PHASE II REMEDIAL INVESTIGATION REPORT FOR THE BEE-JAY SCALES SITE

Chevron Environmental Management Company & BP America, Inc.

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1.0 INTRODUCTION

This document summarizes the Phase II Remedial Investigation (RI) completed by SECOR International Incorporated (SECOR) on behalf of the Chevron Environmental Management Company (CEMC) and BP America, Incorporated (BP) at the Bee-Jay Scales Site in Sunnyside, Washington (the Site). This project is being implemented in accordance with the Washington State Department of Ecology (Ecology) Washington Model Toxics Control Act (MTCA) and Ecology Agreed Order No. DE 02TCPCR-3932.

1.1 Purpose

The purpose of this report is to summarize the sampling activities and treatability studies conducted as part of the Phase II investigation and present the results in comparison to screening criteria.

1.2 Report Organization

This report is organized as follows:

- A summary of the Site background and historical operations is included in the remaining portion of Section 1;
- A summary of the Phase I RI, resulting data gap evaluation, and recommendations for the Phase II RI are included in Section 2;
- A summary of the Phase II RI activities, including soil boring and monitoring well installation and sampling, surface water/sediment sampling, and quality control procedures, is presented in Section 3;
- An analytical data summary, including comparisons of analytical data to appropriate MTCA cleanup criteria, as well as the pump testing results are included in Section 4;
- A summary of the results of the treatability investigation, including results of the bench-scale and field pilot study, is included in Section 5; and
- Summary and conclusions are presented in Section 6.

1.3 Background

Information regarding the Site description and historical operations at the Site has been adapted from the Remedial Investigation/Feasibility Study Work Plan, Bee-Jay Scales Site, Sunnyside, WA (CH2M Hill, February 2003). The RI/FS Work Plan was approved by Ecology in March 2003. Details of previous investigations can be found in the RI/FS Work Plan, and are also summarized in the Phase I Remedial Investigation Report (SECOR, October 2003).

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1.3.1 Site Description

The Site is located in the city of Sunnyside, within Yakima County, and is composed of two property parcels: Parcel No. 22102522014 and Parcel No. 22102522015 as recorded by the Yakima County Department of Assessment. Parcel No. 22102522014 is located at 116 North 1st Street, and is owned by Bee-Jay Scales, Inc. Parcel No. 22102522015 is located at 301 Warehouse Avenue, and is owned by Hickenbottom & Sons, Inc. Hickenbottom & Sons also owns additional contiguous property on which their business is located. The Site location is shown on Figure 1-1, and the Site layout, including building locations, ground surface contours, and additional site features, is shown on Figure 1-2.

1.3.2 Site History

The Site and adjacent properties have been the location of agricultural warehouses, lumber yards, coal storage, and railroad transportation activities since approximately 1906.

Portions of the Site were owned by the Northern Pacific Railroad Company from 1906 until 1989 when purchased by the Glacier Park Company (GPC). An agricultural distribution facility operated at the Site from the 1960s through at least 1986. This facility consisted of buildings and above ground storage tanks (ASTs), and was operated by at least two separate companies: Laneger Agricultural Services and Valley Agricultural Inc. Documentation also indicates that during the 1970s, Amoco, now known as BP, leased portions of this property from Northern Pacific Railroad. The ASTs have since been removed from the Site. A lagoon was constructed by Valley Agricultural Inc. in the early 1980s to collect water from the washdown of farm chemical applicator vehicles.

The western portion of Lot 10 was purchased by the Chevron Chemical Company in 1981 and sold to Bee-Jay Scales, Inc. in 1987. Bee-Jay Scales, Inc. purchased additional portions of Lots 10 and 11 in 1995 and 1996. Please note Lots 10 and 11 are referenced in the Summary of Ownership included as Appendix B of the RI/FS Work Plan, and are not shown on any available figures.

Hickenbottom & Sons leased a portion of the Site from the Northern Pacific Railroad Company beginning in 1961 and purchased portions of Lots 10 and 11 in 1992. The Hickenbottom property was previously used as pastureland, and since 1961 has been used for food packing, storage, and a transportation business.

Three businesses currently operate at the Bee-Jay Scales portion of the property: Sandy Farms, a local trucking company; Sanleco, Inc., an interstate trucking company with an on-site tractor-trailer repair garage; and Bee-Jay Scales, a commercial scale operation.

Hickenbottom & Sons, Inc. is a food-processing and distribution company. Most of Hickenbottom & Sons' current operation consists of a refrigeration warehouse. The Hickenbottom property that makes up a portion of the Site is currently leased to the Johnson Fruit Company and is used to store produce bins, pallets, tractor-trailer rigs, and other miscellaneous equipment. The remainder of the Hickenbottom & Sons property is used for tractor-trailer and produce storage, as well as transportation.

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2.0 SUMMARY OF PHASE I REMEDIAL INVESTIGATION

The Phase I RI activities were conducted in July 2003, and consisted of the soil and groundwater investigations summarized below, and also detailed in the Phase I Remedial Investigation Report. In addition to the Phase I work, quarterly groundwater monitoring was conducted at the Site and was summarized in the Final Quarterly Groundwater Monitoring Technical Memorandum (SECOR, August 2004).

2.1 Phase I Soil Investigation

SECOR collected soil samples from borings installed in each of the six identified areas at the Site. Boring locations can be found on Figure 2-1. For the purpose of clearing potential subgrade utilities, soil borings were installed by hand auger to a depth of 4.5 feet below ground surface (bgs), and then advanced to the water table by a hollow stem auger (HSA) drill rig. In five of the six identified areas, discrete soil samples were collected from the boring wall during hand clearing at the depth interval of 0.5 feet bgs to 1.5 feet bgs, and by split spoon sampler at depth intervals of 4.5 feet bgs to 6.0 feet bgs and 9.5 feet bgs to 11.0 feet bgs.

When a shallow water table was encountered, discrete samples from the interval above groundwater were collected at a depth of 7.5 feet bgs. In Area 5, only surface soil samples were collected from the boring wall during hand clearing at depths between 0.5 feet and 1.5 feet bgs, as required by the RI/FS Work Plan. Soil samples were submitted to Merit Laboratories and A&L Great Lakes Laboratories for analysis.

Groups of chemical parameters for the soil sampling plan at the Site were defined as follows:

- Conventional A parameters: ammonia, nitrite, nitrate, phosphate, sulfate, chloride, pH, and moisture content;
- Conventional B parameters: total organic carbon (TOC), grain size distribution, and void ratio/porosity;
- Conventional C parameters: agronomic analyses including extractable cations; sodium bicarbonate; cation exchange capacity (CEC); diethylenetriaminepentaacetic acid (DTPA)-available iron, manganese, zinc, and copper; electrical conductivity in saturated paste (ECe); calcium, magnesium, sodium, and chloride in saturation extract; and void ratio.

The number of borings in each area and the corresponding chemical analyses are identified below:

<u>Area 1 - Liquid Fertilizer Plant and Truck Wash Area</u>
Eight soil borings were installed in Area 1. Soil samples from all eight borings were analyzed for Conventional A parameters, Conventional C parameters, pesticides, herbicides, and metals. Samples from three of the borings were also analyzed for Conventional B parameters, and samples from two of the borings were also analyzed for volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs).

Area 2 - Dry Fertilizer
Seven soil borings were installed in Area 2. Soil samples from all seven borings were analyzed for Conventional A parameters, pesticides, herbicides, and metals. Samples from two of the borings were also analyzed for Conventional B parameters.

Area 3 - Drum Storage Area
Two soil borings were installed in Area 3, and samples from both borings were analyzed for Conventional A parameters, total petroleum hydrocarbon (TPH)-gasoline extended (Gx), TPH-diesel extended (Dx), VOCs, SVOCs, pesticides, and metals. Soil samples from one of the borings were also analyzed for Conventional B parameters.

Area 4 - Suspected Historical Washdown Area
Six soil borings were installed in Area 4, and samples from these borings were analyzed for Conventional A parameters, TPH-Gx, TPH-Dx, pesticides, herbicides, and metals. Soil samples from two of the borings were also analyzed for Conventional B parameters, VOCs, and SVOCs.

Area 5 - North Area
Five shallow soil borings were installed in Area 5. Soil samples from all five borings were analyzed for Conventional A parameters, TPH-Hydrocarbon Identification (HCID), pesticides, herbicides, and metals. Samples from two of the five borings were also analyzed for Conventional B parameters.

Area 6 - Hickenbottom Area
A total of seven soil borings were installed in Area 6, two of which were shallow. Soil samples from all seven borings were analyzed for Conventional A parameters, TPH-HCID, pesticides, and herbicides. Samples from one boring were also analyzed for Conventional B parameters and VOCs. Samples from the two shallow borings were also analyzed for metals.

Phase I RI soil results were initially screened against Ecology's MTCA Method A Cleanup Levels (CULs) and natural background soil metals concentrations to identify potential indicator hazardous substances (IHSs). Potential IHSs were retained for further evaluation for one of the following reasons:

- Detected concentrations exceeded Method A CULs;
- Detected metals concentrations were above natural background; or
- Detected constituents do not have Method A CULs or natural background concentrations available.

The potential soil IHSs included: 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, 2-methylnaphthalene, 4,4'-DDE, ammonia-N, antimony, cadmium, chloride, chromium (total), copper, dinoseb, nickel, nitrate-N, nitrite-N, TPH-Gx, p,m-xylene, phosphate, silver, sulfate, thallium, and zinc.

The potential IHSs were then compared against MTCA Method C CULs to determine the constituents requiring further evaluation in the Phase II investigation. The only soil IHS with a maximum concentration exceeding the soil Method C CULs (from both Cleanup Levels and Risk Calculations (CLARC) version 3.1 and calculated) was TPH-Gx.

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Geotechnical analyses (moisture content, void ratio/porosity, grain size distribution, and permeability) were also performed on soils collected from the Site to determine soil properties that have an effect on both soil strength and groundwater behavior. The average moisture content of the Site soil was estimated as 19.2%. The average water content of the void ratio samples was calculated as 22.1%; the estimate for the average Site porosity is 44.4%; and the estimated void ratio for Site soils is 0.80. The average grain size distribution for soils across the Site is as follows: 0.7% gravel, 1.3% coarse sand, 4.0% medium sand, 58.2% fine sand, and 35.8% silt-clay.

Most samples were categorized as well-graded, and there was a range of grain size distributions found at the Site, with a majority visually classified as sandy clay, silty clay, or sandy silt. The vertical permeability was calculated for one sample (collected from MW-7 in Area 5) to determine the properties of the aquitard. The estimated average permeability of the confining layer was determined by geotechnical testing to be 5.1E-06 cm/s.

2.2 Phase I Groundwater Investigation

Three, two-inch diameter shallow wells were installed at the Site as part of the Phase I groundwater investigation. Two of the wells (MW-5 and MW-6) were installed in Area 2, and one well (MW-7) was installed in Area 5. These wells supplement existing groundwater quality information provided by three existing wells (MW-1, MW-3, and MW-4). The fourth previously installed monitoring well (MW-2) could not be located during the Phase I RI. Monitoring well locations are shown on Figure 2-1.

The borings for each of the monitoring wells were advanced to approximately 30 feet bgs. Soil samples were collected from the boreholes during well installation. Well installations were completed with a 10-foot screen installed at a depth interval of 6 feet to 16 feet bgs. After completion, each well was developed by surging and bailing to remove fine-grained sediment from the formation and filter packs, and increase the hydraulic efficiency of the wells.

Groundwater samples were collected from each of the six located monitoring wells. The groundwater samples were collected using minimal drawdown procedures using a combination of dedicated and non-dedicated equipment. Decontamination procedures were followed to prevent cross-contamination between monitoring wells during water level measurement.

Groups of chemical parameters for the groundwater sampling plan were defined as follows:

- Conventional A parameters: ammonia, nitrite, nitrate, phosphate, sulfate, chloride, and pH; and
- Conventional B parameters: TOC, total suspended solids (TSS), total dissolved solids (TDS), hardness, and alkalinity.

Groundwater samples were analyzed for Conventional A parameters, Conventional B parameters, TPH-HCID, VOCs, SVOCs, pesticides, herbicides, and metals. Phase I groundwater results were initially screened against Ecology's MTCA Method A CULs to identify potential IHSs.

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The potential groundwater IHSs include: 1,2-dichloropropane, 2,4-dichlorophenol, ammonia-N, arsenic, chloride, chlorobenzene, copper, iron, manganese, nickel, o-xylene, p,m-xylene, phosphate, sulfate, total nitrates and nitrites, and zinc.

The potential IHSs were then compared against MTCA Method C CULs to determine the constituents requiring further evaluation. 1,2-Dichloropropane, arsenic, and total nitrates and nitrites exceeded Method C CULs. Sulfate and iron, for which no Method C CULs have been developed, exceeded their aesthetics-based Washington State Board of Health Secondary Maximum Contaminant Levels (MCLs). It should be noted that secondary MCLs are based on cosmetic and aesthetic criteria for drinking water rather than on human health.

Groundwater at the Site was encountered at depths ranging from approximately 7.4 to 11.9 feet bgs during the Phase I investigation, and the groundwater flow direction was determined to be south-easterly. The estimated average hydraulic conductivity of the water-bearing zone beneath the Site, based on slug tests conducted on all six monitoring wells during Phase I activities, is 5.23E-04 feet per second (ft/s) (1.59E-02 cm/s). The estimated hydraulic conductivity ranges from 8.44E-06 ft/s to 2.67E-03 ft/s (2.57E-04 cm/s to 8.12E-02 cm/s).

Consideration of the soil leaching to groundwater pathway focused on the constituents identified above MTCA Method C CULs or secondary MCLs in the groundwater investigation. A brief summary of the findings is provided below:

- 1,2-Dichloropropane was not detected in soil at the Site, indicating Site soils are not the source of its detection at MW-4;
- Arsenic concentrations in soil are less than, or just above, its background concentration. Arsenic will be further evaluated in the Phase II groundwater investigation;
- The soil data suggest an aboveground source of stored fertilizer has leached nitrogen compounds (nitrates, nitrites, and ammonia) to the soil. The major nitrogen source area appears to be directly east of the Dry Fertilizer Manufacturing Building in Area 2, and two source areas appear to be located adjacent to the lagoon;
- The potential source areas for sulfate are consistent with identified nitrogen source areas, indicating sulfate may be a component in the fertilizer blends released at the Site; and
- Iron is present in the surface soils at concentrations less than the natural background concentration; however, these low concentrations may still be contributing to the presence of iron in groundwater.

2.3 Data Gap Evaluation/Recommendations for Phase II

Results of the Phase I RI indicate the following:

- A TPH-Gx value exceeding its Method C CUL was observed at a depth of 7.5 feet bgs at A3-SB-002;
- Nitrogen and sulfate compounds are present throughout the unsaturated zone soil samples at high concentrations in potential surface source areas;
- Potential soil source areas occur in Area 5. Only surface soils were collected in this area during the Phase I RI. Therefore, the vertical extent of the nitrogen compound and sulfate impacts has not been delineated;

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- Nitrogen compound, iron, and sulfate concentrations exceeded Method C CULs and secondary MCLs in groundwater samples collected downgradient of potential source areas;
- Nitrogen compound, iron, and sulfate concentrations appear to exceed the Method C CULs and secondary MCLs at the southern property boundary of the Site;
- Arsenic concentrations in groundwater exceeded Method C CULs, although no background concentrations for arsenic are established for local groundwater; and
- The soil leaching to groundwater pathway has been evaluated using a weight of evidence approach. The first line of evidence is comparison of the groundwater data to Method C CULs and secondary MCLs, since the soil release occurred years ago. Any impacts from soil leaching to the groundwater should have been observed by now. As a second line of evidence, soil samples will be selected during Phase II activities for synthetic precipitate leaching procedure (SPLP) analysis to further demonstrate that the soil leaching to groundwater pathway is protective of human health.

As a response to these findings, the Phase II RI was designed to gather additional soil, groundwater, and surface water/sediment data to fill in the identified data gaps. The sampling and analysis program and procedures implemented at the Site during the Phase II RI are described in the Phase II Work Plan (SECOR, May 2004). A summary of the Phase II RI activities is presented in the following sections, along with any deviations from the Phase II Work Plan.

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3.0 SUMMARY OF PHASE II REMEDIAL INVESTIGATION

The Phase II RI activities at the Site included a soil investigation, groundwater investigation, surface water/sediment investigation, and pump testing for hydraulic conductivity. A discussion of the results of the soil, groundwater, and surface water/sediment investigation is presented in Section 4, as well as a summary of the single well pump testing results.

3.1 Phase II Soil Investigation

SECOR completed the Phase II soil investigation in May 2004. Soil samples were collected from borings installed in Areas 3 and 5, as described below. Soil borings were installed by hand auger to a depth of five feet bgs to clear potential subgrade utilities, then installed to completion depth using a 4-inch inside diameter (ID) truck-mounted HSA drilling rig. At boring completion, boreholes were decommissioned by sealing the borehole with hydrated bentonite chips and gravel or concrete, consistent with Washington Administrative Code (WAC) 173-160. Boring locations, determined by a survey conducted in October 2004, can be found on Figure 3-1.

3.1.1 Area 3 Soil Investigation

In Area 3, four soil borings were advanced to depths of 7.5 feet bgs. All drilling and sampling equipment was decontaminated both before and after drilling according to the procedures documented in the Phase II Work Plan.

Due to the storage of pallets over the proposed location of one of the borings and the proximity to a chain link fence, a deviation was made from the Phase II Work Plan. Boring A3-SB-004 was moved from its proposed location to a location approximately 20 feet west of boring A3-SB-006 and installed.

Soil samples were collected from the boring wall during hand clearing at the depth of 0.5 feet bgs, and by split spoon sampler at depths of 4.5 feet bgs and 7.5 feet bgs, and were submitted for laboratory analysis at Merit Laboratories in East Lansing, Michigan (Merit Laboratories). Area 3 samples were analyzed for TPH-Gx. Chains of custody can be found in Appendix A.

A portion of soil was retained from each split spoon for visual inspection, lithologic description, and field-screening for the presence of hydrocarbons. Visual inspection consisted of screening the sample for visual indications of hydrocarbons and sheen. Soil lithology was described using the United Soil Classification System (USCS). Lithologic descriptions included soil type(s), color, grain size/texture, degree of consolidation, and moisture content. Field-screening was completed by monitoring headspace vapor concentrations using a photo ionization detector (PID). Observations were recorded on boring logs, which are included in Appendix B.

3.1.2 Area 5 Soil Investigation

In Area 5, ten soil borings were advanced to depths of 9.0 feet bgs. All drilling and sampling equipment was decontaminated both before and after drilling by the procedures described in the Phase II Work Plan.

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Due to equipment stored on this portion of the Site, two of the Area 5 soil borings were relocated. Boring A5-SB-002 was moved approximately 10 feet to the north of its proposed location, and boring A5-SB-010 was moved approximately 10 feet to the northeast of its proposed location.

Soil samples were collected by split spoon sampler at depths of 4.5 feet bgs and 9.0 feet bgs, and were submitted for laboratory analysis at Merit Laboratories. Area 5 samples were analyzed for ammonia, iron, nitrates, nitrites, phosphate, and sulfate. Chains of custody can be found in Appendix A.

A portion of soil was retained from each split spoon for visual inspection, lithologic description, and field-screening for the presence of hydrocarbons. Visual inspection consisted of screening the sample for visual indications of hydrocarbons and sheen. Soil lithology was described using the USCS. Lithologic descriptions included soil type(s), color, grain size/texture, degree of consolidation, and moisture content. Field-screening was completed by monitoring headspace vapor concentrations using a PID. Observations were recorded on boring logs, which are included in Appendix B.

3.1.3 Synthetic Precipitate Leaching Procedure Testing

Ten soil samples from Area 5 were selected for SPLP analysis following nitrogen compound analysis to more accurately evaluate the soil leaching to groundwater pathway. The ten samples were selected based upon the highest nitrogen compound concentrations. The SPLP analysis was performed by Merit Laboratories for ammonia, nitrates, nitrites, sulfate, phosphate, and iron.

3.2 Phase II Groundwater Investigation

SECOR initiated the Phase II groundwater investigation, consisting of the installation of vertical profile borings and one permanent monitoring well, in May 2004. Four additional permanent monitoring wells, one off-site and three on-site, were installed in October 2004, and installation details are documented below. All borings were installed by hand auger to a depth of five feet bgs to clear potential subgrade utilities, then installed to completion depth using a truck-mounted HSA drilling rig. Vertical profile boring and monitoring well locations, determined by a survey conducted in October 2004, can be found on Figure 3-1.

3.2.1 Vertical Profile Borings

A total of eighteen temporary monitoring wells were installed in vertical profile boreholes for groundwater sample collection as part of the Phase II RI activities. The vertical profile borings were installed in Area 1, Area 5, and Area 6. Two borings could not be installed as specified in the Phase II Work Plan. The proposed location of boring A1-VP-002 was beneath the soil bins and a concrete pad, and boring A1-VP-006 could not be installed because of limited access due to equipment that has been abandoned at the Site.

The vertical profile borings were installed to a depth of 10 feet bgs, sampled, then drilling continued to a final depth of 20 feet bgs. Lithology was recorded on the boring logs contained in Appendix B. Please note that vertical profile borings A5-VP-001 through A5-VP-007 correspond

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to soil borings A5-SB-001 through A5-SB-007, and were only named differently to distinguish between soil and groundwater samples; therefore, separate boring logs were not completed.

The auger was advanced until the first sample collection depth of 10 feet bgs was reached. A two-inch diameter PVC temporary well with five-foot screen was inserted into the auger. A sand pack was installed while the auger was withdrawn until the screen was covered with sand. The well was then purged and sampled according to the procedures in the Phase II Work Plan, then the PVC was pulled and drilling commenced until the second sample collection depth of 20 feet bgs was reached. The temporary well was installed and sampled as before. Groundwater sample collection details were recorded on groundwater purge and sample forms contained in Appendix C.

In locations where the water table was lower, groundwater samples could not be collected at the specified depth. Groundwater samples were not collected at 10 feet bgs at A5-VP-001, A5-VP-007, A5-VP-008, A5-VP-009, A6-VP-002, and A6-VP-004.

After all groundwater samples were collected, the PVC was pulled. The borings were decommissioned by sealing the borehole with hydrated bentonite chips and gravel or concrete, consistent with WAC 173-160. All equipment was decontaminated as described in the Phase II Work Plan to minimize cross-contamination between well locations.

Groundwater samples from the vertical profile borings were sent to Merit Laboratories for the following analyses: arsenic, alkalinity, chloride, dissolved oxygen (DO), nitrates, nitrites, ammonia, phosphate, sulfate, iron, herbicides, pH, and oxidation-reduction potential (ORP). Chains of custody are included in Appendix A.

3.2.2 Monitoring Wells

A total of five permanent monitoring wells were installed at the Site during various stages of the Phase II investigation. Monitoring well MW-8 was installed in Area 1 to a final depth of approximately 17 feet bgs to delineate the nitrogen compound plumes. Monitoring well MW-9 was installed approximately 100 feet downgradient of the southern property boundary to a depth of approximately 18 feet bgs to assess off-site conditions. Monitoring well MW-10 was installed to a depth of approximately 18 feet bgs in the eastern portion of Area 3 to test for the presence of petroleum hydrocarbons in groundwater. Monitoring well MW-11 was installed in the western portion of Area 3 to a depth of approximately 18 feet bgs to delineate possible fertilizer contamination emanating from properties across N. First Street. Monitoring well MW-12 was installed to a depth of approximately 18 feet bgs to delineate groundwater conditions at the property boundary in Area 6. Monitoring wells MW-10, MW-11, and MW-12 were not included in the Phase II Work Plan, but were installed according to its procedures.

Two-inch diameter PVC wells were installed in 8-inch diameter borings drilled by HSA method. Wells were set with ten-foot slotted (0.010-inch) PVC screens. Well installations were completed with sand filter packs and hydrated bentonite seals, as well as flush-mounted well monuments. Well construction details were recorded on boring logs contained in Appendix B.

Once the wells were completed, each was developed by surging and bailing to remove fine-grained sediment from the formation and filter packs, and increase the hydraulic efficiency of the

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well. The wells were surged with a surge block through the full extent of the screened interval while simultaneously being purged. Development was considered complete when each respective well produced water that was relatively free of sediment. Groundwater samples were collected using minimal drawdown procedures with a combination of dedicated and non-dedicated equipment. Static water levels and water quality parameters were measured and logged on the groundwater purge and sample forms contained in Appendix C.

Groundwater samples were collected in the laboratory-prepared containers and shipped to Merit Laboratories for analysis. Samples from all five wells were analyzed for arsenic, alkalinity, chloride, DO, nitrogen compounds, phosphate, sulfate, iron, herbicides, pH, and ORP. Samples from MW-10 and MW-11 were also analyzed for VOCs, TPH-Gx, and TPH-Dx. Chains of custody are located in Appendix A.

3.3 Phase II Surface Water/Sediment Investigation

The surface water/sediment investigation of the lagoon located in the southeastern portion of Area 1 was completed in June 2004. One sample of the lagoon surface water and one sample of the lagoon sediment, along with duplicate samples, were collected to evaluate the nitrogen concentrations. The sediment was sampled from the west edge of the lagoon using a ponar dredge. The surface water was sampled from approximately the middle of the lagoon using a HDPE water collection wand. Sampling implements were decontaminated following use according to procedures from the Phase II Work Plan. Both samples were analyzed by Merit Laboratories for nitrates, nitrites, and ammonia. Chains of custody are included in Appendix A.

3.4 Quality Assurance/Quality Control Procedures

To ensure accuracy in sampling results, the following quality assurance/quality control (QA/QC) samples were collected during the Phase II sampling activities: duplicates and equipment blanks. Duplicate samples were collected at a frequency of approximately ten percent to evaluate the laboratory's performance by comparing the analytical results of two samples collected at the same location. Equipment blanks were collected to determine if any contamination was introduced due to improper decontamination of equipment. A review of the analytical results shows that duplicate results were generally consistent, and results do not indicate that contamination from equipment was an issue.

3.5 Single Well Pump Testing

Single well pump tests were performed at monitoring wells MW-1, MW-3, MW-4, MW-5, MW-6, MW-7, and MW-8 to estimate the horizontal hydraulic conductivity of the shallow aquifer. Before pump testing was performed, depth to water and total depth of each well at the Site was measured.

Each well had a remote sensing device (RSD; In-Situ TROLL 9000, HERMIT Monitoring System) placed in it to record water levels in the well. The RSD was positioned as close to the bottom of the well as possible without touching the bottom. The RSD was then secured so the position of the RSD was stationary and was not affected by the pump and/or change in water levels. Once the RSD was secured, it was calibrated to the height of water previously measured above it.

Subsequently, the pump was placed into the well and positioned approximately 70% beneath the height of the water column. The RSD was programmed to record water levels with a logarithmic interval. The pump test was started once the static water level in the well recovered to equilibrium conditions. The recording of water levels began just prior to initiating pumping. The pumping rate was set at approximately 0.5 gpm in most of the wells, but ranged from 0.3 gpm to 1.0 gpm due to pump operation and relatively fast drawdown. To verify RSD measurements, water levels in the well were also collected manually during the pump test.

The pumping portion of the test was completed when equilibrium conditions were reached. Equilibrium conditions are defined when water level measurements are unchanged for one-half of a log cycle of time. The RSD then recorded the recovery of the well. As with the pumping portion of the test, water levels in the well were manually measured during recovery to verify the values recorded with the RSD. The RSD was used to measure water levels until the original water level was achieved.

Data collected during the pump test was analyzed to evaluate hydraulic conductivity of the portion of the aquifer that was stressed. The method used to analyze the pump test data was the Cooper-Jacob Method. Results are discussed in Section 4.4.

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4.0 DATA PRESENTATION AND SCREENING

In the same manner as during the Phase I RI, detected constituents were screened against MTCA criteria to determine the IHSs and further delineate areas of contamination on the Site. Results for the soil, groundwater, and surface water/sediment investigations are discussed below, as are the results for the single well pump testing.

4.1 Soil Screening

Concentrations of constituents detected in soil during the Phase II RI were first screened against Ecology's MTCA Method A CULs and natural background soil metals concentration to determine the IHSs. Constituents were retained as IHSs for one of the following reasons:

- Detected concentrations exceeded MTCA Method A CULs;
- Detected metals concentrations were above natural background; or
- Detected constituents do not have MTCA Method A CULs or natural background concentrations available.

The IHSs were then screened against MTCA Method B and C CULs, as required by Ecology's MTCA program. Results for each area are discussed below.

4.1.1 Area 3 Results

A summary of the detected concentrations from the Area 3 soil investigation compared to the MTCA Method A CULs is provided in Table 4-1, and the analytical laboratory reports are included in Appendix D. Based upon this comparison, TPH-Gx was retained as an IHS. Results were then screened against MTCA Method B and C CULs in Table 4-2. Please note the MTCA Method C CUL for TPH-Gx was calculated using the "Workbook for Calculating Cleanup Levels for Individual Hazardous Substances." There were five detections of TPH-Gx exceeding Method B and C CULs, all of which were at a depth of 7.5 feet bgs. One additional detection of TPH-Gx at a depth of 4.5 feet bgs exceeded MTCA Method B CULs. Area 3 results are shown on Figure 4-1.

4.1.2 Area 5 Results

Table 4-3 summarizes the detected concentrations from the Area 5 soil investigation in comparison to the MTCA Method A CULs and the natural background soil metals concentrations. The analytical laboratory reports are provided in Appendix D. Based upon this comparison, nitrate-N, phosphate, and sulfate were retained as IHSs, since no MTCA Method A criteria are available. Iron was eliminated as an IHS, since concentrations were below the natural background concentration of 51,500 mg/kg.

Phosphate and sulfate are not recognized as hazardous substances by U.S. Environmental Protection Agency (USEPA), as they are not in Table 302.4 – List of Hazardous Substances and Reportable Quantities (40 CFR, Section 302.4). No MTCA Method B or C CULs for soil have been developed for phosphate or sulfate. These constituents were analyzed for remedial

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design purposes rather than for evaluation of risk to human health. Therefore, no comparison to MTCA criteria is required.

The screening of detected concentrations of nitrate-N in Area 5 soil against MTCA Method B and C CULs is provided in Table 4-4. No exceedances were observed.

Figure 4-2 and Figure 4-3 summarize the nitrate-N soil data from Area 5 at depths of 4.5 feet bgs and 9.0 feet bgs, respectively, and also present concentration isopleths to aid in identifying possible source areas. In the Phase I RI Report, a concentration isopleth of 500 mg/kg was chosen to illustrate areas of concern. No Area 5 soil detections in Phase II exceeded 500 mg/kg, indicating that surface soils in Area 5 are of greater concern than subsurface soils. A 300 mg/kg concentrations isopleth was chosen in Figures 4-2 and 4-3 to identify the areas with higher nitrate-N concentrations.

4.1.3 Area 5 SPLP Results

The results of the Area 5 SPLP analysis are found in Table 4-5, and the analytical laboratory reports are included in Appendix D. Comparing the detected results against MTCA Method B and C groundwater criteria or secondary MCLs, nitrite-N and sulfate did not exceed groundwater standards. Nitrate-N and iron did exceed MTCA Method B and C criteria and secondary MCLs, respectively.

The SPLP results will be further discussed in Section 4.5, as they relate to the fate and transport of constituents at the Site.

4.2 Groundwater Screening

Concentrations of constituents detected in groundwater during the Phase II RI were first screened against Ecology's MTCA Method A CULs to determine the list of IHSs. Constituents were retained as IHSs if they exceeded their MTCA Method A CULs, or if no MTCA Method A CULs were available. Detected concentrations of IHSs were then screened against MTCA Method B and C CULs, as required by Ecology's MTCA program. Results are discussed below.

4.2.1 Vertical Profile Boring Results

A summary of the detected concentrations from the vertical profile boring groundwater sampling compared to the MTCA Method A CULs is found in Table 4-6, and the analytical laboratory reports are provided in Appendix D. Based upon this comparison, the following constituents were retained as IHSs: 2,4-D, ammonia-N, arsenic, chloride, dinoseb, iron, nitrate-N, nitrite-N, phosphate, and sulfate. Alkalinity as $CaCO_3$ and pH were also analyzed in these samples, and results are presented in Table 4-6. These two parameters were analyzed for remedial design purposes and are not considered IHSs.

Detected concentrations of IHSs were then compared to the MTCA Method B and C CULs in Table 4-7. Exceedances were observed for 2,4-D, arsenic, dinoseb, nitrate-N, and nitrite-N. No MTCA Method B and C CULs have been developed for ammonia-N. Ammonia-N will be discussed further in Section 4.5.2.

Chloride, iron, sulfate, and phosphate were analyzed for remedial design purposes rather than for evaluation of risk to human health, and do not have MTCA Method B and C CULs for groundwater. Phosphate and sulfate are not recognized by USEPA as hazardous substances (according to 40 CFR, Section 302.4). Detected concentrations of chloride, iron, and sulfate were compared to their secondary MCLs, and exceedances were observed. No secondary MCL exists for phosphate. Secondary MCLs are based on cosmetic and aesthetic criteria for drinking water rather than on human health.

The maximum detected concentrations of constituents at each vertical profile boring location (regardless of depth or duplicate) exceeding MTCA Method B and C CULs or secondary MCLs are shown on Figure 4-4.

Summaries of the vertical profile boring groundwater results and concentration isopleths for nitrate-N and ammonia-N are included in Figures 4-5 through 4-8. Figure 4-5 and Figure 4-6 present nitrate-N concentration isopleths for the vertical profile borings at depths of 10 feet bgs and 20 feet bgs, respectively. Figure 4-7 and Figure 4-8 present ammonia-N concentration isopleths for the vertical profile borings at depths of 10 feet bgs and 20 feet bgs, respectively. These figures demonstrate that source areas are limited to the southeastern portion of the Site, located in Area 1 and the southern section of Area 6.

4.2.2 Permanent Monitoring Well Results

A summary of the detected concentrations from the sampling of permanent monitoring wells MW-8, MW-9, MW-10, MW-11, and MW-12 compared against the MTCA Method A CULs is found in Table 4-8, and the analytical laboratory reports are provided in Appendix D. Based upon this comparison, the following were retained as IHSs: ammonia-N, arsenic, benzene, chloride, 2,4-D, dinoseb, iron, nitrate-N, phosphate, n-propylbenzene, sulfate, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, o-xylene, and p,m-xylene. Only arsenic and benzene exceeded their MTCA Method A CULs. All other constituents listed above were retained on the basis that no Method A criteria were available. Alkalinity as $CaCO_3$ and pH were also analyzed in these samples, and the results are presented in Table 4-8. These two parameters were analyzed for remedial design purposes; therefore, they are not considered IHSs and are not included in further result analysis.

Table 4-9 presents the comparison between detected concentrations of IHSs against MTCA Method B and C CULs. Exceedances of MTCA Method B and C CULs were observed for arsenic and nitrate-N in all five wells. Exceedances of MTCA Method B and C CULs were also observed for benzene in MW-10 and 2,4-D in MW-12. Ammonia-N was detected in MW-8, MW-9, and MW-12, but no MTCA Method B and C CULs have been developed. Ammonia-N will be discussed in Section 4.5.2.

Detected concentrations of chloride, iron, and sulfate were compared to their secondary MCLs. Iron exceeded its secondary MCL in all five wells, while sulfate its secondary MCL in MW-8, MW-9, and MW-12. Chloride only exceeded its MCL in MW-12.

The maximum detected concentrations of constituents at each monitoring well location installed during Phase II exceeding MTCA Method B and C CULs or secondary MCLs are shown on Figure 4-9. The maximum detected concentrations of constituents from MW-1, MW-3, MW-4,

MW-5, MW-6, and MW-7 exceeding MTCA Method B and C CULs or secondary MCLs are also shown on this figure. These samples were collected during the fourth quarter of groundwater monitoring on June 1, 2004.

4.2.3 Groundwater Summary

Figure 4-10 and Figure 4-11 show the maximum detected groundwater concentrations for nitrate-N and ammonia-N, respectively, regardless of sample date or depth at all monitoring well and vertical profile boring locations. Maximum detected groundwater concentrations at wells MW-1 through MW-7 are also shown on these drawings. Please note that Phase I results on Figure 4-10 are for total nitrates + nitrites, as no separate analysis was performed for nitrate-N.

Concentration isopleths of 1,000 mg/l and 500 mg/l have been drawn to help illustrate the areas of concern at the Site. These areas are focused in the southeastern portion of the Site. These results will be further discussed in Section 4.5.

4.3 Surface Water/Sediment Investigation Results

Table 4-10 summarizes the detected concentrations from the surface water/sediment sampling of the lagoon, and the analytical laboratory results are included in Appendix D. No detections of nitrate-N or nitrite-N were observed. Ammonia-N was detected in both the sediment and surface water samples and their duplicate samples.

4.4 Single Well Pump Testing Results

Drawdown and recovery data from the single well pump testing were analyzed according to the Cooper-Jacob Method to determine the hydraulic conductivity of each well. The results are summarized in Table 4-11. The hydraulic conductivities (K) were calculated to range from 2.74E-05 cm/s to 4.12E-04 cm/s, with an average hydraulic conductivity of 1.45E-04 cm/s. This hydraulic conductivity is characteristic of fine sands, organic and inorganic silts, and mixtures of sand, silt, and clay.

4.5 Fate and Transport

Based upon the results of the Phase I RI, further delineation and analysis was performed regarding the fate and transport for constituents at the Site, including nitrate, ammonia, dinoseb, and arsenic. This delineation and findings are discussed in the following sections.

4.5.1 Nitrate

Nitrate-N was detected in off-site monitoring well MW-9 at a concentration of 1,000 mg/l in groundwater, which is above MTCA Method B and C criteria. This indicates that nitrates are leaching from the soil column and migrating off-site through groundwater flow. This is further reinforced by the results of the SPLP testing on soil samples from Area 5. This testing showed that nitrates did leach from the soil column, resulting in concentrations ranging from 1 mg/l to 14.7 mg/l. Nitrate migration is also illustrated in Figure 4-10. Concentration isopleths were generated using the maximum nitrate-N concentrations in groundwater, and show that the

nitrate-N plume is concentrated in Area 1 and in the southern portion of Area 6. It also extends off-site.

Nitrite-N is not shown to exhibit the same behavior, as it was not detected in off-site monitoring well MW-9, and was also not detected in the SPLP testing. Therefore, nitrite-N is not a concern for leaching to groundwater and off-site migration.

4.5.2 Ammonia

Ammonia is not shown to mobilize from the soil column, and is not a concern for leaching to groundwater and migrating off-site. Ammonia-N was detected at the method detection limit in off-site well MW-9 at a concentration of 0.1 mg/l in groundwater. The SPLP testing in Area 5 showed that ammonia-N only leached from the soil column in one out of ten samples, and at a low concentration of 0.5 mg/l. Figure 4-11, which shows concentration isopleths generated using the maximum ammonia-N concentrations in groundwater, indicates that ammonia-N concentrations are centered in Area 1 and the southern portion of Area 6, and do not significantly extend off-site.

The cation exchange capacity (CEC) of the soils in Area 1 was investigated during the Phase I RI, and an average CEC of 20.3 milliequivalents/100 grams was reported. This is a relatively high CEC for sandy soils, indicating the Site soils have a great capacity to hold exchangeable cations, such as ammonium.

Research involving soil testing indicates most nutrient anions in their available form, such as nitrate (NO_3^-), chloride (Cl^-), sulfate (SO_4^{-2}) and borate (BO_3^{-3}), are repelled by the soil-exchange complex and, therefore, will easily leach with excess water. This reinforces the conclusions from Section 4.5.1.

4.5.3 Dinoseb

Dinoseb is not shown to be a concern for migration off-site. Though dinoseb was detected in samples collected from the on-site vertical profile borings at levels above MTCA Method B and C criteria, dinoseb was not detected at levels above MTCA Method B and C criteria in off-site monitoring well MW-9 or monitoring well MW-12.

4.5.4 Arsenic

Arsenic exceeds the MTCA Method B and C criteria across the Site in both impacted and non-impacted areas. Arsenic can be released naturally into the groundwater from the soil by a variety of weathering and biological mechanisms. When the arsenic is dissolved into the groundwater, it may undergo other transformations involving redox reactions or ligand exchange. The fate and transport process for arsenic in groundwater is highly dependent upon the valence state of the arsenic, the pH of the groundwater, and the concentration of iron in the soil and groundwater. Arsenic is most commonly found in groundwater in the form of arsenate, As (V), and less frequently as arsenite, As (III), depending on subsurface redox conditions.

The presence of nitrate (an oxidizing agent) in the Site groundwater has produced elevated redox conditions (+70 mV to +182 mV) which makes arsenic more stable in the soil and less

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soluble in the groundwater due to high sorption capacity. At the typical Site groundwater pH conditions of 7.2 to 8.3, the arsenic exists in the form of the $H_2AsO_4^-$ and $H_2AsO_4^{2-}$ arsenic conjugate bases. These two anions are readily sorbed to common iron minerals and iron oxyhydroxides in the subsurface. This arsenic can be released by reductive dissolution of the iron mineral or oxyhydroxide. Movement of most arsenic species in the groundwater will occur by the reduction of iron minerals and/or ferric oxyhydroxides which release sorbed arsenate anions into solution. Once in solution, the arsenate may be reduced to arsenious acid (H_3AsO_3). Arsenious acid has a pK_a value of 9.2, so very little conjugate base is available for sorption. Therefore, the arsenite, As (IIII), is more soluble and mobile in groundwater than arsenate, As (V).

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5.0 TREATABILITY INVESTIGATION

A treatability investigation, including both a bench-scale study and field pilot study, was conducted at the Site to guide future remediation activities. Results of the treatability investigation are detailed below.

5.1 Bench-scale Study Results

Bench-scale testing was conducted using representative soil and groundwater samples collected from the Site. Five gallons of soil were collected from the unsaturated zone and designated for evaluation of potential ex-situ treatment remedies. Five gallons of soil were collected from the saturated zone and designated for testing of potential in-situ treatment processes. Ten gallons of groundwater were collected from MW-04, where dinoseb has previously been detected. The samples were delivered to SECOR's Treatability Laboratory in Toledo, Ohio, where the bench-scale testing was performed.

To ensure an efficient, cost-effective collection of data, the bench-scale treatability study was conducted in a phased approach. Testing results from the initial phases were incorporated within the design parameters of subsequent testing. The following sections provide a summary of the work scope completed during each phase of testing, and provide testing results.

5.1.1 Phase I – Initial Baseline Screening

Upon receipt of samples by SECOR's Treatability Laboratory, initial baseline screening of the soil and groundwater was conducted. The groundwater was analyzed for the following parameters.

- Alkalinity
- pH
- ORP
- Nitrates
- Nitrites
- Ammonia
- Phosphorus
- Total heterotrophs
- Denitrifying bacteria
- Nitrifying bacteria
- Sulfates
- Arsenic
- Iron
- Manganese
- TOC
- Dinoseb

The saturated and unsaturated soil samples were analyzed for the following parameters:

- Nitrates
- Nitrites
- Ammonia
- Phosphorus
- Dinoseb

The nitrogen and phosphorus data were used to determine if the nitrogen-to-phosphorus ratios were adequate for nitrification and denitrification. Alkalinity data was used to determine if alkalinity supplements were required for nitrification (the alkalinity-to-ammonia-N ratio should be approximately 9:1 to avoid acidic pH conditions). The total nitrogen loading was also used to

establish the dosage demands for the soluble carbon substrate required in the denitrification stage. All other analyses were used to establish baseline criteria for the bench-scale test. The results of Phase I are presented below.

Soil Analysis Results

Representative samples of the unsaturated and saturated soil zones were sent to Merit Laboratories for analysis. Initial samples were also sent to Brookside Laboratories, Inc. (Brookside) in New Knoxville, Ohio for dinoseb analysis. The results are presented in the following table.

Initial Soil Analysis Results			
Analysis Parameter	**Unsaturated Soil**	**Saturated Soil**	**EPA Method**
Ammonia	820 mg/kg	85 mg/kg	350.3
Nitrate	180 mg/kg	153 mg/kg	300.0
Nitrite	< 40 mg/kg	< 40 mg/kg	300.0
Total Phosphorus	810 mg/kg	2,440 mg/kg	365.2
Solids	78%	77%	160.3
Dinoseb	< 0.5 mg/kg	< 0.5 mg/kg	8150

Groundwater Analysis Results

Representative groundwater samples were also sent to Merit Laboratories and Brookside for baseline analyses. The results of these groundwater analyses are provided in the following table.

Initial Groundwater Analysis Results		
Analysis Parameter	**Groundwater Concentration**	**EPA Method**
Ammonia	730 mg/l	350.3
Nitrate	754 mg/l	300.0
Nitrite	3.7 mg/l	300.0
TOC	8.88 mg/l	415.1
Total Phosphorus	0.1 mg/l	365.2
Sulfate	208 mg/l	300.0
Arsenic	0.008 mg/l	200.8
Iron	0.22 mg/l	200.8
Manganese	0.328 mg/l	200.8
Dinoseb	0.459 mg/l	8150

SECOR's Treatability Laboratory performed groundwater screening for a variety of parameters. The results are presented below.

