ROUND 1 QUARTERLY GROUNDWATER MONITORING REPORT

Remedial Investigation Part 1, At Acid Areas 2 & 3 Former Plum Brook Ordnance Works Sandusky, Ohio

Prepared for:

DEPARTMENT OF THE ARMY
NASHVILLE DISTRICT, CORPS OF ENGINEERS
NASHVILLE, TENNESSEE
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COMPLETION OF INDEPENDENT TECHNICAL REVIEW

Jacobs Engineering Group, Inc. has completed the Round 1 Quarterly Groundwater Monitoring Report for the Acid Areas 2 and 3 Remedial Investigation Part 1: Site Characterization at the Former Plum Brook Ordnance Works, Sandusky, Ohio. Notice is hereby given that an independent technical review has been conducted that is appropriate to the level of risk and complexity inherent in the project, as defined in the Quality Control Plan. During the independent technical review, compliance with established policy principles and procedures, utilizing justified and valid assumptions, was verified. This included review of assumptions; methods, procedures, and material used in analyses; alternatives evaluated; the appropriateness of data used and level of data obtained; and reasonableness of the results, including whether the product meets the customer's needs consistent with law and existing Corps policy.

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CERTIFICATION OF INDEPENDENT TECHNICAL REVIEW

Significant concerns and the explanation of the resolution are as follows (Describe the major technical concerns, possible impact, and resolution):

Comment: Provide additional well completion details for the area at the bottom of the borehole below the screen.
Resolution: A discussion was provided regarding backfill of the boreholes with granular bentonite and placement of a minimum of one ft of sand pack below the screen.

Comment: Revise data in Table 4-1 and 4-2 to provide elevations of screen and groundwater rather than depths from TOC to be consistent with values used on the groundwater contour maps.
Resolution: Both tables were revised as suggested.

Comment: State the concentrations for the various exceedances in comparison to the PRGs and background values in section 4.
Resolution: Revisions were made as suggested.

Comment: Provide the Hach test results for Fe and Mn.
Resolution: Test results were provided in the text at the end of the analytical results section.

Comment: Divide the detection tables into two separate tables: one for shallow groundwater and one for bedrock groundwater.
Resolution: The two data sets were placed in separate tables for both the Jan 2005 data and the prior sampling events at existing wells.

All concerns resulting from independent technical review of the project have been considered.

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LIST OF ACRONYMS

AA2	Acid Area 2
AA3	Acid Area 3
amsl	above mean sea level
bgs	below ground surface
cm/sec	centimeters per second
COC	contaminants of concern
DERP	defense environmental restoration program
DOD	U.S. Department of Defense
EPA	U.S. Environmental Protection Agency
ft	feet
ID	inner diameter
IDW	investigative-derived waste
IT	IT Corporation
Jacobs	Jacobs Engineering
μg/L	micrograms per liter
mg/L	milligrams per liter
NTU	nephelometric turbidity unit
OEPA	Ohio Environmental Protection Agency
PAH	polyaromatic hydrocarbons
PBOW	Plum Brook Ordnance Works
PCB	polychlorinated biphenyls
pH	hydrogen ion concentration
PRG	preliminary remediation goal
PVC	polyvinylchloride
RBC	risk based criteria
RI	remedial investigation
SAP	sampling and analysis plan
SI	site investigation
SVOC	semivolatile organic compound
TAL	target analyte list
TNT	trinitrotoluene
TOC	top of casing
USACE	U.S. Army Corps of Engineers
VOC	volatile organic compounds

1.0 INTRODUCTION

The U.S. Army is conducting investigations of the environmental impact at previously owned U.S. Department of Defense (DOD) properties. This work is being conducted by the U.S. Army Corps of Engineers (USACE) under the Defense Environmental Restoration Program (DERP). The Plum Brook Ordnance Works (PBOW) site, located in Sandusky, Erie County, Ohio, is a formerly used defense site under DERP. This Task Order is being managed and technically overseen by the Nashville, Tennessee USACE District Office. Jacobs Engineering (Jacobs) is contracted to conduct Part 1 of a Remedial Investigation (RI) at Acid Areas 2 and 3 (AA2 and AA3).

Groundwater monitoring and sampling activities were conducted in accordance with plans and procedures defined in the Final Site-Wide Sampling and Analysis Plan (SAP) (Jacobs 2004a) and the Final Site-Specific SAP, Remedial Investigation, Part 1, at Acid Areas 2 & 3 (Jacobs 2004b).

This report summarizes the monitoring activities conducted during Round 1, the investigative methods used, and the hydrogeological and analytical results.

1.1 OBJECTIVES

The objectives of the remedial investigation of groundwater at Acid Areas 2 & 3 are as follows:

- Determine the physical characteristics of the shallow and bedrock groundwater, at both sites, including depth, gradient, flow direction, and hydraulic properties.
- Determine whether shallow and bedrock groundwater has been impacted by site contaminants.

The objective of the quarterly groundwater monitoring is to evaluate changes in contaminant concentrations and water levels in response to seasonal variability. Round 1 sampling and monitoring was conducted from 20 January 2005 to 1 February 2005. Two rounds of monitoring were proposed in the Final Site-Specific Sampling and Analysis Plan (Jacobs 2004b). The second round 2 of monitoring is scheduled to begin 21 April 2005. After review of both rounds of data, an evaluation for continued monitoring will be conducted by the USACE in conjunction with the Ohio Environmental Protection Agency (OEPA).

1.2 FACILITY LOCATION AND DESCRIPTION

AA2 and AA3 are located in the northwest portion of PBOW (Figure 1-1). The AA2 site is located south of Patrol Road approximately 2000 feet (ft) west of Campbell Street. The AA3 site is located at the intersection of Ransom Road and Maintenance Road, with the majority of the site in the area northwest of the intersection.

The AA2 site physical features include an open field bounded by drainage ditches to the north and south with scattered overgrowth throughout. Mature vegetation is mainly

limited to the site boundaries. The ground surface at AA2 is relatively flat, with minimal slope toward the drainage ditches to the north and south.
The AA3 site physical features include an open field with minimal low-lying overgrowth. The ground surface at AA3 is relatively flat, with minimal slope toward the north. A small drainage ditch borders the west side of the site.

1.3 SITE HISTORY AND POTENTIAL FOR CONTAMINATION

The acid areas were used to produce oleum, sulfuric acid, and nitric acid for the manufacture of trinitrotoluene (TNT). A review of the 1958 aerial photographs revealed several buildings and above-ground storage tanks at both AA2 and AA3. A records review was conducted by IT Corporation (IT) in preparation for a Site Investigation (SI) of the Acid Areas (IT, 1998). The SI of AA2 and AA3 was conducted to determine the presence of potential contaminants and to narrow the focus of future sampling (if necessary) to specific contaminants of concern (COC).

A total of fifteen soil borings were conducted at AA2, with two samples being collected at each location: one surface and one subsurface. The SI identified surface and subsurface soil contamination above U.S Environmental Protection Agency (EPA) Region III Risk Based Criteria (RBC). Organic contaminants in surface and subsurface soil exceeding the RBCs at AA2 include the following:

- Polyaromatic Hydrocarbons (PAHs): Benzo(a)pyrene, Benzo(a)Anthracene, Benzo(b)Flouranthene, Dibenzo(a,h)Anthracene, and Indeno(1,2,3-cd)Pyrene
- Semi-Volatile Organic Compounds (SVOCs): 3,3 Dichlorobenzidine.
- Polychlorinated biphenyls (PCBs): Aroclor 1260

Subsurface soil samples were not analyzed for PCBs; therefore it is not known if PCBs are present at depth. Inorganic contaminants were not detected in surface and subsurface soil at concentrations exceeding the RBCs or established background values.

A total of eighteen soil borings were completed at AA3, with two samples being collected at each location: one surface and one subsurface. An additional two surface soil samples were collected in the vicinity of the Power Substation Area on the East side of Ransom Road. The SI identified surface and subsurface soil contamination above U.S EPA Region III RBCs. Organic contaminants in surface and subsurface soil exceeding the RBCs at AA3 include the following:

- Polyaromatic Hydrocarbons (PAHs): Benzo(a)pyrene, Benzo(a)Anthracene, Benzo(b)Flouranthene, and Indeno(1,2,3-cd)Pyrene
- Polychlorinated biphenyls (PCBs): Aroclor 1260

Inorganic contaminants were not detected in surface and subsurface soil at concentrations exceeding the RBCs or established background values.

Four shallow overburden wells and three bedrock wells were installed at AA2. One shallow overburden well and one bedrock well were installed at AA3. Groundwater samples were collected from the bedrock wells as part of the 2002 site-wide

groundwater investigation (Shaw, 2004). Samples were collected during both dry season (September 2001 – October 2001) and wet season (April 2002).

Sampling results indicate volatile organic compounds (VOC) and SVOCs were detected in the bedrock groundwater at both sites at levels above RBCs. RBCs used for the 2002 groundwater investigation were based on EPA 2002 tap water criteria.

2.0 FIELD ACTIVITIES

Groundwater characterization activities conducted at AA2 and AA3 as a part of the 2004-2005 RI include the following:

- Installation of five temporary peizometers at each site
- Installation of three shallow overburden wells and three bedrock wells at AA3
- Development of all newly installed wells
- Monitoring of water levels in piezometers and wells
- Slug testing of all newly installed wells
- Groundwater sampling of existing and newly installed wells

2.1 INVESTIGATIVE METHODS

2.1.1 Piezometer Installation and Water Level Measurements

Five temporary piezometers were installed at each site to determine shallow groundwater gradients and to determine the location of permanent shallow monitoring wells (Figure 2-1 and 2-2). Borings for piezometers were advanced using a Geoprobe 5400 equipped with the macrocore sampling device. All borings were advanced to top of bedrock with continuous coring and logging of lithologic descriptions. Total depths of the piezometer borings ranged from 18 to 21.5 ft bgs at AA2, and 21 to 25.2 ft bgs at AA3. Borehole logs for the piezometers are provided in Appendix A. Piezometers were completed with 1-inch inner diameter (ID) schedule 40 polyvinylchloride (PVC) screen and riser. Screened intervals were from the bedrock to 10 ft above bedrock. The annulus was filled with 30/60 sand pack to one ft below ground surface (bgs) and granular bentonite was used for the surface seal.

Water level measurements were collected over a three-month period from 8 November 2004 through 23 January 2005, using a Solinst water level meter, which was decontaminated between each well reading. One additional round of measurements is planned for April 2005 during the scheduled Round 2 sampling. The piezometers are scheduled for abandonment at the conclusion of Round 2 sampling. Abandonment will be performed by removing all screen and casing material and tremmie grouting from the bottom up to ground surface using a bentonite slurry.

2.1.2 Monitoring Well Installation

Three shallow overburden wells (AA3-GW003, AA3-GW004, and AA3-GW005) and three bedrock monitoring wells (AA3-BEDGW-002, AA3-BEDGW-003, and AA3-BEDGW-004) were installed at AA3. Newly installed monitoring wells were placed to characterize up-gradient, on-site, and down-gradient groundwater (Figure 2-1). Well placement was in accordance with the proposed locations presented in the Final Site-Specific SAP (Jacobs 2004b), with the exception of AA3-GW005, which was moved based on water level data collected from the temporary piezometers. Approval of the new location was received from OEPA after review of a preliminary shallow groundwater

contour map and a brief technical memo provided at the 02 December 2004 team meeting.

The boreholes for the shallow overburden wells were completed with 4 ¼-inch ID, hollow-stem augers, using two-inch diameter split spoons for continuous coring and logging of lithologic descriptions. Shallow boreholes were terminated at depths ranging from 19 to 24 ft bgs, and in all cases were terminated in clay deposits exhibiting medium to high plasticity and low permeability. Borehole logs for the permanent monitoring wells are provided in Appendix B. In all cases the most permeable zones were located in the upper 10 ft of overburden; therefore, screens were placed as high as possible, while maintaining minimum filter pack and bentonite seal requirements. Boreholes for monitoring wells AA3-GW003 and AA3-GW004 were backfilled with granular bentonite to 19 ft bgs. Shallow wells were completed with 2-inch ID schedule 40 PVC screens and risers. All shallow wells were completed with top of screen at 8 ft bgs, with a sand pack extending from 19 ft bgs to 3 ft above top of screen (5 ft bgs). A bentonite seal using granular bentonite was placed from top of sand pack to 1 ft bgs and hydrated. Because of the shallow completion, no additional annular cement was used above the bentonite seal. Additional completion details are provided in Appendix C.

The boreholes for the bedrock wells were completed using 8 ¼-inch ID, hollow-stem augers to a minimum of three ft below the top of bedrock. Six-inch steel surface casing was installed to a minimum of 3 ft into bedrock and grouted in place. Rock coring using air rotary methods was then conducted from the bottom of the surface casing. In all cases water producing zones were encountered in the Plum Brook Shale, which precluded the use of air rotary methods. Conventional mud rotary drilling with 94 mm wire-line coring was then conducted to a minimum of two ft below the top of the Delaware Limestone. The borehole was then reamed with a 5 7/8-inch roller bit. Four-inch steel casing was then installed and grouted in place to seal off the water producing zones in the Plum Brook Shale. Air rotary coring was then resumed with a 3 7/8-inch coring bit to total depth. Total depths of the borings ranged from 51 to 75.5 ft bgs

Monitoring wells AA3-BEDGW-002 and AA3-BEDGW-003 were completed with 2-inch ID schedule 40 PVC screens and risers. Monitoring well AA3-BEDGW-004 was not completed due to the lack of water producing horizons. This well was drilled to 75.5 feet, roughly 45 ft below the top of the Delaware Limestone. The well was left as on open hole completion pending further evaluation and discussion with OEPA. The well has been fitted with a six-inch expansion cap attached directly to the surface casing and is being monitored for water levels. Additional completion details are provided in Appendix C.

Photologs of the continuous rock cores are presented in Appendix D. The rock cores are stored in core boxes at an indoor staging facility and are available for further inspection.

2.1.3 Monitoring Well Development

Development of each well was performed with a bladder pump in accordance with procedures outlined in the Final Site-Wide SAP (Jacobs 2004a). Water quality parameters were monitored with a Horiba U22XD equipped with a flow-thru cell. Required purge volumes and water parameter stabilization was achieved for all wells. Turbidity readings of less than 20 nephelometric turbidity units (NTU) were achieved for all wells. Turbidity readings approaching zero were achieved for all wells but AA3-GW003. Well yields were calculated for each well based on maximum pump rates while maintaining water level stabilization. Well development records and calculated well yields are presented in Appendix E.

2.1.4 Slug Testing

Slug tests were performed on all newly installed monitoring wells with the exception of AA3-BEDGW-004, which did not have sufficient water. A stainless steel slug measuring 36 inches long and 1.5 inches in diameter was used for all tests. Pressure transducers with built in data loggers were used to monitor water levels during the tests. Rising head and falling head tests were performed at each well. Water levels were allowed to equilibrate following equipment installation, before initiating the falling head test. Likewise, water levels were allowed to equilibrate following the falling head test prior to initiating the rising head test.

2.1.5 Piezometer and Well Surveying

All piezometers and monitoring wells were surveyed using conventional methods, which included determination of elevation at top of casing and ground elevation. The northing, easting, and elevation of top of casing for each monitoring well are listed in Appendix F and correspond to the Ohio State Plane North NAD83.

2.2 GROUNDWATER SAMPLING

Round 1 groundwater sampling was performed 21 January 2005 through 1 February 2005. Prior to initiating sampling activities, water levels were measured in all monitoring wells and piezometers. Groundwater samples were collected from twelve monitoring wells at or near AA2 and AA3. Five existing wells in AA2 were sampled, which included AA2-GW002, IT-MW10, MK-MW09, AA2-BEDGW-001, and PB-BED-MW19. Seven wells were sampled in AA3, which included the five newly installed wells (AA3-GW003, AA3-GW004, AA3-GW005, AA3-BEDGW-002, and AA3-BEDGW-003) and existing wells (AA3-GW002 and AA3-BEDGW-001).

Groundwater samples from each monitoring well were analyzed for VOCs, SVOCs, PCBs, nitroaromatics, target analyte list (TAL) metals (unfiltered), TAL metals (filtered), cyanide, total organic carbon, turbidity, alkalinity, total suspended solids, total dissolved solids, nitrate, chloride, sulfate, and hardness. The filtering of metals was performed in the field using disposable 0.45-micron in-line filters. In addition iron (Fe^{++}) and manganese (Mn^{++}) were analyzed in the field using Hach test kits. Water quality parameters were also monitored during purging and after sampling using a Horiba U22XD equipped with a flow-thru cell. Water quality parameters included temperature, pH, dissolved oxygen, oxidation reduction potential, specific conductance, and turbidity.

Purging and sampling of the wells was performed with a bladder pump using low-flow methods, whereby pumping rates were set at a level that maintained static water levels or slightly increasing water levels during sampling. The pump was lowered into the well slowly to minimize suspension of sediments while setting the pump intake slightly above the center of the screen. Purge volume and water parameter stabilization requirements, as specified in the Final Site-Wide SAP (Jacobs 2004a), were achieved for all wells sampled by low-flow methods. Purge volume requirements were not achieved for low-yield wells that were purged dry.

Several of the wells (AA2-BEDGW-001, AA3-GW004, and AA3-GW005) exhibited well yields too low to perform purging and sampling at low-flow rates within a 10-hour period. These wells were pumped dry and allowed to recover overnight. Additional purging was then conducted at low-flow rates before sampling, until water parameters stabilized.

Bedrock wells AA3-BEDGW-001 and PB-BED-MW19 exhibited well yields too low to meet purging requirements and sampling within a 10-hour period, while trying to maintain the initial static water level. These wells exhibited increased yields as the water level was lowered. The increase in the yield prohibited a complete purging of the well; therefore the pumping rate was reduced after approaching the purge volume requirements, allowing water levels to recover and water parameters to stabilize. Sampling was then performed at these reduced flow rates while the water levels continued to rise, thus meeting the objectives of low-flow sampling.

Monitoring well IT-MW10 was sampled using a disposable ½-inch diameter bailer, due to blockage in the casing near ground level. This condition was noted in the Second Quarterly Background Report (IT 2002), which precluded sampling from this well during the September – October 2001 and January 2002 sampling events. Since low-flow methods were not possible, the well was bailed dry to remove all stagnant water from the well. The well was sampled with a bailer upon recovery. Filtered metals analysis was collected in an unpreserved bottle and submitted for filtering at the lab. Water quality parameters were measured before and after sampling using a grab sample, as opposed to continuous undisturbed readings from a flow-thru cell.

Sampling was performed on all monitoring wells after meeting the purge volume and water parameter stabilization requirements. Turbidity readings for many of the bedrock wells were often inaccurate due the accumulation of H^2S bubbles on the inside of the flow-thru cell. In most cases the water appeared very clear. Due to the extremely cold outside temperatures, the sampling equipment was placed inside of a vehicle, to avoid freezing of the purge lines. Temperature readings were not considered for water parameter stabilization, due to considerable temperature swings inside the vehicle. Constant temperature swings were inevitable due to opening doors or hatches to adjust pump settings, to collect water level measurements, or to change purge buckets. Purge and sampling records are provided in Appendix G.

2.3 DECONTAMINATION PROCEDURES

All down-hole equipment was decontaminated prior to use and in between each well. During drilling operations all down-hole equipment and tools were decontaminated using a high-pressure steam sprayer and potable water. The drilling tools were placed inside a decontamination pad constructed with high walls and designed to capture all decontamination fluids.

During well development and sampling all down-hole equipment was decontaminated in accordance with the Final Site-Wide SAP (Jacobs 2004a), which included a potable wash, potable rinse, and a final rinse with ASTM Type II deionized water. Equipment included pumps, tubing, slugs, security cables, pressure transducers (trolls), and water level meters.

Decontamination of the flow-thru cell and Horiba was not necessary since the flow-thru cell was disconnected just prior to sampling. Decontamination of the bladder pump and tubing was performed by immersing the pump and cycling the decontamination fluids through the entire system. The outside of the pump and tubing was also immersed and decontaminated. Rinsate samples were collected after decontamination by immersing the pump in a container of ASTM Type II deionized water and cycling water through the system.

2.4 IDW MANAGEMENT

All investigative derived waste (IDW) was managed in accordance with the Final Site-Wide SAP (Jacobs 2004a). Drill cuttings were containerized in 55-gallon open-top drums and labeled according to contents and location. Soil drums were staged on-site. Characterization sampling of soil IDW was performed at the conclusion of the piezometer and well installation activities. Six composite samples were collected: one from each set of drums associated with co-located shallow and bedrock well pairs (AA3-GW003 & AA3-BEDGW-002), (AA3-GW004 &AA3-BEDGW-003), one from AA3-GW-005, one from AA3-BEDGW-004, one composite of all AA2 piezometer borings, and one composite of all AA3 piezometer borings. Sample results indicated all soil IDW was non-hazardous. Soil IDW was transported on 28 January 2005 and disposed at an approved off-site facility.

Liquid IDW associated with decontamination of drilling equipment and was containerized in 55-gallon closed-top drums on a daily basis. Purge water and decontamination fluids generated during well development and groundwater sampling were collected in 5-gallon purge buckets and transferred to 55-gallon closed-top drums, which were stored at a temperature-controlled indoor facility. Characterization sampling of liquid IDW was performed on 31 January 2005. One composite sample was collected from all liquid IDW drums. Sample results indicate the liquid IDW is non-hazardous. Liquid IDW is scheduled for transportation to an approved off-site facility on 29 April 2005.

3.0 ANALYTICAL PROGRAM

The first round of groundwater sampling at the Acid Areas consisted of sample collection at thirteen groundwater monitoring wells at Acid Areas 2 and 3. The purpose of the groundwater monitoring samples is to determine impacts to the shallow and bedrock groundwater from the process facilities at the Acid Areas, and to collect data of appropriate quality to support a risk assessment and feasibility study. The groundwater monitoring samples were analyzed by USEPA SW-846 methodology capable of producing definitive data and EPA 600/4-79-020, *Method for Chemical Analysis of Water and Wastes* for the water quality parameters. Full level four data packages including raw data chromatograms and calibration information were generated for data evaluation.

3.1 ANALYTICAL PROGRAM AND METHODOLOGIES

The analytical subcontractors supporting the Plum Brook Acid Areas Remedial Investigation were required to hold current letters of validation to perform analyses in support of the USACE Hazardous, Toxic, Radioactive Waste Center of Expertise, and maintain the certification for all applicable methods for the duration of the project. Ecology and Environment of Lancaster, NY performed the primary sample analyses in support of this program. Jacobs performed data verification and validation on 100% of the primary sample data per the guidance of Section 2.1 of the Site Wide Quality Assurance Project Plan included as part of the *Final Site-Wide Sampling and Analysis Plan* (Jacobs 2004a).

ELAB of Nashville, Tennessee served at the quality assurance laboratory and analyzed splits of 10% of the primary samples. The primary and quality assurance laboratories used the same preparation and analysis methods to maintain adequate comparability of the data. Stratum Engineering of Bridgeton, Missouri evaluated the QA data and performed the comparison of the QA and primary data results.

Laboratory analyses performed on the primary and quality assurance Acid Areas groundwater samples included:

- VOCs by SW-846 5030/8260B
- SVOCs by SW-846 3520/8270c
- PCBs by SW-846 8082
- Nitroaromatics by SW-846 8330
- Total and Dissolved Metals by SW-846 3005A/6010B
- Total and Dissolved Mercury by SW-846 7470A
- Cyanide by SW-846 9012A

The following water quality parameters were performed on the primary samples only:

- Turbidity by EPA 180.1
- Hardness by EPA 130.2
- Alkalinity by EPA 310.1
- TOC by SW-846 9060
- Total Dissolved Solids by EPA 160.1
- Total Suspended Solids by EPA 160.2
- Anions (chloride, nitrate, and sulfate) by EPA 300

3.2 DATA QUALITY EVALUATION

Jacobs evaluated 100% of the primary groundwater data collected in support of the Acid Areas RI. The data evaluation was performed in accordance with the requirements of the SAP (Jacobs 2004a), the guidance of *EPA Contract Laboratory Program National Functional Guidelines for Organic Data Review* (USEPA 1999), and *EPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review* (USEPA 1994). The Chemical Data Quality Report summarizing Jacobs' data evaluation in terms of precision, accuracy, representativeness, comparability, and completeness is provided in Appendix I. The qualifiers applied as part of the data evaluation are defined in Section 2.0 of the Chemical Data Quality Report and the limitations implied by the qualification should be considered when reviewing the data.

Stratum Engineering, an independent third party firm, performed the evaluation of the quality assurance sample data and comparison of the quality assurance data to the corresponding primary sample data. Stratum prepared a Chemical Quality Assurance Report as a result of their data evaluation in accordance with the requirements of the SAP (Jacobs 2004A) and the guidance of *Chemical Quality Assurance for HTRW Projects* (USACE HTRW-CX 1997). The Chemical Quality Assurance report is included as Appendix J to this report.

The DQOs for this project were to produce scientifically and technically valid data of known quality that were complete, comparable with similar data types, and representative of the media sampled so as to be useable for its intended purposes. The data evaluation process utilizing the DQOs set forth in the SAP (Jacobs 2004A) resulted in the determination that the majority of the data set is valid and of sufficient quality to meet the objectives of the investigation. The only unusable data points are benzoic acid from the SVOC analysis for all 17 samples, and the metal selenium in four of the 17 samples. All other analytes are 100% complete and usable as qualified.

4.0 INVESTIGATION RESULTS

Site groundwater characterization results include water level data, slug test data, and analytical data. The discussion and presentation of this data has been separated into hydrogeological results and analytical results as presented below.

4.1 HYDROGEOLOGICAL RESULTS

Water level data was used to generate groundwater elevation contour maps, which were useful in determining gradients and flow direction for the shallow overburden and bedrock aquifers (Figures 4-1 through 4-5). Two separate shallow overburden contour maps were created: one based on piezometer data only (Figures 4-1 and 4-3), and the other based on permanent overburden wells only (Figures 4-2 and 4-4). In general both sets of data yield similar contour profiles. Groundwater elevation contour maps for the bedrock aquifer at AA2 were not generated because of limited data. Monitoring wells AA2-BEDGW-001 and PB-BED-MW19 represent the only bedrock wells at AA2 monitored during this investigation. Site-wide bedrock groundwater contour maps provided in the 2004 Groundwater Data Summary and Evaluation Report (Shaw 2004) have been used to evaluate bedrock groundwater gradients at AA2.

Shallow groundwater at AA2 flows eastward toward Pipe Creek. The drainage ditches to the north and south of the site also influence the shallow groundwater flow, as evidenced by the steep gradients on the northern and southern perimeter of the site. Shallow groundwater levels observed from the piezometers range from 1.3 to 8.6 ft bgs (Table 4-1). Shallow groundwater levels observed from the permanent overburden wells range from 3.2 to 6.4 ft bgs (Table 4-1).

Shallow groundwater at AA3 flows toward the center of the site and then westward toward the drainage ditch located on the western perimeter of the site. An underground drainage system was observed running north-south on the east side of the inner most railroad tracks. A discharge pipe was also observed on the east side of the drainage ditch near the center of the site. This drainage feature likely accounts for the shallow groundwater gradient observed at the site. Shallow groundwater levels observed from the piezometers range from 0.5 to 3.8 ft bgs (Table 4-2). Shallow groundwater levels observed from the permanent overburden wells range from 1.5 to 5.4 ft bgs (Table 4-2).

Based on the bedrock groundwater contour map provided in the 2004 Groundwater Data Summary and Evaluation Report (Shaw 2004), bedrock groundwater at AA2 flows to the east, west, and north, away from a groundwater high situated in the center of the site. Bedrock groundwater levels observed from the existing wells at AA2 range from 12.3 to 22.9 ft bgs (Table 4-1). Bedrock groundwater at AA3 flows to north, east, and south, away from a groundwater high located in the center of the site (Figure 4-5). Bedrock groundwater levels at AA3 range from 8.1 to 27.8 ft bgs (Table 4-2).

Slug test data was used to determine hydraulic parameters for the shallow and bedrock aquifers. Hydraulic conductivities for each well were calculated using the Bouwer-Rice

Method and AQTESOLV software. An anisotropy ratio of 0.5 was assumed. Saturated thickness for the shallow groundwater aquifer was assumed to be equivalent to the height of the water column. Saturated thickness for the bedrock wells was estimated at 60 ft. Various anisotropy values and saturated thickness values were used for experimental purposes to evaluate the range in results. A range of anisotropy values from 0.2 to 1 resulted in a minimal change of 2.5E-05 centimeters per second (cm/sec), while a range of saturated thickness values from 16.5 to 50 ft resulted in a change of 2.0E-05 cm/sec. All results were within the same order of magnitude.

Hydraulic conductivities calculated for the shallow overburden are 1.5E-04 cm/sec at AA3-GW003, 1.0E-05 at AA3-GW004, and 5.3E-06 cm/sec at AA3-GW005. Hydraulic conductivities for the bedrock wells range from 1.2E-03 cm/sec at AA3-BEDGW-002 to 2.4E-05 cm/sec at AA3-BEDGW-003. Slug test data, log plots, and calculation sheets are provided in Appendix H.

4.2 ANALYTICAL RESULTS

The following sections address the analytical results from the first round of groundwater sampling associated with the Acid Areas 2 and 3 RI. Prior sampling from the existing wells has been performed at these sites under different investigations, notably bedrock well PB-BED-MW19, which had been sampled seven times prior to this investigation, as a part of the site-wide groundwater investigation. Table 4-3 summarizes the sampling events to date for the various existing wells used for this investigation. Jacobs did not receive any groundwater data for monitoring wells AA2-GW002 and AA3-GW002, so it is unclear when these wells were sampled.

Sample results were screened against the EPA Region IX Preliminary Remediation Goals (PRG) for groundwater. Sample results for bedrock groundwater were also screened against the draft background values for organic and inorganic constituents in bedrock groundwater as submitted in the 2004 Groundwater Data Summary and Evaluation Report (Shaw 2004).

4.2.1 Overburden

Arsenic exceeds the PRG screening value in overburden monitoring well AA3-GW005. Arsenic concentrations were measured at 12.5 micrograms per liter (ug/L) (dissolved) and 12.1 ug/L (total) compared to the PRG value of 0.045 ug/L. Background values have not been established for shallow groundwater; however, draft background levels for arsenic in bedrock groundwater is 7.4ug/L. No other exceedances were observed.

Other analytes detected in the shallow groundwater included VOCs and metals (Table 4-4). Contaminants found in soil at AA2 and AA3 (SVOCs and PCBs) during prior investigations were not detected in the shallow groundwater. The VOCs were detected only in AA2-GW002, and included cyclohexane, ethylbenzene, isopropylbenzene, methylcyclohexane, and xylenes, all at relatively low levels (Table 4-4). These contaminants are found in groundwater in most of the bedrock wells, which are associated with naturally occurring petroleum in the Delaware Limestone. AA2-GW002

was the only shallow well where bladder pump #2 was used. This pump was used for all of the bedrock wells. It is possible that residual amounts of contaminants were left in the pump after decontamination. Further sampling with a dedicated shallow well pump during round 2 will allow for further evaluation.

Laboratory analysis for turbidity ranged from non detect (AA3-GW002, AA3-GW004, and MK-MW09) to 6.63 NTUs in IT-MW10. Suspended solids were non-detect in all overburden wells. Other water quality parameters such as total organic carbon, alkalinity, hardness, total dissolved solids, nitrate, sulfate, and chloride are presented in Table 4-4. The Hach test results for Fe^{++} and Mn^{++} were all negative.

For comparison purposes, analyte detections in shallow groundwater during prior sampling events are provided in Table 4-5. The maximum detection values for all analytes in shallow groundwater with the corresponding PRG and background values are presented in Table 4-6.

4.2.2 Bedrock

Arsenic was detected at levels above the PRG and draft background values at AA2-BEDGW-001. Arsenic concentrations were measured at 7.04 ug/L (dissolved) and 7.95 ug/L (total) compared to the PRG value of 0.045 ug/L and a background value of 7.4 ug/L. Benzene was detected above the PRG and background values at AA3-BEDGW-002, AA3-BEDGW-003, and PB-BED-MW19. The maximum concentration was 41.8 ug/L compared to the PRG value of 0.35 ug/L and a background value of 2.4 ug/L.

Other analytes detected in bedrock groundwater include metals and VOCs (Table 4-7). Contaminants found in soil at AA2 and AA3 (SVOCs and PCBs) during prior investigations were not detected in the bedrock groundwater. VOCs detected in the bedrock groundwater include the following analytes with associated frequencies:

- 2-Methylnapthalene (2 wells)
- Carbon Disulfide (4 wells)
- Chloromethane (1 well)
- Cyclohexane (all 5 wells)
- Ethylbenzene (all 5 wells)
- Isopropylbenzene (4 wells)
- Methylcyclohexane (all 5 wells)
- Napthalene (3 wells)
- Toluene (all 5 wells)
- Xylenes (all 5 wells)

Laboratory analysis for turbidity ranged from 1.64 NTUs in AA3-BEDGW-002 to 56.1 NTUs in AA3-BEDGW-003. Suspended solids were non-detect in all bedrock wells except for PB-BED-MW19 (5 mg/L). Because of the low suspended solids and overall clarity of the water, it is believed that chemical interference is causing elevated turbidity

results. Much of the bedrock groundwater exhibited either a green or black tint. Other water quality parameters such as total organic carbon, alkalinity, hardness, total dissolved solids, nitrate, sulfate, and chloride are presented in Table 4-7. The Hach test results for Fe^{++} and Mn^{++} were all negative.

For comparison purposes, analyte detections during prior groundwater sampling events are provided in Table 4-8. The maximum detection values for all analytes in bedrock groundwater with the corresponding PRG and background values are presented in Table 4-9.

5.0 PLANNED ACTIVITIES

Round 2 groundwater sampling is scheduled to begin 21 April 2005. A subsequent quarterly groundwater monitoring report will be submitted no later than 90 days following sample collection.

Water level measurements will be conducted at AA3-BEDGW-004, which remains as an open-hole completion. If no appreciable water has collected in the well, discussions between USACE and OEPA will be needed to determine future actions, to include abandonment.

After review of both rounds of data, an evaluation of the need for continued monitoring will be conducted by the USACE in conjunction with the Ohio Environmental Protection Agency (OEPA).

6.0 REFERENCES

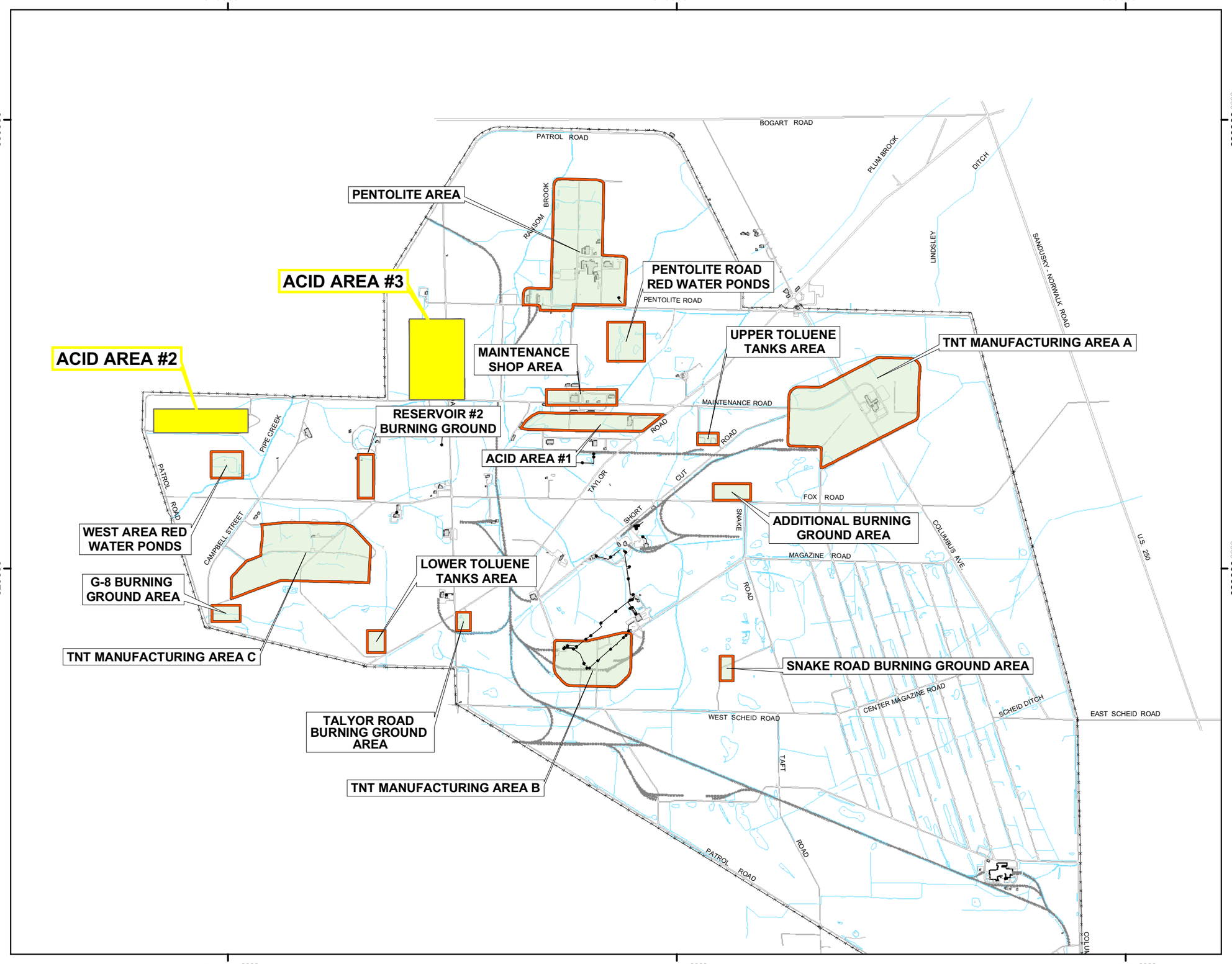
IT Corporation (IT), 1998, *Site Investigations of Acid Areas, Former Plum Brook Ordnance Works, Sandusky, Ohio*, December 1998.

IT Corporation (IT), 2002, *Second Quarterly Background Report*, May 2002

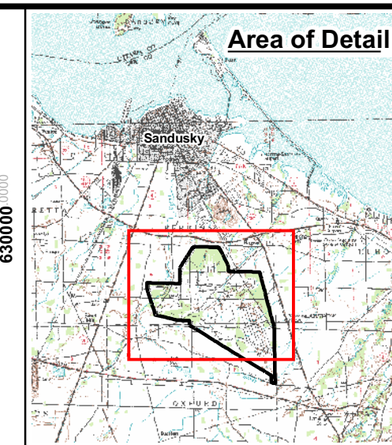
Jacobs, 2004a, *Final Site-Wide Sampling and Analysis Plan, Former Plum Brook Ordnance Works, Sandusky, Ohio*, May 2004.

Jacobs, 2004b, *Final Site-Specific Sampling and Analysis Plan, Remedial Investigation, Part 1, at Acid Areas 2 & 3*, October 2004.

Shaw, 2004, *2004 Groundwater Data Summary and Evaluation Report*, December 2004



Area of Detail



Legend

Area of Concern

Creek, Ditch, Conveyance

Sources

Data mapped to Ohio State Plane North NAD83, map grid units in feet.

N
W E
S

0 2,000 4,000 Feet

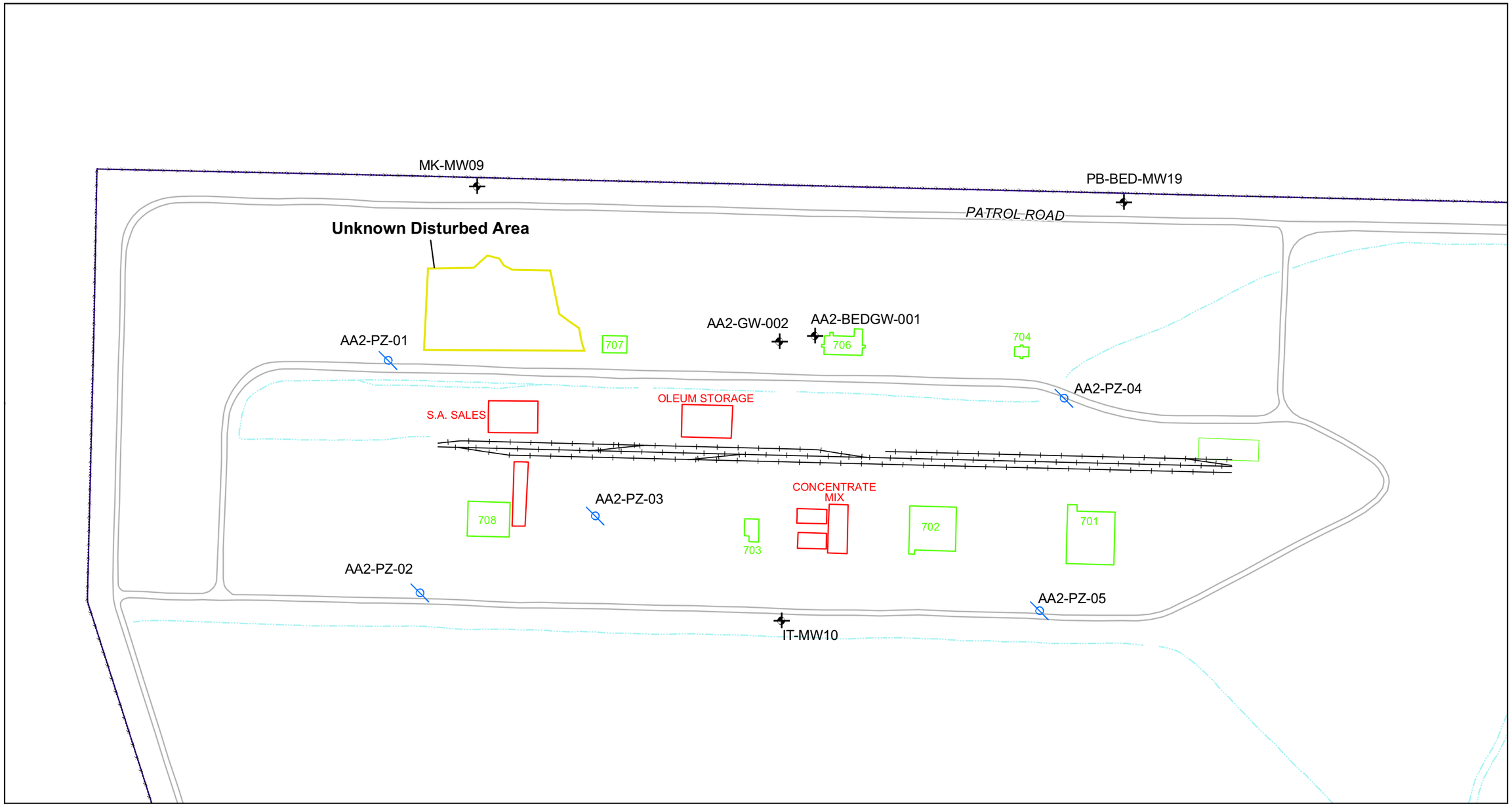
JACOBS

Location Map, Acid Area 2 and Acid Area 3

Plum Brook Ordnance Works
Sandusky, Ohio

04/14/05 NZ D:/GIS/Plumbrook/Projects/Quarterly Reports/GW_Q1/ArcGIS Acid_Areas2_3_LocMap.mxd

Figure 1-1



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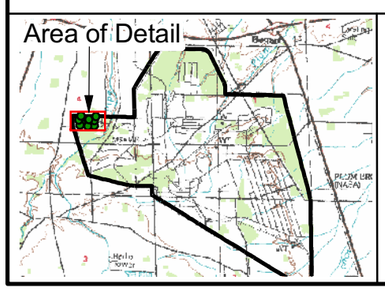


Legend

- Storage Tank Areas from Engineering Drawings
- Creek, Ditch, Conveyance
- Buildings
- Railway
- Monitoring Wells
- Piezometers

0 50 100 200
Feet

N

Notes: *Aerial Photography from 1958.*
Data mapped to Ohio Stateplane North NAD83, map units are feet.

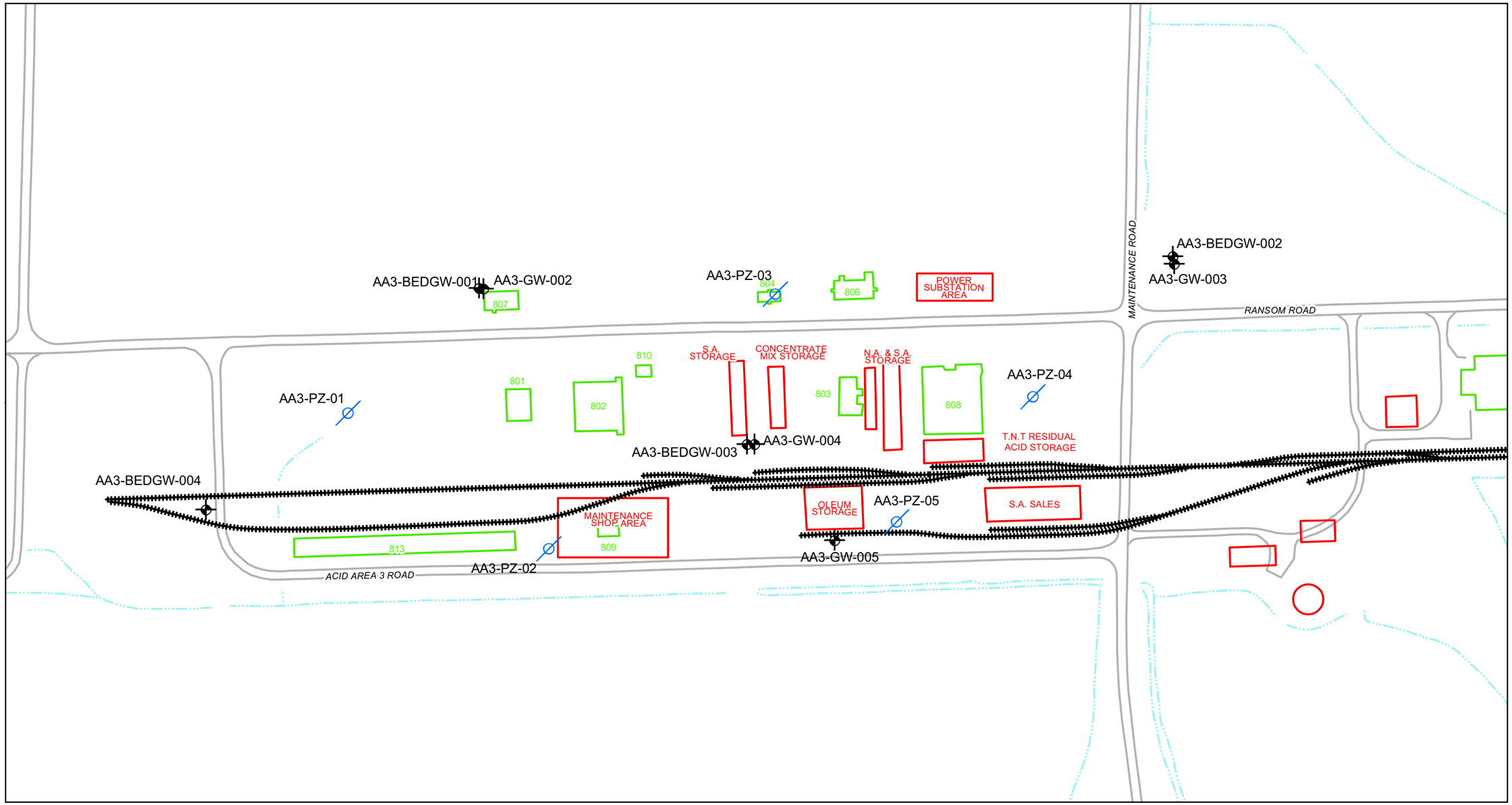
JACOBS

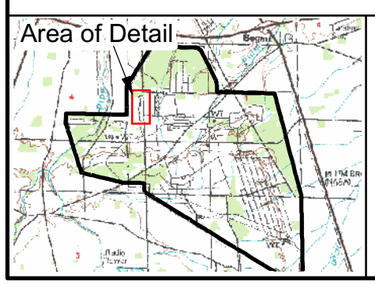
Final Piezometer and Well Locations at Acid Area 2

Plum Brook Ordnance Works
Sandusky, Ohio

04/14/05 NZ D:/GIS/Plumbrook/Projects/Quarterly Reports/GW_Q1/ArcGIS/AA2_GW_locs.mxd

Figure 2-1





Legend

- Storage Tank Areas from Engineering Drawings
- Creek, Ditch, Conveyance
- Buildings
- Railway
- Monitoring Wells
- Piezometers

0 50 100 200
Feet

N

Notes: *Aerial Photography from 1958.*
Data mapped to Ohio State Plane North NAD83, map units are feet.

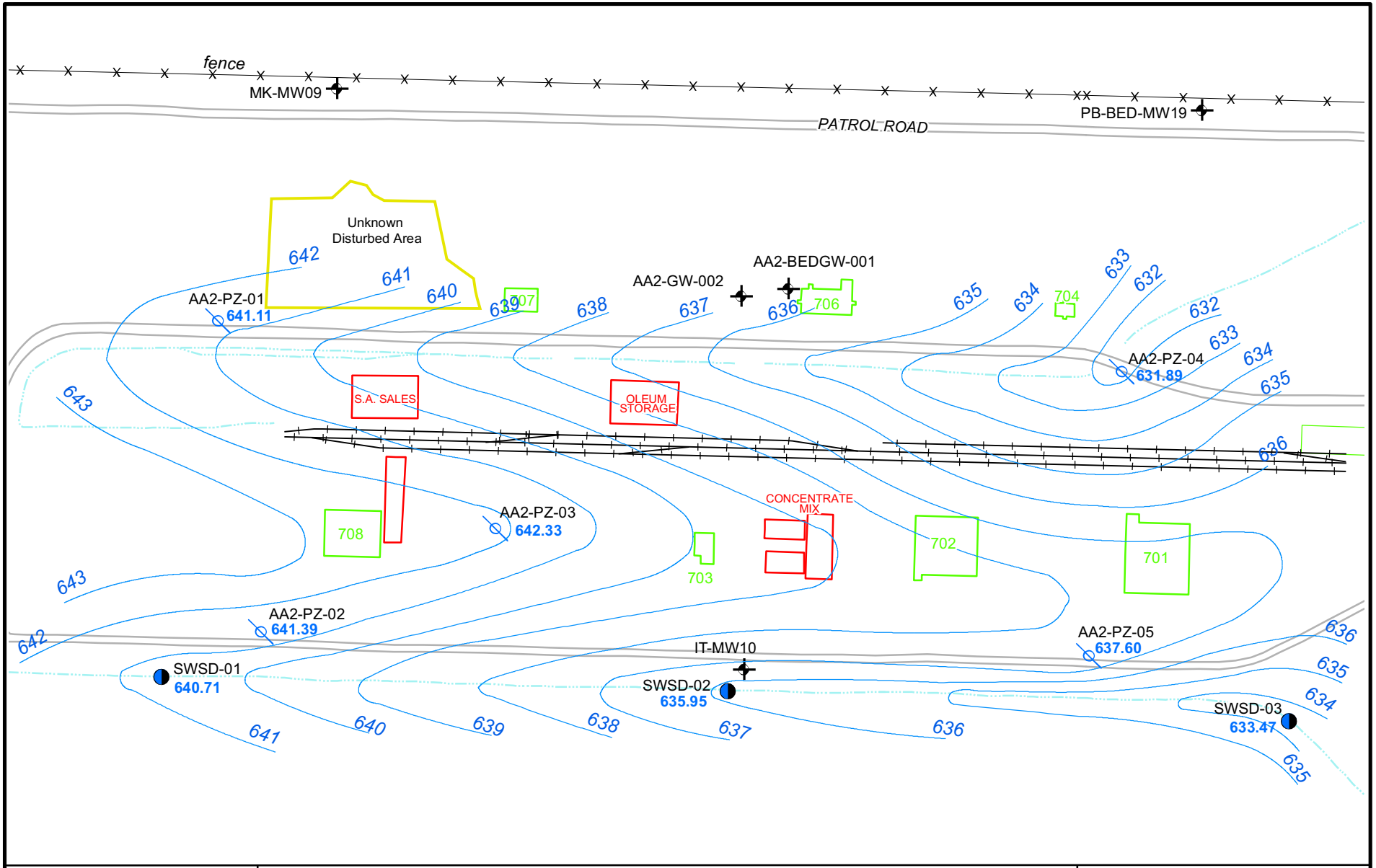
JACOBS

Final Piezometer and Well Locations at Acid Area 3

Plum Brook Ordnance Works
Sandusky, Ohio

04/14/05 NZ D:/GIS/Plumbrook/Projects/Quarterly Reports/GW_Q1/ArcGIS/AA3_GW_locs.mxd

Figure 2-2



Area of Detail

Legend

- Storage Tank Areas from Engineering Drawings
- Creek, Ditch, Conveyance
- Buildings
- Railway
- 640 Groundwater Elevation (feet above mean sea level)
- Monitoring Wells
- Piezometers
- Surface Water Sampling Locations

100 50 0 100
Feet

N

Notes:
Data mapped to Ohio State Plane North NAD83, map units are feet.

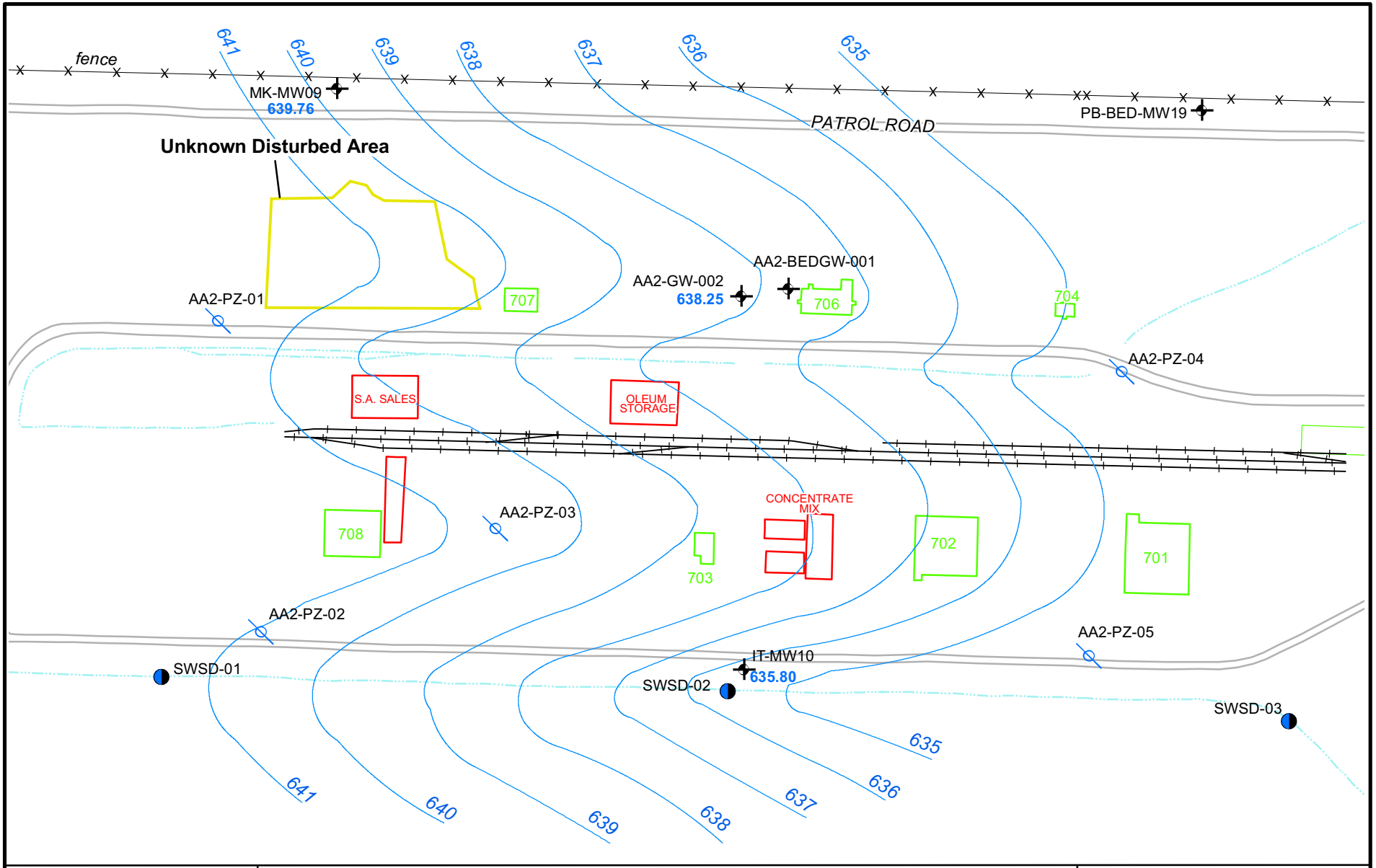
JACOBS

Shallow Groundwater Elevation Map Based on Piezometer Data at Acid Area 2 — January 2005

Plum Brook Ordnance Works
Sandusky, Ohio

04/13/05 NZ Y:/GIS/Plumbrook/Projects/Quarterly Reports/GW_Q1/ArcGISAA2_GW_Shallow_Piezo.mxd

Figure 4-1



Area of Detail

Legend

- Storage Tank Areas from Engineering Drawings
- Creek, Ditch, Conveyance
- Buildings
- Railway
- 640 Groundwater Elevation (feet above mean sea level)
- Monitoring Wells
- Piezometers
- Surface Water Sampling Locations

100 50 0 100
Feet

N

Notes:
Data mapped to Ohio State Plane North NAD83, map units are feet.

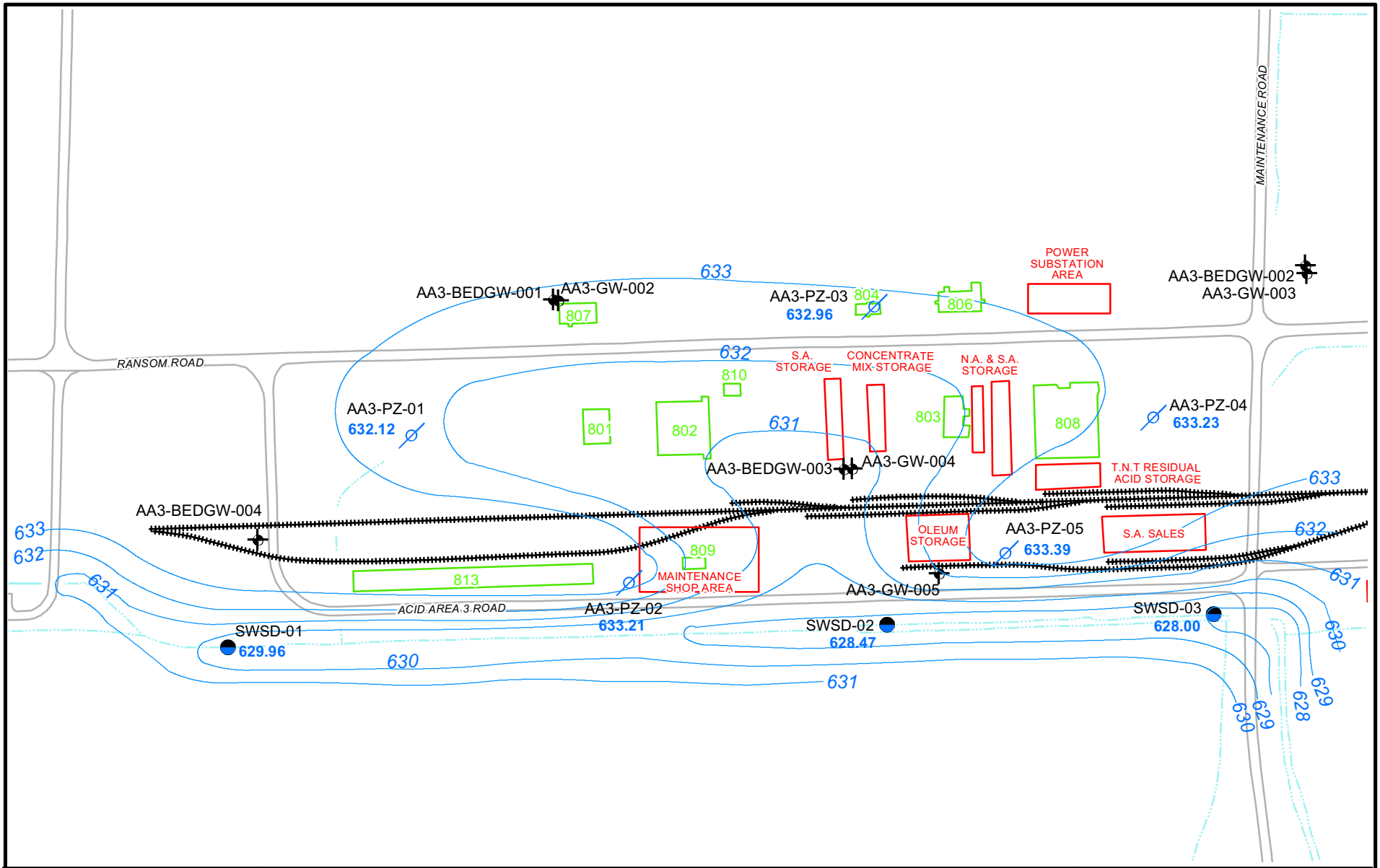
JACOBS

Shallow Groundwater Elevation Map Based on Overburden Well Data at Acid Area 2 — January 2005

Plum Brook Ordnance Works
Sandusky, Ohio

04/14/05 NZ Y:/GIS/Plumbrook/Projects/Quarterly Reports/GW_Q1/ArcGIS/AA2_GW_Shallow_Wells.mxd

Figure 4-2



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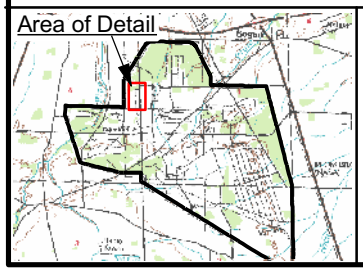


Legend

- Storage Tank Areas from Engineering Drawings
- Creek, Ditch, Conveyance
- Buildings
- Railway
- 640 Groundwater Elevation (feet above mean sea level)
- Monitoring Wells
- Piezometers
- Surface Water Sampling Locations

100 50 0 100
Feet

N

Notes:
Data mapped to Ohio State Plane North NAD83, map units are feet.

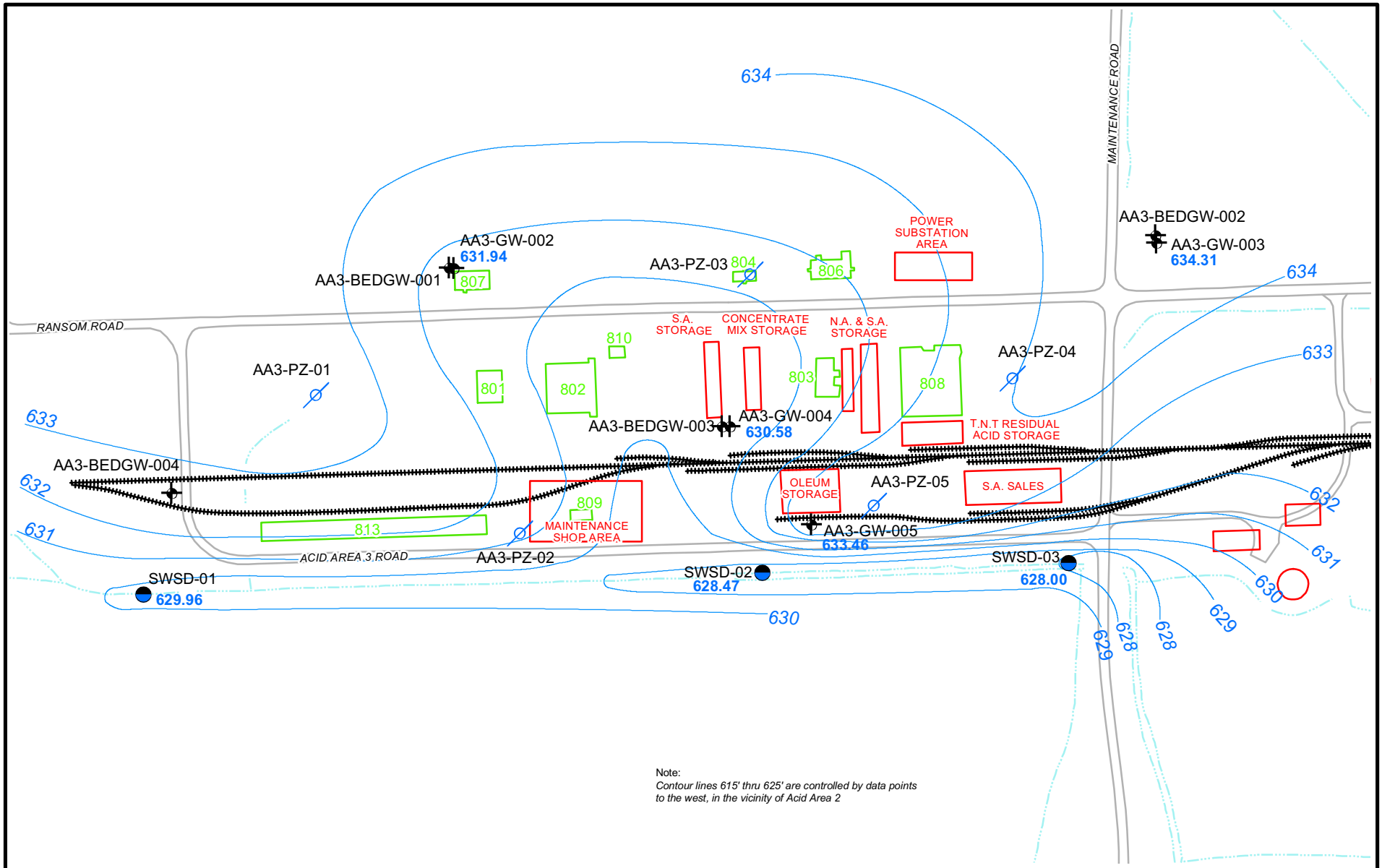
JACOBS

Shallow Groundwater Elevation Map Based on Piezometer Data at Acid Area 3 — January 2005

Plum Brook Ordnance Works
Sandusky, Ohio

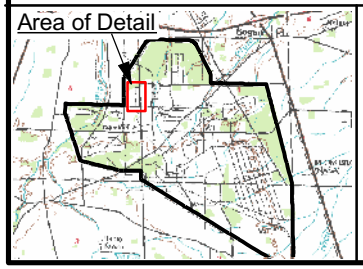
04/13/05 NZ Y:/GIS/Plumbrook/Projects/Quarterly Reports/GW_Q1/ArcGIS/AA3_GW_Shallow_Piezo.mxd

Figure 4-3



Note:
Contour lines 615' thru 625' are controlled by data points to the west, in the vicinity of Acid Area 2

Area of Detail



Legend

- Storage Tank Areas from Engineering Drawings
- Creek, Ditch, Conveyance
- Buildings
- Railway
- 640 Groundwater Elevation (feet above mean sea level)
- Monitoring Wells
- Piezometers
- Surface Water Sampling Locations

100 50 0 100
Feet

N

Notes:
Data mapped to Ohio State Plane North NAD83, map units are feet.

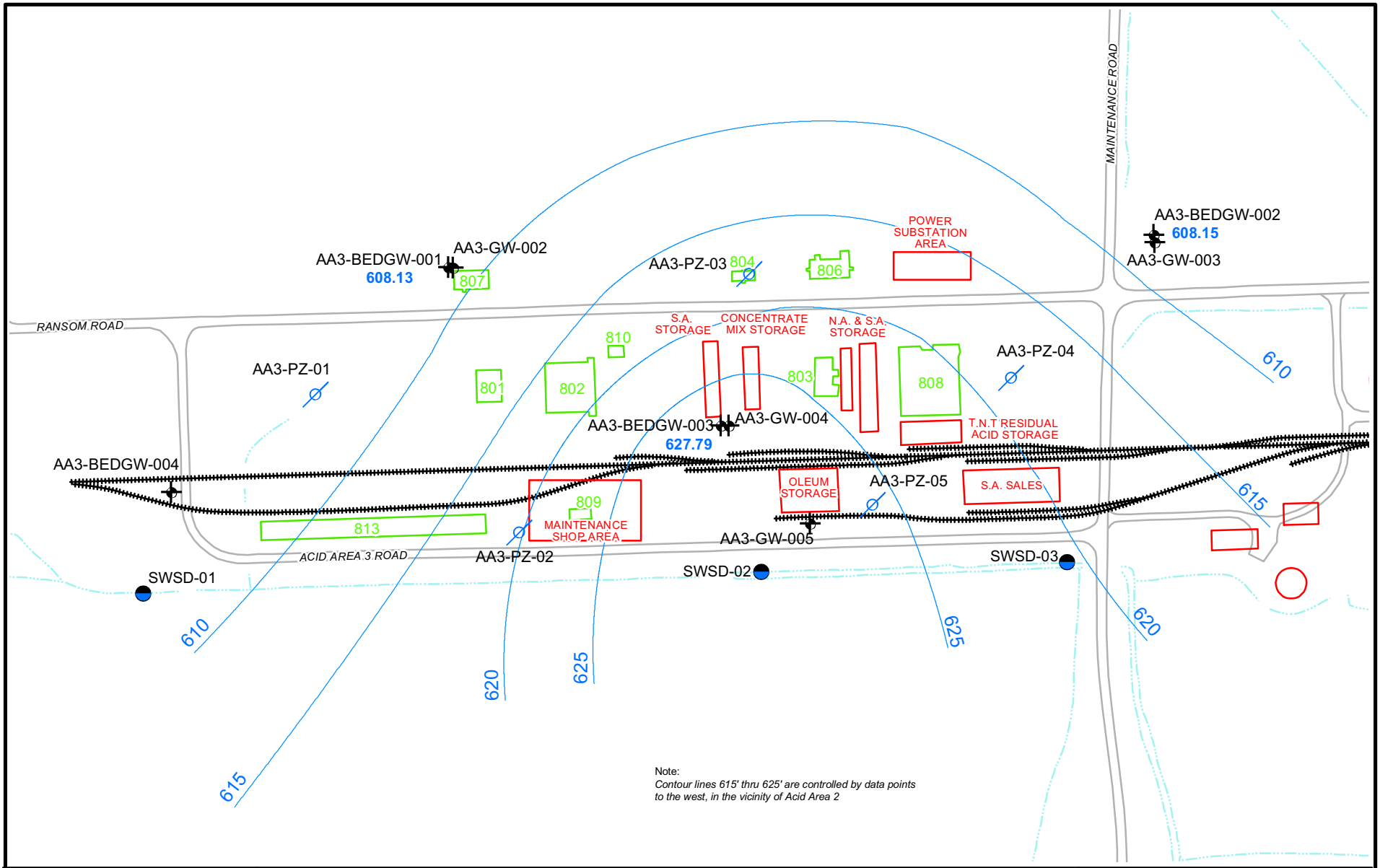
JACOBS

Shallow Groundwater Elevation Map Based on Permanent Overburden Well Data at Acid Area 3 — January 2005

Plum Brook Ordnance Works
Sandusky, Ohio

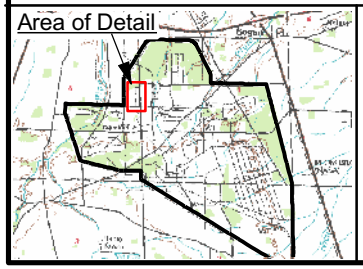
04/13/05 NZ Y:/GIS/Plumbrook/Projects/Quarterly Reports/GW_Q1/ArcGIS/AA3_GW_Shallow_Groundwater.mxd

Figure 4-4



Note:
Contour lines 615' thru 625' are controlled by data points to the west, in the vicinity of Acid Area 2

Area of Detail



Legend

- Storage Tank Areas from Engineering Drawings
- Creek, Ditch, Conveyance
- Buildings
- Railway
- 640 Groundwater Elevation (feet above mean sea level)
- Monitoring Wells
- Piezometers
- Surface Water Sampling Locations

100 50 0 100
Feet

N

Notes:
Data mapped to Ohio State Plane North NAD83, map units are feet.

JACOBS

Bedrock Groundwater Elevation Map for Acid Area 3— January 2005

Plum Brook Ordnance Works
Sandusky, Ohio

04/14/05 NZ Y:/GIS/Plumbrook/Projects/Quarterly Reports/GW_Q1/ArcGIS/AA3_GW_Bedrock.mxd

Figure 4-5

Table 4-1
Acid Area 2 - Groundwater Level Data (ft amsl)

Location	Installation Date	Land Elevation	Elevation TOC	Elevation Top of Screen	Groundwater Elevation			
					11/8/2004	11/10/2004	12/2/2004	1/23/2005
Piezometers								
AA2-PZ-01	11/3/2004	642.73	644.43	633.73	633.01	632.46	638.63	641.11
AA2-PZ-02	11/3/2004	643.55	645.61	635.55	636.41	636.53	640.00	641.39
AA2-PZ-03	11/3/2004	643.64	646.15	633.44	624.84	624.39	636.31	642.33
AA2-PZ-04	11/4/2004	640.54	643.06	629.04	621.87	621.66	620.97	631.89
AA2-PZ-05	11/4/2004	640.92	642.04	631.92	625.87	625.96	633.11	637.6
Overburden Wells								
AA2-GW-002	9/22/1997	641.50	643.95	630.75	625.11	625.04	624.29	638.25
IT-MW10	9/26/1996	642.20	644.80	630.40	627.20	627.25	628.89	635.80
MK-MW09	6/29/1993	642.95	645.61	635.10				639.76
Bedrock Wells								
AA2-BEDGW-001	10/2/1997	641.60	644.06	611.35				629.3
PB-BED-MW19	11/4/2004	640.19	642.75	613.99				617.29

Table 4-2
Acid Area 3 - Groundwater Level Data (ft amsl)

Location	Installation Date	Land Elevation	Elevation TOC	Elevation Top of Screen	Groundwater Elevation				
					11/8/2004	11/10/2004	12/2/2004	12/10/2004	1/20/2005
Piezometers									
AA3-PZ-01	11/3/2004	632.65	634.84	621.65	612.97	613.57	619.77	621.21	632.12
AA3-PZ-02	11/3/2004	637.02	638.62	621.82	629.66	629.78	632.16	632.02	633.21
AA3-PZ-03	11/3/2004	636.43	639.19	621.53	626.9	627.05	630.22	630.26	632.96
AA3-PZ-04	11/4/2004	635.84	638.71	621.54	629.08	629.15	633.55	633.46	633.23
AA3-PZ-05	11/4/2004	636.17	638.37	622.17	626.97	627.03	630.54	631.96	633.39
Overburden Wells									
AA3-GW002	9/18/1997	634.10	636.11	625.85	627.69	627.71	631.09	631.09	631.94
AA3-GW003	12/3/2004	635.86	637.85	625.86				633.79	634.31
AA3-GW004	12/4/2004	635.97	638.26	625.67				629.28	630.58
AA3-GW005	12/6/2004	636.24	638.31	626.14				633.12	633.46
Bedrock Wells									
AA3-BEDGW-001	10/5/1997	634.10	636.43	593.85					608.13
AA3-BEDGW-002	12/16/2004	635.91	638.30	588.51					608.15
AA3-BEDGW-003	12/17/2004	635.92	638.55	592.97					627.79

Table 4-3
Historical Groundwater Sampling Events at Existing Wells

Acid Area 2	Jun 1993	Dec 1994	Oct 1996	Nov 1997	May 1998	Sep-Oct 2001	Apr 2002	May 2004	Jan-Feb 2005
AA2-GW-002									x
IT-MW10				x	x				x
MK-MW09	x			x	x				x
AA2-BEDGW-001				x	x	x	x		x
PB-BED-MW19		x	x	x	x	x	x	x	x

Acid Area 3									
AA3-GW002									x
AA3-BEDGW-001				x	x	x	x		x

Table 4-4
Detected Analytes in Shallow Groundwater (January 2005)

Location	Date	Time Samp.	Sample ID	Depth	Test	Analyte	Result	Qual	DL	RL	Units	Bkg.	Region 9 Tap Water Std.	Samp. Type
Acid Area 2														
AA2-GW-002	1/26/2005	16:20	PBOW-05-GW-AA2-GW002-01A	15.8	E310.1	Alkalinity, Total (as CaCO3)	250		2	2	mg/L			N1
AA2-GW-002	1/26/2005	16:20	PBOW-05-GW-AA2-GW002-01A	15.8	E300	Chloride (as Cl)	6.79		0.0494	0.1	mg/L			N1
AA2-GW-002	1/26/2005	16:20	PBOW-05-GW-AA2-GW002-01A	15.8	E130.2	Hardness (as CACO3)	589		1	1	mg/L			N1
AA2-GW-002	1/26/2005	16:20	PBOW-05-GW-AA2-GW002-01A	15.8	E300	Sulfate (as SO4)	131		0.187	1	mg/L			N1
AA2-GW-002	1/26/2005	16:20	PBOW-05-GW-AA2-GW002-01A	15.8	E160.1	Total Dissolved Solids	480		10	10	mg/L			N1
AA2-GW-002	1/26/2005	16:20	PBOW-05-GW-AA2-GW002-01A	15.8	SW9060	Total Organic Carbon	2.66		0.217	1	mg/L			N1
AA2-GW-002	1/26/2005	16:20	PBOW-05-GW-AA2-GW002-01A	15.8	E180.1	Turbidity	1.64		0.393	0.5	NTU			N1
AA2-GW-002	1/26/2005	16:20	PBOW-05-GW-AA2-GW002-01A	15.8	SW6010B	Barium	25.2		0.693	20	ug/L		2600	N1
AA2-GW-002	1/26/2005	16:20	PBOW-05-GW-AA2-GW002-01A	15.8	SW6010B	Calcium	106000		90.9	1500	ug/L			N1
AA2-GW-002	1/26/2005	16:20	PBOW-05-GW-AA2-GW002-01A	15.8	SW6010B	Copper	4.09	J	2.55	20	ug/L		1500	N1
AA2-GW-002	1/26/2005	16:20	PBOW-05-GW-AA2-GW002-01A	15.8	SW6010B	Iron	29.8	J	22.9	200	ug/L		11000	N1
AA2-GW-002	1/26/2005	16:20	PBOW-05-GW-AA2-GW002-01A	15.8	SW6010B	Magnesium	31600		38.5	1500	ug/L			N1
AA2-GW-002	1/26/2005	16:20	PBOW-05-GW-AA2-GW002-01A	15.8	SW6010B	Sodium	13900		49.3	1500	ug/L			N1
AA2-GW-002	1/26/2005	16:20	PBOW-05-GW-AA2-GW002-01A	15.8	SW6010B	Zinc	20.4		1.46	20	ug/L		11000	N1
AA2-GW-002	1/26/2005	16:20	PBOW-05-GW-AA2-GW002-01A	15.8	SW6010B	Barium (total)	25.9		0.693	20	ug/L		2600	N1
AA2-GW-002	1/26/2005	16:20	PBOW-05-GW-AA2-GW002-01A	15.8	SW6010B	Beryllium (total)	0.156	J	0.109	5	ug/L		73	N1
AA2-GW-002	1/26/2005	16:20	PBOW-05-GW-AA2-GW002-01A	15.8	SW6010B	Calcium (total)	109000		90.9	1500	ug/L			N1
AA2-GW-002	1/26/2005	16:20	PBOW-05-GW-AA2-GW002-01A	15.8	SW6010B	Chromium (total)	0.77	J	0.236	10	ug/L			N1
AA2-GW-002	1/26/2005	16:20	PBOW-05-GW-AA2-GW002-01A	15.8	SW6010B	Cobalt (total)	1.53	J	0.898	20	ug/L		730	N1
AA2-GW-002	1/26/2005	16:20	PBOW-05-GW-AA2-GW002-01A	15.8	SW6010B	Copper (total)	3.1	J	2.55	20	ug/L		1500	N1
AA2-GW-002	1/26/2005	16:20	PBOW-05-GW-AA2-GW002-01A	15.75	SW6010B	Magnesium (total)	32400		38.5	1500	ug/L			N1
AA2-GW-002	1/26/2005	16:20	PBOW-05-GW-AA2-GW002-01A	15.75	SW6010B	Potassium (total)	277	J	175	1500	ug/L			N1
AA2-GW-002	1/26/2005	16:20	PBOW-05-GW-AA2-GW002-01A	15.75	SW6010B	Sodium (total)	14700		49.3	1500	ug/L			N1
AA2-GW-002	1/26/2005	16:20	PBOW-05-GW-AA2-GW002-01A	15.75	SW6010B	Zinc (total)	22.8		1.46	20	ug/L		11000	N1
AA2-GW-002	1/26/2005	16:20	PBOW-05-GW-AA2-GW002-01A	15.75	SW8260B	Benzene	0.117	J	0.104	1	ug/L	2.4	0.35	N1
AA2-GW-002	1/26/2005	16:20	PBOW-05-GW-AA2-GW002-01A	15.75	SW8260B	Cyclohexane	14.8		0.0999	1	ug/L		10000	N1
AA2-GW-002	1/26/2005	16:20	PBOW-05-GW-AA2-GW002-01A	15.75	SW8260B	Ethylbenzene	0.68	J	0.164	1	ug/L		1300	N1
AA2-GW-002	1/26/2005	16:20	PBOW-05-GW-AA2-GW002-01A	15.75	SW8260B	Isopropylbenzene (Cumene)	0.325	J	0.101	1	ug/L		660	N1
AA2-GW-002	1/26/2005	16:20	PBOW-05-GW-AA2-GW002-01A	15.75	SW8260B	Methylcyclohexane	10.2		0.107	1	ug/L		5200	N1
AA2-GW-002	1/26/2005	16:20	PBOW-05-GW-AA2-GW002-01A	15.75	SW8260B	Xylenes, Total	11.9		0.307	1	ug/L		210	N1
IT-MW10	2/1/2005	11:30	PBOW-05-GW-AA2-ITMW10-01A	16.8	E310.1	Alkalinity, Total (as CaCO3)	370		2	2	mg/L			N1
IT-MW10	2/1/2005	11:30	PBOW-05-GW-AA2-ITMW10-01A	16.8	E300	Chloride (as Cl)	7.74	J	0.0494	0.1	mg/L			N1
IT-MW10	2/1/2005	11:30	PBOW-05-GW-AA2-ITMW10-01A	16.8	E130.2	Hardness (as CACO3)	1110		1	1	mg/L			N1
IT-MW10	2/1/2005	11:30	PBOW-05-GW-AA2-ITMW10-01A	16.8	E300	Nitrogen, Nitrate (as N)	0.071	J	0.0149	0.1	mg/L		10	N1
IT-MW10	2/1/2005	11:30	PBOW-05-GW-AA2-ITMW10-01A	16.8	E300	Sulfate (as SO4)	308		0.187	1	mg/L			N1
IT-MW10	2/1/2005	11:30	PBOW-05-GW-AA2-ITMW10-01A	16.8	E160.1	Total Dissolved Solids	900		10	10	mg/L			N1
IT-MW10	2/1/2005	11:30	PBOW-05-GW-AA2-ITMW10-01A	16.8	SW9060	Total Organic Carbon	2.68		0.217	1	mg/L			N1
IT-MW10	2/1/2005	11:30	PBOW-05-GW-AA2-ITMW10-01A	16.8	E180.1	Turbidity	6.63		0.393	0.5	NTU			N1
IT-MW10	2/1/2005	11:30	PBOW-05-GW-AA2-ITMW10-01A	16.8	SW6010B	Barium	48.4		0.693	20	ug/L		2600	N1
IT-MW10	2/1/2005	11:30	PBOW-05-GW-AA2-ITMW10-01A	16.8	SW6010B	Calcium	176000		90.9	1500	ug/L			N1
IT-MW10	2/1/2005	11:30	PBOW-05-GW-AA2-ITMW10-01A	16.8	SW6010B	Magnesium	69900		38.5	1500	ug/L			N1

Table 4-4
Detected Analytes in Shallow Groundwater (January 2005)

Location	Date	Time Samp.	Sample ID	Depth	Test	Analyte	Result	Qual	DL	RL	Units	Bkg.	Region 9 Tap Water Std.	Samp. Type
IT-MW10	2/1/2005	11:30	PBOW-05-GW-AA2-ITMW10-01A	16.8	SW6010B	Manganese	49		0.419	10	ug/L		880	N1
IT-MW10	2/1/2005	11:30	PBOW-05-GW-AA2-ITMW10-01A	16.8	SW6010B	Potassium	2110		175	1500	ug/L			N1
IT-MW10	2/1/2005	11:30	PBOW-05-GW-AA2-ITMW10-01A	16.8	SW6010B	Sodium	21500	J	49.3	1500	ug/L			N1
IT-MW10	2/1/2005	11:30	PBOW-05-GW-AA2-ITMW10-01A	16.8	SW6010B	Barium (total)	40.5		0.693	20	ug/L		2600	N1
IT-MW10	2/1/2005	11:30	PBOW-05-GW-AA2-ITMW10-01A	16.8	SW6010B	Calcium (total)	184000		90.9	1500	ug/L			N1
IT-MW10	2/1/2005	11:30	PBOW-05-GW-AA2-ITMW10-01A	16.8	SW6010B	Cobalt (total)	1.62	J	0.898	20	ug/L		730	N1
IT-MW10	2/1/2005	11:30	PBOW-05-GW-AA2-ITMW10-01A	16.8	SW6010B	Iron (total)	834		22.9	200	ug/L		11000	N1
IT-MW10	2/1/2005	11:30	PBOW-05-GW-AA2-ITMW10-01A	16.8	SW6010B	Magnesium (total)	73700		38.5	1500	ug/L			N1
IT-MW10	2/1/2005	11:30	PBOW-05-GW-AA2-ITMW10-01A	16.8	SW6010B	Manganese (total)	103		0.419	10	ug/L		880	N1
IT-MW10	2/1/2005	11:30	PBOW-05-GW-AA2-ITMW10-01A	16.8	SW6010B	Nickel (total)	4.15	J	0.745	20	ug/L		730	N1
IT-MW10	2/1/2005	11:30	PBOW-05-GW-AA2-ITMW10-01A	16.8	SW6010B	Potassium (total)	2290		175	1500	ug/L			N1
IT-MW10	2/1/2005	11:30	PBOW-05-GW-AA2-ITMW10-01A	16.8	SW6010B	Sodium (total)	20700	J	49.3	1500	ug/L			N1
MK-MW09	1/24/2005	15:30	PBOW-05-GW-AA2-MKMW09-01A	12.85	E310.1	Alkalinity, Total (as CaCO3)	230		2	2	mg/L			N1
MK-MW09	1/24/2005	15:30	PBOW-05-GW-AA2-MKMW09-01A	12.85	E300	Chloride (as Cl)	6.69	J	0.0494	0.1	mg/L			N1
MK-MW09	1/24/2005	15:30	PBOW-05-GW-AA2-MKMW09-01A	12.85	E130.2	Hardness (as CACO3)	474		1	1	mg/L			N1
MK-MW09	1/24/2005	15:30	PBOW-05-GW-AA2-MKMW09-01A	12.85	E300	Nitrogen, Nitrate (as N)	3.98		0.0149	0.1	mg/L		10	N1
MK-MW09	1/24/2005	15:30	PBOW-05-GW-AA2-MKMW09-01A	12.85	E300	Sulfate (as SO4)	30		0.0187	0.1	mg/L			N1
MK-MW09	1/24/2005	15:30	PBOW-05-GW-AA2-MKMW09-01A	12.85	E160.1	Total Dissolved Solids	300		10	10	mg/L			N1
MK-MW09	1/24/2005	15:30	PBOW-05-GW-AA2-MKMW09-01A	12.85	SW9060	Total Organic Carbon	1.87		0.217	1	mg/L			N1
MK-MW09	1/24/2005	15:30	PBOW-05-GW-AA2-MKMW09-01A	12.85	SW6010B	Barium	27.6		0.693	20	ug/L		2600	N1
MK-MW09	1/24/2005	15:30	PBOW-05-GW-AA2-MKMW09-01A	12.85	SW6010B	Calcium	74700		90.9	1500	ug/L			N1
MK-MW09	1/24/2005	15:30	PBOW-05-GW-AA2-MKMW09-01A	12.85	SW6010B	Cobalt	1.29	J	0.898	20	ug/L		730	N1
MK-MW09	1/24/2005	15:30	PBOW-05-GW-AA2-MKMW09-01A	12.85	SW6010B	Magnesium	20400		38.5	1500	ug/L			N1
MK-MW09	1/24/2005	15:30	PBOW-05-GW-AA2-MKMW09-01A	12.85	SW6010B	Manganese	0.7	J	0.419	10	ug/L		880	N1
MK-MW09	1/24/2005	15:30	PBOW-05-GW-AA2-MKMW09-01A	12.85	SW6010B	Potassium	719	J	175	1500	ug/L			N1
MK-MW09	1/24/2005	15:30	PBOW-05-GW-AA2-MKMW09-01A	12.85	SW6010B	Sodium	3140		49.3	1500	ug/L			N1
MK-MW09	1/24/2005	15:30	PBOW-05-GW-AA2-MKMW09-01A	12.85	SW6010B	Barium (total)	29	J	0.693	20	ug/L		2600	N1
MK-MW09	1/24/2005	15:30	PBOW-05-GW-AA2-MKMW09-01A	12.85	SW6010B	Calcium (total)	75700	J	90.9	1500	ug/L			N1
MK-MW09	1/24/2005	15:30	PBOW-05-GW-AA2-MKMW09-01A	12.85	SW6010B	Cobalt (total)	1.17	J	0.898	20	ug/L		730	N1
MK-MW09	1/24/2005	15:30	PBOW-05-GW-AA2-MKMW09-01A	12.85	SW6010B	Magnesium (total)	20700	J	38.5	1500	ug/L			N1
MK-MW09	1/24/2005	15:30	PBOW-05-GW-AA2-MKMW09-01A	12.85	SW6010B	Potassium (total)	704	J	175	1500	ug/L			N1
MK-MW09	1/24/2005	15:30	PBOW-05-GW-AA2-MKMW09-01A	12.85	SW6010B	Sodium (total)	3190	J	49.3	1500	ug/L			N1
Acid Area 3														
AA3-GW-002	1/21/2005	16:45	PBOW-05-GW-AA3-GW002-01A	13.25	E310.1	Alkalinity, Total (as CaCO3)	370		2	2	mg/L			N1
AA3-GW-002	1/21/2005	16:45	PBOW-05-GW-AA3-GW002-01A	13.25	E300	Chloride (as Cl)	2.08		0.0494	0.1	mg/L			N1
AA3-GW-002	1/21/2005	16:45	PBOW-05-GW-AA3-GW002-01A	13.25	E130.2	Hardness (as CACO3)	646		1	1	mg/L			N1
AA3-GW-002	1/21/2005	16:45	PBOW-05-GW-AA3-GW002-01A	13.25	E300	Nitrogen, Nitrate (as N)	0.076	J	0.0149	0.1	mg/L		10	N1
AA3-GW-002	1/21/2005	16:45	PBOW-05-GW-AA3-GW002-01A	13.25	E300	Sulfate (as SO4)	45.5		0.0187	0.1	mg/L			N1
AA3-GW-002	1/21/2005	16:45	PBOW-05-GW-AA3-GW002-01A	13.25	E160.1	Total Dissolved Solids	400		10	10	mg/L			N1
AA3-GW-002	1/21/2005	16:45	PBOW-05-GW-AA3-GW002-01A	13.25	SW9060	Total Organic Carbon	2.61		0.217	1	mg/L			N1
AA3-GW-002	1/21/2005	16:45	PBOW-05-GW-AA3-GW002-01A	13.25	SW6010B	Barium	53.4		0.693	20	ug/L		2600	N1
AA3-GW-002	1/21/2005	16:45	PBOW-05-GW-AA3-GW002-01A	13.25	SW6010B	Calcium	115000		90.9	1500	ug/L			N1

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Detected Analytes in Shallow Groundwater (January 2005)

Location	Date	Time Samp.	Sample ID	Depth	Test	Analyte	Result	Qual	DL	RL	Units	Bkg.	Region 9 Tap Water Std.	Samp. Type
AA3-GW-002	1/21/2005	16:45	PBOW-05-GW-AA3-GW002-01A	13.25	SW6010B	Cobalt	1.44	J	0.898	20	ug/L		730	N1
AA3-GW-002	1/21/2005	16:45	PBOW-05-GW-AA3-GW002-01A	13.25	SW6010B	Magnesium	25400		38.5	1500	ug/L			N1
AA3-GW-002	1/21/2005	16:45	PBOW-05-GW-AA3-GW002-01A	13.25	SW6010B	Manganese	0.567	J	0.419	10	ug/L		880	N1
AA3-GW-002	1/21/2005	16:45	PBOW-05-GW-AA3-GW002-01A	13.25	SW6010B	Potassium	470	J	175	1500	ug/L			N1
AA3-GW-002	1/21/2005	16:45	PBOW-05-GW-AA3-GW002-01A	13.25	SW6010B	Sodium	6290		49.3	1500	ug/L			N1
AA3-GW-002	1/21/2005	16:45	PBOW-05-GW-AA3-GW002-01A	13.25	SW6010B	Zinc	17.1	J	1.46	20	ug/L		11000	N1
AA3-GW-002	1/21/2005	16:45	PBOW-05-GW-AA3-GW002-01A	13.25	SW6010B	Barium (total)	56.4	J	0.693	20	ug/L		2600	N1
AA3-GW-002	1/21/2005	16:45	PBOW-05-GW-AA3-GW002-01A	13.25	SW6010B	Calcium (total)	119000	J	90.9	1500	ug/L			N1
AA3-GW-002	1/21/2005	16:45	PBOW-05-GW-AA3-GW002-01A	13.25	SW6010B	Chromium (total)	0.695	J	0.236	10	ug/L			N1
AA3-GW-002	1/21/2005	16:45	PBOW-05-GW-AA3-GW002-01A	13.25	SW6010B	Cobalt (total)	1.66	J	0.898	20	ug/L		730	N1
AA3-GW-002	1/21/2005	16:45	PBOW-05-GW-AA3-GW002-01A	13.25	SW6010B	Magnesium (total)	26100	J	38.5	1500	ug/L			N1
AA3-GW-002	1/21/2005	16:45	PBOW-05-GW-AA3-GW002-01A	13.25	SW6010B	Potassium (total)	469	J	175	1500	ug/L			N1
AA3-GW-002	1/21/2005	16:45	PBOW-05-GW-AA3-GW002-01A	13.25	SW6010B	Sodium (total)	6480	J	49.3	1500	ug/L			N1
AA3-GW-002	1/21/2005	16:45	PBOW-05-GW-AA3-GW002-01A	13.25	SW6010B	Zinc (total)	15.1	J	1.46	20	ug/L		11000	N1
AA3-GW-003	1/25/2005	15:40	PBOW-05-GW-AA3-GW003-01A	15	E310.1	Alkalinity, Total (as CaCO3)	340		2	2	mg/L			N1
AA3-GW-003	1/25/2005	15:40	PBOW-05-GW-AA3-GW003-01A	15	E300	Chloride (as Cl)	78.6		0.0494	0.1	mg/L			N1
AA3-GW-003	1/25/2005	15:40	PBOW-05-GW-AA3-GW003-01A	15	E130.2	Hardness (as CACO3)	880		1	1	mg/L			N1
AA3-GW-003	1/25/2005	15:40	PBOW-05-GW-AA3-GW003-01A	15	E300	Sulfate (as SO4)	253		0.187	1	mg/L			N1
AA3-GW-003	1/25/2005	15:40	PBOW-05-GW-AA3-GW003-01A	15	E160.1	Total Dissolved Solids	850		10	10	mg/L			N1
AA3-GW-003	1/25/2005	15:40	PBOW-05-GW-AA3-GW003-01A	15	SW9060	Total Organic Carbon	1.25		0.217	1	mg/L			N1
AA3-GW-003	1/25/2005	15:40	PBOW-05-GW-AA3-GW003-01A	15	E180.1	Turbidity	2.26		0.393	0.5	NTU			N1
AA3-GW-003	1/25/2005	15:40	PBOW-05-GW-AA3-GW003-01A	15	SW6010B	Barium	89.8		0.693	20	ug/L		2600	N1
AA3-GW-003	1/25/2005	15:40	PBOW-05-GW-AA3-GW003-01A	15	SW6010B	Calcium	164000		90.9	1500	ug/L			N1
AA3-GW-003	1/25/2005	15:40	PBOW-05-GW-AA3-GW003-01A	15	SW6010B	Cobalt	2.79	J	0.898	20	ug/L		730	N1
AA3-GW-003	1/25/2005	15:40	PBOW-05-GW-AA3-GW003-01A	15	SW6010B	Iron	39.9	J	22.9	200	ug/L		11000	N1
AA3-GW-003	1/25/2005	15:40	PBOW-05-GW-AA3-GW003-01A	15	SW6010B	Magnesium	54700		38.5	1500	ug/L			N1
AA3-GW-003	1/25/2005	15:40	PBOW-05-GW-AA3-GW003-01A	15	SW6010B	Manganese	295		0.419	10	ug/L		880	N1
AA3-GW-003	1/25/2005	15:40	PBOW-05-GW-AA3-GW003-01A	15	SW6010B	Nickel	3.06	J	0.745	20	ug/L		730	N1
AA3-GW-003	1/25/2005	15:40	PBOW-05-GW-AA3-GW003-01A	15	SW6010B	Potassium	1040	J	175	1500	ug/L			N1
AA3-GW-003	1/25/2005	15:40	PBOW-05-GW-AA3-GW003-01A	15	SW6010B	Sodium	36000		49.3	1500	ug/L			N1
AA3-GW-003	1/25/2005	15:40	PBOW-05-GW-AA3-GW003-01A	15	SW6010B	Zinc	13.8	J	1.46	20	ug/L		11000	N1
AA3-GW-003	1/25/2005	15:40	PBOW-05-GW-AA3-GW003-01A	15	SW6010B	Barium (total)	92.9		0.693	20	ug/L		2600	N1
AA3-GW-003	1/25/2005	15:40	PBOW-05-GW-AA3-GW003-01A	15	SW6010B	Calcium (total)	165000		90.9	1500	ug/L			N1
AA3-GW-003	1/25/2005	15:40	PBOW-05-GW-AA3-GW003-01A	15	SW6010B	Cobalt (total)	2.6	J	0.898	20	ug/L		730	N1
AA3-GW-003	1/25/2005	15:40	PBOW-05-GW-AA3-GW003-01A	15	SW6010B	Magnesium (total)	55200		38.5	1500	ug/L			N1
AA3-GW-003	1/25/2005	15:40	PBOW-05-GW-AA3-GW003-01A	15	SW6010B	Manganese (total)	324		0.419	10	ug/L		880	N1
AA3-GW-003	1/25/2005	15:40	PBOW-05-GW-AA3-GW003-01A	15	SW6010B	Potassium (total)	1220	J	175	1500	ug/L			N1
AA3-GW-003	1/25/2005	15:40	PBOW-05-GW-AA3-GW003-01A	15	SW6010B	Sodium (total)	36300		49.3	1500	ug/L			N1
AA3-GW-003	1/25/2005	15:40	PBOW-05-GW-AA3-GW003-01A	15	SW6010B	Zinc (total)	14.8	J	1.46	20	ug/L		11000	N1
AA3-GW-003	1/25/2005	15:40	PBOW-05-GW-AA3-GW003-01D	15	E130.2	Hardness (as CACO3)	851		1	1	mg/L			FD1
AA3-GW-003	1/25/2005	15:40	PBOW-05-GW-AA3-GW003-01D	15	SW6010B	Barium	90.2		0.693	20	ug/L		2600	FD1
AA3-GW-003	1/25/2005	15:40	PBOW-05-GW-AA3-GW003-01D	15	SW6010B	Calcium	166000		90.9	1500	ug/L			FD1

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Detected Analytes in Shallow Groundwater (January 2005)

Location	Date	Time Samp.	Sample ID	Depth	Test	Analyte	Result	Qual	DL	RL	Units	Bkg.	Region 9 Tap Water Std.	Samp. Type
AA3-GW-003	1/25/2005	15:40	PBOW-05-GW-AA3-GW003-01D	15	SW6010B	Cobalt	2.4	J	0.898	20	ug/L		730	FD1
AA3-GW-003	1/25/2005	15:40	PBOW-05-GW-AA3-GW003-01D	15	SW6010B	Iron	38.8	J	22.9	200	ug/L		11000	FD1
AA3-GW-003	1/25/2005	15:40	PBOW-05-GW-AA3-GW003-01D	15	SW6010B	Magnesium	55200		38.5	1500	ug/L			FD1
AA3-GW-003	1/25/2005	15:40	PBOW-05-GW-AA3-GW003-01D	15	SW6010B	Manganese	296		0.419	10	ug/L		880	FD1
AA3-GW-003	1/25/2005	15:40	PBOW-05-GW-AA3-GW003-01D	15	SW6010B	Nickel	3.08	J	0.745	20	ug/L		730	FD1
AA3-GW-003	1/25/2005	15:40	PBOW-05-GW-AA3-GW003-01D	15	SW6010B	Potassium	1130	J	175	1500	ug/L			FD1
AA3-GW-003	1/25/2005	15:40	PBOW-05-GW-AA3-GW003-01D	15	SW6010B	Sodium	35900		49.3	1500	ug/L			FD1
AA3-GW-003	1/25/2005	15:40	PBOW-05-GW-AA3-GW003-01D	15	SW6010B	Zinc	13	J	1.46	20	ug/L		11000	FD1
AA3-GW-003	1/25/2005	15:40	PBOW-05-GW-AA3-GW003-01D	15	SW6010B	Barium (total)	92.9		0.693	20	ug/L		2600	FD1
AA3-GW-003	1/25/2005	15:40	PBOW-05-GW-AA3-GW003-01D	15	SW6010B	Calcium (total)	167000		90.9	1500	ug/L			FD1
AA3-GW-003	1/25/2005	15:40	PBOW-05-GW-AA3-GW003-01D	15	SW6010B	Cobalt (total)	2.63	J	0.898	20	ug/L		730	FD1
AA3-GW-003	1/25/2005	15:40	PBOW-05-GW-AA3-GW003-01D	15	SW6010B	Copper (total)	6.93	J	2.55	20	ug/L		1500	FD1
AA3-GW-003	1/25/2005	15:40	PBOW-05-GW-AA3-GW003-01D	15	SW6010B	Magnesium (total)	55800		38.5	1500	ug/L			FD1
AA3-GW-003	1/25/2005	15:40	PBOW-05-GW-AA3-GW003-01D	15	SW6010B	Manganese (total)	320		0.419	10	ug/L		880	FD1
AA3-GW-003	1/25/2005	15:40	PBOW-05-GW-AA3-GW003-01D	15	SW6010B	Potassium (total)	1170	J	175	1500	ug/L			FD1
AA3-GW-003	1/25/2005	15:40	PBOW-05-GW-AA3-GW003-01D	15	SW6010B	Sodium (total)	36600		49.3	1500	ug/L			FD1
AA3-GW-003	1/25/2005	15:40	PBOW-05-GW-AA3-GW003-01D	15	SW6010B	Zinc (total)	19.5	J	1.46	20	ug/L		11000	FD1
AA3-GW-004	1/30/2005	13:40	PBOW-05-GW-AA3-GW004-01A	15.3	E310.1	Alkalinity, Total (as CaCO3)	560		2	2	mg/L			N1
AA3-GW-004	1/30/2005	13:40	PBOW-05-GW-AA3-GW004-01A	15.3	E300	Chloride (as Cl)	6.21		0.0494	0.1	mg/L			N1
AA3-GW-004	1/30/2005	13:40	PBOW-05-GW-AA3-GW004-01A	15.3	E130.2	Hardness (as CACO3)	680		1	1	mg/L			N1
AA3-GW-004	1/30/2005	13:40	PBOW-05-GW-AA3-GW004-01A	15.3	E300	Sulfate (as SO4)	38.4	J	0.0187	0.1	mg/L			N1
AA3-GW-004	1/30/2005	13:40	PBOW-05-GW-AA3-GW004-01A	15.3	E160.1	Total Dissolved Solids	410		10	10	mg/L			N1
AA3-GW-004	1/30/2005	13:40	PBOW-05-GW-AA3-GW004-01A	15.3	SW9060	Total Organic Carbon	2.29		0.217	1	mg/L			N1
AA3-GW-004	1/30/2005	13:40	PBOW-05-GW-AA3-GW004-01A	15.3	SW6010B	Barium	198		0.693	20	ug/L		2600	N1
AA3-GW-004	1/30/2005	13:40	PBOW-05-GW-AA3-GW004-01A	15.3	SW6010B	Calcium	89600		90.9	1500	ug/L			N1
AA3-GW-004	1/30/2005	13:40	PBOW-05-GW-AA3-GW004-01A	15.3	SW6010B	Cobalt	1.03	J	0.898	20	ug/L		730	N1
AA3-GW-004	1/30/2005	13:40	PBOW-05-GW-AA3-GW004-01A	15.3	SW6010B	Magnesium	37800		38.5	1500	ug/L			N1
AA3-GW-004	1/30/2005	13:40	PBOW-05-GW-AA3-GW004-01A	15.3	SW6010B	Manganese	47.8		0.419	10	ug/L		880	N1
AA3-GW-004	1/30/2005	13:40	PBOW-05-GW-AA3-GW004-01A	15.3	SW6010B	Potassium	2330		175	1500	ug/L			N1
AA3-GW-004	1/30/2005	13:40	PBOW-05-GW-AA3-GW004-01A	15.3	SW6010B	Sodium	24600	J	49.3	1500	ug/L			N1
AA3-GW-004	1/30/2005	13:40	PBOW-05-GW-AA3-GW004-01A	15.3	SW6010B	Zinc	52.9		1.46	20	ug/L		11000	N1
AA3-GW-004	1/30/2005	13:40	PBOW-05-GW-AA3-GW004-01A	15.3	SW6010B	Barium (total)	206		0.693	20	ug/L		2600	N1
AA3-GW-004	1/30/2005	13:40	PBOW-05-GW-AA3-GW004-01A	15.3	SW6010B	Calcium (total)	88800		90.9	1500	ug/L			N1
AA3-GW-004	1/30/2005	13:40	PBOW-05-GW-AA3-GW004-01A	15.3	SW6010B	Magnesium (total)	37700		38.5	1500	ug/L			N1
AA3-GW-004	1/30/2005	13:40	PBOW-05-GW-AA3-GW004-01A	15.3	SW6010B	Manganese (total)	51.3		0.419	10	ug/L		880	N1
AA3-GW-004	1/30/2005	13:40	PBOW-05-GW-AA3-GW004-01A	15.3	SW6010B	Potassium (total)	2410		175	1500	ug/L			N1
AA3-GW-004	1/30/2005	13:40	PBOW-05-GW-AA3-GW004-01A	15.3	SW6010B	Sodium (total)	24800	J	49.3	1500	ug/L			N1
AA3-GW-004	1/30/2005	13:40	PBOW-05-GW-AA3-GW004-01A	15.3	SW6010B	Zinc (total)	58.3		1.46	20	ug/L		11000	N1
AA3-GW-005	1/27/2005	13:40	PBOW-05-GW-AA3-GW005-01A	15.1	E310.1	Alkalinity, Total (as CaCO3)	330		2	2	mg/L			N1
AA3-GW-005	1/27/2005	13:40	PBOW-05-GW-AA3-GW005-01A	15.1	E300	Chloride (as Cl)	3.73	J	0.494	1	mg/L			N1
AA3-GW-005	1/27/2005	13:40	PBOW-05-GW-AA3-GW005-01A	15.1	E130.2	Hardness (as CACO3)	731		1	1	mg/L			N1
AA3-GW-005	1/27/2005	13:40	PBOW-05-GW-AA3-GW005-01A	15.1	E300	Sulfate (as SO4)	157	J	0.187	1	mg/L			N1

Table 4-4
Detected Analytes in Shallow Groundwater (January 2005)

Location	Date	Time Samp.	Sample ID	Depth	Test	Analyte	Result	Qual	DL	RL	Units	Bkg.	Region 9 Tap Water Std.	Samp. Type
AA3-GW-005	1/27/2005	13:40	PBOW-05-GW-AA3-GW005-01A	15.1	E160.1	Total Dissolved Solids	550		10	10	mg/L			N1
AA3-GW-005	1/27/2005	13:40	PBOW-05-GW-AA3-GW005-01A	15.1	SW9060	Total Organic Carbon	1.37		0.217	1	mg/L			N1
AA3-GW-005	1/27/2005	13:40	PBOW-05-GW-AA3-GW005-01A	15.1	E180.1	Turbidity	3.76		0.393	0.5	NTU			N1
AA3-GW-005	1/27/2005	13:40	PBOW-05-GW-AA3-GW005-01A	15.1	SW6010B	**Arsenic**	**12.5**	J	4.59	25	ug/L	7.4	**0.045**	N1
AA3-GW-005	1/27/2005	13:40	PBOW-05-GW-AA3-GW005-01A	15.1	SW6010B	Barium	108		0.693	20	ug/L		2600	N1
AA3-GW-005	1/27/2005	13:40	PBOW-05-GW-AA3-GW005-01A	15.1	SW6010B	Calcium	111000		90.9	1500	ug/L			N1
AA3-GW-005	1/27/2005	13:40	PBOW-05-GW-AA3-GW005-01A	15.1	SW6010B	Copper	44.2		2.55	20	ug/L		1500	N1
AA3-GW-005	1/27/2005	13:40	PBOW-05-GW-AA3-GW005-01A	15.1	SW6010B	Iron	64.9	J	22.9	200	ug/L		11000	N1
AA3-GW-005	1/27/2005	13:40	PBOW-05-GW-AA3-GW005-01A	15.1	SW6010B	Magnesium	42400		38.5	1500	ug/L			N1
AA3-GW-005	1/27/2005	13:40	PBOW-05-GW-AA3-GW005-01A	15.1	SW6010B	Manganese	74.3		0.419	10	ug/L		880	N1
AA3-GW-005	1/27/2005	13:40	PBOW-05-GW-AA3-GW005-01A	15.1	SW6010B	Sodium	11600		49.3	1500	ug/L			N1
AA3-GW-005	1/27/2005	13:40	PBOW-05-GW-AA3-GW005-01A	15.1	SW6010B	Zinc	109		1.46	20	ug/L		11000	N1
AA3-GW-005	1/27/2005	13:40	PBOW-05-GW-AA3-GW005-01A	15.1	SW6010B	**Arsenic (total)**	**12.1**	J	4.59	25	ug/L	7.4	**0.045**	N1
AA3-GW-005	1/27/2005	13:40	PBOW-05-GW-AA3-GW005-01A	15.1	SW6010B	Barium (total)	113		0.693	20	ug/L		2600	N1
AA3-GW-005	1/27/2005	13:40	PBOW-05-GW-AA3-GW005-01A	15.1	SW6010B	Calcium (total)	115000		90.9	1500	ug/L			N1
AA3-GW-005	1/27/2005	13:40	PBOW-05-GW-AA3-GW005-01A	15.1	SW6010B	Cobalt (total)	1.75	J	0.898	20	ug/L		730	N1
AA3-GW-005	1/27/2005	13:40	PBOW-05-GW-AA3-GW005-01A	15.1	SW6010B	Iron (total)	165	J	22.9	200	ug/L		11000	N1
AA3-GW-005	1/27/2005	13:40	PBOW-05-GW-AA3-GW005-01A	15.1	SW6010B	Magnesium (total)	44500		38.5	1500	ug/L			N1
AA3-GW-005	1/27/2005	13:40	PBOW-05-GW-AA3-GW005-01A	15.1	SW6010B	Manganese (total)	75.4		0.419	10	ug/L		880	N1
AA3-GW-005	1/27/2005	13:40	PBOW-05-GW-AA3-GW005-01A	15.1	SW6010B	Potassium (total)	1480	J	175	1500	ug/L			N1
AA3-GW-005	1/27/2005	13:40	PBOW-05-GW-AA3-GW005-01A	15.1	SW6010B	Sodium (total)	12500		49.3	1500	ug/L			N1
AA3-GW-005	1/27/2005	13:40	PBOW-05-GW-AA3-GW005-01A	15.1	SW6010B	Zinc (total)	82.8		1.46	20	ug/L		11000	N1

Table 4-5
Detected Analytes in Shallow Groundwater (Prior Sampling Events)

Location	Date	Time Samp.	Sample ID	Depth	Test	Analyte	Result	Qual	DL	RL	Units	Bkg.	Region 9 Tap Water Std.	Samp. Type
Acid Area 2														
IT-MW10	11/14/1997	8:15	PBOW97-IT-MW10-GW-5600-REG	18.85	E353.2	Nitrogen, Nitrate (as N)	100		0.1	0.1	ug/L		10000	N1
IT-MW10	11/14/1997	8:15	PBOW97-IT-MW10-GW-5600-REG	18.85	E310.1	Alkalinity, Total (as CaCO3)	45000		5	5	ug/L			N1
IT-MW10	11/14/1997	8:15	PBOW97-IT-MW10-GW-5600-REG	18.85	E325.2	Chloride (as Cl)	17000		1	1	ug/L			N1
IT-MW10	11/14/1997	8:15	PBOW97-IT-MW10-GW-5600-REG	18.85	E130.2	Hardness (as CACO3)	760000		8	8	ug/L			N1
IT-MW10	11/14/1997	8:15	PBOW97-IT-MW10-GW-5600-REG	18.85	E375.4	Sulfate (as SO4)	300000		50	50	ug/L			N1
IT-MW10	11/14/1997	8:15	PBOW97-IT-MW10-GW-5600-REG	18.85	E160.2	Suspended Solids (residue, Non-filterable)	37000		4	4	ug/L			N1
IT-MW10	11/14/1997	8:15	PBOW97-IT-MW10-GW-5600-REG	18.85	E160.1	Total Dissolved Solids	930000		10	10	ug/L			N1
IT-MW10	11/14/1997	8:15	PBOW97-IT-MW10-GW-5600-REG	18.85	SW9060	Total Organic Carbon	2.7		2	2	mg/L			N1
IT-MW10	11/14/1997	8:15	PBOW97-IT-MW10-GW-5600-REG	18.85	SW6010	Calcium	188000		5000	5000	ug/L			N1
IT-MW10	11/14/1997	8:15	PBOW97-IT-MW10-GW-5600-REG	18.85	SW6010	Magnesium	86300		5000	5000	ug/L			N1
IT-MW10	11/14/1997	8:15	PBOW97-IT-MW10-GW-5600-REG	18.85	SW6010	**Manganese**	**1630**		15	15	ug/L		**880**	N1
IT-MW10	11/14/1997	8:15	PBOW97-IT-MW10-GW-5600-REG	18.85	SW6010	Sodium	50200		5000	5000	ug/L			N1
IT-MW10	11/14/1997	8:15	PBOW97-IT-MW10-GW-5600-REG	18.85	SW6010	Aluminum	1040		200	200	ug/L		36000	N1
IT-MW10	11/14/1997	8:15	PBOW97-IT-MW10-GW-5600-REG	18.85	SW6010	Calcium	183000	J	5000	5000	ug/L			N1
IT-MW10	11/14/1997	8:15	PBOW97-IT-MW10-GW-5600-REG	18.85	SW6010	Iron	3040		100	100	ug/L		11000	N1
IT-MW10	11/14/1997	8:15	PBOW97-IT-MW10-GW-5600-REG	18.85	SW6010	Lead	4.5		3	3	ug/L			N1
IT-MW10	11/14/1997	8:15	PBOW97-IT-MW10-GW-5600-REG	18.85	SW6010	Magnesium	83700		5000	5000	ug/L			N1
IT-MW10	11/14/1997	8:15	PBOW97-IT-MW10-GW-5600-REG	18.85	SW6010	**Manganese**	**1670**		15	15	ug/L		**880**	N1
IT-MW10	11/14/1997	8:15	PBOW97-IT-MW10-GW-5600-REG	18.85	SW6010	Sodium	48200		5000	5000	ug/L			N1
IT-MW10	11/14/1997	8:15	PBOW97-IT-MW10-GW-5600-REG	18.85	SW8270	**bis(2-Ethylhexyl)phthalate**	**5.1**	J	5.1	10	ug/L		**4.8**	N1
IT-MW10	11/14/1997	8:15	PBOW97-IT-MW10-GW-5600-REG	18.85	SW8260	Carbon Disulfide	0.17	J	0.17	1	ug/L		1000	N1
IT-MW10	5/14/1998	8:00	PBOW-98-GW-ITMW10-5605	18.85	E353.2	Nitrogen, Nitrate (as N)	0.2		0.1	0.1	mg/L		10	N1
IT-MW10	5/14/1998	8:00	PBOW-98-GW-ITMW10-5605	18.85	E310.1	Alkalinity, Total (as CaCO3)	480		5	5	mg/L			N1
IT-MW10	5/14/1998	8:00	PBOW-98-GW-ITMW10-5605	18.85	E325.2	Chloride (as Cl)	13	J	1	1	mg/L			N1
IT-MW10	5/14/1998	8:00	PBOW-98-GW-ITMW10-5605	18.85	E130.2	Hardness (as CACO3)	820		10	10	mg/L			N1
IT-MW10	5/14/1998	8:00	PBOW-98-GW-ITMW10-5605	18.85	E375.4	Sulfate (as SO4)	270	J	50	50	mg/L			N1
IT-MW10	5/14/1998	8:00	PBOW-98-GW-ITMW10-5605	18.85	E160.2	Suspended Solids (residue, Non-filterable)	400		4	4	mg/L			N1
IT-MW10	5/14/1998	8:00	PBOW-98-GW-ITMW10-5605	18.85	E160.1	Total Dissolved Solids	1100		10	10	mg/L			N1
IT-MW10	5/14/1998	8:00	PBOW-98-GW-ITMW10-5605	18.85	SW9060	Total Organic Carbon	3	J	2	2	mg/L			N1
IT-MW10	5/14/1998	8:00	PBOW-98-GW-ITMW10-5605	18.85	SW6010	Calcium	188000		5000	5000	ug/L			N1
IT-MW10	5/14/1998	8:00	PBOW-98-GW-ITMW10-5605	18.85	SW6010	Magnesium	86200		5000	5000	ug/L			N1
IT-MW10	5/14/1998	8:00	PBOW-98-GW-ITMW10-5605	18.85	SW6010	Manganese	621		15	15	ug/L		880	N1
IT-MW10	5/14/1998	8:00	PBOW-98-GW-ITMW10-5605	18.85	SW6010	Sodium	26200		5000	5000	ug/L			N1
IT-MW10	5/14/1998	8:00	PBOW-98-GW-ITMW10-5605	18.85	SW6010	Aluminum	11500		200	200	ug/L		36000	N1
IT-MW10	5/14/1998	8:00	PBOW-98-GW-ITMW10-5605	18.85	SW6010	**Arsenic**	**36.8**		10	10	ug/L	7.4	**0.045**	N1
IT-MW10	5/14/1998	8:00	PBOW-98-GW-ITMW10-5605	18.85	SW6010	Barium	372		200	200	ug/L		2600	N1
IT-MW10	5/14/1998	8:00	PBOW-98-GW-ITMW10-5605	18.85	SW6010	Calcium	185000		5000	5000	ug/L			N1
IT-MW10	5/14/1998	8:00	PBOW-98-GW-ITMW10-5605	18.85	SW6010	Chromium	39.8		10	10	ug/L			N1
IT-MW10	5/14/1998	8:00	PBOW-98-GW-ITMW10-5605	18.85	SW6010	Copper	30.8		25	25	ug/L		1500	N1
IT-MW10	5/14/1998	8:00	PBOW-98-GW-ITMW10-5605	18.85	SW6010	**Iron**	**41000**		100	100	ug/L		**11000**	N1
IT-MW10	5/14/1998	8:00	PBOW-98-GW-ITMW10-5605	18.85	SW6010	Lead	33.6		3	3	ug/L			N1

Table 4-5
Detected Analytes in Shallow Groundwater (Prior Sampling Events)

Location	Date	Time Samp.	Sample ID	Depth	Test	Analyte	Result	Qual	DL	RL	Units	Bkg.	Region 9 Tap Water Std.	Samp. Type
IT-MW10	5/14/1998	8:00	PBOW-98-GW-ITMW10-5605	18.85	SW6010	Magnesium	83500		5000	5000	ug/L			N1
IT-MW10	5/14/1998	8:00	PBOW-98-GW-ITMW10-5605	18.85	SW6010	**Manganese**	**1460**		15	15	ug/L		**880**	N1
IT-MW10	5/14/1998	8:00	PBOW-98-GW-ITMW10-5605	18.85	SW6010	Potassium	5550		5000	5000	ug/L			N1
IT-MW10	5/14/1998	8:00	PBOW-98-GW-ITMW10-5605	18.85	SW6010	Sodium	24700		5000	5000	ug/L			N1
IT-MW10	5/14/1998	8:00	PBOW-98-GW-ITMW10-5605	18.85	SW6010	**Vanadium**	**54.4**		50	50	ug/L		**36**	N1
IT-MW10	5/14/1998	8:00	PBOW-98-GW-ITMW10-5605	18.85	SW6010	Zinc	92.6	B	20	20	ug/L		11000	N1
IT-MW10	5/14/1998	8:00	PBOW-98-GW-ITMW10-5605	18.85	SW8260	Methylene Chloride	0.55	B	0.55	1	ug/L		4.3	N1
MK-MW09	6/29/1993	0:00		12.85		Aluminum	2880	N*	-99	-99	ug/L		36000	N1
MK-MW09	6/29/1993	0:00		12.85		Aluminum	16600	N*	-99	-99	ug/L		36000	N1
MK-MW09	6/29/1993	0:00		12.85		**Arsenic**	**14**		-99	-99	ug/L	7.4	**0.045**	N1
MK-MW09	6/29/1993	0:00		12.85		Barium	73.1	B	-99	-99	ug/L		2600	N1
MK-MW09	6/29/1993	0:00		12.85		Barium	155	B	-99	-99	ug/L		2600	N1
MK-MW09	6/29/1993	0:00		12.85		Cadmium	0.5	BN	-99	-99	ug/L		18	N1
MK-MW09	6/29/1993	0:00		12.85		Calcium	81000	B*	-99	-99	ug/L			N1
MK-MW09	6/29/1993	0:00		12.85		Calcium	13900	B*	-99	-99	ug/L			N1
MK-MW09	6/29/1993	0:00		12.85		Chromium	22.7		-99	-99	ug/L			N1
MK-MW09	6/29/1993	0:00		12.85		Copper	48.5		-99	-99	ug/L		1500	N1
MK-MW09	6/29/1993	0:00		12.85		Iron	4930	N*	-99	-99	ug/L		11000	N1
MK-MW09	6/29/1993	0:00		12.85		**Iron**	**41800**	N*	-99	-99	ug/L		**11000**	N1
MK-MW09	6/29/1993	0:00		12.85		Lead	2	B	-99	-99	ug/L			N1
MK-MW09	6/29/1993	0:00		12.85		Lead	23		-99	-99	ug/L			N1
MK-MW09	6/29/1993	0:00		12.85		Magnesium	29200		-99	-99	ug/L			N1
MK-MW09	6/29/1993	0:00		12.85		Magnesium	44500		-99	-99	ug/L			N1
MK-MW09	6/29/1993	0:00		12.85		Nickel	55.6		-99	-99	ug/L		730	N1
MK-MW09	6/29/1993	0:00		12.85		Potassium	1640	B	-99	-99	ug/L			N1
MK-MW09	6/29/1993	0:00		12.85		Potassium	4320	B	-99	-99	ug/L			N1
MK-MW09	6/29/1993	0:00		12.85		Sodium	7860		-99	-99	ug/L			N1
MK-MW09	6/29/1993	0:00		12.85		Sodium	5670		-99	-99	ug/L			N1
MK-MW09	6/29/1993	0:00		12.85		Vanadium	35.8	B	-99	-99	ug/L		36	N1
MK-MW09	6/29/1993	0:00		12.85		Zinc	30.3		-99	-99	ug/L		11000	N1
MK-MW09	6/29/1993	0:00		12.85		Zinc	166		-99	-99	ug/L		11000	N1
MK-MW09	11/16/1997	16:45	PBOW97-MK-MW09-GW-5720-REG	12.85	E353.2	Nitrogen, Nitrate (as N)	200		0.1	0.1	ug/L		10000	N1
MK-MW09	11/16/1997	16:45	PBOW97-MK-MW09-GW-5720-REG	12.85	E310.1	Alkalinity, Total (as CaCO3)	300000		5	5	ug/L			N1
MK-MW09	11/16/1997	16:45	PBOW97-MK-MW09-GW-5720-REG	12.85	E325.2	Chloride (as Cl)	5000		1	1	ug/L			N1
MK-MW09	11/16/1997	16:45	PBOW97-MK-MW09-GW-5720-REG	12.85	E130.2	Hardness (as CACO3)	370000		4	4	ug/L			N1
MK-MW09	11/16/1997	16:45	PBOW97-MK-MW09-GW-5720-REG	12.85	E375.4	Sulfate (as SO4)	32000		5	5	ug/L			N1
MK-MW09	11/16/1997	16:45	PBOW97-MK-MW09-GW-5720-REG	12.85	E160.2	Suspended Solids (residue, Non-filterable)	5000		4	4	ug/L			N1
MK-MW09	11/16/1997	16:45	PBOW97-MK-MW09-GW-5720-REG	12.85	E160.1	Total Dissolved Solids	350000		10	10	ug/L			N1
MK-MW09	11/16/1997	16:45	PBOW97-MK-MW09-GW-5720-REG	12.85	SW9060	Total Organic Carbon	1.5		1	1	mg/L			N1
MK-MW09	11/16/1997	16:45	PBOW97-MK-MW09-GW-5720-REG	12.85	SW6010	Calcium	106000	J	5000	5000	ug/L			N1
MK-MW09	11/16/1997	16:45	PBOW97-MK-MW09-GW-5720-REG	12.85	SW6010	Iron	329	B	100	100	ug/L		11000	N1
MK-MW09	11/16/1997	16:45	PBOW97-MK-MW09-GW-5720-REG	12.85	SW6010	Magnesium	28100		5000	5000	ug/L			N1

Table 4-5
Detected Analytes in Shallow Groundwater (Prior Sampling Events)

Location	Date	Time Samp.	Sample ID	Depth	Test	Analyte	Result	Qual	DL	RL	Units	Bkg.	Region 9 Tap Water Std.	Samp. Type
MK-MW09	11/16/1997	16:45	PBOW97-MK-MW09-GW-5720-REG	12.85	SW6010	Sodium	6470		5000	5000	ug/L			N1
MK-MW09	11/16/1997	16:45	PBOW97-MK-MW09-GW-5720-REG	12.85	SW6010	Aluminum	282	B	200	200	ug/L		36000	N1
MK-MW09	11/16/1997	16:45	PBOW97-MK-MW09-GW-5720-REG	12.85	SW6010	Calcium	103000		5000	5000	ug/L			N1
MK-MW09	11/16/1997	16:45	PBOW97-MK-MW09-GW-5720-REG	12.85	SW6010	Iron	493	B	100	100	ug/L		11000	N1
MK-MW09	11/16/1997	16:45	PBOW97-MK-MW09-GW-5720-REG	12.85	SW6010	Lead	8.5		3	3	ug/L			N1
MK-MW09	11/16/1997	16:45	PBOW97-MK-MW09-GW-5720-REG	12.85	SW6010	Magnesium	27600		5000	5000	ug/L			N1
MK-MW09	11/16/1997	16:45	PBOW97-MK-MW09-GW-5720-REG	12.85	SW6010	Sodium	6290		5000	5000	ug/L			N1
MK-MW09	11/16/1997	16:45	PBOW97-MK-MW09-GW-5720-REG	12.85	SW8260	Methylene Chloride	0.3	B	0.3	1	ug/L		4.3	N1
MK-MW09	11/16/1997	16:45	PBOW97-MK-MW09-GW-5720-REG	12.85	SW8260	Toluene	0.13	B	0.13	1	ug/L		720	N1
MK-MW09	11/16/1997	16:45	PBOW97-MK-MW09-GW-5720-REG	12.85	SW8260	Xylenes, Total	0.13	B	0.13	1	ug/L		210	N1
MK-MW09	5/13/1998	9:10	PBOW-98-GW-MKMW09-5725	12.85	E353.2	Nitrogen, Nitrate (as N)	0.2		0.1	0.1	mg/L		10	N1
MK-MW09	5/13/1998	9:10	PBOW-98-GW-MKMW09-5725	12.85	E310.1	Alkalinity, Total (as CaCO3)	270		5	5	mg/L			N1
MK-MW09	5/13/1998	9:10	PBOW-98-GW-MKMW09-5725	12.85	E325.2	Chloride (as Cl)	2	J	1	1	mg/L			N1
MK-MW09	5/13/1998	9:10	PBOW-98-GW-MKMW09-5725	12.85	E130.2	Hardness (as CACO3)	320		10	10	mg/L			N1
MK-MW09	5/13/1998	9:10	PBOW-98-GW-MKMW09-5725	12.85	E375.4	Sulfate (as SO4)	31	J	5	5	mg/L			N1
MK-MW09	5/13/1998	9:10	PBOW-98-GW-MKMW09-5725	12.85	E160.1	Total Dissolved Solids	370		10	10	mg/L			N1
MK-MW09	5/13/1998	9:10	PBOW-98-GW-MKMW09-5725	12.85	SW9060	Total Organic Carbon	1	J	1	1	mg/L			N1
MK-MW09	5/13/1998	9:10	PBOW-98-GW-MKMW09-5725	12.85	SW6010	Calcium	92700		5000	5000	ug/L			N1
MK-MW09	5/13/1998	9:10	PBOW-98-GW-MKMW09-5725	12.85	SW6010	Copper	50.7		25	25	ug/L		1500	N1
MK-MW09	5/13/1998	9:10	PBOW-98-GW-MKMW09-5725	12.85	SW6010	Magnesium	25500		5000	5000	ug/L			N1
MK-MW09	5/13/1998	9:10	PBOW-98-GW-MKMW09-5725	12.85	SW6010	Sodium	5760		5000	5000	ug/L			N1
MK-MW09	5/13/1998	9:10	PBOW-98-GW-MKMW09-5725	12.85	SW6010	Calcium	78500		5000	5000	ug/L			N1
MK-MW09	5/13/1998	9:10	PBOW-98-GW-MKMW09-5725	12.85	SW6010	Magnesium	21100		5000	5000	ug/L			N1
MK-MW09	5/13/1998	9:10	PBOW-98-GW-MKMW09-5725	12.85	SW6010	Zinc	29	B	20	20	ug/L		11000	N1
MK-MW09	5/13/1998	9:10	PBOW-98-GW-MKMW09-5725	12.85	SW8260	Methylene Chloride	0.34	B	0.34	1	ug/L		4.3	N1

Table 4-6

Maximum Detection Values in Shallow Groundwater (January 2005)

Method Type	Analyte	Units	Method	Minimum	Minimum Detected Result	Maximum Detected Result	Mean	Number of Detects	Number of Non Detects	Number of Usable Samples	Date of Maximum Detection	Sample ID for Maximum Detection	Depth for Max Detect
WetC	Alkalinity, Total (as CaCO3)	mg/L	E310.1	230	230	560	350	7	0	7	1/30/2005	PBOW-05-GW-AA3-GW004-01A	15.3
WetC	Chloride (as Cl)	mg/L	E300	2.08	2.08	78.6	16	7	0	7	1/25/2005	PBOW-05-GW-AA3-GW003-01A	15
WetC	Cyanide	mg/L	SW9012	ND	ND	ND	ND	0	7	7	/ /		
WetC	Hardness (as CACO3)	mg/L	E130.2	474	474	1110	728	7	0	7	2/1/2005	PBOW-05-GW-AA2-ITMW10-01A	16.8
WetC	Nitrogen, Nitrate (as N)	mg/L	E300	ND	0.071	3.98	0.594	3	4	7	1/24/2005	PBOW-05-GW-AA2-MKMW09-01A	12.85
WetC	Sulfate (as SO4)	mg/L	E300	30	30	308	138	7	0	7	2/1/2005	PBOW-05-GW-AA2-ITMW10-01A	16.8
WetC	Suspended Solids (residue, Non-filterable)	mg/L	E160.2	ND	ND	ND	ND	0	7	7	/ /		
WetC	Total Dissolved Solids	mg/L	E160.1	300	300	900	556	7	0	7	2/1/2005	PBOW-05-GW-AA2-ITMW10-01A	16.8
WetC	Total Organic Carbon	mg/L	SW9060	1.25	1.25	2.68	2.1	7	0	7	2/1/2005	PBOW-05-GW-AA2-ITMW10-01A	16.8
WetC	Turbidity	NTU	E180.1	ND	1.64	6.63	2.13	4	3	7	2/1/2005	PBOW-05-GW-AA2-ITMW10-01A	16.8
HE	1,3,5-Trinitrobenzene	ug/L	SW8330	ND	ND	ND	ND	0	7	7	/ /		
HE	1,3-Dinitrobenzene	ug/L	SW8330	ND	ND	ND	ND	0	7	7	/ /		
HE	2,4,6-Trinitrotoluene	ug/L	SW8330	ND	ND	ND	ND	0	7	7	/ /		
HE	2,4-Dinitrotoluene	ug/L	SW8330	ND	ND	ND	ND	0	7	7	/ /		
HE	2,6-Dinitrotoluene	ug/L	SW8330	ND	ND	ND	ND	0	7	7	/ /		
HE	2-Amino-4,6-Dinitrotoluene	ug/L	SW8330	ND	ND	ND	ND	0	7	7	/ /		
HE	2-Nitrotoluene	ug/L	SW8330	ND	ND	ND	ND	0	7	7	/ /		
HE	3-Nitrotoluene	ug/L	SW8330	ND	ND	ND	ND	0	7	7	/ /		
HE	4-Amino-2,6-Dinitrotoluene	ug/L	SW8330	ND	ND	ND	ND	0	7	7	/ /		
HE	4-Nitrotoluene	ug/L	SW8330	ND	ND	ND	ND	0	7	7	/ /		
HE	HMX	ug/L	SW8330	ND	ND	ND	ND	0	7	7	/ /		
HE	Nitrobenzene	ug/L	SW8330	ND	ND	ND	ND	0	7	7	/ /		
HE	RDX	ug/L	SW8330	ND	ND	ND	ND	0	7	7	/ /		
HE	Tetryl	ug/L	SW8330	ND	ND	ND	ND	0	7	7	/ /		
MET	Aluminum	mg/L	SW6010B	ND	ND	ND	ND	0	7	7	/ /		
MET	Aluminum (total)	mg/L	SW6010B	ND	ND	ND	ND	0	7	7	/ /		
MET	Antimony	mg/L	SW6010B	ND	ND	ND	ND	0	7	7	/ /		
MET	Antimony (total)	mg/L	SW6010B	ND	ND	ND	ND	0	7	7	/ /		
MET	Arsenic	mg/L	SW6010B	ND	0.0125	0.0125	0.00375	1	6	7	1/27/2005	PBOW-05-GW-AA3-GW005-01A	15.1
MET	Arsenic (total)	mg/L	SW6010B	ND	0.0121	0.0121	0.0037	1	6	7	1/27/2005	PBOW-05-GW-AA3-GW005-01A	15.1
MET	Barium	mg/L	SW6010B	0.0252	0.0252	0.198	0.0787	7	0	7	1/30/2005	PBOW-05-GW-AA3-GW004-01A	15.3
MET	Barium (total)	mg/L	SW6010B	0.0259	0.0259	0.206	0.0805	7	0	7	1/30/2005	PBOW-05-GW-AA3-GW004-01A	15.3
MET	Beryllium	mg/L	SW6010B	ND	ND	ND	ND	0	7	7	/ /		
MET	Beryllium (total)	mg/L	SW6010B	ND	0.000156	0.000156	0.000069	1	6	7	1/26/2005	PBOW-05-GW-AA2-GW002-01A	15.75
MET	Cadmium	mg/L	SW6010B	ND	ND	ND	ND	0	7	7	/ /		
MET	Cadmium (total)	mg/L	SW6010B	ND	ND	ND	ND	0	7	7	/ /		

