW06-PZM053	1,2-Dichloropropane	1	U	110	0.00	no	C
SW06-PZM053	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW06-PZM053	1,4-Dioxane	0.1	U	130000	0.00	no	C
SW06-PZM053	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW06-PZM053	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
SW06-PZM053	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW06-PZM053	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW06-PZM053	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW06-PZM053	2,4-Dinitrophenol	2.5	U	N/A	0.00	no	N/A
SW06-PZM053	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW06-PZM053	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW06-PZM053	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW06-PZM053	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW06-PZM053	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW06-PZM053	2-Hexanone	10	U	34000	0.00	no	NC
SW06-PZM053	2-Methylnaphthalene	0.1	U	N/A	0.00	no	N/A
SW06-PZM053	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW06-PZM053	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW06-PZM053	3,3'-Dichlorobenzidine	1	U	N/A	0.00	no	N/A
SW06-PZM053	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW06-PZM053	4-Methyl-2-pentanone (MIBK)	1.9	J	2300000	0.00	no	NC
SW06-PZM053	4-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW06-PZM053	Acenaphthene	0.1	U	N/A	0.00	no	N/A
SW06-PZM053	Acetone	10	R	95000000	0.00	no	NC
SW06-PZM053	Acetophenone	1	U	N/A	0.00	no	N/A
SW06-PZM053	Aluminum	123		N/A	0.00	no	N/A
SW06-PZM053	Aluminum, Dissolve	50	U	N/A	0.00	no	N/A
SW06-PZM053	Anthracene	0.1	U	N/A	0.00	no	N/A
SW06-PZM053	Antimony	6	U	N/A	0.00	no	N/A
SW06-PZM053	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW06-PZM053	Arsenic	5	U	N/A	0.00	no	N/A
SW06-PZM053	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SW06-PZM053	Barium	65.3		N/A	0.00	no	N/A
SW06-PZM053	Barium, Dissolve	65.6		N/A	0.00	no	N/A
SW06-PZM053	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW06-PZM053	Benzene	1	U	69	0.00	no	C
SW06-PZM053	Benzo[a]anthracene	0.033	J	NVT	0.00	no	C
SW06-PZM053	Benzo[a]pyrene	0.035	J	N/A	0.00	no	N/A
SW06-PZM053	Benzo[b]fluoranthene	0.15		N/A	0.00	no	N/A
SW06-PZM053	Benzo[k]fluoranthene	0.1		N/A	0.00	no	N/A
SW06-PZM053	Beryllium	1	U	N/A	0.00	no	N/A
SW06-PZM053	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW06-PZM053	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW06-PZM053	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW06-PZM053	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW06-PZM053	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A
SW06-PZM053	Bromodichloromethane	1	U	38	0.00	no	C
SW06-PZM053	Bromoform	1	U	5100	0.00	no	C
SW06-PZM053	Bromomethane	1	U	73	0.00	no	NC

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW06-PZM053	Cadmium	3	U	N/A	0.00	no	N/A
SW06-PZM053	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A
SW06-PZM053	Caprolactam	2.5	U	N/A	0.00	no	N/A
SW06-PZM053	Carbon disulfide	1	U	5200	0.00	no	NC
SW06-PZM053	Carbon tetrachloride	1	U	18	0.00	no	C
SW06-PZM053	Chlorobenzene	1	U	1700	0.00	no	NC
SW06-PZM053	Chloroethane	1	U	97000	0.00	no	NC
SW06-PZM053	Chloroform	5.9		36	0.16	no	C
SW06-PZM053	Chloromethane	1	U	1100	0.00	no	NC
SW06-PZM053	Chromium	5	U	N/A	0.00	no	N/A
SW06-PZM053	Chromium VI	10	U	N/A	0.00	no	N/A
SW06-PZM053	Chromium, Dissolve	5	U	N/A	0.00	no	N/A
SW06-PZM053	Chrysene	0.031	B	N/A	0.00	no	N/A
SW06-PZM053	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW06-PZM053	Cobalt	5	U	N/A	0.00	no	N/A
SW06-PZM053	Cobalt, Dissolve	5	U	N/A	0.00	no	N/A
SW06-PZM053	Copper	5	U	N/A	0.00	no	N/A
SW06-PZM053	Copper, Dissolve	5	U	N/A	0.00	no	N/A
SW06-PZM053	Cyanide	10	U	3.5	0.00	no	NC
SW06-PZM053	Cyclohexane	10	U	4300	0.00	no	NC
SW06-PZM053	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW06-PZM053	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW06-PZM053	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW06-PZM053	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW06-PZM053	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW06-PZM053	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW06-PZM053	Ethylbenzene	1	U	150	0.00	no	C
SW06-PZM053	Fluoranthene	0.015	J	N/A	0.00	no	N/A
SW06-PZM053	Fluorene	0.1	U	N/A	0.00	no	N/A
SW06-PZM053	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW06-PZM053	Hexachlorobutadiene	1	U	13	0.00	no	C
SW06-PZM053	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW06-PZM053	Hexachloroethane	1	U	70	0.00	no	C
SW06-PZM053	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW06-PZM053	Iron	5390		N/A	0.00	no	N/A
SW06-PZM053	Iron, Dissolve	5440		N/A	0.00	no	N/A
SW06-PZM053	Isophorone	1	U	N/A	0.00	no	N/A
SW06-PZM053	Isopropylbenzene	1	U	3700	0.00	no	NC
SW06-PZM053	Lead	5	U	N/A	0.00	no	N/A
SW06-PZM053	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW06-PZM053	Manganese	671		N/A	0.00	no	N/A
SW06-PZM053	Manganese, Dissolve	689		N/A	0.00	no	N/A
SW06-PZM053	Mercury	0.2	U	3.7	0.00	no	NC
SW06-PZM053	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW06-PZM053	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW06-PZM053	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW06-PZM053	Methylene Chloride	1.4		20000	0.00	no	NC
SW06-PZM053	Naphthalene	0.024	B	200	0.00	no	C
SW06-PZM053	Nickel	1	B	N/A	0.00	no	N/A
SW06-PZM053	Nickel, Dissolve	10	U	N/A	0.00	no	N/A
SW06-PZM053	Nitrobenzene	1	U	3100	0.00	no	C
SW06-PZM053	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW06-PZM053	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW06-PZM053	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
SW06-PZM053	Phenol	1	U	N/A	0.00	no	N/A
SW06-PZM053	Pyrene	0.013	J	N/A	0.00	no	N/A
SW06-PZM053	Selenium	8	U	N/A	0.00	no	N/A
SW06-PZM053	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW06-PZM053	Silver	6	U	N/A	0.00	no	N/A
SW06-PZM053	Silver, Dissolve	6	UJ	N/A	0.00	no	N/A
SW06-PZM053	Styrene	1	U	39000	0.00	no	NC
SW06-PZM053	Tetrachloroethene	1	U	240	0.00	no	NC
SW06-PZM053	Thallium	10	U	N/A	0.00	no	N/A
SW06-PZM053	Thallium, Dissolve	10	U	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW06-PZM053	Toluene	1	U	81000	0.00	no	NC
SW06-PZM053	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW06-PZM053	Trichloroethene	1	U	22	0.00	no	NC
SW06-PZM053	Trichlorofluoromethane	1	UJ	N/A	0.00	no	N/A
SW06-PZM053	Vanadium	5	U	N/A	0.00	no	N/A
SW06-PZM053	Vanadium, Dissolve	5	U	N/A	0.00	no	N/A
SW06-PZM053	Vinyl chloride	1	U	25	0.00	no	C
SW06-PZM053	Xylenes	3	U	1600	0.00	no	NC
SW06-PZM053	Zinc	2.6	B	N/A	0.00	no	N/A
SW06-PZM053	Zinc, Dissolve	0.65	J	N/A	0.00	no	N/A
SW-070-MWS	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW-070-MWS	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW-070-MWS	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW-070-MWS	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW-070-MWS	1,1-Biphenyl	1	U	140	0.00	no	NC
SW-070-MWS	1,1-Dichloroethane	1	U	330	0.00	no	C
SW-070-MWS	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW-070-MWS	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW-070-MWS	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW-070-MWS	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW-070-MWS	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW-070-MWS	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW-070-MWS	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW-070-MWS	1,2-Dichloroethane	1	U	98	0.00	no	C
SW-070-MWS	1,2-Dichloropropane	1	U	110	0.00	no	C
SW-070-MWS	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW-070-MWS	1,4-Dioxane	0.052	J	130000	0.00	no	C
SW-070-MWS	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW-070-MWS	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
SW-070-MWS	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW-070-MWS	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW-070-MWS	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW-070-MWS	2,4-Dinitrophenol	2.5	U	N/A	0.00	no	N/A
SW-070-MWS	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-070-MWS	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-070-MWS	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW-070-MWS	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW-070-MWS	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW-070-MWS	2-Hexanone	10	U	34000	0.00	no	NC
SW-070-MWS	2-Methylnaphthalene	0.1	U	N/A	0.00	no	N/A
SW-070-MWS	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW-070-MWS	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-070-MWS	3,3'-Dichlorobenzidine	1	UJ	N/A	0.00	no	N/A
SW-070-MWS	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW-070-MWS	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW-070-MWS	4-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-070-MWS	Acenaphthene	0.1	U	N/A	0.00	no	N/A
SW-070-MWS	Acetone	10	R	95000000	0.00	no	NC
SW-070-MWS	Acetophenone	1	U	N/A	0.00	no	N/A
SW-070-MWS	Aluminum	64.5		N/A	0.00	no	N/A
SW-070-MWS	Aluminum, Dissolve	21.1	J	N/A	0.00	no	N/A
SW-070-MWS	Anthracene	0.1	U	N/A	0.00	no	N/A
SW-070-MWS	Antimony	6	U	N/A	0.00	no	N/A
SW-070-MWS	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW-070-MWS	Arsenic	5	U	N/A	0.00	no	N/A
SW-070-MWS	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SW-070-MWS	Barium	78.4		N/A	0.00	no	N/A
SW-070-MWS	Barium, Dissolve	77.7		N/A	0.00	no	N/A
SW-070-MWS	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW-070-MWS	Benzene	1	U	69	0.00	no	C
SW-070-MWS	Benzo[a]anthracene	0.1	U	NVT	0.00	no	C
SW-070-MWS	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW-070-MWS	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-070-MWS	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-070-MWS	Beryllium	1	U	N/A	0.00	no	N/A
SW-070-MWS	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW-070-MWS	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW-070-MWS	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW-070-MWS	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW-070-MWS	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A
SW-070-MWS	Bromodichloromethane	1	U	38	0.00	no	C
SW-070-MWS	Bromoform	1	U	5100	0.00	no	C
SW-070-MWS	Bromomethane	1	U	73	0.00	no	NC
SW-070-MWS	Cadmium	3	U	N/A	0.00	no	N/A
SW-070-MWS	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A
SW-070-MWS	Caprolactam	2.5	U	N/A	0.00	no	N/A
SW-070-MWS	Carbon disulfide	1	U	5200	0.00	no	NC
SW-070-MWS	Carbon tetrachloride	1	U	18	0.00	no	C
SW-070-MWS	Chlorobenzene	1	U	1700	0.00	no	NC
SW-070-MWS	Chloroethane	1	U	97000	0.00	no	NC
SW-070-MWS	Chloroform	1	U	36	0.00	no	C
SW-070-MWS	Chloromethane	1	U	1100	0.00	no	NC
SW-070-MWS	Chromium	2.3	B	N/A	0.00	no	N/A
SW-070-MWS	Chromium VI	10	U	N/A	0.00	no	N/A
SW-070-MWS	Chromium, Dissolve	2.5	B	N/A	0.00	no	N/A
SW-070-MWS	Chrysene	0.1	U	N/A	0.00	no	N/A
SW-070-MWS	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-070-MWS	Cobalt	5	U	N/A	0.00	no	N/A
SW-070-MWS	Cobalt, Dissolve	5	U	N/A	0.00	no	N/A
SW-070-MWS	Copper	5	U	N/A	0.00	no	N/A
SW-070-MWS	Copper, Dissolve	5	U	N/A	0.00	no	N/A
SW-070-MWS	Cyanide	10	U	3.5	0.00	no	NC
SW-070-MWS	Cyclohexane	10	U	4300	0.00	no	NC
SW-070-MWS	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW-070-MWS	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW-070-MWS	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW-070-MWS	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW-070-MWS	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW-070-MWS	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW-070-MWS	Ethylbenzene	1	U	150	0.00	no	C
SW-070-MWS	Fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-070-MWS	Fluorene	0.1	U	N/A	0.00	no	N/A
SW-070-MWS	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW-070-MWS	Hexachlorobutadiene	1	U	13	0.00	no	C
SW-070-MWS	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW-070-MWS	Hexachloroethane	1	U	70	0.00	no	C
SW-070-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW-070-MWS	Iron	535		N/A	0.00	no	N/A
SW-070-MWS	Iron, Dissolve	217		N/A	0.00	no	N/A
SW-070-MWS	Isophorone	1	U	N/A	0.00	no	N/A
SW-070-MWS	Isopropylbenzene	1	U	3700	0.00	no	NC
SW-070-MWS	Lead	5	U	N/A	0.00	no	N/A
SW-070-MWS	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW-070-MWS	Manganese	350		N/A	0.00	no	N/A
SW-070-MWS	Manganese, Dissolve	321		N/A	0.00	no	N/A
SW-070-MWS	Mercury	0.2	U	3.7	0.00	no	NC
SW-070-MWS	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW-070-MWS	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW-070-MWS	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW-070-MWS	Methylene Chloride	1	U	20000	0.00	no	NC
SW-070-MWS	Naphthalene	0.1	U	200	0.00	no	C
SW-070-MWS	Nickel	0.98	B	N/A	0.00	no	N/A
SW-070-MWS	Nickel, Dissolve	0.93	B	N/A	0.00	no	N/A
SW-070-MWS	Nitrobenzene	1	U	3100	0.00	no	C
SW-070-MWS	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW-070-MWS	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW-070-MWS	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
SW-070-MWS	Phenol	1	U	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-070-MWS	Pyrene	0.1	U	N/A	0.00	no	N/A
SW-070-MWS	Selenium	8	U	N/A	0.00	no	N/A
SW-070-MWS	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW-070-MWS	Silver	6	U	N/A	0.00	no	N/A
SW-070-MWS	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW-070-MWS	Styrene	1	U	39000	0.00	no	NC
SW-070-MWS	Tetrachloroethene	1	U	240	0.00	no	NC
SW-070-MWS	Thallium	10	U	N/A	0.00	no	N/A
SW-070-MWS	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW-070-MWS	Toluene	1	U	81000	0.00	no	NC
SW-070-MWS	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-070-MWS	Trichloroethene	1	U	22	0.00	no	NC
SW-070-MWS	Trichlorofluoromethane	1	UJ	N/A	0.00	no	N/A
SW-070-MWS	Vanadium	0.77	J	N/A	0.00	no	N/A
SW-070-MWS	Vanadium, Dissolve	5	U	N/A	0.00	no	N/A
SW-070-MWS	Vinyl chloride	1	U	25	0.00	no	C
SW-070-MWS	Xylenes	3	U	1600	0.00	no	NC
SW-070-MWS	Zinc	2.1	B	N/A	0.00	no	N/A
SW-070-MWS	Zinc, Dissolve	1.4	B	N/A	0.00	no	N/A
SW-071-MWS	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW-071-MWS	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW-071-MWS	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW-071-MWS	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW-071-MWS	1,1-Biphenyl	1	U	140	0.00	no	NC
SW-071-MWS	1,1-Dichloroethane	1	U	330	0.00	no	C
SW-071-MWS	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW-071-MWS	1,2,3-Trichlorobenzene	2	UJ	N/A	0.00	no	N/A
SW-071-MWS	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW-071-MWS	1,2,4-Trichlorobenzene	1	UJ	150	0.00	no	NC
SW-071-MWS	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW-071-MWS	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW-071-MWS	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW-071-MWS	1,2-Dichloroethane	1	U	98	0.00	no	C
SW-071-MWS	1,2-Dichloropropane	1	U	110	0.00	no	C
SW-071-MWS	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW-071-MWS	1,4-Dioxane	0.1	U	130000	0.00	no	C
SW-071-MWS	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW-071-MWS	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
SW-071-MWS	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW-071-MWS	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW-071-MWS	2,4-Dimethylphenol	1.4		N/A	0.00	no	N/A
SW-071-MWS	2,4-Dinitrophenol	2.5	UJ	N/A	0.00	no	N/A
SW-071-MWS	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-071-MWS	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-071-MWS	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW-071-MWS	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW-071-MWS	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW-071-MWS	2-Hexanone	10	U	34000	0.00	no	NC
SW-071-MWS	2-Methylnaphthalene	0.24		N/A	0.00	no	N/A
SW-071-MWS	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW-071-MWS	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-071-MWS	3,3'-Dichlorobenzidine	1	R	N/A	0.00	no	N/A
SW-071-MWS	4-Chloroaniline	1	R	N/A	0.00	no	N/A
SW-071-MWS	4-Methyl-2-pentanone (MIBK)	4.4	J	2300000	0.00	no	NC
SW-071-MWS	4-Nitroaniline	2.5	UJ	N/A	0.00	no	N/A
SW-071-MWS	Acenaphthene	0.29		N/A	0.00	no	N/A
SW-071-MWS	Acetone	7.2	J	95000000	0.00	no	NC
SW-071-MWS	Acetophenone	1	U	N/A	0.00	no	N/A
SW-071-MWS	Aluminum	73.5		N/A	0.00	no	N/A
SW-071-MWS	Aluminum, Dissolve	45	J	N/A	0.00	no	N/A
SW-071-MWS	Anthracene	0.2		N/A	0.00	no	N/A
SW-071-MWS	Antimony	6	U	N/A	0.00	no	N/A
SW-071-MWS	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW-071-MWS	Arsenic	5	U	N/A	0.00	no	N/A

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-071-MWS	Arsenic, Dissolve	4.7	B	N/A	0.00	no	N/A
SW-071-MWS	Barium	49.2		N/A	0.00	no	N/A
SW-071-MWS	Barium, Dissolve	43.7		N/A	0.00	no	N/A
SW-071-MWS	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW-071-MWS	Benzene	1	U	69	0.00	no	C
SW-071-MWS	Benzo[a]anthracene	0.1	U	NVT	0.00	no	C
SW-071-MWS	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW-071-MWS	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-071-MWS	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-071-MWS	Beryllium	1	U	N/A	0.00	no	N/A
SW-071-MWS	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW-071-MWS	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW-071-MWS	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW-071-MWS	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW-071-MWS	bis(2-Ethylhexyl)phthalate	0.32	B	N/A	0.00	no	N/A
SW-071-MWS	Bromodichloromethane	1	U	38	0.00	no	C
SW-071-MWS	Bromoform	1	U	5100	0.00	no	C
SW-071-MWS	Bromomethane	1	U	73	0.00	no	NC
SW-071-MWS	Cadmium	3	U	N/A	0.00	no	N/A
SW-071-MWS	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A
SW-071-MWS	Caprolactam	2.5	U	N/A	0.00	no	N/A
SW-071-MWS	Carbon disulfide	1	U	5200	0.00	no	NC
SW-071-MWS	Carbon tetrachloride	1	U	18	0.00	no	C
SW-071-MWS	Chlorobenzene	1	U	1700	0.00	no	NC
SW-071-MWS	Chloroethane	1	U	97000	0.00	no	NC
SW-071-MWS	Chloroform	1	U	36	0.00	no	C
SW-071-MWS	Chloromethane	1	U	1100	0.00	no	NC
SW-071-MWS	Chromium	1.1	B	N/A	0.00	no	N/A
SW-071-MWS	Chromium VI	10	U	N/A	0.00	no	N/A
SW-071-MWS	Chromium, Dissolve	1.4	B	N/A	0.00	no	N/A
SW-071-MWS	Chrysene	0.1	U	N/A	0.00	no	N/A
SW-071-MWS	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-071-MWS	Cobalt	5	U	N/A	0.00	no	N/A
SW-071-MWS	Cobalt, Dissolve	5	U	N/A	0.00	no	N/A
SW-071-MWS	Copper	5	U	N/A	0.00	no	N/A
SW-071-MWS	Copper, Dissolve	5	U	N/A	0.00	no	N/A
SW-071-MWS	Cyanide	10.4		3.5	2.97	YES	NC
SW-071-MWS	Cyclohexane	10	U	4300	0.00	no	NC
SW-071-MWS	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW-071-MWS	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW-071-MWS	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW-071-MWS	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW-071-MWS	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW-071-MWS	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW-071-MWS	Ethylbenzene	1	U	150	0.00	no	C
SW-071-MWS	Fluoranthene	0.015	J	N/A	0.00	no	N/A
SW-071-MWS	Fluorene	0.11		N/A	0.00	no	N/A
SW-071-MWS	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW-071-MWS	Hexachlorobutadiene	1	U	13	0.00	no	C
SW-071-MWS	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW-071-MWS	Hexachloroethane	1	U	70	0.00	no	C
SW-071-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW-071-MWS	Iron	103		N/A	0.00	no	N/A
SW-071-MWS	Iron, Dissolve	45.6	B	N/A	0.00	no	N/A
SW-071-MWS	Isophorone	1	U	N/A	0.00	no	N/A
SW-071-MWS	Isopropylbenzene	1	U	3700	0.00	no	NC
SW-071-MWS	Lead	5	U	N/A	0.00	no	N/A
SW-071-MWS	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW-071-MWS	Manganese	193		N/A	0.00	no	N/A
SW-071-MWS	Manganese, Dissolve	186		N/A	0.00	no	N/A
SW-071-MWS	Mercury	0.2	U	3.7	0.00	no	NC
SW-071-MWS	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW-071-MWS	Methyl Acetate	5	UJ	N/A	0.00	no	N/A
SW-071-MWS	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-071-MWS	Methylene Chloride	1	U	20000	0.00	no	NC
SW-071-MWS	Naphthalene	0.16		200	0.00	no	C
SW-071-MWS	Nickel	0.73	J	N/A	0.00	no	N/A
SW-071-MWS	Nickel, Dissolve	10	U	N/A	0.00	no	N/A
SW-071-MWS	Nitrobenzene	1	U	3100	0.00	no	C
SW-071-MWS	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW-071-MWS	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW-071-MWS	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
SW-071-MWS	Phenol	5.3	J	N/A	0.00	no	N/A
SW-071-MWS	Pyrene	0.029	J	N/A	0.00	no	N/A
SW-071-MWS	Selenium	11.2		N/A	0.00	no	N/A
SW-071-MWS	Selenium, Dissolve	4.8	J	N/A	0.00	no	N/A
SW-071-MWS	Silver	6	U	N/A	0.00	no	N/A
SW-071-MWS	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW-071-MWS	Styrene	1	U	39000	0.00	no	NC
SW-071-MWS	Tetrachloroethene	1	U	240	0.00	no	NC
SW-071-MWS	Thallium	5.6	B	N/A	0.00	no	N/A
SW-071-MWS	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW-071-MWS	Toluene	1	U	81000	0.00	no	NC
SW-071-MWS	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-071-MWS	Trichloroethene	1	U	22	0.00	no	NC
SW-071-MWS	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW-071-MWS	Vanadium	3.3	B	N/A	0.00	no	N/A
SW-071-MWS	Vanadium, Dissolve	2.5	J	N/A	0.00	no	N/A
SW-071-MWS	Vinyl chloride	1	U	25	0.00	no	C
SW-071-MWS	Xylenes	3	U	1600	0.00	no	NC
SW-071-MWS	Zinc	10	U	N/A	0.00	no	N/A
SW-071-MWS	Zinc, Dissolve	10	U	N/A	0.00	no	N/A
SW-072-MWS	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW-072-MWS	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW-072-MWS	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	UJ	6100	0.00	no	NC
SW-072-MWS	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW-072-MWS	1,1-Biphenyl	1	U	140	0.00	no	NC
SW-072-MWS	1,1-Dichloroethane	1	U	330	0.00	no	C
SW-072-MWS	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW-072-MWS	1,2,3-Trichlorobenzene	2	UJ	N/A	0.00	no	N/A
SW-072-MWS	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW-072-MWS	1,2,4-Trichlorobenzene	1	UJ	150	0.00	no	NC
SW-072-MWS	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW-072-MWS	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW-072-MWS	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW-072-MWS	1,2-Dichloroethane	1	U	98	0.00	no	C
SW-072-MWS	1,2-Dichloropropane	1	U	110	0.00	no	C
SW-072-MWS	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW-072-MWS	1,4-Dioxane	0.071	J	130000	0.00	no	C
SW-072-MWS	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW-072-MWS	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
SW-072-MWS	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW-072-MWS	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW-072-MWS	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW-072-MWS	2,4-Dinitrophenol	2.5	U	N/A	0.00	no	N/A
SW-072-MWS	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-072-MWS	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-072-MWS	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW-072-MWS	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW-072-MWS	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW-072-MWS	2-Hexanone	10	U	34000	0.00	no	NC
SW-072-MWS	2-Methylnaphthalene	0.1	U	N/A	0.00	no	N/A
SW-072-MWS	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW-072-MWS	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-072-MWS	3,3'-Dichlorobenzidine	1	U	N/A	0.00	no	N/A
SW-072-MWS	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW-072-MWS	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW-072-MWS	4-Nitroaniline	2.5	U	N/A	0.00	no	N/A

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-072-MWS	Acenaphthene	0.1	U	N/A	0.00	no	N/A
SW-072-MWS	Acetone	10	UJ	95000000	0.00	no	NC
SW-072-MWS	Acetophenone	1	U	N/A	0.00	no	N/A
SW-072-MWS	Aluminum	7650		N/A	0.00	no	N/A
SW-072-MWS	Aluminum, Dissolve	7800		N/A	0.00	no	N/A
SW-072-MWS	Anthracene	0.1	U	N/A	0.00	no	N/A
SW-072-MWS	Antimony	6	U	N/A	0.00	no	N/A
SW-072-MWS	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW-072-MWS	Arsenic	5	U	N/A	0.00	no	N/A
SW-072-MWS	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SW-072-MWS	Barium	16.9		N/A	0.00	no	N/A
SW-072-MWS	Barium, Dissolve	16.5		N/A	0.00	no	N/A
SW-072-MWS	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW-072-MWS	Benzene	1	U	69	0.00	no	C
SW-072-MWS	Benzo[a]anthracene	0.1	U	NVT	0.00	no	C
SW-072-MWS	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW-072-MWS	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-072-MWS	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-072-MWS	Beryllium	7		N/A	0.00	no	N/A
SW-072-MWS	Beryllium, Dissolve	7.3		N/A	0.00	no	N/A
SW-072-MWS	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW-072-MWS	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW-072-MWS	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW-072-MWS	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A
SW-072-MWS	Bromodichloromethane	1	U	38	0.00	no	C
SW-072-MWS	Bromoform	1	U	5100	0.00	no	C
SW-072-MWS	Bromomethane	1	U	73	0.00	no	NC
SW-072-MWS	Cadmium	1.1	J	N/A	0.00	no	N/A
SW-072-MWS	Cadmium, Dissolve	0.93	J	N/A	0.00	no	N/A
SW-072-MWS	Caprolactam	2.5	U	N/A	0.00	no	N/A
SW-072-MWS	Carbon disulfide	1	U	5200	0.00	no	NC
SW-072-MWS	Carbon tetrachloride	1	U	18	0.00	no	C
SW-072-MWS	Chlorobenzene	1	U	1700	0.00	no	NC
SW-072-MWS	Chloroethane	1	U	97000	0.00	no	NC
SW-072-MWS	Chloroform	1	U	36	0.00	no	C
SW-072-MWS	Chloromethane	1	U	1100	0.00	no	NC
SW-072-MWS	Chromium	1.4	J	N/A	0.00	no	N/A
SW-072-MWS	Chromium VI	10	U	N/A	0.00	no	N/A
SW-072-MWS	Chromium, Dissolve	0.85	J	N/A	0.00	no	N/A
SW-072-MWS	Chrysene	0.1	U	N/A	0.00	no	N/A
SW-072-MWS	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-072-MWS	Cobalt	124		N/A	0.00	no	N/A
SW-072-MWS	Cobalt, Dissolve	123		N/A	0.00	no	N/A
SW-072-MWS	Copper	4.8	J	N/A	0.00	no	N/A
SW-072-MWS	Copper, Dissolve	4.9	J	N/A	0.00	no	N/A
SW-072-MWS	Cyanide	10	U	3.5	0.00	no	NC
SW-072-MWS	Cyclohexane	10	U	4300	0.00	no	NC
SW-072-MWS	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW-072-MWS	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW-072-MWS	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW-072-MWS	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW-072-MWS	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW-072-MWS	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW-072-MWS	Ethylbenzene	1	U	150	0.00	no	C
SW-072-MWS	Fluoranthene	0.011	J	N/A	0.00	no	N/A
SW-072-MWS	Fluorene	0.1	U	N/A	0.00	no	N/A
SW-072-MWS	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW-072-MWS	Hexachlorobutadiene	1	U	13	0.00	no	C
SW-072-MWS	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW-072-MWS	Hexachloroethane	1	U	70	0.00	no	C
SW-072-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW-072-MWS	Iron	38600		N/A	0.00	no	N/A
SW-072-MWS	Iron, Dissolve	44100		N/A	0.00	no	N/A
SW-072-MWS	Isophorone	1	U	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-072-MWS	Isopropylbenzene	1	U	3700	0.00	no	NC
SW-072-MWS	Lead	5	U	N/A	0.00	no	N/A
SW-072-MWS	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW-072-MWS	Manganese	5550		N/A	0.00	no	N/A
SW-072-MWS	Manganese, Dissolve	5360		N/A	0.00	no	N/A
SW-072-MWS	Mercury	0.2	U	3.7	0.00	no	NC
SW-072-MWS	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW-072-MWS	Methyl Acetate	5	UJ	N/A	0.00	no	N/A
SW-072-MWS	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW-072-MWS	Methylene Chloride	1	U	20000	0.00	no	NC
SW-072-MWS	Naphthalene	0.033	B	200	0.00	no	C
SW-072-MWS	Nickel	166		N/A	0.00	no	N/A
SW-072-MWS	Nickel, Dissolve	165		N/A	0.00	no	N/A
SW-072-MWS	Nitrobenzene	1	U	3100	0.00	no	C
SW-072-MWS	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW-072-MWS	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW-072-MWS	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
SW-072-MWS	Phenol	1	U	N/A	0.00	no	N/A
SW-072-MWS	Pyrene	0.1	U	N/A	0.00	no	N/A
SW-072-MWS	Selenium	8	U	N/A	0.00	no	N/A
SW-072-MWS	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW-072-MWS	Silver	6	U	N/A	0.00	no	N/A
SW-072-MWS	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW-072-MWS	Styrene	1	U	39000	0.00	no	NC
SW-072-MWS	Tetrachloroethene	1	U	240	0.00	no	NC
SW-072-MWS	Thallium	10	U	N/A	0.00	no	N/A
SW-072-MWS	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW-072-MWS	Toluene	1	U	81000	0.00	no	NC
SW-072-MWS	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-072-MWS	Trichloroethene	1	U	22	0.00	no	NC
SW-072-MWS	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW-072-MWS	Vanadium	5	U	N/A	0.00	no	N/A
SW-072-MWS	Vanadium, Dissolve	5	U	N/A	0.00	no	N/A
SW-072-MWS	Vinyl chloride	1	U	25	0.00	no	C
SW-072-MWS	Xylenes	3	U	1600	0.00	no	NC
SW-072-MWS	Zinc	411		N/A	0.00	no	N/A
SW-072-MWS	Zinc, Dissolve	410		N/A	0.00	no	N/A
SW-073-MWS	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW-073-MWS	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW-073-MWS	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	UJ	6100	0.00	no	NC
SW-073-MWS	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW-073-MWS	1,1-Biphenyl	1	U	140	0.00	no	NC
SW-073-MWS	1,1-Dichloroethane	1	U	330	0.00	no	C
SW-073-MWS	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW-073-MWS	1,2,3-Trichlorobenzene	2	UJ	N/A	0.00	no	N/A
SW-073-MWS	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW-073-MWS	1,2,4-Trichlorobenzene	1	UJ	150	0.00	no	NC
SW-073-MWS	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW-073-MWS	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW-073-MWS	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW-073-MWS	1,2-Dichloroethane	1	U	98	0.00	no	C
SW-073-MWS	1,2-Dichloropropane	1	U	110	0.00	no	C
SW-073-MWS	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW-073-MWS	1,4-Dioxane	0.1	U	130000	0.00	no	C
SW-073-MWS	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW-073-MWS	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
SW-073-MWS	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW-073-MWS	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW-073-MWS	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW-073-MWS	2,4-Dinitrophenol	2.5	U	N/A	0.00	no	N/A
SW-073-MWS	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-073-MWS	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-073-MWS	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW-073-MWS	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-073-MWS	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW-073-MWS	2-Hexanone	10	U	34000	0.00	no	NC
SW-073-MWS	2-Methylnaphthalene	0.59		N/A	0.00	no	N/A
SW-073-MWS	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW-073-MWS	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-073-MWS	3,3'-Dichlorobenzidine	1	U	N/A	0.00	no	N/A
SW-073-MWS	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW-073-MWS	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW-073-MWS	4-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-073-MWS	Acenaphthene	0.37		N/A	0.00	no	N/A
SW-073-MWS	Acetone	6.8	J	95000000	0.00	no	NC
SW-073-MWS	Acetophenone	1	U	N/A	0.00	no	N/A
SW-073-MWS	Aluminum	125		N/A	0.00	no	N/A
SW-073-MWS	Aluminum, Dissolve	125		N/A	0.00	no	N/A
SW-073-MWS	Anthracene	0.28		N/A	0.00	no	N/A
SW-073-MWS	Antimony	6	U	N/A	0.00	no	N/A
SW-073-MWS	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW-073-MWS	Arsenic	5	U	N/A	0.00	no	N/A
SW-073-MWS	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SW-073-MWS	Barium	149		N/A	0.00	no	N/A
SW-073-MWS	Barium, Dissolve	150		N/A	0.00	no	N/A
SW-073-MWS	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW-073-MWS	Benzene	1	U	69	0.00	no	C
SW-073-MWS	Benzo[a]anthracene	0.043	J	NVT	0.00	no	C
SW-073-MWS	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW-073-MWS	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-073-MWS	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-073-MWS	Beryllium	1	U	N/A	0.00	no	N/A
SW-073-MWS	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW-073-MWS	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW-073-MWS	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW-073-MWS	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW-073-MWS	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A
SW-073-MWS	Bromodichloromethane	1	U	38	0.00	no	C
SW-073-MWS	Bromoform	1	U	5100	0.00	no	C
SW-073-MWS	Bromomethane	1	U	73	0.00	no	NC
SW-073-MWS	Cadmium	3	U	N/A	0.00	no	N/A
SW-073-MWS	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A
SW-073-MWS	Caprolactam	2.5	U	N/A	0.00	no	N/A
SW-073-MWS	Carbon disulfide	1	U	5200	0.00	no	NC
SW-073-MWS	Carbon tetrachloride	1	U	18	0.00	no	C
SW-073-MWS	Chlorobenzene	1	U	1700	0.00	no	NC
SW-073-MWS	Chloroethane	1	U	97000	0.00	no	NC
SW-073-MWS	Chloroform	1	U	36	0.00	no	C
SW-073-MWS	Chloromethane	1	U	1100	0.00	no	NC
SW-073-MWS	Chromium	8.8		N/A	0.00	no	N/A
SW-073-MWS	Chromium VI	10	U	N/A	0.00	no	N/A
SW-073-MWS	Chromium, Dissolve	9.7		N/A	0.00	no	N/A
SW-073-MWS	Chrysene	0.03	J	N/A	0.00	no	N/A
SW-073-MWS	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-073-MWS	Cobalt	5	U	N/A	0.00	no	N/A
SW-073-MWS	Cobalt, Dissolve	5	U	N/A	0.00	no	N/A
SW-073-MWS	Copper	5	U	N/A	0.00	no	N/A
SW-073-MWS	Copper, Dissolve	5	U	N/A	0.00	no	N/A
SW-073-MWS	Cyanide	10	U	3.5	0.00	no	NC
SW-073-MWS	Cyclohexane	10	U	4300	0.00	no	NC
SW-073-MWS	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW-073-MWS	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW-073-MWS	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW-073-MWS	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW-073-MWS	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW-073-MWS	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW-073-MWS	Ethylbenzene	0.91	J	150	0.01	no	C
SW-073-MWS	Fluoranthene	0.42		N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-073-MWS	Fluorene	0.22		N/A	0.00	no	N/A
SW-073-MWS	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW-073-MWS	Hexachlorobutadiene	1	U	13	0.00	no	C
SW-073-MWS	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW-073-MWS	Hexachloroethane	1	U	70	0.00	no	C
SW-073-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW-073-MWS	Iron	70	U	N/A	0.00	no	N/A
SW-073-MWS	Iron, Dissolve	12.1	B	N/A	0.00	no	N/A
SW-073-MWS	Isophorone	1	U	N/A	0.00	no	N/A
SW-073-MWS	Isopropylbenzene	1	U	3700	0.00	no	NC
SW-073-MWS	Lead	5	U	N/A	0.00	no	N/A
SW-073-MWS	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW-073-MWS	Manganese	5	U	N/A	0.00	no	N/A
SW-073-MWS	Manganese, Dissolve	5	U	N/A	0.00	no	N/A
SW-073-MWS	Mercury	0.2	U	3.7	0.00	no	NC
SW-073-MWS	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW-073-MWS	Methyl Acetate	5	UJ	N/A	0.00	no	N/A
SW-073-MWS	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW-073-MWS	Methylene Chloride	1	U	20000	0.00	no	NC
SW-073-MWS	Naphthalene	0.42		200	0.00	no	C
SW-073-MWS	Nickel	0.75	B	N/A	0.00	no	N/A
SW-073-MWS	Nickel, Dissolve	0.7	B	N/A	0.00	no	N/A
SW-073-MWS	Nitrobenzene	1	U	3100	0.00	no	C
SW-073-MWS	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW-073-MWS	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW-073-MWS	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
SW-073-MWS	Phenol	0.27	J	N/A	0.00	no	N/A
SW-073-MWS	Pyrene	0.42		N/A	0.00	no	N/A
SW-073-MWS	Selenium	6.4	J	N/A	0.00	no	N/A
SW-073-MWS	Selenium, Dissolve	7.1	J	N/A	0.00	no	N/A
SW-073-MWS	Silver	6	U	N/A	0.00	no	N/A
SW-073-MWS	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW-073-MWS	Styrene	1	U	39000	0.00	no	NC
SW-073-MWS	Tetrachloroethene	1	U	240	0.00	no	NC
SW-073-MWS	Thallium	10	U	N/A	0.00	no	N/A
SW-073-MWS	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW-073-MWS	Toluene	0.71	J	81000	0.00	no	NC
SW-073-MWS	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-073-MWS	Trichloroethene	1	U	22	0.00	no	NC
SW-073-MWS	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW-073-MWS	Vanadium	17.7		N/A	0.00	no	N/A
SW-073-MWS	Vanadium, Dissolve	17.6		N/A	0.00	no	N/A
SW-073-MWS	Vinyl chloride	1	U	25	0.00	no	C
SW-073-MWS	Xylenes	4.1		1600	0.00	no	NC
SW-073-MWS	Zinc	10	U	N/A	0.00	no	N/A
SW-073-MWS	Zinc, Dissolve	1.7	B	N/A	0.00	no	N/A
SW-074-MWI	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW-074-MWI	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW-074-MWI	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW-074-MWI	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW-074-MWI	1,1-Biphenyl	1	U	140	0.00	no	NC
SW-074-MWI	1,1-Dichloroethane	1	U	330	0.00	no	C
SW-074-MWI	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW-074-MWI	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW-074-MWI	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW-074-MWI	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW-074-MWI	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW-074-MWI	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW-074-MWI	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW-074-MWI	1,2-Dichloroethane	1	U	98	0.00	no	C
SW-074-MWI	1,2-Dichloropropane	1	U	110	0.00	no	C
SW-074-MWI	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW-074-MWI	1,4-Dioxane	0.1	U	130000	0.00	no	C
SW-074-MWI	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-074-MWI	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
SW-074-MWI	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW-074-MWI	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW-074-MWI	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW-074-MWI	2,4-Dinitrophenol	2.5	U	N/A	0.00	no	N/A
SW-074-MWI	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-074-MWI	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-074-MWI	2-Butanone (MEK)	7.2	J	9400000	0.00	no	NC
SW-074-MWI	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW-074-MWI	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW-074-MWI	2-Hexanone	10	U	34000	0.00	no	NC
SW-074-MWI	2-Methylnaphthalene	0.1	U	N/A	0.00	no	N/A
SW-074-MWI	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW-074-MWI	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-074-MWI	3,3'-Dichlorobenzidine	1	U	N/A	0.00	no	N/A
SW-074-MWI	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW-074-MWI	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW-074-MWI	4-Nitroaniline	2.5	UJ	N/A	0.00	no	N/A
SW-074-MWI	Acenaphthene	0.1	U	N/A	0.00	no	N/A
SW-074-MWI	Acetone	80.6		95000000	0.00	no	NC
SW-074-MWI	Acetophenone	1	U	N/A	0.00	no	N/A
SW-074-MWI	Aluminum	176		N/A	0.00	no	N/A
SW-074-MWI	Aluminum, Dissolve	59.7		N/A	0.00	no	N/A
SW-074-MWI	Anthracene	0.1	U	N/A	0.00	no	N/A
SW-074-MWI	Antimony	6	U	N/A	0.00	no	N/A
SW-074-MWI	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW-074-MWI	Arsenic	3.8	B	N/A	0.00	no	N/A
SW-074-MWI	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SW-074-MWI	Barium	51.4		N/A	0.00	no	N/A
SW-074-MWI	Barium, Dissolve	51.5		N/A	0.00	no	N/A
SW-074-MWI	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW-074-MWI	Benzene	1	U	69	0.00	no	C
SW-074-MWI	Benzo[a]anthracene	0.1	U	NVT	0.00	no	C
SW-074-MWI	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW-074-MWI	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-074-MWI	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-074-MWI	Beryllium	1	U	N/A	0.00	no	N/A
SW-074-MWI	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW-074-MWI	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW-074-MWI	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW-074-MWI	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW-074-MWI	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A
SW-074-MWI	Bromodichloromethane	1	U	38	0.00	no	C
SW-074-MWI	Bromoform	1	U	5100	0.00	no	C
SW-074-MWI	Bromomethane	1	U	73	0.00	no	NC
SW-074-MWI	Cadmium	0.64	J	N/A	0.00	no	N/A
SW-074-MWI	Cadmium, Dissolve	0.63	B	N/A	0.00	no	N/A
SW-074-MWI	Caprolactam	2.5	U	N/A	0.00	no	N/A
SW-074-MWI	Carbon disulfide	1	U	5200	0.00	no	NC
SW-074-MWI	Carbon tetrachloride	1	U	18	0.00	no	C
SW-074-MWI	Chlorobenzene	1	U	1700	0.00	no	NC
SW-074-MWI	Chloroethane	1	U	97000	0.00	no	NC
SW-074-MWI	Chloroform	1	U	36	0.00	no	C
SW-074-MWI	Chloromethane	1	U	1100	0.00	no	NC
SW-074-MWI	Chromium	5	U	N/A	0.00	no	N/A
SW-074-MWI	Chromium VI	10	U	N/A	0.00	no	N/A
SW-074-MWI	Chromium, Dissolve	5	U	N/A	0.00	no	N/A
SW-074-MWI	Chrysene	0.1	U	N/A	0.00	no	N/A
SW-074-MWI	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-074-MWI	Cobalt	55.6		N/A	0.00	no	N/A
SW-074-MWI	Cobalt, Dissolve	60.2		N/A	0.00	no	N/A
SW-074-MWI	Copper	5	U	N/A	0.00	no	N/A
SW-074-MWI	Copper, Dissolve	5	U	N/A	0.00	no	N/A
SW-074-MWI	Cyanide	10	U	3.5	0.00	no	NC

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-074-MWI	Cyclohexane	10	U	4300	0.00	no	NC
SW-074-MWI	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW-074-MWI	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW-074-MWI	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW-074-MWI	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW-074-MWI	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW-074-MWI	Di-n-ocytlphthalate	1	UJ	N/A	0.00	no	N/A
SW-074-MWI	Ethylbenzene	1	U	150	0.00	no	C
SW-074-MWI	Fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-074-MWI	Fluorene	0.1	U	N/A	0.00	no	N/A
SW-074-MWI	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW-074-MWI	Hexachlorobutadiene	1	U	13	0.00	no	C
SW-074-MWI	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW-074-MWI	Hexachloroethane	1	U	70	0.00	no	C
SW-074-MWI	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW-074-MWI	Iron	9070		N/A	0.00	no	N/A
SW-074-MWI	Iron, Dissolve	9650		N/A	0.00	no	N/A
SW-074-MWI	Isophorone	0.49	J	N/A	0.00	no	N/A
SW-074-MWI	Isopropylbenzene	1	U	3700	0.00	no	NC
SW-074-MWI	Lead	5	U	N/A	0.00	no	N/A
SW-074-MWI	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW-074-MWI	Manganese	2420		N/A	0.00	no	N/A
SW-074-MWI	Manganese, Dissolve	2450		N/A	0.00	no	N/A
SW-074-MWI	Mercury	0.2	U	3.7	0.00	no	NC
SW-074-MWI	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW-074-MWI	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW-074-MWI	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW-074-MWI	Methylene Chloride	1	U	20000	0.00	no	NC
SW-074-MWI	Naphthalene	0.059	B	200	0.00	no	C
SW-074-MWI	Nickel	31.4		N/A	0.00	no	N/A
SW-074-MWI	Nickel, Dissolve	35.4		N/A	0.00	no	N/A
SW-074-MWI	Nitrobenzene	1	U	3100	0.00	no	C
SW-074-MWI	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW-074-MWI	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW-074-MWI	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
SW-074-MWI	Phenol	1	U	N/A	0.00	no	N/A
SW-074-MWI	Pyrene	0.1	U	N/A	0.00	no	N/A
SW-074-MWI	Selenium	8	U	N/A	0.00	no	N/A
SW-074-MWI	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW-074-MWI	Silver	6	U	N/A	0.00	no	N/A
SW-074-MWI	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW-074-MWI	Styrene	1	U	39000	0.00	no	NC
SW-074-MWI	Tetrachloroethene	1	U	240	0.00	no	NC
SW-074-MWI	Thallium	10	U	N/A	0.00	no	N/A
SW-074-MWI	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW-074-MWI	Toluene	1	U	81000	0.00	no	NC
SW-074-MWI	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-074-MWI	Trichloroethene	1	U	22	0.00	no	NC
SW-074-MWI	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW-074-MWI	Vanadium	2.2	J	N/A	0.00	no	N/A
SW-074-MWI	Vanadium, Dissolve	2.1	J	N/A	0.00	no	N/A
SW-074-MWI	Vinyl chloride	1	U	25	0.00	no	C
SW-074-MWI	Xylenes	3	U	1600	0.00	no	NC
SW-074-MWI	Zinc	34.4		N/A	0.00	no	N/A
SW-074-MWI	Zinc, Dissolve	11.3		N/A	0.00	no	N/A
SW-074-MWS	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW-074-MWS	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW-074-MWS	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW-074-MWS	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW-074-MWS	1,1-Biphenyl	1	U	140	0.00	no	NC
SW-074-MWS	1,1-Dichloroethane	1	U	330	0.00	no	C
SW-074-MWS	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW-074-MWS	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW-074-MWS	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-074-MWS	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW-074-MWS	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW-074-MWS	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW-074-MWS	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW-074-MWS	1,2-Dichloroethane	1	U	98	0.00	no	C
SW-074-MWS	1,2-Dichloropropane	1	U	110	0.00	no	C
SW-074-MWS	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW-074-MWS	1,4-Dioxane	0.1	U	130000	0.00	no	C
SW-074-MWS	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW-074-MWS	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
SW-074-MWS	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW-074-MWS	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW-074-MWS	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW-074-MWS	2,4-Dinitrophenol	2.5	U	N/A	0.00	no	N/A
SW-074-MWS	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-074-MWS	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW-074-MWS	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW-074-MWS	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW-074-MWS	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW-074-MWS	2-Hexanone	10	U	34000	0.00	no	NC
SW-074-MWS	2-Methylnaphthalene	0.1	U	N/A	0.00	no	N/A
SW-074-MWS	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW-074-MWS	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-074-MWS	3,3'-Dichlorobenzidine	1	UJ	N/A	0.00	no	N/A
SW-074-MWS	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW-074-MWS	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW-074-MWS	4-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW-074-MWS	Acenaphthene	0.1	U	N/A	0.00	no	N/A
SW-074-MWS	Acetone	10	R	95000000	0.00	no	NC
SW-074-MWS	Acetophenone	1	U	N/A	0.00	no	N/A
SW-074-MWS	Aluminum	118		N/A	0.00	no	N/A
SW-074-MWS	Aluminum, Dissolve	51		N/A	0.00	no	N/A
SW-074-MWS	Anthracene	0.11		N/A	0.00	no	N/A
SW-074-MWS	Antimony	6	U	N/A	0.00	no	N/A
SW-074-MWS	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW-074-MWS	Arsenic	5	U	N/A	0.00	no	N/A
SW-074-MWS	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SW-074-MWS	Barium	30.6		N/A	0.00	no	N/A
SW-074-MWS	Barium, Dissolve	27.8		N/A	0.00	no	N/A
SW-074-MWS	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW-074-MWS	Benzene	1	U	69	0.00	no	C
SW-074-MWS	Benzo[a]anthracene	0.1	U	NVT	0.00	no	C
SW-074-MWS	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW-074-MWS	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-074-MWS	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-074-MWS	Beryllium	1	U	N/A	0.00	no	N/A
SW-074-MWS	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW-074-MWS	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW-074-MWS	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW-074-MWS	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW-074-MWS	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A
SW-074-MWS	Bromodichloromethane	1	U	38	0.00	no	C
SW-074-MWS	Bromoform	1	U	5100	0.00	no	C
SW-074-MWS	Bromomethane	1	U	73	0.00	no	NC
SW-074-MWS	Cadmium	3	U	N/A	0.00	no	N/A
SW-074-MWS	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A
SW-074-MWS	Caprolactam	2.5	U	N/A	0.00	no	N/A
SW-074-MWS	Carbon disulfide	1	U	5200	0.00	no	NC
SW-074-MWS	Carbon tetrachloride	1	U	18	0.00	no	C
SW-074-MWS	Chlorobenzene	1	U	1700	0.00	no	NC
SW-074-MWS	Chloroethane	1	U	97000	0.00	no	NC
SW-074-MWS	Chloroform	1	U	36	0.00	no	C
SW-074-MWS	Chloromethane	1	U	1100	0.00	no	NC
SW-074-MWS	Chromium	8.6		N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW-074-MWS	Chromium VI	7	J	N/A	0.00	no	N/A
SW-074-MWS	Chromium, Dissolve	8.3		N/A	0.00	no	N/A
SW-074-MWS	Chrysene	0.1	U	N/A	0.00	no	N/A
SW-074-MWS	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-074-MWS	Cobalt	3.8	B	N/A	0.00	no	N/A
SW-074-MWS	Cobalt, Dissolve	2.6	J	N/A	0.00	no	N/A
SW-074-MWS	Copper	5	U	N/A	0.00	no	N/A
SW-074-MWS	Copper, Dissolve	5	U	N/A	0.00	no	N/A
SW-074-MWS	Cyanide	10	U	3.5	0.00	no	NC
SW-074-MWS	Cyclohexane	10	U	4300	0.00	no	NC
SW-074-MWS	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW-074-MWS	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW-074-MWS	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW-074-MWS	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW-074-MWS	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW-074-MWS	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW-074-MWS	Ethylbenzene	1	U	150	0.00	no	C
SW-074-MWS	Fluoranthene	0.1	U	N/A	0.00	no	N/A
SW-074-MWS	Fluorene	0.1	U	N/A	0.00	no	N/A
SW-074-MWS	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW-074-MWS	Hexachlorobutadiene	1	U	13	0.00	no	C
SW-074-MWS	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW-074-MWS	Hexachloroethane	1	U	70	0.00	no	C
SW-074-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW-074-MWS	Iron	176		N/A	0.00	no	N/A
SW-074-MWS	Iron, Dissolve	70	U	N/A	0.00	no	N/A
SW-074-MWS	Isophorone	1	U	N/A	0.00	no	N/A
SW-074-MWS	Isopropylbenzene	1	U	3700	0.00	no	NC
SW-074-MWS	Lead	5	U	N/A	0.00	no	N/A
SW-074-MWS	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW-074-MWS	Manganese	275		N/A	0.00	no	N/A
SW-074-MWS	Manganese, Dissolve	215		N/A	0.00	no	N/A
SW-074-MWS	Mercury	0.2	UJ	3.7	0.00	no	NC
SW-074-MWS	Mercury, Dissolve	0.2	UJ	3.7	0.00	no	NC
SW-074-MWS	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW-074-MWS	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW-074-MWS	Methylene Chloride	1	U	20000	0.00	no	NC
SW-074-MWS	Naphthalene	0.1	U	200	0.00	no	C
SW-074-MWS	Nickel	3.8	B	N/A	0.00	no	N/A
SW-074-MWS	Nickel, Dissolve	3.4	B	N/A	0.00	no	N/A
SW-074-MWS	Nitrobenzene	1	U	3100	0.00	no	C
SW-074-MWS	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW-074-MWS	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW-074-MWS	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
SW-074-MWS	Phenol	1	U	N/A	0.00	no	N/A
SW-074-MWS	Pyrene	0.1	U	N/A	0.00	no	N/A
SW-074-MWS	Selenium	5.1	B	N/A	0.00	no	N/A
SW-074-MWS	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW-074-MWS	Silver	6	U	N/A	0.00	no	N/A
SW-074-MWS	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW-074-MWS	Styrene	1	U	39000	0.00	no	NC
SW-074-MWS	Tetrachloroethene	1	U	240	0.00	no	NC
SW-074-MWS	Thallium	10	U	N/A	0.00	no	N/A
SW-074-MWS	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW-074-MWS	Toluene	1	U	81000	0.00	no	NC
SW-074-MWS	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW-074-MWS	Trichloroethene	1	U	22	0.00	no	NC
SW-074-MWS	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW-074-MWS	Vanadium	89.9		N/A	0.00	no	N/A
SW-074-MWS	Vanadium, Dissolve	91		N/A	0.00	no	N/A
SW-074-MWS	Vinyl chloride	1	U	25	0.00	no	C
SW-074-MWS	Xylenes	3	U	1600	0.00	no	NC
SW-074-MWS	Zinc	5.5	B	N/A	0.00	no	N/A
SW-074-MWS	Zinc, Dissolve	4.6	B	N/A	0.00	no	N/A

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW07-PZM004	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW07-PZM004	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW07-PZM004	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW07-PZM004	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW07-PZM004	1,1-Biphenyl	1	U	140	0.00	no	NC
SW07-PZM004	1,1-Dichloroethane	1	U	330	0.00	no	C
SW07-PZM004	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW07-PZM004	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW07-PZM004	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW07-PZM004	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW07-PZM004	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW07-PZM004	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW07-PZM004	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW07-PZM004	1,2-Dichloroethane	1	U	98	0.00	no	C
SW07-PZM004	1,2-Dichloropropane	1	U	110	0.00	no	C
SW07-PZM004	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW07-PZM004	1,4-Dioxane	0.1	U	130000	0.00	no	C
SW07-PZM004	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW07-PZM004	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
SW07-PZM004	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW07-PZM004	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW07-PZM004	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW07-PZM004	2,4-Dinitrophenol	2.5	U	N/A	0.00	no	N/A
SW07-PZM004	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW07-PZM004	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW07-PZM004	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW07-PZM004	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW07-PZM004	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW07-PZM004	2-Hexanone	10	U	34000	0.00	no	NC
SW07-PZM004	2-Methylnaphthalene	0.1	U	N/A	0.00	no	N/A
SW07-PZM004	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW07-PZM004	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW07-PZM004	3,3'-Dichlorobenzidine	1	R	N/A	0.00	no	N/A
SW07-PZM004	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW07-PZM004	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW07-PZM004	4-Nitroaniline	2.5	UJ	N/A	0.00	no	N/A
SW07-PZM004	Acenaphthene	0.1	U	N/A	0.00	no	N/A
SW07-PZM004	Acetone	10	UJ	95000000	0.00	no	NC
SW07-PZM004	Acetophenone	1	U	N/A	0.00	no	N/A
SW07-PZM004	Aluminum	49.2	B	N/A	0.00	no	N/A
SW07-PZM004	Aluminum, Dissolve	50	U	N/A	0.00	no	N/A
SW07-PZM004	Anthracene	0.1	U	N/A	0.00	no	N/A
SW07-PZM004	Antimony	6	U	N/A	0.00	no	N/A
SW07-PZM004	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW07-PZM004	Arsenic	5	U	N/A	0.00	no	N/A
SW07-PZM004	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SW07-PZM004	Barium	31.5		N/A	0.00	no	N/A
SW07-PZM004	Barium, Dissolve	28.4		N/A	0.00	no	N/A
SW07-PZM004	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW07-PZM004	Benzene	1	U	69	0.00	no	C
SW07-PZM004	Benzo[a]anthracene	0.1	U	NVT	0.00	no	C
SW07-PZM004	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW07-PZM004	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW07-PZM004	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW07-PZM004	Beryllium	1	U	N/A	0.00	no	N/A
SW07-PZM004	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW07-PZM004	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW07-PZM004	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW07-PZM004	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW07-PZM004	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A
SW07-PZM004	Bromodichloromethane	1	U	38	0.00	no	C
SW07-PZM004	Bromoform	1	U	5100	0.00	no	C
SW07-PZM004	Bromomethane	1	U	73	0.00	no	NC
SW07-PZM004	Cadmium	0.5	J	N/A	0.00	no	N/A

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW07-PZM004	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A
SW07-PZM004	Caprolactam	2.5	UJ	N/A	0.00	no	N/A
SW07-PZM004	Carbon disulfide	1	U	5200	0.00	no	NC
SW07-PZM004	Carbon tetrachloride	1	U	18	0.00	no	C
SW07-PZM004	Chlorobenzene	1	U	1700	0.00	no	NC
SW07-PZM004	Chloroethane	1	U	97000	0.00	no	NC
SW07-PZM004	Chloroform	1	U	36	0.00	no	C
SW07-PZM004	Chloromethane	1	U	1100	0.00	no	NC
SW07-PZM004	Chromium	5	U	N/A	0.00	no	N/A
SW07-PZM004	Chromium VI	10	U	N/A	0.00	no	N/A
SW07-PZM004	Chromium, Dissolve	0.9	B	N/A	0.00	no	N/A
SW07-PZM004	Chrysene	0.1	U	N/A	0.00	no	N/A
SW07-PZM004	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW07-PZM004	Cobalt	1.3	B	N/A	0.00	no	N/A
SW07-PZM004	Cobalt, Dissolve	1.5	B	N/A	0.00	no	N/A
SW07-PZM004	Copper	2.2	B	N/A	0.00	no	N/A
SW07-PZM004	Copper, Dissolve	5	U	N/A	0.00	no	N/A
SW07-PZM004	Cyanide	10	U	3.5	0.00	no	NC
SW07-PZM004	Cyclohexane	10	U	4300	0.00	no	NC
SW07-PZM004	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW07-PZM004	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW07-PZM004	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW07-PZM004	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW07-PZM004	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW07-PZM004	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW07-PZM004	Ethylbenzene	1	U	150	0.00	no	C
SW07-PZM004	Fluoranthene	0.1	U	N/A	0.00	no	N/A
SW07-PZM004	Fluorene	0.1	U	N/A	0.00	no	N/A
SW07-PZM004	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW07-PZM004	Hexachlorobutadiene	1	U	13	0.00	no	C
SW07-PZM004	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW07-PZM004	Hexachloroethane	1	U	70	0.00	no	C
SW07-PZM004	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW07-PZM004	Iron	3150		N/A	0.00	no	N/A
SW07-PZM004	Iron, Dissolve	1150		N/A	0.00	no	N/A
SW07-PZM004	Isophorone	1	U	N/A	0.00	no	N/A
SW07-PZM004	Isopropylbenzene	1	U	3700	0.00	no	NC
SW07-PZM004	Lead	5	U	N/A	0.00	no	N/A
SW07-PZM004	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW07-PZM004	Manganese	619	J	N/A	0.00	no	N/A
SW07-PZM004	Manganese, Dissolve	600	J	N/A	0.00	no	N/A
SW07-PZM004	Mercury	0.2	U	3.7	0.00	no	NC
SW07-PZM004	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW07-PZM004	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW07-PZM004	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW07-PZM004	Methylene Chloride	1	U	20000	0.00	no	NC
SW07-PZM004	Naphthalene	0.045	B	200	0.00	no	C
SW07-PZM004	Nickel	10	U	N/A	0.00	no	N/A
SW07-PZM004	Nickel, Dissolve	10	U	N/A	0.00	no	N/A
SW07-PZM004	Nitrobenzene	1	U	3100	0.00	no	C
SW07-PZM004	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW07-PZM004	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW07-PZM004	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
SW07-PZM004	Phenol	1	U	N/A	0.00	no	N/A
SW07-PZM004	Pyrene	0.1	U	N/A	0.00	no	N/A
SW07-PZM004	Selenium	8	U	N/A	0.00	no	N/A
SW07-PZM004	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW07-PZM004	Silver	6	U	N/A	0.00	no	N/A
SW07-PZM004	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW07-PZM004	Styrene	1	U	39000	0.00	no	NC
SW07-PZM004	Tetrachloroethene	1	U	240	0.00	no	NC
SW07-PZM004	Thallium	10	U	N/A	0.00	no	N/A
SW07-PZM004	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW07-PZM004	Toluene	1	U	81000	0.00	no	NC

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW07-PZM004	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW07-PZM004	Trichloroethene	1	U	22	0.00	no	NC
SW07-PZM004	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW07-PZM004	Vanadium	0.65	B	N/A	0.00	no	N/A
SW07-PZM004	Vanadium, Dissolve	5	U	N/A	0.00	no	N/A
SW07-PZM004	Vinyl chloride	1	U	25	0.00	no	C
SW07-PZM004	Xylenes	3	U	1600	0.00	no	NC
SW07-PZM004	Zinc	2.2	B	N/A	0.00	no	N/A
SW07-PZM004	Zinc, Dissolve	10	U	N/A	0.00	no	N/A
SW07-PZM108	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW07-PZM108	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW07-PZM108	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW07-PZM108	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW07-PZM108	1,1-Biphenyl	1	U	140	0.00	no	NC
SW07-PZM108	1,1-Dichloroethane	1	U	330	0.00	no	C
SW07-PZM108	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW07-PZM108	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW07-PZM108	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW07-PZM108	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW07-PZM108	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW07-PZM108	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW07-PZM108	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW07-PZM108	1,2-Dichloroethane	1	U	98	0.00	no	C
SW07-PZM108	1,2-Dichloropropane	1	U	110	0.00	no	C
SW07-PZM108	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW07-PZM108	1,4-Dioxane	0.1	U	130000	0.00	no	C
SW07-PZM108	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW07-PZM108	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
SW07-PZM108	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW07-PZM108	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW07-PZM108	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW07-PZM108	2,4-Dinitrophenol	2.5	U	N/A	0.00	no	N/A
SW07-PZM108	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW07-PZM108	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW07-PZM108	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW07-PZM108	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW07-PZM108	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW07-PZM108	2-Hexanone	10	U	34000	0.00	no	NC
SW07-PZM108	2-Methylnaphthalene	0.1	U	N/A	0.00	no	N/A
SW07-PZM108	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW07-PZM108	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW07-PZM108	3,3'-Dichlorobenzidine	1	R	N/A	0.00	no	N/A
SW07-PZM108	4-Chloroaniline	1	UJ	N/A	0.00	no	N/A
SW07-PZM108	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW07-PZM108	4-Nitroaniline	2.5	UJ	N/A	0.00	no	N/A
SW07-PZM108	Acenaphthene	0.1	U	N/A	0.00	no	N/A
SW07-PZM108	Acetone	10	R	95000000	0.00	no	NC
SW07-PZM108	Acetophenone	1	U	N/A	0.00	no	N/A
SW07-PZM108	Aluminum	1290		N/A	0.00	no	N/A
SW07-PZM108	Aluminum, Dissolve	50	U	N/A	0.00	no	N/A
SW07-PZM108	Anthracene	0.014	J	N/A	0.00	no	N/A
SW07-PZM108	Antimony	6	U	N/A	0.00	no	N/A
SW07-PZM108	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW07-PZM108	Arsenic	5	U	N/A	0.00	no	N/A
SW07-PZM108	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SW07-PZM108	Barium	58.5		N/A	0.00	no	N/A
SW07-PZM108	Barium, Dissolve	20.2		N/A	0.00	no	N/A
SW07-PZM108	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW07-PZM108	Benzene	1	U	69	0.00	no	C
SW07-PZM108	Benzo[a]anthracene	0.072	J	NVT	0.00	no	C
SW07-PZM108	Benzo[a]pyrene	0.068	J	N/A	0.00	no	N/A
SW07-PZM108	Benzo[b]fluoranthene	0.085	J	N/A	0.00	no	N/A
SW07-PZM108	Benzo[k]fluoranthene	0.047	J	N/A	0.00	no	N/A
SW07-PZM108	Beryllium	1	U	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW07-PZM108	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW07-PZM108	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW07-PZM108	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW07-PZM108	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW07-PZM108	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A
SW07-PZM108	Bromodichloromethane	1	U	38	0.00	no	C
SW07-PZM108	Bromoform	1	U	5100	0.00	no	C
SW07-PZM108	Bromomethane	1	U	73	0.00	no	NC
SW07-PZM108	Cadmium	3	U	N/A	0.00	no	N/A
SW07-PZM108	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A
SW07-PZM108	Caprolactam	2.5	UJ	N/A	0.00	no	N/A
SW07-PZM108	Carbon disulfide	1	U	5200	0.00	no	NC
SW07-PZM108	Carbon tetrachloride	1	U	18	0.00	no	C
SW07-PZM108	Chlorobenzene	1	U	1700	0.00	no	NC
SW07-PZM108	Chloroethane	1	U	97000	0.00	no	NC
SW07-PZM108	Chloroform	1	U	36	0.00	no	C
SW07-PZM108	Chloromethane	1	UJ	1100	0.00	no	NC
SW07-PZM108	Chromium	9.3		N/A	0.00	no	N/A
SW07-PZM108	Chromium VI	10	U	N/A	0.00	no	N/A
SW07-PZM108	Chromium, Dissolve	3.1	B	N/A	0.00	no	N/A
SW07-PZM108	Chrysene	0.055	J	N/A	0.00	no	N/A
SW07-PZM108	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW07-PZM108	Cobalt	1.9	B	N/A	0.00	no	N/A
SW07-PZM108	Cobalt, Dissolve	5	U	N/A	0.00	no	N/A
SW07-PZM108	Copper	29.9		N/A	0.00	no	N/A
SW07-PZM108	Copper, Dissolve	1.8	B	N/A	0.00	no	N/A
SW07-PZM108	Cyanide	10	U	3.5	0.00	no	NC
SW07-PZM108	Cyclohexane	10	U	4300	0.00	no	NC
SW07-PZM108	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW07-PZM108	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW07-PZM108	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW07-PZM108	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW07-PZM108	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW07-PZM108	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW07-PZM108	Ethylbenzene	1	U	150	0.00	no	C
SW07-PZM108	Fluoranthene	0.11		N/A	0.00	no	N/A
SW07-PZM108	Fluorene	0.1	U	N/A	0.00	no	N/A
SW07-PZM108	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW07-PZM108	Hexachlorobutadiene	1	U	13	0.00	no	C
SW07-PZM108	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW07-PZM108	Hexachloroethane	1	U	70	0.00	no	C
SW07-PZM108	Indeno[1,2,3-c,d]pyrene	0.051	J	N/A	0.00	no	N/A
SW07-PZM108	Iron	5610		N/A	0.00	no	N/A
SW07-PZM108	Iron, Dissolve	34.6	B	N/A	0.00	no	N/A
SW07-PZM108	Isophorone	1	U	N/A	0.00	no	N/A
SW07-PZM108	Isopropylbenzene	1	U	3700	0.00	no	NC
SW07-PZM108	Lead	35.7		N/A	0.00	no	N/A
SW07-PZM108	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW07-PZM108	Manganese	399		N/A	0.00	no	N/A
SW07-PZM108	Manganese, Dissolve	13.1	J	N/A	0.00	no	N/A
SW07-PZM108	Mercury	0.06	B	3.7	0.02	no	NC
SW07-PZM108	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW07-PZM108	Methyl Acetate	5	R	N/A	0.00	no	N/A
SW07-PZM108	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW07-PZM108	Methylene Chloride	1	U	20000	0.00	no	NC
SW07-PZM108	Naphthalene	0.042	B	200	0.00	no	C
SW07-PZM108	Nickel	7	B	N/A	0.00	no	N/A
SW07-PZM108	Nickel, Dissolve	10	U	N/A	0.00	no	N/A
SW07-PZM108	Nitrobenzene	1	U	3100	0.00	no	C
SW07-PZM108	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW07-PZM108	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW07-PZM108	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
SW07-PZM108	Phenol	1	U	N/A	0.00	no	N/A
SW07-PZM108	Pyrene	0.11		N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW07-PZM108	Selenium	8	U	N/A	0.00	no	N/A
SW07-PZM108	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW07-PZM108	Silver	6	U	N/A	0.00	no	N/A
SW07-PZM108	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW07-PZM108	Styrene	1	U	39000	0.00	no	NC
SW07-PZM108	Tetrachloroethene	1	U	240	0.00	no	NC
SW07-PZM108	Thallium	10	U	N/A	0.00	no	N/A
SW07-PZM108	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW07-PZM108	Toluene	1	U	81000	0.00	no	NC
SW07-PZM108	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW07-PZM108	Trichloroethene	1	U	22	0.00	no	NC
SW07-PZM108	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW07-PZM108	Vanadium	4.2	B	N/A	0.00	no	N/A
SW07-PZM108	Vanadium, Dissolve	1	B	N/A	0.00	no	N/A
SW07-PZM108	Vinyl chloride	1	U	25	0.00	no	C
SW07-PZM108	Xylenes	3	U	1600	0.00	no	NC
SW07-PZM108	Zinc	52.4		N/A	0.00	no	N/A
SW07-PZM108	Zinc, Dissolve	10	U	N/A	0.00	no	N/A
SW08-PZM003	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW08-PZM003	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW08-PZM003	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW08-PZM003	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW08-PZM003	1,1-Biphenyl	1	U	140	0.00	no	NC
SW08-PZM003	1,1-Dichloroethane	1	U	330	0.00	no	C
SW08-PZM003	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW08-PZM003	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW08-PZM003	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW08-PZM003	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW08-PZM003	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW08-PZM003	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW08-PZM003	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW08-PZM003	1,2-Dichloroethane	1	U	98	0.00	no	C
SW08-PZM003	1,2-Dichloropropane	1	U	110	0.00	no	C
SW08-PZM003	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW08-PZM003	1,4-Dioxane	0.16		130000	0.00	no	C
SW08-PZM003	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW08-PZM003	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
SW08-PZM003	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW08-PZM003	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW08-PZM003	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW08-PZM003	2,4-Dinitrophenol	2.5	U	N/A	0.00	no	N/A
SW08-PZM003	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW08-PZM003	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW08-PZM003	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW08-PZM003	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW08-PZM003	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW08-PZM003	2-Hexanone	10	U	34000	0.00	no	NC
SW08-PZM003	2-Methylnaphthalene	0.1	U	N/A	0.00	no	N/A
SW08-PZM003	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW08-PZM003	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW08-PZM003	3,3'-Dichlorobenzidine	1	U	N/A	0.00	no	N/A
SW08-PZM003	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW08-PZM003	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW08-PZM003	4-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW08-PZM003	Acenaphthene	0.033	J	N/A	0.00	no	N/A
SW08-PZM003	Acetone	10	R	95000000	0.00	no	NC
SW08-PZM003	Acetophenone	1	U	N/A	0.00	no	N/A
SW08-PZM003	Aluminum	236		N/A	0.00	no	N/A
SW08-PZM003	Aluminum, Dissolve	50	U	N/A	0.00	no	N/A
SW08-PZM003	Anthracene	0.023	J	N/A	0.00	no	N/A
SW08-PZM003	Antimony	6	U	N/A	0.00	no	N/A
SW08-PZM003	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW08-PZM003	Arsenic	3.7	J	N/A	0.00	no	N/A
SW08-PZM003	Arsenic, Dissolve	3.3	B	N/A	0.00	no	N/A