SECOR's Initial Groundwater Analysis Results		
Analysis Parameter	**Groundwater Results**	**Screening Method**
pH	7.65	Oakton Meter 35624-34
ORP	131 mV	Oakton Meter 35650-02
Alkalinity	454 mg/l	Sulfuric Acid Titration
Nitrate	> 500 mg/l	Hach Test Strip 27454-25
Nitrite	> 3 mg/l	Hach Test Strip 27454-25

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Initial analyses were performed on Site groundwater to quantify populations of heterotrophic, nitrifying, and denitrifying bacteria to provide baseline criteria for evaluating bench-scale efforts to stimulate the desired microbes. Testing was performed using BART™ microbiology test kits manufactured by Droycon Bioconcepts, Inc. The initial testing results are provided below.

Initial Microbial Screening Results	
Parameter	**Population (colony forming units/milliliter)**
Total Heterotrophs*	500,000
Nitrifying Bacteria	> 100,000
Denitrifying Bacteria	1,000

* Test results further identified the dominant heterotroph type to be aerobic.

5.1.2 Phase II – Treatment Using Indigenous Bacteria Versus Inoculants

Once baseline criteria were established, the second phase of testing was initiated to evaluate the potential for stimulating the indigenous microbial populations for the desired remediation purposes. Commercially-made inoculants were also evaluated as part of the testing. The inoculants were obtained from Acquamarine and Alken-Murray Corporation. The Acquamarine inoculants consisted of freeze-dried nitrifying (ACM-NH_3) and denitrifying (ACM-NO_3) bacteria. The Alken-Murray products consisted of a liquid concentrate of nitrifying bacteria (Alken Clear-Flo 7110(50x)) and a dried blend of denitrifying bacteria (Alken Enz-Odor 6). In-situ treatment was evaluated using soils collected from below the water table and ex-situ treatments were simulated using unsaturated zone soil moistened with groundwater. Analytical parameters were similar to those completed in Phase I.

Testing was conducted by preparing four sample subsets. Enhanced nitrification and denitrification were evaluated under both in-situ and ex-situ conditions. Test samples were comprised of a soil/groundwater matrix in a container with the chemical additive to be evaluated. The subsets included a kill group (where sulfuric acid was used to eliminate the microbes) and a control group (soil and groundwater without additive). The kill group underwent the same enhancement process as the bacterial samples.

The in-situ nitrification subset evaluated enhancement of the indigenous bacteria with an inoculant (ACF 110-50X or ACM-NH_3) to determine if inoculation was required and if it was beneficial. The samples were supplemented with bicarbonate alkalinity, as required, and sparged with a small air pump to oxygenate the samples. The evaluated inoculants contained both the *Nitrosomonas* and *Nitrobacter* bacteria for optimal nitrification. The ex-situ nitrification process evaluated percarbonate addition as a chemical capable of delivering both bicarbonate and oxygen for enhanced nitrification. The denitrification treatment studies for the in-situ and ex-situ applications were evaluated using acetate addition as an electron donor enhancement. The samples included an indigenous bacteria test group and two inoculated test groups. The inoculated test groups included commercial inoculants of denitrifying bacteria cultures (ACM-NO3 and A-EO-6) known to contain a wide variety of denitrifying bacteria.

<u>Nitrification Process</u>
Process monitoring was conducted for the saturated system through measurement of pH, ORP, and ammonia levels over the course of the testing timeframe. The pH and ORP levels for the individual test samples showed little fluctuation over the course of the first 21 days of testing.

Monitoring of ammonia levels within the test samples using an EM Science test kit indicated levels exceeded the maximum detectable concentration of 400 mg/l.

The results indicated that geochemical parameters present at the Site produced rate-limited conditions resulting from low alkalinity. The bioactivity within the test samples leveled off as the alkalinity dropped below 100 mg/l. The indigenous and two commercially-produced inoculant samples were therefore supplemented using sodium bicarbonate, instead of sodium carbonate, to increase alkalinity. The results were very promising, as monitoring of ammonia levels using the EM Science test kit produced concentrations ranging from 10 mg/l to 100 mg/l. The monitoring results showed the best performance was achieved through the stimulation of indigenous microbial populations.

Nitrification testing results are presented in the following tables.

Nitrification – Unsaturated Test Samples					
Analyte	**Control**	**Kill**	**Indigenous**	**ACM-NH_3**	**ACF 110-50x**
Ammonia	70 mg/kg	100 mg/kg	90 mg/kg	100 mg/kg	120 mg/kg
Nitrate	166 mg/kg	130 mg/kg	145 mg/kg	125 mg/kg	155 mg/kg
Nitrite	< 10 mg/kg	< 10 mg/kg	< 10 mg/kg	< 10 mg/kg	< 10 mg/kg
Phosphorus	2,240 mg/kg	2,120 mg/kg	2,380 mg/kg	2,080 mg/kg	2,720 mg/kg
Solids	76%	78%	77%	79%	77%

Nitrification – Saturated Test Samples					
Analyte	**Control**	**Kill**	**Indigenous**	**ACM-NH_3**	**ACF 110-50x**
Ammonia	240 mg/l	970 mg/l	8.5 mg/l	38 mg/l	73 mg/l
Nitrate	859 mg/l	908 mg/l	906 mg/l	1,010 mg/l	987 mg/l
Nitrite	55.9 mg/l	< 0.2 mg/l	929 mg/l	832 mg/l	819 mg/l
Phosphorus	6.34 mg/l	10.0 mg/l	4.35 mg/l	2.94 mg/l	4.00 mg/l

Testing performed using the BART™ test kits showed that greater than 10,000-fold increases in nitrifying bacteria microbial populations occurred within the indigenous and two commercially-produced inoculant test samples, compared to pre-test levels. However, the laboratory results show that incomplete oxidation of ammonia occurred, resulting in the formation of nitrites and not nitrates. These results were observed in both the inoculated samples and the indigenous samples, thus indicating that the incomplete bio-oxidation was the result of chemical biological inhibitions rather than a lack of suitable bacteria for nitrification.

Denitrification Process

Process monitoring conducted for the saturated system indicated Site soils may be highly amenable to the denitrification of nitrates and nitrites through the enhancement of naturally occurring biological processes. The pH of the indigenous and two inoculant samples increased by approximately 15 percent within the first few days of testing, before stabilizing between 9.0 and 9.2. A decrease in sample ORPs to levels less than -100 mV were recorded within the first week.

The data collected during testing indicated that following a brief acclimation period of a few days, stimulation of bacteria occurred within the test samples for the denitrification process. Monitoring of nitrate and nitrite levels using the Hach test kits showed reduction in

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concentrations to below detection limits occurs within the first ten days. The process also resulted in elevated alkalinity levels, averaging approximately 6,600 mg/l. This concentration was 22 times that observed within the control sample. The monitoring results showed the best performance was achieved through the stimulation of indigenous microbial populations.

Final samples for the saturated and unsaturated systems of the denitrification process were collected and submitted to Merit Laboratories for analysis. The results of these analyses are presented in the tables below.

Denitrification – Unsaturated Test Samples				
Analyte	**Control**	**Indigenous**	**ACM-NO_3**	**A-EO-6**
Ammonia	70 mg/kg	60 mg/kg	40 mg/kg	60 mg/kg
Nitrate	165 mg/kg	< 4.0 mg/kg	< 4.0 mg/kg	< 4.0 mg/kg
Nitrite	< 4.0 mg/kg	< 4.0 mg/kg	< 4.0 mg/kg	< 4.0 mg/kg
Phosphorus	2,220 mg/kg	2,700 mg/kg	2,210 mg/kg	2,220 mg/kg
Solids	74%	74%	77%	76%

Denitrification – Saturated Test Samples				
Analyte	**Control**	**Indigenous**	**ACM-NO_3**	**A-EO-6**
Ammonia	750 mg/l	590 mg/l	550 mg/l	600 mg/l
Nitrate	890 mg/l	< 4.0 mg/l	< 4.0 mg/l	< 4.0 mg/l
Nitrite	5.0 mg/l	< 4.0 mg/l	< 4.0 mg/l	< 4.0 mg/l
Phosphorus	2.17 mg/l	4.53 mg/l	6.75 mg/l	5.34 mg/l
TOC	10.6 mg/l	561 mg/l	238 mg/l	219 mg/l
Arsenic	0.068 mg/l	0.103 mg/l	0.153 mg/l	0.151 mg/l
Iron	0.880 mg/l	1.410 mg/l	1.600 mg/l	1.710 mg/l
Manganese	0.404 mg/l	0.293 mg/l	0.315 mg/l	0.311 mg/l
Selenium	< 0.005 mg/l	< 0.005 mg/l	< 0.005 mg/l	< 0.005 mg/l

Testing performed using the BART™ microbiology test kits showed greater than 5,000-fold increases in microbial populations for denitrifying bacteria occurred within the indigenous and two commercially-produced inoculant test samples when compared to pre-test levels.

5.1.3 Phase III – Electron Acceptor and Donor Optimization

This phase of the treatability study was designed to evaluate the effectiveness of multiple electron donors and acceptors to enhance the desired nitrification/denitrification reactions. Testing was conducted utilizing stimulation of the indigenous microbial population, identified as showing optimal performance during Phase II. Analytical parameters are the same as those in Phase II, and samples were collected at the same sampling frequency.

Testing was conducted by preparing four sample subsets. Enhanced nitrification and denitrification was evaluated under in-situ and ex-situ conditions. Test samples were comprised of a soil/groundwater matrix in a container with the chemical additive to be evaluated. The nitrification subsets contained a control group comprised of soil, groundwater, and selected microbes without addition of an electron acceptor. The denitrification subsets were compared to a control group utilizing acetate as an electron donor.

The in-situ nitrification subset evaluated the ability of two electron acceptors: aeration/bicarbonate and sodium percarbonate. The ex-situ nitrification process evaluated sodium percarbonate and calcium peroxide addition. Denitrification treatment for the in-situ and ex-situ applications was evaluated using both glucose and whey powder as electron donors.

At completion of the test, water samples were filtered from the saturated denitrification treatability studies for analyses of dissolved arsenic, manganese, and iron to determine if reduced groundwater conditions increased concentrations of these metals in solution. In addition, the water was analyzed for TOC to determine the extent of electron donor degradation, and for dinoseb to evaluate the extent of dinoseb degradation resulting from the carbon substrate addition.

Final samples were collected and submitted to Merit Laboratories and Brookside. The nitrification and denitrification tests were conducted concurrently for both the saturated and unsaturated soils. Phase III testing results are presented below.

Nitrification Process

Test sample monitoring followed the same procedures and parameters outlined during the Phase II testing. Given the rate-limiting conditions observed during the previous tests, the addition of sodium bicarbonate was incorporated during preparation of the aeration sample for the saturated soils. The production of excessive amounts of off-gas and pressure build up within five minutes of preparing the unsaturated soil sample amended with calcium peroxide excluded this remedial option from further evaluation.

Process monitoring was conducted for pH, ORP, and ammonia levels within the saturated soil samples. The sodium percarbonate sample pH held steady throughout the testing at approximately 9.9, while the ORP showed an initial decrease from +54 mV to +12 mV in the first two days before steadily increasing back to pretest levels over the course of the next four weeks. A similar trend was observed for the aeration sample ORP, as an initial decrease from +64 mV to +26 mV was observed. However, the subsequent increase exceeded pretest levels at the end of the test, achieving +149 mV. The pH levels recorded for the aeration sample held steady at approximately 9.2 for the first sixteen days, and then decreased to 6.6 over final two weeks of testing. The alkalinities of the aeration and sodium percarbonate test samples were determined to be approximately 100 mg/l and 10,400 mg/l, respectively

The results of the laboratory analyses performed by Merit Laboratories and Brookside for the Phase III test samples are provided in the following tables.

Nitrification – Unsaturated Test Sample					
Sample	**Total Solids**	**Ammonia**	**Nitrate**	**Nitrite**	**Phosphorus**
Sodium Percarbonate	80%	40 mg/kg	129 mg/kg	< 5 mg/kg	2,040 mg/kg

Nitrification – Saturated Soils		
Analyte	**Aeration Sample**	**Sodium Percarbonate Sample**
Ammonia	75 mg/l	740 mg/l
Nitrate	1,070 mg/l	906 mg/l
Nitrite	461 mg/l	13.6 mg/l
Phosphorus	7.47 mg/l	4.43 mg/l

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Monitoring with the BART™ test kits showed total heterotroph populations for the aeration sample to be approximately 1,000–10,000 cfus/ml. No heterotrophs were observed in the sodium percarbonate sample. Testing for nitrifying bacteria provided the same results for both samples as populations ranged between 1,000 and 10,000 cfus/ml.

Denitrification Process

Phase III denitrification testing was designed to evaluate the ability of sodium acetate, glucose, and whey powder to act as electron donors for stimulating indigenous bacteria for the reduction of dinoseb, nitrate, and nitrite levels within the subsurface. After a four-week reaction period, final samples were collected and submitted for off-site laboratory analyses for the parameters of concern.

Monitoring of pH, ORP, nitrate, and nitrite levels was conducted for the saturated systems of the sodium acetate, glucose, and whey powder test samples. The ORP for all three samples decreased from pretest levels of approximately +80 mV to < -100 mV within the first three days and remained at this level for the duration of the testing. The pH of the whey powder and sodium acetate samples increased over the course of the testing timeframe, while pH levels decreased within the glucose sample. The recorded pH levels from before and after treatment are provided in the following table.

Denitrification pH Monitoring Results			
Sample	**Sodium Acetate**	**Glucose**	**Whey Powder**
Pre-treatment pH	7.44	7.42	6.64
Post-treatment pH	9.04	6.91	7.15

Nitrate and nitrite levels were monitored during testing through screening with the Hach test strips. Pretest levels exceeded 500 mg/l and 30 mg/l for nitrate and nitrite, respectively, in all three samples. These levels were reduced below detection limits for the test strips within nine days, and remained undetected for all three sample subsets until completion of the testing timeframe.

Representative samples were collected and submitted to Merit Laboratories and Brookside for analysis of the parameters of concern. The results of these analyses are presented in the following tables.

Denitrification – Unsaturated Test Samples			
Analyte	**Sodium Acetate**	**Glucose**	**Whey Powder**
Ammonia	50 mg/kg	30 mg/kg	50 mg/kg
Nitrate	12 mg/kg	< 5 mg/kg	< 5 mg/kg
Nitrite	76 mg/kg	< 5 mg/kg	< 5 mg/kg
Phosphorus	2,090 mg/kg	2,130 mg/kg	2,120 mg/kg
Total Solids	76%	80%	80%

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Denitrification – Saturated Test Samples			
Analyte	**Sodium Acetate**	**Glucose**	**Whey Powder**
Ammonia	540 mg/l	610 mg/l	650 mg/l
Nitrate	< 50 mg/l	< 50 mg/l	< 50 mg/l
Nitrite	< 50 mg/l	< 50 mg/l	< 50 mg/l
Phosphorus	9.44 mg/l	3.04 mg/l	18.6 mg/l
TOC	807 mg/l	1,610 mg/l	1,170 mg/l
Sulfate	< 500 mg/l	< 500 mg/l	< 500 mg/l
Arsenic	0.144 mg/l	0.138 mg/l	0.196 mg/l
Iron	1.13 mg/l	81.2 mg/l	37.2 mg/l
Manganese	0.161 mg/l	19.8 mg/l	14.4 mg/l
Selenium	< 0.005 mg/l	< 0.005 mg/l	< 0.005 mg/l
Dinoseb	< 0.0025 mg/l	< 0.0025 mg/l	< 0.0025 mg/l

Monitoring was also conducted on the three saturated test samples for alkalinity and microbial populations using the BART™ test kits. The results are presented in the following table.

Denitrification SECOR Monitoring Results			
Parameter	**Sodium Acetate**	**Glucose**	**Whey Powder**
Alkalinity	7,270 mg/l	2,630 mg/l	3,030 mg/l
Total Heterotrophs	> 5,000,000 cfus/ml	> 5,000,000 cfus/ml	> 5,000,000 cfus/ml
Denitrifying Bacteria	> 5,000,000 cfus/ml	> 5,000,000 cfus/ml	> 5,000,000 cfus/ml

5.1.4 Phase IV – Evaluation of Bench-Scale Nitrification/Denitrification Kinetics

The fourth phase of bench-scale testing was designed to evaluate the potential full-scale in-situ treatment procedures to be implemented during the field pilot study. The results obtained during Phase II and Phase III were used to identify the optimal microbial population, electron donor, and electron acceptor for the site-specific process application for the optimal denitrification and nitrification steps. The process was conducted on a mixed soil/groundwater sample utilizing two sequential steps. The following work tasks were completed for evaluating the potential process:

- Preparation of test sample with the selected microbial population from Phase II in-situ denitrification tests;
- Addition of selected electron acceptor identified during the Phase III in-situ denitrification tests;
- Completion of an initial four-week reaction period;
- Collection of midpoint samples for analysis of specific parameters to evaluate the denitrification portion of the test;
- Initiation of sample nitrification through the addition of the selected microbes identified in Phase II and the optimal oxygen source and bicarbonate supplement identified during Phase III;
- Completion of a second four-week reaction period; and
- Collection of final samples for analysis of specific parameters to evaluate the nitrification portion of the test and the overall performance of the recommended remedial program.

The test was designed to first stimulate the indigenous denitrifying bacteria to address the nitrate, nitrite, and dinoseb concentrations within the sample. Testing conducted during Phases II and III indicated the process would result in increased alkalinity and pH levels, thereby providing favorable conditions for the second step incorporating ammonia removal through sample aeration.

The Phase IV test sample was prepared in a 10-liter plastic container. Five kilograms of saturated zone soil was combined with 5.5 liters of groundwater. The theoretical carbon demand for the denitrification process within the test sample was calculated to be 29.5 grams. Therefore, approximately 101 grams of sodium acetate was added to the test sample to act as a carbon source. An additional 70.2 milligrams of phosphorus was introduced, as a solution of sodium phosphate, to ensure proper nutrient levels. The results of baseline screening conducted on the groundwater within the test sample for treatment evaluation purposes are presented in the following table.

Phase IV – Baseline Screening Results	
Parameter	**Results**
Ammonia	730 mg/l
Nitrate	754 mg/l
Nitrite	3.7 mg/l
Dinoseb	0.459 mg/l
TOC	8.8 mg/l
Total Phosphorus	0.1 mg/l
Sulfate	208 mg/l
Arsenic	0.008 mg/l
Iron	0.22 mg/l
Manganese	0.328 mg/l
pH	7.58 mg/l
ORP	128 mV
Alkalinity	500 mg/l
Total Heterotrophs	500,000 cfu/ml
Denitrifying Bacteria	1,000 cfu/ml
Nitrifying Bacteria	> 100,000 cfu/ml

The test sample was placed in a light-deficient environment and allowed to react over the course of the following four weeks. Periodic monitoring of the sample was conducted for the parameters of pH, ORP, ammonia, nitrates, and nitrites. The pH and ORP levels were monitored using Oakton meters. The ammonia, nitrate, and nitrite concentrations were determined using Hach test kits. The results of the denitrification process monitoring are provided in the table below.

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Phase IV – Denitrification Process Monitoring					
Day	pH	ORP (mV)	Ammonia (mg/l)	Nitrate (mg/l)	Nitrite (mg/l)
0	7.58	128	> 400	>500	> 3
1	7.46	108	> 400	>500	> 3
2	7.61	76	> 400	>500	> 3
5	8.55	-24	> 400	>500	> 3
7	9.08	< -100	> 400	BDL*	BDL
8	9.02	< -100	> 400	BDL	BDL
9	8.98	< -100	> 400	BDL	BDL
12	8.97	< -100	> 400	BDL	BDL
14	8.95	< -100	> 400	BDL	BDL
19	8.90	< -100	> 400	BDL	BDL
23	8.91	< -100	> 400	BDL	BDL
27	8.92	< -100	> 400	BDL	BDL
28	8.91	< -100	> 400	BDL	BDL

*BDL = Below detection limit.

The results of the process monitoring showed a steady increase in pH levels over the first week of testing to slightly above 9.0, while a corresponding decrease in test sample ORP to levels below -100 mV was observed over the same timeframe. Reduction in nitrate and nitrite concentrations to levels below detection limits of the Hach test kits also occurred within the first seven days of Phase IV testing. Ammonia levels remained above 400 mg/l for the duration of the 28-day monitoring period. After peaking at 9.08 on Day 7, pH levels stabilized at approximately 8.9.

For the midpoint sampling, representative samples of the groundwater were collected and sent for off-site laboratory analyses for the parameters of concern at Merit Laboratories and Brookside. The results are presented in the following table.

Phase IV – Midpoint Sample Analysis Results			
Parameter	Results	Parameter	Results
Ammonia	580 mg/l	Iron	1.21 mg/l
Nitrate	< 0.2 mg/l	Manganese	0.095 mg/l
Nitrite	< 0.2 mg/l	pH	8.91
Dinoseb	< 0.01 mg/l	ORP	< -100 mV
TOC	1,030 mg/l	Alkalinity	7,330 mg/l
Total Phosphorus	7.23 mg/l	Total Heterotrophs	> 5,000,000 cfu/ml
Sulfate	197 mg/l	Denitrifying Bacteria	> 5,000,000 cfu/ml
Arsenic	0.068 mg/l	Nitrifying Bacteria	10,000 – 100,000 cfu/ml

The results of the midpoint sampling indicated the indigenous bacteria at the Site could be successfully stimulated within a laboratory setting to reduce dinoseb, nitrate, and nitrite levels below analytical detection limits. This stimulation in bioactivity was further verified by the 500,000 fold increase observed in denitrifying bacteria populations. As predicted by the earlier testing, the denitrification process also resulted in the significant increase in test sample alkalinity required for the nitrification portion of the Phase IV testing.

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Once the midpoint sampling was completed, sparging of the test sample was initiated. A small air pump, connected by Tygon tubing to a diffuser stone installed in the bottom of the sample container, was used to oxygenate the soil/water matrix. The aeration was continued for the next three weeks, with periodic sample monitoring conducted for the parameters of pH, ORP, ammonia, nitrates, and nitrites. The pH and ORP levels were monitored using Oakton meters. The ammonia, nitrate, and nitrite concentrations were determined using Hach test kits. The results of the nitrification process monitoring are provided in the table below.

Phase IV – Nitrification Process Monitoring			
Day	**pH**	**ORP (mV)**	**Ammonia (mg/l)**
0	8.91	< -100	> 400
1	9.04	-36	> 400
2	9.32	28	200 - 400
6	9.54	35	200 - 400
15	9.56	40	100 - 200
20	9.56	45	100 - 200

A steady increase was observed in both the pH and ORP levels of the test sample. Aeration of the sample also appeared to result in reduction of ammonia levels, based on the results obtained using the Hach test kit. After Phase IV activities were discontinued, groundwater samples were collected for analysis by Merit Laboratories. The results are presented in the following table.

Phase IV – Final Sample Analysis Results	
Parameter	**Results**
Ammonia	132 mg/l
Nitrate	< 0.2 mg/l
Nitrite	< 0.2 mg/l
Total Phosphorus	26.1 mg/l
pH	9.56
ORP	45 mV
Alkalinity	4,450 mg/l
Total Heterotrophs	> 5,000,000 cfu/ml
Denitrifying Bacteria	> 5,000,000 cfu/ml
Nitrifying Bacteria	> 100,000 cfu/ml

The results show that the overall process was able to reduce ammonia concentrations in the test sample. An 82 percent reduction was observed over the course of Phase IV testing, with 61 percent of the ammonia present removed during the aeration portion of the test. The increased pH levels produced during testing appear to have created conditions within in the test sample where ammonia levels were more amenable to stripping as opposed to the biodegradation pathway. As a result, the significant reduction in alkalinity (39 percent) is likely due to the precipitation of carbonates based on Langelier saturation resulting from the pH shift of the water, and not alkalinity uptake by nitrifying bacteria. However, the elevated bioactivity for the indigenous nitrifying/denitrifying bacteria shown with the BART™ test kits indicates some nitrification/denitrification processes may have been occurring simultaneously with test sample aeration.

5.1.5 Phase V – Nitrate/Ammonia Flushing Column Test

Phase V of testing was designed to evaluate the potential application of the pump and treat technology to address nitrate, nitrite, and ammonia levels within the unsaturated and saturated soils. Two columns were constructed using a 12-inch section of 2-inch outer diameter Plexiglas tubing. The columns were constructed to provide a 9-inch soil bed, with sand intervals at the inlet and outlet to keep the soil in place. The ends of the column were capped and sealed. Hose barb fittings were installed at each end of the soil bed to allow the conveyance of "clean" water through the column using FMI Model QG 6 laboratory pumps.

The first column was constructed with unsaturated soils, and the second with saturated soils. The two column tests were conducted simultaneously, using separate pumps, to reduce the testing timeframe. Assuming a forty percent soil porosity and soil bed volume of approximately 355 cubic centimeters, it was calculated that a pumping rate of 0.099 ml/min would provide for one pore volume exchange per day through the columns. These testing parameters allowed for completion of testing in 21 days.

Samples of the column effluents were collected on a frequency of once every three pore volume exchanges, and were sent to Merit Laboratories for analysis of nitrates, nitrites, and ammonia. Process monitoring of the column effluents for nitrate and nitrite levels using the Hach test kit showed concentrations peaked within the initial pore volume exchanges before decreasing over the course of the testing timeframe. Upon completion of the Phase V testing, representative soil samples from each column were collected and also submitted for analysis. The results of off-site laboratory analyses performed by Merit Laboratories for the column effluents and soil samples are presented in the following tables.

Nitrate/Ammonia Flushing Column Tests – Effluent Analysis Results						
Pore Volumes	Unsaturated Soil			Saturated Soil		
	Ammonia	Nitrate	Nitrite	Ammonia	Nitrate	Nitrite
Initial	< 0.1 mg/l	< 4.0 mg/l	< 4.0 mg/l	< 0.1 mg/l	< 4.0 mg/l	< 4.0 mg/l
3	3.9 mg/l	160 mg/l	< 4.0 mg/l	260 mg/l	236 mg/l	< 4.0 mg/l
6	1.5 mg/l	8.1 mg/l	< 4.0 mg/l	100 mg/l	12.2 mg/l	< 4.0 mg/l
9	1.0 mg/l	4.5 mg/l	< 4.0 mg/l	90 mg/l	8.2 mg/l	< 4.0 mg/l
12	< 0.1 mg/l	< 4.0 mg/l	< 4.0 mg/l	70 mg/l	5.5 mg/l	< 4.0 mg/l
15	< 0.1 mg/l	< 4.0 mg/l	< 4.0 mg/l	40 mg/l	6.1 mg/l	< 4.0 mg/l
18	< 0.1 mg/l	< 4.0 mg/l	< 4.0 mg/l	60 mg/l	11.3 mg/l	< 4.0 mg/l
21	< 0.1 mg/l	< 4.0 mg/l	< 4.0 mg/l	1.7 mg/l	< 4.0 mg/l	< 4.0 mg/l

Nitrate/Ammonia Flushing Column Tests – Soil Analysis Results						
Sample	Unsaturated Soil			Saturated Soil		
	Ammonia	Nitrate	Nitrite	Ammonia	Nitrate	Nitrite
Pre-Treatment	820 mg/kg	180 mg/kg	<40 mg/kg	85 mg/kg	153 mg/kg	<40 mg/kg
Post-Treatment	240 mg/kg	<20 mg/kg	<20 mg/kg	70 mg/kg	<20 mg/kg	<20 mg/kg

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5.2 Field Pilot Study Implementation and Results

The optimal remedial approach identified during bench-scale testing activities and implemented during the field pilot study was to first stimulate the indigenous denitrifying bacteria for removal of nitrates, nitrites, and dinoseb. During this process, the pH of the groundwater is increased to transform ionized ammonium cations into deionized ammonia gas that can be stripped from the groundwater. A second treatment step involved subsurface aeration to strip deionized ammonia from the groundwater. The pilot study procedures are detailed in the Pilot Study Work Plan, contained in Appendix B of the Phase II Work Plan. Procedures and results of the field pilot study are summarized below.

5.2.1 Pilot Study Implementation of Denitrification

The first stage of pilot study implementation was the selection of the treatment area. The area surrounding monitoring well MW-4 was selected based on the presence of elevated nitrate, nitrite, dinoseb, and ammonia levels within the groundwater, as determined during the Phase I RI and quarterly groundwater monitoring. Data from the single well pump test conducted at MW-4 during the Phase II activities was used to determine appropriate injection rates for the pilot study.

Prior to the pilot study, a groundwater sample (MW04-070704-0) was collected from MW-4 to obtain baseline criteria for comparison, and was analyzed by Merit Laboratories for ammonia, nitrate, nitrite, dinoseb, total phosphorus, alkalinity, TOC, and dissolved arsenic, iron, and manganese. The chain of custody is included in Appendix E, and analytical laboratory reports are included in Appendix H. Field screening for pH and ORP was conducted, and results were recorded on the groundwater purge and sample form included in Appendix G. A portion of the groundwater sample also underwent analysis using a BART™ microbiology test kit for the purposes of quantifying baseline populations of indigenous heterotrophic, nitrifying, and denitrifying bacteria prior to initiating injection of the sodium acetate solution into the subsurface. The baseline testing results are provided in the following table and are used for evaluating the ability of pilot study activities to stimulate the desired microbial activities.

Baseline Microbial Screening Results – MW-4	
Microbial Parameter	**Population (colony forming units/milliliter)**
Total Heterotrophs*	1,000 – 500,000
Nitrifying Bacteria	1,000
Denitrifying Bacteria	1,000

* Test kit further identified the dominant heterotroph type to be aerobic.

Following groundwater sample collection, four injection wells (IW-1 through IW-4) were installed by HSA methods on 5-foot centers around MW-4. The wells were constructed with Schedule 40 PVC pipe and 0.020-inch slotted well screen. The completion depth of each injection well was approximately 18 feet bgs, with a 10-foot screen interval installed across the saturated zone from 8 feet bgs to 18 feet bgs. Soil samples were collected during installation from two of the injection well locations (IW-1 and IW-4) to obtain baseline criteria for comparison, and were analyzed by Merit Laboratories for nitrate, nitrite, ammonia, dinoseb, total phosphorus, and TOC. Chains of custody and boring logs are included in Appendices E and F, respectively. Analytical laboratory reports are provided in Appendix H.

Once the injection wells were installed, assembly of the system and nutrient injection began. The injection manifold and berm were assembled and constructed around the injection well area. A total of 2,000 pounds of sodium acetate and 3 kg of disodium phosphate (phosphorus source) were purchased in their anhydrous forms, then mixed in batches with over 5,000 gallons of water, and injected into the treatment area. Each batch contained approximately 345 gallons of water, 125 pounds of sodium acetate, and 4 ounces of disodium phosphate.

The solution was injected into the subsurface using a centrifugal transfer pump. The pumping rate was monitored continuously during injection activities to maintain a slow and steady rate that ensured an even distribution across the well screen interval and minimized adverse effects from channeling of injection fluid. The pumping rate ranged from approximately 1.0 gpm to 6.0 gpm, depending on whether injection was to all four wells or an individual well. A total of 16 batches were injected into the system over the duration of the field pilot study. Water levels were monitored in MW-4 and the injection wells during treatment, and it was determined the wells were influencing each other during injection. This indicates injection well spacing during full-scale or interim remediation by this technique could be increased to decrease inter-well influences. Photographs documenting the pilot study activities associated with the injection of the sodium acetate solution are included in Appendix I.

5.2.2 Pilot Study Monitoring and Results Following Denitrification

After the injection of the sodium acetate and disodium phosphate solution was completed, a week was allowed to pass before the monitoring program for the first phase of the pilot study was implemented. Groundwater samples were collected from monitoring well MW-4 and the four injection wells (IW-1 through IW-4) on a weekly basis for a six-week timeframe, and analyzed by Merit Laboratories for alkalinity, ammonia, nitrate, nitrite, total phosphorus, and TOC. During the final weekly monitoring activity, the groundwater samples collected from MW-4 and the four injection wells were also analyzed for dinoseb, iron, arsenic, and manganese. Screening of pH and ORP levels was completed and documented during each week of sample collection. Chains of custody are included in Appendix E, groundwater purge and sample forms are included in Appendix G, and analytical laboratory reports are included in Appendix H. Results from all six weeks of monitoring at MW-4 and the injection wells are summarized in Table 5-1. Baseline pre-pilot results and results from Week 6 of post-pilot monitoring at MW-4 are compared in the table below:

Comparison of MW-4 Pre-pilot and Post-pilot Results		
Parameter	**Pre-pilot Results**	**Post-pilot Results**
Dinoseb	0.32 mg/l	Not Detected
Arsenic, Dissolved	0.007 mg/l	0.069 mg/l
Iron, Dissolved	0.70 mg/l	4.59 mg/l
Manganese, Dissolved	0.377 mg/l	7.54 mg/l
Alkalinity as $CaCO_3$	490 mg/l	6,250 mg/l
Ammonia-N	780 mg/l	560 mg/l
Nitrate-N	962 mg/l	Not Detected
Nitrite-N	6.7 mg/l	Not Detected
TOC	10 mg/l	5,500 mg/l
Total Phosphorus	0.10 mg/l	1.71 mg/l

During the final weekly monitoring activity, a groundwater sample was also collected for screening of bacteria populations using the BART™ microbiology test kits.

Pilot Study Monitoring Week 6 Microbial Screening Results – MW-4	
Microbial Parameter	**Population (colony forming units/milliliter)**
Total Heterotrophs	500,000 - 5,000,000
Nitrifying Bacteria	< 1,000
Denitrifying Bacteria	100,000 - 5,000,000

Beginning in Week 2 of monitoring and continuing through Week 6, both nitrates and nitrites were no longer detected in the pilot study samples. Dinoseb, detected in the pre-pilot results, was not detected in the post-pilot samples. Detected concentrations of ammonia were observed; therefore, air stripping was conducted at the Site as part of the pilot study to evaluate this method as the ammonia removal process.

5.2.3 Pilot Study Implementation of Nitrification

After final sample collection for evaluation of the denitrification process was completed, each injection well was modified to accept low-pressure compressed air (<15 psi) from an air compressor to evaluate the effectiveness of subsurface aeration as a mechanism for stripping deionized ammonia from the groundwater. A secondary purpose of the air injection was to provide in-situ oxidation of iron and manganese and co-precipitation of arsenic. The air was injected through ¾-inch PVC drop tubes that extended to the bottom of each injection well. A 1-HP compressor was connected to an air distribution manifold containing four solenoid valves operated by a controller to sparge each well on rotating two-hour intervals. The system was placed into operation on November 16, 2004 at 7:30 p.m., and operated for 12 hours overnight before the first round of pH and ORP data was collected from the wells the following morning. The first round of data is summarized in the table below.

Groundwater Parameters During Sparging – 11/17/04 @ 7:30 a.m.					
Parameter	**IW-1**	**IW-2**	**IW-3**	**IW-4**	**MW-4**
pH	8.54	8.28	8.54	8.44	7.90
ORP (mV)	+72	+74	+92	+98	- 11

The data showed minor increases in ORP and pH when compared to previous monitoring data. The goal of the sparging test was to increase the pH of the groundwater to 9.4 or greater (by stripping carbon dioxide from the water) so the majority of the ammonia in the groundwater would become deionized for volatilization. At a pH of 9.4, the iron and manganese are also highly insoluble, and arsenic is readily co-precipitated onto the iron and manganese oxides. During aeration, the average pH at the wells increased from 7.9 to 8.3 overnight, representing a shift in the deionized ammonia fraction from 8 to 14 percent. This was not considered adequate to achieve any significant ammonia stripping. Therefore, a decision was made to replace the 1-HP compressor with a larger 5-HP compressor. This increased the injected airflow from approximately one scfm to eight scfm.

The larger compressor was placed on-line at 12:30 p.m. on November 17, 2004. Sparging influence could be observed at monitoring well MW-4 as the compressor alternated between each of the injection wells, thus showing communication throughout the pilot study area. The

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system operated for approximately five hours before collecting a groundwater sample from well MW-4 to determine if the larger compressor was influencing the pH. A sample collected from MW-4 at approximately 5:30 p.m. had an ORP of +45 mV and a pH of 8.26. This showed that the groundwater at MW-4 was being aerated, but that only minor pH changes were occurring in the groundwater as a result of the aeration. The system was left in operation overnight so changes in groundwater chemistry could be observed the following morning.

Samples were collected from each of the wells at 8:00 a.m. on November 18, 2004 for analysis of pH and ORP. The results are shown in the table below.

Groundwater Parameters During Sparging – 11/18/04 @ 8:00 a.m.					
Parameter	**IW-1**	**IW-2**	**IW-3**	**IW-4**	**MW-4**
pH	8.23	8.38	8.29	8.15	8.54
ORP (mV)	+76	+73	+80	+87	+56

The results showed that the pH of the groundwater was stabilizing between pH values of 8.15 and 8.54, indicating that less than 20 percent of the ammonia in the groundwater was in the deionized state where it was amenable to volatilization. Department of Ecology approval was given to investigate the effectiveness of dosing the four injection wells with sodium hydroxide to further deionize the ammonia. Each injection well was dosed with ten gallons of a solution containing five percent sodium hydroxide, temporarily sparged for ten minutes to achieve subsurface mixing, and then subjected to normal operation of the air sparging system. Immediate changes were apparent in the water chemistry as the water turned clearer from precipitation of calcium carbonate and then a yellowish-brown from iron and manganese precipitation. An ammonia odor was very apparent in the pH-adjusted water samples. The system remained in operation until noon the following day (November 19, 2004), and one additional round of samples were collected from the wells for on-site analysis. The results of the last sampling round are summarized below.

Groundwater Parameters During Sparging – 11/19/04 @ 12:00 noon.					
Parameter	**IW-1**	**IW-2**	**IW-3**	**IW-4**	**MW-4**
pH	9.03	9.63	9.98	9.55	9.91
ORP (mV)	+163	+45	+112	+114	+14

Though the odor of ammonia could be detected from water samples collected from each of the wells, an ammonia test kit indicated that ammonia concentrations in the groundwater were still greater than 400 mg/l. These data show that partial deionization of the ammonia was achieved, but that groundwater ammonia concentrations still remained high due to poor stripping efficiency.

After the pilot study was completed, the system was disassembled. Photographs of the pilot operations prior to disassembly are included in Appendix I.

5.2.4 Pilot Study Monitoring and Results Following Nitrification

After the subsurface aeration was completed, samples of the groundwater were collected from monitoring well MW-4 and the four injection wells for analysis of alkalinity, ammonia, nitrate, nitrite, total phosphorus, TOC, iron, arsenic, manganese, and dinoseb.

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As shown in Table 5-2, arsenic and iron were detected above MTCA Method B and C groundwater criteria and secondary MCLs in all five samples. However, the analyses for iron and arsenic are for total metals in unfiltered water samples. The water samples had a yellowish to brown color, thus indicating that most of the iron and arsenic in the water sample was likely in the form of suspended solids. Ammonia-N was detected in all five samples. Nitrate-N and nitrite-N were detected above MTCA Method B and C criteria in only one sample, collected from IW-1. Injection well IW-1 is located northwest of the pilot study area, and based upon the historical southeastern groundwater flow direction, would be the first to be affected by upgradient, non-treated groundwater.

Dinoseb and manganese were not detected above MTCA Method B and C groundwater criteria in any of the samples. Alkalinity, TOC, and total phosphorus were analyzed for remedial design purposes only, therefore are not compared to MTCA criteria. Alkalinity results ranged from 11,200 mg/l to 14,500 mg/l (as $CaCO_3$), TOC values ranged from 838 mg/l to 8,230 mg/l, and total phosphorus results ranged from 4.15 mg/l to 37 mg/l. The chain of custody and groundwater purge and sample forms for this sampling are located in Appendix E and Appendix G, respectively, and analytical laboratory reports are located in Appendix H.

Borings were also installed outside the pilot study area at locations approximately 10 feet and 15 feet west of the injection wells to determine the range of influence of the treatment. Groundwater samples were collected from these borings (SB-PS-003 and SB-PS-004) and analyzed for nitrates, nitrites, and ammonia.

In the groundwater samples from outside the pilot study area, nitrate-N was detected at levels above the MTCA Method B and C groundwater criteria. Nitrite-N was not detected. Ammonia-N was detected, but no MTCA Method B and C CULs have been developed. This information is summarized in Table 5-3, and the chain of custody is provided in Appendix E, the boring logs in Appendix F, and analytical laboratory reports in Appendix H.

After completion of air injection operations, a hydraulic probing unit was used to complete two soil borings within the treatment area (SB-PS-001 and SB-PS-002). The soil borings were installed according to the procedures outlined in the Phase II Work Plan. The borings were continuously sampled until a completion depth of approximately 18 feet bgs, with composite samples prepared for each 2-foot interval. The soil samples were analyzed by Merit Laboratories for nitrates, nitrites, ammonia, dinoseb, total phosphorus, and total organic carbon.

As shown in Table 5-4, detected constituents (nitrate-N and nitrite-N) were below MTCA Method B and C soil criteria. Ammonia-N was also detected, but no MTCA criteria have been developed. Dinoseb was not detected. For nitrate-N, saturated soils had lower concentrations than unsaturated soils, indicating that the pilot study, as implemented, was directed toward treatment of groundwater and saturated soils.

TOC and total phosphorus were analyzed for remedial design purposes only, therefore are not compared to MTCA criteria. TOC values ranged from 150 mg/kg to 4,400 mg/kg, and total phosphorus values ranged from 675 mg/kg to 996 mg/kg. The chain of custody is provided in Appendix E, the boring logs in Appendix F, and analytical laboratory reports are provided in Appendix H.

Approximate locations of the injection wells, soil borings, and sampling locations associated with the field pilot study are shown on Figure 5-1. When it has been determined that no further data collection will be required, the injection wells will be abandoned by overdrilling in accordance with WAC 173-160.

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6.0 SUMMARY AND CONCLUSIONS

The following findings and conclusions can be drawn from the Phase II RI, treatability study, and pilot study results discussed in the preceding sections of this report:

Area 3 Soils

- Detected concentrations of TPH-Gx in Area 3 at a depth of 7.5 feet bgs were above MTCA Method B and C CULs.

Area 5 Soils

- Detected concentrations of COCs in subsurface soil in Area 5 did not exceed MTCA Method B and C CULs or other screening criteria.

Lagoon Water Samples

- Concentrations of ammonia-N were detected in the lagoon surface water and sediment samples. No detections of nitrate-N or nitrite-N were observed.

Groundwater

- Nitrate-N was detected in all newly installed monitoring wells at concentrations above the MTCA Method B criteria. The high concentrations observed in MW-8 and MW-12 are contained within the main nitrate-N source areas as defined in the Phase I RI. High concentrations of nitrate-N were also detected in MW-9, which is located off-site in a southeasterly direction. The nitrate-N concentrations detected at MW-10 and MW-11 are slightly over the MCTA Method B criteria and likely approach background concentrations.
- Concentration isopleths of nitrate-N developed from the vertical profile sampling show that source areas are primarily located in the southeastern portion of the Site (Area 1 and the southern section of Area 6).
- Ammonia-N was also detected at MW-8 and MW-12, within the source areas identified during the Phase I RI. Ammonia-N was not detected in MW-9, which suggests that the ammonia is being naturally attenuated and is not migrating off-site.
- 2,4-D was detected in MW-12 at concentrations slightly in excess of the MTCA Method B criteria.
- Arsenic concentrations in all five newly installed monitoring wells exceeded the MTCA Method A, B, and C criteria. However, the range of arsenic concentrations observed are fairly consistent across the Site and appear to be within normal background concentrations for arsenic;
- Exceedances of the MTCA Method B and C groundwater criteria were observed in the vertical profile borings for 2,4-D, ammonia-N, arsenic, dinoseb, nitrate-N, and nitrite-N.
- Detected concentrations of benzene in MW-10 exceeded MTCA Method A, B, and C groundwater criteria.

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Treatability and Pilot Study

- The treatability study determined that the most effective treatment sequence was denitrification using acetate as an electron donor, followed by ammonia removal by aeration.
- The pilot study demonstrated that the injection of acetate was successful in lowering nitrate-N, nitrite-N, and dinoseb concentrations to below detectable limits in the groundwater at MW-4 within a ten-foot diameter for the duration of the monitoring period, and reduced concentrations in saturated soils.
- Groundwater collected from borings installed at locations 10 and 15 feet west of the pilot study area to determine the range of influence of the pilot study treatment had detections of nitrate-N at levels above the MTCA Method B and C groundwater criteria. Concentrations of ammonia-N were also detected.
- Nitrates appear to be toxic to the bacteria that convert ammonia to nitrates, thus inhibiting the nitrification process. Suitable remediation for ammonia would require denitrification in anaerobic conditions to remove nitrates, nitrification in aerobic conditions to remove ammonia, then a second round of denitrification in anaerobic conditions to remove remaining nitrates. This is not a feasible treatment alternative since the soils are currently void of nitrifying bacteria and the soil permeability restricts the ability to inoculate the Site.
- Subsurface aeration was not effective in removing ammonia-N concentrations from the groundwater. Although pH adjustment was able to deionize the ammonium ions to form ammonia gas, the ammonia gas was absorbed by the overlying soil column before reaching ground surface.