Table 4-6

Maximum Detection Values in Shallow Groundwater (January 2005)

Method Type	Analyte	Units	Method	Minimum	Minimum Detected Result	Maximum Detected Result	Mean	Number of Detects	Number of Non Detects	Number of Usable Samples	Date of Maximum Detection	Sample ID for Maximum Detection	Depth for Max Detect
MET	Calcium	mg/L	SW6010B	74.7	74.7	176	120	7	0	7	2/1/2005	PBOW-05-GW-AA2-ITMW10-01A	16.8
MET	Calcium (total)	mg/L	SW6010B	75.7	75.7	184	123	7	0	7	2/1/2005	PBOW-05-GW-AA2-ITMW10-01A	16.8
MET	Chromium	mg/L	SW6010B	ND	ND	ND	ND	0	7	7	/ /		
MET	Chromium (total)	mg/L	SW6010B	ND	0.000695	0.00077	0.000294	2	5	7	1/26/2005	PBOW-05-GW-AA2-GW002-01A	15.75
MET	Cobalt	mg/L	SW6010B	ND	0.00103	0.00279	0.0011	4	3	7	1/25/2005	PBOW-05-GW-AA3-GW003-01A	15
MET	Cobalt (total)	mg/L	SW6010B	ND	0.00117	0.00263	0.00154	6	1	7	1/25/2005	PBOW-05-GW-AA3-GW003-01D	15
MET	Copper	mg/L	SW6010B	ND	0.00409	0.0442	0.00781	2	5	7	1/27/2005	PBOW-05-GW-AA3-GW005-01A	15.1
MET	Copper (total)	mg/L	SW6010B	ND	0.0031	0.00693	0.00194	2	5	7	1/26/2005	PBOW-05-GW-AA2-GW002-01A	15.75
MET	Iron	mg/L	SW6010B	ND	0.0298	0.0649	0.0257	3	4	7	1/27/2005	PBOW-05-GW-AA3-GW005-01A	15.1
MET	Iron (total)	mg/L	SW6010B	ND	0.165	0.834	0.151	2	5	7	2/1/2005	PBOW-05-GW-AA2-ITMW10-01A	16.8
MET	Lead	mg/L	SW6010B	ND	ND	ND	ND	0	7	7	/ /		
MET	Lead (total)	mg/L	SW6010B	ND	ND	ND	ND	0	7	7	/ /		
MET	Magnesium	mg/L	SW6010B	20.4	20.4	69.9	40.4	7	0	7	2/1/2005	PBOW-05-GW-AA2-ITMW10-01A	16.8
MET	Magnesium (total)	mg/L	SW6010B	20.7	20.7	73.7	41.5	7	0	7	2/1/2005	PBOW-05-GW-AA2-ITMW10-01A	16.8
MET	Manganese	mg/L	SW6010B	ND	0.000567	0.296	0.0669	6	1	7	1/25/2005	PBOW-05-GW-AA3-GW003-01D	15
MET	Manganese (total)	mg/L	SW6010B	ND	0.0513	0.324	0.0789	4	3	7	1/25/2005	PBOW-05-GW-AA3-GW003-01A	15
MET	Mercury	mg/L	SW7470A	ND	ND	ND	ND	0	7	7	/ /		
MET	Mercury (total)	mg/L	SW7470A	ND	ND	ND	ND	0	7	7	/ /		
MET	Nickel	mg/L	SW6010B	ND	0.00306	0.00308	0.000758	1	6	7	1/25/2005	PBOW-05-GW-AA3-GW003-01D	15
MET	Nickel (total)	mg/L	SW6010B	ND	0.00415	0.00415	0.000912	1	6	7	2/1/2005	PBOW-05-GW-AA2-ITMW10-01A	16.8
MET	Potassium	mg/L	SW6010B	ND	0.47	2.33	0.984	5	2	7	1/30/2005	PBOW-05-GW-AA3-GW004-01A	15.3
MET	Potassium (total)	mg/L	SW6010B	0.277	0.277	2.41	1.26	7	0	7	1/30/2005	PBOW-05-GW-AA3-GW004-01A	15.3
MET	Selenium	mg/L	SW6010B	ND	ND	ND	ND	0	5	5	/ /		
MET	Selenium (total)	mg/L	SW6010B	ND	ND	ND	ND	0	5	5	/ /		
MET	Silver	mg/L	SW6010B	ND	ND	ND	ND	0	7	7	/ /		
MET	Silver (total)	mg/L	SW6010B	ND	ND	ND	ND	0	7	7	/ /		
MET	Sodium	mg/L	SW6010B	3.14	3.14	36	16.7	7	0	7	1/25/2005	PBOW-05-GW-AA3-GW003-01A	15
MET	Sodium (total)	mg/L	SW6010B	3.19	3.19	36.6	17	7	0	7	1/25/2005	PBOW-05-GW-AA3-GW003-01D	15
MET	Thallium	mg/L	SW6010B	ND	ND	ND	ND	0	7	7	/ /		
MET	Thallium (total)	mg/L	SW6010B	ND	ND	ND	ND	0	7	7	/ /		
MET	Vanadium	mg/L	SW6010B	ND	ND	ND	ND	0	7	7	/ /		
MET	Vanadium (total)	mg/L	SW6010B	ND	ND	ND	ND	0	7	7	/ /		
MET	Zinc	mg/L	SW6010B	ND	0.013	0.109	0.0306	5	2	7	1/27/2005	PBOW-05-GW-AA3-GW005-01A	15.1
MET	Zinc (total)	mg/L	SW6010B	ND	0.0148	0.0828	0.0282	5	2	7	1/27/2005	PBOW-05-GW-AA3-GW005-01A	15.1
PCB	PCB-1016 (Aroclor 1016)	ug/L	SW8082	ND	ND	ND	ND	0	7	7	/ /		
PCB	PCB-1221 (Aroclor 1221)	ug/L	SW8082	ND	ND	ND	ND	0	7	7	/ /		

Table 4-6

Maximum Detection Values in Shallow Groundwater (January 2005)

Method Type	Analyte	Units	Method	Minimum	Minimum Detected Result	Maximum Detected Result	Mean	Number of Detects	Number of Non Detects	Number of Usable Samples	Date of Maximum Detection	Sample ID for Maximum Detection	Depth for Max Detect
PCB	PCB-1232 (Aroclor 1232)	ug/L	SW8082	ND	ND	ND	ND	0	7	7	/ /		
PCB	PCB-1242 (Aroclor 1242)	ug/L	SW8082	ND	ND	ND	ND	0	7	7	/ /		
PCB	PCB-1248 (Aroclor 1248)	ug/L	SW8082	ND	ND	ND	ND	0	7	7	/ /		
PCB	PCB-1254 (Aroclor 1254)	ug/L	SW8082	ND	ND	ND	ND	0	7	7	/ /		
PCB	PCB-1260 (Aroclor 1260)	ug/L	SW8082	ND	ND	ND	ND	0	7	7	/ /		
SV	1,2,4-Trichlorobenzene	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	1,2-Dichlorobenzene	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	1,3-Dichlorobenzene	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	1,4-Dichlorobenzene	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	2,4,5-Trichlorophenol	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	2,4,6-Trichlorophenol	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	2,4-Dichlorophenol	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	2,4-Dimethylphenol	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	2,4-Dinitrophenol	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	2,4-Dinitrotoluene	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	2,6-Dinitrotoluene	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	2-Chloronaphthalene	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	2-Chlorophenol	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	2-Methylnaphthalene	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	2-Methylphenol (o-Cresol)	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	2-Nitroaniline	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	2-Nitrophenol	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	3,3'-Dichlorobenzidine	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	3-Nitroaniline	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	4,6-Dinitro-2-methylphenol	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	4-Bromophenyl phenyl ether	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	4-Chloro-3-methylphenol	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	4-Chloroaniline	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	4-Chlorophenyl phenyl ether	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	4-Methylphenol (p-Cresol)	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	4-Nitroaniline	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	4-Nitrophenol	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	Acenaphthene	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	Acenaphthylene	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	Acetophenone	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	Anthracene	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		

Table 4-6

Maximum Detection Values in Shallow Groundwater (January 2005)

Method Type	Analyte	Units	Method	Minimum	Minimum Detected Result	Maximum Detected Result	Mean	Number of Detects	Number of Non Detects	Number of Usable Samples	Date of Maximum Detection	Sample ID for Maximum Detection	Depth for Max Detect
SV	Atrazine	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	Benzaldehyde	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	Benzo(a)anthracene	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	Benzo(a)pyrene	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	Benzo(b)fluoranthene	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	Benzo(g,h,i)perylene	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	Benzo(k)fluoranthene	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	Benzyl alcohol	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	Benzyl butyl phthalate	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	Biphenyl (Diphenyl)	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	Caprolactam	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	Carbazole	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	Chrysene	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	Di-n-butylphthalate	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	Di-n-octylphthalate	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	Dibenz(a,h)anthracene	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	Dibenzofuran	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	Diethylphthalate	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	Dimethylphthalate	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	Fluoranthene	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	Fluorene	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	Hexachlorobenzene	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	Hexachlorobutadiene	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	Hexachlorocyclopentadiene	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	Hexachloroethane	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	Indeno(1,2,3-cd)pyrene	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	Isophorone	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	N-Nitroso-di-n-propylamine	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	N-Nitrosodimethylamine	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	N-Nitrosodiphenylamine	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	Naphthalene	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	Nitrobenzene	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	Pentachlorophenol	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	Phenanthrene	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	Phenol	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	Pyrene	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		

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Maximum Detection Values in Shallow Groundwater (January 2005)

Method Type	Analyte	Units	Method	Minimum	Minimum Detected Result	Maximum Detected Result	Mean	Number of Detects	Number of Non Detects	Number of Usable Samples	Date of Maximum Detection	Sample ID for Maximum Detection	Depth for Max Detect
SV	bis(2-Chloroethoxy)methane	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	bis(2-Chloroethyl)ether (2-Chloroethylether)	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	bis(2-Chloroisopropyl)ether	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
SV	bis(2-Ethylhexyl)phthalate	ug/L	SW8270C	ND	ND	ND	ND	0	7	7	/ /		
VOC	1,1,1-Trichloroethane	ug/L	SW8260B	ND	ND	ND	ND	0	7	7	/ /		
VOC	1,1,2,2-Tetrachloroethane	ug/L	SW8260B	ND	ND	ND	ND	0	7	7	/ /		
VOC	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/L	SW8260B	ND	ND	ND	ND	0	7	7	/ /		
VOC	1,1,2-Trichloroethane	ug/L	SW8260B	ND	ND	ND	ND	0	7	7	/ /		
VOC	1,1-Dichloroethane	ug/L	SW8260B	ND	ND	ND	ND	0	7	7	/ /		
VOC	1,1-Dichloroethene	ug/L	SW8260B	ND	ND	ND	ND	0	7	7	/ /		
VOC	1,2,3-Trichlorobenzene	ug/L	SW8260B	ND	ND	ND	ND	0	7	7	/ /		
VOC	1,2,4-Trichlorobenzene	ug/L	SW8260B	ND	ND	ND	ND	0	7	7	/ /		
VOC	1,2-Dibromo-3-chloropropane	ug/L	SW8260B	ND	ND	ND	ND	0	7	7	/ /		
VOC	1,2-Dibromoethane (EDB)	ug/L	SW8260B	ND	ND	ND	ND	0	7	7	/ /		
VOC	1,2-Dichlorobenzene	ug/L	SW8260B	ND	ND	ND	ND	0	7	7	/ /		
VOC	1,2-Dichloroethane	ug/L	SW8260B	ND	ND	ND	ND	0	7	7	/ /		
VOC	1,2-Dichloropropane	ug/L	SW8260B	ND	ND	ND	ND	0	7	7	/ /		
VOC	1,3-Dichlorobenzene	ug/L	SW8260B	ND	ND	ND	ND	0	7	7	/ /		
VOC	1,4-Dichlorobenzene	ug/L	SW8260B	ND	ND	ND	ND	0	7	7	/ /		
VOC	2-Butanone (Methyl ethyl ketone)	ug/L	SW8260B	ND	ND	ND	ND	0	7	7	/ /		
VOC	2-Hexanone	ug/L	SW8260B	ND	ND	ND	ND	0	7	7	/ /		
VOC	4-Methyl-2-pentanone (Methyl isobutyl ketone)	ug/L	SW8260B	ND	ND	ND	ND	0	7	7	/ /		
VOC	Acetone	ug/L	SW8260B	ND	ND	ND	ND	0	7	7	/ /		
VOC	Benzene	ug/L	SW8260B	ND	0.117	0.117	0.0613	1	6	7	1/26/2005	PBOW-05-GW-AA2-GW002-01A	15.75
VOC	Bromochloromethane	ug/L	SW8260B	ND	ND	ND	ND	0	7	7	/ /		
VOC	Bromodichloromethane	ug/L	SW8260B	ND	ND	ND	ND	0	7	7	/ /		
VOC	Bromoform	ug/L	SW8260B	ND	ND	ND	ND	0	7	7	/ /		
VOC	Bromomethane	ug/L	SW8260B	ND	ND	ND	ND	0	7	7	/ /		
VOC	Carbon Disulfide	ug/L	SW8260B	ND	ND	ND	ND	0	7	7	/ /		
VOC	Carbon tetrachloride	ug/L	SW8260B	ND	ND	ND	ND	0	7	7	/ /		
VOC	Chlorobenzene	ug/L	SW8260B	ND	ND	ND	ND	0	7	7	/ /		
VOC	Chloroethane	ug/L	SW8260B	ND	ND	ND	ND	0	7	7	/ /		
VOC	Chloroform	ug/L	SW8260B	ND	ND	ND	ND	0	7	7	/ /		
VOC	Chloromethane	ug/L	SW8260B	ND	ND	ND	ND	0	7	7	/ /		
VOC	Cyclohexane	ug/L	SW8260B	ND	14.8	14.8	2.16	1	6	7	1/26/2005	PBOW-05-GW-AA2-GW002-01A	15.75
VOC	Dibromochloromethane	ug/L	SW8260B	ND	ND	ND	ND	0	7	7	/ /		

Table 4-6

Maximum Detection Values in Shallow Groundwater (January 2005)

Method Type	Analyte	Units	Method	Minimum	Minimum Detected Result	Maximum Detected Result	Mean	Number of Detects	Number of Non Detects	Number of Usable Samples	Date of Maximum Detection	Sample ID for Maximum Detection	Depth for Max Detect
VOC	Dichlorodifluoromethane	ug/L	SW8260B	ND	ND	ND	ND	0	7	7	/ /		
VOC	Ethylbenzene	ug/L	SW8260B	ND	0.68	0.68	0.167	1	6	7	1/26/2005	PBOW-05-GW-AA2-GW002-01A	15.75
VOC	Isopropylbenzene (Cumene)	ug/L	SW8260B	ND	0.325	0.325	0.0897	1	6	7	1/26/2005	PBOW-05-GW-AA2-GW002-01A	15.75
VOC	Methyl Acetate	ug/L	SW8260B	ND	ND	ND	ND	0	7	7	/ /		
VOC	Methylcyclohexane	ug/L	SW8260B	ND	10.2	10.2	1.5	1	6	7	1/26/2005	PBOW-05-GW-AA2-GW002-01A	15.75
VOC	Methylene Chloride	ug/L	SW8260B	ND	ND	ND	ND	0	7	7	/ /		
VOC	Styrene	ug/L	SW8260B	ND	ND	ND	ND	0	7	7	/ /		
VOC	Tert-Butyl Methyl Ether (MTBE)	ug/L	SW8260B	ND	ND	ND	ND	0	7	7	/ /		
VOC	Tetrachloroethene (PCE)	ug/L	SW8260B	ND	ND	ND	ND	0	7	7	/ /		
VOC	Toluene	ug/L	SW8260B	ND	ND	ND	ND	0	7	7	/ /		
VOC	Trichloroethene (TCE)	ug/L	SW8260B	ND	ND	ND	ND	0	7	7	/ /		
VOC	Trichlorofluoromethane	ug/L	SW8260B	ND	ND	ND	ND	0	7	7	/ /		
VOC	Vinyl chloride	ug/L	SW8260B	ND	ND	ND	ND	0	7	7	/ /		
VOC	Xylenes, Total	ug/L	SW8260B	ND	11.9	11.9	1.83	1	6	7	1/26/2005	PBOW-05-GW-AA2-GW002-01A	15.75
VOC	cis-1,2-Dichloroethene	ug/L	SW8260B	ND	ND	ND	ND	0	7	7	/ /		
VOC	cis-1,3-Dichloropropene	ug/L	SW8260B	ND	ND	ND	ND	0	7	7	/ /		
VOC	trans-1,2-Dichloroethene	ug/L	SW8260B	ND	ND	ND	ND	0	7	7	/ /		
VOC	trans-1,3-Dichloropropene	ug/L	SW8260B	ND	ND	ND	ND	0	7	7	/ /		

Note the MEAN is calculated using the Detection Limit/2 as the value for samples that did not have a detectable concentration

Table 4-,

Detected Analytes in Bedrock Groundwater (January 2005)

Location	Date	Time Samp.	Sample ID	Depth	Test	Analyte	Result	Qual	DL	RL	Units	Bkg.	Region 9 Tap Water Std.	Samp. Type
Acid Area 2														
AA2-BEDGW-001	1/27/2005	12:50	PBOW-05-GW-AA2-BEDGW001-01A	37.75	E310.1	Alkalinity, Total (as CaCO3)	590		2	2	mg/L			N1
AA2-BEDGW-001	1/27/2005	12:50	PBOW-05-GW-AA2-BEDGW001-01A	37.75	E300	Chloride (as Cl)	42.4	J	0.0494	0.1	mg/L			N1
AA2-BEDGW-001	1/27/2005	12:50	PBOW-05-GW-AA2-BEDGW001-01A	37.75	E130.2	Hardness (as CACO3)	669		1	1	mg/L			N1
AA2-BEDGW-001	1/27/2005	12:50	PBOW-05-GW-AA2-BEDGW001-01A	37.75	E300	Nitrogen, Nitrate (as N)	0.143		0.0149	0.1	mg/L		10	N1
AA2-BEDGW-001	1/27/2005	12:50	PBOW-05-GW-AA2-BEDGW001-01A	37.75	E300	Sulfate (as SO4)	6.41	J	0.0187	0.1	mg/L			N1
AA2-BEDGW-001	1/27/2005	12:50	PBOW-05-GW-AA2-BEDGW001-01A	37.75	E160.1	Total Dissolved Solids	680		10	10	mg/L			N1
AA2-BEDGW-001	1/27/2005	12:50	PBOW-05-GW-AA2-BEDGW001-01A	37.75	SW9060	Total Organic Carbon	1.49		0.217	1	mg/L			N1
AA2-BEDGW-001	1/27/2005	12:50	PBOW-05-GW-AA2-BEDGW001-01A	37.75	E180.1	Turbidity	30.6		0.393	0.5	NTU			N1
AA2-BEDGW-001	1/27/2005	12:50	PBOW-05-GW-AA2-BEDGW001-01A	37.75	SW6010B	Arsenic	7.04	J	4.59	25	ug/L	7.4	0.045	N1
AA2-BEDGW-001	1/27/2005	12:50	PBOW-05-GW-AA2-BEDGW001-01A	37.75	SW6010B	Barium	280		0.693	20	ug/L		2600	N1
AA2-BEDGW-001	1/27/2005	12:50	PBOW-05-GW-AA2-BEDGW001-01A	37.75	SW6010B	Calcium	88800		90.9	1500	ug/L			N1
AA2-BEDGW-001	1/27/2005	12:50	PBOW-05-GW-AA2-BEDGW001-01A	37.75	SW6010B	Iron	131	J	22.9	200	ug/L		11000	N1
AA2-BEDGW-001	1/27/2005	12:50	PBOW-05-GW-AA2-BEDGW001-01A	37.75	SW6010B	Magnesium	53500		38.5	1500	ug/L			N1
AA2-BEDGW-001	1/27/2005	12:50	PBOW-05-GW-AA2-BEDGW001-01A	37.75	SW6010B	Manganese	93.8		0.419	10	ug/L		880	N1
AA2-BEDGW-001	1/27/2005	12:50	PBOW-05-GW-AA2-BEDGW001-01A	37.75	SW6010B	Potassium	26900		175	1500	ug/L			N1
AA2-BEDGW-001	1/27/2005	12:50	PBOW-05-GW-AA2-BEDGW001-01A	37.75	SW6010B	Sodium	90200		49.3	1500	ug/L			N1
AA2-BEDGW-001	1/27/2005	12:50	PBOW-05-GW-AA2-BEDGW001-01A	37.75	SW6010B	**Arsenic (total)**	**7.95**	J	4.59	25	ug/L	7.4	**0.045**	N1
AA2-BEDGW-001	1/27/2005	12:50	PBOW-05-GW-AA2-BEDGW001-01A	37.75	SW6010B	Barium (total)	275		0.693	20	ug/L		2600	N1
AA2-BEDGW-001	1/27/2005	12:50	PBOW-05-GW-AA2-BEDGW001-01A	37.75	SW6010B	Calcium (total)	85100		90.9	1500	ug/L			N1
AA2-BEDGW-001	1/27/2005	12:50	PBOW-05-GW-AA2-BEDGW001-01A	37.75	SW6010B	Cobalt (total)	1.21	J	0.898	20	ug/L		730	N1
AA2-BEDGW-001	1/27/2005	12:50	PBOW-05-GW-AA2-BEDGW001-01A	37.75	SW6010B	Iron (total)	913		22.9	200	ug/L		11000	N1
AA2-BEDGW-001	1/27/2005	12:50	PBOW-05-GW-AA2-BEDGW001-01A	37.75	SW6010B	Magnesium (total)	50600		38.5	1500	ug/L			N1
AA2-BEDGW-001	1/27/2005	12:50	PBOW-05-GW-AA2-BEDGW001-01A	37.75	SW6010B	Manganese (total)	90.6		0.419	10	ug/L		880	N1
AA2-BEDGW-001	1/27/2005	12:50	PBOW-05-GW-AA2-BEDGW001-01A	37.75	SW6010B	Potassium (total)	25800		175	1500	ug/L			N1
AA2-BEDGW-001	1/27/2005	12:50	PBOW-05-GW-AA2-BEDGW001-01A	37.75	SW6010B	Sodium (total)	91600		49.3	1500	ug/L			N1
AA2-BEDGW-001	1/27/2005	12:50	PBOW-05-GW-AA2-BEDGW001-01A	37.75	SW6010B	Zinc (total)	19.1	J	1.46	20	ug/L		11000	N1
AA2-BEDGW-001	1/27/2005	12:50	PBOW-05-GW-AA2-BEDGW001-01A	37.75	SW8270C	Naphthalene	1.09	J	0.545	9.43	ug/L		6.2	N1
AA2-BEDGW-001	1/27/2005	12:50	PBOW-05-GW-AA2-BEDGW001-01A	37.75	SW8260B	Benzene	0.439	J	0.104	1	ug/L	2.4	0.35	N1
AA2-BEDGW-001	1/27/2005	12:50	PBOW-05-GW-AA2-BEDGW001-01A	37.75	SW8260B	Carbon Disulfide	0.257	J	0.118	5	ug/L		1000	N1
AA2-BEDGW-001	1/27/2005	12:50	PBOW-05-GW-AA2-BEDGW001-01A	37.75	SW8260B	Cyclohexane	24.2		0.0999	1	ug/L		10000	N1
AA2-BEDGW-001	1/27/2005	12:50	PBOW-05-GW-AA2-BEDGW001-01A	37.75	SW8260B	Ethylbenzene	1.48		0.164	1	ug/L		1300	N1
AA2-BEDGW-001	1/27/2005	12:50	PBOW-05-GW-AA2-BEDGW001-01A	37.75	SW8260B	Isopropylbenzene (Cumene)	0.737	J	0.101	1	ug/L		660	N1
AA2-BEDGW-001	1/27/2005	12:50	PBOW-05-GW-AA2-BEDGW001-01A	37.75	SW8260B	Methylcyclohexane	14.5		0.107	1	ug/L		5200	N1
AA2-BEDGW-001	1/27/2005	12:50	PBOW-05-GW-AA2-BEDGW001-01A	37.75	SW8260B	Toluene	0.192	J	0.119	1	ug/L		720	N1
AA2-BEDGW-001	1/27/2005	12:50	PBOW-05-GW-AA2-BEDGW001-01A	37.75	SW8260B	Xylenes, Total	17.9		0.307	1	ug/L		210	N1
PB-BED-MW19	1/24/2005	16:05	PBOW-05-GW-PB-BEDMW19-01A	38.7	SW9012	Cyanide	0.109	J	0.007	0.01	mg/L		0.73	N1
PB-BED-MW19	1/24/2005	16:05	PBOW-05-GW-PB-BEDMW19-01A	38.7	E310.1	Alkalinity, Total (as CaCO3)	690		2	2	mg/L			N1
PB-BED-MW19	1/24/2005	16:05	PBOW-05-GW-PB-BEDMW19-01A	38.7	E300	Chloride (as Cl)	177		0.494	1	mg/L			N1
PB-BED-MW19	1/24/2005	16:05	PBOW-05-GW-PB-BEDMW19-01A	38.7	E130.2	Hardness (as CACO3)	846		1	1	mg/L			N1
PB-BED-MW19	1/24/2005	16:05	PBOW-05-GW-PB-BEDMW19-01A	38.7	E300	Nitrogen, Nitrate (as N)	0.264		0.0149	0.1	mg/L		10	N1
PB-BED-MW19	1/24/2005	16:05	PBOW-05-GW-PB-BEDMW19-01A	38.7	E300	Sulfate (as SO4)	3.75	J	0.0187	0.1	mg/L			N1

Table 4-,

Detected Analytes in Bedrock Groundwater (January 2005)

Location	Date	Time Samp.	Sample ID	Depth	Test	Analyte	Result	Qual	DL	RL	Units	Bkg.	Region 9 Tap Water Std.	Samp. Type
PB-BED-MW19	1/24/2005	16:05	PBOW-05-GW-PB-BEDMW19-01A	38.7	E160.2	Suspended Solids (residue, Non-filterable)	5		4	4	mg/L			N1
PB-BED-MW19	1/24/2005	16:05	PBOW-05-GW-PB-BEDMW19-01A	38.7	E160.1	Total Dissolved Solids	1000		10	10	mg/L			N1
PB-BED-MW19	1/24/2005	16:05	PBOW-05-GW-PB-BEDMW19-01A	38.7	SW9060	Total Organic Carbon	5.24		0.217	1	mg/L			N1
PB-BED-MW19	1/24/2005	16:05	PBOW-05-GW-PB-BEDMW19-01A	38.7	E180.1	Turbidity	34.4		0.393	0.5	NTU			N1
PB-BED-MW19	1/24/2005	16:05	PBOW-05-GW-PB-BEDMW19-01A	38.7	SW6010B	Barium	1570		0.693	20	ug/L		2600	N1
PB-BED-MW19	1/24/2005	16:05	PBOW-05-GW-PB-BEDMW19-01A	38.7	SW6010B	Calcium	150000		90.9	1500	ug/L			N1
PB-BED-MW19	1/24/2005	16:05	PBOW-05-GW-PB-BEDMW19-01A	38.7	SW6010B	Cobalt	1.27	J	0.898	20	ug/L		730	N1
PB-BED-MW19	1/24/2005	16:05	PBOW-05-GW-PB-BEDMW19-01A	38.7	SW6010B	Magnesium	72500		38.5	1500	ug/L			N1
PB-BED-MW19	1/24/2005	16:05	PBOW-05-GW-PB-BEDMW19-01A	38.7	SW6010B	Manganese	10.2		0.419	10	ug/L		880	N1
PB-BED-MW19	1/24/2005	16:05	PBOW-05-GW-PB-BEDMW19-01A	38.7	SW6010B	Potassium	26000		175	1500	ug/L			N1
PB-BED-MW19	1/24/2005	16:05	PBOW-05-GW-PB-BEDMW19-01A	38.7	SW6010B	Sodium	118000		49.3	1500	ug/L			N1
PB-BED-MW19	1/24/2005	16:05	PBOW-05-GW-PB-BEDMW19-01A	38.7	SW6010B	Barium (total)	1640	J	0.693	20	ug/L		2600	N1
PB-BED-MW19	1/24/2005	16:05	PBOW-05-GW-PB-BEDMW19-01A	38.7	SW6010B	Calcium (total)	148000	J	90.9	1500	ug/L			N1
PB-BED-MW19	1/24/2005	16:05	PBOW-05-GW-PB-BEDMW19-01A	38.7	SW6010B	Magnesium (total)	71300	J	38.5	1500	ug/L			N1
PB-BED-MW19	1/24/2005	16:05	PBOW-05-GW-PB-BEDMW19-01A	38.7	SW6010B	Manganese (total)	8.49	J	0.419	10	ug/L		880	N1
PB-BED-MW19	1/24/2005	16:05	PBOW-05-GW-PB-BEDMW19-01A	38.7	SW6010B	Potassium (total)	25400		175	1500	ug/L			N1
PB-BED-MW19	1/24/2005	16:05	PBOW-05-GW-PB-BEDMW19-01A	38.7	SW6010B	Sodium (total)	118000	J	49.3	1500	ug/L			N1
PB-BED-MW19	1/24/2005	16:05	PBOW-05-GW-PB-BEDMW19-01A	38.7	SW8270C	2-Methylnaphthalene	2.08	J	2.06	9.35	ug/L			N1
PB-BED-MW19	1/24/2005	16:05	PBOW-05-GW-PB-BEDMW19-01A	38.7	SW8270C	Naphthalene	1.57	J	0.54	9.35	ug/L		6.2	N1
PB-BED-MW19	1/24/2005	16:05	PBOW-05-GW-PB-BEDMW19-01A	38.7	SW8260B	**Benzene**	**6.73**		0.104	1	ug/L	2.4	**0.35**	N1
PB-BED-MW19	1/24/2005	16:05	PBOW-05-GW-PB-BEDMW19-01A	38.7	SW8260B	Carbon Disulfide	0.203	J	0.118	5	ug/L		1000	N1
PB-BED-MW19	1/24/2005	16:05	PBOW-05-GW-PB-BEDMW19-01A	38.7	SW8260B	Cyclohexane	55		0.2	2	ug/L		10000	N1
PB-BED-MW19	1/24/2005	16:05	PBOW-05-GW-PB-BEDMW19-01A	38.7	SW8260B	Ethylbenzene	3.04		0.164	1	ug/L		1300	N1
PB-BED-MW19	1/24/2005	16:05	PBOW-05-GW-PB-BEDMW19-01A	38.7	SW8260B	Isopropylbenzene (Cumene)	1.23		0.101	1	ug/L		660	N1
PB-BED-MW19	1/24/2005	16:05	PBOW-05-GW-PB-BEDMW19-01A	38.7	SW8260B	Methylcyclohexane	30.3		0.107	1	ug/L		5200	N1
PB-BED-MW19	1/24/2005	16:05	PBOW-05-GW-PB-BEDMW19-01A	38.7	SW8260B	Toluene	1.73		0.119	1	ug/L		720	N1
PB-BED-MW19	1/24/2005	16:05	PBOW-05-GW-PB-BEDMW19-01A	38.7	SW8260B	Xylenes, Total	22.6		0.307	1	ug/L		210	N1
Acid Area 3														
AA3-BEDGW-001	1/23/2005	11:50	PBOW-05-GW-AA3-BEDGW001-01A	47.75	SW9012	Cyanide	0.0268	J	0.007	0.01	mg/L		0.73	N1
AA3-BEDGW-001	1/23/2005	11:50	PBOW-05-GW-AA3-BEDGW001-01A	47.75	E310.1	Alkalinity, Total (as CaCO3)	730		2	2	mg/L			N1
AA3-BEDGW-001	1/23/2005	11:50	PBOW-05-GW-AA3-BEDGW001-01A	47.75	E300	Chloride (as Cl)	323	J	0.494	1	mg/L			N1
AA3-BEDGW-001	1/23/2005	11:50	PBOW-05-GW-AA3-BEDGW001-01A	47.75	E130.2	Hardness (as CACO3)	737		1	1	mg/L			N1
AA3-BEDGW-001	1/23/2005	11:50	PBOW-05-GW-AA3-BEDGW001-01A	47.75	E300	Nitrogen, Nitrate (as N)	0.225		0.0149	0.1	mg/L		10	N1
AA3-BEDGW-001	1/23/2005	11:50	PBOW-05-GW-AA3-BEDGW001-01A	47.75	E300	Sulfate (as SO4)	1.21		0.0187	0.1	mg/L			N1
AA3-BEDGW-001	1/23/2005	11:50	PBOW-05-GW-AA3-BEDGW001-01A	47.75	E160.1	Total Dissolved Solids	1300		10	10	mg/L			N1
AA3-BEDGW-001	1/23/2005	11:50	PBOW-05-GW-AA3-BEDGW001-01A	47.75	SW9060	Total Organic Carbon	2.72		0.217	1	mg/L			N1
AA3-BEDGW-001	1/23/2005	11:50	PBOW-05-GW-AA3-BEDGW001-01A	47.75	E180.1	Turbidity	41.8		0.786	1	NTU			N1
AA3-BEDGW-001	1/23/2005	11:50	PBOW-05-GW-AA3-BEDGW001-01A	47.75	SW6010B	Barium	76.2		0.693	20	ug/L		2600	N1
AA3-BEDGW-001	1/23/2005	11:50	PBOW-05-GW-AA3-BEDGW001-01A	47.75	SW6010B	Calcium	109000		90.9	1500	ug/L			N1
AA3-BEDGW-001	1/23/2005	11:50	PBOW-05-GW-AA3-BEDGW001-01A	47.75	SW6010B	Cobalt	1.13	J	0.898	20	ug/L		730	N1
AA3-BEDGW-001	1/23/2005	11:50	PBOW-05-GW-AA3-BEDGW001-01A	47.75	SW6010B	Magnesium	68700		38.5	1500	ug/L			N1
AA3-BEDGW-001	1/23/2005	11:50	PBOW-05-GW-AA3-BEDGW001-01A	47.75	SW6010B	Manganese	13.4		0.419	10	ug/L		880	N1

Table 4-7

Detected Analytes in Bedrock Groundwater (January 2005)

Location	Date	Time Samp.	Sample ID	Depth	Test	Analyte	Result	Qual	DL	RL	Units	Bkg.	Region 9 Tap Water Std.	Samp. Type
AA3-BEDGW-001	1/23/2005	11:50	PBOW-05-GW-AA3-BEDGW001-01A	47.75	SW6010B	Potassium	37100		175	1500	ug/L			N1
AA3-BEDGW-001	1/23/2005	11:50	PBOW-05-GW-AA3-BEDGW001-01A	47.75	SW6010B	Sodium	260000		49.3	1500	ug/L			N1
AA3-BEDGW-001	1/23/2005	11:50	PBOW-05-GW-AA3-BEDGW001-01A	47.75	SW6010B	Barium (total)	74.4	J	0.693	20	ug/L		2600	N1
AA3-BEDGW-001	1/23/2005	11:50	PBOW-05-GW-AA3-BEDGW001-01A	47.75	SW6010B	Calcium (total)	108000	J	90.9	1500	ug/L			N1
AA3-BEDGW-001	1/23/2005	11:50	PBOW-05-GW-AA3-BEDGW001-01A	47.75	SW6010B	Magnesium (total)	67800	J	38.5	1500	ug/L			N1
AA3-BEDGW-001	1/23/2005	11:50	PBOW-05-GW-AA3-BEDGW001-01A	47.75	SW6010B	Manganese (total)	11.8		0.419	10	ug/L		880	N1
AA3-BEDGW-001	1/23/2005	11:50	PBOW-05-GW-AA3-BEDGW001-01A	47.75	SW6010B	Potassium (total)	36200		175	1500	ug/L			N1
AA3-BEDGW-001	1/23/2005	11:50	PBOW-05-GW-AA3-BEDGW001-01A	47.75	SW6010B	Sodium (total)	260000	J	49.3	1500	ug/L			N1
AA3-BEDGW-001	1/23/2005	11:50	PBOW-05-GW-AA3-BEDGW001-01A	47.75	SW8260B	Benzene	0.763	J	0.104	1	ug/L	2.4	0.35	N1
AA3-BEDGW-001	1/23/2005	11:50	PBOW-05-GW-AA3-BEDGW001-01A	47.75	SW8260B	Cyclohexane	16.7		0.0999	1	ug/L		10000	N1
AA3-BEDGW-001	1/23/2005	11:50	PBOW-05-GW-AA3-BEDGW001-01A	47.75	SW8260B	Ethylbenzene	0.353	J	0.164	1	ug/L		1300	N1
AA3-BEDGW-001	1/23/2005	11:50	PBOW-05-GW-AA3-BEDGW001-01A	47.75	SW8260B	Methylcyclohexane	7.16		0.107	1	ug/L		5200	N1
AA3-BEDGW-001	1/23/2005	11:50	PBOW-05-GW-AA3-BEDGW001-01A	47.75	SW8260B	Toluene	1.28		0.119	1	ug/L		720	N1
AA3-BEDGW-001	1/23/2005	11:50	PBOW-05-GW-AA3-BEDGW001-01A	47.75	SW8260B	Xylenes, Total	2.56		0.307	1	ug/L		210	N1
AA3-BEDGW-002	1/25/2005	14:50	PBOW-05-GW-AA3-BEDGW002-01A	52.4	E310.1	Alkalinity, Total (as CaCO3)	320		2	2	mg/L			N1
AA3-BEDGW-002	1/25/2005	14:50	PBOW-05-GW-AA3-BEDGW002-01A	52.4	E300	Chloride (as Cl)	16.1		0.0494	0.1	mg/L			N1
AA3-BEDGW-002	1/25/2005	14:50	PBOW-05-GW-AA3-BEDGW002-01A	52.4	E130.2	Hardness (as CACO3)	480		1	1	mg/L			N1
AA3-BEDGW-002	1/25/2005	14:50	PBOW-05-GW-AA3-BEDGW002-01A	52.4	E300	Sulfate (as SO4)	7.15		0.0187	0.1	mg/L			N1
AA3-BEDGW-002	1/25/2005	14:50	PBOW-05-GW-AA3-BEDGW002-01A	52.4	E160.1	Total Dissolved Solids	380		10	10	mg/L			N1
AA3-BEDGW-002	1/25/2005	14:50	PBOW-05-GW-AA3-BEDGW002-01A	52.4	SW9060	Total Organic Carbon	1.88		0.217	1	mg/L			N1
AA3-BEDGW-002	1/25/2005	14:50	PBOW-05-GW-AA3-BEDGW002-01A	52.4	E180.1	Turbidity	1.64		0.393	0.5	NTU			N1
AA3-BEDGW-002	1/25/2005	14:50	PBOW-05-GW-AA3-BEDGW002-01A	52.4	SW6010B	Barium	187		0.693	20	ug/L		2600	N1
AA3-BEDGW-002	1/25/2005	14:50	PBOW-05-GW-AA3-BEDGW002-01A	52.4	SW6010B	Calcium	57500		90.9	1500	ug/L			N1
AA3-BEDGW-002	1/25/2005	14:50	PBOW-05-GW-AA3-BEDGW002-01A	52.4	SW6010B	Magnesium	30400		38.5	1500	ug/L			N1
AA3-BEDGW-002	1/25/2005	14:50	PBOW-05-GW-AA3-BEDGW002-01A	52.4	SW6010B	Manganese	12.9		0.419	10	ug/L		880	N1
AA3-BEDGW-002	1/25/2005	14:50	PBOW-05-GW-AA3-BEDGW002-01A	52.4	SW6010B	Potassium	11100		175	1500	ug/L			N1
AA3-BEDGW-002	1/25/2005	14:50	PBOW-05-GW-AA3-BEDGW002-01A	52.4	SW6010B	Sodium	41600		49.3	1500	ug/L			N1
AA3-BEDGW-002	1/25/2005	14:50	PBOW-05-GW-AA3-BEDGW002-01A	52.4	SW6010B	Barium (total)	194		0.693	20	ug/L		2600	N1
AA3-BEDGW-002	1/25/2005	14:50	PBOW-05-GW-AA3-BEDGW002-01A	52.4	SW6010B	Calcium (total)	59000		90.9	1500	ug/L			N1
AA3-BEDGW-002	1/25/2005	14:50	PBOW-05-GW-AA3-BEDGW002-01A	52.4	SW6010B	Magnesium (total)	31500		38.5	1500	ug/L			N1
AA3-BEDGW-002	1/25/2005	14:50	PBOW-05-GW-AA3-BEDGW002-01A	52.4	SW6010B	Manganese (total)	13.3		0.419	10	ug/L		880	N1
AA3-BEDGW-002	1/25/2005	14:50	PBOW-05-GW-AA3-BEDGW002-01A	52.4	SW6010B	Potassium (total)	11400		175	1500	ug/L			N1
AA3-BEDGW-002	1/25/2005	14:50	PBOW-05-GW-AA3-BEDGW002-01A	52.4	SW6010B	Sodium (total)	43600		49.3	1500	ug/L			N1
AA3-BEDGW-002	1/25/2005	14:50	PBOW-05-GW-AA3-BEDGW002-01A	52.4	SW8260B	**Benzene**	**5.06**		0.104	1	ug/L	2.4	**0.35**	N1
AA3-BEDGW-002	1/25/2005	14:50	PBOW-05-GW-AA3-BEDGW002-01A	52.4	SW8260B	Carbon Disulfide	0.661	J	0.118	5	ug/L		1000	N1
AA3-BEDGW-002	1/25/2005	14:50	PBOW-05-GW-AA3-BEDGW002-01A	52.4	SW8260B	Chloromethane	11.4		0.142	2	ug/L		160	N1
AA3-BEDGW-002	1/25/2005	14:50	PBOW-05-GW-AA3-BEDGW002-01A	52.4	SW8260B	Cyclohexane	39.8		0.0999	1	ug/L		10000	N1
AA3-BEDGW-002	1/25/2005	14:50	PBOW-05-GW-AA3-BEDGW002-01A	52.4	SW8260B	Ethylbenzene	1.58		0.164	1	ug/L		1300	N1
AA3-BEDGW-002	1/25/2005	14:50	PBOW-05-GW-AA3-BEDGW002-01A	52.4	SW8260B	Isopropylbenzene (Cumene)	0.423	J	0.101	1	ug/L		660	N1
AA3-BEDGW-002	1/25/2005	14:50	PBOW-05-GW-AA3-BEDGW002-01A	52.4	SW8260B	Methylcyclohexane	30.9		0.107	1	ug/L		5200	N1
AA3-BEDGW-002	1/25/2005	14:50	PBOW-05-GW-AA3-BEDGW002-01A	52.4	SW8260B	Toluene	3.24		0.119	1	ug/L		720	N1
AA3-BEDGW-002	1/25/2005	14:50	PBOW-05-GW-AA3-BEDGW002-01A	52.4	SW8260B	Xylenes, Total	12.1		0.307	1	ug/L		210	N1

Table 4-

Detected Analytes in Bedrock Groundwater (January 2005)

Location	Date	Time Samp.	Sample ID	Depth	Test	Analyte	Result	Qual	DL	RL	Units	Bkg.	Region 9 Tap Water Std.	Samp. Type
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01A	47.95	SW9012	Cyanide	0.0086	J	0.007	0.01	mg/L		0.73	N1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01A	47.95	E310.1	Alkalinity, Total (as CaCO3)	470		2	2	mg/L			N1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01A	47.95	E300	Chloride (as Cl)	160	J	0.494	1	mg/L			N1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01A	47.95	E130.2	Hardness (as CACO3)	503		1	1	mg/L			N1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01A	47.95	E300	Nitrogen, Nitrate (as N)	0.413	J	0.0149	0.1	mg/L		10	N1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01A	47.95	E300	Sulfate (as SO4)	23.6		0.0187	0.1	mg/L			N1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01A	47.95	E160.1	Total Dissolved Solids	820		10	10	mg/L			N1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01A	47.95	SW9060	Total Organic Carbon	1.46		0.217	1	mg/L			N1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01A	47.95	E180.1	Turbidity	56.1		0.786	1	NTU			N1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01A	47.95	SW6010B	Barium	806		0.693	20	ug/L		2600	N1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01A	47.95	SW6010B	Calcium	76300		90.9	1500	ug/L			N1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01A	47.95	SW6010B	Magnesium	44600		38.5	1500	ug/L			N1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01A	47.95	SW6010B	Manganese	41.9		0.419	10	ug/L		880	N1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01A	47.95	SW6010B	Potassium	28600		175	1500	ug/L			N1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01A	47.95	SW6010B	Sodium	194000	J	49.3	1500	ug/L			N1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01A	47.95	SW6010B	Barium (total)	825		0.693	20	ug/L		2600	N1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01A	47.95	SW6010B	Calcium (total)	73200		90.9	1500	ug/L			N1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01A	47.95	SW6010B	Iron (total)	58.4	J	22.9	200	ug/L		11000	N1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01A	47.95	SW6010B	Magnesium (total)	43200		38.5	1500	ug/L			N1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01A	47.95	SW6010B	Manganese (total)	41.1		0.419	10	ug/L		880	N1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01A	47.95	SW6010B	Potassium (total)	27900		175	1500	ug/L			N1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01A	47.95	SW6010B	Sodium (total)	187000	J	49.3	1500	ug/L			N1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01A	47.95	SW6010B	Zinc (total)	11.8	J	1.46	20	ug/L		11000	N1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01A	47.95	SW8270C	2-Methylnaphthalene	5.47	J	2.08	9.43	ug/L			N1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01A	47.95	SW8270C	Naphthalene	5.53	J	0.545	9.43	ug/L		6.2	N1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01A	47.95	SW8260B	**Benzene**	**41.8**		0.104	1	ug/L	2.4	**0.35**	N1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01A	47.95	SW8260B	Carbon Disulfide	0.606	J	0.118	5	ug/L		1000	N1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01A	47.95	SW8260B	Cyclohexane	96		0.25	2.5	ug/L		10000	N1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01A	47.95	SW8260B	Ethylbenzene	15.5		0.164	1	ug/L		1300	N1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01A	47.95	SW8260B	Isopropylbenzene (Cumene)	4.64		0.101	1	ug/L		660	N1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01A	47.95	SW8260B	Methylcyclohexane	55.9		0.268	2.5	ug/L		5200	N1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01A	47.95	SW8260B	Toluene	27.4		0.119	1	ug/L		720	N1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01A	47.95	SW8260B	Xylenes, Total	128		0.307	1	ug/L		210	N1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01D	47.95	E130.2	Hardness (as CACO3)	623		1	1	mg/L			FD1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01D	47.95	SW6010B	Barium	837		0.693	20	ug/L		2600	FD1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01D	47.95	SW6010B	Calcium	75400		90.9	1500	ug/L			FD1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01D	47.95	SW6010B	Copper	4	J	2.55	20	ug/L		1500	FD1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01D	47.95	SW6010B	Magnesium	44400		38.5	1500	ug/L			FD1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01D	47.95	SW6010B	Manganese	43.5		0.419	10	ug/L		880	FD1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01D	47.95	SW6010B	Potassium	28500		175	1500	ug/L			FD1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01D	47.95	SW6010B	Sodium	191000	J	49.3	1500	ug/L			FD1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01D	47.95	SW6010B	Arsenic (total)	5.08	J	4.59	25	ug/L	7.4	0.045	FD1

Table 4-1

Detected Analytes in Bedrock Groundwater (January 2005)

Location	Date	Time Samp.	Sample ID	Depth	Test	Analyte	Result	Qual	DL	RL	Units	Bkg.	Region 9 Tap Water Std.	Samp. Type
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01D	47.95	SW6010B	Barium (total)	844		0.693	20	ug/L		2600	FD1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01D	47.95	SW6010B	Calcium (total)	75800		90.9	1500	ug/L			FD1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01D	47.95	SW6010B	Iron (total)	55.7	J	22.9	200	ug/L		11000	FD1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01D	47.95	SW6010B	Magnesium (total)	44200		38.5	1500	ug/L			FD1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01D	47.95	SW6010B	Manganese (total)	42.3		0.419	10	ug/L		880	FD1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01D	47.95	SW6010B	Potassium (total)	28600		175	1500	ug/L			FD1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01D	47.95	SW6010B	Sodium (total)	192000	J	49.3	1500	ug/L			FD1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01D	47.95	SW6010B	Zinc (total)	9.56	J	1.46	20	ug/L		11000	FD1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01D	47.95	SW8270C	2-Methylnaphthalene	4.92	J	2.06	9.35	ug/L			FD1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01D	47.95	SW8270C	Naphthalene	4.66	J	0.54	9.35	ug/L		6.2	FD1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01D	47.95	SW8260B	**Benzene**	**41.4**		0.104	1	ug/L	2.4	**0.35**	FD1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01D	47.95	SW8260B	Carbon Disulfide	0.619	J	0.118	5	ug/L		1000	FD1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01D	47.95	SW8260B	Cyclohexane	93.5		0.25	2.5	ug/L		10000	FD1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01D	47.95	SW8260B	Ethylbenzene	15.3		0.164	1	ug/L		1300	FD1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01D	47.95	SW8260B	Isopropylbenzene (Cumene)	4.65		0.101	1	ug/L		660	FD1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01D	47.95	SW8260B	Methylcyclohexane	54.4		0.268	2.5	ug/L		5200	FD1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01D	47.95	SW8260B	Toluene	26.9		0.119	1	ug/L		720	FD1
AA3-BEDGW-003	1/30/2005	14:00	PBOW-05-GW-AA3-BEDMW003-01D	47.95	SW8260B	Xylenes, Total	127		0.307	1	ug/L		210	FD1

Table 4-8

Detected Analytes in Bedrock Groundwater (Prior Sampling Events)

Location	Date	Time Samp.	Sample ID	Depth	Test	Analyte	Result	Qual	DL	RL	Units	Bkg.	Region 9 Tap Water Std.	Samp. Type
Acid Area 2														
AA2-BEDGW-001	11/20/1997	11:15	PBOW97-IT-AA2-BEDGW-001-GW-5460-REG	37.75	E310.1	Alkalinity, Total (as CaCO3)	510000		5	5	ug/L			N1
AA2-BEDGW-001	11/20/1997	11:15	PBOW97-IT-AA2-BEDGW-001-GW-5460-REG	37.75	E325.2	Chloride (as Cl)	47000		1	1	ug/L			N1
AA2-BEDGW-001	11/20/1997	11:15	PBOW97-IT-AA2-BEDGW-001-GW-5460-REG	37.75	E130.2	Hardness (as CACO3)	700000		50	50	ug/L			N1
AA2-BEDGW-001	11/20/1997	11:15	PBOW97-IT-AA2-BEDGW-001-GW-5460-REG	37.75	E375.4	Sulfate (as SO4)	48000		25	25	ug/L			N1
AA2-BEDGW-001	11/20/1997	11:15	PBOW97-IT-AA2-BEDGW-001-GW-5460-REG	37.75	E160.2	Suspended Solids (residue, Non-filterable)	4000		4	4	ug/L			N1
AA2-BEDGW-001	11/20/1997	11:15	PBOW97-IT-AA2-BEDGW-001-GW-5460-REG	37.75	E160.1	Total Dissolved Solids	750000		10	10	ug/L			N1
AA2-BEDGW-001	11/20/1997	11:15	PBOW97-IT-AA2-BEDGW-001-GW-5460-REG	37.75	SW9060	Total Organic Carbon	7.4		2	2	mg/L			N1
AA2-BEDGW-001	11/20/1997	11:15	PBOW97-IT-AA2-BEDGW-001-GW-5460-REG	37.75	SW6010	Barium	212		200	200	ug/L		2600	N1
AA2-BEDGW-001	11/20/1997	11:15	PBOW97-IT-AA2-BEDGW-001-GW-5460-REG	37.75	SW6010	Calcium	88600		5000	5000	ug/L			N1
AA2-BEDGW-001	11/20/1997	11:15	PBOW97-IT-AA2-BEDGW-001-GW-5460-REG	37.75	SW6010	Iron	106	B	100	100	ug/L		11000	N1
AA2-BEDGW-001	11/20/1997	11:15	PBOW97-IT-AA2-BEDGW-001-GW-5460-REG	37.75	SW6010	Magnesium	54800		5000	5000	ug/L			N1
AA2-BEDGW-001	11/20/1997	11:15	PBOW97-IT-AA2-BEDGW-001-GW-5460-REG	37.75	SW6010	Manganese	351		15	15	ug/L		880	N1
AA2-BEDGW-001	11/20/1997	11:15	PBOW97-IT-AA2-BEDGW-001-GW-5460-REG	37.75	SW6010	Potassium	30000		5000	5000	ug/L			N1
AA2-BEDGW-001	11/20/1997	11:15	PBOW97-IT-AA2-BEDGW-001-GW-5460-REG	37.75	SW6010	Sodium	104000		5000	5000	ug/L			N1
AA2-BEDGW-001	11/20/1997	11:15	PBOW97-IT-AA2-BEDGW-001-GW-5460-REG	37.75	SW6010	Zinc	66.2	J	20	20	ug/L		11000	N1
AA2-BEDGW-001	11/20/1997	11:15	PBOW97-IT-AA2-BEDGW-001-GW-5460-REG	37.75	SW6010	Aluminum	1060	J	200	200	ug/L		36000	N1
AA2-BEDGW-001	11/20/1997	11:15	PBOW97-IT-AA2-BEDGW-001-GW-5460-REG	37.75	SW6010	Barium	220		200	200	ug/L		2600	N1
AA2-BEDGW-001	11/20/1997	11:15	PBOW97-IT-AA2-BEDGW-001-GW-5460-REG	37.75	SW6010	Calcium	186000	J	5000	5000	ug/L			N1
AA2-BEDGW-001	11/20/1997	11:15	PBOW97-IT-AA2-BEDGW-001-GW-5460-REG	37.75	SW6010	Iron	5240		100	100	ug/L		11000	N1
AA2-BEDGW-001	11/20/1997	11:15	PBOW97-IT-AA2-BEDGW-001-GW-5460-REG	37.75	SW6010	Lead	6.5	B	3	3	ug/L			N1
AA2-BEDGW-001	11/20/1997	11:15	PBOW97-IT-AA2-BEDGW-001-GW-5460-REG	37.75	SW6010	Magnesium	56900		5000	5000	ug/L			N1
AA2-BEDGW-001	11/20/1997	11:15	PBOW97-IT-AA2-BEDGW-001-GW-5460-REG	37.75	SW6010	Manganese	522		15	15	ug/L		880	N1
AA2-BEDGW-001	11/20/1997	11:15	PBOW97-IT-AA2-BEDGW-001-GW-5460-REG	37.75	SW6010	Potassium	29100		5000	5000	ug/L			N1
AA2-BEDGW-001	11/20/1997	11:15	PBOW97-IT-AA2-BEDGW-001-GW-5460-REG	37.75	SW6010	Sodium	99100	J	5000	5000	ug/L			N1
AA2-BEDGW-001	11/20/1997	11:15	PBOW97-IT-AA2-BEDGW-001-GW-5460-REG	37.75	SW6010	Zinc	55		20	20	ug/L		11000	N1
AA2-BEDGW-001	11/20/1997	11:15	PBOW97-IT-AA2-BEDGW-001-GW-5460-REG	37.75	SW8270	2,4-Dimethylphenol	1.3	J	1.3	10	ug/L		730	N1
AA2-BEDGW-001	11/20/1997	11:15	PBOW97-IT-AA2-BEDGW-001-GW-5460-REG	37.75	SW8270	2-Methylnaphthalene	1.3	J	1.3	10	ug/L			N1
AA2-BEDGW-001	11/20/1997	11:15	PBOW97-IT-AA2-BEDGW-001-GW-5460-REG	37.75	SW8260	**Benzene**	**33**		25	25	ug/L	2.4	**0.35**	N1
AA2-BEDGW-001	11/20/1997	11:15	PBOW97-IT-AA2-BEDGW-001-GW-5460-REG	37.75	SW8260	Carbon Disulfide	5.5	J	5.5	25	ug/L		1000	N1
AA2-BEDGW-001	11/20/1997	11:15	PBOW97-IT-AA2-BEDGW-001-GW-5460-REG	37.75	SW8260	Chlorobenzene	21	J	21	25	ug/L		110	N1
AA2-BEDGW-001	11/20/1997	11:15	PBOW97-IT-AA2-BEDGW-001-GW-5460-REG	37.75	SW8260	Ethylbenzene	23	J	23	25	ug/L		1300	N1
AA2-BEDGW-001	11/20/1997	11:15	PBOW97-IT-AA2-BEDGW-001-GW-5460-REG	37.75	SW8260	**Methylene Chloride**	**7.4**	B	7.4	25	ug/L		**4.3**	N1
AA2-BEDGW-001	11/20/1997	11:15	PBOW97-IT-AA2-BEDGW-001-GW-5460-REG	37.75	SW8260	Toluene	32	B	25	25	ug/L		720	N1
AA2-BEDGW-001	11/20/1997	11:15	PBOW97-IT-AA2-BEDGW-001-GW-5460-REG	37.75	SW8260	Xylenes, Total	200		25	25	ug/L		210	N1
AA2-BEDGW-001	5/12/1998	15:20	PBOW-98-GW-AA2-BEDGW-001-5465	37.75	E310.1	Alkalinity, Total (as CaCO3)	600		5	5	mg/L			N1
AA2-BEDGW-001	5/12/1998	15:20	PBOW-98-GW-AA2-BEDGW-001-5465	37.75	E325.2	Chloride (as Cl)	53	J	1	1	mg/L			N1
AA2-BEDGW-001	5/12/1998	15:20	PBOW-98-GW-AA2-BEDGW-001-5465	37.75	E130.2	Hardness (as CACO3)	860		10	10	mg/L			N1
AA2-BEDGW-001	5/12/1998	15:20	PBOW-98-GW-AA2-BEDGW-001-5465	37.75	E375.4	Sulfate (as SO4)	70	J	25	25	mg/L			N1
AA2-BEDGW-001	5/12/1998	15:20	PBOW-98-GW-AA2-BEDGW-001-5465	37.75	E160.1	Total Dissolved Solids	310		10	10	mg/L			N1
AA2-BEDGW-001	5/12/1998	15:20	PBOW-98-GW-AA2-BEDGW-001-5465	37.75	SW9060	Total Organic Carbon	6	J	2	2	mg/L			N1
AA2-BEDGW-001	5/12/1998	15:20	PBOW-98-GW-AA2-BEDGW-001-5465	37.75	SW8330	1,3-Dinitrobenzene	0.81		0.2	0.2	ug/L		3.6	N1

Table 4-8

Detected Analytes in Bedrock Groundwater (Prior Sampling Events)

Location	Date	Time Samp.	Sample ID	Depth	Test	Analyte	Result	Qual	DL	RL	Units	Bkg.	Region 9 Tap Water Std.	Samp. Type
AA2-BEDGW-001	5/12/1998	15:20	PBOW-98-GW-AA2-BEDGW-001-5465	37.75	SW8330	2,4-Dinitrotoluene	2.5		0.2	0.2	ug/L		73	N1
AA2-BEDGW-001	5/12/1998	15:20	PBOW-98-GW-AA2-BEDGW-001-5465	37.75	SW8330	2,6-Dinitrotoluene	1.2		0.2	0.2	ug/L		36	N1
AA2-BEDGW-001	5/12/1998	15:20	PBOW-98-GW-AA2-BEDGW-001-5465	37.75	SW6010	Barium	279		200	200	ug/L		2600	N1
AA2-BEDGW-001	5/12/1998	15:20	PBOW-98-GW-AA2-BEDGW-001-5465	37.75	SW6010	Calcium	70400		5000	5000	ug/L			N1
AA2-BEDGW-001	5/12/1998	15:20	PBOW-98-GW-AA2-BEDGW-001-5465	37.75	SW6010	Magnesium	54300		5000	5000	ug/L			N1
AA2-BEDGW-001	5/12/1998	15:20	PBOW-98-GW-AA2-BEDGW-001-5465	37.75	SW6010	**Manganese**	**995**		15	15	ug/L		**880**	N1
AA2-BEDGW-001	5/12/1998	15:20	PBOW-98-GW-AA2-BEDGW-001-5465	37.75	SW6010	Potassium	31200		5000	5000	ug/L			N1
AA2-BEDGW-001	5/12/1998	15:20	PBOW-98-GW-AA2-BEDGW-001-5465	37.75	SW6010	Sodium	124000		5000	5000	ug/L			N1
AA2-BEDGW-001	5/12/1998	15:20	PBOW-98-GW-AA2-BEDGW-001-5465	37.75	SW6010	Zinc	29.1	B	20	20	ug/L		11000	N1
AA2-BEDGW-001	5/12/1998	15:20	PBOW-98-GW-AA2-BEDGW-001-5465	37.75	SW6010	Aluminum	10200		200	200	ug/L		36000	N1
AA2-BEDGW-001	5/12/1998	15:20	PBOW-98-GW-AA2-BEDGW-001-5465	37.75	SW6010	**Arsenic**	**34.2**		10	10	ug/L	7.4	**0.045**	N1
AA2-BEDGW-001	5/12/1998	15:20	PBOW-98-GW-AA2-BEDGW-001-5465	37.75	SW6010	Barium	645		200	200	ug/L		2600	N1
AA2-BEDGW-001	5/12/1998	15:20	PBOW-98-GW-AA2-BEDGW-001-5465	37.75	SW6010	Calcium	1970000		50000	50000	ug/L			N1
AA2-BEDGW-001	5/12/1998	15:20	PBOW-98-GW-AA2-BEDGW-001-5465	37.75	SW6010	Chromium	307		10	10	ug/L			N1
AA2-BEDGW-001	5/12/1998	15:20	PBOW-98-GW-AA2-BEDGW-001-5465	37.75	SW6010	Cobalt	63.3		50	50	ug/L		730	N1
AA2-BEDGW-001	5/12/1998	15:20	PBOW-98-GW-AA2-BEDGW-001-5465	37.75	SW6010	Copper	62.7		25	25	ug/L		1500	N1
AA2-BEDGW-001	5/12/1998	15:20	PBOW-98-GW-AA2-BEDGW-001-5465	37.75	SW6010	**Iron**	**51600**		100	100	ug/L		**11000**	N1
AA2-BEDGW-001	5/12/1998	15:20	PBOW-98-GW-AA2-BEDGW-001-5465	37.75	SW6010	Lead	38.6		3	3	ug/L			N1
AA2-BEDGW-001	5/12/1998	15:20	PBOW-98-GW-AA2-BEDGW-001-5465	37.75	SW6010	Magnesium	132000		5000	5000	ug/L			N1
AA2-BEDGW-001	5/12/1998	15:20	PBOW-98-GW-AA2-BEDGW-001-5465	37.75	SW6010	**Manganese**	**5130**		15	15	ug/L		**880**	N1
AA2-BEDGW-001	5/12/1998	15:20	PBOW-98-GW-AA2-BEDGW-001-5465	37.75	SW6010	Nickel	238		40	40	ug/L		730	N1
AA2-BEDGW-001	5/12/1998	15:20	PBOW-98-GW-AA2-BEDGW-001-5465	37.75	SW6010	Potassium	34200		5000	5000	ug/L			N1
AA2-BEDGW-001	5/12/1998	15:20	PBOW-98-GW-AA2-BEDGW-001-5465	37.75	SW6010	Sodium	124000		5000	5000	ug/L			N1
AA2-BEDGW-001	5/12/1998	15:20	PBOW-98-GW-AA2-BEDGW-001-5465	37.75	SW6010	**Vanadium**	**108**		50	50	ug/L		**36**	N1
AA2-BEDGW-001	5/12/1998	15:20	PBOW-98-GW-AA2-BEDGW-001-5465	37.75	SW6010	Zinc	137	B	20	20	ug/L		11000	N1
AA2-BEDGW-001	5/12/1998	15:20	PBOW-98-GW-AA2-BEDGW-001-5465	37.75	SW8270	2,4-Dimethylphenol	8.6	J	8.6	10	ug/L		730	N1
AA2-BEDGW-001	5/12/1998	15:20	PBOW-98-GW-AA2-BEDGW-001-5465	37.75	SW8270	2-Methylnaphthalene	5.6	J	5.6	10	ug/L			N1
AA2-BEDGW-001	5/12/1998	15:20	PBOW-98-GW-AA2-BEDGW-001-5465	37.75	SW8270	2-Methylphenol (o-Cresol)	1.6	J	1.6	10	ug/L		1800	N1
AA2-BEDGW-001	5/12/1998	15:20	PBOW-98-GW-AA2-BEDGW-001-5465	37.75	SW8270	4-Methylphenol (p-Cresol)	1.6	J	1.6	10	ug/L		180	N1
AA2-BEDGW-001	5/12/1998	15:20	PBOW-98-GW-AA2-BEDGW-001-5465	37.75	SW8270	**Naphthalene**	**8.1**	J	8.1	10	ug/L		**6.2**	N1
AA2-BEDGW-001	5/12/1998	15:20	PBOW-98-GW-AA2-BEDGW-001-5465	37.75	SW8270	Phenol	74		10	10	ug/L		11000	N1
AA2-BEDGW-001	5/12/1998	15:20	PBOW-98-GW-AA2-BEDGW-001-5465	37.75	SW8270	**bis(2-Ethylhexyl)phthalate**	**5.6**	B	5.6	10	ug/L		**4.8**	N1
AA2-BEDGW-001	5/12/1998	15:20	PBOW-98-GW-AA2-BEDGW-001-5465	37.75	SW8260	2-Butanone (Methyl ethyl ketone)	18	J	18	25	ug/L		7000	N1
AA2-BEDGW-001	5/12/1998	15:20	PBOW-98-GW-AA2-BEDGW-001-5465	37.75	SW8260	Acetone	41	J	41	50	ug/L		5500	N1
AA2-BEDGW-001	5/12/1998	15:20	PBOW-98-GW-AA2-BEDGW-001-5465	37.75	SW8260	**Benzene**	**130**		5	5	ug/L	2.4	**0.35**	N1
AA2-BEDGW-001	5/12/1998	15:20	PBOW-98-GW-AA2-BEDGW-001-5465	37.75	SW8260	Carbon Disulfide	1.7	J	1.7	5	ug/L		1000	N1
AA2-BEDGW-001	5/12/1998	15:20	PBOW-98-GW-AA2-BEDGW-001-5465	37.75	SW8260	Chloromethane	10		10	10	ug/L		160	N1
AA2-BEDGW-001	5/12/1998	15:20	PBOW-98-GW-AA2-BEDGW-001-5465	37.75	SW8260	Ethylbenzene	43		5	5	ug/L		1300	N1
AA2-BEDGW-001	5/12/1998	15:20	PBOW-98-GW-AA2-BEDGW-001-5465	37.75	SW8260	Methylene Chloride	3.2	B	3.2	5	ug/L		4.3	N1
AA2-BEDGW-001	5/12/1998	15:20	PBOW-98-GW-AA2-BEDGW-001-5465	37.75	SW8260	Toluene	20		5	5	ug/L		720	N1
AA2-BEDGW-001	5/12/1998	15:20	PBOW-98-GW-AA2-BEDGW-001-5465	37.75	SW8260	**Xylenes, Total**	**220**		5	5	ug/L		**210**	N1
AA2-BEDGW-001	10/8/2001	11:45	IT-AA2-BEDGW-001-GW-BD3004-REG	37.75	E310.1	Alkalinity, Total (as CaCO3)	552	J	0.56	5	mg/L			N1

Table 4-8

Detected Analytes in Bedrock Groundwater (Prior Sampling Events)

Location	Date	Time Samp.	Sample ID	Depth	Test	Analyte	Result	Qual	DL	RL	Units	Bkg.	Region 9 Tap Water Std.	Samp. Type
AA2-BEDGW-001	10/8/2001	11:45	IT-AA2-BEDGW-001-GW-BD3004-REG	37.75	E325.2	Chloride (as Cl)	68.1		0.4	1	mg/L			N1
AA2-BEDGW-001	10/8/2001	11:45	IT-AA2-BEDGW-001-GW-BD3004-REG	37.75	E130.2	Hardness (as CACO3)	360		6.5	25	mg/L			N1
AA2-BEDGW-001	10/8/2001	11:45	IT-AA2-BEDGW-001-GW-BD3004-REG	37.75	E375.4	Sulfate (as SO4)	31.7		0.28	5	mg/L			N1
AA2-BEDGW-001	10/8/2001	11:45	IT-AA2-BEDGW-001-GW-BD3004-REG	37.75	E160.2	Suspended Solids (residue, Non-filterable)	113		2.6	4	mg/L			N1
AA2-BEDGW-001	10/8/2001	11:45	IT-AA2-BEDGW-001-GW-BD3004-REG	37.75	E160.1	Total Dissolved Solids	716		8.3	10	mg/L			N1
AA2-BEDGW-001	10/8/2001	11:45	IT-AA2-BEDGW-001-GW-BD3004-REG	37.75	SW9060	Total Organic Carbon	3.1		0.37	1	mg/L			N1
AA2-BEDGW-001	10/8/2001	11:45	IT-AA2-BEDGW-001-GW-BD3004-REG	37.75	E180.1	Turbidity	313	J	5	5	NTU			N1
AA2-BEDGW-001	10/8/2001	11:45	IT-AA2-BEDGW-001-GW-BD3004-REG	37.75	SW8330	2,4,6-Trinitrotoluene	1.6		0.08	0.2	ug/L		2.2	N1
AA2-BEDGW-001	10/8/2001	11:45	IT-AA2-BEDGW-001-GW-BD3004-REG	37.75	SW6010	Aluminum	75.6	B	22	200	ug/L		36000	N1
AA2-BEDGW-001	10/8/2001	11:45	IT-AA2-BEDGW-001-GW-BD3004-REG	37.75	SW6010	Arsenic	3.7	J	2.5	10	ug/L	7.4	0.045	N1
AA2-BEDGW-001	10/8/2001	11:45	IT-AA2-BEDGW-001-GW-BD3004-REG	37.75	SW6010	Barium	724		1	200	ug/L		2600	N1
AA2-BEDGW-001	10/8/2001	11:45	IT-AA2-BEDGW-001-GW-BD3004-REG	37.75	SW6010	Beryllium	0.56	B	0.5	5	ug/L		73	N1
AA2-BEDGW-001	10/8/2001	11:45	IT-AA2-BEDGW-001-GW-BD3004-REG	37.75	SW6010	Calcium	59300		37.7	5000	ug/L			N1
AA2-BEDGW-001	10/8/2001	11:45	IT-AA2-BEDGW-001-GW-BD3004-REG	37.75	SW6010	Iron	1300		36.1	100	ug/L		11000	N1
AA2-BEDGW-001	10/8/2001	11:45	IT-AA2-BEDGW-001-GW-BD3004-REG	37.75	SW6010	Magnesium	54600		21.8	5000	ug/L			N1
AA2-BEDGW-001	10/8/2001	11:45	IT-AA2-BEDGW-001-GW-BD3004-REG	37.75	SW6010	**Manganese**	**946**		1.5	15	ug/L		**880**	N1
AA2-BEDGW-001	10/8/2001	11:45	IT-AA2-BEDGW-001-GW-BD3004-REG	37.75	SW6010	Potassium	27500	J	158	5000	ug/L			N1
AA2-BEDGW-001	10/8/2001	11:45	IT-AA2-BEDGW-001-GW-BD3004-REG	37.75	SW6010	Sodium	127000		357	5000	ug/L			N1
AA2-BEDGW-001	10/8/2001	11:45	IT-AA2-BEDGW-001-GW-BD3004-REG	37.75	SW6010	Zinc	7.1	J	2.6	20	ug/L		11000	N1
AA2-BEDGW-001	10/8/2001	11:45	IT-AA2-BEDGW-001-GW-BD3004-REG	37.75	SW6010	Aluminum	1170	J	22	200	ug/L		36000	N1
AA2-BEDGW-001	10/8/2001	11:45	IT-AA2-BEDGW-001-GW-BD3004-REG	37.75	SW6010	**Arsenic**	**9.1**	J	2.5	10	ug/L	7.4	**0.045**	N1
AA2-BEDGW-001	10/8/2001	11:45	IT-AA2-BEDGW-001-GW-BD3004-REG	37.75	SW6010	Barium	843		1	200	ug/L		2600	N1
AA2-BEDGW-001	10/8/2001	11:45	IT-AA2-BEDGW-001-GW-BD3004-REG	37.75	SW6010	Calcium	81800		37.7	5000	ug/L			N1
AA2-BEDGW-001	10/8/2001	11:45	IT-AA2-BEDGW-001-GW-BD3004-REG	37.75	SW6010	Chromium	2.4	J	1.2	10	ug/L			N1
AA2-BEDGW-001	10/8/2001	11:45	IT-AA2-BEDGW-001-GW-BD3004-REG	37.75	SW6010	Cobalt	5.9	J	2.3	50	ug/L		730	N1
AA2-BEDGW-001	10/8/2001	11:45	IT-AA2-BEDGW-001-GW-BD3004-REG	37.75	SW6010	Copper	3.6	B	1.9	25	ug/L		1500	N1
AA2-BEDGW-001	10/8/2001	11:45	IT-AA2-BEDGW-001-GW-BD3004-REG	37.75	SW6010	Iron	7210		36.1	100	ug/L		11000	N1
AA2-BEDGW-001	10/8/2001	11:45	IT-AA2-BEDGW-001-GW-BD3004-REG	37.75	SW6010	Magnesium	60000		21.8	5000	ug/L			N1
AA2-BEDGW-001	10/8/2001	11:45	IT-AA2-BEDGW-001-GW-BD3004-REG	37.75	SW6010	**Manganese**	**1030**		1.5	15	ug/L		**880**	N1
AA2-BEDGW-001	10/8/2001	11:45	IT-AA2-BEDGW-001-GW-BD3004-REG	37.75	SW6010	Nickel	3.7	J	1.9	40	ug/L		730	N1
AA2-BEDGW-001	10/8/2001	11:45	IT-AA2-BEDGW-001-GW-BD3004-REG	37.75	SW6010	Potassium	30100	J	158	5000	ug/L			N1
AA2-BEDGW-001	10/8/2001	11:45	IT-AA2-BEDGW-001-GW-BD3004-REG	37.75	SW6010	Sodium	132000		357	5000	ug/L			N1
AA2-BEDGW-001	10/8/2001	11:45	IT-AA2-BEDGW-001-GW-BD3004-REG	37.75	SW6010	**Thallium**	**5.3**	B	4.8	10	ug/L		**2.4**	N1
AA2-BEDGW-001	10/8/2001	11:45	IT-AA2-BEDGW-001-GW-BD3004-REG	37.75	SW6010	Zinc	10.2	J	2.6	20	ug/L		11000	N1
AA2-BEDGW-001	10/8/2001	11:45	IT-AA2-BEDGW-001-GW-BD3004-REG	37.75	SW8270	2,4-Dimethylphenol	2.5	J	0.59	10	ug/L		730	N1
AA2-BEDGW-001	10/8/2001	11:45	IT-AA2-BEDGW-001-GW-BD3004-REG	37.75	SW8270	2-Methylnaphthalene	9.8	J	0.87	10	ug/L			N1
AA2-BEDGW-001	10/8/2001	11:45	IT-AA2-BEDGW-001-GW-BD3004-REG	37.75	SW8270	**Naphthalene**	**12**		0.67	10	ug/L		**6.2**	N1
AA2-BEDGW-001	10/8/2001	11:45	IT-AA2-BEDGW-001-GW-BD3004-REG	37.75	SW8270	Phenol	2.2	J	0.82	10	ug/L		11000	N1
AA2-BEDGW-001	10/8/2001	11:45	IT-AA2-BEDGW-001-GW-BD3004-REG	37.75	SW8260	Acetone	54	B	47	1000	ug/L		5500	N1
AA2-BEDGW-001	10/8/2001	11:45	IT-AA2-BEDGW-001-GW-BD3004-REG	37.75	SW8260	**Benzene**	**45**	J	24	100	ug/L	2.4	**0.35**	N1
AA2-BEDGW-001	10/8/2001	11:45	IT-AA2-BEDGW-001-GW-BD3004-REG	37.75	SW8260	Chloromethane	30	J	10	200	ug/L		160	N1
AA2-BEDGW-001	10/8/2001	11:45	IT-AA2-BEDGW-001-GW-BD3004-REG	37.75	SW8260	Ethylbenzene	64	J	19	100	ug/L		1300	N1

Table 4-8

Detected Analytes in Bedrock Groundwater (Prior Sampling Events)

Location	Date	Time Samp.	Sample ID	Depth	Test	Analyte	Result	Qual	DL	RL	Units	Bkg.	Region 9 Tap Water Std.	Samp. Type
AA2-BEDGW-001	10/8/2001	11:45	IT-AA2-BEDGW-001-GW-BD3004-REG	37.75	SW8260	**Methylene Chloride**	**100**	J	17	200	ug/L		**4.3**	N1
AA2-BEDGW-001	10/8/2001	11:45	IT-AA2-BEDGW-001-GW-BD3004-REG	37.75	SW8260	**Xylenes, Total**	**360**		61	100	ug/L		**210**	N1
AA2-BEDGW-001	4/10/2002	9:40	PBOW-02-GW-IT-AA2-BEDGW-001-CB3030-19-24	37.75	E310.1	Alkalinity, Total (as CaCO3)	586		0.56	5	mg/L			N1
AA2-BEDGW-001	4/10/2002	9:40	PBOW-02-GW-IT-AA2-BEDGW-001-CB3030-19-24	37.75	E325.2	Chloride (as Cl)	56		0.4	1	mg/L			N1
AA2-BEDGW-001	4/10/2002	9:40	PBOW-02-GW-IT-AA2-BEDGW-001-CB3030-19-24	37.75	E130.2	Hardness (as CACO3)	700		6.5	25	mg/L			N1
AA2-BEDGW-001	4/10/2002	9:40	PBOW-02-GW-IT-AA2-BEDGW-001-CB3030-19-24	37.75	E375.4	Sulfate (as SO4)	32.7		0.57	10	mg/L			N1
AA2-BEDGW-001	4/10/2002	9:40	PBOW-02-GW-IT-AA2-BEDGW-001-CB3030-19-24	37.75	E160.2	Suspended Solids (residue, Non-filterable)	22		2.6	4	mg/L			N1
AA2-BEDGW-001	4/10/2002	9:40	PBOW-02-GW-IT-AA2-BEDGW-001-CB3030-19-24	37.75	E160.1	Total Dissolved Solids	712		8.3	10	mg/L			N1
AA2-BEDGW-001	4/10/2002	9:40	PBOW-02-GW-IT-AA2-BEDGW-001-CB3030-19-24	37.75	SW9060	Total Organic Carbon	3.1		0.37	1	mg/L			N1
AA2-BEDGW-001	4/10/2002	9:40	PBOW-02-GW-IT-AA2-BEDGW-001-CB3030-19-24	37.75	E180.1	Turbidity	137		2.5	2.5	NTU			N1
AA2-BEDGW-001	4/10/2002	9:40	PBOW-02-GW-IT-AA2-BEDGW-001-CB3030-19-24	37.75	SW6010	Aluminum	42.6	J	22	200	ug/L		36000	N1
AA2-BEDGW-001	4/10/2002	9:40	PBOW-02-GW-IT-AA2-BEDGW-001-CB3030-19-24	37.75	SW6010	**Arsenic**	**9**	J	2.5	10	ug/L	7.4	**0.045**	N1
AA2-BEDGW-001	4/10/2002	9:40	PBOW-02-GW-IT-AA2-BEDGW-001-CB3030-19-24	37.75	SW6010	Barium	336		1	200	ug/L		2600	N1
AA2-BEDGW-001	4/10/2002	9:40	PBOW-02-GW-IT-AA2-BEDGW-001-CB3030-19-24	37.75	SW6010	Calcium	89900		37.7	5000	ug/L			N1
AA2-BEDGW-001	4/10/2002	9:40	PBOW-02-GW-IT-AA2-BEDGW-001-CB3030-19-24	37.75	SW6010	Cobalt	3.4	J	2.3	50	ug/L		730	N1
AA2-BEDGW-001	4/10/2002	9:40	PBOW-02-GW-IT-AA2-BEDGW-001-CB3030-19-24	37.75	SW6010	Iron	124	J	36.1	100	ug/L		11000	N1
AA2-BEDGW-001	4/10/2002	9:40	PBOW-02-GW-IT-AA2-BEDGW-001-CB3030-19-24	37.75	SW6010	Magnesium	57100		21.8	5000	ug/L			N1
AA2-BEDGW-001	4/10/2002	9:40	PBOW-02-GW-IT-AA2-BEDGW-001-CB3030-19-24	37.75	SW6010	Manganese	207		1.5	15	ug/L		880	N1
AA2-BEDGW-001	4/10/2002	9:40	PBOW-02-GW-IT-AA2-BEDGW-001-CB3030-19-24	37.75	SW6010	Potassium	29600		158	5000	ug/L			N1
AA2-BEDGW-001	4/10/2002	9:40	PBOW-02-GW-IT-AA2-BEDGW-001-CB3030-19-24	37.75	SW6010	Sodium	103000		357	5000	ug/L			N1
AA2-BEDGW-001	4/10/2002	9:40	PBOW-02-GW-IT-AA2-BEDGW-001-CB3030-19-24	37.75	SW6010	Zinc	5	J	2.6	20	ug/L		11000	N1
AA2-BEDGW-001	4/10/2002	9:40	PBOW-02-GW-IT-AA2-BEDGW-001-CB3030-19-24	37.75	SW6010	Aluminum	195	B	22	200	ug/L		36000	N1
AA2-BEDGW-001	4/10/2002	9:40	PBOW-02-GW-IT-AA2-BEDGW-001-CB3030-19-24	37.75	SW6010	Arsenic	6.6	J	2.5	10	ug/L	7.4	0.045	N1
AA2-BEDGW-001	4/10/2002	9:40	PBOW-02-GW-IT-AA2-BEDGW-001-CB3030-19-24	37.75	SW6010	Barium	368		1	200	ug/L		2600	N1
AA2-BEDGW-001	4/10/2002	9:40	PBOW-02-GW-IT-AA2-BEDGW-001-CB3030-19-24	37.75	SW6010	Calcium	99400		37.7	5000	ug/L			N1
AA2-BEDGW-001	4/10/2002	9:40	PBOW-02-GW-IT-AA2-BEDGW-001-CB3030-19-24	37.75	SW6010	Chromium	1.3	J	1.2	10	ug/L			N1
AA2-BEDGW-001	4/10/2002	9:40	PBOW-02-GW-IT-AA2-BEDGW-001-CB3030-19-24	37.75	SW6010	Cobalt	9.2	J	2.3	50	ug/L		730	N1
AA2-BEDGW-001	4/10/2002	9:40	PBOW-02-GW-IT-AA2-BEDGW-001-CB3030-19-24	37.75	SW6010	Iron	2020	J	36.1	100	ug/L		11000	N1
AA2-BEDGW-001	4/10/2002	9:40	PBOW-02-GW-IT-AA2-BEDGW-001-CB3030-19-24	37.75	SW6010	Magnesium	58000		21.8	5000	ug/L			N1
AA2-BEDGW-001	4/10/2002	9:40	PBOW-02-GW-IT-AA2-BEDGW-001-CB3030-19-24	37.75	SW6010	Manganese	228		1.5	15	ug/L		880	N1
AA2-BEDGW-001	4/10/2002	9:40	PBOW-02-GW-IT-AA2-BEDGW-001-CB3030-19-24	37.75	SW6010	Nickel	4	J	1.9	40	ug/L		730	N1
AA2-BEDGW-001	4/10/2002	9:40	PBOW-02-GW-IT-AA2-BEDGW-001-CB3030-19-24	37.75	SW6010	Potassium	28900		158	5000	ug/L			N1
AA2-BEDGW-001	4/10/2002	9:40	PBOW-02-GW-IT-AA2-BEDGW-001-CB3030-19-24	37.75	SW6010	Sodium	100000		357	5000	ug/L			N1
AA2-BEDGW-001	4/10/2002	9:40	PBOW-02-GW-IT-AA2-BEDGW-001-CB3030-19-24	37.75	SW6010	**Thallium**	**5.2**	B	4.8	10	ug/L		**2.4**	N1
AA2-BEDGW-001	4/10/2002	9:40	PBOW-02-GW-IT-AA2-BEDGW-001-CB3030-19-24	37.75	SW6010	Zinc	6.2	J	2.6	20	ug/L		11000	N1
AA2-BEDGW-001	4/10/2002	9:40	PBOW-02-GW-IT-AA2-BEDGW-001-CB3030-19-24	37.75	SW8270	2,4-Dimethylphenol	1.8	J	0.59	10	ug/L		730	N1
AA2-BEDGW-001	4/10/2002	9:40	PBOW-02-GW-IT-AA2-BEDGW-001-CB3030-19-24	37.75	SW8270	2-Methylnaphthalene	3.2	J	0.87	10	ug/L			N1
AA2-BEDGW-001	4/10/2002	9:40	PBOW-02-GW-IT-AA2-BEDGW-001-CB3030-19-24	37.75	SW8270	Naphthalene	2.5	J	0.67	10	ug/L		6.2	N1
AA2-BEDGW-001	4/10/2002	9:40	PBOW-02-GW-IT-AA2-BEDGW-001-CB3030-19-24	37.75	SW8270	bis(2-Ethylhexyl)phthalate	2	J	0.8	10	ug/L		4.8	N1
AA2-BEDGW-001	4/10/2002	9:40	PBOW-02-GW-IT-AA2-BEDGW-001-CB3030-19-24	37.75	SW8260	**Benzene**	**4.8**	J	1.2	5	ug/L	2.4	**0.35**	N1
AA2-BEDGW-001	4/10/2002	9:40	PBOW-02-GW-IT-AA2-BEDGW-001-CB3030-19-24	37.75	SW8260	Carbon Disulfide	0.84	J	0.5	5	ug/L		1000	N1
AA2-BEDGW-001	4/10/2002	9:40	PBOW-02-GW-IT-AA2-BEDGW-001-CB3030-19-24	37.75	SW8260	Ethylbenzene	13		0.95	5	ug/L		1300	N1

Table 4-8
Detected Analytes in Bedrock Groundwater (Prior Sampling Events)

Location	Date	Time Samp.	Sample ID	Depth	Test	Analyte	Result	Qual	DL	RL	Units	Bkg.	Region 9 Tap Water Std.	Samp. Type
AA2-BEDGW-001	4/10/2002	9:40	PBOW-02-GW-IT-AA2-BEDGW-001-CB3030-19-24	37.75	SW8260	Methylene Chloride	3.9	J	0.85	10	ug/L		4.3	N1
AA2-BEDGW-001	4/10/2002	9:40	PBOW-02-GW-IT-AA2-BEDGW-001-CB3030-19-24	37.75	SW8260	Toluene	2.2	J	1.2	5	ug/L		720	N1
AA2-BEDGW-001	4/10/2002	9:40	PBOW-02-GW-IT-AA2-BEDGW-001-CB3030-19-24	37.75	SW8260	Xylenes, Total	98		3	5	ug/L		210	N1
PB-BED-MW19	12/14/1994	0:00		38.7		1,3,5-Trinitrobenzene	0.8		0.45	0.45	ug/L		1100	N1
PB-BED-MW19	12/14/1994	0:00		38.7		2,4-Dinitrotoluene	0.3		0.1	0.1	ug/L		73	N1
PB-BED-MW19	12/14/1994	0:00		38.7		2,6-Dinitrotoluene	0.2		0.1	0.1	ug/L		36	N1
PB-BED-MW19	12/14/1994	0:00		38.7		**2-Nitrotoluene**	**1.2**		0.41	0.41	ug/L		**0.049**	N1
PB-BED-MW19	12/14/1994	0:00		38.7		3-Nitrotoluene	8.1		1.4	1.4	ug/L		120	N1
PB-BED-MW19	12/14/1994	0:00		38.7		Acetone	59		20	20	ug/L		5500	N1
PB-BED-MW19	12/14/1994	0:00		38.7		Antimony	8		2	2	ug/L		15	N1
PB-BED-MW19	12/14/1994	0:00		38.7		**Benzene**	**5**		1	1	ug/L	2.4	**0.35**	N1
PB-BED-MW19	12/14/1994	0:00		38.7		Carbon Disulfide	26		20	20	ug/L		1000	N1
PB-BED-MW19	12/14/1994	0:00		38.7		Copper	22		20	20	ug/L		1500	N1
PB-BED-MW19	12/14/1994	0:00		38.7		Ethylbenzene	3		1	1	ug/L		1300	N1
PB-BED-MW19	12/14/1994	0:00		38.7		Nitrogen, Nitrate (as N)	0.2		0.2	1	ug/L		10000	N1
PB-BED-MW19	12/14/1994	0:00		38.7		Thallium	0.6		0.5	0.5	ug/L		2.4	N1
PB-BED-MW19	12/14/1994	0:00		38.7		Toluene	5		1	1	ug/L		720	N1
PB-BED-MW19	12/14/1994	0:00		38.7		Xylenes, Total	26		1	1	ug/L		210	N1
PB-BED-MW19	12/14/1994	0:00		38.7		Zinc	24		20	20	ug/L		11000	N1
PB-BED-MW19	10/17/1996	13:30	PBOW-96-GW-WELLS-PB-BED-MW19-5220-(0-0)	38.7	SW8330	Nitrobenzene	0.4		0.2	0.2	ug/L		3.4	N1
PB-BED-MW19	10/17/1996	13:30	PBOW-96-GW-WELLS-PB-BED-MW19-5220-(0-0)	38.7	SW8330	Nitrobenzene	0.5		0.2	0.2	ug/L		3.4	N1
PB-BED-MW19	10/17/1996	13:30	PBOW-96-GW-WELLS-PB-BED-MW19-5220-(0-0)	38.7	SW6010	Aluminum	378		200	200	ug/L		36000	N1
PB-BED-MW19	10/17/1996	13:30	PBOW-96-GW-WELLS-PB-BED-MW19-5220-(0-0)	38.7	SW6010	Barium	1940		200	200	ug/L		2600	N1
PB-BED-MW19	10/17/1996	13:30	PBOW-96-GW-WELLS-PB-BED-MW19-5220-(0-0)	38.7	SW6010	Calcium	210000		5000	5000	ug/L			N1
PB-BED-MW19	10/17/1996	13:30	PBOW-96-GW-WELLS-PB-BED-MW19-5220-(0-0)	38.7	SW6010	Magnesium	107000		5000	5000	ug/L			N1
PB-BED-MW19	10/17/1996	13:30	PBOW-96-GW-WELLS-PB-BED-MW19-5220-(0-0)	38.7	SW6010	Manganese	16.5		15	15	ug/L		880	N1
PB-BED-MW19	10/17/1996	13:30	PBOW-96-GW-WELLS-PB-BED-MW19-5220-(0-0)	38.7	SW6010	Potassium	32300		5000	5000	ug/L			N1
PB-BED-MW19	10/17/1996	13:30	PBOW-96-GW-WELLS-PB-BED-MW19-5220-(0-0)	38.7	SW6010	Sodium	147000	J	5000	5000	ug/L			N1
PB-BED-MW19	10/17/1996	13:30	PBOW-96-GW-WELLS-PB-BED-MW19-5220-(0-0)	38.7	SW6010	Barium	2130		200	200	ug/L		2600	N1
PB-BED-MW19	10/17/1996	13:30	PBOW-96-GW-WELLS-PB-BED-MW19-5220-(0-0)	38.7	SW6010	Calcium	228000		5000	5000	ug/L			N1
PB-BED-MW19	10/17/1996	13:30	PBOW-96-GW-WELLS-PB-BED-MW19-5220-(0-0)	38.7	SW6010	Chromium	13.8		10	10	ug/L			N1
PB-BED-MW19	10/17/1996	13:30	PBOW-96-GW-WELLS-PB-BED-MW19-5220-(0-0)	38.7	SW6010	Iron	129		100	100	ug/L		11000	N1
PB-BED-MW19	10/17/1996	13:30	PBOW-96-GW-WELLS-PB-BED-MW19-5220-(0-0)	38.7	SW6010	Magnesium	117000	J	5000	5000	ug/L			N1
PB-BED-MW19	10/17/1996	13:30	PBOW-96-GW-WELLS-PB-BED-MW19-5220-(0-0)	38.7	SW6010	Manganese	20.5		15	15	ug/L		880	N1
PB-BED-MW19	10/17/1996	13:30	PBOW-96-GW-WELLS-PB-BED-MW19-5220-(0-0)	38.7	SW6010	Potassium	37400		5000	5000	ug/L			N1
PB-BED-MW19	10/17/1996	13:30	PBOW-96-GW-WELLS-PB-BED-MW19-5220-(0-0)	38.7	SW6010	Sodium	162000	J	5000	5000	ug/L			N1
PB-BED-MW19	10/17/1996	13:30	PBOW-96-GW-WELLS-PB-BED-MW19-5220-(0-0)	38.7	SW6010	Zinc	30	J	20	20	ug/L		11000	N1
PB-BED-MW19	10/17/1996	13:30	PBOW-96-GW-WELLS-PB-BED-MW19-5220-(0-0)	38.7	SW8270	2-Methylnaphthalene	3.5	J	3.5	10	ug/L			N1
PB-BED-MW19	10/17/1996	13:30	PBOW-96-GW-WELLS-PB-BED-MW19-5220-(0-0)	38.7	SW8270	Naphthalene	2.2	J	2.2	10	ug/L		6.2	N1
PB-BED-MW19	10/17/1996	13:30	PBOW-96-GW-WELLS-PB-BED-MW19-5220-(0-0)	38.7	SW8260	**Benzene**	**3.7**	J	3.7	5	ug/L	2.4	**0.35**	N1
PB-BED-MW19	10/17/1996	13:30	PBOW-96-GW-WELLS-PB-BED-MW19-5220-(0-0)	38.7	SW8260	Ethylbenzene	2.4	J	2.4	5	ug/L		1300	N1
PB-BED-MW19	10/17/1996	13:30	PBOW-96-GW-WELLS-PB-BED-MW19-5220-(0-0)	38.7	SW8260	Toluene	2	J	2	5	ug/L		720	N1

Table 4-8

Detected Analytes in Bedrock Groundwater (Prior Sampling Events)

Location	Date	Time Samp.	Sample ID	Depth	Test	Analyte	Result	Qual	DL	RL	Units	Bkg.	Region 9 Tap Water Std.	Samp. Type
PB-BED-MW19	10/17/1996	13:30	PBOW-96-GW-WELLS-PB-BED-MW19-5220-(0-0)	38.7	SW8260	Xylenes, Total	19		5	5	ug/L		210	N1
PB-BED-MW19	10/17/1996	13:30	PBOW-96-FD-WELLS-PB-BED-MW19-5221-(0-0)	38.7	SW8330	Nitrobenzene	0.4		0.2	0.2	ug/L		3.4	FD1
PB-BED-MW19	10/17/1996	13:30	PBOW-96-FD-WELLS-PB-BED-MW19-5221-(0-0)	38.7	SW8330	Nitrobenzene	0.44		0.2	0.2	ug/L		3.4	FD1
PB-BED-MW19	10/17/1996	13:30	PBOW-96-FD-WELLS-PB-BED-MW19-5221-(0-0)	38.7	SW6010	Barium	2110		200	200	ug/L		2600	FD1
PB-BED-MW19	10/17/1996	13:30	PBOW-96-FD-WELLS-PB-BED-MW19-5221-(0-0)	38.7	SW6010	Calcium	231000		5000	5000	ug/L			FD1
PB-BED-MW19	10/17/1996	13:30	PBOW-96-FD-WELLS-PB-BED-MW19-5221-(0-0)	38.7	SW6010	Magnesium	117000		5000	5000	ug/L			FD1
PB-BED-MW19	10/17/1996	13:30	PBOW-96-FD-WELLS-PB-BED-MW19-5221-(0-0)	38.7	SW6010	Manganese	17.2		15	15	ug/L		880	FD1
PB-BED-MW19	10/17/1996	13:30	PBOW-96-FD-WELLS-PB-BED-MW19-5221-(0-0)	38.7	SW6010	Potassium	33900		5000	5000	ug/L			FD1
PB-BED-MW19	10/17/1996	13:30	PBOW-96-FD-WELLS-PB-BED-MW19-5221-(0-0)	38.7	SW6010	Sodium	161000	J	5000	5000	ug/L			FD1
PB-BED-MW19	10/17/1996	13:30	PBOW-96-FD-WELLS-PB-BED-MW19-5221-(0-0)	38.7	SW6010	**Vanadium**	**51.8**		50	50	ug/L		**36**	FD1
PB-BED-MW19	10/17/1996	13:30	PBOW-96-FD-WELLS-PB-BED-MW19-5221-(0-0)	38.7	SW6010	Barium	2260		200	200	ug/L		2600	FD1
PB-BED-MW19	10/17/1996	13:30	PBOW-96-FD-WELLS-PB-BED-MW19-5221-(0-0)	38.7	SW6010	Calcium	245000		5000	5000	ug/L			FD1
PB-BED-MW19	10/17/1996	13:30	PBOW-96-FD-WELLS-PB-BED-MW19-5221-(0-0)	38.7	SW6010	Chromium	10.7		10	10	ug/L			FD1
PB-BED-MW19	10/17/1996	13:30	PBOW-96-FD-WELLS-PB-BED-MW19-5221-(0-0)	38.7	SW6010	Magnesium	125000	J	5000	5000	ug/L			FD1
PB-BED-MW19	10/17/1996	13:30	PBOW-96-FD-WELLS-PB-BED-MW19-5221-(0-0)	38.7	SW6010	Manganese	21.7		15	15	ug/L		880	FD1
PB-BED-MW19	10/17/1996	13:30	PBOW-96-FD-WELLS-PB-BED-MW19-5221-(0-0)	38.7	SW6010	Potassium	41600		5000	5000	ug/L			FD1
PB-BED-MW19	10/17/1996	13:30	PBOW-96-FD-WELLS-PB-BED-MW19-5221-(0-0)	38.7	SW6010	Sodium	173000	J	5000	5000	ug/L			FD1
PB-BED-MW19	10/17/1996	13:30	PBOW-96-FD-WELLS-PB-BED-MW19-5221-(0-0)	38.7	SW6010	Zinc	29.6	J	20	20	ug/L		11000	FD1
PB-BED-MW19	10/17/1996	13:30	PBOW-96-FD-WELLS-PB-BED-MW19-5221-(0-0)	38.7	SW8270	2-Methylnaphthalene	3.6	J	3.6	10	ug/L			FD1
PB-BED-MW19	10/17/1996	13:30	PBOW-96-FD-WELLS-PB-BED-MW19-5221-(0-0)	38.7	SW8270	Naphthalene	2.5	J	2.5	10	ug/L		6.2	FD1
PB-BED-MW19	10/17/1996	13:30	PBOW-96-FD-WELLS-PB-BED-MW19-5221-(0-0)	38.7	SW8260	**Benzene**	**3.1**	J	3.1	5	ug/L	2.4	**0.35**	FD1
PB-BED-MW19	10/17/1996	13:30	PBOW-96-FD-WELLS-PB-BED-MW19-5221-(0-0)	38.7	SW8260	Ethylbenzene	1.6	J	1.6	5	ug/L		1300	FD1
PB-BED-MW19	10/17/1996	13:30	PBOW-96-FD-WELLS-PB-BED-MW19-5221-(0-0)	38.7	SW8260	Toluene	1.5	J	1.5	5	ug/L		720	FD1
PB-BED-MW19	10/17/1996	13:30	PBOW-96-FD-WELLS-PB-BED-MW19-5221-(0-0)	38.7	SW8260	Xylenes, Total	14		5	5	ug/L		210	FD1
PB-BED-MW19	11/14/1997	13:20	PBOW97-PB-BED-MW19-GW-5950-REG	38.7	E310.1	Alkalinity, Total (as CaCO3)	310000		5	5	ug/L			N1
PB-BED-MW19	11/14/1997	13:20	PBOW97-PB-BED-MW19-GW-5950-REG	38.7	E325.2	Chloride (as Cl)	330000		10	10	ug/L			N1
PB-BED-MW19	11/14/1997	13:20	PBOW97-PB-BED-MW19-GW-5950-REG	38.7	E130.2	Hardness (as CACO3)	1700000		20	20	ug/L			N1
PB-BED-MW19	11/14/1997	13:20	PBOW97-PB-BED-MW19-GW-5950-REG	38.7	E375.4	Sulfate (as SO4)	14000		5	5	ug/L			N1
PB-BED-MW19	11/14/1997	13:20	PBOW97-PB-BED-MW19-GW-5950-REG	38.7	E160.2	Suspended Solids (residue, Non-filterable)	41000		4	4	ug/L			N1
PB-BED-MW19	11/14/1997	13:20	PBOW97-PB-BED-MW19-GW-5950-REG	38.7	E160.1	Total Dissolved Solids	1200000		10	10	ug/L			N1
PB-BED-MW19	11/14/1997	13:20	PBOW97-PB-BED-MW19-GW-5950-REG	38.7	SW9060	Total Organic Carbon	16		5	5	mg/L			N1
PB-BED-MW19	11/14/1997	13:20	PBOW97-PB-BED-MW19-GW-5950-REG	38.7	SW8330	1,3-Dinitrobenzene	0.22		0.2	0.2	ug/L		3.6	N1
PB-BED-MW19	11/14/1997	13:20	PBOW97-PB-BED-MW19-GW-5950-REG	38.7	SW8330	Nitrobenzene	0.32		0.2	0.2	ug/L		3.4	N1
PB-BED-MW19	11/14/1997	13:20	PBOW97-PB-BED-MW19-GW-5950-REG	38.7	SW6010	Barium	1520		200	200	ug/L		2600	N1
PB-BED-MW19	11/14/1997	13:20	PBOW97-PB-BED-MW19-GW-5950-REG	38.7	SW6010	Calcium	220000		5000	5000	ug/L			N1
PB-BED-MW19	11/14/1997	13:20	PBOW97-PB-BED-MW19-GW-5950-REG	38.7	SW6010	Magnesium	65100		5000	5000	ug/L			N1
PB-BED-MW19	11/14/1997	13:20	PBOW97-PB-BED-MW19-GW-5950-REG	38.7	SW6010	Potassium	46200		5000	5000	ug/L			N1
PB-BED-MW19	11/14/1997	13:20	PBOW97-PB-BED-MW19-GW-5950-REG	38.7	SW6010	Sodium	125000		5000	5000	ug/L			N1
PB-BED-MW19	11/14/1997	13:20	PBOW97-PB-BED-MW19-GW-5950-REG	38.7	SW6010	Zinc	57.4		20	20	ug/L		11000	N1
PB-BED-MW19	11/14/1997	13:20	PBOW97-PB-BED-MW19-GW-5950-REG	38.7	SW6010	Barium	1520		200	200	ug/L		2600	N1
PB-BED-MW19	11/14/1997	13:20	PBOW97-PB-BED-MW19-GW-5950-REG	38.7	SW6010	Calcium	255000	J	5000	5000	ug/L			N1
PB-BED-MW19	11/14/1997	13:20	PBOW97-PB-BED-MW19-GW-5950-REG	38.7	SW6010	Chromium	10		10	10	ug/L			N1

Table 4-8

Detected Analytes in Bedrock Groundwater (Prior Sampling Events)

Location	Date	Time Samp.	Sample ID	Depth	Test	Analyte	Result	Qual	DL	RL	Units	Bkg.	Region 9 Tap Water Std.	Samp. Type
PB-BED-MW19	11/14/1997	13:20	PBOW97-PB-BED-MW19-GW-5950-REG	38.7	SW6010	Copper	61.7		25	25	ug/L		1500	N1
PB-BED-MW19	11/14/1997	13:20	PBOW97-PB-BED-MW19-GW-5950-REG	38.7	SW6010	Iron	376	B	100	100	ug/L		11000	N1
PB-BED-MW19	11/14/1997	13:20	PBOW97-PB-BED-MW19-GW-5950-REG	38.7	SW6010	Lead	6.8		3	3	ug/L			N1
PB-BED-MW19	11/14/1997	13:20	PBOW97-PB-BED-MW19-GW-5950-REG	38.7	SW6010	Magnesium	57200		5000	5000	ug/L			N1
PB-BED-MW19	11/14/1997	13:20	PBOW97-PB-BED-MW19-GW-5950-REG	38.7	SW6010	Manganese	30.4		15	15	ug/L		880	N1
PB-BED-MW19	11/14/1997	13:20	PBOW97-PB-BED-MW19-GW-5950-REG	38.7	SW6010	Potassium	49500		5000	5000	ug/L			N1
PB-BED-MW19	11/14/1997	13:20	PBOW97-PB-BED-MW19-GW-5950-REG	38.7	SW6010	Sodium	120000		5000	5000	ug/L			N1
PB-BED-MW19	11/14/1997	13:20	PBOW97-PB-BED-MW19-GW-5950-REG	38.7	SW6010	Zinc	62.3		20	20	ug/L		11000	N1
PB-BED-MW19	11/14/1997	13:20	PBOW97-PB-BED-MW19-GW-5950-REG	38.7	SW8270	2-Methylnaphthalene	3.3	J	3.3	10	ug/L			N1
PB-BED-MW19	11/14/1997	13:20	PBOW97-PB-BED-MW19-GW-5950-REG	38.7	SW8270	Naphthalene	2.1	J	2.1	10	ug/L		6.2	N1
PB-BED-MW19	11/14/1997	13:20	PBOW97-PB-BED-MW19-GW-5950-REG	38.7	SW8270	Phenol	55		10	10	ug/L		11000	N1
PB-BED-MW19	11/14/1997	13:20	PBOW97-PB-BED-MW19-GW-5950-REG	38.7	SW8270	**bis(2-Ethylhexyl)phthalate**	**5.8**	J	5.8	10	ug/L		**4.8**	N1
PB-BED-MW19	11/14/1997	13:20	PBOW97-PB-BED-MW19-GW-5950-REG	38.7	SW8260	Acetone	68	J	10	10	ug/L		5500	N1
PB-BED-MW19	11/14/1997	13:20	PBOW97-PB-BED-MW19-GW-5950-REG	38.7	SW8260	**Benzene**	**11**		1	1	ug/L	2.4	**0.35**	N1
PB-BED-MW19	11/14/1997	13:20	PBOW97-PB-BED-MW19-GW-5950-REG	38.7	SW8260	Carbon Disulfide	2		1	1	ug/L		1000	N1
PB-BED-MW19	11/14/1997	13:20	PBOW97-PB-BED-MW19-GW-5950-REG	38.7	SW8260	Ethylbenzene	5.1		1	1	ug/L		1300	N1
PB-BED-MW19	11/14/1997	13:20	PBOW97-PB-BED-MW19-GW-5950-REG	38.7	SW8260	Toluene	8.9		1	1	ug/L		720	N1
PB-BED-MW19	11/14/1997	13:20	PBOW97-PB-BED-MW19-GW-5950-REG	38.7	SW8260	Xylenes, Total	38		1	1	ug/L		210	N1
PB-BED-MW19	5/16/1998	8:00	PBOW-98-GW-BEDMW19-5955	38.7	SW9010	Cyanide	0.016		0.01	0.01	mg/L		0.73	N1
PB-BED-MW19	5/16/1998	8:00	PBOW-98-GW-BEDMW19-5955	38.7	E310.1	Alkalinity, Total (as CaCO3)	750		5	5	mg/L			N1
PB-BED-MW19	5/16/1998	8:00	PBOW-98-GW-BEDMW19-5955	38.7	E325.2	Chloride (as Cl)	280		4	4	mg/L			N1
PB-BED-MW19	5/16/1998	8:00	PBOW-98-GW-BEDMW19-5955	38.7	E130.2	Hardness (as CACO3)	750		10	10	mg/L			N1
PB-BED-MW19	5/16/1998	8:00	PBOW-98-GW-BEDMW19-5955	38.7	E375.4	Sulfate (as SO4)	49		10	10	mg/L			N1
PB-BED-MW19	5/16/1998	8:00	PBOW-98-GW-BEDMW19-5955	38.7	E160.2	Suspended Solids (residue, Non-filterable)	5		4	4	mg/L			N1
PB-BED-MW19	5/16/1998	8:00	PBOW-98-GW-BEDMW19-5955	38.7	E160.1	Total Dissolved Solids	590		10	10	mg/L			N1
PB-BED-MW19	5/16/1998	8:00	PBOW-98-GW-BEDMW19-5955	38.7	SW9060	Total Organic Carbon	9		5	5	mg/L			N1
PB-BED-MW19	5/16/1998	8:00	PBOW-98-GW-BEDMW19-5955	38.7	SW8330	3-Nitrotoluene	0.62		0.2	0.2	ug/L		120	N1
PB-BED-MW19	5/16/1998	8:00	PBOW-98-GW-BEDMW19-5955	38.7	SW6010	Barium	1740		200	200	ug/L		2600	N1
PB-BED-MW19	5/16/1998	8:00	PBOW-98-GW-BEDMW19-5955	38.7	SW6010	Calcium	162000		5000	5000	ug/L			N1
PB-BED-MW19	5/16/1998	8:00	PBOW-98-GW-BEDMW19-5955	38.7	SW6010	Magnesium	77900		5000	5000	ug/L			N1
PB-BED-MW19	5/16/1998	8:00	PBOW-98-GW-BEDMW19-5955	38.7	SW6010	Manganese	16.3		15	15	ug/L		880	N1
PB-BED-MW19	5/16/1998	8:00	PBOW-98-GW-BEDMW19-5955	38.7	SW6010	Potassium	24800		5000	5000	ug/L			N1
PB-BED-MW19	5/16/1998	8:00	PBOW-98-GW-BEDMW19-5955	38.7	SW6010	Sodium	127000		5000	5000	ug/L			N1
PB-BED-MW19	5/16/1998	8:00	PBOW-98-GW-BEDMW19-5955	38.7	SW6010	Zinc	24.4	B	20	20	ug/L		11000	N1
PB-BED-MW19	5/16/1998	8:00	PBOW-98-GW-BEDMW19-5955	38.7	SW6010	Barium	1800		200	200	ug/L		2600	N1
PB-BED-MW19	5/16/1998	8:00	PBOW-98-GW-BEDMW19-5955	38.7	SW6010	Calcium	171000		5000	5000	ug/L			N1
PB-BED-MW19	5/16/1998	8:00	PBOW-98-GW-BEDMW19-5955	38.7	SW6010	Iron	141	J	100	100	ug/L		11000	N1
PB-BED-MW19	5/16/1998	8:00	PBOW-98-GW-BEDMW19-5955	38.7	SW6010	Magnesium	80000		5000	5000	ug/L			N1
PB-BED-MW19	5/16/1998	8:00	PBOW-98-GW-BEDMW19-5955	38.7	SW6010	Potassium	26000		5000	5000	ug/L			N1
PB-BED-MW19	5/16/1998	8:00	PBOW-98-GW-BEDMW19-5955	38.7	SW6010	Sodium	129000		5000	5000	ug/L			N1
PB-BED-MW19	5/16/1998	8:00	PBOW-98-GW-BEDMW19-5955	38.7	SW6010	Zinc	29.5	B	20	20	ug/L		11000	N1
PB-BED-MW19	5/16/1998	8:00	PBOW-98-GW-BEDMW19-5955	38.7	SW8270	2-Methylnaphthalene	1.5	J	1.5	10	ug/L			N1

Table 4-8

Detected Analytes in Bedrock Groundwater (Prior Sampling Events)

Location	Date	Time Samp.	Sample ID	Depth	Test	Analyte	Result	Qual	DL	RL	Units	Bkg.	Region 9 Tap Water Std.	Samp. Type
PB-BED-MW19	5/16/1998	8:00	PBOW-98-GW-BEDMW19-5955	38.7	SW8270	**bis(2-Ethylhexyl)phthalate**	**24**	B	10	10	ug/L		**4.8**	N1
PB-BED-MW19	5/16/1998	8:00	PBOW-98-GW-BEDMW19-5955	38.7	SW8260	Benzene	1.9	J	1.9	5	ug/L	2.4	0.35	N1
PB-BED-MW19	5/16/1998	8:00	PBOW-98-GW-BEDMW19-5955	38.7	SW8260	Carbon Disulfide	6.9		5	5	ug/L		1000	N1
PB-BED-MW19	5/16/1998	8:00	PBOW-98-GW-BEDMW19-5955	38.7	SW8260	Ethylbenzene	1.2	J	1.2	5	ug/L		1300	N1
PB-BED-MW19	5/16/1998	8:00	PBOW-98-GW-BEDMW19-5955	38.7	SW8260	Methylene Chloride	2.3	B	2.3	5	ug/L		4.3	N1
PB-BED-MW19	5/16/1998	8:00	PBOW-98-GW-BEDMW19-5955	38.7	SW8260	Toluene	1.5	B	1.5	5	ug/L		720	N1
PB-BED-MW19	5/16/1998	8:00	PBOW-98-GW-BEDMW19-5955	38.7	SW8260	Xylenes, Total	10		5	5	ug/L		210	N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3045-FS	38.7	SW8330	2-Amino-4,6-DNT	0.14	J	0.03	0.25	ug/L			N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3045-FS	38.7	SW6010	Aluminum	0.061	B	0.016	0.2	mg/L		36	N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3045-FS	38.7	SW6010	Antimony	0.0022	B	0.0016	0.02	mg/L		0.015	N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3045-FS	38.7	SW6010	Arsenic	0.0032	J	0.0024	0.01	mg/L	0.0074	0.000045	N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3045-FS	38.7	SW6010	Barium	0.95		0.00031	0.1	mg/L		2.6	N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3045-FS	38.7	SW6010	Barium	0.98	J	0.00031	0.1	mg/L		2.6	N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3045-FS	38.7	SW6010	Calcium	220		0.004	1	mg/L			N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3045-FS	38.7	SW6010	Calcium	210	J	0.004	1	mg/L			N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3045-FS	38.7	SW6010	Chromium	0.0011	B	0.00031	0.01	mg/L			N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3045-FS	38.7	SW6010	Chromium	0.0004	B	0.00031	0.01	mg/L			N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3045-FS	38.7	SW6010	Cobalt	0.0011	J	0.00017	0.01	mg/L		0.73	N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3045-FS	38.7	SW6010	Cobalt	0.00039	B	0.00017	0.01	mg/L		0.73	N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3045-FS	38.7	SW6010	Copper	0.036		0.00072	0.01	mg/L		1.5	N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3045-FS	38.7	SW6010	Iron	0.14		0.0076	0.1	mg/L		11	N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3045-FS	38.7	SW6010	Iron	0.034	B	0.0076	0.1	mg/L		11	N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3045-FS	38.7	SW6010	Magnesium	58		0.0047	1	mg/L			N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3045-FS	38.7	SW6010	Magnesium	78	J	0.0047	1	mg/L			N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3045-FS	38.7	SW6010	Manganese	0.0021	J	0.00011	0.01	mg/L		0.88	N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3045-FS	38.7	SW6010	Manganese	0.0029	J	0.00011	0.01	mg/L		0.88	N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3045-FS	38.7	SW6010	Nickel	0.012	J	0.00066	0.02	mg/L		0.73	N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3045-FS	38.7	SW6010	Nickel	0.0074	J	0.00066	0.02	mg/L		0.73	N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3045-FS	38.7	SW6010	Potassium	42		0.069	1	mg/L			N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3045-FS	38.7	SW6010	Potassium	43	J	0.069	1	mg/L			N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3045-FS	38.7	SW6010	Sodium	64		0.054	1	mg/L			N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3045-FS	38.7	SW6010	Sodium	84	J	0.054	1	mg/L			N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3045-FS	38.7	SW6010	**Thallium**	**0.0048**	J	0.0028	0.01	mg/L		**0.0024**	N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3045-FS	38.7	SW6010	Vanadium	0.00065	J	0.00047	0.01	mg/L		0.036	N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3045-FS	38.7	SW6010	Zinc	0.12		0.00085	0.02	mg/L		11	N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3045-FS	38.7	SW8270	2-Methylnaphthalene	11	J	1.5	11	ug/L			N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3045-FS	38.7	SW8270	Benzo(g,h,i)perylene	2.3	J	1.2	11	ug/L			N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3045-FS	38.7	SW8270	Benzoic acid	15	J	6.7	54	ug/L		150000	N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3045-FS	38.7	SW8270	**Naphthalene**	**8.4**	J	1.6	11	ug/L		**6.2**	N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3045-FS	38.7	SW8270	bis(2-Ethylhexyl)phthalate	2.9	J	2.3	11	ug/L		4.8	N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3045-FS	38.7	SW8260	**1,2,4-Trimethylbenzene**	**71**		0.87	5	ug/L		**12**	N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3045-FS	38.7	SW8260	**1,3,5-Trimethylbenzene (Mesitylene)**	**17**		0.92	5	ug/L		**12**	N1

Table 4-8

Detected Analytes in Bedrock Groundwater (Prior Sampling Events)

Location	Date	Time Samp.	Sample ID	Depth	Test	Analyte	Result	Qual	DL	RL	Units	Bkg.	Region 9 Tap Water Std.	Samp. Type
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3045-FS	38.7	SW8260	2-Butanone (Methyl ethyl ketone)	11	J	5.2	20	ug/L		7000	N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3045-FS	38.7	SW8260	Acetone	78	B	7.7	20	ug/L		5500	N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3045-FS	38.7	SW8260	**Benzene**	**49**		0.44	5	ug/L	2.4	**0.35**	N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3045-FS	38.7	SW8260	Carbon Disulfide	4.9	J	0.85	5	ug/L		1000	N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3045-FS	38.7	SW8260	Cymene (4-isopropyltoluene)	1.7	J	0.85	5	ug/L			N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3045-FS	38.7	SW8260	Ethylbenzene	16		0.57	5	ug/L		1300	N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3045-FS	38.7	SW8260	Isopropylbenzene (Cumene)	5.5		0.84	5	ug/L		660	N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3045-FS	38.7	SW8260	Methylene Chloride	2	B	0.6	5	ug/L		4.3	N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3045-FS	38.7	SW8260	**Naphthalene**	**17**		0.86	5	ug/L		**6.2**	N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3045-FS	38.7	SW8260	Toluene	21		0.47	5	ug/L		720	N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3045-FS	38.7	SW8260	m,p-Xylene (sum of isomers)	120		1.4	5	ug/L			N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3045-FS	38.7	SW8260	n-Butylbenzene	2	J	0.88	5	ug/L		240	N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3045-FS	38.7	SW8260	n-Propylbenzene	6.8		0.84	5	ug/L		240	N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3045-FS	38.7	SW8260	o-Xylene (1,2-Dimethylbenzene)	41		0.67	5	ug/L			N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3045-FS	38.7	SW8260	sec-Butylbenzene	1.7	J	0.75	5	ug/L			N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3025-REG	38.7	E310.1	Alkalinity, Total (as CaCO3)	707	J	0.56	5	mg/L			N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3025-REG	38.7	E325.2	Chloride (as Cl)	248	J	4	10	mg/L			N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3025-REG	38.7	E130.2	Hardness (as CACO3)	905		6.5	25	mg/L			N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3025-REG	38.7	E375.4	Sulfate (as SO4)	27.7	J	0.28	5	mg/L			N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3025-REG	38.7	E160.2	Suspended Solids (residue, Non-filterable)	199		2.6	4	mg/L			N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3025-REG	38.7	E160.1	Total Dissolved Solids	1110		8.3	10	mg/L			N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3025-REG	38.7	SW9060	Total Organic Carbon	8.6		0.37	1	mg/L			N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3025-REG	38.7	E180.1	Turbidity	662	J	12.5	12.5	NTU			N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3025-REG	38.7	SW6010	Aluminum	86	B	22	200	ug/L		36000	N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3025-REG	38.7	SW6010	Barium	1080		1	200	ug/L		2600	N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3025-REG	38.7	SW6010	Calcium	202000		37.7	5000	ug/L			N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3025-REG	38.7	SW6010	Magnesium	81000		21.8	5000	ug/L			N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3025-REG	38.7	SW6010	Manganese	4	J	1.5	15	ug/L		880	N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3025-REG	38.7	SW6010	Nickel	7.9	J	1.9	40	ug/L		730	N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3025-REG	38.7	SW6010	Potassium	42100		158	5000	ug/L			N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3025-REG	38.7	SW6010	Sodium	94900		357	5000	ug/L			N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3025-REG	38.7	SW6010	Zinc	5.2	J	2.6	20	ug/L		11000	N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3025-REG	38.7	SW6010	Aluminum	94.8	B	22	200	ug/L		36000	N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3025-REG	38.7	SW6010	Barium	1060		1	200	ug/L		2600	N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3025-REG	38.7	SW6010	Calcium	221000		37.7	5000	ug/L			N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3025-REG	38.7	SW6010	Chromium	1.2	J	1.2	10	ug/L			N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3025-REG	38.7	SW6010	Copper	99		1.9	25	ug/L		1500	N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3025-REG	38.7	SW6010	Iron	149		36.1	100	ug/L		11000	N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3025-REG	38.7	SW6010	Magnesium	66200		21.8	5000	ug/L			N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3025-REG	38.7	SW6010	Manganese	2.2	J	1.5	15	ug/L		880	N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3025-REG	38.7	SW6010	Nickel	13.8	J	1.9	40	ug/L		730	N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3025-REG	38.7	SW6010	Potassium	43800		158	5000	ug/L			N1

Table 4-8

Detected Analytes in Bedrock Groundwater (Prior Sampling Events)

Location	Date	Time Samp.	Sample ID	Depth	Test	Analyte	Result	Qual	DL	RL	Units	Bkg.	Region 9 Tap Water Std.	Samp. Type
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3025-REG	38.7	SW6010	Sodium	75400		357	5000	ug/L			N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3025-REG	38.7	SW6010	Zinc	144		2.6	20	ug/L		11000	N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3025-REG	38.7	SW8270	2-Methylnaphthalene	12		0.87	10	ug/L			N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3025-REG	38.7	SW8270	**Naphthalene**	**8.6**	J	0.67	10	ug/L		**6.2**	N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3025-REG	38.7	SW8270	Phenanthrene	0.82	J	0.72	10	ug/L			N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3025-REG	38.7	SW8270	Phenol	1.2	J	0.82	10	ug/L		11000	N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3025-REG	38.7	SW8260	Acetone	66	B	16	330	ug/L		5500	N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3025-REG	38.7	SW8260	**Benzene**	**46**		8	33	ug/L	2.4	**0.35**	N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3025-REG	38.7	SW8260	Bromomethane	7.9	J	6	67	ug/L		8.7	N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3025-REG	38.7	SW8260	Ethylbenzene	17	J	6.3	33	ug/L		1300	N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3025-REG	38.7	SW8260	**Methylene Chloride**	**30**	J	5.7	67	ug/L		**4.3**	N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3025-REG	38.7	SW8260	Toluene	21	J	8.3	33	ug/L		720	N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3025-REG	38.7	SW8260	Xylenes, Total	180		20	33	ug/L		210	N1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3046-FD	38.7	SW6010	Aluminum	76.7	B	22	200	ug/L		36000	FD1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3046-FD	38.7	SW6010	Barium	1090	J	1	200	ug/L		2600	FD1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3046-FD	38.7	SW6010	Calcium	200000	J	37.7	5000	ug/L			FD1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3046-FD	38.7	SW6010	Magnesium	81500	J	21.8	5000	ug/L			FD1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3046-FD	38.7	SW6010	Manganese	3.5	J	1.5	15	ug/L		880	FD1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3046-FD	38.7	SW6010	Nickel	8.7	J	1.9	40	ug/L		730	FD1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3046-FD	38.7	SW6010	Potassium	41800	J	158	5000	ug/L			FD1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3046-FD	38.7	SW6010	Sodium	95600	J	357	5000	ug/L			FD1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3046-FD	38.7	SW6010	Aluminum	89	B	22	200	ug/L		36000	FD1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3046-FD	38.7	SW6010	Barium	982		1	200	ug/L		2600	FD1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3046-FD	38.7	SW6010	Calcium	207000		37.7	5000	ug/L			FD1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3046-FD	38.7	SW6010	Copper	89.9		1.9	25	ug/L		1500	FD1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3046-FD	38.7	SW6010	Iron	143		36.1	100	ug/L		11000	FD1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3046-FD	38.7	SW6010	Magnesium	65000		21.8	5000	ug/L			FD1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3046-FD	38.7	SW6010	Manganese	1.9	J	1.5	15	ug/L		880	FD1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3046-FD	38.7	SW6010	Nickel	12.7	J	1.9	40	ug/L		730	FD1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3046-FD	38.7	SW6010	Potassium	41400		158	5000	ug/L			FD1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3046-FD	38.7	SW6010	Sodium	71700		357	5000	ug/L			FD1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3046-FD	38.7	SW6010	Zinc	135		2.6	20	ug/L		11000	FD1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3046-FD	38.7	SW8270	2-Methylnaphthalene	12		0.87	10	ug/L			FD1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3046-FD	38.7	SW8270	**Naphthalene**	**8.9**	J	0.67	10	ug/L		**6.2**	FD1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3046-FD	38.7	SW8270	Phenanthrene	0.89	J	0.72	10	ug/L			FD1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3046-FD	38.7	SW8270	Phenol	1.3	J	0.82	10	ug/L		11000	FD1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3046-FD	38.7	SW8270	bis(2-Ethylhexyl)phthalate	1.6	J	0.8	10	ug/L		4.8	FD1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3046-FD	38.7	SW8260	Acetone	59	B	9.4	200	ug/L		5500	FD1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3046-FD	38.7	SW8260	**Benzene**	**54**		4.8	20	ug/L	2.4	**0.35**	FD1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3046-FD	38.7	SW8260	Carbon Disulfide	2.1	J	2	20	ug/L		1000	FD1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3046-FD	38.7	SW8260	Ethylbenzene	19	J	3.8	20	ug/L		1300	FD1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3046-FD	38.7	SW8260	**Methylene Chloride**	**7.4**	J	3.4	40	ug/L		**4.3**	FD1

...le 4-8
Detected Analytes in Bedrock Groundwater (Prior Sampling Events)

Location	Date	Time Samp.	Sample ID	Depth	Test	Analyte	Result	Qual	DL	RL	Units	Bkg.	Region 9 Tap Water Std.	Samp. Type
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3046-FD	38.7	SW8260	Toluene	24		5	20	ug/L		720	FD1
PB-BED-MW19	10/4/2001	13:15	PB-BED-MW19-GW-BD3046-FD	38.7	SW8260	Xylenes, Total	210		12	20	ug/L		210	FD1
PB-BED-MW19	4/4/2002	15:20	PBOW-02-GW-PB-BED-MW19-CB3013-34-34	38.7	E310.1	Alkalinity, Total (as CaCO3)	302		0.56	5	mg/L			N1
PB-BED-MW19	4/4/2002	15:20	PBOW-02-GW-PB-BED-MW19-CB3013-34-34	38.7	E325.2	Chloride (as Cl)	373	J	4	10	mg/L			N1
PB-BED-MW19	4/4/2002	15:20	PBOW-02-GW-PB-BED-MW19-CB3013-34-34	38.7	E130.2	Hardness (as CACO3)	424		2.6	10	mg/L			N1
PB-BED-MW19	4/4/2002	15:20	PBOW-02-GW-PB-BED-MW19-CB3013-34-34	38.7	E375.4	Sulfate (as SO4)	32.2		0.57	10	mg/L			N1
PB-BED-MW19	4/4/2002	15:20	PBOW-02-GW-PB-BED-MW19-CB3013-34-34	38.7	E160.2	Suspended Solids (residue, Non-filterable)	44		2.6	4	mg/L			N1
PB-BED-MW19	4/4/2002	15:20	PBOW-02-GW-PB-BED-MW19-CB3013-34-34	38.7	E160.1	Total Dissolved Solids	651		8.3	10	mg/L			N1
PB-BED-MW19	4/4/2002	15:20	PBOW-02-GW-PB-BED-MW19-CB3013-34-34	38.7	SW9060	Total Organic Carbon	5.9		0.37	1	mg/L			N1
PB-BED-MW19	4/4/2002	15:20	PBOW-02-GW-PB-BED-MW19-CB3013-34-34	38.7	E180.1	Turbidity	164		2.5	2.5	NTU			N1
PB-BED-MW19	4/4/2002	15:20	PBOW-02-GW-PB-BED-MW19-CB3013-34-34	38.7	SW8330	RDX	0.17	J	0.13	0.5	ug/L		0.61	N1
PB-BED-MW19	4/4/2002	15:20	PBOW-02-GW-PB-BED-MW19-CB3013-34-34	38.7	SW6010	Aluminum	66.6	B	22	200	ug/L		36000	N1
PB-BED-MW19	4/4/2002	15:20	PBOW-02-GW-PB-BED-MW19-CB3013-34-34	38.7	SW6010	Barium	852		1	200	ug/L		2600	N1
PB-BED-MW19	4/4/2002	15:20	PBOW-02-GW-PB-BED-MW19-CB3013-34-34	38.7	SW6010	Calcium	109000		37.7	5000	ug/L			N1
PB-BED-MW19	4/4/2002	15:20	PBOW-02-GW-PB-BED-MW19-CB3013-34-34	38.7	SW6010	Magnesium	44000		21.8	5000	ug/L			N1
PB-BED-MW19	4/4/2002	15:20	PBOW-02-GW-PB-BED-MW19-CB3013-34-34	38.7	SW6010	Manganese	2.5	J	1.5	15	ug/L		880	N1
PB-BED-MW19	4/4/2002	15:20	PBOW-02-GW-PB-BED-MW19-CB3013-34-34	38.7	SW6010	Nickel	4.3	J	1.9	40	ug/L		730	N1
PB-BED-MW19	4/4/2002	15:20	PBOW-02-GW-PB-BED-MW19-CB3013-34-34	38.7	SW6010	Potassium	42900	J	158	5000	ug/L			N1
PB-BED-MW19	4/4/2002	15:20	PBOW-02-GW-PB-BED-MW19-CB3013-34-34	38.7	SW6010	Sodium	92900		357	5000	ug/L			N1
PB-BED-MW19	4/4/2002	15:20	PBOW-02-GW-PB-BED-MW19-CB3013-34-34	38.7	SW6010	Zinc	3.1	J	2.6	20	ug/L		11000	N1
PB-BED-MW19	4/4/2002	15:20	PBOW-02-GW-PB-BED-MW19-CB3013-34-34	38.7	SW6010	Aluminum	56.2	J	22	200	ug/L		36000	N1
PB-BED-MW19	4/4/2002	15:20	PBOW-02-GW-PB-BED-MW19-CB3013-34-34	38.7	SW6010	Barium	892		1	200	ug/L		2600	N1
PB-BED-MW19	4/4/2002	15:20	PBOW-02-GW-PB-BED-MW19-CB3013-34-34	38.7	SW6010	Calcium	121000		37.7	5000	ug/L			N1
PB-BED-MW19	4/4/2002	15:20	PBOW-02-GW-PB-BED-MW19-CB3013-34-34	38.7	SW6010	Copper	15.6	J	1.9	25	ug/L		1500	N1
PB-BED-MW19	4/4/2002	15:20	PBOW-02-GW-PB-BED-MW19-CB3013-34-34	38.7	SW6010	Magnesium	41900		21.8	5000	ug/L			N1
PB-BED-MW19	4/4/2002	15:20	PBOW-02-GW-PB-BED-MW19-CB3013-34-34	38.7	SW6010	Manganese	2.2	J	1.5	15	ug/L		880	N1
PB-BED-MW19	4/4/2002	15:20	PBOW-02-GW-PB-BED-MW19-CB3013-34-34	38.7	SW6010	Nickel	3.5	J	1.9	40	ug/L		730	N1
PB-BED-MW19	4/4/2002	15:20	PBOW-02-GW-PB-BED-MW19-CB3013-34-34	38.7	SW6010	Potassium	41500	J	158	5000	ug/L			N1
PB-BED-MW19	4/4/2002	15:20	PBOW-02-GW-PB-BED-MW19-CB3013-34-34	38.7	SW6010	Sodium	88400		357	5000	ug/L			N1
PB-BED-MW19	4/4/2002	15:20	PBOW-02-GW-PB-BED-MW19-CB3013-34-34	38.7	SW6010	Zinc	31.3		2.6	20	ug/L		11000	N1
PB-BED-MW19	4/4/2002	15:20	PBOW-02-GW-PB-BED-MW19-CB3013-34-34	38.7	SW8270	2-Methylnaphthalene	10		0.87	10	ug/L			N1
PB-BED-MW19	4/4/2002	15:20	PBOW-02-GW-PB-BED-MW19-CB3013-34-34	38.7	SW8270	Naphthalene	6.1	J	0.67	10	ug/L		6.2	N1
PB-BED-MW19	4/4/2002	15:20	PBOW-02-GW-PB-BED-MW19-CB3013-34-34	38.7	SW8270	Phenanthrene	0.74	J	0.72	10	ug/L			N1
PB-BED-MW19	4/4/2002	15:20	PBOW-02-GW-PB-BED-MW19-CB3013-34-34	38.7	SW8270	**bis(2-Ethylhexyl)phthalate**	**9.7**	J	0.8	10	ug/L		**4.8**	N1
PB-BED-MW19	4/4/2002	15:20	PBOW-02-GW-PB-BED-MW19-CB3013-34-34	38.7	SW8260	**Benzene**	**42**	J	12	50	ug/L	2.4	**0.35**	N1
PB-BED-MW19	4/4/2002	15:20	PBOW-02-GW-PB-BED-MW19-CB3013-34-34	38.7	SW8260	Ethylbenzene	16	J	9.5	50	ug/L		1300	N1
PB-BED-MW19	4/4/2002	15:20	PBOW-02-GW-PB-BED-MW19-CB3013-34-34	38.7	SW8260	**Methylene Chloride**	**9.7**	J	8.5	100	ug/L		**4.3**	N1
PB-BED-MW19	4/4/2002	15:20	PBOW-02-GW-PB-BED-MW19-CB3013-34-34	38.7	SW8260	Toluene	18	J	12	50	ug/L		720	N1
PB-BED-MW19	4/4/2002	15:20	PBOW-02-GW-PB-BED-MW19-CB3013-34-34	38.7	SW8260	Xylenes, Total	170		30	50	ug/L		210	N1
PB-BED-MW19	5/5/2004	9:30	PB-BED-MW19-GW-DF3001-REG	38.7	E310.1	Alkalinity, Total (as CaCO3)	1050	J	1.5	5	mg/L			N1
PB-BED-MW19	5/5/2004	9:30	PB-BED-MW19-GW-DF3001-REG	38.7	E325.2	Chloride (as Cl)	229		54	100	mg/L			N1
PB-BED-MW19	5/5/2004	9:30	PB-BED-MW19-GW-DF3001-REG	38.7	E130.2	Hardness (as CACO3)	662		5	25	mg/L			N1