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW08-PZM003	Barium	20.3		N/A	0.00	no	N/A
SW08-PZM003	Barium, Dissolve	18.9		N/A	0.00	no	N/A
SW08-PZM003	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW08-PZM003	Benzene	1	U	69	0.00	no	C
SW08-PZM003	Benzo[a]anthracene	0.032	J	NVT	0.00	no	C
SW08-PZM003	Benzo[a]pyrene	0.029	J	N/A	0.00	no	N/A
SW08-PZM003	Benzo[b]fluoranthene	0.11	J	N/A	0.00	no	N/A
SW08-PZM003	Benzo[k]fluoranthene	0.083	B	N/A	0.00	no	N/A
SW08-PZM003	Beryllium	1	U	N/A	0.00	no	N/A
SW08-PZM003	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW08-PZM003	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW08-PZM003	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW08-PZM003	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW08-PZM003	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A
SW08-PZM003	Bromodichloromethane	1	U	38	0.00	no	C
SW08-PZM003	Bromoform	1	U	5100	0.00	no	C
SW08-PZM003	Bromomethane	1	U	73	0.00	no	NC
SW08-PZM003	Cadmium	3	U	N/A	0.00	no	N/A
SW08-PZM003	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A
SW08-PZM003	Caprolactam	2.5	U	N/A	0.00	no	N/A
SW08-PZM003	Carbon disulfide	1	U	5200	0.00	no	NC
SW08-PZM003	Carbon tetrachloride	1	U	18	0.00	no	C
SW08-PZM003	Chlorobenzene	1	U	1700	0.00	no	NC
SW08-PZM003	Chloroethane	1	U	97000	0.00	no	NC
SW08-PZM003	Chloroform	1	U	36	0.00	no	C
SW08-PZM003	Chloromethane	1	U	1100	0.00	no	NC
SW08-PZM003	Chromium	1.5	J	N/A	0.00	no	N/A
SW08-PZM003	Chromium VI	10	U	N/A	0.00	no	N/A
SW08-PZM003	Chromium, Dissolve	0.86	J	N/A	0.00	no	N/A
SW08-PZM003	Chrysene	0.028	B	N/A	0.00	no	N/A
SW08-PZM003	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW08-PZM003	Cobalt	5	U	N/A	0.00	no	N/A
SW08-PZM003	Cobalt, Dissolve	5	U	N/A	0.00	no	N/A
SW08-PZM003	Copper	5	U	N/A	0.00	no	N/A
SW08-PZM003	Copper, Dissolve	2.3	B	N/A	0.00	no	N/A
SW08-PZM003	Cyanide	10	U	3.5	0.00	no	NC
SW08-PZM003	Cyclohexane	10	U	4300	0.00	no	NC
SW08-PZM003	Dibenz[a,h]anthracene	0.1	UJ	N/A	0.00	no	N/A
SW08-PZM003	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW08-PZM003	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW08-PZM003	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW08-PZM003	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW08-PZM003	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW08-PZM003	Ethylbenzene	1	U	150	0.00	no	C
SW08-PZM003	Fluoranthene	0.014	J	N/A	0.00	no	N/A
SW08-PZM003	Fluorene	0.019	J	N/A	0.00	no	N/A
SW08-PZM003	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW08-PZM003	Hexachlorobutadiene	1	U	13	0.00	no	C
SW08-PZM003	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW08-PZM003	Hexachloroethane	1	U	70	0.00	no	C
SW08-PZM003	Indeno[1,2,3-c,d]pyrene	0.1	UJ	N/A	0.00	no	N/A
SW08-PZM003	Iron	532		N/A	0.00	no	N/A
SW08-PZM003	Iron, Dissolve	69.5	J	N/A	0.00	no	N/A
SW08-PZM003	Isophorone	1	U	N/A	0.00	no	N/A
SW08-PZM003	Isopropylbenzene	1	U	3700	0.00	no	NC
SW08-PZM003	Lead	5	U	N/A	0.00	no	N/A
SW08-PZM003	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW08-PZM003	Manganese	296		N/A	0.00	no	N/A
SW08-PZM003	Manganese, Dissolve	278		N/A	0.00	no	N/A
SW08-PZM003	Mercury	0.2	U	3.7	0.00	no	NC
SW08-PZM003	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW08-PZM003	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW08-PZM003	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW08-PZM003	Methylene Chloride	1	U	20000	0.00	no	NC

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW08-PZM003	Naphthalene	0.046	B	200	0.00	no	C
SW08-PZM003	Nickel	2.7	B	N/A	0.00	no	N/A
SW08-PZM003	Nickel, Dissolve	3.4	B	N/A	0.00	no	N/A
SW08-PZM003	Nitrobenzene	1	U	3100	0.00	no	C
SW08-PZM003	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW08-PZM003	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW08-PZM003	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
SW08-PZM003	Phenol	1	U	N/A	0.00	no	N/A
SW08-PZM003	Pyrene	0.1	U	N/A	0.00	no	N/A
SW08-PZM003	Selenium	8	U	N/A	0.00	no	N/A
SW08-PZM003	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW08-PZM003	Silver	6	U	N/A	0.00	no	N/A
SW08-PZM003	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW08-PZM003	Styrene	1	U	39000	0.00	no	NC
SW08-PZM003	Tetrachloroethene	1	U	240	0.00	no	NC
SW08-PZM003	Thallium	4.6	B	N/A	0.00	no	N/A
SW08-PZM003	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW08-PZM003	Toluene	1	U	81000	0.00	no	NC
SW08-PZM003	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW08-PZM003	Trichloroethene	1	U	22	0.00	no	NC
SW08-PZM003	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW08-PZM003	Vanadium	1.4	B	N/A	0.00	no	N/A
SW08-PZM003	Vanadium, Dissolve	0.63	B	N/A	0.00	no	N/A
SW08-PZM003	Vinyl chloride	1	U	25	0.00	no	C
SW08-PZM003	Xylenes	3	U	1600	0.00	no	NC
SW08-PZM003	Zinc	11.2		N/A	0.00	no	N/A
SW08-PZM003	Zinc, Dissolve	10	U	N/A	0.00	no	N/A
SW08-PZM053	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW08-PZM053	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW08-PZM053	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW08-PZM053	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW08-PZM053	1,1-Biphenyl	1	U	140	0.00	no	NC
SW08-PZM053	1,1-Dichloroethane	1	U	330	0.00	no	C
SW08-PZM053	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW08-PZM053	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW08-PZM053	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW08-PZM053	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW08-PZM053	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW08-PZM053	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW08-PZM053	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW08-PZM053	1,2-Dichloroethane	1	U	98	0.00	no	C
SW08-PZM053	1,2-Dichloropropane	1	U	110	0.00	no	C
SW08-PZM053	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW08-PZM053	1,4-Dioxane	0.1	U	130000	0.00	no	C
SW08-PZM053	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW08-PZM053	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
SW08-PZM053	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW08-PZM053	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW08-PZM053	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW08-PZM053	2,4-Dinitrophenol	2.5	U	N/A	0.00	no	N/A
SW08-PZM053	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW08-PZM053	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW08-PZM053	2-Butanone (MEK)	4.7	J	9400000	0.00	no	NC
SW08-PZM053	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW08-PZM053	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW08-PZM053	2-Hexanone	10	U	34000	0.00	no	NC
SW08-PZM053	2-Methylnaphthalene	0.028	J	N/A	0.00	no	N/A
SW08-PZM053	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW08-PZM053	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW08-PZM053	3,3'-Dichlorobenzidine	1	U	N/A	0.00	no	N/A
SW08-PZM053	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW08-PZM053	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW08-PZM053	4-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW08-PZM053	Acenaphthene	0.1	U	N/A	0.00	no	N/A

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW08-PZM053	Acetone	24.3	J	95000000	0.00	no	NC
SW08-PZM053	Acetophenone	1	U	N/A	0.00	no	N/A
SW08-PZM053	Aluminum	31.7	B	N/A	0.00	no	N/A
SW08-PZM053	Aluminum, Dissolve	47.6	B	N/A	0.00	no	N/A
SW08-PZM053	Anthracene	0.021	J	N/A	0.00	no	N/A
SW08-PZM053	Antimony	6	U	N/A	0.00	no	N/A
SW08-PZM053	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW08-PZM053	Arsenic	12.3		N/A	0.00	no	N/A
SW08-PZM053	Arsenic, Dissolve	14.8		N/A	0.00	no	N/A
SW08-PZM053	Barium	543		N/A	0.00	no	N/A
SW08-PZM053	Barium, Dissolve	559		N/A	0.00	no	N/A
SW08-PZM053	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW08-PZM053	Benzene	1	U	69	0.00	no	C
SW08-PZM053	Benzo[a]anthracene	0.018	J	NVT	0.00	no	C
SW08-PZM053	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW08-PZM053	Benzo[b]fluoranthene	0.018	J	N/A	0.00	no	N/A
SW08-PZM053	Benzo[k]fluoranthene	0.014	J	N/A	0.00	no	N/A
SW08-PZM053	Beryllium	1	U	N/A	0.00	no	N/A
SW08-PZM053	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW08-PZM053	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW08-PZM053	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW08-PZM053	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW08-PZM053	bis(2-Ethylhexyl)phthalate	0.13	B	N/A	0.00	no	N/A
SW08-PZM053	Bromodichloromethane	1	U	38	0.00	no	C
SW08-PZM053	Bromoform	1	U	5100	0.00	no	C
SW08-PZM053	Bromomethane	1	U	73	0.00	no	NC
SW08-PZM053	Cadmium	0.95	B	N/A	0.00	no	N/A
SW08-PZM053	Cadmium, Dissolve	0.8	B	N/A	0.00	no	N/A
SW08-PZM053	Caprolactam	2.5	U	N/A	0.00	no	N/A
SW08-PZM053	Carbon disulfide	1	U	5200	0.00	no	NC
SW08-PZM053	Carbon tetrachloride	1	U	18	0.00	no	C
SW08-PZM053	Chlorobenzene	1	U	1700	0.00	no	NC
SW08-PZM053	Chloroethane	1	U	97000	0.00	no	NC
SW08-PZM053	Chloroform	1	U	36	0.00	no	C
SW08-PZM053	Chloromethane	1	U	1100	0.00	no	NC
SW08-PZM053	Chromium	1.3	J	N/A	0.00	no	N/A
SW08-PZM053	Chromium VI	10	U	N/A	0.00	no	N/A
SW08-PZM053	Chromium, Dissolve	1.3	J	N/A	0.00	no	N/A
SW08-PZM053	Chrysene	0.01	J	N/A	0.00	no	N/A
SW08-PZM053	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW08-PZM053	Cobalt	25	U	N/A	0.00	no	N/A
SW08-PZM053	Cobalt, Dissolve	25	U	N/A	0.00	no	N/A
SW08-PZM053	Copper	5	U	N/A	0.00	no	N/A
SW08-PZM053	Copper, Dissolve	5	U	N/A	0.00	no	N/A
SW08-PZM053	Cyanide	10	U	3.5	0.00	no	NC
SW08-PZM053	Cyclohexane	10	U	4300	0.00	no	NC
SW08-PZM053	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW08-PZM053	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW08-PZM053	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW08-PZM053	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW08-PZM053	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW08-PZM053	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW08-PZM053	Ethylbenzene	1	U	150	0.00	no	C
SW08-PZM053	Fluoranthene	0.023	J	N/A	0.00	no	N/A
SW08-PZM053	Fluorene	0.1	U	N/A	0.00	no	N/A
SW08-PZM053	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW08-PZM053	Hexachlorobutadiene	1	U	13	0.00	no	C
SW08-PZM053	Hexachlorocyclopentadiene	1	UJ	0.79	0.00	no	NC
SW08-PZM053	Hexachloroethane	1	U	70	0.00	no	C
SW08-PZM053	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW08-PZM053	Iron	39400		N/A	0.00	no	N/A
SW08-PZM053	Iron, Dissolve	40800		N/A	0.00	no	N/A
SW08-PZM053	Isophorone	1	U	N/A	0.00	no	N/A
SW08-PZM053	Isopropylbenzene	1	U	3700	0.00	no	NC

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW08-PZM053	Lead	25	U	N/A	0.00	no	N/A
SW08-PZM053	Lead, Dissolve	25	U	N/A	0.00	no	N/A
SW08-PZM053	Manganese	1570		N/A	0.00	no	N/A
SW08-PZM053	Manganese, Dissolve	1620		N/A	0.00	no	N/A
SW08-PZM053	Mercury	0.2	U	3.7	0.00	no	NC
SW08-PZM053	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW08-PZM053	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW08-PZM053	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW08-PZM053	Methylene Chloride	1	U	20000	0.00	no	NC
SW08-PZM053	Naphthalene	0.065	B	200	0.00	no	C
SW08-PZM053	Nickel	10	U	N/A	0.00	no	N/A
SW08-PZM053	Nickel, Dissolve	10	U	N/A	0.00	no	N/A
SW08-PZM053	Nitrobenzene	1	U	3100	0.00	no	C
SW08-PZM053	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW08-PZM053	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW08-PZM053	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
SW08-PZM053	Phenol	1	U	N/A	0.00	no	N/A
SW08-PZM053	Pyrene	0.013	J	N/A	0.00	no	N/A
SW08-PZM053	Selenium	8	U	N/A	0.00	no	N/A
SW08-PZM053	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW08-PZM053	Silver	6	U	N/A	0.00	no	N/A
SW08-PZM053	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW08-PZM053	Styrene	1	U	39000	0.00	no	NC
SW08-PZM053	Tetrachloroethene	1	UJ	240	0.00	no	NC
SW08-PZM053	Thallium	50	U	N/A	0.00	no	N/A
SW08-PZM053	Thallium, Dissolve	50	U	N/A	0.00	no	N/A
SW08-PZM053	Toluene	1	U	81000	0.00	no	NC
SW08-PZM053	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW08-PZM053	Trichloroethene	1	U	22	0.00	no	NC
SW08-PZM053	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW08-PZM053	Vanadium	0.97	J	N/A	0.00	no	N/A
SW08-PZM053	Vanadium, Dissolve	1.8	J	N/A	0.00	no	N/A
SW08-PZM053	Vinyl chloride	1	U	25	0.00	no	C
SW08-PZM053	Xylenes	3	U	1600	0.00	no	NC
SW08-PZM053	Zinc	0.91	B	N/A	0.00	no	N/A
SW08-PZM053	Zinc, Dissolve	0.73	B	N/A	0.00	no	N/A
SW09-PZM004	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW09-PZM004	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW09-PZM004	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW09-PZM004	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW09-PZM004	1,1-Biphenyl	1	U	140	0.00	no	NC
SW09-PZM004	1,1-Dichloroethane	1	U	330	0.00	no	C
SW09-PZM004	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW09-PZM004	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW09-PZM004	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW09-PZM004	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW09-PZM004	1,2-Dibromo-3-chloropropane	5	UJ	3.4	0.00	no	C
SW09-PZM004	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW09-PZM004	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW09-PZM004	1,2-Dichloroethane	1	U	98	0.00	no	C
SW09-PZM004	1,2-Dichloropropane	1	U	110	0.00	no	C
SW09-PZM004	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW09-PZM004	1,4-Dioxane	0.1	U	130000	0.00	no	C
SW09-PZM004	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW09-PZM004	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
SW09-PZM004	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW09-PZM004	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW09-PZM004	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW09-PZM004	2,4-Dinitrophenol	2.5	UJ	N/A	0.00	no	N/A
SW09-PZM004	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW09-PZM004	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW09-PZM004	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW09-PZM004	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW09-PZM004	2-Chlorophenol	1	U	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW09-PZM004	2-Hexanone	10	U	34000	0.00	no	NC
SW09-PZM004	2-Methylnaphthalene	0.1	U	N/A	0.00	no	N/A
SW09-PZM004	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW09-PZM004	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW09-PZM004	3,3'-Dichlorobenzidine	1	R	N/A	0.00	no	N/A
SW09-PZM004	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW09-PZM004	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW09-PZM004	4-Nitroaniline	2.5	UJ	N/A	0.00	no	N/A
SW09-PZM004	Acenaphthene	0.1	U	N/A	0.00	no	N/A
SW09-PZM004	Acetone	10	R	95000000	0.00	no	NC
SW09-PZM004	Acetophenone	1	U	N/A	0.00	no	N/A
SW09-PZM004	Aluminum	1490		N/A	0.00	no	N/A
SW09-PZM004	Aluminum, Dissolve	89		N/A	0.00	no	N/A
SW09-PZM004	Anthracene	0.1	U	N/A	0.00	no	N/A
SW09-PZM004	Antimony	6	U	N/A	0.00	no	N/A
SW09-PZM004	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW09-PZM004	Arsenic	5	U	N/A	0.00	no	N/A
SW09-PZM004	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SW09-PZM004	Barium	72.8		N/A	0.00	no	N/A
SW09-PZM004	Barium, Dissolve	73.8		N/A	0.00	no	N/A
SW09-PZM004	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW09-PZM004	Benzene	1	U	69	0.00	no	C
SW09-PZM004	Benzo[a]anthracene	0.1	U	NVT	0.00	no	C
SW09-PZM004	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW09-PZM004	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW09-PZM004	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW09-PZM004	Beryllium	0.41	B	N/A	0.00	no	N/A
SW09-PZM004	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW09-PZM004	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW09-PZM004	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW09-PZM004	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW09-PZM004	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A
SW09-PZM004	Bromodichloromethane	1	U	38	0.00	no	C
SW09-PZM004	Bromoform	1	UJ	5100	0.00	no	C
SW09-PZM004	Bromomethane	1	UJ	73	0.00	no	NC
SW09-PZM004	Cadmium	1.5	J	N/A	0.00	no	N/A
SW09-PZM004	Cadmium, Dissolve	1.8	J	N/A	0.00	no	N/A
SW09-PZM004	Caprolactam	2.5	UJ	N/A	0.00	no	N/A
SW09-PZM004	Carbon disulfide	1	U	5200	0.00	no	NC
SW09-PZM004	Carbon tetrachloride	1	U	18	0.00	no	C
SW09-PZM004	Chlorobenzene	1	U	1700	0.00	no	NC
SW09-PZM004	Chloroethane	1	U	97000	0.00	no	NC
SW09-PZM004	Chloroform	1	U	36	0.00	no	C
SW09-PZM004	Chloromethane	1	UJ	1100	0.00	no	NC
SW09-PZM004	Chromium	2.2	B	N/A	0.00	no	N/A
SW09-PZM004	Chromium VI	10	U	N/A	0.00	no	N/A
SW09-PZM004	Chromium, Dissolve	5	U	N/A	0.00	no	N/A
SW09-PZM004	Chrysene	0.1	U	N/A	0.00	no	N/A
SW09-PZM004	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW09-PZM004	Cobalt	43.1		N/A	0.00	no	N/A
SW09-PZM004	Cobalt, Dissolve	57.4		N/A	0.00	no	N/A
SW09-PZM004	Copper	8.8		N/A	0.00	no	N/A
SW09-PZM004	Copper, Dissolve	5.9		N/A	0.00	no	N/A
SW09-PZM004	Cyanide	10	U	3.5	0.00	no	NC
SW09-PZM004	Cyclohexane	10	U	4300	0.00	no	NC
SW09-PZM004	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW09-PZM004	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW09-PZM004	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW09-PZM004	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW09-PZM004	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW09-PZM004	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW09-PZM004	Ethylbenzene	1	U	150	0.00	no	C
SW09-PZM004	Fluoranthene	0.1	U	N/A	0.00	no	N/A
SW09-PZM004	Fluorene	0.1	U	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW09-PZM004	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW09-PZM004	Hexachlorobutadiene	1	U	13	0.00	no	C
SW09-PZM004	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW09-PZM004	Hexachloroethane	1	U	70	0.00	no	C
SW09-PZM004	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW09-PZM004	Iron	1230		N/A	0.00	no	N/A
SW09-PZM004	Iron, Dissolve	626		N/A	0.00	no	N/A
SW09-PZM004	Isophorone	1	U	N/A	0.00	no	N/A
SW09-PZM004	Isopropylbenzene	1	U	3700	0.00	no	NC
SW09-PZM004	Lead	5	U	N/A	0.00	no	N/A
SW09-PZM004	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW09-PZM004	Manganese	986		N/A	0.00	no	N/A
SW09-PZM004	Manganese, Dissolve	1280	J	N/A	0.00	no	N/A
SW09-PZM004	Mercury	0.06	B	3.7	0.02	no	NC
SW09-PZM004	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW09-PZM004	Methyl Acetate	5	R	N/A	0.00	no	N/A
SW09-PZM004	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW09-PZM004	Methylene Chloride	1	U	20000	0.00	no	NC
SW09-PZM004	Naphthalene	0.047	B	200	0.00	no	C
SW09-PZM004	Nickel	40.7		N/A	0.00	no	N/A
SW09-PZM004	Nickel, Dissolve	51.3		N/A	0.00	no	N/A
SW09-PZM004	Nitrobenzene	1	U	3100	0.00	no	C
SW09-PZM004	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW09-PZM004	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW09-PZM004	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
SW09-PZM004	Phenol	1	U	N/A	0.00	no	N/A
SW09-PZM004	Pyrene	0.1	U	N/A	0.00	no	N/A
SW09-PZM004	Selenium	8	U	N/A	0.00	no	N/A
SW09-PZM004	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW09-PZM004	Silver	6	U	N/A	0.00	no	N/A
SW09-PZM004	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW09-PZM004	Styrene	1	U	39000	0.00	no	NC
SW09-PZM004	Tetrachloroethene	1	U	240	0.00	no	NC
SW09-PZM004	Thallium	10	U	N/A	0.00	no	N/A
SW09-PZM004	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW09-PZM004	Toluene	1	U	81000	0.00	no	NC
SW09-PZM004	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW09-PZM004	Trichloroethene	1	U	22	0.00	no	NC
SW09-PZM004	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW09-PZM004	Vanadium	4.6	B	N/A	0.00	no	N/A
SW09-PZM004	Vanadium, Dissolve	2.2	B	N/A	0.00	no	N/A
SW09-PZM004	Vinyl chloride	1	U	25	0.00	no	C
SW09-PZM004	Xylenes	3	U	1600	0.00	no	NC
SW09-PZM004	Zinc	66.1		N/A	0.00	no	N/A
SW09-PZM004	Zinc, Dissolve	75.5		N/A	0.00	no	N/A
SW09-PZM028	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW09-PZM028	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW09-PZM028	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW09-PZM028	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW09-PZM028	1,1-Biphenyl	1	U	140	0.00	no	NC
SW09-PZM028	1,1-Dichloroethane	1	U	330	0.00	no	C
SW09-PZM028	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW09-PZM028	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW09-PZM028	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW09-PZM028	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW09-PZM028	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW09-PZM028	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW09-PZM028	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW09-PZM028	1,2-Dichloroethane	1	U	98	0.00	no	C
SW09-PZM028	1,2-Dichloropropane	1	U	110	0.00	no	C
SW09-PZM028	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW09-PZM028	1,4-Dioxane	0.1	U	130000	0.00	no	C
SW09-PZM028	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW09-PZM028	2,4,5-Trichlorophenol	2.6	U	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW09-PZM028	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW09-PZM028	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW09-PZM028	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW09-PZM028	2,4-Dinitrophenol	2.6	U	N/A	0.00	no	N/A
SW09-PZM028	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW09-PZM028	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW09-PZM028	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW09-PZM028	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW09-PZM028	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW09-PZM028	2-Hexanone	10	U	34000	0.00	no	NC
SW09-PZM028	2-Methylnaphthalene	0.027	B	N/A	0.00	no	N/A
SW09-PZM028	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW09-PZM028	2-Nitroaniline	2.6	U	N/A	0.00	no	N/A
SW09-PZM028	3,3'-Dichlorobenzidine	1	U	N/A	0.00	no	N/A
SW09-PZM028	4-Chloroaniline	1	UJ	N/A	0.00	no	N/A
SW09-PZM028	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW09-PZM028	4-Nitroaniline	2.6	U	N/A	0.00	no	N/A
SW09-PZM028	Acenaphthene	0.032	B	N/A	0.00	no	N/A
SW09-PZM028	Acetone	10	R	95000000	0.00	no	NC
SW09-PZM028	Acetophenone	1	U	N/A	0.00	no	N/A
SW09-PZM028	Aluminum	70		N/A	0.00	no	N/A
SW09-PZM028	Aluminum, Dissolve	85.6		N/A	0.00	no	N/A
SW09-PZM028	Anthracene	0.017	J	N/A	0.00	no	N/A
SW09-PZM028	Antimony	6	U	N/A	0.00	no	N/A
SW09-PZM028	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW09-PZM028	Arsenic	5	U	N/A	0.00	no	N/A
SW09-PZM028	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SW09-PZM028	Barium	119		N/A	0.00	no	N/A
SW09-PZM028	Barium, Dissolve	107		N/A	0.00	no	N/A
SW09-PZM028	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW09-PZM028	Benzene	1	U	69	0.00	no	C
SW09-PZM028	Benzo[a]anthracene	0.015	J	NVT	0.00	no	C
SW09-PZM028	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW09-PZM028	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW09-PZM028	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW09-PZM028	Beryllium	1	U	N/A	0.00	no	N/A
SW09-PZM028	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW09-PZM028	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW09-PZM028	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW09-PZM028	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW09-PZM028	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A
SW09-PZM028	Bromodichloromethane	1	U	38	0.00	no	C
SW09-PZM028	Bromoform	1	U	5100	0.00	no	C
SW09-PZM028	Bromomethane	1	U	73	0.00	no	NC
SW09-PZM028	Cadmium	3	U	N/A	0.00	no	N/A
SW09-PZM028	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A
SW09-PZM028	Caprolactam	2.6	UJ	N/A	0.00	no	N/A
SW09-PZM028	Carbon disulfide	1	U	5200	0.00	no	NC
SW09-PZM028	Carbon tetrachloride	1	U	18	0.00	no	C
SW09-PZM028	Chlorobenzene	1	U	1700	0.00	no	NC
SW09-PZM028	Chloroethane	1	U	97000	0.00	no	NC
SW09-PZM028	Chloroform	1	U	36	0.00	no	C
SW09-PZM028	Chloromethane	1	U	1100	0.00	no	NC
SW09-PZM028	Chromium	5	U	N/A	0.00	no	N/A
SW09-PZM028	Chromium VI	10	U	N/A	0.00	no	N/A
SW09-PZM028	Chromium, Dissolve	5	U	N/A	0.00	no	N/A
SW09-PZM028	Chrysene	0.1	U	N/A	0.00	no	N/A
SW09-PZM028	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW09-PZM028	Cobalt	5	U	N/A	0.00	no	N/A
SW09-PZM028	Cobalt, Dissolve	5	U	N/A	0.00	no	N/A
SW09-PZM028	Copper	5	U	N/A	0.00	no	N/A
SW09-PZM028	Copper, Dissolve	3.3	B	N/A	0.00	no	N/A
SW09-PZM028	Cyanide	10	U	3.5	0.00	no	NC
SW09-PZM028	Cyclohexane	10	U	4300	0.00	no	NC

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW09-PZM028	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW09-PZM028	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW09-PZM028	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW09-PZM028	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW09-PZM028	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW09-PZM028	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW09-PZM028	Ethylbenzene	1	U	150	0.00	no	C
SW09-PZM028	Fluoranthene	0.027	J	N/A	0.00	no	N/A
SW09-PZM028	Fluorene	0.022	B	N/A	0.00	no	N/A
SW09-PZM028	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW09-PZM028	Hexachlorobutadiene	1	U	13	0.00	no	C
SW09-PZM028	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW09-PZM028	Hexachloroethane	1	U	70	0.00	no	C
SW09-PZM028	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW09-PZM028	Iron	52200		N/A	0.00	no	N/A
SW09-PZM028	Iron, Dissolve	50400		N/A	0.00	no	N/A
SW09-PZM028	Isophorone	1	U	N/A	0.00	no	N/A
SW09-PZM028	Isopropylbenzene	1	U	3700	0.00	no	NC
SW09-PZM028	Lead	5	U	N/A	0.00	no	N/A
SW09-PZM028	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW09-PZM028	Manganese	3860		N/A	0.00	no	N/A
SW09-PZM028	Manganese, Dissolve	3770		N/A	0.00	no	N/A
SW09-PZM028	Mercury	0.2	U	3.7	0.00	no	NC
SW09-PZM028	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW09-PZM028	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW09-PZM028	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW09-PZM028	Methylene Chloride	1	U	20000	0.00	no	NC
SW09-PZM028	Naphthalene	0.084	B	200	0.00	no	C
SW09-PZM028	Nickel	10	U	N/A	0.00	no	N/A
SW09-PZM028	Nickel, Dissolve	1.4	B	N/A	0.00	no	N/A
SW09-PZM028	Nitrobenzene	1	U	3100	0.00	no	C
SW09-PZM028	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW09-PZM028	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW09-PZM028	Pentachlorophenol	2.6	U	N/A	0.00	no	N/A
SW09-PZM028	Phenol	1	U	N/A	0.00	no	N/A
SW09-PZM028	Pyrene	0.021	J	N/A	0.00	no	N/A
SW09-PZM028	Selenium	5	B	N/A	0.00	no	N/A
SW09-PZM028	Selenium, Dissolve	3.1	J	N/A	0.00	no	N/A
SW09-PZM028	Silver	1.1	J	N/A	0.00	no	N/A
SW09-PZM028	Silver, Dissolve	1.5	J	N/A	0.00	no	N/A
SW09-PZM028	Styrene	1	U	39000	0.00	no	NC
SW09-PZM028	Tetrachloroethene	1	UJ	240	0.00	no	NC
SW09-PZM028	Thallium	10	U	N/A	0.00	no	N/A
SW09-PZM028	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW09-PZM028	Toluene	1	U	81000	0.00	no	NC
SW09-PZM028	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW09-PZM028	Trichloroethene	1	U	22	0.00	no	NC
SW09-PZM028	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW09-PZM028	Vanadium	5	U	N/A	0.00	no	N/A
SW09-PZM028	Vanadium, Dissolve	0.93	J	N/A	0.00	no	N/A
SW09-PZM028	Vinyl chloride	1	U	25	0.00	no	C
SW09-PZM028	Xylenes	3	U	1600	0.00	no	NC
SW09-PZM028	Zinc	1.7	J	N/A	0.00	no	N/A
SW09-PZM028	Zinc, Dissolve	1.8	B	N/A	0.00	no	N/A
SW09-PZM068	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW09-PZM068	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW09-PZM068	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW09-PZM068	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW09-PZM068	1,1-Biphenyl	1	U	140	0.00	no	NC
SW09-PZM068	1,1-Dichloroethane	1	U	330	0.00	no	C
SW09-PZM068	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW09-PZM068	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW09-PZM068	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW09-PZM068	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW09-PZM068	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW09-PZM068	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW09-PZM068	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW09-PZM068	1,2-Dichloroethane	1	U	98	0.00	no	C
SW09-PZM068	1,2-Dichloropropane	1	U	110	0.00	no	C
SW09-PZM068	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW09-PZM068	1,4-Dioxane	0.1	U	130000	0.00	no	C
SW09-PZM068	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW09-PZM068	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
SW09-PZM068	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW09-PZM068	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW09-PZM068	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW09-PZM068	2,4-Dinitrophenol	2.5	U	N/A	0.00	no	N/A
SW09-PZM068	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW09-PZM068	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW09-PZM068	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW09-PZM068	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW09-PZM068	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW09-PZM068	2-Hexanone	10	U	34000	0.00	no	NC
SW09-PZM068	2-Methylnaphthalene	0.042	J	N/A	0.00	no	N/A
SW09-PZM068	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW09-PZM068	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW09-PZM068	3,3'-Dichlorobenzidine	1	UJ	N/A	0.00	no	N/A
SW09-PZM068	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW09-PZM068	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW09-PZM068	4-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW09-PZM068	Acenaphthene	0.1	U	N/A	0.00	no	N/A
SW09-PZM068	Acetone	10	R	95000000	0.00	no	NC
SW09-PZM068	Acetophenone	1	U	N/A	0.00	no	N/A
SW09-PZM068	Aluminum	167		N/A	0.00	no	N/A
SW09-PZM068	Aluminum, Dissolve	21.6	B	N/A	0.00	no	N/A
SW09-PZM068	Anthracene	0.1	U	N/A	0.00	no	N/A
SW09-PZM068	Antimony	6	U	N/A	0.00	no	N/A
SW09-PZM068	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW09-PZM068	Arsenic	5	U	N/A	0.00	no	N/A
SW09-PZM068	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SW09-PZM068	Barium	21.2		N/A	0.00	no	N/A
SW09-PZM068	Barium, Dissolve	20.3		N/A	0.00	no	N/A
SW09-PZM068	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW09-PZM068	Benzene	1	U	69	0.00	no	C
SW09-PZM068	Benzo[a]anthracene	0.1	U	NVT	0.00	no	C
SW09-PZM068	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW09-PZM068	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW09-PZM068	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW09-PZM068	Beryllium	1	U	N/A	0.00	no	N/A
SW09-PZM068	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW09-PZM068	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW09-PZM068	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW09-PZM068	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW09-PZM068	bis(2-Ethylhexyl)phthalate	1	UJ	N/A	0.00	no	N/A
SW09-PZM068	Bromodichloromethane	1	U	38	0.00	no	C
SW09-PZM068	Bromoform	1	U	5100	0.00	no	C
SW09-PZM068	Bromomethane	1	U	73	0.00	no	NC
SW09-PZM068	Cadmium	0.7	J	N/A	0.00	no	N/A
SW09-PZM068	Cadmium, Dissolve	0.78	J	N/A	0.00	no	N/A
SW09-PZM068	Caprolactam	2.5	U	N/A	0.00	no	N/A
SW09-PZM068	Carbon disulfide	1	U	5200	0.00	no	NC
SW09-PZM068	Carbon tetrachloride	1	U	18	0.00	no	C
SW09-PZM068	Chlorobenzene	1	U	1700	0.00	no	NC
SW09-PZM068	Chloroethane	1	U	97000	0.00	no	NC
SW09-PZM068	Chloroform	1	U	36	0.00	no	C
SW09-PZM068	Chloromethane	1	U	1100	0.00	no	NC
SW09-PZM068	Chromium	1.2	J	N/A	0.00	no	N/A
SW09-PZM068	Chromium VI	10	U	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW09-PZM068	Chromium, Dissolve	1.1	B	N/A	0.00	no	N/A
SW09-PZM068	Chrysene	0.1	U	N/A	0.00	no	N/A
SW09-PZM068	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW09-PZM068	Cobalt	5	U	N/A	0.00	no	N/A
SW09-PZM068	Cobalt, Dissolve	5	U	N/A	0.00	no	N/A
SW09-PZM068	Copper	2.4	J	N/A	0.00	no	N/A
SW09-PZM068	Copper, Dissolve	5	U	N/A	0.00	no	N/A
SW09-PZM068	Cyanide	10	U	3.5	0.00	no	NC
SW09-PZM068	Cyclohexane	10	U	4300	0.00	no	NC
SW09-PZM068	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW09-PZM068	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW09-PZM068	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW09-PZM068	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW09-PZM068	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW09-PZM068	Di-n-ocytlphthalate	1	UJ	N/A	0.00	no	N/A
SW09-PZM068	Ethylbenzene	1	U	150	0.00	no	C
SW09-PZM068	Fluoranthene	0.1	U	N/A	0.00	no	N/A
SW09-PZM068	Fluorene	0.1	U	N/A	0.00	no	N/A
SW09-PZM068	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW09-PZM068	Hexachlorobutadiene	1	U	13	0.00	no	C
SW09-PZM068	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW09-PZM068	Hexachloroethane	1	U	70	0.00	no	C
SW09-PZM068	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW09-PZM068	Iron	323		N/A	0.00	no	N/A
SW09-PZM068	Iron, Dissolve	99.8		N/A	0.00	no	N/A
SW09-PZM068	Isophorone	1	U	N/A	0.00	no	N/A
SW09-PZM068	Isopropylbenzene	1	U	3700	0.00	no	NC
SW09-PZM068	Lead	5	U	N/A	0.00	no	N/A
SW09-PZM068	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW09-PZM068	Manganese	41.8		N/A	0.00	no	N/A
SW09-PZM068	Manganese, Dissolve	39.5		N/A	0.00	no	N/A
SW09-PZM068	Mercury	0.2	U	3.7	0.00	no	NC
SW09-PZM068	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW09-PZM068	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW09-PZM068	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW09-PZM068	Methylene Chloride	1	U	20000	0.00	no	NC
SW09-PZM068	Naphthalene	0.091	B	200	0.00	no	C
SW09-PZM068	Nickel	1.3	B	N/A	0.00	no	N/A
SW09-PZM068	Nickel, Dissolve	0.88	B	N/A	0.00	no	N/A
SW09-PZM068	Nitrobenzene	1	U	3100	0.00	no	C
SW09-PZM068	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW09-PZM068	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW09-PZM068	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
SW09-PZM068	Phenol	1	U	N/A	0.00	no	N/A
SW09-PZM068	Pyrene	0.1	U	N/A	0.00	no	N/A
SW09-PZM068	Selenium	8	U	N/A	0.00	no	N/A
SW09-PZM068	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW09-PZM068	Silver	6	U	N/A	0.00	no	N/A
SW09-PZM068	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW09-PZM068	Styrene	1	U	39000	0.00	no	NC
SW09-PZM068	Tetrachloroethene	1	U	240	0.00	no	NC
SW09-PZM068	Thallium	10	U	N/A	0.00	no	N/A
SW09-PZM068	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW09-PZM068	Toluene	1	U	81000	0.00	no	NC
SW09-PZM068	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW09-PZM068	Trichloroethene	1	U	22	0.00	no	NC
SW09-PZM068	Trichlorofluoromethane	1	UJ	N/A	0.00	no	N/A
SW09-PZM068	Vanadium	2	B	N/A	0.00	no	N/A
SW09-PZM068	Vanadium, Dissolve	1.2	B	N/A	0.00	no	N/A
SW09-PZM068	Vinyl chloride	1	U	25	0.00	no	C
SW09-PZM068	Xylenes	3	U	1600	0.00	no	NC
SW09-PZM068	Zinc	3.5	B	N/A	0.00	no	N/A
SW09-PZM068	Zinc, Dissolve	1.7	B	N/A	0.00	no	N/A
SW10-PZM012	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW10-PZM012	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW10-PZM012	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW10-PZM012	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW10-PZM012	1,1-Biphenyl	1	U	140	0.00	no	NC
SW10-PZM012	1,1-Dichloroethane	1	U	330	0.00	no	C
SW10-PZM012	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW10-PZM012	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW10-PZM012	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW10-PZM012	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW10-PZM012	1,2-Dibromo-3-chloropropane	5	UJ	3.4	0.00	no	C
SW10-PZM012	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW10-PZM012	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW10-PZM012	1,2-Dichloroethane	1	U	98	0.00	no	C
SW10-PZM012	1,2-Dichloropropane	1	U	110	0.00	no	C
SW10-PZM012	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW10-PZM012	1,4-Dioxane	0.1	U	130000	0.00	no	C
SW10-PZM012	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW10-PZM012	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
SW10-PZM012	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW10-PZM012	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW10-PZM012	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW10-PZM012	2,4-Dinitrophenol	2.5	UJ	N/A	0.00	no	N/A
SW10-PZM012	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW10-PZM012	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW10-PZM012	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW10-PZM012	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW10-PZM012	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW10-PZM012	2-Hexanone	10	U	34000	0.00	no	NC
SW10-PZM012	2-Methylnaphthalene	0.1	U	N/A	0.00	no	N/A
SW10-PZM012	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW10-PZM012	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW10-PZM012	3,3'-Dichlorobenzidine	1	R	N/A	0.00	no	N/A
SW10-PZM012	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW10-PZM012	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW10-PZM012	4-Nitroaniline	2.5	UJ	N/A	0.00	no	N/A
SW10-PZM012	Acenaphthene	0.1	U	N/A	0.00	no	N/A
SW10-PZM012	Acetone	10	R	95000000	0.00	no	NC
SW10-PZM012	Acetophenone	1	U	N/A	0.00	no	N/A
SW10-PZM012	Aluminum	106		N/A	0.00	no	N/A
SW10-PZM012	Aluminum, Dissolve	50	U	N/A	0.00	no	N/A
SW10-PZM012	Anthracene	0.1	U	N/A	0.00	no	N/A
SW10-PZM012	Antimony	6	U	N/A	0.00	no	N/A
SW10-PZM012	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW10-PZM012	Arsenic	5	U	N/A	0.00	no	N/A
SW10-PZM012	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SW10-PZM012	Barium	28.4		N/A	0.00	no	N/A
SW10-PZM012	Barium, Dissolve	28.5		N/A	0.00	no	N/A
SW10-PZM012	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW10-PZM012	Benzene	1	U	69	0.00	no	C
SW10-PZM012	Benzo[a]anthracene	0.1	U	NVT	0.00	no	C
SW10-PZM012	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW10-PZM012	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW10-PZM012	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW10-PZM012	Beryllium	1	U	N/A	0.00	no	N/A
SW10-PZM012	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW10-PZM012	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW10-PZM012	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW10-PZM012	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW10-PZM012	bis(2-Ethylhexyl)phthalate	0.27	B	N/A	0.00	no	N/A
SW10-PZM012	Bromodichloromethane	1	U	38	0.00	no	C
SW10-PZM012	Bromoform	1	UJ	5100	0.00	no	C
SW10-PZM012	Bromomethane	1	UJ	73	0.00	no	NC
SW10-PZM012	Cadmium	3	U	N/A	0.00	no	N/A
SW10-PZM012	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW10-PZM012	Caprolactam	2.5	UJ	N/A	0.00	no	N/A
SW10-PZM012	Carbon disulfide	1	U	5200	0.00	no	NC
SW10-PZM012	Carbon tetrachloride	1	U	18	0.00	no	C
SW10-PZM012	Chlorobenzene	1	U	1700	0.00	no	NC
SW10-PZM012	Chloroethane	1	U	97000	0.00	no	NC
SW10-PZM012	Chloroform	1	U	36	0.00	no	C
SW10-PZM012	Chloromethane	1	UJ	1100	0.00	no	NC
SW10-PZM012	Chromium	17.2		N/A	0.00	no	N/A
SW10-PZM012	Chromium VI	15		N/A	0.00	no	N/A
SW10-PZM012	Chromium, Dissolve	15.6		N/A	0.00	no	N/A
SW10-PZM012	Chrysene	0.1	U	N/A	0.00	no	N/A
SW10-PZM012	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW10-PZM012	Cobalt	5	U	N/A	0.00	no	N/A
SW10-PZM012	Cobalt, Dissolve	5	U	N/A	0.00	no	N/A
SW10-PZM012	Copper	1.7	B	N/A	0.00	no	N/A
SW10-PZM012	Copper, Dissolve	1.6	B	N/A	0.00	no	N/A
SW10-PZM012	Cyanide	10	U	3.5	0.00	no	NC
SW10-PZM012	Cyclohexane	10	U	4300	0.00	no	NC
SW10-PZM012	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW10-PZM012	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW10-PZM012	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW10-PZM012	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW10-PZM012	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW10-PZM012	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW10-PZM012	Ethylbenzene	1	U	150	0.00	no	C
SW10-PZM012	Fluoranthene	0.1	U	N/A	0.00	no	N/A
SW10-PZM012	Fluorene	0.1	U	N/A	0.00	no	N/A
SW10-PZM012	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW10-PZM012	Hexachlorobutadiene	1	U	13	0.00	no	C
SW10-PZM012	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW10-PZM012	Hexachloroethane	1	U	70	0.00	no	C
SW10-PZM012	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW10-PZM012	Iron	486		N/A	0.00	no	N/A
SW10-PZM012	Iron, Dissolve	70	U	N/A	0.00	no	N/A
SW10-PZM012	Isophorone	1	U	N/A	0.00	no	N/A
SW10-PZM012	Isopropylbenzene	1	U	3700	0.00	no	NC
SW10-PZM012	Lead	5	U	N/A	0.00	no	N/A
SW10-PZM012	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW10-PZM012	Manganese	3.8	J	N/A	0.00	no	N/A
SW10-PZM012	Manganese, Dissolve	4	J	N/A	0.00	no	N/A
SW10-PZM012	Mercury	0.06	B	3.7	0.02	no	NC
SW10-PZM012	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW10-PZM012	Methyl Acetate	5	R	N/A	0.00	no	N/A
SW10-PZM012	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW10-PZM012	Methylene Chloride	1	U	20000	0.00	no	NC
SW10-PZM012	Naphthalene	0.04	B	200	0.00	no	C
SW10-PZM012	Nickel	2.5	B	N/A	0.00	no	N/A
SW10-PZM012	Nickel, Dissolve	2.3	B	N/A	0.00	no	N/A
SW10-PZM012	Nitrobenzene	1	U	3100	0.00	no	C
SW10-PZM012	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW10-PZM012	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW10-PZM012	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
SW10-PZM012	Phenol	1	U	N/A	0.00	no	N/A
SW10-PZM012	Pyrene	0.1	U	N/A	0.00	no	N/A
SW10-PZM012	Selenium	8	U	N/A	0.00	no	N/A
SW10-PZM012	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW10-PZM012	Silver	6	U	N/A	0.00	no	N/A
SW10-PZM012	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW10-PZM012	Styrene	1	U	39000	0.00	no	NC
SW10-PZM012	Tetrachloroethene	1	U	240	0.00	no	NC
SW10-PZM012	Thallium	10	U	N/A	0.00	no	N/A
SW10-PZM012	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW10-PZM012	Toluene	1	U	81000	0.00	no	NC
SW10-PZM012	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW10-PZM012	Trichloroethene	1	U	22	0.00	no	NC
SW10-PZM012	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW10-PZM012	Vanadium	14.4		N/A	0.00	no	N/A
SW10-PZM012	Vanadium, Dissolve	13		N/A	0.00	no	N/A
SW10-PZM012	Vinyl chloride	1	U	25	0.00	no	C
SW10-PZM012	Xylenes	3	U	1600	0.00	no	NC
SW10-PZM012	Zinc	3.9	B	N/A	0.00	no	N/A
SW10-PZM012	Zinc, Dissolve	1.4	B	N/A	0.00	no	N/A
SW11-PZM005	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW11-PZM005	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW11-PZM005	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW11-PZM005	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW11-PZM005	1,1-Biphenyl	1	U	140	0.00	no	NC
SW11-PZM005	1,1-Dichloroethane	1	U	330	0.00	no	C
SW11-PZM005	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW11-PZM005	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW11-PZM005	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW11-PZM005	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW11-PZM005	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW11-PZM005	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW11-PZM005	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW11-PZM005	1,2-Dichloroethane	1	U	98	0.00	no	C
SW11-PZM005	1,2-Dichloropropane	1	U	110	0.00	no	C
SW11-PZM005	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW11-PZM005	1,4-Dioxane	0.1	U	130000	0.00	no	C
SW11-PZM005	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW11-PZM005	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
SW11-PZM005	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW11-PZM005	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW11-PZM005	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW11-PZM005	2,4-Dinitrophenol	2.5	U	N/A	0.00	no	N/A
SW11-PZM005	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW11-PZM005	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW11-PZM005	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW11-PZM005	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW11-PZM005	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW11-PZM005	2-Hexanone	10	U	34000	0.00	no	NC
SW11-PZM005	2-Methylnaphthalene	0.1	U	N/A	0.00	no	N/A
SW11-PZM005	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW11-PZM005	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW11-PZM005	3,3'-Dichlorobenzidine	1	U	N/A	0.00	no	N/A
SW11-PZM005	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW11-PZM005	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW11-PZM005	4-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW11-PZM005	Acenaphthene	0.1	U	N/A	0.00	no	N/A
SW11-PZM005	Acetone	10	U	95000000	0.00	no	NC
SW11-PZM005	Acetophenone	1	U	N/A	0.00	no	N/A
SW11-PZM005	Aluminum	71.4		N/A	0.00	no	N/A
SW11-PZM005	Aluminum, Dissolve	21.3	J	N/A	0.00	no	N/A
SW11-PZM005	Anthracene	0.1	U	N/A	0.00	no	N/A
SW11-PZM005	Antimony	6	U	N/A	0.00	no	N/A
SW11-PZM005	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW11-PZM005	Arsenic	5	U	N/A	0.00	no	N/A
SW11-PZM005	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SW11-PZM005	Barium	50.1		N/A	0.00	no	N/A
SW11-PZM005	Barium, Dissolve	48.8		N/A	0.00	no	N/A
SW11-PZM005	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW11-PZM005	Benzene	1	U	69	0.00	no	C
SW11-PZM005	Benzo[a]anthracene	0.1	U	NVT	0.00	no	C
SW11-PZM005	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW11-PZM005	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW11-PZM005	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW11-PZM005	Beryllium	1	U	N/A	0.00	no	N/A
SW11-PZM005	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW11-PZM005	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW11-PZM005	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW11-PZM005	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW11-PZM005	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A
SW11-PZM005	Bromodichloromethane	1	U	38	0.00	no	C
SW11-PZM005	Bromoform	1	U	5100	0.00	no	C
SW11-PZM005	Bromomethane	1	U	73	0.00	no	NC
SW11-PZM005	Cadmium	0.77	B	N/A	0.00	no	N/A
SW11-PZM005	Cadmium, Dissolve	0.68	J	N/A	0.00	no	N/A
SW11-PZM005	Caprolactam	2.5	U	N/A	0.00	no	N/A
SW11-PZM005	Carbon disulfide	1	U	5200	0.00	no	NC
SW11-PZM005	Carbon tetrachloride	1	U	18	0.00	no	C
SW11-PZM005	Chlorobenzene	1	U	1700	0.00	no	NC
SW11-PZM005	Chloroethane	1	U	97000	0.00	no	NC
SW11-PZM005	Chloroform	1	U	36	0.00	no	C
SW11-PZM005	Chloromethane	1	U	1100	0.00	no	NC
SW11-PZM005	Chromium	3.6	B	N/A	0.00	no	N/A
SW11-PZM005	Chromium VI	5	J	N/A	0.00	no	N/A
SW11-PZM005	Chromium, Dissolve	3.2	B	N/A	0.00	no	N/A
SW11-PZM005	Chrysene	0.1	U	N/A	0.00	no	N/A
SW11-PZM005	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW11-PZM005	Cobalt	1	J	N/A	0.00	no	N/A
SW11-PZM005	Cobalt, Dissolve	0.96	B	N/A	0.00	no	N/A
SW11-PZM005	Copper	3.7	B	N/A	0.00	no	N/A
SW11-PZM005	Copper, Dissolve	4.2	J	N/A	0.00	no	N/A
SW11-PZM005	Cyanide	10	U	3.5	0.00	no	NC
SW11-PZM005	Cyclohexane	10	U	4300	0.00	no	NC
SW11-PZM005	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW11-PZM005	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW11-PZM005	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW11-PZM005	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW11-PZM005	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW11-PZM005	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW11-PZM005	Ethylbenzene	1	U	150	0.00	no	C
SW11-PZM005	Fluoranthene	0.1	U	N/A	0.00	no	N/A
SW11-PZM005	Fluorene	0.1	U	N/A	0.00	no	N/A
SW11-PZM005	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW11-PZM005	Hexachlorobutadiene	1	U	13	0.00	no	C
SW11-PZM005	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW11-PZM005	Hexachloroethane	1	U	70	0.00	no	C
SW11-PZM005	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW11-PZM005	Iron	40.9	B	N/A	0.00	no	N/A
SW11-PZM005	Iron, Dissolve	68.6	B	N/A	0.00	no	N/A
SW11-PZM005	Isophorone	1	U	N/A	0.00	no	N/A
SW11-PZM005	Isopropylbenzene	1	U	3700	0.00	no	NC
SW11-PZM005	Lead	5	U	N/A	0.00	no	N/A
SW11-PZM005	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW11-PZM005	Manganese	83.6		N/A	0.00	no	N/A
SW11-PZM005	Manganese, Dissolve	73.6		N/A	0.00	no	N/A
SW11-PZM005	Mercury	0.2	U	3.7	0.00	no	NC
SW11-PZM005	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW11-PZM005	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW11-PZM005	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW11-PZM005	Methylene Chloride	1	U	20000	0.00	no	NC
SW11-PZM005	Naphthalene	0.018	B	200	0.00	no	C
SW11-PZM005	Nickel	0.61	B	N/A	0.00	no	N/A
SW11-PZM005	Nickel, Dissolve	1	B	N/A	0.00	no	N/A
SW11-PZM005	Nitrobenzene	1	U	3100	0.00	no	C
SW11-PZM005	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW11-PZM005	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW11-PZM005	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
SW11-PZM005	Phenol	1	U	N/A	0.00	no	N/A
SW11-PZM005	Pyrene	0.1	U	N/A	0.00	no	N/A
SW11-PZM005	Selenium	8	U	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW11-PZM005	Selenium, Dissolve	3.8	J	N/A	0.00	no	N/A
SW11-PZM005	Silver	6	U	N/A	0.00	no	N/A
SW11-PZM005	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW11-PZM005	Styrene	1	U	39000	0.00	no	NC
SW11-PZM005	Tetrachloroethene	1	U	240	0.00	no	NC
SW11-PZM005	Thallium	4.4	J	N/A	0.00	no	N/A
SW11-PZM005	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW11-PZM005	Toluene	1	U	81000	0.00	no	NC
SW11-PZM005	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW11-PZM005	Trichloroethene	1	U	22	0.00	no	NC
SW11-PZM005	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW11-PZM005	Vanadium	12.4		N/A	0.00	no	N/A
SW11-PZM005	Vanadium, Dissolve	12.4		N/A	0.00	no	N/A
SW11-PZM005	Vinyl chloride	1	U	25	0.00	no	C
SW11-PZM005	Xylenes	3	U	1600	0.00	no	NC
SW11-PZM005	Zinc	13.5		N/A	0.00	no	N/A
SW11-PZM005	Zinc, Dissolve	14.8		N/A	0.00	no	N/A
SW12-PZP001	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW12-PZP001	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW12-PZP001	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW12-PZP001	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW12-PZP001	1,1-Biphenyl	1	U	140	0.00	no	NC
SW12-PZP001	1,1-Dichloroethane	1	U	330	0.00	no	C
SW12-PZP001	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW12-PZP001	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW12-PZP001	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW12-PZP001	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW12-PZP001	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW12-PZP001	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW12-PZP001	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW12-PZP001	1,2-Dichloroethane	1	U	98	0.00	no	C
SW12-PZP001	1,2-Dichloropropane	1	U	110	0.00	no	C
SW12-PZP001	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW12-PZP001	1,4-Dioxane	0.1	U	130000	0.00	no	C
SW12-PZP001	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW12-PZP001	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
SW12-PZP001	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW12-PZP001	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW12-PZP001	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW12-PZP001	2,4-Dinitrophenol	2.5	U	N/A	0.00	no	N/A
SW12-PZP001	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW12-PZP001	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW12-PZP001	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW12-PZP001	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW12-PZP001	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW12-PZP001	2-Hexanone	10	U	34000	0.00	no	NC
SW12-PZP001	2-Methylnaphthalene	0.1	U	N/A	0.00	no	N/A
SW12-PZP001	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW12-PZP001	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW12-PZP001	3,3'-Dichlorobenzidine	1	UJ	N/A	0.00	no	N/A
SW12-PZP001	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW12-PZP001	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW12-PZP001	4-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW12-PZP001	Acenaphthene	0.1	U	N/A	0.00	no	N/A
SW12-PZP001	Acetone	10	U	95000000	0.00	no	NC
SW12-PZP001	Acetophenone	1	U	N/A	0.00	no	N/A
SW12-PZP001	Aluminum	2290		N/A	0.00	no	N/A
SW12-PZP001	Aluminum, Dissolve	50	U	N/A	0.00	no	N/A
SW12-PZP001	Anthracene	0.1	U	N/A	0.00	no	N/A
SW12-PZP001	Antimony	6	U	N/A	0.00	no	N/A
SW12-PZP001	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW12-PZP001	Arsenic	5	U	N/A	0.00	no	N/A
SW12-PZP001	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SW12-PZP001	Barium	55.7		N/A	0.00	no	N/A

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW12-PZP001	Barium, Dissolve	47.9		N/A	0.00	no	N/A
SW12-PZP001	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW12-PZP001	Benzene	1	U	69	0.00	no	C
SW12-PZP001	Benzo[a]anthracene	0.1	U	NVT	0.00	no	C
SW12-PZP001	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW12-PZP001	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW12-PZP001	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW12-PZP001	Beryllium	1	U	N/A	0.00	no	N/A
SW12-PZP001	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW12-PZP001	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW12-PZP001	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW12-PZP001	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW12-PZP001	bis(2-Ethylhexyl)phthalate	1	UJ	N/A	0.00	no	N/A
SW12-PZP001	Bromodichloromethane	1	U	38	0.00	no	C
SW12-PZP001	Bromoform	1	U	5100	0.00	no	C
SW12-PZP001	Bromomethane	1	U	73	0.00	no	NC
SW12-PZP001	Cadmium	0.62	J	N/A	0.00	no	N/A
SW12-PZP001	Cadmium, Dissolve	0.65	J	N/A	0.00	no	N/A
SW12-PZP001	Caprolactam	2.5	U	N/A	0.00	no	N/A
SW12-PZP001	Carbon disulfide	1	U	5200	0.00	no	NC
SW12-PZP001	Carbon tetrachloride	1	U	18	0.00	no	C
SW12-PZP001	Chlorobenzene	1	U	1700	0.00	no	NC
SW12-PZP001	Chloroethane	1	U	97000	0.00	no	NC
SW12-PZP001	Chloroform	1	U	36	0.00	no	C
SW12-PZP001	Chloromethane	1	U	1100	0.00	no	NC
SW12-PZP001	Chromium	3	B	N/A	0.00	no	N/A
SW12-PZP001	Chromium VI	10	U	N/A	0.00	no	N/A
SW12-PZP001	Chromium, Dissolve	0.97	B	N/A	0.00	no	N/A
SW12-PZP001	Chrysene	0.1	U	N/A	0.00	no	N/A
SW12-PZP001	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW12-PZP001	Cobalt	6.2		N/A	0.00	no	N/A
SW12-PZP001	Cobalt, Dissolve	6.1		N/A	0.00	no	N/A
SW12-PZP001	Copper	5	U	N/A	0.00	no	N/A
SW12-PZP001	Copper, Dissolve	5	U	N/A	0.00	no	N/A
SW12-PZP001	Cyanide	59		3.5	16.86	YES	NC
SW12-PZP001	Cyclohexane	10	U	4300	0.00	no	NC
SW12-PZP001	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW12-PZP001	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW12-PZP001	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW12-PZP001	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW12-PZP001	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW12-PZP001	Di-n-ocytlphthalate	1	UJ	N/A	0.00	no	N/A
SW12-PZP001	Ethylbenzene	1	U	150	0.00	no	C
SW12-PZP001	Fluoranthene	0.1	U	N/A	0.00	no	N/A
SW12-PZP001	Fluorene	0.1	U	N/A	0.00	no	N/A
SW12-PZP001	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW12-PZP001	Hexachlorobutadiene	1	U	13	0.00	no	C
SW12-PZP001	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW12-PZP001	Hexachloroethane	1	U	70	0.00	no	C
SW12-PZP001	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW12-PZP001	Iron	1470		N/A	0.00	no	N/A
SW12-PZP001	Iron, Dissolve	592		N/A	0.00	no	N/A
SW12-PZP001	Isophorone	1	U	N/A	0.00	no	N/A
SW12-PZP001	Isopropylbenzene	1	U	3700	0.00	no	NC
SW12-PZP001	Lead	5	U	N/A	0.00	no	N/A
SW12-PZP001	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW12-PZP001	Manganese	1030		N/A	0.00	no	N/A
SW12-PZP001	Manganese, Dissolve	1040		N/A	0.00	no	N/A
SW12-PZP001	Mercury	0.2	U	3.7	0.00	no	NC
SW12-PZP001	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW12-PZP001	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW12-PZP001	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW12-PZP001	Methylene Chloride	1	U	20000	0.00	no	NC
SW12-PZP001	Naphthalene	0.1	U	200	0.00	no	C

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW12-PZP001	Nickel	6	B	N/A	0.00	no	N/A
SW12-PZP001	Nickel, Dissolve	5.7	B	N/A	0.00	no	N/A
SW12-PZP001	Nitrobenzene	1	U	3100	0.00	no	C
SW12-PZP001	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW12-PZP001	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW12-PZP001	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
SW12-PZP001	Phenol	1	U	N/A	0.00	no	N/A
SW12-PZP001	Pyrene	0.1	U	N/A	0.00	no	N/A
SW12-PZP001	Selenium	6.1	J	N/A	0.00	no	N/A
SW12-PZP001	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW12-PZP001	Silver	6	U	N/A	0.00	no	N/A
SW12-PZP001	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW12-PZP001	Styrene	1	U	39000	0.00	no	NC
SW12-PZP001	Tetrachloroethene	1	U	240	0.00	no	NC
SW12-PZP001	Thallium	3.8	J	N/A	0.00	no	N/A
SW12-PZP001	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW12-PZP001	Toluene	1	U	81000	0.00	no	NC
SW12-PZP001	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW12-PZP001	Trichloroethene	1	U	22	0.00	no	NC
SW12-PZP001	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW12-PZP001	Vanadium	4.3	B	N/A	0.00	no	N/A
SW12-PZP001	Vanadium, Dissolve	1	J	N/A	0.00	no	N/A
SW12-PZP001	Vinyl chloride	1	U	25	0.00	no	C
SW12-PZP001	Xylenes	3	U	1600	0.00	no	NC
SW12-PZP001	Zinc	50.1		N/A	0.00	no	N/A
SW12-PZP001	Zinc, Dissolve	39		N/A	0.00	no	N/A
SW13-PZM003	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW13-PZM003	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW13-PZM003	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW13-PZM003	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW13-PZM003	1,1-Biphenyl	1.2		140	0.01	no	NC
SW13-PZM003	1,1-Dichloroethane	1	U	330	0.00	no	C
SW13-PZM003	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW13-PZM003	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW13-PZM003	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW13-PZM003	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW13-PZM003	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW13-PZM003	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW13-PZM003	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW13-PZM003	1,2-Dichloroethane	1	U	98	0.00	no	C
SW13-PZM003	1,2-Dichloropropane	1	U	110	0.00	no	C
SW13-PZM003	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW13-PZM003	1,4-Dioxane	0.14		130000	0.00	no	C
SW13-PZM003	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW13-PZM003	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
SW13-PZM003	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW13-PZM003	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW13-PZM003	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW13-PZM003	2,4-Dinitrophenol	2.5	U	N/A	0.00	no	N/A
SW13-PZM003	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW13-PZM003	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW13-PZM003	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW13-PZM003	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW13-PZM003	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW13-PZM003	2-Hexanone	10	U	34000	0.00	no	NC
SW13-PZM003	2-Methylnaphthalene	12.2		N/A	0.00	no	N/A
SW13-PZM003	2-Methylphenol	0.43	J	N/A	0.00	no	N/A
SW13-PZM003	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW13-PZM003	3,3'-Dichlorobenzidine	1	U	N/A	0.00	no	N/A
SW13-PZM003	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW13-PZM003	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW13-PZM003	4-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW13-PZM003	Acenaphthene	0.64		N/A	0.00	no	N/A
SW13-PZM003	Acetone	10	R	95000000	0.00	no	NC

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW13-PZM003	Acetophenone	6.2		N/A	0.00	no	N/A
SW13-PZM003	Aluminum	206	J	N/A	0.00	no	N/A
SW13-PZM003	Aluminum, Dissolve	196		N/A	0.00	no	N/A
SW13-PZM003	Anthracene	2.1		N/A	0.00	no	N/A
SW13-PZM003	Antimony	6	U	N/A	0.00	no	N/A
SW13-PZM003	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW13-PZM003	Arsenic	5	U	N/A	0.00	no	N/A
SW13-PZM003	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SW13-PZM003	Barium	64.2		N/A	0.00	no	N/A
SW13-PZM003	Barium, Dissolve	65.7		N/A	0.00	no	N/A
SW13-PZM003	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW13-PZM003	Benzene	20.4		69	0.30	no	C
SW13-PZM003	Benzo[a]anthracene	0.33		NVT	0.00	no	C
SW13-PZM003	Benzo[a]pyrene	0.04	J	N/A	0.00	no	N/A
SW13-PZM003	Benzo[b]fluoranthene	0.11		N/A	0.00	no	N/A
SW13-PZM003	Benzo[k]fluoranthene	0.11		N/A	0.00	no	N/A
SW13-PZM003	Beryllium	1	U	N/A	0.00	no	N/A
SW13-PZM003	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW13-PZM003	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW13-PZM003	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW13-PZM003	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW13-PZM003	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A
SW13-PZM003	Bromodichloromethane	1	U	38	0.00	no	C
SW13-PZM003	Bromoform	1	U	5100	0.00	no	C
SW13-PZM003	Bromomethane	1	U	73	0.00	no	NC
SW13-PZM003	Cadmium	3	U	N/A	0.00	no	N/A
SW13-PZM003	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A
SW13-PZM003	Caprolactam	2.5	U	N/A	0.00	no	N/A
SW13-PZM003	Carbon disulfide	1	U	5200	0.00	no	NC
SW13-PZM003	Carbon tetrachloride	1	U	18	0.00	no	C
SW13-PZM003	Chlorobenzene	1	U	1700	0.00	no	NC
SW13-PZM003	Chloroethane	1	U	97000	0.00	no	NC
SW13-PZM003	Chloroform	2.2		36	0.06	no	C
SW13-PZM003	Chloromethane	1	U	1100	0.00	no	NC
SW13-PZM003	Chromium	5	U	N/A	0.00	no	N/A
SW13-PZM003	Chromium VI	10	U	N/A	0.00	no	N/A
SW13-PZM003	Chromium, Dissolve	5	U	N/A	0.00	no	N/A
SW13-PZM003	Chrysene	0.29		N/A	0.00	no	N/A
SW13-PZM003	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW13-PZM003	Cobalt	5	U	N/A	0.00	no	N/A
SW13-PZM003	Cobalt, Dissolve	5	U	N/A	0.00	no	N/A
SW13-PZM003	Copper	5	U	N/A	0.00	no	N/A
SW13-PZM003	Copper, Dissolve	5	U	N/A	0.00	no	N/A
SW13-PZM003	Cyanide	9.9	J	3.5	2.83	YES	NC
SW13-PZM003	Cyclohexane	10	U	4300	0.00	no	NC
SW13-PZM003	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW13-PZM003	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW13-PZM003	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW13-PZM003	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW13-PZM003	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW13-PZM003	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW13-PZM003	Ethylbenzene	2		150	0.01	no	C
SW13-PZM003	Fluoranthene	3.5		N/A	0.00	no	N/A
SW13-PZM003	Fluorene	2.5		N/A	0.00	no	N/A
SW13-PZM003	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW13-PZM003	Hexachlorobutadiene	1	U	13	0.00	no	C
SW13-PZM003	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW13-PZM003	Hexachloroethane	1	U	70	0.00	no	C
SW13-PZM003	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW13-PZM003	Iron	14.6	J	N/A	0.00	no	N/A
SW13-PZM003	Iron, Dissolve	70	U	N/A	0.00	no	N/A
SW13-PZM003	Isophorone	1	U	N/A	0.00	no	N/A
SW13-PZM003	Isopropylbenzene	0.23	J	3700	0.00	no	NC
SW13-PZM003	Lead	5	U	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW13-PZM003	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW13-PZM003	Manganese	4.3	B	N/A	0.00	no	N/A
SW13-PZM003	Manganese, Dissolve	5	U	N/A	0.00	no	N/A
SW13-PZM003	Mercury	0.2	U	3.7	0.00	no	NC
SW13-PZM003	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW13-PZM003	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW13-PZM003	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW13-PZM003	Methylene Chloride	1	U	20000	0.00	no	NC
SW13-PZM003	Naphthalene	169		200	0.85	no	C
SW13-PZM003	Nickel	10	U	N/A	0.00	no	N/A
SW13-PZM003	Nickel, Dissolve	10	U	N/A	0.00	no	N/A
SW13-PZM003	Nitrobenzene	1	U	3100	0.00	no	C
SW13-PZM003	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW13-PZM003	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW13-PZM003	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
SW13-PZM003	Phenol	0.27	J	N/A	0.00	no	N/A
SW13-PZM003	Pyrene	2.4		N/A	0.00	no	N/A
SW13-PZM003	Selenium	6	J	N/A	0.00	no	N/A
SW13-PZM003	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW13-PZM003	Silver	6	U	N/A	0.00	no	N/A
SW13-PZM003	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW13-PZM003	Styrene	1	U	39000	0.00	no	NC
SW13-PZM003	Tetrachloroethene	1	U	240	0.00	no	NC
SW13-PZM003	Thallium	10	U	N/A	0.00	no	N/A
SW13-PZM003	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW13-PZM003	Toluene	35.6		81000	0.00	no	NC
SW13-PZM003	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW13-PZM003	Trichloroethene	1	U	22	0.00	no	NC
SW13-PZM003	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW13-PZM003	Vanadium	0.85	B	N/A	0.00	no	N/A
SW13-PZM003	Vanadium, Dissolve	0.85	B	N/A	0.00	no	N/A
SW13-PZM003	Vinyl chloride	1	U	25	0.00	no	C
SW13-PZM003	Xylenes	47.7		1600	0.03	no	NC
SW13-PZM003	Zinc	0.72	B	N/A	0.00	no	N/A
SW13-PZM003	Zinc, Dissolve	1.3	B	N/A	0.00	no	N/A
SW13-PZM025	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW13-PZM025	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW13-PZM025	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW13-PZM025	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW13-PZM025	1,1-Biphenyl	1	U	140	0.00	no	NC
SW13-PZM025	1,1-Dichloroethane	1	U	330	0.00	no	C
SW13-PZM025	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW13-PZM025	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW13-PZM025	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW13-PZM025	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW13-PZM025	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW13-PZM025	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW13-PZM025	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW13-PZM025	1,2-Dichloroethane	1	U	98	0.00	no	C
SW13-PZM025	1,2-Dichloropropane	1	U	110	0.00	no	C
SW13-PZM025	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW13-PZM025	1,4-Dioxane	0.1	U	130000	0.00	no	C
SW13-PZM025	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW13-PZM025	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
SW13-PZM025	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW13-PZM025	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW13-PZM025	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW13-PZM025	2,4-Dinitrophenol	2.5	U	N/A	0.00	no	N/A
SW13-PZM025	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW13-PZM025	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW13-PZM025	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW13-PZM025	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW13-PZM025	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW13-PZM025	2-Hexanone	10	U	34000	0.00	no	NC

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW13-PZM025	2-Methylnaphthalene	0.1	U	N/A	0.00	no	N/A
SW13-PZM025	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW13-PZM025	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW13-PZM025	3,3'-Dichlorobenzidine	1	UJ	N/A	0.00	no	N/A
SW13-PZM025	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW13-PZM025	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW13-PZM025	4-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW13-PZM025	Acenaphthene	0.1	U	N/A	0.00	no	N/A
SW13-PZM025	Acetone	10	U	95000000	0.00	no	NC
SW13-PZM025	Acetophenone	1	U	N/A	0.00	no	N/A
SW13-PZM025	Aluminum	23.7	J	N/A	0.00	no	N/A
SW13-PZM025	Aluminum, Dissolve	23.6	B	N/A	0.00	no	N/A
SW13-PZM025	Anthracene	0.1	U	N/A	0.00	no	N/A
SW13-PZM025	Antimony	6	U	N/A	0.00	no	N/A
SW13-PZM025	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW13-PZM025	Arsenic	7.7		N/A	0.00	no	N/A
SW13-PZM025	Arsenic, Dissolve	7.8		N/A	0.00	no	N/A
SW13-PZM025	Barium	123		N/A	0.00	no	N/A
SW13-PZM025	Barium, Dissolve	121		N/A	0.00	no	N/A
SW13-PZM025	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW13-PZM025	Benzene	1	U	69	0.00	no	C
SW13-PZM025	Benzo[a]anthracene	0.1	U	NVT	0.00	no	C
SW13-PZM025	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW13-PZM025	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW13-PZM025	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW13-PZM025	Beryllium	1	U	N/A	0.00	no	N/A
SW13-PZM025	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW13-PZM025	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW13-PZM025	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW13-PZM025	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW13-PZM025	bis(2-Ethylhexyl)phthalate	1	UJ	N/A	0.00	no	N/A
SW13-PZM025	Bromodichloromethane	1	U	38	0.00	no	C
SW13-PZM025	Bromoform	1	U	5100	0.00	no	C
SW13-PZM025	Bromomethane	1	U	73	0.00	no	NC
SW13-PZM025	Cadmium	0.81	J	N/A	0.00	no	N/A
SW13-PZM025	Cadmium, Dissolve	0.62	B	N/A	0.00	no	N/A
SW13-PZM025	Caprolactam	2.5	U	N/A	0.00	no	N/A
SW13-PZM025	Carbon disulfide	1	U	5200	0.00	no	NC
SW13-PZM025	Carbon tetrachloride	1	U	18	0.00	no	C
SW13-PZM025	Chlorobenzene	1	U	1700	0.00	no	NC
SW13-PZM025	Chloroethane	1	U	97000	0.00	no	NC
SW13-PZM025	Chloroform	1	U	36	0.00	no	C
SW13-PZM025	Chloromethane	1	U	1100	0.00	no	NC
SW13-PZM025	Chromium	0.98	B	N/A	0.00	no	N/A
SW13-PZM025	Chromium VI	10	U	N/A	0.00	no	N/A
SW13-PZM025	Chromium, Dissolve	5	U	N/A	0.00	no	N/A
SW13-PZM025	Chrysene	0.1	U	N/A	0.00	no	N/A
SW13-PZM025	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW13-PZM025	Cobalt	2.5	B	N/A	0.00	no	N/A
SW13-PZM025	Cobalt, Dissolve	2.5	B	N/A	0.00	no	N/A
SW13-PZM025	Copper	2.1	J	N/A	0.00	no	N/A
SW13-PZM025	Copper, Dissolve	1.6	J	N/A	0.00	no	N/A
SW13-PZM025	Cyanide	10	U	3.5	0.00	no	NC
SW13-PZM025	Cyclohexane	10	U	4300	0.00	no	NC
SW13-PZM025	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW13-PZM025	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW13-PZM025	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW13-PZM025	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW13-PZM025	Di-n-butylphthalate	0.1	J	N/A	0.00	no	N/A
SW13-PZM025	Di-n-ocytlphthalate	1	UJ	N/A	0.00	no	N/A
SW13-PZM025	Ethylbenzene	1	U	150	0.00	no	C
SW13-PZM025	Fluoranthene	0.1	U	N/A	0.00	no	N/A
SW13-PZM025	Fluorene	0.1	U	N/A	0.00	no	N/A
SW13-PZM025	Hexachlorobenzene	1	U	3.8	0.00	no	C