ED_002369M_00000163-00042

7.0 REFERENCES

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TABLES

Table 4-1: Area 3 Soil Results Against MTCA Method A Cleanup Levels
Bee-Jay Scales Site
Sunnyside, Washington

Sample ID	Date	Analyte	Analytical Results	Units	MDL	MA_soil-ind (mg/kg)	Exceed Method A?
A3-SB-003, 7.5'-0	5/18/2004	NWTPH-Gx	650	mg/kg	20	100	**Yes**
A3-SB-004, 4.5'-1	5/25/2004	NWTPH-Gx	30	mg/kg	20	100	No
A3-SB-004, 7.5'-0	5/25/2004	NWTPH-Gx	280	mg/kg	20	100	**Yes**
A3-SB-004, 7.5'-1	5/25/2004	NWTPH-Gx	400	mg/kg	20	100	**Yes**
A3-SB-005, 7.5'-0	5/18/2004	NWTPH-Gx	1800	mg/kg	20	100	**Yes**
A3-SB-006, 7.5'-0	5/18/2004	NWTPH-Gx	360	mg/kg	20	100	**Yes**

Table 4-2: Area 3 Soil Results Against MTCA Method B and C Cleanup Levels
Bee-Jay Scales Site
Sunnyside, Washington

Sample ID	Date	Analyte	Analytical Results	Units	MDL	MB_soil-std (mg/kg)	Exceed Method B?	MC_soil-std* (mg/kg)	Exceed Method C?
A3-SB-003, 7.5'-0	5/18/2004	NWTPH-Gx	650	mg/kg	20	29.95	**Yes**	121	**Yes**
A3-SB-004, 4.5'-1	5/25/2004	NWTPH-Gx	30	mg/kg	20	29.95	**Yes**	121	No
A3-SB-004, 7.5'-0	5/25/2004	NWTPH-Gx	280	mg/kg	20	29.95	**Yes**	121	**Yes**
A3-SB-004, 7.5'-1	5/25/2004	NWTPH-Gx	400	mg/kg	20	29.95	**Yes**	121	**Yes**
A3-SB-005, 7.5'-0	5/18/2004	NWTPH-Gx	1800	mg/kg	20	29.95	**Yes**	121	**Yes**
A3-SB-006, 7.5'-0	5/18/2004	NWTPH-Gx	360	mg/kg	20	29.95	**Yes**	121	**Yes**

* MTCA Method C CUL was calculated using the "Workbook for Calculating Cleanup Levels for Individual Hazardous Substances."

Table 4-3: Area 5 Soil Results Against MTCA Method A Cleanup Levels and Natural Background Soil Metals Concentrations
Bee-Jay Scales Site
Sunnyside, Washington

Sample ID	Date	Analyte	Analytical Results	Units	MDL	MA_soil-ind* (mg/kg)	Exceed Method A?	Background (mg/kg)	Exceed Background?
A5-SB-001, 4.5'-0	5/19/2004	Iron	2290	mg/kg	1	0	NA	51500	No
A5-SB-001, 9'-0	5/19/2004	Iron	1780	mg/kg	1	0	NA	51500	No
A5-SB-002, 4.5'-0	5/19/2004	Iron	3190	mg/kg	1	0	NA	51500	No
A5-SB-002, 9'-0	5/19/2004	Iron	3150	mg/kg	1	0	NA	51500	No
A5-SB-003, 4.5'-0	5/19/2004	Iron	2280	mg/kg	1	0	NA	51500	No
A5-SB-003, 9'-0	5/19/2004	Iron	2000	mg/kg	1	0	NA	51500	No
A5-SB-004, 4.5'-0	5/19/2004	Iron	1960	mg/kg	1	0	NA	51500	No
A5-SB-004, 9'-0	5/19/2004	Iron	2180	mg/kg	1	0	NA	51500	No
A5-SB-005, 4.5'-0	5/19/2004	Iron	2310	mg/kg	1	0	NA	51500	No
A5-SB-005, 9'-0	5/19/2004	Iron	2520	mg/kg	1	0	NA	51500	No
A5-SB-006, 4.5'-0	5/19/2004	Iron	1830	mg/kg	1	0	NA	51500	No
A5-SB-006, 9'-0	5/19/2004	Iron	2300	mg/kg	1	0	NA	51500	No
A5-SB-007, 4.5'-0	5/19/2004	Iron	1680	mg/kg	1	0	NA	51500	No
A5-SB-007, 9'-0	5/19/2004	Iron	3000	mg/kg	1	0	NA	51500	No
A5-SB-008, 4.5'-0	5/18/2004	Iron	1050	mg/kg	1	0	NA	51500	No
A5-SB-008, 9'-0	5/18/2004	Iron	1860	mg/kg	1	0	NA	51500	No
A5-SB-009, 4.5'-0	5/18/2004	Iron	1760	mg/kg	1	0	NA	51500	No
A5-SB-009, 9'-0	5/18/2004	Iron	1970	mg/kg	1	0	NA	51500	No
A5-SB-010, 4.5'-0	5/18/2004	Iron	2730	mg/kg	1	0	NA	51500	No
A5-SB-010, 9'-0	5/18/2004	Iron	2020	mg/kg	1	0	NA	51500	No
A5-SB-001, 4.5'-0	5/19/2004	Nitrate-N	99	mg/kg	10	0	NA	NA	NA
A5-SB-001, 9'-0	5/19/2004	Nitrate-N	304	mg/kg	10	0	NA	NA	NA
A5-SB-002, 4.5'-0	5/19/2004	Nitrate-N	205	mg/kg	10	0	NA	NA	NA
A5-SB-002, 9'-0	5/19/2004	Nitrate-N	49	mg/kg	10	0	NA	NA	NA
A5-SB-003, 4.5'-0	5/19/2004	Nitrate-N	42.8	mg/kg	10	0	NA	NA	NA
A5-SB-003, 9'-0	5/19/2004	Nitrate-N	67.2	mg/kg	10	0	NA	NA	NA
A5-SB-004, 4.5'-0	5/19/2004	Nitrate-N	40.1	mg/kg	10	0	NA	NA	NA
A5-SB-004, 9'-0	5/19/2004	Nitrate-N	19	mg/kg	10	0	NA	NA	NA
A5-SB-005, 4.5'-0	5/19/2004	Nitrate-N	81	mg/kg	10	0	NA	NA	NA
A5-SB-006, 4.5'-0	5/19/2004	Nitrate-N	89.4	mg/kg	10	0	NA	NA	NA
A5-SB-007, 4.5'-0	5/19/2004	Nitrate-N	60.4	mg/kg	10	0	NA	NA	NA
A5-SB-008, 4.5'-0	5/18/2004	Nitrate-N	354	mg/kg	5	0	NA	NA	NA
A5-SB-008, 9'-0	5/18/2004	Nitrate-N	12.9	mg/kg	5	0	NA	NA	NA

Table 4-3: Area 5 Soil Results Against MTCA Method A Cleanup Levels and Natural Background Soil Metals Concentrations
Bee-Jay Scales Site
Sunnyside, Washington

Sample ID	Date	Analyte	Analytical Results	Units	MDL	MA_soil-ind* (mg/kg)	Exceed Method A?	Background (mg/kg)	Exceed Background?
A5-SB-009, 4.5'-0	5/18/2004	Nitrate-N	23.6	mg/kg	5	0	NA	NA	NA
A5-SB-009, 9'-0	5/18/2004	Nitrate-N	57	mg/kg	5	0	NA	NA	NA
A5-SB-010, 4.5'-0	5/18/2004	Nitrate-N	450	mg/kg	5	0	NA	NA	NA
A5-SB-010, 9'-0	5/18/2004	Nitrate-N	146	mg/kg	5	0	NA	NA	NA
A5-SB-001, 4.5'-0	5/19/2004	Phosphate	2280	mg/kg	10	0	NA	NA	NA
A5-SB-001, 9'-0	5/19/2004	Phosphate	2590	mg/kg	10	0	NA	NA	NA
A5-SB-002, 4.5'-0	5/19/2004	Phosphate	2450	mg/kg	10	0	NA	NA	NA
A5-SB-002, 9'-0	5/19/2004	Phosphate	2830	mg/kg	10	0	NA	NA	NA
A5-SB-003, 4.5'-0	5/19/2004	Phosphate	2080	mg/kg	10	0	NA	NA	NA
A5-SB-003, 9'-0	5/19/2004	Phosphate	2220	mg/kg	10	0	NA	NA	NA
A5-SB-004, 4.5'-0	5/19/2004	Phosphate	2190	mg/kg	10	0	NA	NA	NA
A5-SB-004, 9'-0	5/19/2004	Phosphate	2120	mg/kg	10	0	NA	NA	NA
A5-SB-005, 4.5'-0	5/19/2004	Phosphate	1760	mg/kg	10	0	NA	NA	NA
A5-SB-005, 9'-0	5/19/2004	Phosphate	2250	mg/kg	10	0	NA	NA	NA
A5-SB-006, 4.5'-0	5/19/2004	Phosphate	1830	mg/kg	10	0	NA	NA	NA
A5-SB-006, 9'-0	5/19/2004	Phosphate	2060	mg/kg	10	0	NA	NA	NA
A5-SB-007, 4.5'-0	5/19/2004	Phosphate	1940	mg/kg	10	0	NA	NA	NA
A5-SB-007, 9'-0	5/19/2004	Phosphate	2510	mg/kg	10	0	NA	NA	NA
A5-SB-008, 4.5'-0	5/18/2004	Phosphate	1930	mg/kg	10	0	NA	NA	NA
A5-SB-008, 9'-0	5/18/2004	Phosphate	2290	mg/kg	10	0	NA	NA	NA
A5-SB-009, 4.5'-0	5/18/2004	Phosphate	1820	mg/kg	10	0	NA	NA	NA
A5-SB-009, 9'-0	5/18/2004	Phosphate	2110	mg/kg	10	0	NA	NA	NA
A5-SB-010, 4.5'-0	5/18/2004	Phosphate	1950	mg/kg	10	0	NA	NA	NA
A5-SB-010, 9'-0	5/18/2004	Phosphate	2120	mg/kg	10	0	NA	NA	NA
A5-SB-001, 4.5'-0	5/19/2004	Sulfate	144	mg/kg	100	0	NA	NA	NA
A5-SB-001, 9'-0	5/19/2004	Sulfate	176	mg/kg	100	0	NA	NA	NA
A5-SB-002, 4.5'-0	5/19/2004	Sulfate	244	mg/kg	100	0	NA	NA	NA
A5-SB-002, 9'-0	5/19/2004	Sulfate	104	mg/kg	100	0	NA	NA	NA
A5-SB-003, 4.5'-0	5/19/2004	Sulfate	155	mg/kg	100	0	NA	NA	NA
A5-SB-003, 9'-0	5/19/2004	Sulfate	124	mg/kg	100	0	NA	NA	NA
A5-SB-004, 4.5'-0	5/19/2004	Sulfate	426	mg/kg	100	0	NA	NA	NA
A5-SB-004, 9'-0	5/19/2004	Sulfate	137	mg/kg	100	0	NA	NA	NA
A5-SB-005, 4.5'-0	5/19/2004	Sulfate	171	mg/kg	100	0	NA	NA	NA

Table 4-3: Area 5 Soil Results Against MTCA Method A Cleanup Levels and Natural Background Soil Metals Concentrations
Bee-Jay Scales Site
Sunnyside, Washington

Sample ID	Date	Analyte	Analytical Results	Units	MDL	MA_soil-ind* (mg/kg)	Exceed Method A?	Background (mg/kg)	Exceed Background?
A5-SB-006, 4.5'-0	5/19/2004	Sulfate	241	mg/kg	100	0	NA	NA	NA
A5-SB-006, 9'-0	5/19/2004	Sulfate	104	mg/kg	100	0	NA	NA	NA
A5-SB-007, 4.5'-0	5/19/2004	Sulfate	156	mg/kg	100	0	NA	NA	NA
A5-SB-007, 9'-0	5/19/2004	Sulfate	110	mg/kg	100	0	NA	NA	NA
A5-SB-008, 4.5'-0	5/18/2004	Sulfate	250	mg/kg	20	0	NA	NA	NA
A5-SB-008, 9'-0	5/18/2004	Sulfate	41	mg/kg	20	0	NA	NA	NA
A5-SB-009, 4.5'-0	5/18/2004	Sulfate	42	mg/kg	20	0	NA	NA	NA
A5-SB-009, 9'-0	5/18/2004	Sulfate	77	mg/kg	20	0	NA	NA	NA
A5-SB-010, 4.5'-0	5/18/2004	Sulfate	191	mg/kg	20	0	NA	NA	NA
A5-SB-010, 9'-0	5/18/2004	Sulfate	82	mg/kg	20	0	NA	NA	NA

NA = Not available.

* No MTCA Method A Cleanup Levels have been developed for iron, nitrate, phosphate, or sulfate.

Table 4-4: Area 5 Soil Results Against MTCA Method B and C Cleanup Levels
Bee-Jay Scales Site
Sunnyside, Washington

Sample ID	Date	Analyte	Analytical Results	Units	MDL	MB_soil-std (mg/kg)	Exceed Method B?	MC_soil-std (mg/kg)	Exceed Method C?
A5-SB-001, 4.5'-0	5/19/2004	Nitrate-N	99	mg/kg	10	8000	No	350000	No
A5-SB-001, 9'-0	5/19/2004	Nitrate-N	304	mg/kg	10	8000	No	350000	No
A5-SB-002, 4.5'-0	5/19/2004	Nitrate-N	205	mg/kg	10	8000	No	350000	No
A5-SB-002, 9'-0	5/19/2004	Nitrate-N	49	mg/kg	10	8000	No	350000	No
A5-SB-003, 4.5'-0	5/19/2004	Nitrate-N	42.8	mg/kg	10	8000	No	350000	No
A5-SB-003, 9'-0	5/19/2004	Nitrate-N	67.2	mg/kg	10	8000	No	350000	No
A5-SB-004, 4.5'-0	5/19/2004	Nitrate-N	40.1	mg/kg	10	8000	No	350000	No
A5-SB-004, 9'-0	5/19/2004	Nitrate-N	19	mg/kg	10	8000	No	350000	No
A5-SB-005, 4.5'-0	5/19/2004	Nitrate-N	81	mg/kg	10	8000	No	350000	No
A5-SB-006, 4.5'-0	5/19/2004	Nitrate-N	89.4	mg/kg	10	8000	No	350000	No
A5-SB-007, 4.5'-0	5/19/2004	Nitrate-N	60.4	mg/kg	10	8000	No	350000	No
A5-SB-008, 4.5'-0	5/18/2004	Nitrate-N	354	mg/kg	5	8000	No	350000	No
A5-SB-008, 9'-0	5/18/2004	Nitrate-N	12.9	mg/kg	5	8000	No	350000	No
A5-SB-009, 4.5'-0	5/18/2004	Nitrate-N	23.6	mg/kg	5	8000	No	350000	No
A5-SB-009, 9'-0	5/18/2004	Nitrate-N	57	mg/kg	5	8000	No	350000	No
A5-SB-010, 4.5'-0	5/18/2004	Nitrate-N	450	mg/kg	5	8000	No	350000	No
A5-SB-010, 9'-0	5/18/2004	Nitrate-N	146	mg/kg	5	8000	No	350000	No

Table 4-5: Area 5 Soil SPLP Results
Bee-Jay Scales Site
Sunnyside, Washington

Sample ID	Date	Analyte	Less than MDL	Analytical Results	Units	MDL	Qualifier
A5-SB-001, 4.5'-0	5/19/2004	Ammonia-N, SPLP	<	0.1	mg/L	0.1	U
A5-SB-001, 9'-0	5/19/2004	Ammonia-N, SPLP	<	0.1	mg/L	0.1	U
A5-SB-002, 4.5'-0	5/19/2004	Ammonia-N, SPLP		0.5	mg/L	0.1	
A5-SB-003, 9'-0	5/19/2004	Ammonia-N, SPLP	<	0.1	mg/L	0.1	U
A5-SB-005, 4.5'-0	5/19/2004	Ammonia-N, SPLP	<	0.1	mg/L	0.1	U
A5-SB-006, 4.5'-0	5/19/2004	Ammonia-N, SPLP	<	0.1	mg/L	0.1	U
A5-SB-007, 4.5'-0	5/19/2004	Ammonia-N, SPLP	<	0.1	mg/L	0.1	U
A5-SB-008, 4.5'-0	5/18/2004	Ammonia-N, SPLP	<	0.1	mg/L	0.1	U
A5-SB-010, 4.5'-0	5/25/2004	Ammonia-N, SPLP	<	0.1	mg/L	0.1	U
A5-SB-010, 9'-0	5/25/2004	Ammonia-N, SPLP	<	0.1	mg/L	0.1	U
A5-SB-001, 4.5'-0	5/19/2004	Iron, SPLP		0.09	mg/L	0.02	
A5-SB-001, 9'-0	5/19/2004	Iron, SPLP		0.05	mg/L	0.02	
A5-SB-002, 4.5'-0	5/19/2004	Iron, SPLP		0.58	mg/L	0.02	
A5-SB-003, 9'-0	5/19/2004	Iron, SPLP		2.06	mg/L	0.02	
A5-SB-005, 4.5'-0	5/19/2004	Iron, SPLP		0.14	mg/L	0.02	
A5-SB-006, 4.5'-0	5/19/2004	Iron, SPLP		0.22	mg/L	0.02	
A5-SB-007, 4.5'-0	5/19/2004	Iron, SPLP		0.31	mg/L	0.02	
A5-SB-008, 4.5'-0	5/18/2004	Iron, SPLP		1.71	mg/L	0.02	
A5-SB-010, 4.5'-0	5/25/2004	Iron, SPLP		0.11	mg/L	0.02	
A5-SB-010, 9'-0	5/25/2004	Iron, SPLP		0.85	mg/L	0.02	
A5-SB-001, 4.5'-0	5/19/2004	Nitrate-N, SPLP		10.5	mg/L	0.2	
A5-SB-001, 9'-0	5/19/2004	Nitrate-N, SPLP		11	mg/L	0.2	
A5-SB-002, 4.5'-0	5/19/2004	Nitrate-N, SPLP		9.7	mg/L	0.2	
A5-SB-003, 9'-0	5/19/2004	Nitrate-N, SPLP		2.8	mg/L	0.2	
A5-SB-005, 4.5'-0	5/19/2004	Nitrate-N, SPLP		5	mg/L	0.2	
A5-SB-006, 4.5'-0	5/19/2004	Nitrate-N, SPLP		4.2	mg/L	0.2	
A5-SB-007, 4.5'-0	5/19/2004	Nitrate-N, SPLP		4.6	mg/L	0.2	
A5-SB-008, 4.5'-0	5/18/2004	Nitrate-N, SPLP		14.7	mg/L	0.2	
A5-SB-010, 4.5'-0	5/25/2004	Nitrate-N, SPLP		10.3	mg/L	0.2	
A5-SB-010, 9'-0	5/25/2004	Nitrate-N, SPLP		1	mg/L	0.2	
A5-SB-001, 4.5'-0	5/19/2004	Nitrite-N, SPLP	<	0.2	mg/L	0.2	U
A5-SB-001, 9'-0	5/19/2004	Nitrite-N, SPLP	<	0.2	mg/L	0.2	U
A5-SB-002, 4.5'-0	5/19/2004	Nitrite-N, SPLP	<	0.2	mg/L	0.2	U
A5-SB-003, 9'-0	5/19/2004	Nitrite-N, SPLP	<	0.2	mg/L	0.2	U

Table 4-5: Area 5 Soil SPLP Results
Bee-Jay Scales Site
Sunnyside, Washington

Sample ID	Date	Analyte	Less than MDL	Analytical Results	Units	MDL	Qualifier
A5-SB-005, 4.5'-0	5/19/2004	Nitrite-N, SPLP	<	0.2	mg/L	0.2	U
A5-SB-006, 4.5'-0	5/19/2004	Nitrite-N, SPLP	<	0.2	mg/L	0.2	U
A5-SB-007, 4.5'-0	5/19/2004	Nitrite-N, SPLP	<	0.2	mg/L	0.2	U
A5-SB-008, 4.5'-0	5/18/2004	Nitrite-N, SPLP	<	0.2	mg/L	0.2	U
A5-SB-010, 4.5'-0	5/25/2004	Nitrite-N, SPLP	<	0.2	mg/L	0.2	U
A5-SB-010, 9'-0	5/25/2004	Nitrite-N, SPLP	<	0.2	mg/L	0.2	U
A5-SB-001, 4.5'-0	5/19/2004	Phosphate, SPLP		0.6	mg/L	0.1	
A5-SB-001, 9'-0	5/19/2004	Phosphate, SPLP	<	0.1	mg/L	0.1	U
A5-SB-002, 4.5'-0	5/19/2004	Phosphate, SPLP		0.1	mg/L	0.1	
A5-SB-003, 9'-0	5/19/2004	Phosphate, SPLP		0.3	mg/L	0.1	
A5-SB-005, 4.5'-0	5/19/2004	Phosphate, SPLP		0.1	mg/L	0.1	
A5-SB-006, 4.5'-0	5/19/2004	Phosphate, SPLP	<	0.1	mg/L	0.1	U
A5-SB-007, 4.5'-0	5/19/2004	Phosphate, SPLP		0.6	mg/L	0.1	
A5-SB-008, 4.5'-0	5/18/2004	Phosphate, SPLP	<	0.1	mg/L	0.1	U
A5-SB-010, 4.5'-0	5/25/2004	Phosphate, SPLP		0.2	mg/L	0.1	
A5-SB-010, 9'-0	5/25/2004	Phosphate, SPLP		0.3	mg/L	0.1	
A5-SB-001, 4.5'-0	5/19/2004	Sulfate, SPLP		16	mg/L	1	
A5-SB-001, 9'-0	5/19/2004	Sulfate, SPLP		9	mg/L	1	
A5-SB-002, 4.5'-0	5/19/2004	Sulfate, SPLP		14	mg/L	1	
A5-SB-003, 9'-0	5/19/2004	Sulfate, SPLP		9	mg/L	1	
A5-SB-005, 4.5'-0	5/19/2004	Sulfate, SPLP		10	mg/L	1	
A5-SB-006, 4.5'-0	5/19/2004	Sulfate, SPLP		12	mg/L	1	
A5-SB-007, 4.5'-0	5/19/2004	Sulfate, SPLP		13	mg/L	1	
A5-SB-008, 4.5'-0	5/18/2004	Sulfate, SPLP		16	mg/L	1	
A5-SB-010, 4.5'-0	5/25/2004	Sulfate, SPLP		11	mg/L	1	
A5-SB-010, 9'-0	5/25/2004	Sulfate, SPLP		8	mg/L	1	

U = Compound was not detected.

Table 4-6: Vertical Profile Boring Groundwater Results Against MTCA Method A Cleanup Levels
Bee-Jay Scales Site
Sunnyside, Washington

Sample ID	Date	Analyte	Analytical Results	Units	MDL	MA_gw* (mg/L)	Exceed Method A?
A6-VP-002, 20'-0	5/24/2004	2,4-D	1.3	mg/L	0.4	0	NA
A1-VP-001, 10'-0	5/20/2004	Alkalinity as CaCO3	206	mg/L	1	0	NA
A1-VP-001, 20'-0	5/20/2004	Alkalinity as CaCO3	164	mg/L	1	0	NA
A1-VP-003, 10'-0	5/21/2004	Alkalinity as CaCO3	884	mg/L	1	0	NA
A1-VP-003, 10'-1	5/21/2004	Alkalinity as CaCO3	908	mg/L	1	0	NA
A1-VP-003, 20'-0	5/21/2004	Alkalinity as CaCO3	282	mg/L	1	0	NA
A1-VP-003, 20'-1	5/21/2004	Alkalinity as CaCO3	268	mg/L	1	0	NA
A1-VP-004, 10'-0	5/21/2004	Alkalinity as CaCO3	938	mg/L	1	0	NA
A1-VP-004, 20'-0	5/21/2004	Alkalinity as CaCO3	238	mg/L	1	0	NA
A1-VP-005, 10'-0	5/21/2004	Alkalinity as CaCO3	284	mg/L	1	0	NA
A1-VP-005, 20'-0	5/21/2004	Alkalinity as CaCO3	228	mg/L	1	0	NA
A1-VP-007, 10'-0	5/20/2004	Alkalinity as CaCO3	257	mg/L	1	0	NA
A1-VP-007, 10'-1	5/20/2004	Alkalinity as CaCO3	254	mg/L	1	0	NA
A1-VP-007, 20'-0	5/20/2004	Alkalinity as CaCO3	248	mg/L	1	0	NA
A1-VP-007, 20'-1	5/20/2004	Alkalinity as CaCO3	238	mg/L	1	0	NA
A5-VP-001, 20'-0	5/20/2004	Alkalinity as CaCO3	252	mg/L	1	0	NA
A5-VP-002, 10'-0	5/19/2004	Alkalinity as CaCO3	227	mg/L	1	0	NA
A5-VP-002, 20'-0	5/20/2004	Alkalinity as CaCO3	258	mg/L	1	0	NA
A5-VP-003, 10'-0	5/19/2004	Alkalinity as CaCO3	218	mg/L	1	0	NA
A5-VP-003, 20'-0	5/20/2004	Alkalinity as CaCO3	244	mg/L	1	0	NA
A5-VP-004, 10'-0	5/19/2004	Alkalinity as CaCO3	292	mg/L	1	0	NA
A5-VP-004, 10'-1	5/19/2004	Alkalinity as CaCO3	284	mg/L	1	0	NA
A5-VP-004, 20'-0	5/19/2004	Alkalinity as CaCO3	236	mg/L	1	0	NA
A5-VP-004, 20'-1	5/19/2004	Alkalinity as CaCO3	232	mg/L	1	0	NA
A5-VP-005, 10'-0	5/19/2004	Alkalinity as CaCO3	255	mg/L	1	0	NA
A5-VP-005, 20'-0	5/19/2004	Alkalinity as CaCO3	229	mg/L	1	0	NA
A5-VP-006, 10'-0	5/19/2004	Alkalinity as CaCO3	256	mg/L	1	0	NA
A5-VP-006, 20'-0	5/19/2004	Alkalinity as CaCO3	240	mg/L	1	0	NA
A5-VP-007, 20'-0	5/19/2004	Alkalinity as CaCO3	226	mg/L	1	0	NA
A5-VP-008, 20'-0	5/20/2004	Alkalinity as CaCO3	378	mg/L	1	0	NA
A5-VP-009, 20'-0	5/20/2004	Alkalinity as CaCO3	252	mg/L	1	0	NA
A6-VP-001, 10'-0	5/24/2004	Alkalinity as CaCO3	192	mg/L	1	0	NA
A6-VP-001, 20'-0	5/24/2004	Alkalinity as CaCO3	206	mg/L	1	0	NA
A6-VP-002, 20'-0	5/24/2004	Alkalinity as CaCO3	580	mg/L	1	0	NA
A6-VP-003, 10'-0	5/24/2004	Alkalinity as CaCO3	366	mg/L	1	0	NA
A6-VP-003, 20'-0	5/24/2004	Alkalinity as CaCO3	2080	mg/L	1	0	NA
A6-VP-004, 20'-0	5/24/2004	Alkalinity as CaCO3	1500	mg/L	1	0	NA
A1-VP-001, 10'-0	5/20/2004	Ammonia-N	0.6	mg/L	0.1	0	NA
A1-VP-001, 20'-0	5/20/2004	Ammonia-N	0.6	mg/L	0.1	0	NA
A1-VP-003, 10'-0	5/21/2004	Ammonia-N	1090	mg/L	10	0	NA
A1-VP-003, 10'-1	5/21/2004	Ammonia-N	1060	mg/L	10	0	NA
A1-VP-003, 20'-0	5/21/2004	Ammonia-N	150	mg/L	10	0	NA
A1-VP-003, 20'-1	5/21/2004	Ammonia-N	160	mg/L	10	0	NA
A1-VP-004, 10'-0	5/21/2004	Ammonia-N	260	mg/L	10	0	NA
A1-VP-004, 20'-0	5/21/2004	Ammonia-N	29	mg/L	1	0	NA
A1-VP-005, 10'-0	5/21/2004	Ammonia-N	8.7	mg/L	0.1	0	NA
A1-VP-005, 20'-0	5/21/2004	Ammonia-N	1.5	mg/L	0.1	0	NA
A1-VP-007, 10'-0	5/20/2004	Ammonia-N	0.3	mg/L	0.1	0	NA
A1-VP-007, 10'-1	5/20/2004	Ammonia-N	0.2	mg/L	0.1	0	NA

Table 4-6: Vertical Profile Boring Groundwater Results Against MTCA Method A Cleanup Levels
Bee-Jay Scales Site
Sunnyside, Washington

Sample ID	Date	Analyte	Analytical Results	Units	MDL	MA_gw* (mg/L)	Exceed Method A?
A5-VP-002, 10'-0	5/19/2004	Ammonia-N	6.9	mg/L	0.1	0	NA
A5-VP-002, 20'-0	5/20/2004	Ammonia-N	4.6	mg/L	0.1	0	NA
A5-VP-008, 20'-0	5/20/2004	Ammonia-N	130	mg/L	10	0	NA
A5-VP-009, 20'-0	5/20/2004	Ammonia-N	0.2	mg/L	0.1	0	NA
A6-VP-001, 10'-0	5/24/2004	Ammonia-N	0.4	mg/L	0.1	0	NA
A6-VP-002, 20'-0	5/24/2004	Ammonia-N	440	mg/L	10	0	NA
A6-VP-003, 10'-0	5/24/2004	Ammonia-N	60	mg/L	1	0	NA
A6-VP-003, 20'-0	5/24/2004	Ammonia-N	1750	mg/L	10	0	NA
A6-VP-004, 20'-0	5/24/2004	Ammonia-N	300	mg/L	10	0	NA
A1-VP-001, 10'-0	5/20/2004	Arsenic	0.015	mg/L	0.002	0.005	**Yes**
A1-VP-001, 20'-0	5/20/2004	Arsenic	0.017	mg/L	0.002	0.005	**Yes**
A1-VP-003, 10'-0	5/21/2004	Arsenic	0.047	mg/L	0.002	0.005	**Yes**
A1-VP-003, 10'-1	5/21/2004	Arsenic	0.047	mg/L	0.002	0.005	**Yes**
A1-VP-003, 20'-0	5/21/2004	Arsenic	0.057	mg/L	0.002	0.005	**Yes**
A1-VP-003, 20'-1	5/21/2004	Arsenic	0.059	mg/L	0.002	0.005	**Yes**
A1-VP-004, 10'-0	5/21/2004	Arsenic	0.042	mg/L	0.002	0.005	**Yes**
A1-VP-004, 20'-0	5/21/2004	Arsenic	0.011	mg/L	0.002	0.005	**Yes**
A1-VP-005, 10'-0	5/21/2004	Arsenic	0.024	mg/L	0.002	0.005	**Yes**
A1-VP-005, 20'-0	5/21/2004	Arsenic	0.015	mg/L	0.002	0.005	**Yes**
A1-VP-007, 10'-0	5/20/2004	Arsenic	0.018	mg/L	0.002	0.005	**Yes**
A1-VP-007, 10'-1	5/20/2004	Arsenic	0.016	mg/L	0.002	0.005	**Yes**
A1-VP-007, 20'-0	5/20/2004	Arsenic	0.017	mg/L	0.002	0.005	**Yes**
A1-VP-007, 20'-1	5/20/2004	Arsenic	0.02	mg/L	0.002	0.005	**Yes**
A5-VP-001, 20'-0	5/20/2004	Arsenic	0.017	mg/L	0.002	0.005	**Yes**
A5-VP-002, 10'-0	5/19/2004	Arsenic	0.012	mg/L	0.002	0.005	**Yes**
A5-VP-002, 20'-0	5/20/2004	Arsenic	0.018	mg/L	0.002	0.005	**Yes**
A5-VP-003, 10'-0	5/19/2004	Arsenic	0.004	mg/L	0.002	0.005	No
A5-VP-003, 20'-0	5/20/2004	Arsenic	0.014	mg/L	0.002	0.005	**Yes**
A5-VP-004, 10'-0	5/19/2004	Arsenic	0.017	mg/L	0.002	0.005	**Yes**
A5-VP-004, 10'-1	5/19/2004	Arsenic	0.018	mg/L	0.002	0.005	**Yes**
A5-VP-004, 20'-0	5/19/2004	Arsenic	0.043	mg/L	0.002	0.005	**Yes**
A5-VP-004, 20'-1	5/19/2004	Arsenic	0.048	mg/L	0.002	0.005	**Yes**
A5-VP-005, 10'-0	5/19/2004	Arsenic	0.049	mg/L	0.002	0.005	**Yes**
A5-VP-005, 20'-0	5/19/2004	Arsenic	0.034	mg/L	0.002	0.005	**Yes**
A5-VP-006, 10'-0	5/19/2004	Arsenic	0.013	mg/L	0.002	0.005	**Yes**
A5-VP-006, 20'-0	5/19/2004	Arsenic	0.033	mg/L	0.002	0.005	**Yes**
A5-VP-007, 20'-0	5/19/2004	Arsenic	0.02	mg/L	0.002	0.005	**Yes**
A5-VP-008, 20'-0	5/20/2004	Arsenic	0.028	mg/L	0.002	0.005	**Yes**
A5-VP-009, 20'-0	5/20/2004	Arsenic	0.022	mg/L	0.002	0.005	**Yes**
A6-VP-001, 10'-0	5/24/2004	Arsenic	0.027	mg/L	0.002	0.005	**Yes**
A6-VP-001, 20'-0	5/24/2004	Arsenic	0.018	mg/L	0.002	0.005	**Yes**
A6-VP-002, 20'-0	5/24/2004	Arsenic	0.025	mg/L	0.002	0.005	**Yes**
A6-VP-003, 10'-0	5/24/2004	Arsenic	0.018	mg/L	0.002	0.005	**Yes**
A6-VP-003, 20'-0	5/24/2004	Arsenic	0.087	mg/L	0.002	0.005	**Yes**
A6-VP-004, 20'-0	5/24/2004	Arsenic	0.034	mg/L	0.002	0.005	**Yes**
A1-VP-001, 10'-0	5/20/2004	Chloride	478	mg/L	1	0	NA
A1-VP-001, 20'-0	5/20/2004	Chloride	190	mg/L	1	0	NA
A1-VP-003, 10'-0	5/21/2004	Chloride	190	mg/L	1	0	NA
A1-VP-003, 10'-1	5/21/2004	Chloride	230	mg/L	1	0	NA

Table 4-6: Vertical Profile Boring Groundwater Results Against MTCA Method A Cleanup Levels
Bee-Jay Scales Site
Sunnyside, Washington

Sample ID	Date	Analyte	Analytical Results	Units	MDL	MA_gw* (mg/L)	Exceed Method A?
A1-VP-003, 20'-0	5/21/2004	Chloride	57	mg/L	1	0	NA
A1-VP-003, 20'-1	5/21/2004	Chloride	56	mg/L	1	0	NA
A1-VP-004, 10'-0	5/21/2004	Chloride	210	mg/L	1	0	NA
A1-VP-004, 20'-0	5/21/2004	Chloride	100	mg/L	1	0	NA
A1-VP-005, 10'-0	5/21/2004	Chloride	324	mg/L	1	0	NA
A1-VP-005, 20'-0	5/21/2004	Chloride	108	mg/L	1	0	NA
A1-VP-007, 10'-0	5/20/2004	Chloride	366	mg/L	1	0	NA
A1-VP-007, 10'-1	5/20/2004	Chloride	369	mg/L	1	0	NA
A1-VP-007, 20'-0	5/20/2004	Chloride	52	mg/L	1	0	NA
A1-VP-007, 20'-1	5/20/2004	Chloride	51	mg/L	1	0	NA
A5-VP-001, 20'-0	5/20/2004	Chloride	86	mg/L	1	0	NA
A5-VP-002, 10'-0	5/19/2004	Chloride	265	mg/L	1	0	NA
A5-VP-002, 20'-0	5/20/2004	Chloride	19	mg/L	1	0	NA
A5-VP-003, 10'-0	5/19/2004	Chloride	230	mg/L	1	0	NA
A5-VP-003, 20'-0	5/20/2004	Chloride	48	mg/L	1	0	NA
A5-VP-004, 10'-0	5/19/2004	Chloride	148	mg/L	1	0	NA
A5-VP-004, 10'-1	5/19/2004	Chloride	149	mg/L	1	0	NA
A5-VP-004, 20'-0	5/19/2004	Chloride	56	mg/L	1	0	NA
A5-VP-004, 20'-1	5/19/2004	Chloride	57	mg/L	1	0	NA
A5-VP-005, 10'-0	5/19/2004	Chloride	80	mg/L	1	0	NA
A5-VP-005, 20'-0	5/19/2004	Chloride	30	mg/L	1	0	NA
A5-VP-006, 10'-0	5/19/2004	Chloride	177	mg/L	1	0	NA
A5-VP-006, 20'-0	5/19/2004	Chloride	34	mg/L	1	0	NA
A5-VP-007, 20'-0	5/19/2004	Chloride	67	mg/L	1	0	NA
A5-VP-008, 20'-0	5/20/2004	Chloride	41	mg/L	1	0	NA
A5-VP-009, 20'-0	5/20/2004	Chloride	49	mg/L	1	0	NA
A6-VP-001, 10'-0	5/24/2004	Chloride	175	mg/L	1	0	NA
A6-VP-001, 20'-0	5/24/2004	Chloride	60	mg/L	1	0	NA
A6-VP-002, 20'-0	5/24/2004	Chloride	196	mg/L	1	0	NA
A6-VP-003, 10'-0	5/24/2004	Chloride	340	mg/L	1	0	NA
A6-VP-003, 20'-0	5/24/2004	Chloride	410	mg/L	1	0	NA
A6-VP-004, 20'-0	5/24/2004	Chloride	1120	mg/L	1	0	NA
A1-VP-003, 10'-0	5/21/2004	Dinoseb	0.028	mg/L	0.003	0	NA
A1-VP-003, 10'-1	5/21/2004	Dinoseb	0.0096	mg/L	0.0006	0	NA
A1-VP-003, 20'-0	5/21/2004	Dinoseb	0.069	mg/L	0.006	0	NA
A1-VP-003, 20'-1	5/21/2004	Dinoseb	0.069	mg/L	0.003	0	NA
A6-VP-001, 10'-0	5/24/2004	Dinoseb	0.005	mg/L	0.0006	0	NA
A6-VP-002, 20'-0	5/24/2004	Dinoseb	1.4	mg/L	0.06	0	NA
A6-VP-003, 10'-0	5/24/2004	Dinoseb	0.031	mg/L	0.003	0	NA
A6-VP-003, 20'-0	5/24/2004	Dinoseb	1.4	mg/L	0.12	0	NA
A6-VP-004, 20'-0	5/24/2004	Dinoseb	3.7	mg/L	0.12	0	NA
A1-VP-001, 10'-0	5/20/2004	Iron	3.95	mg/L	0.02	0	NA
A1-VP-001, 20'-0	5/20/2004	Iron	8.61	mg/L	0.02	0	NA
A1-VP-003, 10'-0	5/21/2004	Iron	3.84	mg/L	0.02	0	NA
A1-VP-003, 10'-1	5/21/2004	Iron	1.57	mg/L	0.02	0	NA
A1-VP-003, 20'-0	5/21/2004	Iron	5.06	mg/L	0.02	0	NA
A1-VP-003, 20'-1	5/21/2004	Iron	4.32	mg/L	0.02	0	NA
A1-VP-003, 20'-2	5/21/2004	Iron	0.04	mg/L	0.02	0	NA
A1-VP-004, 10'-0	5/21/2004	Iron	1.69	mg/L	0.02	0	NA

Table 4-6: Vertical Profile Boring Groundwater Results Against MTCA Method A Cleanup Levels
Bee-Jay Scales Site
Sunnyside, Washington

Sample ID	Date	Analyte	Analytical Results	Units	MDL	MA_gw* (mg/L)	Exceed Method A?
A1-VP-004, 20'-0	5/21/2004	Iron	5.67	mg/L	0.02	0	NA
A1-VP-005, 10'-0	5/21/2004	Iron	5.55	mg/L	0.02	0	NA
A1-VP-005, 20'-0	5/21/2004	Iron	6.45	mg/L	0.02	0	NA
A1-VP-007, 10'-0	5/20/2004	Iron	6.14	mg/L	0.02	0	NA
A1-VP-007, 10'-1	5/20/2004	Iron	7.08	mg/L	0.02	0	NA
A1-VP-007, 20'-0	5/20/2004	Iron	7.47	mg/L	0.02	0	NA
A1-VP-007, 20'-1	5/20/2004	Iron	2.69	mg/L	0.02	0	NA
A5-VP-001, 20'-0	5/20/2004	Iron	1.12	mg/L	0.02	0	NA
A5-VP-002, 10'-0	5/19/2004	Iron	6.68	mg/L	0.02	0	NA
A5-VP-002, 20'-0	5/20/2004	Iron	6.53	mg/L	0.02	0	NA
A5-VP-003, 10'-0	5/19/2004	Iron	2.08	mg/L	0.02	0	NA
A5-VP-003, 20'-0	5/20/2004	Iron	8.41	mg/L	0.02	0	NA
A5-VP-004, 10'-0	5/19/2004	Iron	4.29	mg/L	0.02	0	NA
A5-VP-004, 10'-1	5/19/2004	Iron	5.96	mg/L	0.02	0	NA
A5-VP-004, 20'-0	5/19/2004	Iron	3.12	mg/L	0.02	0	NA
A5-VP-004, 20'-1	5/19/2004	Iron	2.43	mg/L	0.02	0	NA
A5-VP-005, 10'-0	5/19/2004	Iron	5.29	mg/L	0.02	0	NA
A5-VP-005, 20'-0	5/19/2004	Iron	2.5	mg/L	0.02	0	NA
A5-VP-006, 10'-0	5/19/2004	Iron	12.5	mg/L	0.02	0	NA
A5-VP-006, 20'-0	5/19/2004	Iron	3.1	mg/L	0.02	0	NA
A5-VP-007, 20'-0	5/19/2004	Iron	6.42	mg/L	0.02	0	NA
A5-VP-008, 20'-0	5/20/2004	Iron	4.27	mg/L	0.02	0	NA
A5-VP-009, 20'-0	5/20/2004	Iron	1.15	mg/L	0.02	0	NA
A6-VP-001, 10'-0	5/24/2004	Iron	6.49	mg/L	0.02	0	NA
A6-VP-001, 20'-0	5/24/2004	Iron	5.01	mg/L	0.02	0	NA
A6-VP-002, 20'-0	5/24/2004	Iron	3.03	mg/L	0.02	0	NA
A6-VP-003, 10'-0	5/24/2004	Iron	6.96	mg/L	0.02	0	NA
A6-VP-003, 20'-0	5/24/2004	Iron	4.78	mg/L	0.02	0	NA
A6-VP-004, 20'-0	5/24/2004	Iron	11.2	mg/L	0.02	0	NA
A1-VP-001, 10'-0	5/20/2004	Nitrate-N	347	mg/L	0.2	0	NA
A1-VP-001, 20'-0	5/20/2004	Nitrate-N	712	mg/L	0.2	0	NA
A1-VP-003, 10'-0	5/21/2004	Nitrate-N	983	mg/L	0.2	0	NA
A1-VP-003, 10'-1	5/21/2004	Nitrate-N	1010	mg/L	0.2	0	NA
A1-VP-003, 20'-0	5/21/2004	Nitrate-N	256	mg/L	0.2	0	NA
A1-VP-003, 20'-1	5/21/2004	Nitrate-N	258	mg/L	0.2	0	NA
A1-VP-004, 10'-0	5/21/2004	Nitrate-N	59.5	mg/L	0.2	0	NA
A1-VP-004, 20'-0	5/21/2004	Nitrate-N	147	mg/L	0.2	0	NA
A1-VP-005, 10'-0	5/21/2004	Nitrate-N	206	mg/L	0.2	0	NA
A1-VP-005, 20'-0	5/21/2004	Nitrate-N	111	mg/L	0.2	0	NA
A1-VP-007, 10'-0	5/20/2004	Nitrate-N	176	mg/L	0.2	0	NA
A1-VP-007, 10'-1	5/20/2004	Nitrate-N	176	mg/L	0.2	0	NA
A1-VP-007, 20'-0	5/20/2004	Nitrate-N	113	mg/L	0.2	0	NA
A1-VP-007, 20'-1	5/20/2004	Nitrate-N	114	mg/L	0.2	0	NA
A5-VP-001, 20'-0	5/20/2004	Nitrate-N	5.2	mg/L	0.2	0	NA
A5-VP-002, 10'-0	5/19/2004	Nitrate-N	40.4	mg/L	0.2	0	NA
A5-VP-002, 20'-0	5/20/2004	Nitrate-N	39.2	mg/L	0.2	0	NA
A5-VP-003, 10'-0	5/19/2004	Nitrate-N	250	mg/L	0.2	0	NA
A5-VP-003, 20'-0	5/20/2004	Nitrate-N	22.9	mg/L	0.2	0	NA
A5-VP-004, 10'-0	5/19/2004	Nitrate-N	58	mg/L	0.2	0	NA

Table 4-6: Vertical Profile Boring Groundwater Results Against MTCA Method A Cleanup Levels
Bee-Jay Scales Site
Sunnyside, Washington