Table 4-8

Detected Analytes in Bedrock Groundwater (Prior Sampling Events)

Location	Date	Time Samp.	Sample ID	Depth	Test	Analyte	Result	Qual	DL	RL	Units	Bkg.	Region 9 Tap Water Std.	Samp. Type
PB-BED-MW19	5/5/2004	9:30	PB-BED-MW19-GW-DF3001-REG	38.7	E375.4	Sulfate (as SO4)	21		0.5	5	mg/L			N1
PB-BED-MW19	5/5/2004	9:30	PB-BED-MW19-GW-DF3001-REG	38.7	E160.2	Suspended Solids (residue, Non-filterable)	32		2.8	4	mg/L			N1
PB-BED-MW19	5/5/2004	9:30	PB-BED-MW19-GW-DF3001-REG	38.7	E160.1	Total Dissolved Solids	887		4.9	10	mg/L			N1
PB-BED-MW19	5/5/2004	9:30	PB-BED-MW19-GW-DF3001-REG	38.7	SW9060	Total Organic Carbon	5.6		0.17	1	mg/L			N1
PB-BED-MW19	5/5/2004	9:30	PB-BED-MW19-GW-DF3001-REG	38.7	E180.1	Turbidity	220		5	5	NTU			N1
PB-BED-MW19	5/5/2004	9:30	PB-BED-MW19-GW-DF3001-REG	38.7	SW6010	Aluminum	45.2	J	41.3	200	ug/L		36000	N1
PB-BED-MW19	5/5/2004	9:30	PB-BED-MW19-GW-DF3001-REG	38.7	SW6010	Barium	1050		0.96	200	ug/L		2600	N1
PB-BED-MW19	5/5/2004	9:30	PB-BED-MW19-GW-DF3001-REG	38.7	SW6010	Calcium	170000		58.2	5000	ug/L			N1
PB-BED-MW19	5/5/2004	9:30	PB-BED-MW19-GW-DF3001-REG	38.7	SW6010	Magnesium	44800		37	5000	ug/L			N1
PB-BED-MW19	5/5/2004	9:30	PB-BED-MW19-GW-DF3001-REG	38.7	SW6010	Manganese	2.2	J	1.6	15	ug/L		880	N1
PB-BED-MW19	5/5/2004	9:30	PB-BED-MW19-GW-DF3001-REG	38.7	SW6010	Nickel	7.9	J	2.8	40	ug/L		730	N1
PB-BED-MW19	5/5/2004	9:30	PB-BED-MW19-GW-DF3001-REG	38.7	SW6010	Potassium	36500	J	66.8	5000	ug/L			N1
PB-BED-MW19	5/5/2004	9:30	PB-BED-MW19-GW-DF3001-REG	38.7	SW6010	Selenium	2.6	B	1.5	5	ug/L		180	N1
PB-BED-MW19	5/5/2004	9:30	PB-BED-MW19-GW-DF3001-REG	38.7	SW6010	Sodium	75400	J	464	5000	ug/L			N1
PB-BED-MW19	5/5/2004	9:30	PB-BED-MW19-GW-DF3001-REG	38.7	SW6010	**Thallium**	**4.4**	B	2.4	10	ug/L		**2.4**	N1
PB-BED-MW19	5/5/2004	9:30	PB-BED-MW19-GW-DF3001-REG	38.7	SW6010	Aluminum	61.7	J	41.3	200	ug/L		36000	N1
PB-BED-MW19	5/5/2004	9:30	PB-BED-MW19-GW-DF3001-REG	38.7	SW6010	Barium	1120		0.96	200	ug/L		2600	N1
PB-BED-MW19	5/5/2004	9:30	PB-BED-MW19-GW-DF3001-REG	38.7	SW6010	Calcium	184000		58.2	5000	ug/L			N1
PB-BED-MW19	5/5/2004	9:30	PB-BED-MW19-GW-DF3001-REG	38.7	SW6010	Copper	52.2		3	25	ug/L		1500	N1
PB-BED-MW19	5/5/2004	9:30	PB-BED-MW19-GW-DF3001-REG	38.7	SW6010	Magnesium	44600		37	5000	ug/L			N1
PB-BED-MW19	5/5/2004	9:30	PB-BED-MW19-GW-DF3001-REG	38.7	SW6010	Nickel	9.2	J	2.8	40	ug/L		730	N1
PB-BED-MW19	5/5/2004	9:30	PB-BED-MW19-GW-DF3001-REG	38.7	SW6010	Potassium	36500	J	66.8	5000	ug/L			N1
PB-BED-MW19	5/5/2004	9:30	PB-BED-MW19-GW-DF3001-REG	38.7	SW6010	Sodium	74300	J	464	5000	ug/L			N1
PB-BED-MW19	5/5/2004	9:30	PB-BED-MW19-GW-DF3001-REG	38.7	SW6010	**Thallium**	**5.1**	B	2.4	10	ug/L		**2.4**	N1
PB-BED-MW19	5/5/2004	9:30	PB-BED-MW19-GW-DF3001-REG	38.7	SW6010	Zinc	65.9		2.4	20	ug/L		11000	N1
PB-BED-MW19	5/5/2004	9:30	PB-BED-MW19-GW-DF3001-REG	38.7	SW8270	2-Methylnaphthalene	5.2	J	1.6	10	ug/L			N1
PB-BED-MW19	5/5/2004	9:30	PB-BED-MW19-GW-DF3001-REG	38.7	SW8270	Naphthalene	3.7	J	1.7	10	ug/L		6.2	N1
PB-BED-MW19	5/5/2004	9:30	PB-BED-MW19-GW-DF3001-REG	38.7	SW8260	Acetone	220	B	28	200	ug/L		5500	N1
PB-BED-MW19	5/5/2004	9:30	PB-BED-MW19-GW-DF3001-REG	38.7	SW8260	**Benzene**	**18**	J	2	20	ug/L	2.4	**0.35**	N1
PB-BED-MW19	5/5/2004	9:30	PB-BED-MW19-GW-DF3001-REG	38.7	SW8260	Carbon Disulfide	3.2	J	2	20	ug/L		1000	N1
PB-BED-MW19	5/5/2004	9:30	PB-BED-MW19-GW-DF3001-REG	38.7	SW8260	Chlorobenzene	2.2	J	2	20	ug/L		110	N1
PB-BED-MW19	5/5/2004	9:30	PB-BED-MW19-GW-DF3001-REG	38.7	SW8260	Ethylbenzene	6.8	J	2	20	ug/L		1300	N1
PB-BED-MW19	5/5/2004	9:30	PB-BED-MW19-GW-DF3001-REG	38.7	SW8260	**Methylene Chloride**	**7.3**	J	4.6	40	ug/L		**4.3**	N1
PB-BED-MW19	5/5/2004	9:30	PB-BED-MW19-GW-DF3001-REG	38.7	SW8260	Toluene	8	J	2	20	ug/L		720	N1
PB-BED-MW19	5/5/2004	9:30	PB-BED-MW19-GW-DF3001-REG	38.7	SW8260	Xylenes, Total	66		6	20	ug/L		210	N1
Acid Area 3														
AA3-BEDGW-001	11/19/1997	7:50	PBOW97-IT-AA3-BEDGW-001-GW-5470-REG	47.75	E310.1	Alkalinity, Total (as CaCO3)	670000		5	5	ug/L			N1
AA3-BEDGW-001	11/19/1997	7:50	PBOW97-IT-AA3-BEDGW-001-GW-5470-REG	47.75	E325.2	Chloride (as Cl)	790000		50	50	ug/L			N1
AA3-BEDGW-001	11/19/1997	7:50	PBOW97-IT-AA3-BEDGW-001-GW-5470-REG	47.75	E130.2	Hardness (as CACO3)	13000000		1000	1000	ug/L			N1
AA3-BEDGW-001	11/19/1997	7:50	PBOW97-IT-AA3-BEDGW-001-GW-5470-REG	47.75	E160.2	Suspended Solids (residue, Non-filterable)	38000		4	4	ug/L			N1
AA3-BEDGW-001	11/19/1997	7:50	PBOW97-IT-AA3-BEDGW-001-GW-5470-REG	47.75	E160.1	Total Dissolved Solids	1900000		20	20	ug/L			N1
AA3-BEDGW-001	11/19/1997	7:50	PBOW97-IT-AA3-BEDGW-001-GW-5470-REG	47.75	SW9060	Total Organic Carbon	5.3	J	5	5	mg/L			N1

..ble 4-8
Detected Analytes in Bedrock Groundwater (Prior Sampling Events)

Location	Date	Time Samp.	Sample ID	Depth	Test	Analyte	Result	Qual	DL	RL	Units	Bkg.	Region 9 Tap Water Std.	Samp. Type
AA3-BEDGW-001	11/19/1997	7:50	PBOW97-IT-AA3-BEDGW-001-GW-5470-REG	47.75	SW6010	Calcium	160000		5000	5000	ug/L			N1
AA3-BEDGW-001	11/19/1997	7:50	PBOW97-IT-AA3-BEDGW-001-GW-5470-REG	47.75	SW6010	Magnesium	96300		5000	5000	ug/L			N1
AA3-BEDGW-001	11/19/1997	7:50	PBOW97-IT-AA3-BEDGW-001-GW-5470-REG	47.75	SW6010	Manganese	57.6		15	15	ug/L		880	N1
AA3-BEDGW-001	11/19/1997	7:50	PBOW97-IT-AA3-BEDGW-001-GW-5470-REG	47.75	SW6010	Potassium	44700		5000	5000	ug/L			N1
AA3-BEDGW-001	11/19/1997	7:50	PBOW97-IT-AA3-BEDGW-001-GW-5470-REG	47.75	SW6010	Sodium	331000		5000	5000	ug/L			N1
AA3-BEDGW-001	11/19/1997	7:50	PBOW97-IT-AA3-BEDGW-001-GW-5470-REG	47.75	SW6010	Zinc	23		20	20	ug/L		11000	N1
AA3-BEDGW-001	11/19/1997	7:50	PBOW97-IT-AA3-BEDGW-001-GW-5470-REG	47.75	SW6010	Calcium	189000		5000	5000	ug/L			N1
AA3-BEDGW-001	11/19/1997	7:50	PBOW97-IT-AA3-BEDGW-001-GW-5470-REG	47.75	SW6010	Iron	168	B	100	100	ug/L		11000	N1
AA3-BEDGW-001	11/19/1997	7:50	PBOW97-IT-AA3-BEDGW-001-GW-5470-REG	47.75	SW6010	Magnesium	108000		5000	5000	ug/L			N1
AA3-BEDGW-001	11/19/1997	7:50	PBOW97-IT-AA3-BEDGW-001-GW-5470-REG	47.75	SW6010	Manganese	74.6		15	15	ug/L		880	N1
AA3-BEDGW-001	11/19/1997	7:50	PBOW97-IT-AA3-BEDGW-001-GW-5470-REG	47.75	SW6010	Potassium	49600		5000	5000	ug/L			N1
AA3-BEDGW-001	11/19/1997	7:50	PBOW97-IT-AA3-BEDGW-001-GW-5470-REG	47.75	SW6010	Sodium	368000		5000	5000	ug/L			N1
AA3-BEDGW-001	11/19/1997	7:50	PBOW97-IT-AA3-BEDGW-001-GW-5470-REG	47.75	SW6010	Zinc	29.2		20	20	ug/L		11000	N1
AA3-BEDGW-001	11/19/1997	7:50	PBOW97-IT-AA3-BEDGW-001-GW-5470-REG	47.75	SW8270	Phenol	3.1	J	3.1	10	ug/L		11000	N1
AA3-BEDGW-001	11/19/1997	7:50	PBOW97-IT-AA3-BEDGW-001-GW-5470-REG	47.75	SW8270	**bis(2-Ethylhexyl)phthalate**	**5.8**	J	5.8	10	ug/L		**4.8**	N1
AA3-BEDGW-001	11/19/1997	7:50	PBOW97-IT-AA3-BEDGW-001-GW-5470-REG	47.75	SW8260	Acetone	36	J	36	50	ug/L		5500	N1
AA3-BEDGW-001	11/19/1997	7:50	PBOW97-IT-AA3-BEDGW-001-GW-5470-REG	47.75	SW8260	Carbon Disulfide	4.2	J	4.2	5	ug/L		1000	N1
AA3-BEDGW-001	11/19/1997	7:50	PBOW97-IT-AA3-BEDGW-001-GW-5470-REG	47.75	SW8260	Methylene Chloride	2.1	B	2.1	5	ug/L		4.3	N1
AA3-BEDGW-001	5/14/1998	11:30	PBOW-98-GW-AA3-BEDGW-001-5475	47.75	E310.1	Alkalinity, Total (as CaCO3)	790		5	5	mg/L			N1
AA3-BEDGW-001	5/14/1998	11:30	PBOW-98-GW-AA3-BEDGW-001-5475	47.75	E325.2	Chloride (as Cl)	860	J	10	10	mg/L			N1
AA3-BEDGW-001	5/14/1998	11:30	PBOW-98-GW-AA3-BEDGW-001-5475	47.75	E130.2	Hardness (as CACO3)	860		10	10	mg/L			N1
AA3-BEDGW-001	5/14/1998	11:30	PBOW-98-GW-AA3-BEDGW-001-5475	47.75	E375.4	Sulfate (as SO4)	8	J	5	5	mg/L			N1
AA3-BEDGW-001	5/14/1998	11:30	PBOW-98-GW-AA3-BEDGW-001-5475	47.75	E160.2	Suspended Solids (residue, Non-filterable)	54		4	4	mg/L			N1
AA3-BEDGW-001	5/14/1998	11:30	PBOW-98-GW-AA3-BEDGW-001-5475	47.75	E160.1	Total Dissolved Solids	1800		10	10	mg/L			N1
AA3-BEDGW-001	5/14/1998	11:30	PBOW-98-GW-AA3-BEDGW-001-5475	47.75	SW9060	Total Organic Carbon	2	J	2	2	mg/L			N1
AA3-BEDGW-001	5/14/1998	11:30	PBOW-98-GW-AA3-BEDGW-001-5475	47.75	SW6010	Calcium	143000		5000	5000	ug/L			N1
AA3-BEDGW-001	5/14/1998	11:30	PBOW-98-GW-AA3-BEDGW-001-5475	47.75	SW6010	Magnesium	89400		5000	5000	ug/L			N1
AA3-BEDGW-001	5/14/1998	11:30	PBOW-98-GW-AA3-BEDGW-001-5475	47.75	SW6010	Manganese	51.3		15	15	ug/L		880	N1
AA3-BEDGW-001	5/14/1998	11:30	PBOW-98-GW-AA3-BEDGW-001-5475	47.75	SW6010	Potassium	43800		5000	5000	ug/L			N1
AA3-BEDGW-001	5/14/1998	11:30	PBOW-98-GW-AA3-BEDGW-001-5475	47.75	SW6010	Sodium	321000		5000	5000	ug/L			N1
AA3-BEDGW-001	5/14/1998	11:30	PBOW-98-GW-AA3-BEDGW-001-5475	47.75	SW6010	Zinc	42.8	B	20	20	ug/L		11000	N1
AA3-BEDGW-001	5/14/1998	11:30	PBOW-98-GW-AA3-BEDGW-001-5475	47.75	SW6010	Aluminum	397		200	200	ug/L		36000	N1
AA3-BEDGW-001	5/14/1998	11:30	PBOW-98-GW-AA3-BEDGW-001-5475	47.75	SW6010	Calcium	131000		5000	5000	ug/L			N1
AA3-BEDGW-001	5/14/1998	11:30	PBOW-98-GW-AA3-BEDGW-001-5475	47.75	SW6010	Iron	450		100	100	ug/L		11000	N1
AA3-BEDGW-001	5/14/1998	11:30	PBOW-98-GW-AA3-BEDGW-001-5475	47.75	SW6010	Magnesium	76800		5000	5000	ug/L			N1
AA3-BEDGW-001	5/14/1998	11:30	PBOW-98-GW-AA3-BEDGW-001-5475	47.75	SW6010	Manganese	83.8		15	15	ug/L		880	N1
AA3-BEDGW-001	5/14/1998	11:30	PBOW-98-GW-AA3-BEDGW-001-5475	47.75	SW6010	Potassium	38500		5000	5000	ug/L			N1
AA3-BEDGW-001	5/14/1998	11:30	PBOW-98-GW-AA3-BEDGW-001-5475	47.75	SW6010	Sodium	282000		5000	5000	ug/L			N1
AA3-BEDGW-001	5/14/1998	11:30	PBOW-98-GW-AA3-BEDGW-001-5475	47.75	SW6010	**Thallium**	**10.1**	B	10	10	ug/L		**2.4**	N1
AA3-BEDGW-001	5/14/1998	11:30	PBOW-98-GW-AA3-BEDGW-001-5475	47.75	SW6010	Zinc	67.6	B	20	20	ug/L		11000	N1
AA3-BEDGW-001	5/14/1998	11:30	PBOW-98-GW-AA3-BEDGW-001-5475	47.75	SW8260	**Methylene Chloride**	**160**	B	160	200	ug/L		**4.3**	N1
AA3-BEDGW-001	5/14/1998	11:30	PBOW-98-GW-AA3-BEDGW-001-5475	47.75	SW8260	Toluene	29	B	29	200	ug/L		720	N1

Table 4-8

Detected Analytes in Bedrock Groundwater (Prior Sampling Events)

Location	Date	Time Samp.	Sample ID	Depth	Test	Analyte	Result	Qual	DL	RL	Units	Bkg.	Region 9 Tap Water Std.	Samp. Type
AA3-BEDGW-001	9/27/2001	16:15	IT-AA3-BEDGW-001-GW-BD3005-REG	47.75	E310.1	Alkalinity, Total (as CaCO3)	750	J	0.56	5	mg/L			N1
AA3-BEDGW-001	9/27/2001	16:15	IT-AA3-BEDGW-001-GW-BD3005-REG	47.75	E325.2	Chloride (as Cl)	451		2	5	mg/L			N1
AA3-BEDGW-001	9/27/2001	16:15	IT-AA3-BEDGW-001-GW-BD3005-REG	47.75	E130.2	Hardness (as CACO3)	630		6.5	25	mg/L			N1
AA3-BEDGW-001	9/27/2001	16:15	IT-AA3-BEDGW-001-GW-BD3005-REG	47.75	E375.4	Sulfate (as SO4)	31.1		0.28	5	mg/L			N1
AA3-BEDGW-001	9/27/2001	16:15	IT-AA3-BEDGW-001-GW-BD3005-REG	47.75	E160.1	Total Dissolved Solids	1440		16.6	20	mg/L			N1
AA3-BEDGW-001	9/27/2001	16:15	IT-AA3-BEDGW-001-GW-BD3005-REG	47.75	SW9060	Total Organic Carbon	0.84	J	0.37	1	mg/L			N1
AA3-BEDGW-001	9/27/2001	16:15	IT-AA3-BEDGW-001-GW-BD3005-REG	47.75	E180.1	Turbidity	179	J	5	5	NTU			N1
AA3-BEDGW-001	9/27/2001	16:15	IT-AA3-BEDGW-001-GW-BD3005-REG	47.75	SW6010	Aluminum	50.2	B	22	200	ug/L		36000	N1
AA3-BEDGW-001	9/27/2001	16:15	IT-AA3-BEDGW-001-GW-BD3005-REG	47.75	SW6010	Barium	99.5	J	1	200	ug/L		2600	N1
AA3-BEDGW-001	9/27/2001	16:15	IT-AA3-BEDGW-001-GW-BD3005-REG	47.75	SW6010	Calcium	122000		37.7	5000	ug/L			N1
AA3-BEDGW-001	9/27/2001	16:15	IT-AA3-BEDGW-001-GW-BD3005-REG	47.75	SW6010	Magnesium	80900		21.8	5000	ug/L			N1
AA3-BEDGW-001	9/27/2001	16:15	IT-AA3-BEDGW-001-GW-BD3005-REG	47.75	SW6010	Manganese	23.9		1.5	15	ug/L		880	N1
AA3-BEDGW-001	9/27/2001	16:15	IT-AA3-BEDGW-001-GW-BD3005-REG	47.75	SW6010	Potassium	43100		158	5000	ug/L			N1
AA3-BEDGW-001	9/27/2001	16:15	IT-AA3-BEDGW-001-GW-BD3005-REG	47.75	SW6010	Sodium	293000		357	5000	ug/L			N1
AA3-BEDGW-001	9/27/2001	16:15	IT-AA3-BEDGW-001-GW-BD3005-REG	47.75	SW6010	**Thallium**	**6.4**	B	4.8	10	ug/L		**2.4**	N1
AA3-BEDGW-001	9/27/2001	16:15	IT-AA3-BEDGW-001-GW-BD3005-REG	47.75	SW6010	Aluminum	59.6	B	22	200	ug/L		36000	N1
AA3-BEDGW-001	9/27/2001	16:15	IT-AA3-BEDGW-001-GW-BD3005-REG	47.75	SW6010	Barium	102	J	1	200	ug/L		2600	N1
AA3-BEDGW-001	9/27/2001	16:15	IT-AA3-BEDGW-001-GW-BD3005-REG	47.75	SW6010	Calcium	122000	J	37.7	5000	ug/L			N1
AA3-BEDGW-001	9/27/2001	16:15	IT-AA3-BEDGW-001-GW-BD3005-REG	47.75	SW6010	Chromium	1.6	B	1.2	10	ug/L			N1
AA3-BEDGW-001	9/27/2001	16:15	IT-AA3-BEDGW-001-GW-BD3005-REG	47.75	SW6010	Iron	126		36.1	100	ug/L		11000	N1
AA3-BEDGW-001	9/27/2001	16:15	IT-AA3-BEDGW-001-GW-BD3005-REG	47.75	SW6010	Magnesium	80700		21.8	5000	ug/L			N1
AA3-BEDGW-001	9/27/2001	16:15	IT-AA3-BEDGW-001-GW-BD3005-REG	47.75	SW6010	Manganese	28.7		1.5	15	ug/L		880	N1
AA3-BEDGW-001	9/27/2001	16:15	IT-AA3-BEDGW-001-GW-BD3005-REG	47.75	SW6010	Potassium	43900		158	5000	ug/L			N1
AA3-BEDGW-001	9/27/2001	16:15	IT-AA3-BEDGW-001-GW-BD3005-REG	47.75	SW6010	Sodium	293000		357	5000	ug/L			N1
AA3-BEDGW-001	9/27/2001	16:15	IT-AA3-BEDGW-001-GW-BD3005-REG	47.75	SW8260	Acetone	22	B	2.4	50	ug/L		5500	N1
AA3-BEDGW-001	9/27/2001	16:15	IT-AA3-BEDGW-001-GW-BD3005-REG	47.75	SW8260	**Benzene**	**11**		1.2	5	ug/L	2.4	**0.35**	N1
AA3-BEDGW-001	9/27/2001	16:15	IT-AA3-BEDGW-001-GW-BD3005-REG	47.75	SW8260	Ethylbenzene	4	J	0.95	5	ug/L		1300	N1
AA3-BEDGW-001	9/27/2001	16:15	IT-AA3-BEDGW-001-GW-BD3005-REG	47.75	SW8260	Methylene Chloride	2.2	B	0.85	10	ug/L		4.3	N1
AA3-BEDGW-001	9/27/2001	16:15	IT-AA3-BEDGW-001-GW-BD3005-REG	47.75	SW8260	Toluene	11		1.2	5	ug/L		720	N1
AA3-BEDGW-001	9/27/2001	16:15	IT-AA3-BEDGW-001-GW-BD3005-REG	47.75	SW8260	Xylenes, Total	28		3	5	ug/L		210	N1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3033-48-48	47.75	E310.1	Alkalinity, Total (as CaCO3)	650		0.56	5	mg/L			N1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3033-48-48	47.75	E325.2	Chloride (as Cl)	369		4	10	mg/L			N1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3033-48-48	47.75	E130.2	Hardness (as CACO3)	480		6.5	25	mg/L			N1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3033-48-48	47.75	E160.2	Suspended Solids (residue, Non-filterable)	16		2.6	4	mg/L			N1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3033-48-48	47.75	E160.1	Total Dissolved Solids	1200		16.6	20	mg/L			N1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3033-48-48	47.75	SW9060	Total Organic Carbon	1		0.37	1	mg/L			N1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3033-48-48	47.75	E180.1	Turbidity	118		2.5	2.5	NTU			N1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3035-48-48	47.75	SW6010B	Calcium	109000		3.82	1000	ug/L			N1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3035-48-48	47.75	SW6010B	Calcium	107000		3.82	1000	ug/L			N1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3035-48-48	47.75	SW6010B	Iron	333		7.11	300	ug/L		11000	N1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3035-48-48	47.75	SW6010B	Magnesium	70200		9.88	5000	ug/L			N1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3035-48-48	47.75	SW6010B	Magnesium	69500		9.88	5000	ug/L			N1

Table 4-8

Detected Analytes in Bedrock Groundwater (Prior Sampling Events)

Location	Date	Time Samp.	Sample ID	Depth	Test	Analyte	Result	Qual	DL	RL	Units	Bkg.	Region 9 Tap Water Std.	Samp. Type
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3035-48-48	47.75	SW6010B	Manganese	20.2		0.16	15	ug/L		880	N1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3035-48-48	47.75	SW6010B	Manganese	16.3		0.16	15	ug/L		880	N1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3035-48-48	47.75	SW6010B	Potassium	47900		13.9	5000	ug/L			N1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3035-48-48	47.75	SW6010B	Potassium	47600		13.9	5000	ug/L			N1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3035-48-48	47.75	SW6010B	Sodium	263000		145	5000	ug/L			N1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3035-48-48	47.75	SW6010B	Sodium	261000		145	5000	ug/L			N1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3033-48-48	47.75	SW6010	Aluminum	49.2	J	22	200	ug/L		36000	N1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3033-48-48	47.75	SW6010	Barium	78.1	J	1	200	ug/L		2600	N1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3033-48-48	47.75	SW6010	Calcium	104000		37.7	5000	ug/L			N1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3033-48-48	47.75	SW6010	Magnesium	67100		21.8	5000	ug/L			N1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3033-48-48	47.75	SW6010	Manganese	17		1.5	15	ug/L		880	N1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3033-48-48	47.75	SW6010	Potassium	40000		158	5000	ug/L			N1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3033-48-48	47.75	SW6010	Sodium	237000		357	5000	ug/L			N1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3033-48-48	47.75	SW6010	Aluminum	104	B	22	200	ug/L		36000	N1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3033-48-48	47.75	SW6010	Barium	80.2	J	1	200	ug/L		2600	N1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3033-48-48	47.75	SW6010	Calcium	104000		37.7	5000	ug/L			N1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3033-48-48	47.75	SW6010	Iron	118	J	36.1	100	ug/L		11000	N1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3033-48-48	47.75	SW6010	Magnesium	69300		21.8	5000	ug/L			N1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3033-48-48	47.75	SW6010	Manganese	20.7		1.5	15	ug/L		880	N1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3033-48-48	47.75	SW6010	Potassium	40400		158	5000	ug/L			N1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3033-48-48	47.75	SW6010	Sodium	237000		357	5000	ug/L			N1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3033-48-48	47.75	SW6010	**Thallium**	**6.9**	B	4.8	10	ug/L		**2.4**	N1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3035-48-48	47.75	SW8270C	3 and 4-Methylphenol	5.9		5	5	ug/L			N1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3033-48-48	47.75	SW8270	Naphthalene	0.7	J	0.67	10	ug/L		6.2	N1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3035-48-48	47.75	SW8260B	**Benzene**	**6.4**		1	1	ug/L	2.4	**0.35**	N1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3035-48-48	47.75	SW8260B	Ethylbenzene	3.4		2	2	ug/L		1300	N1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3035-48-48	47.75	SW8260B	Toluene	9.2		2	2	ug/L		720	N1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3035-48-48	47.75	SW8260B	Xylenes, Total	25.2		6	6	ug/L		210	N1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3033-48-48	47.75	SW8260	**Benzene**	**8**	J	2.4	10	ug/L	2.4	**0.35**	N1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3033-48-48	47.75	SW8260	Ethylbenzene	4.6	J	1.9	10	ug/L		1300	N1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3033-48-48	47.75	SW8260	**Methylene Chloride**	**9.2**	J	1.7	20	ug/L		**4.3**	N1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3033-48-48	47.75	SW8260	Toluene	12	J	2.5	10	ug/L		720	N1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3033-48-48	47.75	SW8260	Xylenes, Total	31		6.1	10	ug/L		210	N1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3034-48-48	47.75	SW6010	Aluminum	61.2	B	22	200	ug/L		36000	FD1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3034-48-48	47.75	SW6010	Barium	78.5	J	1	200	ug/L		2600	FD1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3034-48-48	47.75	SW6010	Calcium	105000		37.7	5000	ug/L			FD1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3034-48-48	47.75	SW6010	Magnesium	67900		21.8	5000	ug/L			FD1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3034-48-48	47.75	SW6010	Manganese	17.2		1.5	15	ug/L		880	FD1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3034-48-48	47.75	SW6010	Potassium	40700		158	5000	ug/L			FD1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3034-48-48	47.75	SW6010	Sodium	241000		357	5000	ug/L			FD1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3034-48-48	47.75	SW6010	Aluminum	104	B	22	200	ug/L		36000	FD1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3034-48-48	47.75	SW6010	Barium	77.7	J	1	200	ug/L		2600	FD1

Table 4-8

Detected Analytes in Bedrock Groundwater (Prior Sampling Events)

Location	Date	Time Samp.	Sample ID	Depth	Test	Analyte	Result	Qual	DL	RL	Units	Bkg.	Region 9 Tap Water Std.	Samp. Type
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3034-48-48	47.75	SW6010	Calcium	101000		37.7	5000	ug/L			FD1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3034-48-48	47.75	SW6010	Iron	91.8	J	36.1	100	ug/L		11000	FD1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3034-48-48	47.75	SW6010	Magnesium	67200		21.8	5000	ug/L			FD1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3034-48-48	47.75	SW6010	Manganese	20		1.5	15	ug/L		880	FD1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3034-48-48	47.75	SW6010	Potassium	39300		158	5000	ug/L			FD1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3034-48-48	47.75	SW6010	Sodium	231000		357	5000	ug/L			FD1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3034-48-48	47.75	SW8270	Naphthalene	0.72	J	0.67	10	ug/L		6.2	FD1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3034-48-48	47.75	SW8260	**Benzene**	**7.5**	J	2.4	10	ug/L	2.4	**0.35**	FD1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3034-48-48	47.75	SW8260	Ethylbenzene	4.1	J	1.9	10	ug/L		1300	FD1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3034-48-48	47.75	SW8260	**Methylene Chloride**	**9.6**	J	1.7	20	ug/L		**4.3**	FD1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3034-48-48	47.75	SW8260	Toluene	11		2.5	10	ug/L		720	FD1
AA3-BEDGW-001	4/10/2002	17:00	PBOW-02-GW-IT-AA3-BEDGW-001-CB3034-48-48	47.75	SW8260	Xylenes, Total	28		6.1	10	ug/L		210	FD1

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Maximum Detection Values in Bedrock Groundwater (January 2005)

Method Type	Analyte	Units	Method	Minimum	Minimum Detected Result	Maximum Detected Result	Mean	Number of Detects	Number of Non Detects	Number of Usable Samples	Date of Maximum Detection	Sample ID for Maximum Detection	Depth for Max Detect
WetC	Alkalinity, Total (as CaCO3)	mg/L	E310.1	320	320	730	560	5	0	5	1/23/2005	PBOW-05-GW-AA3-BEDGW001-0	47.75
WetC	Chloride (as Cl)	mg/L	E300	16.1	16.1	323	144	5	0	5	1/23/2005	PBOW-05-GW-AA3-BEDGW001-0	47.75
WetC	Cyanide	mg/L	SW9012	ND	0.0086	0.109	0.0298	3	2	5	1/24/2005	PBOW-05-GW-PB-BEDMW19-01A	38.7
WetC	Hardness (as CACO3)	mg/L	E130.2	480	480	846	659	5	0	5	1/24/2005	PBOW-05-GW-PB-BEDMW19-01A	38.7
WetC	Nitrogen, Nitrate (as N)	mg/L	E300	ND	0.143	0.413	0.21	4	1	5	1/30/2005	PBOW-05-GW-AA3-BEDMW003-0	47.95
WetC	Sulfate (as SO4)	mg/L	E300	1.21	1.21	23.6	8.42	5	0	5	1/30/2005	PBOW-05-GW-AA3-BEDMW003-0	47.95
WetC	Suspended Solids (residue, Non-filterable)	mg/L	E160.2	ND	5	5	2.6	1	4	5	1/24/2005	PBOW-05-GW-PB-BEDMW19-01A	38.7
WetC	Total Dissolved Solids	mg/L	E160.1	380	380	1300	836	5	0	5	1/23/2005	PBOW-05-GW-AA3-BEDGW001-0	47.75
WetC	Total Organic Carbon	mg/L	SW9060	1.46	1.46	5.24	2.56	5	0	5	1/24/2005	PBOW-05-GW-PB-BEDMW19-01A	38.7
WetC	Turbidity	NTU	E180.1	1.64	1.64	56.1	32.9	5	0	5	1/30/2005	PBOW-05-GW-AA3-BEDMW003-0	47.95
HE	1,3,5-Trinitrobenzene	ug/L	SW8330	ND	ND	ND	ND	0	5	5	/ /		
HE	1,3-Dinitrobenzene	ug/L	SW8330	ND	ND	ND	ND	0	5	5	/ /		
HE	2,4,6-Trinitrotoluene	ug/L	SW8330	ND	ND	ND	ND	0	5	5	/ /		
HE	2,4-Dinitrotoluene	ug/L	SW8330	ND	ND	ND	ND	0	5	5	/ /		
HE	2,6-Dinitrotoluene	ug/L	SW8330	ND	ND	ND	ND	0	5	5	/ /		
HE	2-Amino-4,6-Dinitrotoluene	ug/L	SW8330	ND	ND	ND	ND	0	5	5	/ /		
HE	2-Nitrotoluene	ug/L	SW8330	ND	ND	ND	ND	0	5	5	/ /		
HE	3-Nitrotoluene	ug/L	SW8330	ND	ND	ND	ND	0	5	5	/ /		
HE	4-Amino-2,6-Dinitrotoluene	ug/L	SW8330	ND	ND	ND	ND	0	5	5	/ /		
HE	4-Nitrotoluene	ug/L	SW8330	ND	ND	ND	ND	0	5	5	/ /		
HE	HMX	ug/L	SW8330	ND	ND	ND	ND	0	5	5	/ /		
HE	Nitrobenzene	ug/L	SW8330	ND	ND	ND	ND	0	5	5	/ /		
HE	RDX	ug/L	SW8330	ND	ND	ND	ND	0	5	5	/ /		
HE	Tetryl	ug/L	SW8330	ND	ND	ND	ND	0	5	5	/ /		
MET	Aluminum	mg/L	SW6010B	ND	ND	ND	ND	0	5	5	/ /		
MET	Aluminum (total)	mg/L	SW6010B	ND	ND	ND	ND	0	5	5	/ /		
MET	Antimony	mg/L	SW6010B	ND	ND	ND	ND	0	5	5	/ /		
MET	Antimony (total)	mg/L	SW6010B	ND	ND	ND	ND	0	5	5	/ /		
MET	Arsenic	mg/L	SW6010B	ND	0.00704	0.00704	0.00324	1	4	5	1/27/2005	PBOW-05-GW-AA2-BEDGW001-0	37.75
MET	Arsenic (total)	mg/L	SW6010B	ND	0.00508	0.00795	0.0037	2	3	5	1/27/2005	PBOW-05-GW-AA2-BEDGW001-0	37.75
MET	Barium	mg/L	SW6010B	0.0762	0.0762	1.57	0.587	5	0	5	1/24/2005	PBOW-05-GW-PB-BEDMW19-01A	38.7
MET	Barium (total)	mg/L	SW6010B	0.0744	0.0744	1.64	0.604	5	0	5	1/24/2005	PBOW-05-GW-PB-BEDMW19-01A	38.7
MET	Beryllium	mg/L	SW6010B	ND	ND	ND	ND	0	5	5	/ /		
MET	Beryllium (total)	mg/L	SW6010B	ND	ND	ND	ND	0	5	5	/ /		
MET	Cadmium	mg/L	SW6010B	ND	ND	ND	ND	0	5	5	/ /		
MET	Cadmium (total)	mg/L	SW6010B	ND	ND	ND	ND	0	5	5	/ /		

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Maximum Detection Values in Bedrock Groundwater (January 2005)

Method Type	Analyte	Units	Method	Minimum	Minimum Detected Result	Maximum Detected Result	Mean	Number of Detects	Number of Non Detects	Number of Usable Samples	Date of Maximum Detection	Sample ID for Maximum Detection	Depth for Max Detect
MET	Calcium	mg/L	SW6010B	57.5	57.5	150	96.2	5	0	5	1/24/2005	PBOW-05-GW-PB-BEDMW19-01A	38.7
MET	Calcium (total)	mg/L	SW6010B	59	59	148	94.9	5	0	5	1/24/2005	PBOW-05-GW-PB-BEDMW19-01A	38.7
MET	Chromium	mg/L	SW6010B	ND	ND	ND	ND	0	5	5	/ /		
MET	Chromium (total)	mg/L	SW6010B	ND	ND	ND	ND	0	5	5	/ /		
MET	Cobalt	mg/L	SW6010B	ND	0.00113	0.00127	0.000749	2	3	5	1/24/2005	PBOW-05-GW-PB-BEDMW19-01A	38.7
MET	Cobalt (total)	mg/L	SW6010B	ND	0.00121	0.00121	0.000601	1	4	5	1/27/2005	PBOW-05-GW-AA2-BEDGW001-0	37.75
MET	Copper	mg/L	SW6010B	ND	0.004	0.004	0.00155	1	4	5	/ /		
MET	Copper (total)	mg/L	SW6010B	ND	ND	ND	ND	0	5	5	/ /		
MET	Iron	mg/L	SW6010B	ND	0.131	0.131	0.0354	1	4	5	1/27/2005	PBOW-05-GW-AA2-BEDGW001-0	37.75
MET	Iron (total)	mg/L	SW6010B	ND	0.0557	0.913	0.201	2	3	5	1/27/2005	PBOW-05-GW-AA2-BEDGW001-0	37.75
MET	Lead	mg/L	SW6010B	ND	ND	ND	ND	0	5	5	/ /		
MET	Lead (total)	mg/L	SW6010B	ND	ND	ND	ND	0	5	5	/ /		
MET	Magnesium	mg/L	SW6010B	30.4	30.4	72.5	53.9	5	0	5	1/24/2005	PBOW-05-GW-PB-BEDMW19-01A	38.7
MET	Magnesium (total)	mg/L	SW6010B	31.5	31.5	71.3	53	5	0	5	1/24/2005	PBOW-05-GW-PB-BEDMW19-01A	38.7
MET	Manganese	mg/L	SW6010B	0.0102	0.0102	0.0938	0.0346	5	0	5	1/27/2005	PBOW-05-GW-AA2-BEDGW001-0	37.75
MET	Manganese (total)	mg/L	SW6010B	0.00849	0.00849	0.0906	0.0332	5	0	5	1/27/2005	PBOW-05-GW-AA2-BEDGW001-0	37.75
MET	Mercury	mg/L	SW7470A	ND	ND	ND	ND	0	5	5	/ /		
MET	Mercury (total)	mg/L	SW7470A	ND	ND	ND	ND	0	5	5	/ /		
MET	Nickel	mg/L	SW6010B	ND	ND	ND	ND	0	5	5	/ /		
MET	Nickel (total)	mg/L	SW6010B	ND	ND	ND	ND	0	5	5	/ /		
MET	Potassium	mg/L	SW6010B	11.1	11.1	37.1	25.9	5	0	5	1/23/2005	PBOW-05-GW-AA3-BEDGW001-0	47.75
MET	Potassium (total)	mg/L	SW6010B	11.4	11.4	36.2	25.4	5	0	5	1/23/2005	PBOW-05-GW-AA3-BEDGW001-0	47.75
MET	Selenium	mg/L	SW6010B	ND	ND	ND	ND	0	4	4	/ /		
MET	Selenium (total)	mg/L	SW6010B	ND	ND	ND	ND	0	4	4	/ /		
MET	Silver	mg/L	SW6010B	ND	ND	ND	ND	0	5	5	/ /		
MET	Silver (total)	mg/L	SW6010B	ND	ND	ND	ND	0	5	5	/ /		
MET	Sodium	mg/L	SW6010B	41.6	41.6	260	140	5	0	5	1/23/2005	PBOW-05-GW-AA3-BEDGW001-0	47.75
MET	Sodium (total)	mg/L	SW6010B	43.6	43.6	260	141	5	0	5	1/23/2005	PBOW-05-GW-AA3-BEDGW001-0	47.75
MET	Thallium	mg/L	SW6010B	ND	ND	ND	ND	0	5	5	/ /		
MET	Thallium (total)	mg/L	SW6010B	ND	ND	ND	ND	0	5	5	/ /		
MET	Vanadium	mg/L	SW6010B	ND	ND	ND	ND	0	5	5	/ /		
MET	Vanadium (total)	mg/L	SW6010B	ND	ND	ND	ND	0	5	5	/ /		
MET	Zinc	mg/L	SW6010B	ND	ND	ND	ND	0	5	5	/ /		
MET	Zinc (total)	mg/L	SW6010B	ND	0.00956	0.0191	0.00639	2	3	5	1/27/2005	PBOW-05-GW-AA2-BEDGW001-0	37.75
PCB	PCB-1016 (Aroclor 1016)	ug/L	SW8082	ND	ND	ND	ND	0	5	5	/ /		
PCB	PCB-1221 (Aroclor 1221)	ug/L	SW8082	ND	ND	ND	ND	0	5	5	/ /		

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Method Type	Analyte	Units	Method	Minimum	Minimum Detected Result	Maximum Detected Result	Mean	Number of Detects	Number of Non Detects	Number of Usable Samples	Date of Maximum Detection	Sample ID for Maximum Detection	Depth for Max Detect
PCB	PCB-1232 (Aroclor 1232)	ug/L	SW8082	ND	ND	ND	ND	0	5	5	/ /		
PCB	PCB-1242 (Aroclor 1242)	ug/L	SW8082	ND	ND	ND	ND	0	5	5	/ /		
PCB	PCB-1248 (Aroclor 1248)	ug/L	SW8082	ND	ND	ND	ND	0	5	5	/ /		
PCB	PCB-1254 (Aroclor 1254)	ug/L	SW8082	ND	ND	ND	ND	0	5	5	/ /		
PCB	PCB-1260 (Aroclor 1260)	ug/L	SW8082	ND	ND	ND	ND	0	5	5	/ /		
SV	1,2,4-Trichlorobenzene	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	1,2-Dichlorobenzene	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	1,3-Dichlorobenzene	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	1,4-Dichlorobenzene	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	2,4,5-Trichlorophenol	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	2,4,6-Trichlorophenol	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	2,4-Dichlorophenol	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	2,4-Dimethylphenol	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	2,4-Dinitrophenol	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	2,4-Dinitrotoluene	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	2,6-Dinitrotoluene	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	2-Chloronaphthalene	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	2-Chlorophenol	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	2-Methylnaphthalene	ug/L	SW8270C	ND	2.08	5.47	2.08	2	3	5	1/30/2005	PBOW-05-GW-AA3-BEDMW003-0	47.95
SV	2-Methylphenol (o-Cresol)	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	2-Nitroaniline	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	2-Nitrophenol	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	3,3'-Dichlorobenzidine	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	3-Nitroaniline	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	4,6-Dinitro-2-methylphenol	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	4-Bromophenyl phenyl ether	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	4-Chloro-3-methylphenol	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	4-Chloroaniline	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	4-Chlorophenyl phenyl ether	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	4-Methylphenol (p-Cresol)	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	4-Nitroaniline	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	4-Nitrophenol	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	Acenaphthene	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	Acenaphthylene	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	Acetophenone	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	Anthracene	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		

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Method Type	Analyte	Units	Method	Minimum	Minimum Detected Result	Maximum Detected Result	Mean	Number of Detects	Number of Non Detects	Number of Usable Samples	Date of Maximum Detection	Sample ID for Maximum Detection	Depth for Max Detect
SV	Atrazine	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	Benzaldehyde	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	Benzo(a)anthracene	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	Benzo(a)pyrene	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	Benzo(b)fluoranthene	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	Benzo(g,h,i)perylene	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	Benzo(k)fluoranthene	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	Benzyl alcohol	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	Benzyl butyl phthalate	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	Biphenyl (Diphenyl)	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	Caprolactam	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	Carbazole	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	Chrysene	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	Di-n-butylphthalate	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	Di-n-octylphthalate	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	Dibenz(a,h)anthracene	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	Dibenzofuran	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	Diethylphthalate	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	Dimethylphthalate	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	Fluoranthene	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	Fluorene	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	Hexachlorobenzene	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	Hexachlorobutadiene	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	Hexachlorocyclopentadiene	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	Hexachloroethane	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	Indeno(1,2,3-cd)pyrene	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	Isophorone	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	N-Nitroso-di-n-propylamine	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	N-Nitrosodimethylamine	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	N-Nitrosodiphenylamine	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	Naphthalene	ug/L	SW8270C	ND	1.09	5.53	1.66	3	2	5	1/30/2005	PBOW-05-GW-AA3-BEDMW003-0	47.95
SV	Nitrobenzene	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	Pentachlorophenol	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	Phenanthrene	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	Phenol	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	Pyrene	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		

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Method Type	Analyte	Units	Method	Minimum	Minimum Detected Result	Maximum Detected Result	Mean	Number of Detects	Number of Non Detects	Number of Usable Samples	Date of Maximum Detection	Sample ID for Maximum Detection	Depth for Max Detect
SV	bis(2-Chloroethoxy)methane	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	bis(2-Chloroethyl)ether (2-Chloroethylether)	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	bis(2-Chloroisopropyl)ether	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
SV	bis(2-Ethylhexyl)phthalate	ug/L	SW8270C	ND	ND	ND	ND	0	5	5	/ /		
VOC	1,1,1-Trichloroethane	ug/L	SW8260B	ND	ND	ND	ND	0	5	5	/ /		
VOC	1,1,2,2-Tetrachloroethane	ug/L	SW8260B	ND	ND	ND	ND	0	5	5	/ /		
VOC	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/L	SW8260B	ND	ND	ND	ND	0	5	5	/ /		
VOC	1,1,2-Trichloroethane	ug/L	SW8260B	ND	ND	ND	ND	0	5	5	/ /		
VOC	1,1-Dichloroethane	ug/L	SW8260B	ND	ND	ND	ND	0	5	5	/ /		
VOC	1,1-Dichloroethene	ug/L	SW8260B	ND	ND	ND	ND	0	5	5	/ /		
VOC	1,2,3-Trichlorobenzene	ug/L	SW8260B	ND	ND	ND	ND	0	5	5	/ /		
VOC	1,2,4-Trichlorobenzene	ug/L	SW8260B	ND	ND	ND	ND	0	5	5	/ /		
VOC	1,2-Dibromo-3-chloropropane	ug/L	SW8260B	ND	ND	ND	ND	0	5	5	/ /		
VOC	1,2-Dibromoethane (EDB)	ug/L	SW8260B	ND	ND	ND	ND	0	5	5	/ /		
VOC	1,2-Dichlorobenzene	ug/L	SW8260B	ND	ND	ND	ND	0	5	5	/ /		
VOC	1,2-Dichloroethane	ug/L	SW8260B	ND	ND	ND	ND	0	5	5	/ /		
VOC	1,2-Dichloropropane	ug/L	SW8260B	ND	ND	ND	ND	0	5	5	/ /		
VOC	1,3-Dichlorobenzene	ug/L	SW8260B	ND	ND	ND	ND	0	5	5	/ /		
VOC	1,4-Dichlorobenzene	ug/L	SW8260B	ND	ND	ND	ND	0	5	5	/ /		
VOC	2-Butanone (Methyl ethyl ketone)	ug/L	SW8260B	ND	ND	ND	ND	0	5	5	/ /		
VOC	2-Hexanone	ug/L	SW8260B	ND	ND	ND	ND	0	5	5	/ /		
VOC	4-Methyl-2-pentanone (Methyl isobutyl ketone)	ug/L	SW8260B	ND	ND	ND	ND	0	5	5	/ /		
VOC	Acetone	ug/L	SW8260B	ND	ND	ND	ND	0	5	5	/ /		
VOC	Benzene	ug/L	SW8260B	0.439	0.439	41.8	10.9	5	0	5	1/30/2005	PBOW-05-GW-AA3-BEDMW003-0	47.95
VOC	Bromochloromethane	ug/L	SW8260B	ND	ND	ND	ND	0	5	5	/ /		
VOC	Bromodichloromethane	ug/L	SW8260B	ND	ND	ND	ND	0	5	5	/ /		
VOC	Bromoform	ug/L	SW8260B	ND	ND	ND	ND	0	5	5	/ /		
VOC	Bromomethane	ug/L	SW8260B	ND	ND	ND	ND	0	5	5	/ /		
VOC	Carbon Disulfide	ug/L	SW8260B	ND	0.203	0.661	0.359	4	1	5	1/25/2005	PBOW-05-GW-AA3-BEDGW002-0	52.4
VOC	Carbon tetrachloride	ug/L	SW8260B	ND	ND	ND	ND	0	5	5	/ /		
VOC	Chlorobenzene	ug/L	SW8260B	ND	ND	ND	ND	0	5	5	/ /		
VOC	Chloroethane	ug/L	SW8260B	ND	ND	ND	ND	0	5	5	/ /		
VOC	Chloroform	ug/L	SW8260B	ND	ND	ND	ND	0	5	5	/ /		
VOC	Chloromethane	ug/L	SW8260B	ND	11.4	11.4	2.34	1	4	5	1/25/2005	PBOW-05-GW-AA3-BEDGW002-0	52.4
VOC	Cyclohexane	ug/L	SW8260B	16.7	16.7	96	46.1	5	0	5	1/30/2005	PBOW-05-GW-AA3-BEDMW003-0	47.95
VOC	Dibromochloromethane	ug/L	SW8260B	ND	ND	ND	ND	0	5	5	/ /		

Table 4-9
Maximum Detection Values in Bedrock Groundwater (January 2005)

Method Type	Analyte	Units	Method	Minimum	Minimum Detected Result	Maximum Detected Result	Mean	Number of Detects	Number of Non Detects	Number of Usable Samples	Date of Maximum Detection	Sample ID for Maximum Detection	Depth for Max Detect
VOC	Dichlorodifluoromethane	ug/L	SW8260B	ND	ND	ND	ND	0	5	5	/ /		
VOC	Ethylbenzene	ug/L	SW8260B	0.353	0.353	15.5	4.37	5	0	5	1/30/2005	PBOW-05-GW-AA3-BEDMW003-0	47.95
VOC	Isopropylbenzene (Cumene)	ug/L	SW8260B	ND	0.423	4.65	1.42	4	1	5	1/30/2005	PBOW-05-GW-AA3-BEDMW003-0	47.95
VOC	Methyl Acetate	ug/L	SW8260B	ND	ND	ND	ND	0	5	5	/ /		
VOC	Methylcyclohexane	ug/L	SW8260B	7.16	7.16	55.9	27.6	5	0	5	1/30/2005	PBOW-05-GW-AA3-BEDMW003-0	47.95
VOC	Methylene Chloride	ug/L	SW8260B	ND	ND	ND	ND	0	5	5	/ /		
VOC	Styrene	ug/L	SW8260B	ND	ND	ND	ND	0	5	5	/ /		
VOC	Tert-Butyl Methyl Ether (MTBE)	ug/L	SW8260B	ND	ND	ND	ND	0	5	5	/ /		
VOC	Tetrachloroethene (PCE)	ug/L	SW8260B	ND	ND	ND	ND	0	5	5	/ /		
VOC	Toluene	ug/L	SW8260B	0.192	0.192	27.4	6.72	5	0	5	1/30/2005	PBOW-05-GW-AA3-BEDMW003-0	47.95
VOC	Trichloroethene (TCE)	ug/L	SW8260B	ND	ND	ND	ND	0	5	5	/ /		
VOC	Trichlorofluoromethane	ug/L	SW8260B	ND	ND	ND	ND	0	5	5	/ /		
VOC	Vinyl chloride	ug/L	SW8260B	ND	ND	ND	ND	0	5	5	/ /		
VOC	Xylenes, Total	ug/L	SW8260B	2.56	2.56	128	36.5	5	0	5	1/30/2005	PBOW-05-GW-AA3-BEDMW003-0	47.95
VOC	cis-1,2-Dichloroethene	ug/L	SW8260B	ND	ND	ND	ND	0	5	5	/ /		
VOC	cis-1,3-Dichloropropene	ug/L	SW8260B	ND	ND	ND	ND	0	5	5	/ /		
VOC	trans-1,2-Dichloroethene	ug/L	SW8260B	ND	ND	ND	ND	0	5	5	/ /		
VOC	trans-1,3-Dichloropropene	ug/L	SW8260B	ND	ND	ND	ND	0	5	5	/ /		

Note the MEAN is calculated using the Detection Limit/2 as the value for samples that did not have a detectable concentration

Appendix A
Borehole Logs for Piezometers

HTRW DRILLING LOG

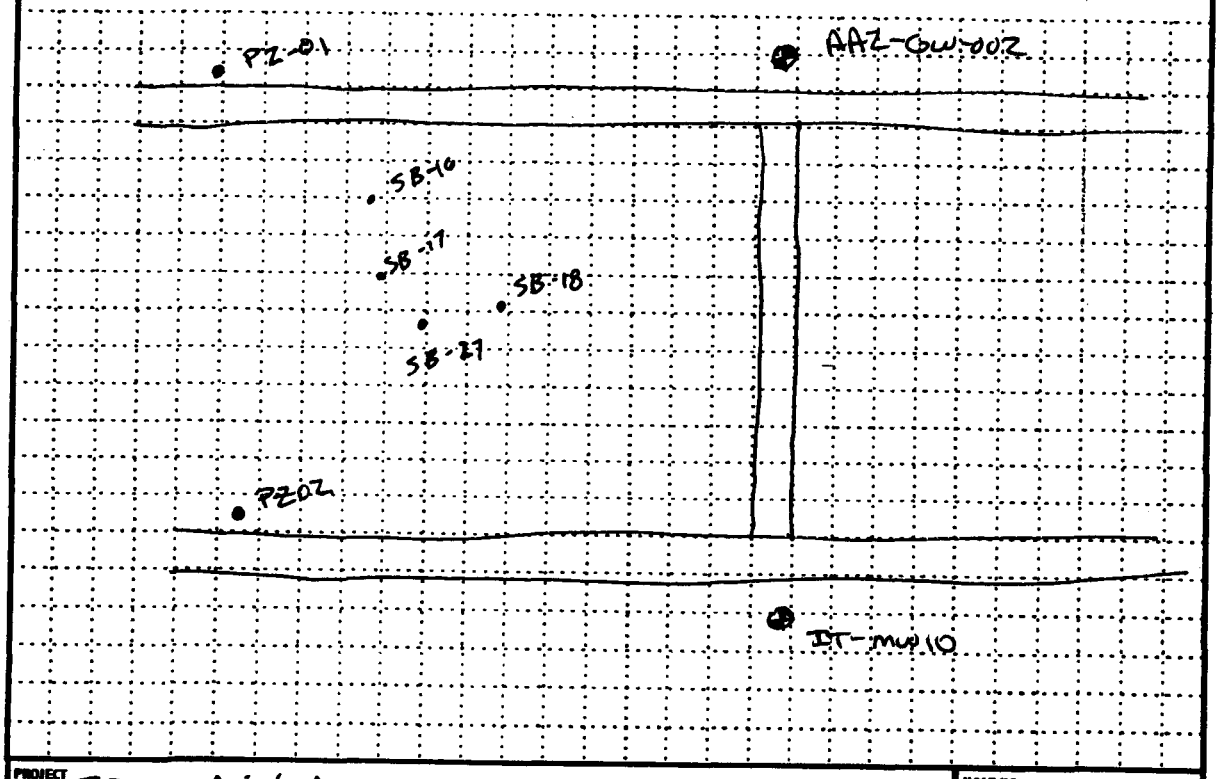
DISTRICT	USACE - Nashville
HOLE NUMBER	AAZ-PZ01
1. COMPANY NAME	Jacobs Eng
2. DRILLING SUBCONTRACTOR	Frontz Drilling
SHEET	1 OF 3 SHEETS
3. PROJECT	PBOW - Acid Area 2+3 RI
4. LOCATION	AAZ- PZ01
5. NAME OF DRILLER	Jeremy Lockrone
6. MANUFACTURER'S DESIGNATION OF DRILL	Geoprobe 5400
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT	Macrocore 2 1/8"
8. HOLE LOCATION	AAZ- PZ01
9. SURFACE ELEVATION	
10. DATE STARTED	11-2-04
11. DATE COMPLETED	11-2-04
12. OVERBURDEN THICKNESS	19'
15. DEPTH GROUNDWATER ENCOUNTERED	
13. DEPTH DRILLED INTO ROCK	
16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED	
14. TOTAL DEPTH OF HOLE	19'
17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)	

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
None			

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %
None						

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
1" PVC piezo				

LOCATION SKETCH/COMMENTS **SCALE:**



PROJECT	HOLE NO.
PBOW- Acid Area 2+3 RI	AAZ- PZ01

Figure 5-1

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER: AA2-PZ01

PROJECT: PBOW - Acid Area 2+3

INSPECTOR:

SHEET 2 OF 3 SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	SAMPLE NO. (e)	ANALYTICAL SAMPLE NO. (f)	BLOW COUNT (g)	REMARKS (h)
		0"-8", OL, organic silt, dark brown (10YR, 3/1), firm, low plasticity, moist					
	1	8"-4.5', ML, clayey silt, medium brown (10YR, 4/4), firm to stiff, low plasticity, moist to dry.					
	2						
	3						
	4						
		4.5'-9.25', CL, silty clay, medium brown (10YR, 4/3), firm, low plasticity, moist					
	5	silt lenses at 5.1' to 5.2' and at 7.75 to 7.8'					
	6						
	7						
	8	silt lense at 8.2 to 8.4'					
	9						
		9.25'- , CL/CH, clay, medium gray (10YR, 4/1) soft, medium to high					
	10						

PROJECT: PBOW - Acid Area 2+3 RI

HOLE NO. AA2-PZ01

ENG FORM 5056A-R, AUG 94 (Proponent: CECW-EG)

Figure 5-1 (continued)

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER: AAZ-PZ01

PROJECT: PBOW - Acid Area 2+3

INSPECTOR:

SHEET 2 OF 3 SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	SAMPLE NO. OR CORE RUN NO. (e)	ANALYTICAL SAMPLE NO. (f)	BLOW COUNT (g)	REMARKS (h)
		high plasticity, moist to wet.					
	11						
	12						
	13						
	14						
	15	color change to reddish gray (5YR, 4/1), with rock fragments, pebble to sand size at 15'					
	16						
	17	increased rock fragments at 16' very stiff, moist to dry					
	18						
	19	TD - 19.0' refusal on bedrock					
	20						

PROJECT: PBOW - Acid Area 2+3 RI

HOLE NO. AAZ - PZ01

ENG FORM 5056A-R, AUG 94 (Proponent: CEOW-EG)

Figure 5-1 (continued)

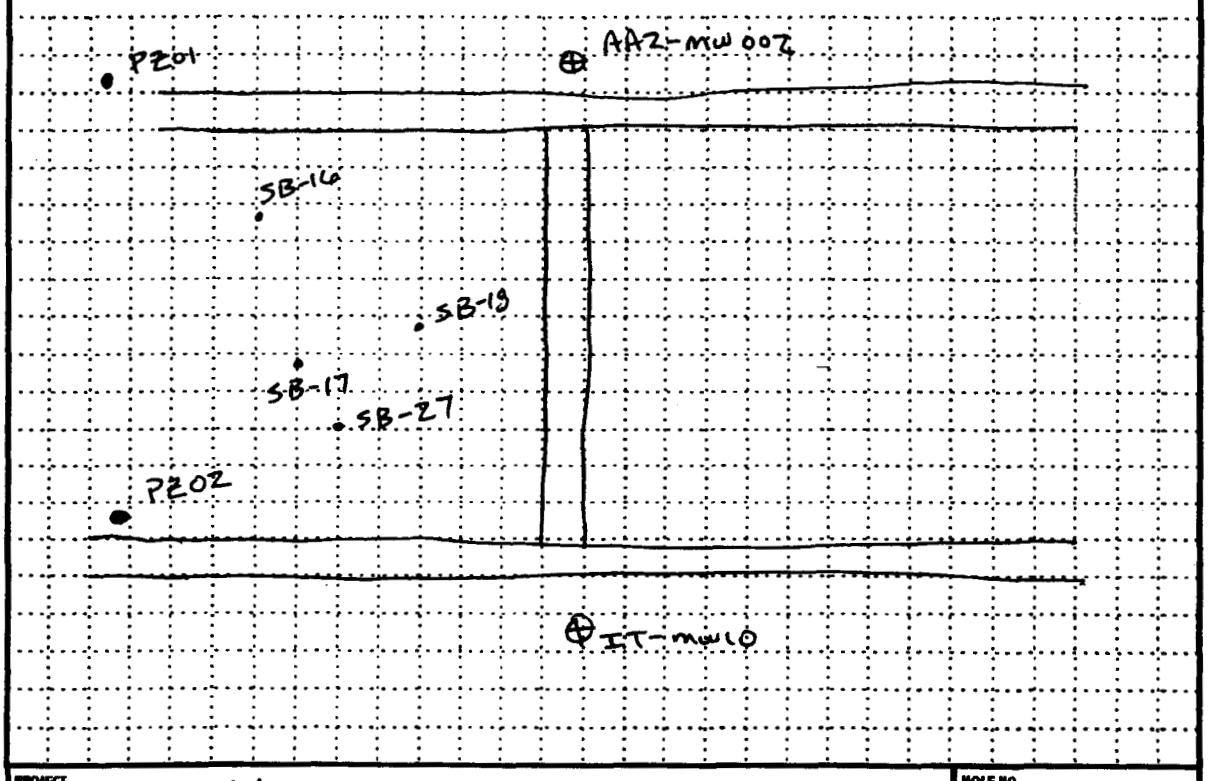
HTRW DRILLING LOG	DISTRICT USACE - Nashville	HOLE NUMBER AAZ-PZ02
1. COMPANY NAME Jacobs Eng	2. DRILLING SUBCONTRACTOR Frontz Drilling	SHEET 1 OF 3 SHEETS
3. PROJECT PBOW - Acid Area 2+3 RI	4. LOCATION AAZ- PZ02	
5. NAME OF DRILLER Jeremy Lackrone	6. MANUFACTURER'S DESIGNATION OF DRILL Geoprobe 5400	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT MacroCore 2 1/2"	8. HOLE LOCATION AAz - PZ02	
	9. SURFACE ELEVATION	
	10. DATE STARTED 11-2-04	11. DATE COMPLETED 11-2-04
12. OVERBURDEN THICKNESS 18'	15. DEPTH GROUNDWATER ENCOUNTERED	
13. DEPTH DRILLED INTO ROCK	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED	
14. TOTAL DEPTH OF HOLE 18'	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)	

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
None			

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %
None						

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
Installed 2" piezo				

LOCATION SKETCH/COMMENTS SCALE:



PROJECT PBOW - Acid Areas 2+3 RI	HOLE NO. AAZ-PZ02

Figure 5-1

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER: AAZ-PZ02

PROJECT: PBOW - Acid Areas 2+3 RI

INSPECTOR:

SHEET 2 OF 3 SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	SAMPLE NO. OR CORE RUN NO. (e)	ANALYTICAL SAMPLE NO. (f)	BLOW COUNT (g)	REMARKS (h)
	1	0" - 8", OL, organic silt, with gravel backfill from 6" - 8", dark brown (10YR, 3/2), soft moist.					
	2	8" - 10", ML, sandy silt, light brown (10YR, 4/4), soft, loose dry to moist.					
	3	10" - 1.5' - CL, silty clay light to medium brown (10YR, 5/3), firm, low plasticity, moist					
	4	1.5' - 9.5', CL, clay, medium brown (10YR, 4/4), firm, low plasticity, moist.					
	5						
	6						
	7						
	8						
	9						
	10	9.5' - 18', CL, clay silty clay intervals					

PROJECT: PBOW - Acid Areas 2+3 RI

HOLE NO. AAZ-PZ02

ENG FORM 5056A-R, AUG 94 (Proponent: CECW-EG)

Figure 5-1 (continued)

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER: AAZ-PZ02

PROJECT: PBOW - Acid Area 2+3 RI

INSPECTOR:

SHEET 3 OF 3 SHEETS

ELEV. (1)	DEPTH (2)	DESCRIPTION OF MATERIALS (4)	FIELD ANALYSIS RESULTS (5)	SAMPLE OR CORE RUN NO. (6)	CHAIN OF CUSTODY SAMPLE NO. (7)	BLOW COUNT (8)	REMARKS (9)
		throughout, dark to medium gray (10YR 4/1 to 10YR 5/1), soft to firm, medium to medium-high plasticity, moist to wet.					
	11						
	12				NONE		
	13						
	14						
	15						
	16						
	17	bottom 2", sandy gravelly, weathered bedrock fragments					
	18	TD - 18' - hit refusal of bedrock Limestone or Limey shale					
	19						
	20						

PROJECT: PBOW - Acid Area 2+3 RI

HOLE NO. AAZ-PZ02

ENG FORM 5056A-R, AUG 94 (Proponent: CECW-EG)

Figure 5-1 (continued)

HTRW DRILLING LOG

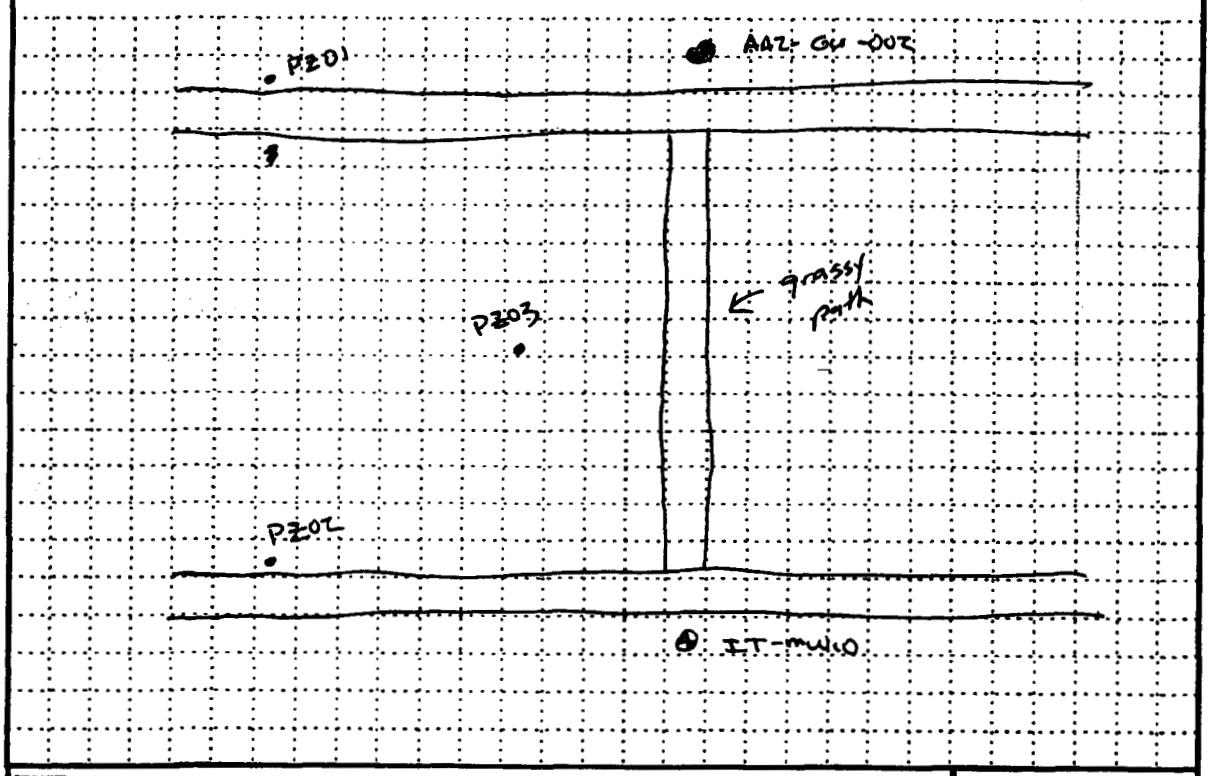
DISTRICT	USACE - Nashville
HOLE NUMBER	AA2- PZ03
1. COMPANY NAME	Jacobs Eng.
2. DRILLING SUBCONTRACTOR	Frontz Drilling
SHEET / OF / SHEETS	1 OF 4
3. PROJECT	PBOW - Acid Area 2+3 RI
4. LOCATION	AA2 - PZ03
5. NAME OF DRILLER	Jeremy Lockrone
6. MANUFACTURER'S DESIGNATION OF DRILL	Geoprobe 5400
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT	Macrocore 2"/8"
8. HOLE LOCATION	AA2 - PZ03
9. SURFACE ELEVATION	
10. DATE STARTED	11-3-04
11. DATE COMPLETED	11-3-04
12. OVERBURDEN THICKNESS	20.2'
15. DEPTH GROUNDWATER ENCOUNTERED	
13. DEPTH DRILLED INTO ROCK	
16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED	
14. TOTAL DEPTH OF HOLE	20.2'
17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)	

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
None			

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %
None						

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
1" PVC Seizo				

LOCATION SKETCH/COMMENTS SCALE:



PROJECT	HOLE NO.
PBOW - Acid Area 2+3 RI	AA2- PZ03

Figure 5-1

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER: AA2-PZ03

PROJECT: PBOW Acid Area 2+3

INSPECTOR:

SHEET 2 OF 4 SHEETS

ELEV. (+)	DEPTH (+)	DESCRIPTION OF MATERIALS (+)	FIELD INSPECTION RESULTS (+)	REPRESENTATIVE SAMPLE OR CORE SIZE ETC. (+)	CHAIN OF CUSTODY TAKEN ETC. (+)	BLOW COUNT (+)	REMARKS (+)
	1	0"-3", OL, organic silt clayey, dark brown (10YR, 4/2), soft to firm, moist.					
		3"-1.5', ML, silt, med brown (5/6), soft, loose, dry to moist					
	2	1.5'-2.5, ML, clayey silt light to med brown (10YR, 5/3), firm, low plasticity, moist					
	3	2.5-6', CL, silty clay, medium brown (10YR, 5/3), soft to firm, low plasticity moist to wet.					
	4						
	5						
	6	6'- , CL, clay light brow (10YR, 5/3) to 7' changing to medium gray (10YR, 4/1). firm to soft to 11.5' changing to firm to stiff at 11.5', low plasticity, moist to wet.					
	7						
	8						
	9						
	10						

PROJECT: PBOW - Acid Area 2+3 RI

HOLE NO. AA2-PZ03

ENG FORM 5058A-R, AUG 94 (Proponent: CEOD-EG)

Figure 5-1 (continued)

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER: AA2-PZ03

PROJECT: PBOW - Acid Area 2+3 RI

INSPECTOR:

SHEET 3 OF 4 SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	SAMPLE NO. OR CORE RUN NO. (e)	ANALYTICAL SAMPLE NO. (f)	BLOW COUNT (g)	REMARKS (h)
	11						
	12						
	13						
	14	rock fragments pebble to sand size beginning at 14', sub angular					
	15						
	16	color change to reddish gray gradually occurs beginning at 16' (5YR, 4/1) also changing to dry to moist.					
	17						
	18						
	19						
	20						

PROJECT: PBOW - Acid Area 2+3 RI

HOLE NO. AA2-PZ03

ENG FORM 5056A-R, AUG 94 (Proponent: CECW-EG)

Figure 5-1 (continued)

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER: AA2-PZ03

PROJECT: PBOW - Acid Area 2+3 RI

INSPECTOR:

SHEET 4 OF 4 SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	SAMPLE NUMBER OR CORE RUN NO. (e)	CHAIN OF CUSTODY NO. (f)	BLOW COUNT (g)	REMARKS (h)
		TD - 20.2' hit refusal on bedrock.					
	21						
	22						
	23						

PROJECT: PBOW - Acid Area 2+3 RI

HOLE NO. AA2-PZ03

ENG FORM 5056A-R, AUG 94 (Proponent: CEOR-EG)

Figure 5-1 (continued)

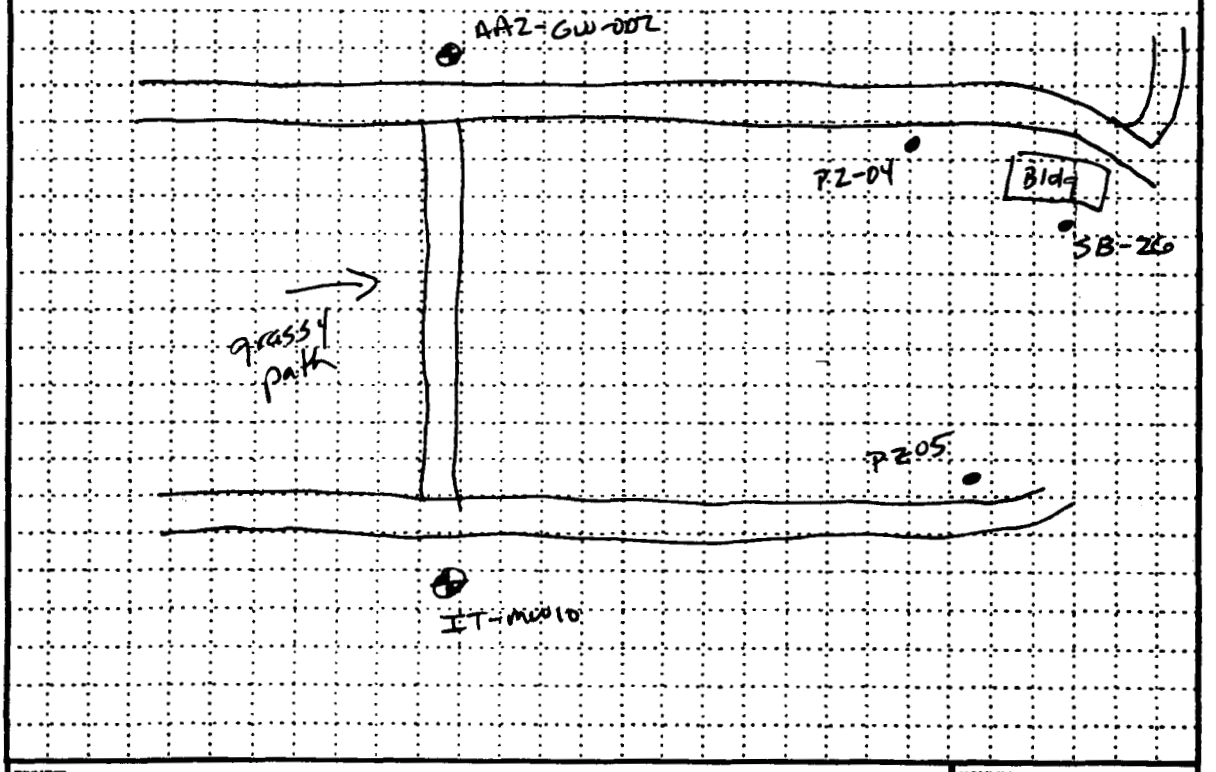
HTRW DRILLING LOG	DISTRICT USACE - Nashville	HOLE NUMBER AAZ-PZ04
1. COMPANY NAME Jacobs Engineering	2. DRILLING SUBCONTRACTOR Fronte Drilling	SHEET 1 OF 4 SHEETS
3. PROJECT PBOW - Acid Area 2+3 RI	4. LOCATION AAZ-PZ04	
5. NAME OF DRILLER Jeremy Leckrone	6. MANUFACTURER'S DESIGNATION OF DRILL Geoprobe 5400	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT Macro Core 2 1/4"	8. HOLE LOCATION AAZ-PZ04	
	9. SURFACE ELEVATION	
	10. DATE STARTED 11-2-04	11. DATE COMPLETED 11-2-04
12. OVERBURDEN THICKNESS 21.5'	15. DEPTH GROUNDWATER ENCOUNTERED	
13. DEPTH DRILLED INTO ROCK	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED	
14. TOTAL DEPTH OF HOLE 21.5'	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)	

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
None			

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %
None						

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
1" PVC piezo				

LOCATION SKETCH/COMMENTS SCALE:



PROJECT PBOW- Acid Areas 2+3 RI	HOLE NO. AAZ-PZ04

Figure 5-1

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER: AAZ-PZ04

PROJECT: PBOW - Acid Area 2+3 RI

INSPECTOR:

SHEET 2 OF 4 SHEETS

ELEV. (+)	DEPTH (ft)	DESCRIPTION OF MATERIALS (+)	FIELD SCREENING RESULTS (+)	SAMPLE NO. OR CORE RUN NO. (+)	ANALYTICAL SAMPLE NO. (+)	BLOW COUNT (+)	REMARKS (+)
		0"-4", OL, organic silt, dark brown (10YR 4/1) soft, loose, moist.					
	1	4"-8', ML, silt, medium brown (10YR, 4/4), firm to stiff, no plasticity, moist to dry. Increased clay content from 6.5' to 8.0'			NONE		
	2						
	3						
	4						
	5						
	6						
	7						
	8	8'-13', CL, Clay, medium brown (10YR, 4/4) changing to med to dark gray (10YR, 4/1) at 9.8', Firm to soft, low to medium plasticity increasing to medium to high plasticity at 10.5',					
	9						
	10						

PROJECT: PBOW - Acid Area 2+3 RI

HOLE NO. AAZ-PZ04

ENG FORM 5098A-R, AUG 94 (Proponent: CECW-EG)

Figure 5-1 (continued)

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER: AAZ-PZ04

PROJECT: PBOW - Acid Area 2+3 RI

INSPECTOR:

SHEET 3 OF 4 SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	SAMPLE NO. (e)	PENETRATION RESISTANCE (f)	BLOW COUNT (g)	REMARKS (h)
		moist to wet.					
	11						
	12						
	13	13' - 21.5', CH, clay medium ~~brown~~ dark gray (10YR, 5/1), soft high plasticity, moist to wet.					
	14						
	15						
	16						
	17						
	18						
	19						
	20	rock fragments at 19.5'					

PROJECT: PBOW - Acid Area 2+3 RI

HOLE NO. AAZ - PZ04

ENG FORM 5056A-R, AUG 94 (Proponent: CEOW-EG)

Figure 5-1 (continued)

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER: AAZ-PZ04

PROJECT: PBOW - Acid Area 2+3 RI

INSPECTOR:

SHEET 4 OF 4 SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	SAMPLE NO. (e)	ANALYTICAL SAMPLE NO. (f)	BLOW COUNT (g)	REMARKS (h)
	21	increasing rock fragments from 19.5' to 21.5'					
	22	TD - 21.5 refusal on bedrock, limestone or shaley limestone.					
	23						
	24						
	25						
	26						
	27						
	28						
	29						
	30						

PROJECT: PBOW - Acid Area 2+3 RI

HOLE NO. AAZ-PZ04

ENG FORM 5056A-R, AUG 94 (Proponent: CECW-EG)

Figure 5-1 (continued)

HTRW DRILLING LOG

DISTRICT: USACE - Nashville		HOLE NUMBER: AA2-PZ05
1. COMPANY NAME: Jacobs Engineering	2. DRILLING SUBCONTRACTOR: Frontz Drilling	SHEET 1 OF 3 SHEETS
3. PROJECT: PBOW - Acid Areas 2+3 RI	4. LOCATION: AA2 - PZ05	
5. NAME OF DRILLER: Jeremy Leckrone	6. MANUFACTURER'S DESIGNATION OF DRILL: Geoprobe 5400	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: Macro Core 2 1/8"	8. HOLE LOCATION: AA2-PZ05	
	9. SURFACE ELEVATION	
	10. DATE STARTED: 11-2-04	11. DATE COMPLETED: 11-2-04
12. OVERBURDEN THICKNESS: 19'	15. DEPTH GROUNDWATER ENCOUNTERED	
13. DEPTH DRILLED INTO ROCK	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED	
14. TOTAL DEPTH OF HOLE: 19'	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)	

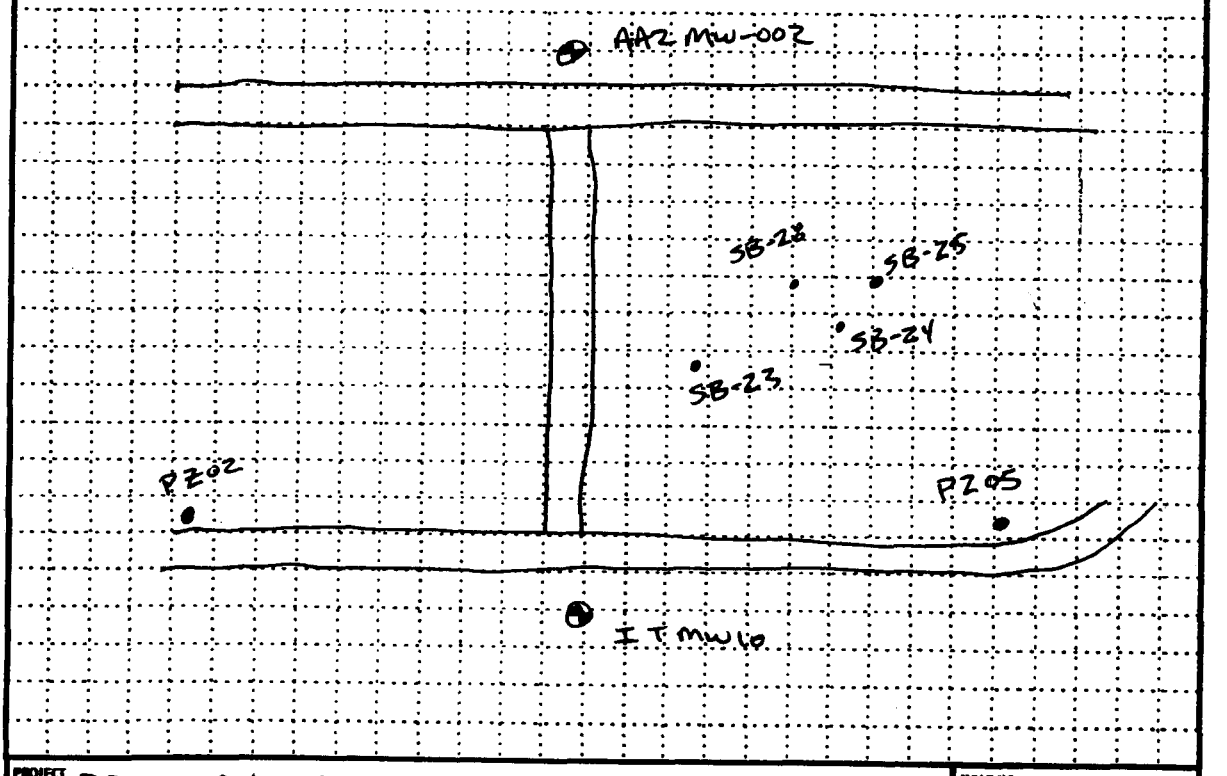
18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
None			

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %
None						

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
Set 1" PVC piezo				

LOCATION SKETCH/COMMENTS

SCALE:



PROJECT	HOLE NO.
PBOW- Acid Area 2+3 RI	AA2-PZ05

Figure 5-1

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER AAZ-PZ05

PROJECT PBOW-Acid Area 2+3

INSPECTOR

SHEET 2 OF 3 SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	SAMPLE NO. OR CORE RUN NO. (e)	ANALYTICAL SAMPLE NO. (f)	BLOW COUNT (g)	REMARKS (h)
		0"-9" OL, organic silt, dark brown (10YR, 3/1), soft, loose, moist.					
	1	9"-1.5', SM, silty sand, medium brown (10YR, 4/4), firm to soft, loose, moist.			NONE		
	2	1.5'-2.0', CL, silty clay, medium brown (10YR, 4/4) firm, low plasticity, moist					
	3	2.0'-3.0', CL, silty clay, medium brown (10YR, 5/3) soft, low to medium plasticity, moist					
	4	3.0-4.5, CL, silty clay with small silt lenses throughout, occasional gravel and pebbles, sub angular, medium brown (10YR, 5/4), firm to soft low to medium plasticity, moist					
	5	4.5'-7.0', CL, clay, medium brown (10YR, 4/4) soft, medium to high plasicity, moist to wet					
	6	7.0'-8.0', ML/SM, sandy silt to silty sand, some clayey zones, light brown (10YR, 5/4), firm, loose, moist.					
	7	8.0'- , CL, clay, silty in places, medium gray (10YR, 4/1), soft to firm, low to medium plasticity, medium to high plasticity in places, moist to wet.					
	8						
	9						
	10						

PROJECT PBOW-Acid Area 2+3 RI

HOLE NO. AAZ-PZ05

ENG FORM 5056A-R, AUG 94 (Proponent: CECW-EG)

Figure 5-1 (continued)

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER: AAZ-PZ05

PROJECT: PBOW - Acid Area 2+3 RI

INSPECTOR:

SHEET 3 OF 3 SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	SAMPLE NO. (e)	ANALYTICAL SAMPLE NO. (f)	BLOW COUNT (g)	REMARKS (h)
	11	same as above					
	12						
	13						
	14						
	15						
	16						
	17						
	18	weathered rock fragments bottom 1".					
	19	TD - 19.0', refusal on bedrock. Limestone or limey shale					
	20						

PROJECT: PBOW - Acid Area 2+3 RI

HOLE NO. AAZ-PZ05

ENG FORM 5056A-R, AUG 94 (Proponent: CECW-EG)

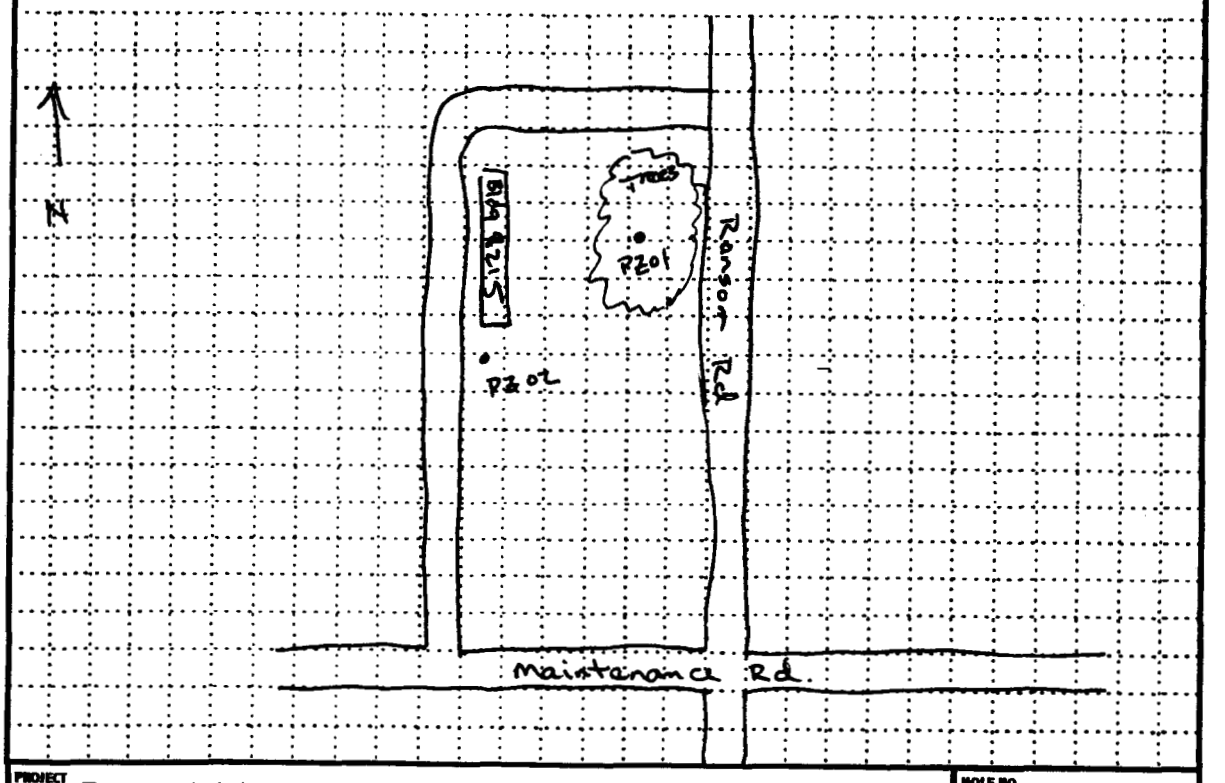
Figure 5-1 (continued)

HTRW DRILLING LOG

DISTRICT	USACE - Nashville
HOLE NUMBER	AA3-PZ01
1. COMPANY NAME	Jacobs Engineering
2. DRILLING SUBCONTRACTOR	Frontz Drilling
SHEET	1 OF 4 SHEETS
3. PROJECT	PBOW - Acid Area 2+3 RI
4. LOCATION	AA3 - PZ01
5. NAME OF DRILLER	Jeremy Lackrone
6. MANUFACTURER'S DESIGNATION OF DRILL	Geoprobe 5400
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT	Macro core 2"&3"
8. HOLE LOCATION	AA3 - PZ01
9. SURFACE ELEVATION	
10. DATE STARTED	11-3-04
11. DATE COMPLETED	11-3-04
12. OVERBURDEN THICKNESS	21'
13. DEPTH DRILLED INTO ROCK	
14. TOTAL DEPTH OF HOLE	21'
15. DEPTH GROUNDWATER ENCOUNTERED	
16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED	
17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)	
18. GEOTECHNICAL SAMPLES	None
DISTURBED	
UNDISTURBED	
19. TOTAL NUMBER OF CORE BOXES	
20. SAMPLES FOR CHEMICAL ANALYSIS	None
VOC	
METALS	
OTHER (SPECIFY)	
OTHER (SPECIFY)	
OTHER (SPECIFY)	
21. TOTAL CORE RECOVERY	%
22. DISPOSITION OF HOLE	1" PVC piezometer
BACKFILLED	
MONITORING WELL	
OTHER (SPECIFY)	
23. SIGNATURE OF INSPECTOR	

LOCATION SKETCH/COMMENTS

SCALE:



PROJECT	PBOW - Acid Area 2+3 RI
HOLE NO.	AA3 - PZ01

Figure 5-1

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER: AA3-PZ01

PROJECT: PBOW - Acid Area 2+3 RI

INSPECTOR:

SHEET 2 OF 4 SHEETS

ELEV. (+)	DEPTH (ft)	DESCRIPTION OF MATERIALS (+)	FIELD SCREENING RESULTS (+)	SAMPLE NO. (+)	ANALYTICAL SAMPLE NO. (+)	BLOW COUNT (+)	REMARKS (+)
	1	0"-7", OL/OH, organic silt to organic clay, dark brown (10YR, 2/2), soft to firm, loose, moist.					
	2	7"-5.0', ML, clayey silt, light to medium brown (10YR, 5/3), firm to stiff, no plasticity, dry.					
	3						
	4						
	5	5.0'-6.75', ML, silt, (light to medium brown 10YR, 5/3), soft, loose, moist.					
	6						
	7	6.75'-8.9', CL, silty clay, medium brown (10YR, 5/3) changing to med. gray (10YR, 5/1) at 8.5', soft to firm, low plasticity, moist to wet.					
	8						
	9	8.9'-21', CL, clay, medium gray (10YR, 5/1) soft to firm, low to med. plasticity, moist to wet					
	10						

PROJECT: PBOW - Acid Area 2+3 RI

HOLE NO. AA3-PZ01

ENG FORM 5056A-R, AUG 94 (Proponent: CECW-EG)

Figure 5-1 (continued)

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER: AA3-PZ01

PROJECT: PBOW - Acid Area 2+3 RI

INSPECTOR:

SHEET 3 OF 4 SHEETS

ELEV. (+)	DEPTH (ft)	DESCRIPTION OF MATERIALS (+)	FIELD SCREENING RESULTS (+)	DEPTH/ SAMPLE OR CORE RUN NO. (+)	ANALYTICAL SAMPLE NO. (+)	BLOW COUNT (+)	REMARKS (+)
	11						
	12						
	13						
	14						
	15	slight gradual color change to (5YR, 4/1) med gray with slight red tint. Rock fragments, sand and gravel size begin at 15.1 and increase in o/o downwards to bottom, change from soft to firm at 15.1'					
	16						
	17						
	18						
	19						
	20						

PROJECT: PBOW - Acid Area 2+3 RI

HOLE NO. AA3-PZ01

ENG FORM 5056A-R, AUG 94 (Proponent: CECW-EG)

Figure 5-1 (continued)

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER: AA3-PZ01

PROJECT: PBOW-Acid Area 2+3 RI

INSPECTOR:

SHEET 4 OF 4 SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD TESTING RESULTS (d)	REPRESENTATIVE SAMPLE OR CORE RUN NO. (e)	ANALYTICAL SAMPLE NO. (f)	BLOW COUNT (g)	REMARKS (h)
	21	TD - 21' hit refusal on bedrock.					
	22						
	23						
	24						
	25						
	26						
	27						
	28						
	29						
	30						

PROJECT: PBOW- Acid Area 2+3 RI

HOLE NO. AA3-PZ01

ENG FORM 5056A-R, AUG 94 (Proponent: CECW-EG)

Figure 5-1 (continued)

HTRW DRILLING LOG	DISTRICT USACE - Nashville	HOLE NUMBER AA3-PZ02
1. COMPANY NAME Jacobs Eng.	2. DRILLING SUBCONTRACTOR Frontz Drilling	SHEET 1 OF 4 SHEETS

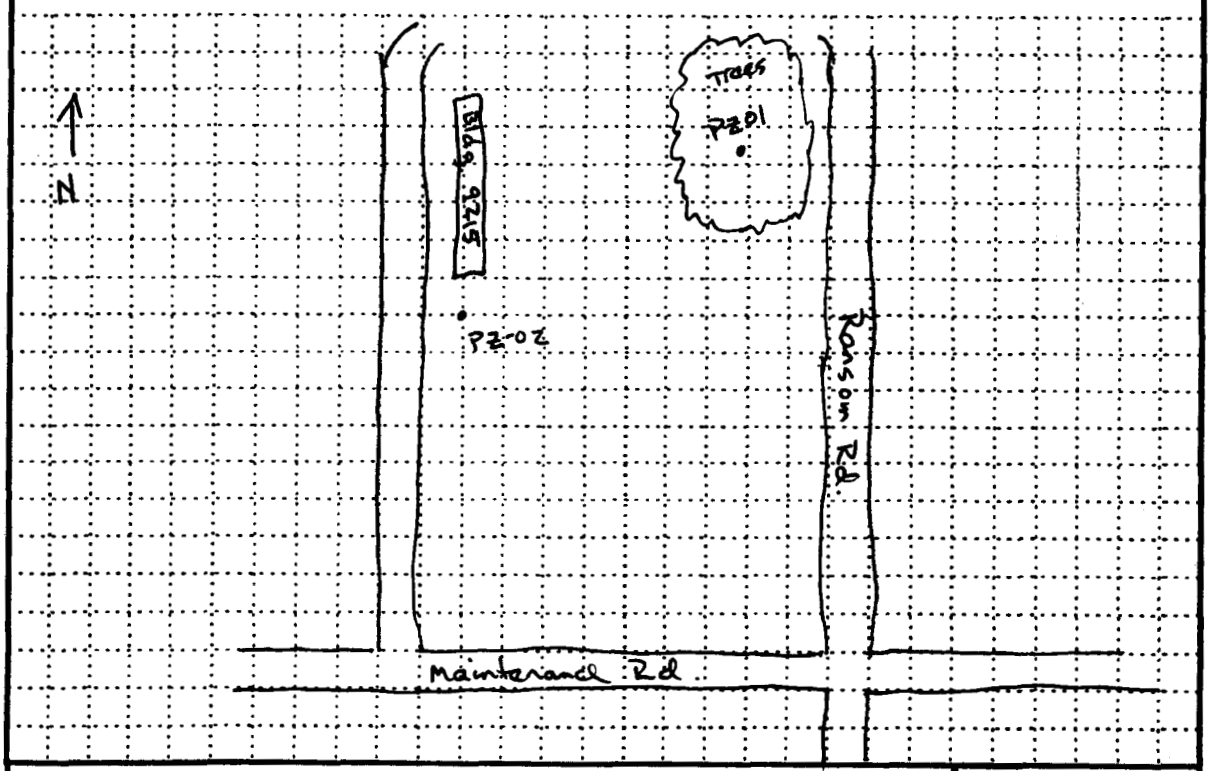
3. PROJECT PBOW - Acid Area 2+3 RI	4. LOCATION AA3 - PZ02
5. NAME OF DRILLER Jeremy Lackrone	6. MANUFACTURER'S DESIGNATION OF DRILL Geoprobe 5400
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT Macrocore 2 1/8"	8. HOLE LOCATION AA3 - PZ02
	9. SURFACE ELEVATION
	10. DATE STARTED 11-3-04 / 11. DATE COMPLETED 11-3-04
12. OVERBURDEN THICKNESS 25.2'	15. DEPTH GROUNDWATER ENCOUNTERED
13. DEPTH DRILLED INTO ROCK	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED
14. TOTAL DEPTH OF HOLE 25.2'	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
None			

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %
None						

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
1" PVC piezometer				

LOCATION SKETCH/COMMENTS SCALE:



PROJECT PBOW - Acid Area 2+3 RI	HOLE NO. AA3 - PZ02

Figure 5-1

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER: AA3-PZ02

PROJECT: PBOW - Acid Area 2+3 RI

INSPECTOR:

SHEET 2 OF 4 SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	SAMPLE NO. OR CORE RUN NO. (e)	ANALYTICAL SAMPLE NO. (f)	BLOW COUNT (g)	REMARKS (h)
		0"-4", OL, organic silt, dark brown (10YR 3/2) soft, loose, moist to dry.					
	1	4"-7", GM, silty gravel backfill, light to med. brown (10YR, 4/3), loose dry					
	2	7"-2', ML ~~SM~~ NOT, clayey silt, light to med brown (10YR, 4/3), firm, no plasticity, dry to moist.					
	3	2'-2.25', ML ~~SM~~ NOT, silt, light brown (10YR, 5/4) soft loose, dry.					
	4	2.25'-2.75, ML ~~SM~~ NOT, clayey silt, light to medium brown (10YR, 4/3), firm to stiff, moist					
	5	2.75 - 4.25', OL/OH, organic clayey silt to organic silty clay, dark brown, (10YR, 3/1) soft to firm, loose, moist to dry.					
	6	4.25 - 5.0', ML, clayey silt, med to dark brown (10YR, 4/2), firm, low plasticity, moist					
	7	5.0-5.25, ML, silt, medium brown (10YR, 4/4) soft, loose, moist					
	8	5.25'-6.0, CL, silty clay, med brown (10YR, 5/3) firm to stiff, low plast., moist					
	9	6.0-7', ML, clayey silt (10YR, 5/3), soft to firm moist to wet					
	10						

PROJECT: PBOW - Acid Area 2+3 RI

HOLE NO. AA3-PZ02

ENG FORM 5098A-R, AUG 94 (Proponent: CEOW-EG)

Figure 5-1 (continued)

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER AA3-PZ02

PROJECT PBOW- Acid Area 2+3 RI

INSPECTOR

SHEET 3 OF 4 SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	SAMPLE NO. (e)	CHAIN OF CUSTODY (f)	BLOW COUNT (g)	REMARKS (h)
		7.0-8.0' CL, clay medium brown (10YR, 5/3) soft, low to medium plasticity, moist to wet					
	11	8.0'-9.4', ML, slayey silt, medium brown (10YR, 5/3), soft to firm, moist to wet.					
	12	9.4'-18', CL, clay medium brown (10YR, 5/3) changing to medium gray (10YR, 4/1) at 10.25', soft to firm, medium plasticity, wet.					
	13						
		silty at 13.8' to 14.2'					
	14						
	15						
	16						
	17						
	18	18'-25.2', CH, Clay. medium gray (10YR, 4/1) soft to firm, medium to high plasticity, wet to moist					
	19						
	20						

PROJECT PBOW- Acid Area 2+3 RI

HOLE NO. AA3-PZ02

ENG FORM 5056A-R, AUG 94 (Proponent: CEOW-EG)

Figure 5-1 (continued)

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER: AA3-PZ02

PROJECT: PBOW-Acid Area 2+3

INSPECTOR:

SHEET 4 OF 4 SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	SAMPLE NO. (e)	ANALYTICAL SAMPLE NO. (f)	BLOW COUNT (g)	REMARKS (h)
	21	increased plasticity at 21'; soft.					
	22						
	23	rock fragment increasing downwards from 23' to bottom.					
	24	firm at 24', decreased plasticity to bottom.					
	25	TD - 25.2' hit refusal on bedrock.					
	26						
	27						
	28						
	29						
	30						

PROJECT: PBOW- Acid Area 2+3 RI

HOLE NO. AA3-PZ02

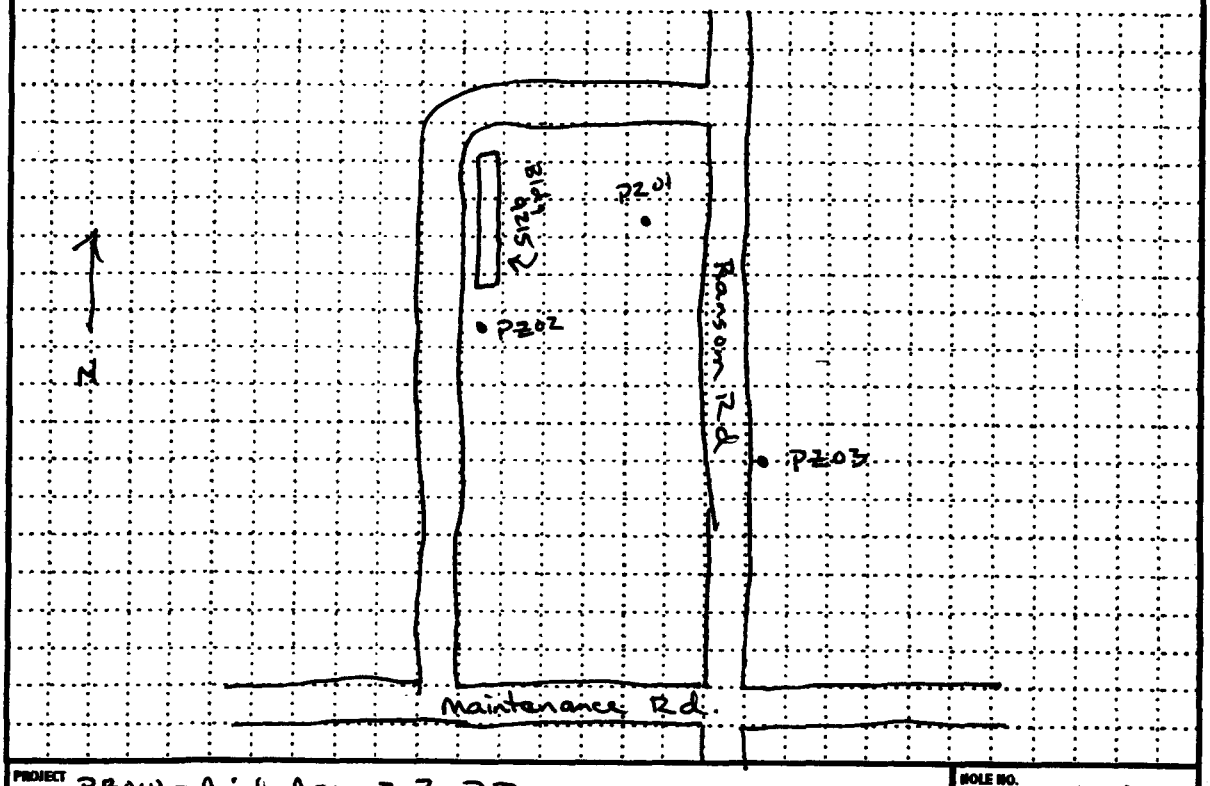
ENG FORM 5058A-R, AUG 94 (Proponent: CECW-EG)

Figure 5-1 (continued)

HTRW DRILLING LOG	DISTRICT USACE - Nashville	HOLE NUMBER AA3-PZ03
1. COMPANY NAME Jacobs Eng.	2. DRILLING SUBCONTRACTOR Frontz Drilling	SHEET 1 OF 4 SHEETS
3. PROJECT PBOW - Acid Area 2+3 RI	4. LOCATION AA3 - PZ03	
5. NAME OF DRILLER Jeremy Lackrone	6. MANUFACTURER'S DESIGNATION OF DRILL Geoprobe 5400	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT Macro core 2 7/8"	8. HOLE LOCATION AA3-PZ03	
	9. SURFACE ELEVATION	
	10. DATE STARTED 11-3-04	11. DATE COMPLETED 11-3-04
12. OVERBURDEN THICKNESS 24.9'	15. DEPTH GROUNDWATER ENCOUNTERED	
13. DEPTH DRILLED INTO ROCK	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED	
14. TOTAL DEPTH OF HOLE 24.9'	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)	

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES			
None						
20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %
None						
22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR		
1" PVC piezometer						

LOCATION SKETCH/COMMENTS SCALE:



PROJECT PBOW - Acid Area 2+3 RI	HOLE NO. AA3-PZ03

Figure 5-1

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER: AA3-PZ03

PROJECT: PBOW - Acid Area 2+3

INSPECTOR:

SHEET 2 OF 4 SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	SAMPLE NO. (e)	PENETRATION RESISTANCE (f)	BLOW COUNT (g)	REMARKS (h)
		0"-4", OL, organic silt, dark brown (10YR, 3/2), soft, loose, moist.					
	1	4" - 5.1', ML, silt, w/ minimal clay, medium brown (10YR, 4/4), firm to stiff, no plasticity. loose in places, dry.					
	2						
	3						
	4						
	5	5.1' - 8.7', CL, silty clay, medium brown (10YR, 5/3), firm to stiff, low plasticity, moist. silt lense from 6.7' to 6.8'.					
	6						
	7						
	8						
	9	8.7' - 11.4', CL, clay, silty med brown (10YR, 5/3) changing to (10YR/5/1) at 10.4', soft to firm, firm at places.					
	10						

PROJECT: PBOW - Acid Area 2+3

HOLE NO. AA3-PZ03

ENG FORM 5056A-R, AUG 94 (Proponent: CEOW-EG)

Figure 5-1 (continued)

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER AA3-PZ03

PROJECT PBOW - Acid Area 2+3

INSPECTOR

SHEET 3 OF 4 SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	REPRESENTATIVE SAMPLE OR CORE RUN NO. (e)	ANALYTICAL SAMPLE NO. (f)	BLOW COUNT (g)	REMARKS (h)
		silt lense from 10.1 to 10.3'					
	11						
		11.4' to 13.3', ML, clayey, dark to med gray (10YR, 4/1), firm, wet.					
	12						
	13						
		13.3 - 18.25', ML/SM, silt and fine sand, dark to med gray (10YR 4/1), saturated.					
	14						
	15						
	16						
	17						
	18						
		18.25'-24.9', CH, clay medium gray (10YR 4/1) soft, high plasticity, wet.					
	19						
	20						

PROJECT PBOW - Acid Area 2+3

HOLE NO. AA3-PZ03

ENG FORM 5056A-R, AUG 94 (Proponent: CEOW-EG)

Figure 5-1 (continued)

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER AA3 - PZ03

PROJECT PBOW - Acid Area 2+3 RI

INSPECTOR

SHEET 4 OF 4 SHEETS

ELEV. (+)	DEPTH (ft)	DESCRIPTION OF MATERIALS (+)	FIELD HYDROCARBON RESULTS (+)	UNIFIED SOIL CLASS. OR CORE SAMPLE NO. (+)	ANALYTICAL SAMPLE NO. (+)	BLOW COUNT (+)	REMARKS (+)
	21						
	22						
	23						
	24	rock fragments at 24', sand and gravel size, subangular					
	25	TD - 24.9' - hit refusal on bedrock					
	26						
	27						
	28						
	29						
	30						

PROJECT PBOW - Acid Area 2+3 RI

HOLE NO. AA3 - PZ03

ENG FORM 5056A-R, AUG 94 (Proponent: CECW-EG)

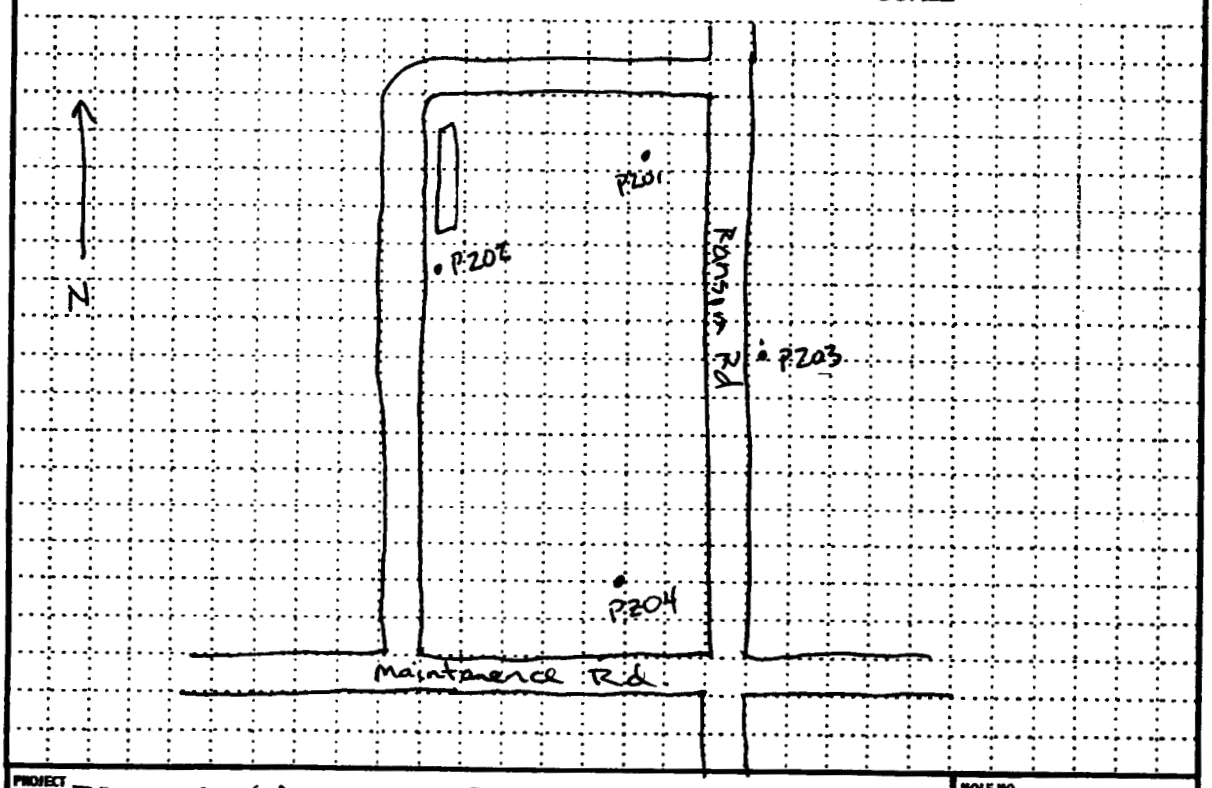
Figure 5-1 (continued)

HTRW DRILLING LOG

DISTRICT	USACE - Nashville
HOLE NUMBER	AA3-PZ04
1. COMPANY NAME	Jacobs Eng
2. DRILLING SUBCONTRACTOR	Frontz Drilling
SHEET	1 OF 4 SHEETS
3. PROJECT	PBOW - Acid Area 2+3 RI
4. LOCATION	AA3 - PZ04
5. NAME OF DRILLER	Jeremy Lockrone
6. MANUFACTURER'S DESIGNATION OF DRILL	Geoprobe 5400
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT	Macrocore 2 7/8"
8. HOLE LOCATION	AA3 - PZ04
9. SURFACE ELEVATION	
10. DATE STARTED	11-4-04
11. DATE COMPLETED	11-4-04
12. OVERBURDEN THICKNESS	24.3'
15. DEPTH GROUNDWATER ENCOUNTERED	
13. DEPTH DRILLED INTO ROCK	
16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED	
14. TOTAL DEPTH OF HOLE	24.3'
17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)	
18. GEOTECHNICAL SAMPLES	None
DISTURBED	
UNDISTURBED	
19. TOTAL NUMBER OF CORE BOXES	
20. SAMPLES FOR CHEMICAL ANALYSIS	None
VOC	
METALS	
OTHER (SPECIFY)	
OTHER (SPECIFY)	
OTHER (SPECIFY)	
21. TOTAL CORE RECOVERY	%
22. DISPOSITION OF HOLE	1" PVC piezo
BACKFILLED	
MONITORING WELL	
OTHER (SPECIFY)	
23. SIGNATURE OF INSPECTOR	

LOCATION SKETCH/COMMENTS

SCALE:



PROJECT	PBOW - Acid Areas 2+3 RI
HOLE NO.	AA3-PZ04

Figure 5-1

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER: AA3-PZ04

PROJECT: PBOW - Acid Areas 2+3 RI

INSPECTOR:

SHEET 2 OF 4 SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	SAMPLE NO. OR CORE RUN NO. (e)	ANALYTICAL SAMPLE NO. (f)	BLOW COUNT (g)	REMARKS (h)
		0"-9", OL, organic silt, dark brown (10YR, 3/2) soft, loose, moist					
	1	9"-21", ML, silt with fine sand, yellowish brown (10YR, 5/3), soft to firm, loose, moist.					
	2	1.75'-4.5, ML, clayey silt, medium brown (10YR, 4/3), wood fragments from 1.75'-1.9', firm, low plasticity, moist.					
	3						
	4						
	5	4.5'-7.25', CL, silty clay, soft to firm, medium brown (10YR, 4/4) low to medium plasticity, moist to wet.					
	6						
	7						
		7.25-8.1', ML, clayey silt, medium brown (10YR, 5/4), stiff, moist					
	8	8.1'-19.4, CL, clay, medium gray (10YR, 4/1) soft to firm, low to medium plasticity, moist to wet.					
	9						
	10						

NONE

PROJECT: PBOW - Acid Areas 2+3 RI

HOLE NO. AA3-PZ04

EIG FORM 5058A-R, AUG 94 (Proponent: CEOW-EG)

Figure 5-1 (continued)

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER: AA3-PZ04

PROJECT: PBOW - Acid Areas 2+3 RI

INSPECTOR:

SHEET 3 OF 4 SHEETS

ELEV. (+)	DEPTH (ft)	DESCRIPTION OF MATERIALS (+)	FIELD SCREENING RESULTS (+)	SELECTED SAMPLE OR CORE FOR LAB. (+)	ANALYTICAL SAMPLE NO. (+)	BLOW COUNT (+)	REMARKS (+)
	11						
	12	same as above					
	13						
	14						
	15						
	16						
	17						
	18						
	19						
	20	19.4' - 23.0', CH, clay medium gray (10YR, 4/1) high plasticity, soft					

PROJECT: PBOW - Acid Areas 2+3 RI

HOLE NO. AA3-PZ04

ENG FORM 5056A-R, AUG 94 (Proponent: CECW-EG)

Figure 5-1 (continued)

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER: AA3-PZ04

PROJECT: PBOW-Acid Areas 2+3 RI

INSPECTOR:

SHEET 4 OF 4 SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD TESTING RESULTS (d)	DISTURBED SAMPLE OR CORE RUN NO. (e)	ANALYTICAL SAMPLE NO. (f)	BLOW COUNT (g)	REMARKS (h)
		moist to wet.					
	21						
	22	small percentage of rock fragments, sand and gravel size, sub angular.					
	23	23.0'-24.3', CL, clay, with rock fragments, increasing in percentage downward, medium gray (10YR, 4/1) stiff, moist to dry.					
	24						
	25	TD - 24.3 - hit refusal on bedrock					
	26						
	27						
	28						
	29						
	30						

PROJECT: PBOW-Acid Areas 2+3 RI

HOLE NO. AA3-PZ04

ENG FORM 5056A-R, AUG 94 (Proponent: CEOD-EG)

Figure 5-1 (continued)

HTRW DRILLING LOG

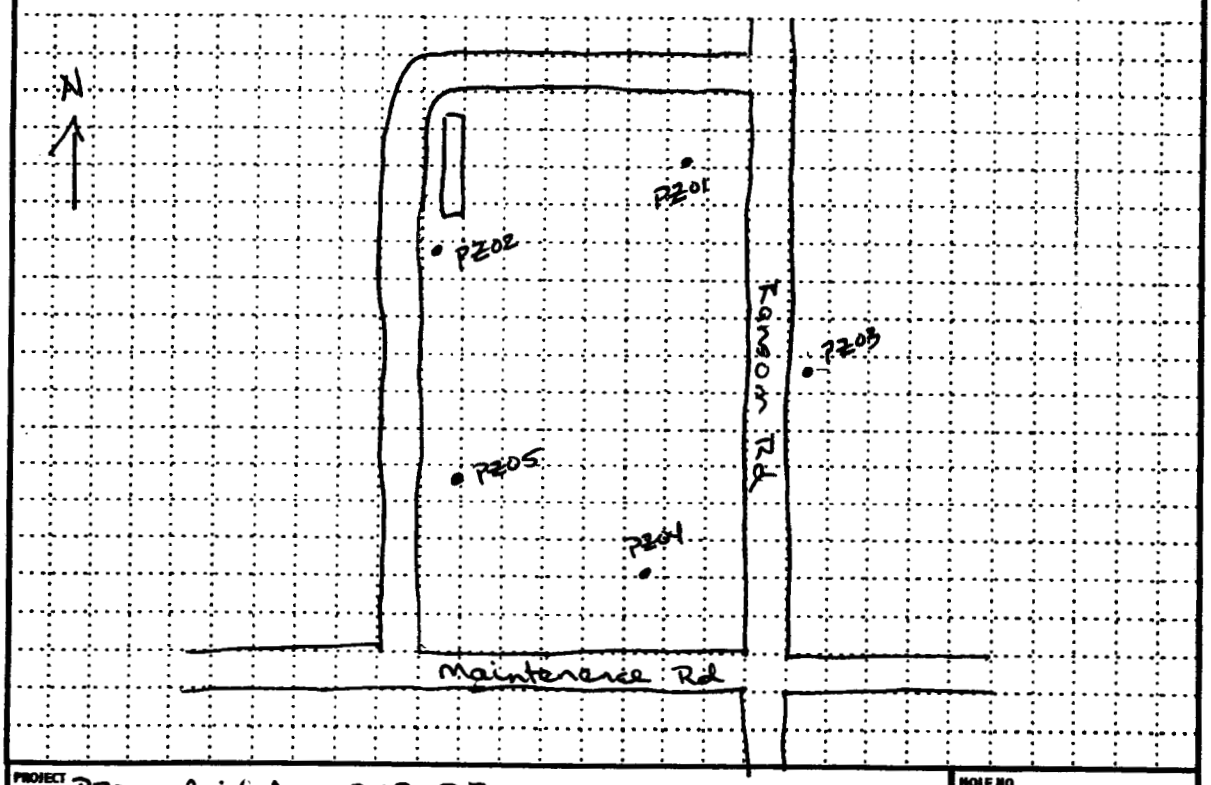
DISTRICT: USACE - Nashville		HOLE NUMBER: AA3-PZ05
1. COMPANY NAME: Jacobs Eng	2. DRILLING SUBCONTRACTOR: Frontz Drilling	SHEET 1 OF 4 SHEETS
3. PROJECT: PBOW - Acid Area 2+3 RI	4. LOCATION: AA3-PZ05	
5. NAME OF DRILLER: Jeremy Heckrone	6. MANUFACTURER'S DESIGNATION OF DRILL: Geoprobe 5400	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: Macro core 2"ø"	8. HOLE LOCATION: AA3-PZ05	
	9. SURFACE ELEVATION	
	10. DATE STARTED: 11-4-04	11. DATE COMPLETED: 11-4-04
12. OVERBURDEN THICKNESS: 24.0'	15. DEPTH GROUNDWATER ENCOUNTERED	
13. DEPTH DRILLED INTO ROCK	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED	
14. TOTAL DEPTH OF HOLE: 24.0'	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)	

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
None			

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %
None						

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
1" PVC piezometer				

LOCATION SKETCH/COMMENTS SCALE:



PROJECT: PBOW-Acid Area 2+3 RI | HOLE NO. AA3-PZ05

Figure 5-1

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER: AA3-PZ05

PROJECT: PBOW - Acid Area 2+3 RI

INSPECTOR:

SHEET 2 OF 4 SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	GROSS SAMPLE OR CORE BOX NO. (e)	ANALYTICAL SAMPLE NO. (f)	BLOW COUNT (g)	REMARKS (h)
	1	0"-8", OL, organic silt, dark brown (10YR, 3/2) black granular burn material or cinders from 5"-7", firm, moist.					
	2	8"-13", ML, silt, dark brown (10YR, 3/3), firm to stiff, loose, dry to moist					
	3	13"-2.5', ML, clayey silt stiff, low plasticity, dark brown (10YR, 3/3) changing to (medium brown (10YR, 4/4) at 2'.					
	4	2.5'-6.2', CL, silty clay, medium brown (10YR, 5/3) firm to stiff, med to low plasticity, moist.					
	5						
	6						
	7	6.2'-16.75, CL, clay medium brown (10YR, 4/4) changing to medium gray (10YR, 4/1) at 8.0', soft to firm, low to medium plasticity, moist to wet					
	8						
	9						
	10						

PROJECT: PBOW - Acid Area 2+3 RI

HOLE NO. AA3-PZ05

ENG FORM 5056A-R, AUG 94 (Proponent: CECW-EG)

Figure 5-1 (continued)

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER: AA3-PZ05

PROJECT: PBOW - Acid Areas 2+3 RI

INSPECTOR:

SHEET 3 OF 4 SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	SCREENED SAMPLE OR CORE SIZE NO. (e)	ANALYTICAL SAMPLE NO. (f)	BLOW COUNT (g)	REMARKS (h)
	11						
	12						
	13						
	14						
	15						
	16						
	17	16.75 - 19.2, CH, clay light to med gray (10YR, 5/1), soft, medium to high plasticity, wet.					
	18						
	19						
	20	19.2 - 24.0, CL, clay med grey (10YR, 4/1), soft to firm, medium plasticity moist to dry.					

PROJECT: PBOW - Acid Areas 2+3 RI

HOLE NO. AA3 - PZ05

ENG FORM 5058A-R, AUG 94 (Proponent: CECW-EG)

Figure 5-1 (continued)

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER: AA3-PZ05

PROJECT: PBOW - Acid Area 2+3 RI

INSPECTOR:

SHEET 4 OF 4 SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD screening results (d)	SAMPLE NO. (e)	ANALYTICAL SAMPLE NO. (f)	BLOW COUNT (g)	REMARKS (h)
	21	rock fragments at 20.8' increasing in percentage downward					
	22						
	23						
	24	TD - 24.0 - hit refusal on bedrock at 24.0'					
	25						
	26						
	27						
	28						
	29						

PROJECT: PBOW - Acid Area 2+3 RI

HOLE NO. AA3 - PZ05

ENG FORM 5056A-R, AUG 94 (Proponent: CEOW-EG)

Figure 5-1 (continued)

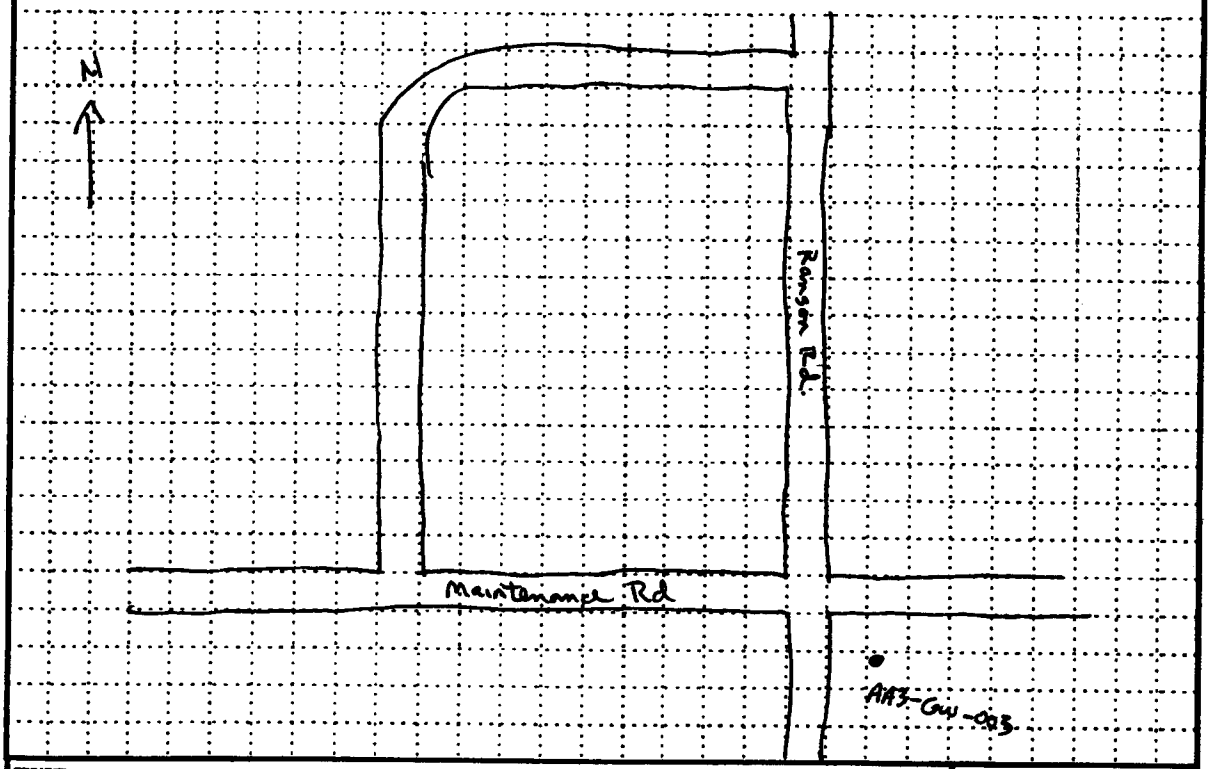
Appendix B
Borehole Logs for Permanent Monitoring Wells

HTRW DRILLING LOG

DISTRICT	USACE - Nashville
HOLE NUMBER	AA3-GW-003
1. COMPANY NAME	Jacobs Eng.
2. DRILLING SUBCONTRACTOR	Frontz Drilling
SHEET / SHEETS	1 OF 4
3. PROJECT	AA3 RI
4. LOCATION	AA3-GW-003
5. NAME OF DRILLER	Rob Hamilton
6. MANUFACTURER'S DESIGNATION OF DRILL	CME 75
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT	4¼ Augers 2" split spoon
8. HOLE LOCATION	AA3-GW-003
9. SURFACE ELEVATION	
10. DATE STARTED	12-3-04
11. DATE COMPLETED	12-3-04
12. OVERBURDEN THICKNESS	24'
15. DEPTH GROUNDWATER ENCOUNTERED	2.5
13. DEPTH DRILLED INTO ROCK	N/A
16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED	
14. TOTAL DEPTH OF HOLE	24'
17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)	
18. GEOTECHNICAL SAMPLES	None
DISTURBED	
UNDISTURBED	
19. TOTAL NUMBER OF CORE BOXES	N/A
20. SAMPLES FOR CHEMICAL ANALYSIS	None
VOC	
METALS	
OTHER (SPECIFY)	
OTHER (SPECIFY)	
OTHER (SPECIFY)	
21. TOTAL CORE RECOVERY	%
22. DISPOSITION OF HOLE	Installed 2" PVC well
BACKFILLED	
MONITORING WELL	
OTHER (SPECIFY)	
23. SIGNATURE OF INSPECTOR	

LOCATION SKETCH/COMMENTS

SCALE:



PROJECT	Acid Area 2+3 RI
HOLE NO.	AA3-GW-003

Figure 5-1

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER: AA3-GW-003

PROJECT: Acid Area 2+3 RI

INSPECTOR:

SHEET 2 OF 4 SHEETS

ELEV. (1)	DEPTH (2)	DESCRIPTION OF MATERIALS (4)	FIELD ANALYSIS RESULTS (4)	SAMPLE NO. (4)	ANALYTICAL SAMPLE NO. (4)	BLOW COUNT (4)	REMARKS (4)
		0"-6", OL, organic silt, dark brown (10YR, 3/2), soft to firm, loose, moist	0 ppm			2,2,2,2	
	1	6"-9", ML, fine sandy silt, medium brown (10YR 5/8), soft, loose, moist.					
	2	9"-2'-CL, silty clay, medium brown (10YR, 5/3) soft to firm, low plasticity moist.				1,1,4,4	
	3	2'-3.5, ML, silt, soft to firm, loose, medium brown (10YR, 5/3), moist					
	4	3.5-10.25', ML, clayey silt, medium brown (10YR, 4/3), moist, wet at 4.0 feet, soft to firm, low plasticity.				1,1,2,4	
	5						
	6					4,4,6,7	
	7						
	8	color change to medium gray at 8.0' (10YR, 4/1).				4,4,2,2	
	9						
	10						

PROJECT: Acid Area 2+3 R

HOLE NO. AA3-GW-003

ENG FORM 5056A-R, AUG 94 (Proponent: CECW-EG)

Figure 5-1 (continued)

HTRW DRILLING LOG (CONTINUATION SHEET)

PROJECT: Acid Areas 2+3 RI | INSPECTOR: | HOLE NUMBER: AA3-GW-003 | SHEET 3 OF 4 SHEETS

ELEV. (ft)	DEPTH (ft)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	REPRESENTATIVE SAMPLE OR CORE BOX NO. (e)	ANALYTICAL SAMPLE NO. (f)	BLOW COUNT (g)	REMARKS (h)
		10.25' - 17', CL, silty clay with small silt lenses, less than 1/8", medium gray (10YR, 4/1) soft to firm, low plasticity, wet.	0ppm			weight of tool, 2,3,4	
	11						
	12					weight of tool, 1,2,1	
	13						
	14					weight of tool, 2,3,2	
	15						
	16					2,3,3,3	
	17	17' - 23', CL/CH, clay, medium gray (10YR, 4/1) soft, medium to high plasticity, wet.					
	18					WT, WT WT, 2	
	19						
	20						

PROJECT: Acid Area 2+3 RI | HOLE NO. AA3-GW-003

ENG FORM 5056A-R, AUG 94 (Proponent: CECW-EG)

* WT, - weight of tool.