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW13-PZM025	Hexachlorobutadiene	1	U	13	0.00	no	C
SW13-PZM025	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW13-PZM025	Hexachloroethane	1	U	70	0.00	no	C
SW13-PZM025	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW13-PZM025	Iron	37800		N/A	0.00	no	N/A
SW13-PZM025	Iron, Dissolve	36800		N/A	0.00	no	N/A
SW13-PZM025	Isophorone	1	U	N/A	0.00	no	N/A
SW13-PZM025	Isopropylbenzene	1	U	3700	0.00	no	NC
SW13-PZM025	Lead	5	U	N/A	0.00	no	N/A
SW13-PZM025	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW13-PZM025	Manganese	1100		N/A	0.00	no	N/A
SW13-PZM025	Manganese, Dissolve	1060		N/A	0.00	no	N/A
SW13-PZM025	Mercury	0.2	U	3.7	0.00	no	NC
SW13-PZM025	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW13-PZM025	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW13-PZM025	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW13-PZM025	Methylene Chloride	1	U	20000	0.00	no	NC
SW13-PZM025	Naphthalene	0.1	U	200	0.00	no	C
SW13-PZM025	Nickel	3.3	B	N/A	0.00	no	N/A
SW13-PZM025	Nickel, Dissolve	3.3	B	N/A	0.00	no	N/A
SW13-PZM025	Nitrobenzene	1	U	3100	0.00	no	C
SW13-PZM025	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW13-PZM025	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW13-PZM025	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
SW13-PZM025	Phenol	1	U	N/A	0.00	no	N/A
SW13-PZM025	Pyrene	0.1	U	N/A	0.00	no	N/A
SW13-PZM025	Selenium	8	U	N/A	0.00	no	N/A
SW13-PZM025	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW13-PZM025	Silver	6	U	N/A	0.00	no	N/A
SW13-PZM025	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW13-PZM025	Styrene	1	U	39000	0.00	no	NC
SW13-PZM025	Tetrachloroethene	1	U	240	0.00	no	NC
SW13-PZM025	Thallium	10	U	N/A	0.00	no	N/A
SW13-PZM025	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW13-PZM025	Toluene	1	U	81000	0.00	no	NC
SW13-PZM025	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW13-PZM025	Trichloroethene	1	U	22	0.00	no	NC
SW13-PZM025	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW13-PZM025	Vanadium	5	U	N/A	0.00	no	N/A
SW13-PZM025	Vanadium, Dissolve	5	U	N/A	0.00	no	N/A
SW13-PZM025	Vinyl chloride	1	U	25	0.00	no	C
SW13-PZM025	Xylenes	3	U	1600	0.00	no	NC
SW13-PZM025	Zinc	10	U	N/A	0.00	no	N/A
SW13-PZM025	Zinc, Dissolve	1.8	B	N/A	0.00	no	N/A
SW13-PZM111	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW13-PZM111	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW13-PZM111	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW13-PZM111	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW13-PZM111	1,1-Biphenyl	1	U	140	0.00	no	NC
SW13-PZM111	1,1-Dichloroethane	1	U	330	0.00	no	C
SW13-PZM111	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW13-PZM111	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW13-PZM111	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW13-PZM111	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW13-PZM111	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW13-PZM111	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW13-PZM111	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW13-PZM111	1,2-Dichloroethane	1	U	98	0.00	no	C
SW13-PZM111	1,2-Dichloropropane	1	U	110	0.00	no	C
SW13-PZM111	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW13-PZM111	1,4-Dioxane	0.1	U	130000	0.00	no	C
SW13-PZM111	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW13-PZM111	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
SW13-PZM111	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW13-PZM111	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW13-PZM111	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW13-PZM111	2,4-Dinitrophenol	2.5	U	N/A	0.00	no	N/A
SW13-PZM111	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW13-PZM111	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW13-PZM111	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW13-PZM111	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW13-PZM111	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW13-PZM111	2-Hexanone	10	U	34000	0.00	no	NC
SW13-PZM111	2-Methylnaphthalene	0.1		N/A	0.00	no	N/A
SW13-PZM111	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW13-PZM111	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW13-PZM111	3,3'-Dichlorobenzidine	1	R	N/A	0.00	no	N/A
SW13-PZM111	4-Chloroaniline	1	UJ	N/A	0.00	no	N/A
SW13-PZM111	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW13-PZM111	4-Nitroaniline	2.5	UJ	N/A	0.00	no	N/A
SW13-PZM111	Acenaphthene	0.071	J	N/A	0.00	no	N/A
SW13-PZM111	Acetone	10	R	95000000	0.00	no	NC
SW13-PZM111	Acetophenone	1	U	N/A	0.00	no	N/A
SW13-PZM111	Aluminum	1280		N/A	0.00	no	N/A
SW13-PZM111	Aluminum, Dissolve	24.5	B	N/A	0.00	no	N/A
SW13-PZM111	Anthracene	0.027	J	N/A	0.00	no	N/A
SW13-PZM111	Antimony	6	U	N/A	0.00	no	N/A
SW13-PZM111	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW13-PZM111	Arsenic	5	U	N/A	0.00	no	N/A
SW13-PZM111	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SW13-PZM111	Barium	70.7		N/A	0.00	no	N/A
SW13-PZM111	Barium, Dissolve	52.5		N/A	0.00	no	N/A
SW13-PZM111	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW13-PZM111	Benzene	1	U	69	0.00	no	C
SW13-PZM111	Benzo[a]anthracene	0.1	U	NVT	0.00	no	C
SW13-PZM111	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW13-PZM111	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW13-PZM111	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW13-PZM111	Beryllium	1		N/A	0.00	no	N/A
SW13-PZM111	Beryllium, Dissolve	0.63	B	N/A	0.00	no	N/A
SW13-PZM111	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW13-PZM111	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW13-PZM111	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW13-PZM111	bis(2-Ethylhexyl)phthalate	1.1		N/A	0.00	no	N/A
SW13-PZM111	Bromodichloromethane	1	U	38	0.00	no	C
SW13-PZM111	Bromoform	1	U	5100	0.00	no	C
SW13-PZM111	Bromomethane	1	U	73	0.00	no	NC
SW13-PZM111	Cadmium	3	U	N/A	0.00	no	N/A
SW13-PZM111	Cadmium, Dissolve	0.66	J	N/A	0.00	no	N/A
SW13-PZM111	Caprolactam	0.24	J	N/A	0.00	no	N/A
SW13-PZM111	Carbon disulfide	1	U	5200	0.00	no	NC
SW13-PZM111	Carbon tetrachloride	1	U	18	0.00	no	C
SW13-PZM111	Chlorobenzene	1	U	1700	0.00	no	NC
SW13-PZM111	Chloroethane	1	U	97000	0.00	no	NC
SW13-PZM111	Chloroform	1	U	36	0.00	no	C
SW13-PZM111	Chloromethane	1	UJ	1100	0.00	no	NC
SW13-PZM111	Chromium	17.4		N/A	0.00	no	N/A
SW13-PZM111	Chromium VI	10	U	N/A	0.00	no	N/A
SW13-PZM111	Chromium, Dissolve	0.91	B	N/A	0.00	no	N/A
SW13-PZM111	Chrysene	0.1	U	N/A	0.00	no	N/A
SW13-PZM111	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW13-PZM111	Cobalt	3	J	N/A	0.00	no	N/A
SW13-PZM111	Cobalt, Dissolve	1.7	B	N/A	0.00	no	N/A
SW13-PZM111	Copper	11.5		N/A	0.00	no	N/A
SW13-PZM111	Copper, Dissolve	2.5	B	N/A	0.00	no	N/A
SW13-PZM111	Cyanide	10	U	3.5	0.00	no	NC
SW13-PZM111	Cyclohexane	10	U	4300	0.00	no	NC
SW13-PZM111	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW13-PZM111	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW13-PZM111	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW13-PZM111	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW13-PZM111	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW13-PZM111	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW13-PZM111	Ethylbenzene	1	U	150	0.00	no	C
SW13-PZM111	Fluoranthene	0.04	J	N/A	0.00	no	N/A
SW13-PZM111	Fluorene	0.082	J	N/A	0.00	no	N/A
SW13-PZM111	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW13-PZM111	Hexachlorobutadiene	1	U	13	0.00	no	C
SW13-PZM111	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW13-PZM111	Hexachloroethane	1	U	70	0.00	no	C
SW13-PZM111	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW13-PZM111	Iron	33700		N/A	0.00	no	N/A
SW13-PZM111	Iron, Dissolve	21000		N/A	0.00	no	N/A
SW13-PZM111	Isophorone	1	U	N/A	0.00	no	N/A
SW13-PZM111	Isopropylbenzene	1	U	3700	0.00	no	NC
SW13-PZM111	Lead	5	U	N/A	0.00	no	N/A
SW13-PZM111	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW13-PZM111	Manganese	1340		N/A	0.00	no	N/A
SW13-PZM111	Manganese, Dissolve	1180	J	N/A	0.00	no	N/A
SW13-PZM111	Mercury	0.06	B	3.7	0.02	no	NC
SW13-PZM111	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW13-PZM111	Methyl Acetate	5	R	N/A	0.00	no	N/A
SW13-PZM111	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW13-PZM111	Methylene Chloride	1	U	20000	0.00	no	NC
SW13-PZM111	Naphthalene	0.14		200	0.00	no	C
SW13-PZM111	Nickel	12.6	J	N/A	0.00	no	N/A
SW13-PZM111	Nickel, Dissolve	9	B	N/A	0.00	no	N/A
SW13-PZM111	Nitrobenzene	1	U	3100	0.00	no	C
SW13-PZM111	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW13-PZM111	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW13-PZM111	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
SW13-PZM111	Phenol	1	U	N/A	0.00	no	N/A
SW13-PZM111	Pyrene	0.029	J	N/A	0.00	no	N/A
SW13-PZM111	Selenium	8	U	N/A	0.00	no	N/A
SW13-PZM111	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW13-PZM111	Silver	6	U	N/A	0.00	no	N/A
SW13-PZM111	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW13-PZM111	Styrene	1	U	39000	0.00	no	NC
SW13-PZM111	Tetrachloroethene	1	U	240	0.00	no	NC
SW13-PZM111	Thallium	3.4	B	N/A	0.00	no	N/A
SW13-PZM111	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW13-PZM111	Toluene	1	U	81000	0.00	no	NC
SW13-PZM111	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW13-PZM111	Trichloroethene	1	U	22	0.00	no	NC
SW13-PZM111	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW13-PZM111	Vanadium	36.6		N/A	0.00	no	N/A
SW13-PZM111	Vanadium, Dissolve	1.3	B	N/A	0.00	no	N/A
SW13-PZM111	Vinyl chloride	1	U	25	0.00	no	C
SW13-PZM111	Xylenes	3	U	1600	0.00	no	NC
SW13-PZM111	Zinc	48.1		N/A	0.00	no	N/A
SW13-PZM111	Zinc, Dissolve	24.6	J	N/A	0.00	no	N/A
SW14-PZM004	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW14-PZM004	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW14-PZM004	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW14-PZM004	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW14-PZM004	1,1-Biphenyl	2.2		140	0.02	no	NC
SW14-PZM004	1,1-Dichloroethane	1	U	330	0.00	no	C
SW14-PZM004	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW14-PZM004	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW14-PZM004	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW14-PZM004	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW14-PZM004	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW14-PZM004	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW14-PZM004	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW14-PZM004	1,2-Dichloroethane	1	U	98	0.00	no	C
SW14-PZM004	1,2-Dichloropropane	1	U	110	0.00	no	C
SW14-PZM004	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW14-PZM004	1,4-Dioxane	0.27		130000	0.00	no	C
SW14-PZM004	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW14-PZM004	2,4,5-Trichlorophenol	2.6	U	N/A	0.00	no	N/A
SW14-PZM004	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW14-PZM004	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW14-PZM004	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW14-PZM004	2,4-Dinitrophenol	2.6	U	N/A	0.00	no	N/A
SW14-PZM004	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW14-PZM004	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW14-PZM004	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW14-PZM004	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW14-PZM004	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW14-PZM004	2-Hexanone	10	U	34000	0.00	no	NC
SW14-PZM004	2-Methylnaphthalene	12.8	J	N/A	0.00	no	N/A
SW14-PZM004	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW14-PZM004	2-Nitroaniline	2.6	UJ	N/A	0.00	no	N/A
SW14-PZM004	3,3'-Dichlorobenzidine	1	R	N/A	0.00	no	N/A
SW14-PZM004	4-Chloroaniline	1	UJ	N/A	0.00	no	N/A
SW14-PZM004	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW14-PZM004	4-Nitroaniline	2.6	U	N/A	0.00	no	N/A
SW14-PZM004	Acenaphthene	25.7		N/A	0.00	no	N/A
SW14-PZM004	Acetone	10	R	95000000	0.00	no	NC
SW14-PZM004	Acetophenone	1	U	N/A	0.00	no	N/A
SW14-PZM004	Aluminum	1740		N/A	0.00	no	N/A
SW14-PZM004	Aluminum, Dissolve	1850		N/A	0.00	no	N/A
SW14-PZM004	Anthracene	3.4		N/A	0.00	no	N/A
SW14-PZM004	Antimony	6	U	N/A	0.00	no	N/A
SW14-PZM004	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW14-PZM004	Arsenic	3.3	J	N/A	0.00	no	N/A
SW14-PZM004	Arsenic, Dissolve	4.7	J	N/A	0.00	no	N/A
SW14-PZM004	Barium	162		N/A	0.00	no	N/A
SW14-PZM004	Barium, Dissolve	164		N/A	0.00	no	N/A
SW14-PZM004	Benzaldehyde	1	UJ	N/A	0.00	no	N/A
SW14-PZM004	Benzene	1	U	69	0.00	no	C
SW14-PZM004	Benzo[a]anthracene	0.33		NVT	0.00	no	C
SW14-PZM004	Benzo[a]pyrene	0.035	J	N/A	0.00	no	N/A
SW14-PZM004	Benzo[b]fluoranthene	0.089	J	N/A	0.00	no	N/A
SW14-PZM004	Benzo[k]fluoranthene	0.088	J	N/A	0.00	no	N/A
SW14-PZM004	Beryllium	1	U	N/A	0.00	no	N/A
SW14-PZM004	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW14-PZM004	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW14-PZM004	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW14-PZM004	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW14-PZM004	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A
SW14-PZM004	Bromodichloromethane	1	U	38	0.00	no	C
SW14-PZM004	Bromoform	1	U	5100	0.00	no	C
SW14-PZM004	Bromomethane	1	U	73	0.00	no	NC
SW14-PZM004	Cadmium	3	U	N/A	0.00	no	N/A
SW14-PZM004	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A
SW14-PZM004	Caprolactam	2.6	UJ	N/A	0.00	no	N/A
SW14-PZM004	Carbon disulfide	1	U	5200	0.00	no	NC
SW14-PZM004	Carbon tetrachloride	1	U	18	0.00	no	C
SW14-PZM004	Chlorobenzene	1	U	1700	0.00	no	NC
SW14-PZM004	Chloroethane	1	U	97000	0.00	no	NC
SW14-PZM004	Chloroform	1	U	36	0.00	no	C
SW14-PZM004	Chloromethane	1	U	1100	0.00	no	NC
SW14-PZM004	Chromium	1.1	J	N/A	0.00	no	N/A
SW14-PZM004	Chromium VI	10	U	N/A	0.00	no	N/A
SW14-PZM004	Chromium, Dissolve	1.7	B	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW14-PZM004	Chrysene	0.23		N/A	0.00	no	N/A
SW14-PZM004	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW14-PZM004	Cobalt	5	U	N/A	0.00	no	N/A
SW14-PZM004	Cobalt, Dissolve	5	U	N/A	0.00	no	N/A
SW14-PZM004	Copper	2.1	B	N/A	0.00	no	N/A
SW14-PZM004	Copper, Dissolve	5	U	N/A	0.00	no	N/A
SW14-PZM004	Cyanide	10	U	3.5	0.00	no	NC
SW14-PZM004	Cyclohexane	10	U	4300	0.00	no	NC
SW14-PZM004	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW14-PZM004	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW14-PZM004	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW14-PZM004	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW14-PZM004	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW14-PZM004	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW14-PZM004	Ethylbenzene	1	U	150	0.00	no	C
SW14-PZM004	Fluoranthene	6.8	J	N/A	0.00	no	N/A
SW14-PZM004	Fluorene	11.4		N/A	0.00	no	N/A
SW14-PZM004	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW14-PZM004	Hexachlorobutadiene	1	U	13	0.00	no	C
SW14-PZM004	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW14-PZM004	Hexachloroethane	1	U	70	0.00	no	C
SW14-PZM004	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW14-PZM004	Iron	41.1	B	N/A	0.00	no	N/A
SW14-PZM004	Iron, Dissolve	15.6	B	N/A	0.00	no	N/A
SW14-PZM004	Isophorone	1	U	N/A	0.00	no	N/A
SW14-PZM004	Isopropylbenzene	1	U	3700	0.00	no	NC
SW14-PZM004	Lead	5	U	N/A	0.00	no	N/A
SW14-PZM004	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW14-PZM004	Manganese	1.2	J	N/A	0.00	no	N/A
SW14-PZM004	Manganese, Dissolve	5	U	N/A	0.00	no	N/A
SW14-PZM004	Mercury	0.2	U	3.7	0.00	no	NC
SW14-PZM004	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW14-PZM004	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW14-PZM004	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW14-PZM004	Methylene Chloride	1	U	20000	0.00	no	NC
SW14-PZM004	Naphthalene	49.5		200	0.25	no	C
SW14-PZM004	Nickel	3	J	N/A	0.00	no	N/A
SW14-PZM004	Nickel, Dissolve	3.1	B	N/A	0.00	no	N/A
SW14-PZM004	Nitrobenzene	1	U	3100	0.00	no	C
SW14-PZM004	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW14-PZM004	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW14-PZM004	Pentachlorophenol	2.6	U	N/A	0.00	no	N/A
SW14-PZM004	Phenol	0.26	J	N/A	0.00	no	N/A
SW14-PZM004	Pyrene	4.2	J	N/A	0.00	no	N/A
SW14-PZM004	Selenium	8	U	N/A	0.00	no	N/A
SW14-PZM004	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW14-PZM004	Silver	6	U	N/A	0.00	no	N/A
SW14-PZM004	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW14-PZM004	Styrene	1	U	39000	0.00	no	NC
SW14-PZM004	Tetrachloroethene	1	UJ	240	0.00	no	NC
SW14-PZM004	Thallium	5.9	J	N/A	0.00	no	N/A
SW14-PZM004	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW14-PZM004	Toluene	1	U	81000	0.00	no	NC
SW14-PZM004	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW14-PZM004	Trichloroethene	1	U	22	0.00	no	NC
SW14-PZM004	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW14-PZM004	Vanadium	118		N/A	0.00	no	N/A
SW14-PZM004	Vanadium, Dissolve	125		N/A	0.00	no	N/A
SW14-PZM004	Vinyl chloride	1	U	25	0.00	no	C
SW14-PZM004	Xylenes	3	U	1600	0.00	no	NC
SW14-PZM004	Zinc	10	U	N/A	0.00	no	N/A
SW14-PZM004	Zinc, Dissolve	0.64	J	N/A	0.00	no	N/A
SW15-PZM005	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW15-PZM005	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW15-PZM005	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW15-PZM005	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW15-PZM005	1,1-Biphenyl	1	U	140	0.00	no	NC
SW15-PZM005	1,1-Dichloroethane	1	U	330	0.00	no	C
SW15-PZM005	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW15-PZM005	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW15-PZM005	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW15-PZM005	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW15-PZM005	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW15-PZM005	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW15-PZM005	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW15-PZM005	1,2-Dichloroethane	1	U	98	0.00	no	C
SW15-PZM005	1,2-Dichloropropane	1	U	110	0.00	no	C
SW15-PZM005	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW15-PZM005	1,4-Dioxane	0.1	U	130000	0.00	no	C
SW15-PZM005	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW15-PZM005	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
SW15-PZM005	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW15-PZM005	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW15-PZM005	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW15-PZM005	2,4-Dinitrophenol	2.5	U	N/A	0.00	no	N/A
SW15-PZM005	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW15-PZM005	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW15-PZM005	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW15-PZM005	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW15-PZM005	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW15-PZM005	2-Hexanone	10	U	34000	0.00	no	NC
SW15-PZM005	2-Methylnaphthalene	0.1	U	N/A	0.00	no	N/A
SW15-PZM005	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW15-PZM005	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW15-PZM005	3,3'-Dichlorobenzidine	1	R	N/A	0.00	no	N/A
SW15-PZM005	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW15-PZM005	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW15-PZM005	4-Nitroaniline	2.5	UJ	N/A	0.00	no	N/A
SW15-PZM005	Acenaphthene	0.1	U	N/A	0.00	no	N/A
SW15-PZM005	Acetone	10	U	95000000	0.00	no	NC
SW15-PZM005	Acetophenone	1	U	N/A	0.00	no	N/A
SW15-PZM005	Aluminum	165		N/A	0.00	no	N/A
SW15-PZM005	Aluminum, Dissolve	144		N/A	0.00	no	N/A
SW15-PZM005	Anthracene	0.1	U	N/A	0.00	no	N/A
SW15-PZM005	Antimony	6	U	N/A	0.00	no	N/A
SW15-PZM005	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW15-PZM005	Arsenic	5	U	N/A	0.00	no	N/A
SW15-PZM005	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SW15-PZM005	Barium	30.2		N/A	0.00	no	N/A
SW15-PZM005	Barium, Dissolve	30.7		N/A	0.00	no	N/A
SW15-PZM005	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW15-PZM005	Benzene	1	U	69	0.00	no	C
SW15-PZM005	Benzo[a]anthracene	0.1	U	NVT	0.00	no	C
SW15-PZM005	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW15-PZM005	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW15-PZM005	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW15-PZM005	Beryllium	1	U	N/A	0.00	no	N/A
SW15-PZM005	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW15-PZM005	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW15-PZM005	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW15-PZM005	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW15-PZM005	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A
SW15-PZM005	Bromodichloromethane	1	U	38	0.00	no	C
SW15-PZM005	Bromoform	1	U	5100	0.00	no	C
SW15-PZM005	Bromomethane	1	UJ	73	0.00	no	NC
SW15-PZM005	Cadmium	3	U	N/A	0.00	no	N/A
SW15-PZM005	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A
SW15-PZM005	Caprolactam	2.5	U	N/A	0.00	no	N/A

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW15-PZM005	Carbon disulfide	1	U	5200	0.00	no	NC
SW15-PZM005	Carbon tetrachloride	1	U	18	0.00	no	C
SW15-PZM005	Chlorobenzene	1	U	1700	0.00	no	NC
SW15-PZM005	Chloroethane	1	U	97000	0.00	no	NC
SW15-PZM005	Chloroform	1	U	36	0.00	no	C
SW15-PZM005	Chloromethane	1	UJ	1100	0.00	no	NC
SW15-PZM005	Chromium	0.89	B	N/A	0.00	no	N/A
SW15-PZM005	Chromium, Dissolve	0.79	B	N/A	0.00	no	N/A
SW15-PZM005	Chrysene	0.1	U	N/A	0.00	no	N/A
SW15-PZM005	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW15-PZM005	Cobalt	4	J	N/A	0.00	no	N/A
SW15-PZM005	Cobalt, Dissolve	4.5	B	N/A	0.00	no	N/A
SW15-PZM005	Copper	2.1	B	N/A	0.00	no	N/A
SW15-PZM005	Copper, Dissolve	1.9	J	N/A	0.00	no	N/A
SW15-PZM005	Cyanide	10	U	3.5	0.00	no	NC
SW15-PZM005	Cyclohexane	10	U	4300	0.00	no	NC
SW15-PZM005	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW15-PZM005	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW15-PZM005	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW15-PZM005	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW15-PZM005	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW15-PZM005	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW15-PZM005	Ethylbenzene	1	U	150	0.00	no	C
SW15-PZM005	Fluoranthene	0.1	U	N/A	0.00	no	N/A
SW15-PZM005	Fluorene	0.1	U	N/A	0.00	no	N/A
SW15-PZM005	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW15-PZM005	Hexachlorobutadiene	1	U	13	0.00	no	C
SW15-PZM005	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW15-PZM005	Hexachloroethane	1	U	70	0.00	no	C
SW15-PZM005	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW15-PZM005	Iron	899		N/A	0.00	no	N/A
SW15-PZM005	Iron, Dissolve	957		N/A	0.00	no	N/A
SW15-PZM005	Isophorone	1	U	N/A	0.00	no	N/A
SW15-PZM005	Isopropylbenzene	1	U	3700	0.00	no	NC
SW15-PZM005	Lead	5	U	N/A	0.00	no	N/A
SW15-PZM005	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW15-PZM005	Manganese	256		N/A	0.00	no	N/A
SW15-PZM005	Manganese, Dissolve	273		N/A	0.00	no	N/A
SW15-PZM005	Mercury	0.05	B	3.7	0.01	no	NC
SW15-PZM005	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW15-PZM005	Methyl Acetate	5	R	N/A	0.00	no	N/A
SW15-PZM005	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW15-PZM005	Methylene Chloride	1	U	20000	0.00	no	NC
SW15-PZM005	Naphthalene	0.023	B	200	0.00	no	C
SW15-PZM005	Nickel	4.2	B	N/A	0.00	no	N/A
SW15-PZM005	Nickel, Dissolve	3.6	B	N/A	0.00	no	N/A
SW15-PZM005	Nitrobenzene	1	U	3100	0.00	no	C
SW15-PZM005	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW15-PZM005	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW15-PZM005	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
SW15-PZM005	Phenol	1	U	N/A	0.00	no	N/A
SW15-PZM005	Pyrene	0.1	U	N/A	0.00	no	N/A
SW15-PZM005	Selenium	8	U	N/A	0.00	no	N/A
SW15-PZM005	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW15-PZM005	Silver	6	U	N/A	0.00	no	N/A
SW15-PZM005	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW15-PZM005	Styrene	1	U	39000	0.00	no	NC
SW15-PZM005	Tetrachloroethene	1	U	240	0.00	no	NC
SW15-PZM005	Thallium	10	U	N/A	0.00	no	N/A
SW15-PZM005	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW15-PZM005	Toluene	1	U	81000	0.00	no	NC
SW15-PZM005	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW15-PZM005	Trichloroethene	1	U	22	0.00	no	NC
SW15-PZM005	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW15-PZM005	Vanadium	5	U	N/A	0.00	no	N/A
SW15-PZM005	Vanadium, Dissolve	5	U	N/A	0.00	no	N/A
SW15-PZM005	Vinyl chloride	1	U	25	0.00	no	C
SW15-PZM005	Xylenes	3	U	1600	0.00	no	NC
SW15-PZM005	Zinc	7.5	B	N/A	0.00	no	N/A
SW15-PZM005	Zinc, Dissolve	8	B	N/A	0.00	no	N/A
SW15-PZM031	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW15-PZM031	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW15-PZM031	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW15-PZM031	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW15-PZM031	1,1-Biphenyl	1	U	140	0.00	no	NC
SW15-PZM031	1,1-Dichloroethane	1	U	330	0.00	no	C
SW15-PZM031	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW15-PZM031	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW15-PZM031	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW15-PZM031	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW15-PZM031	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW15-PZM031	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW15-PZM031	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW15-PZM031	1,2-Dichloroethane	1	U	98	0.00	no	C
SW15-PZM031	1,2-Dichloropropane	1	U	110	0.00	no	C
SW15-PZM031	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW15-PZM031	1,4-Dioxane	0.084	J	130000	0.00	no	C
SW15-PZM031	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW15-PZM031	2,4,5-Trichlorophenol	2.6	U	N/A	0.00	no	N/A
SW15-PZM031	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW15-PZM031	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW15-PZM031	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW15-PZM031	2,4-Dinitrophenol	2.6	U	N/A	0.00	no	N/A
SW15-PZM031	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW15-PZM031	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW15-PZM031	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW15-PZM031	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW15-PZM031	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW15-PZM031	2-Hexanone	10	U	34000	0.00	no	NC
SW15-PZM031	2-Methylnaphthalene	0.037	J	N/A	0.00	no	N/A
SW15-PZM031	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW15-PZM031	2-Nitroaniline	2.6	U	N/A	0.00	no	N/A
SW15-PZM031	3,3'-Dichlorobenzidine	1	U	N/A	0.00	no	N/A
SW15-PZM031	4-Chloroaniline	1	UJ	N/A	0.00	no	N/A
SW15-PZM031	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW15-PZM031	4-Nitroaniline	2.6	U	N/A	0.00	no	N/A
SW15-PZM031	Acenaphthene	0.019	B	N/A	0.00	no	N/A
SW15-PZM031	Acetone	10	R	95000000	0.00	no	NC
SW15-PZM031	Acetophenone	1	U	N/A	0.00	no	N/A
SW15-PZM031	Aluminum	50	U	N/A	0.00	no	N/A
SW15-PZM031	Aluminum, Dissolve	50	U	N/A	0.00	no	N/A
SW15-PZM031	Anthracene	0.1	U	N/A	0.00	no	N/A
SW15-PZM031	Antimony	6	U	N/A	0.00	no	N/A
SW15-PZM031	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW15-PZM031	Arsenic	5.5		N/A	0.00	no	N/A
SW15-PZM031	Arsenic, Dissolve	7.5		N/A	0.00	no	N/A
SW15-PZM031	Barium	405		N/A	0.00	no	N/A
SW15-PZM031	Barium, Dissolve	420		N/A	0.00	no	N/A
SW15-PZM031	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW15-PZM031	Benzene	1	U	69	0.00	no	C
SW15-PZM031	Benzo[a]anthracene	0.1	U	NVT	0.00	no	C
SW15-PZM031	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW15-PZM031	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW15-PZM031	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW15-PZM031	Beryllium	1	U	N/A	0.00	no	N/A
SW15-PZM031	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW15-PZM031	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW15-PZM031	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW15-PZM031	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW15-PZM031	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A
SW15-PZM031	Bromodichloromethane	1	U	38	0.00	no	C
SW15-PZM031	Bromoform	1	U	5100	0.00	no	C
SW15-PZM031	Bromomethane	1	U	73	0.00	no	NC
SW15-PZM031	Cadmium	0.49	J	N/A	0.00	no	N/A
SW15-PZM031	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A
SW15-PZM031	Caprolactam	2.6	UJ	N/A	0.00	no	N/A
SW15-PZM031	Carbon disulfide	1	U	5200	0.00	no	NC
SW15-PZM031	Carbon tetrachloride	1	U	18	0.00	no	C
SW15-PZM031	Chlorobenzene	1	U	1700	0.00	no	NC
SW15-PZM031	Chloroethane	1	U	97000	0.00	no	NC
SW15-PZM031	Chloroform	1	U	36	0.00	no	C
SW15-PZM031	Chloromethane	1	U	1100	0.00	no	NC
SW15-PZM031	Chromium	5	U	N/A	0.00	no	N/A
SW15-PZM031	Chromium VI	10	U	N/A	0.00	no	N/A
SW15-PZM031	Chromium, Dissolve	5	U	N/A	0.00	no	N/A
SW15-PZM031	Chrysene	0.1	U	N/A	0.00	no	N/A
SW15-PZM031	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW15-PZM031	Cobalt	5	U	N/A	0.00	no	N/A
SW15-PZM031	Cobalt, Dissolve	5	U	N/A	0.00	no	N/A
SW15-PZM031	Copper	5	U	N/A	0.00	no	N/A
SW15-PZM031	Copper, Dissolve	3.4	B	N/A	0.00	no	N/A
SW15-PZM031	Cyanide	10	U	3.5	0.00	no	NC
SW15-PZM031	Cyclohexane	10	U	4300	0.00	no	NC
SW15-PZM031	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW15-PZM031	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW15-PZM031	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW15-PZM031	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW15-PZM031	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW15-PZM031	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW15-PZM031	Ethylbenzene	1	U	150	0.00	no	C
SW15-PZM031	Fluoranthene	0.013	J	N/A	0.00	no	N/A
SW15-PZM031	Fluorene	0.018	B	N/A	0.00	no	N/A
SW15-PZM031	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW15-PZM031	Hexachlorobutadiene	1	U	13	0.00	no	C
SW15-PZM031	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW15-PZM031	Hexachloroethane	1	U	70	0.00	no	C
SW15-PZM031	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW15-PZM031	Iron	64700		N/A	0.00	no	N/A
SW15-PZM031	Iron, Dissolve	64500		N/A	0.00	no	N/A
SW15-PZM031	Isophorone	1	U	N/A	0.00	no	N/A
SW15-PZM031	Isopropylbenzene	1	U	3700	0.00	no	NC
SW15-PZM031	Lead	5	U	N/A	0.00	no	N/A
SW15-PZM031	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW15-PZM031	Manganese	2530		N/A	0.00	no	N/A
SW15-PZM031	Manganese, Dissolve	2590		N/A	0.00	no	N/A
SW15-PZM031	Mercury	0.2	U	3.7	0.00	no	NC
SW15-PZM031	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW15-PZM031	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW15-PZM031	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW15-PZM031	Methylene Chloride	1	U	20000	0.00	no	NC
SW15-PZM031	Naphthalene	0.13	B	200	0.00	no	C
SW15-PZM031	Nickel	1.5	B	N/A	0.00	no	N/A
SW15-PZM031	Nickel, Dissolve	2.9	B	N/A	0.00	no	N/A
SW15-PZM031	Nitrobenzene	1	U	3100	0.00	no	C
SW15-PZM031	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW15-PZM031	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW15-PZM031	Pentachlorophenol	2.6	U	N/A	0.00	no	N/A
SW15-PZM031	Phenol	1	U	N/A	0.00	no	N/A
SW15-PZM031	Pyrene	0.1	U	N/A	0.00	no	N/A
SW15-PZM031	Selenium	3.3	B	N/A	0.00	no	N/A
SW15-PZM031	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW15-PZM031	Silver	1.3	J	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW15-PZM031	Silver, Dissolve	1.3	J	N/A	0.00	no	N/A
SW15-PZM031	Styrene	1	U	39000	0.00	no	NC
SW15-PZM031	Tetrachloroethene	1	UJ	240	0.00	no	NC
SW15-PZM031	Thallium	10	U	N/A	0.00	no	N/A
SW15-PZM031	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW15-PZM031	Toluene	1	U	81000	0.00	no	NC
SW15-PZM031	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW15-PZM031	Trichloroethene	1	U	22	0.00	no	NC
SW15-PZM031	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW15-PZM031	Vanadium	5	U	N/A	0.00	no	N/A
SW15-PZM031	Vanadium, Dissolve	1.5	J	N/A	0.00	no	N/A
SW15-PZM031	Vinyl chloride	1	U	25	0.00	no	C
SW15-PZM031	Xylenes	3	U	1600	0.00	no	NC
SW15-PZM031	Zinc	2.7	J	N/A	0.00	no	N/A
SW15-PZM031	Zinc, Dissolve	3.4	B	N/A	0.00	no	N/A
SW15-PZM085	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW15-PZM085	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW15-PZM085	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW15-PZM085	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW15-PZM085	1,1-Biphenyl	1	U	140	0.00	no	NC
SW15-PZM085	1,1-Dichloroethane	1	U	330	0.00	no	C
SW15-PZM085	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW15-PZM085	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW15-PZM085	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW15-PZM085	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW15-PZM085	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW15-PZM085	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW15-PZM085	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW15-PZM085	1,2-Dichloroethane	1	U	98	0.00	no	C
SW15-PZM085	1,2-Dichloropropane	1	U	110	0.00	no	C
SW15-PZM085	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW15-PZM085	1,4-Dioxane	0.1	U	130000	0.00	no	C
SW15-PZM085	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW15-PZM085	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
SW15-PZM085	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW15-PZM085	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW15-PZM085	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW15-PZM085	2,4-Dinitrophenol	2.5	U	N/A	0.00	no	N/A
SW15-PZM085	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW15-PZM085	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW15-PZM085	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW15-PZM085	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW15-PZM085	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW15-PZM085	2-Hexanone	10	U	34000	0.00	no	NC
SW15-PZM085	2-Methylnaphthalene	0.1	U	N/A	0.00	no	N/A
SW15-PZM085	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW15-PZM085	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW15-PZM085	3,3'-Dichlorobenzidine	1	R	N/A	0.00	no	N/A
SW15-PZM085	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW15-PZM085	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW15-PZM085	4-Nitroaniline	2.5	UJ	N/A	0.00	no	N/A
SW15-PZM085	Acenaphthene	0.1	U	N/A	0.00	no	N/A
SW15-PZM085	Acetone	10	UJ	95000000	0.00	no	NC
SW15-PZM085	Acetophenone	1	U	N/A	0.00	no	N/A
SW15-PZM085	Aluminum	94.6		N/A	0.00	no	N/A
SW15-PZM085	Aluminum, Dissolve	50	U	N/A	0.00	no	N/A
SW15-PZM085	Anthracene	0.1	U	N/A	0.00	no	N/A
SW15-PZM085	Antimony	6	U	N/A	0.00	no	N/A
SW15-PZM085	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW15-PZM085	Arsenic	5	U	N/A	0.00	no	N/A
SW15-PZM085	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SW15-PZM085	Barium	90.2		N/A	0.00	no	N/A
SW15-PZM085	Barium, Dissolve	86.8		N/A	0.00	no	N/A
SW15-PZM085	Benzaldehyde	1	U	N/A	0.00	no	N/A

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW15-PZM085	Benzene	1	U	69	0.00	no	C
SW15-PZM085	Benzo[a]anthracene	0.1	U	NVT	0.00	no	C
SW15-PZM085	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW15-PZM085	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW15-PZM085	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW15-PZM085	Beryllium	1	U	N/A	0.00	no	N/A
SW15-PZM085	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW15-PZM085	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW15-PZM085	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW15-PZM085	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW15-PZM085	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A
SW15-PZM085	Bromodichloromethane	1	U	38	0.00	no	C
SW15-PZM085	Bromoform	1	U	5100	0.00	no	C
SW15-PZM085	Bromomethane	1	U	73	0.00	no	NC
SW15-PZM085	Cadmium	0.5	B	N/A	0.00	no	N/A
SW15-PZM085	Cadmium, Dissolve	0.54	B	N/A	0.00	no	N/A
SW15-PZM085	Caprolactam	2.5	UJ	N/A	0.00	no	N/A
SW15-PZM085	Carbon disulfide	1	U	5200	0.00	no	NC
SW15-PZM085	Carbon tetrachloride	1	U	18	0.00	no	C
SW15-PZM085	Chlorobenzene	1	U	1700	0.00	no	NC
SW15-PZM085	Chloroethane	1	U	97000	0.00	no	NC
SW15-PZM085	Chloroform	1	U	36	0.00	no	C
SW15-PZM085	Chloromethane	1	U	1100	0.00	no	NC
SW15-PZM085	Chromium	1	B	N/A	0.00	no	N/A
SW15-PZM085	Chromium VI	10	U	N/A	0.00	no	N/A
SW15-PZM085	Chromium, Dissolve	5	U	N/A	0.00	no	N/A
SW15-PZM085	Chrysene	0.1	U	N/A	0.00	no	N/A
SW15-PZM085	cis-1,2-Dichloroethene	0.57	B	N/A	0.00	no	N/A
SW15-PZM085	Cobalt	5	U	N/A	0.00	no	N/A
SW15-PZM085	Cobalt, Dissolve	5	U	N/A	0.00	no	N/A
SW15-PZM085	Copper	1.8	B	N/A	0.00	no	N/A
SW15-PZM085	Copper, Dissolve	1.8	B	N/A	0.00	no	N/A
SW15-PZM085	Cyanide	10	U	3.5	0.00	no	NC
SW15-PZM085	Cyclohexane	10	U	4300	0.00	no	NC
SW15-PZM085	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW15-PZM085	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW15-PZM085	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW15-PZM085	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW15-PZM085	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW15-PZM085	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW15-PZM085	Ethylbenzene	1	U	150	0.00	no	C
SW15-PZM085	Fluoranthene	0.1	U	N/A	0.00	no	N/A
SW15-PZM085	Fluorene	0.1	U	N/A	0.00	no	N/A
SW15-PZM085	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW15-PZM085	Hexachlorobutadiene	1	U	13	0.00	no	C
SW15-PZM085	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW15-PZM085	Hexachloroethane	1	U	70	0.00	no	C
SW15-PZM085	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW15-PZM085	Iron	14300		N/A	0.00	no	N/A
SW15-PZM085	Iron, Dissolve	13300		N/A	0.00	no	N/A
SW15-PZM085	Isophorone	1	U	N/A	0.00	no	N/A
SW15-PZM085	Isopropylbenzene	1	U	3700	0.00	no	NC
SW15-PZM085	Lead	5	U	N/A	0.00	no	N/A
SW15-PZM085	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW15-PZM085	Manganese	749	J	N/A	0.00	no	N/A
SW15-PZM085	Manganese, Dissolve	735	J	N/A	0.00	no	N/A
SW15-PZM085	Mercury	0.2	U	3.7	0.00	no	NC
SW15-PZM085	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW15-PZM085	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW15-PZM085	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW15-PZM085	Methylene Chloride	1	U	20000	0.00	no	NC
SW15-PZM085	Naphthalene	0.045	B	200	0.00	no	C
SW15-PZM085	Nickel	1.3	J	N/A	0.00	no	N/A
SW15-PZM085	Nickel, Dissolve	1.2	B	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW15-PZM085	Nitrobenzene	1	U	3100	0.00	no	C
SW15-PZM085	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW15-PZM085	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW15-PZM085	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
SW15-PZM085	Phenol	1	U	N/A	0.00	no	N/A
SW15-PZM085	Pyrene	0.1	U	N/A	0.00	no	N/A
SW15-PZM085	Selenium	8	U	N/A	0.00	no	N/A
SW15-PZM085	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW15-PZM085	Silver	6	U	N/A	0.00	no	N/A
SW15-PZM085	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW15-PZM085	Styrene	1	U	39000	0.00	no	NC
SW15-PZM085	Tetrachloroethene	1	U	240	0.00	no	NC
SW15-PZM085	Thallium	10	U	N/A	0.00	no	N/A
SW15-PZM085	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW15-PZM085	Toluene	1	U	81000	0.00	no	NC
SW15-PZM085	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW15-PZM085	Trichloroethene	1	U	22	0.00	no	NC
SW15-PZM085	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW15-PZM085	Vanadium	1.3	B	N/A	0.00	no	N/A
SW15-PZM085	Vanadium, Dissolve	0.71	B	N/A	0.00	no	N/A
SW15-PZM085	Vinyl chloride	1	U	25	0.00	no	C
SW15-PZM085	Xylenes	3	U	1600	0.00	no	NC
SW15-PZM085	Zinc	7.9	B	N/A	0.00	no	N/A
SW15-PZM085	Zinc, Dissolve	6.2	B	N/A	0.00	no	N/A
SW16-PZM003	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW16-PZM003	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW16-PZM003	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW16-PZM003	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW16-PZM003	1,1-Biphenyl	1	U	140	0.00	no	NC
SW16-PZM003	1,1-Dichloroethane	0.38	J	330	0.00	no	C
SW16-PZM003	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW16-PZM003	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW16-PZM003	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW16-PZM003	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW16-PZM003	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW16-PZM003	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW16-PZM003	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW16-PZM003	1,2-Dichloroethane	1	U	98	0.00	no	C
SW16-PZM003	1,2-Dichloropropane	1	U	110	0.00	no	C
SW16-PZM003	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW16-PZM003	1,4-Dioxane	0.36		130000	0.00	no	C
SW16-PZM003	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW16-PZM003	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
SW16-PZM003	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW16-PZM003	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW16-PZM003	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW16-PZM003	2,4-Dinitrophenol	2.5	U	N/A	0.00	no	N/A
SW16-PZM003	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW16-PZM003	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW16-PZM003	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW16-PZM003	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW16-PZM003	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW16-PZM003	2-Hexanone	10	U	34000	0.00	no	NC
SW16-PZM003	2-Methylnaphthalene	0.1	U	N/A	0.00	no	N/A
SW16-PZM003	2-Methylphenol	1	U	N/A	0.00	no	N/A
SW16-PZM003	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW16-PZM003	3,3'-Dichlorobenzidine	1	R	N/A	0.00	no	N/A
SW16-PZM003	4-Chloroaniline	1	UJ	N/A	0.00	no	N/A
SW16-PZM003	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW16-PZM003	4-Nitroaniline	2.5	UJ	N/A	0.00	no	N/A
SW16-PZM003	Acenaphthene	0.1	U	N/A	0.00	no	N/A
SW16-PZM003	Acetone	10	R	95000000	0.00	no	NC
SW16-PZM003	Acetophenone	1	U	N/A	0.00	no	N/A
SW16-PZM003	Aluminum	4370		N/A	0.00	no	N/A

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW16-PZM003	Aluminum, Dissolve	4260		N/A	0.00	no	N/A
SW16-PZM003	Anthracene	0.034	J	N/A	0.00	no	N/A
SW16-PZM003	Antimony	6	U	N/A	0.00	no	N/A
SW16-PZM003	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW16-PZM003	Arsenic	5	U	N/A	0.00	no	N/A
SW16-PZM003	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SW16-PZM003	Barium	13.1		N/A	0.00	no	N/A
SW16-PZM003	Barium, Dissolve	13		N/A	0.00	no	N/A
SW16-PZM003	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW16-PZM003	Benzene	1	U	69	0.00	no	C
SW16-PZM003	Benzo[a]anthracene	0.1	U	NVT	0.00	no	C
SW16-PZM003	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW16-PZM003	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW16-PZM003	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW16-PZM003	Beryllium	5.1		N/A	0.00	no	N/A
SW16-PZM003	Beryllium, Dissolve	5.2		N/A	0.00	no	N/A
SW16-PZM003	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW16-PZM003	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW16-PZM003	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW16-PZM003	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A
SW16-PZM003	Bromodichloromethane	1	U	38	0.00	no	C
SW16-PZM003	Bromoform	1	U	5100	0.00	no	C
SW16-PZM003	Bromomethane	1	U	73	0.00	no	NC
SW16-PZM003	Cadmium	1.8	J	N/A	0.00	no	N/A
SW16-PZM003	Cadmium, Dissolve	1.6	J	N/A	0.00	no	N/A
SW16-PZM003	Caprolactam	2.5	UJ	N/A	0.00	no	N/A
SW16-PZM003	Carbon disulfide	1	U	5200	0.00	no	NC
SW16-PZM003	Carbon tetrachloride	1	U	18	0.00	no	C
SW16-PZM003	Chlorobenzene	1	U	1700	0.00	no	NC
SW16-PZM003	Chloroethane	1	U	97000	0.00	no	NC
SW16-PZM003	Chloroform	1	U	36	0.00	no	C
SW16-PZM003	Chloromethane	1	UJ	1100	0.00	no	NC
SW16-PZM003	Chromium	1.7	J	N/A	0.00	no	N/A
SW16-PZM003	Chromium VI	10	U	N/A	0.00	no	N/A
SW16-PZM003	Chromium, Dissolve	1.8	B	N/A	0.00	no	N/A
SW16-PZM003	Chrysene	0.1	U	N/A	0.00	no	N/A
SW16-PZM003	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW16-PZM003	Cobalt	158		N/A	0.00	no	N/A
SW16-PZM003	Cobalt, Dissolve	153		N/A	0.00	no	N/A
SW16-PZM003	Copper	22.6		N/A	0.00	no	N/A
SW16-PZM003	Copper, Dissolve	18.8		N/A	0.00	no	N/A
SW16-PZM003	Cyanide	10	U	3.5	0.00	no	NC
SW16-PZM003	Cyclohexane	10	U	4300	0.00	no	NC
SW16-PZM003	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW16-PZM003	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW16-PZM003	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW16-PZM003	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW16-PZM003	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW16-PZM003	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
SW16-PZM003	Ethylbenzene	1	U	150	0.00	no	C
SW16-PZM003	Fluoranthene	0.052	J	N/A	0.00	no	N/A
SW16-PZM003	Fluorene	0.061	J	N/A	0.00	no	N/A
SW16-PZM003	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW16-PZM003	Hexachlorobutadiene	1	U	13	0.00	no	C
SW16-PZM003	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
SW16-PZM003	Hexachloroethane	1	U	70	0.00	no	C
SW16-PZM003	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW16-PZM003	Iron	8680		N/A	0.00	no	N/A
SW16-PZM003	Iron, Dissolve	8840		N/A	0.00	no	N/A
SW16-PZM003	Isophorone	1	U	N/A	0.00	no	N/A
SW16-PZM003	Isopropylbenzene	1	U	3700	0.00	no	NC
SW16-PZM003	Lead	5	U	N/A	0.00	no	N/A
SW16-PZM003	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW16-PZM003	Manganese	2360		N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW16-PZM003	Manganese, Dissolve	2280	J	N/A	0.00	no	N/A
SW16-PZM003	Mercury	0.06	B	3.7	0.02	no	NC
SW16-PZM003	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW16-PZM003	Methyl Acetate	5	R	N/A	0.00	no	N/A
SW16-PZM003	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW16-PZM003	Methylene Chloride	1	U	20000	0.00	no	NC
SW16-PZM003	Naphthalene	0.027	B	200	0.00	no	C
SW16-PZM003	Nickel	220	J	N/A	0.00	no	N/A
SW16-PZM003	Nickel, Dissolve	212	J	N/A	0.00	no	N/A
SW16-PZM003	Nitrobenzene	1	U	3100	0.00	no	C
SW16-PZM003	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW16-PZM003	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW16-PZM003	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
SW16-PZM003	Phenol	1	U	N/A	0.00	no	N/A
SW16-PZM003	Pyrene	0.038	J	N/A	0.00	no	N/A
SW16-PZM003	Selenium	8	U	N/A	0.00	no	N/A
SW16-PZM003	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW16-PZM003	Silver	6	U	N/A	0.00	no	N/A
SW16-PZM003	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW16-PZM003	Styrene	1	U	39000	0.00	no	NC
SW16-PZM003	Tetrachloroethene	1	U	240	0.00	no	NC
SW16-PZM003	Thallium	10	U	N/A	0.00	no	N/A
SW16-PZM003	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW16-PZM003	Toluene	1	U	81000	0.00	no	NC
SW16-PZM003	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW16-PZM003	Trichloroethene	1	U	22	0.00	no	NC
SW16-PZM003	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW16-PZM003	Vanadium	1.6	B	N/A	0.00	no	N/A
SW16-PZM003	Vanadium, Dissolve	1.4	B	N/A	0.00	no	N/A
SW16-PZM003	Vinyl chloride	1	U	25	0.00	no	C
SW16-PZM003	Xylenes	3	U	1600	0.00	no	NC
SW16-PZM003	Zinc	403		N/A	0.00	no	N/A
SW16-PZM003	Zinc, Dissolve	388	J	N/A	0.00	no	N/A
SW16-PZM067	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
SW16-PZM067	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
SW16-PZM067	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
SW16-PZM067	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
SW16-PZM067	1,1-Biphenyl	1	U	140	0.00	no	NC
SW16-PZM067	1,1-Dichloroethane	1	U	330	0.00	no	C
SW16-PZM067	1,1-Dichloroethene	1	U	820	0.00	no	NC
SW16-PZM067	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
SW16-PZM067	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
SW16-PZM067	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
SW16-PZM067	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
SW16-PZM067	1,2-Dibromoethane	1	U	7.7	0.00	no	C
SW16-PZM067	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
SW16-PZM067	1,2-Dichloroethane	1	U	98	0.00	no	C
SW16-PZM067	1,2-Dichloropropane	1	U	110	0.00	no	C
SW16-PZM067	1,4-Dichlorobenzene	1	U	110	0.00	no	C
SW16-PZM067	1,4-Dioxane	0.1	U	130000	0.00	no	C
SW16-PZM067	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
SW16-PZM067	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
SW16-PZM067	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
SW16-PZM067	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
SW16-PZM067	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
SW16-PZM067	2,4-Dinitrophenol	2.5	U	N/A	0.00	no	N/A
SW16-PZM067	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW16-PZM067	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
SW16-PZM067	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
SW16-PZM067	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
SW16-PZM067	2-Chlorophenol	1	U	N/A	0.00	no	N/A
SW16-PZM067	2-Hexanone	10	U	34000	0.00	no	NC
SW16-PZM067	2-Methylnaphthalene	0.023	J	N/A	0.00	no	N/A
SW16-PZM067	2-Methylphenol	1	U	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW16-PZM067	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW16-PZM067	3,3'-Dichlorobenzidine	1	UJ	N/A	0.00	no	N/A
SW16-PZM067	4-Chloroaniline	1	U	N/A	0.00	no	N/A
SW16-PZM067	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
SW16-PZM067	4-Nitroaniline	2.5	U	N/A	0.00	no	N/A
SW16-PZM067	Acenaphthene	0.1	U	N/A	0.00	no	N/A
SW16-PZM067	Acetone	10	U	95000000	0.00	no	NC
SW16-PZM067	Acetophenone	1	U	N/A	0.00	no	N/A
SW16-PZM067	Aluminum	50	U	N/A	0.00	no	N/A
SW16-PZM067	Aluminum, Dissolve	50	U	N/A	0.00	no	N/A
SW16-PZM067	Anthracene	0.1	U	N/A	0.00	no	N/A
SW16-PZM067	Antimony	6	U	N/A	0.00	no	N/A
SW16-PZM067	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
SW16-PZM067	Arsenic	5	U	N/A	0.00	no	N/A
SW16-PZM067	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
SW16-PZM067	Barium	28.2		N/A	0.00	no	N/A
SW16-PZM067	Barium, Dissolve	27.4		N/A	0.00	no	N/A
SW16-PZM067	Benzaldehyde	1	U	N/A	0.00	no	N/A
SW16-PZM067	Benzene	1	U	69	0.00	no	C
SW16-PZM067	Benzo[a]anthracene	0.1	U	NVT	0.00	no	C
SW16-PZM067	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
SW16-PZM067	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW16-PZM067	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
SW16-PZM067	Beryllium	1	U	N/A	0.00	no	N/A
SW16-PZM067	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
SW16-PZM067	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
SW16-PZM067	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
SW16-PZM067	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
SW16-PZM067	bis(2-Ethylhexyl)phthalate	1	UJ	N/A	0.00	no	N/A
SW16-PZM067	Bromodichloromethane	1	U	38	0.00	no	C
SW16-PZM067	Bromoform	1	U	5100	0.00	no	C
SW16-PZM067	Bromomethane	1	U	73	0.00	no	NC
SW16-PZM067	Cadmium	3	U	N/A	0.00	no	N/A
SW16-PZM067	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A
SW16-PZM067	Caprolactam	2.5	U	N/A	0.00	no	N/A
SW16-PZM067	Carbon disulfide	1	U	5200	0.00	no	NC
SW16-PZM067	Carbon tetrachloride	1	U	18	0.00	no	C
SW16-PZM067	Chlorobenzene	1	U	1700	0.00	no	NC
SW16-PZM067	Chloroethane	1	U	97000	0.00	no	NC
SW16-PZM067	Chloroform	1	U	36	0.00	no	C
SW16-PZM067	Chloromethane	1	U	1100	0.00	no	NC
SW16-PZM067	Chromium	0.84	B	N/A	0.00	no	N/A
SW16-PZM067	Chromium VI	10	U	N/A	0.00	no	N/A
SW16-PZM067	Chromium, Dissolve	0.83	B	N/A	0.00	no	N/A
SW16-PZM067	Chrysene	0.1	U	N/A	0.00	no	N/A
SW16-PZM067	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW16-PZM067	Cobalt	5	U	N/A	0.00	no	N/A
SW16-PZM067	Cobalt, Dissolve	5	U	N/A	0.00	no	N/A
SW16-PZM067	Copper	5	U	N/A	0.00	no	N/A
SW16-PZM067	Copper, Dissolve	8.8		N/A	0.00	no	N/A
SW16-PZM067	Cyanide	10	U	3.5	0.00	no	NC
SW16-PZM067	Cyclohexane	10	U	4300	0.00	no	NC
SW16-PZM067	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
SW16-PZM067	Dibromochloromethane	1	U	N/A	0.00	no	N/A
SW16-PZM067	Dichlorodifluoromethane	1	U	31	0.00	no	NC
SW16-PZM067	Diethylphthalate	1	U	N/A	0.00	no	N/A
SW16-PZM067	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
SW16-PZM067	Di-n-ocytlphthalate	1	UJ	N/A	0.00	no	N/A
SW16-PZM067	Ethylbenzene	1	U	150	0.00	no	C
SW16-PZM067	Fluoranthene	0.1	U	N/A	0.00	no	N/A
SW16-PZM067	Fluorene	0.1	U	N/A	0.00	no	N/A
SW16-PZM067	Hexachlorobenzene	1	U	3.8	0.00	no	C
SW16-PZM067	Hexachlorobutadiene	1	U	13	0.00	no	C
SW16-PZM067	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
SW16-PZM067	Hexachloroethane	1	U	70	0.00	no	C
SW16-PZM067	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
SW16-PZM067	Iron	6770		N/A	0.00	no	N/A
SW16-PZM067	Iron, Dissolve	6530		N/A	0.00	no	N/A
SW16-PZM067	Isophorone	1	U	N/A	0.00	no	N/A
SW16-PZM067	Isopropylbenzene	1	U	3700	0.00	no	NC
SW16-PZM067	Lead	5	U	N/A	0.00	no	N/A
SW16-PZM067	Lead, Dissolve	5	U	N/A	0.00	no	N/A
SW16-PZM067	Manganese	1960		N/A	0.00	no	N/A
SW16-PZM067	Manganese, Dissolve	1880		N/A	0.00	no	N/A
SW16-PZM067	Mercury	0.2	U	3.7	0.00	no	NC
SW16-PZM067	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
SW16-PZM067	Methyl Acetate	5	U	N/A	0.00	no	N/A
SW16-PZM067	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
SW16-PZM067	Methylene Chloride	1	U	20000	0.00	no	NC
SW16-PZM067	Naphthalene	0.032	B	200	0.00	no	C
SW16-PZM067	Nickel	10	U	N/A	0.00	no	N/A
SW16-PZM067	Nickel, Dissolve	10	U	N/A	0.00	no	N/A
SW16-PZM067	Nitrobenzene	1	U	3100	0.00	no	C
SW16-PZM067	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
SW16-PZM067	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
SW16-PZM067	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
SW16-PZM067	Phenol	1	U	N/A	0.00	no	N/A
SW16-PZM067	Pyrene	0.1	U	N/A	0.00	no	N/A
SW16-PZM067	Selenium	8	U	N/A	0.00	no	N/A
SW16-PZM067	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
SW16-PZM067	Silver	6	U	N/A	0.00	no	N/A
SW16-PZM067	Silver, Dissolve	6	U	N/A	0.00	no	N/A
SW16-PZM067	Styrene	1	U	39000	0.00	no	NC
SW16-PZM067	Tetrachloroethene	1	U	240	0.00	no	NC
SW16-PZM067	Thallium	10	U	N/A	0.00	no	N/A
SW16-PZM067	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
SW16-PZM067	Toluene	1	U	81000	0.00	no	NC
SW16-PZM067	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
SW16-PZM067	Trichloroethene	1	U	22	0.00	no	NC
SW16-PZM067	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
SW16-PZM067	Vanadium	5	U	N/A	0.00	no	N/A
SW16-PZM067	Vanadium, Dissolve	5	U	N/A	0.00	no	N/A
SW16-PZM067	Vinyl chloride	1	U	25	0.00	no	C
SW16-PZM067	Xylenes	3	U	1600	0.00	no	NC
SW16-PZM067	Zinc	10	U	N/A	0.00	no	N/A
SW16-PZM067	Zinc, Dissolve	10	U	N/A	0.00	no	N/A
TM03-PZM004	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
TM03-PZM004	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
TM03-PZM004	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
TM03-PZM004	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
TM03-PZM004	1,1-Biphenyl	2.2	J	140	0.02	no	NC
TM03-PZM004	1,1-Dichloroethane	1	U	330	0.00	no	C
TM03-PZM004	1,1-Dichloroethene	1	U	820	0.00	no	NC
TM03-PZM004	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
TM03-PZM004	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
TM03-PZM004	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
TM03-PZM004	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
TM03-PZM004	1,2-Dibromoethane	1	U	7.7	0.00	no	C
TM03-PZM004	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
TM03-PZM004	1,2-Dichloroethane	1	U	98	0.00	no	C
TM03-PZM004	1,2-Dichloropropane	1	U	110	0.00	no	C
TM03-PZM004	1,4-Dichlorobenzene	1	U	110	0.00	no	C
TM03-PZM004	1,4-Dioxane	0.044	J	130000	0.00	no	C
TM03-PZM004	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
TM03-PZM004	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
TM03-PZM004	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
TM03-PZM004	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
TM03-PZM004	2,4-Dimethylphenol	0.26	J	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
TM03-PZM004	2,4-Dinitrophenol	2.5	U	N/A	0.00	no	N/A
TM03-PZM004	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
TM03-PZM004	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
TM03-PZM004	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
TM03-PZM004	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
TM03-PZM004	2-Chlorophenol	1	U	N/A	0.00	no	N/A
TM03-PZM004	2-Hexanone	10	U	34000	0.00	no	NC
TM03-PZM004	2-Methylnaphthalene	11.7		N/A	0.00	no	N/A
TM03-PZM004	2-Methylphenol	0.19	J	N/A	0.00	no	N/A
TM03-PZM004	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
TM03-PZM004	3,3'-Dichlorobenzidine	1	U	N/A	0.00	no	N/A
TM03-PZM004	4-Chloroaniline	1	U	N/A	0.00	no	N/A
TM03-PZM004	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
TM03-PZM004	4-Nitroaniline	2.5	U	N/A	0.00	no	N/A
TM03-PZM004	Acenaphthene	2.6		N/A	0.00	no	N/A
TM03-PZM004	Acetone	10	R	95000000	0.00	no	NC
TM03-PZM004	Acetophenone	1	U	N/A	0.00	no	N/A
TM03-PZM004	Aluminum	297	J	N/A	0.00	no	N/A
TM03-PZM004	Aluminum, Dissolve	283		N/A	0.00	no	N/A
TM03-PZM004	Anthracene	2.3		N/A	0.00	no	N/A
TM03-PZM004	Antimony	6	U	N/A	0.00	no	N/A
TM03-PZM004	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
TM03-PZM004	Arsenic	4.5	J	N/A	0.00	no	N/A
TM03-PZM004	Arsenic, Dissolve	5.3		N/A	0.00	no	N/A
TM03-PZM004	Barium	13.1		N/A	0.00	no	N/A
TM03-PZM004	Barium, Dissolve	12.5		N/A	0.00	no	N/A
TM03-PZM004	Benzaldehyde	1	U	N/A	0.00	no	N/A
TM03-PZM004	Benzene	1.1		69	0.02	no	C
TM03-PZM004	Benzo[a]anthracene	0.33		NVT	0.00	no	C
TM03-PZM004	Benzo[a]pyrene	0.035	J	N/A	0.00	no	N/A
TM03-PZM004	Benzo[b]fluoranthene	0.089	J	N/A	0.00	no	N/A
TM03-PZM004	Benzo[k]fluoranthene	0.036	J	N/A	0.00	no	N/A
TM03-PZM004	Beryllium	1	U	N/A	0.00	no	N/A
TM03-PZM004	Beryllium, Dissolve	0.41	J	N/A	0.00	no	N/A
TM03-PZM004	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
TM03-PZM004	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
TM03-PZM004	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
TM03-PZM004	bis(2-Ethylhexyl)phthalate	0.14	B	N/A	0.00	no	N/A
TM03-PZM004	Bromodichloromethane	1	U	38	0.00	no	C
TM03-PZM004	Bromoform	1	U	5100	0.00	no	C
TM03-PZM004	Bromomethane	1	U	73	0.00	no	NC
TM03-PZM004	Cadmium	0.51	B	N/A	0.00	no	N/A
TM03-PZM004	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A
TM03-PZM004	Caprolactam	2.5	U	N/A	0.00	no	N/A
TM03-PZM004	Carbon disulfide	1	U	5200	0.00	no	NC
TM03-PZM004	Carbon tetrachloride	1	U	18	0.00	no	C
TM03-PZM004	Chlorobenzene	1	U	1700	0.00	no	NC
TM03-PZM004	Chloroethane	1	U	97000	0.00	no	NC
TM03-PZM004	Chloroform	1	U	36	0.00	no	C
TM03-PZM004	Chloromethane	1	U	1100	0.00	no	NC
TM03-PZM004	Chromium	1	J	N/A	0.00	no	N/A
TM03-PZM004	Chromium VI	10	U	N/A	0.00	no	N/A
TM03-PZM004	Chromium, Dissolve	0.95	B	N/A	0.00	no	N/A
TM03-PZM004	Chrysene	0.23		N/A	0.00	no	N/A
TM03-PZM004	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
TM03-PZM004	Cobalt	5	U	N/A	0.00	no	N/A
TM03-PZM004	Cobalt, Dissolve	5	U	N/A	0.00	no	N/A
TM03-PZM004	Copper	2.1	B	N/A	0.00	no	N/A
TM03-PZM004	Copper, Dissolve	5	U	N/A	0.00	no	N/A
TM03-PZM004	Cyanide	61.4		3.5	17.54	YES	NC
TM03-PZM004	Cyclohexane	10	U	4300	0.00	no	NC
TM03-PZM004	Dibenz[a,h]anthracene	0.1	UJ	N/A	0.00	no	N/A
TM03-PZM004	Dibromochloromethane	1	U	N/A	0.00	no	N/A
TM03-PZM004	Dichlorodifluoromethane	1	U	31	0.00	no	NC

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
TM03-PZM004	Diethylphthalate	1	U	N/A	0.00	no	N/A
TM03-PZM004	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
TM03-PZM004	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
TM03-PZM004	Ethylbenzene	1	U	150	0.00	no	C
TM03-PZM004	Fluoranthene	4.9		N/A	0.00	no	N/A
TM03-PZM004	Fluorene	8.9	J	N/A	0.00	no	N/A
TM03-PZM004	Hexachlorobenzene	1	U	3.8	0.00	no	C
TM03-PZM004	Hexachlorobutadiene	1	U	13	0.00	no	C
TM03-PZM004	Hexachlorocyclopentadiene	1	UJ	0.79	0.00	no	NC
TM03-PZM004	Hexachloroethane	1	U	70	0.00	no	C
TM03-PZM004	Indeno[1,2,3-c,d]pyrene	0.1	UJ	N/A	0.00	no	N/A
TM03-PZM004	Iron	44.2	J	N/A	0.00	no	N/A
TM03-PZM004	Iron, Dissolve	33.3	B	N/A	0.00	no	N/A
TM03-PZM004	Isophorone	1	U	N/A	0.00	no	N/A
TM03-PZM004	Isopropylbenzene	1	U	3700	0.00	no	NC
TM03-PZM004	Lead	5	U	N/A	0.00	no	N/A
TM03-PZM004	Lead, Dissolve	5	U	N/A	0.00	no	N/A
TM03-PZM004	Manganese	1.4	J	N/A	0.00	no	N/A
TM03-PZM004	Manganese, Dissolve	5	U	N/A	0.00	no	N/A
TM03-PZM004	Mercury	0.2	U	3.7	0.00	no	NC
TM03-PZM004	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
TM03-PZM004	Methyl Acetate	5	U	N/A	0.00	no	N/A
TM03-PZM004	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
TM03-PZM004	Methylene Chloride	1	U	20000	0.00	no	NC
TM03-PZM004	Naphthalene	110		200	0.55	no	C
TM03-PZM004	Nickel	10	U	N/A	0.00	no	N/A
TM03-PZM004	Nickel, Dissolve	10	U	N/A	0.00	no	N/A
TM03-PZM004	Nitrobenzene	1	U	3100	0.00	no	C
TM03-PZM004	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
TM03-PZM004	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
TM03-PZM004	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
TM03-PZM004	Phenol	0.27	J	N/A	0.00	no	N/A
TM03-PZM004	Pyrene	3.6		N/A	0.00	no	N/A
TM03-PZM004	Selenium	3.2	J	N/A	0.00	no	N/A
TM03-PZM004	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
TM03-PZM004	Silver	6	U	N/A	0.00	no	N/A
TM03-PZM004	Silver, Dissolve	6	U	N/A	0.00	no	N/A
TM03-PZM004	Styrene	1	U	39000	0.00	no	NC
TM03-PZM004	Tetrachloroethene	1	UJ	240	0.00	no	NC
TM03-PZM004	Thallium	10	U	N/A	0.00	no	N/A
TM03-PZM004	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
TM03-PZM004	Toluene	0.7	J	81000	0.00	no	NC
TM03-PZM004	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
TM03-PZM004	Trichloroethene	1	U	22	0.00	no	NC
TM03-PZM004	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
TM03-PZM004	Vanadium	114		N/A	0.00	no	N/A
TM03-PZM004	Vanadium, Dissolve	119		N/A	0.00	no	N/A
TM03-PZM004	Vinyl chloride	1	U	25	0.00	no	C
TM03-PZM004	Xylenes	3	U	1600	0.00	no	NC
TM03-PZM004	Zinc	0.69	B	N/A	0.00	no	N/A
TM03-PZM004	Zinc, Dissolve	10	U	N/A	0.00	no	N/A
TM03-PZM037	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
TM03-PZM037	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
TM03-PZM037	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
TM03-PZM037	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
TM03-PZM037	1,1-Biphenyl	1	U	140	0.00	no	NC
TM03-PZM037	1,1-Dichloroethane	1	U	330	0.00	no	C
TM03-PZM037	1,1-Dichloroethene	1	U	820	0.00	no	NC
TM03-PZM037	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
TM03-PZM037	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
TM03-PZM037	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
TM03-PZM037	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
TM03-PZM037	1,2-Dibromoethane	1	U	7.7	0.00	no	C
TM03-PZM037	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
TM03-PZM037	1,2-Dichloroethane	1	U	98	0.00	no	C
TM03-PZM037	1,2-Dichloropropane	1	U	110	0.00	no	C
TM03-PZM037	1,4-Dichlorobenzene	1	U	110	0.00	no	C
TM03-PZM037	1,4-Dioxane	0.5		130000	0.00	no	C
TM03-PZM037	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
TM03-PZM037	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
TM03-PZM037	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
TM03-PZM037	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
TM03-PZM037	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
TM03-PZM037	2,4-Dinitrophenol	2.5	U	N/A	0.00	no	N/A
TM03-PZM037	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
TM03-PZM037	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
TM03-PZM037	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
TM03-PZM037	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
TM03-PZM037	2-Chlorophenol	1	U	N/A	0.00	no	N/A
TM03-PZM037	2-Hexanone	10	U	34000	0.00	no	NC
TM03-PZM037	2-Methylnaphthalene	0.58		N/A	0.00	no	N/A
TM03-PZM037	2-Methylphenol	1	U	N/A	0.00	no	N/A
TM03-PZM037	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
TM03-PZM037	3,3'-Dichlorobenzidine	1	U	N/A	0.00	no	N/A
TM03-PZM037	4-Chloroaniline	1	U	N/A	0.00	no	N/A
TM03-PZM037	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
TM03-PZM037	4-Nitroaniline	2.5	U	N/A	0.00	no	N/A
TM03-PZM037	Acenaphthene	0.91		N/A	0.00	no	N/A
TM03-PZM037	Acetone	10	R	95000000	0.00	no	NC
TM03-PZM037	Acetophenone	1	U	N/A	0.00	no	N/A
TM03-PZM037	Aluminum	38.4	B	N/A	0.00	no	N/A
TM03-PZM037	Aluminum, Dissolve	21.6	J	N/A	0.00	no	N/A
TM03-PZM037	Anthracene	1.1		N/A	0.00	no	N/A
TM03-PZM037	Antimony	6	U	N/A	0.00	no	N/A
TM03-PZM037	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
TM03-PZM037	Arsenic	18.9		N/A	0.00	no	N/A
TM03-PZM037	Arsenic, Dissolve	20.8		N/A	0.00	no	N/A
TM03-PZM037	Barium	123		N/A	0.00	no	N/A
TM03-PZM037	Barium, Dissolve	125		N/A	0.00	no	N/A
TM03-PZM037	Benzaldehyde	1	U	N/A	0.00	no	N/A
TM03-PZM037	Benzene	1	U	69	0.00	no	C
TM03-PZM037	Benzo[a]anthracene	0.11		NVT	0.00	no	C
TM03-PZM037	Benzo[a]pyrene	0.011	J	N/A	0.00	no	N/A
TM03-PZM037	Benzo[b]fluoranthene	0.04	J	N/A	0.00	no	N/A
TM03-PZM037	Benzo[k]fluoranthene	0.036	J	N/A	0.00	no	N/A
TM03-PZM037	Beryllium	1	U	N/A	0.00	no	N/A
TM03-PZM037	Beryllium, Dissolve	0.4	J	N/A	0.00	no	N/A
TM03-PZM037	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
TM03-PZM037	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
TM03-PZM037	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
TM03-PZM037	bis(2-Ethylhexyl)phthalate	0.16	B	N/A	0.00	no	N/A
TM03-PZM037	Bromodichloromethane	1	U	38	0.00	no	C
TM03-PZM037	Bromoform	1	U	5100	0.00	no	C
TM03-PZM037	Bromomethane	1	U	73	0.00	no	NC
TM03-PZM037	Cadmium	0.87	B	N/A	0.00	no	N/A
TM03-PZM037	Cadmium, Dissolve	0.74	B	N/A	0.00	no	N/A
TM03-PZM037	Caprolactam	2.5	U	N/A	0.00	no	N/A
TM03-PZM037	Carbon disulfide	1	U	5200	0.00	no	NC
TM03-PZM037	Carbon tetrachloride	1	U	18	0.00	no	C
TM03-PZM037	Chlorobenzene	1	U	1700	0.00	no	NC
TM03-PZM037	Chloroethane	1	U	97000	0.00	no	NC
TM03-PZM037	Chloroform	0.98	J	36	0.03	no	C
TM03-PZM037	Chloromethane	1	U	1100	0.00	no	NC
TM03-PZM037	Chromium	1.1	J	N/A	0.00	no	N/A
TM03-PZM037	Chromium VI	10	U	N/A	0.00	no	N/A
TM03-PZM037	Chromium, Dissolve	1.2	B	N/A	0.00	no	N/A
TM03-PZM037	Chrysene	0.11		N/A	0.00	no	N/A
TM03-PZM037	cis-1,2-Dichloroethene	1.3		N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
TM03-PZM037	Cobalt	5	U	N/A	0.00	no	N/A
TM03-PZM037	Cobalt, Dissolve	5	U	N/A	0.00	no	N/A
TM03-PZM037	Copper	2.6	B	N/A	0.00	no	N/A
TM03-PZM037	Copper, Dissolve	5	U	N/A	0.00	no	N/A
TM03-PZM037	Cyanide	10	U	3.5	0.00	no	NC
TM03-PZM037	Cyclohexane	10	U	4300	0.00	no	NC
TM03-PZM037	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
TM03-PZM037	Dibromochloromethane	1	U	N/A	0.00	no	N/A
TM03-PZM037	Dichlorodifluoromethane	1	U	31	0.00	no	NC
TM03-PZM037	Diethylphthalate	1	U	N/A	0.00	no	N/A
TM03-PZM037	Di-n-butylphthalate	0.21	J	N/A	0.00	no	N/A
TM03-PZM037	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
TM03-PZM037	Ethylbenzene	1	U	150	0.00	no	C
TM03-PZM037	Fluoranthene	2.1		N/A	0.00	no	N/A
TM03-PZM037	Fluorene	1.3		N/A	0.00	no	N/A
TM03-PZM037	Hexachlorobenzene	1	U	3.8	0.00	no	C
TM03-PZM037	Hexachlorobutadiene	1	U	13	0.00	no	C
TM03-PZM037	Hexachlorocyclopentadiene	1	UJ	0.79	0.00	no	NC
TM03-PZM037	Hexachloroethane	1	U	70	0.00	no	C
TM03-PZM037	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
TM03-PZM037	Iron	23200		N/A	0.00	no	N/A
TM03-PZM037	Iron, Dissolve	23700		N/A	0.00	no	N/A
TM03-PZM037	Isophorone	1	U	N/A	0.00	no	N/A
TM03-PZM037	Isopropylbenzene	1	U	3700	0.00	no	NC
TM03-PZM037	Lead	5	U	N/A	0.00	no	N/A
TM03-PZM037	Lead, Dissolve	5	U	N/A	0.00	no	N/A
TM03-PZM037	Manganese	2800		N/A	0.00	no	N/A
TM03-PZM037	Manganese, Dissolve	2790		N/A	0.00	no	N/A
TM03-PZM037	Mercury	0.2	U	3.7	0.00	no	NC
TM03-PZM037	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
TM03-PZM037	Methyl Acetate	5	U	N/A	0.00	no	N/A
TM03-PZM037	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
TM03-PZM037	Methylene Chloride	1	U	20000	0.00	no	NC
TM03-PZM037	Naphthalene	3.4		200	0.02	no	C
TM03-PZM037	Nickel	1	B	N/A	0.00	no	N/A
TM03-PZM037	Nickel, Dissolve	10	U	N/A	0.00	no	N/A
TM03-PZM037	Nitrobenzene	1	U	3100	0.00	no	C
TM03-PZM037	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
TM03-PZM037	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
TM03-PZM037	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
TM03-PZM037	Phenol	1	U	N/A	0.00	no	N/A
TM03-PZM037	Pyrene	1.3		N/A	0.00	no	N/A
TM03-PZM037	Selenium	8	U	N/A	0.00	no	N/A
TM03-PZM037	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
TM03-PZM037	Silver	6	U	N/A	0.00	no	N/A
TM03-PZM037	Silver, Dissolve	6	U	N/A	0.00	no	N/A
TM03-PZM037	Styrene	1	U	39000	0.00	no	NC
TM03-PZM037	Tetrachloroethene	1	UJ	240	0.00	no	NC
TM03-PZM037	Thallium	10	U	N/A	0.00	no	N/A
TM03-PZM037	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
TM03-PZM037	Toluene	1	U	81000	0.00	no	NC
TM03-PZM037	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
TM03-PZM037	Trichloroethene	0.91	J	22	0.04	no	NC
TM03-PZM037	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
TM03-PZM037	Vanadium	5	U	N/A	0.00	no	N/A
TM03-PZM037	Vanadium, Dissolve	5	U	N/A	0.00	no	N/A
TM03-PZM037	Vinyl chloride	1	U	25	0.00	no	C
TM03-PZM037	Xylenes	3	U	1600	0.00	no	NC
TM03-PZM037	Zinc	1.5	B	N/A	0.00	no	N/A
TM03-PZM037	Zinc, Dissolve	10	U	N/A	0.00	no	N/A
TM05-PZM005	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
TM05-PZM005	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
TM05-PZM005	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
TM05-PZM005	1,1,2-Trichloroethane	1	U	26	0.00	no	NC