Sample ID	Date	Analyte	Analytical Results	Units	MDL	MA_gw* (mg/L)	Exceed Method A?
A5-VP-004, 10'-1	5/19/2004	Nitrate-N	57.8	mg/L	0.2	0	NA
A5-VP-004, 20'-0	5/19/2004	Nitrate-N	59.6	mg/L	0.2	0	NA
A5-VP-004, 20'-1	5/19/2004	Nitrate-N	60.4	mg/L	0.2	0	NA
A5-VP-005, 10'-0	5/19/2004	Nitrate-N	45.8	mg/L	0.2	0	NA
A5-VP-005, 20'-0	5/19/2004	Nitrate-N	6.4	mg/L	0.2	0	NA
A5-VP-006, 10'-0	5/19/2004	Nitrate-N	26.6	mg/L	0.2	0	NA
A5-VP-006, 20'-0	5/19/2004	Nitrate-N	4.3	mg/L	0.2	0	NA
A5-VP-007, 20'-0	5/19/2004	Nitrate-N	3.9	mg/L	0.2	0	NA
A5-VP-008, 20'-0	5/20/2004	Nitrate-N	54.6	mg/L	0.2	0	NA
A5-VP-009, 20'-0	5/20/2004	Nitrate-N	6.8	mg/L	0.2	0	NA
A6-VP-001, 10'-0	5/24/2004	Nitrate-N	661	mg/L	0.2	0	NA
A6-VP-001, 20'-0	5/24/2004	Nitrate-N	46.1	mg/L	0.2	0	NA
A6-VP-002, 20'-0	5/24/2004	Nitrate-N	511	mg/L	0.2	0	NA
A6-VP-003, 10'-0	5/24/2004	Nitrate-N	64.5	mg/L	0.2	0	NA
A6-VP-003, 20'-0	5/24/2004	Nitrate-N	866	mg/L	0.2	0	NA
A6-VP-004, 20'-0	5/24/2004	Nitrate-N	2040	mg/L	0.2	0	NA
A1-VP-003, 10'-0	5/21/2004	Nitrite-N	34.6	mg/L	0.2	0	NA
A1-VP-003, 10'-1	5/21/2004	Nitrite-N	34.8	mg/L	0.2	0	NA
A6-VP-003, 20'-0	5/24/2004	Nitrite-N	38.7	mg/L	0.2	0	NA
A6-VP-004, 20'-0	5/24/2004	Nitrite-N	45.4	mg/L	0.2	0	NA
A1-VP-001, 10'-0	5/20/2004	pH	7.54	STD Units	0.01	0	NA
A1-VP-001, 20'-0	5/20/2004	pH	7.55	STD Units	0.01	0	NA
A1-VP-003, 10'-0	5/21/2004	pH	7.62	STD Units	0.01	0	NA
A1-VP-003, 10'-1	5/21/2004	pH	7.58	STD Units	0.01	0	NA
A1-VP-003, 20'-0	5/21/2004	pH	7.83	STD Units	0.01	0	NA
A1-VP-003, 20'-1	5/21/2004	pH	7.88	STD Units	0.01	0	NA
A1-VP-003, 20'-2	5/21/2004	pH	8.37	STD Units	0.01	0	NA
A1-VP-004, 10'-0	5/21/2004	pH	7.54	STD Units	0.01	0	NA
A1-VP-004, 20'-0	5/21/2004	pH	7.83	STD Units	0.01	0	NA
A1-VP-005, 10'-0	5/21/2004	pH	7.57	STD Units	0.01	0	NA
A1-VP-005, 20'-0	5/21/2004	pH	7.91	STD Units	0.01	0	NA
A1-VP-007, 10'-0	5/20/2004	pH	7.59	STD Units	0.01	0	NA
A1-VP-007, 10'-1	5/20/2004	pH	7.71	STD Units	0.01	0	NA
A1-VP-007, 20'-0	5/20/2004	pH	7.99	STD Units	0.01	0	NA
A1-VP-007, 20'-1	5/20/2004	pH	7.95	STD Units	0.01	0	NA
A1-VP-007, 20'-2	5/20/2004	pH	7.76	STD Units	0.01	0	NA
A5-VP-001, 20'-0	5/20/2004	pH	7.91	STD Units	0.01	0	NA
A5-VP-002, 10'-0	5/19/2004	pH	8.06	STD Units	0.01	0	NA
A5-VP-002, 20'-0	5/20/2004	pH	7.71	STD Units	0.01	0	NA
A5-VP-003, 10'-0	5/19/2004	pH	7.56	STD Units	0.01	0	NA
A5-VP-003, 20'-0	5/20/2004	pH	7.79	STD Units	0.01	0	NA
A5-VP-004, 10'-0	5/19/2004	pH	7.88	STD Units	0.01	0	NA
A5-VP-004, 10'-1	5/19/2004	pH	7.87	STD Units	0.01	0	NA
A5-VP-004, 20'-0	5/19/2004	pH	8.02	STD Units	0.01	0	NA
A5-VP-004, 20'-1	5/19/2004	pH	8.24	STD Units	0.01	0	NA
A5-VP-004, 20'-2	5/19/2004	pH	6.84	STD Units	0.01	0	NA
A5-VP-005, 10'-0	5/19/2004	pH	8.01	STD Units	0.01	0	NA
A5-VP-005, 20'-0	5/19/2004	pH	8.12	STD Units	0.01	0	NA
A5-VP-006, 10'-0	5/19/2004	pH	7.95	STD Units	0.01	0	NA

Table 4-6: Vertical Profile Boring Groundwater Results Against MTCA Method A Cleanup Levels
Bee-Jay Scales Site
Sunnyside, Washington

Sample ID	Date	Analyte	Analytical Results	Units	MDL	MA_gw* (mg/L)	Exceed Method A?
A5-VP-006, 20'-0	5/19/2004	pH	8.23	STD Units	0.01	0	NA
A5-VP-007, 20'-0	5/19/2004	pH	8.29	STD Units	0.01	0	NA
A5-VP-008, 20'-0	5/20/2004	pH	8.04	STD Units	0.01	0	NA
A5-VP-009, 20'-0	5/20/2004	pH	7.95	STD Units	0.01	0	NA
A6-VP-001, 10'-0	5/24/2004	pH	7.56	STD Units	0.01	0	NA
A6-VP-001, 20'-0	5/24/2004	pH	8.01	STD Units	0.01	0	NA
A6-VP-002, 20'-0	5/24/2004	pH	7.6	STD Units	0.01	0	NA
A6-VP-002, 20'-1	5/24/2004	pH	5.9	STD Units	0.01	0	NA
A6-VP-003, 10'-0	5/24/2004	pH	7.73	STD Units	0.01	0	NA
A6-VP-003, 20'-0	5/24/2004	pH	8.53	STD Units	0.01	0	NA
A6-VP-004, 20'-0	5/24/2004	pH	6.56	STD Units	0.01	0	NA
A1-VP-001, 10'-0	5/20/2004	Phosphate	42	mg/L	1	0	NA
A1-VP-001, 20'-0	5/20/2004	Phosphate	22.3	mg/L	0.1	0	NA
A1-VP-003, 10'-0	5/21/2004	Phosphate	28.5	mg/L	0.1	0	NA
A1-VP-003, 10'-1	5/21/2004	Phosphate	26.6	mg/L	0.1	0	NA
A1-VP-003, 20'-0	5/21/2004	Phosphate	21.7	mg/L	0.1	0	NA
A1-VP-003, 20'-1	5/21/2004	Phosphate	29.7	mg/L	0.1	0	NA
A1-VP-004, 10'-0	5/21/2004	Phosphate	22.2	mg/L	0.1	0	NA
A1-VP-004, 20'-0	5/21/2004	Phosphate	3.9	mg/L	0.1	0	NA
A1-VP-005, 10'-0	5/21/2004	Phosphate	17.8	mg/L	0.1	0	NA
A1-VP-005, 20'-0	5/21/2004	Phosphate	6.3	mg/L	0.1	0	NA
A1-VP-007, 10'-0	5/20/2004	Phosphate	21.3	mg/L	0.1	0	NA
A1-VP-007, 10'-1	5/20/2004	Phosphate	17.7	mg/L	0.1	0	NA
A1-VP-007, 20'-0	5/20/2004	Phosphate	71	mg/L	1	0	NA
A1-VP-007, 20'-1	5/20/2004	Phosphate	63	mg/L	1	0	NA
A5-VP-001, 20'-0	5/20/2004	Phosphate	440	mg/L	10	0	NA
A5-VP-002, 10'-0	5/19/2004	Phosphate	4.4	mg/L	0.1	0	NA
A5-VP-002, 20'-0	5/20/2004	Phosphate	33	mg/L	1	0	NA
A5-VP-003, 10'-0	5/19/2004	Phosphate	1.1	mg/L	0.1	0	NA
A5-VP-003, 20'-0	5/20/2004	Phosphate	9.5	mg/L	0.1	0	NA
A5-VP-004, 10'-0	5/19/2004	Phosphate	35	mg/L	1	0	NA
A5-VP-004, 10'-1	5/19/2004	Phosphate	30	mg/L	1	0	NA
A5-VP-004, 20'-0	5/19/2004	Phosphate	47	mg/L	1	0	NA
A5-VP-004, 20'-1	5/19/2004	Phosphate	54	mg/L	1	0	NA
A5-VP-005, 10'-0	5/19/2004	Phosphate	11.7	mg/L	0.1	0	NA
A5-VP-005, 20'-0	5/19/2004	Phosphate	48	mg/L	1	0	NA
A5-VP-006, 10'-0	5/19/2004	Phosphate	3	mg/L	0.1	0	NA
A5-VP-006, 20'-0	5/19/2004	Phosphate	26	mg/L	1	0	NA
A5-VP-007, 20'-0	5/19/2004	Phosphate	15.6	mg/L	0.1	0	NA
A5-VP-008, 20'-0	5/20/2004	Phosphate	29.9	mg/L	0.1	0	NA
A5-VP-009, 20'-0	5/20/2004	Phosphate	99	mg/L	1	0	NA
A6-VP-001, 10'-0	5/24/2004	Phosphate	54	mg/L	1	0	NA
A6-VP-001, 20'-0	5/24/2004	Phosphate	16.5	mg/L	0.1	0	NA
A6-VP-002, 20'-0	5/24/2004	Phosphate	53	mg/L	1	0	NA
A6-VP-003, 10'-0	5/24/2004	Phosphate	17.2	mg/L	0.1	0	NA
A6-VP-003, 20'-0	5/24/2004	Phosphate	51	mg/L	1	0	NA
A6-VP-004, 20'-0	5/24/2004	Phosphate	49	mg/L	1	0	NA
A1-VP-001, 10'-0	5/20/2004	Sulfate	169	mg/L	1	0	NA
A1-VP-001, 20'-0	5/20/2004	Sulfate	277	mg/L	1	0	NA

Table 4-6: Vertical Profile Boring Groundwater Results Against MTCA Method A Cleanup Levels
Bee-Jay Scales Site
Sunnyside, Washington

Sample ID	Date	Analyte	Analytical Results	Units	MDL	MA_gw* (mg/L)	Exceed Method A?
A1-VP-003, 10'-0	5/21/2004	Sulfate	110	mg/L	1	0	NA
A1-VP-003, 10'-1	5/21/2004	Sulfate	116	mg/L	1	0	NA
A1-VP-003, 20'-0	5/21/2004	Sulfate	204	mg/L	1	0	NA
A1-VP-003, 20'-1	5/21/2004	Sulfate	203	mg/L	1	0	NA
A1-VP-004, 10'-0	5/21/2004	Sulfate	250	mg/L	1	0	NA
A1-VP-004, 20'-0	5/21/2004	Sulfate	156	mg/L	1	0	NA
A1-VP-005, 10'-0	5/21/2004	Sulfate	224	mg/L	1	0	NA
A1-VP-005, 20'-0	5/21/2004	Sulfate	197	mg/L	1	0	NA
A1-VP-007, 10'-0	5/20/2004	Sulfate	211	mg/L	1	0	NA
A1-VP-007, 10'-1	5/20/2004	Sulfate	213	mg/L	1	0	NA
A1-VP-007, 20'-0	5/20/2004	Sulfate	122	mg/L	1	0	NA
A1-VP-007, 20'-1	5/20/2004	Sulfate	122	mg/L	1	0	NA
A5-VP-001, 20'-0	5/20/2004	Sulfate	42	mg/L	1	0	NA
A5-VP-002, 10'-0	5/19/2004	Sulfate	91	mg/L	1	0	NA
A5-VP-002, 20'-0	5/20/2004	Sulfate	52	mg/L	1	0	NA
A5-VP-003, 10'-0	5/19/2004	Sulfate	161	mg/L	1	0	NA
A5-VP-003, 20'-0	5/20/2004	Sulfate	54	mg/L	1	0	NA
A5-VP-004, 10'-0	5/19/2004	Sulfate	135	mg/L	1	0	NA
A5-VP-004, 10'-1	5/19/2004	Sulfate	136	mg/L	1	0	NA
A5-VP-004, 20'-0	5/19/2004	Sulfate	87	mg/L	1	0	NA
A5-VP-004, 20'-1	5/19/2004	Sulfate	86	mg/L	1	0	NA
A5-VP-005, 10'-0	5/19/2004	Sulfate	76	mg/L	1	0	NA
A5-VP-005, 20'-0	5/19/2004	Sulfate	43	mg/L	1	0	NA
A5-VP-006, 10'-0	5/19/2004	Sulfate	88	mg/L	1	0	NA
A5-VP-006, 20'-0	5/19/2004	Sulfate	45	mg/L	1	0	NA
A5-VP-007, 20'-0	5/19/2004	Sulfate	63	mg/L	1	0	NA
A5-VP-008, 20'-0	5/20/2004	Sulfate	90	mg/L	1	0	NA
A5-VP-009, 20'-0	5/20/2004	Sulfate	50	mg/L	1	0	NA
A6-VP-001, 10'-0	5/24/2004	Sulfate	226	mg/L	1	0	NA
A6-VP-001, 20'-0	5/24/2004	Sulfate	58	mg/L	1	0	NA
A6-VP-002, 20'-0	5/24/2004	Sulfate	869	mg/L	1	0	NA
A6-VP-003, 10'-0	5/24/2004	Sulfate	129	mg/L	1	0	NA
A6-VP-003, 20'-0	5/24/2004	Sulfate	846	mg/L	1	0	NA
A6-VP-004, 20'-0	5/24/2004	Sulfate	3010	mg/L	1	0	NA

NA = Not available.

* No MTCA Method A Cleanup Levels have been developed for 2,4-D, alkalinity as $CaCO_3$, ammonia-N, chloride, dinoseb, iron, nitrate-N, nitrite-N, pH, phosphate, or sulfate.

Table 4-7: Vertical Profile Boring Groundwater Results Against MTCA Method B and C Cleanup Levels
Bee-Jay Scales Site
Sunnyside, Washington

Sample ID	Date	Analyte	Analytical Results	Units	MDL	MB_gw-std* (mg/L)	Exceed Method B?	MC_gw-std* (mg/L)	Exceed Method C?	GW Comments
A6-VP-002, 20'-0	5/24/2004	2,4-D	1.3	mg/L	0.4	0.16	**Yes**	0.35	**Yes**	
A1-VP-001, 10'-0	5/20/2004	Ammonia-N	0.6	mg/L	0.1	0	NA	0	NA	No CUL recommended for ammonia-N.
A1-VP-001, 20'-0	5/20/2004	Ammonia-N	0.6	mg/L	0.1	0	NA	0	NA	No CUL recommended for ammonia-N.
A1-VP-003, 10'-0	5/21/2004	Ammonia-N	1090	mg/L	10	0	NA	0	NA	No CUL recommended for ammonia-N.
A1-VP-003, 10'-1	5/21/2004	Ammonia-N	1060	mg/L	10	0	NA	0	NA	No CUL recommended for ammonia-N.
A1-VP-003, 20'-0	5/21/2004	Ammonia-N	150	mg/L	10	0	NA	0	NA	No CUL recommended for ammonia-N.
A1-VP-003, 20'-1	5/21/2004	Ammonia-N	160	mg/L	10	0	NA	0	NA	No CUL recommended for ammonia-N.
A1-VP-004, 10'-0	5/21/2004	Ammonia-N	260	mg/L	10	0	NA	0	NA	No CUL recommended for ammonia-N.
A1-VP-004, 20'-0	5/21/2004	Ammonia-N	29	mg/L	1	0	NA	0	NA	No CUL recommended for ammonia-N.
A1-VP-005, 10'-0	5/21/2004	Ammonia-N	8.7	mg/L	0.1	0	NA	0	NA	No CUL recommended for ammonia-N.
A1-VP-005, 20'-0	5/21/2004	Ammonia-N	1.5	mg/L	0.1	0	NA	0	NA	No CUL recommended for ammonia-N.
A1-VP-007, 10'-0	5/20/2004	Ammonia-N	0.3	mg/L	0.1	0	NA	0	NA	No CUL recommended for ammonia-N.
A1-VP-007, 10'-1	5/20/2004	Ammonia-N	0.2	mg/L	0.1	0	NA	0	NA	No CUL recommended for ammonia-N.
A5-VP-002, 10'-0	5/19/2004	Ammonia-N	6.9	mg/L	0.1	0	NA	0	NA	No CUL recommended for ammonia-N.
A5-VP-002, 20'-0	5/20/2004	Ammonia-N	4.6	mg/L	0.1	0	NA	0	NA	No CUL recommended for ammonia-N.
A5-VP-008, 20'-0	5/20/2004	Ammonia-N	130	mg/L	10	0	NA	0	NA	No CUL recommended for ammonia-N.
A5-VP-009, 20'-0	5/20/2004	Ammonia-N	0.2	mg/L	0.1	0	NA	0	NA	No CUL recommended for ammonia-N.
A6-VP-001, 10'-0	5/24/2004	Ammonia-N	0.4	mg/L	0.1	0	NA	0	NA	No CUL recommended for ammonia-N.
A6-VP-002, 20'-0	5/24/2004	Ammonia-N	440	mg/L	10	0	NA	0	NA	No CUL recommended for ammonia-N.
A6-VP-003, 10'-0	5/24/2004	Ammonia-N	60	mg/L	1	0	NA	0	NA	No CUL recommended for ammonia-N.
A6-VP-003, 20'-0	5/24/2004	Ammonia-N	1750	mg/L	10	0	NA	0	NA	No CUL recommended for ammonia-N.
A6-VP-004, 20'-0	5/24/2004	Ammonia-N	300	mg/L	10	0	NA	0	NA	No CUL recommended for ammonia-N.
A1-VP-001, 10'-0	5/20/2004	Arsenic	0.015	mg/L	0.002	5.8333E-05	**Yes**	0.000583	**Yes**	
A1-VP-001, 20'-0	5/20/2004	Arsenic	0.017	mg/L	0.002	5.8333E-05	**Yes**	0.000583	**Yes**	
A1-VP-003, 10'-0	5/21/2004	Arsenic	0.047	mg/L	0.002	5.8333E-05	**Yes**	0.000583	**Yes**	
A1-VP-003, 10'-1	5/21/2004	Arsenic	0.047	mg/L	0.002	5.8333E-05	**Yes**	0.000583	**Yes**	
A1-VP-003, 20'-0	5/21/2004	Arsenic	0.057	mg/L	0.002	5.8333E-05	**Yes**	0.000583	**Yes**	
A1-VP-003, 20'-1	5/21/2004	Arsenic	0.059	mg/L	0.002	5.8333E-05	**Yes**	0.000583	**Yes**	
A1-VP-004, 10'-0	5/21/2004	Arsenic	0.042	mg/L	0.002	5.8333E-05	**Yes**	0.000583	**Yes**	
A1-VP-004, 20'-0	5/21/2004	Arsenic	0.011	mg/L	0.002	5.8333E-05	**Yes**	0.000583	**Yes**	
A1-VP-005, 10'-0	5/21/2004	Arsenic	0.024	mg/L	0.002	5.8333E-05	**Yes**	0.000583	**Yes**	
A1-VP-005, 20'-0	5/21/2004	Arsenic	0.015	mg/L	0.002	5.8333E-05	**Yes**	0.000583	**Yes**	
A1-VP-007, 10'-0	5/20/2004	Arsenic	0.018	mg/L	0.002	5.8333E-05	**Yes**	0.000583	**Yes**	
A1-VP-007, 10'-1	5/20/2004	Arsenic	0.016	mg/L	0.002	5.8333E-05	**Yes**	0.000583	**Yes**	
A1-VP-007, 20'-0	5/20/2004	Arsenic	0.017	mg/L	0.002	5.8333E-05	**Yes**	0.000583	**Yes**	
A1-VP-007, 20'-1	5/20/2004	Arsenic	0.02	mg/L	0.002	5.8333E-05	**Yes**	0.000583	**Yes**	
A5-VP-001, 20'-0	5/20/2004	Arsenic	0.017	mg/L	0.002	5.8333E-05	**Yes**	0.000583	**Yes**	
A5-VP-002, 10'-0	5/19/2004	Arsenic	0.012	mg/L	0.002	5.8333E-05	**Yes**	0.000583	**Yes**	
A5-VP-002, 20'-0	5/20/2004	Arsenic	0.018	mg/L	0.002	5.8333E-05	**Yes**	0.000583	**Yes**	
A5-VP-003, 10'-0	5/19/2004	Arsenic	0.004	mg/L	0.002	5.8333E-05	**Yes**	0.000583	**Yes**	

Table 4-7: Vertical Profile Boring Groundwater Results Against MTCA Method B and C Cleanup Levels
Bee-Jay Scales Site
Sunnyside, Washington

Sample ID	Date	Analyte	Analytical Results	Units	MDL	MB_gw-std* (mg/L)	Exceed Method B?	MC_gw-std* (mg/L)	Exceed Method C?	GW Comments
A5-VP-003, 20'-0	5/20/2004	Arsenic	0.014	mg/L	0.002	5.8333E-05	**Yes**	0.000583	**Yes**	
A5-VP-004, 10'-0	5/19/2004	Arsenic	0.017	mg/L	0.002	5.8333E-05	**Yes**	0.000583	**Yes**	
A5-VP-004, 10'-1	5/19/2004	Arsenic	0.018	mg/L	0.002	5.8333E-05	**Yes**	0.000583	**Yes**	
A5-VP-004, 20'-0	5/19/2004	Arsenic	0.043	mg/L	0.002	5.8333E-05	**Yes**	0.000583	**Yes**	
A5-VP-004, 20'-1	5/19/2004	Arsenic	0.048	mg/L	0.002	5.8333E-05	**Yes**	0.000583	**Yes**	
A5-VP-005, 10'-0	5/19/2004	Arsenic	0.049	mg/L	0.002	5.8333E-05	**Yes**	0.000583	**Yes**	
A5-VP-005, 20'-0	5/19/2004	Arsenic	0.034	mg/L	0.002	5.8333E-05	**Yes**	0.000583	**Yes**	
A5-VP-006, 10'-0	5/19/2004	Arsenic	0.013	mg/L	0.002	5.8333E-05	**Yes**	0.000583	**Yes**	
A5-VP-006, 20'-0	5/19/2004	Arsenic	0.033	mg/L	0.002	5.8333E-05	**Yes**	0.000583	**Yes**	
A5-VP-007, 20'-0	5/19/2004	Arsenic	0.02	mg/L	0.002	5.8333E-05	**Yes**	0.000583	**Yes**	
A5-VP-008, 20'-0	5/20/2004	Arsenic	0.028	mg/L	0.002	5.8333E-05	**Yes**	0.000583	**Yes**	
A5-VP-009, 20'-0	5/20/2004	Arsenic	0.022	mg/L	0.002	5.8333E-05	**Yes**	0.000583	**Yes**	
A6-VP-001, 10'-0	5/24/2004	Arsenic	0.027	mg/L	0.002	5.8333E-05	**Yes**	0.000583	**Yes**	
A6-VP-001, 20'-0	5/24/2004	Arsenic	0.018	mg/L	0.002	5.8333E-05	**Yes**	0.000583	**Yes**	
A6-VP-002, 20'-0	5/24/2004	Arsenic	0.025	mg/L	0.002	5.8333E-05	**Yes**	0.000583	**Yes**	
A6-VP-003, 10'-0	5/24/2004	Arsenic	0.018	mg/L	0.002	5.8333E-05	**Yes**	0.000583	**Yes**	
A6-VP-003, 20'-0	5/24/2004	Arsenic	0.087	mg/L	0.002	5.8333E-05	**Yes**	0.000583	**Yes**	
A6-VP-004, 20'-0	5/24/2004	Arsenic	0.034	mg/L	0.002	5.8333E-05	**Yes**	0.000583	**Yes**	
A1-VP-001, 10'-0	5/20/2004	Chloride	478	mg/L	1	250	**Yes**	250	**Yes**	WA State Board of Health Secondary MCL.
A1-VP-001, 20'-0	5/20/2004	Chloride	190	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A1-VP-003, 10'-0	5/21/2004	Chloride	190	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A1-VP-003, 10'-1	5/21/2004	Chloride	230	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A1-VP-003, 20'-0	5/21/2004	Chloride	57	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A1-VP-003, 20'-1	5/21/2004	Chloride	56	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A1-VP-004, 10'-0	5/21/2004	Chloride	210	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A1-VP-004, 20'-0	5/21/2004	Chloride	100	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A1-VP-005, 10'-0	5/21/2004	Chloride	324	mg/L	1	250	**Yes**	250	**Yes**	WA State Board of Health Secondary MCL.
A1-VP-005, 20'-0	5/21/2004	Chloride	108	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A1-VP-007, 10'-0	5/20/2004	Chloride	366	mg/L	1	250	**Yes**	250	**Yes**	WA State Board of Health Secondary MCL.
A1-VP-007, 10'-1	5/20/2004	Chloride	369	mg/L	1	250	**Yes**	250	**Yes**	WA State Board of Health Secondary MCL.
A1-VP-007, 20'-0	5/20/2004	Chloride	52	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A1-VP-007, 20'-1	5/20/2004	Chloride	51	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A5-VP-001, 20'-0	5/20/2004	Chloride	86	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A5-VP-002, 10'-0	5/19/2004	Chloride	265	mg/L	1	250	**Yes**	250	**Yes**	WA State Board of Health Secondary MCL.
A5-VP-002, 20'-0	5/20/2004	Chloride	19	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A5-VP-003, 10'-0	5/19/2004	Chloride	230	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A5-VP-003, 20'-0	5/20/2004	Chloride	48	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A5-VP-004, 10'-0	5/19/2004	Chloride	148	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A5-VP-004, 10'-1	5/19/2004	Chloride	149	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A5-VP-004, 20'-0	5/19/2004	Chloride	56	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.

Table 4-7: Vertical Profile Boring Groundwater Results Against MTCA Method B and C Cleanup Levels
Bee-Jay Scales Site
Sunnyside, Washington

Sample ID	Date	Analyte	Analytical Results	Units	MDL	MB_gw-std* (mg/L)	Exceed Method B?	MC_gw-std* (mg/L)	Exceed Method C?	GW Comments
A5-VP-004, 20'-1	5/19/2004	Chloride	57	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A5-VP-005, 10'-0	5/19/2004	Chloride	80	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A5-VP-005, 20'-0	5/19/2004	Chloride	30	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A5-VP-006, 10'-0	5/19/2004	Chloride	177	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A5-VP-006, 20'-0	5/19/2004	Chloride	34	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A5-VP-007, 20'-0	5/19/2004	Chloride	67	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A5-VP-008, 20'-0	5/20/2004	Chloride	41	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A5-VP-009, 20'-0	5/20/2004	Chloride	49	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A6-VP-001, 10'-0	5/24/2004	Chloride	175	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A6-VP-001, 20'-0	5/24/2004	Chloride	60	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A6-VP-002, 20'-0	5/24/2004	Chloride	196	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A6-VP-003, 10'-0	5/24/2004	Chloride	340	mg/L	1	250	**Yes**	250	**Yes**	WA State Board of Health Secondary MCL.
A6-VP-003, 20'-0	5/24/2004	Chloride	410	mg/L	1	250	**Yes**	250	**Yes**	WA State Board of Health Secondary MCL.
A6-VP-004, 20'-0	5/24/2004	Chloride	1120	mg/L	1	250	**Yes**	250	**Yes**	WA State Board of Health Secondary MCL.
A1-VP-003, 10'-0	5/21/2004	Dinoseb	0.028	mg/L	0.003	0.016	**Yes**	0.035	No	
A1-VP-003, 10'-1	5/21/2004	Dinoseb	0.0096	mg/L	0.0006	0.016	No	0.035	No	
A1-VP-003, 20'-0	5/21/2004	Dinoseb	0.069	mg/L	0.006	0.016	**Yes**	0.035	**Yes**	
A1-VP-003, 20'-1	5/21/2004	Dinoseb	0.069	mg/L	0.003	0.016	**Yes**	0.035	**Yes**	
A6-VP-001, 10'-0	5/24/2004	Dinoseb	0.005	mg/L	0.0006	0.016	No	0.035	No	
A6-VP-002, 20'-0	5/24/2004	Dinoseb	1.4	mg/L	0.06	0.016	**Yes**	0.035	**Yes**	
A6-VP-003, 10'-0	5/24/2004	Dinoseb	0.031	mg/L	0.003	0.016	**Yes**	0.035	No	
A6-VP-003, 20'-0	5/24/2004	Dinoseb	1.4	mg/L	0.12	0.016	**Yes**	0.035	**Yes**	
A6-VP-004, 20'-0	5/24/2004	Dinoseb	3.7	mg/L	0.12	0.016	**Yes**	0.035	**Yes**	
A1-VP-001, 10'-0	5/20/2004	Iron	3.95	mg/L	0.02	0.3	**Yes**	0.3	**Yes**	WA State Board of Health Secondary MCL.
A1-VP-001, 20'-0	5/20/2004	Iron	8.61	mg/L	0.02	0.3	**Yes**	0.3	**Yes**	WA State Board of Health Secondary MCL.
A1-VP-003, 10'-0	5/21/2004	Iron	3.84	mg/L	0.02	0.3	**Yes**	0.3	**Yes**	WA State Board of Health Secondary MCL.
A1-VP-003, 10'-1	5/21/2004	Iron	1.57	mg/L	0.02	0.3	**Yes**	0.3	**Yes**	WA State Board of Health Secondary MCL.
A1-VP-003, 20'-0	5/21/2004	Iron	5.06	mg/L	0.02	0.3	**Yes**	0.3	**Yes**	WA State Board of Health Secondary MCL.
A1-VP-003, 20'-1	5/21/2004	Iron	4.32	mg/L	0.02	0.3	**Yes**	0.3	**Yes**	WA State Board of Health Secondary MCL.
A1-VP-003, 20'-2	5/21/2004	Iron	0.04	mg/L	0.02	0.3	No	0.3	No	WA State Board of Health Secondary MCL.
A1-VP-004, 10'-0	5/21/2004	Iron	1.69	mg/L	0.02	0.3	**Yes**	0.3	**Yes**	WA State Board of Health Secondary MCL.
A1-VP-004, 20'-0	5/21/2004	Iron	5.67	mg/L	0.02	0.3	**Yes**	0.3	**Yes**	WA State Board of Health Secondary MCL.
A1-VP-005, 10'-0	5/21/2004	Iron	5.55	mg/L	0.02	0.3	**Yes**	0.3	**Yes**	WA State Board of Health Secondary MCL.
A1-VP-005, 20'-0	5/21/2004	Iron	6.45	mg/L	0.02	0.3	**Yes**	0.3	**Yes**	WA State Board of Health Secondary MCL.
A1-VP-007, 10'-0	5/20/2004	Iron	6.14	mg/L	0.02	0.3	**Yes**	0.3	**Yes**	WA State Board of Health Secondary MCL.
A1-VP-007, 10'-1	5/20/2004	Iron	7.08	mg/L	0.02	0.3	**Yes**	0.3	**Yes**	WA State Board of Health Secondary MCL.
A1-VP-007, 20'-0	5/20/2004	Iron	7.47	mg/L	0.02	0.3	**Yes**	0.3	**Yes**	WA State Board of Health Secondary MCL.
A1-VP-007, 20'-1	5/20/2004	Iron	2.69	mg/L	0.02	0.3	**Yes**	0.3	**Yes**	WA State Board of Health Secondary MCL.
A5-VP-001, 20'-0	5/20/2004	Iron	1.12	mg/L	0.02	0.3	**Yes**	0.3	**Yes**	WA State Board of Health Secondary MCL.
A5-VP-002, 10'-0	5/19/2004	Iron	6.68	mg/L	0.02	0.3	**Yes**	0.3	**Yes**	WA State Board of Health Secondary MCL.

Table 4-7: Vertical Profile Boring Groundwater Results Against MTCA Method B and C Cleanup Levels
Bee-Jay Scales Site
Sunnyside, Washington

Sample ID	Date	Analyte	Analytical Results	Units	MDL	MB_gw-std* (mg/L)	Exceed Method B?	MC_gw-std* (mg/L)	Exceed Method C?	GW Comments
A5-VP-002, 20'-0	5/20/2004	Iron	6.53	mg/L	0.02	0.3	**Yes**	0.3	**Yes**	WA State Board of Health Secondary MCL.
A5-VP-003, 10'-0	5/19/2004	Iron	2.08	mg/L	0.02	0.3	**Yes**	0.3	**Yes**	WA State Board of Health Secondary MCL.
A5-VP-003, 20'-0	5/20/2004	Iron	8.41	mg/L	0.02	0.3	**Yes**	0.3	**Yes**	WA State Board of Health Secondary MCL.
A5-VP-004, 10'-0	5/19/2004	Iron	4.29	mg/L	0.02	0.3	**Yes**	0.3	**Yes**	WA State Board of Health Secondary MCL.
A5-VP-004, 10'-1	5/19/2004	Iron	5.96	mg/L	0.02	0.3	**Yes**	0.3	**Yes**	WA State Board of Health Secondary MCL.
A5-VP-004, 20'-0	5/19/2004	Iron	3.12	mg/L	0.02	0.3	**Yes**	0.3	**Yes**	WA State Board of Health Secondary MCL.
A5-VP-004, 20'-1	5/19/2004	Iron	2.43	mg/L	0.02	0.3	**Yes**	0.3	**Yes**	WA State Board of Health Secondary MCL.
A5-VP-005, 10'-0	5/19/2004	Iron	5.29	mg/L	0.02	0.3	**Yes**	0.3	**Yes**	WA State Board of Health Secondary MCL.
A5-VP-005, 20'-0	5/19/2004	Iron	2.5	mg/L	0.02	0.3	**Yes**	0.3	**Yes**	WA State Board of Health Secondary MCL.
A5-VP-006, 10'-0	5/19/2004	Iron	12.5	mg/L	0.02	0.3	**Yes**	0.3	**Yes**	WA State Board of Health Secondary MCL.
A5-VP-006, 20'-0	5/19/2004	Iron	3.1	mg/L	0.02	0.3	**Yes**	0.3	**Yes**	WA State Board of Health Secondary MCL.
A5-VP-007, 20'-0	5/19/2004	Iron	6.42	mg/L	0.02	0.3	**Yes**	0.3	**Yes**	WA State Board of Health Secondary MCL.
A5-VP-008, 20'-0	5/20/2004	Iron	4.27	mg/L	0.02	0.3	**Yes**	0.3	**Yes**	WA State Board of Health Secondary MCL.
A5-VP-009, 20'-0	5/20/2004	Iron	1.15	mg/L	0.02	0.3	**Yes**	0.3	**Yes**	WA State Board of Health Secondary MCL.
A6-VP-001, 10'-0	5/24/2004	Iron	6.49	mg/L	0.02	0.3	**Yes**	0.3	**Yes**	WA State Board of Health Secondary MCL.
A6-VP-001, 20'-0	5/24/2004	Iron	5.01	mg/L	0.02	0.3	**Yes**	0.3	**Yes**	WA State Board of Health Secondary MCL.
A6-VP-002, 20'-0	5/24/2004	Iron	3.03	mg/L	0.02	0.3	**Yes**	0.3	**Yes**	WA State Board of Health Secondary MCL.
A6-VP-003, 10'-0	5/24/2004	Iron	6.96	mg/L	0.02	0.3	**Yes**	0.3	**Yes**	WA State Board of Health Secondary MCL.
A6-VP-003, 20'-0	5/24/2004	Iron	4.78	mg/L	0.02	0.3	**Yes**	0.3	**Yes**	WA State Board of Health Secondary MCL.
A6-VP-004, 20'-0	5/24/2004	Iron	11.2	mg/L	0.02	0.3	**Yes**	0.3	**Yes**	WA State Board of Health Secondary MCL.
A1-VP-001, 10'-0	5/20/2004	Nitrate-N	347	mg/L	0.2	1.6	**Yes**	3.5	**Yes**	
A1-VP-001, 20'-0	5/20/2004	Nitrate-N	712	mg/L	0.2	1.6	**Yes**	3.5	**Yes**	
A1-VP-003, 10'-0	5/21/2004	Nitrate-N	983	mg/L	0.2	1.6	**Yes**	3.5	**Yes**	
A1-VP-003, 10'-1	5/21/2004	Nitrate-N	1010	mg/L	0.2	1.6	**Yes**	3.5	**Yes**	
A1-VP-003, 20'-0	5/21/2004	Nitrate-N	256	mg/L	0.2	1.6	**Yes**	3.5	**Yes**	
A1-VP-003, 20'-1	5/21/2004	Nitrate-N	258	mg/L	0.2	1.6	**Yes**	3.5	**Yes**	
A1-VP-004, 10'-0	5/21/2004	Nitrate-N	59.5	mg/L	0.2	1.6	**Yes**	3.5	**Yes**	
A1-VP-004, 20'-0	5/21/2004	Nitrate-N	147	mg/L	0.2	1.6	**Yes**	3.5	**Yes**	
A1-VP-005, 10'-0	5/21/2004	Nitrate-N	206	mg/L	0.2	1.6	**Yes**	3.5	**Yes**	
A1-VP-005, 20'-0	5/21/2004	Nitrate-N	111	mg/L	0.2	1.6	**Yes**	3.5	**Yes**	
A1-VP-007, 10'-0	5/20/2004	Nitrate-N	176	mg/L	0.2	1.6	**Yes**	3.5	**Yes**	
A1-VP-007, 10'-1	5/20/2004	Nitrate-N	176	mg/L	0.2	1.6	**Yes**	3.5	**Yes**	
A1-VP-007, 20'-0	5/20/2004	Nitrate-N	113	mg/L	0.2	1.6	**Yes**	3.5	**Yes**	
A1-VP-007, 20'-1	5/20/2004	Nitrate-N	114	mg/L	0.2	1.6	**Yes**	3.5	**Yes**	
A5-VP-001, 20'-0	5/20/2004	Nitrate-N	5.2	mg/L	0.2	1.6	**Yes**	3.5	**Yes**	
A5-VP-002, 10'-0	5/19/2004	Nitrate-N	40.4	mg/L	0.2	1.6	**Yes**	3.5	**Yes**	
A5-VP-002, 20'-0	5/20/2004	Nitrate-N	39.2	mg/L	0.2	1.6	**Yes**	3.5	**Yes**	
A5-VP-003, 10'-0	5/19/2004	Nitrate-N	250	mg/L	0.2	1.6	**Yes**	3.5	**Yes**	
A5-VP-003, 20'-0	5/20/2004	Nitrate-N	22.9	mg/L	0.2	1.6	**Yes**	3.5	**Yes**	
A5-VP-004, 10'-0	5/19/2004	Nitrate-N	58	mg/L	0.2	1.6	**Yes**	3.5	**Yes**	

Table 4-7: Vertical Profile Boring Groundwater Results Against MTCA Method B and C Cleanup Levels
Bee-Jay Scales Site
Sunnyside, Washington

Sample ID	Date	Analyte	Analytical Results	Units	MDL	MB_gw-std* (mg/L)	Exceed Method B?	MC_gw-std* (mg/L)	Exceed Method C?	GW Comments
A5-VP-004, 10'-1	5/19/2004	Nitrate-N	57.8	mg/L	0.2	1.6	**Yes**	3.5	**Yes**	
A5-VP-004, 20'-0	5/19/2004	Nitrate-N	59.6	mg/L	0.2	1.6	**Yes**	3.5	**Yes**	
A5-VP-004, 20'-1	5/19/2004	Nitrate-N	60.4	mg/L	0.2	1.6	**Yes**	3.5	**Yes**	
A5-VP-005, 10'-0	5/19/2004	Nitrate-N	45.8	mg/L	0.2	1.6	**Yes**	3.5	**Yes**	
A5-VP-005, 20'-0	5/19/2004	Nitrate-N	6.4	mg/L	0.2	1.6	**Yes**	3.5	**Yes**	
A5-VP-006, 10'-0	5/19/2004	Nitrate-N	26.6	mg/L	0.2	1.6	**Yes**	3.5	**Yes**	
A5-VP-006, 20'-0	5/19/2004	Nitrate-N	4.3	mg/L	0.2	1.6	**Yes**	3.5	**Yes**	
A5-VP-007, 20'-0	5/19/2004	Nitrate-N	3.9	mg/L	0.2	1.6	**Yes**	3.5	**Yes**	
A5-VP-008, 20'-0	5/20/2004	Nitrate-N	54.6	mg/L	0.2	1.6	**Yes**	3.5	**Yes**	
A5-VP-009, 20'-0	5/20/2004	Nitrate-N	6.8	mg/L	0.2	1.6	**Yes**	3.5	**Yes**	
A6-VP-001, 10'-0	5/24/2004	Nitrate-N	661	mg/L	0.2	1.6	**Yes**	3.5	**Yes**	
A6-VP-001, 20'-0	5/24/2004	Nitrate-N	46.1	mg/L	0.2	1.6	**Yes**	3.5	**Yes**	
A6-VP-002, 20'-0	5/24/2004	Nitrate-N	511	mg/L	0.2	1.6	**Yes**	3.5	**Yes**	
A6-VP-003, 10'-0	5/24/2004	Nitrate-N	64.5	mg/L	0.2	1.6	**Yes**	3.5	**Yes**	
A6-VP-003, 20'-0	5/24/2004	Nitrate-N	866	mg/L	0.2	1.6	**Yes**	3.5	**Yes**	
A6-VP-004, 20'-0	5/24/2004	Nitrate-N	2040	mg/L	0.2	1.6	**Yes**	3.5	**Yes**	
A1-VP-003, 10'-0	5/21/2004	Nitrite-N	34.6	mg/L	0.2	1.6	**Yes**	3.5	**Yes**	
A1-VP-003, 10'-1	5/21/2004	Nitrite-N	34.8	mg/L	0.2	1.6	**Yes**	3.5	**Yes**	
A6-VP-003, 20'-0	5/24/2004	Nitrite-N	38.7	mg/L	0.2	1.6	**Yes**	3.5	**Yes**	
A6-VP-004, 20'-0	5/24/2004	Nitrite-N	45.4	mg/L	0.2	1.6	**Yes**	3.5	**Yes**	
A1-VP-001, 10'-0	5/20/2004	Phosphate	42	mg/L	1	0	NA	0	NA	No CUL recommended for phosphate.
A1-VP-001, 20'-0	5/20/2004	Phosphate	22.3	mg/L	0.1	0	NA	0	NA	No CUL recommended for phosphate.
A1-VP-003, 10'-0	5/21/2004	Phosphate	28.5	mg/L	0.1	0	NA	0	NA	No CUL recommended for phosphate.
A1-VP-003, 10'-1	5/21/2004	Phosphate	26.6	mg/L	0.1	0	NA	0	NA	No CUL recommended for phosphate.
A1-VP-003, 20'-0	5/21/2004	Phosphate	21.7	mg/L	0.1	0	NA	0	NA	No CUL recommended for phosphate.
A1-VP-003, 20'-1	5/21/2004	Phosphate	29.7	mg/L	0.1	0	NA	0	NA	No CUL recommended for phosphate.
A1-VP-004, 10'-0	5/21/2004	Phosphate	22.2	mg/L	0.1	0	NA	0	NA	No CUL recommended for phosphate.
A1-VP-004, 20'-0	5/21/2004	Phosphate	3.9	mg/L	0.1	0	NA	0	NA	No CUL recommended for phosphate.
A1-VP-005, 10'-0	5/21/2004	Phosphate	17.8	mg/L	0.1	0	NA	0	NA	No CUL recommended for phosphate.
A1-VP-005, 20'-0	5/21/2004	Phosphate	6.3	mg/L	0.1	0	NA	0	NA	No CUL recommended for phosphate.
A1-VP-007, 10'-0	5/20/2004	Phosphate	21.3	mg/L	0.1	0	NA	0	NA	No CUL recommended for phosphate.
A1-VP-007, 10'-1	5/20/2004	Phosphate	17.7	mg/L	0.1	0	NA	0	NA	No CUL recommended for phosphate.
A1-VP-007, 20'-0	5/20/2004	Phosphate	71	mg/L	1	0	NA	0	NA	No CUL recommended for phosphate.
A1-VP-007, 20'-1	5/20/2004	Phosphate	63	mg/L	1	0	NA	0	NA	No CUL recommended for phosphate.
A5-VP-001, 20'-0	5/20/2004	Phosphate	440	mg/L	10	0	NA	0	NA	No CUL recommended for phosphate.
A5-VP-002, 10'-0	5/19/2004	Phosphate	4.4	mg/L	0.1	0	NA	0	NA	No CUL recommended for phosphate.
A5-VP-002, 20'-0	5/20/2004	Phosphate	33	mg/L	1	0	NA	0	NA	No CUL recommended for phosphate.
A5-VP-003, 10'-0	5/19/2004	Phosphate	1.1	mg/L	0.1	0	NA	0	NA	No CUL recommended for phosphate.
A5-VP-003, 20'-0	5/20/2004	Phosphate	9.5	mg/L	0.1	0	NA	0	NA	No CUL recommended for phosphate.
A5-VP-004, 10'-0	5/19/2004	Phosphate	35	mg/L	1	0	NA	0	NA	No CUL recommended for phosphate.