Figure 5-1 (continued)

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER: AA3-GW-003

PROJECT: Acid Areas 2+3 RI

INSPECTOR:

SHEET 4 OF 4 SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	SAMPLE NO. (e)	ANALYTICAL SAMPLE NO. (f)	BLOW COUNT (g)	REMARKS (h)
			0 ppm			WT, WT, WT, 2	
	21						
	22					1,5,7,6	
	23	23-24', CL, clay, with rock fragments, olive gray (10YR, 4/6), firm to stiff, low plasticity, moist to dry.					
	24	TD-24'					

PROJECT: Acid Areas 2+3 RI

HOLE NO. AA3-GW-003

ENG FORM 5058A-R, AUG 94 (Proponent: CEOW-EG)

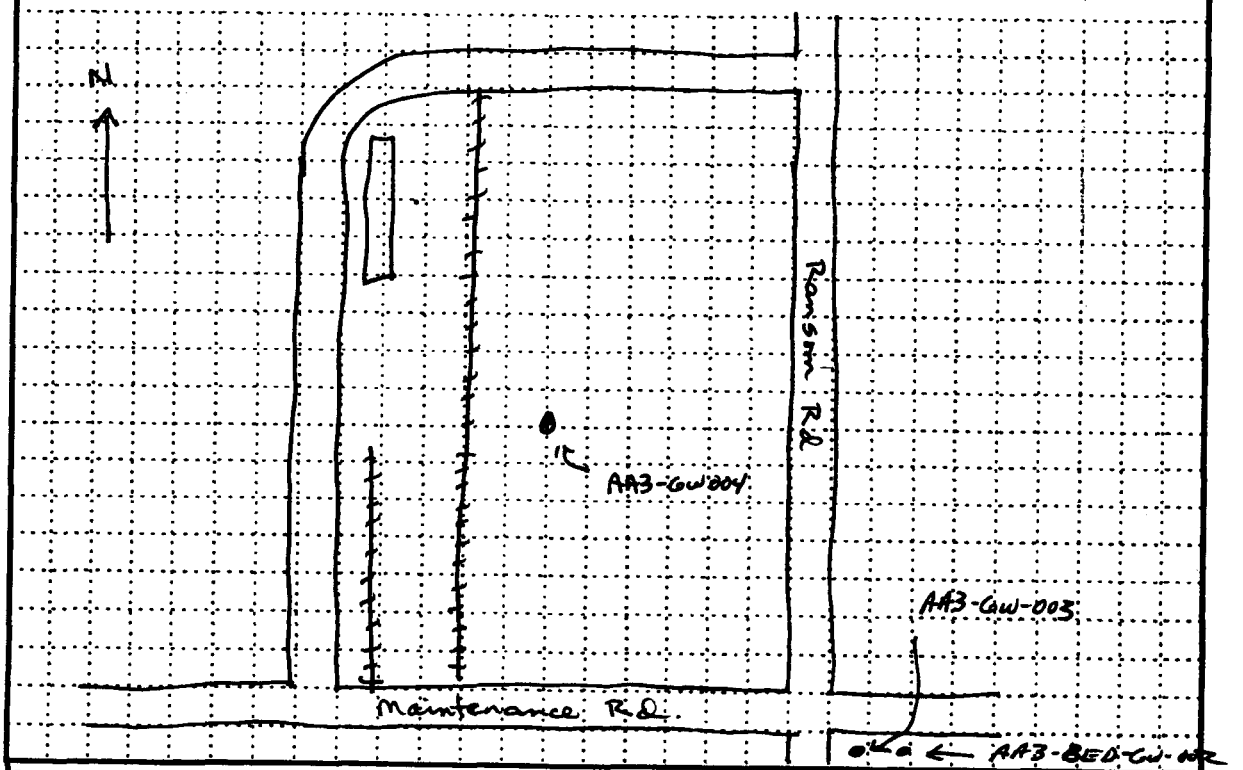
Figure 5-1 (continued)

HTRW DRILLING LOG

DISTRICT	USACE - Nashville
HOLE NUMBER	AA3-GW-004
1. COMPANY NAME	Jacobs Eng
2. DRILLING SUBCONTRACTOR	Frontz Drilling
SHEET / OF SHEETS	1 OF 4
3. PROJECT	Acid Areas 2+3 RI
4. LOCATION	AA3-GW-004
5. NAME OF DRILLER	Rob Hamilton
6. MANUFACTURER'S DESIGNATION OF DRILL	CME 75
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT	4"ID Hollow Stem Auger; 2" split spoons
8. HOLE LOCATION	AA3-GW-004
9. SURFACE ELEVATION	
10. DATE STARTED	12-4-04
11. DATE COMPLETED	12-4-04
12. OVERBURDEN THICKNESS	
15. DEPTH GROUNDWATER ENCOUNTERED	
13. DEPTH DRILLED INTO ROCK	
16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED	
14. TOTAL DEPTH OF HOLE	21'
17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)	
18. GEOTECHNICAL SAMPLES	None
DISTURBED	
UNDISTURBED	
19. TOTAL NUMBER OF CORE BOXES	None
20. SAMPLES FOR CHEMICAL ANALYSIS	None
VOC	
METALS	
OTHER (SPECIFY)	
OTHER (SPECIFY)	
OTHER (SPECIFY)	
21. TOTAL CORE RECOVERY	%
22. DISPOSITION OF HOLE	set 2" PVC well
BACKFILLED	
MONITORING WELL	
OTHER (SPECIFY)	
23. SIGNATURE OF INSPECTOR	

LOCATION SKETCH/COMMENTS

SCALE:



PROJECT	Acid Areas 2+3 RI
HOLE NO.	AA3-GW-004

Figure 5-1

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER: AA3-GW-004

PROJECT: Acid Area 2+3 RI

INSPECTOR:

SHEET 2 OF 4 SHEETS

ELEV. (+)	DEPTH (ft)	DESCRIPTION OF MATERIALS (+)	FIELD SCREENING RESULTS (+)	REPRESENTATIVE SAMPLE OR CORE RUN NO. (+)	ANALYTICAL SAMPLE NO. (+)	BLOW COUNT (+)	REMARKS (+)
		0"-12", OL, organic silt, dark brown (10YR, 3/2), firm, loose, moist	0 ppm			2,3,2,4	
	1	12"-2.25', ML, clayey silt, medium brown (4/3, 10YR), firm, low plasticity, moist					
	2	2.25'-4.5', ML, silt, medium brown (10YR, 5/3) soft to firm, loose, moist. moist to wet at 3.5'				3,3,4,6	
	3						
	4					3,3,6,4	
	5	4.5'-7.5', CL, silty clay, with numerous silt lenses 1/8" to 1/4" thick, medium brown (10YR, 5/3), soft to firm, low plasticity, moist to wet.					
	6					2,3,2,2	
	7	gradual change to medium gray (10YR, 5/1) from 6.5' to 7.5'					
	8	7.5'-8.5', CL/CH, clay, medium gray (10YR, 5/1) soft, medium ~~plas~~ plasticity to high plasticity, wet.				2,3,5,4	
	9	8.5'-10', ML, clayey silt, with silt partings, medium gray (10YR, 5/1) soft to firm low plasticity moist to wet.					
	10						

PROJECT: Acid Area 2+3 RI

HOLE NO. AA3-GW-004

ENG FORM 5058A-R, AUG 94 (Proponent: CEOW-EG)

Figure 5-1 (continued)

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER: AA3-GW-004

PROJECT: Acid Areas 2+3 RI

INSPECTOR:

SHEET 3 OF 4 SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	SAMPLE OR CORE RUN NO. (e)	ANALYTICAL SAMPLE NO. (f)	BLOW COUNT (g)	REMARKS (h)
		10'-11', CL/CH, clay medium brown (10YR 5/1) soft, medium to high plasticity, wet.	0ppm			WT, WT, 2, 3	
	11	11'-15.5', CL, silty clay with silt partings medium gray (10YR 5/1) soft, low plasticity, wet.					
	12	silt lenses 1/2" thick at 14.5'				WT, 2, 3, 3	
	13	decreasing silt partings from 14.5' down					
	14					3, 4, 4, 3	
	15						
		15.5'-21' CL/CH, clay medium brown (10YR 5/1) soft to firm, medium to high plasticity, moist to wet.					
	16					WT, 1, 3, 2	
	17	silt parting at 17.0'					
	18						
		rock fragments at 18.75'				2, 3, 3, 2	
	19	augered to 19' only splitspoon sampled to TD from 19' on.					
	20						

PROJECT: Acid Area 2+3 RI

HOLE NO. AA3-GW-004

ENG FORM 5056A-R, AUG 94 (Proponent: CEOW-EG)

WT - weight of tool

Figure 5-1 (continued)

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER: AA3-GW-004

PROJECT: Acid Areas 2+3 RI

INSPECTOR:

SHEET 4 OF 4 SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	SAMPLE NO. (e)	ANALYTICAL SAMPLE NO. (f)	BLOW COUNT (g)	REMARKS (h)
		increasing rock fragments moist to dry.	0ppm ↓			6, 7 20' to 21'	
	21	TD - 21' near bedrock surface					
	22						

PROJECT: Acid Areas 2+3 RI

HOLE NO. AA3-GW-004

ENG FORM 5098A-R, AUG 94 (Proponent: CECW-EG)

Figure 5-1 (continued)

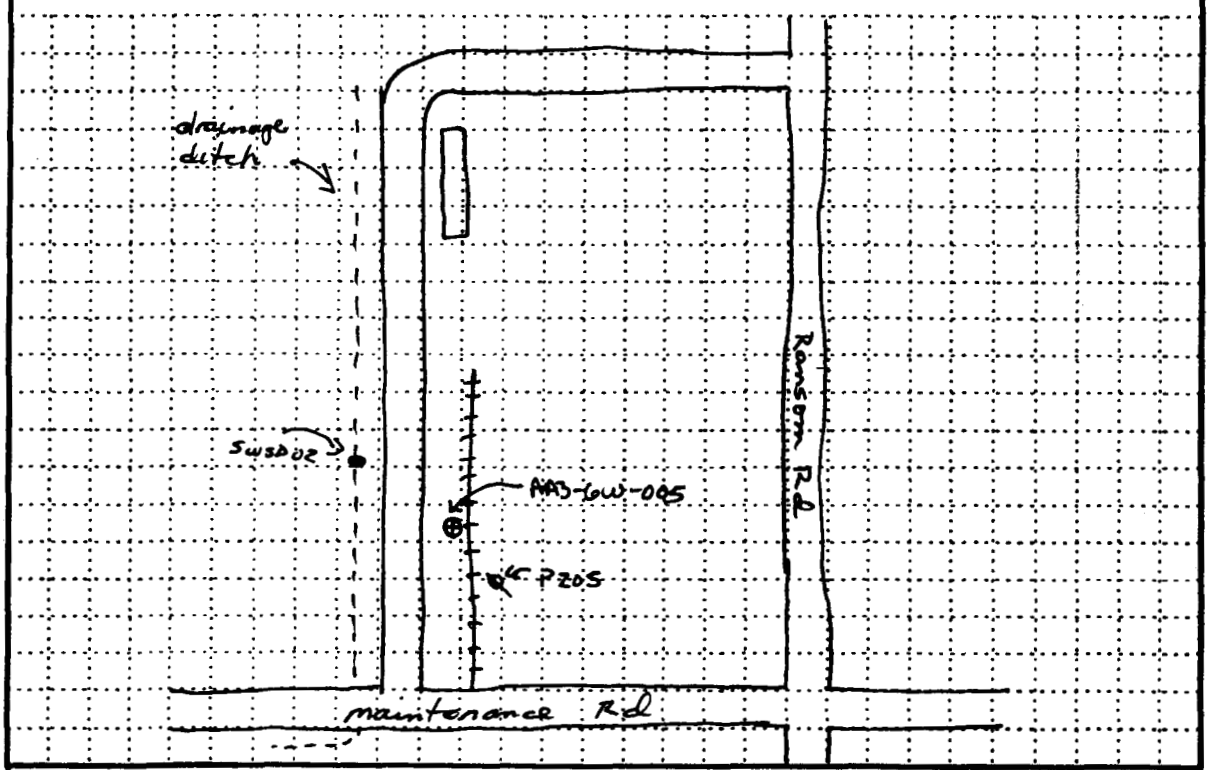
HTRW DRILLING LOG	DISTRICT USACE - Nashville	HOLE NUMBER AA3-GW-005
1. COMPANY NAME Jacobs Eng	2. DRILLING SUBCONTRACTOR Frontz Drilling	SHEET 1 OF SHEETS
3. PROJECT Acid Areas 2+3 RI	4. LOCATION PBOW - Acid Area 3	
5. NAME OF DRILLER Rob Hamilton	6. MANUFACTURER'S DESIGNATION OF DRILL CME 75	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT 4 1/4" hollow stem auger; 2" split spoon	8. HOLE LOCATION AA3-GW-005	
	9. SURFACE ELEVATION	
	10. DATE STARTED 12-6-04	11. DATE COMPLETED 12-6-04
12. OVERBURDEN THICKNESS est at 24'-25'	15. DEPTH GROUNDWATER ENCOUNTERED 4.5'	
13. DEPTH DRILLED INTO ROCK	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED	
14. TOTAL DEPTH OF HOLE 19'	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)	

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
None			

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %
None						

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
set 2" PVC well				

LOCATION SKETCH/COMMENTS SCALE:



PROJECT Acid Areas 2+3 RI	HOLE NO. AA3-GW-005

Figure 5-1

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER: AA3-GW-005

PROJECT: Acid Areas 2+3 RI

INSPECTOR:

SHEET 2 OF SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	MONITOR SAMPLE OR CORE BOX NO. (e)	ANALYTICAL SAMPLE NO. (f)	BLOW COUNT (g)	REMARKS (h)
		0"-2", OL, organic silt, dark brown (10YR, 2/1), soft loose, moist to wet.				1,3,2,4	
	1	2"-9", coal fragments, black, loose, coarse.					
		9"-12", ML, silt, medium brown (10YR, 4/3), soft, loose, moist to wet.					
	2	1'-2', ML, clayey silt, firm, low plasticity, moist, medium brown (10YR, 4/4).				5,4,8,9	
	3	2'-3', ML, clayey silt with silt lenses 1"-2" thick, medium brown (10YR, 4/3), soft to firm, loose, moist.					
	4	3'-3.5, ML, silt, medium brown (10YR, 4/3) soft, loose, moist to dry				4,6,7,5	
	5	3.5'-6.0', ML, clayey silt, medium brown (10YR, 4/3), firm to soft, low plasticity, moist to dry. wet at 4.5'.					
	6	6.0'-12', CL, silty clay, with few silt partings, medium brown (10YR, 4/3), soft to firm low plasticity, wet.				3,5,6,6	
	7	change in color to medium gray (10YR, 5/1) at 7.75'					
	8					1,2,4,4	
	9						
	10						

PROJECT: Acid Areas 2+3 RI

HOLE NO. AA3-GW-005

ENG FORM 5056A-R, AUG 94 (Proponent: CEOW-EG)

Figure 5-1 (continued)

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER: AA3-GW-005

PROJECT: Acid Areas 2+3 RI

INSPECTOR:

SHEET 3 OF SHEETS

ELEV. (1)	DEPTH (2)	DESCRIPTION OF MATERIALS (3)	FIELD SCREENING RESULTS (4)	SCORED SAMPLE OR CORE BOX NO. (5)	SHELBY TUBE SAMPLE NO. (6)	BLOW COUNT (7)	REMARKS (8)
						4,5,4,6	
	11						
	12	12'-19', CH, clay medium gray (10YR, 5/1) soft, medium to high plasticity, moist to wet				3,4,5,6	
	13						
	14					4,4,5,7	
	15						
	16						
	17						
	18						
	19	TD - 19'					
	20						

PROJECT: Acid Areas 2+3 RI

HOLE NO. AA3-GW-005

ENG FORM 5056A-R, AUG 94 (Proponent: CEOR-EG)

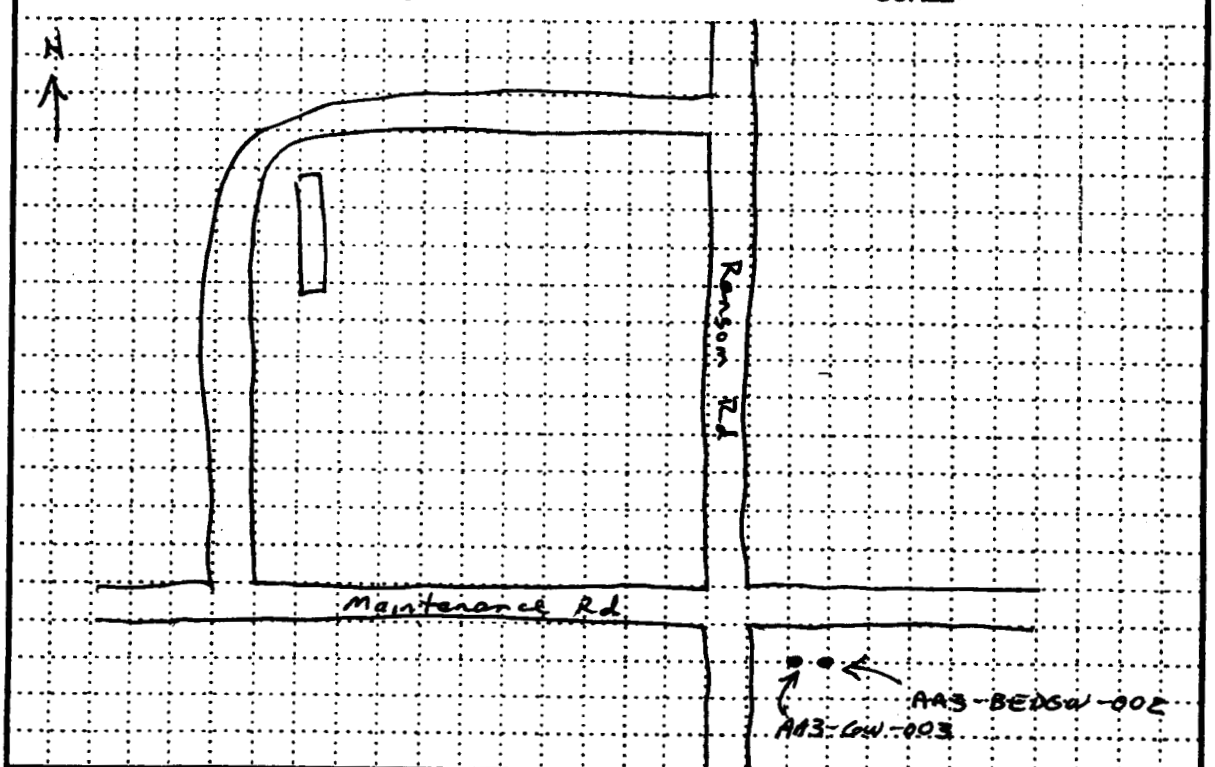
Figure 5-1 (continued)

HTRW DRILLING LOG

DISTRICT	USACE - Nashville
HOLE NUMBER	AA3-BEDGW-002
1. COMPANY NAME	Jacobs Eng.
2. DRILLING SUBCONTRACTOR	Frontz Drilling
SHEET	1 OF 7 SHEETS
3. PROJECT	Acid Area 2+3 RI
4. LOCATION	AA3-BEDGW-002
5. NAME OF DRILLER	Rob Hamilton
6. MANUFACTURER'S DESIGNATION OF DRILL	CME 75
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT	8¼" hollow stem Augus; 6" steel surface casing; 4" casing to 40' using 5⅞ roller bit. Used 3⅞" core bit from 41' - 56'
8. HOLE LOCATION	AA3-BEDGW-002
9. SURFACE ELEVATION	TBD
10. DATE STARTED	12-3-04
11. DATE COMPLETED	12-16-04
12. OVERBURDEN THICKNESS	24'
15. DEPTH GROUNDWATER ENCOUNTERED	
13. DEPTH DRILLED INTO ROCK	32'
16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED	
14. TOTAL DEPTH OF HOLE	56'
17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)	
18. GEOTECHNICAL SAMPLES	None
DISTURBED	
UNDISTURBED	
19. TOTAL NUMBER OF CORE BOXES	4
20. SAMPLES FOR CHEMICAL ANALYSIS	None
VOC	
METALS	
OTHER (SPECIFY)	
OTHER (SPECIFY)	
OTHER (SPECIFY)	
21. TOTAL CORE RECOVERY	%
22. DISPOSITION OF HOLE	Set 2" PVC well
BACKFILLED	
MONITORING WELL	
OTHER (SPECIFY)	
23. SIGNATURE OF INSPECTOR	

LOCATION SKETCH/COMMENTS

SCALE:



PROJECT	Acid Area 2+3 RI
HOLE NO.	AA3-BEDGW-002

Figure 5-1

14.6
3.7
10.9'

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER: AA3-BEDGW-002

PROJECT: Acid Areas 2+3

INSPECTION:

SHEET 2 OF 7 SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	SAMPLE OR CORE NO. (e)	ANALYTICAL SAMPLE NO. (f)	BLOW COUNT (g)	REMARKS (h)
			0 ppm				
	1					N/A	
						Augered	
	2	see log					
		for AA3-GW-003					
	3						
	4						
	5						
	6						
	7						
	8						
	9						
	10						

PROJECT: Acid Area 2+3 RI

HOLE NO. AA3-BEDGW-002

ENG FORM 5058A-R, AUG 94 (Proponent: CECW-EG)

Figure 5-1 (continued)

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER: AA3-BEDGW-002

PROJECT: Acid Area 2+3 RI

INSPECTOR:

SHEET 3 OF 7 SHEETS

ELEV. (4)	DEPTH (5)	DESCRIPTION OF MATERIALS (6)	FIELD SCREENING RESULTS (7)	MOISTURE SAMPLE OR CORE FOR TO. (8)	CHAIN OF CUSTODY TAGNUMBER (9)	BLOW COUNT (10)	REMARKS (11)
			0ppm				
	11						
	12	see log for AA3-GW-003					
	13						
	14						
	15						
	16						
	17						
	18						
	19						
	20						

PROJECT: Acid Area 2+3 RI

HOLE NO. AA3-BEDGW-002

ENG FORM 5088A-R, AUG 94 (Proponent: CEOW-EG)

Figure 5-1 (continued)

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER: AA3-BEDGW-002

PROJECT: Acid Area 2+3 RI

INSPECTOR:

SHEET 4 OF 7 SHEETS

ELEV. (-)	DEPTH (ft)	DESCRIPTION OF MATERIALS (+)	FIELD SCREENING RESULTS (d)	SAMPLE NO. (+)	ANALYTICAL SAMPLE NO. (f)	BLOW COUNT (g)	REMARKS (h)
	21	see log for AA3-GW-003	0 ppm				
	22						
	23						
	24	24'-27', Augered to set 4" ~~as~~ surface casing - no descriptions Plum Brook Shale					
	25						
	26						
	27	27'-38', limestone, shaly, with liney shale, well consolidated, not friable, medium gray, very fine laminae throughout, laminae are dark gray-shaly.		core box #1 27'-35'			
	28						
	29						
	30						

PROJECT: Acid Area 2+3 RI

HOLE NO. AA3-BEDGW-002

ENG FORM 5098A-R, AUG 94 (Proponent: CECW-EG)

Figure 5-1 (continued)

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER: AA3-BEDGW-002

PROJECT: Acid Area Z+3 RI

INSPECTOR:

SHEET 5 OF 7 SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD FOREMAN REMARKS (d)	MOISTURE SAMPLE OR CORE BOX NO. (e)	ANALYTICAL SAMPLE NO. (f)	BLOW COUNT (g)	REMARKS (h)
	31			core box #1 27'-35'			
	32						
	33						
	34						
	35						
	36			core box #2 35'-40'			
	37						
	38	38'-56', Limestone, massive, fossiliferous, petroliferous, stylolites, light gray with light tan. Delaware Limestone					
	39						
	40						

PROJECT: Acid Area Z+3 RI

HOLE NO. AA3-BEDGW-002

ENG FORM 5058A-R, AUG 94 (Proponent: CEOW-EG)

Figure 5-1 (continued)

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER: AA3-BEDOW-002

PROJECT: PBOW - Acid Areas 2+3 RI

INSPECTOR:

SHEET 6 OF 7 SHEETS

ELEV. (c)	DEPTH (b)	DESCRIPTION OF MATERIALS (d)	FIELD SCREENING RESULTS (e)	SAMPLE NO. (g)	ANALYTICAL SAMPLE NO. (f)	BLOW COUNT (h)	REMARKS (m)
				reamed hole 1" after setting 4" casing			
	41			core box #3 41'-51'			
	42						
	43						
	44						
	45						
	46						
	47						
	48						
	49						
	50						

PROJECT: PBOW - Acid Areas 2+3 RI

HOLE NO. AA3-BEDOW-002

ENG FORM 5058A-R, AUG 94 (Proponent: CECW-EG)

Figure 5-1 (continued)

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER: AA3-BEDGW-002

PROJECT: Acid Areas 2+3 RI

INSPECTOR:

SHEET 7 OF 7 SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	SAMPLE OR CORE BOX NO. (e)	ANALYTICAL SAMPLE NO. (f)	BLOW COUNT (g)	REMARKS (h)
				core box #3			
	51						
	52			core box #4 51'-56'			
	53						
	54						
	55						
	56	TD - 56'					
	57						
	58						
	59						
	10						

PROJECT: PBOW - Acid Area 2+3 RI

HOLE NO. AA3 - BEDGW - 002

ENG FORM 5058A-R, AUG 94 (Proponent: CECW-EG)

Figure 5-1 (continued)

HTRW DRILLING LOG

DISTRICT	USACE - Nashville
HOLE NUMBER	AA3-BEDGW-003
1. COMPANY NAME	Jacobs Eng.
2. DRILLING SUBCONTRACTOR	Frontz Drilling
SHEET / SHEETS	1 OF 7
3. PROJECT	Acid Areas 2+3 RI
4. LOCATION	AA3-BEDGW-003
5. NAME OF DRILLER	Rob Hamilton
6. MANUFACTURER'S DESIGNATION OF DRILL	CME 75
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT	8 1/4" hollow stem 6" steel surface casing 5 7/8" roller bit to 35' after coring set 4" steel casing 3 7/8 core bit from 36' - 51'
8. HOLE LOCATION	AA3-BEDGW-003
9. SURFACE ELEVATION	
10. DATE STARTED	12-4-04
11. DATE COMPLETED	12-17-04
12. OVERBURDEN THICKNESS	21'
15. DEPTH GROUNDWATER ENCOUNTERED	
13. DEPTH DRILLED INTO ROCK	30'
16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED	
14. TOTAL DEPTH OF HOLE	51'
17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)	

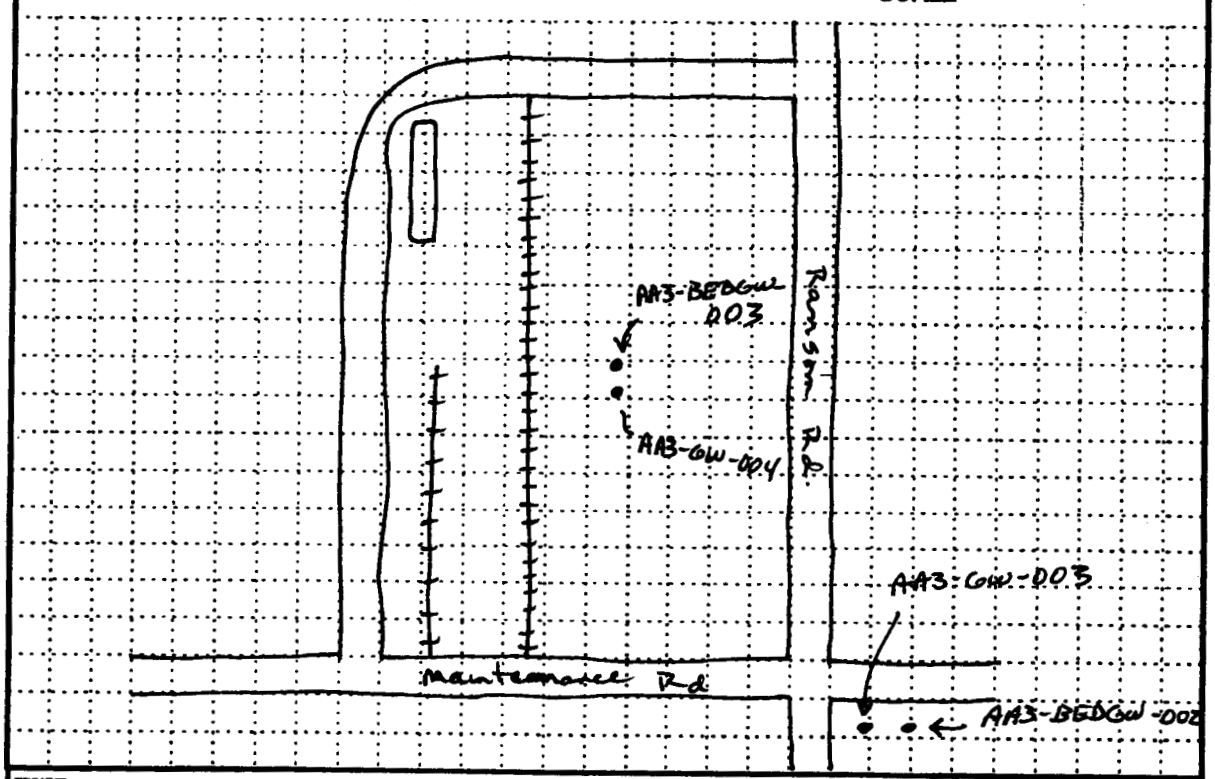
18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
None			4

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %
None						

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
set 2" PVC well				

LOCATION SKETCH/COMMENTS

SCALE:



PROJECT: Acid Areas 2+3 RI

HOLE NO.: AA3-BEDGW-003

Figure 5-1

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER: AA3-BED6W-003

PROJECT: Acid Areas 2+3 RI

INSPECTOR:

SHEET 2 OF 7 SHEETS

ELEV. (c)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD HEADSPACE RESULTS (d)	MOISTURE SAMPLE OR CORE RUN NO. (e)	ANALYTICAL SAMPLE NO. (f)	BLOW COUNT (g)	REMARKS (h)
	1	see log for AA3-6W-004	0ppm			N/A Augered	
	2						
	3						
	4						
	5						
	6						
	7						
	8						
	9						
	10						

PROJECT: Acid Areas 2+3 RI

HOLE NO. AA3-BED6W-003

ENG FORM 5056A-R, AUG 94 (Proponent: CEOW-EG)

Figure 5-1 (continued)

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER: AA3-BEDGW-003

PROJECT: Acid Areas 2+3 RI

INSPECTOR:

SHEET 3 OF 7 SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	SAMPLE OR CORE RUN NO. (e)	ANALYTICAL SAMPLE NO. (f)	BLOW COUNT (g)	REMARKS (h)
	11	see log for AA3-GW-004	oppm				
	12						
	13						
	14						
	15						
	16						
	17						
	18						
	19						
	20						

PROJECT: Acid Areas 2+3 RI

HOLE NO. AA3-BEDGW-003

ENG FORM 5058A-R, AUG 94 (Proponent: CEOW-EG)

Figure 5-1 (continued)

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER: AA3-BEDGW-003

PROJECT: Acid Areas 2+3 RI

INSPECTOR:

SHEET 3 OF 7 SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD TESTING RESULTS (d)	SAMPLE OR CORE BOX NO. (e)	ANALYTICAL SAMPLE NO. (f)	BLOW COUNT (g)	REMARKS (h)
		see log for AA3-GW-004					
	21	21'-24', bedrock, no recovery - augured to refusal to set surface casing upper portion of Plum Brook Shale					
	22						
	23						
	24	24'-32'.5, Shaly Limestone, with Limy shale, well consolidated, ~~friable~~ not friable, medium gray, very fine laminae through out laminae are darker gray Plum Brook Shale		core box #1 24'-30', 9"			
	25						
	26						
	27						
	28						
	29						
	30						

PROJECT: Acid Areas 2+3 RI

HOLE NO. AA3-BEDGW-003

ENG FORM 5098A-R, AUG 94 (Proponent: CECW-EG)

Figure 5-1 (continued)

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER: AA3-BED6W-003

PROJECT: Acid Areas 2+3 RI

INSPECTOR:

SHEET 5 OF 7 SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	SAMPLE OR CORE BOX NO. (e)	ANALYTICAL SAMPLE NO. (f)	BLOW COUNT (g)	REMARKS (h)
				core box #1			
	31	friable shale layer from 30', 9" to 31', 1" darker gray		core box # 2 30', 9" - 35'			
	32	friable shale layer from 31', 7" to 31', 9"					
		32', 5" - 51', Limestone Dolomite Limestone, massive, fossiliferous, petroliferous, stylolites throughout. light gray with light tan areas					
	33						
	34						
	35			reamed hole 1' below 4" casing			
	36			core box #3 36'-45'			
	37						
	38						
	39						
	40						

PROJECT: Acid Areas 2+3 RI

HOLE NO. AA3-BED6W-003

ENG FORM 5056A-R, AUG 94 (Proponent: CECW-EG)

Figure 5-1 (continued)

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER: AA3-BEDGW-003

PROJECT: Acid Area 2+3 RI

DESIGNATION:

SHEET 6 OF 7 SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	REMOVED SAMPLE OR CORE BOX NO. (e)	ANALYTICAL SAMPLE NO. (f)	BLOW COUNT (g)	REMARKS (h)
				core box #3 30'-45'			
	41						
	42						
	43						
	44						
	45						
				core box #4 45'-51'			
	46						
	47						
	48						
	49						
	50						

PROJECT: PBOW - Acid Areas 2+3 RI

HOLE NO. AA3-BEDGW-003

ENG FORM 5056A-R, AUG 94 (Proponent: CEOW-EG)

Figure 5-1 (continued)

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER: AA3-BEDGW-003

PROJECT: Acid Areas 2+3 RI

INSPECTOR:

SHEET 7 OF 7 SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	SELECTED SAMPLE OR CORE RUN NO. (e)	ANALYTICAL SAMPLE NO. (f)	BLOW COUNT (g)	REMARKS (h)
				Core box #4 45'-51'			
	51	TD - 51'					
	52						
	53						
	54						
	55						
	56						
	57						
	58						
	59						
	60						

PROJECT: PBOW - Acid Areas 2+3 RI

HOLE NO. AA3-BEDGW-003

ENG FORM 5056A-R, AUG 94 (Proponent: CECW-EG)

Figure 5-1 (continued)

HTRW DRILLING LOG

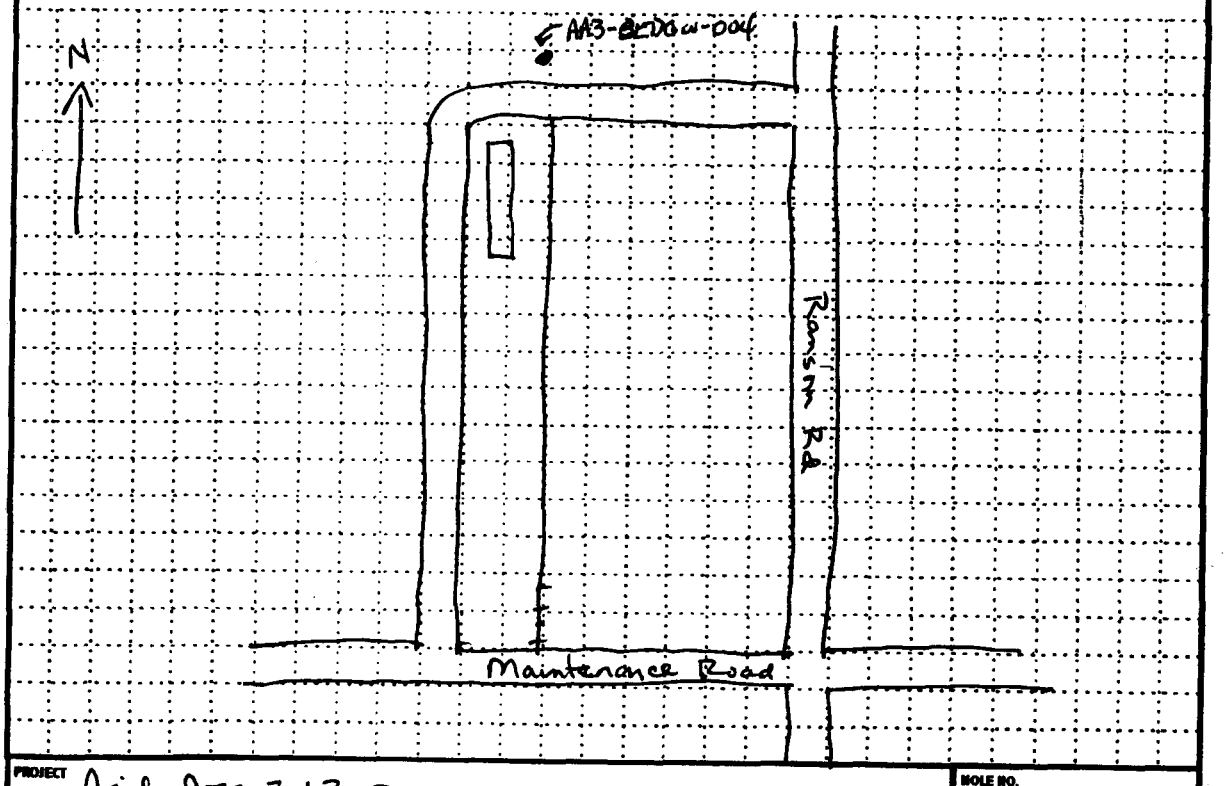
DISTRICT	USACE - Nashville
HOLE NUMBER	AA3-BEDGW-004
1. COMPANY NAME	Jacobs Eng
2. DRILLING SUBCONTRACTOR	Frontz Drilling
SHEET / OF SHEETS	1 of 9
3. PROJECT	Acid Areas 2+3 RI
4. LOCATION	AA3-BEDGW-004
5. NAME OF DRILLER	Rob Hamilton
6. MANUFACTURER'S DESIGNATION OF DRILL	BME 75
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT	8 1/4" hollowstem auger 2" split spoon 6" surface casing 5 7/8" roller bit after coring to 34.5 set 4" casing 5 7/8" core bit from 34.5 to 75.5'
8. HOLE LOCATION	AA3-BEDGW-004
9. SURFACE ELEVATION	
10. DATE STARTED	12-5-04
11. DATE COMPLETED	12-14-04
12. OVERBURDEN THICKNESS	25.25'
13. DEPTH DRILLED INTO ROCK	50.25'
14. TOTAL DEPTH OF HOLE	75.5'
15. DEPTH GROUNDWATER ENCOUNTERED	
16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED	
17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)	

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
None			5

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %
None						

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
open hole				

LOCATION SKETCH/COMMENTS SCALE:



PROJECT	HOLE NO.
Acid Area 2+3 RI	AA3-BEDGW-004

Figure 5-1

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER: AA3-BEDGW-004

PROJECT: Acid Area 2+3 RI

INSPECTOR:

SHEET 2 OF 9 SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	SAMPLE NO. (e)	ANALYTICAL SAMPLE NO. (f)	BLOW COUNT (g)	REMARKS (h)
		0"-6", OL, organic silt, dark brown (10YR, 3/2), soft to firm, loose, moist.	0 ppm			3,2,4,3	
	1	6"-2.5', ML, clayey silt, firm, loose, low plasticity, dry. medium brown (10YR, 4/3)					
	2					11,36,26 34	
	3	2.5'-2.75', ML, silt medium brown (10YR, 5/3) soft, loose, dry.					
	4	2.75'-3.5', concrete and rubble, gravel, loose on top, hard concrete at bottom.					
	5	3.5'-4.0'-OL, organic silt, dark brown (10YR, 3/2), firm, loose, dry.				8,5,5,9	
	6	4.0'-6.0', ML, clayey silt, firm to stiff, low plasticity, dry to moist, medium brown (10YR, 4/3)					
	7	6.0'-7.25', ML, silt, no clay, soft to firm, very loose, dry to moist, medium brown (10YR, 5/4)				4,5,5,8	
	8	7.25'-8.25', ML, clayey silt, medium brown (10YR, 4/3), firm to stiff, low plasticity, dry to moist.					
	9	8.25-8.5', ML, silt w/ very fine sand, medium brown (10YR, 5/4), soft, loose, dry to moist.				2,3,2,3	
	10	8.5'-9.75', ML, clayey silt, with silt lenses 1/2" to 1" thick, medium					

PROJECT: Acid Area 2+3 RI

HOLE NO. AA3-BEDGW-004

ENG FORM 5056A-R, AUG 94 (Proponent: CECW-EG)

Figure 5-1 (continued)

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER: AA3-BEDGW-004

PROJECT: Acid Areas 2+3 RI

INSPECTOR:

SHEET 3 OF 9 SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	SUPERIOR SAMPLE OR CORE RUN NO. (e)	ANALYTICAL SAMPLE NO. (f)	BLOW COUNT (g)	REMARKS (h)
		brown (10YR, 4/3), firm, low plasticity, dry to moist				2,4,5,7	
	11	9.75' - 19.5', CL, clay, medium gray (10YR, 5/1), soft, medium plasticity, moist to wet, small silt partings throughout, 1/8" or less in thickness.					
	12	increasing plasticity at 12.0' - 15.0'				4,5,5,5	
	13						
	14					3,4,6,5	
	15						
	16					WT, WT WT, 2	
	17	no silt partings from 17' - 19.5'					
	18					3,3,3,4	
	19						
	20	19' - CH, Clay, med. gray (10YR, 5/1), soft					

PROJECT: Acid Areas 2+3 RI

HOLE NO. AA3-BEDGW-004

ENG FORM 5098A-R, AUG 94 (Proponent: CECW-EG)

Figure 5-1 (continued)

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER: AA3-BEDGW-004

PROJECT: Acid Areas 2+3 RI

INSPECTOR:

SHEET 4 OF 9 SHEETS

ELEV. (+)	DEPTH (ft)	DESCRIPTION OF MATERIALS (+)	FIELD SCREENING RESULTS (+)	MOISTURE SAMPLE OR CORE BOX NO. (+)	ANALYTICAL SAMPLE NO. (+)	BLOW COUNT (+)	REMARKS (+)
		high plasticity, wet.				6,5,4,4	
	21						
	22					4,4,4,4	
	23						
	24	rock fragments at 24' increasing in percentage downward				2,3,4,7	
	25	dry at 24.9'					
		25.25 - 27', Augured hole for surface casing no descriptions					
	26	Plum Brook Shale					
	27	27' - 29.75', Shaly limestone, well consolidated, numerous laminae. Plum Brook Shale, med to dark gray.		core box #1 27' - 34.5'			
	28						
	29						
	30	29.75 - 35.5', Limestone					

PROJECT: Acid Areas 2+3 RI

HOLE NO. AA3-BEDGW-004

ENG FORM 5056A-R, AUG 94 (Proponent: CECW-EG)

Figure 5-1 (continued)

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER: AA3-BEDGW-004

PROJECT: Acid Areas 2+3 RI

INSPECTOR:

SHEET 5 OF 9 SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	SAMPLE OR CORE RUN NO. (e)	ANALYTICAL SAMPLE NO. (f)	BLOW COUNT (g)	REMARKS (h)
		massive, fossiliferous, petroliferous, stylolites throughout, light gray to light tan. Delaware Limestone					
	31			core box #1 27'-34.5'			
	32						
	33						
	34						
	35			reamed hole after setting 4" casing			
	36						
	37			core box #2 36'-45.5'			
	38						
	39						
	40						

PROJECT: Acid Areas 2+3 RI

HOLE NO. AA3-BEDGW-004

ENG FORM 5058A-R, AUG 94 (Proponent: CEOW-EG)

Figure 5-1 (continued)

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER: AA3-BEDGW-004

PROJECT: Acid Areas 2+3 RI

INSPECTOR:

SHEET 6 OF 9 SHEETS

ELEV. (+)	DEPTH (ft)	DESCRIPTION OF MATERIALS (+)	FIELD SCREENING RESULTS (+)	SAMPLE OR CORE RUN NO. (+)	ANALYTICAL SAMPLE NO. (+)	BLOW COUNT (+)	REMARKS (+)
	41						
	42			core box #2			
	43			36' - 45.5'			
	44						
	45						
	46						
	47			core box #3			
	48			45.5' - 55.5'			
	49						
	50						

PROJECT: PBOW - Acid Areas 2+3 RI

HOLE NO. AA3-BEDGW-004

ENG FORM 5056A-R, AUG 94 (Proponent: CECW-EG)

Figure 5-1 (continued)

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER: AA3-BEDGW-004

PROJECT: Acid Areas 2+3 RI

INSPECTOR:

SHEET 7 OF 9 SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD TESTING RESULTS (d)	RECOVERED SAMPLE OR CORE SIZE NO. (e)	ANALYTICAL SAMPLE NO. (f)	BLOW COUNT (g)	REMARKS (h)
	51						
	52			core box #3			
	53			45.5'-55.5'			
	54						
	55						
	56			core box #4			
	57			55.5'-65.5'			
	58						
	59						
	60						

PROJECT: PBOW - Acid Areas 2+3 RI

HOLE NO. AA3-BEDGW-004

ENG FORM 5058A-R, AUG 94 (Proponent: CEOP-EG)

Figure 5-1 (continued)

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER: AA3-BEDGW-004

PROJECT: Acid Areas 2+3 RI

INSPECTOR:

SHEET 8 OF 9 SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	SAMPLE OR CORE BOX NO. (e)	ANALYTICAL SAMPLE NO. (f)	BLOW COUNT (g)	REMARKS (h)
	61						
	62			Core box #4 55.5' - 65.5'			
	63						
	64						
	65						
	66			Core box #5 65.5' - 75.5'			
	67						
	68						
	69						
	70						

PROJECT: PBOW - Acid Areas 2+3 RI

HOLE NO. AA3-BEDGW-004

ENG FORM 5056A-R, AUG 94 (Proponent: CECW-EG)

Figure 5-1 (continued)

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER: AA3-BEDGW-004

PROJECT: Acid Areas 2+3 RI

INSPECTOR:

SHEET 9 OF 9 SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	GROUND SAMPLE OR CORE SAM NO. (e)	ADDITIONAL SAMPLE NO. (f)	BLOW COUNT (g)	REMARKS (h)
	71						
	72			CORE BOX #5 65.5'-76.5'			
	73						
	74						
	75						
	76	TD - 75.5'					
	77						
	78						
	79						
	80						

PROJECT: PBOW - Acid Areas 2+3 RI

HOLE NO. AA3-BEDGW-004

ENG FORM 5056A-R, AUG 94 (Proponent: CEOW-EG)

Figure 5-1 (continued)

Appendix C
Well Completion Diagrams

WELL CONSTRUCTION DETAILS AND ABANDONMENT FORM

FIELD REPRESENTATIVE: Al Hardesty

DRILLING CONTRACTOR: Fronte Drilling

DRILLING TECHNIQUE: CME 75 Auger Rig

AUGER SIZE AND TYPE: 4"/4" hollow stem

BOREHOLE IDENTIFICATION: AA3-GW-003

BOREHOLE DIAMETER: ~~8"~~ 6"

WELL IDENTIFICATION: AA3-GW-003

WELL CONSTRUCTION START DATE: 12-3-04

WELL CONSTRUCTION COMPLETE DATE: 12-3-04

SCREEN MATERIAL: PVC - 0.010

SCREEN DIAMETER: 2"

STRATUM-SCREENED INTERVAL (FT): 8'-18'

CASING MATERIAL: PVC

CASING DIAMETER: 2"

TYPE OF FILTER PACK: Sand

GRADIATION: 20/40

AMOUNT OF FILTER PACK USED: 375 lbs

TYPE OF BENTONITE: Hole plug - barrel

AMOUNT BENTONITE USED: 200 lbs (100 bottom, 100 top)

TYPE OF CEMENT: N/A

AMOUNT CEMENT USED: N/A

GROUT MATERIALS USED: N/A

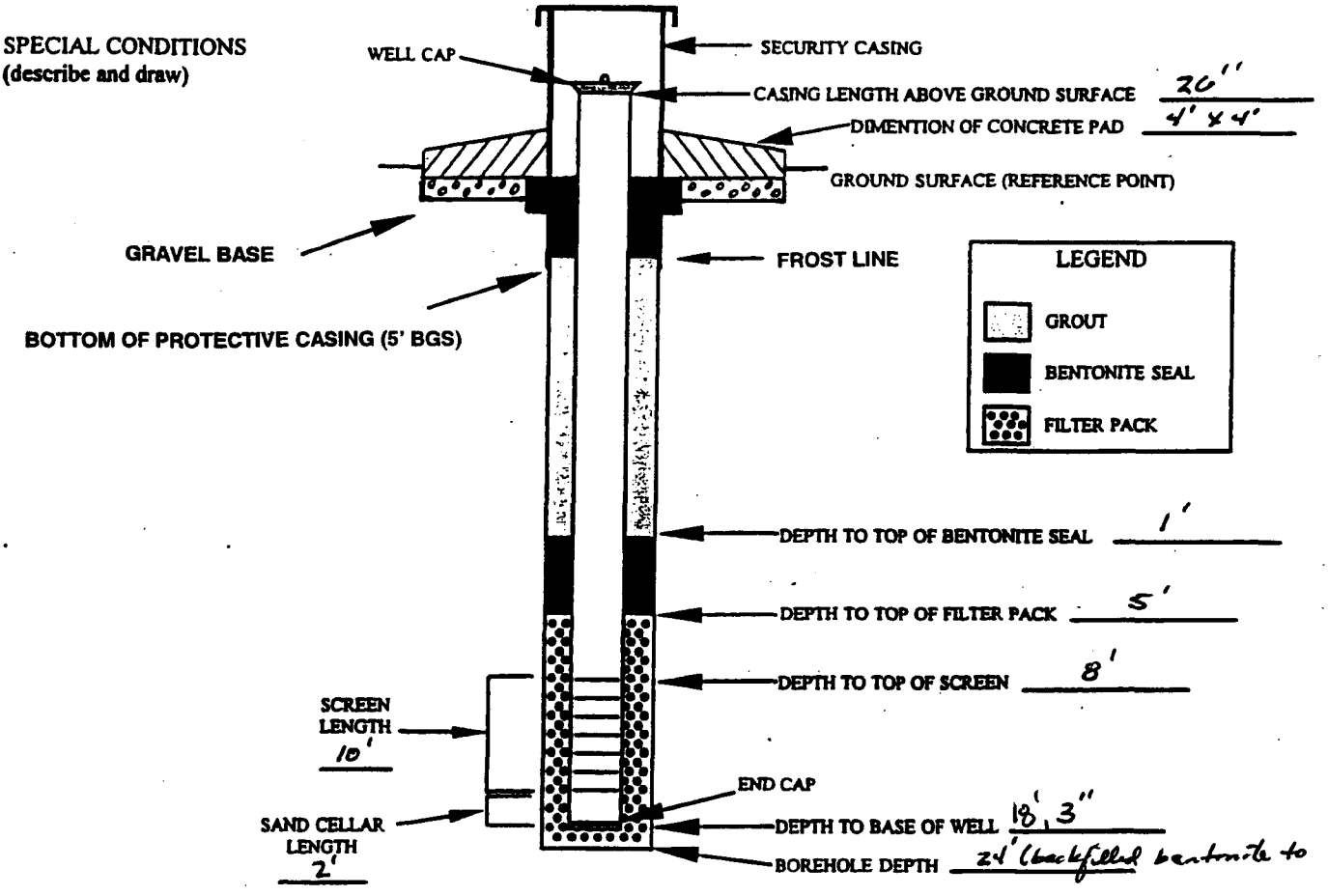
DIMENSIONS OF SECURITY CASING: 6" Steel

TYPE OF WELL CAP: threaded cap

TYPE OF END CAP: Flat - threaded

COMMENTS:

SPECIAL CONDITIONS
(describe and draw)



NOT TO SCALE

INSTALLED BY: Rob Hamilton (Fronte) INSTALLATION OBSERVED BY: Al Hardesty

DISCREPANCIES:

Figure 5-2

WELL CONSTRUCTION DETAILS AND ABANDONMENT FORM

FIELD REPRESENTATIVE: Al Hardesty

DRILLING CONTRACTOR: Frontz Drilling

DRILLING TECHNIQUE: Hollow Stem Auger

AUGER SIZE AND TYPE: 4"/4" hollow stem

BOREHOLE IDENTIFICATION: AA3-GW-004

BOREHOLE DIAMETER: ~~2~~ 6"

WELL IDENTIFICATION: AA3-GW-004

WELL CONSTRUCTION START DATE: 12-4-04

WELL CONSTRUCTION COMPLETE DATE: 12-4-04

SCREEN MATERIAL: PVC - 0.010 slot

SCREEN DIAMETER: 2"

STRATUM-SCREENED INTERVAL (FT): 8'-18'

CASING MATERIAL: PVC - schedule 40

CASING DIAMETER: 2"

TYPE OF FILTER PACK: Sand - Silica

GRADIATION: 20/40

AMOUNT OF FILTER PACK USED: 500 lbs

TYPE OF BENTONITE: hole plug - baroid

AMOUNT BENTONITE USED: 100 lbs

TYPE OF CEMENT: N/A

AMOUNT CEMENT USED: N/A

GROUT MATERIALS USED: N/A

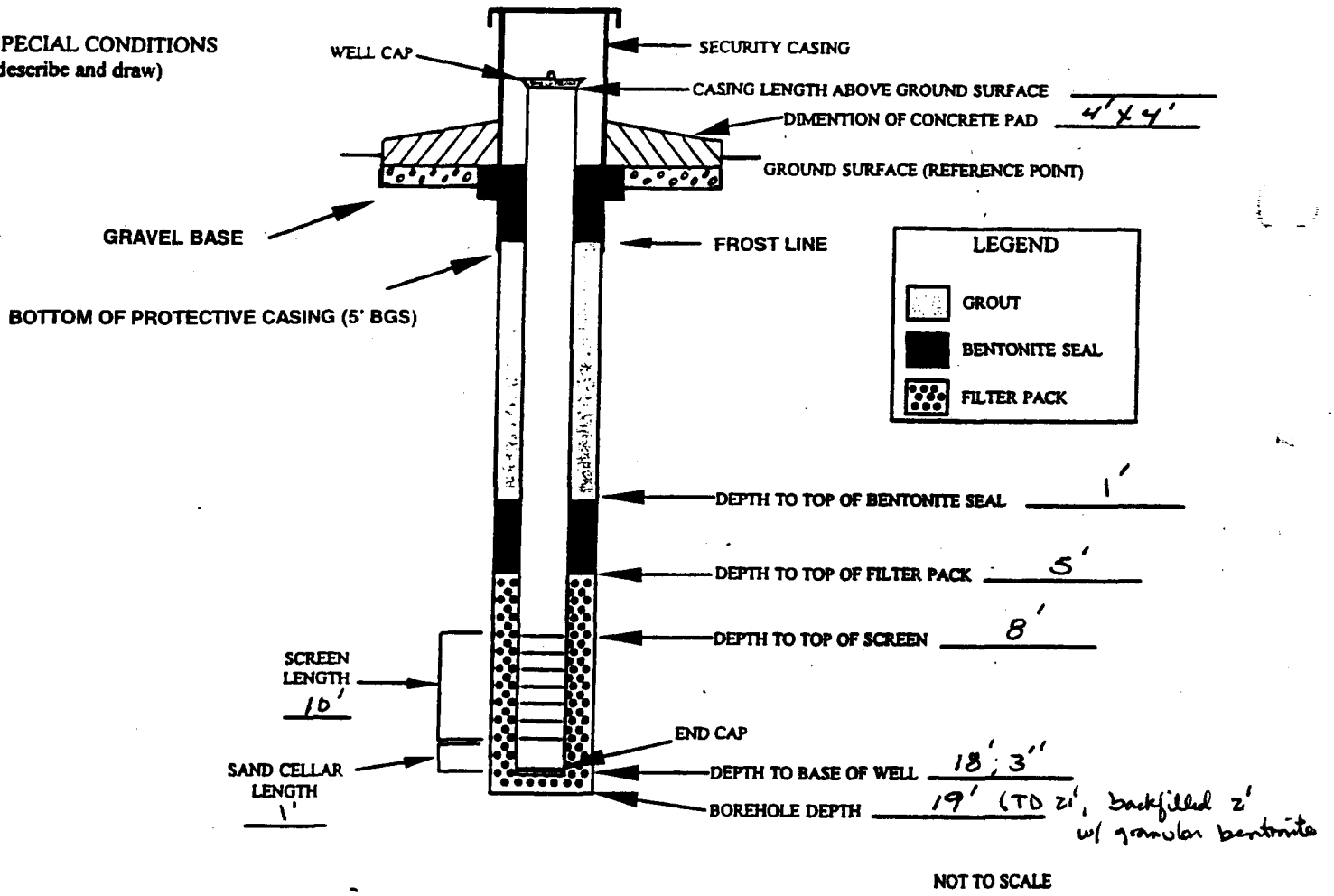
DIMENSIONS OF SECURITY CASING: 6" steel

TYPE OF WELL CAP: threaded cap

TYPE OF END CAP: Flat - threaded

COMMENTS:

SPECIAL CONDITIONS
(describe and draw)



NOT TO SCALE

INSTALLED BY: Rob Hamilton

INSTALLATION OBSERVED BY: Al Hardesty

DISCREPANCIES:

Figure 5-2

WELL CONSTRUCTION DETAILS AND ABANDONMENT FORM

FIELD REPRESENTATIVE: Al Hardesty

DRILLING CONTRACTOR: Frontz Drilling

DRILLING TECHNIQUE: Hollow Stem Auger

AUGER SIZE AND TYPE: 4"4 hollow stem

BOREHOLE IDENTIFICATION: AA3-GW-005

BOREHOLE DIAMETER: 6"

WELL IDENTIFICATION: AA3-GW-005

WELL CONSTRUCTION START DATE: 12-6-04

WELL CONSTRUCTION COMPLETE DATE: 12-6-04

SCREEN MATERIAL: PVC - 2" ID - 0.010

SCREEN DIAMETER: 2"

STRATUM-SCREENED INTERVAL (FT): 8'-18'

CASING MATERIAL: PVC - schedule 40

CASING DIAMETER: 2"

TYPE OF FILTER PACK: Sand

GRADIATION: 20/40

AMOUNT OF FILTER PACK USED: 375 lb

TYPE OF BENTONITE: bentonite hole plug

AMOUNT BENTONITE USED: 100 lbs

TYPE OF CEMENT: N/A

AMOUNT CEMENT USED: N/A

GROUT MATERIALS USED: N/A

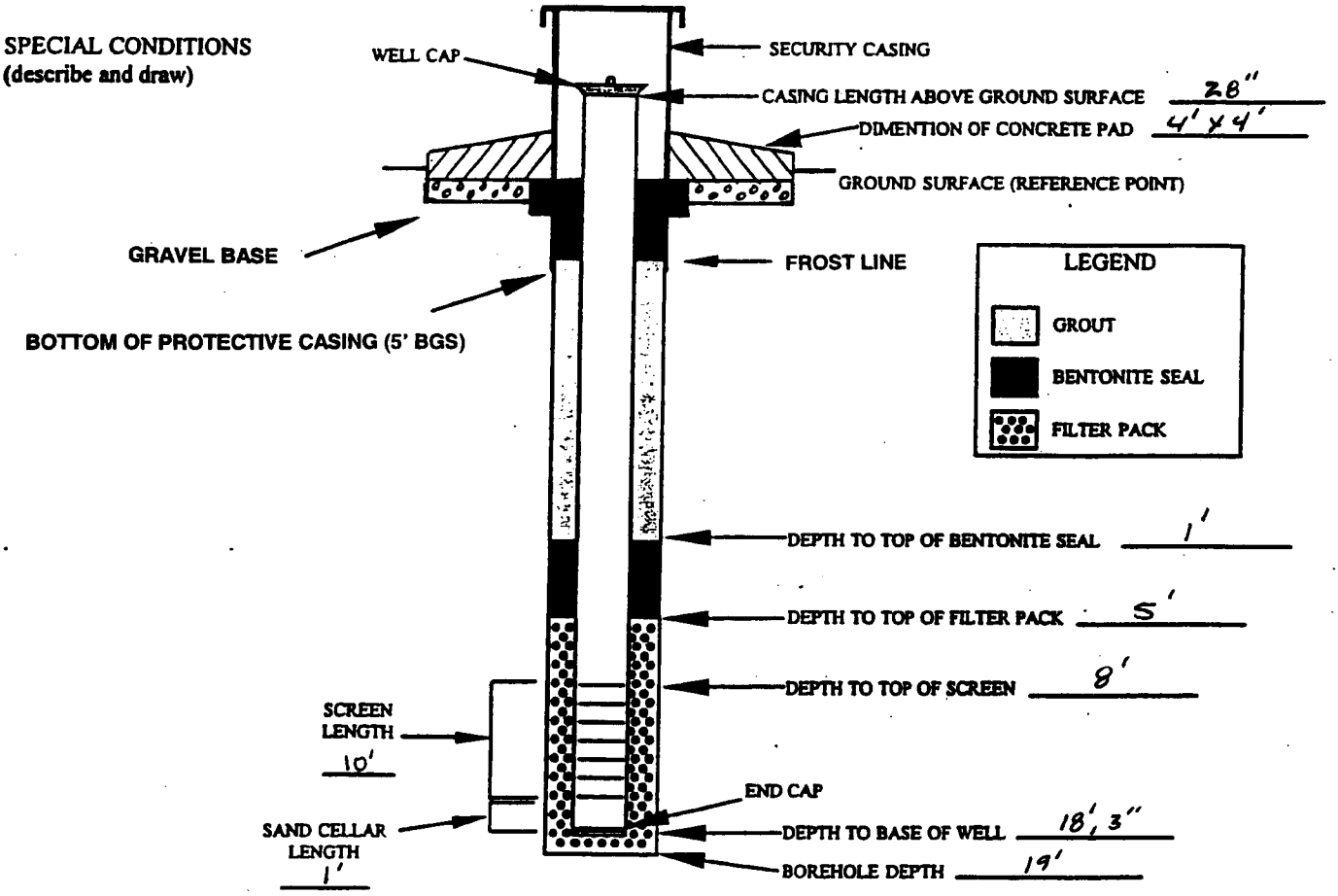
DIMENSIONS OF SECURITY CASING: 6" steel

TYPE OF WELL CAP: threaded cap

TYPE OF END CAP: flat-threaded

COMMENTS:

SPECIAL CONDITIONS
(describe and draw)



NOT TO SCALE

INSTALLED BY: Rob Hamilton

INSTALLATION OBSERVED BY: Al Hardesty / Jim Beaujon

DISCREPANCIES:

Figure 5-2

WELL CONSTRUCTION DETAILS AND ABANDONMENT FORM

FIELD REPRESENTATIVE: Al Hardesty

DRILLING CONTRACTOR: Frontz Drilling

DRILLING TECHNIQUE: Air Rotary

AUGER SIZE AND TYPE: 3 7/8 core bit

BOREHOLE IDENTIFICATION: AA3-BEDGW-002

BOREHOLE DIAMETER: 3 7/8"

WELL IDENTIFICATION: AA3-BEDGW-002

WELL CONSTRUCTION START DATE: 12-3-04

WELL CONSTRUCTION COMPLETE DATE: 12-16-04

SCREEN MATERIAL: PVC - 0.010 slot

SCREEN DIAMETER: 2"

STRATUM-SCREENED INTERVAL (FT): 45'-55'

CASING MATERIAL: PVC - schedule 40

CASING DIAMETER: 2"

TYPE OF FILTER PACK: sand

GRADIATION: 20/40

AMOUNT OF FILTER PACK USED: 150 lbs

TYPE OF BENTONITE: Hole plug

AMOUNT BENTONITE USED: 25 lbs

TYPE OF CEMENT: bentonite/portland mix

AMOUNT CEMENT USED: 15 gallons

GROUT MATERIALS USED: tremie from bottom up

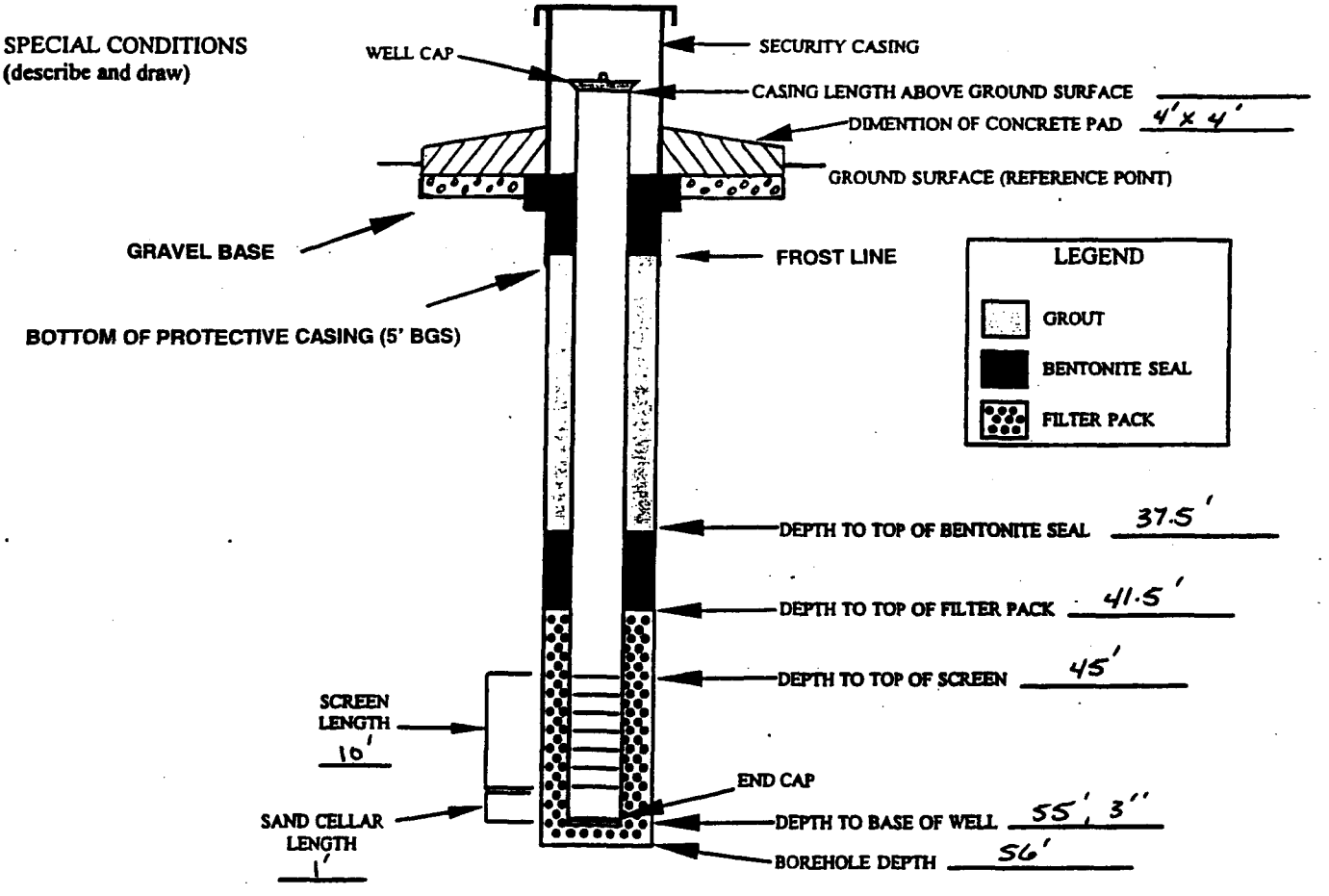
DIMENSIONS OF SECURITY CASING: 6" steel

TYPE OF WELL CAP: J-plug pressure cap

TYPE OF END CAP:

COMMENTS: set 6" surface casing to 26.5'
set 4" casing to 40'
performed mud rotary from 27'-40'
performed air rotary from 40'-56'

SPECIAL CONDITIONS
(describe and draw)



NOT TO SCALE

INSTALLED BY: Rob Hamilton

INSTALLATION OBSERVED BY: Al Hardesty

DISCREPANCIES:

Figure 5-2

WELL CONSTRUCTION DETAILS AND ABANDONMENT FORM

FIELD REPRESENTATIVE: Al Hardesty

DRILLING CONTRACTOR: Fronte Drilling

DRILLING TECHNIQUE: Air Rotary
AUGER SIZE AND TYPE: 3 7/8" core bit

BOREHOLE IDENTIFICATION: AA3-BED6W-003
BOREHOLE DIAMETER: 3 7/8"
WELL IDENTIFICATION: AA3-BED6W-003

WELL CONSTRUCTION START DATE: 12-4-04
WELL CONSTRUCTION COMPLETE DATE: 12-17-04

SCREEN MATERIAL: PVC - 0.010 slot
SCREEN DIAMETER: 2"
STRATUM-SCREENED INTERVAL (FT): 40'-45'

CASING MATERIAL: PVC - schedule 40
CASING DIAMETER: 2"

TYPE OF FILTER PACK: sand
GRADIATION: 20/40
AMOUNT OF FILTER PACK USED: 125 lbs

TYPE OF BENTONITE: Hole plug
AMOUNT BENTONITE USED: 25lb

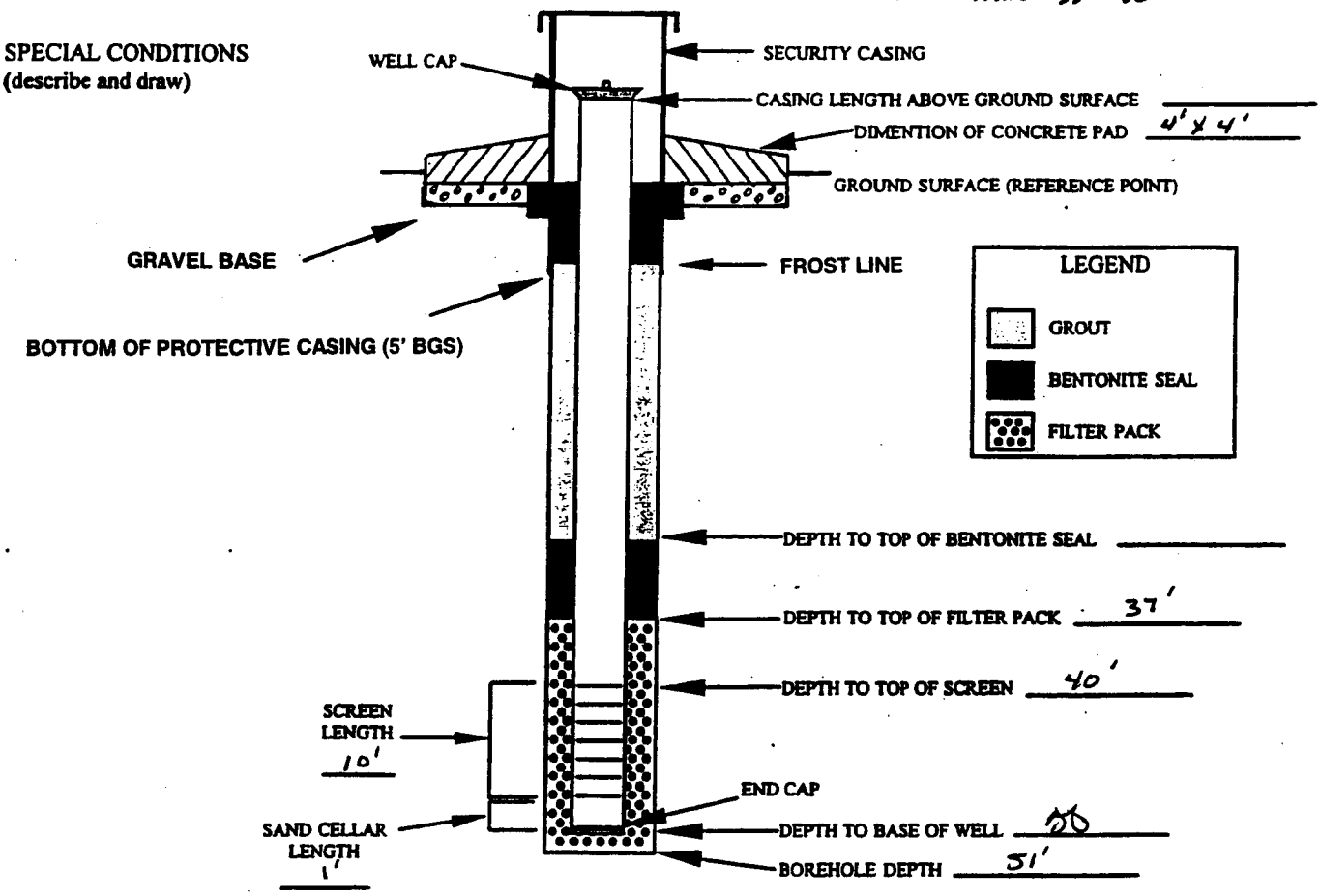
TYPE OF CEMENT: cement bentonite / portland mix
AMOUNT CEMENT USED: 12 Gal
GROUT MATERIALS USED: tremie from bottom up

DIMENSIONS OF SECURITY CASING: 6" steel

TYPE OF WELL CAP:
TYPE OF END CAP:

COMMENTS: set 6" sorting casing to 23.5'
set 4" casing to 35'
performed mud rotary from ~~23.5~~ 31'-35'
performed air rotary from 23.5'-31'
and from 35'-56'

SPECIAL CONDITIONS
(describe and draw)



NOT TO SCALE

INSTALLED BY: Rob Hamilton INSTALLATION OBSERVED BY: Al Hardesty

DISCREPANCIES:

Figure 5-2

WELL CONSTRUCTION DETAILS AND ABANDONMENT FORM

FIELD REPRESENTATIVE: Al Hardesty

DRILLING CONTRACTOR: Fronte Drilling

DRILLING TECHNIQUE: Air rotary

AUGER SIZE AND TYPE: 3 7/8 coring bit

BOREHOLE IDENTIFICATION: AA3-BEDGW-004

BOREHOLE DIAMETER: 3 7/8"

WELL IDENTIFICATION: AA3-BEDGW-004

WELL CONSTRUCTION START DATE: 12/5/04 ~~12-14-04~~

WELL CONSTRUCTION COMPLETE DATE: 12-14-04

SCREEN MATERIAL: None - open hole

SCREEN DIAMETER: N/A

STRATUM-SCREENED INTERVAL (FT): open-hole

CASING MATERIAL: 6" steel casing to 27'

CASING DIAMETER: 4" steel casing to 34.5'

TYPE OF FILTER PACK: none

GRADIATION: N/A

AMOUNT OF FILTER PACK USED: N/A

TYPE OF BENTONITE: bentonite seal in 6" annulus 23'-27'; bentonite seal in 4" annulus 30.5'-34.5'

AMOUNT BENTONITE USED: 50 lbs

TYPE OF CEMENT: cement bentonite / portland mix

AMOUNT CEMENT USED: 150 gallons 6" annulus

GROUT MATERIALS USED: 80 gallons 4" annulus

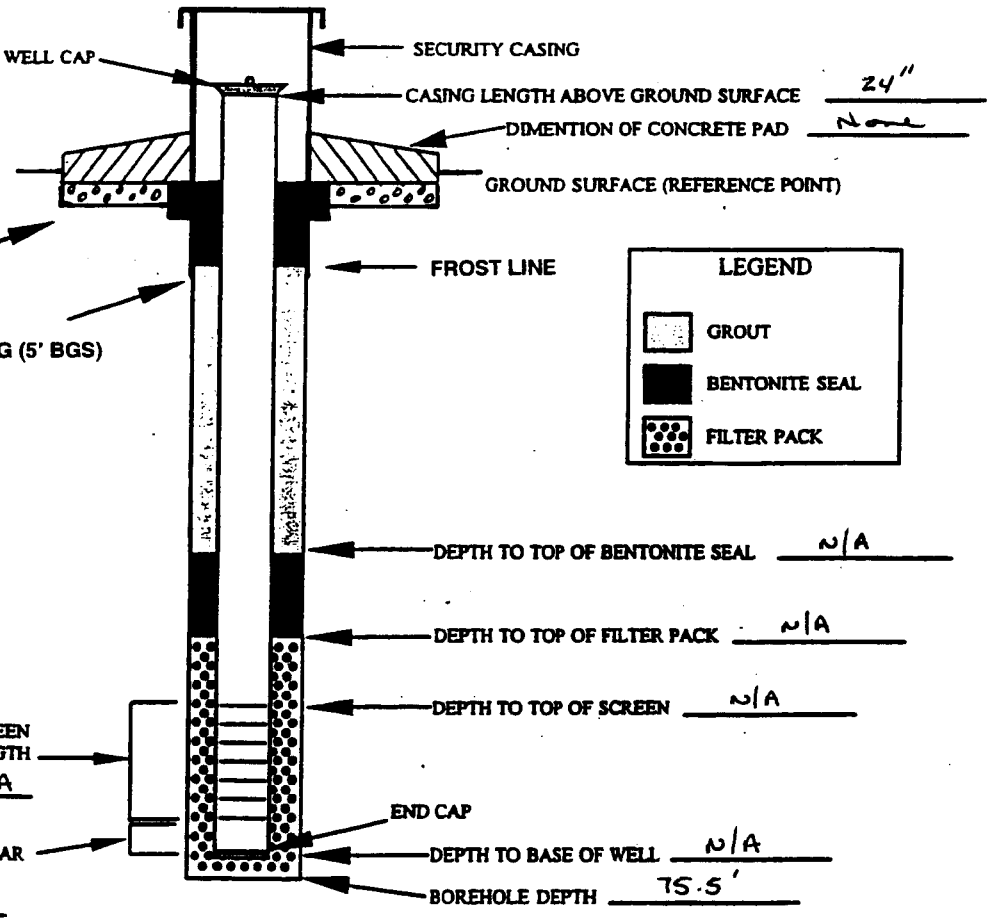
DIMENSIONS OF SECURITY CASING: 4" steel

TYPE OF WELL CAP: 4" pressure cap

TYPE OF END CAP: none

COMMENTS: Did not finish installation of PVC well due to lack of water

SPECIAL CONDITIONS
(describe and draw)



NOT TO SCALE

INSTALLED BY: Rob Hamilton

INSTALLATION OBSERVED BY: Al Hardesty

DISCREPANCIES: Left as open bore hole from 34.5' to TD due to no formation water. Left open to monitor future water levels.

Figure 5-2

Appendix D
Photologs of Rock Cores

JACOBS

Photograph Log No. D-1

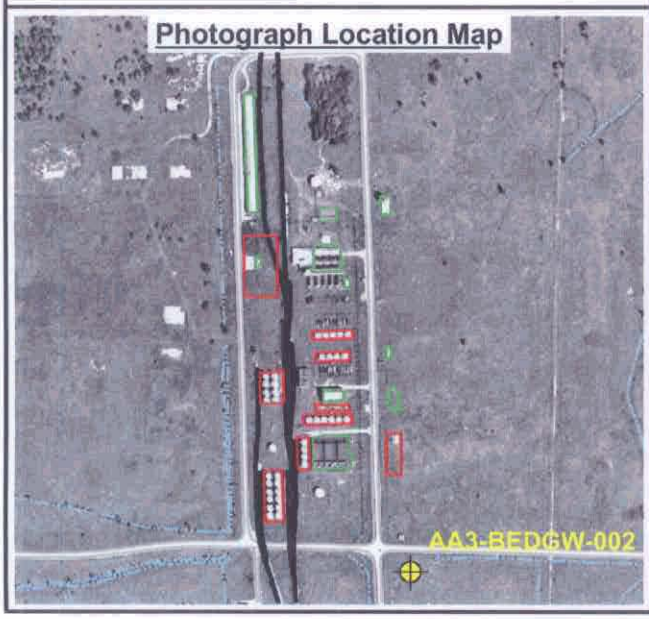
Site:
Acid Area 3

Description:

Rock Core: From Monitoring Well AA3-BEDGW-002, interval 27 ft bgs (upper right) to 35 ft bgs (lower left),

Photograph Date: December 19, 2004

Photograph No.: DSCN0419.JPG



D:\GIS\Plumbrook\Projects\Quarterly Reports\GW_Q1\ArcGIS\Photologs
Photolog_D-1.mxd
April 14, 2005 NZehms Checked by AHardesty

JACOBS

Photograph Log No. D-2

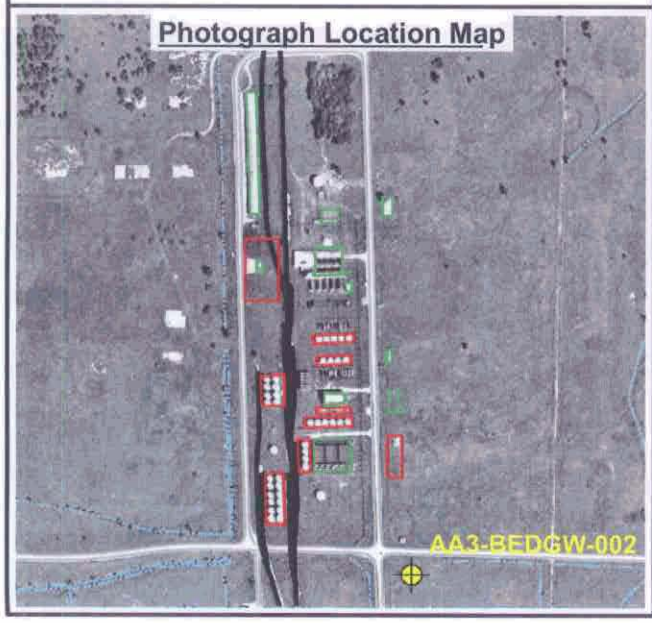
Site:
Acid Area 3

Description:

Rock Core: From Monitoring Well AA3-BEDGW-002, interval 35 ft bgs (upper right) to 40 ft bgs (lower left),

Photograph Date: December 19, 2004

Photograph No.: DSCN0420.JPG



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Photolog_D-2.mxd
April 14, 2005 NZehms Checked by AHardesty

JACOBS

Photograph Log No. D-3

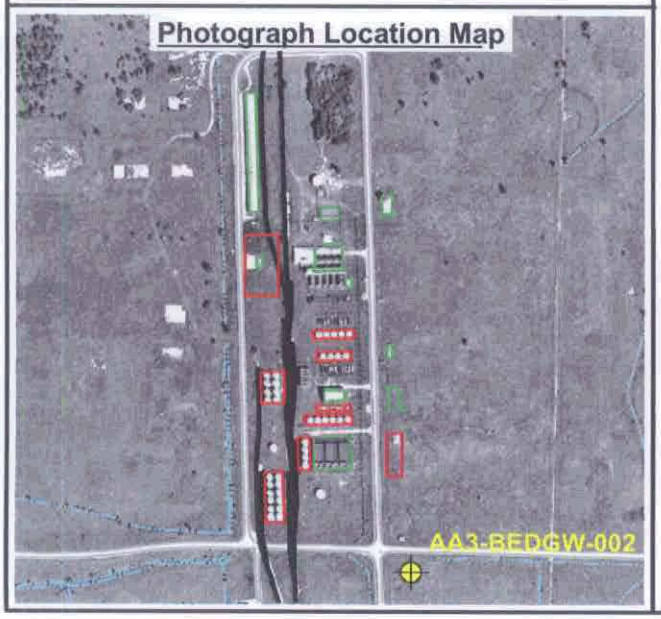
Site:
Acid Area 3

Description:

Rock Core: From Monitoring Well AA3-BEDGW-002, interval 41 ft bgs (upper right) to 51 ft bgs (lower left),

Photograph Date: December 19, 2004

Photograph No.: DSCN0418.JPG



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Photolog_D-3.mxd
April 14, 2005 NZehms Checked by AHardesty

JACOBS

Photograph Log No. D-4

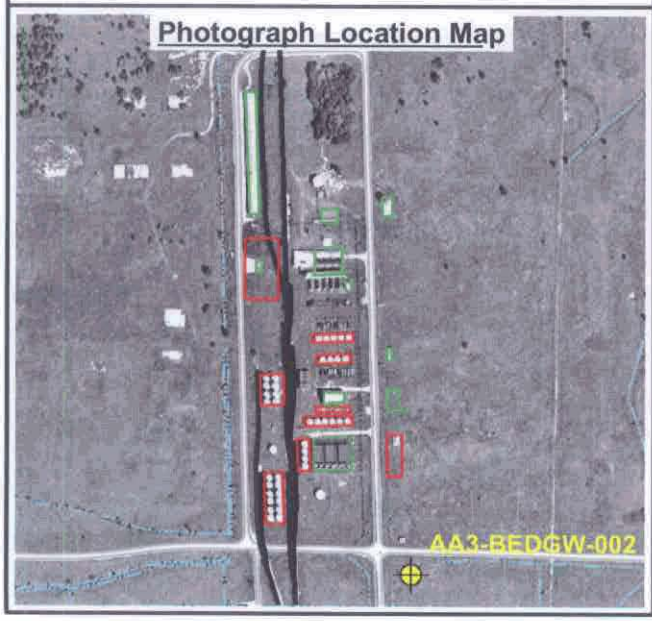
Site:
Acid Area 3

Description:

Rock Core: From Monitoring Well AA3-BEDGW-002, interval 51 ft bgs (upper right) to 56 ft bgs (lower left),

Photograph Date: December 19, 2004

Photograph No.: DSCN0422.JPG



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Photolog_D-4.mxd
April 14, 2005 NZehms Checked by AHardesty

JACOBS

Photograph Log No. D-5

Site:
Acid Area 3

Description:

Rock Core: From Monitoring Well AA3-BEDGW-003, interval 24 ft bgs (upper right) to 30 ft 9 in bgs (lower left),

Photograph Date: December 19, 2004

Photograph No.: DSCN0412.JPG

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Photolog_D-5.mxd
April 14, 2005 NZehms Checked by AHardesty

JACOBS

Photograph Log No. D-6

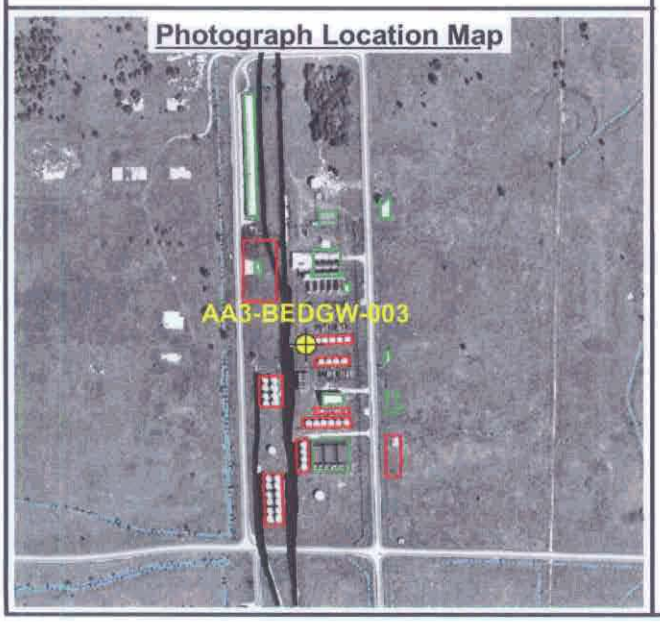
Site:
Acid Area 3

Description:

Rock Core: From Monitoring Well AA3-BEDGW-003, interval 30 ft 9 in bgs (upper right) to 35 ft bgs (lower left),

Photograph Date: December 19, 2004

Photograph No.: DSCN0415.JPG



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Photolog_D-6.mxd
April 14, 2005 NZehms Checked by AHardesty

JACOBS

Photograph Log No. D-7

Site:
Acid Area 3

Description:

Rock Core: From Monitoring Well AA3-BEDGW-003, interval 36 bgs (upper right) to 45 ft bgs (lower left),

Photograph Date: December 19, 2004

Photograph No.: DSCN0416.JPG

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Photolog_D-7.mxd
April 14, 2005 NZehms Checked by AHardesty

JACOBS

Photograph Log No. D-8

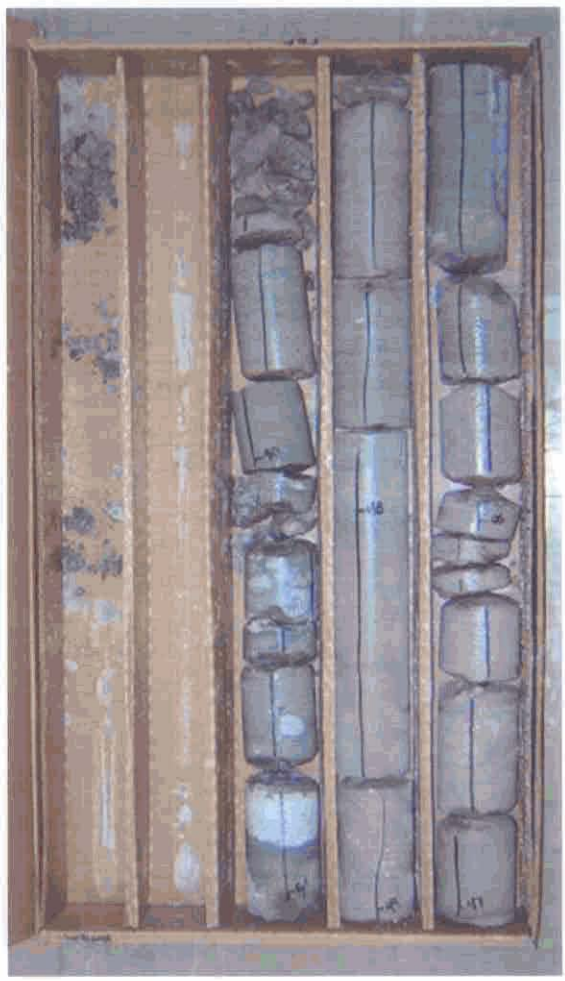
Site:
Acid Area 3

Description:

Rock Core: From Monitoring Well AA3-BEDGW-003, interval 45 bgs (upper right) to 51 ft bgs (lower left),

Photograph Date: December 19, 2004

Photograph No.: DSCN0417.JPG



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Photolog_D-8.mxd
April 14, 2005 NZehms Checked by AHardesty

JACOBS

Photograph Log No. D-9

Site:
Acid Area 3

Description:

Rock Core: From Monitoring Well AA3-BEDGW-004, interval 27 bgs (lower right) to 34.5 ft bgs (upper left),

Photograph Date: December 19, 2004

Photograph No.: DSCN0410.JPG

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Photolog_D-9.mxd
April 14, 2005 NZehms Checked by AHardesty

JACOBS

Photograph Log No. D-10

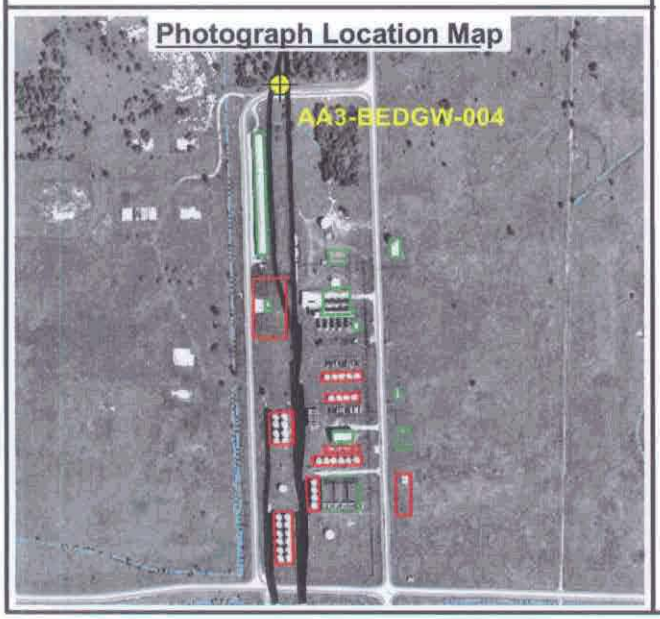
Site:
Acid Area 3

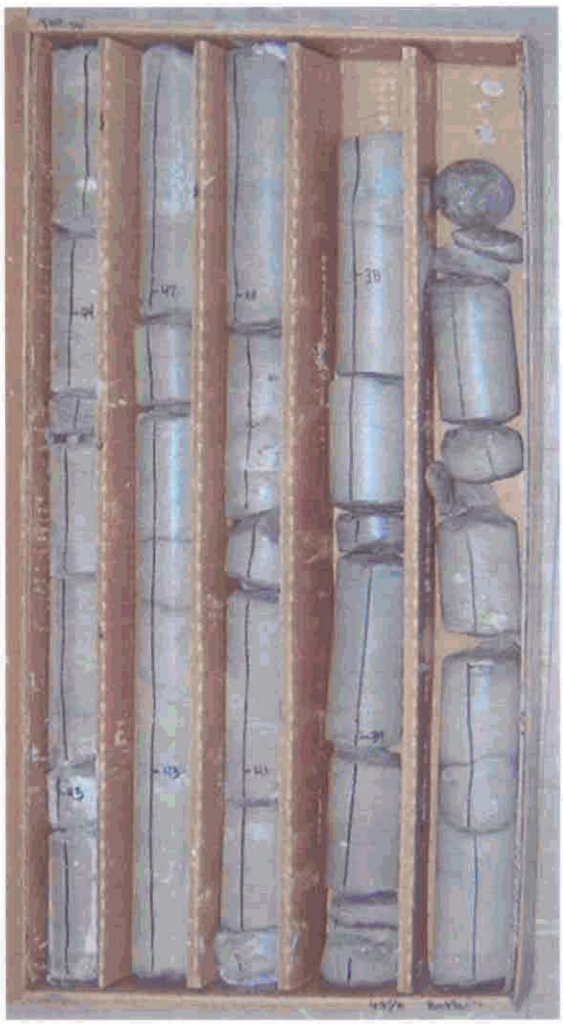
Description:

Rock Core: From Monitoring Well AA3-BEDGW-004, interval 36 ft bgs (upper right) to 45.5 ft bgs (lower left),

Photograph Date: December 19, 2004

Photograph No.: DSCN0411.JPG





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Photolog_D-10.mxd
April 14, 2005 NZahms Checked by AHardesty

JACOBS

Photograph Log No. D-11

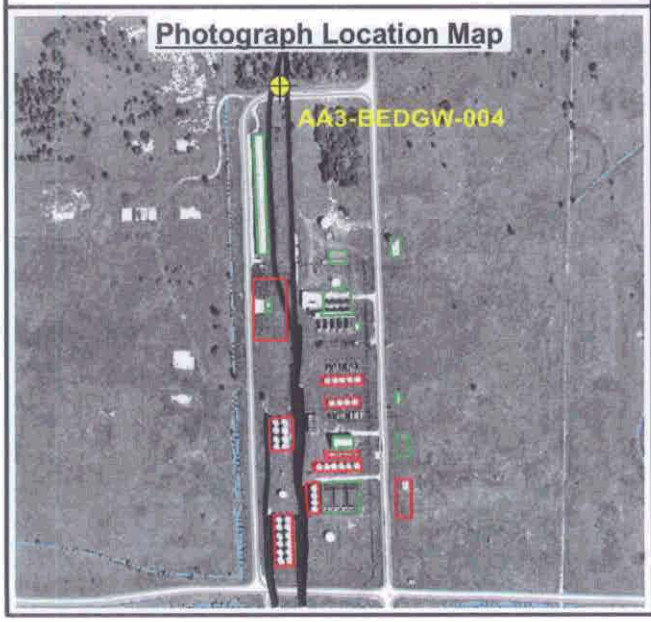
Site:
Acid Area 3

Description:

Rock Core: From Monitoring Well AA3-BEDGW-004, interval 45.5 ft bgs (upper right) to 55.5 ft bgs (lower left),

Photograph Date: December 19, 2004

Photograph No.: DSCN0401.JPG



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Photolog_D-11.mxd
April 14, 2005 NZehms Checked by AHardesty

JACOBS

Photograph Log No. D-12

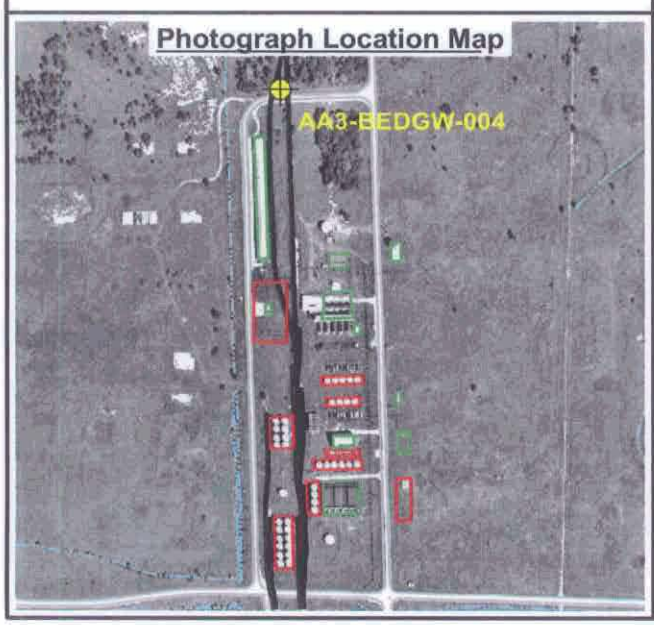
Site:
Acid Area 3

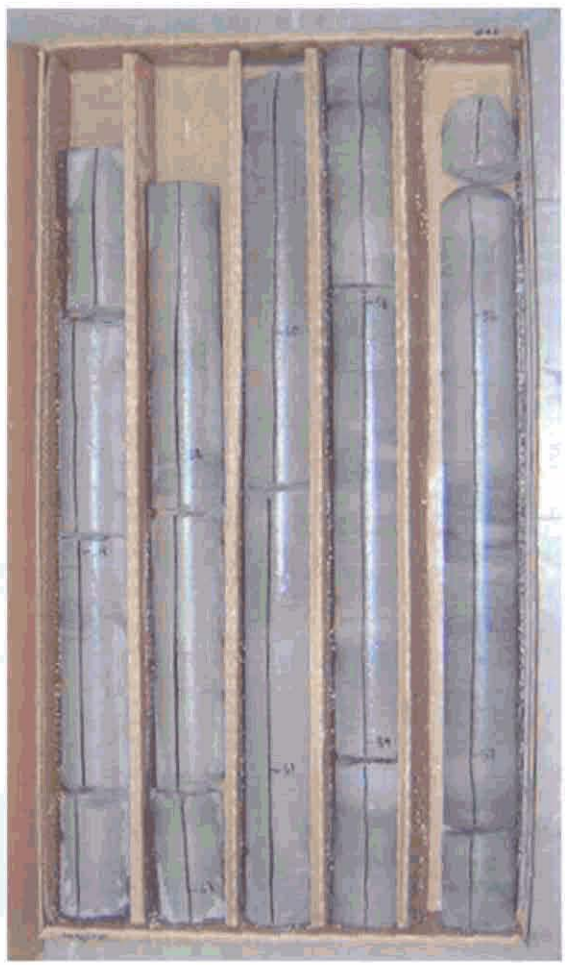
Description:

Rock Core: From Monitoring Well AA3-BEDGW-004, interval 55.5 ft bgs (upper right) to 55.5 ft bgs (lower left),

Photograph Date: December 19, 2004

Photograph No.: DSCN0413.JPG





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Photolog_D-12.mxd
April 14, 2005 NZehms Checked by AHardesty

JACOBS

Photograph Log No. D-13

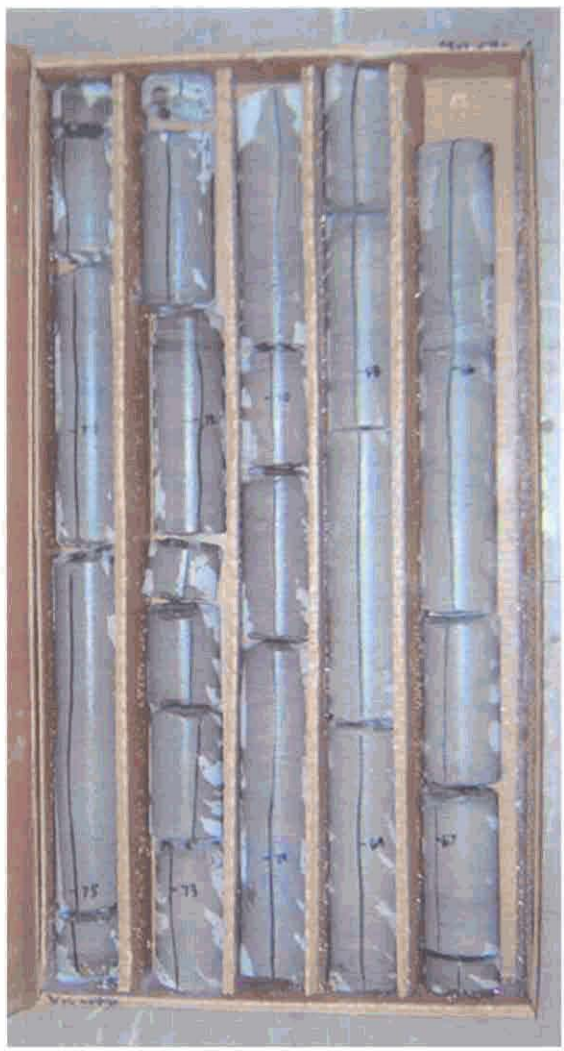
Site:
Acid Area 3

Description:

Rock Core: From Monitoring Well AA3-BEDGW-004, interval 65.5 ft bgs (upper right) to 75.5 ft bgs (lower left),

Photograph Date: December 19, 2004

Photograph No.: DSCN0414.JPG



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Photolog_D-13.mxd
April 14, 2005 NZehms Checked by AHardesty

Appendix E
Well Development Records.

WELL DEVELOPMENT RECORD

WELL/PIEZOMETER ID AA3-GW-003
SHEET 1 of 3

PROJECT NAME: PBOW Acid Area 2+3RI PROJECT NO.: 35BH9304 DATE: 12-18-04 + 12-19-04

LOCATION: AA3-GW-003 DATE INSTALLED: 12-3-04

TOTAL DEPTH (FTOC) 20.09 CASING DIAMETER 2" PVC

METHODS OF DEVELOPMENT

☐ Swabbing ☐ Bailing ☑ Pumping ☐ Describe Bladder pump

Equipment decomtaminated prior to development ☐ Yes ☐ NO

Describe

EQUIPMENT NUMBERS: Horiba U22XD w/ flow-thru cell

pH Meter EC Meter Turbidity Meter Thermometer

CASING VOLUME INFORMATION

Casing ID (inch)	1.0	1.5	2.0	2.2	3.0	4.0	4.3	5.0	6.0	7.0	8.0
Unit Casing Volume (A) (gal/ft)	0.04	0.09	0.16	0.2	0.37	0.65	0.75	1.0	1.5	2.0	2.6

PURGING INFORMATION:

Measured Well Depth (B) 20.09 ft

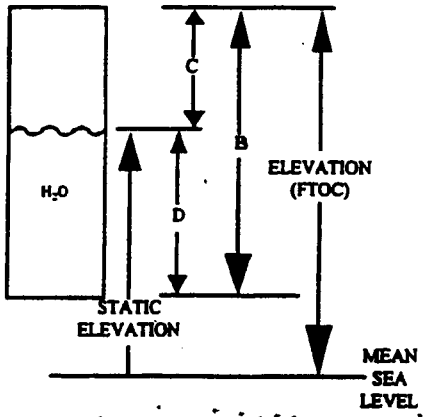
Measured Water Level Depth (C) 4.06 ft

Length of Static Water Column (D) (B) - (C) = 16.03 ft

13 x 0.56 = 7.28 , 3.03 x 0.16 = .48

Casing Water Volume (E) = (A) x (D) = 7.76 gal

Total Purge Volume = 38.8 (gal)



started purge at 1515 - surged well with bladder pump during initial pumping

Date	Time	Water Level (FTOC)	Volume Removed (gal)	pH	EC	Temperature F or C	Turb. (NTU) Sand (ppm)	Comments
12-18-04	~~1600~~ 1630	8.05	5.5	7.21	1.41	10.66	999	DO - 0.17 ORP (-3)
12-18-04	1645	7.75	7	7.23	1.39	10.59	999	DO - 2.88 ORP - 14
12-18-04	1700	6.25	8.5	7.21	1.33	10.59	999	DO - 8.34 ORP - 7
12-18-04	1730	7.23	10.75	7.23	1.36	10.73	999	DO - 4.12 ORP - 8 cleaned screen on pump - silt was clogging mat
12-19-04	0830	7.6'	12.25	7.35	1.34	8.61	895	DO - 0.12 ORP - 27
12-19-04	0900	7.4'	15.0	7.29	1.35	9.31	999	DO - 0.22 ORP - 21
12-19-04	0930	7.47	18.25	7.29	1.35	9.61	594	DO - 0.41 ORP - 20
12-19-04	1000	7.86	21.25	7.29	1.35	9.35	645	DO - 0.36 ORP - 20
12-19-04	1030	7.68	24.5	7.29	1.35	9.52	196	DO - 0.62 ORP - 20
12-19-04	1100	7.63	27.5	7.30	1.35	9.45	68.6	DO - 0.71 ORP - 21

calculated well yield at 375-400 ml/min.

Figure 5-4

WELL DEVELOPMENT RECORD

WELL/PIEZOMETER ID AA3-GW-003
SHEET 2 of 3

PROJECT NAME: PBOW - Acid Area 2+3 RI PROJECT NO.: 35BH9304 DATE: 12-19-04

LOCATION: AA3-GW-003 DATE INSTALLED: 12-3-04

TOTAL DEPTH (FTOC) 20.09 CASING DIAMETER 2" PVC

METHODS OF DEVELOPMENT

☐ Swabbing ☐ Bailing ☑ Pumping ☐ Describe Bladder pump

Equipment decontaminated prior to development ☐ Yes ☐ NO

Describe

EQUIPMENT NUMBERS: Horiba ~~U22~~ U22XD with flow-thru cell

pH Meter EC Meter Turbidity Meter Thermometer

CASING VOLUME INFORMATION

Casing ID (inch)	1.0	1.5	2.0	2.2	3.0	4.0	4.3	5.0	6.0	7.0	8.0
Unit Casing Volume (A) (gal/ft)	0.04	0.09	0.16	0.2	0.37	0.65	0.75	1.0	1.5	2.0	2.6

PURGING INFORMATION:

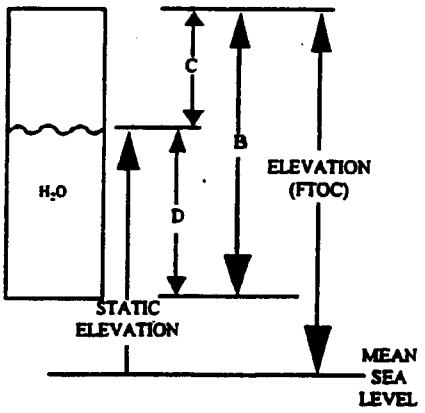
Measured Well Depth (B) 20.09 ft

Measured Water Level Depth (C) 4.06 ft

Length of Static Water Column (D) (B) - (C) = 16.03 ft

Casing Water Volume (E) = (A) x (D) = 7.76 gal

Total Purge Volume = 38.8 (gal)



Date	Time	Water Level (FTOC)	Volume Removed (gal)	pH	EC	Temperature F or C	Turb. (NTU) Sand (ppm)	Comments
12-19-04	1130	7.57'	30.5	7.30	1.35	9.73	51.6	DO - 0.78 ORP - 22
12-19-04	1200	7.56'	33.5	7.31	1.35	9.54	53.2	DO - 0.85 ORP - 23
12-19-04	1230	7.47'	36.5	7.31	1.35	9.09	106.0	DO - 1.00 ORP - 26
12-19-04	1300	6.58'	39.25	7.32	1.36	8.07	59.8	DO - 1.02 ORP - 29 reduced pump rate to 200 ml/min
12-19-04	1330	6.40'	41.5	7.31	1.35	7.59	47.4	DO - 0.98 ORP - 33 reduced pumping intake rate to 200 ml/min APH
12-19-04	1400	5.91'	43.0 APH	7.32	1.36	7.59	41.4	DO - 0.92 ORP - 33
12-19-04	1415	5.80'	44.0	7.31	1.35	7.18	34.1	DO - 0.92 ORP - 33
12-19-04	1445	4.88'	44.75	7.36	1.36	3.79	22.0*	DO - 2.93* ORP - 51* flushed out flow-thru cell - removed sediment
12-19-04	1500	4.95'	45.5	7.33	1.36	2.91	28.1	DO - 0.59 ORP - 42
12-19-04	1515	5.39'	46.25	7.31	1.36	6.26	22.6	DO - 0.62 ORP - 38

opening flow thru cell and cleaning affected DO and ORP but improved turbidity

Figure 5-4

WELL DEVELOPMENT RECORD

WELL/PIEZOMETER ID AA3-GW-003
SHEET 3 of 3

PROJECT NAME: PBOW - Acid Area 2+3 RI PROJECT NO.: 35BH9304 DATE: 12-19-04

LOCATION: AA3-GW-003 DATE INSTALLED: 12-3-04

TOTAL DEPTH (FTOC) 20.09 CASING DIAMETER 2" PVC

METHODS OF DEVELOPMENT

☐ Swabbing ☐ Bailing ☑ Pumping ☐ Describe Bladder Pump

Equipment decontaminated prior to development ☐ Yes ☐ NO

Describe

EQUIPMENT NUMBERS: Horiba - U22XD w/ flow-thru cell

pH Meter EC Meter Turbidity Meter Thermometer

CASING VOLUME INFORMATION

Casing ID (inch)	1.0	1.5	2.0	2.2	3.0	4.0	4.3	5.0	6.0	7.0	8.0
Unit Casing Volume (A) (gal/ft)	0.04	0.09	0.16	0.2	0.37	0.65	0.75	1.0	1.5	2.0	2.6

PURGING INFORMATION:

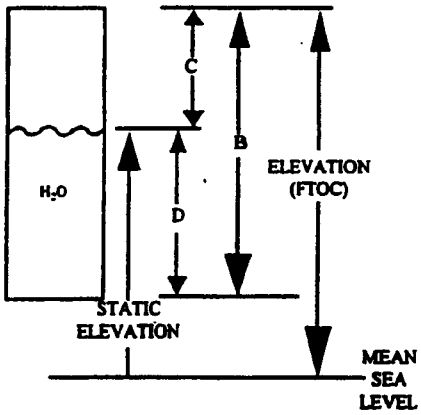
Measured Well Depth (B) 20.09 ft

Measured Water Level Depth (C) 4.06 ft

Length of Static Water Column (D) (B) - (C) = 16.03 ft

Casing Water Volume (E) = (A) x (D) = 7.76 gal

Total Purge Volume = 38.8 (gal)



Date	Time	Water Level (FTOC)	Volume Removed (gal)	pH	EC	Temperature F or C	Turb. (NTU) Sand (ppm)	Comments
12-19-04	1530	5.62'	47	7.32	1.35	7.02	20.7	DO - 0.62 ORP - 35
12-19-04	1545	5.57'	47.75	7.32	1.35	6.60	18.5	DO - 0.61 ORP - 35
12-19-04	1555	5.54'	48.25	7.32	1.36	6.43	17.2	DO - 0.62 ORP - 35

Figure 5-4

JACOBS

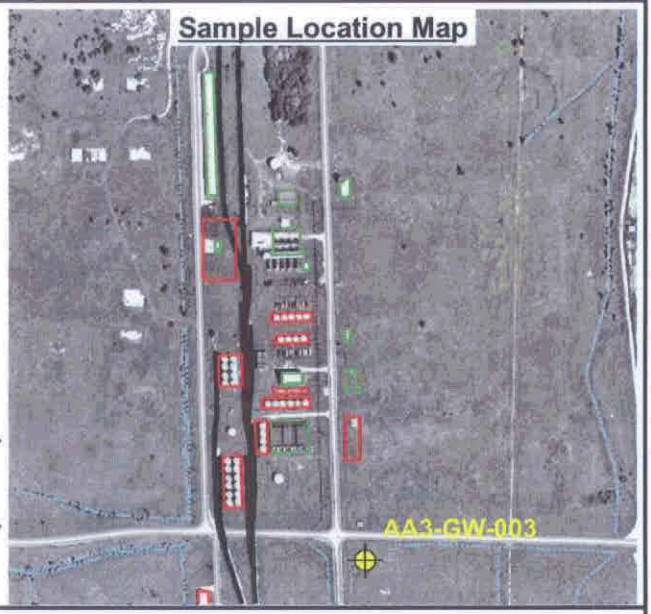
Well Development Final Purge Water E-2

Site:
Acid Area 3

Description:
Development Water from Monitoring Well AA3-GW-003.

Photograph Date: December 19, 2004

Photograph No.: DSCN0432_GW-003.JPG



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April 14, 2005 NZehms Checked by AHardesty

WELL DEVELOPMENT RECORD

WELL/PIEZOMETER ID AA3-GW-004
SHEET 1 of 2

PROJECT NAME: PBOW - Acid Area 2+3 RI PROJECT NO.: 35BH9304 DATE: 12-18-04 to 12-21-04

LOCATION: AA3-GW-004 DATE INSTALLED: 12-4-04

TOTAL DEPTH (FTOC) 20.06' CASING DIAMETER 2" PVC

METHODS OF DEVELOPMENT

☐ Swabbing ☐ Bailing ☑ Pumping ☐ Describe Bladder Pump

Equipment decontaminated prior to development ☐ Yes ☐ NO

Describe Deconned bladder pump and tubing 12-17-04 after completing development on AA3-GW-005

EQUIPMENT NUMBERS: Horiba U-22xD w/ flow-thru cell

pH Meter _____ EC Meter _____ Turbidity Meter _____ Thermometer _____

CASING VOLUME INFORMATION

Casing ID (inch)	1.0	1.5	2.0	2.2	3.0	4.0	4.3	5.0	6.0	7.0	8.0
Unit Casing Volume (A) (gal/ft)	0.04	0.09	0.16	0.2	0.37	0.65	0.75	1.0	1.5	2.0	2.6

PURGING INFORMATION:

Measured Well Depth (B) ~~8.82~~ 20.06 ft

Measured Water Level Depth (C) 8.82 ft

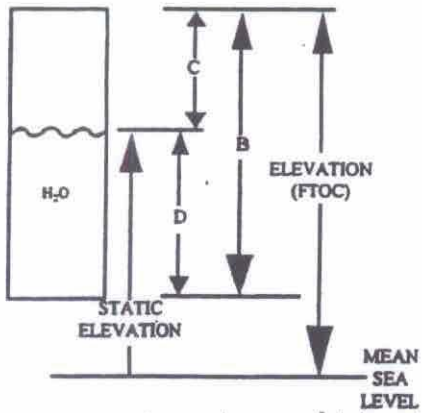
Length of Static Water Column (D) _____ (B) - _____ (C) = 11.24 ft

11.24' x 0.56 gal/ft =

Casing Water Volume (E) = _____ (A) x _____ (D) = 6.29 gal

x 5

Total Purge Volume = 31.47 (gal)



Started purge at 1158 on 12-18-04 Started purge at 1125 on 12-21-04, set pump intake at 19'

Date	Time	Water Level (FTOC)	Volume Removed (gal)	pH	EC	Temperature* F or C	Turb. (NTU) Sand (ppm)	Comments
12-18-04	1300	11.55	2.5	7.43	0.852	9.60	217	surged well prior to pumping and frequently during
12-18-04	1330	11.88	2.94	7.42	0.861	9.92	96.1	DO - 7.11 ORP - 125 pumping at 55 ml/min
12-18-04	1345	13.65	4.95	7.39	0.875	11.09	52.1	DO - 6.54 ORP - 117 increased pump rate
12-18-04	1400	15.91	7.0	7.42	0.829	11.21	98.8	DO - 5.48 ORP - 94
12-18-04	1415	18.54	8.25	7.49	0.794	10.92	142	DO - 5.04 ORP - 45
12-19-04	1645 to 1730	9.52 - start 18.52 - end	15.75	N/A	N/A	N/A	N/A	purging well to bottom to remove all water
12-20-04	0830 to 0955	11.83 start 18.04 - end	23.75	N/A	N/A	N/A	N/A	purging well to bottom to remove all water
12-21-04	1200	13.36'	26.25	7.39	1.91	9.68	0.7	DO - 4.15 ORP - 15 pump rate 200 ml/min
12-21-04	1230	14.47	28.25	7.44	2.07	10.55	1.8	DO - 4.57 ORP - 15
12-21-04	1300	> 15' *	29.75	7.50	1.98	10.89	0.6	DO - 4.64 ORP - (-4)

980 ml + 670 ml

first hour 1300 - DO - 7.54 - ORP - 124

will purge dry

* top of pump at 15'

* set up equipment inside of van - temperature readings reflect ambient air conditions in van not downhole well conditions.

calculated well yield at 31 ml / min.

Figure 5-4

WELL DEVELOPMENT RECORD

WELL/PIEZOMETER ID AA3-GW-004
SHEET 2 of 2

PROJECT NAME: PBOW-Acid Area 2+3 RI PROJECT NO.: 35BH9304 DATE: 12-21-04

LOCATION: AA3-GW-004 DATE INSTALLED: 12-4-04

TOTAL DEPTH (FTOC) 20.06 CASING DIAMETER 2" PVC

METHODS OF DEVELOPMENT

☐ Swabbing ☐ Bailing ☑ Pumping ☐ Describe Bladder Pump

Equipment decontaminated prior to development ☐ Yes ☐ NO

Describe

EQUIPMENT NUMBERS: Horiba . U22XD w/ flow-thru cell

pH Meter EC Meter Turbidity Meter Thermometer

CASING VOLUME INFORMATION

Casing ID (inch)	1.0	1.5	2.0	2.2	3.0	4.0	4.3	5.0	6.0	7.0	8.0
Unit Casing Volume (A) (gal/ft)	0.04	0.09	0.16	0.2	0.37	0.65	0.75	1.0	1.5	2.0	2.6

PURGING INFORMATION:

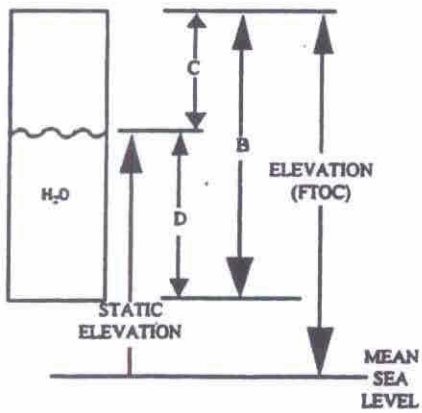
Measured Well Depth (B) 20.06 ft

Measured Water Level Depth (C) 8.82 ft

Length of Static Water Column (D) (B) - (C) = 11.24 ft

Casing Water Volume (E) = (A) x (D) = 6.29 gal

Total Purge Volume = 31.47 (gal)



Date	Time	Water Level (FTOC)	Volume Removed (gal)	pH	EC	Temperature F or C	Turb. (NTU) Sand (ppm)	Comments
12-21-04	1345	>15'	30.75	7.54	1.75	10.35	0.4	DO - 4.47 ORP - (-15)
12-21-04	1400	>15'	31.75	7.53	1.71	10.71	0.2	DO - 4.58 ORP - (-7)
12-21-04	1415	> 15'	32.5	7.53	1.69	10.79	0.2	DO - 4.45 ORP - (-11)

Figure 5-4

JACOBS

Well Development Final Purge Water E-4

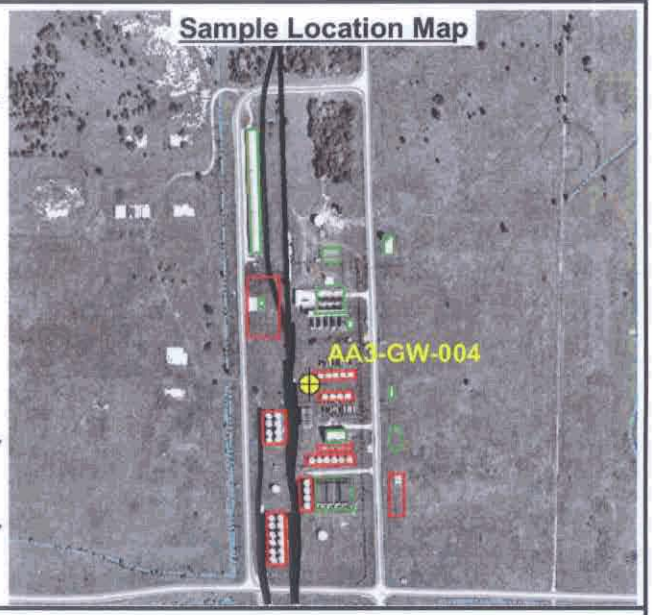
Site:
Acid Area 3

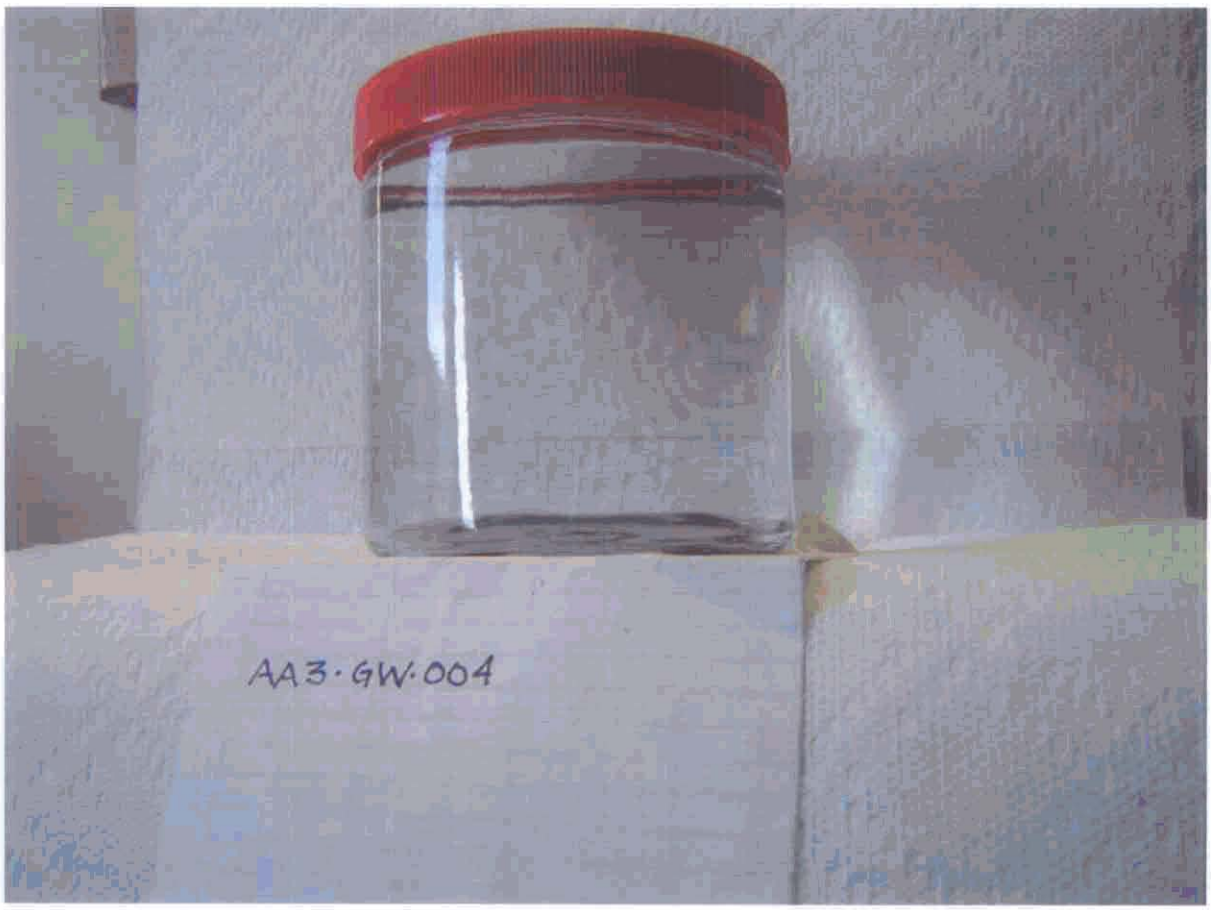
Description:

Development Water from Monitoring Well AA3-GW-004.

Photograph Date: December 19, 2004

Photograph No.: DSCN0430_GW-004.JPG





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Water_E-4.mxd
April 14, 2005 NZehms Checked by AHardesty

WELL DEVELOPMENT RECORD

WELL/PIEZOMETER ID AA3-GW-005
SHEET 1 of 2

PROJECT NAME: PBOW - Acid Areas 2+3 RI PROJECT NO.: 35BH9304 DATE: 12-13-04 - 12-17-04

LOCATION: AA3-GW-005 DATE INSTALLED: 12-6-04

TOTAL DEPTH (FTOC) 20.08 CASING DIAMETER 2" PVC

METHODS OF DEVELOPMENT

☐ Swabbing ☐ Bailing ☑ Pumping ☐ Describe Bladder Pump

Equipment decontaminated prior to development ☑ Yes ☐ NO

Describe Decon'd equipment on 12-13-04 using alguinox, potable rinse, and DI by pouring 5 min each in all 3 solutions.

EQUIPMENT NUMBERS: Horiba U22XD w/ flow thru cell.

pH Meter _____ EC Meter _____ Turbidity Meter _____ Thermometer _____

CASING VOLUME INFORMATION

Casing ID (inch)	1.0	1.5	2.0	2.2	3.0	4.0	4.3	5.0	6.0	7.0	8.0
Unit Casing Volume (A) (gal/ft)	0.04	0.09	0.16	0.2	0.37	0.65	0.75	1.0	1.5	2.0	2.6

PURGING INFORMATION:

Measured Well Depth (B) 20.08 ft

Measured Water Level Depth (C) 4.85' ft

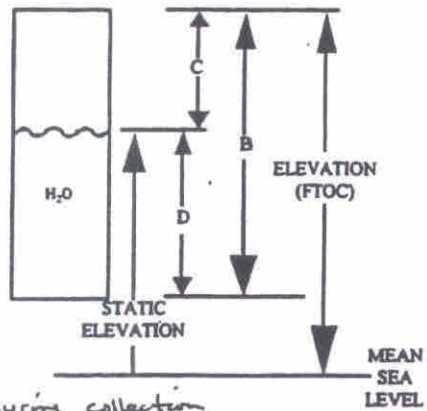
Length of Static Water Colume (D) _____ (B) - _____ (C) = 15.23 ft

13' at 0.16 gal/ft. = 7.3 gal 2.23 ft at 0.16 gal/ft = .36 gal

Casing Water Volume (E) = _____ (A) x _____ (D) = 7.66 gal

x5 volumes

Total Purge Volume = 38.3 (gal)



* set pump intake at 15' below TOC on 12-17-04 during collection of water parameters. Pump controller settings max - 60 sec on recharge - 5 sec on charge

Date	Time	Water Level (FTOC)	Volume Removed (gal)	pH	EC	Temperature F or C	Turb. (NTU) Sand (ppm)	Comments
12-13-04	1415 to 1600	4.85 - start > 17.0 - End	8.5	N/A	N/A	N/A	N/A	purged to bottom of well. wl below top of pump
12-14-04	0844 to 0936	5.40 - start > 17.0 - End	16.0 ~~7.5~~ add	N/A	N/A	N/A	N/A	purged to bottom of well. wl below top of pump
12-15-04	1057 to 1155	5.17' - start > 17' - End	24.0	N/A	N/A	N/A	N/A	purged to bottom. wl below top of pump
12-16-04	0820 to 0855	5.22' - start > 17.0' - End	32.0	N/A	N/A	N/A	N/A	purged to bottom. wl below top of pump.
12-16-04	1610 to 1640	8.39 - start > 17.0' - End	37.0	N/A	N/A	N/A	N/A	purged to bottom - wl below top of pump.
12-17-04	1000	5.38' - start	37.0	N/A	N/A	N/A	N/A	waiting for flow thru cell to fill up.
* 12-17-04	1035	8.48'	37.75	7.24	0.815	8.19°C	10.8	DO - 10.29 ORP - 197
12-17-04	1100	8.60'	38.1	7.53	0.886	4.11°C	7.6	DO - 10.03 ORP - 189
12-17-04	1130	8.78'	38.25	7.59	0.925	2.77°C	6.0	DO - 9.55 ORP - 182
12-17-04	1200	9.02'	38.6	7.60	0.933	2.79°C	4.7	DO - 9.09 ORP - 177

note: Due to very low flow of 50 ml/min - temp readings reflect ambient air temperatures rather than groundwater conditions

estimated volume of water above the pump intake is 5.6 gallons therefore at least 5.6 gallons may need to be purged for parameters to stabilize

2.23 .16 1338 .8

.66 5 3.30

Figure 5-4

WELL DEVELOPMENT RECORD

WELL/PIEZOMETER ID AA3-GW-005
SHEET 2 of 2

PROJECT NAME: PBOW - Acid Areas 2+3 RI PROJECT NO.: 35BH9304 DATE: 12-17-04

LOCATION: AA3-GW-005 DATE INSTALLED: 12-6-04

TOTAL DEPTH (FTOC) 20.08 CASING DIAMETER 2" PVC

METHODS OF DEVELOPMENT

☐ Swabbing ☐ Bailing ☑ Pumping ☐ Describe Bladder Pump

Equipment decontaminated prior to development ☐ Yes ☐ NO

Describe

EQUIPMENT NUMBERS: Horiba U22XD w/ flow thru cell

pH Meter EC Meter Turbidity Meter Thermometer

CASING VOLUME INFORMATION

Casing ID (inch)	1.0	1.5	2.0	2.2	3.0	4.0	4.3	5.0	6.0	7.0	8.0
Unit Casing Volume (A) (gal/ft)	0.04	0.09	0.16	0.2	0.37	0.65	0.75	1.0	1.5	2.0	2.6

PURGING INFORMATION:

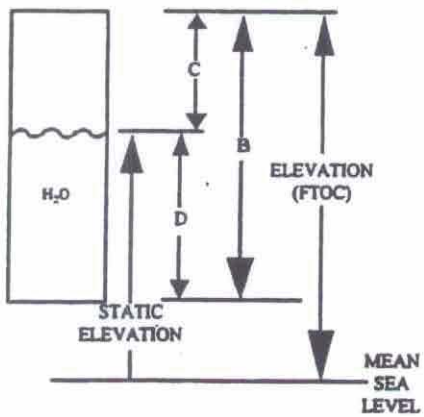
Measured Well Depth (B) 20.08 ft

Measured Water Level Depth (C) 4.85 ft

Length of Static Water Column (D) (B) - (C) = 15.23 ft

Casing Water Volume (E) = (A) x (D) = 7.066 gal

Total Purge Volume = 38.3 (gal)



Date	Time	Water Level (FTOC)	Volume Removed (gal)	pH	EC	Temperature F or C	Turb. (NTU) Sand (ppm)	Comments
12-17-04	1230	9.14'	38.95	7.61	0.942	2.27°C	4.3	DO - 8.60 ORP - 166
12-17-04	1300	9.26'	39.25	7.61	0.934	3.82°C	2.6	DO - 8.42 ORP - 127
12-17-04	1330	9.30'	39.6	7.59	0.935	3.86°C	1.5	DO - 8.24 ORP - 93
12-17-04	1400	9.38'	39.9	7.60	0.929	4.22°C	1.3	DO - 8.01 ORP - 72
12-17-04	1430	9.43'	40.25	7.60	0.931	3.45°C	0.8	DO - 7.80 ORP - 61
12-17-04	1500	9.44'	40.6	7.59	0.936	2.62°C	0.5	DO - 7.46 ORP - 51
12-17-04	1530	9.44'	40.95	7.59	0.941	2.03°C	0.7	DO - 7.28 ORP - 45
12-17-04	1600	9.44'	41.3	7.58	0.938	1.64°C	0.6	DO - 6.99 ORP - 41

calculations for future sampling
well yield is approximately 40 ml/min
purge volume - 4.8 gal (9 hours)
sample volume - 5 L (2 hours)
total estimated time - 11 hours

recharge matches withdrawl rate of 40 ml/min at 9.5'
set top of pump at 10' - intake at 13' to adequately flush upper well volume prior to sampling.

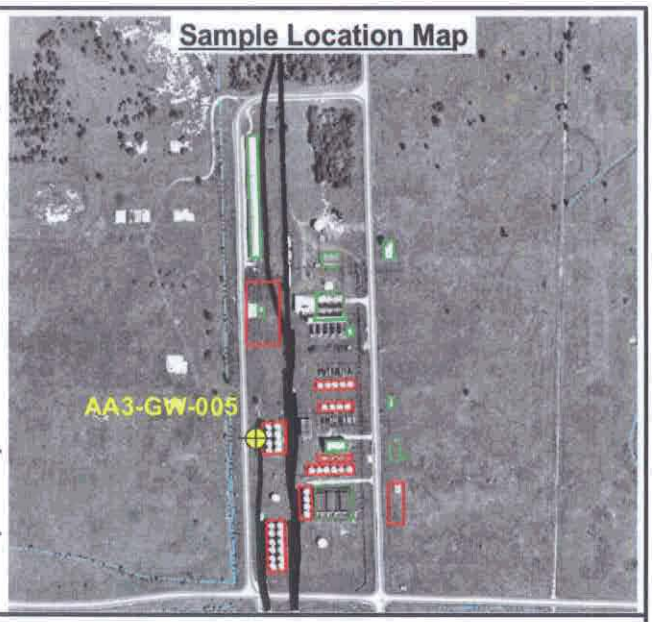
Figure 5-4 It is assumed productive zone is at or above the top of screen.

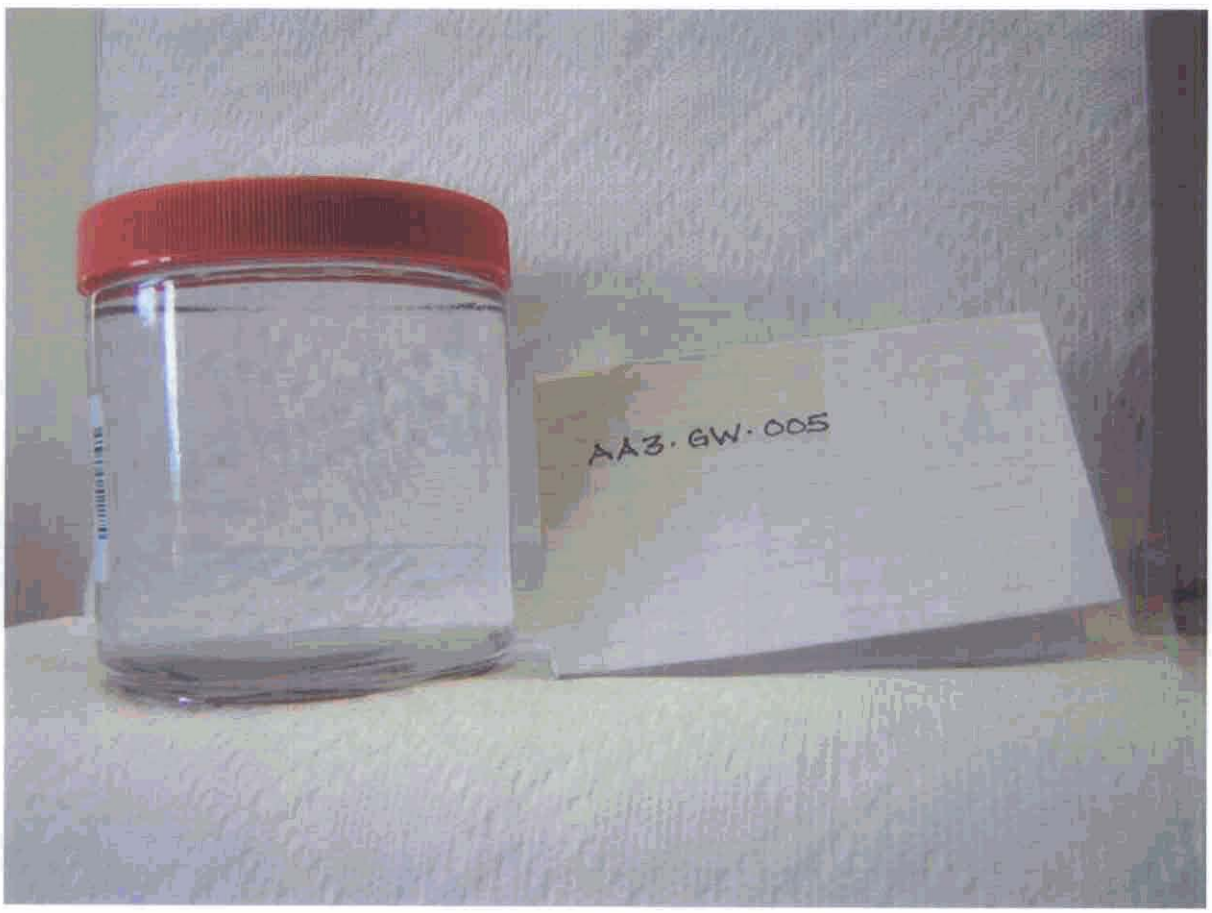
Site:
Acid Area 3

Description:
Development Water from Monitoring Well AA3-GW-005.