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
TM05-PZM005	1,1-Biphenyl	0.7	J	140	0.01	no	NC
TM05-PZM005	1,1-Dichloroethane	1	U	330	0.00	no	C
TM05-PZM005	1,1-Dichloroethene	1	U	820	0.00	no	NC
TM05-PZM005	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
TM05-PZM005	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
TM05-PZM005	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
TM05-PZM005	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
TM05-PZM005	1,2-Dibromoethane	1	U	7.7	0.00	no	C
TM05-PZM005	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
TM05-PZM005	1,2-Dichloroethane	1	U	98	0.00	no	C
TM05-PZM005	1,2-Dichloropropane	1	U	110	0.00	no	C
TM05-PZM005	1,4-Dichlorobenzene	1	U	110	0.00	no	C
TM05-PZM005	1,4-Dioxane	0.1	U	130000	0.00	no	C
TM05-PZM005	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
TM05-PZM005	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
TM05-PZM005	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
TM05-PZM005	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
TM05-PZM005	2,4-Dimethylphenol	0.36	J	N/A	0.00	no	N/A
TM05-PZM005	2,4-Dinitrophenol	2.5	U	N/A	0.00	no	N/A
TM05-PZM005	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
TM05-PZM005	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
TM05-PZM005	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
TM05-PZM005	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
TM05-PZM005	2-Chlorophenol	1	U	N/A	0.00	no	N/A
TM05-PZM005	2-Hexanone	10	U	34000	0.00	no	NC
TM05-PZM005	2-Methylnaphthalene	4.1		N/A	0.00	no	N/A
TM05-PZM005	2-Methylphenol	1	U	N/A	0.00	no	N/A
TM05-PZM005	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
TM05-PZM005	3,3'-Dichlorobenzidine	1	U	N/A	0.00	no	N/A
TM05-PZM005	4-Chloroaniline	1	U	N/A	0.00	no	N/A
TM05-PZM005	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
TM05-PZM005	4-Nitroaniline	2.5	U	N/A	0.00	no	N/A
TM05-PZM005	Acenaphthene	4.1		N/A	0.00	no	N/A
TM05-PZM005	Acetone	10	R	95000000	0.00	no	NC
TM05-PZM005	Acetophenone	1	U	N/A	0.00	no	N/A
TM05-PZM005	Aluminum	183		N/A	0.00	no	N/A
TM05-PZM005	Aluminum, Dissolve	150		N/A	0.00	no	N/A
TM05-PZM005	Anthracene	2.8		N/A	0.00	no	N/A
TM05-PZM005	Antimony	2.4	B	N/A	0.00	no	N/A
TM05-PZM005	Antimony, Dissolve	3.2	B	N/A	0.00	no	N/A
TM05-PZM005	Arsenic	3.1	J	N/A	0.00	no	N/A
TM05-PZM005	Arsenic, Dissolve	4	J	N/A	0.00	no	N/A
TM05-PZM005	Barium	12.5		N/A	0.00	no	N/A
TM05-PZM005	Barium, Dissolve	11.7		N/A	0.00	no	N/A
TM05-PZM005	Benzaldehyde	1	U	N/A	0.00	no	N/A
TM05-PZM005	Benzene	1	U	69	0.00	no	C
TM05-PZM005	Benzo[a]anthracene	0.41		NVT	0.00	no	C
TM05-PZM005	Benzo[a]pyrene	0.11		N/A	0.00	no	N/A
TM05-PZM005	Benzo[b]fluoranthene	0.24		N/A	0.00	no	N/A
TM05-PZM005	Benzo[k]fluoranthene	0.22		N/A	0.00	no	N/A
TM05-PZM005	Beryllium	1	U	N/A	0.00	no	N/A
TM05-PZM005	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
TM05-PZM005	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
TM05-PZM005	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
TM05-PZM005	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
TM05-PZM005	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A
TM05-PZM005	Bromodichloromethane	1	U	38	0.00	no	C
TM05-PZM005	Bromoform	1	U	5100	0.00	no	C
TM05-PZM005	Bromomethane	1	U	73	0.00	no	NC
TM05-PZM005	Cadmium	3	U	N/A	0.00	no	N/A
TM05-PZM005	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A
TM05-PZM005	Caprolactam	2.5	U	N/A	0.00	no	N/A
TM05-PZM005	Carbon disulfide	1	U	5200	0.00	no	NC
TM05-PZM005	Carbon tetrachloride	1	U	18	0.00	no	C

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
TM05-PZM005	Chlorobenzene	1	U	1700	0.00	no	NC
TM05-PZM005	Chloroethane	1	U	97000	0.00	no	NC
TM05-PZM005	Chloroform	1.8		36	0.05	no	C
TM05-PZM005	Chloromethane	1	U	1100	0.00	no	NC
TM05-PZM005	Chromium	1.5	B	N/A	0.00	no	N/A
TM05-PZM005	Chromium VI	10	U	N/A	0.00	no	N/A
TM05-PZM005	Chromium, Dissolve	1.3	B	N/A	0.00	no	N/A
TM05-PZM005	Chrysene	0.31		N/A	0.00	no	N/A
TM05-PZM005	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
TM05-PZM005	Cobalt	5	U	N/A	0.00	no	N/A
TM05-PZM005	Cobalt, Dissolve	5	U	N/A	0.00	no	N/A
TM05-PZM005	Copper	5	U	N/A	0.00	no	N/A
TM05-PZM005	Copper, Dissolve	5	U	N/A	0.00	no	N/A
TM05-PZM005	Cyanide	52.2		3.5	14.91	YES	NC
TM05-PZM005	Cyclohexane	10	U	4300	0.00	no	NC
TM05-PZM005	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
TM05-PZM005	Dibromochloromethane	1	U	N/A	0.00	no	N/A
TM05-PZM005	Dichlorodifluoromethane	1	U	31	0.00	no	NC
TM05-PZM005	Diethylphthalate	1	U	N/A	0.00	no	N/A
TM05-PZM005	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
TM05-PZM005	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
TM05-PZM005	Ethylbenzene	1	U	150	0.00	no	C
TM05-PZM005	Fluoranthene	3.6		N/A	0.00	no	N/A
TM05-PZM005	Fluorene	5.2		N/A	0.00	no	N/A
TM05-PZM005	Hexachlorobenzene	1	U	3.8	0.00	no	C
TM05-PZM005	Hexachlorobutadiene	1	U	13	0.00	no	C
TM05-PZM005	Hexachlorocyclopentadiene	1	UJ	0.79	0.00	no	NC
TM05-PZM005	Hexachloroethane	1	U	70	0.00	no	C
TM05-PZM005	Indeno[1,2,3-c,d]pyrene	0.037	J	N/A	0.00	no	N/A
TM05-PZM005	Iron	114		N/A	0.00	no	N/A
TM05-PZM005	Iron, Dissolve	28.8	B	N/A	0.00	no	N/A
TM05-PZM005	Isophorone	1	U	N/A	0.00	no	N/A
TM05-PZM005	Isopropylbenzene	1	U	3700	0.00	no	NC
TM05-PZM005	Lead	7		N/A	0.00	no	N/A
TM05-PZM005	Lead, Dissolve	5	U	N/A	0.00	no	N/A
TM05-PZM005	Manganese	10.1		N/A	0.00	no	N/A
TM05-PZM005	Manganese, Dissolve	2.3	J	N/A	0.00	no	N/A
TM05-PZM005	Mercury	0.2	U	3.7	0.00	no	NC
TM05-PZM005	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
TM05-PZM005	Methyl Acetate	5	U	N/A	0.00	no	N/A
TM05-PZM005	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
TM05-PZM005	Methylene Chloride	1	U	20000	0.00	no	NC
TM05-PZM005	Naphthalene	16.7		200	0.08	no	C
TM05-PZM005	Nickel	0.93	J	N/A	0.00	no	N/A
TM05-PZM005	Nickel, Dissolve	10	U	N/A	0.00	no	N/A
TM05-PZM005	Nitrobenzene	1	U	3100	0.00	no	C
TM05-PZM005	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
TM05-PZM005	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
TM05-PZM005	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
TM05-PZM005	Phenol	0.31	J	N/A	0.00	no	N/A
TM05-PZM005	Pyrene	2.3		N/A	0.00	no	N/A
TM05-PZM005	Selenium	8	U	N/A	0.00	no	N/A
TM05-PZM005	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
TM05-PZM005	Silver	6	U	N/A	0.00	no	N/A
TM05-PZM005	Silver, Dissolve	6	U	N/A	0.00	no	N/A
TM05-PZM005	Styrene	1	U	39000	0.00	no	NC
TM05-PZM005	Tetrachloroethene	1	UJ	240	0.00	no	NC
TM05-PZM005	Thallium	10	U	N/A	0.00	no	N/A
TM05-PZM005	Thallium, Dissolve	6.8	B	N/A	0.00	no	N/A
TM05-PZM005	Toluene	0.36	J	81000	0.00	no	NC
TM05-PZM005	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
TM05-PZM005	Trichloroethene	1	U	22	0.00	no	NC
TM05-PZM005	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
TM05-PZM005	Vanadium	1560		N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
TM05-PZM005	Vanadium, Dissolve	1560		N/A	0.00	no	N/A
TM05-PZM005	Vinyl chloride	1	U	25	0.00	no	C
TM05-PZM005	Xylenes	3	U	1600	0.00	no	NC
TM05-PZM005	Zinc	17		N/A	0.00	no	N/A
TM05-PZM005	Zinc, Dissolve	1.5	B	N/A	0.00	no	N/A
TM05-PZM040	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
TM05-PZM040	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
TM05-PZM040	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
TM05-PZM040	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
TM05-PZM040	1,1-Biphenyl	1	U	140	0.00	no	NC
TM05-PZM040	1,1-Dichloroethane	1	U	330	0.00	no	C
TM05-PZM040	1,1-Dichloroethene	1	U	820	0.00	no	NC
TM05-PZM040	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
TM05-PZM040	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
TM05-PZM040	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
TM05-PZM040	1,2-Dibromo-3-chloropropane	5	U	3.4	0.00	no	C
TM05-PZM040	1,2-Dibromoethane	1	U	7.7	0.00	no	C
TM05-PZM040	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
TM05-PZM040	1,2-Dichloroethane	1	U	98	0.00	no	C
TM05-PZM040	1,2-Dichloropropane	1	U	110	0.00	no	C
TM05-PZM040	1,4-Dichlorobenzene	1	U	110	0.00	no	C
TM05-PZM040	1,4-Dioxane	0.1	U	130000	0.00	no	C
TM05-PZM040	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
TM05-PZM040	2,4,5-Trichlorophenol	2.5	U	N/A	0.00	no	N/A
TM05-PZM040	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
TM05-PZM040	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
TM05-PZM040	2,4-Dimethylphenol	0.35	J	N/A	0.00	no	N/A
TM05-PZM040	2,4-Dinitrophenol	2.5	U	N/A	0.00	no	N/A
TM05-PZM040	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
TM05-PZM040	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
TM05-PZM040	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
TM05-PZM040	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
TM05-PZM040	2-Chlorophenol	1	U	N/A	0.00	no	N/A
TM05-PZM040	2-Hexanone	10	U	34000	0.00	no	NC
TM05-PZM040	2-Methylnaphthalene	0.1	U	N/A	0.00	no	N/A
TM05-PZM040	2-Methylphenol	1	U	N/A	0.00	no	N/A
TM05-PZM040	2-Nitroaniline	2.5	U	N/A	0.00	no	N/A
TM05-PZM040	3,3'-Dichlorobenzidine	1	U	N/A	0.00	no	N/A
TM05-PZM040	4-Chloroaniline	1	U	N/A	0.00	no	N/A
TM05-PZM040	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
TM05-PZM040	4-Nitroaniline	2.5	U	N/A	0.00	no	N/A
TM05-PZM040	Acenaphthene	1.2		N/A	0.00	no	N/A
TM05-PZM040	Acetone	10	R	95000000	0.00	no	NC
TM05-PZM040	Acetophenone	1	U	N/A	0.00	no	N/A
TM05-PZM040	Aluminum	77.8	J	N/A	0.00	no	N/A
TM05-PZM040	Aluminum, Dissolve	23.2	J	N/A	0.00	no	N/A
TM05-PZM040	Anthracene	0.089	J	N/A	0.00	no	N/A
TM05-PZM040	Antimony	6	U	N/A	0.00	no	N/A
TM05-PZM040	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
TM05-PZM040	Arsenic	5	U	N/A	0.00	no	N/A
TM05-PZM040	Arsenic, Dissolve	4.4	B	N/A	0.00	no	N/A
TM05-PZM040	Barium	101		N/A	0.00	no	N/A
TM05-PZM040	Barium, Dissolve	106		N/A	0.00	no	N/A
TM05-PZM040	Benzaldehyde	1	U	N/A	0.00	no	N/A
TM05-PZM040	Benzene	1	U	69	0.00	no	C
TM05-PZM040	Benzo[a]anthracene	0.041	J	NVT	0.00	no	C
TM05-PZM040	Benzo[a]pyrene	0.0088	J	N/A	0.00	no	N/A
TM05-PZM040	Benzo[b]fluoranthene	0.026	J	N/A	0.00	no	N/A
TM05-PZM040	Benzo[k]fluoranthene	0.022	J	N/A	0.00	no	N/A
TM05-PZM040	Beryllium	1	U	N/A	0.00	no	N/A
TM05-PZM040	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
TM05-PZM040	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
TM05-PZM040	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
TM05-PZM040	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
TM05-PZM040	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A
TM05-PZM040	Bromodichloromethane	1	U	38	0.00	no	C
TM05-PZM040	Bromoform	1	U	5100	0.00	no	C
TM05-PZM040	Bromomethane	1	U	73	0.00	no	NC
TM05-PZM040	Cadmium	0.77	J	N/A	0.00	no	N/A
TM05-PZM040	Cadmium, Dissolve	0.83	B	N/A	0.00	no	N/A
TM05-PZM040	Caprolactam	2.5	U	N/A	0.00	no	N/A
TM05-PZM040	Carbon disulfide	1	U	5200	0.00	no	NC
TM05-PZM040	Carbon tetrachloride	1	U	18	0.00	no	C
TM05-PZM040	Chlorobenzene	1	U	1700	0.00	no	NC
TM05-PZM040	Chloroethane	1	U	97000	0.00	no	NC
TM05-PZM040	Chloroform	1	U	36	0.00	no	C
TM05-PZM040	Chloromethane	1	U	1100	0.00	no	NC
TM05-PZM040	Chromium	1.1	B	N/A	0.00	no	N/A
TM05-PZM040	Chromium VI	10	U	N/A	0.00	no	N/A
TM05-PZM040	Chromium, Dissolve	1.5	B	N/A	0.00	no	N/A
TM05-PZM040	Chrysene	0.03	J	N/A	0.00	no	N/A
TM05-PZM040	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
TM05-PZM040	Cobalt	5	U	N/A	0.00	no	N/A
TM05-PZM040	Cobalt, Dissolve	25	U	N/A	0.00	no	N/A
TM05-PZM040	Copper	5	U	N/A	0.00	no	N/A
TM05-PZM040	Copper, Dissolve	5	U	N/A	0.00	no	N/A
TM05-PZM040	Cyanide	10	U	3.5	0.00	no	NC
TM05-PZM040	Cyclohexane	10	U	4300	0.00	no	NC
TM05-PZM040	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
TM05-PZM040	Dibromochloromethane	1	U	N/A	0.00	no	N/A
TM05-PZM040	Dichlorodifluoromethane	1	U	31	0.00	no	NC
TM05-PZM040	Diethylphthalate	1	U	N/A	0.00	no	N/A
TM05-PZM040	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
TM05-PZM040	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
TM05-PZM040	Ethylbenzene	1	U	150	0.00	no	C
TM05-PZM040	Fluoranthene	0.45		N/A	0.00	no	N/A
TM05-PZM040	Fluorene	0.27		N/A	0.00	no	N/A
TM05-PZM040	Hexachlorobenzene	1	U	3.8	0.00	no	C
TM05-PZM040	Hexachlorobutadiene	1	U	13	0.00	no	C
TM05-PZM040	Hexachlorocyclopentadiene	1	UJ	0.79	0.00	no	NC
TM05-PZM040	Hexachloroethane	1	U	70	0.00	no	C
TM05-PZM040	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
TM05-PZM040	Iron	15400		N/A	0.00	no	N/A
TM05-PZM040	Iron, Dissolve	16000		N/A	0.00	no	N/A
TM05-PZM040	Isophorone	1	U	N/A	0.00	no	N/A
TM05-PZM040	Isopropylbenzene	1	U	3700	0.00	no	NC
TM05-PZM040	Lead	5	U	N/A	0.00	no	N/A
TM05-PZM040	Lead, Dissolve	25	U	N/A	0.00	no	N/A
TM05-PZM040	Manganese	1850		N/A	0.00	no	N/A
TM05-PZM040	Manganese, Dissolve	1940		N/A	0.00	no	N/A
TM05-PZM040	Mercury	0.2	U	3.7	0.00	no	NC
TM05-PZM040	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
TM05-PZM040	Methyl Acetate	5	U	N/A	0.00	no	N/A
TM05-PZM040	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
TM05-PZM040	Methylene Chloride	1	U	20000	0.00	no	NC
TM05-PZM040	Naphthalene	1.1		200	0.01	no	C
TM05-PZM040	Nickel	10	U	N/A	0.00	no	N/A
TM05-PZM040	Nickel, Dissolve	10	U	N/A	0.00	no	N/A
TM05-PZM040	Nitrobenzene	1	U	3100	0.00	no	C
TM05-PZM040	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
TM05-PZM040	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
TM05-PZM040	Pentachlorophenol	2.5	U	N/A	0.00	no	N/A
TM05-PZM040	Phenol	1	U	N/A	0.00	no	N/A
TM05-PZM040	Pyrene	0.27		N/A	0.00	no	N/A
TM05-PZM040	Selenium	8	U	N/A	0.00	no	N/A
TM05-PZM040	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
TM05-PZM040	Silver	6	U	N/A	0.00	no	N/A
TM05-PZM040	Silver, Dissolve	6	U	N/A	0.00	no	N/A

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
TM05-PZM040	Styrene	1	U	39000	0.00	no	NC
TM05-PZM040	Tetrachloroethene	1	UJ	240	0.00	no	NC
TM05-PZM040	Thallium	10	U	N/A	0.00	no	N/A
TM05-PZM040	Thallium, Dissolve	50	U	N/A	0.00	no	N/A
TM05-PZM040	Toluene	1	U	81000	0.00	no	NC
TM05-PZM040	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
TM05-PZM040	Trichloroethene	1	U	22	0.00	no	NC
TM05-PZM040	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
TM05-PZM040	Vanadium	2.8	B	N/A	0.00	no	N/A
TM05-PZM040	Vanadium, Dissolve	2.9	B	N/A	0.00	no	N/A
TM05-PZM040	Vinyl chloride	1	U	25	0.00	no	C
TM05-PZM040	Xylenes	3	U	1600	0.00	no	NC
TM05-PZM040	Zinc	1.4	B	N/A	0.00	no	N/A
TM05-PZM040	Zinc, Dissolve	0.64	B	N/A	0.00	no	N/A
TS10-PDM008	1,1,1-Trichloroethane	1	U	31000	0.00	no	NC
TS10-PDM008	1,1,2,2-Tetrachloroethane	1	U	140	0.00	no	C
TS10-PDM008	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	U	6100	0.00	no	NC
TS10-PDM008	1,1,2-Trichloroethane	1	U	26	0.00	no	NC
TS10-PDM008	1,1-Biphenyl	1	U	140	0.00	no	NC
TS10-PDM008	1,1-Dichloroethane	1	U	330	0.00	no	C
TS10-PDM008	1,1-Dichloroethene	1	U	820	0.00	no	NC
TS10-PDM008	1,2,3-Trichlorobenzene	2	U	N/A	0.00	no	N/A
TS10-PDM008	1,2,4,5-Tetrachlorobenzene	1	U	N/A	0.00	no	N/A
TS10-PDM008	1,2,4-Trichlorobenzene	1	U	150	0.00	no	NC
TS10-PDM008	1,2-Dibromo-3-chloropropane	5	UJ	3.4	0.00	no	C
TS10-PDM008	1,2-Dibromoethane	1	U	7.7	0.00	no	C
TS10-PDM008	1,2-Dichlorobenzene	1	U	11000	0.00	no	NC
TS10-PDM008	1,2-Dichloroethane	1	U	98	0.00	no	C
TS10-PDM008	1,2-Dichloropropane	1	U	110	0.00	no	C
TS10-PDM008	1,4-Dichlorobenzene	1	U	110	0.00	no	C
TS10-PDM008	1,4-Dioxane	0.21		130000	0.00	no	C
TS10-PDM008	2,3,4,6-Tetrachlorophenol	1	U	N/A	0.00	no	N/A
TS10-PDM008	2,4,5-Trichlorophenol	2.6	U	N/A	0.00	no	N/A
TS10-PDM008	2,4,6-Trichlorophenol	1	U	N/A	0.00	no	N/A
TS10-PDM008	2,4-Dichlorophenol	1	U	N/A	0.00	no	N/A
TS10-PDM008	2,4-Dimethylphenol	1	U	N/A	0.00	no	N/A
TS10-PDM008	2,4-Dinitrophenol	2.6	UJ	N/A	0.00	no	N/A
TS10-PDM008	2,4-Dinitrotoluene	1	U	N/A	0.00	no	N/A
TS10-PDM008	2,6-Dinitrotoluene	1	U	N/A	0.00	no	N/A
TS10-PDM008	2-Butanone (MEK)	10	U	9400000	0.00	no	NC
TS10-PDM008	2-Chloronaphthalene	1	U	N/A	0.00	no	N/A
TS10-PDM008	2-Chlorophenol	1	U	N/A	0.00	no	N/A
TS10-PDM008	2-Hexanone	10	U	34000	0.00	no	NC
TS10-PDM008	2-Methylnaphthalene	0.1	U	N/A	0.00	no	N/A
TS10-PDM008	2-Methylphenol	1	U	N/A	0.00	no	N/A
TS10-PDM008	2-Nitroaniline	2.6	U	N/A	0.00	no	N/A
TS10-PDM008	3,3'-Dichlorobenzidine	1	R	N/A	0.00	no	N/A
TS10-PDM008	4-Chloroaniline	1	U	N/A	0.00	no	N/A
TS10-PDM008	4-Methyl-2-pentanone (MIBK)	10	U	2300000	0.00	no	NC
TS10-PDM008	4-Nitroaniline	2.6	UJ	N/A	0.00	no	N/A
TS10-PDM008	Acenaphthene	0.1	U	N/A	0.00	no	N/A
TS10-PDM008	Acetone	10	R	95000000	0.00	no	NC
TS10-PDM008	Acetophenone	1	U	N/A	0.00	no	N/A
TS10-PDM008	Aluminum	23	B	N/A	0.00	no	N/A
TS10-PDM008	Aluminum, Dissolve	18.4	B	N/A	0.00	no	N/A
TS10-PDM008	Anthracene	0.1	U	N/A	0.00	no	N/A
TS10-PDM008	Antimony	6	U	N/A	0.00	no	N/A
TS10-PDM008	Antimony, Dissolve	6	U	N/A	0.00	no	N/A
TS10-PDM008	Arsenic	5	U	N/A	0.00	no	N/A
TS10-PDM008	Arsenic, Dissolve	5	U	N/A	0.00	no	N/A
TS10-PDM008	Barium	47.8		N/A	0.00	no	N/A
TS10-PDM008	Barium, Dissolve	51.6		N/A	0.00	no	N/A
TS10-PDM008	Benzaldehyde	1	U	N/A	0.00	no	N/A
TS10-PDM008	Benzene	1	U	69	0.00	no	C

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
TS10-PDM008	Benzo[a]anthracene	0.1	U	NVT	0.00	no	C
TS10-PDM008	Benzo[a]pyrene	0.1	U	N/A	0.00	no	N/A
TS10-PDM008	Benzo[b]fluoranthene	0.1	U	N/A	0.00	no	N/A
TS10-PDM008	Benzo[k]fluoranthene	0.1	U	N/A	0.00	no	N/A
TS10-PDM008	Beryllium	1	U	N/A	0.00	no	N/A
TS10-PDM008	Beryllium, Dissolve	1	U	N/A	0.00	no	N/A
TS10-PDM008	bis(2-chloroethoxy)methane	1	U	N/A	0.00	no	N/A
TS10-PDM008	bis(2-Chloroethyl)ether	1	U	530	0.00	no	C
TS10-PDM008	bis(2-Chloroisopropyl)ether	1	U	N/A	0.00	no	N/A
TS10-PDM008	bis(2-Ethylhexyl)phthalate	1	U	N/A	0.00	no	N/A
TS10-PDM008	Bromodichloromethane	1	U	38	0.00	no	C
TS10-PDM008	Bromoform	1	UJ	5100	0.00	no	C
TS10-PDM008	Bromomethane	1	UJ	73	0.00	no	NC
TS10-PDM008	Cadmium	0.49	J	N/A	0.00	no	N/A
TS10-PDM008	Cadmium, Dissolve	3	U	N/A	0.00	no	N/A
TS10-PDM008	Caprolactam	2.6	UJ	N/A	0.00	no	N/A
TS10-PDM008	Carbon disulfide	1	U	5200	0.00	no	NC
TS10-PDM008	Carbon tetrachloride	1	U	18	0.00	no	C
TS10-PDM008	Chlorobenzene	1	U	1700	0.00	no	NC
TS10-PDM008	Chloroethane	1	U	97000	0.00	no	NC
TS10-PDM008	Chloroform	1	U	36	0.00	no	C
TS10-PDM008	Chloromethane	1	UJ	1100	0.00	no	NC
TS10-PDM008	Chromium	1.1	B	N/A	0.00	no	N/A
TS10-PDM008	Chromium VI	10	U	N/A	0.00	no	N/A
TS10-PDM008	Chromium, Dissolve	1.1	B	N/A	0.00	no	N/A
TS10-PDM008	Chrysene	0.1	U	N/A	0.00	no	N/A
TS10-PDM008	cis-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
TS10-PDM008	Cobalt	5	U	N/A	0.00	no	N/A
TS10-PDM008	Cobalt, Dissolve	5	U	N/A	0.00	no	N/A
TS10-PDM008	Copper	2.9	B	N/A	0.00	no	N/A
TS10-PDM008	Copper, Dissolve	1.5	B	N/A	0.00	no	N/A
TS10-PDM008	Cyanide	10	U	3.5	0.00	no	NC
TS10-PDM008	Cyclohexane	10	U	4300	0.00	no	NC
TS10-PDM008	Dibenz[a,h]anthracene	0.1	U	N/A	0.00	no	N/A
TS10-PDM008	Dibromochloromethane	1	U	N/A	0.00	no	N/A
TS10-PDM008	Dichlorodifluoromethane	1	U	31	0.00	no	NC
TS10-PDM008	Diethylphthalate	1	U	N/A	0.00	no	N/A
TS10-PDM008	Di-n-butylphthalate	1	U	N/A	0.00	no	N/A
TS10-PDM008	Di-n-ocytlphthalate	1	U	N/A	0.00	no	N/A
TS10-PDM008	Ethylbenzene	1	U	150	0.00	no	C
TS10-PDM008	Fluoranthene	0.1	U	N/A	0.00	no	N/A
TS10-PDM008	Fluorene	0.1	U	N/A	0.00	no	N/A
TS10-PDM008	Hexachlorobenzene	1	U	3.8	0.00	no	C
TS10-PDM008	Hexachlorobutadiene	1	U	13	0.00	no	C
TS10-PDM008	Hexachlorocyclopentadiene	1	U	0.79	0.00	no	NC
TS10-PDM008	Hexachloroethane	1	U	70	0.00	no	C
TS10-PDM008	Indeno[1,2,3-c,d]pyrene	0.1	U	N/A	0.00	no	N/A
TS10-PDM008	Iron	70	U	N/A	0.00	no	N/A
TS10-PDM008	Iron, Dissolve	70	U	N/A	0.00	no	N/A
TS10-PDM008	Isophorone	1	U	N/A	0.00	no	N/A
TS10-PDM008	Isopropylbenzene	1	U	3700	0.00	no	NC
TS10-PDM008	Lead	5	U	N/A	0.00	no	N/A
TS10-PDM008	Lead, Dissolve	5	U	N/A	0.00	no	N/A
TS10-PDM008	Manganese	75.1		N/A	0.00	no	N/A
TS10-PDM008	Manganese, Dissolve	79	J	N/A	0.00	no	N/A
TS10-PDM008	Mercury	0.08	B	3.7	0.02	no	NC
TS10-PDM008	Mercury, Dissolve	0.2	U	3.7	0.00	no	NC
TS10-PDM008	Methyl Acetate	5	R	N/A	0.00	no	N/A
TS10-PDM008	Methyl tert-butyl ether (MTBE)	1	U	20000	0.00	no	C
TS10-PDM008	Methylene Chloride	1	U	20000	0.00	no	NC
TS10-PDM008	Naphthalene	0.046	B	200	0.00	no	C
TS10-PDM008	Nickel	1.6	B	N/A	0.00	no	N/A
TS10-PDM008	Nickel, Dissolve	1.6	B	N/A	0.00	no	N/A
TS10-PDM008	Nitrobenzene	1	U	3100	0.00	no	C

VAPOR INTRUSION CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Target Groundwater Concentration (ug/L) TCR=1E-05 or THQ=1	Comparison = Result / Target	Exceeds Criteria	Toxicity Type
TS10-PDM008	N-Nitroso-di-n-propylamine	1	U	N/A	0.00	no	N/A
TS10-PDM008	N-Nitrosodiphenylamine	1	U	N/A	0.00	no	N/A
TS10-PDM008	Pentachlorophenol	2.6	U	N/A	0.00	no	N/A
TS10-PDM008	Phenol	1	U	N/A	0.00	no	N/A
TS10-PDM008	Pyrene	0.1	U	N/A	0.00	no	N/A
TS10-PDM008	Selenium	8	U	N/A	0.00	no	N/A
TS10-PDM008	Selenium, Dissolve	8	U	N/A	0.00	no	N/A
TS10-PDM008	Silver	6	U	N/A	0.00	no	N/A
TS10-PDM008	Silver, Dissolve	6	U	N/A	0.00	no	N/A
TS10-PDM008	Styrene	1	U	39000	0.00	no	NC
TS10-PDM008	Tetrachloroethene	1	U	240	0.00	no	NC
TS10-PDM008	Thallium	10	U	N/A	0.00	no	N/A
TS10-PDM008	Thallium, Dissolve	10	U	N/A	0.00	no	N/A
TS10-PDM008	Toluene	1	U	81000	0.00	no	NC
TS10-PDM008	trans-1,2-Dichloroethene	1	U	N/A	0.00	no	N/A
TS10-PDM008	Trichloroethene	1	U	22	0.00	no	NC
TS10-PDM008	Trichlorofluoromethane	1	U	N/A	0.00	no	N/A
TS10-PDM008	Vanadium	4	B	N/A	0.00	no	N/A
TS10-PDM008	Vanadium, Dissolve	3.7	B	N/A	0.00	no	N/A
TS10-PDM008	Vinyl chloride	1	U	25	0.00	no	C
TS10-PDM008	Xylenes	3	U	1600	0.00	no	NC
TS10-PDM008	Zinc	10	U	N/A	0.00	no	N/A
TS10-PDM008	Zinc, Dissolve	10	U	N/A	0.00	no	N/A

NVT indicates the analyte is not sufficiently volatile and/or toxic to pose inhalation risk in selected exposure scenario for the indicated medium
NA indicate no Vapor Intrusion criteria
Highlight indicates exceedance of Vapor Intrusion criteria
C indicates carcinogenic
NC indicates non-carcinogenic
J qualifier indicates the positive result reported for the analyte is a quantitative estimate
B qualifier indicates the analyte was not detected substantially above the level of the associated method or field blank
U qualifier indicates the analye was not detected in the sample and the result represents the sample quantitation limit
UJ qualifier indicates the analyte was not detected in the sample and the actual quantitation limit may be higher than reported
R qualifier indicates the results for the analyte are unreliable and additional data would be needed to confirm or disprove its presence in the sample

APPENDIX J

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SG07-PDM008	1,1,1-Trichloroethane	1	U	N/A	no	N/A	no
SG07-PDM008	1,1,2,2-Tetrachloroethane	1	U	40	no	N/A	no
SG07-PDM008	1,1,2-Trichloroethane	1	U	160	no	N/A	no
SG07-PDM008	1,1-Dichloroethene	1	U	7100	no	N/A	no
SG07-PDM008	1,2,4-Trichlorobenzene	1	U	70	no	N/A	no
SG07-PDM008	1,2-Dichlorobenzene	1	U	1300	no	N/A	no
SG07-PDM008	1,2-Dichloroethane	1	U	370	no	N/A	no
SG07-PDM008	1,2-Dichloropropane	1	U	150	no	N/A	no
SG07-PDM008	1,3-Dichlorobenzene	1	U	960	no	N/A	no
SG07-PDM008	1,4-Dichlorobenzene	1	U	190	no	N/A	no
SG07-PDM008	2,4,6-Trichlorophenol	1	U	24	no	N/A	no
SG07-PDM008	2,4-Dichlorophenol	1	U	290	no	N/A	no
SG07-PDM008	2,4-Dimethylphenol	1	U	850	no	N/A	no
SG07-PDM008	2,4-Dinitrophenol	2.5	U	5300	no	N/A	no
SG07-PDM008	2,4-Dinitrotoluene	1	U	0.28	no	N/A	no
SG07-PDM008	2,4-Dinitrotoluene	1	U	34	no	N/A	no
SG07-PDM008	2-Chloronaphthalene	1	U	1600	no	N/A	no
SG07-PDM008	2-Chlorophenol	1	U	150	no	N/A	no
SG07-PDM008	Acenaphthene	0.1	U	990	no	N/A	no
SG07-PDM008	Anthracene	0.1	U	40000	no	N/A	no
SG07-PDM008	Antimony	6	U	640	no	N/A	no
SG07-PDM008	Antimony, Dissolve	6	U	640	no	N/A	no
SG07-PDM008	Arsenic	5	U	1.4	no	36	no
SG07-PDM008	Arsenic, Dissolve	5	U	1.4	no	36	no
SG07-PDM008	Barium	56.2		N/A	no	N/A	no
SG07-PDM008	Barium, Dissolve	56.5		N/A	no	N/A	no
SG07-PDM008	Benzene	1	U	510	no	N/A	no
SG07-PDM008	Benzo[a]anthracene	0.1	U	0.18	no	N/A	no
SG07-PDM008	Benzo[a]pyrene	0.1	U	0.18	no	N/A	no
SG07-PDM008	Benzo[b]fluoranthene	0.1	U	0.18	no	N/A	no
SG07-PDM008	Benzo[k]fluoranthene	0.1	U	0.18	no	N/A	no
SG07-PDM008	Beryllium	1	U	N/A	no	N/A	no
SG07-PDM008	Beryllium, Dissolve	1	U	N/A	no	N/A	no
SG07-PDM008	bis(2-Chloroethyl)ether	1	U	5.3	no	N/A	no
SG07-PDM008	bis(2-Chloroisopropyl)ether	1	U	65000	no	N/A	no
SG07-PDM008	bis(2-Ethylhexyl)phthalate	0.27	J	22	no	N/A	no
SG07-PDM008	Bromodichloromethane	1	U	170	no	N/A	no
SG07-PDM008	Bromoform	1	U	1400	no	N/A	no
SG07-PDM008	Bromomethane	1	U	1500	no	N/A	no
SG07-PDM008	Cadmium	3	U	N/A	no	8.8	no
SG07-PDM008	Cadmium, Dissolve	3	U	N/A	no	8.8	no
SG07-PDM008	Carbon tetrachloride	1	U	16	no	N/A	no
SG07-PDM008	Chlorobenzene	1	U	1600	no	N/A	no
SG07-PDM008	Chloroform	1	U	4700	no	N/A	no
SG07-PDM008	Chromium	34.2		N/A	no	N/A	no
SG07-PDM008	Chromium VI	26		N/A	no	50	no
SG07-PDM008	Chromium, Dissolve	34.1		N/A	no	N/A	no
SG07-PDM008	Chrysene	0.1	U	0.18	no	N/A	no
SG07-PDM008	Copper	5	U	N/A	no	3.1	no
SG07-PDM008	Copper, Dissolve	2.1	B	N/A	no	3.1	no
SG07-PDM008	Cyanide	10	U	140	no	1	no
SG07-PDM008	Dibenz[a,h]anthracene	0.1	U	0.18	no	N/A	no
SG07-PDM008	Dibromochloromethane	1	U	130	no	N/A	no
SG07-PDM008	Diethylphthalate	1	U	44000	no	N/A	no
SG07-PDM008	Di-n-butylphthalate	1	U	4500	no	N/A	no
SG07-PDM008	Ethylbenzene	1	U	2100	no	N/A	no
SG07-PDM008	Fluoranthene	0.1	U	140	no	N/A	no
SG07-PDM008	Fluorene	0.02	J	5300	no	N/A	no
SG07-PDM008	Hexachlorobenzene	1	U	0.0029	no	N/A	no
SG07-PDM008	Hexachlorobutadiene	1	U	180	no	N/A	no

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SG07-PDM008	Hexachlorocyclopentadiene	1	U	1100	no	N/A	no
SG07-PDM008	Hexachloroethane	1	U	33	no	N/A	no
SG07-PDM008	Indeno[1,2,3-c,d]pyrene	0.1	U	0.18	no	N/A	no
SG07-PDM008	Isophorone	1	U	9600	no	N/A	no
SG07-PDM008	Lead	5	U	N/A	no	8.1	no
SG07-PDM008	Lead, Dissolve	5	U	N/A	no	8.1	no
SG07-PDM008	Mercury	0.06	B	N/A	no	0.94	no
SG07-PDM008	Mercury, Dissolve	0.2	U	N/A	no	0.94	no
SG07-PDM008	Methylene Chloride	1	U	5900	no	N/A	no
SG07-PDM008	Nickel	10	U	4600	no	8.2	no
SG07-PDM008	Nickel, Dissolve	10	U	4600	no	8.2	no
SG07-PDM008	Nitrobenzene	1	U	690	no	N/A	no
SG07-PDM008	N-Nitroso-di-n-propylamine	1	U	5.1	no	N/A	no
SG07-PDM008	N-Nitrosodiphenylamine	1	U	60	no	N/A	no
SG07-PDM008	Phenol	1	U	860000	no	N/A	no
SG07-PDM008	Pyrene	0.1	U	4000	no	N/A	no
SG07-PDM008	Selenium	8.8		4200	no	71	no
SG07-PDM008	Selenium, Dissolve	8.1		4200	no	71	no
SG07-PDM008	Silver	6	U	N/A	no	N/A	no
SG07-PDM008	Silver, Dissolve	6	U	N/A	no	N/A	no
SG07-PDM008	Tetrachloroethene	1	U	33	no	N/A	no
SG07-PDM008	Thallium	10	U	0.47	no	N/A	no
SG07-PDM008	Thallium, Dissolve	10	U	0.47	no	N/A	no
SG07-PDM008	Toluene	1	U	15000	no	N/A	no
SG07-PDM008	trans-1,2-Dichloroethene	1	U	10000	no	N/A	no
SG07-PDM008	Trichloroethene	3.8		300	no	N/A	no
SG07-PDM008	Vinyl chloride	1	U	24	no	N/A	no
SG07-PDM008	Zinc	10	U	26000	no	81	no
SG07-PDM008	Zinc, Dissolve	10	U	26000	no	81	no
SW-021-MWS	1,1,1-Trichloroethane	1	U	N/A	no	N/A	no
SW-021-MWS	1,1,2,2-Tetrachloroethane	1	U	40	no	N/A	no
SW-021-MWS	1,1,2-Trichloroethane	1	U	160	no	N/A	no
SW-021-MWS	1,1-Dichloroethene	1	U	7100	no	N/A	no
SW-021-MWS	1,2,4-Trichlorobenzene	1	UJ	70	no	N/A	no
SW-021-MWS	1,2-Dichlorobenzene	1	U	1300	no	N/A	no
SW-021-MWS	1,2-Dichloroethane	1	U	370	no	N/A	no
SW-021-MWS	1,2-Dichloropropane	1	U	150	no	N/A	no
SW-021-MWS	1,3-Dichlorobenzene	1	U	960	no	N/A	no
SW-021-MWS	1,4-Dichlorobenzene	1	U	190	no	N/A	no
SW-021-MWS	2,4,6-Trichlorophenol	1	U	24	no	N/A	no
SW-021-MWS	2,4-Dichlorophenol	1	U	290	no	N/A	no
SW-021-MWS	2,4-Dimethylphenol	1	U	850	no	N/A	no
SW-021-MWS	2,4-Dinitrophenol	2.5	UJ	5300	no	N/A	no
SW-021-MWS	2,4-Dinitrotoluene	1	U	0.28	no	N/A	no
SW-021-MWS	2,4-Dinitrotoluene	1	U	34	no	N/A	no
SW-021-MWS	2-Chloronaphthalene	1	U	1600	no	N/A	no
SW-021-MWS	2-Chlorophenol	1	U	150	no	N/A	no
SW-021-MWS	Acenaphthene	0.1	U	990	no	N/A	no
SW-021-MWS	Anthracene	0.038	J	40000	no	N/A	no
SW-021-MWS	Antimony	3.3	J	640	no	N/A	no
SW-021-MWS	Antimony, Dissolve	2.8	J	640	no	N/A	no
SW-021-MWS	Arsenic	5	U	1.4	no	36	no
SW-021-MWS	Arsenic, Dissolve	5.4		1.4	YES	36	no
SW-021-MWS	Barium	71.4		N/A	no	N/A	no
SW-021-MWS	Barium, Dissolve	62.3		N/A	no	N/A	no
SW-021-MWS	Benzene	1	U	510	no	N/A	no
SW-021-MWS	Benzo[a]anthracene	0.1	U	0.18	no	N/A	no
SW-021-MWS	Benzo[a]pyrene	0.1	U	0.18	no	N/A	no
SW-021-MWS	Benzo[b]fluoranthene	0.1	U	0.18	no	N/A	no
SW-021-MWS	Benzo[k]fluoranthene	0.1	U	0.18	no	N/A	no

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW-021-MWS	Beryllium	0.47	J	N/A	no	N/A	no
SW-021-MWS	Beryllium, Dissolve	1	U	N/A	no	N/A	no
SW-021-MWS	bis(2-Chloroethyl)ether	1	U	5.3	no	N/A	no
SW-021-MWS	bis(2-Chloroisopropyl)ether	1	U	65000	no	N/A	no
SW-021-MWS	bis(2-Ethylhexyl)phthalate	1	U	22	no	N/A	no
SW-021-MWS	Bromodichloromethane	1	U	170	no	N/A	no
SW-021-MWS	Bromoform	1	U	1400	no	N/A	no
SW-021-MWS	Bromomethane	1	U	1500	no	N/A	no
SW-021-MWS	Cadmium	3	U	N/A	no	8.8	no
SW-021-MWS	Cadmium, Dissolve	3	U	N/A	no	8.8	no
SW-021-MWS	Carbon tetrachloride	1	U	16	no	N/A	no
SW-021-MWS	Chlorobenzene	1	U	1600	no	N/A	no
SW-021-MWS	Chloroform	4.7		4700	no	N/A	no
SW-021-MWS	Chromium	2.5	B	N/A	no	N/A	no
SW-021-MWS	Chromium VI	10	U	N/A	no	50	no
SW-021-MWS	Chromium, Dissolve	2.1	B	N/A	no	N/A	no
SW-021-MWS	Chrysene	0.012	J	0.18	no	N/A	no
SW-021-MWS	Copper	5	U	N/A	no	3.1	no
SW-021-MWS	Copper, Dissolve	2.1	J	N/A	no	3.1	no
SW-021-MWS	Cyanide	10	U	140	no	1	no
SW-021-MWS	Dibenz[a,h]anthracene	0.1	U	0.18	no	N/A	no
SW-021-MWS	Dibromochloromethane	1	U	130	no	N/A	no
SW-021-MWS	Diethylphthalate	1	U	44000	no	N/A	no
SW-021-MWS	Di-n-butylphthalate	1	U	4500	no	N/A	no
SW-021-MWS	Ethylbenzene	1	U	2100	no	N/A	no
SW-021-MWS	Fluoranthene	0.018	J	140	no	N/A	no
SW-021-MWS	Fluorene	0.1	U	5300	no	N/A	no
SW-021-MWS	Hexachlorobenzene	1	U	0.0029	no	N/A	no
SW-021-MWS	Hexachlorobutadiene	1	U	180	no	N/A	no
SW-021-MWS	Hexachlorocyclopentadiene	1	U	1100	no	N/A	no
SW-021-MWS	Hexachloroethane	1	U	33	no	N/A	no
SW-021-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	0.18	no	N/A	no
SW-021-MWS	Isophorone	1	U	9600	no	N/A	no
SW-021-MWS	Lead	5	U	N/A	no	8.1	no
SW-021-MWS	Lead, Dissolve	5	U	N/A	no	8.1	no
SW-021-MWS	Mercury	0.2	U	N/A	no	0.94	no
SW-021-MWS	Mercury, Dissolve	0.2	U	N/A	no	0.94	no
SW-021-MWS	Methylene Chloride	1	U	5900	no	N/A	no
SW-021-MWS	Nickel	0.85	B	4600	no	8.2	no
SW-021-MWS	Nickel, Dissolve	10	U	4600	no	8.2	no
SW-021-MWS	Nitrobenzene	1	U	690	no	N/A	no
SW-021-MWS	N-Nitroso-di-n-propylamine	1	U	5.1	no	N/A	no
SW-021-MWS	N-Nitrosodiphenylamine	1	U	60	no	N/A	no
SW-021-MWS	Phenol	1	U	860000	no	N/A	no
SW-021-MWS	Pyrene	0.014	J	4000	no	N/A	no
SW-021-MWS	Selenium	5.2	B	4200	no	71	no
SW-021-MWS	Selenium, Dissolve	8	U	4200	no	71	no
SW-021-MWS	Silver	6	U	N/A	no	N/A	no
SW-021-MWS	Silver, Dissolve	6	U	N/A	no	N/A	no
SW-021-MWS	Tetrachloroethene	1	U	33	no	N/A	no
SW-021-MWS	Thallium	6	B	0.47	YES	N/A	no
SW-021-MWS	Thallium, Dissolve	10	U	0.47	no	N/A	no
SW-021-MWS	Toluene	1	U	15000	no	N/A	no
SW-021-MWS	trans-1,2-Dichloroethene	1	U	10000	no	N/A	no
SW-021-MWS	Trichloroethene	1	U	300	no	N/A	no
SW-021-MWS	Vinyl chloride	1	U	24	no	N/A	no
SW-021-MWS	Zinc	1.3	B	26000	no	81	no
SW-021-MWS	Zinc, Dissolve	10	U	26000	no	81	no
SW-022-MWS	1,1,1-Trichloroethane	1	U	N/A	no	N/A	no
SW-022-MWS	1,1,2,2-Tetrachloroethane	1	U	40	no	N/A	no

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW-022-MWS	1,1,2-Trichloroethane	1	U	160	no	N/A	no
SW-022-MWS	1,1-Dichloroethene	1	U	7100	no	N/A	no
SW-022-MWS	1,2,4-Trichlorobenzene	1	UJ	70	no	N/A	no
SW-022-MWS	1,2-Dichlorobenzene	1	U	1300	no	N/A	no
SW-022-MWS	1,2-Dichloroethane	1	U	370	no	N/A	no
SW-022-MWS	1,2-Dichloropropane	1	U	150	no	N/A	no
SW-022-MWS	1,3-Dichlorobenzene	1	U	960	no	N/A	no
SW-022-MWS	1,4-Dichlorobenzene	1	U	190	no	N/A	no
SW-022-MWS	2,4,6-Trichlorophenol	1	U	24	no	N/A	no
SW-022-MWS	2,4-Dichlorophenol	1	U	290	no	N/A	no
SW-022-MWS	2,4-Dimethylphenol	1	U	850	no	N/A	no
SW-022-MWS	2,4-Dinitrophenol	2.5	UJ	5300	no	N/A	no
SW-022-MWS	2,4-Dinitrotoluene	1	U	0.28	no	N/A	no
SW-022-MWS	2,4-Dinitrotoluene	1	U	34	no	N/A	no
SW-022-MWS	2-Chloronaphthalene	1	U	1600	no	N/A	no
SW-022-MWS	2-Chlorophenol	1	U	150	no	N/A	no
SW-022-MWS	Acenaphthene	0.1	U	990	no	N/A	no
SW-022-MWS	Anthracene	0.063	J	40000	no	N/A	no
SW-022-MWS	Antimony	6	U	640	no	N/A	no
SW-022-MWS	Antimony, Dissolve	6	U	640	no	N/A	no
SW-022-MWS	Arsenic	5	U	1.4	no	36	no
SW-022-MWS	Arsenic, Dissolve	5	U	1.4	no	36	no
SW-022-MWS	Barium	65.3		N/A	no	N/A	no
SW-022-MWS	Barium, Dissolve	58.3		N/A	no	N/A	no
SW-022-MWS	Benzene	1	U	510	no	N/A	no
SW-022-MWS	Benzo[a]anthracene	0.1	U	0.18	no	N/A	no
SW-022-MWS	Benzo[a]pyrene	0.1	U	0.18	no	N/A	no
SW-022-MWS	Benzo[b]fluoranthene	0.1	U	0.18	no	N/A	no
SW-022-MWS	Benzo[k]fluoranthene	0.1	U	0.18	no	N/A	no
SW-022-MWS	Beryllium	1	U	N/A	no	N/A	no
SW-022-MWS	Beryllium, Dissolve	1	U	N/A	no	N/A	no
SW-022-MWS	bis(2-Chloroethyl)ether	1	U	5.3	no	N/A	no
SW-022-MWS	bis(2-Chloroisopropyl)ether	1	U	65000	no	N/A	no
SW-022-MWS	bis(2-Ethylhexyl)phthalate	1	U	22	no	N/A	no
SW-022-MWS	Bromodichloromethane	1	U	170	no	N/A	no
SW-022-MWS	Bromoform	1	U	1400	no	N/A	no
SW-022-MWS	Bromomethane	1	U	1500	no	N/A	no
SW-022-MWS	Cadmium	3	U	N/A	no	8.8	no
SW-022-MWS	Cadmium, Dissolve	3	U	N/A	no	8.8	no
SW-022-MWS	Carbon tetrachloride	1	U	16	no	N/A	no
SW-022-MWS	Chlorobenzene	1	U	1600	no	N/A	no
SW-022-MWS	Chloroform	1	U	4700	no	N/A	no
SW-022-MWS	Chromium	1.5	B	N/A	no	N/A	no
SW-022-MWS	Chromium VI	10	U	N/A	no	50	no
SW-022-MWS	Chromium, Dissolve	1.6	B	N/A	no	N/A	no
SW-022-MWS	Chrysene	0.1	U	0.18	no	N/A	no
SW-022-MWS	Copper	5	U	N/A	no	3.1	no
SW-022-MWS	Copper, Dissolve	5	U	N/A	no	3.1	no
SW-022-MWS	Cyanide	10	U	140	no	1	no
SW-022-MWS	Dibenz[a,h]anthracene	0.1	U	0.18	no	N/A	no
SW-022-MWS	Dibromochloromethane	1	U	130	no	N/A	no
SW-022-MWS	Diethylphthalate	1	U	44000	no	N/A	no
SW-022-MWS	Di-n-butylphthalate	1	U	4500	no	N/A	no
SW-022-MWS	Ethylbenzene	1	U	2100	no	N/A	no
SW-022-MWS	Fluoranthene	0.031	J	140	no	N/A	no
SW-022-MWS	Fluorene	0.1	U	5300	no	N/A	no
SW-022-MWS	Hexachlorobenzene	1	U	0.0029	no	N/A	no
SW-022-MWS	Hexachlorobutadiene	1	U	180	no	N/A	no
SW-022-MWS	Hexachlorocyclopentadiene	1	U	1100	no	N/A	no
SW-022-MWS	Hexachloroethane	1	U	33	no	N/A	no

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW-022-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	0.18	no	N/A	no
SW-022-MWS	Isophorone	1	U	9600	no	N/A	no
SW-022-MWS	Lead	5	U	N/A	no	8.1	no
SW-022-MWS	Lead, Dissolve	5	U	N/A	no	8.1	no
SW-022-MWS	Mercury	0.2	U	N/A	no	0.94	no
SW-022-MWS	Mercury, Dissolve	0.2	U	N/A	no	0.94	no
SW-022-MWS	Methylene Chloride	1	U	5900	no	N/A	no
SW-022-MWS	Nickel	0.78	B	4600	no	8.2	no
SW-022-MWS	Nickel, Dissolve	10	U	4600	no	8.2	no
SW-022-MWS	Nitrobenzene	1	U	690	no	N/A	no
SW-022-MWS	N-Nitroso-di-n-propylamine	1	U	5.1	no	N/A	no
SW-022-MWS	N-Nitrosodiphenylamine	1	U	60	no	N/A	no
SW-022-MWS	Phenol	1	U	860000	no	N/A	no
SW-022-MWS	Pyrene	0.023	J	4000	no	N/A	no
SW-022-MWS	Selenium	8	U	4200	no	71	no
SW-022-MWS	Selenium, Dissolve	8	U	4200	no	71	no
SW-022-MWS	Silver	6	U	N/A	no	N/A	no
SW-022-MWS	Silver, Dissolve	6	U	N/A	no	N/A	no
SW-022-MWS	Tetrachloroethene	1	U	33	no	N/A	no
SW-022-MWS	Thallium	4.2	B	0.47	YES	N/A	no
SW-022-MWS	Thallium, Dissolve	10	U	0.47	no	N/A	no
SW-022-MWS	Toluene	1	U	15000	no	N/A	no
SW-022-MWS	trans-1,2-Dichloroethene	1	U	10000	no	N/A	no
SW-022-MWS	Trichloroethene	1	U	300	no	N/A	no
SW-022-MWS	Vinyl chloride	1	U	24	no	N/A	no
SW-022-MWS	Zinc	0.64	B	26000	no	81	no
SW-022-MWS	Zinc, Dissolve	10	U	26000	no	81	no
SW-023-MWS	1,1,1-Trichloroethane	1	U	N/A	no	N/A	no
SW-023-MWS	1,1,2,2-Tetrachloroethane	1	U	40	no	N/A	no
SW-023-MWS	1,1,2-Trichloroethane	1	U	160	no	N/A	no
SW-023-MWS	1,1-Dichloroethene	1	U	7100	no	N/A	no
SW-023-MWS	1,2,4-Trichlorobenzene	1	U	70	no	N/A	no
SW-023-MWS	1,2-Dichlorobenzene	1	U	1300	no	N/A	no
SW-023-MWS	1,2-Dichloroethane	1	U	370	no	N/A	no
SW-023-MWS	1,2-Dichloropropane	1	U	150	no	N/A	no
SW-023-MWS	1,3-Dichlorobenzene	1	U	960	no	N/A	no
SW-023-MWS	1,4-Dichlorobenzene	1	U	190	no	N/A	no
SW-023-MWS	2,4,6-Trichlorophenol	1	U	24	no	N/A	no
SW-023-MWS	2,4-Dichlorophenol	1	U	290	no	N/A	no
SW-023-MWS	2,4-Dimethylphenol	1	U	850	no	N/A	no
SW-023-MWS	2,4-Dinitrophenol	2.5	U	5300	no	N/A	no
SW-023-MWS	2,4-Dinitrotoluene	1	U	0.28	no	N/A	no
SW-023-MWS	2,4-Dinitrotoluene	1	U	34	no	N/A	no
SW-023-MWS	2-Chloronaphthalene	1	U	1600	no	N/A	no
SW-023-MWS	2-Chlorophenol	1	U	150	no	N/A	no
SW-023-MWS	Acenaphthene	0.1	U	990	no	N/A	no
SW-023-MWS	Anthracene	0.081	J	40000	no	N/A	no
SW-023-MWS	Antimony	6	U	640	no	N/A	no
SW-023-MWS	Antimony, Dissolve	6	U	640	no	N/A	no
SW-023-MWS	Arsenic	5	U	1.4	no	36	no
SW-023-MWS	Arsenic, Dissolve	5	U	1.4	no	36	no
SW-023-MWS	Barium	23.4		N/A	no	N/A	no
SW-023-MWS	Barium, Dissolve	22.7		N/A	no	N/A	no
SW-023-MWS	Benzene	1	U	510	no	N/A	no
SW-023-MWS	Benzo[a]anthracene	0.015	J	0.18	no	N/A	no
SW-023-MWS	Benzo[a]pyrene	0.1	U	0.18	no	N/A	no
SW-023-MWS	Benzo[b]fluoranthene	0.031	B	0.18	no	N/A	no
SW-023-MWS	Benzo[k]fluoranthene	0.022	B	0.18	no	N/A	no
SW-023-MWS	Beryllium	1	U	N/A	no	N/A	no
SW-023-MWS	Beryllium, Dissolve	1	U	N/A	no	N/A	no

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW-023-MWS	bis(2-Chloroethyl)ether	1	U	5.3	no	N/A	no
SW-023-MWS	bis(2-Chloroisopropyl)ether	1	U	65000	no	N/A	no
SW-023-MWS	bis(2-Ethylhexyl)phthalate	1	U	22	no	N/A	no
SW-023-MWS	Bromodichloromethane	1	U	170	no	N/A	no
SW-023-MWS	Bromoform	1	U	1400	no	N/A	no
SW-023-MWS	Bromomethane	1	U	1500	no	N/A	no
SW-023-MWS	Cadmium	3	U	N/A	no	8.8	no
SW-023-MWS	Cadmium, Dissolve	3	U	N/A	no	8.8	no
SW-023-MWS	Carbon tetrachloride	1	U	16	no	N/A	no
SW-023-MWS	Chlorobenzene	1	U	1600	no	N/A	no
SW-023-MWS	Chloroform	2.5		4700	no	N/A	no
SW-023-MWS	Chromium	18.9		N/A	no	N/A	no
SW-023-MWS	Chromium VI	9	J	N/A	no	50	no
SW-023-MWS	Chromium, Dissolve	19.7		N/A	no	N/A	no
SW-023-MWS	Chrysene	0.0089	B	0.18	no	N/A	no
SW-023-MWS	Copper	3	B	N/A	no	3.1	no
SW-023-MWS	Copper, Dissolve	3.1	B	N/A	no	3.1	no
SW-023-MWS	Cyanide	10	U	140	no	1	no
SW-023-MWS	Dibenz[a,h]anthracene	0.1	U	0.18	no	N/A	no
SW-023-MWS	Dibromochloromethane	1	U	130	no	N/A	no
SW-023-MWS	Diethylphthalate	1	U	44000	no	N/A	no
SW-023-MWS	Di-n-butylphthalate	1	U	4500	no	N/A	no
SW-023-MWS	Ethylbenzene	1	U	2100	no	N/A	no
SW-023-MWS	Fluoranthene	0.1	U	140	no	N/A	no
SW-023-MWS	Fluorene	0.1	U	5300	no	N/A	no
SW-023-MWS	Hexachlorobenzene	1	U	0.0029	no	N/A	no
SW-023-MWS	Hexachlorobutadiene	1	U	180	no	N/A	no
SW-023-MWS	Hexachlorocyclopentadiene	1	U	1100	no	N/A	no
SW-023-MWS	Hexachloroethane	1	U	33	no	N/A	no
SW-023-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	0.18	no	N/A	no
SW-023-MWS	Isophorone	1	U	9600	no	N/A	no
SW-023-MWS	Lead	5	U	N/A	no	8.1	no
SW-023-MWS	Lead, Dissolve	5	U	N/A	no	8.1	no
SW-023-MWS	Mercury	0.2	U	N/A	no	0.94	no
SW-023-MWS	Mercury, Dissolve	0.2	U	N/A	no	0.94	no
SW-023-MWS	Methylene Chloride	1	U	5900	no	N/A	no
SW-023-MWS	Nickel	1.4	B	4600	no	8.2	no
SW-023-MWS	Nickel, Dissolve	0.94	B	4600	no	8.2	no
SW-023-MWS	Nitrobenzene	1	U	690	no	N/A	no
SW-023-MWS	N-Nitroso-di-n-propylamine	1	U	5.1	no	N/A	no
SW-023-MWS	N-Nitrosodiphenylamine	1	U	60	no	N/A	no
SW-023-MWS	Phenol	1	U	860000	no	N/A	no
SW-023-MWS	Pyrene	0.1	U	4000	no	N/A	no
SW-023-MWS	Selenium	11.1		4200	no	71	no
SW-023-MWS	Selenium, Dissolve	12.4		4200	no	71	no
SW-023-MWS	Silver	6	U	N/A	no	N/A	no
SW-023-MWS	Silver, Dissolve	6	U	N/A	no	N/A	no
SW-023-MWS	Tetrachloroethene	1	U	33	no	N/A	no
SW-023-MWS	Thallium	4.7	B	0.47	YES	N/A	no
SW-023-MWS	Thallium, Dissolve	10	U	0.47	no	N/A	no
SW-023-MWS	Toluene	1	U	15000	no	N/A	no
SW-023-MWS	trans-1,2-Dichloroethene	1	U	10000	no	N/A	no
SW-023-MWS	Trichloroethene	1	U	300	no	N/A	no
SW-023-MWS	Vinyl chloride	1	U	24	no	N/A	no
SW-023-MWS	Zinc	0.8	J	26000	no	81	no
SW-023-MWS	Zinc, Dissolve	10	U	26000	no	81	no
SW-024-MWS	1,1,1-Trichloroethane	1	U	N/A	no	N/A	no
SW-024-MWS	1,1,2,2-Tetrachloroethane	1	U	40	no	N/A	no
SW-024-MWS	1,1,2-Trichloroethane	1	U	160	no	N/A	no
SW-024-MWS	1,1-Dichloroethene	1	U	7100	no	N/A	no

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW-024-MWS	1,2,4-Trichlorobenzene	1	U	70	no	N/A	no
SW-024-MWS	1,2-Dichlorobenzene	1	U	1300	no	N/A	no
SW-024-MWS	1,2-Dichloroethane	1	U	370	no	N/A	no
SW-024-MWS	1,2-Dichloropropane	1	U	150	no	N/A	no
SW-024-MWS	1,3-Dichlorobenzene	1	U	960	no	N/A	no
SW-024-MWS	1,4-Dichlorobenzene	1	U	190	no	N/A	no
SW-024-MWS	2,4,6-Trichlorophenol	1	U	24	no	N/A	no
SW-024-MWS	2,4-Dichlorophenol	1	U	290	no	N/A	no
SW-024-MWS	2,4-Dimethylphenol	1	U	850	no	N/A	no
SW-024-MWS	2,4-Dinitrophenol	2.5	U	5300	no	N/A	no
SW-024-MWS	2,4-Dinitrotoluene	1	U	0.28	no	N/A	no
SW-024-MWS	2,4-Dinitrotoluene	1	U	34	no	N/A	no
SW-024-MWS	2-Chloronaphthalene	1	U	1600	no	N/A	no
SW-024-MWS	2-Chlorophenol	1	U	150	no	N/A	no
SW-024-MWS	Acenaphthene	0.1	U	990	no	N/A	no
SW-024-MWS	Anthracene	0.028	J	40000	no	N/A	no
SW-024-MWS	Antimony	6	U	640	no	N/A	no
SW-024-MWS	Antimony, Dissolve	6	U	640	no	N/A	no
SW-024-MWS	Arsenic	4	B	1.4	YES	36	no
SW-024-MWS	Arsenic, Dissolve	4	B	1.4	YES	36	no
SW-024-MWS	Barium	39		N/A	no	N/A	no
SW-024-MWS	Barium, Dissolve	34.5		N/A	no	N/A	no
SW-024-MWS	Benzene	1	U	510	no	N/A	no
SW-024-MWS	Benzo[a]anthracene	0.1	U	0.18	no	N/A	no
SW-024-MWS	Benzo[a]pyrene	0.1	U	0.18	no	N/A	no
SW-024-MWS	Benzo[b]fluoranthene	0.1	U	0.18	no	N/A	no
SW-024-MWS	Benzo[k]fluoranthene	0.1	U	0.18	no	N/A	no
SW-024-MWS	Beryllium	1	U	N/A	no	N/A	no
SW-024-MWS	Beryllium, Dissolve	1	U	N/A	no	N/A	no
SW-024-MWS	bis(2-Chloroethyl)ether	1	U	5.3	no	N/A	no
SW-024-MWS	bis(2-Chloroisopropyl)ether	1	U	65000	no	N/A	no
SW-024-MWS	bis(2-Ethylhexyl)phthalate	1	U	22	no	N/A	no
SW-024-MWS	Bromodichloromethane	1	U	170	no	N/A	no
SW-024-MWS	Bromoform	1	U	1400	no	N/A	no
SW-024-MWS	Bromomethane	1	U	1500	no	N/A	no
SW-024-MWS	Cadmium	3	U	N/A	no	8.8	no
SW-024-MWS	Cadmium, Dissolve	3	U	N/A	no	8.8	no
SW-024-MWS	Carbon tetrachloride	1	U	16	no	N/A	no
SW-024-MWS	Chlorobenzene	1	U	1600	no	N/A	no
SW-024-MWS	Chloroform	1	U	4700	no	N/A	no
SW-024-MWS	Chromium	3.8	B	N/A	no	N/A	no
SW-024-MWS	Chromium VI	10	U	N/A	no	50	no
SW-024-MWS	Chromium, Dissolve	1.6	B	N/A	no	N/A	no
SW-024-MWS	Chrysene	0.1	U	0.18	no	N/A	no
SW-024-MWS	Copper	5	U	N/A	no	3.1	no
SW-024-MWS	Copper, Dissolve	5	U	N/A	no	3.1	no
SW-024-MWS	Cyanide	296		140	YES	1	YES
SW-024-MWS	Dibenz[a,h]anthracene	0.1	U	0.18	no	N/A	no
SW-024-MWS	Dibromochloromethane	1	U	130	no	N/A	no
SW-024-MWS	Diethylphthalate	1	U	44000	no	N/A	no
SW-024-MWS	Di-n-butylphthalate	1	U	4500	no	N/A	no
SW-024-MWS	Ethylbenzene	1	U	2100	no	N/A	no
SW-024-MWS	Fluoranthene	0.039	J	140	no	N/A	no
SW-024-MWS	Fluorene	0.018	J	5300	no	N/A	no
SW-024-MWS	Hexachlorobenzene	1	U	0.0029	no	N/A	no
SW-024-MWS	Hexachlorobutadiene	1	U	180	no	N/A	no
SW-024-MWS	Hexachlorocyclopentadiene	1	U	1100	no	N/A	no
SW-024-MWS	Hexachloroethane	1	U	33	no	N/A	no
SW-024-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	0.18	no	N/A	no
SW-024-MWS	Isophorone	1	U	9600	no	N/A	no

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW-024-MWS	Lead	5	U	N/A	no	8.1	no
SW-024-MWS	Lead, Dissolve	5	U	N/A	no	8.1	no
SW-024-MWS	Mercury	0.2	U	N/A	no	0.94	no
SW-024-MWS	Mercury, Dissolve	0.2	U	N/A	no	0.94	no
SW-024-MWS	Methylene Chloride	1	U	5900	no	N/A	no
SW-024-MWS	Nickel	10	U	4600	no	8.2	no
SW-024-MWS	Nickel, Dissolve	0.8	B	4600	no	8.2	no
SW-024-MWS	Nitrobenzene	1	U	690	no	N/A	no
SW-024-MWS	N-Nitroso-di-n-propylamine	1	U	5.1	no	N/A	no
SW-024-MWS	N-Nitrosodiphenylamine	1	U	60	no	N/A	no
SW-024-MWS	Phenol	1	U	860000	no	N/A	no
SW-024-MWS	Pyrene	0.063	J	4000	no	N/A	no
SW-024-MWS	Selenium	3.6	B	4200	no	71	no
SW-024-MWS	Selenium, Dissolve	8	U	4200	no	71	no
SW-024-MWS	Silver	6	U	N/A	no	N/A	no
SW-024-MWS	Silver, Dissolve	6	U	N/A	no	N/A	no
SW-024-MWS	Tetrachloroethene	1	U	33	no	N/A	no
SW-024-MWS	Thallium	10	U	0.47	no	N/A	no
SW-024-MWS	Thallium, Dissolve	10	U	0.47	no	N/A	no
SW-024-MWS	Toluene	0.34	J	15000	no	N/A	no
SW-024-MWS	trans-1,2-Dichloroethene	1	U	10000	no	N/A	no
SW-024-MWS	Trichloroethene	1	U	300	no	N/A	no
SW-024-MWS	Vinyl chloride	1	U	24	no	N/A	no
SW-024-MWS	Zinc	1.4	B	26000	no	81	no
SW-024-MWS	Zinc, Dissolve	1.2	B	26000	no	81	no
SW-025-MWS	1,1,1-Trichloroethane	1	U	N/A	no	N/A	no
SW-025-MWS	1,1,2,2-Tetrachloroethane	1	U	40	no	N/A	no
SW-025-MWS	1,1,2-Trichloroethane	1	U	160	no	N/A	no
SW-025-MWS	1,1-Dichloroethene	1	U	7100	no	N/A	no
SW-025-MWS	1,2,4-Trichlorobenzene	1	U	70	no	N/A	no
SW-025-MWS	1,2-Dichlorobenzene	1	U	1300	no	N/A	no
SW-025-MWS	1,2-Dichloroethane	1	U	370	no	N/A	no
SW-025-MWS	1,2-Dichloropropane	1	U	150	no	N/A	no
SW-025-MWS	1,3-Dichlorobenzene	1	U	960	no	N/A	no
SW-025-MWS	1,4-Dichlorobenzene	1	U	190	no	N/A	no
SW-025-MWS	2,4,6-Trichlorophenol	1	U	24	no	N/A	no
SW-025-MWS	2,4-Dichlorophenol	1	U	290	no	N/A	no
SW-025-MWS	2,4-Dimethylphenol	1	U	850	no	N/A	no
SW-025-MWS	2,4-Dinitrophenol	2.5	U	5300	no	N/A	no
SW-025-MWS	2,4-Dinitrotoluene	1	U	0.28	no	N/A	no
SW-025-MWS	2,4-Dinitrotoluene	1	U	34	no	N/A	no
SW-025-MWS	2-Chloronaphthalene	1	U	1600	no	N/A	no
SW-025-MWS	2-Chlorophenol	1	U	150	no	N/A	no
SW-025-MWS	Acenaphthene	0.1	U	990	no	N/A	no
SW-025-MWS	Anthracene	0.02	J	40000	no	N/A	no
SW-025-MWS	Antimony	6	U	640	no	N/A	no
SW-025-MWS	Antimony, Dissolve	6	U	640	no	N/A	no
SW-025-MWS	Arsenic	5	U	1.4	no	36	no
SW-025-MWS	Arsenic, Dissolve	5	U	1.4	no	36	no
SW-025-MWS	Barium	69.4		N/A	no	N/A	no
SW-025-MWS	Barium, Dissolve	69.3		N/A	no	N/A	no
SW-025-MWS	Benzene	1	U	510	no	N/A	no
SW-025-MWS	Benzo[a]anthracene	0.046	J	0.18	no	N/A	no
SW-025-MWS	Benzo[a]pyrene	0.046	J	0.18	no	N/A	no
SW-025-MWS	Benzo[b]fluoranthene	0.17		0.18	no	N/A	no
SW-025-MWS	Benzo[k]fluoranthene	0.12		0.18	no	N/A	no
SW-025-MWS	Beryllium	1	U	N/A	no	N/A	no
SW-025-MWS	Beryllium, Dissolve	1	U	N/A	no	N/A	no
SW-025-MWS	bis(2-Chloroethyl)ether	1	U	5.3	no	N/A	no
SW-025-MWS	bis(2-Chloroisopropyl)ether	1	U	65000	no	N/A	no