Table 4-7: Vertical Profile Boring Groundwater Results Against MTCA Method B and C Cleanup Levels
Bee-Jay Scales Site
Sunnyside, Washington

Sample ID	Date	Analyte	Analytical Results	Units	MDL	MB_gw-std* (mg/L)	Exceed Method B?	MC_gw-std* (mg/L)	Exceed Method C?	GW Comments
A5-VP-004, 10'-1	5/19/2004	Phosphate	30	mg/L	1	0	NA	0	NA	No CUL recommended for phosphate.
A5-VP-004, 20'-0	5/19/2004	Phosphate	47	mg/L	1	0	NA	0	NA	No CUL recommended for phosphate.
A5-VP-004, 20'-1	5/19/2004	Phosphate	54	mg/L	1	0	NA	0	NA	No CUL recommended for phosphate.
A5-VP-005, 10'-0	5/19/2004	Phosphate	11.7	mg/L	0.1	0	NA	0	NA	No CUL recommended for phosphate.
A5-VP-005, 20'-0	5/19/2004	Phosphate	48	mg/L	1	0	NA	0	NA	No CUL recommended for phosphate.
A5-VP-006, 10'-0	5/19/2004	Phosphate	3	mg/L	0.1	0	NA	0	NA	No CUL recommended for phosphate.
A5-VP-006, 20'-0	5/19/2004	Phosphate	26	mg/L	1	0	NA	0	NA	No CUL recommended for phosphate.
A5-VP-007, 20'-0	5/19/2004	Phosphate	15.6	mg/L	0.1	0	NA	0	NA	No CUL recommended for phosphate.
A5-VP-008, 20'-0	5/20/2004	Phosphate	29.9	mg/L	0.1	0	NA	0	NA	No CUL recommended for phosphate.
A5-VP-009, 20'-0	5/20/2004	Phosphate	99	mg/L	1	0	NA	0	NA	No CUL recommended for phosphate.
A6-VP-001, 10'-0	5/24/2004	Phosphate	54	mg/L	1	0	NA	0	NA	No CUL recommended for phosphate.
A6-VP-001, 20'-0	5/24/2004	Phosphate	16.5	mg/L	0.1	0	NA	0	NA	No CUL recommended for phosphate.
A6-VP-002, 20'-0	5/24/2004	Phosphate	53	mg/L	1	0	NA	0	NA	No CUL recommended for phosphate.
A6-VP-003, 10'-0	5/24/2004	Phosphate	17.2	mg/L	0.1	0	NA	0	NA	No CUL recommended for phosphate.
A6-VP-003, 20'-0	5/24/2004	Phosphate	51	mg/L	1	0	NA	0	NA	No CUL recommended for phosphate.
A6-VP-004, 20'-0	5/24/2004	Phosphate	49	mg/L	1	0	NA	0	NA	No CUL recommended for phosphate.
A1-VP-001, 10'-0	5/20/2004	Sulfate	169	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A1-VP-001, 20'-0	5/20/2004	Sulfate	277	mg/L	1	250	**Yes**	250	**Yes**	WA State Board of Health Secondary MCL.
A1-VP-003, 10'-0	5/21/2004	Sulfate	110	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A1-VP-003, 10'-1	5/21/2004	Sulfate	116	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A1-VP-003, 20'-0	5/21/2004	Sulfate	204	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A1-VP-003, 20'-1	5/21/2004	Sulfate	203	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A1-VP-004, 10'-0	5/21/2004	Sulfate	250	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A1-VP-004, 20'-0	5/21/2004	Sulfate	156	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A1-VP-005, 10'-0	5/21/2004	Sulfate	224	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A1-VP-005, 20'-0	5/21/2004	Sulfate	197	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A1-VP-007, 10'-0	5/20/2004	Sulfate	211	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A1-VP-007, 10'-1	5/20/2004	Sulfate	213	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A1-VP-007, 20'-0	5/20/2004	Sulfate	122	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A1-VP-007, 20'-1	5/20/2004	Sulfate	122	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A5-VP-001, 20'-0	5/20/2004	Sulfate	42	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A5-VP-002, 10'-0	5/19/2004	Sulfate	91	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A5-VP-002, 20'-0	5/20/2004	Sulfate	52	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A5-VP-003, 10'-0	5/19/2004	Sulfate	161	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A5-VP-003, 20'-0	5/20/2004	Sulfate	54	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A5-VP-004, 10'-0	5/19/2004	Sulfate	135	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A5-VP-004, 10'-1	5/19/2004	Sulfate	136	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A5-VP-004, 20'-0	5/19/2004	Sulfate	87	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A5-VP-004, 20'-1	5/19/2004	Sulfate	86	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A5-VP-005, 10'-0	5/19/2004	Sulfate	76	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.

Table 4-7: Vertical Profile Boring Groundwater Results Against MTCA Method B and C Cleanup Levels
Bee-Jay Scales Site
Sunnyside, Washington

Sample ID	Date	Analyte	Analytical Results	Units	MDL	MB_gw-std* (mg/L)	Exceed Method B?	MC_gw-std* (mg/L)	Exceed Method C?	GW Comments
A5-VP-005, 20'-0	5/19/2004	Sulfate	43	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A5-VP-006, 10'-0	5/19/2004	Sulfate	88	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A5-VP-006, 20'-0	5/19/2004	Sulfate	45	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A5-VP-007, 20'-0	5/19/2004	Sulfate	63	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A5-VP-008, 20'-0	5/20/2004	Sulfate	90	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A5-VP-009, 20'-0	5/20/2004	Sulfate	50	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A6-VP-001, 10'-0	5/24/2004	Sulfate	226	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A6-VP-001, 20'-0	5/24/2004	Sulfate	58	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A6-VP-002, 20'-0	5/24/2004	Sulfate	869	mg/L	1	250	**Yes**	250	**Yes**	WA State Board of Health Secondary MCL.
A6-VP-003, 10'-0	5/24/2004	Sulfate	129	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
A6-VP-003, 20'-0	5/24/2004	Sulfate	846	mg/L	1	250	**Yes**	250	**Yes**	WA State Board of Health Secondary MCL.
A6-VP-004, 20'-0	5/24/2004	Sulfate	3010	mg/L	1	250	**Yes**	250	**Yes**	WA State Board of Health Secondary MCL.

NA = Not available.

* No MTCA Method B or C Cleanup Levels have been developed for ammonia-N or phosphate.

Table 4-8: Permanent Monitoring Wells Groundwater Results Against MTCA Method A Cleanup Levels
Bee-Jay Scales Site
Sunnyside, Washington

Sample ID	Date	Analyte	Analytical Results	Units	MDL	MA_gw* (mg/L)	Exceed Method A?
MW08-260504-0	5/26/2004	Alkalinity as CaCO3	228	mg/L	1	0	NA
MW08-260504-0	5/26/2004	Ammonia-N	5.6	mg/L	0.1	0	NA
MW08-260504-0	5/26/2004	Arsenic	0.01	mg/L	0.002	0.005	**Yes**
MW08-260504-0	5/26/2004	Chloride	162	mg/L	1	0	NA
MW08-260504-0	5/26/2004	Dinoseb	0.00067	mg/L	0.0006	0	NA
MW08-260504-0	5/26/2004	Iron	0.85	mg/L	0.02	0	NA
MW08-260504-0	5/26/2004	Nitrate-N	549	mg/L	0.2	0	NA
MW08-260504-0	5/26/2004	pH	7.44	STD Units	0.01	0	NA
MW08-260504-0	5/26/2004	Phosphate	0.6	mg/L	0.1	0	NA
MW08-260504-0	5/26/2004	Sulfate	272	mg/L	1	0	NA
MW9-251004-0	10/25/2004	Alkalinity as CaCO3	326	mg/L	1	0	NA
MW9-251004-0	10/25/2004	Ammonia-N	0.1	mg/L	0.1	0	NA
MW9-251004-0	10/25/2004	Arsenic	0.016	mg/L	0.002	0.005	**Yes**
MW9-251004-0	10/25/2004	Chloride	186	mg/L	1	0	NA
MW9-251004-0	10/25/2004	Dinoseb	0.0068	mg/L	0.0006	0	NA
MW9-251004-0	10/25/2004	Iron	11.9	mg/L	0.02	0	NA
MW9-251004-0	10/25/2004	Nitrate-N	1000	mg/L	0.2	0	NA
MW9-251004-0	10/25/2004	pH	7.46	STD Units	0.01	0	NA
MW9-251004-0	10/25/2004	Phosphate	11.9	mg/L	0.1	0	NA
MW9-251004-0	10/25/2004	Sulfate	477	mg/L	1	0	NA
MW10-251004-0	10/25/2004	1,2,4-Trimethylbenzene	0.031	mg/L	0.005	0	NA
MW10-251004-0	10/25/2004	1,3,5-Trimethylbenzene	0.028	mg/L	0.005	0	NA
MW10-251004-0	10/25/2004	Alkalinity as CaCO3	320	mg/L	1	0	NA
MW10-251004-0	10/25/2004	Arsenic	0.021	mg/L	0.002	0.005	**Yes**
MW10-251004-0	10/25/2004	Benzene	0.273	mg/L	0.005	0.005	**Yes**
MW10-251004-0	10/25/2004	Chloride	21	mg/L	1	0	NA
MW10-251004-0	10/25/2004	Ethylbenzene	0.078	mg/L	0.005	0.7	No
MW10-251004-0	10/25/2004	Iron	0.36	mg/L	0.02	0	NA
MW10-251004-0	10/25/2004	Nitrate-N	2.2	mg/L	0.2	0	NA
MW10-251004-0	10/25/2004	n-Propylbenzene	0.007	mg/L	0.005	0	NA
MW10-251004-0	10/25/2004	o-Xylene	0.03	mg/L	0.005	0	NA
MW10-251004-0	10/25/2004	p,m-Xylene	0.11	mg/L	0.01	0	NA
MW10-251004-0	10/25/2004	pH	8.14	STD Units	0.01	0	NA

Table 4-8: Permanent Monitoring Wells Groundwater Results Against MTCA Method A Cleanup Levels
Bee-Jay Scales Site
Sunnyside, Washington

MW10-251004-0	10/25/2004	Phosphate	0.5	mg/L	0.1	0	NA
MW10-251004-0	10/25/2004	Sulfate	33	mg/L	1	0	NA
MW10-251004-0	10/25/2004	Toluene	0.029	mg/L	0.005	1	No
MW11-251004-0	10/25/2004	Alkalinity as CaCO3	228	mg/L	1	0	NA
MW11-251004-0	10/25/2004	Arsenic	0.042	mg/L	0.002	0.005	**Yes**
MW11-251004-0	10/25/2004	Chloride	11	mg/L	1	0	NA
MW11-251004-0	10/25/2004	Iron	0.44	mg/L	0.02	0	NA
MW11-251004-0	10/25/2004	Nitrate-N	4.3	mg/L	0.2	0	NA
MW11-251004-0	10/25/2004	pH	8.12	STD Units	0.01	0	NA
MW11-251004-0	10/25/2004	Phosphate	0.6	mg/L	0.1	0	NA
MW11-251004-0	10/25/2004	Sulfate	49	mg/L	1	0	NA
MW12-251004-0	10/25/2004	2,4-D	0.47	mg/L	0.004	0	NA
MW12-251004-0	10/25/2004	Alkalinity as CaCO3	656	mg/L	1	0	NA
MW12-251004-0	10/25/2004	Ammonia-N	390	mg/L	10	0	NA
MW12-251004-0	10/25/2004	Arsenic	0.011	mg/L	0.002	0.005	**Yes**
MW12-251004-0	10/25/2004	Chloride	351	mg/L	1	0	NA
MW12-251004-0	10/25/2004	Iron	2.06	mg/L	0.02	0	NA
MW12-251004-0	10/25/2004	Nitrate-N	557	mg/L	0.2	0	NA
MW12-251004-0	10/25/2004	pH	7.58	STD Units	0.01	0	NA
MW12-251004-0	10/25/2004	Phosphate	1.2	mg/L	0.1	0	NA
MW12-251004-0	10/25/2004	Sulfate	711	mg/L	1	0	NA

NA = Not available.

* No MTCA Method A Cleanup Levels have been developed for 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, 2,4-D, alkalinity as $CaCO_3$, ammonia-N, chloride, dinoseb, iron, n-propylbenzene, nitrate-N, nitrite-N, o-xylene, p,m-xylene, pH, phosphate, or sulfate.

Table 4-9: Permanent Monitoring Wells Groundwater Results Against MTCA Method B and C Cleanup Levels
Bee-Jay Scales Site
Sunnyside, Washington

Sample ID	Date	Analyte	Analytical Results	Units	MDL	MB_gw-std* (mg/L)	Exceed Method B?	MC_gw-std* (mg/L)	Exceed Method C?	GW Comments
MW08-260504-0	5/26/2004	Ammonia-N	5.6	mg/L	0.1	0	NA	0	NA	No CUL recommended for ammonia-N.
MW08-260504-0	5/26/2004	Arsenic	0.01	mg/L	0.002	5.83333E-05	**Yes**	0.000583	**Yes**	
MW08-260504-0	5/26/2004	Chloride	162	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
MW08-260504-0	5/26/2004	Dinoseb	0.00067	mg/L	0.0006	0.016	No	0.035	No	
MW08-260504-0	5/26/2004	Iron	0.85	mg/L	0.02	0.3	**Yes**	0.3	**Yes**	WA State Board of Health Secondary MCL.
MW08-260504-0	5/26/2004	Nitrate-N	549	mg/L	0.2	1.6	**Yes**	3.5	**Yes**	
MW08-260504-0	5/26/2004	Phosphate	0.6	mg/L	0.1	0	NA	0	NA	No CUL recommended for phosphate.
MW08-260504-0	5/26/2004	Sulfate	272	mg/L	1	250	**Yes**	250	**Yes**	WA State Board of Health Secondary MCL.
MW9-251004-0	10/25/2004	Ammonia-N	0.1	mg/L	0.1	0	NA	0	NA	No CUL recommended for ammonia-N.
MW9-251004-0	10/25/2004	Arsenic	0.016	mg/L	0.002	5.83333E-05	**Yes**	0.000583	**Yes**	
MW9-251004-0	10/25/2004	Chloride	186	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
MW9-251004-0	10/25/2004	Dinoseb	0.0068	mg/L	0.0006	0.016	No	0.035	No	
MW9-251004-0	10/25/2004	Iron	11.9	mg/L	0.02	0.3	**Yes**	0.3	**Yes**	WA State Board of Health Secondary MCL.
MW9-251004-0	10/25/2004	Nitrate-N	1000	mg/L	0.2	1.6	**Yes**	3.5	**Yes**	
MW9-251004-0	10/25/2004	Phosphate	11.9	mg/L	0.1	0	NA	0	NA	No CUL recommended for phosphate.
MW9-251004-0	10/25/2004	Sulfate	477	mg/L	1	250	**Yes**	250	**Yes**	WA State Board of Health Secondary MCL.
MW10-251004-0	10/25/2004	1,2,4-Trimethylbenzene	0.031	mg/L	0.005	0.4	No	0.875	No	Standard CUL was calculated.
MW10-251004-0	10/25/2004	1,3,5-Trimethylbenzene	0.028	mg/L	0.005	0.4	No	0.875	No	Standard CUL was calculated.
MW10-251004-0	10/25/2004	Arsenic	0.021	mg/L	0.002	5.83333E-05	**Yes**	0.000583	**Yes**	
MW10-251004-0	10/25/2004	Benzene	0.273	mg/L	0.005	0.000795455	**Yes**	0.00795	**Yes**	
MW10-251004-0	10/25/2004	Chloride	21	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
MW10-251004-0	10/25/2004	Ethylbenzene	0.078	mg/L	0.005	0.8	No	1.75	No	
MW10-251004-0	10/25/2004	Iron	0.36	mg/L	0.02	0.3	**Yes**	0.3	**Yes**	WA State Board of Health Secondary MCL.
MW10-251004-0	10/25/2004	Nitrate-N	2.2	mg/L	0.2	1.6	**Yes**	3.5	No	
MW10-251004-0	10/25/2004	n-Propylbenzene	0.007	mg/L	0.005	0	NA	0	NA	
MW10-251004-0	10/25/2004	o-Xylene	0.03	mg/L	0.005	16	No	35	No	
MW10-251004-0	10/25/2004	p,m-Xylene	0.11	mg/L	0.01	0	NA	35	No	
MW10-251004-0	10/25/2004	Phosphate	0.5	mg/L	0.1	0	NA	0	NA	No CUL recommended for phosphate.
MW10-251004-0	10/25/2004	Sulfate	33	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
MW10-251004-0	10/25/2004	Toluene	0.029	mg/L	0.005	1.6	No	3.5	No	
MW11-251004-0	10/25/2004	Arsenic	0.042	mg/L	0.002	5.83333E-05	**Yes**	0.000583	**Yes**	
MW11-251004-0	10/25/2004	Chloride	11	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
MW11-251004-0	10/25/2004	Iron	0.44	mg/L	0.02	0.3	**Yes**	0.3	**Yes**	WA State Board of Health Secondary MCL.
MW11-251004-0	10/25/2004	Nitrate-N	4.3	mg/L	0.2	1.6	**Yes**	3.5	**Yes**	
MW11-251004-0	10/25/2004	Phosphate	0.6	mg/L	0.1	0	NA	0	NA	No CUL recommended for phosphate.
MW11-251004-0	10/25/2004	Sulfate	49	mg/L	1	250	No	250	No	WA State Board of Health Secondary MCL.
MW12-251004-0	10/25/2004	2,4-D	0.47	mg/L	0.004	0.16	**Yes**	0.35	**Yes**	
MW12-251004-0	10/25/2004	Ammonia-N	390	mg/L	10	0	NA	0	NA	No CUL recommended for ammonia-N.
MW12-251004-0	10/25/2004	Arsenic	0.011	mg/L	0.002	5.83333E-05	**Yes**	0.000583	**Yes**	
MW12-251004-0	10/25/2004	Chloride	351	mg/L	1	250	**Yes**	250	**Yes**	WA State Board of Health Secondary MCL.
MW12-251004-0	10/25/2004	Iron	2.06	mg/L	0.02	0.3	**Yes**	0.3	**Yes**	WA State Board of Health Secondary MCL.
MW12-251004-0	10/25/2004	Nitrate-N	557	mg/L	0.2	1.6	**Yes**	3.5	**Yes**	
MW12-251004-0	10/25/2004	Phosphate	1.2	mg/L	0.1	0	NA	0	NA	No CUL recommended for phosphate.
MW12-251004-0	10/25/2004	Sulfate	711	mg/L	1	250	**Yes**	250	**Yes**	WA State Board of Health Secondary MCL.

NA = Not available.
* No MTCA Method B or C Cleanup Levels have been developed for ammonia-N or phosphate.

Table 4-10: Lagoon Surface Water and Sediment Sampling Results
Bee-Jay Scales Site
Sunnyside, Washington

Sample ID	Date	Analyte	Analytical Results	Units	MDL	Matrix
LAG-001-0	6/2/2004	Ammonia-N	9	mg/L	0.1	SW Sediment
LAG-001-1	6/2/2004	Ammonia-N	7.8	mg/L	0.1	SW Sediment
Sample ID	**Date**	**Analyte**	**Analytical Results**	**Units**	**MDL**	**Matrix**
SED-001-0	6/2/2004	Ammonia-N	760	mg/kg	10	Solid
SED-001-1	6/2/2004	Ammonia-N	1440	mg/kg	10	Solid

Table 4-11: Single Well Pump Test Results
Bee-Jay Scales Site
Sunnyside, Washington

Well	Test	Q (gpm)	$\Delta(h_o-h_x)$ (feet)	T (ft^2/day)	K (cm/s)
MW-1	Drawdown1	1	1	35.0	4.12E-04
	Recovery1	1	1	35.0	4.12E-04
	Drawdown2	0.5	1	17.5	2.06E-04
MW-3	Drawdown	0.5	4.7	3.7	4.38E-05
	Recovery	0.5	4	4.4	5.14E-05
MW-4	Drawdown	0.5	2.2	8.0	9.35E-05
	Recovery	0.5	0.7	25.0	2.94E-04
MW-5	Drawdown	0.5	1.4	12.5	1.47E-04
	Recovery	0.5	1.6	10.9	1.29E-04
MW-6	Drawdown	0.3	4.5	2.3	2.74E-05
	Recovery	0.5	3.3	5.3	6.24E-05
MW-7	Drawdown	0.3	3.5	3.0	3.53E-05
	Recovery	0.3	1.4	7.5	8.82E-05
MW-8	Drawdown	0.5	3.6	4.9	5.72E-05
	Recovery	0.5	1.7	10.3	1.21E-04
				AVERAGE	1.45E-04
			GEOMETRIC AVERAGE		1.03E-04

Table 5-1: Summary of Weekly Pilot Study Monitoring Results Following Denitrification
Bee-Jay Scales Site
Sunnyside, Washington

Sample ID	Sample Date	Analyte	Less Than MDL	Result	Units	MDL	Qualifier
IW01-290704-0	7/29/2004	Alkalinity as CaCO3		12600	mg/L	1	
IW02-290704-0	7/29/2004	Alkalinity as CaCO3		11600	mg/L	1	
IW03-290704-0	7/29/2004	Alkalinity as CaCO3		11300	mg/L	1	
IW04-290704-0	7/29/2004	Alkalinity as CaCO3		11200	mg/L	1	
MW04-290704-0	7/29/2004	Alkalinity as CaCO3		7690	mg/L	1	
IW01-060804-0	8/6/2004	Alkalinity as CaCO3		10880	mg/L	1	
IW02-060804-0	8/6/2004	Alkalinity as CaCO3		10020	mg/L	1	
IW03-060804-0	8/6/2004	Alkalinity as CaCO3		9680	mg/L	1	
IW04-060804-0	8/6/2004	Alkalinity as CaCO3		10080	mg/L	1	
MW04-060804-0	8/6/2004	Alkalinity as CaCO3		7940	mg/L	1	
IW01-120804-0	8/12/2004	Alkalinity as CaCO3		11600	mg/L	1	
IW02-120804-0	8/12/2004	Alkalinity as CaCO3		12100	mg/L	1	
IW03-120804-0	8/12/2004	Alkalinity as CaCO3		9760	mg/L	1	
IW04-120804-0	8/12/2004	Alkalinity as CaCO3		10300	mg/L	1	
MW04-120804-0	8/12/2004	Alkalinity as CaCO3		7630	mg/L	1	
IW01-190804-0	8/19/2004	Alkalinity as CaCO3		10300	mg/L	1	
IW02-190804-0	8/19/2004	Alkalinity as CaCO3		10700	mg/L	1	
IW03-190804-0	8/19/2004	Alkalinity as CaCO3		10700	mg/L	1	
IW04-190804-0	8/19/2004	Alkalinity as CaCO3		9700	mg/L	1	
MW04-190804-0	8/19/2004	Alkalinity as CaCO3		6800	mg/L	1	
IW01-270804-0	8/27/2004	Alkalinity as CaCO3		9600	mg/L	1	
IW02-270804-0	8/27/2004	Alkalinity as CaCO3		10100	mg/L	1	
IW03-270804-0	8/27/2004	Alkalinity as CaCO3		9200	mg/L	1	
IW04-270804-0	8/27/2004	Alkalinity as CaCO3		10400	mg/L	1	
MW04-270804-0	8/27/2004	Alkalinity as CaCO3		6000	mg/L	1	
IW01-070904-0	9/7/2004	Alkalinity as CaCO3		11000	mg/L	1	
IW02-070904-0	9/7/2004	Alkalinity as CaCO3		10500	mg/L	1	
IW03-070904-0	9/7/2004	Alkalinity as CaCO3		10600	mg/L	1	
IW04-070904-0	9/7/2004	Alkalinity as CaCO3		11000	mg/L	1	
MW04-070904-0	9/7/2004	Alkalinity as CaCO3		6250	mg/L	1	
IW01-290704-0	7/29/2004	Ammonia-N		62	mg/L	1	
IW02-290704-0	7/29/2004	Ammonia-N		32	mg/L	1	
IW03-290704-0	7/29/2004	Ammonia-N		19.5	mg/L	0.1	
IW04-290704-0	7/29/2004	Ammonia-N		62	mg/L	1	
MW04-290704-0	7/29/2004	Ammonia-N		450	mg/L	10	
IW01-060804-0	8/6/2004	Ammonia-N		63	mg/L	1	
IW02-060804-0	8/6/2004	Ammonia-N		48	mg/L	1	
IW03-060804-0	8/6/2004	Ammonia-N		25	mg/L	1	
IW04-060804-0	8/6/2004	Ammonia-N		70	mg/L	1	
MW04-060804-0	8/6/2004	Ammonia-N		490	mg/L	1	
IW01-120804-0	8/12/2004	Ammonia-N		87	mg/L	1	
IW02-120804-0	8/12/2004	Ammonia-N		58	mg/L	1	
IW03-120804-0	8/12/2004	Ammonia-N		25	mg/L	1	
IW04-120804-0	8/12/2004	Ammonia-N		66	mg/L	1	
MW04-120804-0	8/12/2004	Ammonia-N		530	mg/L	10	
IW01-190804-0	8/19/2004	Ammonia-N		160	mg/L	10	
IW02-190804-0	8/19/2004	Ammonia-N		83	mg/L	1	
IW03-190804-0	8/19/2004	Ammonia-N		37	mg/L	1	
IW04-190804-0	8/19/2004	Ammonia-N		83	mg/L	1	
MW04-190804-0	8/19/2004	Ammonia-N		550	mg/L	10	
IW01-270804-0	8/27/2004	Ammonia-N		250	mg/L	10	
IW02-270804-0	8/27/2004	Ammonia-N		110	mg/L	10	
IW03-270804-0	8/27/2004	Ammonia-N		41	mg/L	1	
IW04-270804-0	8/27/2004	Ammonia-N		100	mg/L	10	
MW04-270804-0	8/27/2004	Ammonia-N		550	mg/L	10	
IW01-070904-0	9/7/2004	Ammonia-N		330	mg/L	10	
IW02-070904-0	9/7/2004	Ammonia-N		200	mg/L	10	
IW03-070904-0	9/7/2004	Ammonia-N		67	mg/L	1	
IW04-070904-0	9/7/2004	Ammonia-N		130	mg/L	10	
MW04-070904-0	9/7/2004	Ammonia-N		560	mg/L	10	

Table 5-1: Summary of Weekly Pilot Study Monitoring Results Following Denitrification
Bee-Jay Scales Site
Sunnyside, Washington

Sample ID	Sample Date	Analyte	Less Than MDL	Result	Units	MDL	Qualifier
IW01-070904-0	9/7/2004	Arsenic		0.124	mg/L	0.002	
IW02-070904-0	9/7/2004	Arsenic		0.071	mg/L	0.002	
IW03-070904-0	9/7/2004	Arsenic		0.046	mg/L	0.002	
IW04-070904-0	9/7/2004	Arsenic		0.061	mg/L	0.002	
MW04-070904-0	9/7/2004	Arsenic		0.069	mg/L	0.002	
IW01-070904-0	9/7/2004	Dinoseb	<	0.0006	mg/L	0.0006	U
IW02-070904-0	9/7/2004	Dinoseb	<	0.0006	mg/L	0.0006	U
IW03-070904-0	9/7/2004	Dinoseb	<	0.0006	mg/L	0.0006	U
IW04-070904-0	9/7/2004	Dinoseb	<	0.0006	mg/L	0.0006	U
MW04-070904-0	9/7/2004	Dinoseb	<	0.0006	mg/L	0.0006	U
IW01-070904-0	9/7/2004	Iron		2.29	mg/L	0.02	
IW02-070904-0	9/7/2004	Iron		1.27	mg/L	0.02	
IW03-070904-0	9/7/2004	Iron		1.84	mg/L	0.02	
IW04-070904-0	9/7/2004	Iron		0.73	mg/L	0.02	
MW04-070904-0	9/7/2004	Iron		4.59	mg/L	0.02	
IW01-070904-0	9/7/2004	Manganese		7.56	mg/L	0.005	
IW02-070904-0	9/7/2004	Manganese		3.61	mg/L	0.005	
IW03-070904-0	9/7/2004	Manganese		3.96	mg/L	0.005	
IW04-070904-0	9/7/2004	Manganese		2.99	mg/L	0.005	
MW04-070904-0	9/7/2004	Manganese		7.54	mg/L	0.005	
IW01-290704-0	7/29/2004	Nitrate-N	<	0.2	mg/L	0.2	U
IW02-290704-0	7/29/2004	Nitrate-N	<	0.2	mg/L	0.2	U
IW03-290704-0	7/29/2004	Nitrate-N	<	0.2	mg/L	0.2	U
IW04-290704-0	7/29/2004	Nitrate-N	<	0.2	mg/L	0.2	U
MW04-290704-0	7/29/2004	Nitrate-N		68.1	mg/L	0.2	
IW01-060804-0	8/6/2004	Nitrate-N	<	0.2	mg/L	0.2	U
IW02-060804-0	8/6/2004	Nitrate-N	<	0.2	mg/L	0.2	U
IW03-060804-0	8/6/2004	Nitrate-N	<	0.2	mg/L	0.2	U
IW04-060804-0	8/6/2004	Nitrate-N	<	0.2	mg/L	0.2	U
MW04-060804-0	8/6/2004	Nitrate-N	<	0.2	mg/L	0.2	U
IW01-120804-0	8/12/2004	Nitrate-N	<	0.2	mg/L	0.2	U
IW02-120804-0	8/12/2004	Nitrate-N	<	0.2	mg/L	0.2	U
IW03-120804-0	8/12/2004	Nitrate-N	<	0.2	mg/L	0.2	U
IW04-120804-0	8/12/2004	Nitrate-N	<	0.2	mg/L	0.2	U
MW04-120804-0	8/12/2004	Nitrate-N	<	0.2	mg/L	0.2	U
IW01-190804-0	8/19/2004	Nitrate-N	<	0.2	mg/L	0.2	U
IW02-190804-0	8/19/2004	Nitrate-N	<	0.2	mg/L	0.2	U
IW03-190804-0	8/19/2004	Nitrate-N	<	0.2	mg/L	0.2	U
IW04-190804-0	8/19/2004	Nitrate-N	<	0.2	mg/L	0.2	U
MW04-190804-0	8/19/2004	Nitrate-N	<	0.2	mg/L	0.2	U
IW01-270804-0	8/27/2004	Nitrate-N	<	0.2	mg/L	0.2	U
IW02-270804-0	8/27/2004	Nitrate-N	<	0.2	mg/L	0.2	U
IW03-270804-0	8/27/2004	Nitrate-N	<	0.2	mg/L	0.2	U
IW04-270804-0	8/27/2004	Nitrate-N	<	0.2	mg/L	0.2	U
MW04-270804-0	8/27/2004	Nitrate-N	<	0.2	mg/L	0.2	U
IW01-070904-0	9/7/2004	Nitrate-N	<	0.2	mg/L	0.2	U
IW02-070904-0	9/7/2004	Nitrate-N	<	0.2	mg/L	0.2	U
IW03-070904-0	9/7/2004	Nitrate-N	<	0.2	mg/L	0.2	U
IW04-070904-0	9/7/2004	Nitrate-N	<	0.2	mg/L	0.2	U
MW04-070904-0	9/7/2004	Nitrate-N	<	0.2	mg/L	0.2	U

Table 5-1: Summary of Weekly Pilot Study Monitoring Results Following Denitrification
Bee-Jay Scales Site
Sunnyside, Washington

Sample ID	Sample Date	Analyte	Less Than MDL	Result	Units	MDL	Qualifier
IW01-290704-0	7/29/2004	Nitrite-N	<	0.2	mg/L	0.2	U
IW02-290704-0	7/29/2004	Nitrite-N	<	0.2	mg/L	0.2	U
IW03-290704-0	7/29/2004	Nitrite-N	<	0.2	mg/L	0.2	U
IW04-290704-0	7/29/2004	Nitrite-N	<	0.2	mg/L	0.2	U
MW04-290704-0	7/29/2004	Nitrite-N		65.9	mg/L	0.2	
IW01-060804-0	8/6/2004	Nitrite-N	<	0.2	mg/L	0.2	U
IW02-060804-0	8/6/2004	Nitrite-N	<	0.2	mg/L	0.2	U
IW03-060804-0	8/6/2004	Nitrite-N	<	0.2	mg/L	0.2	U
IW04-060804-0	8/6/2004	Nitrite-N	<	0.2	mg/L	0.2	U
MW04-060804-0	8/6/2004	Nitrite-N	<	0.2	mg/L	0.2	U
IW01-120804-0	8/12/2004	Nitrite-N	<	0.2	mg/L	0.2	U
IW02-120804-0	8/12/2004	Nitrite-N	<	0.2	mg/L	0.2	U
IW03-120804-0	8/12/2004	Nitrite-N	<	0.2	mg/L	0.2	U
IW04-120804-0	8/12/2004	Nitrite-N	<	0.2	mg/L	0.2	U
MW04-120804-0	8/12/2004	Nitrite-N	<	0.2	mg/L	0.2	U
IW01-190804-0	8/19/2004	Nitrite-N	<	0.2	mg/L	0.2	U
IW02-190804-0	8/19/2004	Nitrite-N	<	0.2	mg/L	0.2	U
IW03-190804-0	8/19/2004	Nitrite-N	<	0.2	mg/L	0.2	U
IW04-190804-0	8/19/2004	Nitrite-N	<	0.2	mg/L	0.2	U
MW04-190804-0	8/19/2004	Nitrite-N	<	0.2	mg/L	0.2	U
IW01-270804-0	8/27/2004	Nitrite-N	<	0.2	mg/L	0.2	U
IW02-270804-0	8/27/2004	Nitrite-N	<	0.2	mg/L	0.2	U
IW03-270804-0	8/27/2004	Nitrite-N	<	0.2	mg/L	0.2	U
IW04-270804-0	8/27/2004	Nitrite-N	<	0.2	mg/L	0.2	U
MW04-270804-0	8/27/2004	Nitrite-N	<	0.2	mg/L	0.2	U
IW01-070904-0	9/7/2004	Nitrite-N	<	0.2	mg/L	0.2	U
IW02-070904-0	9/7/2004	Nitrite-N	<	0.2	mg/L	0.2	U
IW03-070904-0	9/7/2004	Nitrite-N	<	0.2	mg/L	0.2	U
IW04-070904-0	9/7/2004	Nitrite-N	<	0.2	mg/L	0.2	U
MW04-070904-0	9/7/2004	Nitrite-N	<	0.2	mg/L	0.2	U
IW01-290704-0	7/29/2004	TOC		15000	mg/L	1	
IW02-290704-0	7/29/2004	TOC		14000	mg/L	1	
IW03-290704-0	7/29/2004	TOC		13000	mg/L	1	
IW04-290704-0	7/29/2004	TOC		13000	mg/L	1	
MW04-290704-0	7/29/2004	TOC		8600	mg/L	1	
IW01-060804-0	8/6/2004	TOC		14000	mg/L	1	
IW02-060804-0	8/6/2004	TOC		14000	mg/L	1	
IW03-060804-0	8/6/2004	TOC		14000	mg/L	1	
IW04-060804-0	8/6/2004	TOC		13000	mg/L	1	
MW04-060804-0	8/6/2004	TOC		8400	mg/L	1	
IW01-120804-0	8/12/2004	TOC		15000	mg/L	1	
IW02-120804-0	8/12/2004	TOC		13000	mg/L	1	
IW03-120804-0	8/12/2004	TOC		14000	mg/L	1	
IW04-120804-0	8/12/2004	TOC		14000	mg/L	1	
MW04-120804-0	8/12/2004	TOC		8000	mg/L	1	
IW01-190804-0	8/19/2004	TOC		14000	mg/L	1	
IW02-190804-0	8/19/2004	TOC		8400	mg/L	1	
IW03-190804-0	8/19/2004	TOC		13000	mg/L	1	
IW04-190804-0	8/19/2004	TOC		13000	mg/L	1	
MW04-190804-0	8/19/2004	TOC		6200	mg/L	1	
IW01-270804-0	8/27/2004	TOC		13000	mg/L	1	
IW02-270804-0	8/27/2004	TOC		13000	mg/L	1	
IW03-270804-0	8/27/2004	TOC		14000	mg/L	1	
IW04-270804-0	8/27/2004	TOC		13000	mg/L	1	
MW04-270804-0	8/27/2004	TOC		6100	mg/L	1	
IW01-070904-0	9/7/2004	TOC		11000	mg/L	1	
IW02-070904-0	9/7/2004	TOC		12000	mg/L	1	
IW03-070904-0	9/7/2004	TOC		11000	mg/L	1	
IW04-070904-0	9/7/2004	TOC		13000	mg/L	1	
MW04-070904-0	9/7/2004	TOC		5500	mg/L	1	

Table 5-1: Summary of Weekly Pilot Study Monitoring Results Following Denitrification
Bee-Jay Scales Site
Sunnyside, Washington

Sample ID	Sample Date	Analyte	Less Than MDL	Result	Units	MDL	Qualifier
IW01-290704-0	7/29/2004	Total Phosphorus		19.6	mg/L	0.1	
IW02-290704-0	7/29/2004	Total Phosphorus		16.2	mg/L	0.1	
IW03-290704-0	7/29/2004	Total Phosphorus		15.2	mg/L	0.1	
IW04-290704-0	7/29/2004	Total Phosphorus		15.3	mg/L	0.1	
MW04-290704-0	7/29/2004	Total Phosphorus		5.3	mg/L	0.02	
IW01-060804-0	8/6/2004	Total Phosphorus		19	mg/L	0.1	
IW02-060804-0	8/6/2004	Total Phosphorus		14.8	mg/L	0.1	
IW03-060804-0	8/6/2004	Total Phosphorus		14	mg/L	0.1	
IW04-060804-0	8/6/2004	Total Phosphorus		14.6	mg/L	0.1	
MW04-060804-0	8/6/2004	Total Phosphorus		4.35	mg/L	0.02	
IW01-120804-0	8/12/2004	Total Phosphorus		16	mg/L	0.1	
IW02-120804-0	8/12/2004	Total Phosphorus		12.1	mg/L	0.1	
IW03-120804-0	8/12/2004	Total Phosphorus		12	mg/L	0.1	
IW04-120804-0	8/12/2004	Total Phosphorus		13.6	mg/L	0.1	
MW04-120804-0	8/12/2004	Total Phosphorus		4.2	mg/L	0.02	
IW01-190804-0	8/19/2004	Total Phosphorus		14.7	mg/L	0.1	
IW02-190804-0	8/19/2004	Total Phosphorus		11.4	mg/L	0.1	
IW03-190804-0	8/19/2004	Total Phosphorus		10.5	mg/L	0.1	
IW04-190804-0	8/19/2004	Total Phosphorus		14	mg/L	0.1	
MW04-190804-0	8/19/2004	Total Phosphorus		2.53	mg/L	0.02	
IW01-270804-0	8/27/2004	Total Phosphorus		14.4	mg/L	0.1	
IW02-270804-0	8/27/2004	Total Phosphorus		9.04	mg/L	0.02	
IW03-270804-0	8/27/2004	Total Phosphorus		10.2	mg/L	0.1	
IW04-270804-0	8/27/2004	Total Phosphorus		16.6	mg/L	0.1	
MW04-270804-0	8/27/2004	Total Phosphorus		2.06	mg/L	0.02	
IW01-070904-0	9/7/2004	Total Phosphorus		11.6	mg/L	0.1	
IW02-070904-0	9/7/2004	Total Phosphorus		6.52	mg/L	0.02	
IW03-070904-0	9/7/2004	Total Phosphorus		9.18	mg/L	0.02	
IW04-070904-0	9/7/2004	Total Phosphorus		10.6	mg/L	0.1	
MW04-070904-0	9/7/2004	Total Phosphorus		1.71	mg/L	0.02	

Table 5-2: Post-pilot Study Groundwater Results Against MTCA Method B and C Cleanup Levels
Bee-Jay Scales Site
Sunnyside, Washington

Sample ID	Date	Analyte	Less than MDL	Analytical Results	Units	MDL	Qualifier	MB_gw-std* (mg/L)	Exceed Method B?	MC_gw-std* (mg/L)	Exceed Method C?	GW Comments
MW04-011204-0	12/1/2004	Alkalinity as CaCO3		11200	mg/L	1		NA	NA	NA	NA	
IW01-011204-0	12/1/2004	Alkalinity as CaCO3		11900	mg/L	1		NA	NA	NA	NA	
IW02-011204-0	12/1/2004	Alkalinity as CaCO3		13300	mg/L	1		NA	NA	NA	NA	
IW03-011204-0	12/1/2004	Alkalinity as CaCO3		13300	mg/L	1		NA	NA	NA	NA	
IW04-011204-0	12/1/2004	Alkalinity as CaCO3		14500	mg/L	1		NA	NA	NA	NA	
MW04-011204-0	12/1/2004	Ammonia-N		460	mg/L	10		NA	NA	NA	NA	No CUL recommended for ammonia-N.
IW01-011204-0	12/1/2004	Ammonia-N		490	mg/L	10		NA	NA	NA	NA	No CUL recommended for ammonia-N.
IW02-011204-0	12/1/2004	Ammonia-N		450	mg/L	10		NA	NA	NA	NA	No CUL recommended for ammonia-N.
IW03-011204-0	12/1/2004	Ammonia-N		450	mg/L	10		NA	NA	NA	NA	No CUL recommended for ammonia-N.
IW04-011204-0	12/1/2004	Ammonia-N		600	mg/L	10		NA	NA	NA	NA	No CUL recommended for ammonia-N.
MW04-011204-0	12/1/2004	Arsenic		0.277	mg/L	0.002		5.8333E-05	**Yes**	0.000583	**Yes**	
IW01-011204-0	12/1/2004	Arsenic		3.59	mg/L	0.002		5.8333E-05	**Yes**	0.000583	**Yes**	
IW02-011204-0	12/1/2004	Arsenic		1.98	mg/L	0.002		5.8333E-05	**Yes**	0.000583	**Yes**	
IW03-011204-0	12/1/2004	Arsenic		1.86	mg/L	0.002		5.8333E-05	**Yes**	0.000583	**Yes**	
IW04-011204-0	12/1/2004	Arsenic		2.44	mg/L	0.002		5.8333E-05	**Yes**	0.000583	**Yes**	
MW04-011204-0	12/1/2004	Dinoseb		0.0026	mg/L	0.0006		0.016	No	0.035	No	
IW01-011204-0	12/1/2004	Dinoseb		0.0031	mg/L	0.0006		0.016	No	0.035	No	
IW02-011204-0	12/1/2004	Dinoseb	<	0.0006	mg/L	0.0006	U	0.016	No	0.035	No	
IW03-011204-0	12/1/2004	Dinoseb		0.0031	mg/L	0.0006		0.016	No	0.035	No	
IW04-011204-0	12/1/2004	Dinoseb		0.0014	mg/L	0.0006		0.016	No	0.035	No	
MW04-011204-0	12/1/2004	Iron		7.14	mg/L	0.02		0.3	**Yes**	0.3	**Yes**	WA State Board of Health Secondary MCL.
IW01-011204-0	12/1/2004	Iron		3.9	mg/L	0.02		0.3	**Yes**	0.3	**Yes**	WA State Board of Health Secondary MCL.
IW02-011204-0	12/1/2004	Iron		0.72	mg/L	0.02		0.3	**Yes**	0.3	**Yes**	WA State Board of Health Secondary MCL.
IW03-011204-0	12/1/2004	Iron		2.42	mg/L	0.02		0.3	**Yes**	0.3	**Yes**	WA State Board of Health Secondary MCL.
IW04-011204-0	12/1/2004	Iron		4.05	mg/L	0.02		0.3	**Yes**	0.3	**Yes**	WA State Board of Health Secondary MCL.
MW04-011204-0	12/1/2004	Manganese		0.275	mg/L	0.005		2.24	No	4.9	No	
IW01-011204-0	12/1/2004	Manganese		0.291	mg/L	0.005		2.24	No	4.9	No	
IW02-011204-0	12/1/2004	Manganese		0.234	mg/L	0.005		2.24	No	4.9	No	
IW03-011204-0	12/1/2004	Manganese		0.189	mg/L	0.005		2.24	No	4.9	No	
IW04-011204-0	12/1/2004	Manganese		0.379	mg/L	0.005		2.24	No	4.9	No	
MW04-011204-0	12/1/2004	Nitrate-N	<	0.2	mg/L	0.2	U	1.6	No	3.5	No	
IW01-011204-0	12/1/2004	Nitrate-N		159	mg/L	0.2		1.6	**Yes**	3.5	**Yes**	
IW02-011204-0	12/1/2004	Nitrate-N	<	0.2	mg/L	0.2	U	1.6	No	3.5	No	
IW03-011204-0	12/1/2004	Nitrate-N	<	0.2	mg/L	0.2	U	1.6	No	3.5	No	
IW04-011204-0	12/1/2004	Nitrate-N		0.4	mg/L	0.2		1.6	No	3.5	No	
MW04-011204-0	12/1/2004	Nitrite-N	<	0.2	mg/L	0.2	U	1.6	No	3.5	No	
IW01-011204-0	12/1/2004	Nitrite-N		10.1	mg/L	0.2		1.6	**Yes**	3.5	**Yes**	
IW02-011204-0	12/1/2004	Nitrite-N	<	0.2	mg/L	0.2	U	1.6	No	3.5	No	
IW03-011204-0	12/1/2004	Nitrite-N	<	0.2	mg/L	0.2	U	1.6	No	3.5	No	
IW04-011204-0	12/1/2004	Nitrite-N	<	0.2	mg/L	0.2	U	1.6	No	3.5	No	
MW04-011204-0	12/1/2004	TOC		838	mg/L	1		NA	NA	NA	NA	
IW01-011204-0	12/1/2004	TOC		2420	mg/L	1		NA	NA	NA	NA	
IW02-011204-0	12/1/2004	TOC		7560	mg/L	1		NA	NA	NA	NA	
IW03-011204-0	12/1/2004	TOC		8230	mg/L	1		NA	NA	NA	NA	
IW04-011204-0	12/1/2004	TOC		5420	mg/L	1		NA	NA	NA	NA	
MW04-011204-0	12/1/2004	Total Phosphorus		4.15	mg/L	0.02		NA	NA	NA	NA	
IW01-011204-0	12/1/2004	Total Phosphorus		37	mg/L	1		NA	NA	NA	NA	
IW02-011204-0	12/1/2004	Total Phosphorus		23.2	mg/L	0.1		NA	NA	NA	NA	
IW03-011204-0	12/1/2004	Total Phosphorus		17.2	mg/L	0.1		NA	NA	NA	NA	
IW04-011204-0	12/1/2004	Total Phosphorus		30	mg/L	1		NA	NA	NA	NA	

NA = Not available.