Photograph Date: December 19, 2004

Photograph No.: DSCN0434_GW-005.JPG





WELL DEVELOPMENT RECORD

WELL/PIEZOMETER ID AA3-BEDGW-002
SHEET 1 of 1

PROJECT NAME: Areas 2+3 RI (ABOW - Acid) PROJECT NO.: 35BH9304 DATE: 12-20-04

LOCATION: AA3-BEDGW-002 DATE INSTALLED: 12-16-04

TOTAL DEPTH (FTOC) 57.47 CASING DIAMETER 2" PVC

METHODS OF DEVELOPMENT

☐ Swabbing ☐ Bailing ☑ Pumping ☐ Describe Bladder Pump

Equipment decontaminated prior to development ☐ Yes ☐ NO

Describe Decomed bladder pump and tubing after developing AA3-BEDGW-003

EQUIPMENT NUMBERS: Horiba - U22XD w/ flow-thru cell

pH Meter _____ EC Meter _____ Turbidity Meter _____ Thermometer _____

CASING VOLUME INFORMATION

Casing ID (inch)	1.0	1.5	2.0	2.2	3.0	4.0	4.3	5.0	6.0	7.0	8.0
Unit Casing Volume (A) (gal/ft)	0.04	0.09	0.16	0.2	0.37	0.65	0.75	1.0	1.5	2.0	2.6

PURGING INFORMATION:

Measured Well Depth (B) 57.47 ft

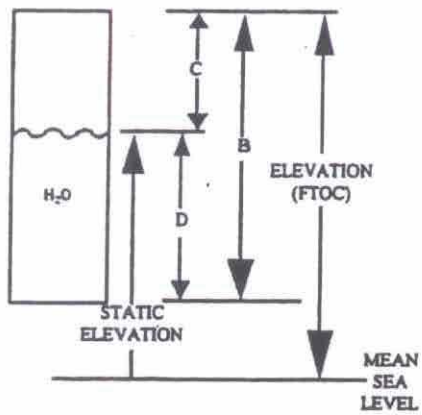
Measured Water Level Depth (C) 31.31 ft

Length of Static Water Column (D) _____ (B) - _____ (C) = 26.16 ft

13 x 0.31 = 4.0 gal + 13.16 x 0.16 = 2.1

Casing Water Volume (E) = _____ (A) x _____ (D) = 6.1 gal

Total Purge Volume = 30.5 (gal)



Started pumping at 1653 12-20-04. Resumed at 0755 12-21-04

Date	Time	Water Level (FTOC)	Volume Removed (gal)	pH	EC	Temperature F or C	Turb. (NTU) Sand (ppm)	Comments
12-20-04	1730	~~7.5~~ 32.40'	7.5	7.20	.793	10.99	62.7	DO - 0.00 ORP ~~-0~~ - (-318)
12-20-04	1750	32.42'	11.75	7.22	.827	10.82	21.6	DO - 0.00 ORP - (-319)
12-21-04	0815	31.82'	15.25	7.32	.763	11.20	58.8	DO - 0.00 ORP - (-286)
12-21-04	0830	32.10'	18.5	7.31	.790	11.20	30.8	DO - 0.00 ORP - (-283)
12-21-04	0845	32.10'	22.25	7.29	.804	11.20	21.5	DO - 0.00 ORP - (-279)
12-21-04	0900	32.05'	24.0	7.28	.831	10.81	19.5	DO - 1.07 ORP - (-270) reduced pump rate and fill rate
12-21-04	0915	31.91'	25.75	7.26	.832	10.83	13.4	DO - 0.33 ORP - (-274)
12-21-04	0930	31.91'	27.5	7.26	.862	10.2	3.1	DO - 0.00 ORP - (-273)
12-21-04	0945	31.91'	29.25	7.25	.855	10.8	2.5	DO - 0.00 ORP - (-275)
12-21-04	1000	31.91'	31.0	7.24	.869	10.77	1.9	DO - 0.00 ORP - (-276)

volume of sand pack interval = (0.65 - 0.16) * .3 = 0.15 + 0.16 = .31 gal/ft

calculated well yield at 880 ml/min.

Figure 5-4

JACOBS

Well Development Final Purge Water E-1

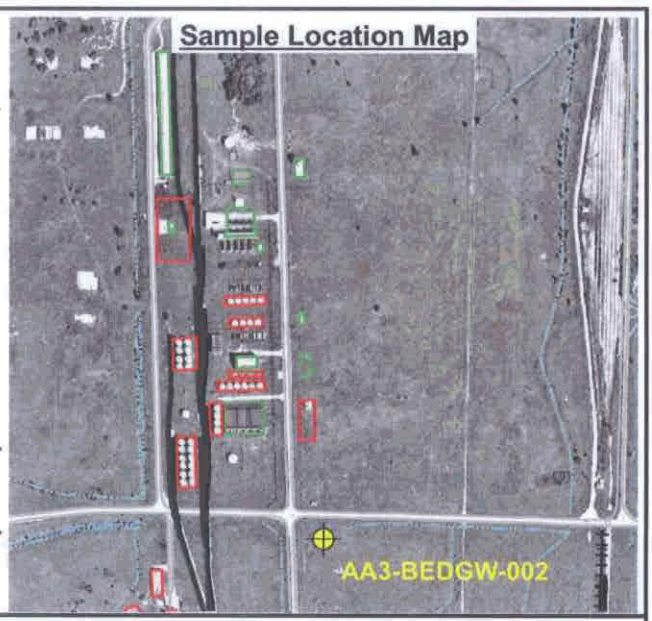
Site:
Acid Area 3

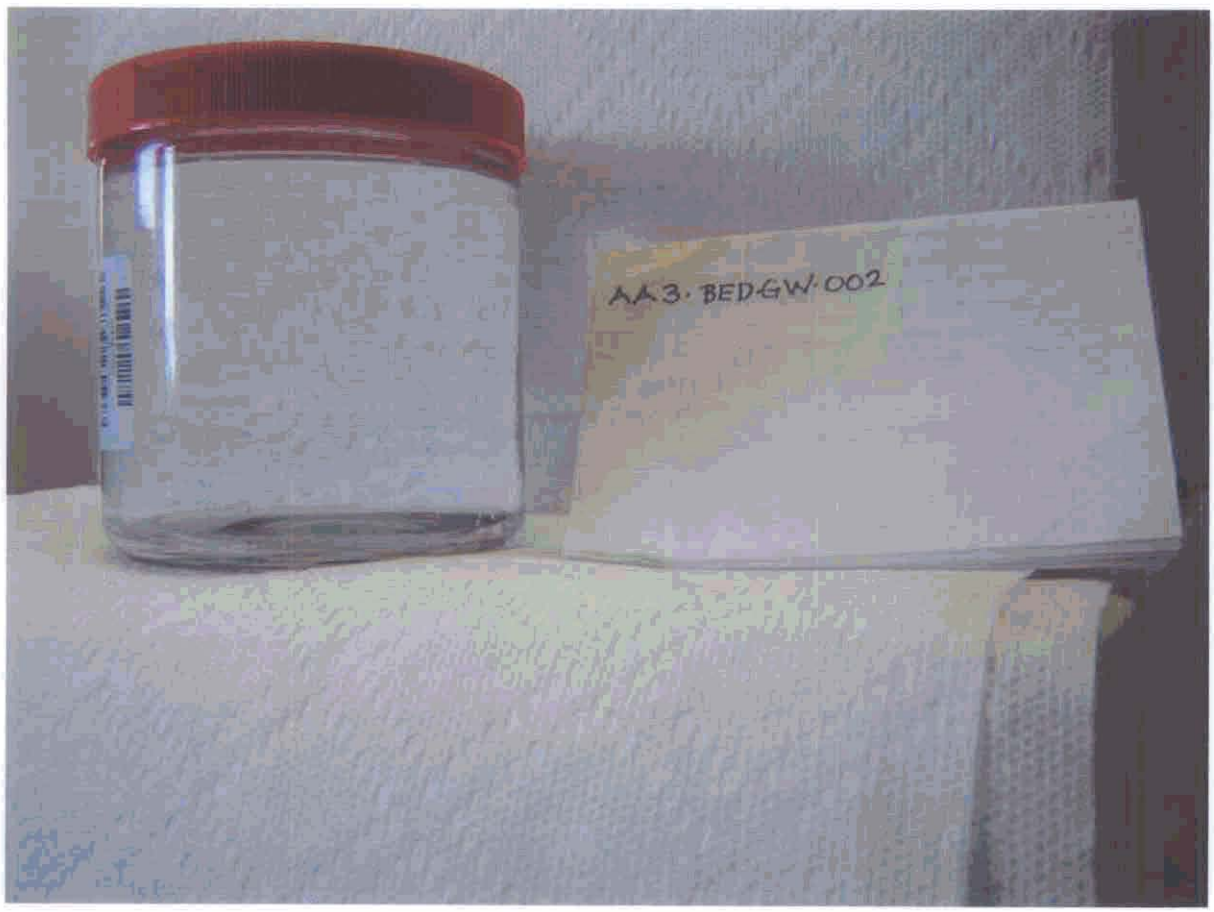
Description:

Development Water from Monitoring Well AA3-BEDGW-002.

Photograph Date: December 19, 2004

Photograph No.: DSCN0431_GW-002.JPG





WELL DEVELOPMENT RECORD

WELL/PIEZOMETER ID AA3-BEDGW-003
SHEET 1 of 2

PROJECT NAME: PBOW - Acid Areas 2+3RI PROJECT NO.: 35BH9304 DATE: 12-20-04

LOCATION: AA3-BEDGW-003 DATE INSTALLED: 12-17-04

TOTAL DEPTH (FTOC) 52.76 CASING DIAMETER 2" PVC

METHODS OF DEVELOPMENT

☐ Swabbing ☐ Bailing ☑ Pumping ☐ Describe Bladder pump

Equipment decontaminated prior to development ☐ Yes ☐ NO

Describe Decomed equipment - wl meter and bladder pump prior to use

EQUIPMENT NUMBERS: Horiba - U22XD with flow-thru cell

pH Meter _____ EC Meter _____ Turbidity Meter _____ Thermometer _____

CASING VOLUME INFORMATION:

Casing ID (inch)	1.0	1.5	2.0	2.2	3.0	4.0	4.3	5.0	6.0	7.0	8.0
Unit Casing Volume (A) (gal/ft)	0.04	0.09	0.16	0.2	0.37	0.65	0.75	1.0	1.5	2.0	2.6

PURGING INFORMATION:

Measured Well Depth (B) 52.76' ft

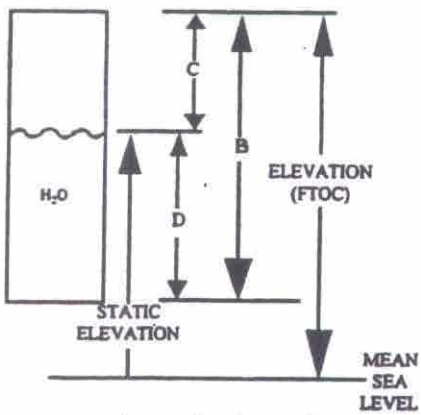
Measured Water Level Depth (C) ~~[illegible] TOC~~ AFH ft 12.70'

Length of Static Water Column (D) _____ (B) - _____ (C) = 40.1 ft

13 x 0.31 = 4.0 gal + 27.1 x 0.16 = 4.3 gal

Casing Water Volume (E) = _____ (A) x _____ (D) = 8.3 gal

Total Purge Volume = 41.5 (gal)



started purge at 1205. Set pump rate sufficient to draw wl down to top of screen so as to flush the upper layer out of the well.

Date	Time	Water Level (FTOC)	Volume Removed (gal)	pH	EC	Temperature F or C	Turb. (NTU) Sand (ppm)	Comments
12-20-04	1230	20.91'	4.5	7.14	1.27	10.41	28.5	DO - 0.00 ORP - (-359)
12-20-04	1300	26.73'	12.25	7.09	1.32	~~11.3~~ 10.1 AFH	11.3	DO - 0.00 ORP (-380)
12-20-04	1330	30.41'	19.0	7.04	1.40	10.14	12.2	DO - 0.00 ORP (-391)
12-20-04	1400	33.76'	26.75	7.06	1.40	9.98	19.4	DO - 0.00 ORP - (-396)
12-20-04	1415	36.24	30.25	7.04	1.41	9.98	12.8	DO - 0.11 * ~~[illegible]~~ cuttings settled upon bailer ORP - (-396)
12-20-04	1430	38.6'	34.0	7.05	1.41	9.84	13.9	DO - 0.27 ORP - (-396)
12-20-04	1445	40.23'	37.5	7.04	1.43	9.96	3.9	DO - 0.37 reduced pump rate ORP - (-397) to allow well to recover.
12-20-04	1500	37.99'	39.5	7.02	1.43	9.82	0.6	DO - 0.44 ORP - (-397)
12-20-04	1515	36.29'	42.5	7.02	1.41	9.39	0.2	DO - 0.58 ORP - (-398)
12-20-04	1530	33.66'	43.75	7.01	1.41	9.61	0.4	DO - 0.61 ORP - (-398)

volume of sand pack interval - (0.65 - 0.16) * 0.3 = 0.15 + 0.16 = .31 gal/ft
(4") - (2") (porosity) (2")

calculated well yield at 630 ml/min

Figure 5-4

WELL DEVELOPMENT RECORD

WELL/PIEZOMETER ID AA3-BEDGW-003
SHEET 2 of 2

PROJECT NAME: PBOW-Acid Areas 2+3 RI PROJECT NO.: 35BH9304 DATE: 12-20-04

LOCATION: AA3-BEDGW-003 DATE INSTALLED: 12-17-04

TOTAL DEPTH (FTOC) 52.76 CASING DIAMETER 2" PVC

METHODS OF DEVELOPMENT

☐ Swabbing ☐ Bailing ☑ Pumping ☐ Describe Bladder Pump

Equipment decontaminated prior to development ☐ Yes ☐ NO

Describe

EQUIPMENT NUMBERS: Horiba - U22XD w/ flow-thru cell

pH Meter EC Meter Turbidity Meter Thermometer

CASING VOLUME INFORMATION

Casing ID (inch)	1.0	1.5	2.0	2.2	3.0	4.0	4.3	5.0	6.0	7.0	8.0
Unit Casing Volume (A) (gal/ft)	0.04	0.09	0.16	0.2	0.37	0.65	0.75	1.0	1.5	2.0	2.6

PURGING INFORMATION:

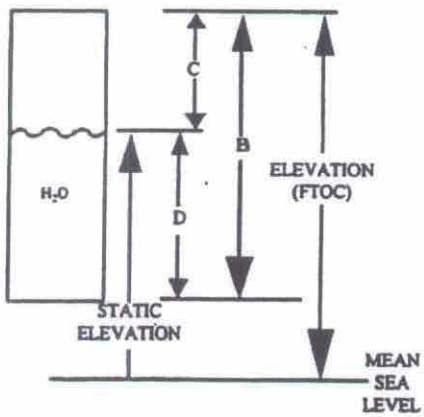
Measured Well Depth (B) 52.76 ft

Measured Water Level Depth (C) 12.70 ft

Length of Static Water Column (D) (B) - (C) = 40.1 ft

Casing Water Volume (E) = (A) x (D) = 8.3 gal

Total Purge Volume = 41.5 (gal)



Date	Time	Water Level (FTOC)	Volume Removed (gal)	pH	EC	Temperature F or C	Turb. (NTU) Sand (ppm)	Comments
12-20-04 ~~1545~~	1545		44.75	7.02	1.40	9.72	0.2	DO - 0.63 ORP - (-398)

Figure 5-4

JACOBS

Well Development Final Purge Water E-3

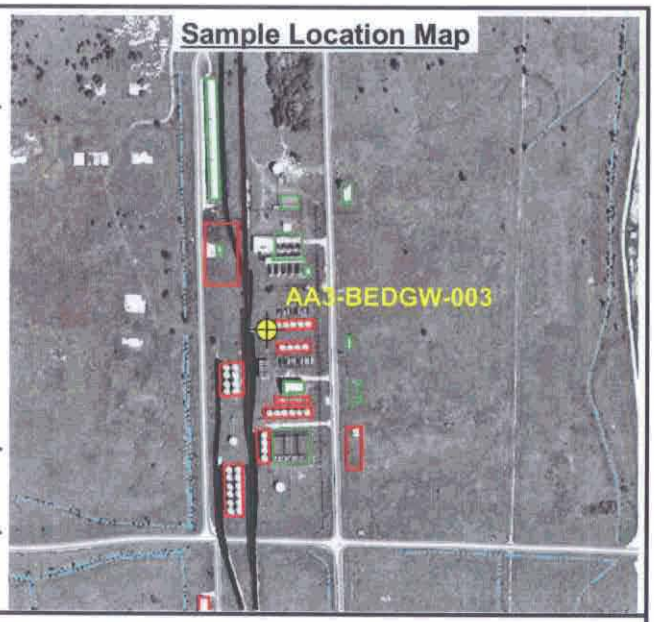
Site:
Acid Area 3

Description:

Development Water from Monitoring Well AA3-BEDGW-003.

Photograph Date: December 19, 2004

Photograph No.: DSCN0433_BEDGW-003.JPG



D:\GIS\Plumbrook\Projects\Quarterly Reports\GW_Q1\ArcGIS\Photologs Water_E-3.mxd
April 14, 2005 NZehms Checked by AHardesty

Appendix F
Land Survey Documentation

NASA ACID AREA #2 - JACOBS ENGINEERING

11/15/2004
145504
ABE

NORTHING	EASTING	ELEVATION	DESCRIPTION
623767.2010	1914904.1250	636.11	RANSOM & MAINTENANCE MON 5/8" PIN, BENCHMARK
623079.2970	1908141.6080	644.35	PATROL RD. @ GATE 10 MON 5/8" PIN
623897.0300	1908144.2050	642.61	PATROL RD. CORNER 1/2" IRON ROD
623337.9090	1910416.4430	641.28	SB-26
623047.1420	1910004.0190	640.92	PZ-05 (TOP OF PIPE ELEV. = 642.04)
623218.7630	1909850.0300	640.82	SB-25
623160.4170	1909780.8920	640.36	SB-24
623208.0730	1909726.6780	639.87	SB-28
623167.5220	1909583.0330	639.6	SB-23
623205.1700	1909379.1430	641.58	SB-22
623271.4300	1909308.3440	641.72	SB-19
623308.7770	1909370.6390	641.49	SB-21
623390.0450	1909336.7770	642.9	SB-20
623238.2360	1909110.3190	643.64	PZ-03 (TOP OF PIPE ELEV. = 646.15)
623248.2040	1909054.8310	643.62	SB-18
623263.0680	1908962.3220	643.79	SB-27
623284.9370	1908897.3000	643.6	SB-17
623455.4820	1908915.1350	643.03	SB-16
623083.1860	1908757.3900	643.55	PZ-02 (TOP OF PIPE ELEV. = 645.61)
623550.8260	1908693.2540	642.73	PZ-01 (TOP OF PIPE ELEV. = 644.43)
623474.4827	1910053.3862	640.54	PZ-04 (TOP OF PIPE ELEV. = 643.06)
622994.1441	1909460.7467	635.95	SWSD-02
622948.8521	1910305.4439	633.47	SWSD-03
623015.8281	1908608.6137	640.71	SWSD-01

Level circuit: Elevation at point #97 ("O" in Open - 1st hydrant Ransom North Fox) of 642.46 was checked with point #94 (RRS - 3rd pole Ransom North Fox) of 641.94, these two points were used to establish elevation at the site. Site benchmark is the top of an iron pin in a monument box located at the intersection of Maintenance & Ransom Roads, as shown on attached Acid Area #3 drawing. Elevation = 636.11

File: JHA6/dwg/145504/1455-AA2-3/docs/coordinates

NAD_1983_StatePlane_Ohio_North_FIPS_3401_Feet
Projection: Lambert_Conformal_Conic
False_Easting: 1968500.000000
False_Northing: 0.000000
Central_Meridian: -82.500000
Standard_Parallel_1: 40.433333
Standard_Parallel_2: 41.700000
Latitude_Of_Origin: 39.666667

GCS_North_American_1983

NASA ACID AREA #3 - JACOBS ENGINEERING

11/15/2004
145504
ABE

NORTHING	EASTING	ELEVATION	DESCRIPTION
623767.2010	1914904.1250	636.11	RANSOM & MAINTENANCE MON 5/8" PIN, BENCHMARK
623734.5780	1916064.4070	635.28	MAINTENANCE, 1ST E OF RANSOM MON 5/8"
621619.4600	1914969.7980	642.38	RANSOM & FOX MON 5/8" PIN
623753.1550	1913467.2920	641.05	MAINTENANCE & RR TRACK RR SPIKE
623953.7300	1914745.3010	635.84	PZ-04 (TOP OF PIPE ELEV. = 638.71)
623942.1440	1914697.5110	635.60	SB-24
624050.7360	1914736.7620	636.12	SB-23
624167.3060	1914660.0440	635.66	SB-22
624185.3850	1914525.7950	636.06	SB-26
624220.0530	1914500.4910	636.17	PZ-05 (TOP OF PIPE ELEV. = 638.37)
624037.0160	1914493.4500	636.38	SB-25
624240.6680	1914775.2450	635.97	SB-21
624426.6450	1914755.8790	635.83	SB-19
624376.3200	1914629.4440	636.56	SB-20
624457.1860	1914945.4870	636.43	PZ-03 (TOP OF PIPE ELEV. = 639.19)
624560.9490	1914783.7710	636.17	SB-18
624711.6600	1914720.5250	635.39	SB-17
625078.6780	1914712.8820	636.19	SB-16
624900.0500	1914447.6330	637.02	PZ-02 (TOP OF PIPE ELEV. = 638.62)
624269.3580	1914186.0330	635.35	SB-29
624435.7370	1914371.6770	628.47	SWSD-02
623846.4087	1914390.2624	628.00	SWSD-03
625625.1455	1914330.1191	629.96	SWSD-01
625327.3714	1914485.7099	636.34	SB-28
625028.3748	1914494.4727	636.35	SB-27
625292.4727	1914712.8041	632.65	PZ-01 (TOP OF PIPE ELEV. = 634.84)

Level circuit: Elevation at point #97 ("O" in Open - 1st hydrant Ransom North Fox) of 642.46 was checked with point #94 (RRS - 3rd pole Ransom North Fox) of 641.94, these two points were used to establish elevation at the site. Site benchmark is the top of an iron pin in a monument box located at the intersection of Maintenance & Ransom Roads, as shown on attached Acid Area #3 drawing. Elevation = 636.11

File: JHA6/dwg/145504/1455-AA2-3/docs/coordinates

NAD_1983_StatePlane_Ohio_North_FIPS_3401_Feet
Projection: Lambert_Conformal_Conic
False_Easting: 1968500.000000
False_Northing: 0.000000
Central_Meridian: -82.500000
Standard_Parallel_1: 40.433333
Standard_Parallel_2: 41.700000
Latitude_Of_Origin: 39.666667

GCS_North_American_1983

NASA MONITORING WELLS - JACOBS ENGINEERING 12/20/2004
ACID AREA #3 145504
ABE

NORTHING	EASTING	GROUND ELEVATION	TOP OF PIPE ELEVATION	DESCRIPTION
623677.6863	1915004.5541	635.86	637.85	AA3-GW-003
624497.9775	1914651.8770	635.97	638.26	AA3-GW-004
624341.3158	1914463.4575	636.24	638.31	AA3-GW-005
623679.9571	1915019.2792	635.91	638.30	AA3-BEDGW-002
624512.9214	1914651.5070	635.92	638.55	AA3-BEDGW-003
625570.6943	1914523.5676	636.21	637.53	AA3-BEDGW-004

File: JHA6/dwg/145504/1455-AA2-3/docs/wells

NAD_1983_StatePlane_Ohio_North_FIPS_3401_Feet
Projection: Lambert_Conformal_Conic
False_Easting: 1968500.000000
False_Northing: 0.000000
Central_Meridian: -82.500000
Standard_Parallel_1: 40.433333
Standard_Parallel_2: 41.700000
Latitude_Of_Origin: 39.666667

GCS_North_American_1983

Appendix G
Groundwater Sampling Field Data Forms

Figure 5- 7

GROUNDWATER SAMPLING FIELD DATA FORM

Location ID: Acid Area 3 COC Sample Numbers P80W-05-GW-AA3-GW00Z-01A
Plume Area: N/A Well Number: AA3 - GW00Z
Arrival Date/Sample Time: 1/21/05 / 1645
Sampling Method : Bladder pump / Low flow / WL stabilized

Pump # 1	Pump Length 30" - 50' tubing
Dedicated Pump Used No	

Weather: Cold, Snowy, 20°-25°

Well Total Depth : 18.25 ft BTOC. Screened Interval : 8.25 - 18.25 ft BTOC.
Background PID Reading : _____ PPM. Well PID Reading : 0 PPM.
Static Water Level : 4.17 ft BTOC. Pump Set Depth : 12.25' ft BTOC
LNAPLS Present : _____ DNAPLS Present : _____

Purge volume calculations:
(D_c) Casing diameter (inches) 2 , (H_s) Length of saturated screen interval (feet) 10 ,

(Db) Well boring diameter (inches) 8", (P) Effective porosity of filter pack (dimensionless) = 0.3

(A) Well Screen Unit Volume = $0.041\ (D_c)^2\ (H_s)$ = 1.6

(B) Saturated Filter Pack Unit Volume = $0.041\ [(D_B)^2 - (D_C)^2]\ (H_S)P$ = 7.32

(C) Total Unit Volume = (A) + (B) = 8.92

(D) Purge Volume = 3 * (C) = 26.8

Analytical Parameters

Collected	Parameters	Method	Preservatives
3 x 40 ml vial	VOC		HCl / 4°C
4 x 1000 ml amber	SVOC, PCB, Nitroaromatics		4°C
1 x 500 ml poly	Metals / Hardness		HNO_3 / 4°C
1 x 250 ml poly	Cyanide		NaOH / 4°C
2 x 40 ml vial	TOC		H_2SO_4 / 4°C
1 x 1000 ml poly	Turbidity, Alkalinity, TSS/TDS / Anions		4°C
1 x 500 ml poly	metals (filtered)	filtered in field	HNO_3 / 4°C

QA/QC Sampling: Sample Duplicate: NO ✓; YES __ Well Number
MS/MSD Sample: NO ✓; YES __ Well Number:
Rinsate Blank: NO ✓; YES __ Well Number:
Field Blank: NO ✓; YES __ Well Number:

Sample Crew (Print): Al Hardesty, Helen Owens

(continues)

Note: It is the user's responsibility to verify with their supervisor that they are using the most current version of this document.

Well ID AA3 - GW002

Figure 5 -7

Sample Date: 1-21-04

GROUNDWATER SAMPLING FIELD DATA FORM (continued)

Final Well Purging - Field Water Quality Measurement Table

Started purge at 1105

Time	Depth to Water (ft)	Purge Rate (ml/min)	Total Purge (gal)	Temp (C) Stab. Para. (± 0.5 deg.)	pH Stab. Para. (± 0.2)	Sp. Cond. (mS/cm) Stab. Para. (± 3%)	Turbidity (NTUs) Stab. Para. (± 10%)	DO (mg/L) Stab. Para. (± 10%)	ORP (mV) Stab. Para (+/- 10 mV)	Comments Stabilization Parameters
1140	4.41	350	3.5	7.7	6.96	0.518	-3.5	5.39	145	negative turbidity
1200	4.41	350	4.5	7.6	7.15	0.511	-3.6	4.20	140	readings indicate cal
1215	4.41	350	5.5	6.9	7.18	0.508	-3.6	3.40	140	solution may have been
1230	4.41	350	7.0	6.8	7.19	0.506	-3.8	5.09	137	slightly greater than
1245	4.41	350	8.5	7.3	7.20	0.504	-3.9	4.47	136	zero. water samples
1300	4.41	350	10.0	7.5	7.21	0.503	-3.9	3.84	137	were very clean during
1315	4.41	350	11.0	6.8	7.12	0.501	-3.8	3.35	141	entire purge.
1330	4.41	350	12.5	7.2	7.15	0.502	-4.0	2.94	140	
1345	4.41	350	13.5	7.14 AFM	7.14	0.501	-4.0	2.64	140	
1400	4.41	350	15.0	7.4	7.13	0.502	-4.2	2.42	142	
1415	4.41	350	16.0	6.5	7.18	0.501	-3.9	2.10	139	
1430	4.43	350	17.5	7.1	7.18	0.501	-4.2	1.94	140	
1445	4.42	350	19.0	7.2	7.15	0.501	-4.2	1.84	142	
1500	4.41	350	20.5	7.2	7.16	0.500	-4.2	1.62	142	
1515	4.42	350	21.5	7.2	7.17	0.498	-4.3	1.47	141	
1530	4.42	350	23.0	7.2	7.19	0.500	-4.3	1.37	141	
1545	4.42	350	24.0	6.6	7.18	0.502	-4.3	1.26	142	
1600	4.41	350	25.5	6.8	7.21	0.500	-4.3	1.17	141	
1615	4.41	350	26.5	6.3	7.18	0.501	-4.2	1.04	143	
1630	4.41	350	28.0	6.5	7.17	0.502	-4.1	1.02	144	
1645	4.41	350	29.0	6.3	7.19	0.503	-4.1	0.96	144	
1645	collect	sample.	maintained	350 ml	purge	rate and	static			
	final	parameters	not	collected	after	sampling	because	of time	constraints	and sample shipment deadline.
1745	completed	sampling								
										Final Field Parameters

* temperature is controlled by ambient conditions inside vehicle. Temperature swings are due to opening back lift gate to manage purge water and collection of readings, which varies temperature in vehicle. Stabilization of temperature will not be considered.

Note: It is the user's responsibility to verify with their supervisor that they are using the most current version of this document.

Field Equipment: PID/OVA SN: _____ Calibration Date: 1/21/05 Initials : AFH

Horiba U22 ~~YSI~~ SN: 9283046 Calibration Date: 1/21/05 Initials : AFH

Field measurement protocols followed with no exceptions (Y / N*) **Form completed by :** Al Hardesty

Date : 1/21/05

*Field Deviations Made :

None

Note: It is the user's responsibility to verify with their supervisor that they are using the most current version of this document.

Figure 5- 7

GROUNDWATER SAMPLING FIELD DATA FORM

Location ID: Acid Area 3 COC Sample Numbers P30W.05.GW.AA3BEDGW001.01A
Plume Area: N/A Well Number: AA3 - BEDGW - 001
Arrival Date/Sample Time: 1-21-04 / 1130 1/23/05
Sampling Method : Bladder pump / low flow AFH

Pump # 2	Pump Length 36" - 100' tubing
Dedicated Pump Used No	

Weather: Cold, Snow flurries, 20°-25°

Well Total Depth : 56.25 ft BTOC. Screened Interval : 40.25-55.25 ft BTOC.
Background PID Reading : 0 PPM. Well PID Reading : 0 PPM.
Static Water Level : 28.30 ft BTOC. Pump Set Depth : 43.75 ft BTOC Intake at 46.75'
LNAPLS Present : DNAPLS Present :

Purge volume calculations:
(D_c) Casing diameter (inches) 2", (H_s) Length of saturated screen interval (feet) ~~10~~ 15' AFH

(Db) Well boring diameter (inches) 6", (P) Effective porosity of filter pack (dimensionless) = 0.3

(A) Well Screen Unit Volume = $0.041\ (D_c)^2\ (H_s)$ = 2.4

(B) Saturated Filter Pack Unit Volume = $0.041\ [(D_B)^2 - (D_C)^2]\ (H_S)P$ = 6.0

(C) Total Unit Volume = (A) + (B) = 8.4

(D) Purge Volume = 3 * (C) = 25.3

Analytical Parameters

Collected	Parameters	Method	Preservatives
3 x 40 ml vial	VOC		HCl / 4°C
4 x 1000 ml amber	SVOC, PCB, Nitroaromatics		4°C
1 x 500 ml poly	metals / Hardness		HNO_3 / 4°C
1 x 250 ml poly	Cyanide		NaOH / 4°C
2 x 40 ml vial	TOC		H_2SO_4 / 4°C
1 x 1000 ml poly	Turbidity, Alkalinity, TSS/TDS/ Anions		4°C
1 x 500 ml poly	metals (Filtered) Filtered in field		HNO_3 / 4°C

QA/QC Sampling: Sample Duplicate: NO ✓; YES __ Well Number
MS/MSD Sample: NO ✓; YES __ Well Number:
Rinsate Blank: NO ✓; YES __ Well Number:
Field Blank: NO ✓; YES __ Well Number:

Sample Crew (Print):
Al Hardesty, Helen Owens (continues)

22K70809\i:\WINWORD\BOILERPL\ WI-015r4.DOC

Note: It is the user's responsibility to verify with their supervisor that they are using the most current version of this document.

Well ID AA3-BEDGW-~~002~~ 001 AFH

Figure 5 -7

Sample Date: 1-23-05

GROUNDWATER SAMPLING FIELD DATA FORM (continued)

Final Well Purging - Field Water Quality Measurement Table

started purge at 1230 1/21/05. Resumed purging 0900 1-23-05

Time	Depth to Water (ft)	Purge Rate (ml/min)	Total Purge (gal)	Temp (C) Stab. Para. (± 0.5 deg.)	pH Stab. Para. (± 0.2)	Sp. Cond. (mS/cm) Stab. Para. (± 3%)	Turbidity (NTUs) Stab. Para. (± 10%)	DO (mg/L) Stab. Para. (± 10%)	ORP (mV) Stab. Para (+/- 10 mV)	Comments Stabilization Parameters
1315	29.08	200	1.5	5.8	4.02	2.35	2.2	0.00	-202	
1330	29.16	200	2.~~25~~	6.8	3.95	2.37	0.6	0.00	-196	
1345	29.27	200	3.0	6.5	3.90	2.37	0.3	0.00	-191	
1400	29.37	200	3.5	7.8	3.83	2.35	0.2	0.00	-185	
1415	29.34	200	4.25	5.9	3.91	2.41	0.3	0.00	-187	
1430	29.36	200	4.75	6.8	3.83	2.38	0.4	0.00	-184	
1445	29.45	200	5.25	7.0	3.77	2.40	0.3	0.00	-179	
1500	29.58	200	5.75	6.5	3.86	2.35	0.4	0.00	-183	
1515	29.59	200	6.25	6.8	3.77	2.32	0.3	0.00	-179	
1530	29.58	200	7.0	6.9	3.62	2.31	1.5	0.00	-173	
1545	29.57	200	7.5	6.0	3.61	2.36	1.1	0.00	-173	
1600	29.54	200	8.0	5.9	3.64	2.36	0.7	0.00	-176	
1615	29.55	200	8.5	5.3	3.63	2.36	1.4	0.00	-175	
1630	29.63	200	9.25	6.0	3.63	2.35	0.9	0.00	-175	
1645	will purge well dry and conduct low flow after recovery									purged total of 19.25 gallons
1-23-05 - 0900	resumed purging low flow rate - 180 ml/min									
0945	29.28	180	20.5	8.3	7.11	2.29	3.0	0.00	-335	changed Horiba units
1000	29.32	180	21.0	6.8	7.16	2.31	6.8	0.00	-340	due to calibration problems
1015	29.49	170	21.5	8.2	7.19	2.28	9.0	0.00	-343	with original unit. Note pH
1030	29.37	170	22.0	8.0	7.20	2.32	11.6 *	0.00	-344	and ORP readings are
1045	29.38	170	22.5	5.7	7.31	2.33	11.7 *	0.00	-354	different.
1100	29.39	170	23.25	5.3	7.33	2.35	11.9 *	0.00	-355	turbidity meter reading
1115	29.41	170	23.75	5.5	7.32	2.35	13.7 *	0.00	-355	flashing error 3
1130	initiate collection of samples - maintained pump settings at 170 ml/min.									water is clean.
1232	29.42	170	25.25	7.9	7.32	2.31	3.0	0.00	-361	Final Field Parameters

* temperature is controlled by ambient conditions inside vehicle. Temperature swings are due to opening back lift gate to manage purge water and collection of readings, which causes the temperature to vary. Stabilization of temperature will not be considered.

Note: It is the user's responsibility to verify with their supervisor that they are using the most current version of this document.

* bubbles are building up on inside of flow through cell - affecting turbidity readings - bubbles believed to be H2S coming out of solution. water is very clean.

Field Equipment: PID/OVA SN: _____ Calibration Date: _____ Initials :

Horiba UXZZD ~~YSI~~ SN: _____ Calibration Date: 1-21-05 Initials : AFH
changed to second unit on 1-23-05 - 9283046 1-23-05 second unit

Field measurement protocols followed with no exceptions (Y / N*) **Form completed by :** Al Hardesty
Date : 1-23-05

*Field Deviations Made :

could not complete full purge volume in one day due to low well yield. Purged well down on 1-21-05. Conducted low flow until parameters stabilized on 1-23-05 - sampled 1/23/05
could not sample 1-22-05 due to snow storm.

Note: It is the user's responsibility to verify with their supervisor that they are using the most current version of this document.

Figure 5- 7

GROUNDWATER SAMPLING FIELD DATA FORM

Location ID: Acid Area 2 COC Sample Numbers PBOW-05-GW-PB-BEDMW19-01A
Plume Area: NIA Well Number: PB BED-19
Arrival Date/Sample Time: 1-24-05 / 1605
Sampling Method: Bladder Pump / low flow

Pump # 2	Pump Length 36" - 100' tubing
Dedicated Pump Used No	

Weather: Cold, snow flurries, 15° - 30°

Well Total Depth: 52.2 ft BTOC. Screened Interval: 26.2 - 51.2 ft BTOC.
Background PID Reading: _____ PPM. Well PID Reading: 0 PPM.
Static Water Level: 25.15 ft BTOC. Pump Set Depth: 35.7 ft BTOC intake at 38.7'
LNAPLS Present: _____ DNAPLS Present: _____

Purge volume calculations:
(D_c) Casing diameter (inches) 2", (H_s) Length of saturated screen interval (feet) 25',

(Db) Well boring diameter (inches) 4", (P) Effective porosity of filter pack (dimensionless) = 0.3

(A) Well Screen Unit Volume = $0.041\ (D_c)^2\ (H_s)$ = 4.0

(B) Saturated Filter Pack Unit Volume = $0.041\ [(D_B)^2 - (D_C)^2]\ (H_S)P$ = 3.7

(C) Total Unit Volume = (A) + (B) = 7.7

(D) Purge Volume = 3 * (C) = 23.0

Analytical Parameters

Collected	Parameters	Method	Preservatives
3 x 40 ml glass vial	VOC		HCl / 4°C
4 x 1000 ml amber glass	SVOC, PCB, Nitroaromatics		4°C
1 x 500 ml Poly	metals / Hardness		HNO_3 / 4°C
1 x 250 ml Poly	Cyanide		NaOH / 4°C
2 x 40 ml glass vial	TOC		H_2SO_4 / 4°C
1 x 1000 ml poly	Turbidity, Alkalinity TSS/TDS / Anions		4°C
1 x 500 ml poly	metals (filtered)	filtered in field	HNO_3 / 4°C

QA/QC Sampling: Sample Duplicate: NO ✓; YES __ Well Number
MS/MSD Sample: NO ✓; YES __ Well Number:
Rinsate Blank: NO ✓; YES __ Well Number:
Field Blank: NO ✓; YES __ Well Number:

Sample Crew (Print):
Al Hardesty, Helen Owens (continues)

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Note: It is the user's responsibility to verify with their supervisor that they are using the most current version of this document.

Well ID PB-BEDGW-19

Figure 5-7

Sample Date: 1-24-05

GROUNDWATER SAMPLING FIELD DATA FORM (continued)

Final Well Purging - Field Water Quality Measurement Table

Time	Depth to Water (ft)	Purge Rate (ml/min)	Total Purge (gal)	Temp (C) Stab. Para. (± 0.5 deg.)	pH Stab. Para. (± 0.2)	Sp. Cond. (mS/cm) Stab. Para. (± 3%)	Turbidity (NTUs) Stab. Para. (± 10%)	DO (mg/L) Stab. Para. (± 10%)	ORP (mV) Stab. Para (+/- 10 mV)	Comments Stabilization Parameters
1045	25.15	200	0.5	2.6	5.50	1.39	0.0	0.00	-199	
1145	27.2	200	3.0	9.7	6.40	1.32	463*	0.00	-194	
1200	27.64	350	4.0	8.9	5.29	1.59	57.9*	0.00	-192	increased flow rate to
1230	28.89	450	7.5	9.9	5.04	1.68	95.2*	0.00	-186	purge well dry.
1300	31.58	550	13.5	10.3	4.93	1.82	89.0*	0.00	-179	
1330	32.28	550	17.5	9.8	4.80	1.86	52.6	0.00	-174	reduction in green tint
1345	32.28	550	20.5	9.4	4.99	1.90	63.8	0.00	-182	well yield has matched
1400	29.56	250	22.50	8.2	5.03	1.91	71.1	0.00	-184	capacity of pump - reducing
1415	28.30	250	23.0	8.2	5.08	1.90	72.5	0.00	-184	flow to allow wl to recovery
1430	27.29	250	24.0	9.1	5.09	1.86	93.6	0.00	-182	
1445	27.14	250	25.0	8.5	4.97	1.90	61.9	0.00	-175	knocked bubble off inside
1500	26.93	250	26.0	9.2	5.36	1.85	85.0	0.00	-192	of flow thru
1515	26.87	250	27.0	9.3	5.17	1.83	94.9	0.00	-182	
1530	26.80	250	28.0	8.5	5.02	1.81	98.3	0.00	-176	
1545	26.75	250	29.0	9.0	4.93	1.80	32.1	0.00	-173	
1600	26.72	250	30.0	8.3	4.91	1.84	45.7	0.00	-173	
				~~7~~ AFH						
1642	26.64	250	33.0	7.6	5.13	1.90	15.3**	~~0.0 15.3~~**		Final Field Parameters

* turbidity reading are being affected by buildup of H_2S bubbles in flow thru cell and the overall green tint to the water due to H_2S in solution. Water is clear - no sediment. Bubbles build up inside purge bucket over time.

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Note: It is the user's responsibility to verify with their supervisor that they are using the most current version of this document.

** Final reading should be more indicative of prior readings since flow thru was emptied prior to sampling. After sampling flow-thru cell reconnected and filled. No H_2S bubbles present on first few cycles.

Field Equipment: PID/OVA SN: _____ Calibration Date: _____ Initials :

Horiba U22XD
~~YSI~~ SN: _____ Calibration Date: 1/24/05 Initials : AFH

Field measurement protocols followed with no exceptions (Y / N*) **Form completed by :** Al Hardesty
Date : 1-24-05

*Field Deviations Made :

pump rate increased above well yield to meet purge volume requirements which lowered WL well yield and purge volume would have required pumping longer than time available ~~allowed~~ for one day. reduced pump rate after achieving purge volume and allowed WL to recover and parameters to stabilize.

Note: it is the user's responsibility to verify with their supervisor that they are using the most current version of this document.

Figure 5- 7

GROUNDWATER SAMPLING FIELD DATA FORM

Location ID: Acid Area 2 MK- MW09 COC Sample Numbers PBOW-05-GW-AA2-MKMW09-01A
Plume Area: N/A Well Number: MK- MW09
Arrival Date/Sample Time: 1-24-05 / 1530
Sampling Method : Bladder pump / low flow

Pump # 1	Pump Length 36" - 50' tubing
Dedicated Pump Used N/A	

Weather: Cold, snow flurries, 15°-30°

Well Total Depth : 18.1 ft BTOC. Screened Interval : 7.85 - 17.85 ft BTOC.
Background PID Reading : _____ PPM. Well PID Reading : 0 PPM.
Static Water Level : 5.81' ft BTOC. Pump Set Depth : 8.85 ft BTOC intake at 11.85'
LNAPLS Present : _____ DNAPLS Present : _____

Purge volume calculations:
(D_c) Casing diameter (inches) 2", (H_s) Length of saturated screen interval (feet) 10',

(Db) Well boring diameter (inches) 6", (P) Effective porosity of filter pack (dimensionless) = 0.3

(A) Well Screen Unit Volume = $0.041\ (D_c)^2\ (H_s)$ = 1.6

(B) Saturated Filter Pack Unit Volume = $0.041\ [(D_B)^2 - (D_C)^2]\ (H_S)P$ = 4.0

(C) Total Unit Volume = (A) + (B) = 5.6

(D) Purge Volume = 3 * (C) = 16.9

Analytical Parameters

Collected	Parameters	Method	Preservatives
3 x 40 ml glass vial	VOC		HCl / 4°C
4 x 1000 ml amber glass	SVOC, PCB, Nitroaromatics		4°C
1 x 500 ml poly	metals, Hardness		HNO_3 / 4°C
1 x 250 ml poly	Cyanide		NaOH / 4°C
2 x 40 ml glass vial	TOC		H_2SO_4 / 4°C
1 x 1000 ml poly	turbidity / Alkalinity TSS/TDS / Anions		4°C
1 x 500 ml poly	metals (filtered)	Filtered in field	HNO_3 / 4°C

QA/QC Sampling: Sample Duplicate: NO ✓; YES __ Well Number
MS/MSD Sample: NO ✓; YES __ Well Number:
Rinsate Blank: NO ✓; YES __ Well Number:
Field Blank: NO ✓; YES __ Well Number:

Sample Crew (Print):

Al Hardesty, Helen Owens

(continues)

Note: It is the user's responsibility to verify with their supervisor that they are using the most current version of this document.

Well ID MK-MW-09

Sample Date: 1/24/05

Figure 5 -7

GROUNDWATER SAMPLING FIELD DATA FORM (continued)

Final Well Purging - Field Water Quality Measurement Table

Time	Depth to Water (ft)	Purge Rate (ml/min)	Total Purge (gal)	Temp (C) Stab. Para. (± 0.5 deg.)	pH Stab. Para. (± 0.2)	Sp. Cond. (mS/cm) Stab. Para. (± 3%)	Turbidity (NTUs) Stab. Para. (± 10%)	DO (mg/L) Stab. Para. (± 10%)	ORP (mV) Stab. Para (+/- 10 mV)	Comments Stabilization Parameters
1104	5.81									
1115										start purge
1130	6.18	300	1	7.7	6.82	0.394	18.0	2.92	+161	
1145	6.27	300	2.5	7.6	7.15	0.399	16.7	1.67	+140	
1200	6.38	300	3.5	7.5	7.25	0.398	26.8	2.12	+135	took reading @ low point
1215	6.24	300	4.5	7.4	7.31	0.397	28.8	2.23	+134	Turbidity - see note 1
1230	6.26	300	5.5	7.2	7.35	0.396	31.6	1.51	+125	"
1245	6.26	300	6.5	7.3	7.29	0.395	31.4	1.53	+130	"
1300	6.26	300	7.5	7.3	7.29	0.396	66.2	2.15	+130	"
1315	6.27	300	8.5	7.3	7.31	0.396	65.5	2.01	+126	"
1330	6.29	300	9.5	6.8	7.32	0.396	66.9	1.97	+115	"
1345	6.28	300	12.0	6.8	7.35	0.396	67.1	1.95	+98	"
1400	6.29	300	13.0	7.3	7.38	0.396	73.3	1.83	+118	"
1415	6.21	300	13.5	6.4	7.38	0.398	68.5	1.67	+112	"
1430	6.20	300	14.5	6.7	7.35	0.397	68.6	1.65	+109	"
1445	6.26	300	15.5	6.6	7.37	0.397	68.6	1.65	+104	"
1500	6.27	300	16.5	6.6	~~7.44~~ 7.38	0.398	69.0	1.67	+104	"
1515	6.26	300	17.5	6.7	7.33	0.398	68.9	1.60	+101	"
1530										
1608	6.27			6.0	7.44	0.392	6.1	1.65	+93	"
										Final Field Parameters

Note 1 - Purge water is very clear, turbidity readings are not correct; error message on Horiba \\ ERR 2" over turb

Note: It is the user's responsibility to verify with their supervisor that they are using the most current version of this document.

Field Equipment: PID/OVA SN: _____ Calibration Date: _____ Initials :

~~YSI SN:~~ Horiba U22 w/ flow thru cell Calibration Date: 1-24-05 Initials : HFH

Field measurement protocols followed with no exceptions (Y / N*) Form completed by : Halan Owens

Date : 1-24-05

*Field Deviations Made :

None

Note: It is the user's responsibility to verify with their supervisor that they are using the most current version of this document.

Figure 5- 7

GROUNDWATER SAMPLING FIELD DATA FORM

QA FD

Location ID: Acid Area 3 COC Sample Numbers PBDW·05·GW·AA3·GW003·01A / 01B / 01D
Plume Area: N/A Well Number: AA3-GW003
Arrival Date/Sample Time: 1-25-05 / 1540
Sampling Method: Bladder pump - low flow

Pump # 1	Pump Length 36" - 50' tubing
Dedicated Pump Used N/A	

Weather: Partly cloudy, cold, 25°-35°

Well Total Depth: 20.25' ft BTOC. Screened Interval: 10'-20' ft BTOC.
Background PID Reading: _____ PPM. Well PID Reading: 0 PPM.
Static Water Level: 3.77' ft BTOC. Pump Set Depth: 11 ft BTOC intake at 14'
LNAPLS Present: _____ DNAPLS Present: _____

Purge volume calculations:
(D_c) Casing diameter (inches) 2, (H_s) Length of saturated screen interval (feet) 10,

(Db) Well boring diameter (inches) 6", (P) Effective porosity of filter pack (dimensionless) = 0.3

(A) Well Screen Unit Volume = $0.041\ (D_c)^2\ (H_s)$ = 1.6

(B) Saturated Filter Pack Unit Volume = $0.041\ [(D_B)^2 - (D_C)^2]\ (H_S)P$ = 4.0

(C) Total Unit Volume = (A) + (B) = 5.6

(D) Purge Volume = 3 * (C) = 16.9

Analytical Parameters

Collected	Parameters	Method	Preservatives
3 x 40 ml glass vial	VOC		HCl / 4°C
4 x 1000 ml amber glass	SVOC, PCB, Nitroaromatics		4°C
1 x 500 ml poly	Metals, Hardness		HNO_3 / 4°C
1 x 250 ml poly	Cyanide		NaOH / 4°C
2 x 40 ml glass vial	TOC		H_2SO_4 / 4°C
1 x 1000 ml poly	turbidity, alkalinity TSS, TDS, anions		4°C
1 x 500 ml poly	metals (filtered)	filtered in field	HNO_3 / 4°C

QA/QC Sampling: Sample Duplicate: NO __; YES ✓ Well Number Field Duplicate and QA sample
MS/MSD Sample: NO ✓; YES __ Well Number:
Rinsate Blank: NO ✓; YES __ Well Number:
Field Blank: NO ✓; YES __ Well Number:

Sample Crew (Print):
Al Hardesty, Helen Owens

(continues)

Note: It is the user's responsibility to verify with their supervisor that they are using the most current version of this document.

Well ID AA3 · GW003

Sample Date: 1/25/05

Figure 5 -7

GROUNDWATER SAMPLING FIELD DATA FORM (continued)

Final Well Purging - Field Water Quality Measurement Table

Time	Depth to Water (ft)	Purge Rate (ml/min)	Total Purge (gal)	Temp (C) Stab. Para. (± 0.5 deg.)	pH Stab. Para. (± 0.2)	Sp. Cond. (mS/cm) Stab. Para. (± 3%)	Turbidity (NTUs) Stab. Para. (± 10%)	DO (mg/L) Stab. Para. (± 10%)	ORP (mV) Stab. Para (+/- 10 mV)	Comments Stabilization Parameters
1145	4.53	350	0.75	5.7	6.95	1.16	146.0	0.00	+120	
1200	5.39	350	2.25	7.3	7.04	1.21	51.3	1.77	+63	
1215	5.46	350	3.25	7.4	7.08	1.22	47.5	1.20	+31	
1230	5.49	350	4.0	7.4	7.11	1.21	38.0	DO: 1.48	+7	
[illegible]	5.48	350	4.75	7.5	7.15	1.20	31.0	0.21	+1	
[illegible]	[illegible]	350	5.75	7.7	7.15	1.19	27.0	0.12	+4	
1315	5.52	350	7.25	7.9	7.14	1.18	26.3	0.16	+9	
1330	5.68	350	8.50	7.7	7.18	1.17	23.8	0.00*	+10	
1345	5.68	350	10.0	7.9	7.16	1.17	~~12.02~~	0.13*	+13	DO meter is not
1400	5.59	350	11.0	8.7	7.22	1.16	21.9	—	+11	working properly
1415	5.73	350	12.5	9.3	7.14	1.16	20.4	—	+15	during sampling
1430	5.75	350	13.5	9.5	7.13	1.16	20.2	—	+17	the reading for DO
1445	5.43	280	14.25	8.1	7.23	1.16	19.2	—	+14	to 1.04 display - then
~~1450~~	~~Begin collecting samples~~			AFH	~~7.2~~ AFH					back to 0.0
1500	5.45	280	15.25	7.6	7.21	1.16	19.8	—	+16	
1515	5.29	250	16.0	7.6	7.21	1.16	19.4	—	+16	
1530	4.85	250	17.0	7.4	7.23	1.17	18.2	—	+17	
1540	collected samples									
1957	4.82	250			7.34	0.749	12.8	0.38	62↓	Final Field Parameters

Note: It is the user's responsibility to verify with their supervisor that they are using the most current version of this document.

Field Equipment: PID/OVA SN: _____ Calibration Date: _____ Initials :

Horiba U22XD

~~YSI~~ SN: _____ Calibration Date: 1/25/05 Initials : AFH

Field measurement protocols followed with no exceptions (Y / N*) **Form completed by :** Al Hardesty

Date : 1-25-05

*Field Deviations Made :

None

Note: It is the user's responsibility to verify with their supervisor that they are using the most current version of this document.

Figure 5- 7

GROUNDWATER SAMPLING FIELD DATA FORM

Location ID: Acid Area 3 COC Sample Numbers PBOW-05-GW-AA3-BEDGW002-01A
Plume Area: N/A Well Number: AA3-GW BEDGW-002
Arrival Date/Sample Time: 1-25-05 / 1450
Sampling Method: Bladder pump - Low flow

Pump # 2	Pump Length 36" - 100' tubing
Dedicated Pump Used N/A	

Weather: Partly cloudy, cold 25°-35°

Well Total Depth: 57.65 ft BTOC. Screened Interval: 47.4 - 57.4 ft BTOC.
Background PID Reading: _____ PPM. Well PID Reading: 0 PPM.
Static Water Level: 29.84' ft BTOC. Pump Set Depth: 48.4 ft BTOC intake at 51.4'
LNAPLS Present: _____ DNAPLS Present: _____

Purge volume calculations:
(D_c) Casing diameter (inches) 2, (H_s) Length of saturated screen interval (feet) 10,

(Db) Well boring diameter (inches) 4", (P) Effective porosity of filter pack (dimensionless) = 0.3

(A) Well Screen Unit Volume = $0.041\ (D_c)^2\ (H_s)$ = 1.6

(B) Saturated Filter Pack Unit Volume = $0.041\ [(D_B)^2 - (D_C)^2]\ (H_S)P$ = 1.47

(C) Total Unit Volume = (A) + (B) = 3.07

(D) Purge Volume = 3 * (C) = 9.2

Analytical Parameters

Collected	Parameters	Method	Preservatives
3 x 40 ml glass vial	VOC		HCl / 4°C
4 x 1000 ml amber glass	SVOC, PCB, Nitroaromatics		4°C
1 x 500 ml poly	metals, Hardness		HNO_3 / 4°C
1 x 250 ml poly	Cyanide		NaOH / 4°C
2 x 40 ml glass vial	TOC		H_2SO_4 / 4°C
1 x 1000 ml poly	turbidity, alkalinity, TSS, TDS, anions		4°C
1 x 500 ml poly	metals (filtered)	filtered in field	HNO_3 / 4°C

QA/QC Sampling: Sample Duplicate: NO ✓; YES __ Well Number
MS/MSD Sample: NO __; YES ✓ Well Number:
Rinsate Blank: NO ✓; YES __ Well Number:
Field Blank: NO ✓; YES __ Well Number:

Sample Crew (Print):
Al Hardesty, Helen Owens (continues)

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Note: It is the user's responsibility to verify with their supervisor that they are using the most current version of this document.

Well ID AA3-BEDGW-002

Figure 5 -7

Sample Date: 1/25/05

GROUNDWATER SAMPLING FIELD DATA FORM (continued)

Final Well Purging - Field Water Quality Measurement Table

Time	Depth to Water (ft)	Purge Rate (ml/min)	Total Purge (gal)	Temp (C) Stab. Para. (± 0.5 deg.)	pH Stab. Para. (± 0.2)	Sp. Cond. (mS/cm) Stab. Para. (± 3%)	Turbidity (NTUs) Stab. Para. (± 10%)	DO (mg/L) Stab. Para. (± 10%)	ORP (mV) Stab. Para (+/- 10 mV)	Comments Stabilization Parameters
~~1145~~										
1200	29.81		0.5	3.3	7.22	0.098	7.9	9.87	-122	
1215	30.05		1.0	6.3	7.73	0.883	11.5	0.00	-167	
1230	30.47	450	2.25	9.7	7.82	0.863	21.5	0.00	-161	
1245	30.66	450	4.50	10.1	7.74	0.834	33.9*	0.00	-151	
1300	30.82	450	6.0	10.2	7.63	0.817	114.0*	0.00	-144	
1315	30.94	450	8.0	10.3	7.64	0.814	81.1*	0.00	-149	
1330	31.16	450	10.25	10.3	~~7.49~~ 7.58	0.831	81.2*	0.00	-145	
1345	31.15	300	12.5	10.6	7.61	0.828	73.6*	0.00	-148	
1400	31.12	300	13.75	11.2	7.55	0.820	65.4*	0.00	-141	
1415	31.11	300	15.0	11.6	7.51	0.807	89.1*	0.00	-140	
1430	31.09	250	16.0	11.7	7.48	0.795	92.0*	0.00	-136	
1445	30.98	250	17.5	10.6	7.47	0.816	130*	0.00	-132	
1450	Collected samples									
1655	30.89		21.0	10.5	7.81	0.852	162.0	3.18	-157	Final reading after sampling

Note 1 = H_2S forming bubbles inside flow-through cell - resulting in erroneous turbidity readings. Water is very clear.

Note 2 = On deep wells post-sampling flow-through cell stabilization takes considerable time

HO 1/25/05

Final Field Parameters

Note: It is the user's responsibility to verify with their supervisor that they are using the most current version of this document.

Field Equipment: PID/OVA SN: _____ Calibration Date: _____ Initials :

Horiba U22XD
~~YSI~~ SN: _____ Calibration Date: 1/25/05 Initials : AFH

Field measurement protocols followed with no exceptions (Y / N*) **Form completed by :** Al Hardesty - Helen Owens
Date : 1-25-05

*Field Deviations Made :

None

Note: It is the user's responsibility to verify with their supervisor that they are using the most current version of this document.

Figure 5- 7

GROUNDWATER SAMPLING FIELD DATA FORM

Location ID: Acid Area 2 COC Sample Numbers PBOW-05-GW-AA2-BEDGW001-01A /01C
Plume Area: N/A Well Number: AA2-BEDGW-001
Arrival Date/Sample Time: 1-26-05 / 1-27-05 1250
Sampling Method : Bladder pump - low flow

Pump # 2	Pump Length 36" - 100' tubing
Dedicated Pump Used N/A	

Weather: Cold, snowy

Well Total Depth : 45.5 ft BTOC. Screened Interval : 30.25 - 45.25 ft BTOC.
Background PID Reading : _____ PPM. Well PID Reading : 0 PPM.
Static Water Level : 14.11 ft BTOC. Pump Set Depth : 33.75 ft BTOC intake set at 36.75
LNAPLS Present : _____ DNAPLS Present : _____

Purge volume calculations:
(D_c) Casing diameter (inches) 2", (H_s) Length of saturated screen interval (feet) 15,

(Db) Well boring diameter (inches) 6", (P) Effective porosity of filter pack (dimensionless) = 0.3

(A) Well Screen Unit Volume = $0.041\ (D_c)^2\ (H_s)$ = 2.4

(B) Saturated Filter Pack Unit Volume = $0.041\ [(D_B)^2 - (D_C)^2]\ (H_S)P$ = 6.0

(C) Total Unit Volume = (A) + (B) = 8.4

(D) Purge Volume = 3 * (C) = 25.3

Analytical Parameters

Collected	Parameters	Method	Preservatives
3x 40 ml glass vial	VOC		HCl / 4°C
4x 1000 ml amber glass	SVOC, PCB, Nitroaromatics		4°C
1x 500 ml poly	metals, Hardness		HNO_3 / 4°C
1x 250 ml poly	Cyanide		NaOH / 4°C
2x 40 ml glass vial	TOC		H_2SO_4 / 4°C
1x 1000 ml poly	turbidity, Alkalinity TSS, TDS, Anions		4°C
1x 500 ml poly	Metals (filtered)	filtered in field	HNO_3 / 4°C

QA/QC Sampling:
Sample Duplicate: NO ✓; YES __ Well Number
MS/MSD Sample: NO ✓; YES __ Well Number:
Rinsate Blank: NO ✗; YES ✓ Well Number: rinsate sample after decon on 1-28-05 PBOW-05-GW-AA2-BEDGW001-01C
Field Blank: NO ✓; YES __ Well Number:

Sample Crew (Print):

Al Hardesty, Halan Owens

(continues)

Note: It is the user's responsibility to verify with their supervisor that they are using the most current version of this document.

Well ID AA2- BEDGW-001

Figure 5 -7

Sample Date: _____

GROUNDWATER SAMPLING FIELD DATA FORM (continued)

Final Well Purging - Field Water Quality Measurement Table

started purge at 0917 1-26-05, resumed purge 1057 1-27-05

Time	Depth to Water (ft)	Purge Rate (ml/min)	Total Purge (gal)	Temp (C) Stab. Para. (± 0.5 deg.)	pH Stab. Para. (± 0.2)	Sp. Cond. (mS/cm) Stab. Para. (± 3%)	Turbidity (NTUs) Stab. Para. (± 10%)	DO (mg/L) Stab. Para. (± 10%)	ORP (mV) Stab. Para (+/- 10 mV)	Comments Stabilization Parameters
0945	22.02	600	3.5	9.4	7.16	0.716	50.7	0.76	-259	WL drops at less than 200
1015	34.19	600	9.0 ~~11.0~~	10.1	6.99	0.708	95.7	0.00	-330	ml/min - will purge dry
1045	40.43	600	12.5	10.2	7.29	0.731	82.9	0.00	-286	
purged well dry										
1-27-05										
1115	17.75	120	13.25	8.3	6.87	1.39	57.3	0.00	-208	water has black
1130	18.35	120	14.0	8.8	6.95	1.37	39.7	0.00	-274	tint due to
1145	18.30	100	14.5	8.3	6.87	1.37	26.1	0.00	-299	chemical reaction from
1200	18.32	100	15.0	7.5	6.72	1.37	27.8	0.00	-339	H_2S and other
1215	18.25	95	15.5	7.3	6.71	1.37	35.7	0.00	-351	constituents in water
1230	18.20	95	16.25	7.1	6.64	1.37	39.8	0.00	-349	- cleared up over
1245	18.18	95	16.75	6.9	6.67	1.37	45.3	0.00	-349	time, but still
1250	collecting samples									exhibited slight
										black tint.
1445	17.57			4.5	6.97	0.885	18.4	0.00	-305↑	Final Field Parameters

Note: It is the user's responsibility to verify with their supervisor that they are using the most current version of this document.

Field Equipment: PID/OVA SN: _____ Calibration Date: _____ Initials :

~~YSI SN:~~ Horiba U22 w/ flow thru cell Calibration Date: 1-26-05 / 1-27-05 Initials : AFH / AFH

Field measurement protocols followed with no exceptions (Y / N) **Form completed by :** Al Hardesty

Date : 1-27-05

*Field Deviations Made :

Purged well dry, conducted low flow purge + sample after water parameters stabilized. Well yield and required purge volumes would have required more than 8 hrs of purging.

Note: It is the user's responsibility to verify with their supervisor that they are using the most current version of this document.

Figure 5- 7

GROUNDWATER SAMPLING FIELD DATA FORM

Location ID: Acid Area 2 COC Sample Numbers PBOW-05-GW-AA2-GW002-01A
Plume Area: N/A Well Number: AA2-GW002
Arrival Date/Sample Time: 1-26-05 / 1620
Sampling Method : Bladder pump - low flow

Pump # 2	Pump Length 36" - 101' tubing
Dedicated Pump Used N/A	

Weather: Cold, snowy

Well Total Depth : 21 ft BTOC. Screened Interval : 10.75 -20.75' ft BTOC.
Background PID Reading : _____ PPM. Well PID Reading : 0 PPM.
Static Water Level : 5.95 ft BTOC. Pump Set Depth : 15.75 ft BTOC
LNAPLS Present : _____ DNAPLS Present : _____

Purge volume calculations:
(D_c) Casing diameter (inches) 2", (H_s) Length of saturated screen interval (feet) 10,

(Db) Well boring diameter (inches) 6 1/2", (P) Effective porosity of filter pack (dimensionless) = 0.3

(A) Well Screen Unit Volume = $0.041\ (D_c)^2\ (H_s)$ = 1.6

(B) Saturated Filter Pack Unit Volume = $0.041\ [(D_B)^2 - (D_C)^2]\ (H_S)P$ = 4.0

(C) Total Unit Volume = (A) + (B) = 5.6

(D) Purge Volume = 3 * (C) = 16.9

Analytical Parameters

Collected	Parameters	Method	Preservatives
3 x 40 ml glass vial	VOC		HCl / 4°C
4 x 1000 ml amber glass	SVOC, PCB, Nitroaromatics		4°C
1 x 500 ml poly	Metals, Hardness		HNO_3 / 4°C
1 x 250 ml poly	Cyanide		NaOH / 4°C
2 x 40 ml glass vials	TOC		H_2SO_4 / 4°C
1 x 1000 ml poly	~~turbidity~~, alkalinity TSS, TDS, Anions		4°C
1 x 500 ml poly	Metals (filtered)	filtered in field	HNO_3 / 4°C

QA/QC Sampling: Sample Duplicate: NO ✓; YES __ Well Number
MS/MSD Sample: NO ✓; YES __ Well Number:
Rinsate Blank: NO ✓; YES __ Well Number:
Field Blank: NO ✓; YES __ Well Number:

Sample Crew (Print):

Al Hardesty, Helen Owens

(continues)

Note: It is the user's responsibility to verify with their supervisor that they are using the most current version of this document.

Well ID AA2-GW002

Figure 5 -7

Sample Date: _____

GROUNDWATER SAMPLING FIELD DATA FORM (continued)

Final Well Purging - Field Water Quality Measurement Table

started purge at 1400

Time	Depth to Water (ft)	Purge Rate (ml/min)	Total Purge (gal)	Temp (C) Stab. Para. (± 0.5 deg.)	pH Stab. Para. (± 0.2)	Sp. Cond. (mS/cm) Stab. Para. (± 3%)	Turbidity (NTUs) Stab. Para. (± 10%)	DO (mg/L) Stab. Para. (± 10%)	ORP (mV) Stab. Para (+/- 10 mV)	Comments Stabilization Parameters
1445	7.27	210	2.0	5.9	7.34	0.430	9.4	0.00	-86	
1500	7.17	210	3.0	7.2	7.30	0.436	8.4	0.00	-64	
1515	7.18	210	3.75	7.9	7.27	0.437	7.5	0.00	-47	
1530	7.18	210	4.75	8.1	7.26	0.440	6.9	0.00	-30	
1545	7.15	210	5.50	6.8	7.27	0.445	7.6	0.00	-16	
1600	7.13	210	6.5	7.5	7.28	0.443	7.1	0.00	-9	
1615	7.12	210	7.25	7.5	7.27	0.445	7.3	0.00	-6	
1620	collected samples									
17	7.22	210		6.7	7.33	0.449	8.9	0.00	16	Final Field Parameters

Note: It is the user's responsibility to verify with their supervisor that they are using the most current version of this document.

Field Equipment: PID/OVA SN: _____ Calibration Date: _____ Initials :

~~YSI SN:~~ Horiba U22 w/ flow thru cell Calibration Date: 1-26-05 Initials : AFH

Field measurement protocols followed with no exceptions (Y / N*) **Form completed by :** Al Hardesty

Date : 1-26-05

*Field Deviations Made :

did not meet purge volume - miscalculated purge volume requirements based on historical WL readings, which were below to screen - failed to recalculate based on current WL readings which were above screen.

Note: It is the user's responsibility to verify with their supervisor that they are using the most current version of this document.

Figure 5- 7

GROUNDWATER SAMPLING FIELD DATA FORM

Location ID: AA3-GW005 COC Sample Numbers PBOW-05-GW-AA3-GW005-01A / 01C
Plume Area: N/A Well Number: AA3-GW005
Arrival Date/Sample Time: 1-26-05 / 1-27-05
Sampling Method: Bladder pump / purge dry / low flow on recovery

Pump # 1	Pump Length 36" - 50' tubing
Dedicated Pump Used _____	

Weather: cold, snowy

Well Total Depth: 20.35 ft BTOC. Screened Interval: 10.1 - 20.1 ft BTOC.
Background PID Reading: _____ PPM. Well PID Reading: 0 PPM.
Static Water Level: 5.14' ft BTOC. Pump Set Depth: 14.1 ft BTOC
LNAPLS Present: _____ DNAPLS Present: _____

Purge volume calculations:
(D_c) Casing diameter (inches) 2", (H_s) Length of saturated screen interval (feet) 10,

(Db) Well boring diameter (inches) 6", (P) Effective porosity of filter pack (dimensionless) = 0.3

(A) Well Screen Unit Volume = $0.041\ (D_c)^2\ (H_s)$ = 1.6

(B) Saturated Filter Pack Unit Volume = $0.041\ [(D_B)^2 - (D_C)^2]\ (H_S)P$ = 4.0

(C) Total Unit Volume = (A) + (B) = 5.6

(D) Purge Volume = 3 * (C) = ~~19~~ 16.9

Analytical Parameters

Collected	Parameters	Method	Preservatives
3 x 40 ml glass vial	VOC		HCl / 4°C
4 x 1000 ml amber glass	SVOC, PCB, Nitroaromatics		4°C
1 x 500 ml poly	metals, Hardness		HNO_3 / 4°C
1 x 250 ml poly	cyanide		NaOH / 4°C
2 x 40 ml glass vials	TOC		H_2SO_4 / 4°C
1 x 1000 ml poly	turbidity, alkalinity TSS, TDS, Anions		4°C
1 x 500 ml poly	metals (~~un~~filtered)	filtered in field	HNO_3 / 4°C

QA/QC Sampling:
Sample Duplicate: NO ✓; YES __ Well Number
MS/MSD Sample: NO ✓; YES __ Well Number:
Rinsate Blank: NO ✗; YES ✓ Well Number: rinsate sample after decon on 1-28-05
Field Blank: NO ✓; YES __ Well Number: PBOW-05-GW-AA3-GW005-01C

Sample Crew (Print):
Al Hardesty, Helen Owens

(continues)

Note: It is the user's responsibility to verify with their supervisor that they are using the most current version of this document.

Well ID AA3-GW0005

Figure 5 -7

Sample Date: 1/26/05 - purged
1/27/05 - sampled

GROUNDWATER SAMPLING FIELD DATA FORM (continued)

Final Well Purging - Field Water Quality Measurement Table

Time	Depth to Water (ft)	Purge Rate (ml/min)	Total Purge (gal)	Temp (C) Stab. Para. (± 0.5 deg.)	pH Stab. Para. (± 0.2)	Sp. Cond. (mS/cm) Stab. Para. (± 3%)	Turbidity (NTUs) Stab. Para. (± 10%)	DO (mg/L) Stab. Para. (± 10%)	ORP (mV) Stab. Para (+/- 10 mV)	Comments Stabilization Parameters
1345	7.0	550	2	10.1	7.53	0.964	45.7	2.79	-28	See note 1
1400	12.39	550	4	10.9	7.24	0.984	47.0	1.02	-27	
1415	15.39	550	5	10.3	7.78	0.999	57.1	1.11	-17	
1430	15.9	550	7	9.5	7.93	0.999	74.6	1.05	-15	See note 2/3
1445		230	7.5	8.6	7.81	0.999	71.6	1.18	-19	
1500		100	~~8.07.4~~ 1/26/05 HJO	7.4	7.82	0.999	80.3	0.86	-21	
	Well	purged	dry -	~100 ml/min	purge rate.	HJO 1/26/05				
1/27/05										
	5.49'									
0945	7.75	45	0.5	13.0	9.31	0.93	10.7	6.22	-26	
1000	7.99	45	~0.5	14.5	9.24	0.93	8.8	6.10	-25	
1015	8.08	45		9.5	9.11	0.94	~~6.18~~ 9.6	6.18	-26	
1030	8.09	45	1.0	13.5	9.17	0.93	1/26/05 HJO 11.5	5.76	-25	
1045	8.03	45	1.0+	15.7	9.12	0.92	14.5	5.77	-26	
1100	8.10	45	1.0+	15.5	9.15	0.95	15.5	5.82	-26	
1105	Began collecting samples									
1200	~~8.10~~ 8.10									
1300	8.09	45								
1400	8.08	45								
1500	8.10	45								
1540	8.06	45		8.5	10.02	0.90	3.5	5.48	-9	
Note 1 =	turb. readings indicate turbid sample, however, purge water was very clear. HJO 1/26/05									
Note 2 =	@ 1430 depth of water was below top of pump. unable to measure level. HJO									Final Field Parameters

Note 3 = turbidity of sample, visual observation, purge water was yellowish in color and cloudy. 1/26/05 HJO 1/26/05

Note: It is the user's responsibility to verify with their supervisor that they are using the most current version of this document.

Field Equipment: PID/OVA SN: _____ Calibration Date: _____ Initials :

~~YSI SN~~: Horiba Calibration Date: 1-26-05 Initials : AFH
1-27-05 AFH

Field measurement protocols followed with no exceptions (Y / N) **Form completed by :** Helen Owens
Date : 1-27-05

*Field Deviations Made :

Purged well dry. Conducted low flow purge + sample upon recovery after water parameters stabilized. Time required to meet purge volume requirements at well yield rate would require more than an 8 hour period.

Note: It is the user's responsibility to verify with their supervisor that they are using the most current version of this document.

Figure 5- 7

GROUNDWATER SAMPLING FIELD DATA FORM

Location ID: Acid Area 3 COC Sample Numbers PB0W-05-GW-AA3-GW004-01A
Plume Area: N/A Well Number: AA3-GW004
Arrival Date/Sample Time: 1-29-04 / 1-30-04 1340
Sampling Method: Bladder Pump - purge dry - low flow on recovery

Pump # 1	Pump Length 36" - 50' tubing
Dedicated Pump Used _____	

Weather: Cloudy, cold - 15°-25°

Well Total Depth: 20.55 ft BTOC. Screened Interval: 10.3 - 20.3 ft BTOC.
Background PID Reading: _____ PPM. Well PID Reading: 0 PPM.
Static Water Level: 8.02 ft BTOC. Pump Set Depth: 14.3 ft BTOC
LNAPLS Present: _____ DNAPLS Present: _____

Purge volume calculations:
(D_c) Casing diameter (inches) 2", (H_s) Length of saturated screen interval (feet) 10,
(Db) Well boring diameter (inches) 6", (P) Effective porosity of filter pack (dimensionless) = 0.3

(A) Well Screen Unit Volume = $0.041\ (D_c)^2\ (H_s)$ = 1.6

(B) Saturated Filter Pack Unit Volume = $0.041\ [(D_B)^2 - (D_C)^2]\ (H_S)P$ = 4.0

(C) Total Unit Volume = (A) + (B) = 5.6

(D) Purge Volume = 3 * (C) = 16.9

Analytical Parameters

Collected	Parameters	Method	Preservatives
3 x 40 ml glass vial	VOC		HCl / 4°C
4 x 1000 ml amber glass	SVOC, PCB, Nitroaromatics		4°C
1 x 500 ml poly	metals / Hardness		HNO_3 / 4°C
1 x 250 ml poly	Cyanide		NaOH / 4°C
2 x 40 ml glass vial	TOC		H_2SO_4 / 4°C
1 x 1000 ml poly	turbidity, alkalinity TSS, TDS, Anions		4°C
1 x 500 ml poly	metals (filtered)	filtered in field	HNO_3 / 4°C

QA/QC Sampling: Sample Duplicate: NO ✓; YES __ Well Number
MS/MSD Sample: NO ✓; YES __ Well Number:
Rinsate Blank: NO ✓; YES __ Well Number:
Field Blank: NO ✓; YES __ Well Number:

Sample Crew (Print):
Al Hardesty, Neal Emminger (continues)

22K70809\:\WINWORD\BOILERPL\ WI-015r4.DOC
Note: It is the user's responsibility to verify with their supervisor that they are using the most current version of this document.

Well ID AA3-GW004

Figure 5 -7

Sample Date: 1-30-05

GROUNDWATER SAMPLING FIELD DATA FORM (continued)

Final Well Purging - Field Water Quality Measurement Table

started purge at 0810 1-29-05, resumed purge 0820 1-30-05

Time	Depth to Water (ft)	Purge Rate (ml/min)	Total Purge (gal)	Temp (C) Stab. Para. (± 0.5 deg.)	pH Stab. Para. (± 0.2)	Sp. Cond. (mS/cm) Stab. Para. (± 3%)	Turbidity (NTUs) Stab. Para. (± 10%)	DO (mg/L) Stab. Para. (± 10%)	ORP (mV) Stab. Para (+/- 10 mV)	Comments Stabilization Parameters
0830	10.62	550	3.0	7.9	7.54	0.900	55.6	0.00*	-79	DO meter may not be functioning properly.
0900	15.30	550	7.25	9.3	7.12	0.987	59.2	0.00*	-66	
0920	16.3 +	550	9.0	purged well dry, will low flow on recovery						
1-30-05			~~9.5~~							
0945	9.92	25	9.5	10.9	7.00	0.503	0.0*	0.00	-45	turbidity meter flashing
1000	10.12	25	9.5 +	12.5	6.92	0.508	0.0*	0.54	-48	water is very clear
1015	9.99	25	9.5 +	14.0	6.87	0.520	0.0*	0.32	-46	
1030	9.92	20	9.75	12.9	6.91	0.527	0.0*	0.96	-48	
1045	9.75	25	9.75 +	13.9	6.97	0.520	0.0*	1.23	-46	
1100	10.19	25	9.75 +	13.2	6.89	0.523	0.0*	0.45	-47	
1115	10.43	20	10.0	12.8	6.93	0.518	0.0*	0.85	-47	
1130	10.53	20	10.0 +	14.6	6.90	0.514	0.0*	0.68	-47	
1140	collecting samples									
1200	10.90	20-25								
1300	10.96	20-25								
1705	11.40	20-25		9.1	7.50	0.547	0.0*	2.18	-29	Final Field Parameters

* turbidity meter not functioning - flashing 0.0. - water is very clear however.

did not have time for stabilizing DO + ORP + PH on final reading.

Note: It is the user's responsibility to verify with their supervisor that they are using the most current version of this document.

Field Equipment: PID/OVA SN: _____ Calibration Date: _____ Initials :

~~YSI SN~~: Horiba U22 w/ flow thru cell Calibration Date: 1-29-05 / 1-30-05 Initials : AFH / AFH

Field measurement protocols followed with no exceptions (Y / N*) Form completed by : Al Hardesty
Date : 1-30-05

*Field Deviations Made :

Purged well dry. Conducted low-flow purge and sampling upon recovery after stabilization of water parameters. Time required to meet purge volume requirements at well yield rate would have been more than an 8 hr period.

Note: It is the user's responsibility to verify with their supervisor that they are using the most current version of this document.

Figure 5- 7

GROUNDWATER SAMPLING FIELD DATA FORM

Location ID: Acid Area 3 COC Sample Numbers P8DW-05-GW-AA3-BEDGW003-01A, 01B, 01D
Plume Area: N/A Well Number: AA3-BEDGW-003
Arrival Date/Sample Time: 1-30-05 / 1-30-05 1400
Sampling Method: Bladder pump - low flow

Pump # 2	Pump Length 36" - 100' tubing
Dedicated Pump Used No	

Weather: Clear, cold - 15°-25°

Well Total Depth: 53.2 ft BTOC. Screened Interval: 42.95 - 52.95 ft BTOC.
Background PID Reading: _____ PPM. Well PID Reading: 0 PPM.
Static Water Level: 10.51 ft BTOC. Pump Set Depth: 46.95 ft BTOC
LNAPLS Present: _____ DNAPLS Present: _____

Purge volume calculations:
(D_c) Casing diameter (inches) 2", (H_s) Length of saturated screen interval (feet) 10',

(Db) Well boring diameter (inches) 4", (P) Effective porosity of filter pack (dimensionless) = 0.3

(A) Well Screen Unit Volume = $0.041\ (D_c)^2\ (H_s)$ = 1.6

(B) Saturated Filter Pack Unit Volume = $0.041\ [(D_B)^2 - (D_C)^2]\ (H_S)P$ = 1.47

(C) Total Unit Volume = (A) + (B) = 3.07

(D) Purge Volume = 3 * (C) = 9.2

Analytical Parameters

Collected	Parameters	Method	Preservatives
3 x 40 ml glass vial	VOC		HCl / 4°C
4 x 1000 ml amber glass	SVOC, PCB, Nitroaromatics		4°C
1 x 500 ml poly	metals, hardness		HNO_3 / 4°C
1 x 250 ml poly	Cyanide		NaOH / 4°C
2 x 40 ml glass vial	TOC		H_2SO_4 / 4°C
1 x 1000 ml poly	~~turbidity, alkalinity~~ TSS, TDS, anions		4°C
1 x 500 ml poly	metals (filtered)		HNO_3 / 4°C

QA/QC Sampling: Sample Duplicate: NO __; YES ✓ Well Number
MS/MSD Sample: NO ✓; YES __ Well Number:
Rinsate Blank: NO ✓; YES __ Well Number:
Field Blank: NO ✓; YES __ Well Number:

Sample Crew (Print):
Al Hardesty, Neal Emminger

(continues)

Note: It is the user's responsibility to verify with their supervisor that they are using the most current version of this document.

Well ID AA3-BELOW-001

Figure 5 -7

Sample Date: 1-30-05

GROUNDWATER SAMPLING FIELD DATA FORM (continued)

Final Well Purging - Field Water Quality Measurement Table

Initiated purging at 0856

Time	Depth to Water (ft)	Purge Rate (ml/min)	Total Purge (gal)	Temp (C) Stab. Para. (± 0.5 deg.)	pH Stab. Para. (± 0.2)	Sp. Cond. (mS/cm) Stab. Para. (± 3%)	Turbidity (NTUs) Stab. Para. (± 10%)	DO (mg/L) Stab. Para. (± 10%)	ORP (mV) Stab. Para (+/- 10 mV)	Comments Stabilization Parameters
0945	13.45	250	3.0	10.6	7.17	1.62	101.0	0.00	-362	
1000	13.60	250	3.75	11.6	7.39	1.58	74.7	0.00	-381	
1015	13.69	250	4.25	11.5	7.32	1.52	53.6	0.00	-381	
1030	13.75	250	5.25	10.5	7.25	1.51	20.7	0.00	-358	
~~1030~~ 1045	13.83	250	6.5	10.8	7.14	1.50	19.9	0.00	-362	
1100	13.91	250	7.25	11.0	7.16	1.51	53.3	0.00	-360	
1115	14.00	250	7.75	10.8	7.05	1.51	115.0 *	0.00	-360	
1130	14.00	250	8.75	10.6	7.26	1.54	109.0 *	0.00	-364	
1145	14.02	250	9.5	10.5	7.18	1.54	116.0 *	0.00	-360	knocked bubbles from flow thru cell + probes
1200	14.15	250	10.25	10.2	7.04	1.54	28.1	0.00	-363	
1215	14.10	225	10.75	9.8	7.10	1.55	30.1	0.00	-363	
1230	14.02	225	11.25	10.6	7.19	1.56	7.6	0.00	-362	
1245	AFT ~~14.0~~ 13.89	225	12.25	11.6	7.18	1.56	5.8	0.00	-361	
1300	13.89	225	13.0	9.8	7.14	1.57	32.2 *	0.00	-367	
1315	13.75	215	13.75	10.7	7.08	1.56	11.5	0.00	-364	
1330	13.72	215	14.5	12.2	7.08	1.56	18.6	0.00	-364	
1345	13.62	215	15.0	12.0	7.08	1.58	22.4 **	0.00	-365	
1400	collecting samples			~~10~~						
1637	13.70	215		10.8	7.11	1.57	** 121.0	0.00	-366	Final Field Parameters

* H_2S bubbles affecting turbidity. water is clearing up.

** Samples were very clear during sampling - probe not reading correctly.

Note: It is the user's responsibility to verify with their supervisor that they are using the most current version of this document.

Field Equipment: PID/OVA SN: _____ Calibration Date: _____ Initials :

Horiba U-22xD
~~YSI SN:~~ _____ Calibration Date: 1-30-05 Initials : AFH

Field measurement protocols followed with no exceptions (Y / N*) **Form completed by :** Al Hardesty
Date : 1-30-05

*Field Deviations Made :

None

Note: It is the user's responsibility to verify with their supervisor that they are using the most current version of this document.

Figure 5- 7

GROUNDWATER SAMPLING FIELD DATA FORM

Location ID: Acid Area 2 COC Sample Numbers PB0W-05-GW-AA2-ITMW10-01A
Plume Area: N/A Well Number: IT-MW10
Arrival Date/Sample Time: 1-29-05 / 2-1-05 1130
Sampling Method: Disposable Bail - Bail dry - sample on recovery

Pump # N/A	Pump Length 1/2" diameter - 24"
Dedicated Pump Used Yes - Disposable	

Weather: Foggy, cold 25°-30°

Well Total Depth: 22.5' ft BTOC. Screened Interval: 11.8 - 21.8 ft BTOC.
Background PID Reading: _____ PPM. Well PID Reading: 0 PPM.
Static Water Level: 9.25' ft BTOC. Pump Set Depth: N/A ft BTOC
LNAPLS Present: _____ DNAPLS Present: _____

Purge volume calculations:
(D_c) Casing diameter (inches) 2", (H_s) Length of saturated screen interval (feet) 10',

(Db) Well boring diameter (inches) 6", (P) Effective porosity of filter pack (dimensionless) = 0.3

(A) Well Screen Unit Volume = $0.041\ (D_c)^2\ (H_s)$ = 1.6

(B) Saturated Filter Pack Unit Volume = $0.041\ [(D_B)^2 - (D_C)^2]\ (H_S)P$ = 4.0

(C) Total Unit Volume = (A) + (B) = 5.6

(D) Purge Volume = 3 * (C) = 16.9

Analytical Parameters

Collected	Parameters	Method	Preservatives
3 x 40 ml vial	VOC		HCL / 4°C
4 x 1000 ml amber glass	SVOC, PCB, Nitroaromatics		4°C
1 x 500 ml poly	metal / Hardness		HNO_3 / 4°C
1 x 250 ml poly	Cyanide		NaOH / 4°C
2 x 40 ml	TOC		H_2SO_4 / 4°C
1 x 1000 ml poly	turbidity, alkalinity TSS, TDS, anions		4°C
1 x 500 ml poly	metal (filtered)	filtered in field	HNO_3 / 4°C

QA/QC Sampling: Sample Duplicate: NO ✓; YES __ Well Number
MS/MSD Sample: NO ✓; YES __ Well Number:
Rinsate Blank: NO ✓; YES __ Well Number:
Field Blank: NO ✓; YES __ Well Number:

Sample Crew (Print):
Al Hardesty, Neal Emminger (continues)

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Note: It is the user's responsibility to verify with their supervisor that they are using the most current version of this document.

Well ID IT-MW10

Figure 5 -7

Sample Date: 1-31-05

GROUNDWATER SAMPLING FIELD DATA FORM (continued)

Final Well Purging - Field Water Quality Measurement Table

purged dry 1-29-05

Time	Depth to Water (ft)	Purge Rate (ml/min)	Total Purge (gal)	Temp (C) Stab. Para. (± 0.5 deg.)	pH Stab. Para. (± 0.2)	Sp. Cond. (mS/cm) Stab. Para. (± 3%)	Turbidity (NTUs) Stab. Para. (± 10%)	DO (mg/L) Stab. Para. (± 10%)	ORP (mV) Stab. Para (+/- 10 mV)	Comments Stabilization Parameters
1230	19.5		7.5	no readings		- using bailer ~~with~~ to purge dry				
1-31-05										
0945	9.6		7.5	8.3	6.38	0.949	0.5	3.39	-30 to 165	used both Horiba for ORP DO from Horiba 1, TURB
0945	collecting samples									from Horiba 1, cond from
	lost bailer down hole - had only collected partial bottle of back-up 1L Amber.									Horiba 2
	will restart sampling on 2-1-05 with fresh bottles.									
2-1-05										
1130	collecting samples. - WL - 9.18'					~~0.878~~				
1257	13.41			8.1	6.95	0.878	0.7	5.99	35 to -43	
										Final Field Parameters

Note: It is the user's responsibility to verify with their supervisor that they are using the most current version of this document.

Field Equipment: PID/OVA SN: _____ Calibration Date: _____ Initials :

~~YSI SN:~~ Horiba U22 did not use flow thru cell Calibration Date: 2-1-05 Initials : AFH

Field measurement protocols followed with no exceptions (Y / N) **Form completed by :** Al Hardesty

Date : 2-1-05

*Field Deviations Made :

Obstruction in casing would not allow bladder pump below a depth of 2.5 to 3.0 feet. Standard bailer would not go past obstruction. Used a special order 1/2 bailer to purge well dry. Sampled upon recovery - collected final water parameter measurements at conclusion of sampling

Note: It is the user's responsibility to verify with their supervisor that they are using the most current version of this document.

Appendix H
Slug Test Data and Calculation Sheets

Monitoring Well Construction Details and Slug Test Analysis
Remedial Investigation support: January 2005 Slug Tests
Plum Brook Ordnance Works

Monitoring Well ID	Groundwater Level	Water Colulmn Height[1]	Well Depth	Screen Bottom	Screen Top	Screen Length	Well Diameter	Casing Radius	Borehole Diameter	Borehole Radius	Well Material	Test Date		Hydraulic Conductivity Bouwer and Rice Analysis[2, 3] K_z/K_r = 0.5 (cm/sec)		Hydraulic Conductivity Bouwer and Rice Analysis[2,3,4] K_z/K_r = 0.5 (ft/day)		Comments
	(ft bTOC)	(ft)	(ft bTOC)	(ft bTOC)	(ft bTOC)	(ft)	(inches)	(ft)	(inches)	(ft)		Slug In (Falling Head Test)	Slug Out (Rising Head Test)	Slug In (Falling Head Test)	Slug Out (Rising Head Test)	Slug In (Falling Head Test)	Slug Out (Rising Head Test)	
AA3-GW-003	3.54	16.5	20.3	20.0	10.0	10	2.0	0.0833	6.0000	0.2500	PVC	01/20/2005	01/20/2005	1.3E-04	1.5E-04	3.7E-01	4.4E-01	
AA3-GW-004	7.68	12.6	20.6	20.3	10.3	10	2.0	0.0833	6.0000	0.2500	PVC	01/23/2005	01/23/2005	N/A	1.0E-05	N/A	2.8E-02	Data not available for slug in test
AA3-GW-005	5.00	15.1	20.4	20.1	10.1	10	2.0	0.0833	6.0000	0.2500	PVC	01/24/2005	01/25/2005	1.3E-05	5.3E-06	3.6E-02	1.5E-02	
AA3-BEDGW-002	30.15	27.3	57.7	57.4	47.4	10	2.0	0.0833	3.8750	0.1615	PVC	01/20/2005	01/20/2005	1.1E-03	1.2E-03	3.2E+00	3.4E+00	
AA3-BEDGW-003	10.07	42.9	53.2	53.0	43.0	10	2.0	0.0833	3.8750	0.1615	PVC	01/23/2005	01/23/2005	3.9E-05	2.4E-05	1.1E-01	6.9E-02	

Notes:
[1] Water Column Height listed as "Total Well Penetration Depth" (total depth of penetration by the well screen in the aquifer) on AQTESOLV analysis printout sheets.
[2] "Saturated Thickness of Aquifer" estimated as the Water Column Height for overburden wells and estimated as 60 feet for bedrock wells. These values were used in AQTESOLV analyses.
[3] Initial displacement of water due to slug volume (based on water level response data) was assumed to be 1.688 feet (3 ft x 1.5 inch diameter slug in a 2-inch inside diameter well casing).
[4] ft/day per cm/sec: **2835**
[5] Filter Pack and Filter Pack Porosity for all wells: 20-40 & 30%

Key:
cm - centimeter
ft - feet
bTOC - below top of casing (measurement point)
K_r - horizontal (radial) hydraulic conductivity
K_z - vertical hydraulic conductivity
N/A - not available
PVC - polyvinyl chloride
sec - second

SLUG TEST DATA FORM

SLUG TEST DATA

LOCATION AA3-GW003 - Acid Area 2+3 SLUG VOLUME (FT³) 36" x 1.5" diameter

LOCATION I.D. AA3-GW003 LOGGER CODE N/A

LOGDATE 1-20-05 / 1-21-06 (AFH AFH) ACCEPTANCE CODE N/A

TEST METHOD: [✓] SLUG INJECTION OR [✓] SLUG WITHDRAWAL

COMMENTS: used troll 9000 data logger - set troll approximately 10' below ~~WL~~ surface

ELAPSED TIME (MIN)	DEPTH-TO-WATER (FT)
0.00	
static WL before installing troll	
3.54'	
static WL before installing slug	
and starting test - troll	
reading	10.31 - this
represents the depth of troll below WL	
started test and ran slug below	
WL.	
started slug-in test @ 15:54 1/20/05	
stopped slug-in test @ 17:00 1/20/05	
started slug-out test @ 17:07 1/20/05	
stopped slug-out test @ 10:23 1/21/05	
reference data file downloaded	
from troll data logger.	

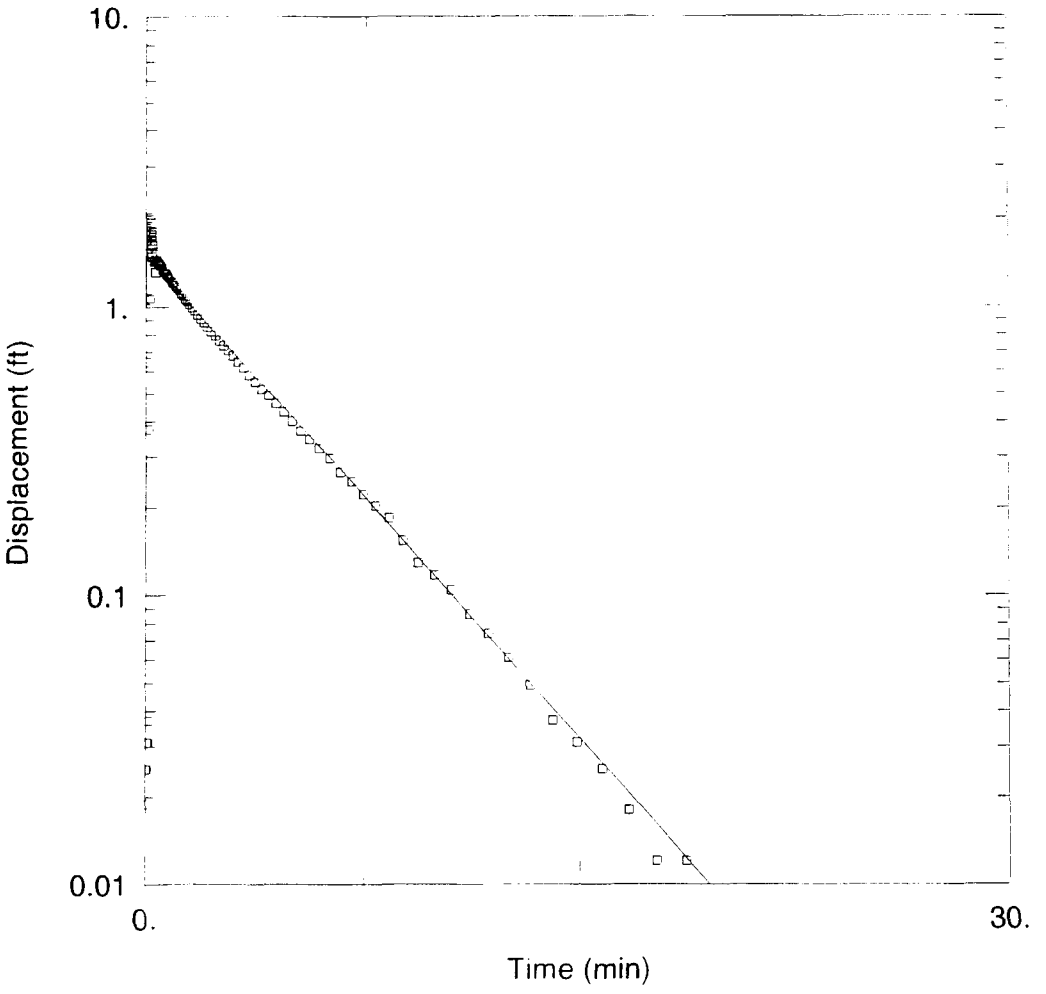
ELAPSED TIME (MIN)	DEPTH-TO-WATER (FT)

ACCEPTANCE CODES: A - ACCEPTABLE R - RECONNAISSANCE U - UNACCEPTABLE N - NOT DETERMINED

Al Hardesty 1/21/05
FORM COMPLETED BY / DATE

TECHNICAL REVIEWER / DATE

Figure 5-8



AA3-GW-003 FALLING HEAD SLUG TEST: ESTIMATED ANALYSIS PARAMETERS

Data Set: D:\...\AA3-GW-003_ib_VE-0pt50.aqt
Date: 03/31/05 Time: 16:26:47

PROJECT INFORMATION

Company: Jacobs
Client: USACE-Nashville
Project: 35BH9304
Test Location: Plum Brook
Test Well: AA3-GW-003
Test Date: 01/20/2005

AQUIFER DATA

Saturated Thickness: 16.5 ft
Anisotropy Ratio (Kz/Kr): 0.5

WELL DATA (AA3-GW-003)

Initial Displacement: 1.688 ft
Wellbore Radius: 0.25 ft
Screen Length: 10. ft
Gravel Pack Porosity: 0.3
Casing Radius: 0.0833 ft
Well Skin Radius: 0.25 ft
Total Well Penetration Depth: 16.5 ft

SOLUTION

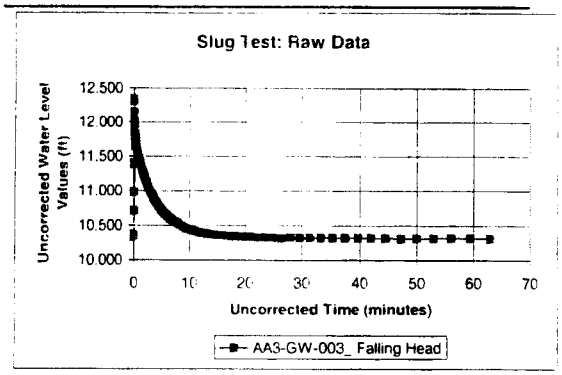
Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

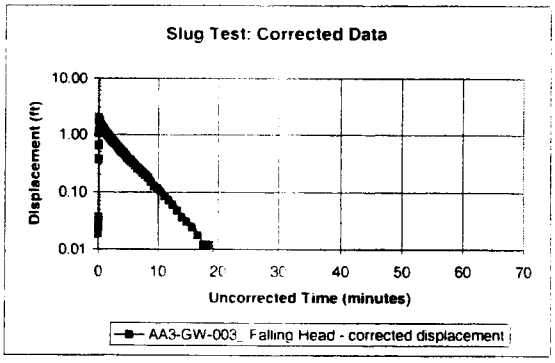
K = 0.0001535 cm/sec
y0 = 1.479 ft

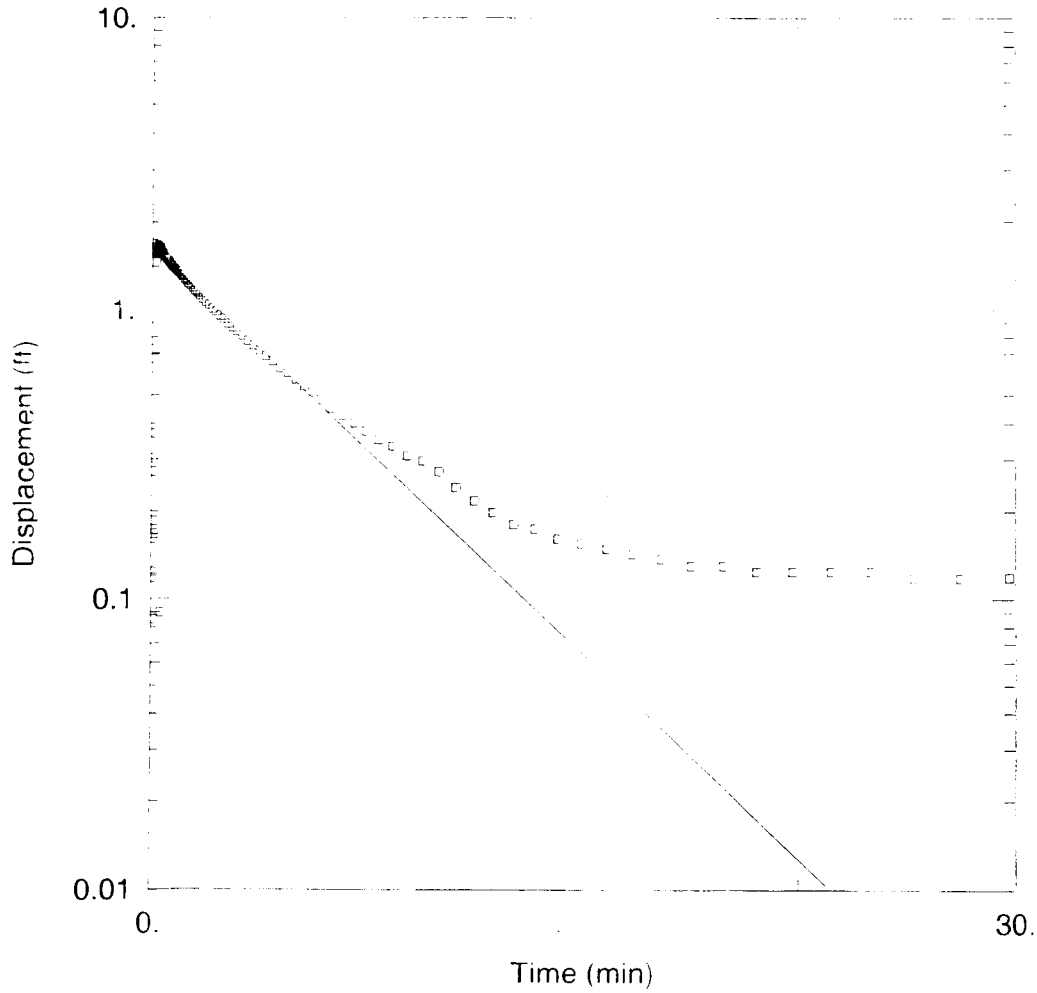
Plum Brook Ordnance Works **AA3-GW-003_ Falling Head** - corrected displacement

Displ. Correction Formula: 0.019

Uncorrected Time (minutes)	Uncorrected displacement (feet)	Corrected displacement **start at 0.005 minutes**
0.000	10.332	
0.005	10.351	0.019
0.010	10.357	0.025
0.015	10.357	0.025
0.020	10.357	0.025
0.025	10.357	0.025
0.030	10.357	0.025
0.035	10.363	0.031
0.040	10.363	0.031
0.045	10.363	0.031
0.050	10.363	0.031
0.055	10.357	0.025
0.060	10.363	0.031
0.065	10.363	0.031
0.070	10.363	0.031
0.075	10.363	0.031
0.080	10.363	0.031
0.085	10.363	0.031
0.090	10.363	0.031
0.095	10.363	0.031
0.100	10.369	0.037
0.107	10.708	0.376
0.112	10.979	0.647
0.118	11.404	1.072
0.125	12.311	1.979
0.133	11.392	1.060
0.140	12.341	2.009
0.148	12.095	1.763
0.158	12.150	1.818
0.167	12.021	1.689
0.177	11.861	1.529
0.188	11.965	1.633
0.198	11.959	1.627
0.210	11.817	1.485
0.223	12.120	1.788
0.237	12.064	1.732
0.250	12.132	1.800
0.265	11.947	1.615
0.280	11.768	1.436
0.297	11.762	1.430
0.315	11.645	1.313
0.333	11.873	1.541
0.353	11.774	1.442
0.373	11.768	1.436
0.397	11.756	1.424
0.420	11.743	1.411
0.445	11.731	1.399
0.470	11.725	1.393
0.497	11.719	1.387
0.525	11.743	1.411
0.555	11.676	1.344
0.587	11.670	1.338
0.622	11.657	1.325
0.658	11.633	1.301
0.697	11.620	1.288
0.738	11.602	1.270
0.782	11.589	1.257
0.828	11.571	1.239
0.877	11.546	1.214
0.928	11.534	1.202
0.983	11.509	1.177
1.042	11.491	1.159
1.103	11.472	1.140
1.168	11.442	1.110
1.238	11.423	1.091
1.312	11.392	1.060
1.390	11.374	1.042
1.473	11.349	1.017
1.562	11.324	0.992
1.655	11.300	0.968
1.753	11.269	0.937
1.858	11.238	0.906
1.968	11.214	0.882
2.085	11.183	0.851
2.210	11.152	0.820
2.342	11.127	0.795
2.482	11.096	0.764
2.630	11.066	0.734
2.787	11.041	0.709
2.953	11.010	0.678
3.130	10.979	0.647
3.317	10.949	0.617
3.515	10.912	0.580
3.725	10.881	0.549
3.947	10.850	0.518
4.182	10.825	0.493
4.430	10.794	0.462







AA3-GW-003 RISING HEAD SLUG TEST: ESTIMATED ANALYSIS PARAMETERS

Data Set: D:\...\AA3-GW-003_ob_VE-0pt50.aqt
Date: 03/31/05 Time: 16:18:51

PROJECT INFORMATION

Company: Jacobs
Client: USACE-Nashville
Project: 35BH9304
Test Location: Plum Brook
Test Well: AA3-GW-003
Test Date: 01/20/2005

AQUIFER DATA

Saturated Thickness: 16.5 ft
Anisotropy Ratio (Kz/Kr): 0.5

WELL DATA (AA3-GW-003)

Initial Displacement: 1.688 ft
Wellbore Radius: 0.25 ft
Screen Length: 10. ft
Gravel Pack Porosity: 0.3
Casing Radius: 0.0833 ft
Well Skin Radius: 0.25 ft
Total Well Penetration Depth: 16.5 ft

SOLUTION

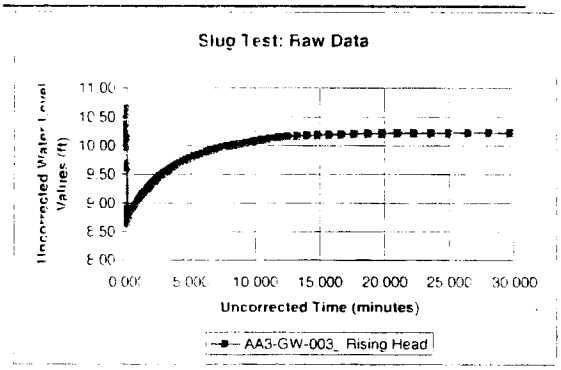
Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

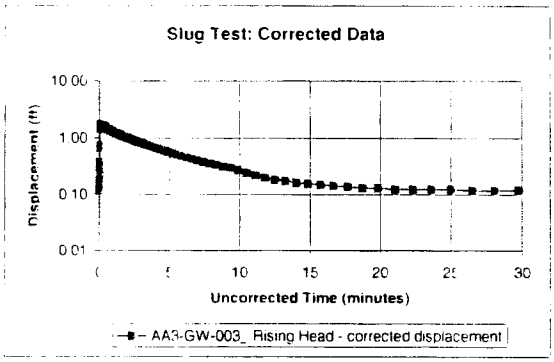
K = 0.0001295 cm/sec
y0 = 1.616 ft

Plum Brook Ordnance Works — AA3-GW-003_ Rising Head — - corrected displacement

Displ. Correction Formula: 0.118

Uncorrected Time (minutes)	Uncorrected displacement (feet)	Correcter displacement start at 0.055 minutes
0.000	10.310	
0.005	10.329	
0.010	10.335	
0.015	10.341	
0.020	10.341	
0.025	10.341	
0.030	10.341	
0.035	10.347	
0.040	10.347	
0.045	10.347	
0.050	10.359	
0.055	10.223	0.118
0.060	10.039	0.302
0.065	10.180	0.161
0.070	9.973	0.370
0.075	10.168	0.173
0.080	10.538	
0.085	10.002	0.339
0.090	10.630	
0.095	10.217	0.124
0.100	10.174	0.167
0.107	10.069	0.272
0.112	10.156	0.185
0.118	9.669	0.672
0.125	9.613	0.728
0.133	8.886	1.455
0.140	8.719	1.628
0.148	8.658	1.683
0.158	8.719	1.622
0.167	8.750	1.591
0.177	8.763	1.578
0.188	8.763	1.578
0.198	8.769	1.572
0.210	8.750	1.591
0.223	8.682	1.659
0.237	8.676	1.665
0.250	8.695	1.646
0.265	8.738	1.603
0.280	8.744	1.597
0.297	8.744	1.597
0.315	8.744	1.597
0.333	8.707	1.634
0.353	8.713	1.628
0.373	8.707	1.634
0.397	8.726	1.615
0.420	8.756	1.585
0.445	8.811	1.529
0.470	8.818	1.523
0.497	8.837	1.504
0.525	8.843	1.498
0.555	8.861	1.480
0.587	8.874	1.467
0.622	8.892	1.449
0.658	8.911	1.430
0.697	8.929	1.412
0.738	8.943	1.400
0.782	8.960	1.383
0.826	8.972	1.369
0.877	8.991	1.350
0.928	9.009	1.332
0.983	9.028	1.313
1.042	9.046	1.295
1.103	9.071	1.270
1.168	9.090	1.251
1.238	9.114	1.227
1.312	9.133	1.208
1.390	9.157	1.184
1.473	9.182	1.159
1.562	9.200	1.141
1.655	9.225	1.116
1.753	9.256	1.085
1.858	9.287	1.060
1.968	9.305	1.039
2.085	9.336	1.008
2.210	9.361	0.980
2.342	9.392	0.949
2.482	9.416	0.925
2.630	9.453	0.888
2.787	9.478	0.863
2.953	9.503	0.838
3.130	9.534	0.807
3.317	9.565	0.776
3.515	9.596	0.745
3.725	9.628	0.715
3.947	9.657	0.684
4.182	9.682	0.659
4.430	9.719	0.622





SLUG TEST DATA FORM

SLUG TEST DATA

LOCATION AA3-OW004 - Acid Area 3

SLUG VOLUME (FT³) 36" x 1.5" diameter

LOCATION I.D. AA3-OW-004

LOGGER CODE N/A

LOGDATE 1-22-05 - 1-24-05

ACCEPTANCE CODE N/A

TEST METHOD: [✓] SLUG INJECTION OR [✓] SLUG WITHDRAWAL

COMMENTS: used Troll 9000 with built-in data logger - set troll approximately 10' below WL

ELAPSED TIME (MIN)	DEPTH-TO-WATER (FT)	ELAPSED TIME (MIN)	DEPTH-TO-WATER (FT)
0.00			
static WL reading prior to			
installing troll	- 7.68'		
set equipment on	1/22/05		
started slug-in test @ 8:44 1/23/05			
stopped slug-in test @ 14:40 1/23/05			
started slug-out test @ 14:45 1/23/05			
stopped slug-out test @ 08:16 1/24/05			
reference data file downloaded			
from troll data logger			

ACCEPTANCE CODES: A - ACCEPTABLE R - RECONNAISSANCE U - UNACCEPTABLE N - NOT DETERMINED

Al Hardesty 1/24/05

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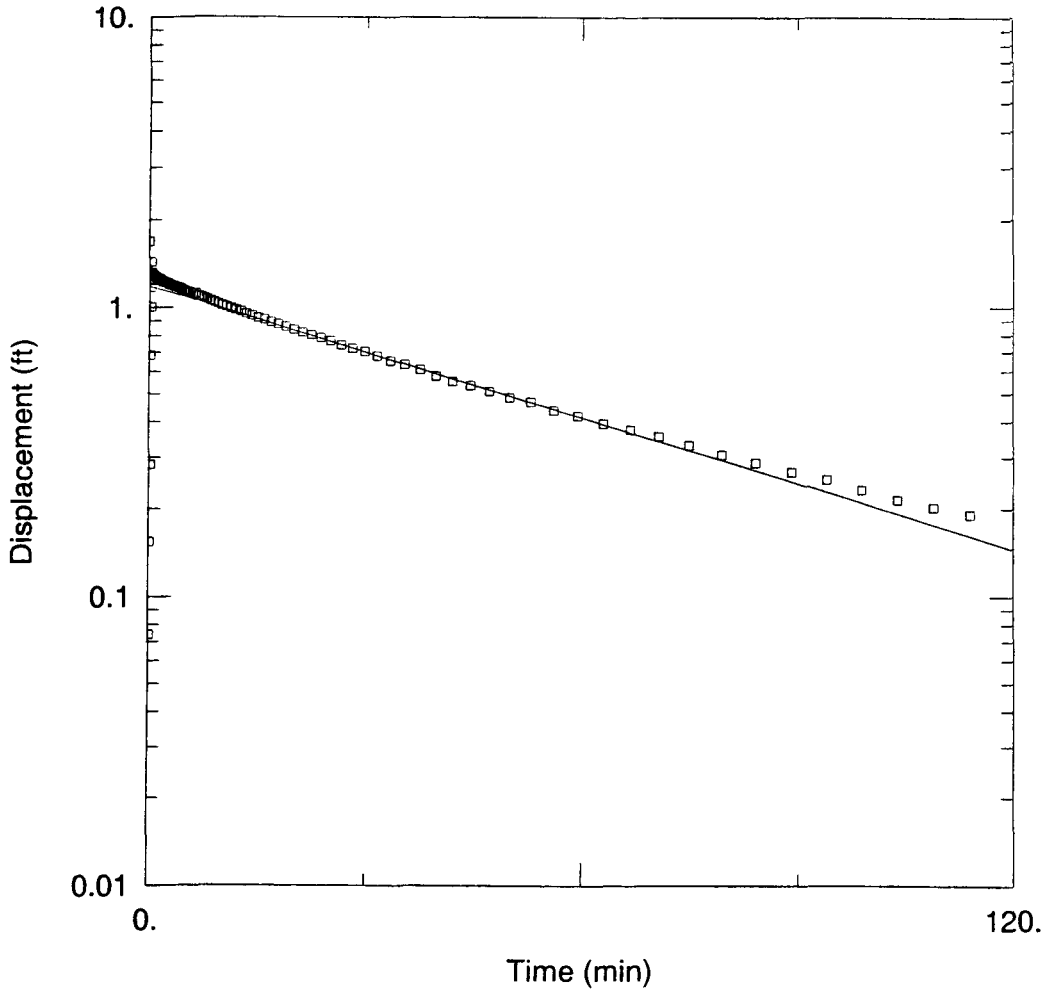
TECHNICAL REVIEWER / DATE

Figure 5-8



AA3-GW-004 RISING HEAD SLUG TEST: ESTIMATED ANALYSIS PARAMETERS

Data Set: D:\...\AA3-GW-004_ob_VE-0pt50.aqt
Date: 03/31/05 Time: 19:07:16

PROJECT INFORMATION

Company: Jacobs
Client: USACE-Nashville
Project: 35BH9304
Test Location: Plum Brook
Test Well: AA3-GW-004
Test Date: 01/23/2005

AQUIFER DATA

Saturated Thickness: 12.6 ft
Anisotropy Ratio (Kz/Kr): 0.5

WELL DATA (AA3-GW-004)

Initial Displacement: 1.688 ft
Wellbore Radius: 0.25 ft
Screen Length: 10. ft
Gravel Pack Porosity: 0.3
Casing Radius: 0.0833 ft
Well Skin Radius: 0.25 ft
Total Well Penetration Depth: 12.6 ft

SOLUTION

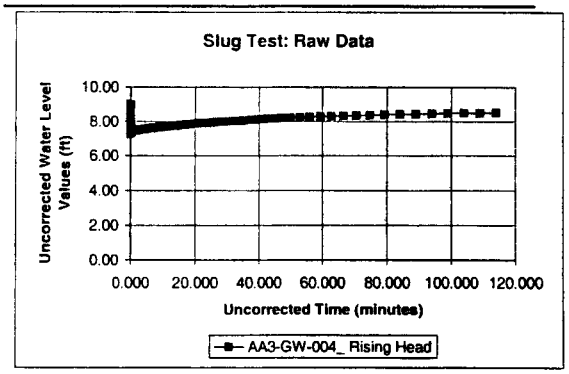
Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

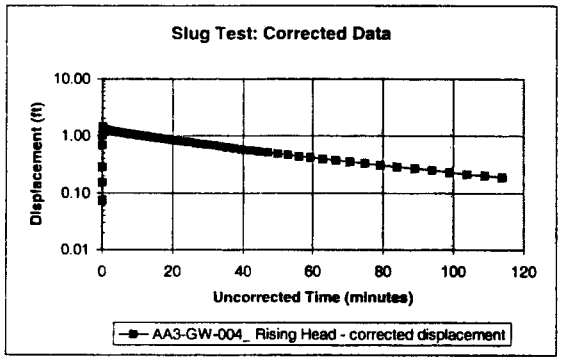
K = 9.971E-06 cm/sec
y0 = 1.18 ft

Plum Brook Ordnance Works **AA3-GW-004_ Rising Head** - corrected displacement

Displ. Correction Formula 0.074

Uncorrected Time (minutes)	Uncorrected displacement (feet)	Corrected displacement start at 0.167 minutes
0.000	8.672	
0.005	8.691	
0.010	8.697	
0.015	8.697	
0.020	8.703	
0.025	8.703	
0.030	8.703	
0.035	8.703	
0.040	8.703	
0.045	8.703	
0.050	8.709	
0.055	8.709	
0.060	8.709	
0.065	8.703	
0.070	8.703	
0.075	8.709	
0.080	8.709	
0.085	8.709	
0.090	8.709	
0.095	8.703	
0.100	8.697	
0.107	8.703	
0.112	8.709	
0.118	8.709	
0.125	8.709	
0.133	8.709	
0.140	8.703	
0.148	8.703	
0.158	8.703	
0.167	8.629	0.074
0.177	8.549	0.154
0.188	8.987	
0.198	8.019	0.684
0.210	8.419	0.284
0.223	7.698	1.005
0.237	7.267	1.436
0.250	7.532	1.171
0.265	7.464	1.239
0.280	7.396	1.307
0.297	7.378	1.325
0.315	7.390	1.313
0.333	7.402	1.301
0.353	7.402	1.301
0.373	7.409	1.294
0.397	7.409	1.294
0.420	7.402	1.301
0.445	7.409	1.294
0.470	7.409	1.294
0.497	7.415	1.288
0.525	7.415	1.288
0.555	7.415	1.288
0.587	7.415	1.288
0.622	7.415	1.288
0.658	7.421	1.282
0.697	7.421	1.282
0.738	7.427	1.276
0.782	7.427	1.276
0.828	7.427	1.276
0.877	7.433	1.270
0.928	7.433	1.270
0.983	7.439	1.264
1.042	7.439	1.264
1.103	7.445	1.258
1.168	7.445	1.258
1.238	7.451	1.252
1.312	7.457	1.246
1.390	7.445	1.258
1.473	7.457	1.246
1.562	7.464	1.239
1.655	7.464	1.239
1.753	7.470	1.233
1.858	7.476	1.227
1.968	7.482	1.221
2.085	7.482	1.221
2.210	7.488	1.215
2.342	7.488	1.215
2.482	7.494	1.209
2.630	7.501	1.202
2.787	7.507	1.196
2.953	7.513	1.190
3.130	7.513	1.190
3.317	7.519	1.184
3.515	7.531	1.172
3.725	7.531	1.172
3.947	7.537	1.166
4.182	7.543	1.160
4.430	7.549	1.154





SLUG TEST DATA FORM

SLUG TEST DATA

LOCATION AA3-GW005

SLUG VOLUME (FT^3) 36" x 1.5" diameter

LOCATION I.D. AA3-GW005

LOGGER CODE N/A

LOGDATE 1-24-05 - 1/26/05

ACCEPTANCE CODE N/A

TEST METHOD: [✓] SLUG INJECTION OR [✓] SLUG WITHDRAWAL

COMMENTS: Used troll 9000 with built in data logger.

ELAPSED TIME (MIN)	DEPTH-TO-WATER (FT)	ELAPSED TIME (MIN)	DEPTH-TO-WATER (FT)
0.00			
static water level prior to			
installing equipment - 5.00			
reference data file from			
troll logger			
started slug-in test @ 9:53 1/24/05			
stopped slug-in test @ 10:47 1/25/05			
started slug-out test @ 10:50 1/25/05			
stopped slug-out test @ 8:50 1/26/05			

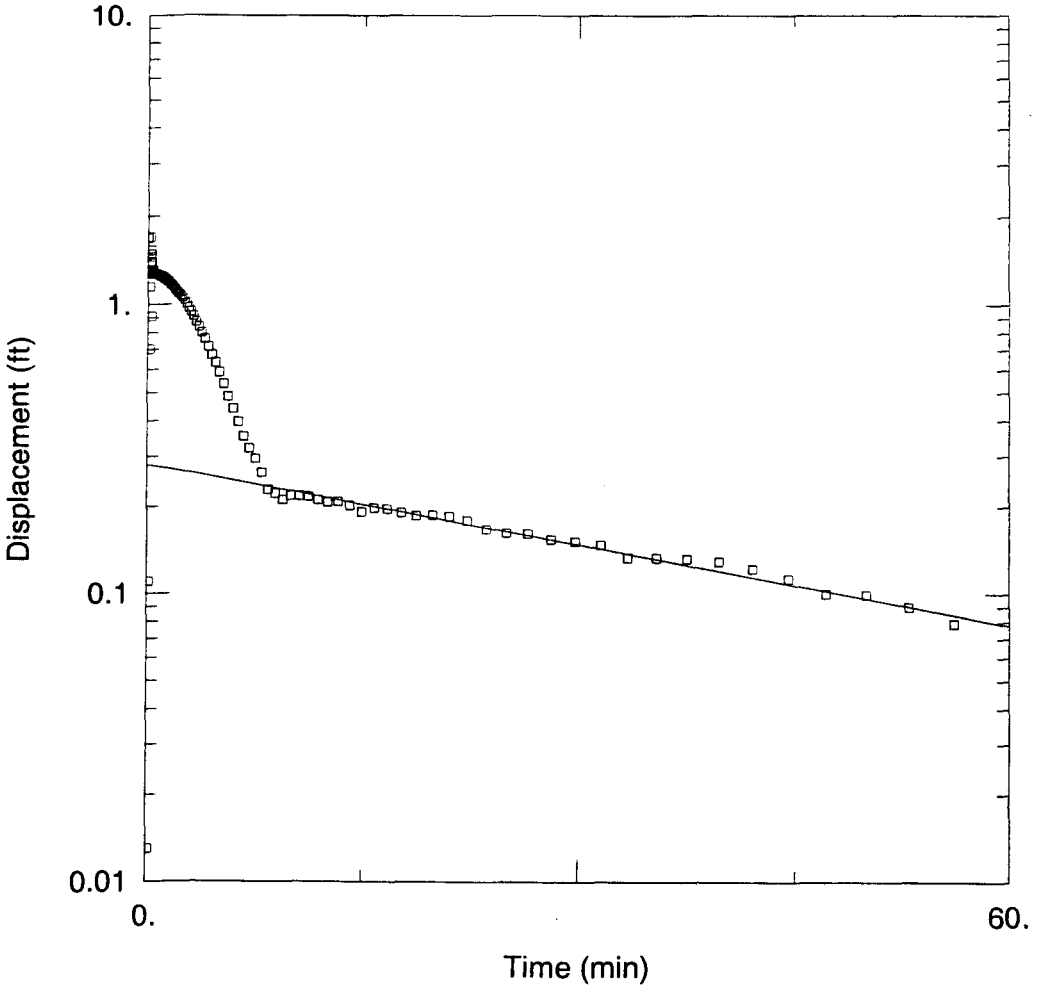
ACCEPTANCE CODES: A - ACCEPTABLE R - RECONNAISSANCE U - UNACCEPTABLE N - NOT DETERMINED

Al Hardesty 1/26/05

FORM COMPLETED BY / DATE

TECHNICAL REVIEWER / DATE

Figure 5-8



AA3-GW-005 FALLING HEAD SLUG TEST: ESTIMATED ANALYSIS PARAMETERS

Data Set: D:\...\AA3-GW-005_ib_VE-0pt50.aqt
Date: 03/31/05 Time: 19:21:17

PROJECT INFORMATION

Company: Jacobs
Client: USACE-Nashville
Project: 35BH9304
Test Location: Plum Brook
Test Well: AA3-GW-005
Test Date: 01/24/2005

AQUIFER DATA

Saturated Thickness: 15.1 ft
Anisotropy Ratio (Kz/Kr): 0.5

WELL DATA (AA3-GW-005)

Initial Displacement: 1.688 ft
Wellbore Radius: 0.25 ft
Screen Length: 10. ft
Gravel Pack Porosity: 0.3
Casing Radius: 0.0833 ft
Well Skin Radius: 0.25 ft
Total Well Penetration Depth: 15.1 ft

SOLUTION

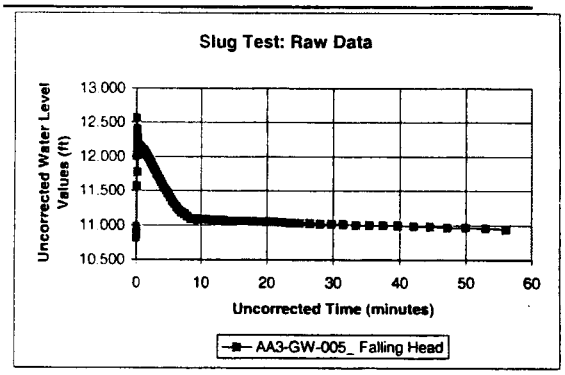
Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

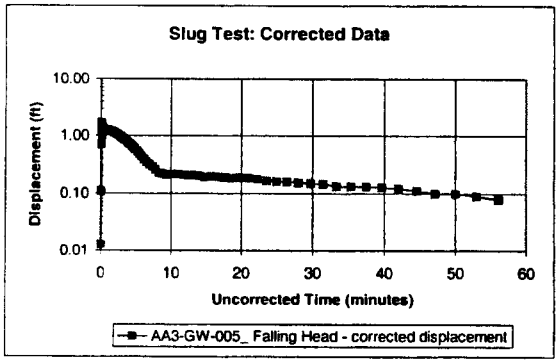
K = 1.265E-05 cm/sec
y0 = 0.2804 ft

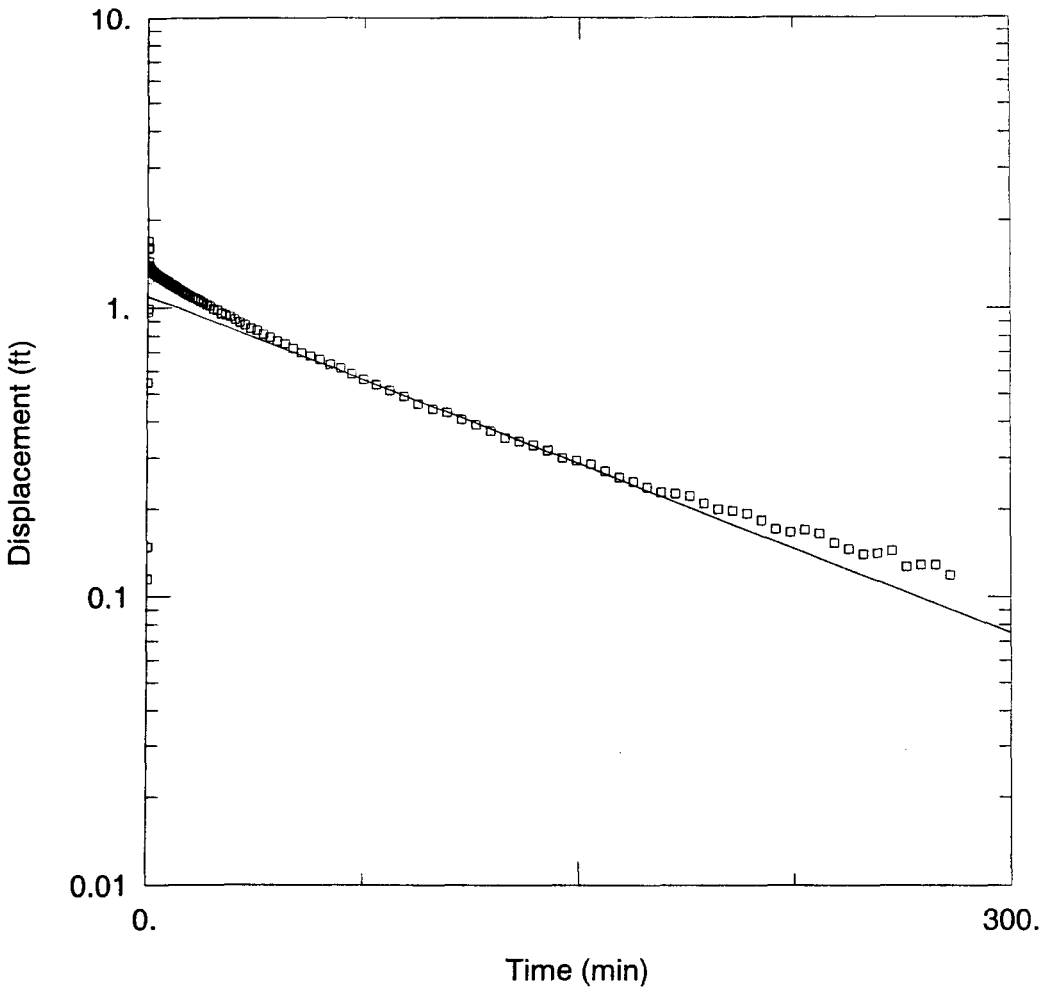
Plum Brook Ordnance Works **AA3-GW-005_ Falling Head** - corrected displacement

Displ. Correction Formula 0.013

Uncorrected Time (minutes)	Uncorrected displacement (feet)	Corrected displacement start at 0.140 minutes
0.000	10.818	
0.005	10.843	
0.010	10.855	
0.015	10.860	
0.020	10.860	
0.025	10.854	
0.030	10.860	
0.035	10.867	
0.040	10.866	
0.045	10.860	
0.050	10.860	
0.055	10.866	
0.060	10.866	
0.065	10.866	
0.070	10.866	
0.075	10.866	
0.080	10.866	
0.085	10.865	
0.090	10.865	
0.095	10.865	
0.100	10.865	
0.107	10.872	
0.112	10.865	
0.118	10.865	
0.125	10.865	
0.133	10.865	
0.140	10.878	0.013
0.148	10.975	0.110
0.158	11.567	0.702
0.167	12.012	1.147
0.177	12.565	1.700
0.188	12.353	1.488
0.198	12.141	1.276
0.210	12.269	1.404
0.223	12.250	1.385
0.237	12.399	1.534
0.250	11.774	0.909
0.265	12.322	1.457
0.280	12.257	1.392
0.297	12.161	1.296
0.315	12.135	1.270
0.333	12.174	1.309
0.353	12.154	1.289
0.373	12.186	1.321
0.397	12.161	1.296
0.420	12.135	1.270
0.445	12.148	1.283
0.470	12.148	1.283
0.497	12.141	1.276
0.525	12.141	1.276
0.555	12.141	1.276
0.587	12.136	1.271
0.622	12.136	1.271
0.658	12.129	1.264
0.697	12.129	1.264
0.738	12.129	1.264
0.782	12.129	1.264
0.828	12.123	1.258
0.877	12.117	1.252
0.928	12.117	1.252
0.983	12.110	1.245
1.042	12.110	1.245
1.103	12.098	1.233
1.168	12.092	1.227
1.238	12.085	1.220
1.312	12.072	1.207
1.390	12.065	1.200
1.473	12.059	1.194
1.562	12.039	1.174
1.655	12.026	1.161
1.753	12.014	1.149
1.858	11.994	1.129
1.968	11.980	1.115
2.085	11.961	1.096
2.210	11.942	1.077
2.342	11.923	1.058
2.482	11.903	1.038
2.630	11.871	1.006
2.787	11.839	0.974
2.953	11.808	0.943
3.130	11.775	0.910
3.317	11.737	0.872
3.515	11.705	0.840
3.725	11.666	0.801
3.947	11.627	0.762
4.182	11.582	0.717
4.430	11.536	0.671







AA3-GW-005 RISING HEAD SLUG TEST: ESTIMATED ANALYSIS PARAMETERS

Data Set: D:\...\AA3-GW-005_ob_VE-0pt50.aqt
Date: 03/31/05 Time: 19:31:34

PROJECT INFORMATION

Company: Jacobs
Client: USACE-Nashville
Project: 35BH9304
Test Location: Plum Brook
Test Well: AA3-GW-005
Test Date: 01/25/2005

AQUIFER DATA

Saturated Thickness: 15.1 ft
Anisotropy Ratio (Kz/Kr): 0.5

WELL DATA (AA3-GW-005)

Initial Displacement: 1.688 ft
Wellbore Radius: 0.25 ft
Screen Length: 10. ft
Gravel Pack Porosity: 0.3
Casing Radius: 0.0833 ft
Well Skin Radius: 0.25 ft
Total Well Penetration Depth: 15.1 ft

SOLUTION

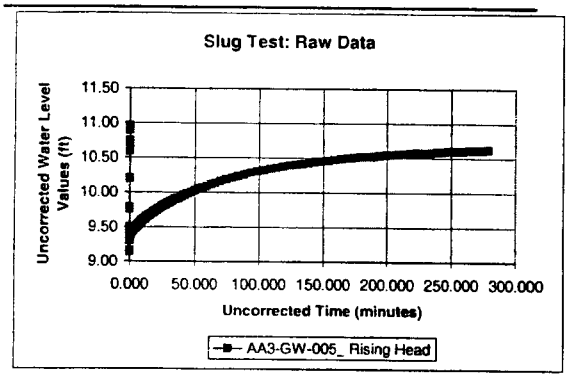
Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

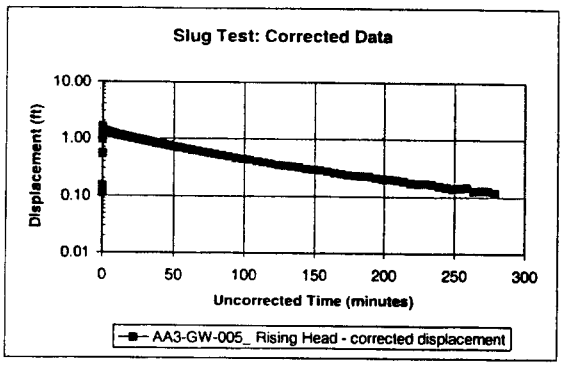
K = 5.275E-06 cm/sec
y0 = 1.092 ft

Plum Brook Ordnance Works **AA3-GW-005_ Rising Head** - corrected displacement

Displ. Correction Formula 0.148

Uncorrected Time (minutes)	Uncorrected displacement (feet)	Corrected displacement **start at 0.148 minutes**
0.000	10.710	
0.005	10.728	
0.010	10.734	
0.015	10.734	
0.020	10.740	
0.025	10.739	
0.030	10.739	
0.035	10.739	
0.040	10.739	
0.045	10.746	
0.050	10.739	
0.055	10.745	
0.060	10.745	
0.065	10.745	
0.070	10.745	
0.075	10.745	
0.080	10.745	
0.085	10.745	
0.090	10.745	
0.095	10.745	
0.100	10.745	
0.107	10.745	
0.112	10.745	
0.118	10.745	
0.125	10.745	
0.133	10.745	
0.140	10.739	
0.148	10.597	0.148
0.158	10.197	0.548
0.167	10.899	
0.177	10.957	
0.188	9.780	0.965
0.198	10.630	0.115
0.210	9.156	1.589
0.223	9.755	0.990
0.237	9.304	1.441
0.250	9.143	1.602
0.265	9.491	1.254
0.280	9.413	1.332
0.297	9.304	1.441
0.315	9.310	1.435
0.333	9.349	1.396
0.353	9.363	1.382
0.373	9.369	1.376
0.397	9.369	1.376
0.420	9.369	1.376
0.445	9.369	1.376
0.470	9.369	1.376
0.497	9.376	1.369
0.525	9.376	1.369
0.555	9.376	1.369
0.587	9.382	1.363
0.622	9.382	1.363
0.658	9.383	1.362
0.697	9.383	1.362
0.738	9.389	1.356
0.782	9.389	1.356
0.828	9.389	1.356
0.877	9.389	1.356
0.928	9.389	1.356
0.983	9.390	1.355
1.042	9.397	1.348
1.103	9.397	1.348
1.168	9.403	1.342
1.238	9.403	1.342
1.312	9.410	1.335
1.390	9.410	1.335
1.473	9.410	1.335
1.562	9.416	1.329
1.655	9.416	1.329
1.753	9.416	1.329
1.858	9.422	1.323
1.968	9.423	1.322
2.085	9.430	1.315
2.210	9.436	1.309
2.342	9.436	1.309
2.482	9.443	1.302
2.630	9.443	1.302
2.787	9.449	1.296
2.953	9.449	1.296
3.130	9.455	1.290
3.317	9.455	1.290
3.515	9.462	1.283
3.725	9.467	1.278
3.947	9.474	1.271
4.182	9.474	1.271
4.430	9.480	1.265





SLUG TEST DATA FORM

SLUG TEST DATA

LOCATION: Acid Area 3

SLUG VOLUME (FT³): 36" x 1.5" diameter

LOCATION I.D.: AA3-BEDGW-002

LOGGER CODE: N/A

LOGDATE: 1-20-05 / 1-21-05 (AFH)

ACCEPTANCE CODE: N/A

TEST METHOD: [✓] SLUG INJECTION OR [✓] SLUG WITHDRAWAL

COMMENTS: used troll 9000 data logger - set troll approximately ~~10'~~ 15' below WL
set top slug at 25.5' while allowing well to stabilize.