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW-025-MWS	bis(2-Ethylhexyl)phthalate	1	U	22	no	N/A	no
SW-025-MWS	Bromodichloromethane	1	U	170	no	N/A	no
SW-025-MWS	Bromoform	1	U	1400	no	N/A	no
SW-025-MWS	Bromomethane	1	U	1500	no	N/A	no
SW-025-MWS	Cadmium	3	U	N/A	no	8.8	no
SW-025-MWS	Cadmium, Dissolve	3	U	N/A	no	8.8	no
SW-025-MWS	Carbon tetrachloride	1	U	16	no	N/A	no
SW-025-MWS	Chlorobenzene	1	U	1600	no	N/A	no
SW-025-MWS	Chloroform	1	U	4700	no	N/A	no
SW-025-MWS	Chromium	1.1	B	N/A	no	N/A	no
SW-025-MWS	Chromium VI	10	U	N/A	no	50	no
SW-025-MWS	Chromium, Dissolve	5	U	N/A	no	N/A	no
SW-025-MWS	Chrysene	0.041	B	0.18	no	N/A	no
SW-025-MWS	Copper	3.9	B	N/A	no	3.1	YES
SW-025-MWS	Copper, Dissolve	5	U	N/A	no	3.1	no
SW-025-MWS	Cyanide	10	U	140	no	1	no
SW-025-MWS	Dibenz[a,h]anthracene	0.1	U	0.18	no	N/A	no
SW-025-MWS	Dibromochloromethane	1	U	130	no	N/A	no
SW-025-MWS	Diethylphthalate	1	U	44000	no	N/A	no
SW-025-MWS	Di-n-butylphthalate	1	U	4500	no	N/A	no
SW-025-MWS	Ethylbenzene	1	U	2100	no	N/A	no
SW-025-MWS	Fluoranthene	0.032	J	140	no	N/A	no
SW-025-MWS	Fluorene	0.1	U	5300	no	N/A	no
SW-025-MWS	Hexachlorobenzene	1	U	0.0029	no	N/A	no
SW-025-MWS	Hexachlorobutadiene	1	U	180	no	N/A	no
SW-025-MWS	Hexachlorocyclopentadiene	1	U	1100	no	N/A	no
SW-025-MWS	Hexachloroethane	1	U	33	no	N/A	no
SW-025-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	0.18	no	N/A	no
SW-025-MWS	Isophorone	1	U	9600	no	N/A	no
SW-025-MWS	Lead	14		N/A	no	8.1	YES
SW-025-MWS	Lead, Dissolve	5	U	N/A	no	8.1	no
SW-025-MWS	Mercury	0.2	U	N/A	no	0.94	no
SW-025-MWS	Mercury, Dissolve	0.2	U	N/A	no	0.94	no
SW-025-MWS	Methylene Chloride	1	U	5900	no	N/A	no
SW-025-MWS	Nickel	0.8	B	4600	no	8.2	no
SW-025-MWS	Nickel, Dissolve	0.7	B	4600	no	8.2	no
SW-025-MWS	Nitrobenzene	1	U	690	no	N/A	no
SW-025-MWS	N-Nitroso-di-n-propylamine	1	U	5.1	no	N/A	no
SW-025-MWS	N-Nitrosodiphenylamine	1	U	60	no	N/A	no
SW-025-MWS	Phenol	1	U	860000	no	N/A	no
SW-025-MWS	Pyrene	0.025	J	4000	no	N/A	no
SW-025-MWS	Selenium	8	U	4200	no	71	no
SW-025-MWS	Selenium, Dissolve	8	U	4200	no	71	no
SW-025-MWS	Silver	6	U	N/A	no	N/A	no
SW-025-MWS	Silver, Dissolve	6	UJ	N/A	no	N/A	no
SW-025-MWS	Tetrachloroethene	1	U	33	no	N/A	no
SW-025-MWS	Thallium	10	U	0.47	no	N/A	no
SW-025-MWS	Thallium, Dissolve	10	U	0.47	no	N/A	no
SW-025-MWS	Toluene	1	U	15000	no	N/A	no
SW-025-MWS	trans-1,2-Dichloroethene	1	U	10000	no	N/A	no
SW-025-MWS	Trichloroethene	1	U	300	no	N/A	no
SW-025-MWS	Vinyl chloride	1	U	24	no	N/A	no
SW-025-MWS	Zinc	19.2		26000	no	81	no
SW-025-MWS	Zinc, Dissolve	1.5	J	26000	no	81	no
SW-026-MWS	1,1,1-Trichloroethane	1	U	N/A	no	N/A	no
SW-026-MWS	1,1,2,2-Tetrachloroethane	1	U	40	no	N/A	no
SW-026-MWS	1,1,2-Trichloroethane	1	U	160	no	N/A	no
SW-026-MWS	1,1-Dichloroethene	1	U	7100	no	N/A	no
SW-026-MWS	1,2,4-Trichlorobenzene	1	U	70	no	N/A	no
SW-026-MWS	1,2-Dichlorobenzene	1	U	1300	no	N/A	no

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW-026-MWS	1,2-Dichloroethane	1	U	370	no	N/A	no
SW-026-MWS	1,2-Dichloropropane	1	U	150	no	N/A	no
SW-026-MWS	1,3-Dichlorobenzene	1	U	960	no	N/A	no
SW-026-MWS	1,4-Dichlorobenzene	1	U	190	no	N/A	no
SW-026-MWS	2,4,6-Trichlorophenol	1	U	24	no	N/A	no
SW-026-MWS	2,4-Dichlorophenol	1	U	290	no	N/A	no
SW-026-MWS	2,4-Dimethylphenol	1	U	850	no	N/A	no
SW-026-MWS	2,4-Dinitrophenol	2.6	U	5300	no	N/A	no
SW-026-MWS	2,4-Dinitrotoluene	1	U	0.28	no	N/A	no
SW-026-MWS	2,4-Dinitrotoluene	1	U	34	no	N/A	no
SW-026-MWS	2-Chloronaphthalene	1	U	1600	no	N/A	no
SW-026-MWS	2-Chlorophenol	1	U	150	no	N/A	no
SW-026-MWS	Acenaphthene	0.12		990	no	N/A	no
SW-026-MWS	Anthracene	0.15		40000	no	N/A	no
SW-026-MWS	Antimony	6	U	640	no	N/A	no
SW-026-MWS	Antimony, Dissolve	6	U	640	no	N/A	no
SW-026-MWS	Arsenic	5	U	1.4	no	36	no
SW-026-MWS	Arsenic, Dissolve	5	U	1.4	no	36	no
SW-026-MWS	Barium	54.9		N/A	no	N/A	no
SW-026-MWS	Barium, Dissolve	52.2		N/A	no	N/A	no
SW-026-MWS	Benzene	1	U	510	no	N/A	no
SW-026-MWS	Benzo[a]anthracene	0.043	J	0.18	no	N/A	no
SW-026-MWS	Benzo[a]pyrene	0.1	U	0.18	no	N/A	no
SW-026-MWS	Benzo[b]fluoranthene	0.1	U	0.18	no	N/A	no
SW-026-MWS	Benzo[k]fluoranthene	0.1	U	0.18	no	N/A	no
SW-026-MWS	Beryllium	1	U	N/A	no	N/A	no
SW-026-MWS	Beryllium, Dissolve	1	U	N/A	no	N/A	no
SW-026-MWS	bis(2-Chloroethyl)ether	1	U	5.3	no	N/A	no
SW-026-MWS	bis(2-Chloroisopropyl)ether	1	U	65000	no	N/A	no
SW-026-MWS	bis(2-Ethylhexyl)phthalate	0.21	J	22	no	N/A	no
SW-026-MWS	Bromodichloromethane	1	U	170	no	N/A	no
SW-026-MWS	Bromoform	1	U	1400	no	N/A	no
SW-026-MWS	Bromomethane	1	U	1500	no	N/A	no
SW-026-MWS	Cadmium	3	U	N/A	no	8.8	no
SW-026-MWS	Cadmium, Dissolve	3	U	N/A	no	8.8	no
SW-026-MWS	Carbon tetrachloride	1	U	16	no	N/A	no
SW-026-MWS	Chlorobenzene	1	U	1600	no	N/A	no
SW-026-MWS	Chloroform	1	U	4700	no	N/A	no
SW-026-MWS	Chromium	1.1	J	N/A	no	N/A	no
SW-026-MWS	Chromium VI	10	U	N/A	no	50	no
SW-026-MWS	Chromium, Dissolve	1	B	N/A	no	N/A	no
SW-026-MWS	Chrysene	0.021	J	0.18	no	N/A	no
SW-026-MWS	Copper	5	U	N/A	no	3.1	no
SW-026-MWS	Copper, Dissolve	5	U	N/A	no	3.1	no
SW-026-MWS	Cyanide	10	U	140	no	1	no
SW-026-MWS	Dibenz[a,h]anthracene	0.1	U	0.18	no	N/A	no
SW-026-MWS	Dibromochloromethane	1	U	130	no	N/A	no
SW-026-MWS	Diethylphthalate	1	U	44000	no	N/A	no
SW-026-MWS	Di-n-butylphthalate	1	U	4500	no	N/A	no
SW-026-MWS	Ethylbenzene	1	U	2100	no	N/A	no
SW-026-MWS	Fluoranthene	0.051	J	140	no	N/A	no
SW-026-MWS	Fluorene	0.2		5300	no	N/A	no
SW-026-MWS	Hexachlorobenzene	1	U	0.0029	no	N/A	no
SW-026-MWS	Hexachlorobutadiene	1	U	180	no	N/A	no
SW-026-MWS	Hexachlorocyclopentadiene	1	U	1100	no	N/A	no
SW-026-MWS	Hexachloroethane	1	U	33	no	N/A	no
SW-026-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	0.18	no	N/A	no
SW-026-MWS	Isophorone	1	U	9600	no	N/A	no
SW-026-MWS	Lead	5	U	N/A	no	8.1	no
SW-026-MWS	Lead, Dissolve	5	U	N/A	no	8.1	no

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW-026-MWS	Mercury	0.2	U	N/A	no	0.94	no
SW-026-MWS	Mercury, Dissolve	0.2	U	N/A	no	0.94	no
SW-026-MWS	Methylene Chloride	1	U	5900	no	N/A	no
SW-026-MWS	Nickel	10	U	4600	no	8.2	no
SW-026-MWS	Nickel, Dissolve	0.78	B	4600	no	8.2	no
SW-026-MWS	Nitrobenzene	1	U	690	no	N/A	no
SW-026-MWS	N-Nitroso-di-n-propylamine	1	U	5.1	no	N/A	no
SW-026-MWS	N-Nitrosodiphenylamine	1	U	60	no	N/A	no
SW-026-MWS	Phenol	1	U	860000	no	N/A	no
SW-026-MWS	Pyrene	0.09	J	4000	no	N/A	no
SW-026-MWS	Selenium	4	B	4200	no	71	no
SW-026-MWS	Selenium, Dissolve	8	U	4200	no	71	no
SW-026-MWS	Silver	6	U	N/A	no	N/A	no
SW-026-MWS	Silver, Dissolve	6	U	N/A	no	N/A	no
SW-026-MWS	Tetrachloroethene	1	UJ	33	no	N/A	no
SW-026-MWS	Thallium	10	U	0.47	no	N/A	no
SW-026-MWS	Thallium, Dissolve	10	U	0.47	no	N/A	no
SW-026-MWS	Toluene	1	U	15000	no	N/A	no
SW-026-MWS	trans-1,2-Dichloroethene	1	U	10000	no	N/A	no
SW-026-MWS	Trichloroethene	1	U	300	no	N/A	no
SW-026-MWS	Vinyl chloride	1	U	24	no	N/A	no
SW-026-MWS	Zinc	1.5	J	26000	no	81	no
SW-026-MWS	Zinc, Dissolve	10	U	26000	no	81	no
SW-027-MWS	1,1,1-Trichloroethane	1	U	N/A	no	N/A	no
SW-027-MWS	1,1,2,2-Tetrachloroethane	1	U	40	no	N/A	no
SW-027-MWS	1,1,2-Trichloroethane	1	U	160	no	N/A	no
SW-027-MWS	1,1-Dichloroethene	1	U	7100	no	N/A	no
SW-027-MWS	1,2,4-Trichlorobenzene	1	U	70	no	N/A	no
SW-027-MWS	1,2-Dichlorobenzene	1	U	1300	no	N/A	no
SW-027-MWS	1,2-Dichloroethane	1	U	370	no	N/A	no
SW-027-MWS	1,2-Dichloropropane	1	U	150	no	N/A	no
SW-027-MWS	1,3-Dichlorobenzene	1	U	960	no	N/A	no
SW-027-MWS	1,4-Dichlorobenzene	1	U	190	no	N/A	no
SW-027-MWS	2,4,6-Trichlorophenol	1	U	24	no	N/A	no
SW-027-MWS	2,4-Dichlorophenol	1	U	290	no	N/A	no
SW-027-MWS	2,4-Dimethylphenol	1	U	850	no	N/A	no
SW-027-MWS	2,4-Dinitrophenol	2.5	U	5300	no	N/A	no
SW-027-MWS	2,4-Dinitrotoluene	1	U	0.28	no	N/A	no
SW-027-MWS	2,4-Dinitrotoluene	1	U	34	no	N/A	no
SW-027-MWS	2-Chloronaphthalene	1	U	1600	no	N/A	no
SW-027-MWS	2-Chlorophenol	1	U	150	no	N/A	no
SW-027-MWS	Acenaphthene	0.1	U	990	no	N/A	no
SW-027-MWS	Anthracene	0.041	J	40000	no	N/A	no
SW-027-MWS	Antimony	3.8	J	640	no	N/A	no
SW-027-MWS	Antimony, Dissolve	6	U	640	no	N/A	no
SW-027-MWS	Arsenic	4.2	J	1.4	YES	36	no
SW-027-MWS	Arsenic, Dissolve	5	U	1.4	no	36	no
SW-027-MWS	Barium	32.4		N/A	no	N/A	no
SW-027-MWS	Barium, Dissolve	34.2		N/A	no	N/A	no
SW-027-MWS	Benzene	1	U	510	no	N/A	no
SW-027-MWS	Benzo[a]anthracene	0.015	J	0.18	no	N/A	no
SW-027-MWS	Benzo[a]pyrene	0.1	U	0.18	no	N/A	no
SW-027-MWS	Benzo[b]fluoranthene	0.022	B	0.18	no	N/A	no
SW-027-MWS	Benzo[k]fluoranthene	0.1	U	0.18	no	N/A	no
SW-027-MWS	Beryllium	1	U	N/A	no	N/A	no
SW-027-MWS	Beryllium, Dissolve	1	U	N/A	no	N/A	no
SW-027-MWS	bis(2-Chloroethyl)ether	1	U	5.3	no	N/A	no
SW-027-MWS	bis(2-Chloroisopropyl)ether	1	U	65000	no	N/A	no
SW-027-MWS	bis(2-Ethylhexyl)phthalate	1	U	22	no	N/A	no
SW-027-MWS	Bromodichloromethane	1	U	170	no	N/A	no

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW-027-MWS	Bromoform	1	U	1400	no	N/A	no
SW-027-MWS	Bromomethane	1	U	1500	no	N/A	no
SW-027-MWS	Cadmium	3	U	N/A	no	8.8	no
SW-027-MWS	Cadmium, Dissolve	0.51	J	N/A	no	8.8	no
SW-027-MWS	Carbon tetrachloride	1	U	16	no	N/A	no
SW-027-MWS	Chlorobenzene	1	U	1600	no	N/A	no
SW-027-MWS	Chloroform	1	U	4700	no	N/A	no
SW-027-MWS	Chromium	9.9		N/A	no	N/A	no
SW-027-MWS	Chromium VI	10	U	N/A	no	50	no
SW-027-MWS	Chromium, Dissolve	10.2		N/A	no	N/A	no
SW-027-MWS	Chrysene	0.1	U	0.18	no	N/A	no
SW-027-MWS	Copper	5	U	N/A	no	3.1	no
SW-027-MWS	Copper, Dissolve	3.1	B	N/A	no	3.1	no
SW-027-MWS	Cyanide	10	U	140	no	1	no
SW-027-MWS	Dibenz[a,h]anthracene	0.1	U	0.18	no	N/A	no
SW-027-MWS	Dibromochloromethane	1	U	130	no	N/A	no
SW-027-MWS	Diethylphthalate	1	U	44000	no	N/A	no
SW-027-MWS	Di-n-butylphthalate	1	U	4500	no	N/A	no
SW-027-MWS	Ethylbenzene	1	U	2100	no	N/A	no
SW-027-MWS	Fluoranthene	0.1	U	140	no	N/A	no
SW-027-MWS	Fluorene	0.1	U	5300	no	N/A	no
SW-027-MWS	Hexachlorobenzene	1	U	0.0029	no	N/A	no
SW-027-MWS	Hexachlorobutadiene	1	U	180	no	N/A	no
SW-027-MWS	Hexachlorocyclopentadiene	1	U	1100	no	N/A	no
SW-027-MWS	Hexachloroethane	1	U	33	no	N/A	no
SW-027-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	0.18	no	N/A	no
SW-027-MWS	Isophorone	1	U	9600	no	N/A	no
SW-027-MWS	Lead	5	U	N/A	no	8.1	no
SW-027-MWS	Lead, Dissolve	5	U	N/A	no	8.1	no
SW-027-MWS	Mercury	0.2	U	N/A	no	0.94	no
SW-027-MWS	Mercury, Dissolve	0.2	U	N/A	no	0.94	no
SW-027-MWS	Methylene Chloride	1	U	5900	no	N/A	no
SW-027-MWS	Nickel	10	U	4600	no	8.2	no
SW-027-MWS	Nickel, Dissolve	1.6	B	4600	no	8.2	no
SW-027-MWS	Nitrobenzene	1	U	690	no	N/A	no
SW-027-MWS	N-Nitroso-di-n-propylamine	1	U	5.1	no	N/A	no
SW-027-MWS	N-Nitrosodiphenylamine	1	U	60	no	N/A	no
SW-027-MWS	Phenol	1	U	860000	no	N/A	no
SW-027-MWS	Pyrene	0.1	U	4000	no	N/A	no
SW-027-MWS	Selenium	8	U	4200	no	71	no
SW-027-MWS	Selenium, Dissolve	4.5	B	4200	no	71	no
SW-027-MWS	Silver	6	U	N/A	no	N/A	no
SW-027-MWS	Silver, Dissolve	6	UJ	N/A	no	N/A	no
SW-027-MWS	Tetrachloroethene	1	U	33	no	N/A	no
SW-027-MWS	Thallium	10	U	0.47	no	N/A	no
SW-027-MWS	Thallium, Dissolve	10	U	0.47	no	N/A	no
SW-027-MWS	Toluene	1	U	15000	no	N/A	no
SW-027-MWS	trans-1,2-Dichloroethene	1	U	10000	no	N/A	no
SW-027-MWS	Trichloroethene	1	U	300	no	N/A	no
SW-027-MWS	Vinyl chloride	1	U	24	no	N/A	no
SW-027-MWS	Zinc	7.1	B	26000	no	81	no
SW-027-MWS	Zinc, Dissolve	7.4	J	26000	no	81	no
SW-028-MWS	1,1,1-Trichloroethane	1	U	N/A	no	N/A	no
SW-028-MWS	1,1,2,2-Tetrachloroethane	1	U	40	no	N/A	no
SW-028-MWS	1,1,2-Trichloroethane	1	U	160	no	N/A	no
SW-028-MWS	1,1-Dichloroethene	1	U	7100	no	N/A	no
SW-028-MWS	1,2,4-Trichlorobenzene	1	U	70	no	N/A	no
SW-028-MWS	1,2-Dichlorobenzene	1	U	1300	no	N/A	no
SW-028-MWS	1,2-Dichloroethane	1	U	370	no	N/A	no
SW-028-MWS	1,2-Dichloropropane	1	U	150	no	N/A	no

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW-028-MWS	1,3-Dichlorobenzene	1	U	960	no	N/A	no
SW-028-MWS	1,4-Dichlorobenzene	1	U	190	no	N/A	no
SW-028-MWS	2,4,6-Trichlorophenol	1	U	24	no	N/A	no
SW-028-MWS	2,4-Dichlorophenol	1	U	290	no	N/A	no
SW-028-MWS	2,4-Dimethylphenol	1	U	850	no	N/A	no
SW-028-MWS	2,4-Dinitrophenol	2.5	U	5300	no	N/A	no
SW-028-MWS	2,4-Dinitrotoluene	1	U	0.28	no	N/A	no
SW-028-MWS	2,4-Dinitrotoluene	1	U	34	no	N/A	no
SW-028-MWS	2-Chloronaphthalene	1	U	1600	no	N/A	no
SW-028-MWS	2-Chlorophenol	1	U	150	no	N/A	no
SW-028-MWS	Acenaphthene	0.51		990	no	N/A	no
SW-028-MWS	Anthracene	0.04	J	40000	no	N/A	no
SW-028-MWS	Antimony	6	U	640	no	N/A	no
SW-028-MWS	Antimony, Dissolve	6	U	640	no	N/A	no
SW-028-MWS	Arsenic	4.3	J	1.4	YES	36	no
SW-028-MWS	Arsenic, Dissolve	4.9	B	1.4	YES	36	no
SW-028-MWS	Barium	68.6		N/A	no	N/A	no
SW-028-MWS	Barium, Dissolve	63.3		N/A	no	N/A	no
SW-028-MWS	Benzene	1	U	510	no	N/A	no
SW-028-MWS	Benzo[a]anthracene	0.053	J	0.18	no	N/A	no
SW-028-MWS	Benzo[a]pyrene	0.033	J	0.18	no	N/A	no
SW-028-MWS	Benzo[b]fluoranthene	0.13		0.18	no	N/A	no
SW-028-MWS	Benzo[k]fluoranthene	0.092	B	0.18	no	N/A	no
SW-028-MWS	Beryllium	1	U	N/A	no	N/A	no
SW-028-MWS	Beryllium, Dissolve	1	U	N/A	no	N/A	no
SW-028-MWS	bis(2-Chloroethyl)ether	1	U	5.3	no	N/A	no
SW-028-MWS	bis(2-Chloroisopropyl)ether	1	U	65000	no	N/A	no
SW-028-MWS	bis(2-Ethylhexyl)phthalate	1	U	22	no	N/A	no
SW-028-MWS	Bromodichloromethane	1	U	170	no	N/A	no
SW-028-MWS	Bromoform	1	U	1400	no	N/A	no
SW-028-MWS	Bromomethane	1	U	1500	no	N/A	no
SW-028-MWS	Cadmium	3	U	N/A	no	8.8	no
SW-028-MWS	Cadmium, Dissolve	3	U	N/A	no	8.8	no
SW-028-MWS	Carbon tetrachloride	1	U	16	no	N/A	no
SW-028-MWS	Chlorobenzene	1	U	1600	no	N/A	no
SW-028-MWS	Chloroform	1	U	4700	no	N/A	no
SW-028-MWS	Chromium	1.3	J	N/A	no	N/A	no
SW-028-MWS	Chromium VI	10	U	N/A	no	50	no
SW-028-MWS	Chromium, Dissolve	0.84	J	N/A	no	N/A	no
SW-028-MWS	Chrysene	0.038	B	0.18	no	N/A	no
SW-028-MWS	Copper	2.3	B	N/A	no	3.1	no
SW-028-MWS	Copper, Dissolve	2.5	B	N/A	no	3.1	no
SW-028-MWS	Cyanide	10	U	140	no	1	no
SW-028-MWS	Dibenz[a,h]anthracene	0.1	U	0.18	no	N/A	no
SW-028-MWS	Dibromochloromethane	1	U	130	no	N/A	no
SW-028-MWS	Diethylphthalate	1	U	44000	no	N/A	no
SW-028-MWS	Di-n-butylphthalate	1	U	4500	no	N/A	no
SW-028-MWS	Ethylbenzene	1	U	2100	no	N/A	no
SW-028-MWS	Fluoranthene	0.2		140	no	N/A	no
SW-028-MWS	Fluorene	0.1	U	5300	no	N/A	no
SW-028-MWS	Hexachlorobenzene	1	U	0.0029	no	N/A	no
SW-028-MWS	Hexachlorobutadiene	1	U	180	no	N/A	no
SW-028-MWS	Hexachlorocyclopentadiene	1	U	1100	no	N/A	no
SW-028-MWS	Hexachloroethane	1	U	33	no	N/A	no
SW-028-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	0.18	no	N/A	no
SW-028-MWS	Isophorone	1	U	9600	no	N/A	no
SW-028-MWS	Lead	5	U	N/A	no	8.1	no
SW-028-MWS	Lead, Dissolve	5	U	N/A	no	8.1	no
SW-028-MWS	Mercury	0.2	U	N/A	no	0.94	no
SW-028-MWS	Mercury, Dissolve	0.2	U	N/A	no	0.94	no

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW-028-MWS	Methylene Chloride	1	U	5900	no	N/A	no
SW-028-MWS	Nickel	1.2	B	4600	no	8.2	no
SW-028-MWS	Nickel, Dissolve	1.2	B	4600	no	8.2	no
SW-028-MWS	Nitrobenzene	1	U	690	no	N/A	no
SW-028-MWS	N-Nitroso-di-n-propylamine	1	U	5.1	no	N/A	no
SW-028-MWS	N-Nitrosodiphenylamine	1	U	60	no	N/A	no
SW-028-MWS	Phenol	1	U	860000	no	N/A	no
SW-028-MWS	Pyrene	0.32		4000	no	N/A	no
SW-028-MWS	Selenium	8	U	4200	no	71	no
SW-028-MWS	Selenium, Dissolve	8	U	4200	no	71	no
SW-028-MWS	Silver	6	U	N/A	no	N/A	no
SW-028-MWS	Silver, Dissolve	6	U	N/A	no	N/A	no
SW-028-MWS	Tetrachloroethene	1	U	33	no	N/A	no
SW-028-MWS	Thallium	3.5	B	0.47	YES	N/A	no
SW-028-MWS	Thallium, Dissolve	4.8	J	0.47	YES	N/A	no
SW-028-MWS	Toluene	1	U	15000	no	N/A	no
SW-028-MWS	trans-1,2-Dichloroethene	1	U	10000	no	N/A	no
SW-028-MWS	Trichloroethene	1	U	300	no	N/A	no
SW-028-MWS	Vinyl chloride	1	U	24	no	N/A	no
SW-028-MWS	Zinc	2.2	J	26000	no	81	no
SW-028-MWS	Zinc, Dissolve	10	U	26000	no	81	no
SW-029-MWS	1,1,1-Trichloroethane	1	U	N/A	no	N/A	no
SW-029-MWS	1,1,2,2-Tetrachloroethane	1	U	40	no	N/A	no
SW-029-MWS	1,1,2-Trichloroethane	1	U	160	no	N/A	no
SW-029-MWS	1,1-Dichloroethene	1	U	7100	no	N/A	no
SW-029-MWS	1,2,4-Trichlorobenzene	1	U	70	no	N/A	no
SW-029-MWS	1,2-Dichlorobenzene	1	U	1300	no	N/A	no
SW-029-MWS	1,2-Dichloroethane	1	U	370	no	N/A	no
SW-029-MWS	1,2-Dichloropropane	1	U	150	no	N/A	no
SW-029-MWS	1,3-Dichlorobenzene	1	U	960	no	N/A	no
SW-029-MWS	1,4-Dichlorobenzene	1	U	190	no	N/A	no
SW-029-MWS	2,4,6-Trichlorophenol	1	U	24	no	N/A	no
SW-029-MWS	2,4-Dichlorophenol	1	U	290	no	N/A	no
SW-029-MWS	2,4-Dimethylphenol	1	U	850	no	N/A	no
SW-029-MWS	2,4-Dinitrophenol	2.5	U	5300	no	N/A	no
SW-029-MWS	2,4-Dinitrotoluene	1	U	0.28	no	N/A	no
SW-029-MWS	2,4-Dinitrotoluene	1	U	34	no	N/A	no
SW-029-MWS	2-Chloronaphthalene	1	U	1600	no	N/A	no
SW-029-MWS	2-Chlorophenol	1	U	150	no	N/A	no
SW-029-MWS	Acenaphthene	0.19		990	no	N/A	no
SW-029-MWS	Anthracene	0.083	J	40000	no	N/A	no
SW-029-MWS	Antimony	6	U	640	no	N/A	no
SW-029-MWS	Antimony, Dissolve	6	U	640	no	N/A	no
SW-029-MWS	Arsenic	5	U	1.4	no	36	no
SW-029-MWS	Arsenic, Dissolve	5	U	1.4	no	36	no
SW-029-MWS	Barium	84.3		N/A	no	N/A	no
SW-029-MWS	Barium, Dissolve	85.8		N/A	no	N/A	no
SW-029-MWS	Benzene	3.6		510	no	N/A	no
SW-029-MWS	Benzo[a]anthracene	0.066	J	0.18	no	N/A	no
SW-029-MWS	Benzo[a]pyrene	1.2	J	0.18	YES	N/A	no
SW-029-MWS	Benzo[b]fluoranthene	2.7	B	0.18	YES	N/A	no
SW-029-MWS	Benzo[k]fluoranthene	1.3	B	0.18	YES	N/A	no
SW-029-MWS	Beryllium	1	U	N/A	no	N/A	no
SW-029-MWS	Beryllium, Dissolve	1	U	N/A	no	N/A	no
SW-029-MWS	bis(2-Chloroethyl)ether	1	U	5.3	no	N/A	no
SW-029-MWS	bis(2-Chloroisopropyl)ether	1	U	65000	no	N/A	no
SW-029-MWS	bis(2-Ethylhexyl)phthalate	1	U	22	no	N/A	no
SW-029-MWS	Bromodichloromethane	1	U	170	no	N/A	no
SW-029-MWS	Bromoform	1	U	1400	no	N/A	no
SW-029-MWS	Bromomethane	1	U	1500	no	N/A	no

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW-029-MWS	Cadmium	0.73	J	N/A	no	8.8	no
SW-029-MWS	Cadmium, Dissolve	3	U	N/A	no	8.8	no
SW-029-MWS	Carbon tetrachloride	1	U	16	no	N/A	no
SW-029-MWS	Chlorobenzene	1	U	1600	no	N/A	no
SW-029-MWS	Chloroform	1	U	4700	no	N/A	no
SW-029-MWS	Chromium	0.87	B	N/A	no	N/A	no
SW-029-MWS	Chromium VI	10	U	N/A	no	50	no
SW-029-MWS	Chromium, Dissolve	5	U	N/A	no	N/A	no
SW-029-MWS	Chrysene	0.048	B	0.18	no	N/A	no
SW-029-MWS	Copper	5	U	N/A	no	3.1	no
SW-029-MWS	Copper, Dissolve	5	U	N/A	no	3.1	no
SW-029-MWS	Cyanide	1420		140	YES	1	YES
SW-029-MWS	Dibenz[a,h]anthracene	5.1	U	0.18	no	N/A	no
SW-029-MWS	Dibromochloromethane	1	U	130	no	N/A	no
SW-029-MWS	Diethylphthalate	1	U	44000	no	N/A	no
SW-029-MWS	Di-n-butylphthalate	1	U	4500	no	N/A	no
SW-029-MWS	Ethylbenzene	1	U	2100	no	N/A	no
SW-029-MWS	Fluoranthene	0.091	J	140	no	N/A	no
SW-029-MWS	Fluorene	0.079	J	5300	no	N/A	no
SW-029-MWS	Hexachlorobenzene	1	U	0.0029	no	N/A	no
SW-029-MWS	Hexachlorobutadiene	1	U	180	no	N/A	no
SW-029-MWS	Hexachlorocyclopentadiene	1	U	1100	no	N/A	no
SW-029-MWS	Hexachloroethane	1	U	33	no	N/A	no
SW-029-MWS	Indeno[1,2,3-c,d]pyrene	5.1	U	0.18	no	N/A	no
SW-029-MWS	Isophorone	1	U	9600	no	N/A	no
SW-029-MWS	Lead	5	U	N/A	no	8.1	no
SW-029-MWS	Lead, Dissolve	5	U	N/A	no	8.1	no
SW-029-MWS	Mercury	0.2	U	N/A	no	0.94	no
SW-029-MWS	Mercury, Dissolve	0.2	U	N/A	no	0.94	no
SW-029-MWS	Methylene Chloride	1	U	5900	no	N/A	no
SW-029-MWS	Nickel	10	U	4600	no	8.2	no
SW-029-MWS	Nickel, Dissolve	10	U	4600	no	8.2	no
SW-029-MWS	Nitrobenzene	1	U	690	no	N/A	no
SW-029-MWS	N-Nitroso-di-n-propylamine	1	U	5.1	no	N/A	no
SW-029-MWS	N-Nitrosodiphenylamine	1	U	60	no	N/A	no
SW-029-MWS	Phenol	0.32	J	860000	no	N/A	no
SW-029-MWS	Pyrene	0.078	J	4000	no	N/A	no
SW-029-MWS	Selenium	6.8	B	4200	no	71	no
SW-029-MWS	Selenium, Dissolve	8	U	4200	no	71	no
SW-029-MWS	Silver	6	U	N/A	no	N/A	no
SW-029-MWS	Silver, Dissolve	6	UJ	N/A	no	N/A	no
SW-029-MWS	Tetrachloroethene	1	U	33	no	N/A	no
SW-029-MWS	Thallium	10	U	0.47	no	N/A	no
SW-029-MWS	Thallium, Dissolve	10	U	0.47	no	N/A	no
SW-029-MWS	Toluene	0.49	J	15000	no	N/A	no
SW-029-MWS	trans-1,2-Dichloroethene	1	U	10000	no	N/A	no
SW-029-MWS	Trichloroethene	1	U	300	no	N/A	no
SW-029-MWS	Vinyl chloride	1	U	24	no	N/A	no
SW-029-MWS	Zinc	2.4	B	26000	no	81	no
SW-029-MWS	Zinc, Dissolve	43.6		26000	no	81	no
SW-030-MWS	1,1,1-Trichloroethane	1	U	N/A	no	N/A	no
SW-030-MWS	1,1,2,2-Tetrachloroethane	1	U	40	no	N/A	no
SW-030-MWS	1,1,2-Trichloroethane	1	U	160	no	N/A	no
SW-030-MWS	1,1-Dichloroethene	1	U	7100	no	N/A	no
SW-030-MWS	1,2,4-Trichlorobenzene	1	UJ	70	no	N/A	no
SW-030-MWS	1,2-Dichlorobenzene	1	U	1300	no	N/A	no
SW-030-MWS	1,2-Dichloroethane	1	U	370	no	N/A	no
SW-030-MWS	1,2-Dichloropropane	1	U	150	no	N/A	no
SW-030-MWS	1,3-Dichlorobenzene	1	U	960	no	N/A	no
SW-030-MWS	1,4-Dichlorobenzene	1	U	190	no	N/A	no

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW-030-MWS	2,4,6-Trichlorophenol	1	U	24	no	N/A	no
SW-030-MWS	2,4-Dichlorophenol	1	U	290	no	N/A	no
SW-030-MWS	2,4-Dimethylphenol	1	U	850	no	N/A	no
SW-030-MWS	2,4-Dinitrophenol	2.6	U	5300	no	N/A	no
SW-030-MWS	2,4-Dinitrotoluene	1	U	0.28	no	N/A	no
SW-030-MWS	2,4-Dinitrotoluene	1	U	34	no	N/A	no
SW-030-MWS	2-Chloronaphthalene	1	U	1600	no	N/A	no
SW-030-MWS	2-Chlorophenol	1	U	150	no	N/A	no
SW-030-MWS	Acenaphthene	0.1	U	990	no	N/A	no
SW-030-MWS	Anthracene	0.026	J	40000	no	N/A	no
SW-030-MWS	Antimony	6	U	640	no	N/A	no
SW-030-MWS	Antimony, Dissolve	6	U	640	no	N/A	no
SW-030-MWS	Arsenic	3.9	J	1.4	YES	36	no
SW-030-MWS	Arsenic, Dissolve	4.5	B	1.4	YES	36	no
SW-030-MWS	Barium	22.6		N/A	no	N/A	no
SW-030-MWS	Barium, Dissolve	21.6		N/A	no	N/A	no
SW-030-MWS	Benzene	1	U	510	no	N/A	no
SW-030-MWS	Benzo[a]anthracene	0.1	U	0.18	no	N/A	no
SW-030-MWS	Benzo[a]pyrene	0.1	U	0.18	no	N/A	no
SW-030-MWS	Benzo[b]fluoranthene	0.1	U	0.18	no	N/A	no
SW-030-MWS	Benzo[k]fluoranthene	0.1	U	0.18	no	N/A	no
SW-030-MWS	Beryllium	1	U	N/A	no	N/A	no
SW-030-MWS	Beryllium, Dissolve	1	U	N/A	no	N/A	no
SW-030-MWS	bis(2-Chloroethyl)ether	1	U	5.3	no	N/A	no
SW-030-MWS	bis(2-Chloroisopropyl)ether	1	U	65000	no	N/A	no
SW-030-MWS	bis(2-Ethylhexyl)phthalate	1	U	22	no	N/A	no
SW-030-MWS	Bromodichloromethane	1	U	170	no	N/A	no
SW-030-MWS	Bromoform	1	U	1400	no	N/A	no
SW-030-MWS	Bromomethane	1	U	1500	no	N/A	no
SW-030-MWS	Cadmium	3	U	N/A	no	8.8	no
SW-030-MWS	Cadmium, Dissolve	3	U	N/A	no	8.8	no
SW-030-MWS	Carbon tetrachloride	1	U	16	no	N/A	no
SW-030-MWS	Chlorobenzene	1	U	1600	no	N/A	no
SW-030-MWS	Chloroform	1	U	4700	no	N/A	no
SW-030-MWS	Chromium	5	U	N/A	no	N/A	no
SW-030-MWS	Chromium VI	10	U	N/A	no	50	no
SW-030-MWS	Chromium, Dissolve	5	U	N/A	no	N/A	no
SW-030-MWS	Chrysene	0.1	U	0.18	no	N/A	no
SW-030-MWS	Copper	1.9	B	N/A	no	3.1	no
SW-030-MWS	Copper, Dissolve	5	U	N/A	no	3.1	no
SW-030-MWS	Cyanide	64.6		140	no	1	YES
SW-030-MWS	Dibenz[a,h]anthracene	0.1	U	0.18	no	N/A	no
SW-030-MWS	Dibromochloromethane	1	U	130	no	N/A	no
SW-030-MWS	Diethylphthalate	1	U	44000	no	N/A	no
SW-030-MWS	Di-n-butylphthalate	1	U	4500	no	N/A	no
SW-030-MWS	Ethylbenzene	1	U	2100	no	N/A	no
SW-030-MWS	Fluoranthene	0.1	U	140	no	N/A	no
SW-030-MWS	Fluorene	0.1	U	5300	no	N/A	no
SW-030-MWS	Hexachlorobenzene	1	U	0.0029	no	N/A	no
SW-030-MWS	Hexachlorobutadiene	1	U	180	no	N/A	no
SW-030-MWS	Hexachlorocyclopentadiene	1	U	1100	no	N/A	no
SW-030-MWS	Hexachloroethane	1	U	33	no	N/A	no
SW-030-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	0.18	no	N/A	no
SW-030-MWS	Isophorone	1	U	9600	no	N/A	no
SW-030-MWS	Lead	5	U	N/A	no	8.1	no
SW-030-MWS	Lead, Dissolve	5	U	N/A	no	8.1	no
SW-030-MWS	Mercury	0.2	UJ	N/A	no	0.94	no
SW-030-MWS	Mercury, Dissolve	0.2	UJ	N/A	no	0.94	no
SW-030-MWS	Methylene Chloride	1	U	5900	no	N/A	no
SW-030-MWS	Nickel	1.6	B	4600	no	8.2	no

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW-030-MWS	Nickel, Dissolve	3.6	B	4600	no	8.2	no
SW-030-MWS	Nitrobenzene	1	U	690	no	N/A	no
SW-030-MWS	N-Nitroso-di-n-propylamine	1	U	5.1	no	N/A	no
SW-030-MWS	N-Nitrosodiphenylamine	1	U	60	no	N/A	no
SW-030-MWS	Phenol	1	U	860000	no	N/A	no
SW-030-MWS	Pyrene	0.1	U	4000	no	N/A	no
SW-030-MWS	Selenium	8	U	4200	no	71	no
SW-030-MWS	Selenium, Dissolve	8	U	4200	no	71	no
SW-030-MWS	Silver	6	U	N/A	no	N/A	no
SW-030-MWS	Silver, Dissolve	6	U	N/A	no	N/A	no
SW-030-MWS	Tetrachloroethene	1	U	33	no	N/A	no
SW-030-MWS	Thallium	10	U	0.47	no	N/A	no
SW-030-MWS	Thallium, Dissolve	4.8	J	0.47	YES	N/A	no
SW-030-MWS	Toluene	1	U	15000	no	N/A	no
SW-030-MWS	trans-1,2-Dichloroethene	1	U	10000	no	N/A	no
SW-030-MWS	Trichloroethene	1	U	300	no	N/A	no
SW-030-MWS	Vinyl chloride	1	U	24	no	N/A	no
SW-030-MWS	Zinc	6.9	B	26000	no	81	no
SW-030-MWS	Zinc, Dissolve	2.2	B	26000	no	81	no
SW-031-MWS	1,1,1-Trichloroethane	1	U	N/A	no	N/A	no
SW-031-MWS	1,1,2,2-Tetrachloroethane	1	U	40	no	N/A	no
SW-031-MWS	1,1,2-Trichloroethane	1	U	160	no	N/A	no
SW-031-MWS	1,1-Dichloroethene	1	U	7100	no	N/A	no
SW-031-MWS	1,2,4-Trichlorobenzene	1	UJ	70	no	N/A	no
SW-031-MWS	1,2-Dichlorobenzene	1	U	1300	no	N/A	no
SW-031-MWS	1,2-Dichloroethane	1	U	370	no	N/A	no
SW-031-MWS	1,2-Dichloropropane	1	U	150	no	N/A	no
SW-031-MWS	1,3-Dichlorobenzene	1	U	960	no	N/A	no
SW-031-MWS	1,4-Dichlorobenzene	1	U	190	no	N/A	no
SW-031-MWS	2,4,6-Trichlorophenol	1.1	U	24	no	N/A	no
SW-031-MWS	2,4-Dichlorophenol	1.1	U	290	no	N/A	no
SW-031-MWS	2,4-Dimethylphenol	1.1	U	850	no	N/A	no
SW-031-MWS	2,4-Dinitrophenol	2.6	U	5300	no	N/A	no
SW-031-MWS	2,4-Dinitrotoluene	1.1	U	0.28	no	N/A	no
SW-031-MWS	2,4-Dinitrotoluene	1.1	U	34	no	N/A	no
SW-031-MWS	2-Chloronaphthalene	1.1	U	1600	no	N/A	no
SW-031-MWS	2-Chlorophenol	1.1	U	150	no	N/A	no
SW-031-MWS	Acenaphthene	0.02	J	990	no	N/A	no
SW-031-MWS	Anthracene	0.058	J	40000	no	N/A	no
SW-031-MWS	Antimony	6	U	640	no	N/A	no
SW-031-MWS	Antimony, Dissolve	6	U	640	no	N/A	no
SW-031-MWS	Arsenic	3.8	J	1.4	YES	36	no
SW-031-MWS	Arsenic, Dissolve	3.1	B	1.4	YES	36	no
SW-031-MWS	Barium	30.1		N/A	no	N/A	no
SW-031-MWS	Barium, Dissolve	29.4		N/A	no	N/A	no
SW-031-MWS	Benzene	1	U	510	no	N/A	no
SW-031-MWS	Benzo[a]anthracene	0.017	J	0.18	no	N/A	no
SW-031-MWS	Benzo[a]pyrene	0.11	U	0.18	no	N/A	no
SW-031-MWS	Benzo[b]fluoranthene	0.11	U	0.18	no	N/A	no
SW-031-MWS	Benzo[k]fluoranthene	0.11	U	0.18	no	N/A	no
SW-031-MWS	Beryllium	1	U	N/A	no	N/A	no
SW-031-MWS	Beryllium, Dissolve	1	U	N/A	no	N/A	no
SW-031-MWS	bis(2-Chloroethyl)ether	1.1	U	5.3	no	N/A	no
SW-031-MWS	bis(2-Chloroisopropyl)ether	1.1	U	65000	no	N/A	no
SW-031-MWS	bis(2-Ethylhexyl)phthalate	1.1	U	22	no	N/A	no
SW-031-MWS	Bromodichloromethane	1	U	170	no	N/A	no
SW-031-MWS	Bromoform	1	U	1400	no	N/A	no
SW-031-MWS	Bromomethane	1	U	1500	no	N/A	no
SW-031-MWS	Cadmium	3	U	N/A	no	8.8	no
SW-031-MWS	Cadmium, Dissolve	3	U	N/A	no	8.8	no

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW-031-MWS	Carbon tetrachloride	1	U	16	no	N/A	no
SW-031-MWS	Chlorobenzene	1	U	1600	no	N/A	no
SW-031-MWS	Chloroform	1	U	4700	no	N/A	no
SW-031-MWS	Chromium	1.4	J	N/A	no	N/A	no
SW-031-MWS	Chromium VI	10	U	N/A	no	50	no
SW-031-MWS	Chromium, Dissolve	5	U	N/A	no	N/A	no
SW-031-MWS	Chrysene	0.0091	J	0.18	no	N/A	no
SW-031-MWS	Copper	5	U	N/A	no	3.1	no
SW-031-MWS	Copper, Dissolve	5	U	N/A	no	3.1	no
SW-031-MWS	Cyanide	6.1	J	140	no	1	YES
SW-031-MWS	Dibenz[a,h]anthracene	0.11	U	0.18	no	N/A	no
SW-031-MWS	Dibromochloromethane	1	U	130	no	N/A	no
SW-031-MWS	Diethylphthalate	1.1	U	44000	no	N/A	no
SW-031-MWS	Di-n-butylphthalate	1.1	U	4500	no	N/A	no
SW-031-MWS	Ethylbenzene	1	U	2100	no	N/A	no
SW-031-MWS	Fluoranthene	0.038	J	140	no	N/A	no
SW-031-MWS	Fluorene	0.026	J	5300	no	N/A	no
SW-031-MWS	Hexachlorobenzene	1.1	U	0.0029	no	N/A	no
SW-031-MWS	Hexachlorobutadiene	1.1	U	180	no	N/A	no
SW-031-MWS	Hexachlorocyclopentadiene	1.1	U	1100	no	N/A	no
SW-031-MWS	Hexachloroethane	1.1	U	33	no	N/A	no
SW-031-MWS	Indeno[1,2,3-c,d]pyrene	0.11	U	0.18	no	N/A	no
SW-031-MWS	Isophorone	1.1	U	9600	no	N/A	no
SW-031-MWS	Lead	5	U	N/A	no	8.1	no
SW-031-MWS	Lead, Dissolve	5	U	N/A	no	8.1	no
SW-031-MWS	Mercury	0.2	UJ	N/A	no	0.94	no
SW-031-MWS	Mercury, Dissolve	0.2	UJ	N/A	no	0.94	no
SW-031-MWS	Methylene Chloride	1	U	5900	no	N/A	no
SW-031-MWS	Nickel	2.8	B	4600	no	8.2	no
SW-031-MWS	Nickel, Dissolve	1.7	B	4600	no	8.2	no
SW-031-MWS	Nitrobenzene	1.1	U	690	no	N/A	no
SW-031-MWS	N-Nitroso-di-n-propylamine	1.1	U	5.1	no	N/A	no
SW-031-MWS	N-Nitrosodiphenylamine	1.1	U	60	no	N/A	no
SW-031-MWS	Phenol	1.1	U	860000	no	N/A	no
SW-031-MWS	Pyrene	0.031	J	4000	no	N/A	no
SW-031-MWS	Selenium	8	U	4200	no	71	no
SW-031-MWS	Selenium, Dissolve	8	U	4200	no	71	no
SW-031-MWS	Silver	6	U	N/A	no	N/A	no
SW-031-MWS	Silver, Dissolve	6	U	N/A	no	N/A	no
SW-031-MWS	Tetrachloroethene	1	U	33	no	N/A	no
SW-031-MWS	Thallium	10	U	0.47	no	N/A	no
SW-031-MWS	Thallium, Dissolve	10	U	0.47	no	N/A	no
SW-031-MWS	Toluene	1	U	15000	no	N/A	no
SW-031-MWS	trans-1,2-Dichloroethene	1	U	10000	no	N/A	no
SW-031-MWS	Trichloroethene	1	U	300	no	N/A	no
SW-031-MWS	Vinyl chloride	1	U	24	no	N/A	no
SW-031-MWS	Zinc	2.8	B	26000	no	81	no
SW-031-MWS	Zinc, Dissolve	3.9	B	26000	no	81	no
SW-032-MWS	1,1,1-Trichloroethane	1	U	N/A	no	N/A	no
SW-032-MWS	1,1,2,2-Tetrachloroethane	1	U	40	no	N/A	no
SW-032-MWS	1,1,2-Trichloroethane	1	U	160	no	N/A	no
SW-032-MWS	1,1-Dichloroethene	1	U	7100	no	N/A	no
SW-032-MWS	1,2,4-Trichlorobenzene	1	UJ	70	no	N/A	no
SW-032-MWS	1,2-Dichlorobenzene	1	U	1300	no	N/A	no
SW-032-MWS	1,2-Dichloroethane	1	U	370	no	N/A	no
SW-032-MWS	1,2-Dichloropropane	1	U	150	no	N/A	no
SW-032-MWS	1,3-Dichlorobenzene	1	U	960	no	N/A	no
SW-032-MWS	1,4-Dichlorobenzene	1	U	190	no	N/A	no
SW-032-MWS	2,4,6-Trichlorophenol	1.1	U	24	no	N/A	no
SW-032-MWS	2,4-Dichlorophenol	1.1	U	290	no	N/A	no

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW-032-MWS	2,4-Dimethylphenol	1.1	U	850	no	N/A	no
SW-032-MWS	2,4-Dinitrophenol	2.6	U	5300	no	N/A	no
SW-032-MWS	2,4-Dinitrotoluene	1.1	U	0.28	no	N/A	no
SW-032-MWS	2,4-Dinitrotoluene	1.1	U	34	no	N/A	no
SW-032-MWS	2-Chloronaphthalene	1.1	U	1600	no	N/A	no
SW-032-MWS	2-Chlorophenol	1.1	U	150	no	N/A	no
SW-032-MWS	Acenaphthene	0.074	J	990	no	N/A	no
SW-032-MWS	Anthracene	0.036	J	40000	no	N/A	no
SW-032-MWS	Antimony	6	U	640	no	N/A	no
SW-032-MWS	Antimony, Dissolve	2.4	B	640	no	N/A	no
SW-032-MWS	Arsenic	5	U	1.4	no	36	no
SW-032-MWS	Arsenic, Dissolve	5	U	1.4	no	36	no
SW-032-MWS	Barium	62		N/A	no	N/A	no
SW-032-MWS	Barium, Dissolve	57.6		N/A	no	N/A	no
SW-032-MWS	Benzene	1	U	510	no	N/A	no
SW-032-MWS	Benzo[a]anthracene	0.016	J	0.18	no	N/A	no
SW-032-MWS	Benzo[a]pyrene	0.11	U	0.18	no	N/A	no
SW-032-MWS	Benzo[b]fluoranthene	0.11	U	0.18	no	N/A	no
SW-032-MWS	Benzo[k]fluoranthene	0.11	U	0.18	no	N/A	no
SW-032-MWS	Beryllium	1	U	N/A	no	N/A	no
SW-032-MWS	Beryllium, Dissolve	1	U	N/A	no	N/A	no
SW-032-MWS	bis(2-Chloroethyl)ether	1.1	U	5.3	no	N/A	no
SW-032-MWS	bis(2-Chloroisopropyl)ether	1.1	U	65000	no	N/A	no
SW-032-MWS	bis(2-Ethylhexyl)phthalate	1.1	U	22	no	N/A	no
SW-032-MWS	Bromodichloromethane	1	U	170	no	N/A	no
SW-032-MWS	Bromoform	1	U	1400	no	N/A	no
SW-032-MWS	Bromomethane	1	U	1500	no	N/A	no
SW-032-MWS	Cadmium	3	U	N/A	no	8.8	no
SW-032-MWS	Cadmium, Dissolve	3	U	N/A	no	8.8	no
SW-032-MWS	Carbon tetrachloride	1	U	16	no	N/A	no
SW-032-MWS	Chlorobenzene	1	U	1600	no	N/A	no
SW-032-MWS	Chloroform	1.3		4700	no	N/A	no
SW-032-MWS	Chromium	3.3	J	N/A	no	N/A	no
SW-032-MWS	Chromium VI	10	U	N/A	no	50	no
SW-032-MWS	Chromium, Dissolve	1.2	B	N/A	no	N/A	no
SW-032-MWS	Chrysene	0.01	J	0.18	no	N/A	no
SW-032-MWS	Copper	5	U	N/A	no	3.1	no
SW-032-MWS	Copper, Dissolve	5	U	N/A	no	3.1	no
SW-032-MWS	Cyanide	32.4		140	no	1	YES
SW-032-MWS	Dibenz[a,h]anthracene	0.11	U	0.18	no	N/A	no
SW-032-MWS	Dibromochloromethane	1	U	130	no	N/A	no
SW-032-MWS	Diethylphthalate	1.1	U	44000	no	N/A	no
SW-032-MWS	Di-n-butylphthalate	1.1	U	4500	no	N/A	no
SW-032-MWS	Ethylbenzene	1	U	2100	no	N/A	no
SW-032-MWS	Fluoranthene	0.046	J	140	no	N/A	no
SW-032-MWS	Fluorene	0.05	J	5300	no	N/A	no
SW-032-MWS	Hexachlorobenzene	1.1	U	0.0029	no	N/A	no
SW-032-MWS	Hexachlorobutadiene	1.1	U	180	no	N/A	no
SW-032-MWS	Hexachlorocyclopentadiene	1.1	U	1100	no	N/A	no
SW-032-MWS	Hexachloroethane	1.1	U	33	no	N/A	no
SW-032-MWS	Indeno[1,2,3-c,d]pyrene	0.11	U	0.18	no	N/A	no
SW-032-MWS	Isophorone	1.1	U	9600	no	N/A	no
SW-032-MWS	Lead	5	U	N/A	no	8.1	no
SW-032-MWS	Lead, Dissolve	5	U	N/A	no	8.1	no
SW-032-MWS	Mercury	0.2	UJ	N/A	no	0.94	no
SW-032-MWS	Mercury, Dissolve	0.2	UJ	N/A	no	0.94	no
SW-032-MWS	Methylene Chloride	1	U	5900	no	N/A	no
SW-032-MWS	Nickel	4.6	B	4600	no	8.2	no
SW-032-MWS	Nickel, Dissolve	3	B	4600	no	8.2	no
SW-032-MWS	Nitrobenzene	1.1	U	690	no	N/A	no

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW-032-MWS	N-Nitroso-di-n-propylamine	1.1	U	5.1	no	N/A	no
SW-032-MWS	N-Nitrosodiphenylamine	1.1	U	60	no	N/A	no
SW-032-MWS	Phenol	1.1	U	860000	no	N/A	no
SW-032-MWS	Pyrene	0.038	J	4000	no	N/A	no
SW-032-MWS	Selenium	8	U	4200	no	71	no
SW-032-MWS	Selenium, Dissolve	8	U	4200	no	71	no
SW-032-MWS	Silver	6	U	N/A	no	N/A	no
SW-032-MWS	Silver, Dissolve	6	U	N/A	no	N/A	no
SW-032-MWS	Tetrachloroethene	1	U	33	no	N/A	no
SW-032-MWS	Thallium	10	U	0.47	no	N/A	no
SW-032-MWS	Thallium, Dissolve	10	U	0.47	no	N/A	no
SW-032-MWS	Toluene	1	U	15000	no	N/A	no
SW-032-MWS	trans-1,2-Dichloroethene	1	U	10000	no	N/A	no
SW-032-MWS	Trichloroethene	1	U	300	no	N/A	no
SW-032-MWS	Vinyl chloride	1	U	24	no	N/A	no
SW-032-MWS	Zinc	2.7	B	26000	no	81	no
SW-032-MWS	Zinc, Dissolve	10	U	26000	no	81	no
SW-033-MWS	1,1,1-Trichloroethane	1	U	N/A	no	N/A	no
SW-033-MWS	1,1,2,2-Tetrachloroethane	1	U	40	no	N/A	no
SW-033-MWS	1,1,2-Trichloroethane	1	U	160	no	N/A	no
SW-033-MWS	1,1-Dichloroethene	1	U	7100	no	N/A	no
SW-033-MWS	1,2,4-Trichlorobenzene	1	U	70	no	N/A	no
SW-033-MWS	1,2-Dichlorobenzene	1	U	1300	no	N/A	no
SW-033-MWS	1,2-Dichloroethane	1	U	370	no	N/A	no
SW-033-MWS	1,2-Dichloropropane	1	U	150	no	N/A	no
SW-033-MWS	1,3-Dichlorobenzene	1	U	960	no	N/A	no
SW-033-MWS	1,4-Dichlorobenzene	1	U	190	no	N/A	no
SW-033-MWS	2,4,6-Trichlorophenol	1	U	24	no	N/A	no
SW-033-MWS	2,4-Dichlorophenol	1	U	290	no	N/A	no
SW-033-MWS	2,4-Dimethylphenol	1	U	850	no	N/A	no
SW-033-MWS	2,4-Dinitrophenol	2.5	U	5300	no	N/A	no
SW-033-MWS	2,4-Dinitrotoluene	1	U	0.28	no	N/A	no
SW-033-MWS	2,4-Dinitrotoluene	1	U	34	no	N/A	no
SW-033-MWS	2-Chloronaphthalene	1	U	1600	no	N/A	no
SW-033-MWS	2-Chlorophenol	1	U	150	no	N/A	no
SW-033-MWS	Acenaphthene	0.22		990	no	N/A	no
SW-033-MWS	Anthracene	0.061	J	40000	no	N/A	no
SW-033-MWS	Antimony	6	U	640	no	N/A	no
SW-033-MWS	Antimony, Dissolve	6	U	640	no	N/A	no
SW-033-MWS	Arsenic	3.5	B	1.4	YES	36	no
SW-033-MWS	Arsenic, Dissolve	4.3	B	1.4	YES	36	no
SW-033-MWS	Barium	53		N/A	no	N/A	no
SW-033-MWS	Barium, Dissolve	47.1		N/A	no	N/A	no
SW-033-MWS	Benzene	1	U	510	no	N/A	no
SW-033-MWS	Benzo[a]anthracene	0.024	J	0.18	no	N/A	no
SW-033-MWS	Benzo[a]pyrene	0.011	J	0.18	no	N/A	no
SW-033-MWS	Benzo[b]fluoranthene	0.016	J	0.18	no	N/A	no
SW-033-MWS	Benzo[k]fluoranthene	0.012	J	0.18	no	N/A	no
SW-033-MWS	Beryllium	0.34	J	N/A	no	N/A	no
SW-033-MWS	Beryllium, Dissolve	1	U	N/A	no	N/A	no
SW-033-MWS	bis(2-Chloroethyl)ether	1	U	5.3	no	N/A	no
SW-033-MWS	bis(2-Chloroisopropyl)ether	1	U	65000	no	N/A	no
SW-033-MWS	bis(2-Ethylhexyl)phthalate	1	U	22	no	N/A	no
SW-033-MWS	Bromodichloromethane	1	U	170	no	N/A	no
SW-033-MWS	Bromoform	1	U	1400	no	N/A	no
SW-033-MWS	Bromomethane	0.67	J	1500	no	N/A	no
SW-033-MWS	Cadmium	3	U	N/A	no	8.8	no
SW-033-MWS	Cadmium, Dissolve	3	U	N/A	no	8.8	no
SW-033-MWS	Carbon tetrachloride	1	U	16	no	N/A	no
SW-033-MWS	Chlorobenzene	1	U	1600	no	N/A	no

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW-033-MWS	Chloroform	1	U	4700	no	N/A	no
SW-033-MWS	Chromium	8.8		N/A	no	N/A	no
SW-033-MWS	Chromium VI	10	U	N/A	no	50	no
SW-033-MWS	Chromium, Dissolve	7.9		N/A	no	N/A	no
SW-033-MWS	Chrysene	0.013	J	0.18	no	N/A	no
SW-033-MWS	Copper	2.5	J	N/A	no	3.1	no
SW-033-MWS	Copper, Dissolve	5	U	N/A	no	3.1	no
SW-033-MWS	Cyanide	81.1		140	no	1	YES
SW-033-MWS	Dibenz[a,h]anthracene	0.1	U	0.18	no	N/A	no
SW-033-MWS	Dibromochloromethane	1	U	130	no	N/A	no
SW-033-MWS	Diethylphthalate	1	U	44000	no	N/A	no
SW-033-MWS	Di-n-butylphthalate	1	U	4500	no	N/A	no
SW-033-MWS	Ethylbenzene	1	U	2100	no	N/A	no
SW-033-MWS	Fluoranthene	0.088	J	140	no	N/A	no
SW-033-MWS	Fluorene	0.12		5300	no	N/A	no
SW-033-MWS	Hexachlorobenzene	1	U	0.0029	no	N/A	no
SW-033-MWS	Hexachlorobutadiene	1	U	180	no	N/A	no
SW-033-MWS	Hexachlorocyclopentadiene	1	U	1100	no	N/A	no
SW-033-MWS	Hexachloroethane	1	U	33	no	N/A	no
SW-033-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	0.18	no	N/A	no
SW-033-MWS	Isophorone	1	U	9600	no	N/A	no
SW-033-MWS	Lead	5	U	N/A	no	8.1	no
SW-033-MWS	Lead, Dissolve	5	U	N/A	no	8.1	no
SW-033-MWS	Mercury	0.2	U	N/A	no	0.94	no
SW-033-MWS	Mercury, Dissolve	0.2	U	N/A	no	0.94	no
SW-033-MWS	Methylene Chloride	1	U	5900	no	N/A	no
SW-033-MWS	Nickel	1.2	B	4600	no	8.2	no
SW-033-MWS	Nickel, Dissolve	10	U	4600	no	8.2	no
SW-033-MWS	Nitrobenzene	1	U	690	no	N/A	no
SW-033-MWS	N-Nitroso-di-n-propylamine	1	U	5.1	no	N/A	no
SW-033-MWS	N-Nitrosodiphenylamine	1	U	60	no	N/A	no
SW-033-MWS	Phenol	0.29	J	860000	no	N/A	no
SW-033-MWS	Pyrene	0.057	J	4000	no	N/A	no
SW-033-MWS	Selenium	4	B	4200	no	71	no
SW-033-MWS	Selenium, Dissolve	4.2	B	4200	no	71	no
SW-033-MWS	Silver	6	U	N/A	no	N/A	no
SW-033-MWS	Silver, Dissolve	6	U	N/A	no	N/A	no
SW-033-MWS	Tetrachloroethene	1	U	33	no	N/A	no
SW-033-MWS	Thallium	4.2	J	0.47	YES	N/A	no
SW-033-MWS	Thallium, Dissolve	6.1	B	0.47	YES	N/A	no
SW-033-MWS	Toluene	1	U	15000	no	N/A	no
SW-033-MWS	trans-1,2-Dichloroethene	1	U	10000	no	N/A	no
SW-033-MWS	Trichloroethene	1	U	300	no	N/A	no
SW-033-MWS	Vinyl chloride	1	U	24	no	N/A	no
SW-033-MWS	Zinc	3.7	B	26000	no	81	no
SW-033-MWS	Zinc, Dissolve	1.5	B	26000	no	81	no
SW-034-MWS	1,1,1-Trichloroethane	1	U	N/A	no	N/A	no
SW-034-MWS	1,1,2,2-Tetrachloroethane	1	U	40	no	N/A	no
SW-034-MWS	1,1,2-Trichloroethane	1	U	160	no	N/A	no
SW-034-MWS	1,1-Dichloroethene	1	U	7100	no	N/A	no
SW-034-MWS	1,2,4-Trichlorobenzene	1	UJ	70	no	N/A	no
SW-034-MWS	1,2-Dichlorobenzene	1	U	1300	no	N/A	no
SW-034-MWS	1,2-Dichloroethane	1	U	370	no	N/A	no
SW-034-MWS	1,2-Dichloropropane	1	U	150	no	N/A	no
SW-034-MWS	1,3-Dichlorobenzene	1	U	960	no	N/A	no
SW-034-MWS	1,4-Dichlorobenzene	1	U	190	no	N/A	no
SW-034-MWS	2,4,6-Trichlorophenol	1	U	24	no	N/A	no
SW-034-MWS	2,4-Dichlorophenol	1	U	290	no	N/A	no
SW-034-MWS	2,4-Dimethylphenol	1	U	850	no	N/A	no
SW-034-MWS	2,4-Dinitrophenol	2.6	U	5300	no	N/A	no

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW-034-MWS	2,4-Dinitrotoluene	1	U	0.28	no	N/A	no
SW-034-MWS	2,4-Dinitrotoluene	1	U	34	no	N/A	no
SW-034-MWS	2-Chloronaphthalene	1	U	1600	no	N/A	no
SW-034-MWS	2-Chlorophenol	1	U	150	no	N/A	no
SW-034-MWS	Acenaphthene	0.067	J	990	no	N/A	no
SW-034-MWS	Anthracene	0.022	J	40000	no	N/A	no
SW-034-MWS	Antimony	6	U	640	no	N/A	no
SW-034-MWS	Antimony, Dissolve	6	U	640	no	N/A	no
SW-034-MWS	Arsenic	3.2	J	1.4	YES	36	no
SW-034-MWS	Arsenic, Dissolve	5	U	1.4	no	36	no
SW-034-MWS	Barium	73.3		N/A	no	N/A	no
SW-034-MWS	Barium, Dissolve	69		N/A	no	N/A	no
SW-034-MWS	Benzene	1	U	510	no	N/A	no
SW-034-MWS	Benzo[a]anthracene	0.1	U	0.18	no	N/A	no
SW-034-MWS	Benzo[a]pyrene	0.1	U	0.18	no	N/A	no
SW-034-MWS	Benzo[b]fluoranthene	0.1	U	0.18	no	N/A	no
SW-034-MWS	Benzo[k]fluoranthene	0.1	U	0.18	no	N/A	no
SW-034-MWS	Beryllium	1	U	N/A	no	N/A	no
SW-034-MWS	Beryllium, Dissolve	1	U	N/A	no	N/A	no
SW-034-MWS	bis(2-Chloroethyl)ether	1	U	5.3	no	N/A	no
SW-034-MWS	bis(2-Chloroisopropyl)ether	1	U	65000	no	N/A	no
SW-034-MWS	bis(2-Ethylhexyl)phthalate	1	U	22	no	N/A	no
SW-034-MWS	Bromodichloromethane	1	U	170	no	N/A	no
SW-034-MWS	Bromoform	1	U	1400	no	N/A	no
SW-034-MWS	Bromomethane	1	U	1500	no	N/A	no
SW-034-MWS	Cadmium	3	U	N/A	no	8.8	no
SW-034-MWS	Cadmium, Dissolve	3	U	N/A	no	8.8	no
SW-034-MWS	Carbon tetrachloride	1	U	16	no	N/A	no
SW-034-MWS	Chlorobenzene	1	U	1600	no	N/A	no
SW-034-MWS	Chloroform	1	U	4700	no	N/A	no
SW-034-MWS	Chromium	1.9	J	N/A	no	N/A	no
SW-034-MWS	Chromium VI	10	U	N/A	no	50	no
SW-034-MWS	Chromium, Dissolve	1.7	B	N/A	no	N/A	no
SW-034-MWS	Chrysene	0.1	U	0.18	no	N/A	no
SW-034-MWS	Copper	5	U	N/A	no	3.1	no
SW-034-MWS	Copper, Dissolve	5	U	N/A	no	3.1	no
SW-034-MWS	Cyanide	71.8		140	no	1	YES
SW-034-MWS	Dibenz[a,h]anthracene	0.1	U	0.18	no	N/A	no
SW-034-MWS	Dibromochloromethane	1	U	130	no	N/A	no
SW-034-MWS	Diethylphthalate	1	U	44000	no	N/A	no
SW-034-MWS	Di-n-butylphthalate	1	U	4500	no	N/A	no
SW-034-MWS	Ethylbenzene	1	U	2100	no	N/A	no
SW-034-MWS	Fluoranthene	0.1	U	140	no	N/A	no
SW-034-MWS	Fluorene	0.1	U	5300	no	N/A	no
SW-034-MWS	Hexachlorobenzene	1	U	0.0029	no	N/A	no
SW-034-MWS	Hexachlorobutadiene	1	U	180	no	N/A	no
SW-034-MWS	Hexachlorocyclopentadiene	1	U	1100	no	N/A	no
SW-034-MWS	Hexachloroethane	1	U	33	no	N/A	no
SW-034-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	0.18	no	N/A	no
SW-034-MWS	Isophorone	1	U	9600	no	N/A	no
SW-034-MWS	Lead	5	U	N/A	no	8.1	no
SW-034-MWS	Lead, Dissolve	5	U	N/A	no	8.1	no
SW-034-MWS	Mercury	0.2	UJ	N/A	no	0.94	no
SW-034-MWS	Mercury, Dissolve	0.2	UJ	N/A	no	0.94	no
SW-034-MWS	Methylene Chloride	1	U	5900	no	N/A	no
SW-034-MWS	Nickel	10	U	4600	no	8.2	no
SW-034-MWS	Nickel, Dissolve	0.82	B	4600	no	8.2	no
SW-034-MWS	Nitrobenzene	1	U	690	no	N/A	no
SW-034-MWS	N-Nitroso-di-n-propylamine	1	U	5.1	no	N/A	no
SW-034-MWS	N-Nitrosodiphenylamine	1	U	60	no	N/A	no

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW-034-MWS	Phenol	1	U	860000	no	N/A	no
SW-034-MWS	Pyrene	0.1	U	4000	no	N/A	no
SW-034-MWS	Selenium	8	U	4200	no	71	no
SW-034-MWS	Selenium, Dissolve	8	U	4200	no	71	no
SW-034-MWS	Silver	6	U	N/A	no	N/A	no
SW-034-MWS	Silver, Dissolve	6	U	N/A	no	N/A	no
SW-034-MWS	Tetrachloroethene	1	U	33	no	N/A	no
SW-034-MWS	Thallium	10	U	0.47	no	N/A	no
SW-034-MWS	Thallium, Dissolve	4.5	B	0.47	YES	N/A	no
SW-034-MWS	Toluene	1	U	15000	no	N/A	no
SW-034-MWS	trans-1,2-Dichloroethene	1	U	10000	no	N/A	no
SW-034-MWS	Trichloroethene	1	U	300	no	N/A	no
SW-034-MWS	Vinyl chloride	1	U	24	no	N/A	no
SW-034-MWS	Zinc	10	U	26000	no	81	no
SW-034-MWS	Zinc, Dissolve	1.5	B	26000	no	81	no
SW-035-MWS	1,1,1-Trichloroethane	1	U	N/A	no	N/A	no
SW-035-MWS	1,1,2,2-Tetrachloroethane	1	U	40	no	N/A	no
SW-035-MWS	1,1,2-Trichloroethane	1	U	160	no	N/A	no
SW-035-MWS	1,1-Dichloroethene	1	U	7100	no	N/A	no
SW-035-MWS	1,2,4-Trichlorobenzene	1	UJ	70	no	N/A	no
SW-035-MWS	1,2-Dichlorobenzene	1	U	1300	no	N/A	no
SW-035-MWS	1,2-Dichloroethane	1	U	370	no	N/A	no
SW-035-MWS	1,2-Dichloropropane	1	U	150	no	N/A	no
SW-035-MWS	1,3-Dichlorobenzene	1	U	960	no	N/A	no
SW-035-MWS	1,4-Dichlorobenzene	1	U	190	no	N/A	no
SW-035-MWS	2,4,6-Trichlorophenol	1.1	U	24	no	N/A	no
SW-035-MWS	2,4-Dichlorophenol	1.1	U	290	no	N/A	no
SW-035-MWS	2,4-Dimethylphenol	1.1	U	850	no	N/A	no
SW-035-MWS	2,4-Dinitrophenol	2.6	U	5300	no	N/A	no
SW-035-MWS	2,4-Dinitrotoluene	1.1	U	0.28	no	N/A	no
SW-035-MWS	2,4-Dinitrotoluene	1.1	U	34	no	N/A	no
SW-035-MWS	2-Chloronaphthalene	1.1	U	1600	no	N/A	no
SW-035-MWS	2-Chlorophenol	1.1	U	150	no	N/A	no
SW-035-MWS	Acenaphthene	0.05	J	990	no	N/A	no
SW-035-MWS	Anthracene	0.046	J	40000	no	N/A	no
SW-035-MWS	Antimony	6	U	640	no	N/A	no
SW-035-MWS	Antimony, Dissolve	6	U	640	no	N/A	no
SW-035-MWS	Arsenic	3.4	J	1.4	YES	36	no
SW-035-MWS	Arsenic, Dissolve	4.1	B	1.4	YES	36	no
SW-035-MWS	Barium	20.1		N/A	no	N/A	no
SW-035-MWS	Barium, Dissolve	21.7		N/A	no	N/A	no
SW-035-MWS	Benzene	1	U	510	no	N/A	no
SW-035-MWS	Benzo[a]anthracene	0.11	U	0.18	no	N/A	no
SW-035-MWS	Benzo[a]pyrene	0.11	U	0.18	no	N/A	no
SW-035-MWS	Benzo[b]fluoranthene	0.11	U	0.18	no	N/A	no
SW-035-MWS	Benzo[k]fluoranthene	0.11	U	0.18	no	N/A	no
SW-035-MWS	Beryllium	1	U	N/A	no	N/A	no
SW-035-MWS	Beryllium, Dissolve	1	U	N/A	no	N/A	no
SW-035-MWS	bis(2-Chloroethyl)ether	1.1	U	5.3	no	N/A	no
SW-035-MWS	bis(2-Chloroisopropyl)ether	1.1	U	65000	no	N/A	no
SW-035-MWS	bis(2-Ethylhexyl)phthalate	1.1	U	22	no	N/A	no
SW-035-MWS	Bromodichloromethane	1	U	170	no	N/A	no
SW-035-MWS	Bromoform	1	U	1400	no	N/A	no
SW-035-MWS	Bromomethane	1	U	1500	no	N/A	no
SW-035-MWS	Cadmium	3	U	N/A	no	8.8	no
SW-035-MWS	Cadmium, Dissolve	3	U	N/A	no	8.8	no
SW-035-MWS	Carbon tetrachloride	1	U	16	no	N/A	no
SW-035-MWS	Chlorobenzene	1	U	1600	no	N/A	no
SW-035-MWS	Chloroform	1	U	4700	no	N/A	no
SW-035-MWS	Chromium	5.7		N/A	no	N/A	no