* No MTCA Method B or C Cleanup Levels have been developed for alkalinity as $CaCO_3$, ammonia-N, TOC, or total phosphorus.

Table 5-3: Post-pilot Study Groundwater Results from Borings Outside Pilot Study Area Against MTCA Method B and C Cleanup Levels
Bee-Jay Scales Site
Sunnyside, Washington

Sample ID	Date	Analyte	Less than MDL	Analytical Results	Units	MDL	Qualifier	MB_gw-std* (mg/L)	Exceed Method B?	MC_gw-std* (mg/L)	Exceed Method C?	GW Comments
SB-PS-003-0	12/1/2004	Ammonia-N		450	mg/L	10		NA	NA	NA	NA	No CUL recommended for ammonia-N.
SB-PS-004-0	12/1/2004	Ammonia-N		400	mg/L	10		NA	NA	NA	NA	No CUL recommended for ammonia-N.
SB-PS-003-0	12/1/2004	Nitrate-N		388	mg/L	0.2		1.6	**Yes**	3.5	**Yes**	
SB-PS-004-0	12/1/2004	Nitrate-N		317	mg/L	0.2		1.6	**Yes**	3.5	**Yes**	
SB-PS-003-0	12/1/2004	Nitrite-N	<	0.2	mg/L	0.2	U	1.6	No	3.5	No	
SB-PS-004-0	12/1/2004	Nitrite-N	<	0.2	mg/L	0.2	U	1.6	No	3.5	No	

NA = Not available.
* No MTCA Method B or C Cleanup Levels have been developed for ammonia-N.

Table 5-4: Post-pilot Study Soil Results Against MTCA Method B and C Cleanup Levels
Bee-Jay Scales Site
Sunnyside, Washington

Sample ID	Date	Analyte	Less than MDL	Analytical Results	Units	MDL	Qualifier	MB_soil-std* (mg/kg)	Exceed Method B?	MC_soil-std* (mg/kg)	Exceed Method C?	Soil Comments
SB-PS-001-0, 0-2'	12/1/2004	Ammonia-N	<	10	mg/kg	10	U	NA	NA	NA	NA	No CUL recommended for ammonia-N.
SB-PS-001-0, 10-12'	12/1/2004	Ammonia-N		810	mg/kg	10		NA	NA	NA	NA	No CUL recommended for ammonia-N.
SB-PS-001-0, 12-14'	12/1/2004	Ammonia-N		1060	mg/kg	10		NA	NA	NA	NA	No CUL recommended for ammonia-N.
SB-PS-001-0, 14-16'	12/1/2004	Ammonia-N		760	mg/kg	10		NA	NA	NA	NA	No CUL recommended for ammonia-N.
SB-PS-001-0, 16-18'	12/1/2004	Ammonia-N		500	mg/kg	10		NA	NA	NA	NA	No CUL recommended for ammonia-N.
SB-PS-001-0, 2-4'	12/1/2004	Ammonia-N	<	10	mg/kg	10	U	NA	NA	NA	NA	No CUL recommended for ammonia-N.
SB-PS-001-0, 4-6'	12/1/2004	Ammonia-N		80	mg/kg	10		NA	NA	NA	NA	No CUL recommended for ammonia-N.
SB-PS-001-0, 6-8'	12/1/2004	Ammonia-N		440	mg/kg	10		NA	NA	NA	NA	No CUL recommended for ammonia-N.
SB-PS-001-0, 8-10'	12/1/2004	Ammonia-N		700	mg/kg	10		NA	NA	NA	NA	No CUL recommended for ammonia-N.
SB-PS-002-0, 0-2'	12/1/2004	Ammonia-N	<	10	mg/kg	10	U	NA	NA	NA	NA	No CUL recommended for ammonia-N.
SB-PS-002-0, 10-12'	12/1/2004	Ammonia-N		990	mg/kg	10		NA	NA	NA	NA	No CUL recommended for ammonia-N.
SB-PS-002-0, 12-14'	12/1/2004	Ammonia-N		1230	mg/kg	10		NA	NA	NA	NA	No CUL recommended for ammonia-N.
SB-PS-002-0, 14-16'	12/1/2004	Ammonia-N		870	mg/kg	10		NA	NA	NA	NA	No CUL recommended for ammonia-N.
SB-PS-002-0, 16-18'	12/1/2004	Ammonia-N		990	mg/kg	10		NA	NA	NA	NA	No CUL recommended for ammonia-N.
SB-PS-002-0, 2-4'	12/1/2004	Ammonia-N	<	10	mg/kg	10	U	NA	NA	NA	NA	No CUL recommended for ammonia-N.
SB-PS-002-0, 4-6'	12/1/2004	Ammonia-N		100	mg/kg	10		NA	NA	NA	NA	No CUL recommended for ammonia-N.
SB-PS-002-0, 6-8'	12/1/2004	Ammonia-N		720	mg/kg	10		NA	NA	NA	NA	No CUL recommended for ammonia-N.
SB-PS-002-0, 8-10'	12/1/2004	Ammonia-N		820	mg/kg	10		NA	NA	NA	NA	No CUL recommended for ammonia-N.
SB-PS-002-1, 8-10'	12/1/2004	Ammonia-N		840	mg/kg	10		NA	NA	NA	NA	No CUL recommended for ammonia-N.
SB-PS-001-0, 0-2'	12/1/2004	Dinoseb	<	15	ug/kg	15	U	80000	No	3500000	No	
SB-PS-001-0, 10-12'	12/1/2004	Dinoseb	<	16	ug/kg	16	U	80000	No	3500000	No	
SB-PS-001-0, 12-14'	12/1/2004	Dinoseb	<	16	ug/kg	16	U	80000	No	3500000	No	
SB-PS-001-0, 14-16'	12/1/2004	Dinoseb	<	15	ug/kg	15	U	80000	No	3500000	No	
SB-PS-001-0, 16-18'	12/1/2004	Dinoseb	<	16	ug/kg	16	U	80000	No	3500000	No	
SB-PS-001-0, 2-4'	12/1/2004	Dinoseb	<	15	ug/kg	15	U	80000	No	3500000	No	
SB-PS-001-0, 4-6'	12/1/2004	Dinoseb	<	15	ug/kg	15	U	80000	No	3500000	No	
SB-PS-001-0, 6-8'	12/1/2004	Dinoseb	<	15	ug/kg	15	U	80000	No	3500000	No	
SB-PS-001-0, 8-10'	12/1/2004	Dinoseb	<	15	ug/kg	15	U	80000	No	3500000	No	
SB-PS-002-0, 0-2'	12/1/2004	Dinoseb	<	14	ug/kg	14	U	80000	No	3500000	No	
SB-PS-002-0, 10-12'	12/1/2004	Dinoseb	<	15	ug/kg	15	U	80000	No	3500000	No	
SB-PS-002-0, 12-14'	12/1/2004	Dinoseb	<	16	ug/kg	16	U	80000	No	3500000	No	
SB-PS-002-0, 14-16'	12/1/2004	Dinoseb	<	15	ug/kg	15	U	80000	No	3500000	No	
SB-PS-002-0, 16-18'	12/1/2004	Dinoseb	<	15	ug/kg	15	U	80000	No	3500000	No	
SB-PS-002-0, 2-4'	12/1/2004	Dinoseb	<	15	ug/kg	15	U	80000	No	3500000	No	
SB-PS-002-0, 4-6'	12/1/2004	Dinoseb	<	16	ug/kg	16	U	80000	No	3500000	No	
SB-PS-002-0, 6-8'	12/1/2004	Dinoseb	<	15	ug/kg	15	U	80000	No	3500000	No	
SB-PS-002-0, 8-10'	12/1/2004	Dinoseb	<	16	ug/kg	16	U	80000	No	3500000	No	
SB-PS-002-1, 8-10'	12/1/2004	Dinoseb	<	17	ug/kg	17	U	80000	No	3500000	No	
SB-PS-001-0, 0-2'	12/1/2004	Nitrate-N		980	mg/kg	30		8000	No	350000	No	
SB-PS-001-0, 10-12'	12/1/2004	Nitrate-N	<	30	mg/kg	30	U	8000	No	350000	No	
SB-PS-001-0, 12-14'	12/1/2004	Nitrate-N	<	30	mg/kg	30	U	8000	No	350000	No	

Table 5-4: Post-pilot Study Soil Results Against MTCA Method B and C Cleanup Levels
Bee-Jay Scales Site
Sunnyside, Washington

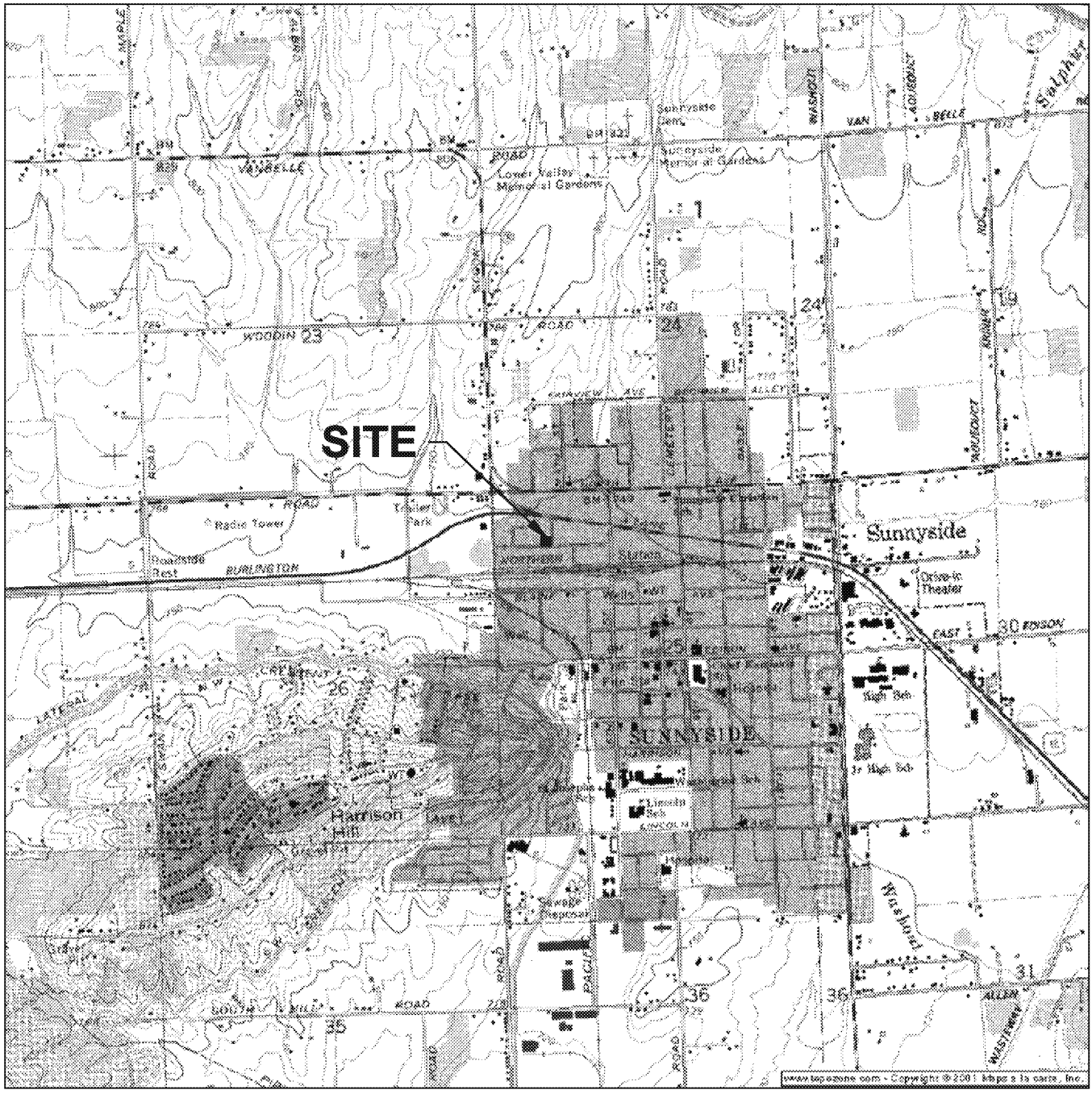
Sample ID	Date	Analyte	Less than MDL	Analytical Results	Units	MDL	Qualifier	MB_soil-std* (mg/kg)	Exceed Method B?	MC_soil-std* (mg/kg)	Exceed Method C?	Soil Comments
SB-PS-001-0, 14-16'	12/1/2004	Nitrate-N	<	30	mg/kg	30	U	8000	No	350000	No	
SB-PS-001-0, 16-18'	12/1/2004	Nitrate-N	<	30	mg/kg	30	U	8000	No	350000	No	
SB-PS-001-0, 2-4'	12/1/2004	Nitrate-N		1860	mg/kg	30		8000	No	350000	No	
SB-PS-001-0, 4-6'	12/1/2004	Nitrate-N		190	mg/kg	30		8000	No	350000	No	
SB-PS-001-0, 6-8'	12/1/2004	Nitrate-N		37	mg/kg	30		8000	No	350000	No	
SB-PS-001-0, 8-10'	12/1/2004	Nitrate-N	<	30	mg/kg	30	U	8000	No	350000	No	
SB-PS-002-0, 0-2'	12/1/2004	Nitrate-N		220	mg/kg	30		8000	No	350000	No	
SB-PS-002-0, 10-12'	12/1/2004	Nitrate-N		170	mg/kg	30		8000	No	350000	No	
SB-PS-002-0, 12-14'	12/1/2004	Nitrate-N		250	mg/kg	30		8000	No	350000	No	
SB-PS-002-0, 14-16'	12/1/2004	Nitrate-N		250	mg/kg	30		8000	No	350000	No	
SB-PS-002-0, 16-18'	12/1/2004	Nitrate-N		480	mg/kg	30		8000	No	350000	No	
SB-PS-002-0, 2-4'	12/1/2004	Nitrate-N		690	mg/kg	30		8000	No	350000	No	
SB-PS-002-0, 4-6'	12/1/2004	Nitrate-N		200	mg/kg	30		8000	No	350000	No	
SB-PS-002-0, 6-8'	12/1/2004	Nitrate-N		120	mg/kg	30		8000	No	350000	No	
SB-PS-002-0, 8-10'	12/1/2004	Nitrate-N		160	mg/kg	30		8000	No	350000	No	
SB-PS-002-1, 8-10'	12/1/2004	Nitrate-N		180	mg/kg	30		8000	No	350000	No	
SB-PS-001-0, 0-2'	12/1/2004	Nitrite-N	<	30	mg/kg	30	U	8000	No	350000	No	
SB-PS-001-0, 10-12'	12/1/2004	Nitrite-N	<	30	mg/kg	30	U	8000	No	350000	No	
SB-PS-001-0, 12-14'	12/1/2004	Nitrite-N	<	30	mg/kg	30	U	8000	No	350000	No	
SB-PS-001-0, 14-16'	12/1/2004	Nitrite-N	<	30	mg/kg	30	U	8000	No	350000	No	
SB-PS-001-0, 16-18'	12/1/2004	Nitrite-N	<	30	mg/kg	30	U	8000	No	350000	No	
SB-PS-001-0, 2-4'	12/1/2004	Nitrite-N	<	30	mg/kg	30	U	8000	No	350000	No	
SB-PS-001-0, 4-6'	12/1/2004	Nitrite-N	<	30	mg/kg	30	U	8000	No	350000	No	
SB-PS-001-0, 6-8'	12/1/2004	Nitrite-N	<	30	mg/kg	30	U	8000	No	350000	No	
SB-PS-001-0, 8-10'	12/1/2004	Nitrite-N	<	30	mg/kg	30	U	8000	No	350000	No	
SB-PS-002-0, 0-2'	12/1/2004	Nitrite-N	<	30	mg/kg	30	U	8000	No	350000	No	
SB-PS-002-0, 10-12'	12/1/2004	Nitrite-N	<	30	mg/kg	30	U	8000	No	350000	No	
SB-PS-002-0, 12-14'	12/1/2004	Nitrite-N	<	30	mg/kg	30	U	8000	No	350000	No	
SB-PS-002-0, 14-16'	12/1/2004	Nitrite-N	<	30	mg/kg	30	U	8000	No	350000	No	
SB-PS-002-0, 16-18'	12/1/2004	Nitrite-N	<	30	mg/kg	30	U	8000	No	350000	No	
SB-PS-002-0, 2-4'	12/1/2004	Nitrite-N	<	30	mg/kg	30	U	8000	No	350000	No	
SB-PS-002-0, 4-6'	12/1/2004	Nitrite-N		31	mg/kg	30		8000	No	350000	No	
SB-PS-002-0, 6-8'	12/1/2004	Nitrite-N	<	30	mg/kg	30	U	8000	No	350000	No	
SB-PS-002-0, 8-10'	12/1/2004	Nitrite-N	<	30	mg/kg	30	U	8000	No	350000	No	
SB-PS-002-1, 8-10'	12/1/2004	Nitrite-N	<	30	mg/kg	30	U	8000	No	350000	No	
SB-PS-001-0, 0-2'	12/1/2004	TOC		1100	mg/kg	100		NA	NA	NA	NA	
SB-PS-001-0, 10-12'	12/1/2004	TOC		550	mg/kg	100		NA	NA	NA	NA	
SB-PS-001-0, 12-14'	12/1/2004	TOC		160	mg/kg	100		NA	NA	NA	NA	
SB-PS-001-0, 14-16'	12/1/2004	TOC		540	mg/kg	100		NA	NA	NA	NA	
SB-PS-001-0, 16-18'	12/1/2004	TOC		250	mg/kg	100		NA	NA	NA	NA	
SB-PS-001-0, 2-4'	12/1/2004	TOC		510	mg/kg	100		NA	NA	NA	NA	

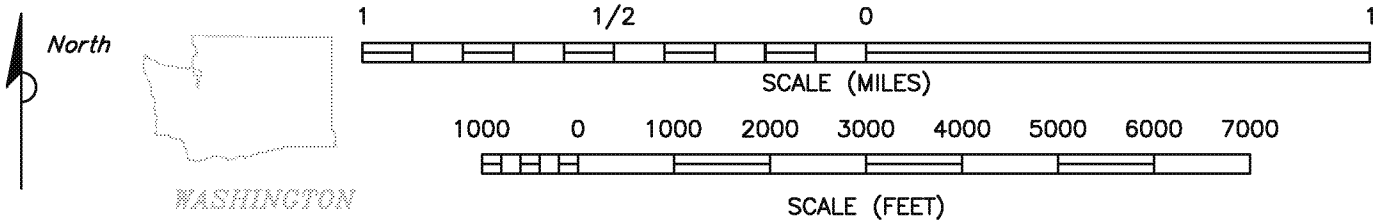
Table 5-4: Post-pilot Study Soil Results Against MTCA Method B and C Cleanup Levels
Bee-Jay Scales Site
Sunnyside, Washington

Sample ID	Date	Analyte	Less than MDL	Analytical Results	Units	MDL	Qualifier	MB_soil-std* (mg/kg)	Exceed Method B?	MC_soil-std* (mg/kg)	Exceed Method C?	Soil Comments
SB-PS-001-0, 4-6'	12/1/2004	TOC		800	mg/kg	100		NA	NA	NA	NA	
SB-PS-001-0, 6-8'	12/1/2004	TOC		430	mg/kg	100		NA	NA	NA	NA	
SB-PS-001-0, 8-10'	12/1/2004	TOC		150	mg/kg	100		NA	NA	NA	NA	
SB-PS-002-0, 0-2'	12/1/2004	TOC		4400	mg/kg	100		NA	NA	NA	NA	
SB-PS-002-0, 10-12'	12/1/2004	TOC	<	130	mg/kg	130	U	NA	NA	NA	NA	
SB-PS-002-0, 12-14'	12/1/2004	TOC		460	mg/kg	100		NA	NA	NA	NA	
SB-PS-002-0, 14-16'	12/1/2004	TOC		250	mg/kg	100		NA	NA	NA	NA	
SB-PS-002-0, 16-18'	12/1/2004	TOC		350	mg/kg	100		NA	NA	NA	NA	
SB-PS-002-0, 2-4'	12/1/2004	TOC		1000	mg/kg	100		NA	NA	NA	NA	
SB-PS-002-0, 4-6'	12/1/2004	TOC		450	mg/kg	100		NA	NA	NA	NA	
SB-PS-002-0, 6-8'	12/1/2004	TOC	<	130	mg/kg	130	U	NA	NA	NA	NA	
SB-PS-002-0, 8-10'	12/1/2004	TOC		470	mg/kg	100		NA	NA	NA	NA	
SB-PS-002-1, 8-10'	12/1/2004	TOC		270	mg/kg	100		NA	NA	NA	NA	
SB-PS-001-0, 0-2'	12/1/2004	Total Phosphorus		828	mg/kg	1		NA	NA	NA	NA	
SB-PS-001-0, 10-12'	12/1/2004	Total Phosphorus		708	mg/kg	1		NA	NA	NA	NA	
SB-PS-001-0, 12-14'	12/1/2004	Total Phosphorus		688	mg/kg	1		NA	NA	NA	NA	
SB-PS-001-0, 14-16'	12/1/2004	Total Phosphorus		740	mg/kg	1		NA	NA	NA	NA	
SB-PS-001-0, 16-18'	12/1/2004	Total Phosphorus		735	mg/kg	1		NA	NA	NA	NA	
SB-PS-001-0, 2-4'	12/1/2004	Total Phosphorus		977	mg/kg	1		NA	NA	NA	NA	
SB-PS-001-0, 4-6'	12/1/2004	Total Phosphorus		910	mg/kg	1		NA	NA	NA	NA	
SB-PS-001-0, 6-8'	12/1/2004	Total Phosphorus		830	mg/kg	1		NA	NA	NA	NA	
SB-PS-001-0, 8-10'	12/1/2004	Total Phosphorus		704	mg/kg	1		NA	NA	NA	NA	
SB-PS-002-0, 0-2'	12/1/2004	Total Phosphorus		754	mg/kg	1		NA	NA	NA	NA	
SB-PS-002-0, 10-12'	12/1/2004	Total Phosphorus		756	mg/kg	1		NA	NA	NA	NA	
SB-PS-002-0, 12-14'	12/1/2004	Total Phosphorus		675	mg/kg	1		NA	NA	NA	NA	
SB-PS-002-0, 14-16'	12/1/2004	Total Phosphorus		790	mg/kg	1		NA	NA	NA	NA	
SB-PS-002-0, 16-18'	12/1/2004	Total Phosphorus		739	mg/kg	1		NA	NA	NA	NA	
SB-PS-002-0, 2-4'	12/1/2004	Total Phosphorus		996	mg/kg	1		NA	NA	NA	NA	
SB-PS-002-0, 4-6'	12/1/2004	Total Phosphorus		845	mg/kg	1		NA	NA	NA	NA	
SB-PS-002-0, 6-8'	12/1/2004	Total Phosphorus		715	mg/kg	1		NA	NA	NA	NA	
SB-PS-002-0, 8-10'	12/1/2004	Total Phosphorus		817	mg/kg	1		NA	NA	NA	NA	
SB-PS-002-1, 8-10'	12/1/2004	Total Phosphorus		769	mg/kg	1		NA	NA	NA	NA	

NA = Not available.
* No MTCA Method B or C Cleanup Levels have been developed for ammonia-N, TOC, or total phosphorus.

FIGURES

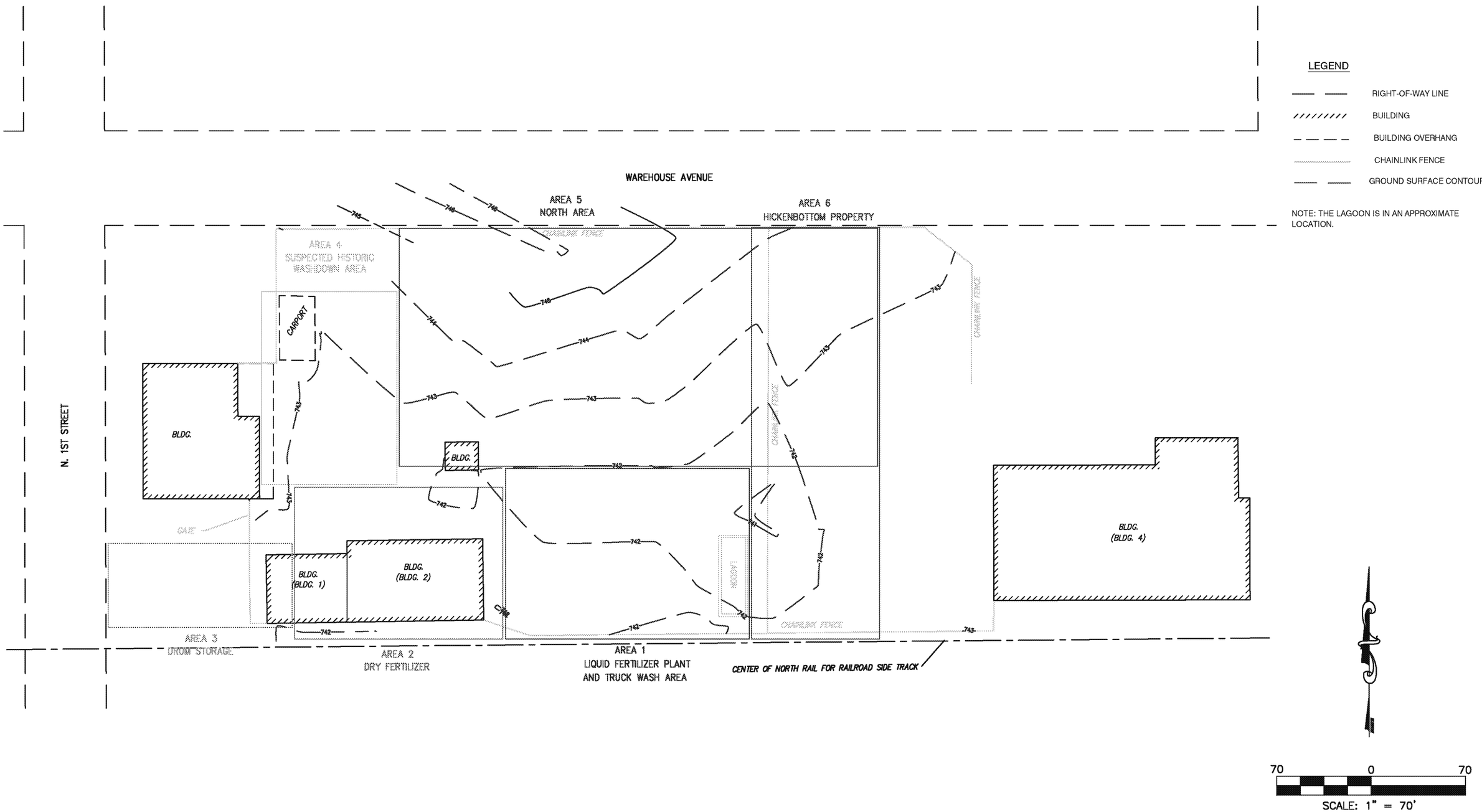




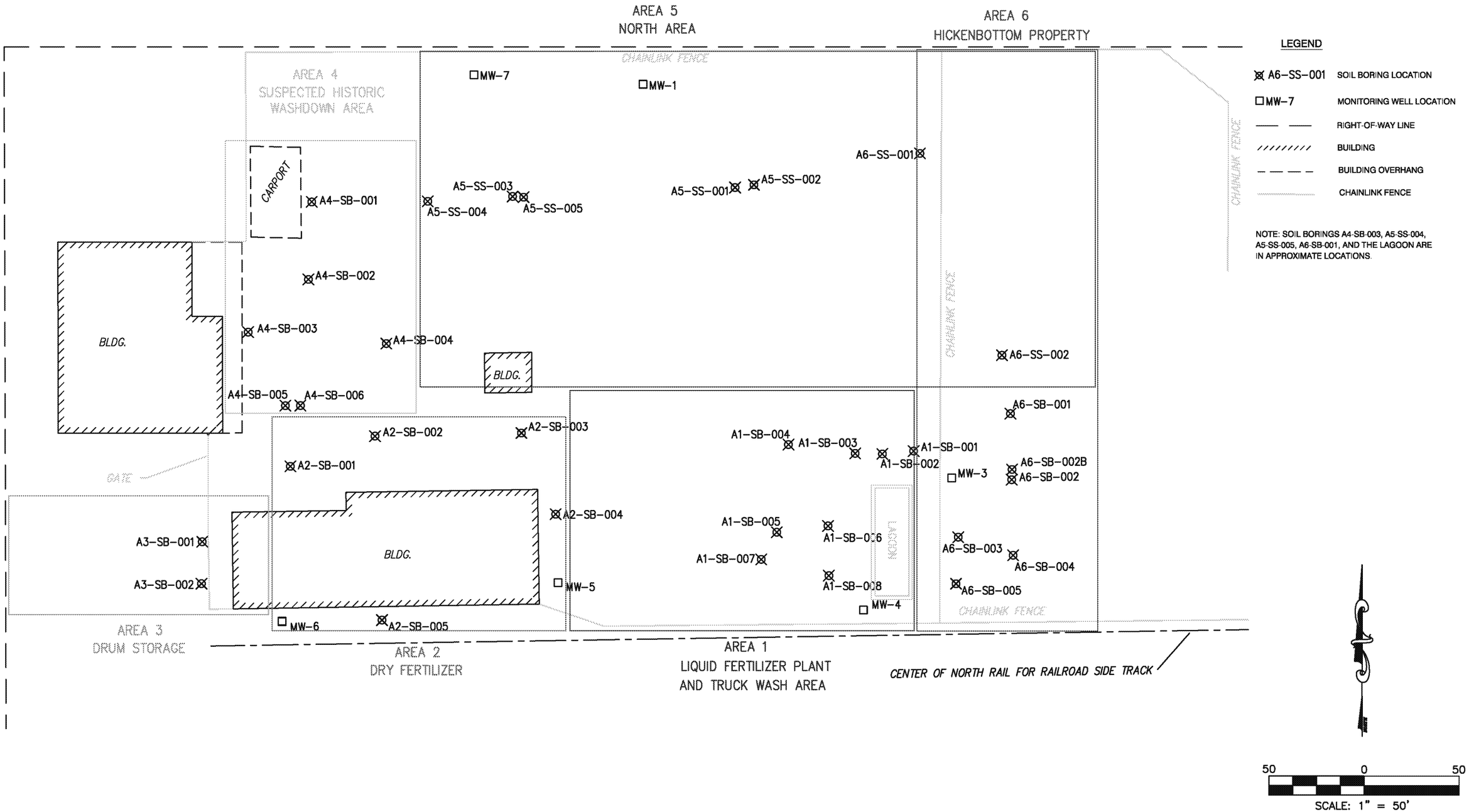
REFERENCE: USGS 7.5 MINUTE QUADRANGLE; SUNNYSIDE, WASHINGTON; 1975

DRAWN BY: SES CHECKED: APPROVED: DATE: 9/19/03 JOB No.: 24CH.67201 CAD FILE: PATH ON LEFT	PREPARED BY: SECOR 12034 134th COURT NE, SUITE 102 REDMOND, WASHINGTON	PREPARED FOR: BEE-JAY SCALES 301 WAREHOUSE AVENUE SUNNYSIDE, WASHINGTON	FIGURE 1-1 SITE LOCATION MAP

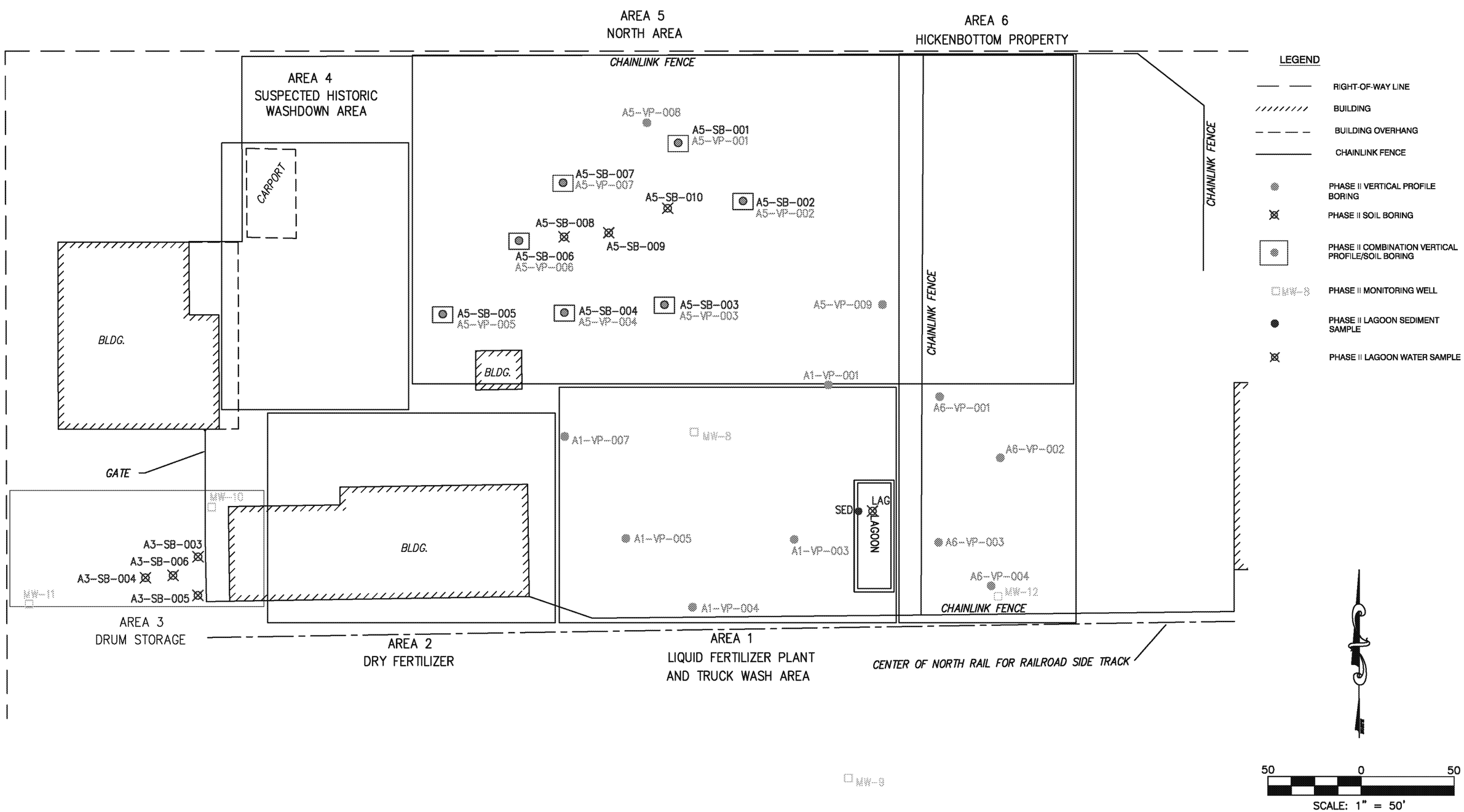
20030922.10174435 R:\CAD\Cad_Files\Projects\CHEVRON\sunnyside\SUNNYSIDE(M).dwg



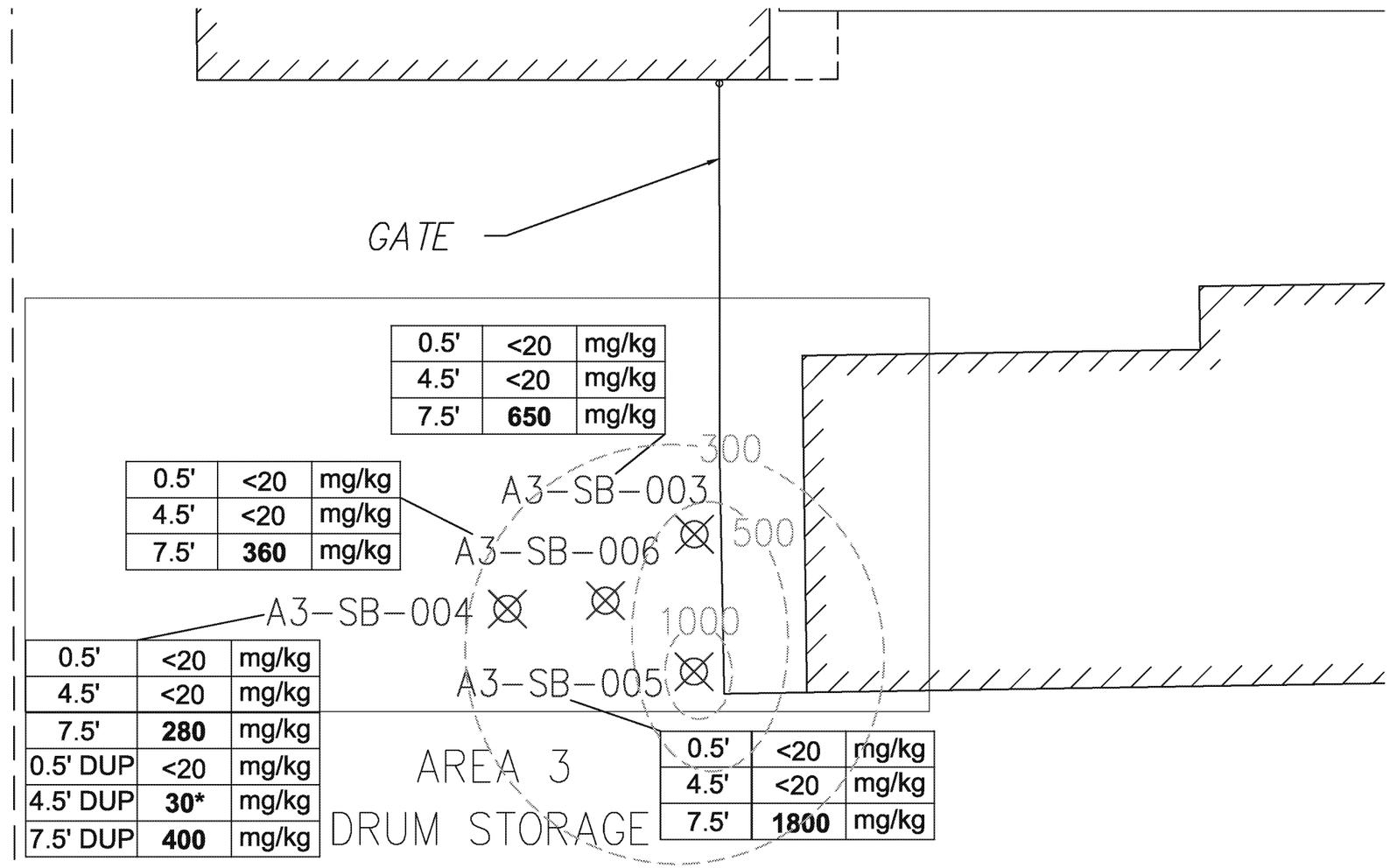
DRAWN BY: PMW CHECKED: MRP APPROVED: JRB DATE: 08/19/03 JOB No.: 24CH.67201.00 CAD FILE: SITE PLAN.dwg	PREPARED BY: SECOR 2321 Club Meridian Dr. Suite E Okemos, MI 48864	PREPARED FOR: ChevronTexaco 6001 Bollinger Canyon Rd K2090 San Ramon, CA 94583	FIGURE 1-2 GENERAL SITE LAYOUT



DRAWN BY: PMW CHECKED: MRP APPROVED: JRB DATE: 08/19/03 JOB No.: 24CH.67201.00 CAD FILE: SITE PLAN.dwg	PREPARED BY: SECOR 2321 Club Meridian Dr. Suite E Okemos, MI 48864	PREPARED FOR: Bee-Jay Scales Site	FIGURE 2-1 PHASE I SAMPLE LOCATION MAP



DRAWN BY: DRM CHECKED: MRP APPROVED: JRB DATE: 12/01/04 JOB No.: 24CH.67201.00 CAD FILE: Phase II Locations.dwg	PREPARED BY: SECOR 2321 Club Meridian Dr. Suite E Okemos, MI 48864	PREPARED FOR: Bee-Jay Scales Site	FIGURE 3-1 PHASE II SAMPLE LOCATION MAP



0.5'	<20	mg/kg
4.5'	<20	mg/kg
7.5'	**650**	mg/kg

0.5'	<20	mg/kg
4.5'	<20	mg/kg
7.5'	**360**	mg/kg

0.5'	<20	mg/kg
4.5'	<20	mg/kg
7.5'	**280**	mg/kg
0.5' DUP	<20	mg/kg
4.5' DUP	**30***	mg/kg
7.5' DUP	**400**	mg/kg

0.5'	<20	mg/kg
4.5'	<20	mg/kg
7.5'	**1800**	mg/kg

LEGEND

RIGHT-OF-WAY LINE

BUILDING

BUILDING OVERHANG

CHAINLINK FENCE

PHASE II SOIL BORING

500 APPROXIMATE TPH-Gx CONCENTRATION ISOPLETH AT 7.5' (MG/KG)

ALL RESULTS SHOWN ARE FOR NWTPH-Gx, AND ARE SHOWN FOR EACH DEPTH INTERVAL.

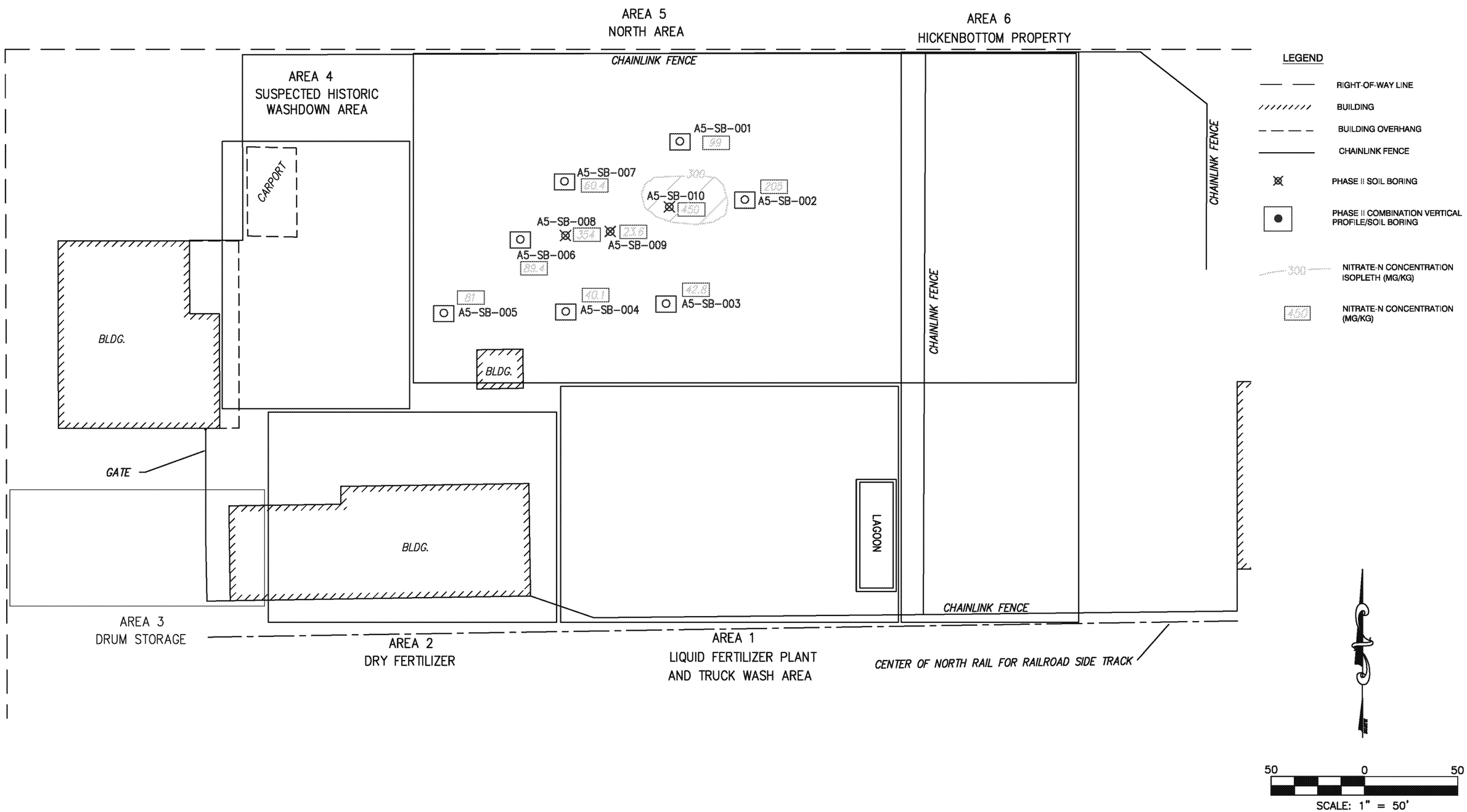
BOLD RESULTS EXCEED MTCA METHOD B AND C CRITERIA.