ELAPSED TIME (MIN)	DEPTH-TO-WATER (FT)
0.00	
static WL before installing	
troll - 1400	- 30.15'
static WL before installing	
slug - pressure reading ~~10.37~~ 15.37	
WL readings stabilized - this	
represents depth of troll below water	
Started test and ran slug below	
WL.	
reference data file downloaded	
from data logger (troll)	
started slug-in test @ 16:44 1/20/05	
stopped slug-in test @ 17:40 1/20/05	
started slug-out test @ 17:46 1/20/05	
stopped slug-out test @ 10:27 1/21/05	

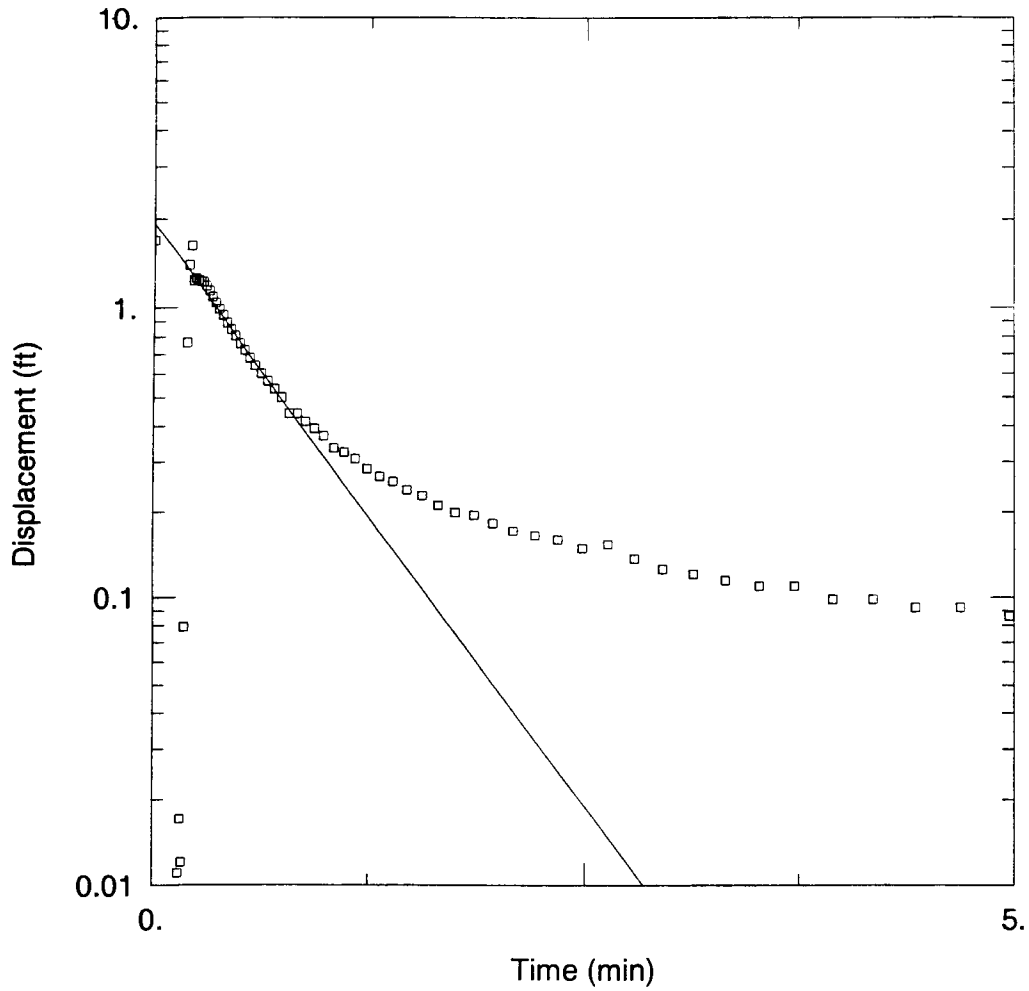
ELAPSED TIME (MIN)	DEPTH-TO-WATER (FT)
reference data file downloaded	
from troll data logger	

ACCEPTANCE CODES: A - ACCEPTABLE R - RECONNAISSANCE U - UNACCEPTABLE N - NOT DETERMINED

Al Hardesty 1/21/05
FORM COMPLETED BY / DATE

TECHNICAL REVIEWER / DATE

Figure 5-8



AA3-BEDGW-002 FALLING HEAD SLUG TEST: ESTIMATED ANALYSIS PARAMETERS

Data Set: D:\...\AA3-BEDGW-002_ib_VE-0pt50.aqt
Date: 03/31/05 Time: 17:21:43

PROJECT INFORMATION

Company: Jacobs
Client: USACE-Nashville
Project: 35BH9304
Test Location: Plum Brook
Test Well: AA3-BEDGW-002
Test Date: 01/20/2005

AQUIFER DATA

Saturated Thickness: 60. ft
Anisotropy Ratio (Kz/Kr): 0.5

WELL DATA (AA3-BEDGW-00)

Initial Displacement: 1.688 ft
Wellbore Radius: 0.1615 ft
Screen Length: 10. ft
Gravel Pack Porosity: 0.3
Casing Radius: 0.0833 ft
Well Skin Radius: 0.1615 ft
Total Well Penetration Depth: 27.3 ft

SOLUTION

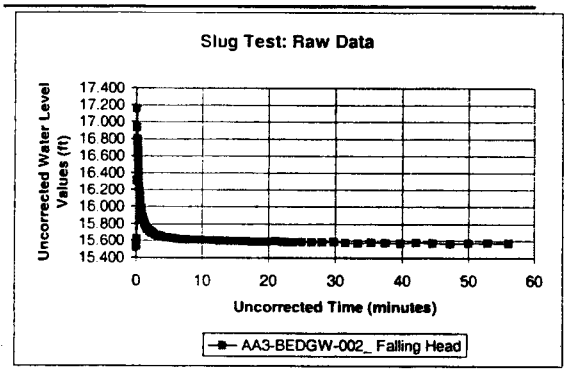
Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

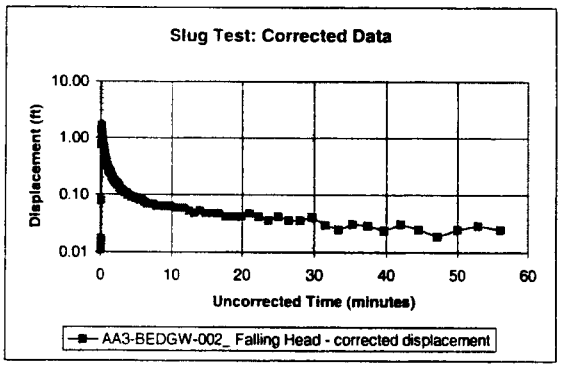
K = 0.001121 cm/sec
y0 = 1.916 ft

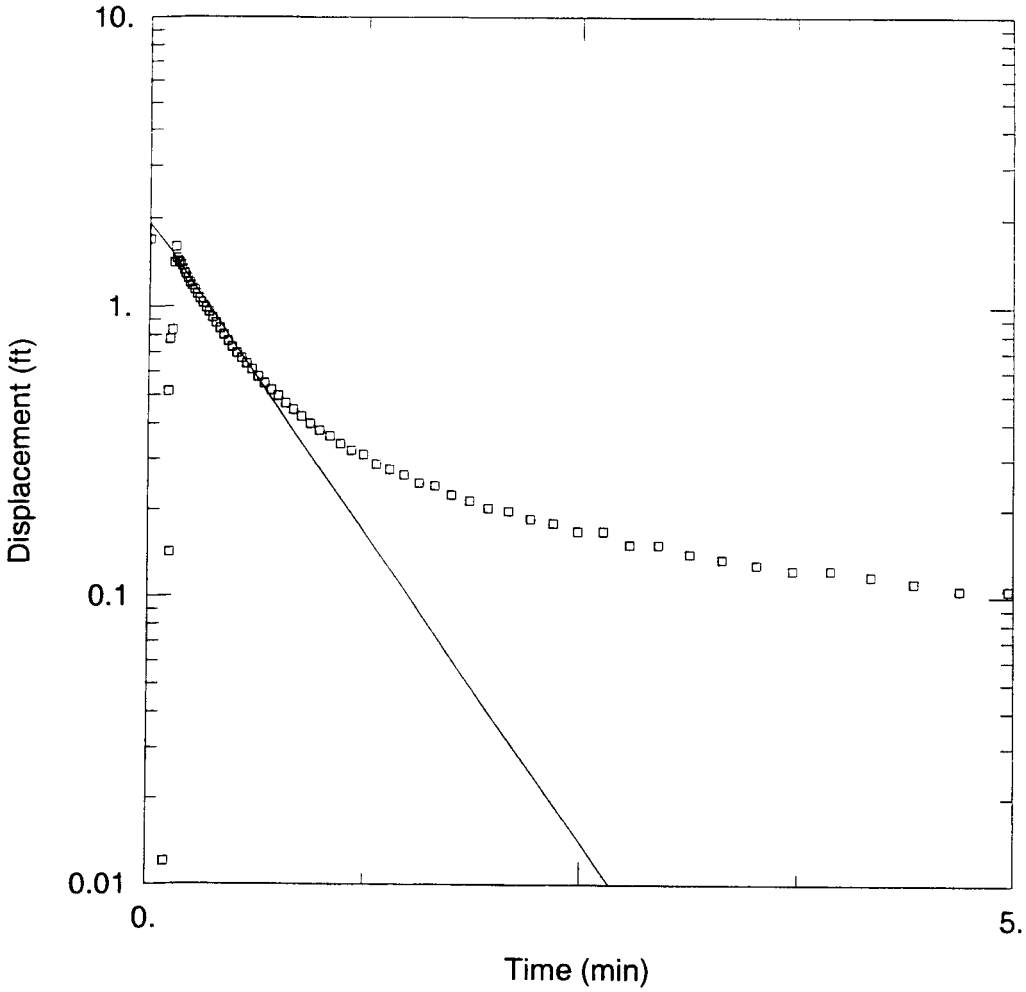
Plum Brook Ordnance Works **AA3-BEDGW-002_ Falling Head** - corrected displacement

Uncorrected Time (minutes)	Uncorrected displacement (feet)	Corrected displacement start at 0.079 minutes
0.000	15.526	
0.005	15.537	
0.010	15.542	
0.015	15.542	
0.020	15.542	
0.025	15.542	
0.030	15.547	
0.035	15.547	
0.040	15.547	
0.045	15.547	
0.050	15.547	
0.055	15.547	
0.060	15.547	
0.065	15.547	
0.070	15.547	
0.075	15.547	
0.080	15.546	
0.085	15.546	
0.090	15.546	
0.095	15.546	
0.100	15.546	
0.107	15.546	
0.112	15.546	
0.118	15.546	
0.125	15.546	
0.133	15.546	
0.140	15.546	
0.148	15.557	0.011
0.158	15.563	0.017
0.167	15.558	0.012
0.177	15.625	0.079
0.188	16.310	0.764
0.198	16.937	1.391
0.210	17.157	1.611
0.223	16.779	1.233
0.237	16.801	1.255
0.250	16.784	1.238
0.265	16.768	1.222
0.280	16.768	1.222
0.297	16.728	1.182
0.315	16.683	1.137
0.333	16.632	1.086
0.353	16.581	1.035
0.373	16.531	0.985
0.397	16.485	0.939
0.420	16.434	0.888
0.445	16.389	0.843
0.470	16.350	0.804
0.497	16.304	0.758
0.525	16.265	0.719
0.555	16.225	0.679
0.587	16.186	0.640
0.622	16.146	0.600
0.658	16.112	0.566
0.697	16.078	0.532
0.738	16.045	0.499
0.782	15.988	0.442
0.828	15.988	0.442
0.877	15.960	0.414
0.928	15.938	0.392
0.983	15.915	0.369
1.042	15.881	0.335
1.103	15.870	0.324
1.168	15.853	0.307
1.238	15.830	0.284
1.312	15.813	0.267
1.390	15.802	0.256
1.473	15.785	0.239
1.562	15.774	0.228
1.655	15.757	0.211
1.753	15.745	0.199
1.858	15.740	0.194
1.968	15.728	0.182
2.085	15.717	0.171
2.210	15.711	0.165
2.342	15.705	0.159
2.482	15.694	0.148
2.630	15.699	0.153
2.787	15.682	0.136
2.953	15.671	0.125
3.130	15.666	0.120
3.317	15.660	0.114
3.515	15.655	0.109
3.725	15.655	0.109
3.947	15.644	0.098
4.182	15.644	0.098
4.430	15.638	0.092

Displ. Correction Formula
0.011







AA3-BEDGW-002 RISING HEAD SLUG TEST: ESTIMATED ANALYSIS PARAMETERS

Data Set: D:\...\AA3-BEDGW-002_ob_VE-0pt50.aqt
Date: 03/31/05 Time: 18:23:49

PROJECT INFORMATION

Company: Jacobs
Client: USACE-Nashville
Project: 35BH9304
Test Location: Plum Brook
Test Well: AA3-BEDGW-002
Test Date: 01/20/2005

AQUIFER DATA

Saturated Thickness: 60. ft
Anisotropy Ratio (Kz/Kr): 0.5

WELL DATA (AA3BEDGW-002)

Initial Displacement: 1.688 ft
Wellbore Radius: 0.1615 ft
Screen Length: 10. ft
Gravel Pack Porosity: 0.3
Casing Radius: 0.0833 ft
Well Skin Radius: 0.1615 ft
Total Well Penetration Depth: 27.3 ft

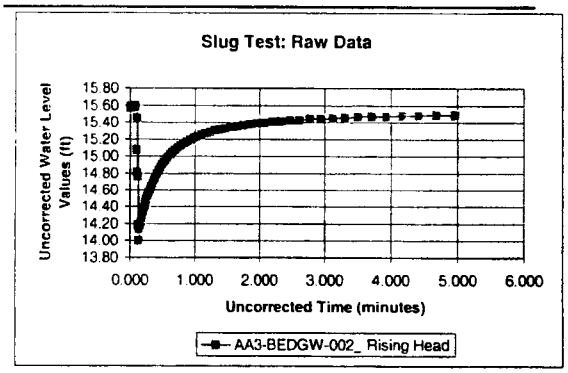
SOLUTION

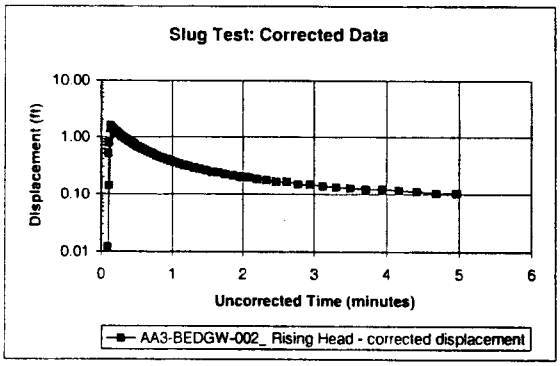
Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.001193 cm/sec
y0 = 1.919 ft

Plum Brook Ordnance Works **AA3-BEDGW-002_ Rising Head** - corrected displacement

Displ. Correction Formula 0.012

Uncorrected Time (minutes)	Uncorrected displacement (feet)	Corrected displacement start at 0.100 minutes
0.000	15.571	
0.005	15.582	
0.010	15.588	
0.015	15.587	
0.020	15.587	
0.025	15.587	
0.030	15.592	
0.035	15.592	
0.040	15.592	
0.045	15.592	
0.050	15.592	
0.055	15.592	
0.060	15.592	
0.065	15.592	
0.070	15.586	
0.075	15.581	
0.080	15.592	
0.085	15.592	
0.090	15.597	
0.095	15.592	
0.100	15.580	0.012
0.107	15.077	0.515
0.112	14.817	0.775
0.118	15.450	0.142
0.125	14.761	0.831
0.133	14.184	1.408
0.140	14.003	1.589
0.148	14.139	1.453
0.158	14.173	1.419
0.167	14.190	1.402
0.177	14.218	1.374
0.188	14.263	1.329
0.198	14.303	1.289
0.210	14.343	1.249
0.223	14.388	1.204
0.237	14.416	1.176
0.250	14.450	1.142
0.265	14.490	1.102
0.280	14.530	1.062
0.297	14.564	1.028
0.315	14.603	0.989
0.333	14.637	0.955
0.353	14.677	0.915
0.373	14.716	0.876
0.397	14.750	0.842
0.420	14.790	0.802
0.445	14.829	0.763
0.470	14.863	0.729
0.497	14.897	0.695
0.525	14.925	0.667
0.555	14.954	0.638
0.587	14.982	0.610
0.622	15.016	0.576
0.658	15.045	0.547
0.697	15.073	0.519
0.738	15.095	0.497
0.782	15.124	0.468
0.828	15.146	0.446
0.877	15.169	0.423
0.928	15.192	0.400
0.983	15.214	0.378
1.042	15.231	0.361
1.103	15.254	0.338
1.168	15.271	0.321
1.238	15.282	0.310
1.312	15.305	0.287
1.390	15.316	0.276
1.473	15.328	0.264
1.562	15.345	0.247
1.655	15.350	0.242
1.753	15.367	0.225
1.858	15.378	0.214
1.968	15.390	0.202
2.085	15.395	0.197
2.210	15.407	0.185
2.342	15.413	0.179
2.482	15.424	0.168
2.630	15.424	0.168
2.787	15.441	0.151
2.953	15.441	0.151
3.130	15.452	0.140
3.317	15.458	0.134
3.515	15.464	0.128
3.725	15.469	0.123
3.947	15.469	0.123
4.182	15.475	0.117
4.430	15.481	0.111





SLUG TEST DATA FORM

SLUG TEST DATA

LOCATION Acid Area 3

SLUG VOLUME (FT^3) 36" x 1.5" diameter

LOCATION I.D. AA3 - BEDGW - 003

LOGGER CODE N/A

LOGDATE 1-22-05 - 1-24-05

ACCEPTANCE CODE N/A

TEST METHOD: [✓] SLUG INJECTION OR [✓] SLUG WITHDRAWAL

COMMENTS: Used Troll 9000 with built in data logger - set troll approximately 10' below WL

ELAPSED TIME (MIN)	DEPTH-TO-WATER (FT)	ELAPSED TIME (MIN)	DEPTH-TO-WATER (FT)
0.00			
static water level prior to			
installing troll + slug - 10.07'			
installed equipment on 1/22/05			
started slug-in test @ 08:52 1/23/05			
stopped slug-in test @ 1430 1/23/05			
started slug-out test @ 1433 1/23/05			
stopped slug-out test @ 0824 1/24/05			
reference data file downloaded			
from troll data logger			

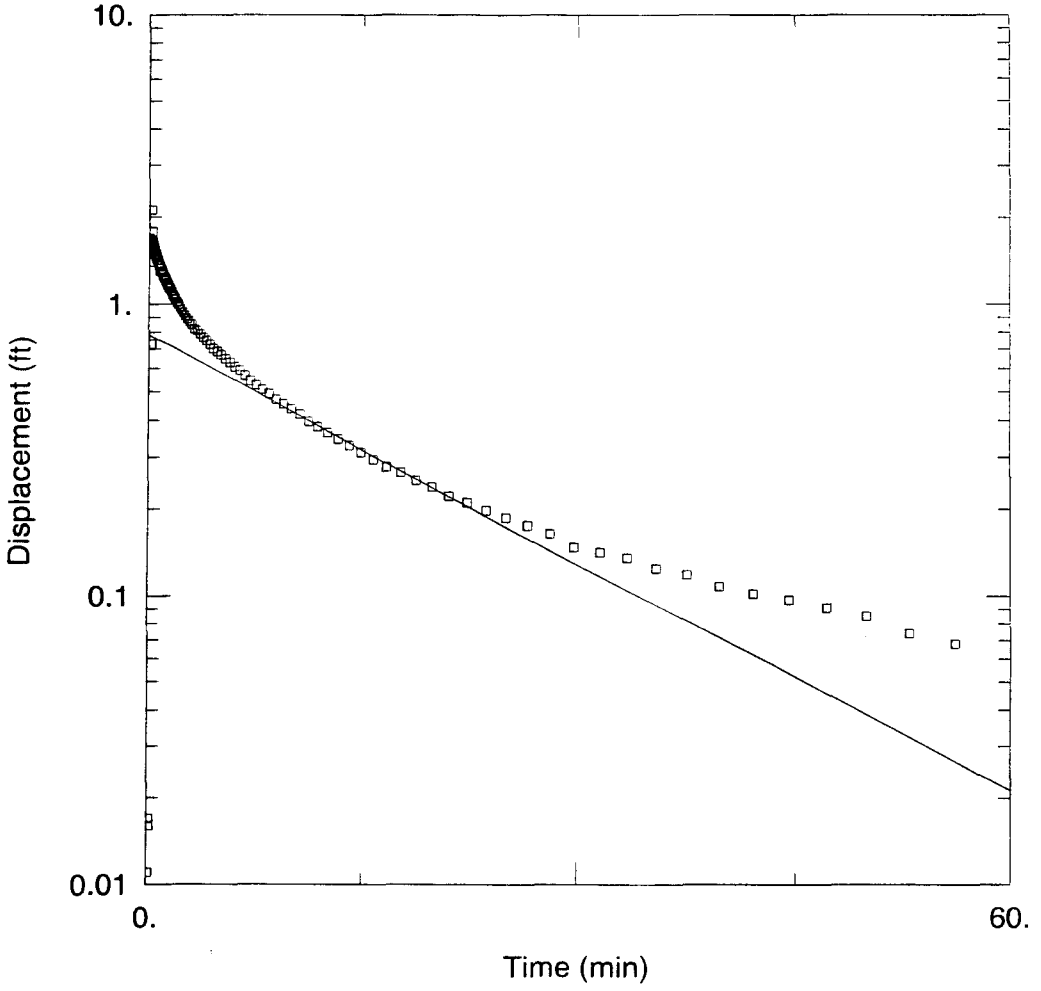
ACCEPTANCE CODES: A - ACCEPTABLE R - RECONNAISSANCE U - UNACCEPTABLE N - NOT DETERMINED

Al Hardesty 1-24-05

FORM COMPLETED BY / DATE

TECHNICAL REVIEWER / DATE

Figure 5-8



AA3-BEDGW-003 FALLING HEAD SLUG TEST: ESTIMATED ANALYSIS PARAMETERS

Data Set: D:\...\AA3-BEDGW-003_ib_VE-0pt50.aqt
Date: 03/31/05 Time: 18:36:47

PROJECT INFORMATION

Company: Jacobs
Client: USACE-Nashville
Project: 35BH9304
Test Location: Plum Brook
Test Well: AA3-BEDGW-003
Test Date: 01/23/2005

AQUIFER DATA

Saturated Thickness: 60. ft
Anisotropy Ratio (Kz/Kr): 0.5

WELL DATA (AA3BEDGW-003)

Initial Displacement: 1.688 ft
Wellbore Radius: 0.1615 ft
Screen Length: 10. ft
Gravel Pack Porosity: 0.3
Casing Radius: 0.0833 ft
Well Skin Radius: 0.1615 ft
Total Well Penetration Depth: 42.9 ft

SOLUTION

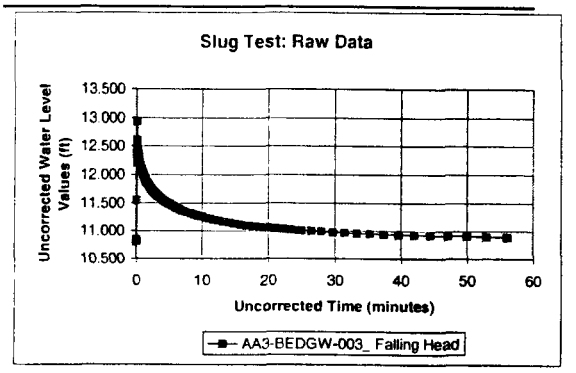
Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

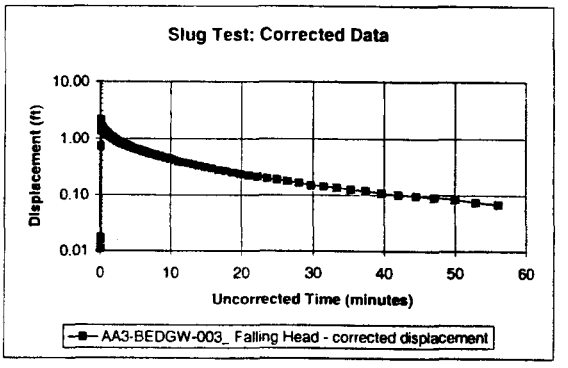
K = 3.917E-05 cm/sec
y0 = 0.7811 ft

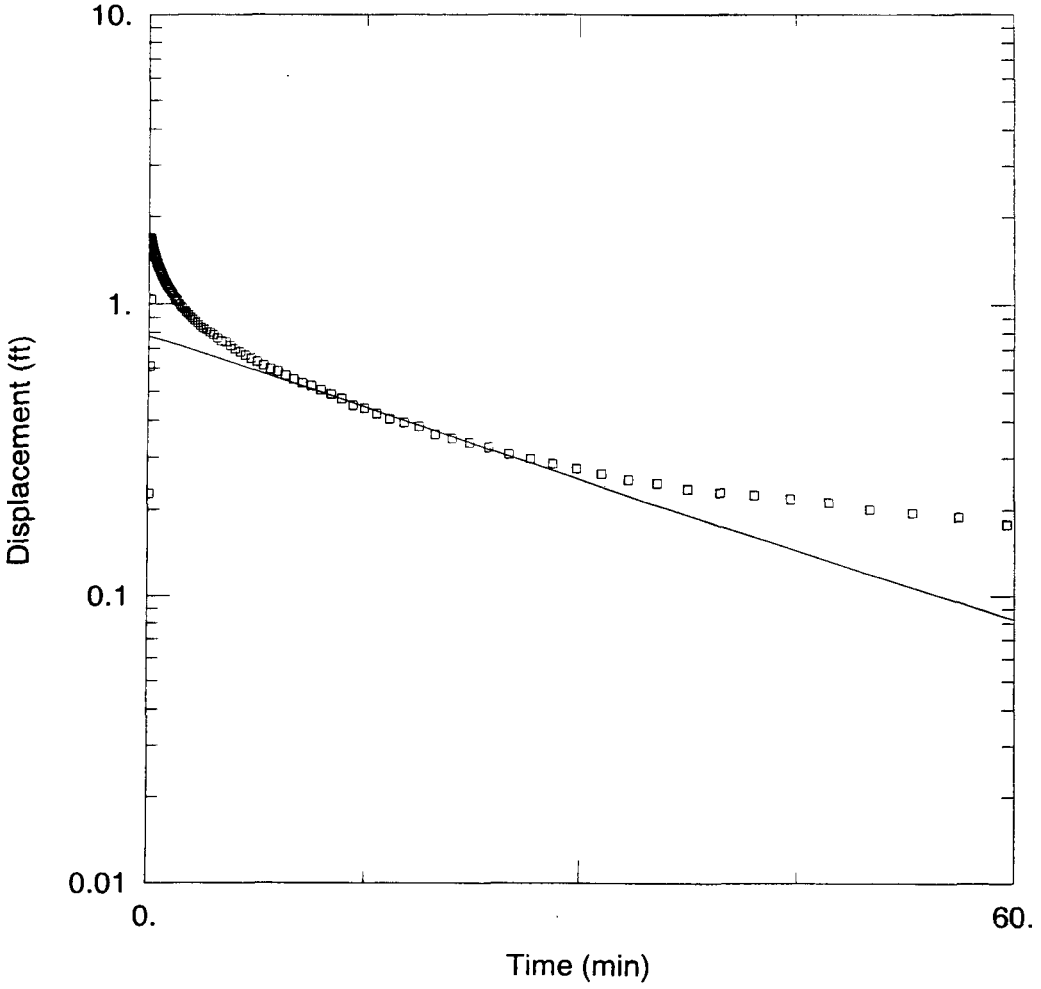
Plum Brook Ordnance Works **AA3-BEDGW-003_ Falling Head** - corrected displacement

Displ Correction Formula 0.000

Uncorrected Time (minutes)	Uncorrected displacement (feet)	Corrected displacement **start at 0.100 minutes**
0.000	10.814	
0.005	10.824	
0.010	10.824	
0.015	10.830	
0.020	10.829	
0.025	10.824	
0.030	10.829	
0.035	10.829	
0.040	10.829	
0.045	10.829	
0.050	10.829	
0.055	10.829	
0.060	10.835	
0.065	10.829	
0.070	10.828	
0.075	10.829	
0.080	10.823	
0.085	10.823	
0.090	10.823	
0.095	10.823	
0.100	10.834	0.011
0.107	10.834	0.011
0.112	10.834	0.011
0.118	10.840	0.017
0.125	10.840	0.017
0.133	10.834	0.011
0.140	10.840	0.017
0.148	10.839	0.016
0.158	11.551	0.728
0.167	12.354	1.531
0.177	12.936	2.113
0.188	12.479	1.656
0.198	12.603	1.780
0.210	12.219	1.396
0.223	12.462	1.639
0.237	12.451	1.628
0.250	12.434	1.611
0.265	12.423	1.600
0.280	12.417	1.594
0.297	12.400	1.577
0.315	12.389	1.566
0.333	12.372	1.549
0.353	12.366	1.543
0.373	12.350	1.527
0.397	12.338	1.515
0.420	12.321	1.498
0.445	12.310	1.487
0.470	12.293	1.470
0.497	12.276	1.453
0.525	12.265	1.442
0.555	12.248	1.425
0.587	12.236	1.413
0.622	12.214	1.391
0.658	12.197	1.374
0.697	12.180	1.357
0.738	12.118	1.295
0.782	12.146	1.323
0.828	12.123	1.300
0.877	12.107	1.284
0.928	12.084	1.261
0.983	12.062	1.239
1.042	12.050	1.227
1.103	12.028	1.205
1.168	12.005	1.182
1.238	11.988	1.165
1.312	11.960	1.137
1.390	11.949	1.126
1.473	11.926	1.103
1.562	11.898	1.075
1.655	11.881	1.058
1.753	11.864	1.041
1.858	11.836	1.013
1.968	11.819	0.996
2.085	11.802	0.979
2.210	11.780	0.957
2.342	11.757	0.934
2.482	11.735	0.912
2.630	11.712	0.889
2.787	11.695	0.872
2.953	11.673	0.850
3.130	11.644	0.821
3.317	11.633	0.810
3.515	11.610	0.787
3.725	11.588	0.765
3.947	11.571	0.748
4.182	11.548	0.725
4.430	11.525	0.702







AA3-BEDGW-003 RISING HEAD SLUG TEST: ESTIMATED ANALYSIS PARAMETERS

Data Set: D:\...\AA3-BEDGW-003_ob_VE-0pt50.aqt
Date: 03/31/05 Time: 18:49:54

PROJECT INFORMATION

Company: Jacobs
Client: USACE-Nashville
Project: 35BH9304
Test Location: Plum Brook
Test Well: AA3-BEDGW-003
Test Date: 01/23/2005

AQUIFER DATA

Saturated Thickness: 60. ft
Anisotropy Ratio (Kz/Kr): 0.5

WELL DATA (AA3BEDGW-003)

Initial Displacement: 1.688 ft
Wellbore Radius: 0.1615 ft
Screen Length: 10. ft
Gravel Pack Porosity: 0.3
Casing Radius: 0.0833 ft
Well Skin Radius: 0.1615 ft
Total Well Penetration Depth: 42.9 ft

SOLUTION

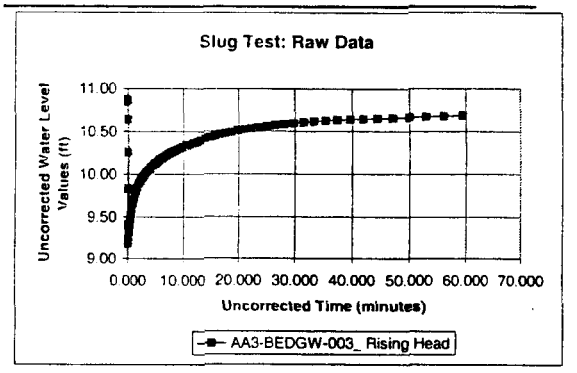
Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

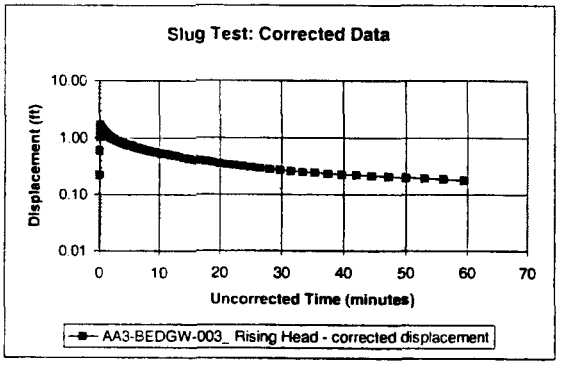
K = 2.434E-05 cm/sec
y0 = 0.7758 ft

Plum Brook Ordnance Works **AA3-BEDGW-003_ Rising Head** - corrected displacement

Displ. Correction Formula 0.006

Uncorrected Time (minutes)	Uncorrected displacement (feet)	Corrected displacement start at 0.107 minutes
0.000	10.849	
0.005	10.860	
0.010	10.860	
0.015	10.865	
0.020	10.865	
0.025	10.865	
0.030	10.865	
0.035	10.865	
0.040	10.865	
0.045	10.864	
0.050	10.870	
0.055	10.864	
0.060	10.864	
0.065	10.870	
0.070	10.864	
0.075	10.870	
0.080	10.864	
0.085	10.859	
0.090	10.864	
0.095	10.870	
0.100	10.870	
0.107	10.858	0.006
0.112	10.638	0.226
0.118	10.254	0.610
0.125	9.830	1.034
0.133	9.406	1.458
0.140	9.180	1.684
0.148	9.191	1.673
0.158	9.203	1.661
0.167	9.203	1.661
0.177	9.219	1.645
0.188	9.226	1.638
0.198	9.237	1.627
0.210	9.254	1.610
0.223	9.259	1.605
0.237	9.265	1.599
0.250	9.276	1.588
0.265	9.288	1.576
0.280	9.310	1.554
0.297	9.322	1.542
0.315	9.333	1.531
0.333	9.345	1.519
0.353	9.362	1.502
0.373	9.373	1.491
0.397	9.384	1.480
0.420	9.401	1.463
0.445	9.412	1.452
0.470	9.429	1.435
0.497	9.441	1.423
0.525	9.458	1.406
0.555	9.475	1.389
0.587	9.486	1.378
0.622	9.503	1.361
0.658	9.520	1.344
0.697	9.537	1.327
0.738	9.554	1.310
0.782	9.571	1.293
0.828	9.588	1.276
0.877	9.605	1.259
0.928	9.622	1.242
0.983	9.645	1.219
1.042	9.661	1.203
1.103	9.678	1.186
1.168	9.695	1.169
1.238	9.712	1.152
1.312	9.729	1.135
1.390	9.747	1.117
1.473	9.769	1.095
1.562	9.781	1.083
1.655	9.803	1.061
1.753	9.826	1.038
1.858	9.837	1.027
1.968	9.848	1.016
2.085	9.871	0.993
2.210	9.888	0.976
2.342	9.900	0.964
2.482	9.922	0.942
2.630	9.934	0.930
2.787	9.951	0.913
2.953	9.967	0.897
3.130	9.984	0.880
3.317	10.001	0.863
3.515	10.018	0.846
3.725	10.035	0.829
3.947	10.047	0.817
4.182	10.064	0.800
4.430	10.080	0.784





Appendix I
Chemical Data Quality Report

CHEMICAL DATA QUALITY REPORT

ROUND 1 GROUNDWATER DATA FOR THE REMEDIAL INVESTIGATION, PART 1, AT ACID AREAS 2 AND 3

FORMER PLUM BROOK ORDNANCE WORKS SANDUSKY, OHIO

Prepared for:

DEPARTMENT OF THE ARMY
NASHVILLE DISTRICT, CORPS OF ENGINEERS
NASHVILLE, TENNESSEE
CONTRACT DACW62-03-D-0004-0004

Prepared by:

JACOBS ENGINEERING GROUP, INC.
125 BROADWAY
OAK RIDGE, TN 37830

April 2005

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ATTACHMENT 1 SAMPLE INFORMATION TABLES

ATTACHMENT 2 TEST RESULT TABLES WITH REVIEW QUALIFIERS APPLIED

Abbreviations and Acronyms

C	Celsius
CDQR	Chemical Data Quality Report
CLP	USEPA Contract Laboratory Program
COC	Chain of Custody
CQAR	Chemical Quality Assurance Report
CRQL	Contract Required Quantitation Limit
%D	Percent Difference
DQA	Data Quality Assessment
DQO	Data Quality Objectives
GC	Gas Chromatograph or Gas Chromatography
HTRW-CX	Hazardous, Toxic, and Radioactive Waste - Center of Expertise
IS	Internal Standard
Jacobs	Jacobs Engineering Group Inc
LCS	Laboratory Control Sample
LDP	Laboratory Data Package
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ND	Not Detected
PCB	Polychlorinated Biphenyl Compounds
QA	Quality Assurance
QA/QC	Quality Assurance/Quality Control
QC	Quality Control
QAPP	Quality Assurance Project Plan
%R	Percent Recovery
RL	Reporting Limit
RPD	Relative Percent Difference
SAP	Sampling and Analysis Plan
SD	Serial Dilution QC sample
SDG	Sample Delivery Group
SUR	Surrogate Spike
SVOC	Semi-volatile Organic Compound
SW-846	Solid Waste Analytical Protocols
TAL	Target Analyte List
TB	Trip Blank
TCL	Target Compound List
TOC	Total Organic Carbon
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
VOC	Volatile Organic Compounds

1.0 INTRODUCTION

This Chemical Data Quality Report (CDQR) presents an evaluation of the quality and usability of the analytical data generated in support of the round 1 groundwater for the remedial investigation at Acid Areas 2 and 3 at the former Plum Brook Ordnance Works (PBOW). Jacobs Engineering (Jacobs) performed this remedial investigation for the United States Army Corps of Engineers (USACE) Nashville District under contract number DACW62-03-D-0004, task order 0004.

Both primary and quality assurance (QA) environmental samples were collected by Jacobs and were submitted to approved laboratories for chemical analyses. Jacobs provided data quality evaluation services for the primary data, and Stratum Engineering, Inc. was subcontracted to evaluate the QA data and prepare the subsequent Chemical Quality Assurance report (CQAR). This CDQR covers Jacobs' evaluation of the primary data.

This evaluation meets and completes the requirement of Step 2 "data verification" of the project data quality assessment (DQA) process. Completion of this step completes Jacob's portion of the requirement in the DQA process. A description of the DQA process is included in Section 8.2.2 of the approved Quality Assurance Project Plan (QAPP). As specified in the QAPP, the findings of this evaluation were discussed in terms of data precision, accuracy, representativeness, sensitivity and completeness.

1.1 REPORT ORGANIZATION

The CDQR has been organized into four sections and two attachments:

- Section 1 - Report organization and data quality program including: analytical laboratory used, analytical samples included in the evaluation, analytical protocols/methods employed, data evaluation procedures followed, and summary of data reporting formats.
- Section 2 - Definitions of qualifiers that may be assigned to data based on this evaluation.
- Section 3 - Statement of the project overall data quality and summary of qualifiers applied to the data as a result of this evaluation.
- Section 4 - Data quality narratives.
- Attachment 1 - Sample information tables including field and laboratory ID cross-reference.
- Attachment 2 - Test result tables with review qualifiers applied.

1.2 DATA QUALITY ASSURANCE PROGRAM

In order to verify compliance with project objectives, it was required that certain measurements of chemical constituents in environmental samples be made that met definitive data quality standards. This CDQR is applicable to those data.

Definitive data standards are specified by the USEPA in *"Data Quality Objectives Process for Superfund,"* EPA540-R-93-071, USEPA Office of Emergency and Remedial Response, September 1993. Definitive data are defined as follows:

> "Definitive data are generated using rigorous analytical methods, such as approved EPA reference methods. Data are analyte-specific, with confirmation of analyte identity and concentration. Methods produce tangible raw data (e.g., chromatograms, spectra, digital values) in the form of paper printouts or computer-generated electronic files. Data may

be generated at the site or at an off-site location, as long as the QA/QC requirements are satisfied. For the data to be definitive, either analytical or total measurement error must be determined."

Specific project data quality objectives (DQOs) and procedures to achieve the DQOs are documented in the approved project Sampling and Analysis Plan Addendum (SAP). Key elements of the quality program relating to this evaluation include:

- Use of approved, USACE-validated laboratories.
- Use of a sampling program designed to meet the project objectives.
- Use of appropriate analytical methods and measurement parameters.
- Evaluation of reported QA/QC to verify compliance with DQOs.
- Use of appropriate analytical data reporting formats.

These elements are discussed in the following paragraphs.

1.2.1 Project Analytical Laboratories

The analytical laboratories employed on this project were evaluated by the USACE Hazardous, Toxic and Radioactive Waste Center of Expertise (HTRW-CX) and hold a current letters of validation from HTRW-CX to perform sample analyses in support of the USACE HTRW Program. This validation confirms their ability to produce reliable and defensible data. The primary analytical laboratory used was:

Ecology and Environment, Inc. (E&E)
Analytical Services Center
Contact: Alan Laffin
4493 Walden Avenue
Lancaster, NY 14086
Phone: 716-685-8080
Fax: 716-685-0852

1.2.2 Sampling Program Design/Project Samples

The sampling program was designed to collect samples representative of site conditions at the time of sampling and to generate data of sufficient quality and quantity to make the intended decisions. Project analytical samples were collected using standardized, USACE approved procedures documented in the sampling and analysis plan (SAP). The SAP was approved by the USACE prior to collection of the associated project samples and included the basis for selecting the sampling locations, sample collection procedures, frequency and type of samples collected, and the analytical parameters for each sample. There were no known deviations to the sample collection procedures presented in the SAP.

Definitive data measurements were required for the samples collected in support of this investigation. The investigation utilized the EPA Target Analyte List/Target Compound List (TAL/TCL) of analytes as the constituents of concern. The rationale for required analytical measurements and resulting data use is specified in the project QAPP.

Project samples included in this evaluation consist of primary round one groundwater samples and associated field QC samples collected in between January 21 and February 1 of 2005. The laboratories reported the round one groundwater samples and field QC analyses in several sample

delivery groups (SDGs). The SDGs included in this evaluation are:

1. E&E SDG # 0501263
2. E&E SDG # 0501276
3. E&E SDG # 0501293
4. E&E SDG # 0501297
5. E&E SDG # 0501303
6. E&E SDG # 0502001
7. E&E SDG # 0502002
8. E&E SDG # 0502004

A listing of specific project samples contained in each SDG, along with a cross reference of sample field ID numbers to laboratory ID numbers, is included in the Sample Information Table at the beginning of each SDG. The respective Sample Information tables have been compiled into a single table listing the samples evaluated from each SDG, and are included with this report as Attachment 1.

1.2.3 Project Analytical Methods and Measurement Parameters

In order to obtain definitive data and promote data comparability, the laboratory was required to perform testing within the guidelines of standardized, USEPA and USACE approved methods and procedures included in the following protocols:

- *"Test Methods for Evaluating Solid Waste,"* SW-846, 3rd Edition, Update III, U.S. EPA, November 1986, (SW-846).
- "*Shell for Analytical Chemistry Requirements*," Appendix I, from EM 200-1-3 "*Requirements for the Preparation of Sampling and Analysis Plans*" USACE HTRW-CX, February 2001.

The project included collection of definitive data for the organics and metals analyses, and screening level data for the water quality parameters for the round one groundwater samples. Specific analytical methods used in the analysis of each project sample were included in the laboratory case narratives included in each SDG and are summarized below for each primary sample type.

Definitive Data Methods for Groundwater Samples

- TCL Volatile organic compounds (VOCs) by SW-846 50305/8260B
- TCL Semi-volatile organic compounds (SVOCs) by SW-846 3520C/8270C
- Polychlorinated biphenyls (PCBs) by SW-846 3520C/8082
- Nitroaromatics by SW-846 8330
- TAL Total and Dissolved Metals by SW-846 3005AB/6010B/7470A
- Total Organic Carbon (TOC) by SW-846 9060
- Cyanide by SW-846 9012A

Water Quality Parameters

- Turbidity by EPA 180.1
- Alkalinity by EPA 310.1
- Hardness by EPA 130.2
- Total Dissolved Solids by EPA 160.1

- Total Suspended Solids by EPA 160.2
- Anions (Nitrate, Chloride, and Sulfate) by EPA 300

1.2.4 Data Evaluation Procedure

The quality of this data has been evaluated following the "data verification" procedure included in the QAPP as Step 2 of the five-step USACE DQA process. The procedure was derived from the USACE "*Shell for Analytical Chemistry Requirements*" and considers the project DQOs, QC requirements of the analytical methods, and informed professional judgment of the evaluator. Qualified Jacobs' personnel, experienced in the evaluation of analytical data quality, performed data evaluation.

A brief description of the procedure followed in this evaluation is presented below.

Data Verification Procedure

At a minimum, the following data quality issues were addressed in this evaluation with respect to 100% of the sample data.

- Review of chain-of-custody and sample receipt forms to evaluate sample receipt data, damaged sample containers, etc.
- Review of laboratory testing methods, detection limits, holding times, data qualifiers, etc.
- Review of field QC blank data to detect contamination from outside sources.
- Review of field QC duplicates to evaluate data reproducibility.
- Review of laboratory QC including laboratory blanks, spike recoveries, and duplicates.
- Verification of calibrations as summarized by the laboratory on the CLP-like reporting forms and within their case narratives.
- Qualification of unusable data as rejected and attachment of appropriate qualifiers to usable data.
- Presentation of data evaluation findings in terms of the data quality parameters precision, accuracy, representativeness, sensitivity and completeness.

Data quality parameters were evaluated as follows:

- Precision - by evaluation of Matrix Spike/Matrix Spike Duplicate (MS/MSD), laboratory duplicate, and field duplicate relative percent differences (RPD).
- Accuracy - by evaluation of surrogate (SUR), Laboratory Control Sample (LCS), and MS/MSD percent recoveries (%R).
- Representativeness - by evaluation of sample receipt records, technical holding times, and blank sample results (field and laboratory).
- Sensitivity - by evaluation of laboratory detection limits, reporting units, and the overall performance of the chosen methods.
- Completeness - by comparing the number of valid measurements obtained to the number of measurements planned for these samples.

1.2.5 Data Reporting Formats

1.2.5.1 Laboratory Data Packages and Analytical Results

The laboratory reported field sample and supporting QC data in a format consistent with the USEPA Contract Laboratory Program (CLP) data reporting requirements. This "CLP-like" format included most applicable report summary forms and was sufficient to complete Step 2 of the DQA process. In a few cases the raw quantitation reports had to be reviewed to evaluate dilutions, manual integrations, and to check for proper quantitation.

The supplied reports did include chromatograms and other raw data that are necessary to complete a third party validation of the DQA process for all parameters of interest. However, third party validation is not currently planned for 2BG. Jacobs has supplied copies of the complete QA data packages and the associated primary sample data to Stratum Engineering to complete their assessment of the QA data and the Chemical Quality Assurance Report (CQAR).

The complete analytical data packages received from the project laboratories and evaluated in this review are available from Jacobs upon request through USACE Nashville.

1.2.5.2 Data Quality Non-Conformances

Data quality non-conformances identified as a result of this review are presented in Section 4.0, Data Quality Narratives. The data quality narratives are detailed explanations of the findings of this evaluation in terms of precision, accuracy, representativeness, sensitivity and completeness. They are intended to present a compilation of laboratory QC results found outside project acceptance criteria and provide an assessment of the potential impact those results had on the analytical data. Typically, the bulk of the project analytical protocol requirements are fulfilled and, therefore, are not summarized in the narratives.

Tabular presentations of the analytical sample results were included in each SDG. The respective laboratory test results tables were compiled into Data Summary Tables from the Electronic Data Deliverable (EDD) and were included with this report as Attachment 2. In addition, the validation qualifiers were applied to sample data to indicate data use limitations based on the findings of this evaluation.

2.0 DATA QUALIFIER DEFINITIONS

The following definitions provide explanations of the data qualifiers that may be assigned to results based on this evaluation. The data qualifier definitions are consistent with those used within the USEPA NFG referenced in Section 1.2.3 of this report.

U- The analyte was analyzed for but not detected (ND). The value preceding the U is the Contract Required Quantitation Limit (CRQL).

J- The identification of the analyte is acceptable, but the quality assurance criteria indicate that the quantitative values may be outside the normal expected range of precision (i.e. the quantitative value is considered estimated).

UJ- This flag is a combination of the U and J qualifiers. This indicates that the analyte is not present and the reported value is considered to be an estimated CRQL.

R- Data are considered to be rejected and shall not be used. This flag denotes the failure of quality control criteria such that it cannot be determined if the analyte is present or absent from the sample.

B- The B flag is to be used for both organic and inorganic analyses when the analyte is found in the associated blank as well as the in the sample. The result is considered ND, and the reported value is considered to be an estimated CRQL.

N- There is presumptive evidence that the analyte is present, but it has not been confirmed. The analyte is tentatively identified. There is an indication that the reported analyte is present, however, all quality control requirements necessary for confirmation were not met.

3.0 DATA EVALUATION SUMMARY

3.1 OVERALL ASSESSMENT OF PROJECT DATA QUALITY

In general, QA/QC results associated with this data indicated that the data met "definitive data" standards and were of known quality. QC data demonstrated that the QA mechanisms were effective in ensuring measurement data reliability within expected limits of sampling and analytical error and were considered, as qualified, representative of actual site conditions at the time sampled.

Data reported are acceptable for the uses as intended with the required qualifications and limitations. The data users are urged to review the Data Quality Narratives and associated data qualifications before utilizing this data for decision-making.

Summary Of Required Data Qualifications

This section provides a summary of qualifiers applied to the data as a result of this evaluation. Attachment 2 includes tabular presentations of the analytical sample results with data qualifiers applied based on the findings of this evaluation. The data qualifier definitions applied during this review are presented in Section 2.0. Section 4.0, Data Quality Narratives, contains discussion of the evaluation findings along with an assessment of the impact on project data. Data qualified as estimated due to detection at a level below the laboratory quantitation limit but above the method detection limit were not included in this summary since they were not qualified due to QC non-conformance.

SDG E&E 0501263

1. For the SVOC (method 8270C) analysis the Initial Calibration Verification (ICV) had marginally low biased recoveries for benzoic acid and pentachlorophenol. The associated sample did not contain detects for either compound, and was qualified as estimated undetected "UJ" for the compounds due to marginal ICV outliers.

2. For the SVOC (method 8270C) analysis the LCS/LCSD had low recoveries for 2-4-dimethylphenol, hexachlorocyclopentadiene, and benzoic acid. The associated sample did not contain detects for the compounds and was qualified as estimated undetected "UJ" for the 2-4-dimethylphenol and the hexachlorocyclopentadiene outliers. The benzoic acid recovery was very low biased (10% and 8%) and the compound was rejected "R" to indicate the potential low bias.

3. For the nitroaromatic (method 8330) analysis the LCS had a marginally low recovery of tetryl. Tetryl was not detected in the associated sample and was qualified as estimated undetected "UJ" to indicate the potential low bias.

4. For the nitroaromatic (method 8330) analysis the ICV had a marginally low recovery of 2-ammino-4,6-dinitrotoluene. 2-ammino-4,6-dinitrotoluene was not detected in the associated sample and was qualified as estimated undetected "UJ" to indicate the potential low bias.

5. For the total and dissolved metals (method 6010B/7471A) analysis the MS/MSD associated with the batch failed the recovery criteria with a low bias for selenium. The non-detect result for selenium in the associated sample was qualified as estimated undetected ("UJ") due to the exceedance of the MS/MSD accuracy criteria.

6. The nitrate analysis (EPA 300) and turbidity analysis for this SDG were performed marginally outside the 48 hour holding time. The non-detect result for turbidity was qualified as "UJ", and the trace level detect for Nitrate was qualified as "J" for the affected sample in the SDG.

7. The Cyanide (method 9012A) LCS and MS performed on an associated project sample recovered marginally low biased and the MS/MSD had a high RPD. The non-detect cyanide result in the associated sample in this SDG was qualified as estimated undetected "UJ".

SDG E&E 0501276

1. For the SVOC (method 8270C) analysis the Initial Calibration Verification (ICV) had marginally low biased recoveries for benzoic acid and pentachlorophenol. The three associated samples in this SDG did not contain detects for either compound and were qualified as estimated undetected "UJ" for the compounds due to marginal ICV outliers.

2. For the SVOC (method 8270C) analysis the LCS/LCSD had low recoveries for 2-4-dimethylphenol, hexachlorocyclopentadiene, and benzoic acid. The three associated samples did not contain detects for the compounds and were qualified as estimated undetected "UJ" for the 2-4-dimethylphenol and the hexachlorocyclopentadiene outliers. The benzoic acid recovery was very low biased (10% and 8%) and the compound was rejected "R" in all three samples in this SDG to indicate the potential low bias.

3. For the nitroaromatic (method 8330) analysis sample PBOW-05-GW-PB-BEDMW19-01A had a marginally low biased surrogate recovery. All nitroaromatic compounds were nondetects in the sample and qualified as estimated undetected "UJ" to indicate the potential low bias.

4. For the nitroaromatic (method 8330) analysis the LCS had a marginally low recovery of tetryl. Tetryl was not detected in the three associated samples and was qualified as estimated undetected "UJ" to indicate the potential low bias.

5. For the nitroaromatic (method 8330) analysis the ICV had a marginally low recovery of 2-ammino-4,6-dinitrotoluene. 2-ammino-4,6-dinitrotoluene was not detected in the three associated samples and was qualified as estimated undetected "UJ" to indicate the potential low bias.

6. For the total and dissolved metals (method 6010B/7471A) analysis the MS/MSD associated with the batch failed the recovery criteria with a low bias for selenium. The non-detect result for selenium in the three associated samples in this SDG were qualified as estimated undetected ("UJ") due to the exceedance of the MS/MSD accuracy criteria.

7. For the total metals (method 6010B/7471A) analysis for sample PBOW-05-GW-AA2-MKMW09-01A, the trace level detect of zinc was qualified as "B" due to contamination in the ICB.

8. For the total metals (method 6010B/7471A) analysis for samples PBOW-05-GW-AA3-BEDGW001-01A and PBOW-05-GW-PB-BEDMW19-01A, the trace level detects of chromium were qualified as "B" due to contamination in the ICB.

9. For the dissolved metals (method 6010B/7471A) analysis for samples PBOW-05-GW-AA2-MKMW09-01A and PBOW-05-GW-PB-BEDMW19-01A, the trace level detects of chromium

were qualified as "B" due to contamination in the ICB.

10. For the dissolved metals (method 6010B/7471A) analysis for sample PBOW-05-GW-AA2-MKMW09-01A, the trace level detects of zinc was qualified as "B" due to contamination in the ICB.

11. For sample PBOW-05-GW-PB-BEDMW19-01A the lab duplicate and MS for the chloride analysis (EPA 300) had recovery and precision outliers. The chloride detects in all three associated samples were qualified as estimated "J" to indicate the inaccurate and imprecise measurement.

12. For sample PBOW-05-GW-PB-BEDMW19-01A the lab duplicate for the sulfate analysis (EPA 300) had a precision outlier of the RPD criteria. The sulfate result was qualified as estimated "J" to indicate the precision outlier.

13. The Cyanide (method 9012A) LCS and MS performed on an associated project sample recovered marginally low biased and the MS/MSD had a high RPD. The non-detect cyanide results in all three samples were qualified as estimated undetected "UJ".

SDG E&E 0501293

1. The positive result for chloroform in sample PBOW-05-GW-AA3-BEDGW002-01A (VOC 8260B analysis) was qualified as "B" due to trip blank contamination.

2. For the VOC (method 8260B) analysis the LCS had marginally low recoveries for 1,2,3-trichlorobenzene. The five associated samples did not contain detects for the compound and were qualified as estimated undetected "UJ" for 1,2,3-trichlorobenzene.

3. For the VOC (method 8260B) analysis the MS/MSD had no recovery for acetone and methyl acetate. The associated LCS was acceptable for the compounds. The five associated samples did not contain detects for the compounds and were qualified as estimated undetected "UJ" for acetone and methyl acetate.

4. For the SVOC (method 8270C) analysis the Initial Calibration Verification (ICV) had marginally low biased recoveries for benzoic acid and pentachlorophenol. The four associated samples in this SDG did not contain detects for either compound and were qualified as estimated undetected "UJ" for the compounds due to marginal ICV outliers.

5. For the SVOC (method 8270C) analysis the LCS had low recoveries for 2-4-dimethylphenol, hexachlorocyclopentadiene, 4-chloroaniline, and benzoic acid. The four associated samples did not contain detects for the compounds and were qualified as estimated undetected "UJ" for the 2-4-dimethylphenol, 4-chloroaniline, and the hexachlorocyclopentadiene outliers. The benzoic acid recovery was very low biased (10% and 8%) and the compound was rejected "R" in all four samples in this SDG to indicate the potential low bias.

6. For the SVOC (method 8270C) analysis the MS/MSD had no recovery for hexachlorocyclopentadiene. The four associated samples did not contain detects for the compound and were already qualified as estimated undetected "UJ" due to the LCS outlier. No further action deemed necessary.

7. For the nitroaromatic (method 8330) analysis the MS/MSD had no recovery for tetryl. The associated LCS was acceptable. The nondetects for tetryl in all four associated samples in

this SDG were qualified as estimated undetected "UJ" to indicate the potential low bias.

8. For the nitroaromatic (method 8330) analysis the ICV had a marginally low recovery of 2-ammino-4,6-dinitrotoluene. 2-ammino-4,6-dinitrotoluene was not detected in the four associated samples and was qualified as estimated undetected "UJ" to indicate the potential low bias.

9. For the total and dissolved metals (method 6010B/7471A) analysis the MS/MSD associated with the batch failed the recovery criteria with a low bias for selenium. The non-detect results for selenium in the four associated samples in this SDG were qualified as estimated undetected ("UJ") due to the exceedance of the MS/MSD accuracy criteria.

10. For the total and dissolved metals (method 6010B/7471A) analysis trace level detects of chromium in all four samples were qualified as "B" due to contamination in the ICB.

11. For the total metals (method 6010B/7471A) analysis for samples PBOW-05-GW-AA3-GW003-01A, PBOW-05-GW-AA3-GW003-01D, and PBOW-05-GW-AA2-GW002-01A, the trace level detects of iron and nickel were qualified as "B" due to contamination in the CCB.

12. For the dissolved metals (method 6010B/7471A) analysis for samples PBOW-05-GW-AA2-GW002-01A, the trace level detects of cobalt and nickel were qualified as "B" due to contamination in the ICB.

13. For the dissolved metals (method 6010B/7471A) analysis for sample PBOW-05-GW-AA2-MKMW09-01A, the trace level detects of zinc was qualified as "B" due to contamination in the ICB.

14. The method blank for the nitrate analysis associated with all four samples in this batch contained nitrate. All four samples results for nitrate were detects and were qualified as "B" because of the method blank contamination.

15. The Cyanide (method 9012A) LCS and MS performed on an associated project sample recovered marginally low biased and the MS/MSD had a high RPD. The non-detect cyanide results in all four samples were qualified as estimated undetected "UJ".

SDG E&E 0501297

1. The positive result for acetone in sample PBOW-05-GW-AA3-GW005-01A (VOC 8260B analysis) was qualified as "B" due to trip blank contamination.

2. For the VOC (method 8260B) analysis the LCS had marginally low recoveries for 1,2,3-trichlorobenzene. The three associated samples in this SDG did not contain detects for the compound and were qualified as estimated undetected "UJ" for 1,2,3-trichlorobenzene.

3. For the SVOC (method 8270C) analysis the Initial Calibration Verification (ICV) had marginally low biased recoveries for benzoic acid and pentachlorophenol. The two associated samples in this SDG did not contain detects for either compound and were qualified as estimated undetected "UJ" for the compounds due to marginal ICV outliers.

4. For the SVOC (method 8270C) analysis the LCS had low recoveries for 2-4-dimethylphenol, hexachlorocyclopentadiene, 4-chloroaniline, and benzoic acid. The two associated samples

did not contain detects for the compounds and were qualified as estimated undetected "UJ" for the 2-4-dimethylphenol, 4-chloroaniline, and the hexachlorocyclopentadiene outliers. The benzoic acid recovery was very low biased (10%) and the compound was rejected "R" in all four samples in this SDG to indicate the potential low bias.

5. For the nitroaromatic (method 8330) analysis the ICV had a marginally low recovery of 2-ammino-4,6-dinitrotoluene. 2-ammino-4,6-dinitrotoluene was not detected in the two associated samples and was qualified as estimated undetected "UJ" to indicate the potential low bias.

6. For the total and dissolved metals (method 6010B/7471A) analysis the MS/MSD associated with the batch failed the recovery criteria with a low bias for selenium. The non-detect results for selenium in the two associated samples in this SDG were qualified as estimated undetected ("UJ") due to the exceedance of the MS/MSD accuracy criteria.

7. For the total and dissolved metals (method 6010B/7471A) analysis trace level detects of chromium in both samples were qualified as "B" due to contamination in the ICB.

8. For the total metals (method 6010B/7471A) analysis for sample PBOW-05-GW-AA3-GW005-01A the trace level detect of nickel was qualified as "B" due to contamination in the CCBs.

9. For the dissolved metals (method 6010B/7471A) analysis for sample PBOW-05-GW-AA3-GW005-01A the trace level detect of potassium was qualified as "B" due to contamination in the CCB.

10. For the dissolved metals (method 6010B/7471A) analysis trace level detects of cobalt and nickel in both samples were qualified as "B" due to contamination in the ICB.

11. The anions high CCV had marginally high biased recoveries for chloride and sulfate. The detects of chloride and sulfate in both associated samples in this SDG were qualified as estimated "J".

12. The trace level nitrate detects in both samples in this SDG were qualified as "B" due to blank contamination in the associated CCB.

13. The Cyanide (method 9012A) MS performed on an associated project sample recovered marginally low biased and the MS/MSD had a high RPD. The non-detect cyanide results in both samples in this SDG were qualified as estimated undetected "UJ".

SDG E&E 0501303

1. For the SVOC (method 8270C) analysis the Initial Calibration Verification (ICV) had marginally low biased recoveries for benzoic acid and pentachlorophenol. The two associated samples in this SDG did not contain detects for either compound and were qualified as estimated undetected "UJ" for the compounds due to marginal ICV outliers.

2. For the SVOC (method 8270C) analysis the LCS had low recoveries for 2-4-dimethylphenol, hexachlorocyclopentadiene, 4-chloroaniline, and benzoic acid. The two associated samples did not contain detects for the compounds and were qualified as estimated undetected "UJ" for the 2-4-dimethylphenol, 4-chloroaniline, and the hexachlorocyclopentadiene outliers. The benzoic acid recovery was very low biased (10%) and the compound was rejected "R" in all

four samples in this SDG to indicate the potential low bias.

3. For the nitroaromatic (method 8330) analysis the ICV had a marginally low recovery of 2-ammino-4,6-dinitrotoluene. 2-ammino-4,6-dinitrotoluene was not detected in the two associated samples and was qualified as estimated undetected "UJ" to indicate the potential low bias.

4. For the total and dissolved metals (method 6010B/7471A) analysis the MS/MSD associated with the batch failed the recovery criteria with a low bias for selenium. The non-detect results for selenium in the two associated samples in this SDG were qualified as estimated undetected ("UJ") due to the exceedance of the MS/MSD accuracy criteria.

5. The Cyanide (method 9012A) MS performed on an associated project sample recovered marginally low biased and the MS/MSD had a high RPD. The non-detect cyanide results in both samples in this SDG were qualified as estimated undetected "UJ".

SDG E&E 0502001

1. For the SVOC (method 8270C) analysis the LCS had low recoveries for 2-4-dimethylphenol, hexachlorocyclopentadiene, and benzoic acid. The three associated samples did not contain detects for the compounds and were qualified as estimated undetected "UJ" for the 2-4-dimethylphenol, and the hexachlorocyclopentadiene outliers. The benzoic acid recovery was very low biased (10%) and the compound was rejected "R" in all four samples in this SDG to indicate the potential low bias.

2. For the PCB (method 8082) analysis of sample PBOW-05-GW-AA3-GW004-01A one of the two surrogate recoveries was biased low (TCMX 15%). The other surrogate recovery was acceptable. The nondetects PCB results for the sample were qualified as estimated undetected "UJ" to indicate the potential low bias.

3. For the nitroaromatic (method 8330) analysis the ICV had a marginally low recovery of 2-ammino-4,6-dinitrotoluene. 2-ammino-4,6-dinitrotoluene was not detected in the three associated samples and was qualified as estimated undetected "UJ" to indicate the potential low bias.

4. For the total and dissolved metals (method 6010B/7471A) analysis the MS/MSD associated with the batch failed the recovery criteria with a low bias for selenium and a high bias for sodium. The non-detect results for selenium in the three associated samples in this SDG were qualified as estimated undetected ("UJ") and the detects of sodium in all three samples were qualified as estimated "J" due to the exceedances of the MS/MSD accuracy criteria.

5. The total metals method blank contained trace levels of chromium and copper that resulted in the qualification of low level detects of chromium in all three samples as undetected "U", and the qualification of the low level detect of copper in sample PBOW-05-GW-AA3-BEDMW003-01A as undetected "U".

6. The dissolved metals method blank contained trace levels of nickel that resulted in the qualification of low level detect of nickel in sample PBOW-05-GW-AA3-GW004-01A as "B".

7. The total metals ICB contained trace levels of chromium and nickel that resulted in the qualification of low level detect of chromium in sample PBOW-05-GW-AA3-BEDMW003-01A as "B", and the qualification of the low level detect of nickel in sample PBOW-05-GW-AA3-

GW004-01A as "B".

8. The dissolved metals ICB and CCB contained trace levels of beryllium, chromium, and nickel that resulted in the qualification of low level detect of beryllium in sample PBOW-05-GW-AA3-BEDMW003-01A as "B", chromium in sample PBOW-05-GW-AA3-BEDMW003-01D as "B", and nickel in sample PBOW-05-GW-AA3-GW004-01A as "B".

9. The dissolved mercury CCB contained trace levels of mercury that resulted in the qualification of low level detect of mercury in sample PBOW-05-GW-AA3-BEDMW003-01A as "B".

10. The nitrate analyses for both samples in this SDG were performed 4-5 hours in excess of the 48-hour holding time. The detect for nitrate in both samples were qualified as estimated "J". However, the detect in sample PBOW-05-GW-AA3-GW004-01A was subsequently changed to "BJ" due to method blank contamination.

11. The nitrate detect in sample PBOW-05-GW-AA3-GW004-01A was qualified as estimated "J" due to marginally high biased LCS and CCV.

12. The chloride detect in sample PBOW-05-GW-AA3-BEDMW003-01A was qualified as estimated "J" due to marginally high biased LCS and CCV.

13. The TSS LCS was biased marginally low resulting in the qualification of the nondetect results in both samples as estimated "UJ".

SDG E&E 0502002

1. For the SVOC (method 8270C) analysis the LCS had low recoveries for 2-4-dimethylphenol, hexachlorocyclopentadiene, and benzoic acid. The associated sample did not contain detects for the compounds and were qualified as estimated undetected "UJ" for the 2-4-dimethylphenol, and the hexachlorocyclopentadiene outliers. The benzoic acid recovery was very low biased (12% and 13%) and the compound was rejected "R" in the sample in this SDG to indicate the potential low bias.

2. For the nitroaromatic (method 8330) analysis the ICV had a marginally low recovery of 2-ammino-4,6-dinitrotoluene. 2-ammino-4,6-dinitrotoluene was not detected in the associated sample and was qualified as estimated undetected "UJ" to indicate the potential low bias.

3. For the total and dissolved metals (method 6010B/7471A) analysis the MS/MSD associated with the batch failed the recovery criteria with a low bias for selenium and a high bias for sodium. The non-detect results for selenium in the associated sample in this SDG was qualified as estimated undetected ("UJ") and the detect of sodium in the sample was qualified as estimated "J" due to the exceedances of the MS/MSD accuracy criteria.

4. The total metals method blank contained trace levels of chromium and copper that resulted in the qualification of low level detect of chromium in sample PBOW-05-GW-AA2-ITMW10-01A as "B".

5. The dissolved metals method blank contained trace levels of nickel and silver that resulted in the qualification of low level detect of nickel in sample PBOW-05-GW-AA2-ITMW10-01A as "B".

6. The dissolved metals ICB contained trace levels of nickel that resulted in the qualification of low level detect of nickel in sample PBOW-05-GW-AA2-ITMW10-01A as "B".

7. The total mercury CCB contained trace levels of mercury that resulted in the qualification of low level detect of mercury in sample PBOW-05-GW-AA2-ITMW10-01A as "B".

8. The chloride and nitrate detects in sample PBOW-05-GW-AA2-ITMW10-01A were qualified as estimated "J" due to marginally high biased LCS and CCV.

9. The chloride detect in sample PBOW-05-GW-AA3-BEDMW003-01A was qualified as estimated "J" due to marginally high biased LCS and CCV.

10. The TSS LCS was biased marginally low resulting in the qualification of the nondetect results in both samples as estimated "UJ".

SDG E&E 0502004

1. For the VOC (method 8260B) analysis the LCS had marginally low recoveries for bromoform. Both associated samples in this SDG did not contain detects for the compound and were qualified as estimated undetected "UJ" for bromoform.

4.0 DATA QUALITY NARRATIVES

The findings of this data quality evaluation are presented below in terms of precision, accuracy, representativeness, sensitivity and completeness.

4.1 DATA PRECISION

4.1.1 Field QC Duplicate Precision Review

Project field duplicate precision indicators were found to be in control for each analytical method without exception.

4.1.2 Laboratory Duplicate Precision Review

Project laboratory duplicate precision indicators were found to be in control for each analytical method, with the exceptions noted below as Specific Findings. Each exception was evaluated to determine whether it had any impact on data use or resulted in data qualification.

Specific Findings:

1. The Cyanide MS/MSD RPD for sample PBOW-05-GW-AA3-BEDGW002-01A in E&E SDG 0501293 was 71%, exceeding the 20% RPD criteria. The non-detect cyanide results in the associated samples in the lab batch were qualified as estimated undetected "UJ".

Affected Sample	Analyte	MS/MSD RPD	Qualifier
PBOW-05-GW-AA3-BEDGW002-01A	Cyanide	71%	UJ
PBOW-05-GW-AA3-GW002-01A			
PBOW-05-GW-AA3-BEDGW001-01A			
PBOW-05-GW-AA2-MKMW09-01A			
PBOW-05-GW-PB-BEDMW19-01A			
PBOW-05-GW-AA3-GW003-01A			
PBOW-05-GW-AA3-GW003-01D			
PBOW-05-GW-AA2-GW002-01A			
PBOW-05-GW-AA3-GW005-01A			
PBOW-05-GW-AA2-BEDGW001-01A			

2. The Chloride MS/MSD RPD for sample PBOW-05-GW-PB-BEDMW19-01A in E&E SDG 0501276 was 54%, exceeding the 20% RPD criteria. The chloride detects in all three associated samples in the SDG were qualified as estimated "J" to indicate the potential imprecise measurement.

Affected Samples	Analyte	MS/MSD RPD	Qualifier
PBOW-05-GW-AA3-BEDGW001-01A	Chloride	54%	UJ
PBOW-05-GW-AA2-MKMW09-01A			
PBOW-05-GW-PB-BEDMW19-01A			

3. The Sulfate laboratory duplicate performed on sample PBOW-05-GW-PB-BEDMW19-01A in E&E SDG 0501276 was 22%, exceeding the 20% RPD criteria. The sulfate detects in all three associated samples in the SDG were qualified as estimated "J" to indicate the potential imprecise measurement.

Affected Samples	Analyte	Lab. Dup. RPD	Qualifier
PBOW-05-GW-AA3-BEDGW001-01A	Sulfate	22%	UJ
PBOW-05-GW-AA2-MKMW09-01A			
PBOW-05-GW-PB-BEDMW19-01A			

4.2 DATA ACCURACY

4.2.1 Data Accuracy Indicators Review

Project accuracy indicators were found to be in control for each analytical method, with the exceptions noted below as Specific Findings. Each exception was evaluated to determine whether it had any impact on data use or resulted in data qualification.

Specific Findings: SDG E&E 0501263

1. The VOC LCS associated with the groundwater sample PBOW-05-GW-AA3-GW002-01A in SDG E&E 0501263 recovered high for one compound (Trichlorofluoromethane 138%). However, the compound was not detected in the associated sample and qualification of a non-detect result for a high bias is not necessary.

2. The VOC ICAL associated with the groundwater sample PBOW-05-GW-AA3-GW002-01A in SDG E&E 0501263 had marginally high % RSDs for two compounds (Trichlorofluoromethane 15.2% and 1,2,4-Trichlorobenzene 16.2%). However, the mean RSD for all compounds was acceptable, and the outliers were less than 30%. Therefore, no qualification was deemed necessary.

3. The VOC Continuing Calibration Verification (CCV) associated with groundwater sample PBOW-05-GW-AA3-GW002-01A in SDG E&E 0501263 had marginally high % Ds for two compounds (Trichlorofluoromethane 23.7% and 1,2,3-Trichlorobenzene 21.6%). However, the mean RSD for all compounds was acceptable, and the outliers were less than 30%. Therefore, no qualification was deemed necessary.

4. The SVOC Initial Calibration Verification (ICV) associated with groundwater sample PBOW-05-GW-AA3-GW002-01A in SDG E&E 0501263 had marginally low recoveries for two compounds (Benzoic acid 77% and Pentachlorophenol 74%). The affected sample was nondetect for the analytes and qualified as estimated to indicate the potential low bias for the analytes.

Affected Samples	Analyte	ICV %R	Qualifier
PBOW-05-GW-AA3-GW002-01A	Benzoic Acid	77%	UJ
	Pentachlorophenol	74%	UJ

5. The SVOC LCS associated with the groundwater sample PBOW-05-GW-AA3-GW002-01A in SDG E&E 0501263 recovered low for three analytes. The analytes were not detected in the associated sample and qualified as indicated in the table below.

Affected Samples	Analyte	LCS/LCSD %R	Qualifier
PBOW-05-GW-AA3-GW002-01A	Benzoic Acid	8% & 10%	R
	2,4-Dimethylphenol	19% & 15%	UJ
	Hexachlorocyclopentadiene	51% (LCSD)	UJ

6. The Nitroaromatic LCS associated with the groundwater sample PBOW-05-GW-AA3-GW002-01A in SDG E&E 0501263 recovered low for one analyte. The analyte was not detected in the associated sample and qualified as indicated in the table below.

Affected Samples	Analyte	LCS %R	Qualifier
PBOW-05-GW-AA3-GW002-01A	Tetryl	58%	UJ

7. The Nitroaromatic Initial Calibration Verification (ICV) associated with groundwater sample PBOW-05-GW-AA3-GW002-01A in SDG E&E 0501263 had a marginally low recovery for one analyte. The affected sample was nondetect for the analytes and qualified as estimated to indicate the potential low bias for the analyte.

Affected Samples	Analyte	ICV %R	Qualifier
PBOW-05-GW-AA3-GW002-01A	2-Ammino-4,6-dinitrotoluene	83%	UJ

8. The total metals MS/MSD analysis performed on sample PBOW-05-GW-AA3-BEDGW002-01A associated with SDG E&E 0501293 recovered marginally low for Selenium. This MS/MSD was batched with the sample in E&E SDG 0501263. The affected sample and qualification is indicated below.

Affected Samples	Analyte	MS/MSD %R	Qualifier
PBOW-05-GW-AA3-GW002-01A	Selenium	49% / 47%	UJ

9. The dissolved metals MS/MSD analysis performed on sample PBOW-05-GW-AA3-BEDGW002-01A associated with SDG E&E 0501293 recovered marginally low for Selenium. This MS/MSD was batched with the sample in E&E SDG 0501263. The affected sample and qualification is indicated below.

Affected Samples	Analyte	MS/MSD %R	Qualifier
PBOW-05-GW-AA3-GW002-01A	Selenium	42% / 43%	UJ

10. The Cyanide LCS associated with PBOW-05-GW-AA3-GW002-01A in SDG E&E 0501263 recovered marginally low at 68%. The affected sample and qualification is indicated below.

Affected Samples	Analyte	LCS %R	Qualifier
PBOW-05-GW-AA3-GW002-01A	Cyanide	68%	UJ

11. The Cyanide MS analysis performed on sample PBOW-05-GW-AA3-BEDGW002-01A associated with SDG E&E 0501293 recovered marginally low at 40%. This MS/MSD was batched with the sample in E&E SDG 0501263. The affected sample and qualification is indicated below.

Affected Samples	Analyte	MS %R	Qualifier
PBOW-05-GW-AA3-GW002-01A	Cyanide	40%	UJ

Specific Findings: SDG E&E 0501276

1. The VOC LCS associated with the four groundwater samples in SDG E&E 0501276 recovered high for one compound (Trichlorofluoromethane 138%). However, the compound was not detected in the associated samples and qualification of non-detect results for a high bias is not necessary.

2. The VOC ICAL associated with the four groundwater samples in SDG E&E 0501276 had marginally high % RSDs for two compounds (Trichlorofluoromethane 15.2% and 1,2,4-Trichlorobenzene 16.2%). However, the mean RSD for all compounds was acceptable, and the outliers were less than 30%. Therefore, no qualification was deemed necessary.

3. The VOC Continuing Calibration Verifications (CCV) associated with the four groundwater samples in SDG E&E 0501276 had marginally high % Ds for two compounds (Trichlorofluoromethane 23.7% and 1,2,3-Trichlorobenzene 22.8%). However, the mean RSD for all compounds was acceptable, and the outliers were less than 30%. Therefore, no qualification was deemed necessary.

4. The SVOC Initial Calibration Verification (ICV) associated with the three groundwater samples in SDG E&E 0501276 had marginally low recoveries for two compounds (Benzoic acid 77% and Pentachlorophenol 74%). The affected samples were nondetect for the analytes and qualified as estimated to indicate the potential low bias for the analytes.

Affected Samples	Analyte	ICV %R	Qualifier
PBOW-05-GW-AA3-BEDGW001-01A	Benzoic Acid	77%	UJ
PBOW-05-GW-AA2-MKMW09-01A	Pentachlorophenol	74%	UJ
PBOW-05-GW-PB-BEDMW19-01A			

5. The SVOC LCS associated with the three groundwater samples in SDG E&E 0501276 recovered low for three analytes. The analytes were not detected in the associated samples

and qualified as indicated in the table below.

Affected Samples	Analyte	LCS/LCSD %R	Q
PBOW-05-GW-AA3-BEDGW001-01A	Benzoic Acid	8% & 10%	R
PBOW-05-GW-AA2-MKMW09-01A	2,4-Dimethylphenol	19% & 15%	UJ
PBOW-05-GW-PB-BEDMW19-01A	Hexachlorocyclopentadiene	51% (LCSD)	UJ

6. The Nitroaromatic LCS associated with the three groundwater samples in SDG E&E 0501276 recovered low for one analyte. The analyte was not detected in the associated samples and qualified as indicated in the table below.

Affected Samples	Analyte	LCS %R	Qualifier
PBOW-05-GW-AA3-BEDGW001-01A PBOW-05-GW-AA2-MKMW09-01A PBOW-05-GW-PB-BEDMW19-01A	Tetryl	58%	UJ

7. The Nitroaromatic Initial Calibration Verification (ICV) associated with the three groundwater samples in SDG E&E 050127 had a marginally low recovery for one analyte. The affected samples were nondetect for the analyte and qualified as estimated to indicate the potential low bias for the analyte.

Affected Samples	Analyte	ICV %R	Q
PBOW-05-GW-AA3-BEDGW001-01A PBOW-05-GW-AA2-MKMW09-01A PBOW-05-GW-PB-BEDMW19-01A	2-Ammino-4,6-dinitrotoluene	83%	UJ

8. The nitroaromatic surrogate recovery for one groundwater sample in E&E SDG 0501276 biased marginally low. All nitroaromatic target analytes were nondetect in the sample and qualified as estimated "UJ"

Affected Samples	Analyte	Surr %R	Q
PBOW-05-GW-PB-BEDMW19-01A	All 8330 Nitroaromatic target analytes	60%	UJ

9. The total metals MS/MSD analysis performed on sample PBOW-05-GW-PB-BEDM19-01A associated with SDG E&E 0501273 recovered marginally low for Selenium. The affected samples and qualification is indicated below.

Affected Samples	Analyte	MS/MSD %R	Qualifier
PBOW-05-GW-AA3-BEDGW001-01A PBOW-05-GW-AA2-MKMW09-01A PBOW-05-GW-PB-BEDMW19-01A	Selenium	49% / 47%	UJ

10. The dissolved metals MS/MSD analysis performed on sample PBOW-05-GW-PB-BEDMW19-01A associated with SDG E&E 0501276 recovered marginally low for Selenium. The affected samples and qualification is indicated below.

Affected Samples	Analyte	MS/MSD %R	Qualifier
PBOW-05-GW-AA3-BEDGW001-01A PBOW-05-GW-AA2-MKMW09-01A PBOW-05-GW-PB-BEDMW19-01A	Selenium	42% / 43%	UJ

11. The Cyanide LCS associated with the three groundwater samples in SDG E&E 0501276 recovered marginally low at 68%. The affected samples and qualification is indicated below.

Affected Samples	Analyte	LCS %R	Qualifier
PBOW-05-GW-AA3-BEDGW001-01A	Cyanide	68%	J
PBOW-05-GW-AA2-MKMW09-01A			UJ
PBOW-05-GW-PB-BEDMW19-01A			J

12. The Cyanide MS analysis performed on sample PBOW-05-GW-PB-BEDMW19-01A associated with SDG E&E 0501276 recovered marginally low at 40%. The affected samples and qualification is indicated below.

Affected Samples	Analyte	MS %R	Qualifier
PBOW-05-GW-AA3-BEDGW001-01A	Cyanide	40%	J
PBOW-05-GW-AA2-MKMW09-01A			UJ
PBOW-05-GW-PB-BEDMW19-01A			J

13. The Chloride MS analysis performed on sample PBOW-05-GW-PB-BEDMW19-01A associated with SDG E&E 0501276 recovered marginally low at 50%. The affected samples and qualification is indicated below.

Affected Samples	Analyte	MS %R	Qualifier
PBOW-05-GW-AA3-BEDGW001-01A PBOW-05-GW-AA2-MKMW09-01A PBOW-05-GW-PB-BEDMW19-01A	Chloride	50%	J

Specific Findings: SDG E&E 0501293

1. The VOC LCS associated with the five groundwater samples in SDG E&E 0501293 recovered marginally low for one compound (1,2,3-Trichlorobenzene 76%). The analyte was not detected in the associated samples and was qualified as estimated "UJ".

Affected Samples	Analyte	LCS %R	Q
PBOW-05-GW-AA3-GW003-01A PBOW-05-GW-AA3-GW003-01D PBOW-05-GW-AA3-BEDGW002-01A PBOW-05-GW-AA2-GW002-01A PBOW-05-TB-012505-01	1,2,3-Trichlorobenzene	76%	UJ

2. The VOC ICAL associated with the five groundwater samples in SDG E&E 0501293 had marginally high % RSDs for two compounds (Trichlorofluoromethane 15.2% and 1,2,4-Trichlorobenzene 16.2%). However, the mean RSD for all compounds was acceptable, and the outliers were less than 30%. Therefore, no qualification was deemed necessary.

3. The VOC Continuing Calibration Verifications (CCV) associated with the five groundwater samples in SDG E&E 0501293 had marginally high % Ds for two compounds (Trichlorofluoromethane 25.5% and 1,2,3-Trichlorobenzene 22.8%). However, the mean RSD for all compounds was acceptable, and the outliers were less than 30%. Therefore, no qualification was deemed necessary.

4. The VOC MS/MSD associated with the five groundwater samples in SDG E&E 0501293 had no recovery (0%) for acetone and methyl acetate. The associated LCS was acceptable for the analytes, and the analytes were not detected in the associated field samples, but was detected at a trace level in the trip blank. The samples were qualified as indicated in the table below.

Affected Samples	Analyte	MS/MSD %R	Q
PBOW-05-GW-AA3-GW003-01A	Acetone	0%	UJ
PBOW-05-GW-AA3-GW003-01D			UJ
PBOW-05-GW-AA3-BEDGW002-01A			UJ
PBOW-05-GW-AA2-GW002-01A			UJ
PBOW-05-TB-012505-01			J
PBOW-05-GW-AA3-GW003-01A	2,4-Dimethylphenol	0%	UJ
PBOW-05-GW-AA3-GW003-01D			UJ
PBOW-05-GW-AA3-BEDGW002-01A			UJ
PBOW-05-GW-AA2-GW002-01A			UJ
PBOW-05-TB-012505-01			UJ

5. The SVOC Initial Calibration Verification (ICV) associated with the four groundwater samples in SDG E&E 0501293 had marginally low recoveries for two compounds (Benzoic acid 77% and Pentachlorophenol 74%). The affected samples were nondetect for the analytes and qualified as estimated to indicate the potential low bias for the analytes.

Affected Samples	Analyte	ICV %R	Qualifier
PBOW-05-GW-AA3-GW003-01A	Benzoic Acid	77%	UJ
PBOW-05-GW-AA3-GW003-01D	Pentachlorophenol	74%	UJ
PBOW-05-GW-AA3-BEDGW002-01A			
PBOW-05-GW-AA2-GW002-01A			

6. The SVOC LCS associated with the four groundwater samples in SDG E&E 0501293 recovered low for four analytes. The analytes were not detected in the associated samples and qualified as indicated in the table below.

Affected Samples	Analyte	LCS %R	Q
PBOW-05-GW-AA3-GW003-01A	Benzoic Acid	10%	R
PBOW-05-GW-AA3-GW003-01D	2,4-Dimethylphenol	54%	UJ
PBOW-05-GW-AA3-BEDGW002-01A	Hexachlorocyclopentadiene	59%	UJ
PBOW-05-GW-AA2-GW002-01A	4-Chloroaniline	56%	UJ

7. The SVOC MS/MSD performed on sample PBOW-05-GW-AA3-BEDGW002-01A associated with the four groundwater samples in SDG E&E 0501293 had no recovery for hexachlorocyclopentadiene. The analyte was not detected in the associated samples and qualified as indicated in the table below.

Affected Samples	Analyte	MS/MSD %R	Q
PBOW-05-GW-AA3-GW003-01A PBOW-05-GW-AA3-GW003-01D PBOW-05-GW-AA3-BEDGW002-01A PBOW-05-GW-AA2-GW002-01A	Hexachlorocyclopentadiene	0%	UJ

8. The Nitroaromatic MS/MSD associated with the four groundwater samples in SDG E&E 0501293 performed on sample PBOW-05-GW-AA3-BEDGW002-01A had no recovery for tetryl. The analyte was acceptable in the associated LCS and not detected in the associated samples and qualified as indicated in the table below.

Affected Samples	Analyte	MS/MSD %R	Qualifier
PBOW-05-GW-AA3-GW003-01A PBOW-05-GW-AA3-GW003-01D PBOW-05-GW-AA3-BEDGW002-01A PBOW-05-GW-AA2-GW002-01A	Tetryl	0%	UJ

9. The Nitroaromatic Initial Calibration Verification (ICV) associated with the four groundwater samples in SDG E&E 0501293 had a marginally low recovery for one analyte. The affected samples were nondetect for the analytes and qualified as estimated to indicate the potential low bias for the analyte.

Affected Samples	Analyte	ICV %R	Q
PBOW-05-GW-AA3-GW003-01A PBOW-05-GW-AA3-GW003-01D PBOW-05-GW-AA3-BEDGW002-01A PBOW-05-GW-AA2-GW002-01A	2-Ammino-4,6-dinitrotoluene	83%	UJ

10. The total metals MS/MSD analysis performed on sample PBOW-05-GW-AA3-BEDGW002-01A associated with SDG E&E 0501293 recovered marginally low for Selenium. The affected samples and qualification are indicated below.

Affected Samples	Analyte	MS/MSD %R	Qualifier
PBOW-05-GW-AA3-GW003-01A PBOW-05-GW-AA3-GW003-01D PBOW-05-GW-AA3-BEDGW002-01A PBOW-05-GW-AA2-GW002-01A	Selenium	49% / 47%	UJ

11. The dissolved metals MS/MSD analysis performed on sample PBOW-05-GW-AA3-BEDGW002-01A associated with SDG E&E 0501293 recovered marginally low for Selenium. The affected samples and qualification is indicated below.

Affected Samples	Analyte	MS/MSD %R	Qualifier
PBOW-05-GW-AA3-GW003-01A PBOW-05-GW-AA3-GW003-01D PBOW-05-GW-AA3-BEDGW002-01A PBOW-05-GW-AA2-GW002-01A	Selenium	42% / 43%	UJ

12. The Cyanide LCS associated with the four groundwater samples in SDG E&E 0501293 recovered marginally low at 68%. The affected samples and qualification are indicated below.

Affected Samples	Analyte	LCS %R	Qualifier
PBOW-05-GW-AA3-GW003-01A PBOW-05-GW-AA3-GW003-01D PBOW-05-GW-AA3-BEDGW002-01A PBOW-05-GW-AA2-GW002-01A	Cyanide	68%	UJ

13. The Cyanide MS analysis performed on sample PBOW-05-GW-AA3-BEDGW002-01A associated with SDG E&E 0501293 recovered marginally low at 40%. The affected samples and qualification are indicated below.

Affected Samples	Analyte	MS %R	Qualifier
PBOW-05-GW-AA3-GW003-01A PBOW-05-GW-AA3-GW003-01D PBOW-05-GW-AA3-BEDGW002-01A PBOW-05-GW-AA2-GW002-01A	Cyanide	40%	J UJ J

Specific Findings: SDG E&E 0501297

1. The VOC LCS associated with the three groundwater samples in SDG E&E 0501297 recovered marginally low for one compound (1,2,3-Trichlorobenzene 76%). The analyte was not detected in the associated samples and was qualified as estimated "UJ".

Affected Samples	Analyte	LCS %R	Q
PBOW-05-GW-AA3-GW005-01A PBOW-05-GW-AA2-BEDGW001-01A PBOW-05-TB-012705-01	1,2,3-Trichlorobenzene	76%	UJ

2. The VOC ICAL associated with the three groundwater samples in SDG E&E 0501297 had marginally high % RSDs for two compounds (Trichlorofluoromethane 15.2% and 1,2,4-Trichlorobenzene 16.2%). However, the mean RSD for all compounds was acceptable, and the outliers were less than 30%. Therefore, no qualification was deemed necessary.

3. The VOC Continuing Calibration Verifications (CCV) associated with the three groundwater samples in SDG E&E 0501297 had marginally high % Ds for two compounds (Trichlorofluoromethane 25.5% and 1,2,3-Trichlorobenzene 22.8%). However, the mean RSD for all compounds was acceptable, and the outliers were less than 30%. Therefore, no qualification was deemed necessary.

4. The SVOC Initial Calibration Verification (ICV) associated with the two groundwater samples in SDG E&E 0501297 had marginally low recoveries for two compounds (Benzoic acid 77% and Pentachlorophenol 74%). The affected samples were nondetect for the analytes and qualified as estimated to indicate the potential low bias for the analytes.

Affected Samples	Analyte	ICV %R	Qualifier
PBOW-05-GW-AA3-GW005-01A	Benzoic Acid	77%	UJ
PBOW-05-GW-AA2-BEDGW001-01A	Pentachlorophenol	74%	UJ

5. The SVOC LCS associated with the two groundwater samples in SDG E&E 0501297 recovered low for four analytes. The analytes were not detected in the associated samples and qualified as indicated in the table below.

Affected Samples	Analyte	LCS %R	Q
PBOW-05-GW-AA3-GW005-01A	Benzoic Acid	10%	R
PBOW-05-GW-AA2-BEDGW001-01A	2,4-Dimethylphenol	54%	UJ
	Hexachlorocyclopentadiene	59%	UJ
	4-Chloroaniline	56%	UJ

6. The Nitroaromatic Initial Calibration Verification (ICV) associated with the two groundwater samples in SDG E&E 0501297 had a marginally low recovery for one analyte. The affected samples were nondetect for the analytes and qualified as estimated to indicate the potential low bias for the analyte.

Affected Samples	Analyte	ICV %R	Q
PBOW-05-GW-AA3-GW005-01A PBOW-05-GW-AA2-BEDGW001-01A	2-Ammino-4,6-dinitrotoluene	83%	UJ

7. The total metals MS/MSD analysis performed on sample PBOW-05-GW-AA3-BEDGW002-01A associated with SDG E&E 0501293 recovered marginally low for Selenium. This MS/MSD was batched with the samples in E&E SDG 0501297. The affected samples and qualification are indicated below.

Affected Samples	Analyte	MS/MSD %R	Qualifier
PBOW-05-GW-AA3-GW005-01A PBOW-05-GW-AA2-BEDGW001-01A	Selenium	49% / 47%	UJ

8. The dissolved metals MS/MSD analysis performed on sample PBOW-05-GW-AA3-BEDGW002-01A associated with SDG E&E 0501293 recovered marginally low for Selenium. This MS/MSD was batched with the samples in E&E SDG 0501297. The affected samples and qualification are indicated below.

Affected Samples	Analyte	MS/MSD %R	Qualifier
PBOW-05-GW-AA3-GW005-01A PBOW-05-GW-AA2-BEDGW001-01A	Selenium	42% / 43%	UJ

9. The Cyanide MS analysis performed on sample PBOW-05-GW-AA3-GW005-01A associated with SDG E&E 0501297 recovered marginally low at 40%. The affected samples and qualification are indicated below.

Affected Samples	Analyte	MS %R	Qualifier
PBOW-05-GW-AA3-GW005-01A	Cyanide	40%	J
PBOW-05-GW-AA2-BEDGW001-01A			UJ
			J

10. The Anions CCVs for Chloride and Sulfate associated with the two groundwater samples in SDG E&E 0501297 had marginally high biased recoveries. The detects for chloride and sulfate in both samples were qualified as estimated to indicate the potential high bias for the analyte.

Affected Samples	Analyte	CCV %R	Q
PBOW-05-GW-AA3-GW005-01A	Chloride	113%	J
	Sulfate	111%	J
PBOW-05-GW-AA2-BEDGW001-01A	Chloride	113%	J
	Sulfate	111%	J

Specific Findings: SDG E&E 0501303

1. The SVOC Initial Calibration Verification (ICV) associated with the two equipment blank samples in SDG E&E 0501303 had marginally low recoveries for two compounds (Benzoic acid 77% and Pentachlorophenol 74%). The affected samples were nondetect for the analytes and qualified as estimated to indicate the potential low bias for the analytes.

Affected Samples	Analyte	ICV %R	Qualifier
PBOW-05-GW-AA3-GW005-01C	Benzoic Acid	77%	UJ
PBOW-05-GW-AA2-BEDGW001-01C	Pentachlorophenol	74%	UJ

2. The SVOC LCS associated with the two equipment blank samples in SDG E&E 0501303 recovered low for four analytes. The analytes were not detected in the associated samples and qualified as indicated in the table below.

Affected Samples	Analyte	LCS %R	Q
PBOW-05-GW-AA3-GW005-01C	Benzoic Acid	10%	R
PBOW-05-GW-AA2-BEDGW001-01C	2,4-Dimethylphenol	54%	UJ
	Hexachlorocyclopentadiene	59%	UJ
	4-Chloroaniline	56%	UJ

3. The Nitroaromatic Initial Calibration Verification (ICV) associated with the two equipment blank samples in SDG E&E 0501303 had a marginally low recovery for one analyte. The affected samples were nondetect for the analytes and qualified as estimated to indicate the potential low bias for the analyte.

Affected Samples	Analyte	ICV %R	Q
PBOW-05-GW-AA3-GW005-01C	2-Ammino-4,6-dinitrotoluene	83%	UJ
PBOW-05-GW-AA2-BEDGW001-01C			

Specific Findings: SDG E&E 0502001

1. The VOC ICAL associated with the six groundwater samples in SDG E&E 0502001 had a marginally high % RSD for one compound (Trichlorofluoromethane 21.2%). However, the mean RSD for all compounds was acceptable, and the outliers were less than 30%. Therefore, no qualification was deemed necessary.

2. The SVOC LCS associated with the three groundwater samples in SDG E&E 0502001 recovered low for three analytes. The analytes were not detected in the associated samples and qualified as indicated in the table below.

Affected Samples	Analyte	LCS/LCSD %R	Q
PBOW-05-GW-AA3-BEDMW003-01A PBOW-05-GW-AA3-BEDMW003-01D PBOW-05-GW-AA3-GW004-01A	Benzoic Acid	12% / 13%	R
PBOW-05-GW-AA3-BEDMW003-01A PBOW-05-GW-AA3-BEDMW003-01D PBOW-05-GW-AA3-GW004-01A	2,4-Dimethylphenol	32% / 41%	UJ
PBOW-05-GW-AA3-BEDMW003-01A PBOW-05-GW-AA3-BEDMW003-01D PBOW-05-GW-AA3-GW004-01A	Hexachlorocyclopentadiene	59% (LCSD)	UJ

3. The PCB surrogate recovery for one groundwater sample in E&E SDG 0502001 was biased low. All PCB target analytes were nondetect in the sample and the other surrogate was acceptable.

Affected Samples	Analyte	Surr %R	Q
PBOW-05-GW-AA3- GW004-01A	All 8082 PCB target analytes	15%	UJ

4. The Nitroaromatic Initial Calibration Verification (ICV) associated with the three groundwater samples in SDG E&E 0502001 had a marginally low recovery for one analyte. The affected samples were nondetect for the analytes and qualified as estimated to indicate the potential low bias for the analyte.

Affected Samples	Analyte	ICV %R	Q
PBOW-05-GW-AA3-BEDMW003-01A PBOW-05-GW-AA3-BEDMW003-01D PBOW-05-GW-AA3-GW004-01A	2-Ammino-4,6-dinitrotoluene	83%	UJ

5. The total metals MS/MSD analysis performed on sample PBOW-05-GW-AA3-BEDMW003-01A associated with SDG E&E 0502001 recovered low for Selenium and high for Sodium. The affected samples and qualification are indicated below.

Affected Samples	Analyte	MS/MSD %R	Qualifier
PBOW-05-GW-AA3-BEDMW003-01A PBOW-05-GW-AA3-BEDMW003-01D PBOW-05-GW-AA3-GW004-01A	Selenium	23% / 25%	R (All ND)
PBOW-05-GW-AA3-BEDMW003-01A PBOW-05-GW-AA3-BEDMW003-01D PBOW-05-GW-AA3-GW004-01A	Sodium	135% (MS)	J (All detect)

6. The dissolved metals MS/MSD analysis performed on sample PBOW-05-GW-AA3-BEDMW003-01A associated with SDG E&E 0502001 recovered low for Selenium and Sodium. The affected samples and qualification are indicated below.

Affected Samples	Analyte	MS/MSD %R	Qualifier
PBOW-05-GW-AA3-BEDMW003-01A PBOW-05-GW-AA3-BEDMW003-01D PBOW-05-GW-AA3-GW004-01A	Selenium	25% / 24%	R (All ND)
PBOW-05-GW-AA3-BEDMW003-01A PBOW-05-GW-AA3-BEDMW003-01D PBOW-05-GW-AA3-GW004-01A	Sodium	53% / 67%	J (All detect)

7. The total suspended solids (TSS) LCS associated with the two groundwater samples in SDG E&E 0502001 had a marginally low biased recovery. The affected samples and qualification are indicated below.

Affected Samples	Analyte	LCS %R	Qualifier
PBOW-05-GW-AA3-BEDMW003-01A PBOW-05-GW-AA3-GW004-01A	TSS	76%	UJ

8. The anions low-level LCS associated with the two groundwater samples in SDG E&E 0502001 had high biased recoveries for Sulfate and Nitrate. The affected samples and qualification are indicated below.

Affected Samples	Analyte	LCS %R	Qualifier
PBOW-05-GW-AA3-BEDMW003-01A PBOW-05-GW-AA3-GW004-01A	Nitrate	111%	J
PBOW-05-GW-AA3-BEDMW003-01A PBOW-05-GW-AA3-GW004-01A	Sulfate	112%	J

9. The Anions CCVs for Chloride and Nitrate associated with the two groundwater samples in SDG E&E 0502001 had marginally high biased recoveries. The detects for chloride and nitrate were qualified as estimated to indicate the potential high bias for the analyte in the affected samples.

Affected Samples	Analyte	CCV %R	Q
PBOW-05-GW-AA3-BEDMW003-01A	Chloride	111%	J
PBOW-05-GW-AA3-GW004-01A	Nitrate	112%	J

Specific Findings: SDG E&E 0502002

1. The SVOC LCS associated with the groundwater sample in SDG E&E 0502002 recovered low for three analytes. The analytes were not detected in the associated sample and qualified as estimated.

Affected Samples	Analyte	LCS%R	Q
PBOW-05-GW-AA2-ITMW10-01A	Benzoic Acid	12%	R
	2,4-Dimethylphenol	41%	UJ
	Hexachlorocyclopentadiene	59%	UJ

2. The Nitroaromatic Initial Calibration Verification (ICV) associated with the groundwater sample in SDG E&E 0502002 had a marginally low recovery for one analyte. The affected sample were nondetect for the analyte and qualified as estimated to indicate the potential low bias for the analyte.

Affected Samples	Analyte	ICV %R	Q
PBOW-05-GW-AA2-ITMW10-01A	2-Ammino-4,6-dinitrotoluene	83%	UJ

3. The total metals MS/MSD analysis performed on sample PBOW-05-GW-AA3-BEDMW003-01A associated with SDG E&E 0502001 recovered low for Selenium and high for Sodium. The MS/MSD for SDG 0502001 was batched with the groundwater sample from SDG 0502002 and the groundwater sample from SDG 0502002 was qualified as indicated below.

Affected Samples	Analyte	MS/MSD %R	Qualifier
PBOW-05-GW-AA2-ITMW10-01A	Selenium	23% / 25%	R
PBOW-05-GW-AA2-ITMW10-01A	Sodium	135% (MS)	J

4. The dissolved metals MS/MSD analysis performed on sample PBOW-05-GW-AA3-BEDMW003-01A associated with SDG E&E 0502001 recovered low for Selenium and Sodium. The MS/MSD for SDG 0502001 was batched with the groundwater sample from SDG 0502002 and the groundwater sample from SDG 0502002 was qualified as indicated below.

Affected Samples	Analyte	MS/MSD %R	Qualifier
PBOW-05-GW-AA2-ITMW10-01A	Selenium	25% / 24%	R
PBOW-05-GW-AA2-ITMW10-01A	Sodium	53% / 67%	J

5. The total suspended solids (TSS) LCS associated with the groundwater sample in SDG E&E 0502002 had a marginally low biased recovery. The affected samples and qualification are indicated below.

Affected Samples	Analyte	LCS %R	Qualifier
PBOW-05-GW-AA2-ITMW10-01A	TSS	76%	UJ

6. The anions low-level LCS associated with the groundwater sample in SDG E&E 0502002 had high biased recoveries for Sulfate and Nitrate. The affected samples and qualification

are indicated below.

Affected Samples	Analyte	LCS %R	Qualifier
PBOW-05-GW-AA2-ITMW10-01A	Nitrate	111%	J
PBOW-05-GW-AA2-ITMW10-01A	Sulfate	112%	J

7. The Anions CCVs for Chloride and Nitrate associated with the groundwater sample in SDG E&E 0502002 had marginally high biased recoveries. The detects for chloride and nitrate were qualified as estimated to indicate the potential high bias for the analyte in the affected samples.

Affected Samples	Analyte	CCV %R	Q
PBOW-05-GW-AA2-ITMW10-01A	Chloride	111%	J
PBOW-05-GW-AA2-ITMW10-01A	Nitrate	111%	J

Specific Findings: SDG E&E 0502004

1. The VOC LCS associated with the groundwater sample in SDG E&E 0502004 recovered marginally low for one compound (Bromoform 78%). The analyte was not detected in the associated sample and was qualified as estimated "UJ".

Affected Samples	Analyte	LCS %R	Q
PBOW-05-GW-AA2-ITMW10-01A	Bromoform	78%	UJ

2. The VOC ICAL associated with the groundwater sample in SDG E&E 0502004 had a marginally high % RSDs for one compounds (Trichlorofluoromethane 21.3%). However, the mean RSD for all compounds was acceptable, and the outlier was less than 30%. Therefore, no qualification was deemed necessary.

4.3 DATA REPRESENTATIVENESS

4.3.1 Sample Custody/Handling Documentation Review

The project samples were received at the laboratory adequately preserved, chilled within the required range of 4 ± 2 degrees Celsius, in good condition, and with required custody documentation in order without exception.

4.3.2 Sample Holding Time Review

QC data indicated requirements for holding times were met for each sample analysis, with the exceptions noted below as Specific Findings. Each exception was evaluated to determine whether it had any impact on data use or resulted in data qualification.

Specific Findings:

1. The turbidity and nitrate analyses for sample PBOW-05-GW-AA3-GW002-01A in E&E SDG 0501263 were analyzed one day past the 48-hour holding time. Since the holding time was not grossly exceeded, the results were estimated. The nondetect turbidity result was qualified as estimated "UJ", and the detect for nitrate in the sample was qualified as estimated "J".

2. The turbidity and nitrate analyses for sample PBOW-05-GW-AA3-BEDGW001-01A in E&E SDG 0501276 were analyzed one hour past the 48-hour holding time. Since the holding time was only marginally exceeded, the results were not qualified.

3. The nitrate analyses for sample PBOW-05-GW-AA3-BEDMW003-01A and PBOW-05-GW-AA3-GW004-01A in E&E SDG 0502001 were analyzed approximately 5 hours past the 48-hour holding time. Since the holding time was not grossly exceeded, the results were estimated. The nondetect nitrate result in sample PBOW-05-GW-AA3-GW004-01A was qualified as estimated "UJ", and the detect for nitrate in sample PBOW-05-GW-AA3-BEDMW003-01A was qualified as estimated "J".

4.3.3 Blank Sample Results Review

QC data indicated requirements for blank sample results were met for each analytical method, with the exceptions noted below as Specific Findings. Each exception was evaluated to determine whether it had any impact on data use or resulted in data qualification.

Specific Finding:

1. The VOC trip blank associated with the groundwater sample in SDG E&E 0501263 contained low level detects of Chloroform, Acetone, and Methylene chloride. The associated groundwater sample was nondetect for the analytes present in the trip blank. No adverse affect to data quality or qualification resulted.

2. The VOC trip blank associated with the three groundwater samples in SDG E&E 0501276 contained low level detects of Chloroform, Acetone, and Methylene chloride. The associated groundwater samples were nondetect for the analytes present in the trip blank. No adverse affect to data quality or qualification resulted.

3. The VOC trip blank associated with the four groundwater samples in SDG E&E 0501293 contained low level detects of Chloroform, Acetone, and Methylene chloride. Three of the associated groundwater samples were nondetect for the analytes present in the trip blank and not affected or qualified. Sample PBOW-05-GW-AA3-BEDGW002-01A did have a positive result for chloroform that was less than five times the level detected in the trip blank. The chloroform result for sample PBOW-05-GW-AA3-BEDGW002-01A was qualified as "B".

4. The VOC trip blank associated with the two groundwater samples in SDG E&E 0501297 contained low level detects of Chloroform, Acetone, and Methylene chloride. One of the associated groundwater samples was nondetect for the analytes present in the trip blank and not affected or qualified. Sample PBOW-05-GW-AA3-GW005-01A did have a positive result for acetone that was less than five times the level detected in the trip blank. The acetone result for sample PBOW-05-GW-AA3- GW005-01A was qualified as "B".

5. The two metals equipment blank samples in SDG 0501303 contained trace level metals detects of a few metals compounds. The equipment blanks correspond to the two groundwater samples in SDG 0501297.

- Equipment blank PBOW-05-GW-AA3-GW005-01C corresponds to sample PBOW-05-GW-AA3- GW005-01A. Equipment blank PBOW-05-GW-AA3- GW005-01C contained sodium at 320 ug/L and vanadium at 2.21 ug/L. The corresponding total and dissolved metals analyses for the sample contained sodium at well above five times the blank level, and were nondetect for vanadium. No qualification was necessary.
- Equipment blank PBOW-05-GW-AA3-BEDGW001-01C corresponds to sample PBOW-05-GW-AA3-BEDGW001-01A. Equipment blank PBOW-05-GW-AA3-BEDGW001-01C contained sodium at 92.8 ug/L, vanadium at 2.90 ug/L, and barium at 4.71 ug/L. The corresponding total and dissolved metals analyses for the sample contained sodium and barium at well above five times the blank level, and were nondetect for vanadium. No qualification was necessary.
- The two VOC equipment blanks in SDG 0502001 contained low-level detects of several VOC compounds. The VOC equipment blanks correspond to the same two samples as the metals equipment blanks detailed above. The equipment blanks and corresponding samples were scrutinized and it was determined that no qualification was necessary. All of the VOC compounds detected in the VOC equipment blanks were either nondetect in the associated samples or detected greater than five times the blank level. No qualification of the VOC data resulted from the equipment blank contamination.

6. The VOC trip blank associated with the three groundwater samples in SDG E&E 0502001 contained low level detects of Chloroform, Acetone, and Methylene chloride. The associated groundwater samples were nondetect for the analytes present in the trip blank. No adverse affect to data quality or qualification resulted.

7. The VOC trip blank associated with the groundwater sample in SDG E&E 0502004 contained low level detects of Chloroform, Acetone, and Methylene chloride. The associated groundwater sample was nondetect for the analytes present in the trip blank. No adverse affect to data quality or qualification resulted.

8. The dissolved metals ICB associated with sample PBOW-05-GW-AA3-GW002-01A in SDG 0501263 contained a trace level beryllium detect that resulted in the sample result for beryllium being qualified as "B".

9. The total metals ICB associated with samples PBOW-05-GW-AA3-BEDGW001-01A and PBOW-05-GW-AA3-BEDMW19-01A in SDG 0501276 contained a trace level chromium detect that resulted in the both sample results for chromium being qualified as "B".

10. The total metals ICB associated with sample PBOW-05-GW-AA3-MKMW09-01A in SDG 0501276 contained a trace level zinc detect that resulted in the sample result for zinc being qualified as "B".

11. The dissolved metals ICB associated with sample PBOW-05-GW-AA3-MKMW09-01A in SDG 0501276 contained trace level chromium and zinc detects that resulted in the sample results for chromium and zinc being qualified as "B".

12. The total metals ICB associated with samples PBOW-05-GW-AA3-GW003-01A, PBOW-05-GW-AA3-GW003-01D, PBOW-05-GW-AA2-GW002-01A and PBOW-05-GW-AA3-BEDGW002-01A in SDG 0501293 contained a trace level chromium detect that resulted in

the sample results in all four samples for chromium being qualified as "B".

13. The dissolved metals ICB associated with samples PBOW-05-GW-AA3-GW003-01A, PBOW-05-GW-AA3-GW003-01D, PBOW-05-GW-AA2-GW002-01A and PBOW-05-GW-AA3-BEDGW002-01A in SDG 0501293 contained a trace level chromium detect that resulted in the sample results in all four samples for chromium being qualified as "B".

14. The total metals CCB associated with samples PBOW-05-GW-AA3-GW003-01A, PBOW-05-GW-AA3-GW003-01D, and PBOW-05-GW-AA2-GW002-01A in SDG 0501293 contained trace level iron and nickel detects that resulted in the sample results for the three samples being qualified as "B" for iron and nickel.

15. The dissolved metals CCB associated with samples PBOW-05-GW-AA2-GW002-01A in SDG 0501293 contained trace level cobalt and nickel detects that resulted in the sample results for the three samples being qualified as "B" cobalt and nickel.

16. The nitrate method blank associated with samples PBOW-05-GW-AA3-GW003-01A, PBOW-05-GW-AA3-GW003-01D, PBOW-05-GW-AA2-GW002-01A and PBOW-05-GW-AA3-BEDGW002-01A in SDG 0501293 contained a trace level nitrate detect that resulted in the sample results in all four samples for nitrate being qualified as "B".

17. The total metals ICB associated with samples PBOW-05-GW-AA3-GW005-01A and PBOW-05-GW-AA3-BEDGW001-01A in SDG 0501297 contained a trace level chromium detect that resulted in the sample results in both samples for chromium being qualified as "B".

18. The dissolved metals ICB associated with samples PBOW-05-GW-AA3-GW005-01A and PBOW-05-GW-AA3-BEDGW001-01A in SDG 0501297 contained a trace level chromium detect that resulted in the sample results in both samples for chromium being qualified as "B".

19. The total metals CCBs associated with samples PBOW-05-GW-AA3-GW005-01A in SDG 0501297 contained trace level nickel detects that resulted in the sample result for nickel being qualified as "B".

20. The dissolved metals CCBs associated with samples PBOW-05-GW-AA3-GW005-01A and PBOW-05-GW-AA3-BEDGW001-01A in SDG 0501297 contained trace level nickel and cobalt detects that resulted in the sample results for nickel and cobalt being qualified as "B".

21. The dissolved metals CCBs associated with samples PBOW-05-GW-AA3-GW005-01A in SDG 0501297 contained trace level potassium detect that resulted in the sample results for potassium being qualified as "B".

22. The total metals ICB associated with samples PBOW-05-GW-AA3-GW004-01A, PBOW-05-GW-AA3-BEDMW003-01A, and PBOW-05-GW-AA3- BEDMW003-01D in SDG 0502001 contained a trace level chromium detect that resulted in the sample results in the three samples for chromium being qualified as "B".

23. The total metals ICB associated with sample PBOW-05-GW-AA3-GW004-01A in SDG 0502001 contained a trace level nickel detect that resulted in the sample results for nickel being qualified as "B".

24. The dissolved metals ICB and CCB associated with sample PBOW-05-GW-AA3-GW004-01A in SDG 0502001 contained a trace level nickel detect that resulted in the sample result

for nickel being qualified as "B".

25. The dissolved metals ICB and CCB associated with sample PBOW-05-GW-AA3-BEDMW003-01A in SDG 0502001 contained a trace level beryllium detect that resulted in the sample result for beryllium being qualified as "B".

26. The dissolved metals ICB and CCB associated with sample PBOW-05-GW-AA3-BEDMW003-01D in SDG 0502001 contained a trace level chromium detect that resulted in the sample result for chromium being qualified as "B".

27. The dissolved metals CCB associated with sample PBOW-05-GW-AA3-BEDMW003-01A in SDG 0502001 contained a trace level mercury detect that resulted in the sample result for mercury being qualified as "B".

28. The nitrate method blank associated with sample PBOW-05-GW-AA3-GW004-01A in SDG 0502001contained a trace level nitrate detect that resulted in the sample result being qualified as "B".

29. The dissolved metals ICB associated with sample PBOW-05-GW-AA2-ITMW10-01A in SDG 0502002 contained a trace level nickel detect that resulted in the sample result for nickel being qualified as "B".

30. The total metals CCB associated with sample PBOW-05-GW- AA2-ITMW10-01A in SDG 0502002 contained a trace level mercury detect that resulted in the sample result for mercury being qualified as "B".

4.4 DATA SENSITIVITY

None of the samples included in this evaluation had high analyte concentrations and/or interferences forcing an initial sample dilution to be performed. Therefore, non-detect sample data are not impacted by a decrease in sensitivity and elevated detection limits that accompany diluted samples. The laboratory reported target analytes to the Method Detection Level (MDL) to achieve maximum sensitivity and to meet as many of the Region IX preliminary remediation goals and data quality objectives detailed in the project QAPP as possible. Analytes detected above the MDL but below the Method Reporting Limit (MRL) are "J" qualified to indicate the result is estimated and does have less certainty than a result greater than the MRL.

4.5 DATA COMPLETENESS

Evaluation of this data set resulted in the rejection of one SVOC analyte in all 17 samples, and one metals compound in 4 of the 17 samples. The SVOC analyte, benzoic acid, was qualified as "R" rejected because of low biased LCS recoveries for the analyte in all the LCS' associated with all 14 groundwater samples and all 4 field QC samples. The selenium results for 4 samples were rejected ("R") due to a low biased MS/MSD recovery. The completeness for all other analytes was found to be 100%.