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW-035-MWS	Chromium VI	10	U	N/A	no	50	no
SW-035-MWS	Chromium, Dissolve	5.4		N/A	no	N/A	no
SW-035-MWS	Chrysene	0.11	U	0.18	no	N/A	no
SW-035-MWS	Copper	5	U	N/A	no	3.1	no
SW-035-MWS	Copper, Dissolve	5	U	N/A	no	3.1	no
SW-035-MWS	Cyanide	225		140	YES	1	YES
SW-035-MWS	Dibenz[a,h]anthracene	0.11	U	0.18	no	N/A	no
SW-035-MWS	Dibromochloromethane	1	U	130	no	N/A	no
SW-035-MWS	Diethylphthalate	1.1	U	44000	no	N/A	no
SW-035-MWS	Di-n-butylphthalate	1.1	U	4500	no	N/A	no
SW-035-MWS	Ethylbenzene	1	U	2100	no	N/A	no
SW-035-MWS	Fluoranthene	0.11	U	140	no	N/A	no
SW-035-MWS	Fluorene	0.11	U	5300	no	N/A	no
SW-035-MWS	Hexachlorobenzene	1.1	U	0.0029	no	N/A	no
SW-035-MWS	Hexachlorobutadiene	1.1	U	180	no	N/A	no
SW-035-MWS	Hexachlorocyclopentadiene	1.1	U	1100	no	N/A	no
SW-035-MWS	Hexachloroethane	1.1	U	33	no	N/A	no
SW-035-MWS	Indeno[1,2,3-c,d]pyrene	0.11	U	0.18	no	N/A	no
SW-035-MWS	Isophorone	1.1	U	9600	no	N/A	no
SW-035-MWS	Lead	5	U	N/A	no	8.1	no
SW-035-MWS	Lead, Dissolve	5	U	N/A	no	8.1	no
SW-035-MWS	Mercury	0.2	UJ	N/A	no	0.94	no
SW-035-MWS	Mercury, Dissolve	0.2	UJ	N/A	no	0.94	no
SW-035-MWS	Methylene Chloride	1	U	5900	no	N/A	no
SW-035-MWS	Nickel	0.73	B	4600	no	8.2	no
SW-035-MWS	Nickel, Dissolve	0.71	B	4600	no	8.2	no
SW-035-MWS	Nitrobenzene	1.1	U	690	no	N/A	no
SW-035-MWS	N-Nitroso-di-n-propylamine	1.1	U	5.1	no	N/A	no
SW-035-MWS	N-Nitrosodiphenylamine	1.1	U	60	no	N/A	no
SW-035-MWS	Phenol	1.1	U	860000	no	N/A	no
SW-035-MWS	Pyrene	0.11	U	4000	no	N/A	no
SW-035-MWS	Selenium	8	U	4200	no	71	no
SW-035-MWS	Selenium, Dissolve	5.6	J	4200	no	71	no
SW-035-MWS	Silver	6	U	N/A	no	N/A	no
SW-035-MWS	Silver, Dissolve	6	U	N/A	no	N/A	no
SW-035-MWS	Tetrachloroethene	1	U	33	no	N/A	no
SW-035-MWS	Thallium	5.3	B	0.47	YES	N/A	no
SW-035-MWS	Thallium, Dissolve	10	U	0.47	no	N/A	no
SW-035-MWS	Toluene	1	U	15000	no	N/A	no
SW-035-MWS	trans-1,2-Dichloroethene	1	U	10000	no	N/A	no
SW-035-MWS	Trichloroethene	1	U	300	no	N/A	no
SW-035-MWS	Vinyl chloride	1	U	24	no	N/A	no
SW-035-MWS	Zinc	8.7	B	26000	no	81	no
SW-035-MWS	Zinc, Dissolve	0.77	B	26000	no	81	no
SW-036-MWS	1,1,1-Trichloroethane	1	U	N/A	no	N/A	no
SW-036-MWS	1,1,2,2-Tetrachloroethane	1	U	40	no	N/A	no
SW-036-MWS	1,1,2-Trichloroethane	1	U	160	no	N/A	no
SW-036-MWS	1,1-Dichloroethene	1	U	7100	no	N/A	no
SW-036-MWS	1,2,4-Trichlorobenzene	1	U	70	no	N/A	no
SW-036-MWS	1,2-Dichlorobenzene	1	U	1300	no	N/A	no
SW-036-MWS	1,2-Dichloroethane	1	U	370	no	N/A	no
SW-036-MWS	1,2-Dichloropropane	1	U	150	no	N/A	no
SW-036-MWS	1,3-Dichlorobenzene	1	U	960	no	N/A	no
SW-036-MWS	1,4-Dichlorobenzene	1	U	190	no	N/A	no
SW-036-MWS	2,4,6-Trichlorophenol	1	U	24	no	N/A	no
SW-036-MWS	2,4-Dichlorophenol	1	U	290	no	N/A	no
SW-036-MWS	2,4-Dimethylphenol	1	U	850	no	N/A	no
SW-036-MWS	2,4-Dinitrophenol	2.5	U	5300	no	N/A	no
SW-036-MWS	2,4-Dinitrotoluene	1	U	0.28	no	N/A	no
SW-036-MWS	2,4-Dinitrotoluene	1	U	34	no	N/A	no

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW-036-MWS	2-Chloronaphthalene	1	U	1600	no	N/A	no
SW-036-MWS	2-Chlorophenol	1	U	150	no	N/A	no
SW-036-MWS	Acenaphthene	0.25		990	no	N/A	no
SW-036-MWS	Anthracene	0.21		40000	no	N/A	no
SW-036-MWS	Antimony	6	U	640	no	N/A	no
SW-036-MWS	Antimony, Dissolve	6	U	640	no	N/A	no
SW-036-MWS	Arsenic	5	U	1.4	no	36	no
SW-036-MWS	Arsenic, Dissolve	5	U	1.4	no	36	no
SW-036-MWS	Barium	69.3		N/A	no	N/A	no
SW-036-MWS	Barium, Dissolve	65.6		N/A	no	N/A	no
SW-036-MWS	Benzene	1	U	510	no	N/A	no
SW-036-MWS	Benzo[a]anthracene	0.086	J	0.18	no	N/A	no
SW-036-MWS	Benzo[a]pyrene	0.012	J	0.18	no	N/A	no
SW-036-MWS	Benzo[b]fluoranthene	0.034	J	0.18	no	N/A	no
SW-036-MWS	Benzo[k]fluoranthene	0.025	J	0.18	no	N/A	no
SW-036-MWS	Beryllium	1	U	N/A	no	N/A	no
SW-036-MWS	Beryllium, Dissolve	1	U	N/A	no	N/A	no
SW-036-MWS	bis(2-Chloroethyl)ether	1	U	5.3	no	N/A	no
SW-036-MWS	bis(2-Chloroisopropyl)ether	1	U	65000	no	N/A	no
SW-036-MWS	bis(2-Ethylhexyl)phthalate	1	U	22	no	N/A	no
SW-036-MWS	Bromodichloromethane	1	U	170	no	N/A	no
SW-036-MWS	Bromoform	1	U	1400	no	N/A	no
SW-036-MWS	Bromomethane	1	U	1500	no	N/A	no
SW-036-MWS	Cadmium	3	U	N/A	no	8.8	no
SW-036-MWS	Cadmium, Dissolve	3	U	N/A	no	8.8	no
SW-036-MWS	Carbon tetrachloride	1	U	16	no	N/A	no
SW-036-MWS	Chlorobenzene	1	U	1600	no	N/A	no
SW-036-MWS	Chloroform	1.1		4700	no	N/A	no
SW-036-MWS	Chromium	1.8	B	N/A	no	N/A	no
SW-036-MWS	Chromium VI	10	U	N/A	no	50	no
SW-036-MWS	Chromium, Dissolve	0.96	B	N/A	no	N/A	no
SW-036-MWS	Chrysene	0.061	J	0.18	no	N/A	no
SW-036-MWS	Copper	5	U	N/A	no	3.1	no
SW-036-MWS	Copper, Dissolve	5	U	N/A	no	3.1	no
SW-036-MWS	Cyanide	10	U	140	no	1	no
SW-036-MWS	Dibenz[a,h]anthracene	0.1	U	0.18	no	N/A	no
SW-036-MWS	Dibromochloromethane	1	U	130	no	N/A	no
SW-036-MWS	Diethylphthalate	1	U	44000	no	N/A	no
SW-036-MWS	Di-n-butylphthalate	1	U	4500	no	N/A	no
SW-036-MWS	Ethylbenzene	1	U	2100	no	N/A	no
SW-036-MWS	Fluoranthene	0.72		140	no	N/A	no
SW-036-MWS	Fluorene	0.15		5300	no	N/A	no
SW-036-MWS	Hexachlorobenzene	1	U	0.0029	no	N/A	no
SW-036-MWS	Hexachlorobutadiene	1	U	180	no	N/A	no
SW-036-MWS	Hexachlorocyclopentadiene	1	U	1100	no	N/A	no
SW-036-MWS	Hexachloroethane	1	U	33	no	N/A	no
SW-036-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	0.18	no	N/A	no
SW-036-MWS	Isophorone	1	U	9600	no	N/A	no
SW-036-MWS	Lead	4.6	B	N/A	no	8.1	no
SW-036-MWS	Lead, Dissolve	5	U	N/A	no	8.1	no
SW-036-MWS	Mercury	0.2	U	N/A	no	0.94	no
SW-036-MWS	Mercury, Dissolve	0.2	U	N/A	no	0.94	no
SW-036-MWS	Methylene Chloride	1	U	5900	no	N/A	no
SW-036-MWS	Nickel	10	U	4600	no	8.2	no
SW-036-MWS	Nickel, Dissolve	1.2	B	4600	no	8.2	no
SW-036-MWS	Nitrobenzene	1	U	690	no	N/A	no
SW-036-MWS	N-Nitroso-di-n-propylamine	1	U	5.1	no	N/A	no
SW-036-MWS	N-Nitrosodiphenylamine	1	U	60	no	N/A	no
SW-036-MWS	Phenol	1	U	860000	no	N/A	no
SW-036-MWS	Pyrene	0.54		4000	no	N/A	no

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW-036-MWS	Selenium	6.8	B	4200	no	71	no
SW-036-MWS	Selenium, Dissolve	5.6	B	4200	no	71	no
SW-036-MWS	Silver	6	U	N/A	no	N/A	no
SW-036-MWS	Silver, Dissolve	6	U	N/A	no	N/A	no
SW-036-MWS	Tetrachloroethene	1	U	33	no	N/A	no
SW-036-MWS	Thallium	7	B	0.47	YES	N/A	no
SW-036-MWS	Thallium, Dissolve	4.7	B	0.47	YES	N/A	no
SW-036-MWS	Toluene	1	U	15000	no	N/A	no
SW-036-MWS	trans-1,2-Dichloroethene	1	U	10000	no	N/A	no
SW-036-MWS	Trichloroethene	1	U	300	no	N/A	no
SW-036-MWS	Vinyl chloride	1	U	24	no	N/A	no
SW-036-MWS	Zinc	1.4	B	26000	no	81	no
SW-036-MWS	Zinc, Dissolve	10	U	26000	no	81	no
SW-037-MWS	1,1,1-Trichloroethane	1	U	N/A	no	N/A	no
SW-037-MWS	1,1,2,2-Tetrachloroethane	1	U	40	no	N/A	no
SW-037-MWS	1,1,2-Trichloroethane	1	U	160	no	N/A	no
SW-037-MWS	1,1-Dichloroethene	1	U	7100	no	N/A	no
SW-037-MWS	1,2,4-Trichlorobenzene	1	UJ	70	no	N/A	no
SW-037-MWS	1,2-Dichlorobenzene	1	U	1300	no	N/A	no
SW-037-MWS	1,2-Dichloroethane	1	U	370	no	N/A	no
SW-037-MWS	1,2-Dichloropropane	1	U	150	no	N/A	no
SW-037-MWS	1,3-Dichlorobenzene	1	U	960	no	N/A	no
SW-037-MWS	1,4-Dichlorobenzene	1	U	190	no	N/A	no
SW-037-MWS	2,4,6-Trichlorophenol	1	U	24	no	N/A	no
SW-037-MWS	2,4-Dichlorophenol	1	U	290	no	N/A	no
SW-037-MWS	2,4-Dimethylphenol	1	U	850	no	N/A	no
SW-037-MWS	2,4-Dinitrophenol	2.6	U	5300	no	N/A	no
SW-037-MWS	2,4-Dinitrotoluene	1	U	0.28	no	N/A	no
SW-037-MWS	2,4-Dinitrotoluene	1	U	34	no	N/A	no
SW-037-MWS	2-Chloronaphthalene	1	U	1600	no	N/A	no
SW-037-MWS	2-Chlorophenol	1	U	150	no	N/A	no
SW-037-MWS	Acenaphthene	0.1	U	990	no	N/A	no
SW-037-MWS	Anthracene	0.018	J	40000	no	N/A	no
SW-037-MWS	Antimony	6	U	640	no	N/A	no
SW-037-MWS	Antimony, Dissolve	6	U	640	no	N/A	no
SW-037-MWS	Arsenic	5	U	1.4	no	36	no
SW-037-MWS	Arsenic, Dissolve	5	U	1.4	no	36	no
SW-037-MWS	Barium	71.3		N/A	no	N/A	no
SW-037-MWS	Barium, Dissolve	67.3		N/A	no	N/A	no
SW-037-MWS	Benzene	1	U	510	no	N/A	no
SW-037-MWS	Benzo[a]anthracene	0.016	J	0.18	no	N/A	no
SW-037-MWS	Benzo[a]pyrene	0.1	U	0.18	no	N/A	no
SW-037-MWS	Benzo[b]fluoranthene	0.1	U	0.18	no	N/A	no
SW-037-MWS	Benzo[k]fluoranthene	0.1	U	0.18	no	N/A	no
SW-037-MWS	Beryllium	1	U	N/A	no	N/A	no
SW-037-MWS	Beryllium, Dissolve	1	U	N/A	no	N/A	no
SW-037-MWS	bis(2-Chloroethyl)ether	1	U	5.3	no	N/A	no
SW-037-MWS	bis(2-Chloroisopropyl)ether	1	U	65000	no	N/A	no
SW-037-MWS	bis(2-Ethylhexyl)phthalate	1	U	22	no	N/A	no
SW-037-MWS	Bromodichloromethane	1	U	170	no	N/A	no
SW-037-MWS	Bromoform	1	U	1400	no	N/A	no
SW-037-MWS	Bromomethane	1	U	1500	no	N/A	no
SW-037-MWS	Cadmium	3	U	N/A	no	8.8	no
SW-037-MWS	Cadmium, Dissolve	3	U	N/A	no	8.8	no
SW-037-MWS	Carbon tetrachloride	1	U	16	no	N/A	no
SW-037-MWS	Chlorobenzene	1	U	1600	no	N/A	no
SW-037-MWS	Chloroform	3		4700	no	N/A	no
SW-037-MWS	Chromium	0.99	J	N/A	no	N/A	no
SW-037-MWS	Chromium VI	10	U	N/A	no	50	no
SW-037-MWS	Chromium, Dissolve	1	J	N/A	no	N/A	no

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW-037-MWS	Chrysene	0.1	U	0.18	no	N/A	no
SW-037-MWS	Copper	5	U	N/A	no	3.1	no
SW-037-MWS	Copper, Dissolve	5	U	N/A	no	3.1	no
SW-037-MWS	Cyanide	4.6	J	140	no	1	YES
SW-037-MWS	Dibenz[a,h]anthracene	0.1	U	0.18	no	N/A	no
SW-037-MWS	Dibromochloromethane	1	U	130	no	N/A	no
SW-037-MWS	Diethylphthalate	1	U	44000	no	N/A	no
SW-037-MWS	Di-n-butylphthalate	1	U	4500	no	N/A	no
SW-037-MWS	Ethylbenzene	0.58	J	2100	no	N/A	no
SW-037-MWS	Fluoranthene	0.029	J	140	no	N/A	no
SW-037-MWS	Fluorene	0.1	U	5300	no	N/A	no
SW-037-MWS	Hexachlorobenzene	1	U	0.0029	no	N/A	no
SW-037-MWS	Hexachlorobutadiene	1	U	180	no	N/A	no
SW-037-MWS	Hexachlorocyclopentadiene	1	U	1100	no	N/A	no
SW-037-MWS	Hexachloroethane	1	U	33	no	N/A	no
SW-037-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	0.18	no	N/A	no
SW-037-MWS	Isophorone	1	U	9600	no	N/A	no
SW-037-MWS	Lead	5	U	N/A	no	8.1	no
SW-037-MWS	Lead, Dissolve	5	U	N/A	no	8.1	no
SW-037-MWS	Mercury	0.2	U	N/A	no	0.94	no
SW-037-MWS	Mercury, Dissolve	0.2	U	N/A	no	0.94	no
SW-037-MWS	Methylene Chloride	1	U	5900	no	N/A	no
SW-037-MWS	Nickel	10	U	4600	no	8.2	no
SW-037-MWS	Nickel, Dissolve	10	U	4600	no	8.2	no
SW-037-MWS	Nitrobenzene	1	U	690	no	N/A	no
SW-037-MWS	N-Nitroso-di-n-propylamine	1	U	5.1	no	N/A	no
SW-037-MWS	N-Nitrosodiphenylamine	1	U	60	no	N/A	no
SW-037-MWS	Phenol	1	U	860000	no	N/A	no
SW-037-MWS	Pyrene	0.025	J	4000	no	N/A	no
SW-037-MWS	Selenium	8	U	4200	no	71	no
SW-037-MWS	Selenium, Dissolve	8	U	4200	no	71	no
SW-037-MWS	Silver	6	U	N/A	no	N/A	no
SW-037-MWS	Silver, Dissolve	6	U	N/A	no	N/A	no
SW-037-MWS	Tetrachloroethene	1	U	33	no	N/A	no
SW-037-MWS	Thallium	10	U	0.47	no	N/A	no
SW-037-MWS	Thallium, Dissolve	10	U	0.47	no	N/A	no
SW-037-MWS	Toluene	1	U	15000	no	N/A	no
SW-037-MWS	trans-1,2-Dichloroethene	1	U	10000	no	N/A	no
SW-037-MWS	Trichloroethene	0.6	J	300	no	N/A	no
SW-037-MWS	Vinyl chloride	1	U	24	no	N/A	no
SW-037-MWS	Zinc	10	U	26000	no	81	no
SW-037-MWS	Zinc, Dissolve	0.67	B	26000	no	81	no
SW-038-MWS	1,1,1-Trichloroethane	1	U	N/A	no	N/A	no
SW-038-MWS	1,1,2,2-Tetrachloroethane	1	U	40	no	N/A	no
SW-038-MWS	1,1,2-Trichloroethane	1	U	160	no	N/A	no
SW-038-MWS	1,1-Dichloroethene	1	U	7100	no	N/A	no
SW-038-MWS	1,2,4-Trichlorobenzene	1	UJ	70	no	N/A	no
SW-038-MWS	1,2-Dichlorobenzene	1	U	1300	no	N/A	no
SW-038-MWS	1,2-Dichloroethane	1	U	370	no	N/A	no
SW-038-MWS	1,2-Dichloropropane	1	U	150	no	N/A	no
SW-038-MWS	1,3-Dichlorobenzene	1	U	960	no	N/A	no
SW-038-MWS	1,4-Dichlorobenzene	1	U	190	no	N/A	no
SW-038-MWS	2,4,6-Trichlorophenol	1	U	24	no	N/A	no
SW-038-MWS	2,4-Dichlorophenol	1	U	290	no	N/A	no
SW-038-MWS	2,4-Dimethylphenol	1	U	850	no	N/A	no
SW-038-MWS	2,4-Dinitrophenol	2.5	U	5300	no	N/A	no
SW-038-MWS	2,4-Dinitrotoluene	1	U	0.28	no	N/A	no
SW-038-MWS	2,4-Dinitrotoluene	1	U	34	no	N/A	no
SW-038-MWS	2-Chloronaphthalene	1	U	1600	no	N/A	no
SW-038-MWS	2-Chlorophenol	1	U	150	no	N/A	no

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW-038-MWS	Acenaphthene	0.037	J	990	no	N/A	no
SW-038-MWS	Anthracene	0.09	J	40000	no	N/A	no
SW-038-MWS	Antimony	6	U	640	no	N/A	no
SW-038-MWS	Antimony, Dissolve	6	U	640	no	N/A	no
SW-038-MWS	Arsenic	5	U	1.4	no	36	no
SW-038-MWS	Arsenic, Dissolve	5	U	1.4	no	36	no
SW-038-MWS	Barium	64.5		N/A	no	N/A	no
SW-038-MWS	Barium, Dissolve	64.3		N/A	no	N/A	no
SW-038-MWS	Benzene	1	U	510	no	N/A	no
SW-038-MWS	Benzo[a]anthracene	0.1	U	0.18	no	N/A	no
SW-038-MWS	Benzo[a]pyrene	0.1	U	0.18	no	N/A	no
SW-038-MWS	Benzo[b]fluoranthene	0.1	U	0.18	no	N/A	no
SW-038-MWS	Benzo[k]fluoranthene	0.1	U	0.18	no	N/A	no
SW-038-MWS	Beryllium	1	U	N/A	no	N/A	no
SW-038-MWS	Beryllium, Dissolve	1	U	N/A	no	N/A	no
SW-038-MWS	bis(2-Chloroethyl)ether	1	U	5.3	no	N/A	no
SW-038-MWS	bis(2-Chloroisopropyl)ether	1	U	65000	no	N/A	no
SW-038-MWS	bis(2-Ethylhexyl)phthalate	1	U	22	no	N/A	no
SW-038-MWS	Bromodichloromethane	1	U	170	no	N/A	no
SW-038-MWS	Bromoform	1	U	1400	no	N/A	no
SW-038-MWS	Bromomethane	1	U	1500	no	N/A	no
SW-038-MWS	Cadmium	3	U	N/A	no	8.8	no
SW-038-MWS	Cadmium, Dissolve	3	U	N/A	no	8.8	no
SW-038-MWS	Carbon tetrachloride	1	U	16	no	N/A	no
SW-038-MWS	Chlorobenzene	1	U	1600	no	N/A	no
SW-038-MWS	Chloroform	1	U	4700	no	N/A	no
SW-038-MWS	Chromium	17.3		N/A	no	N/A	no
SW-038-MWS	Chromium VI	5	J	N/A	no	50	no
SW-038-MWS	Chromium, Dissolve	17.4		N/A	no	N/A	no
SW-038-MWS	Chrysene	0.1	U	0.18	no	N/A	no
SW-038-MWS	Copper	5	U	N/A	no	3.1	no
SW-038-MWS	Copper, Dissolve	5	U	N/A	no	3.1	no
SW-038-MWS	Cyanide	10	U	140	no	1	no
SW-038-MWS	Dibenz[a,h]anthracene	0.1	U	0.18	no	N/A	no
SW-038-MWS	Dibromochloromethane	1	U	130	no	N/A	no
SW-038-MWS	Diethylphthalate	1	U	44000	no	N/A	no
SW-038-MWS	Di-n-butylphthalate	1	U	4500	no	N/A	no
SW-038-MWS	Ethylbenzene	1	U	2100	no	N/A	no
SW-038-MWS	Fluoranthene	0.015	J	140	no	N/A	no
SW-038-MWS	Fluorene	0.02	J	5300	no	N/A	no
SW-038-MWS	Hexachlorobenzene	1	U	0.0029	no	N/A	no
SW-038-MWS	Hexachlorobutadiene	1	U	180	no	N/A	no
SW-038-MWS	Hexachlorocyclopentadiene	1	U	1100	no	N/A	no
SW-038-MWS	Hexachloroethane	1	U	33	no	N/A	no
SW-038-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	0.18	no	N/A	no
SW-038-MWS	Isophorone	1	U	9600	no	N/A	no
SW-038-MWS	Lead	5	U	N/A	no	8.1	no
SW-038-MWS	Lead, Dissolve	5	U	N/A	no	8.1	no
SW-038-MWS	Mercury	0.2	U	N/A	no	0.94	no
SW-038-MWS	Mercury, Dissolve	0.2	U	N/A	no	0.94	no
SW-038-MWS	Methylene Chloride	1	U	5900	no	N/A	no
SW-038-MWS	Nickel	0.93	J	4600	no	8.2	no
SW-038-MWS	Nickel, Dissolve	0.99	B	4600	no	8.2	no
SW-038-MWS	Nitrobenzene	1	U	690	no	N/A	no
SW-038-MWS	N-Nitroso-di-n-propylamine	1	U	5.1	no	N/A	no
SW-038-MWS	N-Nitrosodiphenylamine	1	U	60	no	N/A	no
SW-038-MWS	Phenol	1	U	860000	no	N/A	no
SW-038-MWS	Pyrene	0.1	U	4000	no	N/A	no
SW-038-MWS	Selenium	4	J	4200	no	71	no
SW-038-MWS	Selenium, Dissolve	8	U	4200	no	71	no

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW-038-MWS	Silver	6	U	N/A	no	N/A	no
SW-038-MWS	Silver, Dissolve	6	U	N/A	no	N/A	no
SW-038-MWS	Tetrachloroethene	1	U	33	no	N/A	no
SW-038-MWS	Thallium	10	U	0.47	no	N/A	no
SW-038-MWS	Thallium, Dissolve	10	U	0.47	no	N/A	no
SW-038-MWS	Toluene	1	U	15000	no	N/A	no
SW-038-MWS	trans-1,2-Dichloroethene	1	U	10000	no	N/A	no
SW-038-MWS	Trichloroethene	1	U	300	no	N/A	no
SW-038-MWS	Vinyl chloride	1	U	24	no	N/A	no
SW-038-MWS	Zinc	10	U	26000	no	81	no
SW-038-MWS	Zinc, Dissolve	1.3	B	26000	no	81	no
SW-039-MWS	1,1,1-Trichloroethane	1	U	N/A	no	N/A	no
SW-039-MWS	1,1,2,2-Tetrachloroethane	1	U	40	no	N/A	no
SW-039-MWS	1,1,2-Trichloroethane	1	U	160	no	N/A	no
SW-039-MWS	1,1-Dichloroethene	1	U	7100	no	N/A	no
SW-039-MWS	1,2,4-Trichlorobenzene	1	UJ	70	no	N/A	no
SW-039-MWS	1,2-Dichlorobenzene	1	U	1300	no	N/A	no
SW-039-MWS	1,2-Dichloroethane	1	U	370	no	N/A	no
SW-039-MWS	1,2-Dichloropropane	1	U	150	no	N/A	no
SW-039-MWS	1,3-Dichlorobenzene	1	U	960	no	N/A	no
SW-039-MWS	1,4-Dichlorobenzene	1	U	190	no	N/A	no
SW-039-MWS	2,4,6-Trichlorophenol	1	U	24	no	N/A	no
SW-039-MWS	2,4-Dichlorophenol	1	U	290	no	N/A	no
SW-039-MWS	2,4-Dimethylphenol	1	U	850	no	N/A	no
SW-039-MWS	2,4-Dinitrophenol	2.5	U	5300	no	N/A	no
SW-039-MWS	2,4-Dinitrotoluene	1	U	0.28	no	N/A	no
SW-039-MWS	2,4-Dinitrotoluene	1	U	34	no	N/A	no
SW-039-MWS	2-Chloronaphthalene	1	U	1600	no	N/A	no
SW-039-MWS	2-Chlorophenol	1	U	150	no	N/A	no
SW-039-MWS	Acenaphthene	0.03	J	990	no	N/A	no
SW-039-MWS	Anthracene	0.046	J	40000	no	N/A	no
SW-039-MWS	Antimony	6	U	640	no	N/A	no
SW-039-MWS	Antimony, Dissolve	6	U	640	no	N/A	no
SW-039-MWS	Arsenic	5	U	1.4	no	36	no
SW-039-MWS	Arsenic, Dissolve	5	U	1.4	no	36	no
SW-039-MWS	Barium	51.5		N/A	no	N/A	no
SW-039-MWS	Barium, Dissolve	51.4		N/A	no	N/A	no
SW-039-MWS	Benzene	1	U	510	no	N/A	no
SW-039-MWS	Benzo[a]anthracene	0.1	UJ	0.18	no	N/A	no
SW-039-MWS	Benzo[a]pyrene	0.1	U	0.18	no	N/A	no
SW-039-MWS	Benzo[b]fluoranthene	0.1	U	0.18	no	N/A	no
SW-039-MWS	Benzo[k]fluoranthene	0.1	U	0.18	no	N/A	no
SW-039-MWS	Beryllium	1	U	N/A	no	N/A	no
SW-039-MWS	Beryllium, Dissolve	1	U	N/A	no	N/A	no
SW-039-MWS	bis(2-Chloroethyl)ether	1	U	5.3	no	N/A	no
SW-039-MWS	bis(2-Chloroisopropyl)ether	1	U	65000	no	N/A	no
SW-039-MWS	bis(2-Ethylhexyl)phthalate	1	U	22	no	N/A	no
SW-039-MWS	Bromodichloromethane	1	U	170	no	N/A	no
SW-039-MWS	Bromoform	1	U	1400	no	N/A	no
SW-039-MWS	Bromomethane	1	U	1500	no	N/A	no
SW-039-MWS	Cadmium	3	U	N/A	no	8.8	no
SW-039-MWS	Cadmium, Dissolve	3	U	N/A	no	8.8	no
SW-039-MWS	Carbon tetrachloride	1	U	16	no	N/A	no
SW-039-MWS	Chlorobenzene	1	U	1600	no	N/A	no
SW-039-MWS	Chloroform	1	U	4700	no	N/A	no
SW-039-MWS	Chromium	0.81	J	N/A	no	N/A	no
SW-039-MWS	Chromium VI	10	U	N/A	no	50	no
SW-039-MWS	Chromium, Dissolve	5	U	N/A	no	N/A	no
SW-039-MWS	Chrysene	0.1	UJ	0.18	no	N/A	no
SW-039-MWS	Copper	5	U	N/A	no	3.1	no

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW-039-MWS	Copper, Dissolve	5	U	N/A	no	3.1	no
SW-039-MWS	Cyanide	10	U	140	no	1	no
SW-039-MWS	Dibenz[a,h]anthracene	0.1	U	0.18	no	N/A	no
SW-039-MWS	Dibromochloromethane	1	U	130	no	N/A	no
SW-039-MWS	Diethylphthalate	1	U	44000	no	N/A	no
SW-039-MWS	Di-n-butylphthalate	1	U	4500	no	N/A	no
SW-039-MWS	Ethylbenzene	1	U	2100	no	N/A	no
SW-039-MWS	Fluoranthene	0.026	J	140	no	N/A	no
SW-039-MWS	Fluorene	0.026	J	5300	no	N/A	no
SW-039-MWS	Hexachlorobenzene	1	U	0.0029	no	N/A	no
SW-039-MWS	Hexachlorobutadiene	1	U	180	no	N/A	no
SW-039-MWS	Hexachlorocyclopentadiene	1	U	1100	no	N/A	no
SW-039-MWS	Hexachloroethane	1	U	33	no	N/A	no
SW-039-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	0.18	no	N/A	no
SW-039-MWS	Isophorone	1	U	9600	no	N/A	no
SW-039-MWS	Lead	5	U	N/A	no	8.1	no
SW-039-MWS	Lead, Dissolve	5	U	N/A	no	8.1	no
SW-039-MWS	Mercury	0.2	U	N/A	no	0.94	no
SW-039-MWS	Mercury, Dissolve	0.2	U	N/A	no	0.94	no
SW-039-MWS	Methylene Chloride	1	U	5900	no	N/A	no
SW-039-MWS	Nickel	10	U	4600	no	8.2	no
SW-039-MWS	Nickel, Dissolve	1	B	4600	no	8.2	no
SW-039-MWS	Nitrobenzene	1	U	690	no	N/A	no
SW-039-MWS	N-Nitroso-di-n-propylamine	1	U	5.1	no	N/A	no
SW-039-MWS	N-Nitrosodiphenylamine	1	U	60	no	N/A	no
SW-039-MWS	Phenol	1	U	860000	no	N/A	no
SW-039-MWS	Pyrene	0.035	J	4000	no	N/A	no
SW-039-MWS	Selenium	5.4	J	4200	no	71	no
SW-039-MWS	Selenium, Dissolve	3.7	J	4200	no	71	no
SW-039-MWS	Silver	6	U	N/A	no	N/A	no
SW-039-MWS	Silver, Dissolve	6	U	N/A	no	N/A	no
SW-039-MWS	Tetrachloroethene	1	U	33	no	N/A	no
SW-039-MWS	Thallium	4.1	J	0.47	YES	N/A	no
SW-039-MWS	Thallium, Dissolve	10	U	0.47	no	N/A	no
SW-039-MWS	Toluene	1	U	15000	no	N/A	no
SW-039-MWS	trans-1,2-Dichloroethene	1	U	10000	no	N/A	no
SW-039-MWS	Trichloroethene	1	U	300	no	N/A	no
SW-039-MWS	Vinyl chloride	1	U	24	no	N/A	no
SW-039-MWS	Zinc	10	U	26000	no	81	no
SW-039-MWS	Zinc, Dissolve	1.2	B	26000	no	81	no
SW-040-MWS	1,1,1-Trichloroethane	1	U	N/A	no	N/A	no
SW-040-MWS	1,1,2,2-Tetrachloroethane	1	U	40	no	N/A	no
SW-040-MWS	1,1,2-Trichloroethane	1	U	160	no	N/A	no
SW-040-MWS	1,1-Dichloroethene	1	U	7100	no	N/A	no
SW-040-MWS	1,2,4-Trichlorobenzene	1	U	70	no	N/A	no
SW-040-MWS	1,2-Dichlorobenzene	1	U	1300	no	N/A	no
SW-040-MWS	1,2-Dichloroethane	1	U	370	no	N/A	no
SW-040-MWS	1,2-Dichloropropane	1	U	150	no	N/A	no
SW-040-MWS	1,3-Dichlorobenzene	1	U	960	no	N/A	no
SW-040-MWS	1,4-Dichlorobenzene	1	U	190	no	N/A	no
SW-040-MWS	2,4,6-Trichlorophenol	1	U	24	no	N/A	no
SW-040-MWS	2,4-Dichlorophenol	1	U	290	no	N/A	no
SW-040-MWS	2,4-Dimethylphenol	1	U	850	no	N/A	no
SW-040-MWS	2,4-Dinitrophenol	2.5	U	5300	no	N/A	no
SW-040-MWS	2,4-Dinitrotoluene	1	U	0.28	no	N/A	no
SW-040-MWS	2,4-Dinitrotoluene	1	U	34	no	N/A	no
SW-040-MWS	2-Chloronaphthalene	1	U	1600	no	N/A	no
SW-040-MWS	2-Chlorophenol	1	U	150	no	N/A	no
SW-040-MWS	Acenaphthene	0.1	U	990	no	N/A	no
SW-040-MWS	Anthracene	0.019	J	40000	no	N/A	no

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW-040-MWS	Antimony	6	U	640	no	N/A	no
SW-040-MWS	Antimony, Dissolve	6	U	640	no	N/A	no
SW-040-MWS	Arsenic	5	U	1.4	no	36	no
SW-040-MWS	Arsenic, Dissolve	4	B	1.4	YES	36	no
SW-040-MWS	Barium	18.1		N/A	no	N/A	no
SW-040-MWS	Barium, Dissolve	16		N/A	no	N/A	no
SW-040-MWS	Benzene	1	U	510	no	N/A	no
SW-040-MWS	Benzo[a]anthracene	0.1	U	0.18	no	N/A	no
SW-040-MWS	Benzo[a]pyrene	0.1	U	0.18	no	N/A	no
SW-040-MWS	Benzo[b]fluoranthene	0.1	U	0.18	no	N/A	no
SW-040-MWS	Benzo[k]fluoranthene	0.1	U	0.18	no	N/A	no
SW-040-MWS	Beryllium	1	U	N/A	no	N/A	no
SW-040-MWS	Beryllium, Dissolve	1	U	N/A	no	N/A	no
SW-040-MWS	bis(2-Chloroethyl)ether	1	U	5.3	no	N/A	no
SW-040-MWS	bis(2-Chloroisopropyl)ether	1	U	65000	no	N/A	no
SW-040-MWS	bis(2-Ethylhexyl)phthalate	1	U	22	no	N/A	no
SW-040-MWS	Bromodichloromethane	1	U	170	no	N/A	no
SW-040-MWS	Bromoform	1	U	1400	no	N/A	no
SW-040-MWS	Bromomethane	1	U	1500	no	N/A	no
SW-040-MWS	Cadmium	3	U	N/A	no	8.8	no
SW-040-MWS	Cadmium, Dissolve	3	U	N/A	no	8.8	no
SW-040-MWS	Carbon tetrachloride	1	U	16	no	N/A	no
SW-040-MWS	Chlorobenzene	1	U	1600	no	N/A	no
SW-040-MWS	Chloroform	1	U	4700	no	N/A	no
SW-040-MWS	Chromium	10.7		N/A	no	N/A	no
SW-040-MWS	Chromium VI	10	U	N/A	no	50	no
SW-040-MWS	Chromium, Dissolve	3.3	B	N/A	no	N/A	no
SW-040-MWS	Chrysene	0.1	U	0.18	no	N/A	no
SW-040-MWS	Copper	1.8	J	N/A	no	3.1	no
SW-040-MWS	Copper, Dissolve	5	U	N/A	no	3.1	no
SW-040-MWS	Cyanide	10	U	140	no	1	no
SW-040-MWS	Dibenz[a,h]anthracene	0.1	U	0.18	no	N/A	no
SW-040-MWS	Dibromochloromethane	1	U	130	no	N/A	no
SW-040-MWS	Diethylphthalate	1	U	44000	no	N/A	no
SW-040-MWS	Di-n-butylphthalate	1	U	4500	no	N/A	no
SW-040-MWS	Ethylbenzene	1	U	2100	no	N/A	no
SW-040-MWS	Fluoranthene	0.1	U	140	no	N/A	no
SW-040-MWS	Fluorene	0.1	U	5300	no	N/A	no
SW-040-MWS	Hexachlorobenzene	1	U	0.0029	no	N/A	no
SW-040-MWS	Hexachlorobutadiene	1	U	180	no	N/A	no
SW-040-MWS	Hexachlorocyclopentadiene	1	U	1100	no	N/A	no
SW-040-MWS	Hexachloroethane	1	U	33	no	N/A	no
SW-040-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	0.18	no	N/A	no
SW-040-MWS	Isophorone	1	U	9600	no	N/A	no
SW-040-MWS	Lead	5	U	N/A	no	8.1	no
SW-040-MWS	Lead, Dissolve	5	U	N/A	no	8.1	no
SW-040-MWS	Mercury	0.2	U	N/A	no	0.94	no
SW-040-MWS	Mercury, Dissolve	0.2	U	N/A	no	0.94	no
SW-040-MWS	Methylene Chloride	1	U	5900	no	N/A	no
SW-040-MWS	Nickel	0.78	B	4600	no	8.2	no
SW-040-MWS	Nickel, Dissolve	0.82	B	4600	no	8.2	no
SW-040-MWS	Nitrobenzene	1	U	690	no	N/A	no
SW-040-MWS	N-Nitroso-di-n-propylamine	1	U	5.1	no	N/A	no
SW-040-MWS	N-Nitrosodiphenylamine	1	U	60	no	N/A	no
SW-040-MWS	Phenol	1	U	860000	no	N/A	no
SW-040-MWS	Pyrene	0.1	U	4000	no	N/A	no
SW-040-MWS	Selenium	7.3	B	4200	no	71	no
SW-040-MWS	Selenium, Dissolve	8	U	4200	no	71	no
SW-040-MWS	Silver	6	U	N/A	no	N/A	no
SW-040-MWS	Silver, Dissolve	6	U	N/A	no	N/A	no

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW-040-MWS	Tetrachloroethene	1	U	33	no	N/A	no
SW-040-MWS	Thallium	10	U	0.47	no	N/A	no
SW-040-MWS	Thallium, Dissolve	10	U	0.47	no	N/A	no
SW-040-MWS	Toluene	1	U	15000	no	N/A	no
SW-040-MWS	trans-1,2-Dichloroethene	1	U	10000	no	N/A	no
SW-040-MWS	Trichloroethene	1	U	300	no	N/A	no
SW-040-MWS	Vinyl chloride	1	U	24	no	N/A	no
SW-040-MWS	Zinc	1.9	J	26000	no	81	no
SW-040-MWS	Zinc, Dissolve	0.73	J	26000	no	81	no
SW-041-MWS	1,1,1-Trichloroethane	1	U	N/A	no	N/A	no
SW-041-MWS	1,1,2,2-Tetrachloroethane	1	U	40	no	N/A	no
SW-041-MWS	1,1,2-Trichloroethane	1	U	160	no	N/A	no
SW-041-MWS	1,1-Dichloroethene	1	U	7100	no	N/A	no
SW-041-MWS	1,2,4-Trichlorobenzene	1	U	70	no	N/A	no
SW-041-MWS	1,2-Dichlorobenzene	1	U	1300	no	N/A	no
SW-041-MWS	1,2-Dichloroethane	1	U	370	no	N/A	no
SW-041-MWS	1,2-Dichloropropane	1	U	150	no	N/A	no
SW-041-MWS	1,3-Dichlorobenzene	1	U	960	no	N/A	no
SW-041-MWS	1,4-Dichlorobenzene	1	U	190	no	N/A	no
SW-041-MWS	2,4,6-Trichlorophenol	1.2	U	24	no	N/A	no
SW-041-MWS	2,4-Dichlorophenol	1.2	U	290	no	N/A	no
SW-041-MWS	2,4-Dimethylphenol	1.2	U	850	no	N/A	no
SW-041-MWS	2,4-Dinitrophenol	3	U	5300	no	N/A	no
SW-041-MWS	2,4-Dinitrotoluene	1.2	U	0.28	no	N/A	no
SW-041-MWS	2,4-Dinitrotoluene	1.2	U	34	no	N/A	no
SW-041-MWS	2-Chloronaphthalene	1.2	U	1600	no	N/A	no
SW-041-MWS	2-Chlorophenol	1.2	U	150	no	N/A	no
SW-041-MWS	Acenaphthene	0.1	U	990	no	N/A	no
SW-041-MWS	Anthracene	0.1	U	40000	no	N/A	no
SW-041-MWS	Antimony	6	U	640	no	N/A	no
SW-041-MWS	Antimony, Dissolve	6	U	640	no	N/A	no
SW-041-MWS	Arsenic	5	U	1.4	no	36	no
SW-041-MWS	Arsenic, Dissolve	5	U	1.4	no	36	no
SW-041-MWS	Barium	18.7		N/A	no	N/A	no
SW-041-MWS	Barium, Dissolve	19.4		N/A	no	N/A	no
SW-041-MWS	Benzene	1	U	510	no	N/A	no
SW-041-MWS	Benzo[a]anthracene	0.1	U	0.18	no	N/A	no
SW-041-MWS	Benzo[a]pyrene	0.1	U	0.18	no	N/A	no
SW-041-MWS	Benzo[b]fluoranthene	0.1	U	0.18	no	N/A	no
SW-041-MWS	Benzo[k]fluoranthene	0.1	U	0.18	no	N/A	no
SW-041-MWS	Beryllium	1	U	N/A	no	N/A	no
SW-041-MWS	Beryllium, Dissolve	1	U	N/A	no	N/A	no
SW-041-MWS	bis(2-Chloroethyl)ether	1.2	U	5.3	no	N/A	no
SW-041-MWS	bis(2-Chloroisopropyl)ether	1.2	U	65000	no	N/A	no
SW-041-MWS	bis(2-Ethylhexyl)phthalate	1.2	U	22	no	N/A	no
SW-041-MWS	Bromodichloromethane	1	U	170	no	N/A	no
SW-041-MWS	Bromoform	1	U	1400	no	N/A	no
SW-041-MWS	Bromomethane	1	U	1500	no	N/A	no
SW-041-MWS	Cadmium	3	U	N/A	no	8.8	no
SW-041-MWS	Cadmium, Dissolve	3	U	N/A	no	8.8	no
SW-041-MWS	Carbon tetrachloride	1	UJ	16	no	N/A	no
SW-041-MWS	Chlorobenzene	1	U	1600	no	N/A	no
SW-041-MWS	Chloroform	1	U	4700	no	N/A	no
SW-041-MWS	Chromium	5	U	N/A	no	N/A	no
SW-041-MWS	Chromium VI	10	U	N/A	no	50	no
SW-041-MWS	Chromium, Dissolve	5	U	N/A	no	N/A	no
SW-041-MWS	Chrysene	0.1	U	0.18	no	N/A	no
SW-041-MWS	Copper	5	U	N/A	no	3.1	no
SW-041-MWS	Copper, Dissolve	5	U	N/A	no	3.1	no
SW-041-MWS	Cyanide	10	U	140	no	1	no

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW-041-MWS	Dibenz[a,h]anthracene	0.1	U	0.18	no	N/A	no
SW-041-MWS	Dibromochloromethane	1	U	130	no	N/A	no
SW-041-MWS	Diethylphthalate	1.2	U	44000	no	N/A	no
SW-041-MWS	Di-n-butylphthalate	1.2	U	4500	no	N/A	no
SW-041-MWS	Ethylbenzene	1	U	2100	no	N/A	no
SW-041-MWS	Fluoranthene	0.1	U	140	no	N/A	no
SW-041-MWS	Fluorene	0.1	U	5300	no	N/A	no
SW-041-MWS	Hexachlorobenzene	1.2	U	0.0029	no	N/A	no
SW-041-MWS	Hexachlorobutadiene	1.2	U	180	no	N/A	no
SW-041-MWS	Hexachlorocyclopentadiene	1.2	U	1100	no	N/A	no
SW-041-MWS	Hexachloroethane	1.2	U	33	no	N/A	no
SW-041-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	0.18	no	N/A	no
SW-041-MWS	Isophorone	1.2	U	9600	no	N/A	no
SW-041-MWS	Lead	5	U	N/A	no	8.1	no
SW-041-MWS	Lead, Dissolve	5	U	N/A	no	8.1	no
SW-041-MWS	Mercury	0.2	U	N/A	no	0.94	no
SW-041-MWS	Mercury, Dissolve	0.2	U	N/A	no	0.94	no
SW-041-MWS	Methylene Chloride	1	U	5900	no	N/A	no
SW-041-MWS	Nickel	6.7	B	4600	no	8.2	no
SW-041-MWS	Nickel, Dissolve	6.3	B	4600	no	8.2	no
SW-041-MWS	Nitrobenzene	1.2	U	690	no	N/A	no
SW-041-MWS	N-Nitroso-di-n-propylamine	1.2	U	5.1	no	N/A	no
SW-041-MWS	N-Nitrosodiphenylamine	1.2	U	60	no	N/A	no
SW-041-MWS	Phenol	1.2	U	860000	no	N/A	no
SW-041-MWS	Pyrene	0.1	U	4000	no	N/A	no
SW-041-MWS	Selenium	8	U	4200	no	71	no
SW-041-MWS	Selenium, Dissolve	8	U	4200	no	71	no
SW-041-MWS	Silver	6	U	N/A	no	N/A	no
SW-041-MWS	Silver, Dissolve	6	U	N/A	no	N/A	no
SW-041-MWS	Tetrachloroethene	1	U	33	no	N/A	no
SW-041-MWS	Thallium	10	U	0.47	no	N/A	no
SW-041-MWS	Thallium, Dissolve	10	U	0.47	no	N/A	no
SW-041-MWS	Toluene	1	U	15000	no	N/A	no
SW-041-MWS	trans-1,2-Dichloroethene	1	U	10000	no	N/A	no
SW-041-MWS	Trichloroethene	1	U	300	no	N/A	no
SW-041-MWS	Vinyl chloride	1	U	24	no	N/A	no
SW-041-MWS	Zinc	20.7		26000	no	81	no
SW-041-MWS	Zinc, Dissolve	20		26000	no	81	no
SW-042-MWS	1,1,1-Trichloroethane	1	U	N/A	no	N/A	no
SW-042-MWS	1,1,2,2-Tetrachloroethane	1	U	40	no	N/A	no
SW-042-MWS	1,1,2-Trichloroethane	1	U	160	no	N/A	no
SW-042-MWS	1,1-Dichloroethene	1	U	7100	no	N/A	no
SW-042-MWS	1,2,4-Trichlorobenzene	1	U	70	no	N/A	no
SW-042-MWS	1,2-Dichlorobenzene	1	U	1300	no	N/A	no
SW-042-MWS	1,2-Dichloroethane	1	U	370	no	N/A	no
SW-042-MWS	1,2-Dichloropropane	1	U	150	no	N/A	no
SW-042-MWS	1,3-Dichlorobenzene	1	U	960	no	N/A	no
SW-042-MWS	1,4-Dichlorobenzene	1	U	190	no	N/A	no
SW-042-MWS	2,4,6-Trichlorophenol	1.2	U	24	no	N/A	no
SW-042-MWS	2,4-Dichlorophenol	1.2	U	290	no	N/A	no
SW-042-MWS	2,4-Dimethylphenol	1.2	U	850	no	N/A	no
SW-042-MWS	2,4-Dinitrophenol	3	U	5300	no	N/A	no
SW-042-MWS	2,4-Dinitrotoluene	1.2	U	0.28	no	N/A	no
SW-042-MWS	2,4-Dinitrotoluene	1.2	U	34	no	N/A	no
SW-042-MWS	2-Chloronaphthalene	1.2	U	1600	no	N/A	no
SW-042-MWS	2-Chlorophenol	1.2	U	150	no	N/A	no
SW-042-MWS	Acenaphthene	0.1	U	990	no	N/A	no
SW-042-MWS	Anthracene	0.1	U	40000	no	N/A	no
SW-042-MWS	Antimony	6	U	640	no	N/A	no
SW-042-MWS	Antimony, Dissolve	6	U	640	no	N/A	no

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW-042-MWS	Arsenic	5	U	1.4	no	36	no
SW-042-MWS	Arsenic, Dissolve	5	U	1.4	no	36	no
SW-042-MWS	Barium	16.4		N/A	no	N/A	no
SW-042-MWS	Barium, Dissolve	16.9		N/A	no	N/A	no
SW-042-MWS	Benzene	1	U	510	no	N/A	no
SW-042-MWS	Benzo[a]anthracene	0.1	U	0.18	no	N/A	no
SW-042-MWS	Benzo[a]pyrene	0.1	U	0.18	no	N/A	no
SW-042-MWS	Benzo[b]fluoranthene	0.1	U	0.18	no	N/A	no
SW-042-MWS	Benzo[k]fluoranthene	0.1	U	0.18	no	N/A	no
SW-042-MWS	Beryllium	2.2		N/A	no	N/A	no
SW-042-MWS	Beryllium, Dissolve	2.3		N/A	no	N/A	no
SW-042-MWS	bis(2-Chloroethyl)ether	1.2	U	5.3	no	N/A	no
SW-042-MWS	bis(2-Chloroisopropyl)ether	1.2	U	65000	no	N/A	no
SW-042-MWS	bis(2-Ethylhexyl)phthalate	1.2	U	22	no	N/A	no
SW-042-MWS	Bromodichloromethane	1	U	170	no	N/A	no
SW-042-MWS	Bromoform	1	U	1400	no	N/A	no
SW-042-MWS	Bromomethane	1	U	1500	no	N/A	no
SW-042-MWS	Cadmium	0.61	B	N/A	no	8.8	no
SW-042-MWS	Cadmium, Dissolve	0.54	B	N/A	no	8.8	no
SW-042-MWS	Carbon tetrachloride	1	U	16	no	N/A	no
SW-042-MWS	Chlorobenzene	1	U	1600	no	N/A	no
SW-042-MWS	Chloroform	1	U	4700	no	N/A	no
SW-042-MWS	Chromium	5	U	N/A	no	N/A	no
SW-042-MWS	Chromium VI	10	U	N/A	no	50	no
SW-042-MWS	Chromium, Dissolve	5	U	N/A	no	N/A	no
SW-042-MWS	Chrysene	0.1	U	0.18	no	N/A	no
SW-042-MWS	Copper	3.2	J	N/A	no	3.1	YES
SW-042-MWS	Copper, Dissolve	2.8	J	N/A	no	3.1	no
SW-042-MWS	Cyanide	10	U	140	no	1	no
SW-042-MWS	Dibenz[a,h]anthracene	0.1	U	0.18	no	N/A	no
SW-042-MWS	Dibromochloromethane	1	U	130	no	N/A	no
SW-042-MWS	Diethylphthalate	1.2	U	44000	no	N/A	no
SW-042-MWS	Di-n-butylphthalate	1.2	UJ	4500	no	N/A	no
SW-042-MWS	Ethylbenzene	1	U	2100	no	N/A	no
SW-042-MWS	Fluoranthene	0.1	U	140	no	N/A	no
SW-042-MWS	Fluorene	0.1	U	5300	no	N/A	no
SW-042-MWS	Hexachlorobenzene	1.2	U	0.0029	no	N/A	no
SW-042-MWS	Hexachlorobutadiene	1.2	U	180	no	N/A	no
SW-042-MWS	Hexachlorocyclopentadiene	1.2	U	1100	no	N/A	no
SW-042-MWS	Hexachloroethane	1.2	U	33	no	N/A	no
SW-042-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	0.18	no	N/A	no
SW-042-MWS	Isophorone	1.2	U	9600	no	N/A	no
SW-042-MWS	Lead	5	U	N/A	no	8.1	no
SW-042-MWS	Lead, Dissolve	5	U	N/A	no	8.1	no
SW-042-MWS	Mercury	0.2	U	N/A	no	0.94	no
SW-042-MWS	Mercury, Dissolve	0.2	U	N/A	no	0.94	no
SW-042-MWS	Methylene Chloride	1	U	5900	no	N/A	no
SW-042-MWS	Nickel	31.2		4600	no	8.2	YES
SW-042-MWS	Nickel, Dissolve	32.7		4600	no	8.2	YES
SW-042-MWS	Nitrobenzene	1.2	U	690	no	N/A	no
SW-042-MWS	N-Nitroso-di-n-propylamine	1.2	U	5.1	no	N/A	no
SW-042-MWS	N-Nitrosodiphenylamine	1.2	U	60	no	N/A	no
SW-042-MWS	Phenol	1.2	U	860000	no	N/A	no
SW-042-MWS	Pyrene	0.1	U	4000	no	N/A	no
SW-042-MWS	Selenium	8	U	4200	no	71	no
SW-042-MWS	Selenium, Dissolve	8	U	4200	no	71	no
SW-042-MWS	Silver	6	U	N/A	no	N/A	no
SW-042-MWS	Silver, Dissolve	6	U	N/A	no	N/A	no
SW-042-MWS	Tetrachloroethene	1	U	33	no	N/A	no
SW-042-MWS	Thallium	10	U	0.47	no	N/A	no

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW-042-MWS	Thallium, Dissolve	10	U	0.47	no	N/A	no
SW-042-MWS	Toluene	1	U	15000	no	N/A	no
SW-042-MWS	trans-1,2-Dichloroethene	1	U	10000	no	N/A	no
SW-042-MWS	Trichloroethene	1	U	300	no	N/A	no
SW-042-MWS	Vinyl chloride	1	U	24	no	N/A	no
SW-042-MWS	Zinc	127		26000	no	81	YES
SW-042-MWS	Zinc, Dissolve	137		26000	no	81	YES
SW-043-MWI	1,1,1-Trichloroethane	1	U	N/A	no	N/A	no
SW-043-MWI	1,1,2,2-Tetrachloroethane	1	U	40	no	N/A	no
SW-043-MWI	1,1,2-Trichloroethane	1	U	160	no	N/A	no
SW-043-MWI	1,1-Dichloroethene	1	U	7100	no	N/A	no
SW-043-MWI	1,2,4-Trichlorobenzene	1	U	70	no	N/A	no
SW-043-MWI	1,2-Dichlorobenzene	1	U	1300	no	N/A	no
SW-043-MWI	1,2-Dichloroethane	1	U	370	no	N/A	no
SW-043-MWI	1,2-Dichloropropane	1	U	150	no	N/A	no
SW-043-MWI	1,3-Dichlorobenzene	1	U	960	no	N/A	no
SW-043-MWI	1,4-Dichlorobenzene	1	U	190	no	N/A	no
SW-043-MWI	2,4,6-Trichlorophenol	1	U	24	no	N/A	no
SW-043-MWI	2,4-Dichlorophenol	1	U	290	no	N/A	no
SW-043-MWI	2,4-Dimethylphenol	1	U	850	no	N/A	no
SW-043-MWI	2,4-Dinitrophenol	2.5	U	5300	no	N/A	no
SW-043-MWI	2,4-Dinitrotoluene	1	U	0.28	no	N/A	no
SW-043-MWI	2,4-Dinitrotoluene	1	U	34	no	N/A	no
SW-043-MWI	2-Chloronaphthalene	1	U	1600	no	N/A	no
SW-043-MWI	2-Chlorophenol	1	U	150	no	N/A	no
SW-043-MWI	Acenaphthene	0.1	U	990	no	N/A	no
SW-043-MWI	Anthracene	0.1	U	40000	no	N/A	no
SW-043-MWI	Antimony	6	U	640	no	N/A	no
SW-043-MWI	Antimony, Dissolve	6	U	640	no	N/A	no
SW-043-MWI	Arsenic	2.9	B	1.4	YES	36	no
SW-043-MWI	Arsenic, Dissolve	3.3	B	1.4	YES	36	no
SW-043-MWI	Barium	175		N/A	no	N/A	no
SW-043-MWI	Barium, Dissolve	173		N/A	no	N/A	no
SW-043-MWI	Benzene	1	U	510	no	N/A	no
SW-043-MWI	Benzo[a]anthracene	0.1	U	0.18	no	N/A	no
SW-043-MWI	Benzo[a]pyrene	0.1	U	0.18	no	N/A	no
SW-043-MWI	Benzo[b]fluoranthene	0.1	U	0.18	no	N/A	no
SW-043-MWI	Benzo[k]fluoranthene	0.1	U	0.18	no	N/A	no
SW-043-MWI	Beryllium	1	U	N/A	no	N/A	no
SW-043-MWI	Beryllium, Dissolve	1	U	N/A	no	N/A	no
SW-043-MWI	bis(2-Chloroethyl)ether	1	U	5.3	no	N/A	no
SW-043-MWI	bis(2-Chloroisopropyl)ether	1	U	65000	no	N/A	no
SW-043-MWI	bis(2-Ethylhexyl)phthalate	1	U	22	no	N/A	no
SW-043-MWI	Bromodichloromethane	1	U	170	no	N/A	no
SW-043-MWI	Bromoform	1	U	1400	no	N/A	no
SW-043-MWI	Bromomethane	1	UJ	1500	no	N/A	no
SW-043-MWI	Cadmium	3	U	N/A	no	8.8	no
SW-043-MWI	Cadmium, Dissolve	3	U	N/A	no	8.8	no
SW-043-MWI	Carbon tetrachloride	1	U	16	no	N/A	no
SW-043-MWI	Chlorobenzene	1	U	1600	no	N/A	no
SW-043-MWI	Chloroform	2.6		4700	no	N/A	no
SW-043-MWI	Chromium	1.3	J	N/A	no	N/A	no
SW-043-MWI	Chromium VI	10	U	N/A	no	50	no
SW-043-MWI	Chromium, Dissolve	1.3	B	N/A	no	N/A	no
SW-043-MWI	Chrysene	0.1	U	0.18	no	N/A	no
SW-043-MWI	Copper	5	U	N/A	no	3.1	no
SW-043-MWI	Copper, Dissolve	5	U	N/A	no	3.1	no
SW-043-MWI	Cyanide	10	U	140	no	1	no
SW-043-MWI	Dibenz[a,h]anthracene	0.1	U	0.18	no	N/A	no
SW-043-MWI	Dibromochloromethane	1	U	130	no	N/A	no

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW-043-MWI	Diethylphthalate	1	U	44000	no	N/A	no
SW-043-MWI	Di-n-butylphthalate	1	U	4500	no	N/A	no
SW-043-MWI	Ethylbenzene	1	U	2100	no	N/A	no
SW-043-MWI	Fluoranthene	0.1	U	140	no	N/A	no
SW-043-MWI	Fluorene	0.1	U	5300	no	N/A	no
SW-043-MWI	Hexachlorobenzene	1	U	0.0029	no	N/A	no
SW-043-MWI	Hexachlorobutadiene	1	U	180	no	N/A	no
SW-043-MWI	Hexachlorocyclopentadiene	1	U	1100	no	N/A	no
SW-043-MWI	Hexachloroethane	1	U	33	no	N/A	no
SW-043-MWI	Indeno[1,2,3-c,d]pyrene	0.1	U	0.18	no	N/A	no
SW-043-MWI	Isophorone	1	U	9600	no	N/A	no
SW-043-MWI	Lead	5	U	N/A	no	8.1	no
SW-043-MWI	Lead, Dissolve	5	U	N/A	no	8.1	no
SW-043-MWI	Mercury	0.2	UJ	N/A	no	0.94	no
SW-043-MWI	Mercury, Dissolve	0.2	UJ	N/A	no	0.94	no
SW-043-MWI	Methylene Chloride	1	U	5900	no	N/A	no
SW-043-MWI	Nickel	5	B	4600	no	8.2	no
SW-043-MWI	Nickel, Dissolve	4.3	B	4600	no	8.2	no
SW-043-MWI	Nitrobenzene	1	U	690	no	N/A	no
SW-043-MWI	N-Nitroso-di-n-propylamine	1	U	5.1	no	N/A	no
SW-043-MWI	N-Nitrosodiphenylamine	1	U	60	no	N/A	no
SW-043-MWI	Phenol	1	U	860000	no	N/A	no
SW-043-MWI	Pyrene	0.1	U	4000	no	N/A	no
SW-043-MWI	Selenium	8	U	4200	no	71	no
SW-043-MWI	Selenium, Dissolve	8	U	4200	no	71	no
SW-043-MWI	Silver	0.57	B	N/A	no	N/A	no
SW-043-MWI	Silver, Dissolve	6	U	N/A	no	N/A	no
SW-043-MWI	Tetrachloroethene	1	U	33	no	N/A	no
SW-043-MWI	Thallium	10	U	0.47	no	N/A	no
SW-043-MWI	Thallium, Dissolve	10	U	0.47	no	N/A	no
SW-043-MWI	Toluene	1	U	15000	no	N/A	no
SW-043-MWI	trans-1,2-Dichloroethene	1	U	10000	no	N/A	no
SW-043-MWI	Trichloroethene	1	U	300	no	N/A	no
SW-043-MWI	Vinyl chloride	1	U	24	no	N/A	no
SW-043-MWI	Zinc	6.9	B	26000	no	81	no
SW-043-MWI	Zinc, Dissolve	6.4	B	26000	no	81	no
SW-043-MWS	1,1,1-Trichloroethane	1	U	N/A	no	N/A	no
SW-043-MWS	1,1,2,2-Tetrachloroethane	1	U	40	no	N/A	no
SW-043-MWS	1,1,2-Trichloroethane	1	U	160	no	N/A	no
SW-043-MWS	1,1-Dichloroethene	1	U	7100	no	N/A	no
SW-043-MWS	1,2,4-Trichlorobenzene	1	U	70	no	N/A	no
SW-043-MWS	1,2-Dichlorobenzene	1	U	1300	no	N/A	no
SW-043-MWS	1,2-Dichloroethane	1	U	370	no	N/A	no
SW-043-MWS	1,2-Dichloropropane	1	U	150	no	N/A	no
SW-043-MWS	1,3-Dichlorobenzene	1	U	960	no	N/A	no
SW-043-MWS	1,4-Dichlorobenzene	1	U	190	no	N/A	no
SW-043-MWS	2,4,6-Trichlorophenol	1	U	24	no	N/A	no
SW-043-MWS	2,4-Dichlorophenol	1	U	290	no	N/A	no
SW-043-MWS	2,4-Dimethylphenol	1	U	850	no	N/A	no
SW-043-MWS	2,4-Dinitrophenol	2.6	UJ	5300	no	N/A	no
SW-043-MWS	2,4-Dinitrotoluene	1	U	0.28	no	N/A	no
SW-043-MWS	2,4-Dinitrotoluene	1	U	34	no	N/A	no
SW-043-MWS	2-Chloronaphthalene	1	U	1600	no	N/A	no
SW-043-MWS	2-Chlorophenol	1	U	150	no	N/A	no
SW-043-MWS	Acenaphthene	0.1	U	990	no	N/A	no
SW-043-MWS	Anthracene	0.1	U	40000	no	N/A	no
SW-043-MWS	Antimony	6	U	640	no	N/A	no
SW-043-MWS	Antimony, Dissolve	6	U	640	no	N/A	no
SW-043-MWS	Arsenic	5	U	1.4	no	36	no
SW-043-MWS	Arsenic, Dissolve	5	U	1.4	no	36	no

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW-043-MWS	Barium	21.7		N/A	no	N/A	no
SW-043-MWS	Barium, Dissolve	22.1		N/A	no	N/A	no
SW-043-MWS	Benzene	1	U	510	no	N/A	no
SW-043-MWS	Benzo[a]anthracene	0.1	U	0.18	no	N/A	no
SW-043-MWS	Benzo[a]pyrene	0.1	U	0.18	no	N/A	no
SW-043-MWS	Benzo[b]fluoranthene	0.1	U	0.18	no	N/A	no
SW-043-MWS	Benzo[k]fluoranthene	0.1	U	0.18	no	N/A	no
SW-043-MWS	Beryllium	2.7		N/A	no	N/A	no
SW-043-MWS	Beryllium, Dissolve	2.7		N/A	no	N/A	no
SW-043-MWS	bis(2-Chloroethyl)ether	1	U	5.3	no	N/A	no
SW-043-MWS	bis(2-Chloroisopropyl)ether	1	U	65000	no	N/A	no
SW-043-MWS	bis(2-Ethylhexyl)phthalate	1	U	22	no	N/A	no
SW-043-MWS	Bromodichloromethane	1	U	170	no	N/A	no
SW-043-MWS	Bromoform	1	U	1400	no	N/A	no
SW-043-MWS	Bromomethane	1	U	1500	no	N/A	no
SW-043-MWS	Cadmium	0.79	B	N/A	no	8.8	no
SW-043-MWS	Cadmium, Dissolve	0.79	J	N/A	no	8.8	no
SW-043-MWS	Carbon tetrachloride	1	U	16	no	N/A	no
SW-043-MWS	Chlorobenzene	1	U	1600	no	N/A	no
SW-043-MWS	Chloroform	1	U	4700	no	N/A	no
SW-043-MWS	Chromium	1.1	B	N/A	no	N/A	no
SW-043-MWS	Chromium VI	10	U	N/A	no	50	no
SW-043-MWS	Chromium, Dissolve	1.1	J	N/A	no	N/A	no
SW-043-MWS	Chrysene	0.1	U	0.18	no	N/A	no
SW-043-MWS	Copper	7.2		N/A	no	3.1	YES
SW-043-MWS	Copper, Dissolve	7.4	B	N/A	no	3.1	YES
SW-043-MWS	Cyanide	10	U	140	no	1	no
SW-043-MWS	Dibenz[a,h]anthracene	0.1	U	0.18	no	N/A	no
SW-043-MWS	Dibromochloromethane	1	U	130	no	N/A	no
SW-043-MWS	Diethylphthalate	1	U	44000	no	N/A	no
SW-043-MWS	Di-n-butylphthalate	1	U	4500	no	N/A	no
SW-043-MWS	Ethylbenzene	1	U	2100	no	N/A	no
SW-043-MWS	Fluoranthene	0.1	U	140	no	N/A	no
SW-043-MWS	Fluorene	0.1	U	5300	no	N/A	no
SW-043-MWS	Hexachlorobenzene	1	U	0.0029	no	N/A	no
SW-043-MWS	Hexachlorobutadiene	1	U	180	no	N/A	no
SW-043-MWS	Hexachlorocyclopentadiene	1	U	1100	no	N/A	no
SW-043-MWS	Hexachloroethane	1	U	33	no	N/A	no
SW-043-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	0.18	no	N/A	no
SW-043-MWS	Isophorone	1	U	9600	no	N/A	no
SW-043-MWS	Lead	5	U	N/A	no	8.1	no
SW-043-MWS	Lead, Dissolve	5	U	N/A	no	8.1	no
SW-043-MWS	Mercury	0.2	U	N/A	no	0.94	no
SW-043-MWS	Mercury, Dissolve	0.2	U	N/A	no	0.94	no
SW-043-MWS	Methylene Chloride	1	U	5900	no	N/A	no
SW-043-MWS	Nickel	30.3	J	4600	no	8.2	YES
SW-043-MWS	Nickel, Dissolve	30.3	J	4600	no	8.2	YES
SW-043-MWS	Nitrobenzene	1	U	690	no	N/A	no
SW-043-MWS	N-Nitroso-di-n-propylamine	1	U	5.1	no	N/A	no
SW-043-MWS	N-Nitrosodiphenylamine	1	U	60	no	N/A	no
SW-043-MWS	Phenol	1	U	860000	no	N/A	no
SW-043-MWS	Pyrene	0.1	U	4000	no	N/A	no
SW-043-MWS	Selenium	4	B	4200	no	71	no
SW-043-MWS	Selenium, Dissolve	8	U	4200	no	71	no
SW-043-MWS	Silver	6	U	N/A	no	N/A	no
SW-043-MWS	Silver, Dissolve	6	U	N/A	no	N/A	no
SW-043-MWS	Tetrachloroethene	1	U	33	no	N/A	no
SW-043-MWS	Thallium	10	U	0.47	no	N/A	no
SW-043-MWS	Thallium, Dissolve	10	U	0.47	no	N/A	no
SW-043-MWS	Toluene	1	U	15000	no	N/A	no

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW-043-MWS	trans-1,2-Dichloroethene	1	U	10000	no	N/A	no
SW-043-MWS	Trichloroethene	0.47	J	300	no	N/A	no
SW-043-MWS	Vinyl chloride	1	U	24	no	N/A	no
SW-043-MWS	Zinc	160		26000	no	81	YES
SW-043-MWS	Zinc, Dissolve	162		26000	no	81	YES
SW-044-MWS	1,1,1-Trichloroethane	1	U	N/A	no	N/A	no
SW-044-MWS	1,1,2,2-Tetrachloroethane	1	U	40	no	N/A	no
SW-044-MWS	1,1,2-Trichloroethane	1	U	160	no	N/A	no
SW-044-MWS	1,1-Dichloroethene	1	U	7100	no	N/A	no
SW-044-MWS	1,2,4-Trichlorobenzene	1	U	70	no	N/A	no
SW-044-MWS	1,2-Dichlorobenzene	1	U	1300	no	N/A	no
SW-044-MWS	1,2-Dichloroethane	1	U	370	no	N/A	no
SW-044-MWS	1,2-Dichloropropane	1	U	150	no	N/A	no
SW-044-MWS	1,3-Dichlorobenzene	1	U	960	no	N/A	no
SW-044-MWS	1,4-Dichlorobenzene	1	U	190	no	N/A	no
SW-044-MWS	2,4,6-Trichlorophenol	1.4	U	24	no	N/A	no
SW-044-MWS	2,4-Dichlorophenol	1.4	U	290	no	N/A	no
SW-044-MWS	2,4-Dimethylphenol	1.4	U	850	no	N/A	no
SW-044-MWS	2,4-Dinitrophenol	3.4	U	5300	no	N/A	no
SW-044-MWS	2,4-Dinitrotoluene	1.4	U	0.28	no	N/A	no
SW-044-MWS	2,4-Dinitrotoluene	1.4	U	34	no	N/A	no
SW-044-MWS	2-Chloronaphthalene	1.4	U	1600	no	N/A	no
SW-044-MWS	2-Chlorophenol	1.4	U	150	no	N/A	no
SW-044-MWS	Acenaphthene	0.11	U	990	no	N/A	no
SW-044-MWS	Anthracene	0.11	U	40000	no	N/A	no
SW-044-MWS	Antimony	6	U	640	no	N/A	no
SW-044-MWS	Antimony, Dissolve	6	U	640	no	N/A	no
SW-044-MWS	Arsenic	5	U	1.4	no	36	no
SW-044-MWS	Arsenic, Dissolve	5	U	1.4	no	36	no
SW-044-MWS	Barium	108		N/A	no	N/A	no
SW-044-MWS	Barium, Dissolve	91.1		N/A	no	N/A	no
SW-044-MWS	Benzene	1	U	510	no	N/A	no
SW-044-MWS	Benzo[a]anthracene	0.11	U	0.18	no	N/A	no
SW-044-MWS	Benzo[a]pyrene	0.11	U	0.18	no	N/A	no
SW-044-MWS	Benzo[b]fluoranthene	0.11	U	0.18	no	N/A	no
SW-044-MWS	Benzo[k]fluoranthene	0.11	U	0.18	no	N/A	no
SW-044-MWS	Beryllium	1	U	N/A	no	N/A	no
SW-044-MWS	Beryllium, Dissolve	1	U	N/A	no	N/A	no
SW-044-MWS	bis(2-Chloroethyl)ether	1.4	U	5.3	no	N/A	no
SW-044-MWS	bis(2-Chloroisopropyl)ether	1.4	U	65000	no	N/A	no
SW-044-MWS	bis(2-Ethylhexyl)phthalate	1.4	U	22	no	N/A	no
SW-044-MWS	Bromodichloromethane	1	U	170	no	N/A	no
SW-044-MWS	Bromoform	1	U	1400	no	N/A	no
SW-044-MWS	Bromomethane	1	U	1500	no	N/A	no
SW-044-MWS	Cadmium	1.1	B	N/A	no	8.8	no
SW-044-MWS	Cadmium, Dissolve	1.3	B	N/A	no	8.8	no
SW-044-MWS	Carbon tetrachloride	1	U	16	no	N/A	no
SW-044-MWS	Chlorobenzene	1	U	1600	no	N/A	no
SW-044-MWS	Chloroform	1	U	4700	no	N/A	no
SW-044-MWS	Chromium	5	U	N/A	no	N/A	no
SW-044-MWS	Chromium VI	10	U	N/A	no	50	no
SW-044-MWS	Chromium, Dissolve	5	U	N/A	no	N/A	no
SW-044-MWS	Chrysene	0.11	U	0.18	no	N/A	no
SW-044-MWS	Copper	5	U	N/A	no	3.1	no
SW-044-MWS	Copper, Dissolve	5	U	N/A	no	3.1	no
SW-044-MWS	Cyanide	10	U	140	no	1	no
SW-044-MWS	Dibenz[a,h]anthracene	0.11	U	0.18	no	N/A	no
SW-044-MWS	Dibromochloromethane	1	U	130	no	N/A	no
SW-044-MWS	Diethylphthalate	1.4	U	44000	no	N/A	no
SW-044-MWS	Di-n-butylphthalate	1.4	U	4500	no	N/A	no