*EXCEEDS MTCA METHOD B, BUT NOT MTCA METHOD C.

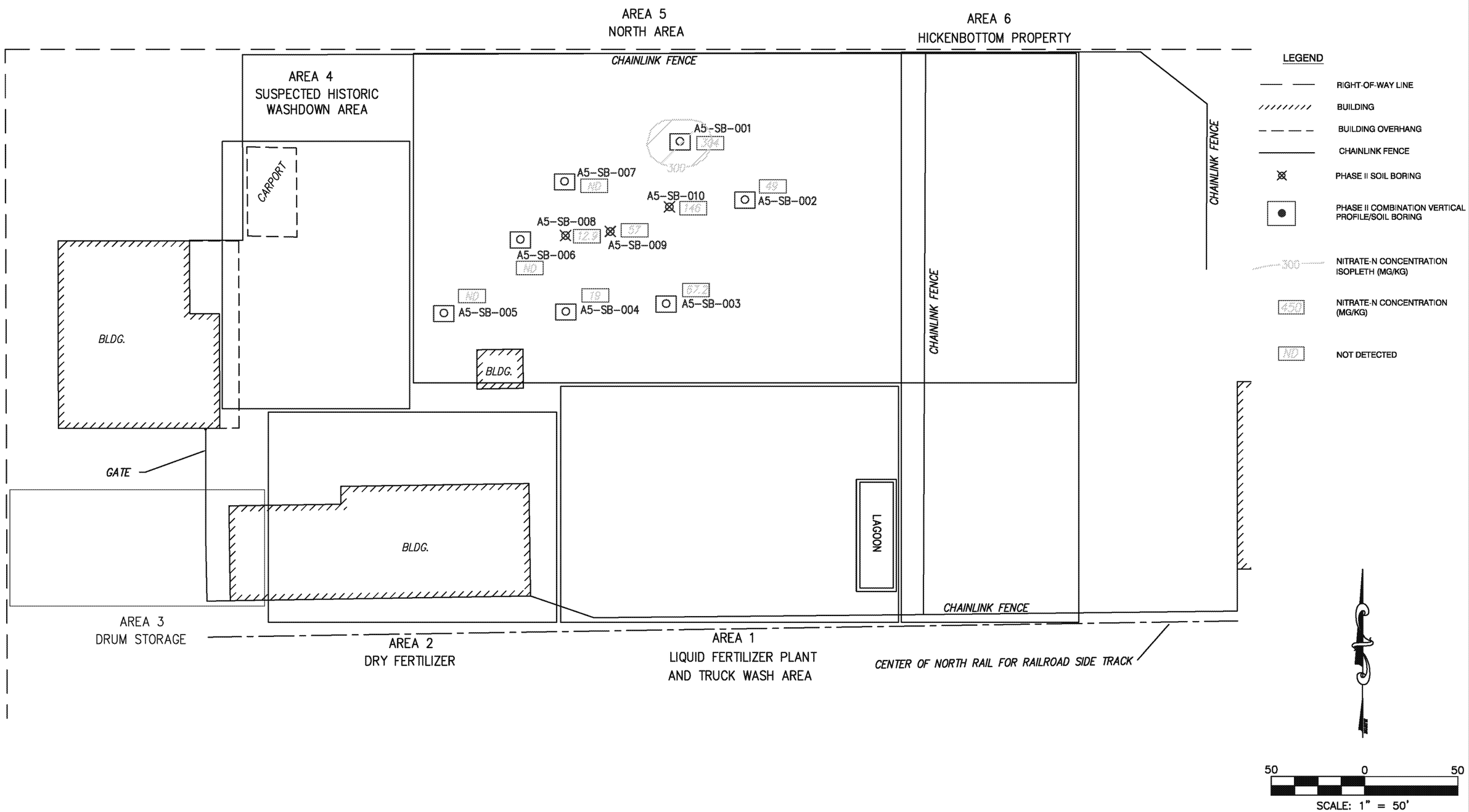
20 0 20

SCALE: 1" = 20'

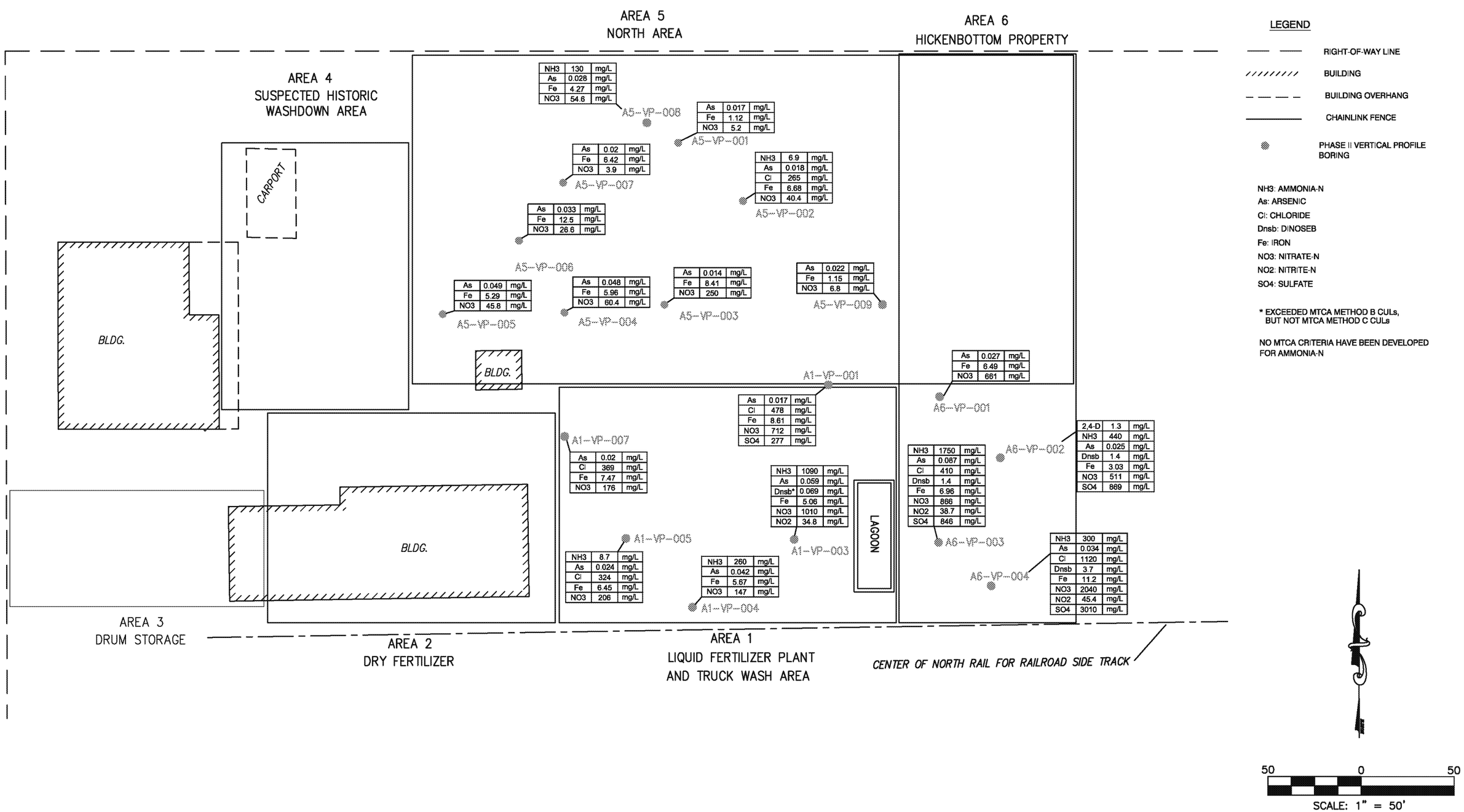
DRAWN BY: DRM CHECKED: MRP APPROVED: JRB DATE: 04/28/05 JOB No.: 24CH.67201.00 CAD FILE: Phase II Locations.dwg	PREPARED BY: SECOR 2321 Club Meridian Dr. Suite E Okemos, MI 48864	PREPARED FOR: Bee-Jay Scales Site	FIGURE 4-1 NWTPH-Gx CONCENTRATIONS IN AREA 3 SOIL



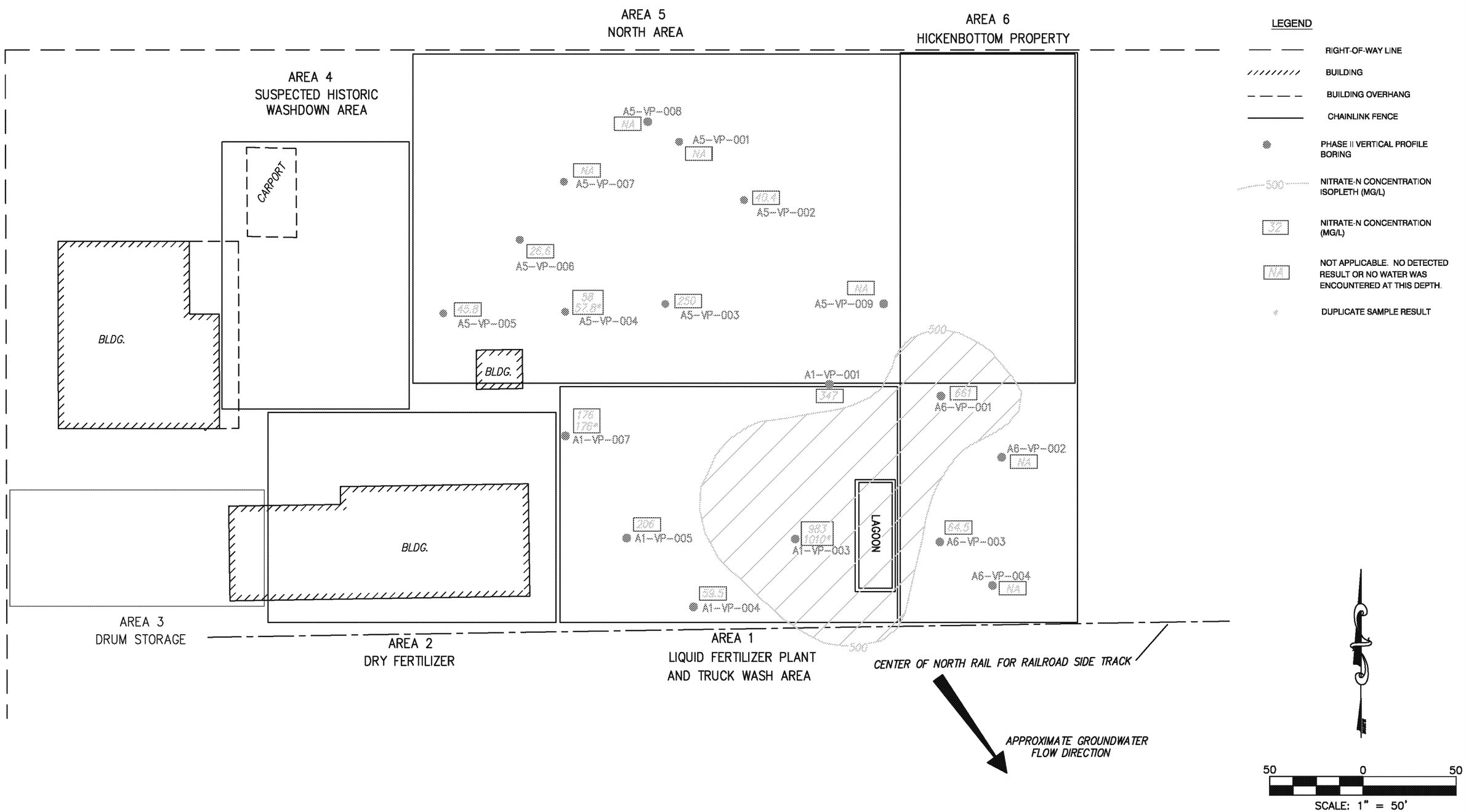
DRAWN BY: DRM CHECKED: MRP APPROVED: JRB DATE: 01/07/05 JOB No.: 24CH.67201.00 CAD FILE: Phase II Locations.dwg	PREPARED BY: SECOR 2321 Club Meridian Dr. Suite E Okemos, MI 48864	PREPARED FOR: Bee-Jay Scales Site	FIGURE 4-2 NITRATE-N CONCENTRATIONS IN AREA 5 SOIL - 4.5' DEPTH



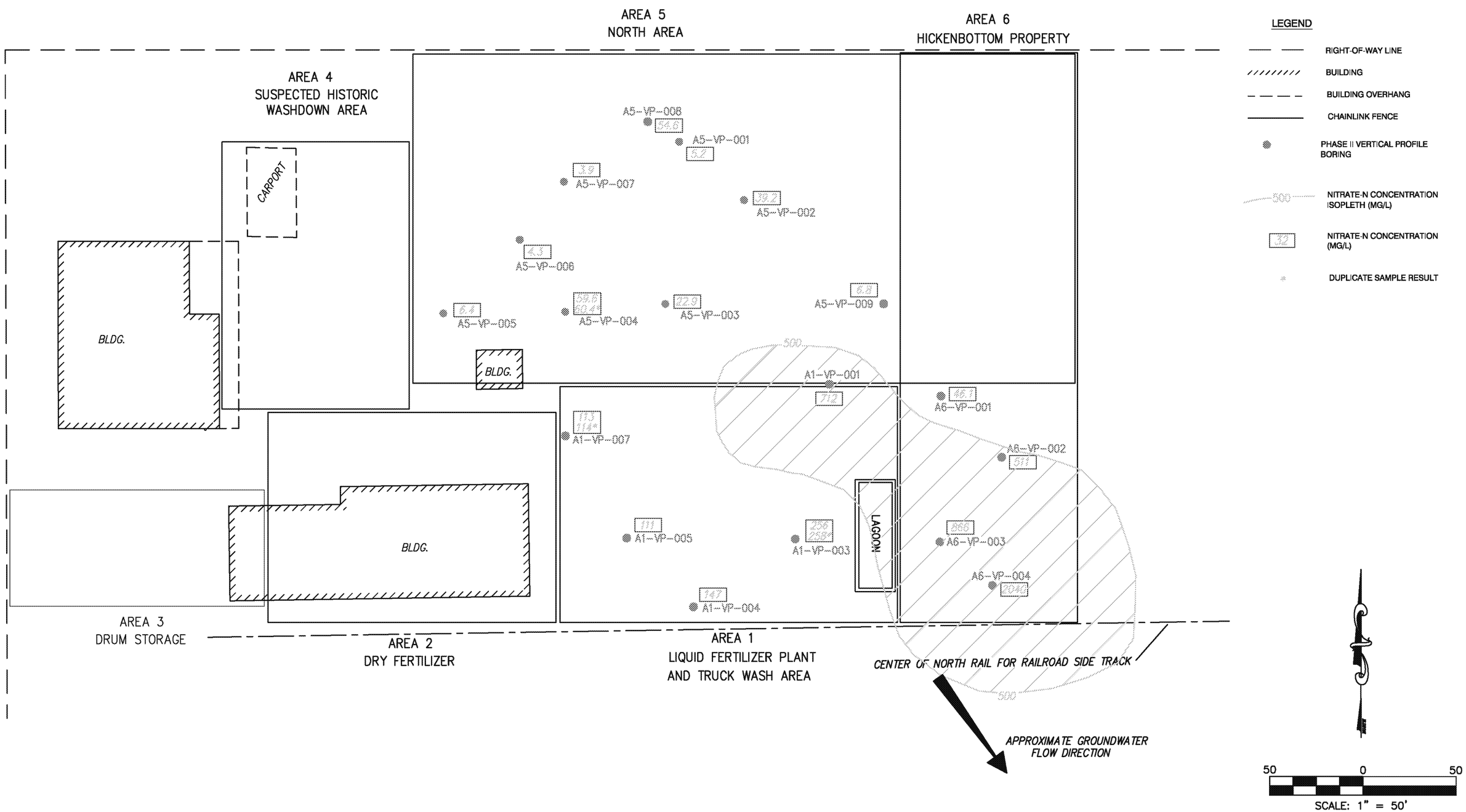
DRAWN BY: DRM CHECKED: MRP APPROVED: JRB DATE: 01/07/05 JOB No.: 24CH.67201.00 CAD FILE: Phase II Locations.dwg	PREPARED BY: SECOR 2321 Club Meridian Dr. Suite E Okemos, MI 48864	PREPARED FOR: Bee-Jay Scales Site	FIGURE 4-3 NITRATE-N CONCENTRATIONS IN AREA 5 SOIL - 9.0' DEPTH



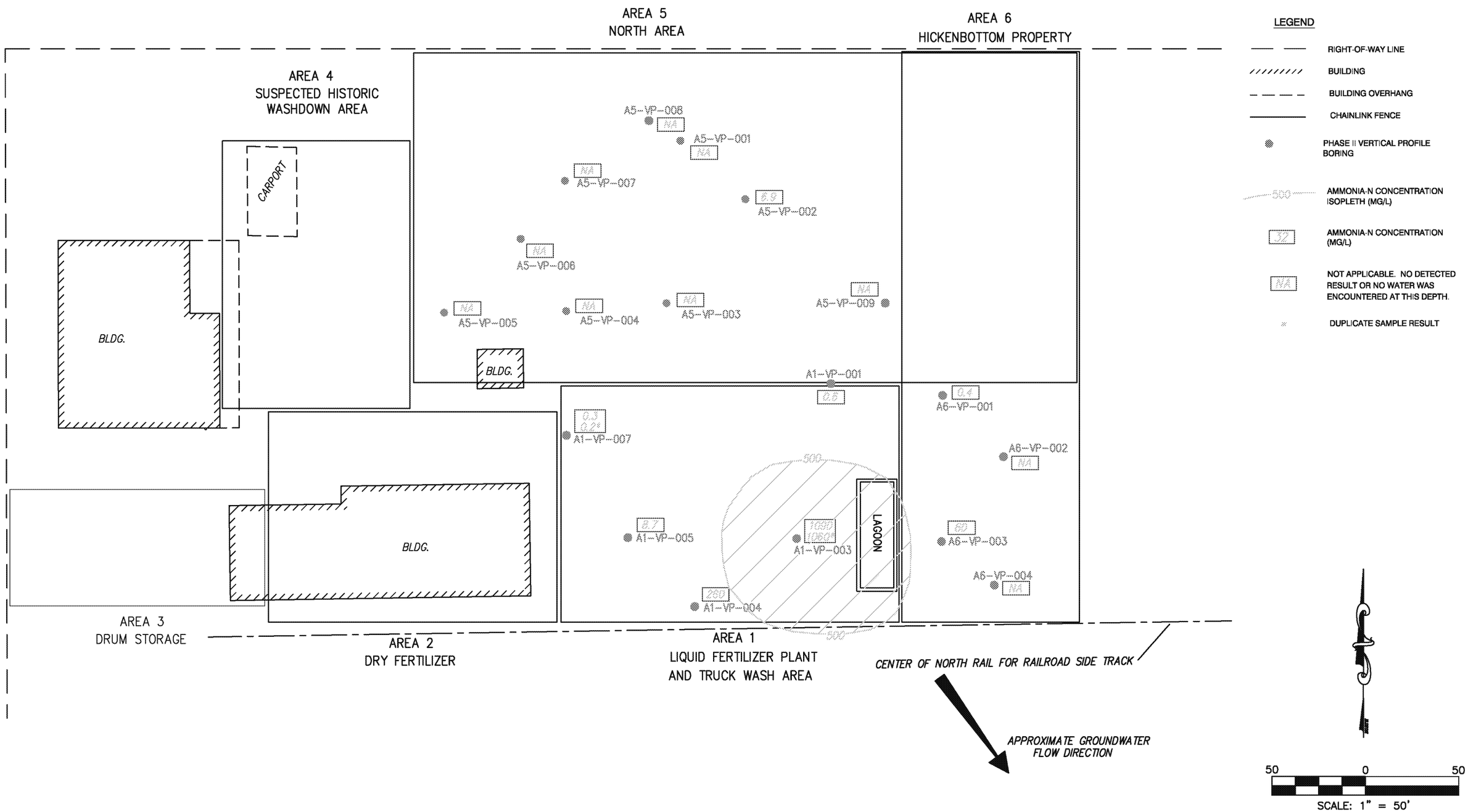
DRAWN BY: DRM CHECKED: MRP APPROVED: JRB DATE: 12/01/04 JOB No.: 24CH.67201.00 CAD FILE: Phase II Locations.dwg	PREPARED BY: SECOR 2321 Club Meridian Dr. Suite E Okemos, MI 48864	PREPARED FOR: Bee-Jay Scales Site	FIGURE 4-4 VERTICAL PROFILE BORING RESULTS ABOVE MTCA CRITERIA



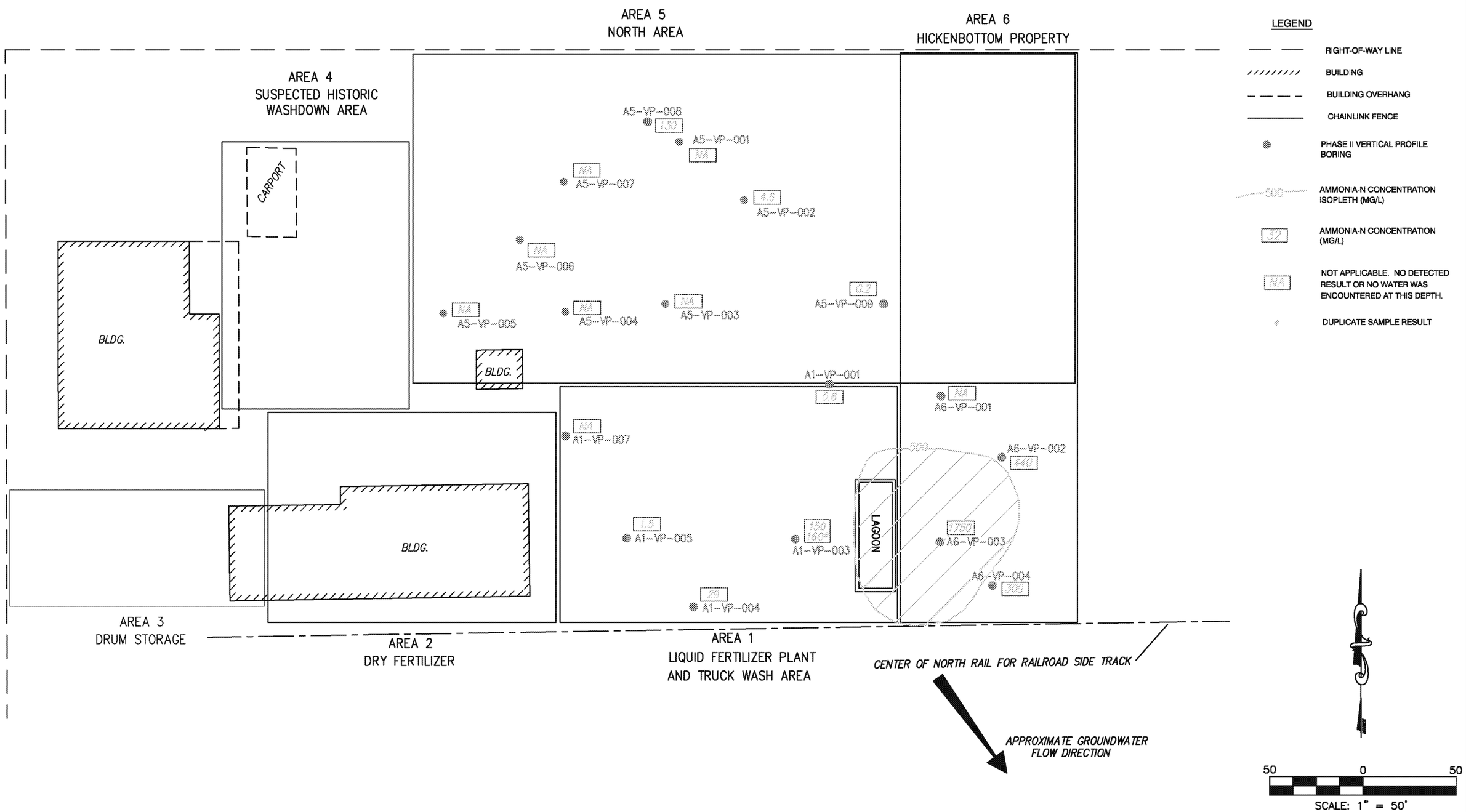
DRAWN BY: DRM CHECKED: MRP APPROVED: JRB DATE: 01/07/05 JOB No.: 24CH.67201.00 CAD FILE: Phase II Locations.dwg	PREPARED BY: SECOR 2321 Club Meridian Dr. Suite E Okemos, MI 48864	PREPARED FOR: Bee-Jay Scales Site	FIGURE 4-5 NITRATE-N CONCENTRATIONS IN VERTICAL PROFILE BORING GROUNDWATER - 10' DEPTH



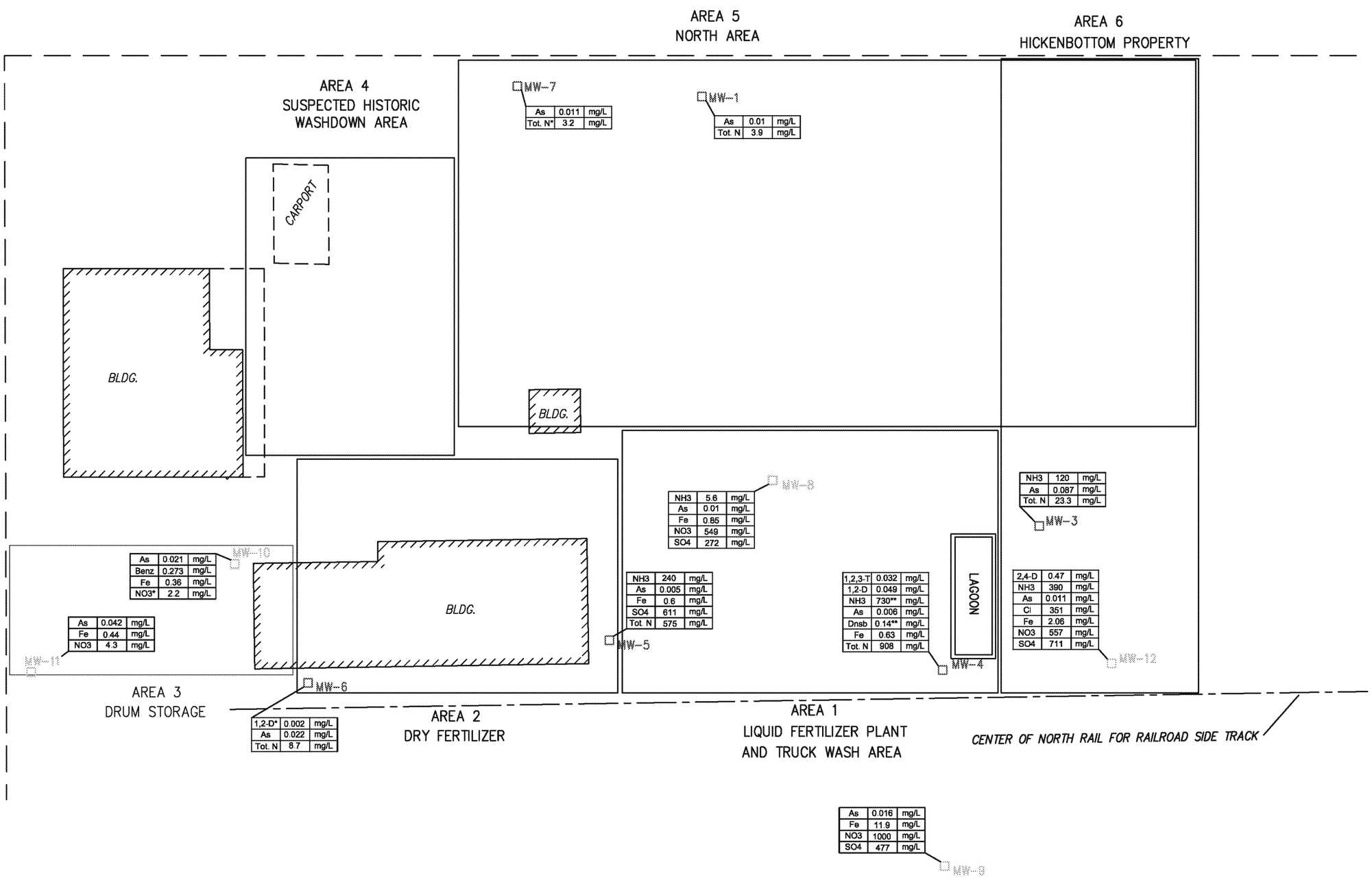
DRAWN BY: DRM CHECKED: MRP APPROVED: JRB DATE: 01/07/05 JOB No.: 24CH.67201.00 CAD FILE: Phase II Locations.dwg	PREPARED BY: SECOR 2321 Club Meridian Dr. Suite E Okemos, MI 48864	PREPARED FOR: Bee-Jay Scales Site	FIGURE 4-6 NITRATE-N CONCENTRATIONS IN VERTICAL PROFILE BORING GROUNDWATER - 20' DEPTH



DRAWN BY: DRM CHECKED: MRP APPROVED: JRB DATE: 01/07/05 JOB No.: 24CH.67201.00 CAD FILE: Phase II Locations.dwg	PREPARED BY: SECOR 2321 Club Meridian Dr. Suite E Okemos, MI 48864	PREPARED FOR: Bee-Jay Scales Site	FIGURE 4-7 AMMONIA-N CONCENTRATIONS IN VERTICAL PROFILE BORING GROUNDWATER - 10' DEPTH



DRAWN BY: DRM CHECKED: MRP APPROVED: JRB DATE: 01/07/05 JOB No.: 24CH.67201.00 CAD FILE: Phase II Locations.dwg	PREPARED BY: SECOR 2321 Club Meridian Dr. Suite E Okemos, MI 48864	PREPARED FOR: Bee-Jay Scales Site	FIGURE 4-8 AMMONIA-N CONCENTRATIONS IN VERTICAL PROFILE BORING GROUNDWATER - 20' DEPTH



LEGEND

- RIGHT-OF-WAY LINE
- BUILDING
- BUILDING OVERHANG
- CHAINLINK FENCE
- MW-1 PHASE I MONITORING WELL
- MW-8 PHASE II MONITORING WELL

1,2,3-T: 1,2,3-TRICHLOROPROPANE
1,2-D: 1,2-DICHLOROETHANE
NH3: AMMONIA-N
As: ARSENIC
Benz: BENZENE
Cl: CHLORIDE
Dnsb: DINOSEB
Fe: IRON
NO3: NITRATE-N
SO4: SULFATE
Tot. N: TOTAL NITRATES + NITRITES

* EXCEEDED MTCA METHOD B CULs, BUT NOT MTCA METHOD C CULs.

** DUPLICATE SAMPLES WERE COLLECTED FROM MW-4, AND THESE RESULTS ARE SHOWN IF HIGHER THAN REGULAR SAMPLE.

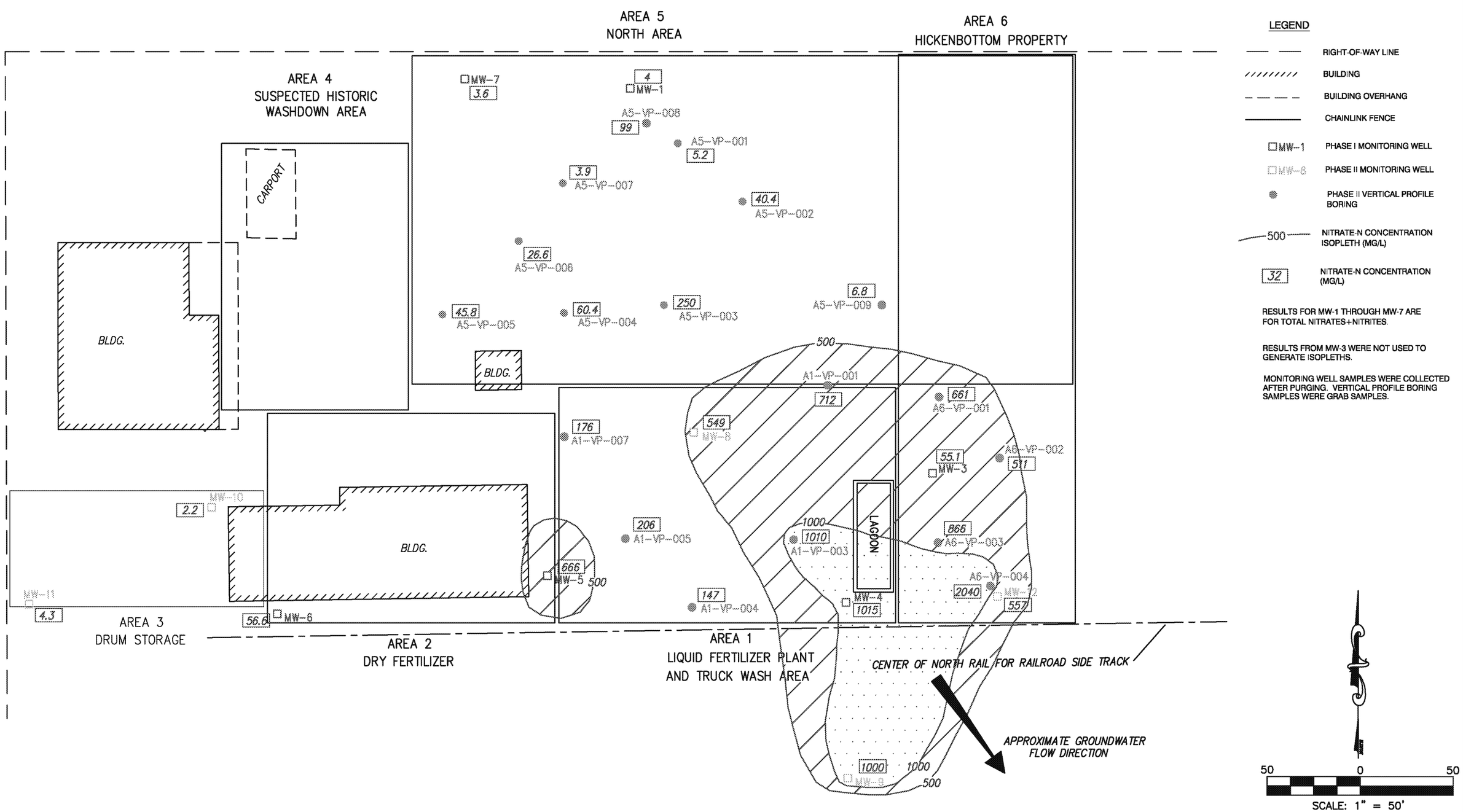
RESULTS FOR MW-8 THROUGH MW-12 ARE FROM THE PHASE II RI. RESULTS FOR MW-1 THROUGH MW-7 ARE FROM THE FOURTH QUARTER OF MONITORING PERFORMED ON JUNE 1, 2004.

NO MTCA CRITERIA HAVE BEEN DEVELOPED FOR AMMONIA-N

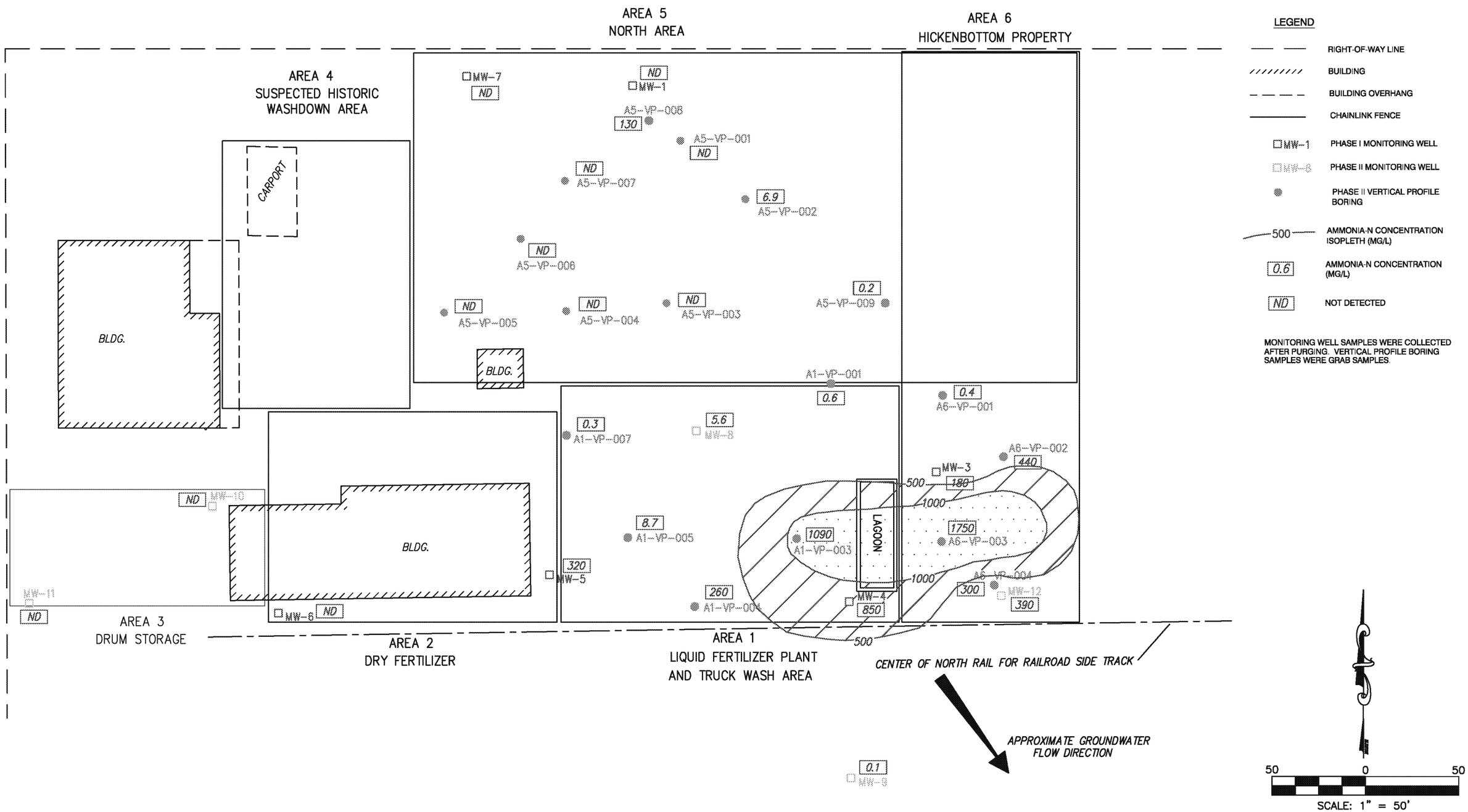
50 0 50

SCALE: 1" = 50'

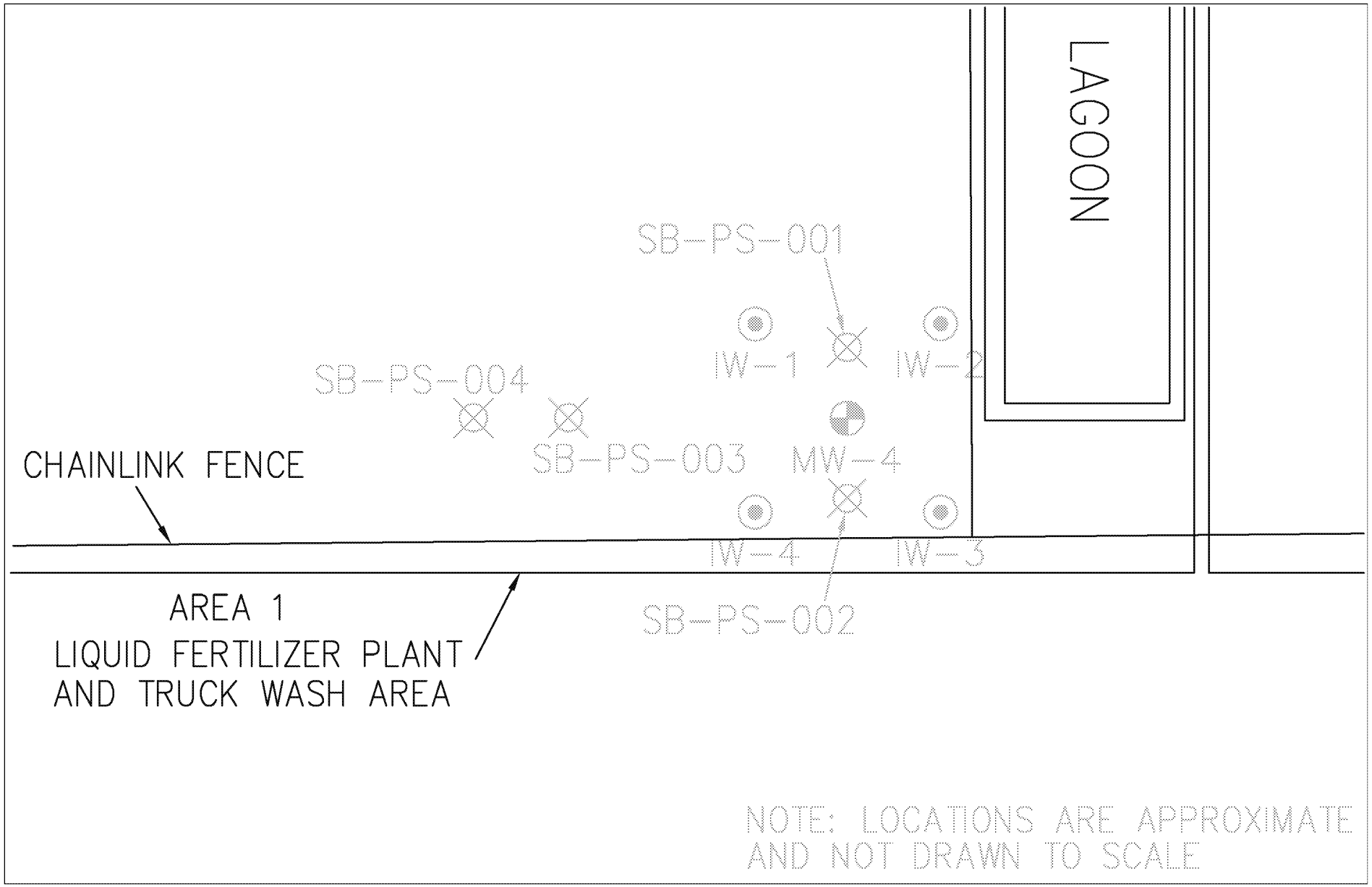
DRAWN BY: DRM CHECKED: MRP APPROVED: JRB DATE: 12/01/04 JOB No.: 24CH.67201.00 CAD FILE: Phase II Locations.dwg	PREPARED BY: SECOR 2321 Club Meridian Dr. Suite E Okemos, MI 48864	PREPARED FOR: Bee-Jay Scales Site	FIGURE 4-9 MONITORING WELL RESULTS ABOVE MTCA CRITERIA



DRAWN BY: DRM CHECKED: MRP APPROVED: JRB DATE: 01/28/05 JOB No.: 24CH.67201.00 CAD FILE: Phase II Locations.dwg	PREPARED BY: SECOR 2321 Club Meridian Dr. Suite E Okemos, MI 48864	PREPARED FOR: Bee-Jay Scales Site	FIGURE 4-10 MAXIMUM DETECTED GROUNDWATER CONCENTRATIONS - NITRATE-N



DRAWN BY: DRM CHECKED: MRP APPROVED: JRB DATE: 01/28/05 JOB No.: 24CH.67201.00 CAD FILE: Phase II Locations.dwg	PREPARED BY: SECOR 2321 Club Meridian Dr. Suite E Okemos, MI 48864	PREPARED FOR: Bee-Jay Scales Site	FIGURE 4-11 MAXIMUM DETECTED GROUNDWATER CONCENTRATIONS - AMMONIA-N



DRAWN BY: MRP CHECKED: MRP APPROVED: JRB DATE: 12/22/04 JOB No.: 24CH.67201.00.0013 CAD FILE: Phase II Locations	PREPARED BY: SECOR 2321 Club Meridian Dr., Suite E Okemos, MI	PREPARED FOR: Bee-Jay Scales Site	FIGURE 5-1 PILOT STUDY SAMPLING LOCATIONS

APPENDIX A
PHASE II CHAINS OF CUSTODY

Phase II Remedial Investigation Report
Chevron Environmental Management Company
& BP America, Inc.