ATTACHMENT 1

SAMPLE INFORMATION TABLES

ATTACHMENT 2

TEST RESULT TABLES WITH REVIEW QUALIFIERS APPLIED

ATTACHMENT 1

SAMPLE INFORMATION TABLES

Plum Brook Acid Areas 2 and 3 Round 1 Groundwater Sample Tracking Report

Sample Date	Sample Time	Location	Field Sample ID	Lab Sample_id	Sample Type	SDG	Method(s)
1/21/2005	16:45	AA3-GW-002	PBOW-05-GW-AA3-GW002-01A	0501263-01A	N1	0501263-ecen	SW8260B
1/21/2005	16:45	AA3-GW-002	PBOW-05-GW-AA3-GW002-01A	0501263-01B	N1	0501263-ecen	SW6010B, SW7470A
1/21/2005	16:45	AA3-GW-002	PBOW-05-GW-AA3-GW002-01A	0501263-01C	N1	0501263-ecen	E130.2, SW6010B, SW7470A
1/21/2005	16:45	AA3-GW-002	PBOW-05-GW-AA3-GW002-01A	0501263-01D	N1	0501263-ecen	SW9012
1/21/2005	16:45	AA3-GW-002	PBOW-05-GW-AA3-GW002-01A	0501263-01E	N1	0501263-ecen	E160.1, E160.2, E180.1, E300, E310.1
1/21/2005	16:45	AA3-GW-002	PBOW-05-GW-AA3-GW002-01A	0501263-01F	N1	0501263-ecen	SW9060
1/21/2005	16:45	AA3-GW-002	PBOW-05-GW-AA3-GW002-01A	0501263-01G	N1	0501263-ecen	SW8082, SW8270C, SW8330
1/21/2005	18:14	FIELDQC	PBOW-05-TB012105	0501263-02A	TB1	0501263-ecen	SW8260B
1/23/2005	11:50	AA3-BEDGW-001	PBOW-05-GW-AA3-BEDGW001-01A	0501276-01A	N1	0501276-ecen	SW8260B
1/23/2005	11:50	AA3-BEDGW-001	PBOW-05-GW-AA3-BEDGW001-01A	0501276-01B	N1	0501276-ecen	SW9060
1/23/2005	11:50	AA3-BEDGW-001	PBOW-05-GW-AA3-BEDGW001-01A	0501276-01C	N1	0501276-ecen	SW6010B, SW7470A
1/23/2005	11:50	AA3-BEDGW-001	PBOW-05-GW-AA3-BEDGW001-01A	0501276-01D	N1	0501276-ecen	E130.2, SW6010B, SW7470A
1/23/2005	11:50	AA3-BEDGW-001	PBOW-05-GW-AA3-BEDGW001-01A	0501276-01E	N1	0501276-ecen	E160.1, E160.2, E180.1, E300, E310.1
1/23/2005	11:50	AA3-BEDGW-001	PBOW-05-GW-AA3-BEDGW001-01A	0501276-01F	N1	0501276-ecen	SW9012
1/23/2005	11:50	AA3-BEDGW-001	PBOW-05-GW-AA3-BEDGW001-01A	0501276-01G	N1	0501276-ecen	SW8270C
1/23/2005	11:50	AA3-BEDGW-001	PBOW-05-GW-AA3-BEDGW001-01A	0501276-01H	N1	0501276-ecen	SW8082, SW8330
1/23/2005	11:50	FIELDQC	PBOW-05-TB-012305-01	0501276-04A	TB1	0501276-ecen	SW8260B
1/24/2005	15:30	MK-MW09	PBOW-05-GW-AA2-MKMW09-01A	0501276-02A	N1	0501276-ecen	SW8260B
1/24/2005	15:30	MK-MW09	PBOW-05-GW-AA2-MKMW09-01A	0501276-02B	N1	0501276-ecen	SW9060
1/24/2005	15:30	MK-MW09	PBOW-05-GW-AA2-MKMW09-01A	0501276-02C	N1	0501276-ecen	SW6010B, SW7470A
1/24/2005	15:30	MK-MW09	PBOW-05-GW-AA2-MKMW09-01A	0501276-02D	N1	0501276-ecen	E130.2, SW6010B, SW7470A
1/24/2005	15:30	MK-MW09	PBOW-05-GW-AA2-MKMW09-01A	0501276-02E	N1	0501276-ecen	E160.1, E160.2, E180.1, E300, E310.1
1/24/2005	15:30	MK-MW09	PBOW-05-GW-AA2-MKMW09-01A	0501276-02F	N1	0501276-ecen	SW9012
1/24/2005	15:30	MK-MW09	PBOW-05-GW-AA2-MKMW09-01A	0501276-02G	N1	0501276-ecen	SW8270C
1/24/2005	15:30	MK-MW09	PBOW-05-GW-AA2-MKMW09-01A	0501276-02H	N1	0501276-ecen	SW8082, SW8330
1/24/2005	16:05	PB-BED-MW19	PBOW-05-GW-PB-BEDMW19-01A	0501276-03ADL	N1	0501276-ecen	SW8260B
1/24/2005	16:05	PB-BED-MW19	PBOW-05-GW-PB-BEDMW19-01A	0501276-03A	N1	0501276-ecen	SW8260B
1/24/2005	16:05	PB-BED-MW19	PBOW-05-GW-PB-BEDMW19-01A	0501276-03B	N1	0501276-ecen	SW9060
1/24/2005	16:05	PB-BED-MW19	PBOW-05-GW-PB-BEDMW19-01A	0501276-03C	N1	0501276-ecen	SW6010B, SW7470A
1/24/2005	16:05	PB-BED-MW19	PBOW-05-GW-PB-BEDMW19-01A	0501276-03D	N1	0501276-ecen	E130.2, SW6010B, SW7470A
1/24/2005	16:05	PB-BED-MW19	PBOW-05-GW-PB-BEDMW19-01A	0501276-03E	N1	0501276-ecen	E160.1, E160.2, E180.1, E300, E310.1
1/24/2005	16:05	PB-BED-MW19	PBOW-05-GW-PB-BEDMW19-01A	0501276-03F	N1	0501276-ecen	SW9012
1/24/2005	16:05	PB-BED-MW19	PBOW-05-GW-PB-BEDMW19-01A	0501276-03G	N1	0501276-ecen	SW8270C
1/24/2005	16:05	PB-BED-MW19	PBOW-05-GW-PB-BEDMW19-01A	0501276-03H	N1	0501276-ecen	SW8082, SW8330
1/25/2005	14:50	AA3-BEDGW-002	PBOW-05-GW-AA3-BEDGW002-01A	0501293-03A	N1	0501293-ecen	SW8260B
1/25/2005	14:50	AA3-BEDGW-002	PBOW-05-GW-AA3-BEDGW002-01A	0501293-03B	N1	0501293-ecen	SW8082, SW8270C, SW8330
1/25/2005	14:50	AA3-BEDGW-002	PBOW-05-GW-AA3-BEDGW002-01A	0501293-03C	N1	0501293-ecen	SW6010B, SW7470A
1/25/2005	14:50	AA3-BEDGW-002	PBOW-05-GW-AA3-BEDGW002-01A	0501293-03D	N1	0501293-ecen	E130.2, SW6010B, SW7470A
1/25/2005	14:50	AA3-BEDGW-002	PBOW-05-GW-AA3-BEDGW002-01A	0501293-03E	N1	0501293-ecen	E160.1, E160.2, E180.1, E300, E310.1
1/25/2005	14:50	AA3-BEDGW-002	PBOW-05-GW-AA3-BEDGW002-01A	0501293-03F	N1	0501293-ecen	SW9012
1/25/2005	14:50	AA3-BEDGW-002	PBOW-05-GW-AA3-BEDGW002-01A	0501293-03G	N1	0501293-ecen	SW9060
1/25/2005	15:40	AA3-GW-003	PBOW-05-GW-AA3-GW003-01A	0501293-01A	N1	0501293-ecen	SW8260B

Plum Brook Acid Areas 2 and 3 Round 1 Groundwater Sample Tracking Report

Sample Date	Sample Time	Location	Field Sample ID	Lab Sample_id	Sample Type	SDG	Method(s)
1/25/2005	15:40	AA3-GW-003	PBOW-05-GW-AA3-GW003-01A	0501293-01B	N1	0501293-ecen	SW8082, SW8270C, SW8330
1/25/2005	15:40	AA3-GW-003	PBOW-05-GW-AA3-GW003-01A	0501293-01C	N1	0501293-ecen	SW6010B, SW7470A
1/25/2005	15:40	AA3-GW-003	PBOW-05-GW-AA3-GW003-01A	0501293-01D	N1	0501293-ecen	E130.2, SW6010B, SW7470A
1/25/2005	15:40	AA3-GW-003	PBOW-05-GW-AA3-GW003-01A	0501293-01E	N1	0501293-ecen	E160.1, E160.2, E180.1, E300, E310.1
1/25/2005	15:40	AA3-GW-003	PBOW-05-GW-AA3-GW003-01A	0501293-01F	N1	0501293-ecen	SW9012
1/25/2005	15:40	AA3-GW-003	PBOW-05-GW-AA3-GW003-01A	0501293-01G	N1	0501293-ecen	SW9060
1/25/2005	15:40	AA3-GW-003	PBOW-05-GW-AA3-GW003-01D	0501293-02A	FD1	0501293-ecen	SW8260B
1/25/2005	15:40	AA3-GW-003	PBOW-05-GW-AA3-GW003-01D	0501293-02B	FD1	0501293-ecen	SW8082, SW8270C, SW8330
1/25/2005	15:40	AA3-GW-003	PBOW-05-GW-AA3-GW003-01D	0501293-02C	FD1	0501293-ecen	SW6010B, SW7470A
1/25/2005	15:40	AA3-GW-003	PBOW-05-GW-AA3-GW003-01D	0501293-02D	FD1	0501293-ecen	E130.2, SW6010B, SW7470A
1/25/2005	15:40	AA3-GW-003	PBOW-05-GW-AA3-GW003-01D	0501293-02F	FD1	0501293-ecen	SW9012
1/25/2005	14:50	FIELDQC	PBOW-05-TB-012505-01	0501293-05A	TB1	0501293-ecen	SW8260B
1/26/2005	16:20	AA2-GW-002	PBOW-05-GW-AA2-GW002-01A	0501293-04A	N1	0501293-ecen	SW8260B
1/26/2005	16:20	AA2-GW-002	PBOW-05-GW-AA2-GW002-01A	0501293-04B	N1	0501293-ecen	SW8082, SW8270C, SW8330
1/26/2005	16:20	AA2-GW-002	PBOW-05-GW-AA2-GW002-01A	0501293-04C	N1	0501293-ecen	SW6010B, SW7470A
1/26/2005	16:20	AA2-GW-002	PBOW-05-GW-AA2-GW002-01A	0501293-04D	N1	0501293-ecen	E130.2, SW6010B, SW7470A
1/26/2005	16:20	AA2-GW-002	PBOW-05-GW-AA2-GW002-01A	0501293-04E	N1	0501293-ecen	E160.1, E160.2, E180.1, E300, E310.1
1/26/2005	16:20	AA2-GW-002	PBOW-05-GW-AA2-GW002-01A	0501293-04F	N1	0501293-ecen	SW9012
1/26/2005	16:20	AA2-GW-002	PBOW-05-GW-AA2-GW002-01A	0501293-04G	N1	0501293-ecen	SW9060
1/27/2005	12:50	AA2-BEDGW-001	PBOW-05-GW-AA2-BEDGW001-01A	0501297-02A	N1	0501297-ecen	SW8260B
1/27/2005	12:50	AA2-BEDGW-001	PBOW-05-GW-AA2-BEDGW001-01A	0501297-02B	N1	0501297-ecen	SW9060
1/27/2005	12:50	AA2-BEDGW-001	PBOW-05-GW-AA2-BEDGW001-01A	0501297-02C	N1	0501297-ecen	SW8082, SW8270C, SW8330
1/27/2005	12:50	AA2-BEDGW-001	PBOW-05-GW-AA2-BEDGW001-01A	0501297-02D	N1	0501297-ecen	E160.1, E160.2, E180.1, E300, E310.1
1/27/2005	12:50	AA2-BEDGW-001	PBOW-05-GW-AA2-BEDGW001-01A	0501297-02E	N1	0501297-ecen	SW9012
1/27/2005	12:50	AA2-BEDGW-001	PBOW-05-GW-AA2-BEDGW001-01A	0501297-02F	N1	0501297-ecen	E130.2, SW6010B, SW7470A
1/27/2005	12:50	AA2-BEDGW-001	PBOW-05-GW-AA2-BEDGW001-01A	0501297-02G	N1	0501297-ecen	SW6010B, SW7470A
1/27/2005	13:40	AA3-GW005	PBOW-05-GW-AA3-GW005-01A	0501297-01A	N1	0501297-ecen	SW8260B
1/27/2005	13:40	AA3-GW005	PBOW-05-GW-AA3-GW005-01A	0501297-01B	N1	0501297-ecen	SW9060
1/27/2005	13:40	AA3-GW005	PBOW-05-GW-AA3-GW005-01A	0501297-01C	N1	0501297-ecen	SW8082, SW8270C, SW8330
1/27/2005	13:40	AA3-GW005	PBOW-05-GW-AA3-GW005-01A	0501297-01D	N1	0501297-ecen	E160.1, E160.2, E180.1, E300, E310.1
1/27/2005	13:40	AA3-GW005	PBOW-05-GW-AA3-GW005-01A	0501297-01E	N1	0501297-ecen	SW9012
1/27/2005	13:40	AA3-GW005	PBOW-05-GW-AA3-GW005-01A	0501297-01F	N1	0501297-ecen	E130.2, SW6010B, SW7470A
1/27/2005	13:40	AA3-GW005	PBOW-05-GW-AA3-GW005-01A	0501297-01G	N1	0501297-ecen	SW6010B, SW7470A
1/27/2005	12:30	FIELDQC	PBOW-05-TB-012705-01	0501297-03A	TB1	0501297-ecen	SW8260B
1/28/2005	11:00	FIELDQC	PBOW-05-GW-AA2-BEDGW001-01C	0501303-01A	EB1	0501303-ecen	SW8082, SW8270C, SW8330
1/28/2005	11:00	FIELDQC	PBOW-05-GW-AA2-BEDGW001-01C	0501303-01B	EB1	0501303-ecen	SW6010B
1/28/2005	11:00	FIELDQC	PBOW-05-GW-AA2-BEDGW001-01C	0501303-01BRE	EB1	0501303-ecen	SW7470A
1/28/2005	11:00	FIELDQC	PBOW-05-GW-AA2-BEDGW001-01C	0501303-01C	EB1	0501303-ecen	SW9012
1/28/2005	11:00	FIELDQC	PBOW-05-GW-AA2-BEDMW001-01C	0502001-02A	EB1	0502001-ecen	SW8260B
1/28/2005	11:45	FIELDQC	PBOW-05-GW-AA3-GW005-01C	0501303-02A	EB1	0501303-ecen	SW8082, SW8270C, SW8330
1/28/2005	11:45	FIELDQC	PBOW-05-GW-AA3-GW005-01C	0501303-02B	EB1	0501303-ecen	SW6010B
1/28/2005	11:45	FIELDQC	PBOW-05-GW-AA3-GW005-01C	0501303-02BRE	EB1	0501303-ecen	SW7470A

Plum Brook Acid Areas 2 and 3 Rou... Groundwater Sample Tracking Report

Sample Date	Sample Time	Location	Field Sample ID	Lab Sample_id	Sample Type	SDG	Method(s)
1/28/2005	11:45	FIELDQC	PBOW-05-GW-AA3-GW005-01C	0501303-02C	EB1	0501303-ecen	SW9012
1/28/2005	11:45	FIELDQC	PBOW-05-GW-AA3-GW005-01C	0502001-03A	EB1	0502001-ecen	SW8260B
1/28/2005	16:27	FIELDQC	PBOW-05-TB-012805-01	0502001-01A	TB1	0502001-ecen	SW8260B
1/30/2005	14:00	AA3-BEDGW-003	PBOW-05-GW-AA3-BEDMW003-01A	0502001-04ADL	N1	0502001-ecen	SW8260B
1/30/2005	14:00	AA3-BEDGW-003	PBOW-05-GW-AA3-BEDMW003-01A	0502001-04A	N1	0502001-ecen	SW8260B
1/30/2005	14:00	AA3-BEDGW-003	PBOW-05-GW-AA3-BEDMW003-01A	0502001-04B	N1	0502001-ecen	SW8082, SW8270C, SW8330
1/30/2005	14:00	AA3-BEDGW-003	PBOW-05-GW-AA3-BEDMW003-01A	0502001-04C	N1	0502001-ecen	SW6010B
1/30/2005	14:00	AA3-BEDGW-003	PBOW-05-GW-AA3-BEDMW003-01A	0502001-04CRE	N1	0502001-ecen	SW7470A
1/30/2005	14:00	AA3-BEDGW-003	PBOW-05-GW-AA3-BEDMW003-01A	0502001-04D	N1	0502001-ecen	E130.2, SW6010B
1/30/2005	14:00	AA3-BEDGW-003	PBOW-05-GW-AA3-BEDMW003-01A	0502001-04DRE	N1	0502001-ecen	SW7470A
1/30/2005	14:00	AA3-BEDGW-003	PBOW-05-GW-AA3-BEDMW003-01A	0502001-04E	N1	0502001-ecen	SW9012
1/30/2005	14:00	AA3-BEDGW-003	PBOW-05-GW-AA3-BEDMW003-01A	0502001-04F	N1	0502001-ecen	E160.1, E160.2, E180.1, E300, E310.1
1/30/2005	14:00	AA3-BEDGW-003	PBOW-05-GW-AA3-BEDMW003-01A	0502001-04G	N1	0502001-ecen	SW9060
1/30/2005	14:00	AA3-BEDGW-003	PBOW-05-GW-AA3-BEDMW003-01D	0502001-05ADL	FD1	0502001-ecen	SW8260B
1/30/2005	14:00	AA3-BEDGW-003	PBOW-05-GW-AA3-BEDMW003-01D	0502001-05A	FD1	0502001-ecen	SW8260B
1/30/2005	14:00	AA3-BEDGW-003	PBOW-05-GW-AA3-BEDMW003-01D	0502001-05B	FD1	0502001-ecen	SW8082, SW8270C, SW8330
1/30/2005	14:00	AA3-BEDGW-003	PBOW-05-GW-AA3-BEDMW003-01D	0502001-05C	FD1	0502001-ecen	SW6010B
1/30/2005	14:00	AA3-BEDGW-003	PBOW-05-GW-AA3-BEDMW003-01D	0502001-05CRE	FD1	0502001-ecen	SW7470A
1/30/2005	14:00	AA3-BEDGW-003	PBOW-05-GW-AA3-BEDMW003-01D	0502001-05D	FD1	0502001-ecen	E130.2, SW6010B
1/30/2005	14:00	AA3-BEDGW-003	PBOW-05-GW-AA3-BEDMW003-01D	0502001-05DRE	FD1	0502001-ecen	SW7470A
1/30/2005	14:00	AA3-BEDGW-003	PBOW-05-GW-AA3-BEDMW003-01D	0502001-05E	FD1	0502001-ecen	SW9012
1/30/2005	13:40	AA3-GW-004	PBOW-05-GW-AA3-GW004-01A	0502001-06A	N1	0502001-ecen	SW8260B
1/30/2005	13:40	AA3-GW-004	PBOW-05-GW-AA3-GW004-01A	0502001-06B	N1	0502001-ecen	SW8082, SW8270C, SW8330
1/30/2005	13:40	AA3-GW-004	PBOW-05-GW-AA3-GW004-01A	0502001-06C	N1	0502001-ecen	SW6010B
1/30/2005	13:40	AA3-GW-004	PBOW-05-GW-AA3-GW004-01A	0502001-06CRE	N1	0502001-ecen	SW7470A
1/30/2005	13:40	AA3-GW-004	PBOW-05-GW-AA3-GW004-01A	0502001-06D	N1	0502001-ecen	E130.2, SW6010B
1/30/2005	13:40	AA3-GW-004	PBOW-05-GW-AA3-GW004-01A	0502001-06DRE	N1	0502001-ecen	SW7470A
1/30/2005	13:40	AA3-GW-004	PBOW-05-GW-AA3-GW004-01A	0502001-06E	N1	0502001-ecen	SW9012
1/30/2005	13:40	AA3-GW-004	PBOW-05-GW-AA3-GW004-01A	0502001-06F	N1	0502001-ecen	E160.1, E160.2, E180.1, E300, E310.1
1/30/2005	13:40	AA3-GW-004	PBOW-05-GW-AA3-GW004-01A	0502001-06G	N1	0502001-ecen	SW9060
2/1/2005	11:30	IT-MW10	PBOW-05-GW-AA2-ITMW10-01A	0502002-01A	N1	0502002-ecen	SW9060
2/1/2005	11:30	IT-MW10	PBOW-05-GW-AA2-ITMW10-01A	0502002-01B	N1	0502002-ecen	SW8082, SW8270C, SW8330
2/1/2005	11:30	IT-MW10	PBOW-05-GW-AA2-ITMW10-01A	0502002-01C	N1	0502002-ecen	E130.2, SW6010B
2/1/2005	11:30	IT-MW10	PBOW-05-GW-AA2-ITMW10-01A	0502002-01CRE	N1	0502002-ecen	SW7470A
2/1/2005	11:30	IT-MW10	PBOW-05-GW-AA2-ITMW10-01A	0502002-01D	N1	0502002-ecen	SW6010B
2/1/2005	11:30	IT-MW10	PBOW-05-GW-AA2-ITMW10-01A	0502002-01DRE	N1	0502002-ecen	SW7470A
2/1/2005	11:30	IT-MW10	PBOW-05-GW-AA2-ITMW10-01A	0502002-01E	N1	0502002-ecen	SW9012
2/1/2005	11:30	IT-MW10	PBOW-05-GW-AA2-ITMW10-01A	0502002-01F	N1	0502002-ecen	E160.1, E160.2, E180.1, E300, E310.1
2/1/2005	11:30	IT-MW10	PBOW-05-GW-AA2-ITMW10-01A	0502004-01A	N1	0502004-ecen	SW8260B
2/2/2005	14:00	FIELDQC	PBOW-05-TB-020205-01	0502004-02A	TB1	0502004-ecen	SW8260B

ATTACHMENT 2

TEST RESULT TABLES WITH REVIEW QUALIFIERS APPLIED

METHOD	ANALYTE	SAMP. NUM. / DATE / UNITS	PBOW-05-GW-AA2-BEDGW001-01A 1/27/2005 RESULT / QUAL	PBOW-05-GW-AA2-GW002-01A 1/26/2005 RESULT / QUAL	PBOW-05-GW-AA3-BEDGW001-01A 1/23/2005 RESULT / QUAL	PBOW-05-GW-AA3-BEDGW002-01A 1/25/2005 RESULT / QUAL
	Wet Chemistry					
E310.1	Alkalinity, Total (as CaCO3)	mg/L	590/=	250/=	730/=	320/=
E300	Chloride (as Cl)	mg/L	42.4/= /J	6.79/=	323/= /J	16.1/=
SW9012	Cyanide	mg/L	0.0070 ND/UJ	0.0070 ND/UJ	0.0268/= /J	0.0070 ND/UJ
E130.2	Hardness (as CACO3)	mg/L	669/=	589/=	737/=	480/=
E300	Nitrogen, Nitrate (as N)	mg/L	0.143/=	0.0760 TR/BJ	0.225/=	0.1300 =/B
E300	Sulfate (as SO4)	mg/L	6.41/= /J	131/=	1.21/=	7.15/=
E160.2	Suspended Solids (residue, Non-filterable)	mg/L	4.0 ND/U	4.0 ND/U	4.0 ND/U	4.0 ND/U
E160.1	Total Dissolved Solids	mg/L	680/=	480/=	1300/=	380/=
SW9060	Total Organic Carbon	mg/L	1.49/=	2.66/=	2.72/=	1.88/=
E180.1	Turbidity		30.6/=	1.64/=	41.8/=	1.64/=
	Explosives					
SW8330	1,3,5-Trinitrobenzene	ug/L	0.0480 ND/U	0.0471 ND/U	0.0475 ND/U	0.0471 ND/U
SW8330	1,3-Dinitrobenzene	ug/L	0.0651 ND/U	0.0639 ND/U	0.0645 ND/U	0.0639 ND/U
SW8330	2,4,6-Trinitrotoluene	ug/L	0.139 ND/U	0.137 ND/U	0.138 ND/U	0.137 ND/U
SW8330	2,4-Dinitrotoluene	ug/L	0.104 ND/U	0.102 ND/U	0.103 ND/U	0.102 ND/U
SW8330	2,6-Dinitrotoluene	ug/L	0.195 ND/U	0.192 ND/U	0.193 ND/U	0.192 ND/U
SW8330	2-Amino-4,6-Dinitrotoluene	ug/L	0.102 ND/UJ	0.100 ND/UJ	0.101 ND/UJ	0.100 ND/UJ
SW8330	2-Nitrotoluene	ug/L	0.200 ND/U	0.196 ND/U	0.198 ND/U	0.196 ND/U
SW8330	3-Nitrotoluene	ug/L	0.368 ND/U	0.361 ND/U	0.365 ND/U	0.361 ND/U
SW8330	4-Amino-2,6-Dinitrotoluene	ug/L	0.208 ND/U	0.204 ND/U	0.206 ND/U	0.204 ND/U
SW8330	4-Nitrotoluene	ug/L	0.181 ND/U	0.177 ND/U	0.179 ND/U	0.177 ND/U
SW8330	HMX	ug/L	0.0683 ND/U	0.0670 ND/U	0.0676 ND/U	0.0670 ND/U
SW8330	Nitrobenzene	ug/L	0.108 ND/U	0.106 ND/U	0.107 ND/U	0.106 ND/U
SW8330	RDX	ug/L	0.0838 ND/U	0.0822 ND/U	0.0830 ND/U	0.0822 ND/U
SW8330	Tetryl	ug/L	0.205 ND/U	0.201 ND/UJ	0.203 ND/UJ	0.201 ND/UJ
	Metals					
SW6010B	Aluminum	ug/L	45.4 ND/U	45.4 ND/U	45.4 ND/U	45.4 ND/U
SW6010B	Aluminum (total)	ug/L	45.4 ND/U	45.4 ND/U	45.4 ND/U	45.4 ND/U
SW6010B	Antimony	ug/L	8.16 ND/U	8.16 ND/U	8.16 ND/U	8.16 ND/U
SW6010B	Antimony (total)	ug/L	8.16 ND/U	8.16 ND/U	8.16 ND/U	8.16 ND/U
SW6010B	Arsenic	ug/L	7.04/TR/J	4.59 ND/U	4.59 ND/U	4.59 ND/U
SW6010B	Arsenic (total)	ug/L	7.95/TR/J	4.59 ND/U	4.59 ND/U	4.59 ND/U
SW6010B	Barium	ug/L	280/=	25.2/=	76.2/=	187/=
SW6010B	Barium (total)	ug/L	275/=	25.9/=	74.4/=	194/=
SW6010B	Beryllium	ug/L	0.109 ND/U	0.109 ND/U	0.109 ND/U	0.109 ND/U
SW6010B	Beryllium (total)	ug/L	0.109 ND/U	0.156/TR/J	0.109 ND/U	0.109 ND/U
SW6010B	Cadmium	ug/L	0.713 ND/U	0.713 ND/U	0.713 ND/U	0.713 ND/U
SW6010B	Cadmium (total)	ug/L	0.713 ND/U	0.713 ND/U	0.713 ND/U	0.713 ND/U
SW6010B	Calcium	ug/L	88800/=	106000/=	109000/=	57500/=
SW6010B	Calcium (total)	ug/L	85100/=	109000/=	108000/=	59000/=
SW6010B	Chromium	ug/L	0.236 ND/U	0.652 TR/BJ	0.236 ND/U	0.309 TR/BJ
SW6010B	Chromium (total)	ug/L	0.994 TR/BJ	0.770/TR/BJ	1.10 TR/BJ	0.295 TR/BJ
SW6010B	Cobalt	ug/L	2.05 TR/BJ	1.85 TR/BJ	1.13/TR/J	0.898 ND/U

METHOD	ANALYTE	SAMP. NUM. DATE UNITS	PBOW-05-GW-AA2-BEDGW001-01A 1/27/2005 RESULT / QUAL	PBOW-05-GW-AA2-GW002-01A 1/26/2005 RESULT / QUAL	PBOW-05-GW-AA3-BEDGW001-01A 1/23/2005 RESULT / QUAL	PBOW-05-GW-AA3-BEDGW002-01A 1/25/2005 RESULT / QUAL
SW6010B	Cobalt (total)	ug/L	1.21/TR/J	1.53/TR/J	0.898 ND/U	0.898 ND/U
SW6010B	Copper	ug/L	2.55 ND/U	4.09/TR/J	2.55 ND/U	2.55 ND/U
SW6010B	Copper (total)	ug/L	2.55 ND/U	3.10/TR/J	2.55 ND/U	2.55 ND/U
SW6010B	Iron	ug/L	131/TR/J	29.8/TR/J	22.9 ND/U	22.9 ND/U
SW6010B	Iron (total)	ug/L	913/=	49.8 TR/BJ	22.9 ND/U	22.9 ND/U
SW6010B	Lead	ug/L	2.44 ND/U	2.44 ND/U	2.44 ND/U	2.44 ND/U
SW6010B	Lead (total)	ug/L	2.44 ND/U	2.44 ND/U	2.44 ND/U	2.44 ND/U
SW6010B	Magnesium	ug/L	53500/=	31600/=	68700/=	30400/=
SW6010B	Magnesium (total)	ug/L	50600/=	32400/=	67800/=	31500/=
SW6010B	Manganese	ug/L	93.8/=	0.419 ND/U	13.4/=	12.9/=
SW6010B	Manganese (total)	ug/L	90.6/=	0.419 ND/U	11.8/=	13.3/=
SW7470A	Mercury	ug/L	0.0584 ND/U	0.0584 ND/U	0.0584 ND/U	0.0584 ND/U
SW7470A	Mercury (total)	ug/L	0.0584 ND/U	0.0584 ND/U	0.0584 ND/U	0.0584 ND/U
SW6010B	Nickel	ug/L	1.60 TR/BJ	0.816 TR/BJ	0.745 ND/U	0.745 ND/U
SW6010B	Nickel (total)	ug/L	0.745 ND/U	0.950 TR/BJ	0.745 ND/U	0.745 ND/U
SW6010B	Potassium	ug/L	26900/=	175 ND/U	37100/=	11100/=
SW6010B	Potassium (total)	ug/L	25800/=	277/TR/J	36200/=	11400/=
SW6010B	Selenium	ug/L	11.1 ND/UJ	11.1 ND/UJ	11.1 ND/UJ	11.1 ND/UJ
SW6010B	Selenium (total)	ug/L	11.1 ND/UJ	11.1 ND/UJ	11.1 ND/UJ	11.1 ND/UJ
SW6010B	Silver	ug/L	1.30 ND/U	1.30 ND/U	1.30 ND/U	1.30 ND/U
SW6010B	Silver (total)	ug/L	1.30 ND/U	1.30 ND/U	1.30 ND/U	1.30 ND/U
SW6010B	Sodium	ug/L	90200/=	13900/=	260000/=	41600/=
SW6010B	Sodium (total)	ug/L	91600/=	14700/=	260000/=	43600/=
SW6010B	Thallium	ug/L	14.1 ND/U	14.1 ND/U	14.1 ND/U	14.1 ND/U
SW6010B	Thallium (total)	ug/L	14.1 ND/U	14.1 ND/U	14.1 ND/U	14.1 ND/U
SW6010B	Vanadium	ug/L	2.14 ND/U	2.14 ND/U	2.14 ND/U	2.14 ND/U
SW6010B	Vanadium (total)	ug/L	2.14 ND/U	2.14 ND/U	2.14 ND/U	2.14 ND/U
SW6010B	Zinc	ug/L	1.46 ND/U	20.4/=	1.46 ND/U	1.46 ND/U
SW6010B	Zinc (total)	ug/L	19.1/TR/J	22.8/=	1.46 ND/U	1.46 ND/U
	Polychlorinated Biphenyls (PCBs)					
SW8082	PCB-1016 (Aroclor 1016)	ug/L	0.635 ND/U	0.629 ND/U	0.629 ND/U	0.635 ND/U
SW8082	PCB-1221 (Aroclor 1221)	ug/L	1.89 ND/U	1.87 ND/U	1.87 ND/U	1.89 ND/U
SW8082	PCB-1232 (Aroclor 1232)	ug/L	0.919 ND/U	0.910 ND/U	0.910 ND/U	0.919 ND/U
SW8082	PCB-1242 (Aroclor 1242)	ug/L	1.40 ND/U	1.38 ND/U	1.38 ND/U	1.40 ND/U
SW8082	PCB-1248 (Aroclor 1248)	ug/L	1.88 ND/U	1.86 ND/U	1.86 ND/U	1.88 ND/U
SW8082	PCB-1254 (Aroclor 1254)	ug/L	0.281 ND/U	0.279 ND/U	0.279 ND/U	0.281 ND/U
SW8082	PCB-1260 (Aroclor 1260)	ug/L	0.285 ND/U	0.282 ND/U	0.282 ND/U	0.285 ND/U
	Semivolatile Organic Compounds					
SW8270C	1,2,4-Trichlorobenzene	ug/L	1.74 ND/U	1.72 ND/U	1.72 ND/U	1.74 ND/U
SW8270C	1,2-Dichlorobenzene	ug/L	1.82 ND/U	1.80 ND/U	1.80 ND/U	1.82 ND/U
SW8270C	1,3-Dichlorobenzene	ug/L	1.63 ND/U	1.62 ND/U	1.62 ND/U	1.63 ND/U
SW8270C	1,4-Dichlorobenzene	ug/L	1.79 ND/U	1.78 ND/U	1.78 ND/U	1.79 ND/U
SW8270C	2,4,5-Trichlorophenol	ug/L	5.39 ND/U	5.34 ND/U	5.34 ND/U	5.39 ND/U
SW8270C	2,4,6-Trichlorophenol	ug/L	4.61 ND/U	4.57 ND/U	4.57 ND/U	4.61 ND/U

METHOD	ANALYTE	SAMP. NUM. DATE UNITS	PBOW-05-GW-AA2-BEDGW001-01A 1/27/2005 RESULT / QUAL	PBOW-05-GW-AA2-GW002-01A 1/26/2005 RESULT / QUAL	PBOW-05-GW-AA3-BEDGW001-01A 1/23/2005 RESULT / QUAL	PBOW-05-GW-AA3-BEDGW002-01A 1/25/2005 RESULT / QUAL
SW8270C	2,4-Dichlorophenol	ug/L	4.42 ND/U	4.38 ND/U	4.38 ND/U	4.42 ND/U
SW8270C	2,4-Dimethylphenol	ug/L	4.48 ND/UJ	4.44 ND/UJ	4.44 ND/UJ	4.48 ND/UJ
SW8270C	2,4-Dinitrophenol	ug/L	4.64 ND/U	4.60 ND/U	4.60 ND/U	4.64 ND/U
SW8270C	2,4-Dinitrotoluene	ug/L	2.44 ND/U	2.42 ND/U	2.42 ND/U	2.44 ND/U
SW8270C	2,6-Dinitrotoluene	ug/L	2.28 ND/U	2.26 ND/U	2.26 ND/U	2.28 ND/U
SW8270C	2-Chloronaphthalene	ug/L	2.82 ND/U	2.79 ND/U	2.79 ND/U	2.82 ND/U
SW8270C	2-Chlorophenol	ug/L	4.38 ND/U	4.34 ND/U	4.34 ND/U	4.38 ND/U
SW8270C	2-Methylnaphthalene	ug/L	2.08 ND/U	2.06 ND/U	2.06 ND/U	2.08 ND/U
SW8270C	2-Methylphenol (o-Cresol)	ug/L	4.18 ND/U	4.14 ND/U	4.14 ND/U	4.18 ND/U
SW8270C	2-Nitroaniline	ug/L	3.06 ND/U	3.03 ND/U	3.03 ND/U	3.06 ND/U
SW8270C	2-Nitrophenol	ug/L	4.05 ND/U	4.01 ND/U	4.01 ND/U	4.05 ND/U
SW8270C	3,3'-Dichlorobenzidine	ug/L	7.25 ND/U	7.19 ND/U	7.19 ND/U	7.25 ND/U
SW8270C	3-Nitroaniline	ug/L	3.10 ND/U	3.07 ND/U	3.07 ND/U	3.10 ND/U
SW8270C	4,6-Dinitro-2-methylphenol	ug/L	4.91 ND/U	4.86 ND/U	4.86 ND/U	4.91 ND/U
SW8270C	4-Bromophenyl phenyl ether	ug/L	3.16 ND/U	3.13 ND/U	3.13 ND/U	3.16 ND/U
SW8270C	4-Chloro-3-methylphenol	ug/L	4.49 ND/U	4.45 ND/U	4.45 ND/U	4.49 ND/U
SW8270C	4-Chloroaniline	ug/L	2.64 ND/UJ	2.62 ND/UJ	2.62 ND/U	2.64 ND/UJ
SW8270C	4-Chlorophenyl phenyl ether	ug/L	3.37 ND/U	3.34 ND/U	3.34 ND/U	3.37 ND/U
SW8270C	4-Methylphenol (p-Cresol)	ug/L	4.52 ND/U	4.48 ND/U	4.48 ND/U	4.52 ND/U
SW8270C	4-Nitroaniline	ug/L	3.31 ND/U	3.28 ND/U	3.28 ND/U	3.31 ND/U
SW8270C	4-Nitrophenol	ug/L	4.57 ND/U	4.52 ND/U	4.52 ND/U	4.57 ND/U
SW8270C	Acenaphthene	ug/L	0.665 ND/U	0.659 ND/U	0.659 ND/U	0.665 ND/U
SW8270C	Acenaphthylene	ug/L	0.592 ND/U	0.587 ND/U	0.587 ND/U	0.592 ND/U
SW8270C	Acetophenone	ug/L	2.23 ND/U	2.21 ND/U	2.21 ND/U	2.23 ND/U
SW8270C	Anthracene	ug/L	0.663 ND/U	0.657 ND/U	0.657 ND/U	0.663 ND/U
SW8270C	Atrazine	ug/L	2.33 ND/U	2.31 ND/U	2.31 ND/U	2.33 ND/U
SW8270C	Benzaldehyde	ug/L	2.36 ND/U	2.34 ND/U	2.34 ND/U	2.36 ND/U
SW8270C	Benzo(a)anthracene	ug/L	0.816 ND/U	0.808 ND/U	0.808 ND/U	0.816 ND/U
SW8270C	Benzo(a)pyrene	ug/L	0.730 ND/U	0.723 ND/U	0.723 ND/U	0.730 ND/U
SW8270C	Benzo(b)fluoranthene	ug/L	0.796 ND/U	0.789 ND/U	0.789 ND/U	0.796 ND/U
SW8270C	Benzo(g,h,i)perylene	ug/L	0.671 ND/U	0.664 ND/U	0.664 ND/U	0.671 ND/U
SW8270C	Benzo(k)fluoranthene	ug/L	0.701 ND/U	0.694 ND/U	0.694 ND/U	0.701 ND/U
SW8270C	Benzoic acid	ug/L	ND/R	ND/R	ND/R	ND/R
SW8270C	Benzyl alcohol	ug/L	2.65 ND/U	2.63 ND/U	2.63 ND/U	2.65 ND/U
SW8270C	Benzyl butyl phthalate	ug/L	2.91 ND/U	2.88 ND/U	2.88 ND/U	2.91 ND/U
SW8270C	Biphenyl (Diphenyl)	ug/L	2.17 ND/U	2.15 ND/U	2.15 ND/U	2.17 ND/U
SW8270C	Caprolactam	ug/L	2.46 ND/U	2.44 ND/U	2.44 ND/U	2.46 ND/U
SW8270C	Carbazole	ug/L	2.25 ND/U	2.23 ND/U	2.23 ND/U	2.25 ND/U
SW8270C	Chrysene	ug/L	0.808 ND/U	0.801 ND/U	0.801 ND/U	0.808 ND/U
SW8270C	Di-n-butylphthalate	ug/L	3.23 ND/U	3.20 ND/U	3.20 ND/U	3.23 ND/U
SW8270C	Di-n-octylphthalate	ug/L	2.68 ND/U	2.65 ND/U	2.65 ND/U	2.68 ND/U
SW8270C	Dibenz(a,h)anthracene	ug/L	0.717 ND/U	0.710 ND/U	0.710 ND/U	0.717 ND/U
SW8270C	Dibenzofuran	ug/L	2.34 ND/U	2.32 ND/U	2.32 ND/U	2.34 ND/U
SW8270C	Diethylphthalate	ug/L	2.39 ND/U	2.36 ND/U	2.36 ND/U	2.39 ND/U

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SW8270C	Dimethylphthalate	ug/L	3.19 ND/U	3.16 ND/U	3.16 ND/U	3.19 ND/U
SW8270C	Fluoranthene	ug/L	0.760 ND/U	0.753 ND/U	0.753 ND/U	0.760 ND/U
SW8270C	Fluorene	ug/L	0.754 ND/U	0.747 ND/U	0.747 ND/U	0.754 ND/U
SW8270C	Hexachlorobenzene	ug/L	2.51 ND/U	2.49 ND/U	2.49 ND/U	2.51 ND/U
SW8270C	Hexachlorobutadiene	ug/L	1.95 ND/U	1.93 ND/U	1.93 ND/U	1.95 ND/U
SW8270C	Hexachlorocyclopentadiene	ug/L	1.58 ND/UJ	1.56 ND/UJ	1.56 ND/UJ	1.58 ND/UJ
SW8270C	Hexachloroethane	ug/L	1.40 ND/U	1.38 ND/U	1.38 ND/U	1.40 ND/U
SW8270C	Indeno(1,2,3-cd)pyrene	ug/L	0.755 ND/U	0.748 ND/U	0.748 ND/U	0.755 ND/U
SW8270C	Isophorone	ug/L	2.07 ND/U	2.05 ND/U	2.05 ND/U	2.07 ND/U
SW8270C	N-Nitroso-di-n-propylamine	ug/L	3.16 ND/U	3.13 ND/U	3.13 ND/U	3.16 ND/U
SW8270C	N-Nitrosodimethylamine	ug/L	3.08 ND/U	3.06 ND/U	3.06 ND/U	3.08 ND/U
SW8270C	N-Nitrosodiphenylamine	ug/L	3.44 ND/U	3.41 ND/U	3.41 ND/U	3.44 ND/U
SW8270C	Naphthalene	ug/L	1.09/TR/J	0.540 ND/U	0.540 ND/U	0.545 ND/U
SW8270C	Nitrobenzene	ug/L	2.08 ND/U	2.07 ND/U	2.07 ND/U	2.08 ND/U
SW8270C	Pentachlorophenol	ug/L	5.42 ND/UJ	5.36 ND/UJ	5.36 ND/UJ	5.42 ND/UJ
SW8270C	Phenanthrene	ug/L	0.691 ND/U	0.684 ND/U	0.684 ND/U	0.691 ND/U
SW8270C	Phenol	ug/L	4.31 ND/U	4.27 ND/U	4.27 ND/U	4.31 ND/U
SW8270C	Pyrene	ug/L	0.730 ND/U	0.723 ND/U	0.723 ND/U	0.730 ND/U
SW8270C	bis(2-Chloroethoxy)methane	ug/L	2.67 ND/U	2.64 ND/U	2.64 ND/U	2.67 ND/U
SW8270C	bis(2-Chloroethyl)ether (2-Chloroethylether)	ug/L	2.46 ND/U	2.44 ND/U	2.44 ND/U	2.46 ND/U
SW8270C	bis(2-Chloroisopropyl)ether	ug/L	3.19 ND/U	3.16 ND/U	3.16 ND/U	3.19 ND/U
SW8270C	bis(2-Ethylhexyl)phthalate	ug/L	3.52 ND/U	3.49 ND/U	3.49 ND/U	3.52 ND/U
	Volatile Organic Compounds					
SW8260B	1,1,1-Trichloroethane	ug/L	0.123 ND/U	0.123 ND/U	0.123 ND/U	0.123 ND/U
SW8260B	1,1,2,2-Tetrachloroethane	ug/L	0.171 ND/U	0.171 ND/U	0.171 ND/U	0.171 ND/U
SW8260B	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/L	0.272 ND/U	0.272 ND/U	0.272 ND/U	0.272 ND/U
SW8260B	1,1,2-Trichloroethane	ug/L	0.139 ND/U	0.139 ND/U	0.139 ND/U	0.139 ND/U
SW8260B	1,1-Dichloroethane	ug/L	0.117 ND/U	0.117 ND/U	0.117 ND/U	0.117 ND/U
SW8260B	1,1-Dichloroethene	ug/L	0.137 ND/U	0.137 ND/U	0.137 ND/U	0.137 ND/U
SW8260B	1,2,3-Trichlorobenzene	ug/L	0.118 ND/UJ	0.118 ND/UJ	0.118 ND/U	0.118 ND/UJ
SW8260B	1,2,4-Trichlorobenzene	ug/L	0.145 ND/U	0.145 ND/U	0.145 ND/U	0.145 ND/U
SW8260B	1,2-Dibromo-3-chloropropane	ug/L	0.373 ND/U	0.373 ND/U	0.373 ND/U	0.373 ND/U
SW8260B	1,2-Dibromoethane (EDB)	ug/L	0.126 ND/U	0.126 ND/U	0.126 ND/U	0.126 ND/U
SW8260B	1,2-Dichlorobenzene	ug/L	0.0800 ND/U	0.0800 ND/U	0.0800 ND/U	0.0800 ND/U
SW8260B	1,2-Dichloroethane	ug/L	0.109 ND/U	0.109 ND/U	0.109 ND/U	0.109 ND/U
SW8260B	1,2-Dichloropropane	ug/L	0.0961 ND/U	0.0961 ND/U	0.0961 ND/U	0.0961 ND/U
SW8260B	1,3-Dichlorobenzene	ug/L	0.0933 ND/U	0.0933 ND/U	0.0933 ND/U	0.0933 ND/U
SW8260B	1,4-Dichlorobenzene	ug/L	0.101 ND/U	0.101 ND/U	0.101 ND/U	0.101 ND/U
SW8260B	2-Butanone (Methyl ethyl ketone)	ug/L	0.815 ND/U	0.815 ND/U	0.815 ND/U	0.815 ND/U
SW8260B	2-Hexanone	ug/L	0.187 ND/U	0.187 ND/U	0.187 ND/U	0.187 ND/U
SW8260B	4-Methyl-2-pentanone (Methyl isobutyl ketone	ug/L	0.393 ND/U	0.393 ND/U	0.393 ND/U	0.393 ND/U
SW8260B	Acetone	ug/L	1.73 ND/U	1.73 ND/UJ	1.73 ND/U	1.73 ND/UJ
SW8260B	Benzene	ug/L	0.439/TR/J	0.117/TR/J	0.763/TR/J	5.06/=
SW8260B	Bromochloromethane	ug/L	0.159 ND/U	0.159 ND/U	0.159 ND/U	0.159 ND/U

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SW8260B	Bromodichloromethane	ug/L	0.141 ND/U	0.141 ND/U	0.141 ND/U	0.141 ND/U
SW8260B	Bromoform	ug/L	0.0990 ND/U	0.0990 ND/U	0.0990 ND/U	0.0990 ND/U
SW8260B	Bromomethane	ug/L	0.101 ND/U	0.101 ND/U	0.101 ND/U	0.101 ND/U
SW8260B	Carbon Disulfide	ug/L	0.257/TR/J	0.118 ND/U	0.118 ND/U	0.661/TR/J
SW8260B	Carbon tetrachloride	ug/L	0.111 ND/U	0.111 ND/U	0.111 ND/U	0.111 ND/U
SW8260B	Chlorobenzene	ug/L	0.115 ND/U	0.115 ND/U	0.115 ND/U	0.115 ND/U
SW8260B	Chloroethane	ug/L	0.121 ND/U	0.121 ND/U	0.121 ND/U	0.121 ND/U
SW8260B	Chloroform	ug/L	0.120 ND/U	0.120 ND/U	0.120 ND/U	0.304 ND/U
SW8260B	Chloromethane	ug/L	0.142 ND/U	0.142 ND/U	0.142 ND/U	11.4/=
SW8260B	Cyclohexane	ug/L	24.2/=	14.8/=	16.7/=	39.8/=
SW8260B	Dibromochloromethane	ug/L	0.0874 ND/U	0.0874 ND/U	0.0874 ND/U	0.0874 ND/U
SW8260B	Dichlorodifluoromethane	ug/L	0.304 ND/U	0.304 ND/U	0.304 ND/U	0.304 TR/JB
SW8260B	Ethylbenzene	ug/L	1.48/=	0.680/TR/J	0.353/TR/J	1.58/=
SW8260B	Isopropylbenzene (Cumene)	ug/L	0.737/TR/J	0.325/TR/J	0.101 ND/U	0.423/TR/J
SW8260B	Methyl Acetate	ug/L	0.387 ND/U	0.387 ND/UJ	0.387 ND/U	0.387 ND/UJ
SW8260B	Methylcyclohexane	ug/L	14.5/=	10.2/=	7.16/=	30.9/=
SW8260B	Methylene Chloride	ug/L	0.128 ND/U	0.128 ND/U	0.128 ND/U	0.128 ND/U
SW8260B	Styrene	ug/L	0.118 ND/U	0.118 ND/U	0.118 ND/U	0.118 ND/U
SW8260B	Tert-Butyl Methyl Ether (MTBE)	ug/L	0.109 ND/U	0.109 ND/U	0.109 ND/U	0.109 ND/U
SW8260B	Tetrachloroethene (PCE)	ug/L	0.141 ND/U	0.141 ND/U	0.141 ND/U	0.141 ND/U
SW8260B	Toluene	ug/L	0.192/TR/J	0.119 ND/U	1.28/=	3.24/=
SW8260B	Trichloroethene (TCE)	ug/L	0.163 ND/U	0.163 ND/U	0.163 ND/U	0.163 ND/U
SW8260B	Trichlorofluoromethane	ug/L	0.185 ND/U	0.185 ND/U	0.185 ND/U	0.185 ND/U
SW8260B	Vinyl chloride	ug/L	0.119 ND/U	0.119 ND/U	0.119 ND/U	0.119 ND/U
SW8260B	Xylenes, Total	ug/L	17.9/=	11.9/=	2.56/=	12.1/=
SW8260B	cis-1,2-Dichloroethene	ug/L	0.0990 ND/U	0.0990 ND/U	0.0990 ND/U	0.0990 ND/U
SW8260B	cis-1,3-Dichloropropene	ug/L	0.104 ND/U	0.104 ND/U	0.104 ND/U	0.104 ND/U
SW8260B	trans-1,2-Dichloroethene	ug/L	0.128 ND/U	0.128 ND/U	0.128 ND/U	0.128 ND/U
SW8260B	trans-1,3-Dichloropropene	ug/L	0.112 ND/U	0.112 ND/U	0.112 ND/U	0.112 ND/U

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	Wet Chemistry					
E310.1	Alkalinity, Total (as CaCO3)	mg/L	470/=		370/=	340/=
E300	Chloride (as Cl)	mg/L	160/= /J		2.08/=	78.6/=
SW9012	Cyanide	mg/L	0.0086/TR/J	0.0070 ND/U	0.0070 ND/UJ	0.0070 ND/UJ
E130.2	Hardness (as CACO3)	mg/L	503/=	623/=	646/=	880/=
E300	Nitrogen, Nitrate (as N)	mg/L	0.413/= /J		0.0760/TR/J	0.1300 =/B
E300	Sulfate (as SO4)	mg/L	23.6/=		45.5/=	253/=
E160.2	Suspended Solids (residue, Non-filterable)	mg/L	4.0 ND/UJ		4.0 ND/U	4.0 ND/U
E160.1	Total Dissolved Solids	mg/L	820/=		400/=	850/=
SW9060	Total Organic Carbon	mg/L	1.46/=		2.61/=	1.25/=
E180.1	Turbidity		56.1/=		0.393 ND/UJ	2.26/=
	Explosives					
SW8330	1,3,5-Trinitrobenzene	ug/L	0.0484 ND/U	0.0480 ND/U	0.0480 ND/U	0.0475 ND/U
SW8330	1,3-Dinitrobenzene	ug/L	0.0657 ND/U	0.0651 ND/U	0.0651 ND/U	0.0645 ND/U
SW8330	2,4,6-Trinitrotoluene	ug/L	0.141 ND/U	0.139 ND/U	0.139 ND/U	0.138 ND/U
SW8330	2,4-Dinitrotoluene	ug/L	0.105 ND/U	0.104 ND/U	0.104 ND/U	0.103 ND/U
SW8330	2,6-Dinitrotoluene	ug/L	0.197 ND/U	0.195 ND/U	0.195 ND/U	0.193 ND/U
SW8330	2-Amino-4,6-Dinitrotoluene	ug/L	0.103 ND/UJ	0.102 ND/UJ	0.102 ND/UJ	0.101 ND/UJ
SW8330	2-Nitrotoluene	ug/L	0.202 ND/U	0.200 ND/U	0.200 ND/U	0.198 ND/U
SW8330	3-Nitrotoluene	ug/L	0.372 ND/U	0.368 ND/U	0.368 ND/U	0.365 ND/U
SW8330	4-Amino-2,6-Dinitrotoluene	ug/L	0.210 ND/U	0.208 ND/U	0.208 ND/U	0.206 ND/U
SW8330	4-Nitrotoluene	ug/L	0.183 ND/U	0.181 ND/U	0.181 ND/U	0.179 ND/U
SW8330	HMX	ug/L	0.0689 ND/U	0.0683 ND/U	0.0683 ND/U	0.0676 ND/U
SW8330	Nitrobenzene	ug/L	0.109 ND/U	0.108 ND/U	0.108 ND/U	0.107 ND/U
SW8330	RDX	ug/L	0.0846 ND/U	0.0838 ND/U	0.0838 ND/U	0.0830 ND/U
SW8330	Tetryl	ug/L	0.207 ND/U	0.205 ND/U	0.205 ND/UJ	0.203 ND/UJ
	Metals					
SW6010B	Aluminum	ug/L	45.4 ND/U	45.4 ND/U	45.4 ND/U	45.4 ND/U
SW6010B	Aluminum (total)	ug/L	45.4 ND/U	45.4 ND/U	45.4 ND/U	45.4 ND/U
SW6010B	Antimony	ug/L	8.16 ND/U	8.16 ND/U	8.16 ND/U	8.16 ND/U
SW6010B	Antimony (total)	ug/L	8.16 ND/U	8.16 ND/U	8.16 ND/U	8.16 ND/U
SW6010B	Arsenic	ug/L	4.59 ND/U	4.59 ND/U	4.59 ND/U	4.59 ND/U
SW6010B	Arsenic (total)	ug/L	4.59 ND/U	5.08/TR/J	4.59 ND/U	4.59 ND/U
SW6010B	Barium	ug/L	806/=	837/=	53.4/=	89.8/=
SW6010B	Barium (total)	ug/L	825/=	844/=	56.4/=	92.9/=
SW6010B	Beryllium	ug/L	0.152 TR/BJ	0.109 ND/U	0.109 ND/U	0.109 ND/U
SW6010B	Beryllium (total)	ug/L	0.109 ND/U	0.109 ND/U	0.154 TR/BJ	0.109 ND/U
SW6010B	Cadmium	ug/L	0.713 ND/U	0.713 ND/U	0.713 ND/U	0.713 ND/U
SW6010B	Cadmium (total)	ug/L	0.713 ND/U	0.713 ND/U	0.713 ND/U	0.713 ND/U
SW6010B	Calcium	ug/L	76300/=	75400/=	115000/=	164000/=
SW6010B	Calcium (total)	ug/L	73200/=	75800/=	119000/=	165000/=
SW6010B	Chromium	ug/L	0.236 ND/U	0.452 TR/BJ	0.236 ND/U	0.409 TR/BJ
SW6010B	Chromium (total)	ug/L	1.21 TR/BJ	0.728 TR/BJ	0.695/TR/J	0.663 TR/BJ
SW6010B	Cobalt	ug/L	0.898 ND/U	0.898 ND/U	1.44/TR/J	2.79/TR/J

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SW6010B	Cobalt (total)	ug/L	0.898 ND/U	0.898 ND/U	1.66/TR/J	2.60/TR/J
SW6010B	Copper	ug/L	2.55 ND/U	4.00/TR/J	2.55 ND/U	2.55 ND/U
SW6010B	Copper (total)	ug/L	2.55 ND/U	2.55 ND/U	2.55 ND/U	2.55 ND/U
SW6010B	Iron	ug/L	22.9 ND/U	22.9 ND/U	22.9 ND/U	39.9/TR/J
SW6010B	Iron (total)	ug/L	58.4/TR/J	55.7/TR/J	22.9 ND/U	114 TR/BJ
SW6010B	Lead	ug/L	2.44 ND/U	2.44 ND/U	2.44 ND/U	2.44 ND/U
SW6010B	Lead (total)	ug/L	2.44 ND/U	2.44 ND/U	2.44 ND/U	2.44 ND/U
SW6010B	Magnesium	ug/L	44600/=	44400/=	25400/=	54700/=
SW6010B	Magnesium (total)	ug/L	43200/=	44200/=	26100/=	55200/=
SW6010B	Manganese	ug/L	41.9/=	43.5/=	0.567/TR/J	295/=
SW6010B	Manganese (total)	ug/L	41.1/=	42.3/=	0.419 ND/U	324/=
SW7470A	Mercury	ug/L	0.145 TR/BJ	0.0584 ND/U	0.0584 ND/U	0.0584 ND/U
SW7470A	Mercury (total)	ug/L	0.0584 ND/U	0.0584 ND/U	0.0584 ND/U	0.0584 ND/U
SW6010B	Nickel	ug/L	0.745 ND/U	0.745 ND/U	0.745 ND/U	3.06/TR/J
SW6010B	Nickel (total)	ug/L	0.745 ND/U	0.745 ND/U	0.745 ND/U	3.12 TR/BJ
SW6010B	Potassium	ug/L	28600/=	28500/=	470/TR/J	1040/TR/J
SW6010B	Potassium (total)	ug/L	27900/=	28600/=	469/TR/J	1220/TR/J
SW6010B	Selenium	ug/L	ND/R	ND/R	11.1 ND/UJ	11.1 ND/UJ
SW6010B	Selenium (total)	ug/L	ND/R	ND/R	11.1 ND/UJ	11.1 ND/UJ
SW6010B	Silver	ug/L	1.30 ND/U	1.30 ND/U	1.30 ND/U	1.30 ND/U
SW6010B	Silver (total)	ug/L	1.30 ND/U	1.30 ND/U	1.30 ND/U	1.30 ND/U
SW6010B	Sodium	ug/L	194000/= /J	191000/= /J	6290/=	36000/=
SW6010B	Sodium (total)	ug/L	187000/= /J	192000/= /J	6480/=	36300/=
SW6010B	Thallium	ug/L	14.1 ND/U	14.1 ND/U	14.1 ND/U	14.1 ND/U
SW6010B	Thallium (total)	ug/L	14.1 ND/U	14.1 ND/U	14.1 ND/U	14.1 ND/U
SW6010B	Vanadium	ug/L	2.14 ND/U	2.14 ND/U	2.14 ND/U	2.14 ND/U
SW6010B	Vanadium (total)	ug/L	2.14 ND/U	2.14 ND/U	2.14 ND/U	2.14 ND/U
SW6010B	Zinc	ug/L	1.46 ND/U	1.46 ND/U	17.1/TR/J	13.8/TR/J
SW6010B	Zinc (total)	ug/L	11.8/TR/J	9.56/TR/J	15.1/TR/J	14.8/TR/J
	Polychlorinated Biphenyls (PCBs)					
SW8082	PCB-1016 (Aroclor 1016)	ug/L	3.17 ND/U	0.641 ND/U	0.635 ND/U	0.629 ND/U
SW8082	PCB-1221 (Aroclor 1221)	ug/L	9.43 ND/U	1.90 ND/U	1.89 ND/U	1.87 ND/U
SW8082	PCB-1232 (Aroclor 1232)	ug/L	4.59 ND/U	0.928 ND/U	0.919 ND/U	0.910 ND/U
SW8082	PCB-1242 (Aroclor 1242)	ug/L	6.98 ND/U	1.41 ND/U	1.40 ND/U	1.38 ND/U
SW8082	PCB-1248 (Aroclor 1248)	ug/L	9.39 ND/U	1.90 ND/U	1.88 ND/U	1.86 ND/U
SW8082	PCB-1254 (Aroclor 1254)	ug/L	1.41 ND/U	0.284 ND/U	0.281 ND/U	0.279 ND/U
SW8082	PCB-1260 (Aroclor 1260)	ug/L	1.42 ND/U	0.288 ND/U	0.285 ND/U	0.282 ND/U
	Semivolatile Organic Compounds					
SW8270C	1,2,4-Trichlorobenzene	ug/L	1.74 ND/U	1.72 ND/U	1.74 ND/U	1.74 ND/U
SW8270C	1,2-Dichlorobenzene	ug/L	1.82 ND/U	1.80 ND/U	1.82 ND/U	1.82 ND/U
SW8270C	1,3-Dichlorobenzene	ug/L	1.63 ND/U	1.62 ND/U	1.63 ND/U	1.63 ND/U
SW8270C	1,4-Dichlorobenzene	ug/L	1.79 ND/U	1.78 ND/U	1.79 ND/U	1.79 ND/U
SW8270C	2,4,5-Trichlorophenol	ug/L	5.39 ND/U	5.34 ND/U	5.39 ND/U	5.39 ND/U
SW8270C	2,4,6-Trichlorophenol	ug/L	4.61 ND/U	4.57 ND/U	4.61 ND/U	4.61 ND/U

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SW8270C	2,4-Dichlorophenol	ug/L	4.42 ND/U	4.38 ND/U	4.42 ND/U	4.42 ND/U
SW8270C	2,4-Dimethylphenol	ug/L	4.48 ND/UJ	4.44 ND/UJ	4.48 ND/UJ	4.48 ND/UJ
SW8270C	2,4-Dinitrophenol	ug/L	4.64 ND/U	4.60 ND/U	4.64 ND/U	4.64 ND/U
SW8270C	2,4-Dinitrotoluene	ug/L	2.44 ND/U	2.42 ND/U	2.44 ND/U	2.44 ND/U
SW8270C	2,6-Dinitrotoluene	ug/L	2.28 ND/U	2.26 ND/U	2.28 ND/U	2.28 ND/U
SW8270C	2-Chloronaphthalene	ug/L	2.82 ND/U	2.79 ND/U	2.82 ND/U	2.82 ND/U
SW8270C	2-Chlorophenol	ug/L	4.38 ND/U	4.34 ND/U	4.38 ND/U	4.38 ND/U
SW8270C	2-Methylnaphthalene	ug/L	5.47/TR/J	4.92/TR/J	2.08 ND/U	2.08 ND/U
SW8270C	2-Methylphenol (o-Cresol)	ug/L	4.18 ND/U	4.14 ND/U	4.18 ND/U	4.18 ND/U
SW8270C	2-Nitroaniline	ug/L	3.06 ND/U	3.03 ND/U	3.06 ND/U	3.06 ND/U
SW8270C	2-Nitrophenol	ug/L	4.05 ND/U	4.01 ND/U	4.05 ND/U	4.05 ND/U
SW8270C	3,3'-Dichlorobenzidine	ug/L	7.25 ND/U	7.19 ND/U	7.25 ND/U	7.25 ND/U
SW8270C	3-Nitroaniline	ug/L	3.10 ND/U	3.07 ND/U	3.10 ND/U	3.10 ND/U
SW8270C	4,6-Dinitro-2-methylphenol	ug/L	4.91 ND/U	4.86 ND/U	4.91 ND/U	4.91 ND/U
SW8270C	4-Bromophenyl phenyl ether	ug/L	3.16 ND/U	3.13 ND/U	3.16 ND/U	3.16 ND/U
SW8270C	4-Chloro-3-methylphenol	ug/L	4.49 ND/U	4.45 ND/U	4.49 ND/U	4.49 ND/U
SW8270C	4-Chloroaniline	ug/L	2.64 ND/U	2.62 ND/U	2.64 ND/U	2.64 ND/UJ
SW8270C	4-Chlorophenyl phenyl ether	ug/L	3.37 ND/U	3.34 ND/U	3.37 ND/U	3.37 ND/U
SW8270C	4-Methylphenol (p-Cresol)	ug/L	4.52 ND/U	4.48 ND/U	4.52 ND/U	4.52 ND/U
SW8270C	4-Nitroaniline	ug/L	3.31 ND/U	3.28 ND/U	3.31 ND/U	3.31 ND/U
SW8270C	4-Nitrophenol	ug/L	4.57 ND/U	4.52 ND/U	4.57 ND/U	4.57 ND/U
SW8270C	Acenaphthene	ug/L	0.665 ND/U	0.659 ND/U	0.665 ND/U	0.665 ND/U
SW8270C	Acenaphthylene	ug/L	0.592 ND/U	0.587 ND/U	0.592 ND/U	0.592 ND/U
SW8270C	Acetophenone	ug/L	2.23 ND/U	2.21 ND/U	2.23 ND/U	2.23 ND/U
SW8270C	Anthracene	ug/L	0.663 ND/U	0.657 ND/U	0.663 ND/U	0.663 ND/U
SW8270C	Atrazine	ug/L	2.33 ND/U	2.31 ND/U	2.33 ND/U	2.33 ND/U
SW8270C	Benzaldehyde	ug/L	2.36 ND/U	2.34 ND/U	2.36 ND/U	2.36 ND/U
SW8270C	Benzo(a)anthracene	ug/L	0.816 ND/U	0.808 ND/U	0.816 ND/U	0.816 ND/U
SW8270C	Benzo(a)pyrene	ug/L	0.730 ND/U	0.723 ND/U	0.730 ND/U	0.730 ND/U
SW8270C	Benzo(b)fluoranthene	ug/L	0.796 ND/U	0.789 ND/U	0.796 ND/U	0.796 ND/U
SW8270C	Benzo(g,h,i)perylene	ug/L	0.671 ND/U	0.664 ND/U	0.671 ND/U	0.671 ND/U
SW8270C	Benzo(k)fluoranthene	ug/L	0.701 ND/U	0.694 ND/U	0.701 ND/U	0.701 ND/U
SW8270C	Benzoic acid	ug/L	ND/R	ND/R	ND/R	ND/R
SW8270C	Benzyl alcohol	ug/L	2.65 ND/U	2.63 ND/U	2.65 ND/U	2.65 ND/U
SW8270C	Benzyl butyl phthalate	ug/L	2.91 ND/U	2.88 ND/U	2.91 ND/U	2.91 ND/U
SW8270C	Biphenyl (Diphenyl)	ug/L	2.17 ND/U	2.15 ND/U	2.17 ND/U	2.17 ND/U
SW8270C	Caprolactam	ug/L	2.46 ND/U	2.44 ND/U	2.46 ND/U	2.46 ND/U
SW8270C	Carbazole	ug/L	2.25 ND/U	2.23 ND/U	2.25 ND/U	2.25 ND/U
SW8270C	Chrysene	ug/L	0.808 ND/U	0.801 ND/U	0.808 ND/U	0.808 ND/U
SW8270C	Di-n-butylphthalate	ug/L	3.23 ND/U	3.20 ND/U	3.23 ND/U	3.23 ND/U
SW8270C	Di-n-octylphthalate	ug/L	2.68 ND/U	2.65 ND/U	2.68 ND/U	2.68 ND/U
SW8270C	Dibenz(a,h)anthracene	ug/L	0.717 ND/U	0.710 ND/U	0.717 ND/U	0.717 ND/U
SW8270C	Dibenzofuran	ug/L	2.34 ND/U	2.32 ND/U	2.34 ND/U	2.34 ND/U
SW8270C	Diethylphthalate	ug/L	2.39 ND/U	2.36 ND/U	2.39 ND/U	2.39 ND/U

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SW8270C	Dimethylphthalate	ug/L	3.19 ND/U	3.16 ND/U	3.19 ND/U	3.19 ND/U
SW8270C	Fluoranthene	ug/L	0.760 ND/U	0.753 ND/U	0.760 ND/U	0.760 ND/U
SW8270C	Fluorene	ug/L	0.754 ND/U	0.747 ND/U	0.754 ND/U	0.754 ND/U
SW8270C	Hexachlorobenzene	ug/L	2.51 ND/U	2.49 ND/U	2.51 ND/U	2.51 ND/U
SW8270C	Hexachlorobutadiene	ug/L	1.95 ND/U	1.93 ND/U	1.95 ND/U	1.95 ND/U
SW8270C	Hexachlorocyclopentadiene	ug/L	1.58 ND/UJ	1.56 ND/UJ	1.58 ND/UJ	1.58 ND/UJ
SW8270C	Hexachloroethane	ug/L	1.40 ND/U	1.38 ND/U	1.40 ND/U	1.40 ND/U
SW8270C	Indeno(1,2,3-cd)pyrene	ug/L	0.755 ND/U	0.748 ND/U	0.755 ND/U	0.755 ND/U
SW8270C	Isophorone	ug/L	2.07 ND/U	2.05 ND/U	2.07 ND/U	2.07 ND/U
SW8270C	N-Nitroso-di-n-propylamine	ug/L	3.16 ND/U	3.13 ND/U	3.16 ND/U	3.16 ND/U
SW8270C	N-Nitrosodimethylamine	ug/L	3.08 ND/U	3.06 ND/U	3.08 ND/U	3.08 ND/U
SW8270C	N-Nitrosodiphenylamine	ug/L	3.44 ND/U	3.41 ND/U	3.44 ND/U	3.44 ND/U
SW8270C	Naphthalene	ug/L	5.53/TR/J	4.66/TR/J	0.545 ND/U	0.545 ND/U
SW8270C	Nitrobenzene	ug/L	2.08 ND/U	2.07 ND/U	2.08 ND/U	2.08 ND/U
SW8270C	Pentachlorophenol	ug/L	5.42 ND/U	5.36 ND/U	5.42 ND/UJ	5.42 ND/UJ
SW8270C	Phenanthrene	ug/L	0.691 ND/U	0.684 ND/U	0.691 ND/U	0.691 ND/U
SW8270C	Phenol	ug/L	4.31 ND/U	4.27 ND/U	4.31 ND/U	4.31 ND/U
SW8270C	Pyrene	ug/L	0.730 ND/U	0.723 ND/U	0.730 ND/U	0.730 ND/U
SW8270C	bis(2-Chloroethoxy)methane	ug/L	2.67 ND/U	2.64 ND/U	2.67 ND/U	2.67 ND/U
SW8270C	bis(2-Chloroethyl)ether (2-Chloroethylether)	ug/L	2.46 ND/U	2.44 ND/U	2.46 ND/U	2.46 ND/U
SW8270C	bis(2-Chloroisopropyl)ether	ug/L	3.19 ND/U	3.16 ND/U	3.19 ND/U	3.19 ND/U
SW8270C	bis(2-Ethylhexyl)phthalate	ug/L	3.52 ND/U	3.49 ND/U	3.52 ND/U	3.52 ND/U
	Volatile Organic Compounds					
SW8260B	1,1,1-Trichloroethane	ug/L	0.123 ND/U	0.123 ND/U	0.123 ND/U	0.123 ND/U
SW8260B	1,1,2,2-Tetrachloroethane	ug/L	0.171 ND/U	0.171 ND/U	0.171 ND/U	0.171 ND/U
SW8260B	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/L	0.272 ND/U	0.272 ND/U	0.272 ND/U	0.272 ND/U
SW8260B	1,1,2-Trichloroethane	ug/L	0.139 ND/U	0.139 ND/U	0.139 ND/U	0.139 ND/U
SW8260B	1,1-Dichloroethane	ug/L	0.117 ND/U	0.117 ND/U	0.117 ND/U	0.117 ND/U
SW8260B	1,1-Dichloroethene	ug/L	0.137 ND/U	0.137 ND/U	0.137 ND/U	0.137 ND/U
SW8260B	1,2,3-Trichlorobenzene	ug/L	0.118 ND/U	0.118 ND/U	0.118 ND/U	0.118 ND/UJ
SW8260B	1,2,4-Trichlorobenzene	ug/L	0.145 ND/U	0.145 ND/U	0.145 ND/U	0.145 ND/U
SW8260B	1,2-Dibromo-3-chloropropane	ug/L	0.373 ND/U	0.373 ND/U	0.373 ND/U	0.373 ND/U
SW8260B	1,2-Dibromoethane (EDB)	ug/L	0.126 ND/U	0.126 ND/U	0.126 ND/U	0.126 ND/U
SW8260B	1,2-Dichlorobenzene	ug/L	0.0800 ND/U	0.0800 ND/U	0.0800 ND/U	0.0800 ND/U
SW8260B	1,2-Dichloroethane	ug/L	0.109 ND/U	0.109 ND/U	0.109 ND/U	0.109 ND/U
SW8260B	1,2-Dichloropropane	ug/L	0.0961 ND/U	0.0961 ND/U	0.0961 ND/U	0.0961 ND/U
SW8260B	1,3-Dichlorobenzene	ug/L	0.0933 ND/U	0.0933 ND/U	0.0933 ND/U	0.0933 ND/U
SW8260B	1,4-Dichlorobenzene	ug/L	0.101 ND/U	0.101 ND/U	0.101 ND/U	0.101 ND/U
SW8260B	2-Butanone (Methyl ethyl ketone)	ug/L	0.815 ND/U	0.815 ND/U	0.815 ND/U	0.815 ND/U
SW8260B	2-Hexanone	ug/L	0.187 ND/U	0.187 ND/U	0.187 ND/U	0.187 ND/U
SW8260B	4-Methyl-2-pentanone (Methyl isobutyl ketone	ug/L	0.393 ND/U	0.393 ND/U	0.393 ND/U	0.393 ND/U
SW8260B	Acetone	ug/L	1.73 ND/U	1.73 ND/U	1.73 ND/U	1.73 ND/UJ
SW8260B	Benzene	ug/L	41.8/=	41.4/=	0.104 ND/U	0.104 ND/U
SW8260B	Bromochloromethane	ug/L	0.159 ND/U	0.159 ND/U	0.159 ND/U	0.159 ND/U

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SW8260B	Bromodichloromethane	ug/L	0.141 ND/U	0.141 ND/U	0.141 ND/U	0.141 ND/U
SW8260B	Bromoform	ug/L	0.0990 ND/U	0.0990 ND/U	0.0990 ND/U	0.0990 ND/U
SW8260B	Bromomethane	ug/L	0.101 ND/U	0.101 ND/U	0.101 ND/U	0.101 ND/U
SW8260B	Carbon Disulfide	ug/L	0.606/TR/J	0.619/TR/J	0.118 ND/U	0.118 ND/U
SW8260B	Carbon tetrachloride	ug/L	0.111 ND/U	0.111 ND/U	0.111 ND/U	0.111 ND/U
SW8260B	Chlorobenzene	ug/L	0.115 ND/U	0.115 ND/U	0.115 ND/U	0.115 ND/U
SW8260B	Chloroethane	ug/L	0.121 ND/U	0.121 ND/U	0.121 ND/U	0.121 ND/U
SW8260B	Chloroform	ug/L	0.120 ND/U	0.120 ND/U	0.120 ND/U	0.120 ND/U
SW8260B	Chloromethane	ug/L	0.142 ND/U	0.142 ND/U	0.142 ND/U	0.142 ND/U
SW8260B	Cyclohexane	ug/L	96.0/=	93.5/=	0.0999 ND/U	0.0999 ND/U
SW8260B	Dibromochloromethane	ug/L	0.0874 ND/U	0.0874 ND/U	0.0874 ND/U	0.0874 ND/U
SW8260B	Dichlorodifluoromethane	ug/L	0.304 ND/U	0.304 ND/U	0.304 ND/U	0.304 ND/U
SW8260B	Ethylbenzene	ug/L	15.5/=	15.3/=	0.164 ND/U	0.164 ND/U
SW8260B	Isopropylbenzene (Cumene)	ug/L	4.64/=	4.65/=	0.101 ND/U	0.101 ND/U
SW8260B	Methyl Acetate	ug/L	0.387 ND/U	0.387 ND/U	0.387 ND/U	0.387 ND/UJ
SW8260B	Methylcyclohexane	ug/L	55.9/=	54.4/=	0.107 ND/U	0.107 ND/U
SW8260B	Methylene Chloride	ug/L	0.128 ND/U	0.128 ND/U	0.128 ND/U	0.128 ND/U
SW8260B	Styrene	ug/L	0.118 ND/U	0.118 ND/U	0.118 ND/U	0.118 ND/U
SW8260B	Tert-Butyl Methyl Ether (MTBE)	ug/L	0.109 ND/U	0.109 ND/U	0.109 ND/U	0.109 ND/U
SW8260B	Tetrachloroethene (PCE)	ug/L	0.141 ND/U	0.141 ND/U	0.141 ND/U	0.141 ND/U
SW8260B	Toluene	ug/L	27.4/=	26.9/=	0.119 ND/U	0.119 ND/U
SW8260B	Trichloroethene (TCE)	ug/L	0.163 ND/U	0.163 ND/U	0.163 ND/U	0.163 ND/U
SW8260B	Trichlorofluoromethane	ug/L	0.185 ND/U	0.185 ND/U	0.185 ND/U	0.185 ND/U
SW8260B	Vinyl chloride	ug/L	0.119 ND/U	0.119 ND/U	0.119 ND/U	0.119 ND/U
SW8260B	Xylenes, Total	ug/L	128/=	127/=	0.307 ND/U	0.307 ND/U
SW8260B	cis-1,2-Dichloroethene	ug/L	0.0990 ND/U	0.0990 ND/U	0.0990 ND/U	0.0990 ND/U
SW8260B	cis-1,3-Dichloropropene	ug/L	0.104 ND/U	0.104 ND/U	0.104 ND/U	0.104 ND/U
SW8260B	trans-1,2-Dichloroethene	ug/L	0.128 ND/U	0.128 ND/U	0.128 ND/U	0.128 ND/U
SW8260B	trans-1,3-Dichloropropene	ug/L	0.112 ND/U	0.112 ND/U	0.112 ND/U	0.112 ND/U

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	Wet Chemistry					
E310.1	Alkalinity, Total (as CaCO3)	mg/L		560/=	330/=	370/=
E300	Chloride (as Cl)	mg/L		6.21/=	3.73/= /J	7.74/= /J
SW9012	Cyanide	mg/L	0.0070 ND/UJ	0.0070 ND/U	0.0070 ND/UJ	0.0070 ND/U
E130.2	Hardness (as CACO3)	mg/L	851/=	680/=	731/=	1110/=
E300	Nitrogen, Nitrate (as N)	mg/L		0.181 =/B	0.0149 ND/U	0.0710/TR/J
E300	Sulfate (as SO4)	mg/L		38.4/= /J	157/= /J	308/=
E160.2	Suspended Solids (residue, Non-filterable)	mg/L		4.0 ND/UJ	4.0 ND/U	4.0 ND/UJ
E160.1	Total Dissolved Solids	mg/L		410/=	550/=	900/=
SW9060	Total Organic Carbon	mg/L		2.29/=	1.37/=	2.68/=
E180.1	Turbidity			0.393 ND/U	3.76/=	6.63/=
	Explosives					
SW8330	1,3,5-Trinitrobenzene	ug/L	0.0475 ND/U	0.0480 ND/U	0.0475 ND/U	0.0489 ND/U
SW8330	1,3-Dinitrobenzene	ug/L	0.0645 ND/U	0.0651 ND/U	0.0645 ND/U	0.0664 ND/U
SW8330	2,4,6-Trinitrotoluene	ug/L	0.138 ND/U	0.139 ND/U	0.138 ND/U	0.142 ND/U
SW8330	2,4-Dinitrotoluene	ug/L	0.103 ND/U	0.104 ND/U	0.103 ND/U	0.106 ND/U
SW8330	2,6-Dinitrotoluene	ug/L	0.193 ND/U	0.195 ND/U	0.193 ND/U	0.199 ND/U
SW8330	2-Amino-4,6-Dinitrotoluene	ug/L	0.101 ND/UJ	0.102 ND/UJ	0.101 ND/UJ	0.104 ND/UJ
SW8330	2-Nitrotoluene	ug/L	0.198 ND/U	0.200 ND/U	0.198 ND/U	0.204 ND/U
SW8330	3-Nitrotoluene	ug/L	0.365 ND/U	0.368 ND/U	0.365 ND/U	0.375 ND/U
SW8330	4-Amino-2,6-Dinitrotoluene	ug/L	0.206 ND/U	0.208 ND/U	0.206 ND/U	0.212 ND/U
SW8330	4-Nitrotoluene	ug/L	0.179 ND/U	0.181 ND/U	0.179 ND/U	0.184 ND/U
SW8330	HMX	ug/L	0.0676 ND/U	0.0683 ND/U	0.0676 ND/U	0.0696 ND/U
SW8330	Nitrobenzene	ug/L	0.107 ND/U	0.108 ND/U	0.107 ND/U	0.110 ND/U
SW8330	RDX	ug/L	0.0830 ND/U	0.0838 ND/U	0.0830 ND/U	0.0854 ND/U
SW8330	Tetryl	ug/L	0.203 ND/UJ	0.205 ND/U	0.203 ND/U	0.209 ND/U
	Metals					
SW6010B	Aluminum	ug/L	45.4 ND/U	45.4 ND/U	45.4 ND/U	45.4 ND/U
SW6010B	Aluminum (total)	ug/L	45.4 ND/U	45.4 ND/U	45.4 ND/U	45.4 ND/U
SW6010B	Antimony	ug/L	8.16 ND/U	8.16 ND/U	8.16 ND/U	8.16 ND/U
SW6010B	Antimony (total)	ug/L	8.16 ND/U	8.16 ND/U	8.16 ND/U	8.16 ND/U
SW6010B	Arsenic	ug/L	4.59 ND/U	4.59 ND/U	12.5/TR/J	4.59 ND/U
SW6010B	Arsenic (total)	ug/L	4.59 ND/U	4.59 ND/U	12.1/TR/J	4.59 ND/U
SW6010B	Barium	ug/L	90.2/=	198/=	108/=	48.4/=
SW6010B	Barium (total)	ug/L	92.9/=	206/=	113/=	40.5/=
SW6010B	Beryllium	ug/L	0.109 ND/U	0.109 ND/U	0.109 ND/U	0.109 ND/U
SW6010B	Beryllium (total)	ug/L	0.109 ND/U	0.109 ND/U	0.109 ND/U	0.109 ND/U
SW6010B	Cadmium	ug/L	0.713 ND/U	0.713 ND/U	0.713 ND/U	0.713 ND/U
SW6010B	Cadmium (total)	ug/L	0.713 ND/U	0.713 ND/U	0.713 ND/U	0.713 ND/U
SW6010B	Calcium	ug/L	166000/=	89600/=	111000/=	176000/=
SW6010B	Calcium (total)	ug/L	167000/=	88800/=	115000/=	184000/=
SW6010B	Chromium	ug/L	0.250 TR/BJ	0.236 ND/U	0.969 TR/BJ	0.236 ND/U
SW6010B	Chromium (total)	ug/L	0.626 TR/BJ	0.924 TR/BJ	0.960 TR/BJ	0.236 ND/U
SW6010B	Cobalt	ug/L	2.40/TR/J	1.03/TR/J	1.89 TR/BJ	0.898 ND/U

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SW6010B	Cobalt (total)	ug/L	2.63/TR/J	0.898 ND/U	1.75/TR/J	1.62/TR/J
SW6010B	Copper	ug/L	2.55 ND/U	2.55 ND/U	44.2/=	2.55 ND/U
SW6010B	Copper (total)	ug/L	6.93/TR/J	2.55 ND/U	2.55 ND/U	2.55 ND/U
SW6010B	Iron	ug/L	38.8/TR/J	22.9 ND/U	64.9/TR/J	22.9 ND/U
SW6010B	Iron (total)	ug/L	106 TR/BJ	22.9 ND/U	165/TR/J	834/=
SW6010B	Lead	ug/L	2.44 ND/U	2.44 ND/U	2.44 ND/U	2.44 ND/U
SW6010B	Lead (total)	ug/L	2.44 ND/U	2.44 ND/U	2.44 ND/U	2.44 ND/U
SW6010B	Magnesium	ug/L	55200/=	37800/=	42400/=	69900/=
SW6010B	Magnesium (total)	ug/L	55800/=	37700/=	44500/=	73700/=
SW6010B	Manganese	ug/L	296/=	47.8/=	74.3/=	49.0/=
SW6010B	Manganese (total)	ug/L	320/=	51.3/=	75.4/=	103/=
SW7470A	Mercury	ug/L	0.0584 ND/U	0.0584 ND/U	0.0584 ND/U	0.0584 ND/U
SW7470A	Mercury (total)	ug/L	0.0584 ND/U	0.0584 ND/U	0.0584 ND/U	0.124 TR/BJ
SW6010B	Nickel	ug/L	3.08/TR/J	1.73 TR/BJ	1.48 TR/BJ	3.84 TR/BJ
SW6010B	Nickel (total)	ug/L	3.29 TR/BJ	1.48 TR/BJ	1.54 TR/BJ	4.15/TR/J
SW6010B	Potassium	ug/L	1130/TR/J	2330/=	1310 TR/BJ	2110/=
SW6010B	Potassium (total)	ug/L	1170/TR/J	2410/=	1480/TR/J	2290/=
SW6010B	Selenium	ug/L	11.1 ND/UJ	ND/R	11.1 ND/UJ	ND/R
SW6010B	Selenium (total)	ug/L	11.1 ND/UJ	ND/R	11.1 ND/UJ	ND/R
SW6010B	Silver	ug/L	1.30 ND/U	1.30 ND/U	1.30 ND/U	1.30 ND/U
SW6010B	Silver (total)	ug/L	1.30 ND/U	1.30 ND/U	1.30 ND/U	1.30 ND/U
SW6010B	Sodium	ug/L	35900/=	24600/= /J	11600/=	21500/= /J
SW6010B	Sodium (total)	ug/L	36600/=	24800/= /J	12500/=	20700/= /J
SW6010B	Thallium	ug/L	14.1 ND/U	14.1 ND/U	14.1 ND/U	14.1 ND/U
SW6010B	Thallium (total)	ug/L	14.1 ND/U	14.1 ND/U	14.1 ND/U	14.1 ND/U
SW6010B	Vanadium	ug/L	2.14 ND/U	2.14 ND/U	2.14 ND/U	2.14 ND/U
SW6010B	Vanadium (total)	ug/L	2.14 ND/U	2.14 ND/U	2.14 ND/U	2.14 ND/U
SW6010B	Zinc	ug/L	13.0/TR/J	52.9/=	109/=	1.46 ND/U
SW6010B	Zinc (total)	ug/L	19.5/TR/J	58.3/=	82.8/=	1.46 ND/U
	Polychlorinated Biphenyls (PCBs)					
SW8082	PCB-1016 (Aroclor 1016)	ug/L	0.647 ND/U	0.635 ND/UJ	0.635 ND/U	0.653 ND/U
SW8082	PCB-1221 (Aroclor 1221)	ug/L	1.92 ND/U	1.89 ND/UJ	1.89 ND/U	1.94 ND/U
SW8082	PCB-1232 (Aroclor 1232)	ug/L	0.937 ND/U	0.919 ND/UJ	0.919 ND/U	0.946 ND/U
SW8082	PCB-1242 (Aroclor 1242)	ug/L	1.42 ND/U	1.40 ND/UJ	1.40 ND/U	1.44 ND/U
SW8082	PCB-1248 (Aroclor 1248)	ug/L	1.91 ND/U	1.88 ND/UJ	1.88 ND/U	1.93 ND/U
SW8082	PCB-1254 (Aroclor 1254)	ug/L	0.287 ND/U	0.281 ND/UJ	0.281 ND/U	0.289 ND/U
SW8082	PCB-1260 (Aroclor 1260)	ug/L	0.290 ND/U	0.285 ND/UJ	0.285 ND/U	0.293 ND/U
	Semivolatile Organic Compounds					
SW8270C	1,2,4-Trichlorobenzene	ug/L	1.74 ND/U	1.79 ND/U	1.72 ND/U	1.77 ND/U
SW8270C	1,2-Dichlorobenzene	ug/L	1.82 ND/U	1.87 ND/U	1.80 ND/U	1.86 ND/U
SW8270C	1,3-Dichlorobenzene	ug/L	1.63 ND/U	1.68 ND/U	1.62 ND/U	1.66 ND/U
SW8270C	1,4-Dichlorobenzene	ug/L	1.79 ND/U	1.84 ND/U	1.78 ND/U	1.83 ND/U
SW8270C	2,4,5-Trichlorophenol	ug/L	5.39 ND/U	5.54 ND/U	5.34 ND/U	5.49 ND/U
SW8270C	2,4,6-Trichlorophenol	ug/L	4.61 ND/U	4.75 ND/U	4.57 ND/U	4.70 ND/U

METHOD	ANALYTE	SAMP. NUM. DATE UNITS	PBOW-05-GW-AA3-GW003-01D 1/25/2005 RESULT / QUAL	PBOW-05-GW-AA3-GW004-01A 1/30/2005 RESULT / QUAL	PBOW-05-GW-AA3-GW005-01A 1/27/2005 RESULT / QUAL	PBOW-05-GW-AA2-ITMW10-01A 2/1/2005 RESULT / QUAL
SW8270C	2,4-Dichlorophenol	ug/L	4.42 ND/U	4.55 ND/U	4.38 ND/U	4.51 ND/U
SW8270C	2,4-Dimethylphenol	ug/L	4.48 ND/UJ	4.61 ND/UJ	4.44 ND/UJ	4.57 ND/UJ
SW8270C	2,4-Dinitrophenol	ug/L	4.64 ND/U	4.78 ND/U	4.60 ND/U	4.73 ND/U
SW8270C	2,4-Dinitrotoluene	ug/L	2.44 ND/U	2.51 ND/U	2.42 ND/U	2.49 ND/U
SW8270C	2,6-Dinitrotoluene	ug/L	2.28 ND/U	2.35 ND/U	2.26 ND/U	2.33 ND/U
SW8270C	2-Chloronaphthalene	ug/L	2.82 ND/U	2.90 ND/U	2.79 ND/U	2.88 ND/U
SW8270C	2-Chlorophenol	ug/L	4.38 ND/U	4.50 ND/U	4.34 ND/U	4.46 ND/U
SW8270C	2-Methylnaphthalene	ug/L	2.08 ND/U	2.14 ND/U	2.06 ND/U	2.12 ND/U
SW8270C	2-Methylphenol (o-Cresol)	ug/L	4.18 ND/U	4.30 ND/U	4.14 ND/U	4.26 ND/U
SW8270C	2-Nitroaniline	ug/L	3.06 ND/U	3.15 ND/U	3.03 ND/U	3.12 ND/U
SW8270C	2-Nitrophenol	ug/L	4.05 ND/U	4.17 ND/U	4.01 ND/U	4.13 ND/U
SW8270C	3,3'-Dichlorobenzidine	ug/L	7.25 ND/U	7.47 ND/U	7.19 ND/U	7.39 ND/U
SW8270C	3-Nitroaniline	ug/L	3.10 ND/U	3.19 ND/U	3.07 ND/U	3.16 ND/U
SW8270C	4,6-Dinitro-2-methylphenol	ug/L	4.91 ND/U	5.05 ND/U	4.86 ND/U	5.00 ND/U
SW8270C	4-Bromophenyl phenyl ether	ug/L	3.16 ND/U	3.25 ND/U	3.13 ND/U	3.22 ND/U
SW8270C	4-Chloro-3-methylphenol	ug/L	4.49 ND/U	4.62 ND/U	4.45 ND/U	4.58 ND/U
SW8270C	4-Chloroaniline	ug/L	2.64 ND/UJ	2.72 ND/U	2.62 ND/UJ	2.69 ND/U
SW8270C	4-Chlorophenyl phenyl ether	ug/L	3.37 ND/U	3.47 ND/U	3.34 ND/U	3.43 ND/U
SW8270C	4-Methylphenol (p-Cresol)	ug/L	4.52 ND/U	4.65 ND/U	4.48 ND/U	4.61 ND/U
SW8270C	4-Nitroaniline	ug/L	3.31 ND/U	3.41 ND/U	3.28 ND/U	3.38 ND/U
SW8270C	4-Nitrophenol	ug/L	4.57 ND/U	4.70 ND/U	4.52 ND/U	4.65 ND/U
SW8270C	Acenaphthene	ug/L	0.665 ND/U	0.684 ND/U	0.659 ND/U	0.678 ND/U
SW8270C	Acenaphthylene	ug/L	0.592 ND/U	0.610 ND/U	0.587 ND/U	0.604 ND/U
SW8270C	Acetophenone	ug/L	2.23 ND/U	2.29 ND/U	2.21 ND/U	2.27 ND/U
SW8270C	Anthracene	ug/L	0.663 ND/U	0.683 ND/U	0.657 ND/U	0.676 ND/U
SW8270C	Atrazine	ug/L	2.33 ND/U	2.40 ND/U	2.31 ND/U	2.38 ND/U
SW8270C	Benzaldehyde	ug/L	2.36 ND/U	2.43 ND/U	2.34 ND/U	2.40 ND/U
SW8270C	Benzo(a)anthracene	ug/L	0.816 ND/U	0.840 ND/U	0.808 ND/U	0.832 ND/U
SW8270C	Benzo(a)pyrene	ug/L	0.730 ND/U	0.751 ND/U	0.723 ND/U	0.744 ND/U
SW8270C	Benzo(b)fluoranthene	ug/L	0.796 ND/U	0.819 ND/U	0.789 ND/U	0.812 ND/U
SW8270C	Benzo(g,h,i)perylene	ug/L	0.671 ND/U	0.690 ND/U	0.664 ND/U	0.684 ND/U
SW8270C	Benzo(k)fluoranthene	ug/L	0.701 ND/U	0.721 ND/U	0.694 ND/U	0.714 ND/U
SW8270C	Benzoic acid	ug/L	ND/R	ND/R	ND/R	ND/R
SW8270C	Benzyl alcohol	ug/L	2.65 ND/U	2.73 ND/U	2.63 ND/U	2.70 ND/U
SW8270C	Benzyl butyl phthalate	ug/L	2.91 ND/U	2.99 ND/U	2.88 ND/U	2.96 ND/U
SW8270C	Biphenyl (Diphenyl)	ug/L	2.17 ND/U	2.23 ND/U	2.15 ND/U	2.21 ND/U
SW8270C	Caprolactam	ug/L	2.46 ND/U	2.53 ND/U	2.44 ND/U	2.51 ND/U
SW8270C	Carbazole	ug/L	2.25 ND/U	2.32 ND/U	2.23 ND/U	2.30 ND/U
SW8270C	Chrysene	ug/L	0.808 ND/U	0.832 ND/U	0.801 ND/U	0.824 ND/U
SW8270C	Di-n-butylphthalate	ug/L	3.23 ND/U	3.32 ND/U	3.20 ND/U	3.29 ND/U
SW8270C	Di-n-octylphthalate	ug/L	2.68 ND/U	2.76 ND/U	2.65 ND/U	2.73 ND/U
SW8270C	Dibenz(a,h)anthracene	ug/L	0.717 ND/U	0.738 ND/U	0.710 ND/U	0.731 ND/U
SW8270C	Dibenzofuran	ug/L	2.34 ND/U	2.41 ND/U	2.32 ND/U	2.38 ND/U
SW8270C	Diethylphthalate	ug/L	2.39 ND/U	2.46 ND/U	2.36 ND/U	2.43 ND/U

METHOD	ANALYTE	SAMP. NUM. DATE UNITS	PBOW-05-GW-AA3-GW003-01D 1/25/2005 RESULT / QUAL	PBOW-05-GW-AA3-GW004-01A 1/30/2005 RESULT / QUAL	PBOW-05-GW-AA3-GW005-01A 1/27/2005 RESULT / QUAL	PBOW-05-GW-AA2-ITMW10-01A 2/1/2005 RESULT / QUAL
SW8270C	Dimethylphthalate	ug/L	3.19 ND/U	3.28 ND/U	3.16 ND/U	3.25 ND/U
SW8270C	Fluoranthene	ug/L	0.760 ND/U	0.783 ND/U	0.753 ND/U	0.775 ND/U
SW8270C	Fluorene	ug/L	0.754 ND/U	0.776 ND/U	0.747 ND/U	0.768 ND/U
SW8270C	Hexachlorobenzene	ug/L	2.51 ND/U	2.58 ND/U	2.49 ND/U	2.56 ND/U
SW8270C	Hexachlorobutadiene	ug/L	1.95 ND/U	2.01 ND/U	1.93 ND/U	1.99 ND/U
SW8270C	Hexachlorocyclopentadiene	ug/L	1.58 ND/UJ	1.62 ND/UJ	1.56 ND/UJ	1.61 ND/UJ
SW8270C	Hexachloroethane	ug/L	1.40 ND/U	1.44 ND/U	1.38 ND/U	1.42 ND/U
SW8270C	Indeno(1,2,3-cd)pyrene	ug/L	0.755 ND/U	0.777 ND/U	0.748 ND/U	0.769 ND/U
SW8270C	Isophorone	ug/L	2.07 ND/U	2.13 ND/U	2.05 ND/U	2.11 ND/U
SW8270C	N-Nitroso-di-n-propylamine	ug/L	3.16 ND/U	3.25 ND/U	3.13 ND/U	3.22 ND/U
SW8270C	N-Nitrosodimethylamine	ug/L	3.08 ND/U	3.17 ND/U	3.06 ND/U	3.14 ND/U
SW8270C	N-Nitrosodiphenylamine	ug/L	3.44 ND/U	3.54 ND/U	3.41 ND/U	3.51 ND/U
SW8270C	Naphthalene	ug/L	0.545 ND/U	0.561 ND/U	0.540 ND/U	0.556 ND/U
SW8270C	Nitrobenzene	ug/L	2.08 ND/U	2.15 ND/U	2.07 ND/U	2.13 ND/U
SW8270C	Pentachlorophenol	ug/L	5.42 ND/UJ	5.57 ND/U	5.36 ND/UJ	5.52 ND/U
SW8270C	Phenanthrene	ug/L	0.691 ND/U	0.711 ND/U	0.684 ND/U	0.704 ND/U
SW8270C	Phenol	ug/L	4.31 ND/U	4.44 ND/U	4.27 ND/U	4.39 ND/U
SW8270C	Pyrene	ug/L	0.730 ND/U	0.751 ND/U	0.723 ND/U	0.744 ND/U
SW8270C	bis(2-Chloroethoxy)methane	ug/L	2.67 ND/U	2.75 ND/U	2.64 ND/U	2.72 ND/U
SW8270C	bis(2-Chloroethyl)ether (2-Chloroethylether)	ug/L	2.46 ND/U	2.53 ND/U	2.44 ND/U	2.51 ND/U
SW8270C	bis(2-Chloroisopropyl)ether	ug/L	3.19 ND/U	3.28 ND/U	3.16 ND/U	3.25 ND/U
SW8270C	bis(2-Ethylhexyl)phthalate	ug/L	3.52 ND/U	3.62 ND/U	3.49 ND/U	3.59 ND/U
	Volatile Organic Compounds					
SW8260B	1,1,1-Trichloroethane	ug/L	0.123 ND/U	0.123 ND/U	0.123 ND/U	0.123 ND/U
SW8260B	1,1,2,2-Tetrachloroethane	ug/L	0.171 ND/U	0.171 ND/U	0.171 ND/U	0.171 ND/U
SW8260B	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/L	0.272 ND/U	0.272 ND/U	0.272 ND/U	0.272 ND/U
SW8260B	1,1,2-Trichloroethane	ug/L	0.139 ND/U	0.139 ND/U	0.139 ND/U	0.139 ND/U
SW8260B	1,1-Dichloroethane	ug/L	0.117 ND/U	0.117 ND/U	0.117 ND/U	0.117 ND/U
SW8260B	1,1-Dichloroethene	ug/L	0.137 ND/U	0.137 ND/U	0.137 ND/U	0.137 ND/U
SW8260B	1,2,3-Trichlorobenzene	ug/L	0.118 ND/UJ	0.118 ND/U	0.118 ND/UJ	0.118 ND/U
SW8260B	1,2,4-Trichlorobenzene	ug/L	0.145 ND/U	0.145 ND/U	0.145 ND/U	0.145 ND/U
SW8260B	1,2-Dibromo-3-chloropropane	ug/L	0.373 ND/U	0.373 ND/U	0.373 ND/U	0.373 ND/U
SW8260B	1,2-Dibromoethane (EDB)	ug/L	0.126 ND/U	0.126 ND/U	0.126 ND/U	0.126 ND/U
SW8260B	1,2-Dichlorobenzene	ug/L	0.0800 ND/U	0.0800 ND/U	0.0800 ND/U	0.0800 ND/U
SW8260B	1,2-Dichloroethane	ug/L	0.109 ND/U	0.109 ND/U	0.109 ND/U	0.109 ND/U
SW8260B	1,2-Dichloropropane	ug/L	0.0961 ND/U	0.0961 ND/U	0.0961 ND/U	0.0961 ND/U
SW8260B	1,3-Dichlorobenzene	ug/L	0.0933 ND/U	0.0933 ND/U	0.0933 ND/U	0.0933 ND/U
SW8260B	1,4-Dichlorobenzene	ug/L	0.101 ND/U	0.101 ND/U	0.101 ND/U	0.101 ND/U
SW8260B	2-Butanone (Methyl ethyl ketone)	ug/L	0.815 ND/U	0.815 ND/U	0.815 ND/U	0.815 ND/U
SW8260B	2-Hexanone	ug/L	0.187 ND/U	0.187 ND/U	0.187 ND/U	0.187 ND/U
SW8260B	4-Methyl-2-pentanone (Methyl isobutyl ketone	ug/L	0.393 ND/U	0.393 ND/U	0.393 ND/U	0.393 ND/U
SW8260B	Acetone	ug/L	1.73 ND/UJ	1.73 ND/U	2.65 TR/JB	1.73 ND/U
SW8260B	Benzene	ug/L	0.104 ND/U	0.104 ND/U	0.104 ND/U	0.104 ND/U
SW8260B	Bromochloromethane	ug/L	0.159 ND/U	0.159 ND/U	0.159 ND/U	0.159 ND/U

METHOD	ANALYTE	SAMP. NUM. DATE UNITS	PBOW-05-GW-AA3-GW003-01D 1/25/2005 RESULT / QUAL	PBOW-05-GW-AA3-GW004-01A 1/30/2005 RESULT / QUAL	PBOW-05-GW-AA3-GW005-01A 1/27/2005 RESULT / QUAL	PBOW-05-GW-AA2-ITMW10-01A 2/1/2005 RESULT / QUAL
SW8260B	Bromodichloromethane	ug/L	0.141 ND/U	0.141 ND/U	0.141 ND/U	0.141 ND/U
SW8260B	Bromoform	ug/L	0.0990 ND/U	0.0990 ND/U	0.0990 ND/U	0.0990 ND/UJ
SW8260B	Bromomethane	ug/L	0.101 ND/U	0.101 ND/U	0.101 ND/U	0.101 ND/U
SW8260B	Carbon Disulfide	ug/L	0.118 ND/U	0.118 ND/U	0.118 ND/U	0.118 ND/U
SW8260B	Carbon tetrachloride	ug/L	0.111 ND/U	0.111 ND/U	0.111 ND/U	0.111 ND/U
SW8260B	Chlorobenzene	ug/L	0.115 ND/U	0.115 ND/U	0.115 ND/U	0.115 ND/U
SW8260B	Chloroethane	ug/L	0.121 ND/U	0.121 ND/U	0.121 ND/U	0.121 ND/U
SW8260B	Chloroform	ug/L	0.120 ND/U	0.120 ND/U	0.120 ND/U	0.120 ND/U
SW8260B	Chloromethane	ug/L	0.142 ND/U	0.142 ND/U	0.142 ND/U	0.142 ND/U
SW8260B	Cyclohexane	ug/L	0.0999 ND/U	0.0999 ND/U	0.0999 ND/U	0.0999 ND/U
SW8260B	Dibromochloromethane	ug/L	0.0874 ND/U	0.0874 ND/U	0.0874 ND/U	0.0874 ND/U
SW8260B	Dichlorodifluoromethane	ug/L	0.304 ND/U	0.304 ND/U	0.304 ND/U	0.304 ND/U
SW8260B	Ethylbenzene	ug/L	0.164 ND/U	0.164 ND/U	0.164 ND/U	0.164 ND/U
SW8260B	Isopropylbenzene (Cumene)	ug/L	0.101 ND/U	0.101 ND/U	0.101 ND/U	0.101 ND/U
SW8260B	Methyl Acetate	ug/L	0.387 ND/UJ	0.387 ND/U	0.387 ND/U	0.387 ND/U
SW8260B	Methylcyclohexane	ug/L	0.107 ND/U	0.107 ND/U	0.107 ND/U	0.107 ND/U
SW8260B	Methylene Chloride	ug/L	0.128 ND/U	0.128 ND/U	0.128 ND/U	0.128 ND/U
SW8260B	Styrene	ug/L	0.118 ND/U	0.118 ND/U	0.118 ND/U	0.118 ND/U
SW8260B	Tert-Butyl Methyl Ether (MTBE)	ug/L	0.109 ND/U	0.109 ND/U	0.109 ND/U	0.109 ND/U
SW8260B	Tetrachloroethene (PCE)	ug/L	0.141 ND/U	0.141 ND/U	0.141 ND/U	0.141 ND/U
SW8260B	Toluene	ug/L	0.119 ND/U	0.119 ND/U	0.119 ND/U	0.119 ND/U
SW8260B	Trichloroethene (TCE)	ug/L	0.163 ND/U	0.163 ND/U	0.163 ND/U	0.163 ND/U
SW8260B	Trichlorofluoromethane	ug/L	0.185 ND/U	0.185 ND/U	0.185 ND/U	0.185 ND/U
SW8260B	Vinyl chloride	ug/L	0.119 ND/U	0.119 ND/U	0.119 ND/U	0.119 ND/U
SW8260B	Xylenes, Total	ug/L	0.307 ND/U	0.307 ND/U	0.307 ND/U	0.307 ND/U
SW8260B	cis-1,2-Dichloroethene	ug/L	0.0990 ND/U	0.0990 ND/U	0.0990 ND/U	0.0990 ND/U
SW8260B	cis-1,3-Dichloropropene	ug/L	0.104 ND/U	0.104 ND/U	0.104 ND/U	0.104 ND/U
SW8260B	trans-1,2-Dichloroethene	ug/L	0.128 ND/U	0.128 ND/U	0.128 ND/U	0.128 ND/U
SW8260B	trans-1,3-Dichloropropene	ug/L	0.112 ND/U	0.112 ND/U	0.112 ND/U	0.112 ND/U

METHOD	ANALYTE	SAMP. NUM. DATE UNITS	PBOW-05-GW-AA2-MKMW09-01A 1/24/2005 RESULT / QUAL	PBOW-05-GW-PB-BEDMW19-01A 1/24/2005 RESULT / QUAL		
	Wet Chemistry					
E310.1	Alkalinity, Total (as CaCO3)	mg/L	230/=	690/=		
E300	Chloride (as Cl)	mg/L	6.69/= /J	177/=		
SW9012	Cyanide	mg/L	0.0070 ND/UJ	0.109/= /J		
E130.2	Hardness (as CACO3)	mg/L	474/=	846/=		
E300	Nitrogen, Nitrate (as N)	mg/L	3.98/=	0.264/=		
E300	Sulfate (as SO4)	mg/L	30.0/=	3.75/= /J		
E160.2	Suspended Solids (residue, Non-filterable)	mg/L	4.0 ND/U	5.0/=		
E160.1	Total Dissolved Solids	mg/L	300/=	1000/=		
SW9060	Total Organic Carbon	mg/L	1.87/=	5.24/=		
E180.1	Turbidity		0.393 ND/U	34.4/=		
	Explosives					
SW8330	1,3,5-Trinitrobenzene	ug/L	0.0494 ND/U	0.0480 ND/UJ		
SW8330	1,3-Dinitrobenzene	ug/L	0.0670 ND/U	0.0651 ND/UJ		
SW8330	2,4,6-Trinitrotoluene	ug/L	0.144 ND/U	0.139 ND/UJ		
SW8330	2,4-Dinitrotoluene	ug/L	0.107 ND/U	0.104 ND/UJ		
SW8330	2,6-Dinitrotoluene	ug/L	0.201 ND/U	0.195 ND/UJ		
SW8330	2-Amino-4,6-Dinitrotoluene	ug/L	0.105 ND/UJ	0.102 ND/UJ		
SW8330	2-Nitrotoluene	ug/L	0.206 ND/U	0.200 ND/UJ		
SW8330	3-Nitrotoluene	ug/L	0.379 ND/U	0.368 ND/UJ		
SW8330	4-Amino-2,6-Dinitrotoluene	ug/L	0.214 ND/U	0.208 ND/UJ		
SW8330	4-Nitrotoluene	ug/L	0.186 ND/U	0.181 ND/UJ		
SW8330	HMX	ug/L	0.0703 ND/U	0.0683 ND/UJ		
SW8330	Nitrobenzene	ug/L	0.111 ND/U	0.108 ND/UJ		
SW8330	RDX	ug/L	0.0862 ND/U	0.0838 ND/UJ		
SW8330	Tetryl	ug/L	0.211 ND/UJ	0.205 ND/UJ		
	Metals					
SW6010B	Aluminum	ug/L	45.4 ND/U	45.4 ND/U		
SW6010B	Aluminum (total)	ug/L	45.4 ND/U	45.4 ND/U		
SW6010B	Antimony	ug/L	8.16 ND/U	8.16 ND/U		
SW6010B	Antimony (total)	ug/L	8.16 ND/U	8.16 ND/U		
SW6010B	Arsenic	ug/L	4.59 ND/U	4.59 ND/U		
SW6010B	Arsenic (total)	ug/L	4.59 ND/U	4.59 ND/U		
SW6010B	Barium	ug/L	27.6/=	1570/=		
SW6010B	Barium (total)	ug/L	29.0/=	1640/=		
SW6010B	Beryllium	ug/L	0.109 ND/U	0.109 ND/U		
SW6010B	Beryllium (total)	ug/L	0.109 ND/U	0.109 ND/U		
SW6010B	Cadmium	ug/L	0.713 ND/U	0.713 ND/U		
SW6010B	Cadmium (total)	ug/L	0.713 ND/U	0.713 ND/U		
SW6010B	Calcium	ug/L	74700/=	150000/=		
SW6010B	Calcium (total)	ug/L	75700/=	148000/=		
SW6010B	Chromium	ug/L	0.789 TR/BJ	0.236 ND/U		
SW6010B	Chromium (total)	ug/L	0.236 ND/U	0.556 TR/BJ		
SW6010B	Cobalt	ug/L	1.29/TR/J	1.27/TR/J		

METHOD	ANALYTE	SAMP. NUM. DATE UNITS	PBOW-05-GW-AA2-MKMW09-01A 1/24/2005 RESULT / QUAL	PBOW-05-GW-PB-BEDMW19-01A 1/24/2005 RESULT / QUAL		
SW6010B	Cobalt (total)	ug/L	1.17/TR/J	0.898 ND/U		
SW6010B	Copper	ug/L	2.55 ND/U	2.55 ND/U		
SW6010B	Copper (total)	ug/L	2.55 ND/U	2.55 ND/U		
SW6010B	Iron	ug/L	22.9 ND/U	22.9 ND/U		
SW6010B	Iron (total)	ug/L	22.9 ND/U	22.9 ND/U		
SW6010B	Lead	ug/L	2.44 ND/U	2.44 ND/U		
SW6010B	Lead (total)	ug/L	2.44 ND/U	2.44 ND/U		
SW6010B	Magnesium	ug/L	20400/=	72500/=		
SW6010B	Magnesium (total)	ug/L	20700/=	71300/=		
SW6010B	Manganese	ug/L	0.700/TR/J	10.2/=		
SW6010B	Manganese (total)	ug/L	0.419 ND/U	8.49/TR/J		
SW7470A	Mercury	ug/L	0.0584 ND/U	0.0584 ND/U		
SW7470A	Mercury (total)	ug/L	0.0584 ND/U	0.0584 ND/U		
SW6010B	Nickel	ug/L	0.745 ND/U	0.745 ND/U		
SW6010B	Nickel (total)	ug/L	0.745 ND/U	0.745 ND/U		
SW6010B	Potassium	ug/L	719/TR/J	26000/=		
SW6010B	Potassium (total)	ug/L	704/TR/J	25400/=		
SW6010B	Selenium	ug/L	11.1 ND/UJ	11.1 ND/UJ		
SW6010B	Selenium (total)	ug/L	11.1 ND/UJ	11.1 ND/UJ		
SW6010B	Silver	ug/L	1.30 ND/U	1.30 ND/U		
SW6010B	Silver (total)	ug/L	1.30 ND/U	1.30 ND/U		
SW6010B	Sodium	ug/L	3140/=	118000/=		
SW6010B	Sodium (total)	ug/L	3190/= /J	118000/= /J		
SW6010B	Thallium	ug/L	14.1 ND/U	14.1 ND/U		
SW6010B	Thallium (total)	ug/L	14.1 ND/U	14.1 ND/U		
SW6010B	Vanadium	ug/L	2.14 ND/U	2.14 ND/U		
SW6010B	Vanadium (total)	ug/L	2.14 ND/U	2.14 ND/U		
SW6010B	Zinc	ug/L	5.30 TR/BJ	1.46 ND/U		
SW6010B	Zinc (total)	ug/L	4.85 TR/BJ	1.46 ND/U		
	Polychlorinated Biphenyls (PCBs)					
SW8082	PCB-1016 (Aroclor 1016)	ug/L	0.653 ND/U	0.629 ND/U		
SW8082	PCB-1221 (Aroclor 1221)	ug/L	1.94 ND/U	1.87 ND/U		
SW8082	PCB-1232 (Aroclor 1232)	ug/L	0.946 ND/U	0.910 ND/U		
SW8082	PCB-1242 (Aroclor 1242)	ug/L	1.44 ND/U	1.38 ND/U		
SW8082	PCB-1248 (Aroclor 1248)	ug/L	1.93 ND/U	1.86 ND/U		
SW8082	PCB-1254 (Aroclor 1254)	ug/L	0.289 ND/U	0.279 ND/U		
SW8082	PCB-1260 (Aroclor 1260)	ug/L	0.293 ND/U	0.282 ND/U		
	Semivolatile Organic Compounds					
SW8270C	1,2,4-Trichlorobenzene	ug/L	1.72 ND/U	1.72 ND/U		
SW8270C	1,2-Dichlorobenzene	ug/L	1.80 ND/U	1.80 ND/U		
SW8270C	1,3-Dichlorobenzene	ug/L	1.62 ND/U	1.62 ND/U		
SW8270C	1,4-Dichlorobenzene	ug/L	1.78 ND/U	1.78 ND/U		
SW8270C	2,4,5-Trichlorophenol	ug/L	5.34 ND/U	5.34 ND/U		
SW8270C	2,4,6-Trichlorophenol	ug/L	4.57 ND/U	4.57 ND/U		

METHOD	ANALYTE	SAMP. NUM. DATE UNITS	PBOW-05-GW-AA2-MKMW09-01A 1/24/2005 RESULT / QUAL	PBOW-05-GW-PB-BEDMW19-01A 1/24/2005 RESULT / QUAL		
SW8270C	2,4-Dichlorophenol	ug/L	4.38 ND/U	4.38 ND/U		
SW8270C	2,4-Dimethylphenol	ug/L	4.44 ND/UJ	4.44 ND/UJ		
SW8270C	2,4-Dinitrophenol	ug/L	4.60 ND/U	4.60 ND/U		
SW8270C	2,4-Dinitrotoluene	ug/L	2.42 ND/U	2.42 ND/U		
SW8270C	2,6-Dinitrotoluene	ug/L	2.26 ND/U	2.26 ND/U		
SW8270C	2-Chloronaphthalene	ug/L	2.79 ND/U	2.79 ND/U		
SW8270C	2-Chlorophenol	ug/L	4.34 ND/U	4.34 ND/U		
SW8270C	2-Methylnaphthalene	ug/L	2.06 ND/U	2.08/TR/J		
SW8270C	2-Methylphenol (o-Cresol)	ug/L	4.14 ND/U	4.14 ND/U		
SW8270C	2-Nitroaniline	ug/L	3.03 ND/U	3.03 ND/U		
SW8270C	2-Nitrophenol	ug/L	4.01 ND/U	4.01 ND/U		
SW8270C	3,3'-Dichlorobenzidine	ug/L	7.19 ND/U	7.19 ND/U		
SW8270C	3-Nitroaniline	ug/L	3.07 ND/U	3.07 ND/U		
SW8270C	4,6-Dinitro-2-methylphenol	ug/L	4.86 ND/U	4.86 ND/U		
SW8270C	4-Bromophenyl phenyl ether	ug/L	3.13 ND/U	3.13 ND/U		
SW8270C	4-Chloro-3-methylphenol	ug/L	4.45 ND/U	4.45 ND/U		
SW8270C	4-Chloroaniline	ug/L	2.62 ND/U	2.62 ND/U		
SW8270C	4-Chlorophenyl phenyl ether	ug/L	3.34 ND/U	3.34 ND/U		
SW8270C	4-Methylphenol (p-Cresol)	ug/L	4.48 ND/U	4.48 ND/U		
SW8270C	4-Nitroaniline	ug/L	3.28 ND/U	3.28 ND/U		
SW8270C	4-Nitrophenol	ug/L	4.52 ND/U	4.52 ND/U		
SW8270C	Acenaphthene	ug/L	0.659 ND/U	0.659 ND/U		
SW8270C	Acenaphthylene	ug/L	0.587 ND/U	0.587 ND/U		
SW8270C	Acetophenone	ug/L	2.21 ND/U	2.21 ND/U		
SW8270C	Anthracene	ug/L	0.657 ND/U	0.657 ND/U		
SW8270C	Atrazine	ug/L	2.31 ND/U	2.31 ND/U		
SW8270C	Benzaldehyde	ug/L	2.34 ND/U	2.34 ND/U		
SW8270C	Benzo(a)anthracene	ug/L	0.808 ND/U	0.808 ND/U		
SW8270C	Benzo(a)pyrene	ug/L	0.723 ND/U	0.723 ND/U		
SW8270C	Benzo(b)fluoranthene	ug/L	0.789 ND/U	0.789 ND/U		
SW8270C	Benzo(g,h,i)perylene	ug/L	0.664 ND/U	0.664 ND/U		
SW8270C	Benzo(k)fluoranthene	ug/L	0.694 ND/U	0.694 ND/U		
SW8270C	Benzoic acid	ug/L	ND/R	ND/R		
SW8270C	Benzyl alcohol	ug/L	2.63 ND/U	2.63 ND/U		
SW8270C	Benzyl butyl phthalate	ug/L	2.88 ND/U	2.88 ND/U		
SW8270C	Biphenyl (Diphenyl)	ug/L	2.15 ND/U	2.15 ND/U		
SW8270C	Caprolactam	ug/L	2.44 ND/U	2.44 ND/U		
SW8270C	Carbazole	ug/L	2.23 ND/U	2.23 ND/U		
SW8270C	Chrysene	ug/L	0.801 ND/U	0.801 ND/U		
SW8270C	Di-n-butylphthalate	ug/L	3.20 ND/U	3.20 ND/U		
SW8270C	Di-n-octylphthalate	ug/L	2.65 ND/U	2.65 ND/U		
SW8270C	Dibenz(a,h)anthracene	ug/L	0.710 ND/U	0.710 ND/U		
SW8270C	Dibenzofuran	ug/L	2.32 ND/U	2.32 ND/U		
SW8270C	Diethylphthalate	ug/L	2.36 ND/U	2.36 ND/U		

METHOD	ANALYTE	SAMP. NUM. DATE UNITS	PBOW-05-GW-AA2-MKMW09-01A 1/24/2005 RESULT / QUAL	PBOW-05-GW-PB-BEDMW19-01A 1/24/2005 RESULT / QUAL		
SW8270C	Dimethylphthalate	ug/L	3.16 ND/U	3.16 ND/U		
SW8270C	Fluoranthene	ug/L	0.753 ND/U	0.753 ND/U		
SW8270C	Fluorene	ug/L	0.747 ND/U	0.747 ND/U		
SW8270C	Hexachlorobenzene	ug/L	2.49 ND/U	2.49 ND/U		
SW8270C	Hexachlorobutadiene	ug/L	1.93 ND/U	1.93 ND/U		
SW8270C	Hexachlorocyclopentadiene	ug/L	1.56 ND/UJ	1.56 ND/UJ		
SW8270C	Hexachloroethane	ug/L	1.38 ND/U	1.38 ND/U		
SW8270C	Indeno(1,2,3-cd)pyrene	ug/L	0.748 ND/U	0.748 ND/U		
SW8270C	Isophorone	ug/L	2.05 ND/U	2.05 ND/U		
SW8270C	N-Nitroso-di-n-propylamine	ug/L	3.13 ND/U	3.13 ND/U		
SW8270C	N-Nitrosodimethylamine	ug/L	3.06 ND/U	3.06 ND/U		
SW8270C	N-Nitrosodiphenylamine	ug/L	3.41 ND/U	3.41 ND/U		
SW8270C	Naphthalene	ug/L	0.540 ND/U	1.57/TR/J		
SW8270C	Nitrobenzene	ug/L	2.07 ND/U	2.07 ND/U		
SW8270C	Pentachlorophenol	ug/L	5.36 ND/UJ	5.36 ND/UJ		
SW8270C	Phenanthrene	ug/L	0.684 ND/U	0.684 ND/U		
SW8270C	Phenol	ug/L	4.27 ND/U	4.27 ND/U		
SW8270C	Pyrene	ug/L	0.723 ND/U	0.723 ND/U		
SW8270C	bis(2-Chloroethoxy)methane	ug/L	2.64 ND/U	2.64 ND/U		
SW8270C	bis(2-Chloroethyl)ether (2-Chloroethylether)	ug/L	2.44 ND/U	2.44 ND/U		
SW8270C	bis(2-Chloroisopropyl)ether	ug/L	3.16 ND/U	3.16 ND/U		
SW8270C	bis(2-Ethylhexyl)phthalate	ug/L	3.49 ND/U	3.49 ND/U		
	Volatile Organic Compounds					
SW8260B	1,1,1-Trichloroethane	ug/L	0.123 ND/U	0.123 ND/U		
SW8260B	1,1,2,2-Tetrachloroethane	ug/L	0.171 ND/U	0.171 ND/U		
SW8260B	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/L	0.272 ND/U	0.272 ND/U		
SW8260B	1,1,2-Trichloroethane	ug/L	0.139 ND/U	0.139 ND/U		
SW8260B	1,1-Dichloroethane	ug/L	0.117 ND/U	0.117 ND/U		
SW8260B	1,1-Dichloroethene	ug/L	0.137 ND/U	0.137 ND/U		
SW8260B	1,2,3-Trichlorobenzene	ug/L	0.118 ND/U	0.118 ND/U		
SW8260B	1,2,4-Trichlorobenzene	ug/L	0.145 ND/U	0.145 ND/U		
SW8260B	1,2-Dibromo-3-chloropropane	ug/L	0.373 ND/U	0.373 ND/U		
SW8260B	1,2-Dibromoethane (EDB)	ug/L	0.126 ND/U	0.126 ND/U		
SW8260B	1,2-Dichlorobenzene	ug/L	0.0800 ND/U	0.0800 ND/U		
SW8260B	1,2-Dichloroethane	ug/L	0.109 ND/U	0.109 ND/U		
SW8260B	1,2-Dichloropropane	ug/L	0.0961 ND/U	0.0961 ND/U		
SW8260B	1,3-Dichlorobenzene	ug/L	0.0933 ND/U	0.0933 ND/U		
SW8260B	1,4-Dichlorobenzene	ug/L	0.101 ND/U	0.101 ND/U		
SW8260B	2-Butanone (Methyl ethyl ketone)	ug/L	0.815 ND/U	0.815 ND/U		
SW8260B	2-Hexanone	ug/L	0.187 ND/U	0.187 ND/U		
SW8260B	4-Methyl-2-pentanone (Methyl isobutyl ketone	ug/L	0.393 ND/U	0.393 ND/U		
SW8260B	Acetone	ug/L	1.73 ND/U	1.73 ND/U		
SW8260B	Benzene	ug/L	0.104 ND/U	6.73/=		
SW8260B	Bromochloromethane	ug/L	0.159 ND/U	0.159 ND/U		

METHOD	ANALYTE	SAMP. NUM. DATE UNITS	PBOW-05-GW-AA2-MKMW09-01A 1/24/2005 RESULT / QUAL	PBOW-05-GW-PB-BEDMW19-01A 1/24/2005 RESULT / QUAL		
SW8260B	Bromodichloromethane	ug/L	0.141 ND/U	0.141 ND/U		
SW8260B	Bromoform	ug/L	0.0990 ND/U	0.0990 ND/U		
SW8260B	Bromomethane	ug/L	0.101 ND/U	0.101 ND/U		
SW8260B	Carbon Disulfide	ug/L	0.118 ND/U	0.203/TR/J		
SW8260B	Carbon tetrachloride	ug/L	0.111 ND/U	0.111 ND/U		
SW8260B	Chlorobenzene	ug/L	0.115 ND/U	0.115 ND/U		
SW8260B	Chloroethane	ug/L	0.121 ND/U	0.121 ND/U		
SW8260B	Chloroform	ug/L	0.120 ND/U	0.120 ND/U		
SW8260B	Chloromethane	ug/L	0.142 ND/U	0.142 ND/U		
SW8260B	Cyclohexane	ug/L	0.0999 ND/U	55.0/=		
SW8260B	Dibromochloromethane	ug/L	0.0874 ND/U	0.0874 ND/U		
SW8260B	Dichlorodifluoromethane	ug/L	0.304 ND/U	0.304 ND/U		
SW8260B	Ethylbenzene	ug/L	0.164 ND/U	3.04/=		
SW8260B	Isopropylbenzene (Cumene)	ug/L	0.101 ND/U	1.23/=		
SW8260B	Methyl Acetate	ug/L	0.387 ND/U	0.387 ND/U		
SW8260B	Methylcyclohexane	ug/L	0.107 ND/U	30.3/=		
SW8260B	Methylene Chloride	ug/L	0.128 ND/U	0.128 ND/U		
SW8260B	Styrene	ug/L	0.118 ND/U	0.118 ND/U		
SW8260B	Tert-Butyl Methyl Ether (MTBE)	ug/L	0.109 ND/U	0.109 ND/U		
SW8260B	Tetrachloroethene (PCE)	ug/L	0.141 ND/U	0.141 ND/U		
SW8260B	Toluene	ug/L	0.119 ND/U	1.73/=		
SW8260B	Trichloroethene (TCE)	ug/L	0.163 ND/U	0.163 ND/U		
SW8260B	Trichlorofluoromethane	ug/L	0.185 ND/U	0.185 ND/U		
SW8260B	Vinyl chloride	ug/L	0.119 ND/U	0.119 ND/U		
SW8260B	Xylenes, Total	ug/L	0.307 ND/U	22.6/=		
SW8260B	cis-1,2-Dichloroethene	ug/L	0.0990 ND/U	0.0990 ND/U		
SW8260B	cis-1,3-Dichloropropene	ug/L	0.104 ND/U	0.104 ND/U		
SW8260B	trans-1,2-Dichloroethene	ug/L	0.128 ND/U	0.128 ND/U		
SW8260B	trans-1,3-Dichloropropene	ug/L	0.112 ND/U	0.112 ND/U		

Plum Brook Acid . ..eas 2 and 3

Equipment Rinsate and Trip Blanks Associated with the Round 1 Groundwater Investigation

METHOD	ANALYTE	SAMP. NUM. DATE UNITS	PBOW-05-TB012105 1/21/2005 RESULT / QUAL	PBOW-05-TB-012305-01 1/23/2005 RESULT / QUAL	PBOW-05-TB-012505-01 1/25/2005 RESULT / QUAL	PBOW-05-TB-012705-01 1/27/2005 RESULT / QUAL
	Volatile Organic Compounds					
SW8260B	1,1,1-Trichloroethane	ug/L	0.123 ND/U	0.123 ND/U	0.123 ND/U	0.123 ND/U
SW8260B	1,1,2,2-Tetrachloroethane	ug/L	0.171 ND/U	0.171 ND/U	0.171 ND/U	0.171 ND/U
SW8260B	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/L	0.272 ND/U	0.272 ND/U	0.272 ND/U	0.272 ND/U
SW8260B	1,1,2-Trichloroethane	ug/L	0.139 ND/U	0.139 ND/U	0.139 ND/U	0.139 ND/U
SW8260B	1,1-Dichloroethane	ug/L	0.117 ND/U	0.117 ND/U	0.117 ND/U	0.117 ND/U
SW8260B	1,1-Dichloroethene	ug/L	0.137 ND/U	0.137 ND/U	0.137 ND/U	0.137 ND/U
SW8260B	1,2,3-Trichlorobenzene	ug/L	0.118 ND/U	0.118 ND/U	0.118 ND/UJ	0.118 ND/UJ
SW8260B	1,2,4-Trichlorobenzene	ug/L	0.145 ND/U	0.145 ND/U	0.145 ND/U	0.145 ND/U
SW8260B	1,2-Dibromo-3-chloropropane	ug/L	0.373 ND/U	0.373 ND/U	0.373 ND/U	0.373 ND/U
SW8260B	1,2-Dibromoethane (EDB)	ug/L	0.126 ND/U	0.126 ND/U	0.126 ND/U	0.126 ND/U
SW8260B	1,2-Dichlorobenzene	ug/L	0.0800 ND/U	0.0800 ND/U	0.0800 ND/U	0.0800 ND/U
SW8260B	1,2-Dichloroethane	ug/L	0.109 ND/U	0.109 ND/U	0.109 ND/U	0.109 ND/U
SW8260B	1,2-Dichloropropane	ug/L	0.0961 ND/U	0.0961 ND/U	0.0961 ND/U	0.0961 ND/U
SW8260B	1,3-Dichlorobenzene	ug/L	0.0933 ND/U	0.0933 ND/U	0.0933 ND/U	0.0933 ND/U
SW8260B	1,4-Dichlorobenzene	ug/L	0.101 ND/U	0.101 ND/U	0.101 ND/U	0.101 ND/U
SW8260B	2-Butanone (Methyl ethyl ketone)	ug/L	0.815 ND/U	0.815 ND/U	0.815 ND/U	0.815 ND/U
SW8260B	2-Hexanone	ug/L	0.187 ND/U	0.187 ND/U	0.187 ND/U	0.187 ND/U
SW8260B	4-Methyl-2-pentanone (Methyl isobutyl ketone)	ug/L	0.393 ND/U	0.393 ND/U	0.393 ND/U	0.393 ND/U
SW8260B	Acetone	ug/L	3.21/TR/J	3.06/TR/J	3.21/TR/J	3.08/TR/J
SW8260B	Benzene	ug/L	0.104 ND/U	0.104 ND/U	0.104 ND/U	0.104 ND/U
SW8260B	Bromochloromethane	ug/L	0.159 ND/U	0.159 ND/U	0.159 ND/U	0.159 ND/U
SW8260B	Bromodichloromethane	ug/L	0.141 ND/U	0.141 ND/U	0.141 ND/U	0.141 ND/U
SW8260B	Bromoform	ug/L	0.0990 ND/U	0.0990 ND/U	0.0990 ND/U	0.0990 ND/U
SW8260B	Bromomethane	ug/L	0.101 ND/U	0.101 ND/U	0.101 ND/U	0.101 ND/U
SW8260B	Carbon Disulfide	ug/L	0.118 ND/U	0.118 ND/U	0.118 ND/U	0.118 ND/U
SW8260B	Carbon tetrachloride	ug/L	0.111 ND/U	0.111 ND/U	0.111 ND/U	0.111 ND/U
SW8260B	Chlorobenzene	ug/L	0.115 ND/U	0.115 ND/U	0.115 ND/U	0.115 ND/U
SW8260B	Chloroethane	ug/L	0.121 ND/U	0.121 ND/U	0.121 ND/U	0.121 ND/U
SW8260B	Chloroform	ug/L	1.81/=	1.81/=	1.84/=	1.80/=
SW8260B	Chloromethane	ug/L	0.142 ND/U	0.142 ND/U	0.142 ND/U	0.142 ND/U
SW8260B	Cyclohexane	ug/L	0.0999 ND/U	0.0999 ND/U	0.0999 ND/U	0.0999 ND/U
SW8260B	Dibromochloromethane	ug/L	0.0874 ND/U	0.0874 ND/U	0.0874 ND/U	0.0874 ND/U
SW8260B	Dichlorodifluoromethane	ug/L	0.304 ND/U	0.304 ND/U	0.304 ND/U	0.304 ND/U
SW8260B	Ethylbenzene	ug/L	0.164 ND/U	0.164 ND/U	0.164 ND/U	0.164 ND/U
SW8260B	Isopropylbenzene (Cumene)	ug/L	0.101 ND/U	0.101 ND/U	0.101 ND/U	0.101 ND/U
SW8260B	Methyl Acetate	ug/L	0.387 ND/U	0.387 ND/U	0.387 ND/UJ	0.387 ND/U
SW8260B	Methylcyclohexane	ug/L	0.107 ND/U	0.107 ND/U	0.107 ND/U	0.107 ND/U
SW8260B	Methylene Chloride	ug/L	1.25/=	1.31/=	1.29/=	1.30/=
SW8260B	Styrene	ug/L	0.118 ND/U	0.118 ND/U	0.118 ND/U	0.118 ND/U
SW8260B	Tert-Butyl Methyl Ether (MTBE)	ug/L	0.109 ND/U	0.109 ND/U	0.109 ND/U	0.109 ND/U
SW8260B	Tetrachloroethene (PCE)	ug/L	0.141 ND/U	0.141 ND/U	0.141 ND/U	0.141 ND/U
SW8260B	Toluene	ug/L	0.119 ND/U	0.119 ND/U	0.119 ND/U	0.119 ND/U
SW8260B	Trichloroethene (TCE)	ug/L	0.163 ND/U	0.163 ND/U	0.163 ND/U	0.163 ND/U

Plum Brook Acid Gas 2 and 3

Equipment Rinsate and Trip Blanks Associated with the Round 1 Groundwater Investigation

METHOD	ANALYTE	SAMP. NUM. DATE UNITS	PBOW-05-TB012105 1/21/2005 RESULT / QUAL	PBOW-05-TB-012305-01 1/23/2005 RESULT / QUAL	PBOW-05-TB-012505-01 1/25/2005 RESULT / QUAL	PBOW-05-TB-012705-01 1/27/2005 RESULT / QUAL
SW8260B	Trichlorofluoromethane	ug/L	0.185 ND/U	0.185 ND/U	0.185 ND/U	0.185 ND/U
SW8260B	Vinyl chloride	ug/L	0.119 ND/U	0.119 ND/U	0.119 ND/U	0.119 ND/U
SW8260B	Xylenes, Total	ug/L	0.307 ND/U	0.307 ND/U	0.307 ND/U	0.307 ND/U
SW8260B	cis-1,2-Dichloroethene	ug/L	0.0990 ND/U	0.0990 ND/U	0.0990 ND/U	0.0990 ND/U
SW8260B	cis-1,3-Dichloropropene	ug/L	0.104 ND/U	0.104 ND/U	0.104 ND/U	0.104 ND/U
SW8260B	trans-1,2-Dichloroethene	ug/L	0.128 ND/U	0.128 ND/U	0.128 ND/U	0.128 ND/U
SW8260B	trans-1,3-Dichloropropene	ug/L	0.112 ND/U	0.112 ND/U	0.112 ND/U	0.112 ND/U

Plum Brook Acio ..eas 2 and 3

Equipment Rinsate and Trip Blanks Associated with the Round 1 Groundwater Investigation

METHOD	ANALYTE	SAMP. NUM. DATE UNITS	PBOW-05-GW-AA2-BEDGW001-01C 1/28/2005 RESULT / QUAL	PBOW-05-GW-AA2-BEDMW001-01C 1/28/2005 RESULT / QUAL	PBOW-05-GW-AA3-GW005-01C 1/28/2005 RESULT / QUAL	PBOW-05-TB-012805-01 1/28/2005 RESULT / QUAL
	Wet Chemistry					
SW9012	Cyanide	mg/L	0.0070 ND/UJ		0.0070 ND/UJ	
	Explosives					
SW8330	1,3,5-Trinitrobenzene	ug/L	0.0499 ND/U		0.0475 ND/U	
SW8330	1,3-Dinitrobenzene	ug/L	0.0677 ND/U		0.0645 ND/U	
SW8330	2,4,6-Trinitrotoluene	ug/L	0.145 ND/U		0.138 ND/U	
SW8330	2,4-Dinitrotoluene	ug/L	0.108 ND/U		0.103 ND/U	
SW8330	2,6-Dinitrotoluene	ug/L	0.203 ND/U		0.193 ND/U	
SW8330	2-Amino-4,6-Dinitrotoluene	ug/L	0.106 ND/UJ		0.101 ND/UJ	
SW8330	2-Nitrotoluene	ug/L	0.208 ND/U		0.198 ND/U	
SW8330	3-Nitrotoluene	ug/L	0.383 ND/U		0.365 ND/U	
SW8330	4-Amino-2,6-Dinitrotoluene	ug/L	0.216 ND/U		0.206 ND/U	
SW8330	4-Nitrotoluene	ug/L	0.188 ND/U		0.179 ND/U	
SW8330	HMX	ug/L	0.0710 ND/U		0.0676 ND/U	
SW8330	Nitrobenzene	ug/L	0.112 ND/U		0.107 ND/U	
SW8330	RDX	ug/L	0.0871 ND/U		0.0830 ND/U	
SW8330	Tetryl	ug/L	0.213 ND/U		0.203 ND/U	
	Metals					
SW6010B	Aluminum (total)	ug/L	45.4 ND/U		45.4 ND/U	
SW6010B	Antimony (total)	ug/L	8.16 ND/U		8.16 ND/U	
SW6010B	Arsenic (total)	ug/L	4.59 ND/U		4.59 ND/U	
SW6010B	Barium (total)	ug/L	4.71/TR/J		0.693 ND/U	
SW6010B	Beryllium (total)	ug/L	0.109 ND/U		0.109 ND/U	
SW6010B	Cadmium (total)	ug/L	0.713 ND/U		0.713 ND/U	
SW6010B	Calcium (total)	ug/L	90.9 ND/U		90.9 ND/U	
SW6010B	Chromium (total)	ug/L	0.236 ND/U		0.236 ND/U	
SW6010B	Cobalt (total)	ug/L	0.898 ND/U		0.898 ND/U	
SW6010B	Copper (total)	ug/L	2.55 ND/U		2.55 ND/U	
SW6010B	Iron (total)	ug/L	22.9 ND/U		22.9 ND/U	
SW6010B	Lead (total)	ug/L	2.44 ND/U		2.44 ND/U	
SW6010B	Magnesium (total)	ug/L	38.5 ND/U		38.5 ND/U	
SW6010B	Manganese (total)	ug/L	0.419 ND/U		0.419 ND/U	
SW7470A	Mercury (total)	ug/L	0.0584 ND/U		0.0584 ND/U	
SW6010B	Nickel (total)	ug/L	0.745 ND/U		0.745 ND/U	
SW6010B	Potassium (total)	ug/L	175 ND/U		175 ND/U	
SW6010B	Selenium (total)	ug/L	11.1 ND/UJ		11.1 ND/UJ	
SW6010B	Silver (total)	ug/L	1.30 ND/U		1.30 ND/U	
SW6010B	Sodium (total)	ug/L	92.8/TR/J		320/TR/J	
SW6010B	Thallium (total)	ug/L	14.1 ND/U		14.1 ND/U	
SW6010B	Vanadium (total)	ug/L	2.90/TR/J		2.21/TR/J	
SW6010B	Zinc (total)	ug/L	1.46 ND/U		1.46 ND/U	
	Polychlorinated Biphenyls (PCBs)					
SW8082	PCB-1016 (Aroclor 1016)	ug/L	0.660 ND/U		0.653 ND/U	
SW8082	PCB-1221 (Aroclor 1221)	ug/L	1.96 ND/U		1.94 ND/U	

Equipment Rinsate and Trip Blanks Associated with the Round 1 Groundwater Investigation

METHOD	ANALYTE	SAMP. NUM. DATE UNITS	PBOW-05-GW-AA2-BEDGW001-01C 1/28/2005 RESULT / QUAL	PBOW-05-GW-AA2-BEDMW001-01C 1/28/2005 RESULT / QUAL	PBOW-05-GW-AA3-GW005-01C 1/28/2005 RESULT / QUAL	PBOW-05-TB-012805-01 1/28/2005 RESULT / QUAL
SW8082	PCB-1232 (Aroclor 1232)	ug/L	0.955 ND/U		0.946 ND/U	
SW8082	PCB-1242 (Aroclor 1242)	ug/L	1.45 ND/U		1.44 ND/U	
SW8082	PCB-1248 (Aroclor 1248)	ug/L	1.95 ND/U		1.93 ND/U	
SW8082	PCB-1254 (Aroclor 1254)	ug/L	0.292 ND/U		0.289 ND/U	
SW8082	PCB-1260 (Aroclor 1260)	ug/L	0.296 ND/U		0.293 ND/U	
	Semivolatile Organic Compounds					
SW8270C	1,2,4-Trichlorobenzene	ug/L	1.74 ND/U		1.74 ND/U	
SW8270C	1,2-Dichlorobenzene	ug/L	1.82 ND/U		1.82 ND/U	
SW8270C	1,3-Dichlorobenzene	ug/L	1.63 ND/U		1.63 ND/U	
SW8270C	1,4-Dichlorobenzene	ug/L	1.79 ND/U		1.79 ND/U	
SW8270C	2,4,5-Trichlorophenol	ug/L	5.39 ND/U		5.39 ND/U	
SW8270C	2,4,6-Trichlorophenol	ug/L	4.61 ND/U		4.61 ND/U	
SW8270C	2,4-Dichlorophenol	ug/L	4.42 ND/U		4.42 ND/U	
SW8270C	2,4-Dimethylphenol	ug/L	4.48 ND/UJ		4.48 ND/UJ	
SW8270C	2,4-Dinitrophenol	ug/L	4.64 ND/U		4.64 ND/U	
SW8270C	2,4-Dinitrotoluene	ug/L	2.44 ND/U		2.44 ND/U	
SW8270C	2,6-Dinitrotoluene	ug/L	2.28 ND/U		2.28 ND/U	
SW8270C	2-Chloronaphthalene	ug/L	2.82 ND/U		2.82 ND/U	
SW8270C	2-Chlorophenol	ug/L	4.38 ND/U		4.38 ND/U	
SW8270C	2-Methylnaphthalene	ug/L	2.08 ND/U		2.08 ND/U	
SW8270C	2-Methylphenol (o-Cresol)	ug/L	4.18 ND/U		4.18 ND/U	
SW8270C	2-Nitroaniline	ug/L	3.06 ND/U		3.06 ND/U	
SW8270C	2-Nitrophenol	ug/L	4.05 ND/U		4.05 ND/U	
SW8270C	3,3'-Dichlorobenzidine	ug/L	7.25 ND/U		7.25 ND/U	
SW8270C	3-Nitroaniline	ug/L	3.10 ND/U		3.10 ND/U	
SW8270C	4,6-Dinitro-2-methylphenol	ug/L	4.91 ND/U		4.91 ND/U	
SW8270C	4-Bromophenyl phenyl ether	ug/L	3.16 ND/U		3.16 ND/U	
SW8270C	4-Chloro-3-methylphenol	ug/L	4.49 ND/U		4.49 ND/U	
SW8270C	4-Chloroaniline	ug/L	2.64 ND/UJ		2.64 ND/UJ	
SW8270C	4-Chlorophenyl phenyl ether	ug/L	3.37 ND/U		3.37 ND/U	
SW8270C	4-Methylphenol (p-Cresol)	ug/L	4.52 ND/U		4.52 ND/U	
SW8270C	4-Nitroaniline	ug/L	3.31 ND/U		3.31 ND/U	
SW8270C	4-Nitrophenol	ug/L	4.57 ND/U		4.57 ND/U	
SW8270C	Acenaphthene	ug/L	0.665 ND/U		0.665 ND/U	
SW8270C	Acenaphthylene	ug/L	0.592 ND/U		0.592 ND/U	
SW8270C	Acetophenone	ug/L	2.23 ND/U		2.23 ND/U	
SW8270C	Anthracene	ug/L	0.663 ND/U		0.663 ND/U	
SW8270C	Atrazine	ug/L	2.33 ND/U		2.33 ND/U	
SW8270C	Benzaldehyde	ug/L	2.36 ND/U		2.36 ND/U	
SW8270C	Benzo(a)anthracene	ug/L	0.816 ND/U		0.816 ND/U	
SW8270C	Benzo(a)pyrene	ug/L	0.730 ND/U		0.730 ND/U	
SW8270C	Benzo(b)fluoranthene	ug/L	0.796 ND/U		0.796 ND/U	
SW8270C	Benzo(g,h,i)perylene	ug/L	0.671 ND/U		0.671 ND/U	
SW8270C	Benzo(k)fluoranthene	ug/L	0.701 ND/U		0.701 ND/U	

Equipment Rinsate and Trip Blanks Associated with the Round 1 Groundwater Investigation

METHOD	ANALYTE	SAMP. NUM. DATE UNITS	PBOW-05-GW-AA2-BEDGW001-01C 1/28/2005 RESULT / QUAL	PBOW-05-GW-AA2-BEDMW001-01C 1/28/2005 RESULT / QUAL	PBOW-05-GW-AA3-GW005-01C 1/28/2005 RESULT / QUAL	PBOW-05-TB-012805-01 1/28/2005 RESULT / QUAL
SW8270C	Benzoic acid	ug/L	ND/R		ND/R	
SW8270C	Benzyl alcohol	ug/L	2.65 ND/U		2.65 ND/U	
SW8270C	Benzyl butyl phthalate	ug/L	2.91 ND/U		2.91 ND/U	
SW8270C	Biphenyl (Diphenyl)	ug/L	2.17 ND/U		2.17 ND/U	
SW8270C	Caprolactam	ug/L	2.46 ND/U		2.46 ND/U	
SW8270C	Carbazole	ug/L	2.25 ND/U		2.25 ND/U	
SW8270C	Chrysene	ug/L	0.808 ND/U		0.808 ND/U	
SW8270C	Di-n-butylphthalate	ug/L	3.23 ND/U		3.23 ND/U	
SW8270C	Di-n-octylphthalate	ug/L	2.68 ND/U		2.68 ND/U	
SW8270C	Dibenz(a,h)anthracene	ug/L	0.717 ND/U		0.717 ND/U	
SW8270C	Dibenzofuran	ug/L	2.34 ND/U		2.34 ND/U	
SW8270C	Diethylphthalate	ug/L	2.39 ND/U		2.39 ND/U	
SW8270C	Dimethylphthalate	ug/L	3.19 ND/U		3.19 ND/U	
SW8270C	Fluoranthene	ug/L	0.760 ND/U		0.760 ND/U	
SW8270C	Fluorene	ug/L	0.754 ND/U		0.754 ND/U	
SW8270C	Hexachlorobenzene	ug/L	2.51 ND/U		2.51 ND/U	
SW8270C	Hexachlorobutadiene	ug/L	1.95 ND/U		1.95 ND/U	
SW8270C	Hexachlorocyclopentadiene	ug/L	1.58 ND/UJ		1.58 ND/UJ	
SW8270C	Hexachloroethane	ug/L	1.40 ND/U		1.40 ND/U	
SW8270C	Indeno(1,2,3-cd)pyrene	ug/L	0.755 ND/U		0.755 ND/U	
SW8270C	Isophorone	ug/L	2.07 ND/U		2.07 ND/U	
SW8270C	N-Nitroso-di-n-propylamine	ug/L	3.16 ND/U		3.16 ND/U	
SW8270C	N-Nitrosodimethylamine	ug/L	3.08 ND/U		3.08 ND/U	
SW8270C	N-Nitrosodiphenylamine	ug/L	3.44 ND/U		3.44 ND/U	
SW8270C	Naphthalene	ug/L	0.545 ND/U		0.545 ND/U	
SW8270C	Nitrobenzene	ug/L	2.08 ND/U		2.08 ND/U	
SW8270C	Pentachlorophenol	ug/L	5.42 ND/UJ		5.42 ND/UJ	
SW8270C	Phenanthrene	ug/L	0.691 ND/U		0.691 ND/U	
SW8270C	Phenol	ug/L	4.31 ND/U		4.31 ND/U	
SW8270C	Pyrene	ug/L	0.730 ND/U		0.730 ND/U	
SW8270C	bis(2-Chloroethoxy)methane	ug/L	2.67 ND/U		2.67 ND/U	
SW8270C	bis(2-Chloroethyl)ether (2-Chloroethylether)	ug/L	2.46 ND/U		2.46 ND/U	
SW8270C	bis(2-Chloroisopropyl)ether	ug/L	3.19 ND/U		3.19 ND/U	
SW8270C	bis(2-Ethylhexyl)phthalate	ug/L	3.52 ND/U		3.52 ND/U	
	Volatile Organic Compounds					
SW8260B	1,1,1-Trichloroethane	ug/L		0.123 ND/U	0.123 ND/U	0.123 ND/U
SW8260B	1,1,2,2-Tetrachloroethane	ug/L		0.171 ND/U	0.171 ND/U	0.171 ND/U
SW8260B	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/L		0.272 ND/U	0.272 ND/U	0.272 ND/U
SW8260B	1,1,2-Trichloroethane	ug/L		0.139 ND/U	0.139 ND/U	0.139 ND/U
SW8260B	1,1-Dichloroethane	ug/L		0.117 ND/U	0.117 ND/U	0.117 ND/U
SW8260B	1,1-Dichloroethene	ug/L		0.137 ND/U	0.137 ND/U	0.137 ND/U
SW8260B	1,2,3-Trichlorobenzene	ug/L		0.118 ND/U	0.118 ND/U	0.118 ND/U
SW8260B	1,2,4-Trichlorobenzene	ug/L		0.287/TR/J	0.324/TR/J	0.145 ND/U
SW8260B	1,2-Dibromo-3-chloropropane	ug/L		0.373 ND/U	0.373 ND/U	0.373 ND/U

Plum Brook Aci. .as 2 and 3

Equipment Rinsate and Trip Blanks Associated with the Round 1 Groundwater Investigation

METHOD	ANALYTE	SAMP. NUM. DATE UNITS	PBOW-05-GW-AA2-BEDGW001-01C 1/28/2005 RESULT / QUAL	PBOW-05-GW-AA2-BEDMW001-01C 1/28/2005 RESULT / QUAL	PBOW-05-GW-AA3-GW005-01C 1/28/2005 RESULT / QUAL	PBOW-05-TB-012805-01 1/28/2005 RESULT / QUAL
SW8260B	1,2-Dibromoethane (EDB)	ug/L		0.126 ND/U	0.126 ND/U	0.126 ND/U
SW8260B	1,2-Dichlorobenzene	ug/L		0.0800 ND/U	0.0800 ND/U	0.0800 ND/U
SW8260B	1,2-Dichloroethane	ug/L		0.109 ND/U	0.109 ND/U	0.109 ND/U
SW8260B	1,2-Dichloropropane	ug/L		0.0961 ND/U	0.0961 ND/U	0.0961 ND/U
SW8260B	1,3-Dichlorobenzene	ug/L		0.0933 ND/U	0.0933 ND/U	0.0933 ND/U
SW8260B	1,4-Dichlorobenzene	ug/L		0.101 ND/U	0.101 ND/U	0.101 ND/U
SW8260B	2-Butanone (Methyl ethyl ketone)	ug/L		0.815 ND/U	0.815 ND/U	0.815 ND/U
SW8260B	2-Hexanone	ug/L		0.187 ND/U	0.187 ND/U	0.187 ND/U
SW8260B	4-Methyl-2-pentanone (Methyl isobutyl ketone)	ug/L		0.393 ND/U	0.393 ND/U	0.393 ND/U
SW8260B	Acetone	ug/L		1.73 ND/U	1.73 ND/U	2.45/TR/J
SW8260B	Benzene	ug/L		0.104 ND/U	0.104 ND/U	0.104 ND/U
SW8260B	Bromochloromethane	ug/L		0.159 ND/U	0.159 ND/U	0.159 ND/U
SW8260B	Bromodichloromethane	ug/L		0.141 ND/U	0.141 ND/U	0.141 ND/U
SW8260B	Bromoform	ug/L		0.0990 ND/U	0.0990 ND/U	0.0990 ND/U
SW8260B	Bromomethane	ug/L		0.101 ND/U	0.101 ND/U	0.101 ND/U
SW8260B	Carbon Disulfide	ug/L		0.118 ND/U	0.118 ND/U	0.118 ND/U
SW8260B	Carbon tetrachloride	ug/L		0.111 ND/U	0.111 ND/U	0.111 ND/U
SW8260B	Chlorobenzene	ug/L		0.115 ND/U	0.115 ND/U	0.115 ND/U
SW8260B	Chloroethane	ug/L		0.121 ND/U	0.121 ND/U	0.121 ND/U
SW8260B	Chloroform	ug/L		0.120 ND/U	0.120 ND/U	1.63/=
SW8260B	Chloromethane	ug/L		0.142 ND/U	0.142 ND/U	0.142 ND/U
SW8260B	Cyclohexane	ug/L		7.29/=	0.0999 ND/U	0.0999 ND/U
SW8260B	Dibromochloromethane	ug/L		0.0874 ND/U	0.0874 ND/U	0.0874 ND/U
SW8260B	Dichlorodifluoromethane	ug/L		0.304 ND/U	0.304 ND/U	0.304 ND/U
SW8260B	Ethylbenzene	ug/L		0.428/TR/J	0.164 ND/U	0.164 ND/U
SW8260B	Isopropylbenzene (Cumene)	ug/L		0.234/TR/J	0.101 ND/U	0.101 ND/U
SW8260B	Methyl Acetate	ug/L		0.387 ND/U	0.387 ND/U	0.387 ND/U
SW8260B	Methylcyclohexane	ug/L		4.84/=	0.107 ND/U	0.107 ND/U
SW8260B	Methylene Chloride	ug/L		0.128 ND/U	0.128 ND/U	1.19/=
SW8260B	Styrene	ug/L		0.118 ND/U	0.118 ND/U	0.118 ND/U
SW8260B	Tert-Butyl Methyl Ether (MTBE)	ug/L		0.109 ND/U	0.109 ND/U	0.109 ND/U
SW8260B	Tetrachloroethene (PCE)	ug/L		0.141 ND/U	0.141 ND/U	0.141 ND/U
SW8260B	Toluene	ug/L		0.268/TR/J	0.186/TR/J	0.119 ND/U
SW8260B	Trichloroethene (TCE)	ug/L		0.163 ND/U	0.163 ND/U	0.163 ND/U
SW8260B	Trichlorofluoromethane	ug/L		0.185 ND/U	0.185 ND/U	0.185 ND/U
SW8260B	Vinyl chloride	ug/L		0.119 ND/U	0.119 ND/U	0.119 ND/U
SW8260B	Xylenes, Total	ug/L		5.96/=	0.307 ND/U	0.307 ND/U
SW8260B	cis-1,2-Dichloroethene	ug/L		0.0990 ND/U	0.0990 ND/U	0.0990 ND/U
SW8260B	cis-1,3-Dichloropropene	ug/L		0.104 ND/U	0.104 ND/U	0.104 ND/U
SW8260B	trans-1,2-Dichloroethene	ug/L		0.128 ND/U	0.128 ND/U	0.128 ND/U
SW8260B	trans-1,3-Dichloropropene	ug/L		0.112 ND/U	0.112 ND/U	0.112 ND/U

Equipment Rinsate and Trip Blanks Associated with the Round 1 Groundwater Investigation

METHOD	ANALYTE	SAMP. NUM. DATE UNITS	PBOW-05-TB-020205-01 2/2/2005 RESULT / QUAL			
	Volatile Organic Compounds					
SW8260B	1,1,1-Trichloroethane	ug/L	0.123 ND/U			
SW8260B	1,1,2,2-Tetrachloroethane	ug/L	0.171 ND/U			
SW8260B	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/L	0.272 ND/U			
SW8260B	1,1,2-Trichloroethane	ug/L	0.139 ND/U			
SW8260B	1,1-Dichloroethane	ug/L	0.117 ND/U			
SW8260B	1,1-Dichloroethene	ug/L	0.137 ND/U			
SW8260B	1,2,3-Trichlorobenzene	ug/L	0.118 ND/U			
SW8260B	1,2,4-Trichlorobenzene	ug/L	0.145 ND/U			
SW8260B	1,2-Dibromo-3-chloropropane	ug/L	0.373 ND/U			
SW8260B	1,2-Dibromoethane (EDB)	ug/L	0.126 ND/U			
SW8260B	1,2-Dichlorobenzene	ug/L	0.0800 ND/U			
SW8260B	1,2-Dichloroethane	ug/L	0.109 ND/U			
SW8260B	1,2-Dichloropropane	ug/L	0.0961 ND/U			
SW8260B	1,3-Dichlorobenzene	ug/L	0.0933 ND/U			
SW8260B	1,4-Dichlorobenzene	ug/L	0.101 ND/U			
SW8260B	2-Butanone (Methyl ethyl ketone)	ug/L	0.815 ND/U			
SW8260B	2-Hexanone	ug/L	0.187 ND/U			
SW8260B	4-Methyl-2-pentanone (Methyl isobutyl ketone)	ug/L	0.393 ND/U			
SW8260B	Acetone	ug/L	2.27/TR/J			
SW8260B	Benzene	ug/L	0.104 ND/U			
SW8260B	Bromochloromethane	ug/L	0.159 ND/U			
SW8260B	Bromodichloromethane	ug/L	0.141 ND/U			
SW8260B	Bromoform	ug/L	0.0990 ND/UJ			
SW8260B	Bromomethane	ug/L	0.101 ND/U			
SW8260B	Carbon Disulfide	ug/L	0.118 ND/U			
SW8260B	Carbon tetrachloride	ug/L	0.111 ND/U			
SW8260B	Chlorobenzene	ug/L	0.115 ND/U			
SW8260B	Chloroethane	ug/L	0.121 ND/U			
SW8260B	Chloroform	ug/L	0.120 ND/U			
SW8260B	Chloromethane	ug/L	0.142 ND/U			
SW8260B	Cyclohexane	ug/L	0.0999 ND/U			
SW8260B	Dibromochloromethane	ug/L	0.0874 ND/U			
SW8260B	Dichlorodifluoromethane	ug/L	0.304 ND/U			
SW8260B	Ethylbenzene	ug/L	0.164 ND/U			
SW8260B	Isopropylbenzene (Cumene)	ug/L	0.101 ND/U			
SW8260B	Methyl Acetate	ug/L	0.387 ND/U			
SW8260B	Methylcyclohexane	ug/L	0.107 ND/U			
SW8260B	Methylene Chloride	ug/L	0.128 ND/U			
SW8260B	Styrene	ug/L	0.118 ND/U			
SW8260B	Tert-Butyl Methyl Ether (MTBE)	ug/L	0.109 ND/U			
SW8260B	Tetrachloroethene (PCE)	ug/L	0.141 ND/U			
SW8260B	Toluene	ug/L	0.119 ND/U			
SW8260B	Trichloroethene (TCE)	ug/L	0.163 ND/U			

Plum Brook Acu . .reas 2 and 3

Equipment Rinsate and Trip Blanks Associated with the Round 1 Groundwater Investigation

METHOD	ANALYTE	SAMP. NUM. DATE UNITS	PBOW-05-TB-020205-01 2/2/2005 RESULT / QUAL			
SW8260B	Trichlorofluoromethane	ug/L	0.185 ND/U			
SW8260B	Vinyl chloride	ug/L	0.119 ND/U			
SW8260B	Xylenes, Total	ug/L	0.307 ND/U			
SW8260B	cis-1,2-Dichloroethene	ug/L	0.0990 ND/U			
SW8260B	cis-1,3-Dichloropropene	ug/L	0.104 ND/U			
SW8260B	trans-1,2-Dichloroethene	ug/L	0.128 ND/U			
SW8260B	trans-1,3-Dichloropropene	ug/L	0.112 ND/U			

Appendix J
Chemical Quality Assurance Report

Chemical Quality Assurance Report

Acid Areas
Remedial Investigation, Part 1
Former Plum Brook Ordnance Works
Sandusky, OH

January 2005 Sampling Event

Presented by:

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ABBREVIATIONS AND ACRONYMS

ASC	Analytical Services Center
CQAR	Chemical Quality Assurance Report
COC	Chain of Custody
%D	Percent Difference
DL	Detection Limit
DQO	Data Quality Objective
EM	Engineering Manual
EPA	Environmental Protection Agency
FID	Flame Ionization Detector
GC	Gas Chromatograph or Gas Chromatography
HTRW	Hazardous, Toxic, Radioactive Waste
ICAP	Inductively Coupled Argon Plasma Spectrophotometer
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LDP	Laboratory Data Package
LLR	Lowest Level for Reporting
MB	Method Blank
MDL	Method Detection Limit
mg/L	milligram per liter
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PARCC	Precision, Accuracy, Representativeness, Comparability, and Completeness
PBOW	Plum Brook Ordnance Works
PCB	Polychlorinated Biphenyl
QA	Quality Assurance
QC	Quality Control
%R	Percent Recovery
RL	Reporting Limit
RPD	Relative Percent Difference
SB	Soil Boring
SDG	Sample Delivery Group
SVOC	Semivolatile Organic Compound
SW-846	Solid Waste Analytical Protocols
TAL	Target Analyte List
TB	Trip Blank
TCL	Target Compound List
µg/L	Microgram per liter
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
VOC	Volatile Organic Compound

INTRODUCTION

This Chemical Quality Assurance Report (CQAR) presents an evaluation of the quality and usability of the Quality Assurance (QA) analytical data generated in support of the groundwater sampling event performed by Jacobs Engineering, Inc. at the Acid Areas at the Former Plum Brook Ordnance Works (PBOW) in Sandusky, Ohio in late January 2005. The findings of this evaluation are presented in terms of data precision, accuracy, representativeness, sensitivity, and completeness.