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW-044-MWS	Ethylbenzene	1	U	2100	no	N/A	no
SW-044-MWS	Fluoranthene	0.024	J	140	no	N/A	no
SW-044-MWS	Fluorene	0.11	U	5300	no	N/A	no
SW-044-MWS	Hexachlorobenzene	1.4	U	0.0029	no	N/A	no
SW-044-MWS	Hexachlorobutadiene	1.4	U	180	no	N/A	no
SW-044-MWS	Hexachlorocyclopentadiene	1.4	U	1100	no	N/A	no
SW-044-MWS	Hexachloroethane	1.4	U	33	no	N/A	no
SW-044-MWS	Indeno[1,2,3-c,d]pyrene	0.11	U	0.18	no	N/A	no
SW-044-MWS	Isophorone	1.4	U	9600	no	N/A	no
SW-044-MWS	Lead	25	U	N/A	no	8.1	no
SW-044-MWS	Lead, Dissolve	25	U	N/A	no	8.1	no
SW-044-MWS	Mercury	0.2	U	N/A	no	0.94	no
SW-044-MWS	Mercury, Dissolve	0.2	U	N/A	no	0.94	no
SW-044-MWS	Methylene Chloride	1	U	5900	no	N/A	no
SW-044-MWS	Nickel	15.4		4600	no	8.2	YES
SW-044-MWS	Nickel, Dissolve	14.4		4600	no	8.2	YES
SW-044-MWS	Nitrobenzene	1.4	U	690	no	N/A	no
SW-044-MWS	N-Nitroso-di-n-propylamine	1.4	U	5.1	no	N/A	no
SW-044-MWS	N-Nitrosodiphenylamine	1.4	U	60	no	N/A	no
SW-044-MWS	Phenol	1.4	U	860000	no	N/A	no
SW-044-MWS	Pyrene	0.11	U	4000	no	N/A	no
SW-044-MWS	Selenium	8	U	4200	no	71	no
SW-044-MWS	Selenium, Dissolve	8	U	4200	no	71	no
SW-044-MWS	Silver	6	U	N/A	no	N/A	no
SW-044-MWS	Silver, Dissolve	6	U	N/A	no	N/A	no
SW-044-MWS	Tetrachloroethene	1	U	33	no	N/A	no
SW-044-MWS	Thallium	50	U	0.47	no	N/A	no
SW-044-MWS	Thallium, Dissolve	50	U	0.47	no	N/A	no
SW-044-MWS	Toluene	1	U	15000	no	N/A	no
SW-044-MWS	trans-1,2-Dichloroethene	1	U	10000	no	N/A	no
SW-044-MWS	Trichloroethene	1	U	300	no	N/A	no
SW-044-MWS	Vinyl chloride	1	U	24	no	N/A	no
SW-044-MWS	Zinc	37.4		26000	no	81	no
SW-044-MWS	Zinc, Dissolve	44		26000	no	81	no
SW-045-MWI	1,1,1-Trichloroethane	1	U	N/A	no	N/A	no
SW-045-MWI	1,1,2,2-Tetrachloroethane	1	U	40	no	N/A	no
SW-045-MWI	1,1,2-Trichloroethane	1	U	160	no	N/A	no
SW-045-MWI	1,1-Dichloroethene	1	U	7100	no	N/A	no
SW-045-MWI	1,2,4-Trichlorobenzene	1	U	70	no	N/A	no
SW-045-MWI	1,2-Dichlorobenzene	1	U	1300	no	N/A	no
SW-045-MWI	1,2-Dichloroethane	1	U	370	no	N/A	no
SW-045-MWI	1,2-Dichloropropane	1	U	150	no	N/A	no
SW-045-MWI	1,3-Dichlorobenzene	1	U	960	no	N/A	no
SW-045-MWI	1,4-Dichlorobenzene	1	U	190	no	N/A	no
SW-045-MWI	2,4,6-Trichlorophenol	1.2	U	24	no	N/A	no
SW-045-MWI	2,4-Dichlorophenol	1.2	U	290	no	N/A	no
SW-045-MWI	2,4-Dimethylphenol	1.2	U	850	no	N/A	no
SW-045-MWI	2,4-Dinitrophenol	3	U	5300	no	N/A	no
SW-045-MWI	2,4-Dinitrotoluene	1.2	U	0.28	no	N/A	no
SW-045-MWI	2,4-Dinitrotoluene	1.2	U	34	no	N/A	no
SW-045-MWI	2-Chloronaphthalene	1.2	U	1600	no	N/A	no
SW-045-MWI	2-Chlorophenol	1.2	U	150	no	N/A	no
SW-045-MWI	Acenaphthene	0.1	U	990	no	N/A	no
SW-045-MWI	Anthracene	0.034	J	40000	no	N/A	no
SW-045-MWI	Antimony	6	U	640	no	N/A	no
SW-045-MWI	Antimony, Dissolve	6	U	640	no	N/A	no
SW-045-MWI	Arsenic	5	U	1.4	no	36	no
SW-045-MWI	Arsenic, Dissolve	5	U	1.4	no	36	no
SW-045-MWI	Barium	72.2		N/A	no	N/A	no
SW-045-MWI	Barium, Dissolve	54.7		N/A	no	N/A	no

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW-045-MWI	Benzene	1	U	510	no	N/A	no
SW-045-MWI	Benzo[a]anthracene	0.1	U	0.18	no	N/A	no
SW-045-MWI	Benzo[a]pyrene	0.1	U	0.18	no	N/A	no
SW-045-MWI	Benzo[b]fluoranthene	0.1	U	0.18	no	N/A	no
SW-045-MWI	Benzo[k]fluoranthene	0.1	U	0.18	no	N/A	no
SW-045-MWI	Beryllium	1	U	N/A	no	N/A	no
SW-045-MWI	Beryllium, Dissolve	1	U	N/A	no	N/A	no
SW-045-MWI	bis(2-Chloroethyl)ether	1.2	U	5.3	no	N/A	no
SW-045-MWI	bis(2-Chloroisopropyl)ether	1.2	U	65000	no	N/A	no
SW-045-MWI	bis(2-Ethylhexyl)phthalate	1.2	U	22	no	N/A	no
SW-045-MWI	Bromodichloromethane	1	U	170	no	N/A	no
SW-045-MWI	Bromoform	1	U	1400	no	N/A	no
SW-045-MWI	Bromomethane	1	U	1500	no	N/A	no
SW-045-MWI	Cadmium	3	U	N/A	no	8.8	no
SW-045-MWI	Cadmium, Dissolve	3	U	N/A	no	8.8	no
SW-045-MWI	Carbon tetrachloride	1	U	16	no	N/A	no
SW-045-MWI	Chlorobenzene	1	U	1600	no	N/A	no
SW-045-MWI	Chloroform	2		4700	no	N/A	no
SW-045-MWI	Chromium	1.1	B	N/A	no	N/A	no
SW-045-MWI	Chromium VI	10	U	N/A	no	50	no
SW-045-MWI	Chromium, Dissolve	1.1	B	N/A	no	N/A	no
SW-045-MWI	Chrysene	0.1	U	0.18	no	N/A	no
SW-045-MWI	Copper	5	U	N/A	no	3.1	no
SW-045-MWI	Copper, Dissolve	5	U	N/A	no	3.1	no
SW-045-MWI	Cyanide	10	U	140	no	1	no
SW-045-MWI	Dibenz[a,h]anthracene	0.1	U	0.18	no	N/A	no
SW-045-MWI	Dibromochloromethane	1	U	130	no	N/A	no
SW-045-MWI	Diethylphthalate	1.2	U	44000	no	N/A	no
SW-045-MWI	Di-n-butylphthalate	1.2	U	4500	no	N/A	no
SW-045-MWI	Ethylbenzene	1	U	2100	no	N/A	no
SW-045-MWI	Fluoranthene	0.1	U	140	no	N/A	no
SW-045-MWI	Fluorene	0.1	U	5300	no	N/A	no
SW-045-MWI	Hexachlorobenzene	1.2	U	0.0029	no	N/A	no
SW-045-MWI	Hexachlorobutadiene	1.2	U	180	no	N/A	no
SW-045-MWI	Hexachlorocyclopentadiene	1.2	U	1100	no	N/A	no
SW-045-MWI	Hexachloroethane	1.2	U	33	no	N/A	no
SW-045-MWI	Indeno[1,2,3-c,d]pyrene	0.1	U	0.18	no	N/A	no
SW-045-MWI	Isophorone	1.2	U	9600	no	N/A	no
SW-045-MWI	Lead	5	U	N/A	no	8.1	no
SW-045-MWI	Lead, Dissolve	5	U	N/A	no	8.1	no
SW-045-MWI	Mercury	0.2	U	N/A	no	0.94	no
SW-045-MWI	Mercury, Dissolve	0.2	U	N/A	no	0.94	no
SW-045-MWI	Methylene Chloride	1	U	5900	no	N/A	no
SW-045-MWI	Nickel	1.5	J	4600	no	8.2	no
SW-045-MWI	Nickel, Dissolve	0.77	B	4600	no	8.2	no
SW-045-MWI	Nitrobenzene	1.2	U	690	no	N/A	no
SW-045-MWI	N-Nitroso-di-n-propylamine	1.2	U	5.1	no	N/A	no
SW-045-MWI	N-Nitrosodiphenylamine	1.2	U	60	no	N/A	no
SW-045-MWI	Phenol	1.2	U	860000	no	N/A	no
SW-045-MWI	Pyrene	0.1	U	4000	no	N/A	no
SW-045-MWI	Selenium	8	U	4200	no	71	no
SW-045-MWI	Selenium, Dissolve	5.5	J	4200	no	71	no
SW-045-MWI	Silver	6	U	N/A	no	N/A	no
SW-045-MWI	Silver, Dissolve	6	U	N/A	no	N/A	no
SW-045-MWI	Tetrachloroethene	1	U	33	no	N/A	no
SW-045-MWI	Thallium	10	U	0.47	no	N/A	no
SW-045-MWI	Thallium, Dissolve	10	U	0.47	no	N/A	no
SW-045-MWI	Toluene	1	U	15000	no	N/A	no
SW-045-MWI	trans-1,2-Dichloroethene	1	U	10000	no	N/A	no
SW-045-MWI	Trichloroethene	1	U	300	no	N/A	no

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW-045-MWI	Vinyl chloride	1	U	24	no	N/A	no
SW-045-MWI	Zinc	10	U	26000	no	81	no
SW-045-MWI	Zinc, Dissolve	10	U	26000	no	81	no
SW-045-MWS	1,1,1-Trichloroethane	1	U	N/A	no	N/A	no
SW-045-MWS	1,1,2,2-Tetrachloroethane	1	U	40	no	N/A	no
SW-045-MWS	1,1,2-Trichloroethane	1	U	160	no	N/A	no
SW-045-MWS	1,1-Dichloroethene	1	U	7100	no	N/A	no
SW-045-MWS	1,2,4-Trichlorobenzene	1	U	70	no	N/A	no
SW-045-MWS	1,2-Dichlorobenzene	1	U	1300	no	N/A	no
SW-045-MWS	1,2-Dichloroethane	1	U	370	no	N/A	no
SW-045-MWS	1,2-Dichloropropane	1	U	150	no	N/A	no
SW-045-MWS	1,3-Dichlorobenzene	1	U	960	no	N/A	no
SW-045-MWS	1,4-Dichlorobenzene	1	U	190	no	N/A	no
SW-045-MWS	2,4,6-Trichlorophenol	1.2	U	24	no	N/A	no
SW-045-MWS	2,4-Dichlorophenol	1.2	U	290	no	N/A	no
SW-045-MWS	2,4-Dimethylphenol	1.2	U	850	no	N/A	no
SW-045-MWS	2,4-Dinitrophenol	3	U	5300	no	N/A	no
SW-045-MWS	2,4-Dinitrotoluene	1.2	U	0.28	no	N/A	no
SW-045-MWS	2,4-Dinitrotoluene	1.2	U	34	no	N/A	no
SW-045-MWS	2-Chloronaphthalene	1.2	U	1600	no	N/A	no
SW-045-MWS	2-Chlorophenol	1.2	U	150	no	N/A	no
SW-045-MWS	Acenaphthene	0.11	U	990	no	N/A	no
SW-045-MWS	Anthracene	0.11	U	40000	no	N/A	no
SW-045-MWS	Antimony	6	U	640	no	N/A	no
SW-045-MWS	Antimony, Dissolve	6	U	640	no	N/A	no
SW-045-MWS	Arsenic	5	U	1.4	no	36	no
SW-045-MWS	Arsenic, Dissolve	5	U	1.4	no	36	no
SW-045-MWS	Barium	20.5		N/A	no	N/A	no
SW-045-MWS	Barium, Dissolve	20.1		N/A	no	N/A	no
SW-045-MWS	Benzene	1	U	510	no	N/A	no
SW-045-MWS	Benzo[a]anthracene	0.11	U	0.18	no	N/A	no
SW-045-MWS	Benzo[a]pyrene	0.11	U	0.18	no	N/A	no
SW-045-MWS	Benzo[b]fluoranthene	0.11	U	0.18	no	N/A	no
SW-045-MWS	Benzo[k]fluoranthene	0.11	U	0.18	no	N/A	no
SW-045-MWS	Beryllium	1.1		N/A	no	N/A	no
SW-045-MWS	Beryllium, Dissolve	1.1		N/A	no	N/A	no
SW-045-MWS	bis(2-Chloroethyl)ether	1.2	U	5.3	no	N/A	no
SW-045-MWS	bis(2-Chloroisopropyl)ether	1.2	U	65000	no	N/A	no
SW-045-MWS	bis(2-Ethylhexyl)phthalate	1.2	U	22	no	N/A	no
SW-045-MWS	Bromodichloromethane	1	U	170	no	N/A	no
SW-045-MWS	Bromoform	1	U	1400	no	N/A	no
SW-045-MWS	Bromomethane	1	U	1500	no	N/A	no
SW-045-MWS	Cadmium	0.86	B	N/A	no	8.8	no
SW-045-MWS	Cadmium, Dissolve	0.74	B	N/A	no	8.8	no
SW-045-MWS	Carbon tetrachloride	1	U	16	no	N/A	no
SW-045-MWS	Chlorobenzene	1	U	1600	no	N/A	no
SW-045-MWS	Chloroform	1	U	4700	no	N/A	no
SW-045-MWS	Chromium	5	U	N/A	no	N/A	no
SW-045-MWS	Chromium VI	10	U	N/A	no	50	no
SW-045-MWS	Chromium, Dissolve	5	U	N/A	no	N/A	no
SW-045-MWS	Chrysene	0.11	U	0.18	no	N/A	no
SW-045-MWS	Copper	5	U	N/A	no	3.1	no
SW-045-MWS	Copper, Dissolve	5	U	N/A	no	3.1	no
SW-045-MWS	Cyanide	10	U	140	no	1	no
SW-045-MWS	Dibenz[a,h]anthracene	0.11	U	0.18	no	N/A	no
SW-045-MWS	Dibromochloromethane	1	U	130	no	N/A	no
SW-045-MWS	Diethylphthalate	1.2	U	44000	no	N/A	no
SW-045-MWS	Di-n-butylphthalate	1.2	U	4500	no	N/A	no
SW-045-MWS	Ethylbenzene	1	U	2100	no	N/A	no
SW-045-MWS	Fluoranthene	0.11	U	140	no	N/A	no

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW-045-MWS	Fluorene	0.11	U	5300	no	N/A	no
SW-045-MWS	Hexachlorobenzene	1.2	U	0.0029	no	N/A	no
SW-045-MWS	Hexachlorobutadiene	1.2	U	180	no	N/A	no
SW-045-MWS	Hexachlorocyclopentadiene	1.2	U	1100	no	N/A	no
SW-045-MWS	Hexachloroethane	1.2	U	33	no	N/A	no
SW-045-MWS	Indeno[1,2,3-c,d]pyrene	0.11	U	0.18	no	N/A	no
SW-045-MWS	Isophorone	1.2	U	9600	no	N/A	no
SW-045-MWS	Lead	5	U	N/A	no	8.1	no
SW-045-MWS	Lead, Dissolve	5	U	N/A	no	8.1	no
SW-045-MWS	Mercury	0.2	U	N/A	no	0.94	no
SW-045-MWS	Mercury, Dissolve	0.2	U	N/A	no	0.94	no
SW-045-MWS	Methylene Chloride	1	U	5900	no	N/A	no
SW-045-MWS	Nickel	103		4600	no	8.2	YES
SW-045-MWS	Nickel, Dissolve	105		4600	no	8.2	YES
SW-045-MWS	Nitrobenzene	1.2	U	690	no	N/A	no
SW-045-MWS	N-Nitroso-di-n-propylamine	1.2	U	5.1	no	N/A	no
SW-045-MWS	N-Nitrosodiphenylamine	1.2	U	60	no	N/A	no
SW-045-MWS	Phenol	1.2	U	860000	no	N/A	no
SW-045-MWS	Pyrene	0.11	U	4000	no	N/A	no
SW-045-MWS	Selenium	8	U	4200	no	71	no
SW-045-MWS	Selenium, Dissolve	8	U	4200	no	71	no
SW-045-MWS	Silver	6	U	N/A	no	N/A	no
SW-045-MWS	Silver, Dissolve	6	U	N/A	no	N/A	no
SW-045-MWS	Tetrachloroethene	1	U	33	no	N/A	no
SW-045-MWS	Thallium	10	U	0.47	no	N/A	no
SW-045-MWS	Thallium, Dissolve	10	U	0.47	no	N/A	no
SW-045-MWS	Toluene	1	U	15000	no	N/A	no
SW-045-MWS	trans-1,2-Dichloroethene	1	U	10000	no	N/A	no
SW-045-MWS	Trichloroethene	1	U	300	no	N/A	no
SW-045-MWS	Vinyl chloride	1	U	24	no	N/A	no
SW-045-MWS	Zinc	146		26000	no	81	YES
SW-045-MWS	Zinc, Dissolve	153		26000	no	81	YES
SW-046-MWS	1,1,1-Trichloroethane	1	U	N/A	no	N/A	no
SW-046-MWS	1,1,2,2-Tetrachloroethane	1	U	40	no	N/A	no
SW-046-MWS	1,1,2-Trichloroethane	1	U	160	no	N/A	no
SW-046-MWS	1,1-Dichloroethene	1	U	7100	no	N/A	no
SW-046-MWS	1,2,4-Trichlorobenzene	1	U	70	no	N/A	no
SW-046-MWS	1,2-Dichlorobenzene	1	U	1300	no	N/A	no
SW-046-MWS	1,2-Dichloroethane	1	U	370	no	N/A	no
SW-046-MWS	1,2-Dichloropropane	1	U	150	no	N/A	no
SW-046-MWS	1,3-Dichlorobenzene	1	U	960	no	N/A	no
SW-046-MWS	1,4-Dichlorobenzene	1	U	190	no	N/A	no
SW-046-MWS	2,4,6-Trichlorophenol	1	U	24	no	N/A	no
SW-046-MWS	2,4-Dichlorophenol	1	U	290	no	N/A	no
SW-046-MWS	2,4-Dimethylphenol	1	U	850	no	N/A	no
SW-046-MWS	2,4-Dinitrophenol	2.6	UJ	5300	no	N/A	no
SW-046-MWS	2,4-Dinitrotoluene	1	U	0.28	no	N/A	no
SW-046-MWS	2,4-Dinitrotoluene	1	U	34	no	N/A	no
SW-046-MWS	2-Chloronaphthalene	1	U	1600	no	N/A	no
SW-046-MWS	2-Chlorophenol	1	U	150	no	N/A	no
SW-046-MWS	Acenaphthene	0.1	U	990	no	N/A	no
SW-046-MWS	Anthracene	0.1	U	40000	no	N/A	no
SW-046-MWS	Antimony	6	U	640	no	N/A	no
SW-046-MWS	Antimony, Dissolve	6	U	640	no	N/A	no
SW-046-MWS	Arsenic	5	U	1.4	no	36	no
SW-046-MWS	Arsenic, Dissolve	5	U	1.4	no	36	no
SW-046-MWS	Barium	28.4		N/A	no	N/A	no
SW-046-MWS	Barium, Dissolve	27.1		N/A	no	N/A	no
SW-046-MWS	Benzene	1	U	510	no	N/A	no
SW-046-MWS	Benzo[a]anthracene	0.1	U	0.18	no	N/A	no

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW-046-MWS	Benzo[a]pyrene	0.1	U	0.18	no	N/A	no
SW-046-MWS	Benzo[b]fluoranthene	0.1	U	0.18	no	N/A	no
SW-046-MWS	Benzo[k]fluoranthene	0.1	U	0.18	no	N/A	no
SW-046-MWS	Beryllium	0.35	B	N/A	no	N/A	no
SW-046-MWS	Beryllium, Dissolve	0.35	B	N/A	no	N/A	no
SW-046-MWS	bis(2-Chloroethyl)ether	1	U	5.3	no	N/A	no
SW-046-MWS	bis(2-Chloroisopropyl)ether	1	U	65000	no	N/A	no
SW-046-MWS	bis(2-Ethylhexyl)phthalate	0.47	B	22	no	N/A	no
SW-046-MWS	Bromodichloromethane	1	U	170	no	N/A	no
SW-046-MWS	Bromoform	1	UJ	1400	no	N/A	no
SW-046-MWS	Bromomethane	1	UJ	1500	no	N/A	no
SW-046-MWS	Cadmium	1.1	J	N/A	no	8.8	no
SW-046-MWS	Cadmium, Dissolve	1.2	J	N/A	no	8.8	no
SW-046-MWS	Carbon tetrachloride	1	U	16	no	N/A	no
SW-046-MWS	Chlorobenzene	1	U	1600	no	N/A	no
SW-046-MWS	Chloroform	1	U	4700	no	N/A	no
SW-046-MWS	Chromium	5	U	N/A	no	N/A	no
SW-046-MWS	Chromium VI	10	U	N/A	no	50	no
SW-046-MWS	Chromium, Dissolve	5	U	N/A	no	N/A	no
SW-046-MWS	Chrysene	0.1	U	0.18	no	N/A	no
SW-046-MWS	Copper	2.4	B	N/A	no	3.1	no
SW-046-MWS	Copper, Dissolve	5	U	N/A	no	3.1	no
SW-046-MWS	Cyanide	10	U	140	no	1	no
SW-046-MWS	Dibenz[a,h]anthracene	0.1	U	0.18	no	N/A	no
SW-046-MWS	Dibromochloromethane	1	U	130	no	N/A	no
SW-046-MWS	Diethylphthalate	1	U	44000	no	N/A	no
SW-046-MWS	Di-n-butylphthalate	1	U	4500	no	N/A	no
SW-046-MWS	Ethylbenzene	1	U	2100	no	N/A	no
SW-046-MWS	Fluoranthene	0.1	U	140	no	N/A	no
SW-046-MWS	Fluorene	0.1	U	5300	no	N/A	no
SW-046-MWS	Hexachlorobenzene	1	U	0.0029	no	N/A	no
SW-046-MWS	Hexachlorobutadiene	1	U	180	no	N/A	no
SW-046-MWS	Hexachlorocyclopentadiene	1	U	1100	no	N/A	no
SW-046-MWS	Hexachloroethane	1	U	33	no	N/A	no
SW-046-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	0.18	no	N/A	no
SW-046-MWS	Isophorone	1	U	9600	no	N/A	no
SW-046-MWS	Lead	5	U	N/A	no	8.1	no
SW-046-MWS	Lead, Dissolve	5	U	N/A	no	8.1	no
SW-046-MWS	Mercury	0.06	B	N/A	no	0.94	no
SW-046-MWS	Mercury, Dissolve	0.2	U	N/A	no	0.94	no
SW-046-MWS	Methylene Chloride	1	U	5900	no	N/A	no
SW-046-MWS	Nickel	100		4600	no	8.2	YES
SW-046-MWS	Nickel, Dissolve	100		4600	no	8.2	YES
SW-046-MWS	Nitrobenzene	1	U	690	no	N/A	no
SW-046-MWS	N-Nitroso-di-n-propylamine	1	U	5.1	no	N/A	no
SW-046-MWS	N-Nitrosodiphenylamine	1	U	60	no	N/A	no
SW-046-MWS	Phenol	1	U	860000	no	N/A	no
SW-046-MWS	Pyrene	0.1	U	4000	no	N/A	no
SW-046-MWS	Selenium	8	U	4200	no	71	no
SW-046-MWS	Selenium, Dissolve	8	U	4200	no	71	no
SW-046-MWS	Silver	6	U	N/A	no	N/A	no
SW-046-MWS	Silver, Dissolve	6	U	N/A	no	N/A	no
SW-046-MWS	Tetrachloroethene	1	U	33	no	N/A	no
SW-046-MWS	Thallium	10	U	0.47	no	N/A	no
SW-046-MWS	Thallium, Dissolve	10	U	0.47	no	N/A	no
SW-046-MWS	Toluene	1	U	15000	no	N/A	no
SW-046-MWS	trans-1,2-Dichloroethene	1	U	10000	no	N/A	no
SW-046-MWS	Trichloroethene	1	U	300	no	N/A	no
SW-046-MWS	Vinyl chloride	1	U	24	no	N/A	no
SW-046-MWS	Zinc	189		26000	no	81	YES

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW-046-MWS	Zinc, Dissolve	192		26000	no	81	YES
SW-047-MWS	1,1,1-Trichloroethane	1	U	N/A	no	N/A	no
SW-047-MWS	1,1,2,2-Tetrachloroethane	1	U	40	no	N/A	no
SW-047-MWS	1,1,2-Trichloroethane	1	U	160	no	N/A	no
SW-047-MWS	1,1-Dichloroethene	1	U	7100	no	N/A	no
SW-047-MWS	1,2,4-Trichlorobenzene	1	U	70	no	N/A	no
SW-047-MWS	1,2-Dichlorobenzene	1	U	1300	no	N/A	no
SW-047-MWS	1,2-Dichloroethane	1	U	370	no	N/A	no
SW-047-MWS	1,2-Dichloropropane	1	U	150	no	N/A	no
SW-047-MWS	1,3-Dichlorobenzene	1	U	960	no	N/A	no
SW-047-MWS	1,4-Dichlorobenzene	1	U	190	no	N/A	no
SW-047-MWS	2,4,6-Trichlorophenol	1	U	24	no	N/A	no
SW-047-MWS	2,4-Dichlorophenol	1	U	290	no	N/A	no
SW-047-MWS	2,4-Dimethylphenol	1	U	850	no	N/A	no
SW-047-MWS	2,4-Dinitrophenol	2.6	UJ	5300	no	N/A	no
SW-047-MWS	2,4-Dinitrotoluene	1	U	0.28	no	N/A	no
SW-047-MWS	2,4-Dinitrotoluene	1	U	34	no	N/A	no
SW-047-MWS	2-Chloronaphthalene	1	U	1600	no	N/A	no
SW-047-MWS	2-Chlorophenol	1	U	150	no	N/A	no
SW-047-MWS	Acenaphthene	0.1	U	990	no	N/A	no
SW-047-MWS	Anthracene	0.1	U	40000	no	N/A	no
SW-047-MWS	Antimony	6	U	640	no	N/A	no
SW-047-MWS	Antimony, Dissolve	6	U	640	no	N/A	no
SW-047-MWS	Arsenic	3.9	B	1.4	YES	36	no
SW-047-MWS	Arsenic, Dissolve	4.5	J	1.4	YES	36	no
SW-047-MWS	Barium	44.3		N/A	no	N/A	no
SW-047-MWS	Barium, Dissolve	42.9		N/A	no	N/A	no
SW-047-MWS	Benzene	1	U	510	no	N/A	no
SW-047-MWS	Benzo[a]anthracene	0.1	U	0.18	no	N/A	no
SW-047-MWS	Benzo[a]pyrene	0.1	U	0.18	no	N/A	no
SW-047-MWS	Benzo[b]fluoranthene	0.1	U	0.18	no	N/A	no
SW-047-MWS	Benzo[k]fluoranthene	0.1	U	0.18	no	N/A	no
SW-047-MWS	Beryllium	6.5		N/A	no	N/A	no
SW-047-MWS	Beryllium, Dissolve	6.6		N/A	no	N/A	no
SW-047-MWS	bis(2-Chloroethyl)ether	1	U	5.3	no	N/A	no
SW-047-MWS	bis(2-Chloroisopropyl)ether	1	U	65000	no	N/A	no
SW-047-MWS	bis(2-Ethylhexyl)phthalate	1	U	22	no	N/A	no
SW-047-MWS	Bromodichloromethane	1	U	170	no	N/A	no
SW-047-MWS	Bromoform	1	U	1400	no	N/A	no
SW-047-MWS	Bromomethane	1	U	1500	no	N/A	no
SW-047-MWS	Cadmium	1.5	J	N/A	no	8.8	no
SW-047-MWS	Cadmium, Dissolve	1.4	B	N/A	no	8.8	no
SW-047-MWS	Carbon tetrachloride	1	U	16	no	N/A	no
SW-047-MWS	Chlorobenzene	1	U	1600	no	N/A	no
SW-047-MWS	Chloroform	6.1		4700	no	N/A	no
SW-047-MWS	Chromium	1.6	J	N/A	no	N/A	no
SW-047-MWS	Chromium VI	5	J	N/A	no	50	no
SW-047-MWS	Chromium, Dissolve	0.98	B	N/A	no	N/A	no
SW-047-MWS	Chrysene	0.1	U	0.18	no	N/A	no
SW-047-MWS	Copper	7.9		N/A	no	3.1	YES
SW-047-MWS	Copper, Dissolve	7.8		N/A	no	3.1	YES
SW-047-MWS	Cyanide	10	U	140	no	1	no
SW-047-MWS	Dibenz[a,h]anthracene	0.1	U	0.18	no	N/A	no
SW-047-MWS	Dibromochloromethane	1	U	130	no	N/A	no
SW-047-MWS	Diethylphthalate	1	U	44000	no	N/A	no
SW-047-MWS	Di-n-butylphthalate	1	U	4500	no	N/A	no
SW-047-MWS	Ethylbenzene	1	U	2100	no	N/A	no
SW-047-MWS	Fluoranthene	0.1	U	140	no	N/A	no
SW-047-MWS	Fluorene	0.1	U	5300	no	N/A	no
SW-047-MWS	Hexachlorobenzene	1	U	0.0029	no	N/A	no

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW-047-MWS	Hexachlorobutadiene	1	U	180	no	N/A	no
SW-047-MWS	Hexachlorocyclopentadiene	1	U	1100	no	N/A	no
SW-047-MWS	Hexachloroethane	1	U	33	no	N/A	no
SW-047-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	0.18	no	N/A	no
SW-047-MWS	Isophorone	1	U	9600	no	N/A	no
SW-047-MWS	Lead	5	U	N/A	no	8.1	no
SW-047-MWS	Lead, Dissolve	5	U	N/A	no	8.1	no
SW-047-MWS	Mercury	0.03	J	N/A	no	0.94	no
SW-047-MWS	Mercury, Dissolve	0.2	U	N/A	no	0.94	no
SW-047-MWS	Methylene Chloride	1	U	5900	no	N/A	no
SW-047-MWS	Nickel	99.4	J	4600	no	8.2	YES
SW-047-MWS	Nickel, Dissolve	106	J	4600	no	8.2	YES
SW-047-MWS	Nitrobenzene	1	U	690	no	N/A	no
SW-047-MWS	N-Nitroso-di-n-propylamine	1	U	5.1	no	N/A	no
SW-047-MWS	N-Nitrosodiphenylamine	1	U	60	no	N/A	no
SW-047-MWS	Phenol	1	U	860000	no	N/A	no
SW-047-MWS	Pyrene	0.1	U	4000	no	N/A	no
SW-047-MWS	Selenium	4	B	4200	no	71	no
SW-047-MWS	Selenium, Dissolve	8	U	4200	no	71	no
SW-047-MWS	Silver	6	U	N/A	no	N/A	no
SW-047-MWS	Silver, Dissolve	6	U	N/A	no	N/A	no
SW-047-MWS	Tetrachloroethene	1	U	33	no	N/A	no
SW-047-MWS	Thallium	10	U	0.47	no	N/A	no
SW-047-MWS	Thallium, Dissolve	10	U	0.47	no	N/A	no
SW-047-MWS	Toluene	1	U	15000	no	N/A	no
SW-047-MWS	trans-1,2-Dichloroethene	1	U	10000	no	N/A	no
SW-047-MWS	Trichloroethene	1	U	300	no	N/A	no
SW-047-MWS	Vinyl chloride	1	U	24	no	N/A	no
SW-047-MWS	Zinc	130		26000	no	81	YES
SW-047-MWS	Zinc, Dissolve	134	J	26000	no	81	YES
SW-074-MWI	1,1,1-Trichloroethane	1	U	N/A	no	N/A	no
SW-074-MWI	1,1,2,2-Tetrachloroethane	1	U	40	no	N/A	no
SW-074-MWI	1,1,2-Trichloroethane	1	U	160	no	N/A	no
SW-074-MWI	1,1-Dichloroethene	1	U	7100	no	N/A	no
SW-074-MWI	1,2,4-Trichlorobenzene	1	U	70	no	N/A	no
SW-074-MWI	1,2-Dichlorobenzene	1	U	1300	no	N/A	no
SW-074-MWI	1,2-Dichloroethane	1	U	370	no	N/A	no
SW-074-MWI	1,2-Dichloropropane	1	U	150	no	N/A	no
SW-074-MWI	1,3-Dichlorobenzene	1	U	960	no	N/A	no
SW-074-MWI	1,4-Dichlorobenzene	1	U	190	no	N/A	no
SW-074-MWI	2,4,6-Trichlorophenol	1	U	24	no	N/A	no
SW-074-MWI	2,4-Dichlorophenol	1	U	290	no	N/A	no
SW-074-MWI	2,4-Dimethylphenol	1	U	850	no	N/A	no
SW-074-MWI	2,4-Dinitrophenol	2.5	U	5300	no	N/A	no
SW-074-MWI	2,4-Dinitrotoluene	1	U	0.28	no	N/A	no
SW-074-MWI	2,4-Dinitrotoluene	1	U	34	no	N/A	no
SW-074-MWI	2-Chloronaphthalene	1	U	1600	no	N/A	no
SW-074-MWI	2-Chlorophenol	1	U	150	no	N/A	no
SW-074-MWI	Acenaphthene	0.1	U	990	no	N/A	no
SW-074-MWI	Anthracene	0.1	U	40000	no	N/A	no
SW-074-MWI	Antimony	6	U	640	no	N/A	no
SW-074-MWI	Antimony, Dissolve	6	U	640	no	N/A	no
SW-074-MWI	Arsenic	3.8	B	1.4	YES	36	no
SW-074-MWI	Arsenic, Dissolve	5	U	1.4	no	36	no
SW-074-MWI	Barium	51.4		N/A	no	N/A	no
SW-074-MWI	Barium, Dissolve	51.5		N/A	no	N/A	no
SW-074-MWI	Benzene	1	U	510	no	N/A	no
SW-074-MWI	Benzo[a]anthracene	0.1	U	0.18	no	N/A	no
SW-074-MWI	Benzo[a]pyrene	0.1	U	0.18	no	N/A	no
SW-074-MWI	Benzo[b]fluoranthene	0.1	U	0.18	no	N/A	no

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW-074-MWI	Benzo[k]fluoranthene	0.1	U	0.18	no	N/A	no
SW-074-MWI	Beryllium	1	U	N/A	no	N/A	no
SW-074-MWI	Beryllium, Dissolve	1	U	N/A	no	N/A	no
SW-074-MWI	bis(2-Chloroethyl)ether	1	U	5.3	no	N/A	no
SW-074-MWI	bis(2-Chloroisopropyl)ether	1	U	65000	no	N/A	no
SW-074-MWI	bis(2-Ethylhexyl)phthalate	1	U	22	no	N/A	no
SW-074-MWI	Bromodichloromethane	1	U	170	no	N/A	no
SW-074-MWI	Bromoform	1	U	1400	no	N/A	no
SW-074-MWI	Bromomethane	1	U	1500	no	N/A	no
SW-074-MWI	Cadmium	0.64	J	N/A	no	8.8	no
SW-074-MWI	Cadmium, Dissolve	0.63	B	N/A	no	8.8	no
SW-074-MWI	Carbon tetrachloride	1	U	16	no	N/A	no
SW-074-MWI	Chlorobenzene	1	U	1600	no	N/A	no
SW-074-MWI	Chloroform	1	U	4700	no	N/A	no
SW-074-MWI	Chromium	5	U	N/A	no	N/A	no
SW-074-MWI	Chromium VI	10	U	N/A	no	50	no
SW-074-MWI	Chromium, Dissolve	5	U	N/A	no	N/A	no
SW-074-MWI	Chrysene	0.1	U	0.18	no	N/A	no
SW-074-MWI	Copper	5	U	N/A	no	3.1	no
SW-074-MWI	Copper, Dissolve	5	U	N/A	no	3.1	no
SW-074-MWI	Cyanide	10	U	140	no	1	no
SW-074-MWI	Dibenz[a,h]anthracene	0.1	U	0.18	no	N/A	no
SW-074-MWI	Dibromochloromethane	1	U	130	no	N/A	no
SW-074-MWI	Diethylphthalate	1	U	44000	no	N/A	no
SW-074-MWI	Di-n-butylphthalate	1	U	4500	no	N/A	no
SW-074-MWI	Ethylbenzene	1	U	2100	no	N/A	no
SW-074-MWI	Fluoranthene	0.1	U	140	no	N/A	no
SW-074-MWI	Fluorene	0.1	U	5300	no	N/A	no
SW-074-MWI	Hexachlorobenzene	1	U	0.0029	no	N/A	no
SW-074-MWI	Hexachlorobutadiene	1	U	180	no	N/A	no
SW-074-MWI	Hexachlorocyclopentadiene	1	U	1100	no	N/A	no
SW-074-MWI	Hexachloroethane	1	U	33	no	N/A	no
SW-074-MWI	Indeno[1,2,3-c,d]pyrene	0.1	U	0.18	no	N/A	no
SW-074-MWI	Isophorone	0.49	J	9600	no	N/A	no
SW-074-MWI	Lead	5	U	N/A	no	8.1	no
SW-074-MWI	Lead, Dissolve	5	U	N/A	no	8.1	no
SW-074-MWI	Mercury	0.2	U	N/A	no	0.94	no
SW-074-MWI	Mercury, Dissolve	0.2	U	N/A	no	0.94	no
SW-074-MWI	Methylene Chloride	1	U	5900	no	N/A	no
SW-074-MWI	Nickel	31.4		4600	no	8.2	YES
SW-074-MWI	Nickel, Dissolve	35.4		4600	no	8.2	YES
SW-074-MWI	Nitrobenzene	1	U	690	no	N/A	no
SW-074-MWI	N-Nitroso-di-n-propylamine	1	U	5.1	no	N/A	no
SW-074-MWI	N-Nitrosodiphenylamine	1	U	60	no	N/A	no
SW-074-MWI	Phenol	1	U	860000	no	N/A	no
SW-074-MWI	Pyrene	0.1	U	4000	no	N/A	no
SW-074-MWI	Selenium	8	U	4200	no	71	no
SW-074-MWI	Selenium, Dissolve	8	U	4200	no	71	no
SW-074-MWI	Silver	6	U	N/A	no	N/A	no
SW-074-MWI	Silver, Dissolve	6	U	N/A	no	N/A	no
SW-074-MWI	Tetrachloroethene	1	U	33	no	N/A	no
SW-074-MWI	Thallium	10	U	0.47	no	N/A	no
SW-074-MWI	Thallium, Dissolve	10	U	0.47	no	N/A	no
SW-074-MWI	Toluene	1	U	15000	no	N/A	no
SW-074-MWI	trans-1,2-Dichloroethene	1	U	10000	no	N/A	no
SW-074-MWI	Trichloroethene	1	U	300	no	N/A	no
SW-074-MWI	Vinyl chloride	1	U	24	no	N/A	no
SW-074-MWI	Zinc	34.4		26000	no	81	no
SW-074-MWI	Zinc, Dissolve	11.3		26000	no	81	no
SW-074-MWS	1,1,1-Trichloroethane	1	U	N/A	no	N/A	no

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW-074-MWS	1,1,2,2-Tetrachloroethane	1	U	40	no	N/A	no
SW-074-MWS	1,1,2-Trichloroethane	1	U	160	no	N/A	no
SW-074-MWS	1,1-Dichloroethene	1	U	7100	no	N/A	no
SW-074-MWS	1,2,4-Trichlorobenzene	1	U	70	no	N/A	no
SW-074-MWS	1,2-Dichlorobenzene	1	U	1300	no	N/A	no
SW-074-MWS	1,2-Dichloroethane	1	U	370	no	N/A	no
SW-074-MWS	1,2-Dichloropropane	1	U	150	no	N/A	no
SW-074-MWS	1,3-Dichlorobenzene	1	U	960	no	N/A	no
SW-074-MWS	1,4-Dichlorobenzene	1	U	190	no	N/A	no
SW-074-MWS	2,4,6-Trichlorophenol	1	U	24	no	N/A	no
SW-074-MWS	2,4-Dichlorophenol	1	U	290	no	N/A	no
SW-074-MWS	2,4-Dimethylphenol	1	U	850	no	N/A	no
SW-074-MWS	2,4-Dinitrophenol	2.5	U	5300	no	N/A	no
SW-074-MWS	2,4-Dinitrotoluene	1	U	0.28	no	N/A	no
SW-074-MWS	2,4-Dinitrotoluene	1	U	34	no	N/A	no
SW-074-MWS	2-Chloronaphthalene	1	U	1600	no	N/A	no
SW-074-MWS	2-Chlorophenol	1	U	150	no	N/A	no
SW-074-MWS	Acenaphthene	0.1	U	990	no	N/A	no
SW-074-MWS	Anthracene	0.11		40000	no	N/A	no
SW-074-MWS	Antimony	6	U	640	no	N/A	no
SW-074-MWS	Antimony, Dissolve	6	U	640	no	N/A	no
SW-074-MWS	Arsenic	5	U	1.4	no	36	no
SW-074-MWS	Arsenic, Dissolve	5	U	1.4	no	36	no
SW-074-MWS	Barium	30.6		N/A	no	N/A	no
SW-074-MWS	Barium, Dissolve	27.8		N/A	no	N/A	no
SW-074-MWS	Benzene	1	U	510	no	N/A	no
SW-074-MWS	Benzo[a]anthracene	0.1	U	0.18	no	N/A	no
SW-074-MWS	Benzo[a]pyrene	0.1	U	0.18	no	N/A	no
SW-074-MWS	Benzo[b]fluoranthene	0.1	U	0.18	no	N/A	no
SW-074-MWS	Benzo[k]fluoranthene	0.1	U	0.18	no	N/A	no
SW-074-MWS	Beryllium	1	U	N/A	no	N/A	no
SW-074-MWS	Beryllium, Dissolve	1	U	N/A	no	N/A	no
SW-074-MWS	bis(2-Chloroethyl)ether	1	U	5.3	no	N/A	no
SW-074-MWS	bis(2-Chloroisopropyl)ether	1	U	65000	no	N/A	no
SW-074-MWS	bis(2-Ethylhexyl)phthalate	1	U	22	no	N/A	no
SW-074-MWS	Bromodichloromethane	1	U	170	no	N/A	no
SW-074-MWS	Bromoform	1	U	1400	no	N/A	no
SW-074-MWS	Bromomethane	1	U	1500	no	N/A	no
SW-074-MWS	Cadmium	3	U	N/A	no	8.8	no
SW-074-MWS	Cadmium, Dissolve	3	U	N/A	no	8.8	no
SW-074-MWS	Carbon tetrachloride	1	U	16	no	N/A	no
SW-074-MWS	Chlorobenzene	1	U	1600	no	N/A	no
SW-074-MWS	Chloroform	1	U	4700	no	N/A	no
SW-074-MWS	Chromium	8.6		N/A	no	N/A	no
SW-074-MWS	Chromium VI	7	J	N/A	no	50	no
SW-074-MWS	Chromium, Dissolve	8.3		N/A	no	N/A	no
SW-074-MWS	Chrysene	0.1	U	0.18	no	N/A	no
SW-074-MWS	Copper	5	U	N/A	no	3.1	no
SW-074-MWS	Copper, Dissolve	5	U	N/A	no	3.1	no
SW-074-MWS	Cyanide	10	U	140	no	1	no
SW-074-MWS	Dibenz[a,h]anthracene	0.1	U	0.18	no	N/A	no
SW-074-MWS	Dibromochloromethane	1	U	130	no	N/A	no
SW-074-MWS	Diethylphthalate	1	U	44000	no	N/A	no
SW-074-MWS	Di-n-butylphthalate	1	U	4500	no	N/A	no
SW-074-MWS	Ethylbenzene	1	U	2100	no	N/A	no
SW-074-MWS	Fluoranthene	0.1	U	140	no	N/A	no
SW-074-MWS	Fluorene	0.1	U	5300	no	N/A	no
SW-074-MWS	Hexachlorobenzene	1	U	0.0029	no	N/A	no
SW-074-MWS	Hexachlorobutadiene	1	U	180	no	N/A	no
SW-074-MWS	Hexachlorocyclopentadiene	1	U	1100	no	N/A	no

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW-074-MWS	Hexachloroethane	1	U	33	no	N/A	no
SW-074-MWS	Indeno[1,2,3-c,d]pyrene	0.1	U	0.18	no	N/A	no
SW-074-MWS	Isophorone	1	U	9600	no	N/A	no
SW-074-MWS	Lead	5	U	N/A	no	8.1	no
SW-074-MWS	Lead, Dissolve	5	U	N/A	no	8.1	no
SW-074-MWS	Mercury	0.2	UJ	N/A	no	0.94	no
SW-074-MWS	Mercury, Dissolve	0.2	UJ	N/A	no	0.94	no
SW-074-MWS	Methylene Chloride	1	U	5900	no	N/A	no
SW-074-MWS	Nickel	3.8	B	4600	no	8.2	no
SW-074-MWS	Nickel, Dissolve	3.4	B	4600	no	8.2	no
SW-074-MWS	Nitrobenzene	1	U	690	no	N/A	no
SW-074-MWS	N-Nitroso-di-n-propylamine	1	U	5.1	no	N/A	no
SW-074-MWS	N-Nitrosodiphenylamine	1	U	60	no	N/A	no
SW-074-MWS	Phenol	1	U	860000	no	N/A	no
SW-074-MWS	Pyrene	0.1	U	4000	no	N/A	no
SW-074-MWS	Selenium	5.1	B	4200	no	71	no
SW-074-MWS	Selenium, Dissolve	8	U	4200	no	71	no
SW-074-MWS	Silver	6	U	N/A	no	N/A	no
SW-074-MWS	Silver, Dissolve	6	U	N/A	no	N/A	no
SW-074-MWS	Tetrachloroethene	1	U	33	no	N/A	no
SW-074-MWS	Thallium	10	U	0.47	no	N/A	no
SW-074-MWS	Thallium, Dissolve	10	U	0.47	no	N/A	no
SW-074-MWS	Toluene	1	U	15000	no	N/A	no
SW-074-MWS	trans-1,2-Dichloroethene	1	U	10000	no	N/A	no
SW-074-MWS	Trichloroethene	1	U	300	no	N/A	no
SW-074-MWS	Vinyl chloride	1	U	24	no	N/A	no
SW-074-MWS	Zinc	5.5	B	26000	no	81	no
SW-074-MWS	Zinc, Dissolve	4.6	B	26000	no	81	no
SW07-PZM004	1,1,1-Trichloroethane	1	U	N/A	no	N/A	no
SW07-PZM004	1,1,2,2-Tetrachloroethane	1	U	40	no	N/A	no
SW07-PZM004	1,1,2-Trichloroethane	1	U	160	no	N/A	no
SW07-PZM004	1,1-Dichloroethene	1	U	7100	no	N/A	no
SW07-PZM004	1,2,4-Trichlorobenzene	1	U	70	no	N/A	no
SW07-PZM004	1,2-Dichlorobenzene	1	U	1300	no	N/A	no
SW07-PZM004	1,2-Dichloroethane	1	U	370	no	N/A	no
SW07-PZM004	1,2-Dichloropropane	1	U	150	no	N/A	no
SW07-PZM004	1,3-Dichlorobenzene	1	U	960	no	N/A	no
SW07-PZM004	1,4-Dichlorobenzene	1	U	190	no	N/A	no
SW07-PZM004	2,4,6-Trichlorophenol	1	U	24	no	N/A	no
SW07-PZM004	2,4-Dichlorophenol	1	U	290	no	N/A	no
SW07-PZM004	2,4-Dimethylphenol	1	U	850	no	N/A	no
SW07-PZM004	2,4-Dinitrophenol	2.5	U	5300	no	N/A	no
SW07-PZM004	2,4-Dinitrotoluene	1	U	0.28	no	N/A	no
SW07-PZM004	2,4-Dinitrotoluene	1	U	34	no	N/A	no
SW07-PZM004	2-Chloronaphthalene	1	U	1600	no	N/A	no
SW07-PZM004	2-Chlorophenol	1	U	150	no	N/A	no
SW07-PZM004	Acenaphthene	0.1	U	990	no	N/A	no
SW07-PZM004	Anthracene	0.1	U	40000	no	N/A	no
SW07-PZM004	Antimony	6	U	640	no	N/A	no
SW07-PZM004	Antimony, Dissolve	6	U	640	no	N/A	no
SW07-PZM004	Arsenic	5	U	1.4	no	36	no
SW07-PZM004	Arsenic, Dissolve	5	U	1.4	no	36	no
SW07-PZM004	Barium	31.5		N/A	no	N/A	no
SW07-PZM004	Barium, Dissolve	28.4		N/A	no	N/A	no
SW07-PZM004	Benzene	1	U	510	no	N/A	no
SW07-PZM004	Benzo[a]anthracene	0.1	U	0.18	no	N/A	no
SW07-PZM004	Benzo[a]pyrene	0.1	U	0.18	no	N/A	no
SW07-PZM004	Benzo[b]fluoranthene	0.1	U	0.18	no	N/A	no
SW07-PZM004	Benzo[k]fluoranthene	0.1	U	0.18	no	N/A	no
SW07-PZM004	Beryllium	1	U	N/A	no	N/A	no

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW07-PZM004	Beryllium, Dissolve	1	U	N/A	no	N/A	no
SW07-PZM004	bis(2-Chloroethyl)ether	1	U	5.3	no	N/A	no
SW07-PZM004	bis(2-Chloroisopropyl)ether	1	U	65000	no	N/A	no
SW07-PZM004	bis(2-Ethylhexyl)phthalate	1	U	22	no	N/A	no
SW07-PZM004	Bromodichloromethane	1	U	170	no	N/A	no
SW07-PZM004	Bromoform	1	U	1400	no	N/A	no
SW07-PZM004	Bromomethane	1	U	1500	no	N/A	no
SW07-PZM004	Cadmium	0.5	J	N/A	no	8.8	no
SW07-PZM004	Cadmium, Dissolve	3	U	N/A	no	8.8	no
SW07-PZM004	Carbon tetrachloride	1	U	16	no	N/A	no
SW07-PZM004	Chlorobenzene	1	U	1600	no	N/A	no
SW07-PZM004	Chloroform	1	U	4700	no	N/A	no
SW07-PZM004	Chromium	5	U	N/A	no	N/A	no
SW07-PZM004	Chromium VI	10	U	N/A	no	50	no
SW07-PZM004	Chromium, Dissolve	0.9	B	N/A	no	N/A	no
SW07-PZM004	Chrysene	0.1	U	0.18	no	N/A	no
SW07-PZM004	Copper	2.2	B	N/A	no	3.1	no
SW07-PZM004	Copper, Dissolve	5	U	N/A	no	3.1	no
SW07-PZM004	Cyanide	10	U	140	no	1	no
SW07-PZM004	Dibenz[a,h]anthracene	0.1	U	0.18	no	N/A	no
SW07-PZM004	Dibromochloromethane	1	U	130	no	N/A	no
SW07-PZM004	Diethylphthalate	1	U	44000	no	N/A	no
SW07-PZM004	Di-n-butylphthalate	1	U	4500	no	N/A	no
SW07-PZM004	Ethylbenzene	1	U	2100	no	N/A	no
SW07-PZM004	Fluoranthene	0.1	U	140	no	N/A	no
SW07-PZM004	Fluorene	0.1	U	5300	no	N/A	no
SW07-PZM004	Hexachlorobenzene	1	U	0.0029	no	N/A	no
SW07-PZM004	Hexachlorobutadiene	1	U	180	no	N/A	no
SW07-PZM004	Hexachlorocyclopentadiene	1	U	1100	no	N/A	no
SW07-PZM004	Hexachloroethane	1	U	33	no	N/A	no
SW07-PZM004	Indeno[1,2,3-c,d]pyrene	0.1	U	0.18	no	N/A	no
SW07-PZM004	Isophorone	1	U	9600	no	N/A	no
SW07-PZM004	Lead	5	U	N/A	no	8.1	no
SW07-PZM004	Lead, Dissolve	5	U	N/A	no	8.1	no
SW07-PZM004	Mercury	0.2	U	N/A	no	0.94	no
SW07-PZM004	Mercury, Dissolve	0.2	U	N/A	no	0.94	no
SW07-PZM004	Methylene Chloride	1	U	5900	no	N/A	no
SW07-PZM004	Nickel	10	U	4600	no	8.2	no
SW07-PZM004	Nickel, Dissolve	10	U	4600	no	8.2	no
SW07-PZM004	Nitrobenzene	1	U	690	no	N/A	no
SW07-PZM004	N-Nitroso-di-n-propylamine	1	U	5.1	no	N/A	no
SW07-PZM004	N-Nitrosodiphenylamine	1	U	60	no	N/A	no
SW07-PZM004	Phenol	1	U	860000	no	N/A	no
SW07-PZM004	Pyrene	0.1	U	4000	no	N/A	no
SW07-PZM004	Selenium	8	U	4200	no	71	no
SW07-PZM004	Selenium, Dissolve	8	U	4200	no	71	no
SW07-PZM004	Silver	6	U	N/A	no	N/A	no
SW07-PZM004	Silver, Dissolve	6	U	N/A	no	N/A	no
SW07-PZM004	Tetrachloroethene	1	U	33	no	N/A	no
SW07-PZM004	Thallium	10	U	0.47	no	N/A	no
SW07-PZM004	Thallium, Dissolve	10	U	0.47	no	N/A	no
SW07-PZM004	Toluene	1	U	15000	no	N/A	no
SW07-PZM004	trans-1,2-Dichloroethene	1	U	10000	no	N/A	no
SW07-PZM004	Trichloroethene	1	U	300	no	N/A	no
SW07-PZM004	Vinyl chloride	1	U	24	no	N/A	no
SW07-PZM004	Zinc	2.2	B	26000	no	81	no
SW07-PZM004	Zinc, Dissolve	10	U	26000	no	81	no
SW07-PZM108	1,1,1-Trichloroethane	1	U	N/A	no	N/A	no
SW07-PZM108	1,1,2,2-Tetrachloroethane	1	U	40	no	N/A	no
SW07-PZM108	1,1,2-Trichloroethane	1	U	160	no	N/A	no

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW07-PZM108	1,1-Dichloroethene	1	U	7100	no	N/A	no
SW07-PZM108	1,2,4-Trichlorobenzene	1	U	70	no	N/A	no
SW07-PZM108	1,2-Dichlorobenzene	1	U	1300	no	N/A	no
SW07-PZM108	1,2-Dichloroethane	1	U	370	no	N/A	no
SW07-PZM108	1,2-Dichloropropane	1	U	150	no	N/A	no
SW07-PZM108	1,3-Dichlorobenzene	1	U	960	no	N/A	no
SW07-PZM108	1,4-Dichlorobenzene	1	U	190	no	N/A	no
SW07-PZM108	2,4,6-Trichlorophenol	1	U	24	no	N/A	no
SW07-PZM108	2,4-Dichlorophenol	1	U	290	no	N/A	no
SW07-PZM108	2,4-Dimethylphenol	1	U	850	no	N/A	no
SW07-PZM108	2,4-Dinitrophenol	2.5	U	5300	no	N/A	no
SW07-PZM108	2,4-Dinitrotoluene	1	U	0.28	no	N/A	no
SW07-PZM108	2,4-Dinitrotoluene	1	U	34	no	N/A	no
SW07-PZM108	2-Chloronaphthalene	1	U	1600	no	N/A	no
SW07-PZM108	2-Chlorophenol	1	U	150	no	N/A	no
SW07-PZM108	Acenaphthene	0.1	U	990	no	N/A	no
SW07-PZM108	Anthracene	0.014	J	40000	no	N/A	no
SW07-PZM108	Antimony	6	U	640	no	N/A	no
SW07-PZM108	Antimony, Dissolve	6	U	640	no	N/A	no
SW07-PZM108	Arsenic	5	U	1.4	no	36	no
SW07-PZM108	Arsenic, Dissolve	5	U	1.4	no	36	no
SW07-PZM108	Barium	58.5		N/A	no	N/A	no
SW07-PZM108	Barium, Dissolve	20.2		N/A	no	N/A	no
SW07-PZM108	Benzene	1	U	510	no	N/A	no
SW07-PZM108	Benzo[a]anthracene	0.072	J	0.18	no	N/A	no
SW07-PZM108	Benzo[a]pyrene	0.068	J	0.18	no	N/A	no
SW07-PZM108	Benzo[b]fluoranthene	0.085	J	0.18	no	N/A	no
SW07-PZM108	Benzo[k]fluoranthene	0.047	J	0.18	no	N/A	no
SW07-PZM108	Beryllium	1	U	N/A	no	N/A	no
SW07-PZM108	Beryllium, Dissolve	1	U	N/A	no	N/A	no
SW07-PZM108	bis(2-Chloroethyl)ether	1	U	5.3	no	N/A	no
SW07-PZM108	bis(2-Chloroisopropyl)ether	1	U	65000	no	N/A	no
SW07-PZM108	bis(2-Ethylhexyl)phthalate	1	U	22	no	N/A	no
SW07-PZM108	Bromodichloromethane	1	U	170	no	N/A	no
SW07-PZM108	Bromoform	1	U	1400	no	N/A	no
SW07-PZM108	Bromomethane	1	U	1500	no	N/A	no
SW07-PZM108	Cadmium	3	U	N/A	no	8.8	no
SW07-PZM108	Cadmium, Dissolve	3	U	N/A	no	8.8	no
SW07-PZM108	Carbon tetrachloride	1	U	16	no	N/A	no
SW07-PZM108	Chlorobenzene	1	U	1600	no	N/A	no
SW07-PZM108	Chloroform	1	U	4700	no	N/A	no
SW07-PZM108	Chromium	9.3		N/A	no	N/A	no
SW07-PZM108	Chromium VI	10	U	N/A	no	50	no
SW07-PZM108	Chromium, Dissolve	3.1	B	N/A	no	N/A	no
SW07-PZM108	Chrysene	0.055	J	0.18	no	N/A	no
SW07-PZM108	Copper	29.9		N/A	no	3.1	YES
SW07-PZM108	Copper, Dissolve	1.8	B	N/A	no	3.1	no
SW07-PZM108	Cyanide	10	U	140	no	1	no
SW07-PZM108	Dibenz[a,h]anthracene	0.1	U	0.18	no	N/A	no
SW07-PZM108	Dibromochloromethane	1	U	130	no	N/A	no
SW07-PZM108	Diethylphthalate	1	U	44000	no	N/A	no
SW07-PZM108	Di-n-butylphthalate	1	U	4500	no	N/A	no
SW07-PZM108	Ethylbenzene	1	U	2100	no	N/A	no
SW07-PZM108	Fluoranthene	0.11		140	no	N/A	no
SW07-PZM108	Fluorene	0.1	U	5300	no	N/A	no
SW07-PZM108	Hexachlorobenzene	1	U	0.0029	no	N/A	no
SW07-PZM108	Hexachlorobutadiene	1	U	180	no	N/A	no
SW07-PZM108	Hexachlorocyclopentadiene	1	U	1100	no	N/A	no
SW07-PZM108	Hexachloroethane	1	U	33	no	N/A	no
SW07-PZM108	Indeno[1,2,3-c,d]pyrene	0.051	J	0.18	no	N/A	no

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW07-PZM108	Isophorone	1	U	9600	no	N/A	no
SW07-PZM108	Lead	35.7		N/A	no	8.1	YES
SW07-PZM108	Lead, Dissolve	5	U	N/A	no	8.1	no
SW07-PZM108	Mercury	0.06	B	N/A	no	0.94	no
SW07-PZM108	Mercury, Dissolve	0.2	U	N/A	no	0.94	no
SW07-PZM108	Methylene Chloride	1	U	5900	no	N/A	no
SW07-PZM108	Nickel	7	B	4600	no	8.2	no
SW07-PZM108	Nickel, Dissolve	10	U	4600	no	8.2	no
SW07-PZM108	Nitrobenzene	1	U	690	no	N/A	no
SW07-PZM108	N-Nitroso-di-n-propylamine	1	U	5.1	no	N/A	no
SW07-PZM108	N-Nitrosodiphenylamine	1	U	60	no	N/A	no
SW07-PZM108	Phenol	1	U	860000	no	N/A	no
SW07-PZM108	Pyrene	0.11		4000	no	N/A	no
SW07-PZM108	Selenium	8	U	4200	no	71	no
SW07-PZM108	Selenium, Dissolve	8	U	4200	no	71	no
SW07-PZM108	Silver	6	U	N/A	no	N/A	no
SW07-PZM108	Silver, Dissolve	6	U	N/A	no	N/A	no
SW07-PZM108	Tetrachloroethene	1	U	33	no	N/A	no
SW07-PZM108	Thallium	10	U	0.47	no	N/A	no
SW07-PZM108	Thallium, Dissolve	10	U	0.47	no	N/A	no
SW07-PZM108	Toluene	1	U	15000	no	N/A	no
SW07-PZM108	trans-1,2-Dichloroethene	1	U	10000	no	N/A	no
SW07-PZM108	Trichloroethene	1	U	300	no	N/A	no
SW07-PZM108	Vinyl chloride	1	U	24	no	N/A	no
SW07-PZM108	Zinc	52.4		26000	no	81	no
SW07-PZM108	Zinc, Dissolve	10	U	26000	no	81	no
SW11-PZM005	1,1,1-Trichloroethane	1	U	N/A	no	N/A	no
SW11-PZM005	1,1,2,2-Tetrachloroethane	1	U	40	no	N/A	no
SW11-PZM005	1,1,2-Trichloroethane	1	U	160	no	N/A	no
SW11-PZM005	1,1-Dichloroethene	1	U	7100	no	N/A	no
SW11-PZM005	1,2,4-Trichlorobenzene	1	U	70	no	N/A	no
SW11-PZM005	1,2-Dichlorobenzene	1	U	1300	no	N/A	no
SW11-PZM005	1,2-Dichloroethane	1	U	370	no	N/A	no
SW11-PZM005	1,2-Dichloropropane	1	U	150	no	N/A	no
SW11-PZM005	1,3-Dichlorobenzene	1	U	960	no	N/A	no
SW11-PZM005	1,4-Dichlorobenzene	1	U	190	no	N/A	no
SW11-PZM005	2,4,6-Trichlorophenol	1	U	24	no	N/A	no
SW11-PZM005	2,4-Dichlorophenol	1	U	290	no	N/A	no
SW11-PZM005	2,4-Dimethylphenol	1	U	850	no	N/A	no
SW11-PZM005	2,4-Dinitrophenol	2.5	U	5300	no	N/A	no
SW11-PZM005	2,4-Dinitrotoluene	1	U	0.28	no	N/A	no
SW11-PZM005	2,4-Dinitrotoluene	1	U	34	no	N/A	no
SW11-PZM005	2-Chloronaphthalene	1	U	1600	no	N/A	no
SW11-PZM005	2-Chlorophenol	1	U	150	no	N/A	no
SW11-PZM005	Acenaphthene	0.1	U	990	no	N/A	no
SW11-PZM005	Anthracene	0.1	U	40000	no	N/A	no
SW11-PZM005	Antimony	6	U	640	no	N/A	no
SW11-PZM005	Antimony, Dissolve	6	U	640	no	N/A	no
SW11-PZM005	Arsenic	5	U	1.4	no	36	no
SW11-PZM005	Arsenic, Dissolve	5	U	1.4	no	36	no
SW11-PZM005	Barium	50.1		N/A	no	N/A	no
SW11-PZM005	Barium, Dissolve	48.8		N/A	no	N/A	no
SW11-PZM005	Benzene	1	U	510	no	N/A	no
SW11-PZM005	Benzo[a]anthracene	0.1	U	0.18	no	N/A	no
SW11-PZM005	Benzo[a]pyrene	0.1	U	0.18	no	N/A	no
SW11-PZM005	Benzo[b]fluoranthene	0.1	U	0.18	no	N/A	no
SW11-PZM005	Benzo[k]fluoranthene	0.1	U	0.18	no	N/A	no
SW11-PZM005	Beryllium	1	U	N/A	no	N/A	no
SW11-PZM005	Beryllium, Dissolve	1	U	N/A	no	N/A	no
SW11-PZM005	bis(2-Chloroethyl)ether	1	U	5.3	no	N/A	no

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW11-PZM005	bis(2-Chloroisopropyl)ether	1	U	65000	no	N/A	no
SW11-PZM005	bis(2-Ethylhexyl)phthalate	1	U	22	no	N/A	no
SW11-PZM005	Bromodichloromethane	1	U	170	no	N/A	no
SW11-PZM005	Bromoform	1	U	1400	no	N/A	no
SW11-PZM005	Bromomethane	1	U	1500	no	N/A	no
SW11-PZM005	Cadmium	0.77	B	N/A	no	8.8	no
SW11-PZM005	Cadmium, Dissolve	0.68	J	N/A	no	8.8	no
SW11-PZM005	Carbon tetrachloride	1	U	16	no	N/A	no
SW11-PZM005	Chlorobenzene	1	U	1600	no	N/A	no
SW11-PZM005	Chloroform	1	U	4700	no	N/A	no
SW11-PZM005	Chromium	3.6	B	N/A	no	N/A	no
SW11-PZM005	Chromium VI	5	J	N/A	no	50	no
SW11-PZM005	Chromium, Dissolve	3.2	B	N/A	no	N/A	no
SW11-PZM005	Chrysene	0.1	U	0.18	no	N/A	no
SW11-PZM005	Copper	3.7	B	N/A	no	3.1	YES
SW11-PZM005	Copper, Dissolve	4.2	J	N/A	no	3.1	YES
SW11-PZM005	Cyanide	10	U	140	no	1	no
SW11-PZM005	Dibenz[a,h]anthracene	0.1	U	0.18	no	N/A	no
SW11-PZM005	Dibromochloromethane	1	U	130	no	N/A	no
SW11-PZM005	Diethylphthalate	1	U	44000	no	N/A	no
SW11-PZM005	Di-n-butylphthalate	1	U	4500	no	N/A	no
SW11-PZM005	Ethylbenzene	1	U	2100	no	N/A	no
SW11-PZM005	Fluoranthene	0.1	U	140	no	N/A	no
SW11-PZM005	Fluorene	0.1	U	5300	no	N/A	no
SW11-PZM005	Hexachlorobenzene	1	U	0.0029	no	N/A	no
SW11-PZM005	Hexachlorobutadiene	1	U	180	no	N/A	no
SW11-PZM005	Hexachlorocyclopentadiene	1	U	1100	no	N/A	no
SW11-PZM005	Hexachloroethane	1	U	33	no	N/A	no
SW11-PZM005	Indeno[1,2,3-c,d]pyrene	0.1	U	0.18	no	N/A	no
SW11-PZM005	Isophorone	1	U	9600	no	N/A	no
SW11-PZM005	Lead	5	U	N/A	no	8.1	no
SW11-PZM005	Lead, Dissolve	5	U	N/A	no	8.1	no
SW11-PZM005	Mercury	0.2	U	N/A	no	0.94	no
SW11-PZM005	Mercury, Dissolve	0.2	U	N/A	no	0.94	no
SW11-PZM005	Methylene Chloride	1	U	5900	no	N/A	no
SW11-PZM005	Nickel	0.61	B	4600	no	8.2	no
SW11-PZM005	Nickel, Dissolve	1	B	4600	no	8.2	no
SW11-PZM005	Nitrobenzene	1	U	690	no	N/A	no
SW11-PZM005	N-Nitroso-di-n-propylamine	1	U	5.1	no	N/A	no
SW11-PZM005	N-Nitrosodiphenylamine	1	U	60	no	N/A	no
SW11-PZM005	Phenol	1	U	860000	no	N/A	no
SW11-PZM005	Pyrene	0.1	U	4000	no	N/A	no
SW11-PZM005	Selenium	8	U	4200	no	71	no
SW11-PZM005	Selenium, Dissolve	3.8	J	4200	no	71	no
SW11-PZM005	Silver	6	U	N/A	no	N/A	no
SW11-PZM005	Silver, Dissolve	6	U	N/A	no	N/A	no
SW11-PZM005	Tetrachloroethene	1	U	33	no	N/A	no
SW11-PZM005	Thallium	4.4	J	0.47	YES	N/A	no
SW11-PZM005	Thallium, Dissolve	10	U	0.47	no	N/A	no
SW11-PZM005	Toluene	1	U	15000	no	N/A	no
SW11-PZM005	trans-1,2-Dichloroethene	1	U	10000	no	N/A	no
SW11-PZM005	Trichloroethene	1	U	300	no	N/A	no
SW11-PZM005	Vinyl chloride	1	U	24	no	N/A	no
SW11-PZM005	Zinc	13.5		26000	no	81	no
SW11-PZM005	Zinc, Dissolve	14.8		26000	no	81	no
SW13-PZM003	1,1,1-Trichloroethane	1	U	N/A	no	N/A	no
SW13-PZM003	1,1,2,2-Tetrachloroethane	1	U	40	no	N/A	no
SW13-PZM003	1,1,2-Trichloroethane	1	U	160	no	N/A	no
SW13-PZM003	1,1-Dichloroethene	1	U	7100	no	N/A	no
SW13-PZM003	1,2,4-Trichlorobenzene	1	U	70	no	N/A	no

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW13-PZM003	1,2-Dichlorobenzene	1	U	1300	no	N/A	no
SW13-PZM003	1,2-Dichloroethane	1	U	370	no	N/A	no
SW13-PZM003	1,2-Dichloropropane	1	U	150	no	N/A	no
SW13-PZM003	1,3-Dichlorobenzene	1	U	960	no	N/A	no
SW13-PZM003	1,4-Dichlorobenzene	1	U	190	no	N/A	no
SW13-PZM003	2,4,6-Trichlorophenol	1	U	24	no	N/A	no
SW13-PZM003	2,4-Dichlorophenol	1	U	290	no	N/A	no
SW13-PZM003	2,4-Dimethylphenol	1	U	850	no	N/A	no
SW13-PZM003	2,4-Dinitrophenol	2.5	U	5300	no	N/A	no
SW13-PZM003	2,4-Dinitrotoluene	1	U	0.28	no	N/A	no
SW13-PZM003	2,4-Dinitrotoluene	1	U	34	no	N/A	no
SW13-PZM003	2-Chloronaphthalene	1	U	1600	no	N/A	no
SW13-PZM003	2-Chlorophenol	1	U	150	no	N/A	no
SW13-PZM003	Acenaphthene	0.64		990	no	N/A	no
SW13-PZM003	Anthracene	2.1		40000	no	N/A	no
SW13-PZM003	Antimony	6	U	640	no	N/A	no
SW13-PZM003	Antimony, Dissolve	6	U	640	no	N/A	no
SW13-PZM003	Arsenic	5	U	1.4	no	36	no
SW13-PZM003	Arsenic, Dissolve	5	U	1.4	no	36	no
SW13-PZM003	Barium	64.2		N/A	no	N/A	no
SW13-PZM003	Barium, Dissolve	65.7		N/A	no	N/A	no
SW13-PZM003	Benzene	20.4		510	no	N/A	no
SW13-PZM003	Benzo[a]anthracene	0.33		0.18	YES	N/A	no
SW13-PZM003	Benzo[a]pyrene	0.04	J	0.18	no	N/A	no
SW13-PZM003	Benzo[b]fluoranthene	0.11		0.18	no	N/A	no
SW13-PZM003	Benzo[k]fluoranthene	0.11		0.18	no	N/A	no
SW13-PZM003	Beryllium	1	U	N/A	no	N/A	no
SW13-PZM003	Beryllium, Dissolve	1	U	N/A	no	N/A	no
SW13-PZM003	bis(2-Chloroethyl)ether	1	U	5.3	no	N/A	no
SW13-PZM003	bis(2-Chloroisopropyl)ether	1	U	65000	no	N/A	no
SW13-PZM003	bis(2-Ethylhexyl)phthalate	1	U	22	no	N/A	no
SW13-PZM003	Bromodichloromethane	1	U	170	no	N/A	no
SW13-PZM003	Bromoform	1	U	1400	no	N/A	no
SW13-PZM003	Bromomethane	1	U	1500	no	N/A	no
SW13-PZM003	Cadmium	3	U	N/A	no	8.8	no
SW13-PZM003	Cadmium, Dissolve	3	U	N/A	no	8.8	no
SW13-PZM003	Carbon tetrachloride	1	U	16	no	N/A	no
SW13-PZM003	Chlorobenzene	1	U	1600	no	N/A	no
SW13-PZM003	Chloroform	2.2		4700	no	N/A	no
SW13-PZM003	Chromium	5	U	N/A	no	N/A	no
SW13-PZM003	Chromium VI	10	U	N/A	no	50	no
SW13-PZM003	Chromium, Dissolve	5	U	N/A	no	N/A	no
SW13-PZM003	Chrysene	0.29		0.18	YES	N/A	no
SW13-PZM003	Copper	5	U	N/A	no	3.1	no
SW13-PZM003	Copper, Dissolve	5	U	N/A	no	3.1	no
SW13-PZM003	Cyanide	9.9	J	140	no	1	YES
SW13-PZM003	Dibenz[a,h]anthracene	0.1	U	0.18	no	N/A	no
SW13-PZM003	Dibromochloromethane	1	U	130	no	N/A	no
SW13-PZM003	Diethylphthalate	1	U	44000	no	N/A	no
SW13-PZM003	Di-n-butylphthalate	1	U	4500	no	N/A	no
SW13-PZM003	Ethylbenzene	2		2100	no	N/A	no
SW13-PZM003	Fluoranthene	3.5		140	no	N/A	no
SW13-PZM003	Fluorene	2.5		5300	no	N/A	no
SW13-PZM003	Hexachlorobenzene	1	U	0.0029	no	N/A	no
SW13-PZM003	Hexachlorobutadiene	1	U	180	no	N/A	no
SW13-PZM003	Hexachlorocyclopentadiene	1	U	1100	no	N/A	no
SW13-PZM003	Hexachloroethane	1	U	33	no	N/A	no
SW13-PZM003	Indeno[1,2,3-c,d]pyrene	0.1	U	0.18	no	N/A	no
SW13-PZM003	Isophorone	1	U	9600	no	N/A	no
SW13-PZM003	Lead	5	U	N/A	no	8.1	no