Analytical samples evaluated in this report consisted of QA samples that were collected in conjunction with the project QC samples (i.e., primary and duplicate) at a frequency of approximately ten percent of the QC samples. The project samples are summarized in Attachment I, Table 1-1 Primary/QC/QA Sample Number Correlation. The QA data is presented in tables in Attachment II – QA Data Summary.

Analytical Methods

Analyses for this project were performed in strict accordance with the following protocol:

- *Test Methods for Evaluating Solid Waste*, SW-846, 3rd Edition, USEPA, November 1986, (SW-846)

Specific analytical methods used included the following:

- SW-846 8260B – volatile organic compounds (VOCs);
- SW-846 8270C – semivolatile organic compounds (SVOCs);
- SW-846 8082 – polychlorinated biphenyls (PCBs);
- SW-846 8330A – nitroaromatic compounds (referred to as explosives hereafter);
- SW-846 6010B – total metals by Inductively Coupled Argon Plasma Spectrophotometer (ICAP);
- SW-846 7471A – total mercury; and
- SW-846 9012M – cyanide.

Analytical Laboratories

The following analytical laboratory was contracted to analyze the primary/QC field samples for this project:

Analytical Services Center (ASC)
Division of Ecology and Environment, Inc.
Contact: Tony Bogolin, Project Manager
4493 Walden Avenue
Lancaster, NY 14086
Phone: (716) 685-8080; Fax: (716) 685-0852

The following analytical laboratory was contracted to analyze the QA field samples for this project:

ELAB of Tennessee, LLC
Contact: Marcia K. McGinnity, Senior Project Manager
227 French Landing Drive, Suite 550
Nashville, TN 37228
Phone: (615) 345-1115; Fax: (615) 846-5426

Both of these laboratories have been validated by the US Army Corps of Engineers (USACE).

Data Evaluation Procedures

The quality of these data has been evaluated following procedures consistent with those included in Engineering Manual (EM) 200-1-6 *Chemical Quality Assurance for HTRW Projects*, 10 October 1997, as well as *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, EPA-540/R-99/008, October 1999 and *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*, EPA-540/R-94/013, February 1994 (*Functional Guidelines*). Data evaluations were also based on the QC requirements of the individual analytical methods.

The following data quality issues were addressed in this evaluation:

- Review of chain-of-custody and sample receipt forms to evaluate sample receipt data, damaged sample containers, etc.;
- Review of laboratory testing methods, detection limits, holding times, data qualifiers, etc.;
- Review of field QC blank data to detect contamination from outside sources;
- Review of QC data to evaluate data reproducibility;
- Review of laboratory QC including verification of calibration, instrument performance checks, laboratory blanks, spike recovery, and duplicates;
- Assign appropriate qualifiers to usable data and qualify unusable data as rejected, if necessary; and
- Data evaluation findings presented in term of the PARCC (precision, accuracy, representativeness, comparability, and completeness) data quality parameters.

Data Qualifier Definitions

The following definitions provide explanations of the data qualifiers that were assigned to results in the data review process. The data qualifier definitions are consistent with those used within the *Functional Guidelines* referenced above.

U – The analyte was analyzed for but was not detected above the reported sample quantitation limit.

J – The analyte was positively identified. However, the associated numerical value is an estimate of the concentration of the analyte in the sample.

UJ - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is an estimate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

I. QC DATA EVALUATION

A. Accuracy:

1) Volatile Organic Compounds

- For Sample Delivery Group (SDG) 0501293, four volatile organic compounds were reported as having low percent recoveries (%Rs) and one compound was reported as having a high %R for the matrix spike (MS). The matrix spike duplicate (MSD) for this SDG reported six low %Rs and one compound was reported as having a high %R. SDG-0502001 did not report any %Rs outside of the control criteria limits for the MS or MSD analyses.
- All laboratory control samples (LCSs) for were within control criteria for SDG-0502001 and 0501293.
- All surrogate recoveries were within control criteria for SDG-0502001 and 0501293.
- The trip blank (TB) results for SDG-051293 reported detectable concentrations of three common laboratory contaminants: acetone at a concentration of 3.21 µg/L, chloroform at a concentration of 1.84 µg/L, and methylene chloride at a concentration of 1.29 µg/L. The analytical results for the TB for SDG-0502001 did not report any detectable compounds.
- The internal standard area responses for SDG-0502001 and 0501293 were all within the control criteria limits.
- Holding times for all analyses for SDG-0502001 and 0501293 were met.
- Sample PBOW-05-GW-AA3-BEDMW003-01A had a dilution factor of 2.5.
- Sample PBOW-05-GW-AA3-BEDMW003-01D had a dilution factor of 2.5.

2) Semivolatile Organic Compounds

- For SDG-0501293, one compound, hexachlorocyclopentadiene, was reported as having a low %R for both the MS and the MSD. All MS and MSD %Rs were within control criteria limits for SDG-0502001.
- The LCS for SDG-00501293 reported one compound as having a low %Rs, benzoic acid. The LCS for SDG-0502001 reported one low %R for benzoic acid and three high %Rs for: acetophenone, caprolactam, and indeno(1,2,3-cd)pyrene. The LCS duplicate for this SDG also reported benzoic acid as having a low %R but had six compounds reporting high %Rs: biphenyl, acenaphthene, acetophenone, caprolactam, dibenz(a, h) anthracene, and indeno(1,2,3-cd)pyrene.
- Surrogate recovery for all analyses of SDG-0502001 and -0501293 were within the control criteria limits.
- The internal standard area responses for SDG-0502001 and -0501293 were all within the control criteria limits.

- Holding times for all analyses for SDG-0502001 and 0501293 were met.

3) Explosives

- For SDG-051293, two explosive compounds were reported as having low percent recoveries (%Rs) and one compound was reported as having a high %R for the matrix spike (MS). The matrix spike duplicate (MSD) for this SDG reported one compound with a low %Rs. SDG 0502001 did not report MS or MSD results.
- Surrogate recovery for all analyses of SDG-0502001 and 0501293 were within the control criteria limits.
- All laboratory control samples (LCSs) for were within control criteria for SDG-0502001 and 0501293.
- The internal standard area responses for SDG-0502001 and 0501293 were all within the control criteria limits.
- Holding times for all analyses for SDG-0502001 and 0501293 were met.

4) Polychlorinated Biphenyls

- All MS and MSD %Rs were within control criteria limits for SDG-0502001 and 0501293.
- One surrogate recovery for tetrachloro-m-xylene in SDG-0502001 was reported as low for sample PBOW-05-GW-AA3-GW004-01. Surrogate recoveries for all analyses of SDG-0501293 were within the control criteria limits.
- All laboratory control samples (LCSs) for were within control criteria for SDG-0502001 and 0501293.
- The internal standard area responses for SDG-0502001 and 0501293 were all within the control criteria limits.
- Holding times for all analyses for SDG-0502001 and 0501293 were met.
- Sample PBOW-05-GW-AA3-BEDMW003-01A had a dilution factor of 5.

5) Metals

- The %R reported for the MS of SDG-0502001 for sodium was outside the QC criteria limits and the MSD of this SDG reported selenium as having a low %R. The MS of SDG-0501293 reported low %Rs for selenium and cyanide.
- The LCS of SDG 0501293 reported cyanide as having a low %R.
- Holding times for all analyses for SDG-0502001 and 0501293 were met.
- Serial dilutions control criteria were met for SDG-0502001 and 0501293.

B. Precision

1) Volatile Organic Compounds

- The MS/MSD pair for SDG-0501293 reported high relative percent differences (RPDs) for acetone cyclohexane (29.8%) and methylcyclohexane (26.5%). MS/MSD analyses were not performed for SDG-0502001.

2) Semivolatile Organic Compounds

- For SDG-0501293, benzoic acid was reported as having a high RPD for the MS/MSD pair, and for one compound, hexachlorocyclopentadiene, the RPD could not be calculated because the MS analytical result was found to be zero. MS/MSD analyses were not performed for SDG-0502001.
- The LCS/LCS duplicate analyses for SDG-0502001 reported 16 compounds as having RPDs higher than the upper limit of the control criteria: 2,4-dimethylphenol, benzoic acid, 1,2,4-trichlorobenzene, 2,4-dinitrotoluene, 2,5-dinitrotoluene, 2-methylnaphthalene, 3,3'-dichlorobenzene, carbazole, dibenzofuran, diethyl phthalate, hexachlorobenzene, hexachlorobutadiene, hexachlorocyclopentadiene, isophorone, hexachloroethane, and nitrobenzene.

3) Explosives

- The MS/MSD pair analyzed for SDG-0501293 reported two compounds as having high RPDs: 4-nitrotoluene (37.4%) and HMX (20.4%).

4) Polychlorinated Biphenyls

- All QC recoveries were found to be within the control criteria limits.

5) Metals

- The MS/MSD pair analyzed for SDG-0502001 reported two compounds as having high RPDs: selenium and sodium. The MS/MSD pair analyzed for SDG-0501293 reported cyanide as having a high RPD.
- Serial dilutions control criteria were met for SDG-0502001 and 0501293.

C. Laboratory Contamination

1) Volatile Organic Compounds

- No contamination was found in any of the associated laboratory blanks SDG-0502001 and 0501293.

2) Semivolatile Organic Compounds

- No contamination was found in any of the associated laboratory blanks SDG-0502001 and 0501293.

3) Explosives

- No contamination was found in any of the associated laboratory blanks SDG-0502001 and 0501293.

4) Polychlorinated Biphenyls

- No contamination was found in any of the associated laboratory blanks SDG-0502001 and 0501293.

5) Metals

- The method blank (MB) results for SDG-0501293 reported detections of magnesium (108.8 µg/L) and vanadium (2.663 µg/L). The MB results for SDG-0502001 reported detections of chromium (0.2410 µg/L), copper (5.593 µg/L), nickel (1.607 µg/L), and silver 1.476 µg/L).
- The initial calibration blank of SDG-0501293 reported detections of beryllium, chromium, and zinc.
- The continuing calibration blanks of SDG-0501293 reported detections of beryllium, cobalt, iron, magnesium, nickel, magnesium, silver, and vanadium. The continuing calibration blanks of SDG-0502001 reported detections of aluminum, beryllium, chromium, iron, magnesium, and nickel.

II. QA DATA EVALUATION

a. Accuracy

1) Volatile Organic Compounds

- One sample, PBOW-05-GW-AA3-GW003-01B, reported a surrogate recovery of 133% for d4-1,2-dichloroethane, which is slightly higher than the criteria limit of 130%. Positive volatile organic compounds results for this sample are qualified as J, estimated.

2) Semivolatile Organic Compounds

- Surrogate recovery of one compound, 2,4,6-tribromophenol, in the MS was reported as low.

3) Explosives

- The continuing calibration verification samples reported two compounds, tetryl and HMX, as outside the control criteria limit of percent difference %D; however, the average %Ds for the mixtures were well within the control criteria limits.

4) Polychlorinated Biphenyls

- The continuing calibration verification samples reported one compound, Aroclor 1260, as outside the control criteria limit of percent difference %D. However, the average %D for the mixture was well within the control criteria limit.

5) Metals

- All analyses were found to be within their respective control criteria limits.

B. Precision

1) Volatile Organic Compounds

- All analyses were found to be within their respective control criteria limits.

2) Semivolatile Organic Compounds

- All analyses were found to be within their respective control criteria limits.

3) Explosives

- All analyses were found to be within their respective control criteria limits.

4) Polychlorinated Biphenyls

- The MS/MSD pair analytical results for Aroclor 1260 had a RPD (54%) higher than the control criteria limits (30%). Positive PCB results were qualified as J, estimated.

5) Metals

- All analyses were found to be within their respective control criteria limits.

C. Laboratory Contamination

1) Volatile Organic Compounds

- No contamination was found in any of the associated blanks.

2) Semivolatile Organic Compounds

- No contamination was found in any of the associated blanks.

3) Explosives

- No contamination was found in any of the associated blanks.

4) Polychlorinated Biphenyls

- No contamination was found in any of the associated blanks.

5) Metals

- Thallium was detected at a concentration of 4.413 µg/L in the method blank. Positive results for thallium were qualified as J, estimated.
- Cyanide was detected in two continuing calibration blanks, both at a concentration of 6.2 µg/L. Mercury was detected in two continuing calibration blanks at concentrations of 0.088 and 0.101 µg/L. Cyanide and mercury positive results were qualified as J, estimated.

III. QA/QC DATA COMPARISON

In accordance with EM 200-1-6, a QA/QC data comparison was performed based on the agreement criteria summarized in the table below:

Criteria for Comparing Field QC and QA Sample Data

Matrix	Parameter	Disagreement	Major Disagreement
Water	All (except TPH)	> 2x difference	>3x difference
Water	TPH	Arbitrary (suggest > 3x difference)	Arbitrary (suggest > 5x difference)

Attachment III presents tables that show a side-by-side comparison of the analytical results of the QC and QA samples.

Data found out of control were examined to determine if the disagreements were extreme, isolated occurrences, or if negative trends existed. Samples found in disagreement do not necessarily indicate an error has been made or inappropriate procedures used. Factors including the natural variability of the sample matrix, high or low analyte concentrations, or the presence of compounds that interfere with analysis can contribute to duplicate disagreement. Negative trends may indicate systemic errors made in sampling, handling, or analytical procedures; or may indicate the selection of an inappropriate protocol. If negative trends or extreme non-conformances exist, associated data were evaluated carefully to determine their validity.

The results of the comparison between Primary Field QC and QA samples are presented below.

A. Volatile Organic Compounds

No volatile organic compounds were found at concentration differences between primary and QA samples that exceeded the criteria limits.

B. Semivolatile Organic Compounds

Sample PBOW-05-GW-AA3-BEDMW003 had disagreements for: 2-methylnaphthalene, as it was detected at a concentration of 5.47 J µg/L in the primary sample and 2.6 J µg/L in the QA sample; and naphthalene, as it was detected at a concentration of 5.53 J µg/L in the primary sample and 2.4 J µg/L in the QA sample.

C. Explosives

No explosive compounds were found at concentration differences between primary and QA samples that exceeded the criteria limits.

D. Polychlorinated Biphenyls

No polychlorinated biphenyl compounds were found at concentration differences between primary and QA samples that exceeded the criteria limits.

E. Metals

Sample PBOW-05-GW-AA3-BEDMW003 had a disagreement with copper (total), as it was detected at a concentration of 2.56 µg/L in the primary sample and not detected in the QA sample. This difference may be due to differences in the detection limits (DL) as the primary sample DL for copper was reported as 2.55 µg/L and the QA DL for copper was reported as 3 µg/L.

Sample PBOW-05-GW-AA3-BEDMW003 had a disagreement with thallium (soluble), as it was not detected in the primary sample and detected at a concentration of 4.2 J µg/L in the QA sample. This difference may be due to differences in the DLs as the primary sample DL for thallium was reported as 14.1 µg/L and the QA DL was reported as 3 µg/L.

Sample PBOW-05-GW-AA3-BEDMW003 had a major disagreement with sodium (soluble), as it was detected in the primary sample at a concentration of 194,000 µg/L and detected at a concentration of 19,200 µg/L in the QA sample. Detection limits differed for sodium as the primary sample DL was reported as 49.3 µg/L and the QA DL was reported as 1,000 µg/L.

Sample PBOW-05-GW-AA3-GW003 had a disagreement with aluminum (total), as it was not detected in the primary sample and detected at a concentration of 68.4 J µg/L in the QA sample. Detection limits were quite comparable for aluminum as the DL for aluminum of the Primary sample was reported as 45.4 µg/L and the QA DL was reported as 50 µg/L.

Sample PBOW-05-GW-AA3-BEDMW003 had a major disagreement with calcium (soluble), as it was detected in the primary sample at a concentration of 164,000 µg/L and detected in the QA sample at a concentration of 17,800 µg/L. Detection limits differed for calcium as the primary sample DL for calcium was reported as 90.9 µg/L and the QA DL was reported as 1,000 µg/L.

Sample PBOW-05-GW-AA3-GW003 had a disagreement with cobalt (soluble), as it was detected in the primary sample at a concentration of 2.79 J µg/L and not detected in the QA sample. Similar results were found for the total cobalt sample results as it was detected in the primary sample at a concentration of 2.60 J µg/L and not detected in the QA sample. Detection limits differed as the reported DL for cobalt for the primary sample was 0.898 µg/L and the QA DL was reported as 3 µg/L.

Sample PBOW-05-GW-AA3-GW003 had a disagreement with iron (soluble), as it was detected in the primary sample at a concentration of 39.9 µg/L and not detected in the QA sample. Detection limits were quite comparable for iron as the DL for aluminum of the primary sample was reported as 22.9 µg/L and the QA DL was reported as 30 µg/L.

Sample PBOW-05-GW-AA3-GW003 had a disagreement with thallium (total), as it was not detected in the primary sample and detected in the QA sample at a concentration of 4.5 J µg/L. Similar results were found for the soluble thallium sample results as it was not detected in the primary sample and detected in the QA sample at a concentration of 3.1 J µg/L. This difference may be due to differences in the DLs as the primary sample DL for thallium was reported as 14.1 µg/L and the QA DL was reported as 3 µg/L.

IV. PROBLEMS

No major problems were found with the quality and usability of the analytical data generated for this project. QC results were unreliable in some cases due to high analyte content that resulted in matrix interference. All of the results were considered usable as no results were rejected due to laboratory error, and where appropriate. Qualifiers were added to specific data results to indicate estimated concentrations when QC data results are not within specific criteria limitations.

V. SUMMARY AND CONCLUSIONS

In general, the QC and QA sample results indicated that the data met "definitive data" standards and were of known quality. The data reported are acceptable with the required qualifications. No results were found to unusable due to data QC deficiencies. QC data demonstrated that the QA mechanisms were effective in ensuring measurement data reliability within expected limits of sampling and analytical error and were considered, as qualified, representative of actual site and sample conditions at the time sampled.

ATTACHMENT 1 – SAMPLE CORRELATION

Primary Field Sample ID	Primary Lab Sample ID	QA Field Sample ID	QA Lab Sample ID	Sample Date and Time	Requested Analyses
PBOW-05-GW-AA3-GW003-01A	0501293-01A	PBOW-05-GW-AA3-GW003-01B	0501236-02	1/25/05 1540	8260B VOCs
PBOW-05-GW-AA3-GW003-01A	0501293-01B	PBOW-05-GW-AA3-GW003-01B	0501236-02	1/25/05 1540	8082 PCBs, 8270C SEMIVOCs, 8330 Nitros
PBOW-05-GW-AA3-GW003-01A	0501293-01C	PBOW-05-GW-AA3-GW003-01B	0501236-02	1/25/05 1540	6010B/7471A Metals
PBOW-05-GW-AA3-GW003-01A	0501293-01D	PBOW-05-GW-AA3-GW003-01B	0501236-02	1/25/05 1540	6010B/7471A Metals
PBOW-05-GW-AA3-GW003-01A	0501293-01E	PBOW-05-GW-AA3-GW003-01B	0501236-02	1/25/05 1540	160.1 TDS, 180.1 Turbidity, 300 Anions, 310.1 Alkalinity
PBOW-05-GW-AA3-GW003-01A	0501293-01F	PBOW-05-GW-AA3-GW003-01B	0501236-02	1/25/05 1540	9012A Cyanide
PBOW-05-GW-AA3-GW003-01A	0501293-01G	PBOW-05-GW-AA3-GW003-01B	0501236-02	1/25/05 1540	9060 Total Organic Carbon
PBOW-05-GW-AA3-BEDMW003-01A	0502001-04A	PBOW-05-GW-AA3-BEDMW003-01B	0502020-01	1/30/05 1400	8260B VOCs
PBOW-05-GW-AA3-BEDMW003-01A	0502001-04B	PBOW-05-GW-AA3-BEDMW003-01B	0502020-01	1/30/05 1400	8082 PCBs, 8270C SEMIVOCs, 8330 Nitros
PBOW-05-GW-AA3-BEDMW003-01A	0502001-04C	PBOW-05-GW-AA3-BEDMW003-01B	0502020-01	1/30/05 1400	6010B Metals
PBOW-05-GW-AA3-BEDMW003-01A	0502001-04CRE	PBOW-05-GW-AA3-BEDMW003-01B	0502020-01	1/30/05 1400	7471A Metals
PBOW-05-GW-AA3-BEDMW003-01A	0502001-04D	PBOW-05-GW-AA3-BEDMW003-01B	0502020-01	1/30/05 1400	6010B Metals
PBOW-05-GW-AA3-BEDMW003-01A	0502001-04DRE	PBOW-05-GW-AA3-BEDMW003-01B	0502020-01	1/30/05 1400	7471A Metals
PBOW-05-GW-AA3-BEDMW003-01A	0502001-04E	PBOW-05-GW-AA3-BEDMW003-01B	0502020-01	1/30/05 1400	9012A Cyanide
PBOW-05-GW-AA3-BEDMW003-01A	0502001-04F	PBOW-05-GW-AA3-BEDMW003-01B	0502020-01	1/30/05 1400	160.1 TDS, 180.1 Turbidity, 300 Anions, 310.1 Alkalinity
PBOW-05-GW-AA3-BEDMW003-01A	0502001-04G	PBOW-05-GW-AA3-BEDMW003-01B	0502020-01	1/30/05 1400	9060 Total Organic Carbon

ATTACHMENT II – QA DATA SUMMARIES

VOLATILE ORGANIC COMPOUNDS

Qualified Analytical Data - Groundwater Samples
QA vs Primary Results, VOCs
Acid Areas, Plum Brook Ordnance Works, OH

Location	QA Sample ID	Date	Time	Method	Analyte	QA Result		DL	Units
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	1,1,1-Trichloroethane	ND	U	0.4	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	1,1,2,2-Tetrachloroethane	ND	U	0.4	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	1,1,2-Trichloro-1,2,2-TFA	ND	U	0.5	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	1,1,2-Trichloroethane	ND	U	0.4	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	1,1-Dichloroethane	ND	U	0.5	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	1,1-Dichloroethene	ND	U	0.6	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	1,2,3-Trichlorobenzene	ND	U	0.3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	1,2,4-Trichlorobenzene	ND	U	0.3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	1,2-Dibromo-3-chloropropane	ND	U	0.5	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	1,2-Dibromoethane (EDB)	ND	U	0.5	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	1,2-Dichlorobenzene	ND	U	0.2	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	1,2-Dichloroethane	ND	U	0.3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	1,2-Dichloropropane	ND	U	0.4	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	1,3-Dichlorobenzene	ND	U	0.3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	1,4-Dichlorobenzene	ND	U	0.3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	2-Butanone	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	2-Hexanone	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	4-Methyl-2-pentanone	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Acetone	ND	U	2	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Benzene	38		0.3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Bromochloromethane	ND	U	0.4	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Bromodichloromethane	ND	U	0.3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Bromoform	ND	U	0.4	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Bromomethane	ND	U	0.8	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Carbon Disulfide	ND	U	0.2	ug/L

Location	QA Sample ID	Date	Time	Method	Analyte	QA Result		DL	Units
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Carbon tetrachloride	ND	U	0.4	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Chlorobenzene	ND	U	0.2	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Chloroethane	ND	U	0.5	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Chloroform	ND	U	0.4	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Chloromethane	ND	U	0.5	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	cis-1,2-Dichloroethene	ND	U	0.4	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	cis-1,3-Dichloropropene	ND	U	0.3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Cyclohexane	97		0.6	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Dibromochloromethane	ND	U	0.3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Dichlorodifluoromethane	ND	U	0.4	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Ethylbenzene	16		0.2	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Isopropylbenzene (Cumene)	4.7		0.3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Methyl Acetate	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Methylcyclohexane	53		0.5	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Methylene Chloride	ND	U	0.9	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Styrene	ND	U	0.3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Tert-Butyl Methyl Ether (MTBE)	ND	U	0.2	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Tetrachloroethene (PCE)	ND	U	0.3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Toluene	26		0.3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	trans-1,2-Dichloroethene	ND	U	0.4	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	trans-1,3-Dichloropropene	ND	U	0.2	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Trichloroethene (TCE)	ND	U	0.4	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Trichlorofluoromethane	ND	U	0.5	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Vinyl chloride	ND	U	0.4	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Xylenes, Total	120		0.3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	1,1,1-Trichloroethane	ND	U	0.4	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	1,1,2,2-Tetrachloroethane	ND	U	0.4	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	1,1,2-Trichloro-1,2,2-TFA	ND	U	0.5	ug/L

Location	QA Sample ID	Date	Time	Method	Analyte	QA Result		DL	Units
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	1,1,2-Trichloroethane	ND	U	0.4	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	1,1-Dichloroethane	ND	U	0.5	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	1,1-Dichloroethene	ND	U	0.6	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	1,2,3-Trichlorobenzene	ND	U	0.3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	1,2,4-Trichlorobenzene	ND	U	0.3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	1,2-Dibromo-3-chloropropane	ND	U	0.5	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	1,2-Dibromoethane (EDB)	ND	U	0.5	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	1,2-Dichlorobenzene	ND	U	0.2	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	1,2-Dichloroethane	ND	U	0.3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	1,2-Dichloropropane	ND	U	0.4	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	1,3-Dichlorobenzene	ND	U	0.3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	1,4-Dichlorobenzene	ND	U	0.3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	2-Butanone	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	2-Hexanone	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	4-Methyl-2-pentanone	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Acetone	ND	U	2	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Benzene	ND	U	0.3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Bromochloromethane	ND	U	0.4	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Bromodichloromethane	ND	U	0.3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Bromoform	ND	U	0.4	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Bromomethane	ND	U	0.8	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Carbon Disulfide	ND	U	0.2	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Carbon tetrachloride	ND	U	0.4	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Chlorobenzene	ND	U	0.2	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Chloroethane	ND	U	0.5	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Chloroform	ND	U	0.4	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Chloromethane	ND	U	0.5	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	cis-1,2-Dichloroethene	ND	U	0.4	ug/L

Location	QA Sample ID	Date	Time	Method	Analyte	QA Result		DL	Units
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	cis-1,3-Dichloropropene	ND	U	0.3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Cyclohexane	ND	U	0.6	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Dibromochloromethane	ND	U	0.3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Dichlorodifluoromethane	ND	U	0.4	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Ethylbenzene	ND	U	0.2	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Isopropylbenzene (Cumene)	ND	U	0.3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Methyl Acetate	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Methylcyclohexane	ND	U	0.5	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Methylene Chloride	ND	U	0.9	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Styrene	ND	U	0.3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Tert-Butyl Methyl Ether (MTBE)	ND	U	0.2	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Tetrachloroethene (PCE)	ND	U	0.3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Toluene	ND	U	0.3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	trans-1,2-Dichloroethene	ND	U	0.4	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	trans-1,3-Dichloropropene	ND	U	0.2	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Trichloroethene (TCE)	ND	U	0.4	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Trichlorofluoromethane	ND	U	0.5	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Vinyl chloride	ND	U	0.4	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Xylenes, Total	ND	U	0.3	ug/L

SEMIVOLATILE ORGANIC COMPOUNDS

Primary Field Sample ID	Primary Lab Sample ID	QA Field Sample ID	QA Lab Sample ID	Sample Date and Time	Requested Analyses
PBOW-05-GW-AA3-GW003-01A	0501293-01A	PBOW-05-GW-AA3-GW003-01B	0501236-02	1/25/05 1540	8260B VOCs
PBOW-05-GW-AA3-GW003-01A	0501293-01B	PBOW-05-GW-AA3-GW003-01B	0501236-02	1/25/05 1540	8082 PCBs, 8270C SEMIVOCs, 8330 Nitros
PBOW-05-GW-AA3-GW003-01A	0501293-01C	PBOW-05-GW-AA3-GW003-01B	0501236-02	1/25/05 1540	6010B/7471A Metals
PBOW-05-GW-AA3-GW003-01A	0501293-01D	PBOW-05-GW-AA3-GW003-01B	0501236-02	1/25/05 1540	6010B/7471A Metals
PBOW-05-GW-AA3-GW003-01A	0501293-01E	PBOW-05-GW-AA3-GW003-01B	0501236-02	1/25/05 1540	160.1 TDS, 180.1 Turbidity, 300 Anions, 310.1 Alkalinity
PBOW-05-GW-AA3-GW003-01A	0501293-01F	PBOW-05-GW-AA3-GW003-01B	0501236-02	1/25/05 1540	9012A Cyanide
PBOW-05-GW-AA3-GW003-01A	0501293-01G	PBOW-05-GW-AA3-GW003-01B	0501236-02	1/25/05 1540	9060 Total Organic Carbon
PBOW-05-GW-AA3-BEDMW003-01A	0502001-04A	PBOW-05-GW-AA3-BEDMW003-01B	0502020-01	1/30/05 1400	8260B VOCs
PBOW-05-GW-AA3-BEDMW003-01A	0502001-04B	PBOW-05-GW-AA3-BEDMW003-01B	0502020-01	1/30/05 1400	8082 PCBs, 8270C SEMIVOCs, 8330 Nitros
PBOW-05-GW-AA3-BEDMW003-01A	0502001-04C	PBOW-05-GW-AA3-BEDMW003-01B	0502020-01	1/30/05 1400	6010B Metals
PBOW-05-GW-AA3-BEDMW003-01A	0502001-04CRE	PBOW-05-GW-AA3-BEDMW003-01B	0502020-01	1/30/05 1400	7471A Metals
PBOW-05-GW-AA3-BEDMW003-01A	0502001-04D	PBOW-05-GW-AA3-BEDMW003-01B	0502020-01	1/30/05 1400	6010B Metals
PBOW-05-GW-AA3-BEDMW003-01A	0502001-04DRE	PBOW-05-GW-AA3-BEDMW003-01B	0502020-01	1/30/05 1400	7471A Metals
PBOW-05-GW-AA3-BEDMW003-01A	0502001-04E	PBOW-05-GW-AA3-BEDMW003-01B	0502020-01	1/30/05 1400	9012A Cyanide
PBOW-05-GW-AA3-BEDMW003-01A	0502001-04F	PBOW-05-GW-AA3-BEDMW003-01B	0502020-01	1/30/05 1400	160.1 TDS, 180.1 Turbidity, 300 Anions, 310.1 Alkalinity
PBOW-05-GW-AA3-BEDMW003-01A	0502001-04G	PBOW-05-GW-AA3-BEDMW003-01B	0502020-01	1/30/05 1400	9060 Total Organic Carbon

Qualified Analytical Data - Groundwater Samples
QA vs Primary Results, VOCs
Acid Areas, Plum Brook Ordnance Works, OH

Location	QA Sample ID	Date	Time	Method	Analyte	QA Result		DL	Units
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	1,1,1-Trichloroethane	ND	U	0.4	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	1,1,2,2-Tetrachloroethane	ND	U	0.4	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	1,1,2-Trichloro-1,2,2-TFA	ND	U	0.5	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	1,1,2-Trichloroethane	ND	U	0.4	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	1,1-Dichloroethane	ND	U	0.5	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	1,1-Dichloroethene	ND	U	0.6	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	1,2,3-Trichlorobenzene	ND	U	0.3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	1,2,4-Trichlorobenzene	ND	U	0.3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	1,2-Dibromo-3-chloropropane	ND	U	0.5	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	1,2-Dibromoethane (EDB)	ND	U	0.5	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	1,2-Dichlorobenzene	ND	U	0.2	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	1,2-Dichloroethane	ND	U	0.3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	1,2-Dichloropropane	ND	U	0.4	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	1,3-Dichlorobenzene	ND	U	0.3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	1,4-Dichlorobenzene	ND	U	0.3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	2-Butanone	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	2-Hexanone	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	4-Methyl-2-pentanone	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Acetone	ND	U	2	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Benzene	38		0.3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Bromochloromethane	ND	U	0.4	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Bromodichloromethane	ND	U	0.3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Bromoform	ND	U	0.4	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Bromomethane	ND	U	0.8	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Carbon Disulfide	ND	U	0.2	ug/L

Location	QA Sample ID	Date	Time	Method	Analyte	QA Result		DL	Units
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Carbon tetrachloride	ND	U	0.4	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Chlorobenzene	ND	U	0.2	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Chloroethane	ND	U	0.5	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Chloroform	ND	U	0.4	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Chloromethane	ND	U	0.5	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	cis-1,2-Dichloroethene	ND	U	0.4	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	cis-1,3-Dichloropropene	ND	U	0.3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Cyclohexane	97		0.6	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Dibromochloromethane	ND	U	0.3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Dichlorodifluoromethane	ND	U	0.4	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Ethylbenzene	16		0.2	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Isopropylbenzene (Cumene)	4.7		0.3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Methyl Acetate	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Methylcyclohexane	53		0.5	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Methylene Chloride	ND	U	0.9	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Styrene	ND	U	0.3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Tert-Butyl Methyl Ether (MTBE)	ND	U	0.2	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Tetrachloroethene (PCE)	ND	U	0.3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Toluene	26		0.3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	trans-1,2-Dichloroethene	ND	U	0.4	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	trans-1,3-Dichloropropene	ND	U	0.2	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Trichloroethene (TCE)	ND	U	0.4	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Trichlorofluoromethane	ND	U	0.5	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Vinyl chloride	ND	U	0.4	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Xylenes, Total	120		0.3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	1,1,1-Trichloroethane	ND	U	0.4	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	1,1,2,2-Tetrachloroethane	ND	U	0.4	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	1,1,2-Trichloro-1,2,2-TFA	ND	U	0.5	ug/L

Location	QA Sample ID	Date	Time	Method	Analyte	QA Result		DL	Units
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	1,1,2-Trichloroethane	ND	U	0.4	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	1,1-Dichloroethane	ND	U	0.5	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	1,1-Dichloroethene	ND	U	0.6	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	1,2,3-Trichlorobenzene	ND	U	0.3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	1,2,4-Trichlorobenzene	ND	U	0.3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	1,2-Dibromo-3-chloropropane	ND	U	0.5	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	1,2-Dibromoethane (EDB)	ND	U	0.5	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	1,2-Dichlorobenzene	ND	U	0.2	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	1,2-Dichloroethane	ND	U	0.3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	1,2-Dichloropropane	ND	U	0.4	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	1,3-Dichlorobenzene	ND	U	0.3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	1,4-Dichlorobenzene	ND	U	0.3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	2-Butanone	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	2-Hexanone	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	4-Methyl-2-pentanone	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Acetone	ND	U	2	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Benzene	ND	U	0.3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Bromochloromethane	ND	U	0.4	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Bromodichloromethane	ND	U	0.3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Bromoform	ND	U	0.4	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Bromomethane	ND	U	0.8	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Carbon Disulfide	ND	U	0.2	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Carbon tetrachloride	ND	U	0.4	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Chlorobenzene	ND	U	0.2	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Chloroethane	ND	U	0.5	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Chloroform	ND	U	0.4	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Chloromethane	ND	U	0.5	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	cis-1,2-Dichloroethene	ND	U	0.4	ug/L

Location	QA Sample ID	Date	Time	Method	Analyte	QA Result		DL	Units
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	cis-1,3-Dichloropropene	ND	U	0.3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Cyclohexane	ND	U	0.6	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Dibromochloromethane	ND	U	0.3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Dichlorodifluoromethane	ND	U	0.4	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Ethylbenzene	ND	U	0.2	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Isopropylbenzene (Cumene)	ND	U	0.3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Methyl Acetate	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Methylcyclohexane	ND	U	0.5	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Methylene Chloride	ND	U	0.9	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Styrene	ND	U	0.3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Tert-Butyl Methyl Ether (MTBE)	ND	U	0.2	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Tetrachloroethene (PCE)	ND	U	0.3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Toluene	ND	U	0.3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	trans-1,2-Dichloroethene	ND	U	0.4	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	trans-1,3-Dichloropropene	ND	U	0.2	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Trichloroethene (TCE)	ND	U	0.4	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Trichlorofluoromethane	ND	U	0.5	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Vinyl chloride	ND	U	0.4	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Xylenes, Total	ND	U	0.3	ug/L

Qualified Analytical Data - Groundwater Samples
QA vs Primary Results, SVOCs
Acid Areas, Plum Brook Ordnance Works, OH

Location	QA Sample ID	Date	Time	Method	Analyte	QA Result		DL	Units
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	1,2,4-Trichlorobenzene	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	1,2-Dichlorobenzene	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	1,2-Diphenylhydrazine	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	1,3-Dichlorobenzene	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	1,4-Dichlorobenzene	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	2,4,5-Trichlorophenol	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	2,4,6-Trichlorophenol	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	2,4-Dichlorophenol	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	2,4-Dimethylphenol	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	2,4-Dinitrophenol	ND	U	10	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	2,4-Dinitrotoluene	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	2,6-Dinitrotoluene	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	2-Chloronaphthalene	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	2-Chlorophenol	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	2-Methylnaphthalene	2.6	J	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	2-Methylphenol (o-Cresol)	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	2-Nitroaniline	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	2-Nitrophenol	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	3&4-Methylphenol	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	3,3'-Dichlorobenzidine	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	3-Nitroaniline	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	4,6-Dinitro-2-methylphenol	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	4-Bromophenyl phenyl ether	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	4-Chloro-3-methylphenol	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	4-Chloroaniline	ND	U	1	ug/L

Qualified Analytical Data - Groundwater Samples
QA vs Primary Results, SVOCs
Acid Areas, Plum Brook Ordnance Works, OH

Location	QA Sample ID	Date	Time	Method	Analyte	QA Result		DL	Units
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	1,2,4-Trichlorobenzene	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	1,2-Dichlorobenzene	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	1,2-Diphenylhydrazine	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	1,3-Dichlorobenzene	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	1,4-Dichlorobenzene	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	2,4,5-Trichlorophenol	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	2,4,6-Trichlorophenol	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	2,4-Dichlorophenol	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	2,4-Dimethylphenol	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	2,4-Dinitrophenol	ND	U	10	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	2,4-Dinitrotoluene	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	2,6-Dinitrotoluene	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	2-Chloronaphthalene	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	2-Chlorophenol	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	2-Methylnaphthalene	2.6	J	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	2-Methylphenol (o-Cresol)	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	2-Nitroaniline	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	2-Nitrophenol	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	3&4-Methylphenol	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	3,3'-Dichlorobenzidine	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	3-Nitroaniline	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	4,6-Dinitro-2-methylphenol	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	4-Bromophenyl phenyl ether	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	4-Chloro-3-methylphenol	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	4-Chloroaniline	ND	U	1	ug/L

Location	QA Sample ID	Date	Time	Method	Analyte	QA Result		DL	Units
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	4-Chlorophenyl phenyl ether	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	4-Nitroaniline	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	4-Nitrophenol	ND	U	5.1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Acenaphthene	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Acenaphthylene	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Anthracene	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Benzo(a)anthracene	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Benzo(a)pyrene	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Benzo(b)fluoranthene	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Benzo(g,h,i)perylene	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Benzo(k)fluoranthene	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Benzoic acid	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Benzyl alcohol	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Benzyl butyl phthalate	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	bis(2-Chloroethoxy)methane	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	bis(2-Chloroethyl)ether	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	bis(2-Chloroisopropyl)ether	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	bis(2-Ethylhexyl)phthalate	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Carbazole	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Chrysene	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Dibenz(a,h)anthracene	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Dibenzofuran	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Diethylphthalate	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Dimethylphthalate	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Di-n-butylphthalate	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Di-n-octylphthalate	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Fluoranthene	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Fluorene	ND	U	1	ug/L

Location	QA Sample ID	Date	Time	Method	Analyte	QA Result		DL	Units
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Hexachlorobenzene	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Hexachlorobutadiene	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Hexachlorocyclopentadiene	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Hexachloroethane	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Indeno(1,2,3-cd)pyrene	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Isophorone	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Naphthalene	2.4	J	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Nitrobenzene	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	N-Nitrosodimethylamine	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	N-Nitroso-di-n-propylamine	ND	U	0.82	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	N-Nitrosodiphenylamine	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Pentachlorophenol	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Phenanthrene	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Phenol	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Pyrene	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	1,2,4-Trichlorobenzene	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	1,2-Dichlorobenzene	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	1,2-Diphenylhydrazine	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	1,3-Dichlorobenzene	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	1,4-Dichlorobenzene	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	2,4,5-Trichlorophenol	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	2,4,6-Trichlorophenol	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	2,4-Dichlorophenol	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	2,4-Dimethylphenol	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	2,4-Dinitrophenol	ND	U	10	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	2,4-Dinitrotoluene	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	2,6-Dinitrotoluene	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	2-Chloronaphthalene	ND	U	1	ug/L

Location	QA Sample ID	Date	Time	Method	Analyte	QA Result		DL	Units
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	2-Chlorophenol	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	2-Methylnaphthalene	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	2-Methylphenol (o-Cresol)	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	2-Nitroaniline	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	2-Nitrophenol	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	3&4-Methylphenol	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	3,3'-Dichlorobenzidine	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	3-Nitroaniline	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	4,6-Dinitro-2-methylphenol	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	4-Bromophenyl phenyl ether	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	4-Chloro-3-methylphenol	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	4-Chloroaniline	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	4-Chlorophenyl phenyl ether	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	4-Nitroaniline	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	4-Nitrophenol	ND	U	5	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Acenaphthene	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Acenaphthylene	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Anthracene	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Benzo(a)anthracene	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Benzo(a)pyrene	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Benzo(b)fluoranthene	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Benzo(g,h,i)perylene	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Benzo(k)fluoranthene	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Benzoic acid	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Benzyl alcohol	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Benzyl butyl phthalate	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	bis(2-Chloroethoxy)methane	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	bis(2-Chloroethyl)ether	ND	U	1	ug/L

Location	QA Sample ID	Date	Time	Method	Analyte	QA Result		DL	Units
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	bis(2-Chloroisopropyl)ether	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	bis(2-Ethylhexyl)phthalate	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Carbazole	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Chrysene	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Dibenz(a,h)anthracene	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Dibenzofuran	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Diethylphthalate	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Dimethylphthalate	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Di-n-butylphthalate	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Di-n-octylphthalate	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Fluoranthene	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Fluorene	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Hexachlorobenzene	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Hexachlorobutadiene	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Hexachlorocyclopentadiene	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Hexachloroethane	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Indeno(1,2,3-cd)pyrene	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Isophorone	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Naphthalene	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Nitrobenzene	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	N-Nitrosodimethylamine	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	N-Nitroso-di-n-propylamine	ND	U	0.8	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	N-Nitrosodiphenylamine	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Pentachlorophenol	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Phenanthrene	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Phenol	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Pyrene	ND	U	1	ug/L

EXPLOSIVE COMPOUNDS

Qualified Analytical Data - Groundwater Samples
QA vs Primary Results, Explosives
Acid Areas, Plum Brook Ordnance Works, OH

Location	QA Sample ID	Date	Time	Method	Analyte	QA Result		DL	Units
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8330	1,3,5-Trinitrobenzene	ND	U	0.16	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8330	1,3-Dinitrobenzene	ND	U	0.11	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8330	2,4,6-Trinitrotoluene	ND	U	0.16	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8330	2,4-Dinitrotoluene	ND	U	0.16	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8330	2,6-Dinitrotoluene	ND	U	0.16	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8330	2-Amino-4,6-Dinitrotoluene	ND	U	0.16	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8330	2-Nitrotoluene	ND	U	0.16	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8330	3-Nitrotoluene	ND	U	0.16	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8330	4-Amino-2,6-Dinitrotoluene	ND	U	0.16	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8330	4-Nitrotoluene	ND	U	0.16	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8330	HMX	ND	U	0.16	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8330	Nitrobenzene	ND	U	0.1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8330	RDX	ND	U	0.16	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8330	Tetryl	ND	U	0.16	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8330	1,3,5-Trinitrobenzene	ND	U	0.14	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8330	1,3-Dinitrobenzene	ND	U	0.096	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8330	2,4,6-Trinitrotoluene	ND	U	0.14	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8330	2,4-Dinitrotoluene	ND	U	0.14	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8330	2,6-Dinitrotoluene	ND	U	0.14	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8330	2-Amino-4,6-Dinitrotoluene	ND	U	0.14	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8330	2-Nitrotoluene	ND	U	0.14	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8330	3-Nitrotoluene	ND	U	0.14	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8330	4-Amino-2,6-Dinitrotoluene	ND	U	0.14	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8330	4-Nitrotoluene	ND	U	0.14	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8330	HMX	ND	U	0.14	ug/L

Location	QA Sample ID	Date	Time	Method	Analyte	QA Result		DL	Units
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8330	Nitrobenzene	ND	U	0.088	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8330	RDX	ND	U	0.14	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8330	Tetryl	ND	U	0.14	ug/L

PCBs

Qualified Analytical Data - Groundwater Samples
QA vs Primary Results, PCBs
Acid Areas, Plum Brook Ordnance Works, OH

Location	QA Sample ID	Date	Time	Method	Analyte	QA Result		DL	Units
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8082	PCB-1016 (Aroclor 1016)	ND	U	0.13	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8082	PCB-1221 (Aroclor 1221)	ND	U	0.13	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8082	PCB-1232 (Aroclor 1232)	ND	U	0.13	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8082	PCB-1242 (Aroclor 1242)	ND	U	0.13	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8082	PCB-1248 (Aroclor 1248)	ND	U	0.13	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8082	PCB-1254 (Aroclor 1254)	ND	U	0.13	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8082	PCB-1260 (Aroclor 1260)	ND	U	0.13	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8082	PCB-1016 (Aroclor 1016)	ND	U	0.12	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8082	PCB-1221 (Aroclor 1221)	ND	U	0.12	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8082	PCB-1232 (Aroclor 1232)	ND	U	0.12	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8082	PCB-1242 (Aroclor 1242)	ND	U	0.12	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8082	PCB-1248 (Aroclor 1248)	ND	U	0.12	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8082	PCB-1254 (Aroclor 1254)	ND	U	0.12	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8082	PCB-1260 (Aroclor 1260)	ND	U	0.12	ug/L

Qualified Analytical Data - Groundwater Samples
QA vs Primary Results, Metals
Acid Areas, Plum Brook Ordnance Works, OH

Location	QA Sample ID	Date	Time	Method	Analyte	QA Result		DL	Units
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Aluminum	ND	U	50	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Aluminum (total)	ND	U	50	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Antimony	ND	U	5	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Antimony (total)	ND	U	5	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Arsenic	ND	U	3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Arsenic (total)	ND	U	3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Barium	860		5	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Barium (total)	767		5	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Beryllium	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Beryllium (total)	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Cadmium	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Cadmium (total)	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Calcium	74200		500	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Calcium (total)	66000		500	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Chromium	ND	U	2	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Chromium (total)	ND	U	2	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Cobalt	ND	U	3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Cobalt (total)	ND	U	3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Copper	ND	U	3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Copper (total)	ND	U	3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Iron	ND	J	30	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Iron (total)	64.9	J	30	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Lead	ND	U	1.5	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Lead (total)	ND	U	1.5	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Magnesium	42800		500	ug/L

Location	QA Sample ID	Date	Time	Method	Analyte	QA Result		DL	Units
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Magnesium (total)	37800		500	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Manganese	43.4		3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Manganese (total)	38.8		3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Nickel	ND	U	3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Nickel (total)	ND	U	3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Potassium	33600		500	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Potassium (total)	29600		500	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Selenium	ND	U	3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Selenium (total)	ND	U	3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Silver	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Silver (total)	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Sodium	19200		1000	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Sodium (total)	190000		1000	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Thallium	4.2	J	3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Thallium (total)	ND	U	3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Vanadium	ND	U	3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Vanadium (total)	ND	U	3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Zinc	ND	J	5	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Zinc (total)	13.9	J	5	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW7470A	Mercury	ND	U	0.08	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW7470A	Mercury (total)	ND	U	0.08	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Aluminum	ND	U	50	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Aluminum (total)	68.4	J	50	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Antimony	ND	U	5	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Antimony (total)	ND	U	5	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Arsenic	ND	U	3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Arsenic (total)	ND	U	3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Barium	96.5	J	5	ug/L

Location	QA Sample ID	Date	Time	Method	Analyte	QA Result		DL	Units
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Barium (total)	97.4	J	5	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Beryllium	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Beryllium (total)	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Cadmium	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Cadmium (total)	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Calcium	17800		1000	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Calcium (total)	173000		1000	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Chromium	ND	U	2	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Chromium (total)	ND	U	2	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Cobalt	ND	U	3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Cobalt (total)	ND	U	3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Copper	ND	U	3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Copper (total)	ND	U	3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Iron	ND	U	30	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Iron (total)	58.1	J	30	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Lead	ND	U	1.5	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Lead (total)	ND	U	1.5	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Magnesium	57200		500	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Magnesium (total)	57000		500	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Manganese	299		3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Manganese (total)	299		3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Nickel	5.4	J	3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Nickel (total)	5.1	J	3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Potassium	1400	J	500	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Potassium (total)	1420	J	500	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Selenium	ND	U	3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Selenium (total)	ND	U	3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Silver	ND	U	1	ug/L

Location	QA Sample ID	Date	Time	Method	Analyte	QA Result		DL	Units
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Silver (total)	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Sodium	37200		500	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Sodium (total)	36800		500	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Thallium	3.1	J	3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Thallium (total)	4.5	J	3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Vanadium	ND	U	3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Vanadium (total)	ND	U	3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Zinc	24.7		5	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Zinc (total)	25		5	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW7470A	Mercury	ND	U	0.08	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW7470A	Mercury (total)	0.125	J	0.08	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW9012A	Cyanide	ND	U	5	ug/L

METALS

ATTACHMENT III – QA/QC DATA COMPARISON

Qualified Analytical Data - Groundwater Samples
QA vs Primary Results - All Methods
Acid Areas, Plum Brook Ordnance Works, OH

Location	Date	Time	Method	Analyte	QA Result		QA DL	Units	Primary Result		Prim DL	Units
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Aluminum	ND	U	50	ug/L	ND	U	45.4	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Aluminum (total)	ND	U	50	ug/L	ND	U	45.4	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Antimony	ND	U	5	ug/L	ND	U	8.16	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Antimony (total)	ND	U	5	ug/L	ND	U	8.16	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Arsenic	ND	U	3	ug/L	ND	U	4.59	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Arsenic (total)	ND	U	3	ug/L	ND	U	4.59	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Barium	860		5	ug/L	806		0.693	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Barium (total)	767		5	ug/L	825		0.693	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Beryllium	ND	U	1	ug/L	0.152	J	0.109	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Beryllium (total)	ND	U	1	ug/L	ND	U	0.109	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Cadmium	ND	U	1	ug/L	ND	U	0.713	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Cadmium (total)	ND	U	1	ug/L	ND	U	0.713	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Calcium	74200		500	ug/L	76300		90.9	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Calcium (total)	66000		500	ug/L	73200		90.9	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Chromium	ND	U	2	ug/L	ND	U	0.236	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Chromium (total)	ND	U	2	ug/L	1.21	J	0.236	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Cobalt	ND	U	3	ug/L	ND	U	0.898	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Cobalt (total)	ND	U	3	ug/L	ND	U	0.898	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Copper	ND	U	3	ug/L	ND	U	2.55	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Copper (total)	ND	U	3	ug/L	2.65	J	2.55	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Iron	ND	J	30	ug/L	ND	U	22.9	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Iron (total)	64.9	J	30	ug/L	58.4	J	22.9	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Lead	ND	U	1.5	ug/L	ND	U	2.44	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Lead (total)	ND	U	1.5	ug/L	ND	U	2.44	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Magnesium	42800		500	ug/L	44600		38.5	ug/L

Location	Date	Time	Method	Analyte	QA Result		QA DL	Units	Primary Result		Prim DL	Units
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Magnesium (total)	37800		500	ug/L	43200		38.5	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Manganese	43.4		3	ug/L	41.9		0.419	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Manganese (total)	38.8		3	ug/L	41.1		0.419	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Nickel	ND	U	3	ug/L	ND	U	0.745	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Nickel (total)	ND	U	3	ug/L	ND	U	0.745	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Potassium	33600		500	ug/L	28600		175	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Potassium (total)	29600		500	ug/L	27900		175	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Selenium	ND	U	3	ug/L	ND	U	11.1	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Selenium (total)	ND	U	3	ug/L	ND	U	11.1	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Silver	ND	U	1	ug/L	ND	U	1.30	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Silver (total)	ND	U	1	ug/L	ND	U	1.30	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Sodium	19200		1000	ug/L	194000		49.3	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Sodium (total)	190000		1000	ug/L	187000		49.3	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Thallium	4.2	J	3	ug/L	ND	U	14.1	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Thallium (total)	ND	U	3	ug/L	ND	U	14.1	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Vanadium	ND	U	3	ug/L	ND	U	2.14	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Vanadium (total)	ND	U	3	ug/L	ND	U	2.14	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Zinc	ND	J	5	ug/L	ND	U	1.46	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Zinc (total)	13.9	J	5	ug/L	11.8	J	1.46	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW7470A	Mercury	ND	U	0.08	ug/L	0.145	J	0.0584	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW7470A	Mercury (total)	ND	U	0.08	ug/L	ND	U	0.0584	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8082	PCB-1016 (Aroclor 1016)	ND	U	0.13	ug/L	ND	U	3.17	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8082	PCB-1221 (Aroclor 1221)	ND	U	0.13	ug/L	ND	U	9.43	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8082	PCB-1232 (Aroclor 1232)	ND	U	0.13	ug/L	ND	U	4.59	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8082	PCB-1242 (Aroclor 1242)	ND	U	0.13	ug/L	ND	U	6.98	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8082	PCB-1248 (Aroclor 1248)	ND	U	0.13	ug/L	ND	U	9.39	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8082	PCB-1254 (Aroclor 1254)	ND	U	0.13	ug/L	ND	U	1.41	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8082	PCB-1260 (Aroclor 1260)	ND	U	0.13	ug/L	ND	U	1.42	ug/L

Location	Date	Time	Method	Analyte	QA Result		QA DL	Units	Primary Result		Prim DL	Units
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	1,1,1-Trichloroethane	ND	U	0.4	ug/L	ND	U	0.308	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	1,1,2,2-Tetrachloroethane	ND	U	0.4	ug/L	ND	U	0.428	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	1,1,2-Trichloro-1,2,2-TFA	ND	U	0.5	ug/L	ND	U	0.680	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	1,1,2-Trichloroethane	ND	U	0.4	ug/L	ND	U	0.348	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	1,1-Dichloroethane	ND	U	0.5	ug/L	ND	U	0.293	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	1,1-Dichloroethene	ND	U	0.6	ug/L	ND	U	0.343	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	1,2,3-Trichlorobenzene	ND	U	0.3	ug/L	ND	U	0.295	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	1,2,4-Trichlorobenzene	ND	U	0.3	ug/L	ND	U	0.363	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	1,2-Dibromo-3-chloropropane	ND	U	0.5	ug/L	ND	U	0.933	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	1,2-Dibromoethane (EDB)	ND	U	0.5	ug/L	ND	U	0.315	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	1,2-Dichlorobenzene	ND	U	0.2	ug/L	ND	U	0.200	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	1,2-Dichloroethane	ND	U	0.3	ug/L	ND	U	0.273	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	1,2-Dichloropropane	ND	U	0.4	ug/L	ND	U	0.240	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	1,3-Dichlorobenzene	ND	U	0.3	ug/L	ND	U	0.233	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	1,4-Dichlorobenzene	ND	U	0.3	ug/L	ND	U	0.253	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	2-Butanone	ND	U	1	ug/L	ND	U	2.04	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	2-Hexanone	ND	U	1	ug/L	ND	U	0.468	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	4-Methyl-2-pentanone	ND	U	1	ug/L	ND	U	0.983	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	Acetone	ND	U	2	ug/L	ND	U	4.33	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	Benzene	38		0.3	ug/L	42.8		0.260	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	Bromochloromethane	ND	U	0.4	ug/L	ND	U	0.398	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	Bromodichloromethane	ND	U	0.3	ug/L	ND	U	0.353	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	Bromoform	ND	U	0.4	ug/L	ND	U	0.248	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	Bromomethane	ND	U	0.8	ug/L	ND	U	0.253	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	Carbon Disulfide	ND	U	0.2	ug/L	0.715	J	0.295	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	Carbon tetrachloride	ND	U	0.4	ug/L	ND	U	0.278	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	Chlorobenzene	ND	U	0.2	ug/L	ND	U	0.288	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	Chloroethane	ND	U	0.5	ug/L	ND	U	0.303	ug/L

Location	Date	Time	Method	Analyte	QA Result		QA DL	Units	Primary Result		Prim DL	Units
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	Chloroform	ND	U	0.4	ug/L	ND	U	0.300	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	Chloromethane	ND	U	0.5	ug/L	ND	U	0.355	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	cis-1,2-Dichloroethene	ND	U	0.4	ug/L	ND	U	0.248	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	cis-1,3-Dichloropropene	ND	U	0.3	ug/L	ND	U	0.260	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	Cyclohexane	97		0.6	ug/L	96.0		0.250	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	Dibromochloromethane	ND	U	0.3	ug/L	ND	U	0.219	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	Dichlorodifluoromethane	ND	U	0.4	ug/L	ND	U	0.760	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	Ethylbenzene	16		0.2	ug/L	15.6		0.410	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	Isopropylbenzene (Cumene)	4.7		0.3	ug/L	4.72		0.253	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	Methyl Acetate	ND	U	1	ug/L	ND	U	0.968	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	Methylcyclohexane	53		0.5	ug/L	55.9		0.268	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	Methylene Chloride	ND	U	0.9	ug/L	ND	U	0.320	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	Styrene	ND	U	0.3	ug/L	ND	U	0.295	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	Tert-Butyl Methyl Ether (MTBE)	ND	U	0.2	ug/L	ND	U	0.273	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	Tetrachloroethene (PCE)	ND	U	0.3	ug/L	ND	U	0.353	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	Toluene	26		0.3	ug/L	27.7		0.298	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	trans-1,2-Dichloroethene	ND	U	0.4	ug/L	ND	U	0.320	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	trans-1,3-Dichloropropene	ND	U	0.2	ug/L	ND	U	0.280	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	Trichloroethene (TCE)	ND	U	0.4	ug/L	ND	U	0.408	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	Trichlorofluoromethane	ND	U	0.5	ug/L	ND	U	0.463	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	Vinyl chloride	ND	U	0.4	ug/L	ND	U	0.298	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	Xylenes, Total	120		0.3	ug/L	132		0.768	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	1,2,4-Trichlorobenzene	ND	U	1	ug/L	ND	U	1.74	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	1,2-Dichlorobenzene	ND	U	1	ug/L	ND	U	1.82	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	1,3-Dichlorobenzene	ND	U	1	ug/L	ND	U	1.63	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	1,4-Dichlorobenzene	ND	U	1	ug/L	ND	U	1.79	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	2,4,5-Trichlorophenol	ND	U	1	ug/L	ND	U	5.39	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	2,4,6-Trichlorophenol	ND	U	1	ug/L	ND	U	4.61	ug/L

Location	Date	Time	Method	Analyte	QA Result		QA DL	Units	Primary Result		Prim DL	Units
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	2,4-Dichlorophenol	ND	U	1	ug/L	ND	U	4.42	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	2,4-Dimethylphenol	ND	U	1	ug/L	ND	U	4.48	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	2,4-Dinitrophenol	ND	U	10	ug/L	ND	U	4.64	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	2,4-Dinitrotoluene	ND	U	1	ug/L	ND	U	2.44	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	2,6-Dinitrotoluene	ND	U	1	ug/L	ND	U	2.28	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	2-Chloronaphthalene	ND	U	1	ug/L	ND	U	2.82	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	2-Chlorophenol	ND	U	1	ug/L	ND	U	4.38	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	2-Methylnaphthalene	2.6	J	1	ug/L	5.47	J	2.08	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	2-Methylphenol (o-Cresol)	ND	U	1	ug/L	ND	U	4.18	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	2-Nitroaniline	ND	U	1	ug/L	ND	U	3.06	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	2-Nitrophenol	ND	U	1	ug/L	ND	U	4.05	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	3&4-Methylphenol	ND	U	1	ug/L	ND	U	4.52	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	3,3'-Dichlorobenzidine	ND	U	1	ug/L	ND	U	7.25	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	3-Nitroaniline	ND	U	1	ug/L	ND	U	3.10	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	4,6-Dinitro-2-methylphenol	ND	U	1	ug/L	ND	U	4.91	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	4-Bromophenyl phenyl ether	ND	U	1	ug/L	ND	U	3.16	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	4-Chloro-3-methylphenol	ND	U	1	ug/L	ND	U	4.49	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	4-Chloroaniline	ND	U	1	ug/L	ND	U	2.64	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	4-Chlorophenyl phenyl ether	ND	U	1	ug/L	ND	U	3.37	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	4-Nitroaniline	ND	U	1	ug/L	ND	U	3.31	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	4-Nitrophenol	ND	U	5.1	ug/L	ND	U	4.57	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Acenaphthene	ND	U	1	ug/L	ND	U	0.665	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Acenaphthylene	ND	U	1	ug/L	ND	U	0.592	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Anthracene	ND	U	1	ug/L	ND	U	0.663	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Benzo(a)anthracene	ND	U	1	ug/L	ND	U	0.816	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Benzo(a)pyrene	ND	U	1	ug/L	ND	U	0.730	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Benzo(b)fluoranthene	ND	U	1	ug/L	ND	U	0.796	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Benzo(g,h,i)perylene	ND	U	1	ug/L	ND	U	0.671	ug/L

Location	Date	Time	Method	Analyte	QA Result		QA DL	Units	Primary Result		Prim DL	Units
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Benzo(k)fluoranthene	ND	U	1	ug/L	ND	U	0.701	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Benzoic acid	ND	U	1	ug/L	ND	U	6.40	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Benzyl alcohol	ND	U	1	ug/L	ND	U	2.65	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Benzyl butyl phthalate	ND	U	1	ug/L	ND	U	2.91	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	bis(2-Chloroethoxy)methane	ND	U	1	ug/L	ND	U	2.67	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	bis(2-Chloroethyl)ether	ND	U	1	ug/L	ND	U	2.46	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	bis(2-Chloroisopropyl)ether	ND	U	1	ug/L	ND	U	3.19	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	bis(2-Ethylhexyl)phthalate	ND	U	1	ug/L	ND	U	3.52	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Carbazole	ND	U	1	ug/L	ND	U	2.25	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Chrysene	ND	U	1	ug/L	ND	U	0.808	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Dibenz(a,h)anthracene	ND	U	1	ug/L	ND	U	0.717	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Dibenzofuran	ND	U	1	ug/L	ND	U	2.34	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Diethylphthalate	ND	U	1	ug/L	ND	U	2.39	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Dimethylphthalate	ND	U	1	ug/L	ND	U	3.19	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Di-n-butylphthalate	ND	U	1	ug/L	ND	U	3.23	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Di-n-octylphthalate	ND	U	1	ug/L	ND	U	2.68	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Fluoranthene	ND	U	1	ug/L	ND	U	0.760	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Fluorene	ND	U	1	ug/L	ND	U	0.754	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Hexachlorobenzene	ND	U	1	ug/L	ND	U	2.51	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Hexachlorobutadiene	ND	U	1	ug/L	ND	U	1.95	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Hexachlorocyclopentadiene	ND	U	1	ug/L	ND	U	1.58	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Hexachloroethane	ND	U	1	ug/L	ND	U	1.40	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Indeno(1,2,3-cd)pyrene	ND	U	1	ug/L	ND	U	0.755	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Isophorone	ND	U	1	ug/L	ND	U	2.07	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Naphthalene	2.4	J	1	ug/L	5.53	J	0.545	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Nitrobenzene	ND	U	1	ug/L	ND	U	2.08	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	N-Nitrosodimethylamine	ND	U	1	ug/L	ND	U	3.08	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	N-Nitroso-di-n-propylamine	ND	U	0.82	ug/L	ND	U	3.16	ug/L

Primary Field Sample ID	Primary Lab Sample ID	QA Field Sample ID	QA Lab Sample ID	Sample Date and Time	Requested Analyses
PBOW-05-GW-AA3-GW003-01A	0501293-01A	PBOW-05-GW-AA3-GW003-01B	0501236-02	1/25/05 1540	8260B VOCs
PBOW-05-GW-AA3-GW003-01A	0501293-01B	PBOW-05-GW-AA3-GW003-01B	0501236-02	1/25/05 1540	8082 PCBs, 8270C SEMIVOCs, 8330 Nitros
PBOW-05-GW-AA3-GW003-01A	0501293-01C	PBOW-05-GW-AA3-GW003-01B	0501236-02	1/25/05 1540	6010B/7471A Metals
PBOW-05-GW-AA3-GW003-01A	0501293-01D	PBOW-05-GW-AA3-GW003-01B	0501236-02	1/25/05 1540	6010B/7471A Metals
PBOW-05-GW-AA3-GW003-01A	0501293-01E	PBOW-05-GW-AA3-GW003-01B	0501236-02	1/25/05 1540	160.1 TDS, 180.1 Turbidity, 300 Anions, 310.1 Alkalinity
PBOW-05-GW-AA3-GW003-01A	0501293-01F	PBOW-05-GW-AA3-GW003-01B	0501236-02	1/25/05 1540	9012A Cyanide
PBOW-05-GW-AA3-GW003-01A	0501293-01G	PBOW-05-GW-AA3-GW003-01B	0501236-02	1/25/05 1540	9060 Total Organic Carbon
PBOW-05-GW-AA3-BEDMW003-01A	0502001-04A	PBOW-05-GW-AA3-BEDMW003-01B	0502020-01	1/30/05 1400	8260B VOCs
PBOW-05-GW-AA3-BEDMW003-01A	0502001-04B	PBOW-05-GW-AA3-BEDMW003-01B	0502020-01	1/30/05 1400	8082 PCBs, 8270C SEMIVOCs, 8330 Nitros
PBOW-05-GW-AA3-BEDMW003-01A	0502001-04C	PBOW-05-GW-AA3-BEDMW003-01B	0502020-01	1/30/05 1400	6010B Metals
PBOW-05-GW-AA3-BEDMW003-01A	0502001-04CRE	PBOW-05-GW-AA3-BEDMW003-01B	0502020-01	1/30/05 1400	7471A Metals
PBOW-05-GW-AA3-BEDMW003-01A	0502001-04D	PBOW-05-GW-AA3-BEDMW003-01B	0502020-01	1/30/05 1400	6010B Metals
PBOW-05-GW-AA3-BEDMW003-01A	0502001-04DRE	PBOW-05-GW-AA3-BEDMW003-01B	0502020-01	1/30/05 1400	7471A Metals
PBOW-05-GW-AA3-BEDMW003-01A	0502001-04E	PBOW-05-GW-AA3-BEDMW003-01B	0502020-01	1/30/05 1400	9012A Cyanide
PBOW-05-GW-AA3-BEDMW003-01A	0502001-04F	PBOW-05-GW-AA3-BEDMW003-01B	0502020-01	1/30/05 1400	160.1 TDS, 180.1 Turbidity, 300 Anions, 310.1 Alkalinity
PBOW-05-GW-AA3-BEDMW003-01A	0502001-04G	PBOW-05-GW-AA3-BEDMW003-01B	0502020-01	1/30/05 1400	9060 Total Organic Carbon

Qualified Analytical Data - Groundwater Samples
QA vs Primary Results, VOCs
Acid Areas, Plum Brook Ordnance Works, OH

Location	QA Sample ID	Date	Time	Method	Analyte	QA Result		DL	Units
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	1,1,1-Trichloroethane	ND	U	0.4	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	1,1,2,2-Tetrachloroethane	ND	U	0.4	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	1,1,2-Trichloro-1,2,2-TFA	ND	U	0.5	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	1,1,2-Trichloroethane	ND	U	0.4	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	1,1-Dichloroethane	ND	U	0.5	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	1,1-Dichloroethene	ND	U	0.6	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	1,2,3-Trichlorobenzene	ND	U	0.3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	1,2,4-Trichlorobenzene	ND	U	0.3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	1,2-Dibromo-3-chloropropane	ND	U	0.5	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	1,2-Dibromoethane (EDB)	ND	U	0.5	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	1,2-Dichlorobenzene	ND	U	0.2	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	1,2-Dichloroethane	ND	U	0.3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	1,2-Dichloropropane	ND	U	0.4	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	1,3-Dichlorobenzene	ND	U	0.3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	1,4-Dichlorobenzene	ND	U	0.3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	2-Butanone	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	2-Hexanone	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	4-Methyl-2-pentanone	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Acetone	ND	U	2	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Benzene	38		0.3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Bromochloromethane	ND	U	0.4	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Bromodichloromethane	ND	U	0.3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Bromoform	ND	U	0.4	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Bromomethane	ND	U	0.8	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Carbon Disulfide	ND	U	0.2	ug/L

Location	QA Sample ID	Date	Time	Method	Analyte	QA Result		DL	Units
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Carbon tetrachloride	ND	U	0.4	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Chlorobenzene	ND	U	0.2	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Chloroethane	ND	U	0.5	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Chloroform	ND	U	0.4	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Chloromethane	ND	U	0.5	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	cis-1,2-Dichloroethene	ND	U	0.4	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	cis-1,3-Dichloropropene	ND	U	0.3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Cyclohexane	97		0.6	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Dibromochloromethane	ND	U	0.3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Dichlorodifluoromethane	ND	U	0.4	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Ethylbenzene	16		0.2	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Isopropylbenzene (Cumene)	4.7		0.3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Methyl Acetate	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Methylcyclohexane	53		0.5	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Methylene Chloride	ND	U	0.9	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Styrene	ND	U	0.3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Tert-Butyl Methyl Ether (MTBE)	ND	U	0.2	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Tetrachloroethene (PCE)	ND	U	0.3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Toluene	26		0.3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	trans-1,2-Dichloroethene	ND	U	0.4	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	trans-1,3-Dichloropropene	ND	U	0.2	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Trichloroethene (TCE)	ND	U	0.4	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Trichlorofluoromethane	ND	U	0.5	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Vinyl chloride	ND	U	0.4	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8260B	Xylenes, Total	120		0.3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	1,1,1-Trichloroethane	ND	U	0.4	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	1,1,2,2-Tetrachloroethane	ND	U	0.4	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	1,1,2-Trichloro-1,2,2-TFA	ND	U	0.5	ug/L

Location	QA Sample ID	Date	Time	Method	Analyte	QA Result		DL	Units
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	1,1,2-Trichloroethane	ND	U	0.4	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	1,1-Dichloroethane	ND	U	0.5	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	1,1-Dichloroethene	ND	U	0.6	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	1,2,3-Trichlorobenzene	ND	U	0.3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	1,2,4-Trichlorobenzene	ND	U	0.3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	1,2-Dibromo-3-chloropropane	ND	U	0.5	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	1,2-Dibromoethane (EDB)	ND	U	0.5	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	1,2-Dichlorobenzene	ND	U	0.2	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	1,2-Dichloroethane	ND	U	0.3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	1,2-Dichloropropane	ND	U	0.4	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	1,3-Dichlorobenzene	ND	U	0.3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	1,4-Dichlorobenzene	ND	U	0.3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	2-Butanone	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	2-Hexanone	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	4-Methyl-2-pentanone	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Acetone	ND	U	2	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Benzene	ND	U	0.3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Bromochloromethane	ND	U	0.4	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Bromodichloromethane	ND	U	0.3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Bromoform	ND	U	0.4	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Bromomethane	ND	U	0.8	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Carbon Disulfide	ND	U	0.2	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Carbon tetrachloride	ND	U	0.4	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Chlorobenzene	ND	U	0.2	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Chloroethane	ND	U	0.5	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Chloroform	ND	U	0.4	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Chloromethane	ND	U	0.5	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	cis-1,2-Dichloroethene	ND	U	0.4	ug/L

Location	QA Sample ID	Date	Time	Method	Analyte	QA Result		DL	Units
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	cis-1,3-Dichloropropene	ND	U	0.3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Cyclohexane	ND	U	0.6	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Dibromochloromethane	ND	U	0.3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Dichlorodifluoromethane	ND	U	0.4	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Ethylbenzene	ND	U	0.2	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Isopropylbenzene (Cumene)	ND	U	0.3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Methyl Acetate	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Methylcyclohexane	ND	U	0.5	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Methylene Chloride	ND	U	0.9	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Styrene	ND	U	0.3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Tert-Butyl Methyl Ether (MTBE)	ND	U	0.2	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Tetrachloroethene (PCE)	ND	U	0.3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Toluene	ND	U	0.3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	trans-1,2-Dichloroethene	ND	U	0.4	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	trans-1,3-Dichloropropene	ND	U	0.2	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Trichloroethene (TCE)	ND	U	0.4	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Trichlorofluoromethane	ND	U	0.5	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Vinyl chloride	ND	U	0.4	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8260B	Xylenes, Total	ND	U	0.3	ug/L

Qualified Analytical Data - Groundwater Samples
QA vs Primary Results, SVOCs
Acid Areas, Plum Brook Ordnance Works, OH

Location	QA Sample ID	Date	Time	Method	Analyte	QA Result		DL	Units
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	1,2,4-Trichlorobenzene	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	1,2-Dichlorobenzene	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	1,2-Diphenylhydrazine	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	1,3-Dichlorobenzene	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	1,4-Dichlorobenzene	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	2,4,5-Trichlorophenol	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	2,4,6-Trichlorophenol	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	2,4-Dichlorophenol	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	2,4-Dimethylphenol	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	2,4-Dinitrophenol	ND	U	10	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	2,4-Dinitrotoluene	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	2,6-Dinitrotoluene	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	2-Chloronaphthalene	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	2-Chlorophenol	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	2-Methylnaphthalene	2.6	J	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	2-Methylphenol (o-Cresol)	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	2-Nitroaniline	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	2-Nitrophenol	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	3&4-Methylphenol	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	3,3'-Dichlorobenzidine	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	3-Nitroaniline	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	4,6-Dinitro-2-methylphenol	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	4-Bromophenyl phenyl ether	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	4-Chloro-3-methylphenol	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	4-Chloroaniline	ND	U	1	ug/L

Location	QA Sample ID	Date	Time	Method	Analyte	QA Result		DL	Units
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	4-Chlorophenyl phenyl ether	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	4-Nitroaniline	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	4-Nitrophenol	ND	U	5.1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Acenaphthene	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Acenaphthylene	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Anthracene	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Benzo(a)anthracene	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Benzo(a)pyrene	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Benzo(b)fluoranthene	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Benzo(g,h,i)perylene	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Benzo(k)fluoranthene	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Benzoic acid	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Benzyl alcohol	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Benzyl butyl phthalate	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	bis(2-Chloroethoxy)methane	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	bis(2-Chloroethyl)ether	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	bis(2-Chloroisopropyl)ether	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	bis(2-Ethylhexyl)phthalate	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Carbazole	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Chrysene	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Dibenz(a,h)anthracene	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Dibenzofuran	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Diethylphthalate	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Dimethylphthalate	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Di-n-butylphthalate	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Di-n-octylphthalate	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Fluoranthene	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Fluorene	ND	U	1	ug/L

Location	QA Sample ID	Date	Time	Method	Analyte	QA Result		DL	Units
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Hexachlorobenzene	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Hexachlorobutadiene	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Hexachlorocyclopentadiene	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Hexachloroethane	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Indeno(1,2,3-cd)pyrene	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Isophorone	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Naphthalene	2.4	J	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Nitrobenzene	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	N-Nitrosodimethylamine	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	N-Nitroso-di-n-propylamine	ND	U	0.82	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	N-Nitrosodiphenylamine	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Pentachlorophenol	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Phenanthrene	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Phenol	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8270C	Pyrene	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	1,2,4-Trichlorobenzene	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	1,2-Dichlorobenzene	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	1,2-Diphenylhydrazine	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	1,3-Dichlorobenzene	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	1,4-Dichlorobenzene	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	2,4,5-Trichlorophenol	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	2,4,6-Trichlorophenol	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	2,4-Dichlorophenol	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	2,4-Dimethylphenol	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	2,4-Dinitrophenol	ND	U	10	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	2,4-Dinitrotoluene	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	2,6-Dinitrotoluene	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	2-Chloronaphthalene	ND	U	1	ug/L

Location	QA Sample ID	Date	Time	Method	Analyte	QA Result		DL	Units
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	2-Chlorophenol	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	2-Methylnaphthalene	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	2-Methylphenol (o-Cresol)	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	2-Nitroaniline	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	2-Nitrophenol	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	3&4-Methylphenol	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	3,3'-Dichlorobenzidine	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	3-Nitroaniline	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	4,6-Dinitro-2-methylphenol	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	4-Bromophenyl phenyl ether	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	4-Chloro-3-methylphenol	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	4-Chloroaniline	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	4-Chlorophenyl phenyl ether	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	4-Nitroaniline	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	4-Nitrophenol	ND	U	5	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Acenaphthene	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Acenaphthylene	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Anthracene	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Benzo(a)anthracene	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Benzo(a)pyrene	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Benzo(b)fluoranthene	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Benzo(g,h,i)perylene	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Benzo(k)fluoranthene	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Benzoic acid	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Benzyl alcohol	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Benzyl butyl phthalate	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	bis(2-Chloroethoxy)methane	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	bis(2-Chloroethyl)ether	ND	U	1	ug/L

Location	QA Sample ID	Date	Time	Method	Analyte	QA Result		DL	Units
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	bis(2-Chloroisopropyl)ether	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	bis(2-Ethylhexyl)phthalate	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Carbazole	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Chrysene	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Dibenz(a,h)anthracene	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Dibenzofuran	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Diethylphthalate	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Dimethylphthalate	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Di-n-butylphthalate	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Di-n-octylphthalate	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Fluoranthene	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Fluorene	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Hexachlorobenzene	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Hexachlorobutadiene	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Hexachlorocyclopentadiene	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Hexachloroethane	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Indeno(1,2,3-cd)pyrene	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Isophorone	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Naphthalene	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Nitrobenzene	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	N-Nitrosodimethylamine	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	N-Nitroso-di-n-propylamine	ND	U	0.8	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	N-Nitrosodiphenylamine	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Pentachlorophenol	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Phenanthrene	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Phenol	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8270C	Pyrene	ND	U	1	ug/L

Qualified Analytical Data - Groundwater Samples
QA vs Primary Results, Explosives
Acid Areas, Plum Brook Ordnance Works, OH

Location	QA Sample ID	Date	Time	Method	Analyte	QA Result		DL	Units
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8330	1,3,5-Trinitrobenzene	ND	U	0.16	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8330	1,3-Dinitrobenzene	ND	U	0.11	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8330	2,4,6-Trinitrotoluene	ND	U	0.16	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8330	2,4-Dinitrotoluene	ND	U	0.16	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8330	2,6-Dinitrotoluene	ND	U	0.16	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8330	2-Amino-4,6-Dinitrotoluene	ND	U	0.16	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8330	2-Nitrotoluene	ND	U	0.16	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8330	3-Nitrotoluene	ND	U	0.16	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8330	4-Amino-2,6-Dinitrotoluene	ND	U	0.16	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8330	4-Nitrotoluene	ND	U	0.16	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8330	HMX	ND	U	0.16	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8330	Nitrobenzene	ND	U	0.1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8330	RDX	ND	U	0.16	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8330	Tetryl	ND	U	0.16	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8330	1,3,5-Trinitrobenzene	ND	U	0.14	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8330	1,3-Dinitrobenzene	ND	U	0.096	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8330	2,4,6-Trinitrotoluene	ND	U	0.14	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8330	2,4-Dinitrotoluene	ND	U	0.14	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8330	2,6-Dinitrotoluene	ND	U	0.14	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8330	2-Amino-4,6-Dinitrotoluene	ND	U	0.14	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8330	2-Nitrotoluene	ND	U	0.14	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8330	3-Nitrotoluene	ND	U	0.14	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8330	4-Amino-2,6-Dinitrotoluene	ND	U	0.14	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8330	4-Nitrotoluene	ND	U	0.14	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8330	HMX	ND	U	0.14	ug/L

Location	QA Sample ID	Date	Time	Method	Analyte	QA Result		DL	Units
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8330	Nitrobenzene	ND	U	0.088	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8330	RDX	ND	U	0.14	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8330	Tetryl	ND	U	0.14	ug/L

Qualified Analytical Data - Groundwater Samples
QA vs Primary Results, PCBs
Acid Areas, Plum Brook Ordnance Works, OH

Location	QA Sample ID	Date	Time	Method	Analyte	QA Result		DL	Units
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8082	PCB-1016 (Aroclor 1016)	ND	U	0.13	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8082	PCB-1221 (Aroclor 1221)	ND	U	0.13	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8082	PCB-1232 (Aroclor 1232)	ND	U	0.13	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8082	PCB-1242 (Aroclor 1242)	ND	U	0.13	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8082	PCB-1248 (Aroclor 1248)	ND	U	0.13	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8082	PCB-1254 (Aroclor 1254)	ND	U	0.13	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW8082	PCB-1260 (Aroclor 1260)	ND	U	0.13	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8082	PCB-1016 (Aroclor 1016)	ND	U	0.12	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8082	PCB-1221 (Aroclor 1221)	ND	U	0.12	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8082	PCB-1232 (Aroclor 1232)	ND	U	0.12	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8082	PCB-1242 (Aroclor 1242)	ND	U	0.12	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8082	PCB-1248 (Aroclor 1248)	ND	U	0.12	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8082	PCB-1254 (Aroclor 1254)	ND	U	0.12	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW8082	PCB-1260 (Aroclor 1260)	ND	U	0.12	ug/L

Qualified Analytical Data - Groundwater Samples
QA vs Primary Results, Metals
Acid Areas, Plum Brook Ordnance Works, OH

Location	QA Sample ID	Date	Time	Method	Analyte	QA Result		DL	Units
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Aluminum	ND	U	50	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Aluminum (total)	ND	U	50	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Antimony	ND	U	5	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Antimony (total)	ND	U	5	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Arsenic	ND	U	3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Arsenic (total)	ND	U	3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Barium	860		5	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Barium (total)	767		5	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Beryllium	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Beryllium (total)	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Cadmium	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Cadmium (total)	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Calcium	74200		500	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Calcium (total)	66000		500	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Chromium	ND	U	2	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Chromium (total)	ND	U	2	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Cobalt	ND	U	3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Cobalt (total)	ND	U	3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Copper	ND	U	3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Copper (total)	ND	U	3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Iron	ND	J	30	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Iron (total)	64.9	J	30	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Lead	ND	U	1.5	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Lead (total)	ND	U	1.5	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Magnesium	42800		500	ug/L

Location	QA Sample ID	Date	Time	Method	Analyte	QA Result		DL	Units
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Magnesium (total)	37800		500	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Manganese	43.4		3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Manganese (total)	38.8		3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Nickel	ND	U	3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Nickel (total)	ND	U	3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Potassium	33600		500	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Potassium (total)	29600		500	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Selenium	ND	U	3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Selenium (total)	ND	U	3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Silver	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Silver (total)	ND	U	1	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Sodium	19200		1000	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Sodium (total)	190000		1000	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Thallium	4.2	J	3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Thallium (total)	ND	U	3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Vanadium	ND	U	3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Vanadium (total)	ND	U	3	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Zinc	ND	J	5	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW6010B	Zinc (total)	13.9	J	5	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW7470A	Mercury	ND	U	0.08	ug/L
AA3-BED-MW-003	PBOW-05-GW-AA3-BEDMW003-01B	01/30/2005	14:00	SW7470A	Mercury (total)	ND	U	0.08	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Aluminum	ND	U	50	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Aluminum (total)	68.4	J	50	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Antimony	ND	U	5	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Antimony (total)	ND	U	5	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Arsenic	ND	U	3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Arsenic (total)	ND	U	3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Barium	96.5	J	5	ug/L

Location	QA Sample ID	Date	Time	Method	Analyte	QA Result		DL	Units
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Barium (total)	97.4	J	5	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Beryllium	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Beryllium (total)	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Cadmium	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Cadmium (total)	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Calcium	17800		1000	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Calcium (total)	173000		1000	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Chromium	ND	U	2	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Chromium (total)	ND	U	2	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Cobalt	ND	U	3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Cobalt (total)	ND	U	3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Copper	ND	U	3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Copper (total)	ND	U	3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Iron	ND	U	30	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Iron (total)	58.1	J	30	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Lead	ND	U	1.5	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Lead (total)	ND	U	1.5	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Magnesium	57200		500	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Magnesium (total)	57000		500	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Manganese	299		3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Manganese (total)	299		3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Nickel	5.4	J	3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Nickel (total)	5.1	J	3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Potassium	1400	J	500	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Potassium (total)	1420	J	500	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Selenium	ND	U	3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Selenium (total)	ND	U	3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Silver	ND	U	1	ug/L

Location	QA Sample ID	Date	Time	Method	Analyte	QA Result		DL	Units
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Silver (total)	ND	U	1	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Sodium	37200		500	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Sodium (total)	36800		500	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Thallium	3.1	J	3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Thallium (total)	4.5	J	3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Vanadium	ND	U	3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Vanadium (total)	ND	U	3	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Zinc	24.7		5	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW6010B	Zinc (total)	25		5	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW7470A	Mercury	ND	U	0.08	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW7470A	Mercury (total)	0.125	J	0.08	ug/L
AA3-GW003	PBOW-05-GW-AA3-GW003-01B	01/25/2005	15:40	SW9012A	Cyanide	ND	U	5	ug/L

Qualified Analytical Data - Groundwater Samples
QA vs Primary Results - All Methods
Acid Areas, Plum Brook Ordnance Works, OH

Location	Date	Time	Method	Analyte	QA Result		QA DL	Units	Primary Result		Prim DL	Units
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Aluminum	ND	U	50	ug/L	ND	U	45.4	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Aluminum (total)	ND	U	50	ug/L	ND	U	45.4	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Antimony	ND	U	5	ug/L	ND	U	8.16	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Antimony (total)	ND	U	5	ug/L	ND	U	8.16	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Arsenic	ND	U	3	ug/L	ND	U	4.59	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Arsenic (total)	ND	U	3	ug/L	ND	U	4.59	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Barium	860		5	ug/L	806		0.693	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Barium (total)	767		5	ug/L	825		0.693	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Beryllium	ND	U	1	ug/L	0.152	J	0.109	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Beryllium (total)	ND	U	1	ug/L	ND	U	0.109	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Cadmium	ND	U	1	ug/L	ND	U	0.713	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Cadmium (total)	ND	U	1	ug/L	ND	U	0.713	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Calcium	74200		500	ug/L	76300		90.9	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Calcium (total)	66000		500	ug/L	73200		90.9	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Chromium	ND	U	2	ug/L	ND	U	0.236	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Chromium (total)	ND	U	2	ug/L	1.21	J	0.236	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Cobalt	ND	U	3	ug/L	ND	U	0.898	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Cobalt (total)	ND	U	3	ug/L	ND	U	0.898	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Copper	ND	U	3	ug/L	ND	U	2.55	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Copper (total)	ND	U	3	ug/L	2.65	J	2.55	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Iron	ND	J	30	ug/L	ND	U	22.9	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Iron (total)	64.9	J	30	ug/L	58.4	J	22.9	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Lead	ND	U	1.5	ug/L	ND	U	2.44	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Lead (total)	ND	U	1.5	ug/L	ND	U	2.44	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Magnesium	42800		500	ug/L	44600		38.5	ug/L

Location	Date	Time	Method	Analyte	QA Result		QA DL	Units	Primary Result		Prim DL	Units
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Magnesium (total)	37800		500	ug/L	43200		38.5	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Manganese	43.4		3	ug/L	41.9		0.419	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Manganese (total)	38.8		3	ug/L	41.1		0.419	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Nickel	ND	U	3	ug/L	ND	U	0.745	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Nickel (total)	ND	U	3	ug/L	ND	U	0.745	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Potassium	33600		500	ug/L	28600		175	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Potassium (total)	29600		500	ug/L	27900		175	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Selenium	ND	U	3	ug/L	ND	U	11.1	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Selenium (total)	ND	U	3	ug/L	ND	U	11.1	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Silver	ND	U	1	ug/L	ND	U	1.30	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Silver (total)	ND	U	1	ug/L	ND	U	1.30	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Sodium	19200		1000	ug/L	194000		49.3	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Sodium (total)	190000		1000	ug/L	187000		49.3	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Thallium	4.2	J	3	ug/L	ND	U	14.1	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Thallium (total)	ND	U	3	ug/L	ND	U	14.1	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Vanadium	ND	U	3	ug/L	ND	U	2.14	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Vanadium (total)	ND	U	3	ug/L	ND	U	2.14	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Zinc	ND	J	5	ug/L	ND	U	1.46	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW6010B	Zinc (total)	13.9	J	5	ug/L	11.8	J	1.46	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW7470A	Mercury	ND	U	0.08	ug/L	0.145	J	0.0584	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW7470A	Mercury (total)	ND	U	0.08	ug/L	ND	U	0.0584	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8082	PCB-1016 (Aroclor 1016)	ND	U	0.13	ug/L	ND	U	3.17	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8082	PCB-1221 (Aroclor 1221)	ND	U	0.13	ug/L	ND	U	9.43	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8082	PCB-1232 (Aroclor 1232)	ND	U	0.13	ug/L	ND	U	4.59	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8082	PCB-1242 (Aroclor 1242)	ND	U	0.13	ug/L	ND	U	6.98	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8082	PCB-1248 (Aroclor 1248)	ND	U	0.13	ug/L	ND	U	9.39	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8082	PCB-1254 (Aroclor 1254)	ND	U	0.13	ug/L	ND	U	1.41	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8082	PCB-1260 (Aroclor 1260)	ND	U	0.13	ug/L	ND	U	1.42	ug/L

Location	Date	Time	Method	Analyte	QA Result		QA DL	Units	Primary Result		Prim DL	Units
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	1,1,1-Trichloroethane	ND	U	0.4	ug/L	ND	U	0.308	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	1,1,2,2-Tetrachloroethane	ND	U	0.4	ug/L	ND	U	0.428	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	1,1,2-Trichloro-1,2,2-TFA	ND	U	0.5	ug/L	ND	U	0.680	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	1,1,2-Trichloroethane	ND	U	0.4	ug/L	ND	U	0.348	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	1,1-Dichloroethane	ND	U	0.5	ug/L	ND	U	0.293	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	1,1-Dichloroethene	ND	U	0.6	ug/L	ND	U	0.343	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	1,2,3-Trichlorobenzene	ND	U	0.3	ug/L	ND	U	0.295	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	1,2,4-Trichlorobenzene	ND	U	0.3	ug/L	ND	U	0.363	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	1,2-Dibromo-3-chloropropane	ND	U	0.5	ug/L	ND	U	0.933	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	1,2-Dibromoethane (EDB)	ND	U	0.5	ug/L	ND	U	0.315	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	1,2-Dichlorobenzene	ND	U	0.2	ug/L	ND	U	0.200	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	1,2-Dichloroethane	ND	U	0.3	ug/L	ND	U	0.273	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	1,2-Dichloropropane	ND	U	0.4	ug/L	ND	U	0.240	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	1,3-Dichlorobenzene	ND	U	0.3	ug/L	ND	U	0.233	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	1,4-Dichlorobenzene	ND	U	0.3	ug/L	ND	U	0.253	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	2-Butanone	ND	U	1	ug/L	ND	U	2.04	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	2-Hexanone	ND	U	1	ug/L	ND	U	0.468	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	4-Methyl-2-pentanone	ND	U	1	ug/L	ND	U	0.983	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	Acetone	ND	U	2	ug/L	ND	U	4.33	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	Benzene	38		0.3	ug/L	42.8		0.260	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	Bromochloromethane	ND	U	0.4	ug/L	ND	U	0.398	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	Bromodichloromethane	ND	U	0.3	ug/L	ND	U	0.353	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	Bromoform	ND	U	0.4	ug/L	ND	U	0.248	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	Bromomethane	ND	U	0.8	ug/L	ND	U	0.253	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	Carbon Disulfide	ND	U	0.2	ug/L	0.715	J	0.295	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	Carbon tetrachloride	ND	U	0.4	ug/L	ND	U	0.278	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	Chlorobenzene	ND	U	0.2	ug/L	ND	U	0.288	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	Chloroethane	ND	U	0.5	ug/L	ND	U	0.303	ug/L

Location	Date	Time	Method	Analyte	QA Result		QA DL	Units	Primary Result		Prim DL	Units
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	Chloroform	ND	U	0.4	ug/L	ND	U	0.300	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	Chloromethane	ND	U	0.5	ug/L	ND	U	0.355	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	cis-1,2-Dichloroethene	ND	U	0.4	ug/L	ND	U	0.248	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	cis-1,3-Dichloropropene	ND	U	0.3	ug/L	ND	U	0.260	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	Cyclohexane	97		0.6	ug/L	96.0		0.250	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	Dibromochloromethane	ND	U	0.3	ug/L	ND	U	0.219	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	Dichlorodifluoromethane	ND	U	0.4	ug/L	ND	U	0.760	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	Ethylbenzene	16		0.2	ug/L	15.6		0.410	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	Isopropylbenzene (Cumene)	4.7		0.3	ug/L	4.72		0.253	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	Methyl Acetate	ND	U	1	ug/L	ND	U	0.968	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	Methylcyclohexane	53		0.5	ug/L	55.9		0.268	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	Methylene Chloride	ND	U	0.9	ug/L	ND	U	0.320	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	Styrene	ND	U	0.3	ug/L	ND	U	0.295	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	Tert-Butyl Methyl Ether (MTBE)	ND	U	0.2	ug/L	ND	U	0.273	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	Tetrachloroethene (PCE)	ND	U	0.3	ug/L	ND	U	0.353	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	Toluene	26		0.3	ug/L	27.7		0.298	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	trans-1,2-Dichloroethene	ND	U	0.4	ug/L	ND	U	0.320	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	trans-1,3-Dichloropropene	ND	U	0.2	ug/L	ND	U	0.280	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	Trichloroethene (TCE)	ND	U	0.4	ug/L	ND	U	0.408	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	Trichlorofluoromethane	ND	U	0.5	ug/L	ND	U	0.463	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	Vinyl chloride	ND	U	0.4	ug/L	ND	U	0.298	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8260B	Xylenes, Total	120		0.3	ug/L	132		0.768	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	1,2,4-Trichlorobenzene	ND	U	1	ug/L	ND	U	1.74	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	1,2-Dichlorobenzene	ND	U	1	ug/L	ND	U	1.82	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	1,3-Dichlorobenzene	ND	U	1	ug/L	ND	U	1.63	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	1,4-Dichlorobenzene	ND	U	1	ug/L	ND	U	1.79	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	2,4,5-Trichlorophenol	ND	U	1	ug/L	ND	U	5.39	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	2,4,6-Trichlorophenol	ND	U	1	ug/L	ND	U	4.61	ug/L

Location	Date	Time	Method	Analyte	QA Result		QA DL	Units	Primary Result		Prim DL	Units
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	2,4-Dichlorophenol	ND	U	1	ug/L	ND	U	4.42	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	2,4-Dimethylphenol	ND	U	1	ug/L	ND	U	4.48	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	2,4-Dinitrophenol	ND	U	10	ug/L	ND	U	4.64	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	2,4-Dinitrotoluene	ND	U	1	ug/L	ND	U	2.44	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	2,6-Dinitrotoluene	ND	U	1	ug/L	ND	U	2.28	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	2-Chloronaphthalene	ND	U	1	ug/L	ND	U	2.82	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	2-Chlorophenol	ND	U	1	ug/L	ND	U	4.38	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	2-Methylnaphthalene	2.6	J	1	ug/L	5.47	J	2.08	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	2-Methylphenol (o-Cresol)	ND	U	1	ug/L	ND	U	4.18	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	2-Nitroaniline	ND	U	1	ug/L	ND	U	3.06	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	2-Nitrophenol	ND	U	1	ug/L	ND	U	4.05	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	3&4-Methylphenol	ND	U	1	ug/L	ND	U	4.52	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	3,3'-Dichlorobenzidine	ND	U	1	ug/L	ND	U	7.25	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	3-Nitroaniline	ND	U	1	ug/L	ND	U	3.10	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	4,6-Dinitro-2-methylphenol	ND	U	1	ug/L	ND	U	4.91	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	4-Bromophenyl phenyl ether	ND	U	1	ug/L	ND	U	3.16	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	4-Chloro-3-methylphenol	ND	U	1	ug/L	ND	U	4.49	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	4-Chloroaniline	ND	U	1	ug/L	ND	U	2.64	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	4-Chlorophenyl phenyl ether	ND	U	1	ug/L	ND	U	3.37	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	4-Nitroaniline	ND	U	1	ug/L	ND	U	3.31	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	4-Nitrophenol	ND	U	5.1	ug/L	ND	U	4.57	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Acenaphthene	ND	U	1	ug/L	ND	U	0.665	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Acenaphthylene	ND	U	1	ug/L	ND	U	0.592	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Anthracene	ND	U	1	ug/L	ND	U	0.663	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Benzo(a)anthracene	ND	U	1	ug/L	ND	U	0.816	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Benzo(a)pyrene	ND	U	1	ug/L	ND	U	0.730	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Benzo(b)fluoranthene	ND	U	1	ug/L	ND	U	0.796	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Benzo(g,h,i)perylene	ND	U	1	ug/L	ND	U	0.671	ug/L

Location	Date	Time	Method	Analyte	QA Result		QA DL	Units	Primary Result		Prim DL	Units
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Benzo(k)fluoranthene	ND	U	1	ug/L	ND	U	0.701	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Benzoic acid	ND	U	1	ug/L	ND	U	6.40	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Benzyl alcohol	ND	U	1	ug/L	ND	U	2.65	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Benzyl butyl phthalate	ND	U	1	ug/L	ND	U	2.91	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	bis(2-Chloroethoxy)methane	ND	U	1	ug/L	ND	U	2.67	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	bis(2-Chloroethyl)ether	ND	U	1	ug/L	ND	U	2.46	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	bis(2-Chloroisopropyl)ether	ND	U	1	ug/L	ND	U	3.19	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	bis(2-Ethylhexyl)phthalate	ND	U	1	ug/L	ND	U	3.52	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Carbazole	ND	U	1	ug/L	ND	U	2.25	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Chrysene	ND	U	1	ug/L	ND	U	0.808	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Dibenz(a,h)anthracene	ND	U	1	ug/L	ND	U	0.717	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Dibenzofuran	ND	U	1	ug/L	ND	U	2.34	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Diethylphthalate	ND	U	1	ug/L	ND	U	2.39	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Dimethylphthalate	ND	U	1	ug/L	ND	U	3.19	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Di-n-butylphthalate	ND	U	1	ug/L	ND	U	3.23	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Di-n-octylphthalate	ND	U	1	ug/L	ND	U	2.68	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Fluoranthene	ND	U	1	ug/L	ND	U	0.760	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Fluorene	ND	U	1	ug/L	ND	U	0.754	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Hexachlorobenzene	ND	U	1	ug/L	ND	U	2.51	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Hexachlorobutadiene	ND	U	1	ug/L	ND	U	1.95	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Hexachlorocyclopentadiene	ND	U	1	ug/L	ND	U	1.58	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Hexachloroethane	ND	U	1	ug/L	ND	U	1.40	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Indeno(1,2,3-cd)pyrene	ND	U	1	ug/L	ND	U	0.755	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Isophorone	ND	U	1	ug/L	ND	U	2.07	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Naphthalene	2.4	J	1	ug/L	5.53	J	0.545	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Nitrobenzene	ND	U	1	ug/L	ND	U	2.08	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	N-Nitrosodimethylamine	ND	U	1	ug/L	ND	U	3.08	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	N-Nitroso-di-n-propylamine	ND	U	0.82	ug/L	ND	U	3.16	ug/L

Location	Date	Time	Method	Analyte	QA Result		QA DL	Units	Primary Result		Prim DL	Units
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	N-Nitrosodiphenylamine	ND	U	1	ug/L	ND	U	3.44	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Pentachlorophenol	ND	U	1	ug/L	ND	U	5.42	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Phenanthrene	ND	U	1	ug/L	ND	U	0.691	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Phenol	ND	U	1	ug/L	ND	U	4.31	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8270C	Pyrene	ND	U	1	ug/L	ND	U	0.730	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8330	1,3,5-Trinitrobenzene	ND	U	0.16	ug/L	ND	U	0.0484	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8330	1,3-Dinitrobenzene	ND	U	0.11	ug/L	ND	U	0.0657	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8330	2,4,6-Trinitrotoluene	ND	U	0.16	ug/L	ND	U	0.141	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8330	2,4-Dinitrotoluene	ND	U	0.16	ug/L	ND	U	0.105	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8330	2,6-Dinitrotoluene	ND	U	0.16	ug/L	ND	U	0.197	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8330	2-Amino-4,6-Dinitrotoluene	ND	U	0.16	ug/L	ND	U	0.103	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8330	2-Nitrotoluene	ND	U	0.16	ug/L	ND	U	0.202	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8330	3-Nitrotoluene	ND	U	0.16	ug/L	ND	U	0.372	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8330	4-Amino-2,6-Dinitrotoluene	ND	U	0.16	ug/L	ND	U	0.210	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8330	4-Nitrotoluene	ND	U	0.16	ug/L	ND	U	0.183	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8330	HMX	ND	U	0.16	ug/L	ND	U	0.0689	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8330	Nitrobenzene	ND	U	0.1	ug/L	ND	U	0.109	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8330	RDX	ND	U	0.16	ug/L	ND	U	0.0846	ug/L
AA3-BED-MW-003	01/30/2005	14:00	SW8330	Tetryl	ND	U	0.16	ug/L	ND	U	0.207	ug/L
AA3-GW003	01/25/2005	15:40	SW6010B	Aluminum	ND	U	50	ug/L	ND	U	45.4	ug/L
AA3-GW003	01/25/2005	15:40	SW6010B	Aluminum (total)	68.4	J	50	ug/L	ND	U	45.4	ug/L
AA3-GW003	01/25/2005	15:40	SW6010B	Antimony	ND	U	5	ug/L	ND	U	8.16	ug/L
AA3-GW003	01/25/2005	15:40	SW6010B	Antimony (total)	ND	U	5	ug/L	ND	U	8.16	ug/L
AA3-GW003	01/25/2005	15:40	SW6010B	Arsenic	ND	U	3	ug/L	ND	U	4.59	ug/L
AA3-GW003	01/25/2005	15:40	SW6010B	Arsenic (total)	ND	U	3	ug/L	ND	U	4.59	ug/L
AA3-GW003	01/25/2005	15:40	SW6010B	Barium	96.5	J	5	ug/L	89.8		0.693	ug/L
AA3-GW003	01/25/2005	15:40	SW6010B	Barium (total)	97.4	J	5	ug/L	92.9		0.693	ug/L
AA3-GW003	01/25/2005	15:40	SW6010B	Beryllium	ND	U	1	ug/L	ND	U	0.109	ug/L

Location	Date	Time	Method	Analyte	QA Result		QA DL	Units	Primary Result		Prim DL	Units
AA3-GW003	01/25/2005	15:40	SW6010B	Beryllium (total)	ND	U	1	ug/L	ND	U	0.109	ug/L
AA3-GW003	01/25/2005	15:40	SW6010B	Cadmium	ND	U	1	ug/L	ND	U	0.713	ug/L
AA3-GW003	01/25/2005	15:40	SW6010B	Cadmium (total)	ND	U	1	ug/L	ND	U	0.713	ug/L
AA3-GW003	01/25/2005	15:40	SW6010B	Calcium	17800		1000	ug/L	164000		90.9	ug/L
AA3-GW003	01/25/2005	15:40	SW6010B	Calcium (total)	173000		1000	ug/L	165000		90.9	ug/L
AA3-GW003	01/25/2005	15:40	SW6010B	Chromium	ND	U	2	ug/L	0.409	J	0.236	ug/L
AA3-GW003	01/25/2005	15:40	SW6010B	Chromium (total)	ND	U	2	ug/L	0.633	J	0.236	ug/L
AA3-GW003	01/25/2005	15:40	SW6010B	Cobalt	ND	U	3	ug/L	2.79	J	0.898	ug/L
AA3-GW003	01/25/2005	15:40	SW6010B	Cobalt (total)	ND	U	3	ug/L	2.60	J	0.898	ug/L
AA3-GW003	01/25/2005	15:40	SW6010B	Copper	ND	U	3	ug/L	ND	U	2.55	ug/L
AA3-GW003	01/25/2005	15:40	SW6010B	Copper (total)	ND	U	3	ug/L	ND	U	2.55	ug/L
AA3-GW003	01/25/2005	15:40	SW6010B	Iron	ND	U	30	ug/L	39.9	J	22.9	ug/L
AA3-GW003	01/25/2005	15:40	SW6010B	Iron (total)	58.1	J	30	ug/L	114	J	22.9	ug/L
AA3-GW003	01/25/2005	15:40	SW6010B	Lead	ND	U	1.5	ug/L	ND	U	2.44	ug/L
AA3-GW003	01/25/2005	15:40	SW6010B	Lead (total)	ND	U	1.5	ug/L	ND	U	2.44	ug/L
AA3-GW003	01/25/2005	15:40	SW6010B	Magnesium	57200		500	ug/L	54700		38.5	ug/L
AA3-GW003	01/25/2005	15:40	SW6010B	Magnesium (total)	57000		500	ug/L	55200		38.5	ug/L
AA3-GW003	01/25/2005	15:40	SW6010B	Manganese	299		3	ug/L	295		0.419	ug/L
AA3-GW003	01/25/2005	15:40	SW6010B	Manganese (total)	299		3	ug/L	324		0.419	ug/L
AA3-GW003	01/25/2005	15:40	SW6010B	Nickel	5.4	J	3	ug/L	3.06	J	0.745	ug/L
AA3-GW003	01/25/2005	15:40	SW6010B	Nickel (total)	5.1	J	3	ug/L	3.12	J	0.745	ug/L
AA3-GW003	01/25/2005	15:40	SW6010B	Potassium	1400	J	500	ug/L	1040	J	175	ug/L
AA3-GW003	01/25/2005	15:40	SW6010B	Potassium (total)	1420	J	500	ug/L	1220	J	175	ug/L
AA3-GW003	01/25/2005	15:40	SW6010B	Selenium	ND	U	3	ug/L	ND	U	11.1	ug/L
AA3-GW003	01/25/2005	15:40	SW6010B	Selenium (total)	ND	U	3	ug/L	ND	U	11.1	ug/L
AA3-GW003	01/25/2005	15:40	SW6010B	Silver	ND	U	1	ug/L	ND	U	1.30	ug/L
AA3-GW003	01/25/2005	15:40	SW6010B	Silver (total)	ND	U	1	ug/L	ND	U	1.30	ug/L
AA3-GW003	01/25/2005	15:40	SW6010B	Sodium	37200		500	ug/L	36000		49.3	ug/L

Location	Date	Time	Method	Analyte	QA Result		QA DL	Units	Primary Result		Prim DL	Units
AA3-GW003	01/25/2005	15:40	SW6010B	Sodium (total)	36800		500	ug/L	36300		49.3	ug/L
AA3-GW003	01/25/2005	15:40	SW6010B	Thallium	3.1	J	3	ug/L	ND	U	14.1	ug/L
AA3-GW003	01/25/2005	15:40	SW6010B	Thallium (total)	4.5	J	3	ug/L	ND	U	14.1	ug/L
AA3-GW003	01/25/2005	15:40	SW6010B	Vanadium	ND	U	3	ug/L	ND	U	2.14	ug/L
AA3-GW003	01/25/2005	15:40	SW6010B	Vanadium (total)	ND	U	3	ug/L	ND	U	2.14	ug/L
AA3-GW003	01/25/2005	15:40	SW6010B	Zinc	24.7		5	ug/L	13.8	J	1.46	ug/L
AA3-GW003	01/25/2005	15:40	SW6010B	Zinc (total)	25		5	ug/L	14.8	J	1.46	ug/L
AA3-GW003	01/25/2005	15:40	SW7470A	Mercury	ND	U	0.08	ug/L	ND	U	0.0584	ug/L
AA3-GW003	01/25/2005	15:40	SW7470A	Mercury (total)	0.125	J	0.08	ug/L	ND	U	0.0584	ug/L
AA3-GW003	01/25/2005	15:40	SW8082	PCB-1016 (Aroclor 1016)	ND	U	0.12	ug/L	ND	U	0.629	ug/L
AA3-GW003	01/25/2005	15:40	SW8082	PCB-1221 (Aroclor 1221)	ND	U	0.12	ug/L	ND	U	1.87	ug/L
AA3-GW003	01/25/2005	15:40	SW8082	PCB-1232 (Aroclor 1232)	ND	U	0.12	ug/L	ND	U	0.910	ug/L
AA3-GW003	01/25/2005	15:40	SW8082	PCB-1242 (Aroclor 1242)	ND	U	0.12	ug/L	ND	U	1.38	ug/L
AA3-GW003	01/25/2005	15:40	SW8082	PCB-1248 (Aroclor 1248)	ND	U	0.12	ug/L	ND	U	1.86	ug/L
AA3-GW003	01/25/2005	15:40	SW8082	PCB-1254 (Aroclor 1254)	ND	U	0.12	ug/L	ND	U	0.279	ug/L
AA3-GW003	01/25/2005	15:40	SW8082	PCB-1260 (Aroclor 1260)	ND	U	0.12	ug/L	ND	U	0.282	ug/L
AA3-GW003	01/25/2005	15:40	SW8260B	1,1,1-Trichloroethane	ND	U	0.4	ug/L	ND	U	0.123	ug/L
AA3-GW003	01/25/2005	15:40	SW8260B	1,1,2,2-Tetrachloroethane	ND	U	0.4	ug/L	ND	U	0.171	ug/L
AA3-GW003	01/25/2005	15:40	SW8260B	1,1,2-Trichloro-1,2,2-TFA	ND	U	0.5	ug/L	ND	U	0.272	ug/L
AA3-GW003	01/25/2005	15:40	SW8260B	1,1,2-Trichloroethane	ND	U	0.4	ug/L	ND	U	0.139	ug/L
AA3-GW003	01/25/2005	15:40	SW8260B	1,1-Dichloroethane	ND	U	0.5	ug/L	ND	U	0.117	ug/L
AA3-GW003	01/25/2005	15:40	SW8260B	1,1-Dichloroethene	ND	U	0.6	ug/L	ND	U	0.137	ug/L
AA3-GW003	01/25/2005	15:40	SW8260B	1,2,3-Trichlorobenzene	ND	U	0.3	ug/L	ND	U	0.118	ug/L
AA3-GW003	01/25/2005	15:40	SW8260B	1,2,4-Trichlorobenzene	ND	U	0.3	ug/L	ND	U	0.145	ug/L
AA3-GW003	01/25/2005	15:40	SW8260B	1,2-Dibromo-3-chloropropane	ND	U	0.5	ug/L	ND	U	0.373	ug/L
AA3-GW003	01/25/2005	15:40	SW8260B	1,2-Dibromoethane (EDB)	ND	U	0.5	ug/L	ND	U	0.126	ug/L
AA3-GW003	01/25/2005	15:40	SW8260B	1,2-Dichlorobenzene	ND	U	0.2	ug/L	ND	U	0.0800	ug/L
AA3-GW003	01/25/2005	15:40	SW8260B	1,2-Dichloroethane	ND	U	0.3	ug/L	ND	U	0.109	ug/L

Location	Date	Time	Method	Analyte	QA Result		QA DL	Units	Primary Result		Prim DL	Units
AA3-GW003	01/25/2005	15:40	SW8260B	1,2-Dichloropropane	ND	U	0.4	ug/L	ND	U	0.0961	ug/L
AA3-GW003	01/25/2005	15:40	SW8260B	1,3-Dichlorobenzene	ND	U	0.3	ug/L	ND	U	0.0933	ug/L
AA3-GW003	01/25/2005	15:40	SW8260B	1,4-Dichlorobenzene	ND	U	0.3	ug/L	ND	U	0.101	ug/L
AA3-GW003	01/25/2005	15:40	SW8260B	2-Butanone	ND	U	1	ug/L	ND	U	0.815	ug/L
AA3-GW003	01/25/2005	15:40	SW8260B	2-Hexanone	ND	U	1	ug/L	ND	U	0.187	ug/L
AA3-GW003	01/25/2005	15:40	SW8260B	4-Methyl-2-pentanone	ND	U	1	ug/L	ND	U	0.393	ug/L
AA3-GW003	01/25/2005	15:40	SW8260B	Acetone	ND	U	2	ug/L	ND	U	1.73	ug/L
AA3-GW003	01/25/2005	15:40	SW8260B	Benzene	ND	U	0.3	ug/L	ND	U	0.104	ug/L
AA3-GW003	01/25/2005	15:40	SW8260B	Bromochloromethane	ND	U	0.4	ug/L	ND	U	0.159	ug/L
AA3-GW003	01/25/2005	15:40	SW8260B	Bromodichloromethane	ND	U	0.3	ug/L	ND	U	0.141	ug/L
AA3-GW003	01/25/2005	15:40	SW8260B	Bromoform	ND	U	0.4	ug/L	ND	U	0.0990	ug/L
AA3-GW003	01/25/2005	15:40	SW8260B	Bromomethane	ND	U	0.8	ug/L	ND	U	0.101	ug/L
AA3-GW003	01/25/2005	15:40	SW8260B	Carbon Disulfide	ND	U	0.2	ug/L	ND	U	0.118	ug/L
AA3-GW003	01/25/2005	15:40	SW8260B	Carbon tetrachloride	ND	U	0.4	ug/L	ND	U	0.111	ug/L
AA3-GW003	01/25/2005	15:40	SW8260B	Chlorobenzene	ND	U	0.2	ug/L	ND	U	0.115	ug/L
AA3-GW003	01/25/2005	15:40	SW8260B	Chloroethane	ND	U	0.5	ug/L	ND	U	0.121	ug/L
AA3-GW003	01/25/2005	15:40	SW8260B	Chloroform	ND	U	0.4	ug/L	ND	U	0.120	ug/L
AA3-GW003	01/25/2005	15:40	SW8260B	Chloromethane	ND	U	0.5	ug/L	ND	U	0.142	ug/L
AA3-GW003	01/25/2005	15:40	SW8260B	cis-1,2-Dichloroethene	ND	U	0.4	ug/L	ND	U	0.0990	ug/L
AA3-GW003	01/25/2005	15:40	SW8260B	cis-1,3-Dichloropropene	ND	U	0.3	ug/L	ND	U	0.104	ug/L
AA3-GW003	01/25/2005	15:40	SW8260B	Cyclohexane	ND	U	0.6	ug/L	ND	U	0.0999	ug/L
AA3-GW003	01/25/2005	15:40	SW8260B	Dibromochloromethane	ND	U	0.3	ug/L	ND	U	0.0874	ug/L
AA3-GW003	01/25/2005	15:40	SW8260B	Dichlorodifluoromethane	ND	U	0.4	ug/L	ND	U	0.304	ug/L
AA3-GW003	01/25/2005	15:40	SW8260B	Ethylbenzene	ND	U	0.2	ug/L	ND	U	0.164	ug/L
AA3-GW003	01/25/2005	15:40	SW8260B	Isopropylbenzene (Cumene)	ND	U	0.3	ug/L	ND	U	0.101	ug/L
AA3-GW003	01/25/2005	15:40	SW8260B	Methyl Acetate	ND	U	1	ug/L	ND	U	0.387	ug/L
AA3-GW003	01/25/2005	15:40	SW8260B	Methylcyclohexane	ND	U	0.5	ug/L	ND	U	0.107	ug/L
AA3-GW003	01/25/2005	15:40	SW8260B	Methylene Chloride	ND	U	0.9	ug/L	ND	U	0.128	ug/L

Location	Date	Time	Method	Analyte	QA Result		QA DL	Units	Primary Result		Prim DL	Units
AA3-GW003	01/25/2005	15:40	SW8260B	Styrene	ND	U	0.3	ug/L	ND	U	0.118	ug/L
AA3-GW003	01/25/2005	15:40	SW8260B	Tert-Butyl Methyl Ether (MTBE)	ND	U	0.2	ug/L	ND	U	0.109	ug/L
AA3-GW003	01/25/2005	15:40	SW8260B	Tetrachloroethene (PCE)	ND	U	0.3	ug/L	ND	U	0.141	ug/L
AA3-GW003	01/25/2005	15:40	SW8260B	Toluene	ND	U	0.3	ug/L	ND	U	0.119	ug/L
AA3-GW003	01/25/2005	15:40	SW8260B	trans-1,2-Dichloroethene	ND	U	0.4	ug/L	ND	U	0.128	ug/L
AA3-GW003	01/25/2005	15:40	SW8260B	trans-1,3-Dichloropropene	ND	U	0.2	ug/L	ND	U	0.112	ug/L
AA3-GW003	01/25/2005	15:40	SW8260B	Trichloroethene (TCE)	ND	U	0.4	ug/L	ND	U	0.163	ug/L
AA3-GW003	01/25/2005	15:40	SW8260B	Trichlorofluoromethane	ND	U	0.5	ug/L	ND	U	0.185	ug/L
AA3-GW003	01/25/2005	15:40	SW8260B	Vinyl chloride	ND	U	0.4	ug/L	ND	U	0.119	ug/L
AA3-GW003	01/25/2005	15:40	SW8260B	Xylenes, Total	ND	U	0.3	ug/L	ND	U	0.307	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	1,2,4-Trichlorobenzene	ND	U	1	ug/L	ND	U	1.74	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	1,2-Dichlorobenzene	ND	U	1	ug/L	ND	U	1.82	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	1,3-Dichlorobenzene	ND	U	1	ug/L	ND	U	1.63	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	1,4-Dichlorobenzene	ND	U	1	ug/L	ND	U	1.79	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	2,4,5-Trichlorophenol	ND	U	1	ug/L	ND	U	5.39	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	2,4,6-Trichlorophenol	ND	U	1	ug/L	ND	U	4.61	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	2,4-Dichlorophenol	ND	U	1	ug/L	ND	U	4.42	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	2,4-Dimethylphenol	ND	U	1	ug/L	ND	U	4.48	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	2,4-Dinitrophenol	ND	U	10	ug/L	ND	U	4.64	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	2,4-Dinitrotoluene	ND	U	1	ug/L	ND	U	2.44	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	2,6-Dinitrotoluene	ND	U	1	ug/L	ND	U	2.28	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	2-Chloronaphthalene	ND	U	1	ug/L	ND	U	2.82	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	2-Chlorophenol	ND	U	1	ug/L	ND	U	4.38	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	2-Methylnaphthalene	ND	U	1	ug/L	ND	U	2.08	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	2-Methylphenol (o-Cresol)	ND	U	1	ug/L	ND	U	4.18	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	2-Nitroaniline	ND	U	1	ug/L	ND	U	3.06	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	2-Nitrophenol	ND	U	1	ug/L	ND	U	4.05	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	3&4-Methylphenol	ND	U	1	ug/L	ND	U	4.52	ug/L

Location	Date	Time	Method	Analyte	QA Result		QA DL	Units	Primary Result		Prim DL	Units
AA3-GW003	01/25/2005	15:40	SW8270C	3,3'-Dichlorobenzidine	ND	U	1	ug/L	ND	U	7.25	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	3-Nitroaniline	ND	U	1	ug/L	ND	U	3.10	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	4,6-Dinitro-2-methylphenol	ND	U	1	ug/L	ND	U	4.91	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	4-Bromophenyl phenyl ether	ND	U	1	ug/L	ND	U	3.16	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	4-Chloro-3-methylphenol	ND	U	1	ug/L	ND	U	4.49	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	4-Chloroaniline	ND	U	1	ug/L	ND	U	2.64	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	4-Chlorophenyl phenyl ether	ND	U	1	ug/L	ND	U	3.37	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	4-Nitroaniline	ND	U	1	ug/L	ND	U	3.31	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	4-Nitrophenol	ND	U	5	ug/L	ND	U	4.57	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	Acenaphthene	ND	U	1	ug/L	ND	U	0.665	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	Acenaphthylene	ND	U	1	ug/L	ND	U	0.592	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	Anthracene	ND	U	1	ug/L	ND	U	0.663	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	Benzo(a)anthracene	ND	U	1	ug/L	ND	U	0.816	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	Benzo(a)pyrene	ND	U	1	ug/L	ND	U	0.730	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	Benzo(b)fluoranthene	ND	U	1	ug/L	ND	U	0.796	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	Benzo(g,h,i)perylene	ND	U	1	ug/L	ND	U	0.671	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	Benzo(k)fluoranthene	ND	U	1	ug/L	ND	U	0.701	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	Benzoic acid	ND	U	1	ug/L	ND	U	6.40	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	Benzyl alcohol	ND	U	1	ug/L	ND	U	2.65	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	Benzyl butyl phthalate	ND	U	1	ug/L	ND	U	2.91	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	bis(2-Chloroethoxy)methane	ND	U	1	ug/L	ND	U	2.67	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	bis(2-Chloroethyl)ether	ND	U	1	ug/L	ND	U	2.46	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	bis(2-Chloroisopropyl)ether	ND	U	1	ug/L	ND	U	3.19	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	bis(2-Ethylhexyl)phthalate	ND	U	1	ug/L	ND	U	3.52	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	Carbazole	ND	U	1	ug/L	ND	U	2.25	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	Chrysene	ND	U	1	ug/L	ND	U	0.808	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	Dibenz(a,h)anthracene	ND	U	1	ug/L	ND	U	0.717	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	Dibenzofuran	ND	U	1	ug/L	ND	U	2.34	ug/L

Location	Date	Time	Method	Analyte	QA Result		QA DL	Units	Primary Result		Prim DL	Units
AA3-GW003	01/25/2005	15:40	SW8270C	Diethylphthalate	ND	U	1	ug/L	ND	U	2.39	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	Dimethylphthalate	ND	U	1	ug/L	ND	U	3.19	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	Di-n-butylphthalate	ND	U	1	ug/L	ND	U	3.23	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	Di-n-octylphthalate	ND	U	1	ug/L	ND	U	2.68	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	Fluoranthene	ND	U	1	ug/L	ND	U	0.760	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	Fluorene	ND	U	1	ug/L	ND	U	0.754	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	Hexachlorobenzene	ND	U	1	ug/L	ND	U	2.51	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	Hexachlorobutadiene	ND	U	1	ug/L	ND	U	1.95	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	Hexachlorocyclopentadiene	ND	U	1	ug/L	ND	U	1.58	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	Hexachloroethane	ND	U	1	ug/L	ND	U	1.40	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	Indeno(1,2,3-cd)pyrene	ND	U	1	ug/L	ND	U	0.755	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	Isophorone	ND	U	1	ug/L	ND	U	2.07	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	Naphthalene	ND	U	1	ug/L	ND	U	0.545	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	Nitrobenzene	ND	U	1	ug/L	ND	U	2.08	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	N-Nitrosodimethylamine	ND	U	1	ug/L	ND	U	3.08	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	N-Nitroso-di-n-propylamine	ND	U	0.8	ug/L	ND	U	3.16	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	N-Nitrosodiphenylamine	ND	U	1	ug/L	ND	U	3.44	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	Pentachlorophenol	ND	U	1	ug/L	ND	U	5.42	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	Phenanthrene	ND	U	1	ug/L	ND	U	0.691	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	Phenol	ND	U	1	ug/L	ND	U	4.31	ug/L
AA3-GW003	01/25/2005	15:40	SW8270C	Pyrene	ND	U	1	ug/L	ND	U	0.730	ug/L
AA3-GW003	01/25/2005	15:40	SW8330	1,3,5-Trinitrobenzene	ND	U	0.14	ug/L	ND	U	0.0475	ug/L
AA3-GW003	01/25/2005	15:40	SW8330	1,3-Dinitrobenzene	ND	U	0.096	ug/L	ND	U	0.0645	ug/L
AA3-GW003	01/25/2005	15:40	SW8330	2,4,6-Trinitrotoluene	ND	U	0.14	ug/L	ND	U	0.138	ug/L
AA3-GW003	01/25/2005	15:40	SW8330	2,4-Dinitrotoluene	ND	U	0.14	ug/L	ND	U	0.103	ug/L
AA3-GW003	01/25/2005	15:40	SW8330	2,6-Dinitrotoluene	ND	U	0.14	ug/L	ND	U	0.193	ug/L
AA3-GW003	01/25/2005	15:40	SW8330	2-Amino-4,6-Dinitrotoluene	ND	U	0.14	ug/L	ND	U	0.101	ug/L
AA3-GW003	01/25/2005	15:40	SW8330	2-Nitrotoluene	ND	U	0.14	ug/L	ND	U	0.198	ug/L

Location	Date	Time	Method	Analyte	QA Result		QA DL	Units	Primary Result		Prim DL	Units
AA3-GW003	01/25/2005	15:40	SW8330	3-Nitrotoluene	ND	U	0.14	ug/L	ND	U	0.365	ug/L
AA3-GW003	01/25/2005	15:40	SW8330	4-Amino-2,6-Dinitrotoluene	ND	U	0.14	ug/L	ND	U	0.206	ug/L
AA3-GW003	01/25/2005	15:40	SW8330	4-Nitrotoluene	ND	U	0.14	ug/L	ND	U	0.179	ug/L
AA3-GW003	01/25/2005	15:40	SW8330	HMX	ND	U	0.14	ug/L	ND	U	0.0676	ug/L
AA3-GW003	01/25/2005	15:40	SW8330	Nitrobenzene	ND	U	0.088	ug/L	ND	U	0.107	ug/L
AA3-GW003	01/25/2005	15:40	SW8330	RDX	ND	U	0.14	ug/L	ND	U	0.0830	ug/L
AA3-GW003	01/25/2005	15:40	SW8330	Tetryl	ND	U	0.14	ug/L	ND	U	0.203	ug/L
AA3-GW003	01/25/2005	15:40	SW9012A	Cyanide	ND	U	5	ug/L	ND	U	0.0070	mg/L