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW13-PZM003	Lead, Dissolve	5	U	N/A	no	8.1	no
SW13-PZM003	Mercury	0.2	U	N/A	no	0.94	no
SW13-PZM003	Mercury, Dissolve	0.2	U	N/A	no	0.94	no
SW13-PZM003	Methylene Chloride	1	U	5900	no	N/A	no
SW13-PZM003	Nickel	10	U	4600	no	8.2	no
SW13-PZM003	Nickel, Dissolve	10	U	4600	no	8.2	no
SW13-PZM003	Nitrobenzene	1	U	690	no	N/A	no
SW13-PZM003	N-Nitroso-di-n-propylamine	1	U	5.1	no	N/A	no
SW13-PZM003	N-Nitrosodiphenylamine	1	U	60	no	N/A	no
SW13-PZM003	Phenol	0.27	J	860000	no	N/A	no
SW13-PZM003	Pyrene	2.4		4000	no	N/A	no
SW13-PZM003	Selenium	6	J	4200	no	71	no
SW13-PZM003	Selenium, Dissolve	8	U	4200	no	71	no
SW13-PZM003	Silver	6	U	N/A	no	N/A	no
SW13-PZM003	Silver, Dissolve	6	U	N/A	no	N/A	no
SW13-PZM003	Tetrachloroethene	1	U	33	no	N/A	no
SW13-PZM003	Thallium	10	U	0.47	no	N/A	no
SW13-PZM003	Thallium, Dissolve	10	U	0.47	no	N/A	no
SW13-PZM003	Toluene	35.6		15000	no	N/A	no
SW13-PZM003	trans-1,2-Dichloroethene	1	U	10000	no	N/A	no
SW13-PZM003	Trichloroethene	1	U	300	no	N/A	no
SW13-PZM003	Vinyl chloride	1	U	24	no	N/A	no
SW13-PZM003	Zinc	0.72	B	26000	no	81	no
SW13-PZM003	Zinc, Dissolve	1.3	B	26000	no	81	no
SW13-PZM025	1,1,1-Trichloroethane	1	U	N/A	no	N/A	no
SW13-PZM025	1,1,2,2-Tetrachloroethane	1	U	40	no	N/A	no
SW13-PZM025	1,1,2-Trichloroethane	1	U	160	no	N/A	no
SW13-PZM025	1,1-Dichloroethene	1	U	7100	no	N/A	no
SW13-PZM025	1,2,4-Trichlorobenzene	1	U	70	no	N/A	no
SW13-PZM025	1,2-Dichlorobenzene	1	U	1300	no	N/A	no
SW13-PZM025	1,2-Dichloroethane	1	U	370	no	N/A	no
SW13-PZM025	1,2-Dichloropropane	1	U	150	no	N/A	no
SW13-PZM025	1,3-Dichlorobenzene	1	U	960	no	N/A	no
SW13-PZM025	1,4-Dichlorobenzene	1	U	190	no	N/A	no
SW13-PZM025	2,4,6-Trichlorophenol	1	U	24	no	N/A	no
SW13-PZM025	2,4-Dichlorophenol	1	U	290	no	N/A	no
SW13-PZM025	2,4-Dimethylphenol	1	U	850	no	N/A	no
SW13-PZM025	2,4-Dinitrophenol	2.5	U	5300	no	N/A	no
SW13-PZM025	2,4-Dinitrotoluene	1	U	0.28	no	N/A	no
SW13-PZM025	2,4-Dinitrotoluene	1	U	34	no	N/A	no
SW13-PZM025	2-Chloronaphthalene	1	U	1600	no	N/A	no
SW13-PZM025	2-Chlorophenol	1	U	150	no	N/A	no
SW13-PZM025	Acenaphthene	0.1	U	990	no	N/A	no
SW13-PZM025	Anthracene	0.1	U	40000	no	N/A	no
SW13-PZM025	Antimony	6	U	640	no	N/A	no
SW13-PZM025	Antimony, Dissolve	6	U	640	no	N/A	no
SW13-PZM025	Arsenic	7.7		1.4	YES	36	no
SW13-PZM025	Arsenic, Dissolve	7.8		1.4	YES	36	no
SW13-PZM025	Barium	123		N/A	no	N/A	no
SW13-PZM025	Barium, Dissolve	121		N/A	no	N/A	no
SW13-PZM025	Benzene	1	U	510	no	N/A	no
SW13-PZM025	Benzo[a]anthracene	0.1	U	0.18	no	N/A	no
SW13-PZM025	Benzo[a]pyrene	0.1	U	0.18	no	N/A	no
SW13-PZM025	Benzo[b]fluoranthene	0.1	U	0.18	no	N/A	no
SW13-PZM025	Benzo[k]fluoranthene	0.1	U	0.18	no	N/A	no
SW13-PZM025	Beryllium	1	U	N/A	no	N/A	no
SW13-PZM025	Beryllium, Dissolve	1	U	N/A	no	N/A	no
SW13-PZM025	bis(2-Chloroethyl)ether	1	U	5.3	no	N/A	no
SW13-PZM025	bis(2-Chloroisopropyl)ether	1	U	65000	no	N/A	no
SW13-PZM025	bis(2-Ethylhexyl)phthalate	1	UJ	22	no	N/A	no

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW13-PZM025	Bromodichloromethane	1	U	170	no	N/A	no
SW13-PZM025	Bromoform	1	U	1400	no	N/A	no
SW13-PZM025	Bromomethane	1	U	1500	no	N/A	no
SW13-PZM025	Cadmium	0.81	J	N/A	no	8.8	no
SW13-PZM025	Cadmium, Dissolve	0.62	B	N/A	no	8.8	no
SW13-PZM025	Carbon tetrachloride	1	U	16	no	N/A	no
SW13-PZM025	Chlorobenzene	1	U	1600	no	N/A	no
SW13-PZM025	Chloroform	1	U	4700	no	N/A	no
SW13-PZM025	Chromium	0.98	B	N/A	no	N/A	no
SW13-PZM025	Chromium VI	10	U	N/A	no	50	no
SW13-PZM025	Chromium, Dissolve	5	U	N/A	no	N/A	no
SW13-PZM025	Chrysene	0.1	U	0.18	no	N/A	no
SW13-PZM025	Copper	2.1	J	N/A	no	3.1	no
SW13-PZM025	Copper, Dissolve	1.6	J	N/A	no	3.1	no
SW13-PZM025	Cyanide	10	U	140	no	1	no
SW13-PZM025	Dibenz[a,h]anthracene	0.1	U	0.18	no	N/A	no
SW13-PZM025	Dibromochloromethane	1	U	130	no	N/A	no
SW13-PZM025	Diethylphthalate	1	U	44000	no	N/A	no
SW13-PZM025	Di-n-butylphthalate	0.1	J	4500	no	N/A	no
SW13-PZM025	Ethylbenzene	1	U	2100	no	N/A	no
SW13-PZM025	Fluoranthene	0.1	U	140	no	N/A	no
SW13-PZM025	Fluorene	0.1	U	5300	no	N/A	no
SW13-PZM025	Hexachlorobenzene	1	U	0.0029	no	N/A	no
SW13-PZM025	Hexachlorobutadiene	1	U	180	no	N/A	no
SW13-PZM025	Hexachlorocyclopentadiene	1	U	1100	no	N/A	no
SW13-PZM025	Hexachloroethane	1	U	33	no	N/A	no
SW13-PZM025	Indeno[1,2,3-c,d]pyrene	0.1	U	0.18	no	N/A	no
SW13-PZM025	Isophorone	1	U	9600	no	N/A	no
SW13-PZM025	Lead	5	U	N/A	no	8.1	no
SW13-PZM025	Lead, Dissolve	5	U	N/A	no	8.1	no
SW13-PZM025	Mercury	0.2	U	N/A	no	0.94	no
SW13-PZM025	Mercury, Dissolve	0.2	U	N/A	no	0.94	no
SW13-PZM025	Methylene Chloride	1	U	5900	no	N/A	no
SW13-PZM025	Nickel	3.3	B	4600	no	8.2	no
SW13-PZM025	Nickel, Dissolve	3.3	B	4600	no	8.2	no
SW13-PZM025	Nitrobenzene	1	U	690	no	N/A	no
SW13-PZM025	N-Nitroso-di-n-propylamine	1	U	5.1	no	N/A	no
SW13-PZM025	N-Nitrosodiphenylamine	1	U	60	no	N/A	no
SW13-PZM025	Phenol	1	U	860000	no	N/A	no
SW13-PZM025	Pyrene	0.1	U	4000	no	N/A	no
SW13-PZM025	Selenium	8	U	4200	no	71	no
SW13-PZM025	Selenium, Dissolve	8	U	4200	no	71	no
SW13-PZM025	Silver	6	U	N/A	no	N/A	no
SW13-PZM025	Silver, Dissolve	6	U	N/A	no	N/A	no
SW13-PZM025	Tetrachloroethene	1	U	33	no	N/A	no
SW13-PZM025	Thallium	10	U	0.47	no	N/A	no
SW13-PZM025	Thallium, Dissolve	10	U	0.47	no	N/A	no
SW13-PZM025	Toluene	1	U	15000	no	N/A	no
SW13-PZM025	trans-1,2-Dichloroethene	1	U	10000	no	N/A	no
SW13-PZM025	Trichloroethene	1	U	300	no	N/A	no
SW13-PZM025	Vinyl chloride	1	U	24	no	N/A	no
SW13-PZM025	Zinc	10	U	26000	no	81	no
SW13-PZM025	Zinc, Dissolve	1.8	B	26000	no	81	no
SW13-PZM111	1,1,1-Trichloroethane	1	U	N/A	no	N/A	no
SW13-PZM111	1,1,2,2-Tetrachloroethane	1	U	40	no	N/A	no
SW13-PZM111	1,1,2-Trichloroethane	1	U	160	no	N/A	no
SW13-PZM111	1,1-Dichloroethene	1	U	7100	no	N/A	no
SW13-PZM111	1,2,4-Trichlorobenzene	1	U	70	no	N/A	no
SW13-PZM111	1,2-Dichlorobenzene	1	U	1300	no	N/A	no
SW13-PZM111	1,2-Dichloroethane	1	U	370	no	N/A	no

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW13-PZM111	1,2-Dichloropropane	1	U	150	no	N/A	no
SW13-PZM111	1,3-Dichlorobenzene	1	U	960	no	N/A	no
SW13-PZM111	1,4-Dichlorobenzene	1	U	190	no	N/A	no
SW13-PZM111	2,4,6-Trichlorophenol	1	U	24	no	N/A	no
SW13-PZM111	2,4-Dichlorophenol	1	U	290	no	N/A	no
SW13-PZM111	2,4-Dimethylphenol	1	U	850	no	N/A	no
SW13-PZM111	2,4-Dinitrophenol	2.5	U	5300	no	N/A	no
SW13-PZM111	2,4-Dinitrotoluene	1	U	0.28	no	N/A	no
SW13-PZM111	2,4-Dinitrotoluene	1	U	34	no	N/A	no
SW13-PZM111	2-Chloronaphthalene	1	U	1600	no	N/A	no
SW13-PZM111	2-Chlorophenol	1	U	150	no	N/A	no
SW13-PZM111	Acenaphthene	0.071	J	990	no	N/A	no
SW13-PZM111	Anthracene	0.027	J	40000	no	N/A	no
SW13-PZM111	Antimony	6	U	640	no	N/A	no
SW13-PZM111	Antimony, Dissolve	6	U	640	no	N/A	no
SW13-PZM111	Arsenic	5	U	1.4	no	36	no
SW13-PZM111	Arsenic, Dissolve	5	U	1.4	no	36	no
SW13-PZM111	Barium	70.7		N/A	no	N/A	no
SW13-PZM111	Barium, Dissolve	52.5		N/A	no	N/A	no
SW13-PZM111	Benzene	1	U	510	no	N/A	no
SW13-PZM111	Benzo[a]anthracene	0.1	U	0.18	no	N/A	no
SW13-PZM111	Benzo[a]pyrene	0.1	U	0.18	no	N/A	no
SW13-PZM111	Benzo[b]fluoranthene	0.1	U	0.18	no	N/A	no
SW13-PZM111	Benzo[k]fluoranthene	0.1	U	0.18	no	N/A	no
SW13-PZM111	Beryllium	1		N/A	no	N/A	no
SW13-PZM111	Beryllium, Dissolve	0.63	B	N/A	no	N/A	no
SW13-PZM111	bis(2-Chloroethyl)ether	1	U	5.3	no	N/A	no
SW13-PZM111	bis(2-Chloroisopropyl)ether	1	U	65000	no	N/A	no
SW13-PZM111	bis(2-Ethylhexyl)phthalate	1.1		22	no	N/A	no
SW13-PZM111	Bromodichloromethane	1	U	170	no	N/A	no
SW13-PZM111	Bromoform	1	U	1400	no	N/A	no
SW13-PZM111	Bromomethane	1	U	1500	no	N/A	no
SW13-PZM111	Cadmium	3	U	N/A	no	8.8	no
SW13-PZM111	Cadmium, Dissolve	0.66	J	N/A	no	8.8	no
SW13-PZM111	Carbon tetrachloride	1	U	16	no	N/A	no
SW13-PZM111	Chlorobenzene	1	U	1600	no	N/A	no
SW13-PZM111	Chloroform	1	U	4700	no	N/A	no
SW13-PZM111	Chromium	17.4		N/A	no	N/A	no
SW13-PZM111	Chromium VI	10	U	N/A	no	50	no
SW13-PZM111	Chromium, Dissolve	0.91	B	N/A	no	N/A	no
SW13-PZM111	Chrysene	0.1	U	0.18	no	N/A	no
SW13-PZM111	Copper	11.5		N/A	no	3.1	YES
SW13-PZM111	Copper, Dissolve	2.5	B	N/A	no	3.1	no
SW13-PZM111	Cyanide	10	U	140	no	1	no
SW13-PZM111	Dibenz[a,h]anthracene	0.1	U	0.18	no	N/A	no
SW13-PZM111	Dibromochloromethane	1	U	130	no	N/A	no
SW13-PZM111	Diethylphthalate	1	U	44000	no	N/A	no
SW13-PZM111	Di-n-butylphthalate	1	U	4500	no	N/A	no
SW13-PZM111	Ethylbenzene	1	U	2100	no	N/A	no
SW13-PZM111	Fluoranthene	0.04	J	140	no	N/A	no
SW13-PZM111	Fluorene	0.082	J	5300	no	N/A	no
SW13-PZM111	Hexachlorobenzene	1	U	0.0029	no	N/A	no
SW13-PZM111	Hexachlorobutadiene	1	U	180	no	N/A	no
SW13-PZM111	Hexachlorocyclopentadiene	1	U	1100	no	N/A	no
SW13-PZM111	Hexachloroethane	1	U	33	no	N/A	no
SW13-PZM111	Indeno[1,2,3-c,d]pyrene	0.1	U	0.18	no	N/A	no
SW13-PZM111	Isophorone	1	U	9600	no	N/A	no
SW13-PZM111	Lead	5	U	N/A	no	8.1	no
SW13-PZM111	Lead, Dissolve	5	U	N/A	no	8.1	no
SW13-PZM111	Mercury	0.06	B	N/A	no	0.94	no

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW13-PZM111	Mercury, Dissolve	0.2	U	N/A	no	0.94	no
SW13-PZM111	Methylene Chloride	1	U	5900	no	N/A	no
SW13-PZM111	Nickel	12.6	J	4600	no	8.2	YES
SW13-PZM111	Nickel, Dissolve	9	B	4600	no	8.2	YES
SW13-PZM111	Nitrobenzene	1	U	690	no	N/A	no
SW13-PZM111	N-Nitroso-di-n-propylamine	1	U	5.1	no	N/A	no
SW13-PZM111	N-Nitrosodiphenylamine	1	U	60	no	N/A	no
SW13-PZM111	Phenol	1	U	860000	no	N/A	no
SW13-PZM111	Pyrene	0.029	J	4000	no	N/A	no
SW13-PZM111	Selenium	8	U	4200	no	71	no
SW13-PZM111	Selenium, Dissolve	8	U	4200	no	71	no
SW13-PZM111	Silver	6	U	N/A	no	N/A	no
SW13-PZM111	Silver, Dissolve	6	U	N/A	no	N/A	no
SW13-PZM111	Tetrachloroethene	1	U	33	no	N/A	no
SW13-PZM111	Thallium	3.4	B	0.47	YES	N/A	no
SW13-PZM111	Thallium, Dissolve	10	U	0.47	no	N/A	no
SW13-PZM111	Toluene	1	U	15000	no	N/A	no
SW13-PZM111	trans-1,2-Dichloroethene	1	U	10000	no	N/A	no
SW13-PZM111	Trichloroethene	1	U	300	no	N/A	no
SW13-PZM111	Vinyl chloride	1	U	24	no	N/A	no
SW13-PZM111	Zinc	48.1		26000	no	81	no
SW13-PZM111	Zinc, Dissolve	24.6	J	26000	no	81	no
SW14-PZM004	1,1,1-Trichloroethane	1	U	N/A	no	N/A	no
SW14-PZM004	1,1,2,2-Tetrachloroethane	1	U	40	no	N/A	no
SW14-PZM004	1,1,2-Trichloroethane	1	U	160	no	N/A	no
SW14-PZM004	1,1-Dichloroethene	1	U	7100	no	N/A	no
SW14-PZM004	1,2,4-Trichlorobenzene	1	U	70	no	N/A	no
SW14-PZM004	1,2-Dichlorobenzene	1	U	1300	no	N/A	no
SW14-PZM004	1,2-Dichloroethane	1	U	370	no	N/A	no
SW14-PZM004	1,2-Dichloropropane	1	U	150	no	N/A	no
SW14-PZM004	1,3-Dichlorobenzene	1	U	960	no	N/A	no
SW14-PZM004	1,4-Dichlorobenzene	1	U	190	no	N/A	no
SW14-PZM004	2,4,6-Trichlorophenol	1	U	24	no	N/A	no
SW14-PZM004	2,4-Dichlorophenol	1	U	290	no	N/A	no
SW14-PZM004	2,4-Dimethylphenol	1	U	850	no	N/A	no
SW14-PZM004	2,4-Dinitrophenol	2.6	U	5300	no	N/A	no
SW14-PZM004	2,4-Dinitrotoluene	1	U	0.28	no	N/A	no
SW14-PZM004	2,4-Dinitrotoluene	1	U	34	no	N/A	no
SW14-PZM004	2-Chloronaphthalene	1	U	1600	no	N/A	no
SW14-PZM004	2-Chlorophenol	1	U	150	no	N/A	no
SW14-PZM004	Acenaphthene	25.7		990	no	N/A	no
SW14-PZM004	Anthracene	3.4		40000	no	N/A	no
SW14-PZM004	Antimony	6	U	640	no	N/A	no
SW14-PZM004	Antimony, Dissolve	6	U	640	no	N/A	no
SW14-PZM004	Arsenic	3.3	J	1.4	YES	36	no
SW14-PZM004	Arsenic, Dissolve	4.7	J	1.4	YES	36	no
SW14-PZM004	Barium	162		N/A	no	N/A	no
SW14-PZM004	Barium, Dissolve	164		N/A	no	N/A	no
SW14-PZM004	Benzene	1	U	510	no	N/A	no
SW14-PZM004	Benzo[a]anthracene	0.33		0.18	YES	N/A	no
SW14-PZM004	Benzo[a]pyrene	0.035	J	0.18	no	N/A	no
SW14-PZM004	Benzo[b]fluoranthene	0.089	J	0.18	no	N/A	no
SW14-PZM004	Benzo[k]fluoranthene	0.088	J	0.18	no	N/A	no
SW14-PZM004	Beryllium	1	U	N/A	no	N/A	no
SW14-PZM004	Beryllium, Dissolve	1	U	N/A	no	N/A	no
SW14-PZM004	bis(2-Chloroethyl)ether	1	U	5.3	no	N/A	no
SW14-PZM004	bis(2-Chloroisopropyl)ether	1	U	65000	no	N/A	no
SW14-PZM004	bis(2-Ethylhexyl)phthalate	1	U	22	no	N/A	no
SW14-PZM004	Bromodichloromethane	1	U	170	no	N/A	no
SW14-PZM004	Bromoform	1	U	1400	no	N/A	no

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
SW14-PZM004	Bromomethane	1	U	1500	no	N/A	no
SW14-PZM004	Cadmium	3	U	N/A	no	8.8	no
SW14-PZM004	Cadmium, Dissolve	3	U	N/A	no	8.8	no
SW14-PZM004	Carbon tetrachloride	1	U	16	no	N/A	no
SW14-PZM004	Chlorobenzene	1	U	1600	no	N/A	no
SW14-PZM004	Chloroform	1	U	4700	no	N/A	no
SW14-PZM004	Chromium	1.1	J	N/A	no	N/A	no
SW14-PZM004	Chromium VI	10	U	N/A	no	50	no
SW14-PZM004	Chromium, Dissolve	1.7	B	N/A	no	N/A	no
SW14-PZM004	Chrysene	0.23		0.18	YES	N/A	no
SW14-PZM004	Copper	2.1	B	N/A	no	3.1	no
SW14-PZM004	Copper, Dissolve	5	U	N/A	no	3.1	no
SW14-PZM004	Cyanide	10	U	140	no	1	no
SW14-PZM004	Dibenz[a,h]anthracene	0.1	U	0.18	no	N/A	no
SW14-PZM004	Dibromochloromethane	1	U	130	no	N/A	no
SW14-PZM004	Diethylphthalate	1	U	44000	no	N/A	no
SW14-PZM004	Di-n-butylphthalate	1	U	4500	no	N/A	no
SW14-PZM004	Ethylbenzene	1	U	2100	no	N/A	no
SW14-PZM004	Fluoranthene	6.8	J	140	no	N/A	no
SW14-PZM004	Fluorene	11.4		5300	no	N/A	no
SW14-PZM004	Hexachlorobenzene	1	U	0.0029	no	N/A	no
SW14-PZM004	Hexachlorobutadiene	1	U	180	no	N/A	no
SW14-PZM004	Hexachlorocyclopentadiene	1	U	1100	no	N/A	no
SW14-PZM004	Hexachloroethane	1	U	33	no	N/A	no
SW14-PZM004	Indeno[1,2,3-c,d]pyrene	0.1	U	0.18	no	N/A	no
SW14-PZM004	Isophorone	1	U	9600	no	N/A	no
SW14-PZM004	Lead	5	U	N/A	no	8.1	no
SW14-PZM004	Lead, Dissolve	5	U	N/A	no	8.1	no
SW14-PZM004	Mercury	0.2	U	N/A	no	0.94	no
SW14-PZM004	Mercury, Dissolve	0.2	U	N/A	no	0.94	no
SW14-PZM004	Methylene Chloride	1	U	5900	no	N/A	no
SW14-PZM004	Nickel	3	J	4600	no	8.2	no
SW14-PZM004	Nickel, Dissolve	3.1	B	4600	no	8.2	no
SW14-PZM004	Nitrobenzene	1	U	690	no	N/A	no
SW14-PZM004	N-Nitroso-di-n-propylamine	1	U	5.1	no	N/A	no
SW14-PZM004	N-Nitrosodiphenylamine	1	U	60	no	N/A	no
SW14-PZM004	Phenol	0.26	J	860000	no	N/A	no
SW14-PZM004	Pyrene	4.2	J	4000	no	N/A	no
SW14-PZM004	Selenium	8	U	4200	no	71	no
SW14-PZM004	Selenium, Dissolve	8	U	4200	no	71	no
SW14-PZM004	Silver	6	U	N/A	no	N/A	no
SW14-PZM004	Silver, Dissolve	6	U	N/A	no	N/A	no
SW14-PZM004	Tetrachloroethene	1	UJ	33	no	N/A	no
SW14-PZM004	Thallium	5.9	J	0.47	YES	N/A	no
SW14-PZM004	Thallium, Dissolve	10	U	0.47	no	N/A	no
SW14-PZM004	Toluene	1	U	15000	no	N/A	no
SW14-PZM004	trans-1,2-Dichloroethene	1	U	10000	no	N/A	no
SW14-PZM004	Trichloroethene	1	U	300	no	N/A	no
SW14-PZM004	Vinyl chloride	1	U	24	no	N/A	no
SW14-PZM004	Zinc	10	U	26000	no	81	no
SW14-PZM004	Zinc, Dissolve	0.64	J	26000	no	81	no
TS10-PDM008	1,1,1-Trichloroethane	1	U	N/A	no	N/A	no
TS10-PDM008	1,1,2,2-Tetrachloroethane	1	U	40	no	N/A	no
TS10-PDM008	1,1,2-Trichloroethane	1	U	160	no	N/A	no
TS10-PDM008	1,1-Dichloroethene	1	U	7100	no	N/A	no
TS10-PDM008	1,2,4-Trichlorobenzene	1	U	70	no	N/A	no
TS10-PDM008	1,2-Dichlorobenzene	1	U	1300	no	N/A	no
TS10-PDM008	1,2-Dichloroethane	1	U	370	no	N/A	no
TS10-PDM008	1,2-Dichloropropane	1	U	150	no	N/A	no
TS10-PDM008	1,3-Dichlorobenzene	1	U	960	no	N/A	no

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
TS10-PDM008	1,4-Dichlorobenzene	1	U	190	no	N/A	no
TS10-PDM008	2,4,6-Trichlorophenol	1	U	24	no	N/A	no
TS10-PDM008	2,4-Dichlorophenol	1	U	290	no	N/A	no
TS10-PDM008	2,4-Dimethylphenol	1	U	850	no	N/A	no
TS10-PDM008	2,4-Dinitrophenol	2.6	UJ	5300	no	N/A	no
TS10-PDM008	2,4-Dinitrotoluene	1	U	0.28	no	N/A	no
TS10-PDM008	2,4-Dinitrotoluene	1	U	34	no	N/A	no
TS10-PDM008	2-Chloronaphthalene	1	U	1600	no	N/A	no
TS10-PDM008	2-Chlorophenol	1	U	150	no	N/A	no
TS10-PDM008	Acenaphthene	0.1	U	990	no	N/A	no
TS10-PDM008	Anthracene	0.1	U	40000	no	N/A	no
TS10-PDM008	Antimony	6	U	640	no	N/A	no
TS10-PDM008	Antimony, Dissolve	6	U	640	no	N/A	no
TS10-PDM008	Arsenic	5	U	1.4	no	36	no
TS10-PDM008	Arsenic, Dissolve	5	U	1.4	no	36	no
TS10-PDM008	Barium	47.8		N/A	no	N/A	no
TS10-PDM008	Barium, Dissolve	51.6		N/A	no	N/A	no
TS10-PDM008	Benzene	1	U	510	no	N/A	no
TS10-PDM008	Benzo[a]anthracene	0.1	U	0.18	no	N/A	no
TS10-PDM008	Benzo[a]pyrene	0.1	U	0.18	no	N/A	no
TS10-PDM008	Benzo[b]fluoranthene	0.1	U	0.18	no	N/A	no
TS10-PDM008	Benzo[k]fluoranthene	0.1	U	0.18	no	N/A	no
TS10-PDM008	Beryllium	1	U	N/A	no	N/A	no
TS10-PDM008	Beryllium, Dissolve	1	U	N/A	no	N/A	no
TS10-PDM008	bis(2-Chloroethyl)ether	1	U	5.3	no	N/A	no
TS10-PDM008	bis(2-Chloroisopropyl)ether	1	U	65000	no	N/A	no
TS10-PDM008	bis(2-Ethylhexyl)phthalate	1	U	22	no	N/A	no
TS10-PDM008	Bromodichloromethane	1	U	170	no	N/A	no
TS10-PDM008	Bromoform	1	UJ	1400	no	N/A	no
TS10-PDM008	Bromomethane	1	UJ	1500	no	N/A	no
TS10-PDM008	Cadmium	0.49	J	N/A	no	8.8	no
TS10-PDM008	Cadmium, Dissolve	3	U	N/A	no	8.8	no
TS10-PDM008	Carbon tetrachloride	1	U	16	no	N/A	no
TS10-PDM008	Chlorobenzene	1	U	1600	no	N/A	no
TS10-PDM008	Chloroform	1	U	4700	no	N/A	no
TS10-PDM008	Chromium	1.1	B	N/A	no	N/A	no
TS10-PDM008	Chromium VI	10	U	N/A	no	50	no
TS10-PDM008	Chromium, Dissolve	1.1	B	N/A	no	N/A	no
TS10-PDM008	Chrysene	0.1	U	0.18	no	N/A	no
TS10-PDM008	Copper	2.9	B	N/A	no	3.1	no
TS10-PDM008	Copper, Dissolve	1.5	B	N/A	no	3.1	no
TS10-PDM008	Cyanide	10	U	140	no	1	no
TS10-PDM008	Dibenz[a,h]anthracene	0.1	U	0.18	no	N/A	no
TS10-PDM008	Dibromochloromethane	1	U	130	no	N/A	no
TS10-PDM008	Diethylphthalate	1	U	44000	no	N/A	no
TS10-PDM008	Di-n-butylphthalate	1	U	4500	no	N/A	no
TS10-PDM008	Ethylbenzene	1	U	2100	no	N/A	no
TS10-PDM008	Fluoranthene	0.1	U	140	no	N/A	no
TS10-PDM008	Fluorene	0.1	U	5300	no	N/A	no
TS10-PDM008	Hexachlorobenzene	1	U	0.0029	no	N/A	no
TS10-PDM008	Hexachlorobutadiene	1	U	180	no	N/A	no
TS10-PDM008	Hexachlorocyclopentadiene	1	U	1100	no	N/A	no
TS10-PDM008	Hexachloroethane	1	U	33	no	N/A	no
TS10-PDM008	Indeno[1,2,3-c,d]pyrene	0.1	U	0.18	no	N/A	no
TS10-PDM008	Isophorone	1	U	9600	no	N/A	no
TS10-PDM008	Lead	5	U	N/A	no	8.1	no
TS10-PDM008	Lead, Dissolve	5	U	N/A	no	8.1	no
TS10-PDM008	Mercury	0.08	B	N/A	no	0.94	no
TS10-PDM008	Mercury, Dissolve	0.2	U	N/A	no	0.94	no
TS10-PDM008	Methylene Chloride	1	U	5900	no	N/A	no

AMBIENT WATER QUALITY CRITERIA COMPARISON (DETAIL)

Sample Location	Parameter	Result (ug/L)	Final Flag	Comsumption of Organism Only (ug/L)	Exceeds Consumption of Organism Only	Salt Water Chronic (ug/L)	Exceeds Salt Water Chronic
TS10-PDM008	Nickel	1.6	B	4600	no	8.2	no
TS10-PDM008	Nickel, Dissolve	1.6	B	4600	no	8.2	no
TS10-PDM008	Nitrobenzene	1	U	690	no	N/A	no
TS10-PDM008	N-Nitroso-di-n-propylamine	1	U	5.1	no	N/A	no
TS10-PDM008	N-Nitrosodiphenylamine	1	U	60	no	N/A	no
TS10-PDM008	Phenol	1	U	860000	no	N/A	no
TS10-PDM008	Pyrene	0.1	U	4000	no	N/A	no
TS10-PDM008	Selenium	8	U	4200	no	71	no
TS10-PDM008	Selenium, Dissolve	8	U	4200	no	71	no
TS10-PDM008	Silver	6	U	N/A	no	N/A	no
TS10-PDM008	Silver, Dissolve	6	U	N/A	no	N/A	no
TS10-PDM008	Tetrachloroethene	1	U	33	no	N/A	no
TS10-PDM008	Thallium	10	U	0.47	no	N/A	no
TS10-PDM008	Thallium, Dissolve	10	U	0.47	no	N/A	no
TS10-PDM008	Toluene	1	U	15000	no	N/A	no
TS10-PDM008	trans-1,2-Dichloroethene	1	U	10000	no	N/A	no
TS10-PDM008	Trichloroethene	1	U	300	no	N/A	no
TS10-PDM008	Vinyl chloride	1	U	24	no	N/A	no
TS10-PDM008	Zinc	10	U	26000	no	81	no
TS10-PDM008	Zinc, Dissolve	10	U	26000	no	81	no

NA indicates no criteria
Yellow highlight indicates criteria exceedance
J qualifier indicates the positive result reported for the analyte is a quantitative estimate
B qualifier indicates the analyte was not detected substantially above the level of the associated method or field blank
U qualifier indicates the analyte was not detected and the result represent the sample quantitation limit
UJ qualifier indicates the analyte was not detected and the quantitation limit may be higher than reported

APPENDIX K

QA/QC Tracking Log

Date:	Sample IDs		
12/8/2015	1)	SW15-PZM005	
12/9/2015	2)	SW16-PZM003	
	3)	SW13-PZM111	
	4)	SW07-PZM108	
	5)	SG07-PDM008	
12/10/2015	6)	SW-046-MWS	
	7)	SW09-PZM004	Duplicate: SW16-PZM003
	8)	SW10-PZM012	Date: 12/9/2015
	9)	FM01-PZM003	MS/MSD: SW-047-MWS
	10)	TS10-PDM008	Date: 12/14/2015
12/11/2015	11)	SW15-PZM085	Field Blank:
	12)	SW07-PZM004	Date: 12/14/2015
12/14/2015	13)	SW-047-MWS	
	14)	SW-043-MWS	
1/19/2016	15)	SW-041-MWS	
1/20/2016	16)	SW-042-MWS	
	17)	SW-044-MWS	
	18)	SW-050-MWS	
	19)	SW-049-MWS	
	20)	SW-045-MWS	

Date:	Sample IDs		
2/2/2016	1)	SW-072-MWS	
	2)	SW-066-MWS	
2/4/2016	3)	SW-021-MWS	
	4)	SW-022-MWS	
	5)	SW-071-MWS	
	6)	SW-067-MWS	
2/5/2016	7)	SW-057-MWS	Duplicate: SW-021-MWS
	8)	SW-058-MWS	Date: 2/4/2016
	9)	SW-054-MWS	MS/MSD: SW06-PZM001
	10)	SW-053-MWS	Date: 2/11/2016
	11)	SW-060-MWS	Field Blank:
2/8/2016	12)	SW-062-MWS	Date: 2/5/2016
	13)	SW-061-MWS	
	14)	SW-059-MWS	
	15)	SW-051-MWS	
	16)	SW-074-MWS	
2/10/2016	17)	SW-036-MWS	
	18)	SW-033-MWS	
	19)	SW-070-MWS	
	20)	SW-024-MWS	

1/21/2016	1)	SW-045-MWI	
	2)	SW-048-MWS	
	3)	SW-074-MWI	
1/22/2016	4)	SW-040-MWS	
	5)	SW-052-MWS	
1/28/2016	6)	SW-055-MWS	
	7)	SW-056-MWS	Duplicate: SW-048-MWS
	8)	SW-043-MWI	Date: 1/21/2016
1/29/2016	9)	SW-069-MWS	MS/MSD: SW-071-MWS
	10)	SW-068-MWS	Date: 2/4/2016
	11)	SW-063-MWS	Field Blank:
2/1/2016	12)	SW-032-MWS	Date: 2/17/2016
	13)	SW-034-MWS	
	14)	SW-035-MWS	
	15)	SW-031-MWS	
	16)	SW-030-MWS	
2/2/2016	17)	SW-037-MWS	
	18)	SW-038-MWS	
	19)	SW-039-MWS	
	20)	SW-073-MWS	

2/11/2016	1)	SW-025-MWS	
	2)	SW-027-MWS	
	3)	SW06-PZM001	
	4)	SW06-PZM053	
	5)	SW-029-MWS	
2/12/2016	6)	SW-028-MWS	
	7)	SW08-PZM003	Duplicate: SW-070-MWS
	8)	SW-023-MWS	Date: 2/10/2016
2/17/2016	9)	SW11-PZM005	MS/MSD: TM03-PZM004
	10)	SW12-PZM005	Date: 3/29/2016
	11)	SW16-PZM067	Field Blank:
2/18/2016	12)	SW09-PZM068	Date: 2/12/2016
	13)	FM01-PZM041	
2/19/2016	14)	SW13-PZM025	
	15)		
	16)		
	17)		
	18)		
	19)		
	20)		

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Trip Blanks: 12/8/15,12/9/15,12/10/15, 12/11/15, 12/14/15, 1/19/16, 1/20/16, 1/21/16, 1/22/16, 1/28/16, 1/29/16, 2/1/16, 2/2/16, 2/4/16, 2/5/16, 2/8/16, 2/10/16,

QA/QC Tracking Log

Date:	Sample IDs	
3/28/2016	1) SW-064-MWS	
	2) SW13-PZM003	
	3) FM05-PZM024	
	4) FM05-PZM004	
3/29/2016	5) TM03-PZM037	
	6) TM03-PZM004	
	7) SW08-PZM053	Duplicate: FM05-PZM024
	8) TM05-PZM040	Date: 3/28/2016
	9) TM05-PZM005	MS/MSD: SW14-PZM004
3/30/2016	10) SW09-PZM028	Date: 3/31/2016
	11) SW-026-MWS	Field Blank:
	12) SW15-PZM031	Date: 3/29/2016
	13) SW-065-MWS	
3/31/2016	14) SW14-PZM004	
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Trip Blanks: 3/28/16, 3/29/16, 3/30/16, 3/31/16

APPENDIX L

EVALUATION OF DATA COMPLETENESS
Percentage of Non-rejected Results vs. Total Results

Parameter	Parameter Group	Matrix	Unit	Number of Result	Detections	Number of Rejected Results	Number of Non-rejected Results	Completeness	Zone
1,1,1-Trichloroethane	VOC	Water	ug/L	71	1	0	71	100.00%	Shallow
1,1,2,2-Tetrachloroethane	VOC	Water	ug/L	71	0	0	71	100.00%	Shallow
1,1,2-Trichloro-1,2,2-Trifluoroethane	VOC	Water	ug/L	71	0	0	71	100.00%	Shallow
1,1,2-Trichloroethane	VOC	Water	ug/L	71	0	0	71	100.00%	Shallow
1,1-Biphenyl	SVOC	Water	ug/L	71	4	0	71	100.00%	Shallow
1,1-Dichloroethane	VOC	Water	ug/L	71	4	0	71	100.00%	Shallow
1,1-Dichloroethene	VOC	Water	ug/L	71	1	0	71	100.00%	Shallow
1,2,3-Trichlorobenzene	VOC	Water	ug/L	71	0	0	71	100.00%	Shallow
1,2,4,5-Tetrachlorobenzene	SVOC	Water	ug/L	71	0	0	71	100.00%	Shallow
1,2,4-Trichlorobenzene	VOC	Water	ug/L	71	0	0	71	100.00%	Shallow
1,2-Dibromo-3-chloropropane	VOC	Water	ug/L	71	0	0	71	100.00%	Shallow
1,2-Dibromoethane	VOC	Water	ug/L	71	0	0	71	100.00%	Shallow
1,2-Dichlorobenzene	VOC	Water	ug/L	71	0	0	71	100.00%	Shallow
1,2-Dichloroethane	VOC	Water	ug/L	71	0	0	71	100.00%	Shallow
1,2-Dichloroethene (Total)	VOC	Water	ug/L	71	1	0	71	100.00%	Shallow
1,2-Dichloropropane	VOC	Water	ug/L	71	0	0	71	100.00%	Shallow
1,3-Dichlorobenzene	VOC	Water	ug/L	71	0	0	71	100.00%	Shallow
1,4-Dichlorobenzene	VOC	Water	ug/L	71	0	0	71	100.00%	Shallow
1,4-Dioxane	VOC/SVOC	Water	ug/L	71	33	0	71	100.00%	Shallow
2,3,4,6-Tetrachlorophenol	SVOC	Water	ug/L	71	1	0	71	100.00%	Shallow
2,4,5-Trichlorophenol	SVOC	Water	ug/L	71	1	0	71	100.00%	Shallow
2,4,6-Trichlorophenol	SVOC	Water	ug/L	71	0	0	71	100.00%	Shallow
2,4-Dichlorophenol	SVOC	Water	ug/L	71	0	0	71	100.00%	Shallow
2,4-Dimethylphenol	SVOC	Water	ug/L	71	4	0	71	100.00%	Shallow
2,4-Dinitrophenol	SVOC	Water	ug/L	71	0	0	71	100.00%	Shallow
2,4-Dinitrotoluene	SVOC	Water	ug/L	71	0	0	71	100.00%	Shallow
2,6-Dinitrotoluene	SVOC	Water	ug/L	71	0	0	71	100.00%	Shallow
2-Butanone (MEK)	VOC	Water	ug/L	71	0	0	71	100.00%	Shallow
2-Chloronaphthalene	SVOC	Water	ug/L	71	1	0	71	100.00%	Shallow
2-Chlorophenol	SVOC	Water	ug/L	71	0	0	71	100.00%	Shallow
2-Hexanone	VOC	Water	ug/L	71	0	0	71	100.00%	Shallow
2-Methylnaphthalene	SVOC	Water	ug/L	71	22	0	71	100.00%	Shallow
2-Methylphenol	SVOC	Water	ug/L	71	4	0	71	100.00%	Shallow
2-Nitroaniline	SVOC	Water	ug/L	71	0	0	71	100.00%	Shallow
3&4-Methylphenol(m&p Cresol)	SVOC	Water	ug/L	71	6	0	71	100.00%	Shallow
3,3'-Dichlorobenzidine	SVOC	Water	ug/L	71	0	13	58	81.69%	Shallow
4-Chloroaniline	SVOC	Water	ug/L	71	0	1	70	98.59%	Shallow
4-Methyl-2-pentanone (MIBK)	VOC	Water	ug/L	71	1	0	71	100.00%	Shallow
4-Nitroaniline	SVOC	Water	ug/L	71	0	0	71	100.00%	Shallow
Acenaphthene	SVOC	Water	ug/L	71	22	0	71	100.00%	Shallow
Acenaphthylene	SVOC	Water	ug/L	71	12	0	71	100.00%	Shallow
Acetone	VOC	Water	ug/L	71	3	31	40	56.34%	Shallow
Acetophenone	SVOC	Water	ug/L	71	6	0	71	100.00%	Shallow
Aluminum	Metal	Water	ug/L	142	135	0	142	100.00%	Shallow
Anthracene	SVOC	Water	ug/L	71	44	0	71	100.00%	Shallow
Antimony	Metal	Water	ug/L	142	7	0	142	100.00%	Shallow
Arsenic	Metal	Water	ug/L	142	42	0	142	100.00%	Shallow
Barium	Metal	Water	ug/L	142	142	0	142	100.00%	Shallow
Benzaldehyde	SVOC	Water	ug/L	71	0	0	71	100.00%	Shallow
Benzene	VOC	Water	ug/L	71	7	0	71	100.00%	Shallow
Benzo[a]anthracene	SVOC	Water	ug/L	71	24	0	71	100.00%	Shallow
Benzo[a]pyrene	SVOC	Water	ug/L	71	14	0	71	100.00%	Shallow
Benzo[b]fluoranthene	SVOC	Water	ug/L	71	16	0	71	100.00%	Shallow
Benzo[g,h,i]perylene	SVOC	Water	ug/L	71	4	0	71	100.00%	Shallow
Benzo[k]fluoranthene	SVOC	Water	ug/L	71	14	0	71	100.00%	Shallow
Beryllium	Metal	Water	ug/L	142	35	0	142	100.00%	Shallow
bis(2-chloroethoxy)methane	SVOC	Water	ug/L	71	0	0	71	100.00%	Shallow
bis(2-Chloroethyl)ether	SVOC	Water	ug/L	71	0	0	71	100.00%	Shallow
bis(2-Chloroisopropyl)ether	SVOC	Water	ug/L	71	0	0	71	100.00%	Shallow
bis(2-Ethylhexyl)phthalate	SVOC	Water	ug/L	71	13	0	71	100.00%	Shallow
Bromodichloromethane	VOC	Water	ug/L	71	0	0	71	100.00%	Shallow
Bromoform	VOC	Water	ug/L	71	0	0	71	100.00%	Shallow
Bromomethane	VOC	Water	ug/L	71	1	0	71	100.00%	Shallow

Parameter	Parameter Group	Matrix	Unit	Number of Result	Detections	Number of Rejected Results	Number of Non-rejected Results	Completeness	Zone
Cadmium	Metal	Water	ug/L	142	43	0	142	100.00%	Shallow
Caprolactam	SVOC	Water	ug/L	71	1	0	71	100.00%	Shallow
Carbazole	SVOC	Water	ug/L	71	8	0	71	100.00%	Shallow
Carbon disulfide	VOC	Water	ug/L	71	3	0	71	100.00%	Shallow
Carbon tetrachloride	VOC	Water	ug/L	71	0	0	71	100.00%	Shallow
Chlorobenzene	VOC	Water	ug/L	71	0	0	71	100.00%	Shallow
Chloroethane	VOC	Water	ug/L	71	0	0	71	100.00%	Shallow
Chloroform	VOC	Water	ug/L	71	12	0	71	100.00%	Shallow
Chloromethane	VOC	Water	ug/L	71	0	0	71	100.00%	Shallow
Chromium	Metal	Water	ug/L	142	115	0	142	100.00%	Shallow
Chromium VI	Metal	Water	ug/L	70	9	0	70	100.00%	Shallow
Chrysene	SVOC	Water	ug/L	71	21	0	71	100.00%	Shallow
cis-1,2-Dichloroethene	VOC	Water	ug/L	71	3	0	71	100.00%	Shallow
cis-1,3-Dichloropropene	VOC	Water	ug/L	71	0	0	71	100.00%	Shallow
Cobalt	Metal	Water	ug/L	142	60	0	142	100.00%	Shallow
Copper	Metal	Water	ug/L	142	52	0	142	100.00%	Shallow
Cyanide	CN	Water	ug/L	71	19	0	71	100.00%	Shallow
Cyclohexane	VOC	Water	ug/L	71	1	0	71	100.00%	Shallow
Dibenz[a,h]anthracene	SVOC	Water	ug/L	71	0	0	71	100.00%	Shallow
Dibromochloromethane	VOC	Water	ug/L	71	0	0	71	100.00%	Shallow
Dichlorobiphenyl	PCB	WATER	ug/L	3	0	0	3	100.00%	Shallow
Dichlorodifluoromethane	VOC	Water	ug/L	71	0	0	71	100.00%	Shallow
Diesel Range Organics	TPH	Water	ug/L	71	56	0	71	100.00%	Shallow
Diethylphthalate	SVOC	Water	ug/L	71	1	0	71	100.00%	Shallow
Di-n-butylphthalate	SVOC	Water	ug/L	71	1	0	71	100.00%	Shallow
Di-n-ocytlphthalate	SVOC	Water	ug/L	71	0	0	71	100.00%	Shallow
Ethylbenzene	VOC	Water	ug/L	71	4	0	71	100.00%	Shallow
Fluoranthene	SVOC	Water	ug/L	71	34	0	71	100.00%	Shallow
Fluorene	SVOC	Water	ug/L	71	22	0	71	100.00%	Shallow
Gasoline Range Organics	TPH	Water	ug/L	71	2	0	71	100.00%	Shallow
Heptachlorobiphenyl	PCB	WATER	ug/L	3	0	0	3	100.00%	Shallow
Hexachlorobenzene	SVOC	Water	ug/L	71	0	0	71	100.00%	Shallow
Hexachlorobiphenyl	PCB	WATER	ug/L	3	0	0	3	100.00%	Shallow
Hexachlorobutadiene	SVOC	Water	ug/L	71	0	0	71	100.00%	Shallow
Hexachlorocyclopentadiene	SVOC	Water	ug/L	71	0	0	71	100.00%	Shallow
Hexachloroethane	SVOC	Water	ug/L	71	0	0	71	100.00%	Shallow
Indeno[1,2,3-c,d]pyrene	SVOC	Water	ug/L	71	2	0	71	100.00%	Shallow
Iron	Metal	Water	ug/L	142	124	0	142	100.00%	Shallow
Isophorone	SVOC	Water	ug/L	71	0	0	71	100.00%	Shallow
Isopropylbenzene	VOC	Water	ug/L	71	3	0	71	100.00%	Shallow
Lead	Metal	Water	ug/L	142	8	0	142	100.00%	Shallow
Manganese	Metal	Water	ug/L	142	129	0	142	100.00%	Shallow
Mercury	Metal	Water	ug/L	142	9	0	142	100.00%	Shallow
Methyl Acetate	VOC	Water	ug/L	71	0	8	63	88.73%	Shallow
Methyl tert-butyl ether (MTBE)	VOC	Water	ug/L	71	4	0	71	100.00%	Shallow
Methylene Chloride	VOC	Water	ug/L	71	0	0	71	100.00%	Shallow
Monochlorobiphenyl	PCB	WATER	ug/L	3	0	0	3	100.00%	Shallow
Naphthalene	SVOC	Water	ug/L	71	63	0	71	100.00%	Shallow
Nickel	Metal	Water	ug/L	142	107	0	142	100.00%	Shallow
Nitrobenzene	SVOC	Water	ug/L	71	0	0	71	100.00%	Shallow
N-Nitroso-di-n-propylamine	SVOC	Water	ug/L	71	0	0	71	100.00%	Shallow
N-Nitrosodiphenylamine	SVOC	Water	ug/L	71	0	0	71	100.00%	Shallow
Nonachlorobiphenyl	PCB	WATER	ug/L	3	0	0	3	100.00%	Shallow
Octachlorobiphenyl	PCB	WATER	ug/L	3	0	0	3	100.00%	Shallow
PCBs (total)	PCB	WATER	ug/L	6	3	0	6	100.00%	Shallow
Pentachlorobiphenyl	PCB	WATER	ug/L	3	0	0	3	100.00%	Shallow
Pentachlorophenol	SVOC	Water	ug/L	71	7	0	71	100.00%	Shallow
Phenanthrene	SVOC	Water	ug/L	71	32	0	71	100.00%	Shallow
Phenol	SVOC	Water	ug/L	71	10	0	71	100.00%	Shallow
Pyrene	SVOC	Water	ug/L	71	28	0	71	100.00%	Shallow
Selenium	Metal	Water	ug/L	142	44	0	142	100.00%	Shallow
Silver	Metal	Water	ug/L	142	4	0	142	100.00%	Shallow
Styrene	VOC	Water	ug/L	71	0	0	71	100.00%	Shallow

Parameter	Parameter Group	Matrix	Unit	Number of Result	Detections	Number of Rejected Results	Number of Non-rejected Results	Completeness	Zone
Tetrachlorobiphenyl	PCB	WATER	ug/L	3	0	0	3	100.00%	Shallow
Tetrachloroethene	VOC	Water	ug/L	71	0	0	71	100.00%	Shallow
Thallium	Metal	Water	ug/L	142	25	0	142	100.00%	Shallow
Toluene	VOC	Water	ug/L	71	9	0	71	100.00%	Shallow
trans-1,2-Dichloroethene	VOC	Water	ug/L	71	0	0	71	100.00%	Shallow
trans-1,3-Dichloropropene	VOC	Water	ug/L	71	0	0	71	100.00%	Shallow
Trichlorobiphenyl	PCB	WATER	ug/L	3	0	0	3	100.00%	Shallow
Trichloroethene	VOC	Water	ug/L	71	3	0	71	100.00%	Shallow
Trichlorofluoromethane	VOC	Water	ug/L	71	0	0	71	100.00%	Shallow
Vanadium	Metal	Water	ug/L	142	116	0	142	100.00%	Shallow
Vinyl chloride	VOC	Water	ug/L	71	0	0	71	100.00%	Shallow
Xylenes	VOC	Water	ug/L	71	4	0	71	100.00%	Shallow
Zinc	Metal	Water	ug/L	142	114	0	142	100.00%	Shallow
1,1,1-Trichloroethane	VOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
1,1,2,2-Tetrachloroethane	VOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
1,1,2-Trichloro-1,2,2-Trifluoroethane	VOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
1,1,2-Trichloroethane	VOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
1,1-Biphenyl	SVOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
1,1-Dichloroethane	VOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
1,1-Dichloroethene	VOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
1,2,3-Trichlorobenzene	VOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
1,2,4,5-Tetrachlorobenzene	SVOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
1,2,4-Trichlorobenzene	VOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
1,2-Dibromo-3-chloropropane	VOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
1,2-Dibromoethane	VOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
1,2-Dichlorobenzene	VOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
1,2-Dichloroethane	VOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
1,2-Dichloroethene (Total)	VOC	Water	ug/L	12	1	0	12	100.00%	Intermediate
1,2-Dichloropropane	VOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
1,3-Dichlorobenzene	VOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
1,4-Dichlorobenzene	VOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
1,4-Dioxane	VOC/SVOC	Water	ug/L	12	2	0	12	100.00%	Intermediate
2,3,4,6-Tetrachlorophenol	SVOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
2,4,5-Trichlorophenol	SVOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
2,4,6-Trichlorophenol	SVOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
2,4-Dichlorophenol	SVOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
2,4-Dimethylphenol	SVOC	Water	ug/L	12	1	0	12	100.00%	Intermediate
2,4-Dinitrophenol	SVOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
2,4-Dinitrotoluene	SVOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
2,6-Dinitrotoluene	SVOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
2-Butanone (MEK)	VOC	Water	ug/L	12	2	0	12	100.00%	Intermediate
2-Chloronaphthalene	SVOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
2-Chlorophenol	SVOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
2-Hexanone	VOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
2-Methylnaphthalene	SVOC	Water	ug/L	12	5	0	12	100.00%	Intermediate
2-Methylphenol	SVOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
2-Nitroaniline	SVOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
3&4-Methylphenol(m&p Cresol)	SVOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
3,3'-Dichlorobenzidine	SVOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
4-Chloroaniline	SVOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
4-Methyl-2-pentanone (MIBK)	VOC	Water	ug/L	12	1	0	12	100.00%	Intermediate
4-Nitroaniline	SVOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
Acenaphthene	SVOC	Water	ug/L	12	4	0	12	100.00%	Intermediate
Acenaphthylene	SVOC	Water	ug/L	12	2	0	12	100.00%	Intermediate
Acetone	VOC	Water	ug/L	12	5	6	6	50.00%	Intermediate
Acetophenone	SVOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
Aluminum	Metal	Water	ug/L	24	18	0	24	100.00%	Intermediate
Anthracene	SVOC	Water	ug/L	12	5	0	12	100.00%	Intermediate
Antimony	Metal	Water	ug/L	24	0	0	24	100.00%	Intermediate
Arsenic	Metal	Water	ug/L	24	14	0	24	100.00%	Intermediate
Barium	Metal	Water	ug/L	24	24	0	24	100.00%	Intermediate
Benzaldehyde	SVOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
Benzene	VOC	Water	ug/L	12	0	0	12	100.00%	Intermediate

Parameter	Parameter Group	Matrix	Unit	Number of Result	Detections	Number of Rejected Results	Number of Non-rejected Results	Completeness	Zone
Benzo[a]anthracene	SVOC	Water	ug/L	12	5	0	12	100.00%	Intermediate
Benzo[a]pyrene	SVOC	Water	ug/L	12	3	0	12	100.00%	Intermediate
Benzo[b]fluoranthene	SVOC	Water	ug/L	12	4	0	12	100.00%	Intermediate
Benzo[g,h,i]perylene	SVOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
Benzo[k]fluoranthene	SVOC	Water	ug/L	12	4	0	12	100.00%	Intermediate
Beryllium	Metal	Water	ug/L	24	1	0	24	100.00%	Intermediate
bis(2-chloroethoxy)methane	SVOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
bis(2-Chloroethyl)ether	SVOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
bis(2-Chloroisopropyl)ether	SVOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
bis(2-Ethylhexyl)phthalate	SVOC	Water	ug/L	12	3	0	12	100.00%	Intermediate
Bromodichloromethane	VOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
Bromoform	VOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
Bromomethane	VOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
Cadmium	Metal	Water	ug/L	24	13	0	24	100.00%	Intermediate
Caprolactam	SVOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
Carbazole	SVOC	Water	ug/L	12	2	0	12	100.00%	Intermediate
Carbon disulfide	VOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
Carbon tetrachloride	VOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
Chlorobenzene	VOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
Chloroethane	VOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
Chloroform	VOC	Water	ug/L	12	4	0	12	100.00%	Intermediate
Chloromethane	VOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
Chromium	Metal	Water	ug/L	24	11	0	24	100.00%	Intermediate
Chromium VI	Metal	Water	ug/L	12	0	0	12	100.00%	Intermediate
Chrysene	SVOC	Water	ug/L	12	4	0	12	100.00%	Intermediate
cis-1,2-Dichloroethene	VOC	Water	ug/L	12	1	0	12	100.00%	Intermediate
cis-1,3-Dichloropropene	VOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
Cobalt	Metal	Water	ug/L	24	6	0	24	100.00%	Intermediate
Copper	Metal	Water	ug/L	24	7	0	24	100.00%	Intermediate
Cyanide	CN	Water	ug/L	12	0	0	12	100.00%	Intermediate
Cyclohexane	VOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
Dibenz[a,h]anthracene	SVOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
Dibromochloromethane	VOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
Dichlorodifluoromethane	VOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
Diesel Range Organics	TPH	Water	ug/L	12	11	0	12	100.00%	Intermediate
Diethylphthalate	SVOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
Di-n-butylphthalate	SVOC	Water	ug/L	12	2	0	12	100.00%	Intermediate
Di-n-ocytlphthalate	SVOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
Ethylbenzene	VOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
Fluoranthene	SVOC	Water	ug/L	12	6	0	12	100.00%	Intermediate
Fluorene	SVOC	Water	ug/L	12	4	0	12	100.00%	Intermediate
Gasoline Range Organics	TPH	Water	ug/L	12	0	0	12	100.00%	Intermediate
Hexachlorobenzene	SVOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
Hexachlorobutadiene	SVOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
Hexachlorocyclopentadiene	SVOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
Hexachloroethane	SVOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
Indeno[1,2,3-c,d]pyrene	SVOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
Iron	Metal	Water	ug/L	24	24	0	24	100.00%	Intermediate
Isophorone	SVOC	Water	ug/L	12	1	0	12	100.00%	Intermediate
Isopropylbenzene	VOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
Lead	Metal	Water	ug/L	24	0	0	24	100.00%	Intermediate
Manganese	Metal	Water	ug/L	24	24	0	24	100.00%	Intermediate
Mercury	Metal	Water	ug/L	24	0	0	24	100.00%	Intermediate
Methyl Acetate	VOC	Water	ug/L	12	1	0	12	100.00%	Intermediate
Methyl tert-butyl ether (MTBE)	VOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
Methylene Chloride	VOC	Water	ug/L	12	1	0	12	100.00%	Intermediate
Naphthalene	SVOC	Water	ug/L	12	10	0	12	100.00%	Intermediate
Nickel	Metal	Water	ug/L	24	14	0	24	100.00%	Intermediate
Nitrobenzene	SVOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
N-Nitroso-di-n-propylamine	SVOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
N-Nitrosodiphenylamine	SVOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
Pentachlorophenol	SVOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
Phenanthrene	SVOC	Water	ug/L	12	7	0	12	100.00%	Intermediate

Parameter	Parameter Group	Matrix	Unit	Number of Result	Detections	Number of Rejected Results	Number of Non-rejected Results	Completeness	Zone
Phenol	SVOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
Pyrene	SVOC	Water	ug/L	12	5	0	12	100.00%	Intermediate
Selenium	Metal	Water	ug/L	24	4	0	24	100.00%	Intermediate
Silver	Metal	Water	ug/L	24	5	0	24	100.00%	Intermediate
Styrene	VOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
Tetrachloroethene	VOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
Thallium	Metal	Water	ug/L	24	0	0	24	100.00%	Intermediate
Toluene	VOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
trans-1,2-Dichloroethene	VOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
trans-1,3-Dichloropropene	VOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
Trichloroethene	VOC	Water	ug/L	12	1	0	12	100.00%	Intermediate
Trichlorofluoromethane	VOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
Vanadium	Metal	Water	ug/L	24	13	0	24	100.00%	Intermediate
Vinyl chloride	VOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
Xylenes	VOC	Water	ug/L	12	0	0	12	100.00%	Intermediate
Zinc	Metal	Water	ug/L	24	18	0	24	100.00%	Intermediate
1,1,1-Trichloroethane	VOC	Water	ug/L	5	0	0	5	100.00%	Lower
1,1,2,2-Tetrachloroethane	VOC	Water	ug/L	5	0	0	5	100.00%	Lower
1,1,2-Trichloro-1,2,2-Trifluoroethane	VOC	Water	ug/L	5	0	0	5	100.00%	Lower
1,1,2-Trichloroethane	VOC	Water	ug/L	5	0	0	5	100.00%	Lower
1,1-Biphenyl	SVOC	Water	ug/L	5	0	0	5	100.00%	Lower
1,1-Dichloroethane	VOC	Water	ug/L	5	0	0	5	100.00%	Lower
1,1-Dichloroethene	VOC	Water	ug/L	5	0	0	5	100.00%	Lower
1,2,3-Trichlorobenzene	VOC	Water	ug/L	5	0	0	5	100.00%	Lower
1,2,4,5-Tetrachlorobenzene	SVOC	Water	ug/L	5	0	0	5	100.00%	Lower
1,2,4-Trichlorobenzene	VOC	Water	ug/L	5	0	0	5	100.00%	Lower
1,2-Dibromo-3-chloropropane	VOC	Water	ug/L	5	0	0	5	100.00%	Lower
1,2-Dibromoethane	VOC	Water	ug/L	5	0	0	5	100.00%	Lower
1,2-Dichlorobenzene	VOC	Water	ug/L	5	0	0	5	100.00%	Lower
1,2-Dichloroethane	VOC	Water	ug/L	5	0	0	5	100.00%	Lower
1,2-Dichloroethene (Total)	VOC	Water	ug/L	5	1	0	5	100.00%	Lower
1,2-Dichloropropane	VOC	Water	ug/L	5	0	0	5	100.00%	Lower
1,3-Dichlorobenzene	VOC	Water	ug/L	5	0	0	5	100.00%	Lower
1,4-Dichlorobenzene	VOC	Water	ug/L	5	0	0	5	100.00%	Lower
1,4-Dioxane	VOC/SVOC	Water	ug/L	5	0	0	5	100.00%	Lower
2,3,4,6-Tetrachlorophenol	SVOC	Water	ug/L	5	0	0	5	100.00%	Lower
2,4,5-Trichlorophenol	SVOC	Water	ug/L	5	0	0	5	100.00%	Lower
2,4,6-Trichlorophenol	SVOC	Water	ug/L	5	0	0	5	100.00%	Lower
2,4-Dichlorophenol	SVOC	Water	ug/L	5	0	0	5	100.00%	Lower
2,4-Dimethylphenol	SVOC	Water	ug/L	5	0	0	5	100.00%	Lower
2,4-Dinitrophenol	SVOC	Water	ug/L	5	0	0	5	100.00%	Lower
2,4-Dinitrotoluene	SVOC	Water	ug/L	5	0	0	5	100.00%	Lower
2,6-Dinitrotoluene	SVOC	Water	ug/L	5	0	0	5	100.00%	Lower
2-Butanone (MEK)	VOC	Water	ug/L	5	0	0	5	100.00%	Lower
2-Chloronaphthalene	SVOC	Water	ug/L	5	0	0	5	100.00%	Lower
2-Chlorophenol	SVOC	Water	ug/L	5	0	0	5	100.00%	Lower
2-Hexanone	VOC	Water	ug/L	5	0	0	5	100.00%	Lower
2-Methylnaphthalene	SVOC	Water	ug/L	5	3	0	5	100.00%	Lower
2-Methylphenol	SVOC	Water	ug/L	5	0	0	5	100.00%	Lower
2-Nitroaniline	SVOC	Water	ug/L	5	0	0	5	100.00%	Lower
3&4-Methylphenol(m&p Cresol)	SVOC	Water	ug/L	5	0	0	5	100.00%	Lower
3,3'-Dichlorobenzidine	SVOC	Water	ug/L	5	0	3	2	40.00%	Lower
4-Chloroaniline	SVOC	Water	ug/L	5	0	0	5	100.00%	Lower
4-Methyl-2-pentanone (MIBK)	VOC	Water	ug/L	5	0	0	5	100.00%	Lower
4-Nitroaniline	SVOC	Water	ug/L	5	0	0	5	100.00%	Lower
Acenaphthene	SVOC	Water	ug/L	5	1	0	5	100.00%	Lower
Acenaphthylene	SVOC	Water	ug/L	5	0	0	5	100.00%	Lower
Acetone	VOC	Water	ug/L	5	0	3	2	40.00%	Lower
Acetophenone	SVOC	Water	ug/L	5	0	0	5	100.00%	Lower
Aluminum	Metal	Water	ug/L	10	6	0	10	100.00%	Lower
Anthracene	SVOC	Water	ug/L	5	2	0	5	100.00%	Lower
Antimony	Metal	Water	ug/L	10	0	0	10	100.00%	Lower
Arsenic	Metal	Water	ug/L	10	0	0	10	100.00%	Lower

Parameter	Parameter Group	Matrix	Unit	Number of Result	Detections	Number of Rejected Results	Number of Non-rejected Results	Completeness	Zone
Barium	Metal	Water	ug/L	10	10	0	10	100.00%	Lower
Benzaldehyde	SVOC	Water	ug/L	5	0	0	5	100.00%	Lower
Benzene	VOC	Water	ug/L	5	0	0	5	100.00%	Lower
Benzo[a]anthracene	SVOC	Water	ug/L	5	1	0	5	100.00%	Lower
Benzo[a]pyrene	SVOC	Water	ug/L	5	1	0	5	100.00%	Lower
Benzo[b]fluoranthene	SVOC	Water	ug/L	5	1	0	5	100.00%	Lower
Benzo[g,h,i]perylene	SVOC	Water	ug/L	5	1	0	5	100.00%	Lower
Benzo[k]fluoranthene	SVOC	Water	ug/L	5	1	0	5	100.00%	Lower
Beryllium	Metal	Water	ug/L	10	2	0	10	100.00%	Lower
bis(2-chloroethoxy)methane	SVOC	Water	ug/L	5	0	0	5	100.00%	Lower
bis(2-Chloroethyl)ether	SVOC	Water	ug/L	5	0	0	5	100.00%	Lower
bis(2-Chloroisopropyl)ether	SVOC	Water	ug/L	5	0	0	5	100.00%	Lower
bis(2-Ethylhexyl)phthalate	SVOC	Water	ug/L	5	1	0	5	100.00%	Lower
Bromodichloromethane	VOC	Water	ug/L	5	0	0	5	100.00%	Lower
Bromoform	VOC	Water	ug/L	5	0	0	5	100.00%	Lower
Bromomethane	VOC	Water	ug/L	5	0	0	5	100.00%	Lower
Cadmium	Metal	Water	ug/L	10	5	0	10	100.00%	Lower
Caprolactam	SVOC	Water	ug/L	5	1	0	5	100.00%	Lower
Carbazole	SVOC	Water	ug/L	5	0	0	5	100.00%	Lower
Carbon disulfide	VOC	Water	ug/L	5	0	0	5	100.00%	Lower
Carbon tetrachloride	VOC	Water	ug/L	5	0	0	5	100.00%	Lower
Chlorobenzene	VOC	Water	ug/L	5	0	0	5	100.00%	Lower
Chloroethane	VOC	Water	ug/L	5	0	0	5	100.00%	Lower
Chloroform	VOC	Water	ug/L	5	0	0	5	100.00%	Lower
Chloromethane	VOC	Water	ug/L	5	0	0	5	100.00%	Lower
Chromium	Metal	Water	ug/L	10	9	0	10	100.00%	Lower
Chromium VI	Metal	Water	ug/L	5	0	0	5	100.00%	Lower
Chrysene	SVOC	Water	ug/L	5	1	0	5	100.00%	Lower
cis-1,2-Dichloroethene	VOC	Water	ug/L	5	1	0	5	100.00%	Lower
cis-1,3-Dichloropropene	VOC	Water	ug/L	5	0	0	5	100.00%	Lower
Cobalt	Metal	Water	ug/L	10	3	0	10	100.00%	Lower
Copper	Metal	Water	ug/L	10	8	0	10	100.00%	Lower
Cyanide	CN	Water	ug/L	5	0	0	5	100.00%	Lower
Cyclohexane	VOC	Water	ug/L	5	0	0	5	100.00%	Lower
Dibenz[a,h]anthracene	SVOC	Water	ug/L	5	0	0	5	100.00%	Lower
Dibromochloromethane	VOC	Water	ug/L	5	0	0	5	100.00%	Lower
Dichlorodifluoromethane	VOC	Water	ug/L	5	0	0	5	100.00%	Lower
Diesel Range Organics	TPH	Water	ug/L	5	4	0	5	100.00%	Lower
Diethylphthalate	SVOC	Water	ug/L	5	0	0	5	100.00%	Lower
Di-n-butylphthalate	SVOC	Water	ug/L	5	0	0	5	100.00%	Lower
Di-n-ocytlphthalate	SVOC	Water	ug/L	5	0	0	5	100.00%	Lower
Ethylbenzene	VOC	Water	ug/L	5	0	0	5	100.00%	Lower
Fluoranthene	SVOC	Water	ug/L	5	2	0	5	100.00%	Lower
Fluorene	SVOC	Water	ug/L	5	1	0	5	100.00%	Lower
Gasoline Range Organics	TPH	Water	ug/L	5	0	0	5	100.00%	Lower
Hexachlorobenzene	SVOC	Water	ug/L	5	0	0	5	100.00%	Lower
Hexachlorobutadiene	SVOC	Water	ug/L	5	0	0	5	100.00%	Lower
Hexachlorocyclopentadiene	SVOC	Water	ug/L	5	0	0	5	100.00%	Lower
Hexachloroethane	SVOC	Water	ug/L	5	0	0	5	100.00%	Lower
Indeno[1,2,3-c,d]pyrene	SVOC	Water	ug/L	5	1	0	5	100.00%	Lower
Iron	Metal	Water	ug/L	10	10	0	10	100.00%	Lower
Isophorone	SVOC	Water	ug/L	5	0	0	5	100.00%	Lower
Isopropylbenzene	VOC	Water	ug/L	5	0	0	5	100.00%	Lower
Lead	Metal	Water	ug/L	10	1	0	10	100.00%	Lower
Manganese	Metal	Water	ug/L	10	10	0	10	100.00%	Lower
Mercury	Metal	Water	ug/L	10	2	0	10	100.00%	Lower
Methyl Acetate	VOC	Water	ug/L	5	0	2	3	60.00%	Lower
Methyl tert-butyl ether (MTBE)	VOC	Water	ug/L	5	0	0	5	100.00%	Lower
Methylene Chloride	VOC	Water	ug/L	5	0	0	5	100.00%	Lower
Naphthalene	SVOC	Water	ug/L	5	5	0	5	100.00%	Lower
Nickel	Metal	Water	ug/L	10	7	0	10	100.00%	Lower
Nitrobenzene	SVOC	Water	ug/L	5	0	0	5	100.00%	Lower
N-Nitroso-di-n-propylamine	SVOC	Water	ug/L	5	0	0	5	100.00%	Lower

EVALUATION OF DATA COMPLETENESS
Percentage of Non-rejected Results vs. Total Results

Parameter	Parameter Group	Matrix	Unit	Number of Result	Detections	Number of Rejected Results	Number of Non-rejected Results	Completeness	Zone
N-Nitrosodiphenylamine	SVOC	Water	ug/L	5	0	0	5	100.00%	Lower
Pentachlorophenol	SVOC	Water	ug/L	5	0	0	5	100.00%	Lower
Phenanthrene	SVOC	Water	ug/L	5	2	0	5	100.00%	Lower
Phenol	SVOC	Water	ug/L	5	0	0	5	100.00%	Lower
Pyrene	SVOC	Water	ug/L	5	2	0	5	100.00%	Lower
Selenium	Metal	Water	ug/L	10	0	0	10	100.00%	Lower
Silver	Metal	Water	ug/L	10	0	0	10	100.00%	Lower
Styrene	VOC	Water	ug/L	5	0	0	5	100.00%	Lower
Tetrachloroethene	VOC	Water	ug/L	5	0	0	5	100.00%	Lower
Thallium	Metal	Water	ug/L	10	1	0	10	100.00%	Lower
Toluene	VOC	Water	ug/L	5	0	0	5	100.00%	Lower
trans-1,2-Dichloroethene	VOC	Water	ug/L	5	0	0	5	100.00%	Lower
trans-1,3-Dichloropropene	VOC	Water	ug/L	5	0	0	5	100.00%	Lower
Trichloroethene	VOC	Water	ug/L	5	0	0	5	100.00%	Lower
Trichlorofluoromethane	VOC	Water	ug/L	5	0	0	5	100.00%	Lower
Vanadium	Metal	Water	ug/L	10	8	0	10	100.00%	Lower
Vinyl chloride	VOC	Water	ug/L	5	0	0	5	100.00%	Lower
Xylenes	VOC	Water	ug/L	5	0	0	5	100.00%	Lower
Zinc	Metal	Water	ug/L	10	7	0	10	100.00%	Lower