24CH.67201.00
May 17, 2005

Merit Laboratories, Inc.

2680 East Lansing Dr., East L[illegible]g, MI 48823
Phone (517) 332-0167 Fax (5[illegible]) 332-6333

C.O.C. PAGE # 1 OF 2

[illegible]8193

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Marisa Patterson
COMPANY: Secor
ADDRESS: 2321 Club Meridian Dr. Suite E
CITY: Okemos STATE: MI ZIP CODE: 48864
PHONE NO.: 517-349-9499 FAX NO.: 517-349-6863 P.O. NO.:
E-MAIL ADDRESS: Mpatterson@secor.com QUOTE NO.:

PROJECT NO./NAME: 24CH.67201.01 Bee Jay Scales
SAMPLER(S) - PLEASE PRINT NAME: M. McMahon

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:

PRESERVATIVE CODE: A
REFRIGERATE (Y/N):
BOTTLE TYPE: NW TPH-GX, nitrogen compounds, sulfate, phosphate, iron

SAMPLE TYPE: GW ☐ WW ☐ OIL ☐ SOIL ☐ PRODUCT ☐ SLUDGE ☐ OTHER _____

A = NONE
B = HNO_3
C = H_2SO_4
D = NaOH
E = HCL
F = _____

RUSH ANALYSES ☐ DUE DATE _____
RUSH PICK-UP ☐ APPROVED BY: _____

ANALYSES

MERIT LAB NO.	SAMPLE COLLECTION YEAR: 2004 DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	# OF BOTTLES	NW TPH-GX	nitrogen compounds	sulfate	phosphate	iron
17176.01	051804	920	A3-SB-003, 0.5'-0	2	X				
.02		935	A3-SB-003, 4.5'-0						
.03		950	A3-SB-003, 7.5'-0						
.04		920	A3-SB-005, 0.5'-0						
.05		1020	A3-SB-005, 4.5'-0						
.06		1025	A3-SB-005, 7.5'-0						
.07		920	A3-SB-006, 0.5'-0						
.08		1000	A3-SB-006, 4.5'-0						
.09		1010	A3-SB-006, 7.5'-0		X				
.10		1235	A5-SB-008, 4.5'-0			X	X	X	X
.11		1240	A5-SB-008, 9'-0			X	X	X	X
.12		1250	A5-SB-009, 4.5'-0			X	X	X	X
.13		1255	A5-SB-009, 9'-0			X	X	X	X
.14		1310	A5-SB-010, 4.5'-0			X	X	X	X

RELINQUISHED BY: SIGNATURE Michael McMahon ☒ SAMPLER	DATE 051904	TIME 1500	
RECEIVED BY: SIGNATURE	DATE	TIME	
RELINQUISHED BY: SIGNATURE	DATE	TIME	
RECEIVED BY: SIGNATURE	DATE	TIME	

RELINQUISHED BY: SIGNATURE	DATE	TIME	
RECEIVED AT MERIT BY: SIGNATURE Paula [illegible]	DATE 5-20-04	TIME 0930	
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL 4
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	ship.

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE

Merit Laboratories, Inc.

2680 East Lansing Dr., East La[illegible], MI 48823
Phone (517) 332-0167 Fax (5[illegible]) 332-6333

C.O.C. PAGE # 2 OF 2

013081

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Marisa Patterson
COMPANY: SECOR
ADDRESS: 2321 Club Meridian Dr. Suite E
CITY: Okemos | STATE: MI | ZIP CODE: 48864
PHONE NO.: 517-349-9499 | FAX NO.: 517-349-6863 | P.O. NO.:
E-MAIL ADDRESS: mpatterson@secor.com | QUOTE NO.:

PROJECT NO./NAME: 24CH.67201.01 Bee Jay Scales
SAMPLER(S) - PLEASE PRINT NAME: Mike McMahon

INVOICE TO

CONTACT NAME | ☐ SAME
COMPANY
ADDRESS
CITY | STATE | ZIP CODE
PHONE NO. | FAX NO. | P.O. NO.

PRESERVATIVE CODE
REFRIGERATE (Y/N)
BOTTLE TYPE

SAMPLE TYPE: GW ☐ WW ☐ OIL ☐ SOIL ☐ PRODUCT ☐ SLUDGE ☐ OTHER _____

A = NONE
B = HNO_3
C = H_2SO_4
D = NaOH
E = HCL
F = _____

RUSH ANALYSES ☐ DUE DATE _____
RUSH PICK-UP ☐ APPROVED BY: _____

ANALYSES: Nitrogen compounds, Sulfate, Phosphate, Iron

MERIT LAB NO.	SAMPLE COLLECTION YEAR: DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	# OF BOTTLES
17176.15	051804	1315	A5SB-010, 9'-0	2

RELINQUISHED BY: SIGNATURE	DATE	TIME
Michael McMahon — SAMPLER	051904	1500
RECEIVED BY: SIGNATURE	DATE	TIME
RELINQUISHED BY: SIGNATURE	DATE	TIME
RECEIVED BY: SIGNATURE	DATE	TIME

RELINQUISHED BY: SIGNATURE	DATE	TIME
RECEIVED AT MERIT BY: SIGNATURE: Paula [illegible]	DATE 5-20-04	TIME 0930

SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL 4
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-6333

C.O.C. PAGE # 1 OF 1

3080

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Marisa Patterson
COMPANY: Secor
ADDRESS: 2321 Club Meridian Dr. Suite E
CITY: Okemos STATE: MI ZIP CODE: 48864
PHONE NO.: 517-349-9499 FAX NO.: 517-349-6863 P.O. NO.:
E-MAIL ADDRESS: mpatterson@secor.com QUOTE NO.:

PROJECT NO./NAME: 24CH.67201.01 Bee Jay Scales
SAMPLER(S) - PLEASE PRINT NAME: Mike McMahon

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:

PRESERVATIVE CODE: A
REFRIGERATE (Y/N):
BOTTLE TYPE:

SAMPLE TYPE: GW ☐ WW ☐ OIL ☐ SOIL ☒ PRODUCT ☐ SLUDGE ☐ OTHER _____

A = NONE
B = HNO_3
C = H_2SO_4
D = NaOH
E = HCL
F = _____

RUSH ANALYSES ☐ DUE DATE _____
RUSH PICK-UP ☐ APPROVED BY: _____

ANALYSES: Nitrogen Compounds, Sulfate, Phosphate, Iron, SPLP

MERIT LAB NO.	SAMPLE COLLECTION YEAR: DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	# OF BOTTLES	ANALYSES
17201.01	5-19-04	0905	AS-SB-001, 4.5'-0	3	SPLP Analysis for NO_2, NO_3, Ammonia, Sulfate, Phosphorus, Iron } HOLD
.02		0910	AS-SB-001, 9'-0		
.03		1030	AS-SB-002, 4.5'-0		
.04		1040	AS-SB-002, 9'-0		
.05		935	AS-SB-003, 4.5'-0		
.06		940	AS-SB-003, 9'-0		
.07		1005	AS-SB-004, 4.5'-0		
.08		1010	AS-SB-004, 9'-0		
.09		820	AS-SB-005, 4.5'-0		
.10		825	AS-SB-005, 9'-0		
.11		720	AS-SB-006, 4.5'-0		
.12		725	AS-SB-006, 9'-0		
.13		750	AS-SB-007, 4.5'-0		
.14		755	AS-SB-007, 9'-0		

RELINQUISHED BY: SIGNATURE: Michael Miller ☒ SAMPLER	DATE: 5-20-04	TIME: 1100	RELINQUISHED BY: SIGNATURE:	DATE:	TIME:
RECEIVED BY: SIGNATURE:	DATE:	TIME:	RECEIVED AT MERIT BY: SIGNATURE: Paula [illegible]	DATE: 5-21-04	TIME: 1000
RELINQUISHED BY: SIGNATURE:	DATE:	TIME:	SEAL NO.:	SEAL INTACT YES ☐ NO ☐	INITIALS:
RECEIVED BY: SIGNATURE:	DATE:	TIME:	SEAL NO.:	SEAL INTACT YES ☐ NO ☐	INITIALS:

NOTES: TEMP. ON ARRIVAL 4

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE

Merit Laboratories, Inc.

2680 East Lansing Dr., East L g, MI 48823
Phone (517) 332-0167 Fax (5) 332-6333

C.O.C. PAGE # 2 OF 2

018192

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Marisa Patterson
COMPANY: SECOR
ADDRESS: 2321 Club Meridian Dr. Suite E
CITY: Okemos | STATE: MI | ZIP CODE: 48864
PHONE NO.: 517-349-9499 | FAX NO.: 517-349-6863 | P.O. NO.:
E-MAIL ADDRESS: mpatterson@secor.com | QUOTE NO.:

PROJECT NO./NAME: 24CH.67201.01 Bee Jay Scales
SAMPLER(S) - PLEASE PRINT NAME: Mike McMahon

INVOICE TO

CONTACT NAME | ☐ SAME
COMPANY
ADDRESS
CITY | STATE | ZIP CODE
PHONE NO. | FAX NO. | P.O. NO.

PRESERVATIVE CODE: B A A A A
REFRIGERATE (Y/N):
BOTTLE TYPE:

SAMPLE TYPE: GW ☐ WW ☐ OIL ☐ SOIL ☐ PRODUCT ☐ SLUDGE ☐ OTHER _____

RUSH ANALYSES ☐ DUE DATE _____
RUSH PICK-UP ☐ APPROVED BY: _____

A = NONE
B = HNO_3
C = H_2SO_4
D = NaOH
E = HCL
F = _____

MERIT LAB NO.	SAMPLE COLLECTION YEAR: DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	# OF BOTTLES	arsenic, iron	alkalinity, chloride	D.O., nitrogen comp.,	sulfate	phosphate, ph	herbicides
17201.15	5-19-04	1345	A5-VP-002, 10'-0	7	→	→	→	→	→	→
.16	↓	1335	A5-VP-003, 10'-0	↓	→	→	→	→	→	→
.17		1315	A5-VP-004, 10'-0		→	→	→	→	→	→
.18		1300	A5-VP-005, 10'-0		→	→	→	→	→	→
.19		1245	A5-VP-006, 10'-0		→	→	→	→	→	→
.20		1320	A5-VP-004, 10'-1		→	→	→	→	→	→
.21		1530	A5-VP-007, 20'-0		→	→	→	→	→	→
.22		1545	A5-VP-006, 20'-0		→	→	→	→	→	→
.23		1555	A5-VP-005, 20'-0		→	→	→	→	→	→
.24		1610	A5-VP-004, 20'-0		→	→	→	→	→	→
.25		1620	A5-VP-004, 20'-1		→	→	→	→	→	→
.26	↓	1700	A5-VP-004, 20'-2	↓	→	→	→	→	→	→

ANALYSES

RELINQUISHED BY: SIGNATURE: Michael Miller ☒ SAMPLER	DATE: 5-20-04	TIME: 1100	
RECEIVED BY: SIGNATURE	DATE	TIME	
RELINQUISHED BY: SIGNATURE	DATE	TIME	
RECEIVED BY: SIGNATURE	DATE	TIME	

RELINQUISHED BY: SIGNATURE	DATE	TIME	
RECEIVED AT MERIT BY: SIGNATURE: Paula [illegible]	DATE: 5-21-04	TIME: 1000	
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL 4
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE

Merit Laboratories, Inc.

2680 East Lansing Dr., East L[illegible]g, MI 48823
Phone (517) 332-0167 Fax [illegible] 332-6333

C.O.C. PAGE # _____ OF _____

3062

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Marisa Patterson
COMPANY: Secor
ADDRESS: 2321 Club Meridian Dr. Suite E
CITY: Okemos STATE: MI ZIP CODE: 48864
PHONE NO.: 517-349-9499 FAX NO.: 517-349-6863 P.O. NO.:
E-MAIL ADDRESS: mpatterson@secor.com QUOTE NO.:

PROJECT NO./NAME: 24CH.67201.01 Bee Jay Scales
SAMPLER(S) - PLEASE PRINT NAME: Mike McMahon

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:

PRESERVATIVE CODE: A A A A A
REFRIGERATE (Y/N):
BOTTLE TYPE: arsenic, iron, alkalinity, chloride, D.O., nitrogen (amp.), sulfate, phosphate, herbicides

SAMPLE TYPE: GW ☑ WW ☐ OIL ☐ SOIL ☐ PRODUCT ☐ SLUDGE ☐ OTHER _____

A = NONE
B = HNO_3
C = H_2SO_4
D = NaOH
E = HCL
F = _____

RUSH ANALYSES ☐ DUE DATE _____
RUSH PICK-UP ☐ APPROVED BY: _____

MERIT LAB NO.	SAMPLE COLLECTION YEAR: DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	# OF BOTTLES
17232.01	5-21-04	820	A1-VP-005, 10'-0	7
.02		955	A1-VP-005, 20'-0	
.03		945	A1-VP-004, 10'-0	
.04		1055	A1-VP-004, 20'-0	
.05		1120	A1-VP-003, 10'-0	
.06		1120	A1-VP-003, 10'-1	
.07		1220	A1-VP-003, 20'-0	
.08		1220	A1-VP-003, 20'-1	
.09		1300	A1-VP-003, 20'-2	

ANALYSES

RELINQUISHED BY: SIGNATURE [signature] SAMPLER	DATE 5-21-04	TIME 1500	
RECEIVED BY: SIGNATURE	DATE	TIME	
RELINQUISHED BY: SIGNATURE	DATE	TIME	
RECEIVED BY: SIGNATURE	DATE	TIME	

RELINQUISHED BY: SIGNATURE	DATE	TIME	
RECEIVED AT MERIT BY: SIGNATURE [signature]	DATE 5-24-04	TIME 1100	
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL 8
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE

Merit Laboratories, Inc.

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Phone (517) 332-0167 Fax ([illegible]) 332-6333

C.O.C. PAGE # _____ OF _____

63063

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Marisa Patterson
COMPANY: Secor
ADDRESS: 2321 Club Merridian dr. Suite E
CITY: Okemos STATE: MI ZIP CODE: 48864
PHONE NO.: 517-349-9499 FAX NO.: 517-349-6863 P.O. NO.:
E-MAIL ADDRESS: mpatterson@secor.com QUOTE NO.:

PROJECT NO./NAME: Bee Jay Scales 24CH.67201.01
SAMPLER(S) - PLEASE PRINT NAME: Michael McMahon

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:

PRESERVATIVE CODE: A A A A A
REFRIGERATE (Y/N):
BOTTLE TYPE: arsenic, iron, alkalinity, chloride, BOD, nitrogen comp, sulfate, Pb, phosphate, herbicides

SAMPLE TYPE: GW ☒ WW ☐ OIL ☐ SOIL ☐ PRODUCT ☐ SLUDGE ☐ OTHER _____

A = NONE
B = HNO_3
C = H_2SO_4
D = NaOH
E = HCL
F = _____

RUSH ANALYSES ☐ DUE DATE _____
RUSH PICK-UP ☐ APPROVED BY: _____

ANALYSES

MERIT LAB NO.	SAMPLE COLLECTION YEAR: DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	# OF BOTTLES
1723301	5-20-04	1045	A5-VP-008, 20'-0	7
.02		1140	A5-VP-003, 20'-0	
.03		1145	A1-VP-001, 10'-0	
.04		1345	A5-VP-001, 20'-0	
.05		1410	A5-VP-002, 20'-0	
.06		1440	A5-VP-009, 20'-0	
.07		1510	A1-VP-001, 20'-0	
.08		1555	A1-VP-007, 10'-0	
.09		1600	A1-VP-007, 10'-1	
.10		1700	A1-VP-007, 20'-0	
.11		1705	A1-VP-007, 20'-1	
.12		1715	A1-VP-007, 20'-2	

RELINQUISHED BY: SIGNATURE Michael McMahon ☒ SAMPLER	DATE 5-21-04	TIME 1300	
RECEIVED BY: SIGNATURE	DATE	TIME	
RELINQUISHED BY: SIGNATURE	DATE	TIME	
RECEIVED BY: SIGNATURE	DATE	TIME	

RELINQUISHED BY: SIGNATURE	DATE	TIME	
RECEIVED AT MERIT BY: SIGNATURE Paula [illegible]	DATE 5-24-04	TIME 1100	
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL 8
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE

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Phone (517) 332-0167 Fax (5[illegible]) 332-6333

C.O.C. PAGE # _____ OF _____

013066

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Marisa Patterson
COMPANY: SECOR
ADDRESS: 2321 Club Meridian dr. Suite E
CITY: Okemos STATE: MI ZIP CODE: 48864
PHONE NO.: 517-349-9499 FAX NO.: 517-349-6863 P.O. NO.:
E-MAIL ADDRESS: mpatterson@secor.com QUOTE NO.:

PROJECT NO./NAME: Bee Jay Scales 24CH-G7201.01
SAMPLER(S) - PLEASE PRINT NAME: Michael McMahon

INVOICE TO

CONTACT NAME ☐ SAME
COMPANY
ADDRESS
CITY STATE ZIP CODE
PHONE NO. FAX NO. P.O. NO.

PRESERVATIVE CODE
REFRIGERATE (Y/N)
BOTTLE TYPE

SAMPLE TYPE: GW ☐ WW ☐ OIL ☐ SOIL ☒ PRODUCT ☐ SLUDGE ☐ OTHER _____

A = NONE
B = HNO_3
C = H_2SO_4
D = NaOH
E = HCL
F = _____

RUSH ANALYSES ☐ DUE DATE _____
RUSH PICK-UP ☐ APPROVED BY: _____

MERIT LAB NO.	SAMPLE COLLECTION YEAR: DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	# OF BOTTLES	ANALYSES
17270.01	5-25-04	0845	A3-SB-004, 0.5'-0	2	NW TPH-Gx
.02		0845	A3-SB-004, 0.5'-1	2	NW TPH-Gx
.03		0850	A3-SB-004, 4.5'-0	2	NW TPH-Gx
.04		0850	A3-SB-004, 4.5'-1	2	NW TPH-Gx
.05		0855	A3-SB-004, 7.5'-0	2	NW TPH-Gx
.06		0855	A3-SB-004, 7.5'-1	2	NW TPH-Gx
.07		1045	A5-SB-008, 4.5'-0	1	SPLP
.08		1050	A5-SB-008, 9'-0	1	SPLP
.09		1010	A5-SB-009, 4.5-0	1	SPLP
.10		1015	A5-SB-009, 9'-0	1	SPLP
.11		945	A5-SB-010, 4.5'-0	1	SPLP
.12		950	A5-SB-010, 9'-0	1	SPLP

RELINQUISHED BY: SIGNATURE Michael Wyle ☒ SAMPLER	DATE 5-25-04	TIME 1300	
RECEIVED BY: SIGNATURE	DATE	TIME	
RELINQUISHED BY: SIGNATURE	DATE	TIME	
RECEIVED BY: SIGNATURE	DATE	TIME	

RELINQUISHED BY: SIGNATURE	DATE	TIME	
RECEIVED AT MERIT BY: SIGNATURE Paula [illegible]	DATE 5-26-04	TIME 1120	
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL 4
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE

Merit Laboratories, Inc.

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Phone (517) 332-0167 Fax (517) 332-6333

C.O.C. PAGE # 1 OF 1

013065

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Marisa Patterson
COMPANY: SECOR
ADDRESS: 2321 Club Meridian dr. Suite E
CITY: Okemos | STATE: MI | ZIP CODE: 48864
PHONE NO.: 517-349-9499 | FAX NO.: 517-349-6863 | P.O. NO.:
E-MAIL ADDRESS: mpatterson@secor.com | QUOTE NO.:
PROJECT NO./NAME: Bee Jay Scales 24CH-67201-01
SAMPLER(S) - PLEASE PRINT NAME: Michael McMahon

INVOICE TO

CONTACT NAME: | ☐ SAME
COMPANY:
ADDRESS:
CITY: | STATE: | ZIP CODE:
PHONE NO.: | FAX NO.: | P.O. NO.:

PRESERVATIVE CODE: B A A A C A
REFRIGERATE (Y/N):
BOTTLE TYPE: arsenic, iron, alkalinity, chloride, SO, nitrogen, comp, solfate, phosphate, herbicides

SAMPLE TYPE: GW ☒ WW ☐ OIL ☐ SOIL ☐ PRODUCT ☐ SLUDGE ☐ OTHER ____
RUSH ANALYSES ☐ DUE DATE ____
RUSH PICK-UP ☐ APPROVED BY: ____

A = NONE
B = HNO_3
C = H_2SO_4
D = NaOH
E = HCL
F = ____

MERIT LAB NO.	SAMPLE COLLECTION YEAR: DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	# OF BOTTLES	ANALYSES
17271.01	5-24-04	845	A6-VP-001, 10'-0	7	
.02	↓	945	A6-VP-001, 20'-0	↓	
.03		1012	A6-VP-003, 10'-0		
.04		1130	A6-VP-003, 20'-0		
.05		1310	A6-VP-004, 20'-0		
.06		1445	A6-VP-002, 20'-0		
.07		1455	A6-VP-002, 20'-1		

RELINQUISHED BY: SIGNATURE: Michael McM[illegible] ☒ SAMPLER	DATE: 5-25-04	TIME: 1200	
RECEIVED BY: SIGNATURE:	DATE:	TIME:	
RELINQUISHED BY: SIGNATURE:	DATE:	TIME:	
RECEIVED BY: SIGNATURE:	DATE:	TIME:	

RELINQUISHED BY: SIGNATURE:	DATE:	TIME:	
RECEIVED AT MERIT BY: SIGNATURE: Paula [illegible]	DATE: 5-26-04	TIME: 1120	
SEAL NO.:	SEAL INTACT YES ☐ NO ☐	INITIALS:	NOTES: TEMP. ON ARRIVAL 4
SEAL NO.:	SEAL INTACT YES ☐ NO ☐	INITIALS:	

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE

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Phone (517) 332-0167 Fax (517) 332-6333

C.O.C. PAGE # _____ OF _____

013069

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Marisa Patterson
COMPANY: Secor
ADDRESS: 2321 Club Meridian dr
CITY: Okemos STATE: MI ZIP CODE: 48864
PHONE NO.: 517-349-9499 FAX NO.: 517-349-6863 P.O. NO.:
E-MAIL ADDRESS: mpatterson@secor.com QUOTE NO.:
PROJECT NO./NAME: Bee Jay Scales 24CH.67201.01
SAMPLER(S) - PLEASE PRINT NAME: Michael McMahon

INVOICE TO

CONTACT NAME ☐ SAME
COMPANY
ADDRESS
CITY STATE ZIP CODE
PHONE NO. FAX NO. P.O. NO.

PRESERVATIVE CODE
REFRIGERATE (Y/N)
BOTTLE TYPE

SAMPLE TYPE: GW ☒ WW ☐ OIL ☐ SOIL ☐ PRODUCT ☐ SLUDGE ☐ OTHER _____

A = NONE
B = HNO_3
C = H_2SO_4
D = NaOH
E = HCL
F = _____

RUSH ANALYSES ☐ DUE DATE _____
RUSH PICK-UP ☐ APPROVED BY: _____

MERIT LAB NO.	SAMPLE COLLECTION YEAR: DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	# OF BOTTLES	ANALYSES
17291.01	5-26-04	910	MW08260504-0	7	arsenic, iron, alkalinity, chloride, DO nitrogen compounds, sulfate, Ph., phosphate, herbicides

RELINQUISHED BY: SIGNATURE Michael McMahon ☒ SAMPLER	DATE 5-26-04	TIME 1100	
RECEIVED BY: SIGNATURE	DATE	TIME	
RELINQUISHED BY: SIGNATURE	DATE	TIME	
RECEIVED BY: SIGNATURE	DATE	TIME	

RELINQUISHED BY: SIGNATURE	DATE	TIME	
RECEIVED AT MERIT BY: SIGNATURE Paula Ahn	DATE 5-27-04	TIME 0930	
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL 4 shipped
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE

Merit Laboratories, Inc.

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Phone (517) 332-0167 Fax (517) 332-6333

C.O.C. PAGE # 1 OF 1

017782

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: MARISA PATTERSON
COMPANY: SECOR
ADDRESS: 2321 Club Meridian Dr Suite E
CITY: Okemos | STATE: MI | ZIP CODE: 48864
PHONE NO.: 517 349 9499 X 35 | FAX NO.: 517 349 6863 | P.O. NO.:
E-MAIL ADDRESS: MPATTERSON@SECOR.Com | QUOTE NO.:

PROJECT NO./NAME:
SAMPLER(S) - PLEASE PRINT NAME:

INVOICE TO

CONTACT NAME: | ☒ SAME
COMPANY:
ADDRESS:
CITY: | STATE: | ZIP CODE:
PHONE NO.: | FAX NO.: | P.O. NO.:

PRESERVATIVE CODE: A A
REFRIGERATE (Y/N): Y Y
BOTTLE TYPE: 250 mL Plastic / 32 oz Glass

SAMPLE TYPE: GW ☐ WW ☐ OIL ☐ SOIL ☐ PRODUCT ☐ SLUDGE ☐ OTHER Sediment

A = NONE
B = HNO_3
C = H_2SO_4
D = NaOH
E = HCL
F = _____

RUSH ANALYSES ☐ DUE DATE _____
RUSH PICK-UP ☐ APPROVED BY: _____

MERIT LAB NO.	SAMPLE COLLECTION YEAR: 2004 DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	# OF BOTTLES	ANALYSES						
17367.01	6/2	2:00pm	LAG 0010		X						
.02	6/2	2:00pm	LAG 0011		X						
.03	6/2	2:15pm	SED 0010			X					
.04	6/2	2:15pm	SED 0011			X					

NITROGEN compounds

RELINQUISHED BY: SIGNATURE	☒ SAMPLER	DATE 6/3/04	TIME 8:45 Am
RECEIVED BY: SIGNATURE		DATE	TIME
RELINQUISHED BY: SIGNATURE		DATE	TIME
RECEIVED BY: SIGNATURE		DATE	TIME

RELINQUISHED BY: SIGNATURE	DATE	TIME
RECEIVED AT MERIT BY: SIGNATURE	DATE 6-4-04	TIME 1030

SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL _____
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE

Merit Laboratories, Inc.

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Phone (517) 332-0167 Fax ([illegible]332-6333
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

[illegible]2721

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Marisa Patterson
COMPANY: Secor
ADDRESS: 2321 Club Meridian dr. Suite E
CITY: Okemos STATE: MI ZIP CODE: 48864
PHONE NO.: 517-349-9499 FAX NO.: 517-349-6863 P.O. NO.:
E-MAIL ADDRESS: mpatterson@secor.com QUOTE NO.:

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:

PROJECT NO./NAME: 24CH.67201.00 Bee Jay Scales
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Michael McMahon

TURNAROUND TIME REQUIRED ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STANDARD ☐ LEVEL II ☐ LEVEL III ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE O=OIL A=AIR W=WASTE M=MISC

ANALYSIS (ATTACH LIST IF MORE SPACE REQUIRED)

MERIT LAB NO.	YEAR 04 DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	NONE	HCL	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	arsenic iron	alkalinity chloride	DO ORP	Nitrogen comp. sulfate, ph	Phosphate	herbicides	NWTPH-Dx	NWTPH-Gx VOCs			SPECIAL INSTRUCTIONS/NOTES
17496.01	10-25	1030	MW11-251004-0	GW	10								X	X	X	X	X	X	X	X			
.02	10-25	1135	MW10-251004-0	GW	10								X	X	X	X	X	X	X	X			
.03	10-25	1430	MW9-251004-0	GW	7								X	X	X	X	X	X					
.04	10-26	0835	MW12-261004-0	GW	7								X	X	X	X	X	X					

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Michael McMahon [signature] Secor	DATE: 10-26	TIME: 1230	
RECEIVED BY: SIGNATURE/ORGANIZATION:	DATE:	TIME:	
RELINQUISHED BY: SIGNATURE/ORGANIZATION:	DATE:	TIME:	
RECEIVED BY: SIGNATURE/ORGANIZATION:	DATE:	TIME:	

RELINQUISHED BY: SIGNATURE/ORGANIZATION:	DATE:	TIME:	
RECEIVED BY: SIGNATURE/ORGANIZATION: [signature]	DATE: 10-27-04	TIME: 1045	
SEAL NO.:	SEAL INTACT YES ☐ NO ☐	INITIALS:	NOTES: TEMP. ON ARRIVAL _____
SEAL NO.:	SEAL INTACT YES ☐ NO ☐	INITIALS:	

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE

APPENDIX B
PHASE II BORING LOGS

Phase II Remedial Investigation Report
Chevron Environmental Management Company
& BP America, Inc.

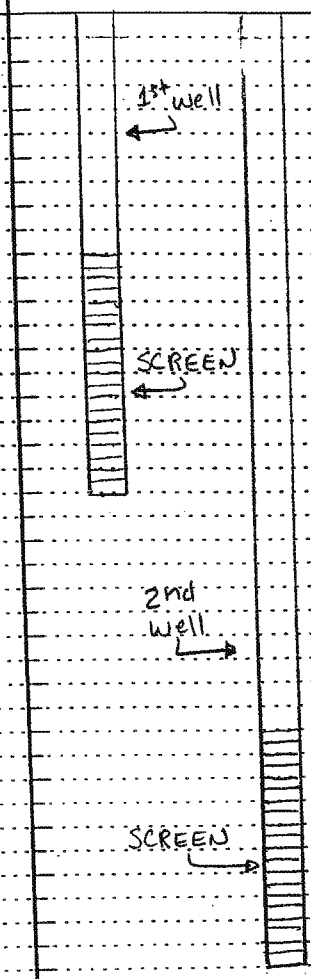
24CH.67201.00
May 17, 2005

Project: Bee Jay Scales			Log of Boring/Monitoring Well: A1-VP-001
Boring Location:	Project No.: 24CH.67201		
Contractor and Equipment: CDI HSA	Logged By: MM	Drawn By:	
Sampling Method:	Monitoring Device:		Comments: Temporary Wells
Start Date/Time:	Finish Date/Time:		
First Water (bgs):	Stabilized Water Level (bgs):		

Surface Elevation: Top Casing Elevation:

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)
A1-VP-001			0				
			1				hand clear to 4.5'
			2				
			3				brown, loose, dry silty sand
			4				
			5				
			6				becomes wet and clayey
			7		▼		
			8		?		
			9				
0'			10				
			11				
			12				
			13				
			14				
			15				
			16				
			17				
			18				
			19				
20'			20				Term @ 20'
			21				
			22				
			23				
			24				
			25				
			26				
			27				
			28				
			29				
			30				

Boring Abandonment/ Well Construction Details



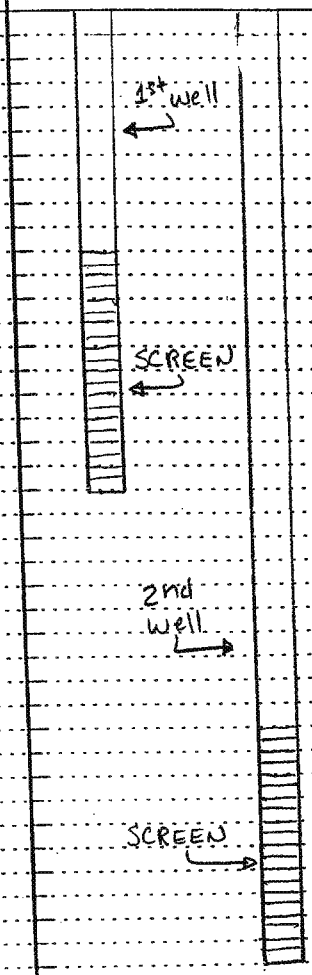
Reviewed By: _____ Date: _____

Project: Bee Jay Scales			Log of Boring/Monitoring Well: A1-VP-003
Boring Location:	Project No.: 24CH.67201		
Contractor and Equipment: CDI HSA	Logged By: MM	Drawn By:	
Sampling Method:	Monitoring Device:		Comments: Temporary Wells
Start Date/Time: 5-21-04	Finish Date/Time: 5-21-04		
First Water (bgs):	Stabilized Water Level (bgs):		

Surface Elevation: Top Casing Elevation:

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)
A1-VP-003			0				
			1				~~[illegible]~~
			2				light brown, loose, dry silty
			3				sand
			4				
			5				
			6				
			7				
			8				
			9				becomes wet
10'			10			▼	
			11			3	
			12				
			13				
			14				
			15				
			16				
			17				
			18				
20'			19				
			20				TD
			21				
			22				
			23				
			24				
			25				
			26				
			27				
			28				
			29				
			30				

Boring Abandonment/ Well Construction Details



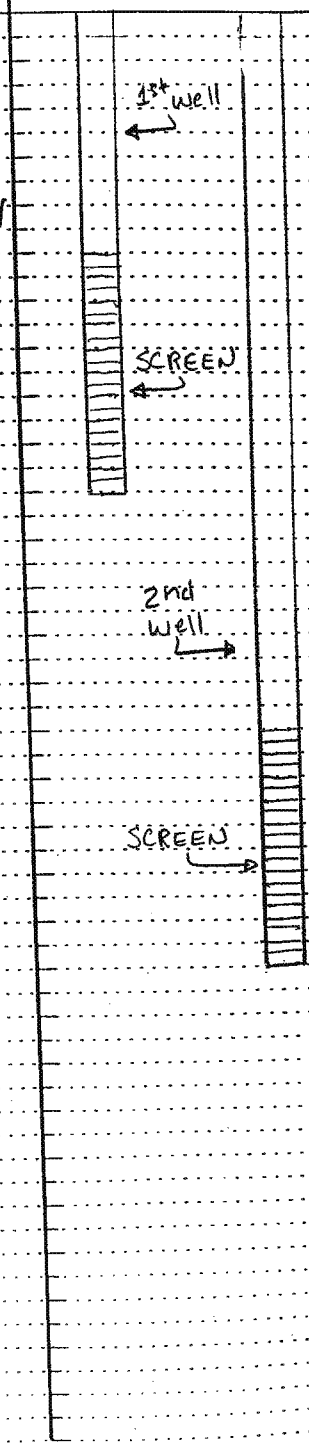
Reviewed By: _____ Date: _____

Project: Bee Jay Scales			Log of Boring/Monitoring Well: A1-VP-004
Boring Location:	Project No.: 24CH.67201		
Contractor and Equipment: CDI HSA	Logged By: MM	Drawn By:	
Sampling Method:	Monitoring Device:		Comments: Temporary Wells
Start Date/Time: 5-21-04	Finish Date/Time: 5-21-04		
First Water (bgs):	Stabilized Water Level (bgs):		

Surface Elevation: Top Casing Elevation:

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)
A1VP004			0				
			1				hand clear to 4.5'
			2				
			3				
			4				light brown, loose dry silty sand
			5				
			6				moist and somewhat clayey
			7				
			8				becomes wet
			9				
10'			10				
			11				
			12				
			13				
			14				
			15				
			16				
			17				
			18				
			19				
20'			20				TD
			21				
			22				
			23				
			24				
			25				
			26				
			27				
			28				
			29				
			30				

Boring Abandonment/ Well Construction Details



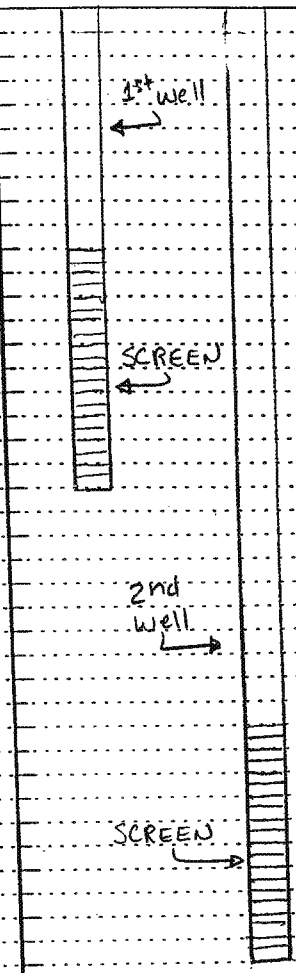
Reviewed By: _____ Date: _____

Project: Bee Jay Scales			Log of Boring/Monitoring Well: AI-VP-005
Boring Location:	Project No.: 24CH.67201		
Contractor and Equipment: CDI HSA	Logged By: MM	Drawn By:	
Sampling Method:	Monitoring Device:		Comments: Temporary Wells
Start Date/Time: 5-21-04	Finish Date/Time: 5-21-04		
First Water (bgs):	Stabilized Water Level (bgs):		

Surface Elevation: Top Casing Elevation:

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)
AIVP005			0				
			1				hand clear to 4.5
			2				
			3				brown, loose, dry silty sand
			4				
			5				
			6				
			7				
			8				becomes wet
			9			▼	
10'			10				
			11				
			12				
			13				
			14				
			15				
			16				
			17				
			18				
			19				
20'			20				TD
			21				
			22				
			23				
			24				
			25				
			26				
			27				
			28				
			29				
			30				

Boring Abandonment/ Well Construction Details



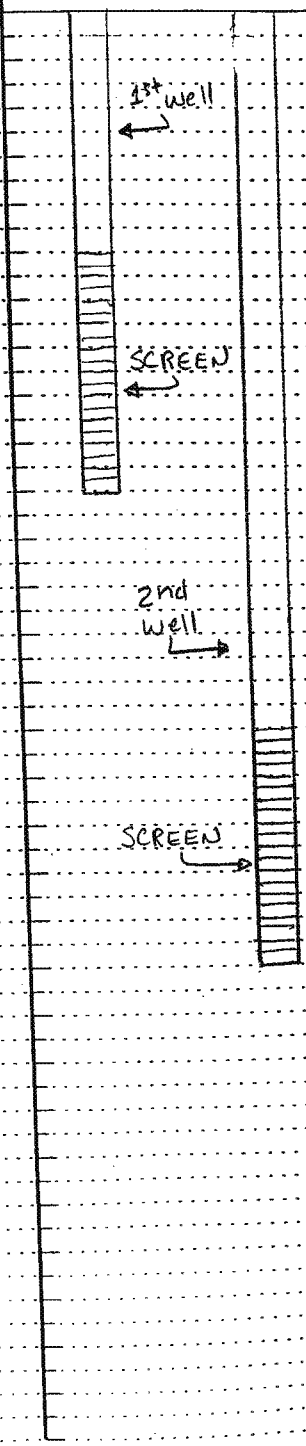
Reviewed By: _____ Date: _____

Project: Bee Jay Scales		Log of Boring/Monitoring Well: A1-VP-007
Boring Location:	Project No.: 24CH.67201	
Contractor and Equipment: CDI HSA	Logged By: MM / Drawn By:	
Sampling Method:	Monitoring Device:	Comments: Temporary Wells
Start Date/Time: 5-20-04	Finish Date/Time: 5-20-04	
First Water (bgs):	Stabilized Water Level (bgs):	

Surface Elevation: Top Casing Elevation:

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)
A1VP007			0				hand clear to 4.5'
			1				
			2				light brown, loose dry silty sand
			3				
			4				
			5				
			6				
			7				becomes wet and clayey
			8		▼		
			9		?		(slight sheen noted on water at 10')
10'			10				
			11				
			12				
			13				
			14				
			15				
			16				
			17				
			18				
			19				
20'			20				TD
			21				
			22				
			23				
			24				
			25				
			26				
			27				
			28				
			29				
			30				

Boring Abandonment/ Well Construction Details



Reviewed By: _____ Date: _____

Project: Bee Jay Scales			Log of Boring/Monitoring Well: A3-SB-003
Boring Location:	Project No.: 24CH.67201		
Contractor and Equipment: CDI	Logged By: mm	Drawn By:	
Sampling Method: HSA	Monitoring Device:		Comments:
Start Date/Time: 5-18-04	Finish Date/Time: 5-18-04		
First Water (bgs):	Stabilized Water Level (bgs):		

Surface Elevation: Top Casing Elevation:

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)	Boring Abandonment/ Well Construction Details
A3-SB-003 0.5-0			0					
			1					
			2				hand clear to 4.5'	
			3				brown loose dry silty sand	
4.5-0			4					
	3/4/5		5				dark brown	
			6				slight moist and clayey	
7.5-0	3/3/7		7				wet, dark brown. strong	
			8				petro odor	
			9				TD	
			10					
			11					
			12					
			13					
			14					
			15					
			16					
			17					
			18					
			19					
			20					
			21					
			22					
			23					
			24					
			25					
			26					
			27					
			28					
			29					
			30					

Reviewed By: _____ Date: _____

Project: Bee Jay Scales		Log of Boring/Monitoring Well: A3-SB-004
Boring Location:	Project No.: 24CH.67201	
Subcontractor and Equipment: CDI HSA	Logged By: mm / Drawn By:	
Sampling Method:	Monitoring Device:	Comments:
Start Date/Time: ~~5-24~~ 5-25-04 0830	Finish Date/Time: 5-25-04 0915	
First Water (bgs):	Stabilized Water Level (bgs):	

Surface Elevation: Top Casing Elevation:

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)	Boring Abandonment/ Well Construction Details
A3-SB-004			0				asphalt	
@0.5			1				hand clear to 4.5'	
			2					
			3				brown, loose dry sand	
			4					
@4.5	3/3/7		5				becomes moist at 5.5. some grey sands and petroleum odor.	
			6					
			7					
@7.5	3/7/11		8				charcoal grey sand. strong petroleum odor.	
			9					
			10				end	
			11					
			12					
			13					
			14					
			15					
			16					
			17					
			18					
			19					
			20					
			21					
			22					
			23					
			24					
			25					
			26					
			27					
			28					
			29					
			30					

Reviewed By: _____ Date: _____

Revised By: _____ Date: _____

Project: Bee Jay Scales		Log of Boring/Monitoring Well: A3-SB-005
Boring Location:	Project No.: 24CH.6720	
Contractor and Equipment: CDI	Logged By: MM / Drawn By:	
Sampling Method: HSA	Monitoring Device:	Comments:
Start Date/Time: 5-18-04	Finish Date/Time:	
First Water (bgs):	Stabilized Water Level (bgs):	

Surface Elevation: Top Casing Elevation:

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)	Boring Abandonment/ Well Construction Details
A3-SB-005, 0.5-0			0					
			1					
			2				hand clear to 4'	
			3				brown loose dry silty sand	
4.5-0	3/4/4		4					
			5				slightly moist and clayey	
			6					
			7				becomes more grey and moist. strong petroleum odor	
7.5-0	3/4/11		8					
			9				TD	
			10					
			11					
			12					
			13					
			14					
			15					
			16					
			17					
			18					
			19					
			20					
			21					
			22					
			23					
			24					
			25					
			26					
			27					
			28					
			29					
			30					

Reviewed By: _____ Date: _____

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Project: Bee Jay Scales		Log of Boring/Monitoring Well: A3-SB-006
Boring Location:	Project No.: 24CH.67201	
Contractor and Equipment: CDI	Logged By: mm / Drawn By:	
Sampling Method: HSA	Monitoring Device:	Comments:
Start Date/Time: 05-18-04	Finish Date/Time: 5-18-04	
First Water (bgs):	Stabilized Water Level (bgs):	

Surface Elevation: Top Casing Elevation:

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)	Boring Abandonment/ Well Construction Details
A3-SB-006/ 05-0			0					
			1					
			2				hand clear to 4'	
			3				brown, loose, dry silty sand	
4.5-0	2/2/3		4					
			5				dark brown, slightly moist	
			6					
7.5-0	3/4/11		7					
			8				greyish brown, higher moisture strong petroleum odor	
			9				TD	
			10					
			11					
			12					
			13					
			14					
			15					
			16					
			17					
			18					
			19					
			20					
			21					
			22					
			23					
			24					
			25					
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			29					
			30					

Reviewed By: _____ Date: _____

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Project: Bee Jay Scales		Log of Boring/Monitoring Well: A5 SB001
Boring Location:	Project No.: 24CH-67201	
Contractor and Equipment: CDI	Logged By: MM / Drawn By:	
Sampling Method: HSA - Split Spoon	Monitoring Device:	Comments:
Start Date/Time: 5-19-04 0855	Finish Date/Time: 0920	
First Water (bgs):	Stabilized Water Level (bgs):	

Surface Elevation: Top Casing Elevation:

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)	Boring Abandonment/ Well Construction Details
A5SB001			0					
			1				hand clear to 4.5'	
			2				light brown, loose, dry silty sand	
4.5-0	4/5/5		3					
			4					
			5				same some clay	905
			6					
			7					
			8					
			9					910
9-0	6/8/11		10				becomes moist	
							end	
			11					
			12					
			13					
			14					
			15					
			16					
			17					
			18					
			19					
			20					
			21					
			22					
			23					
			24					
			25					
			26					
			27					
			28					
			29					
			30					

Reviewed By: _____ Date: _____

ED_002369M_00000163-00120

Project: Bee Jay Scales		Log of Boring/Monitoring Well: AS SB 002
Boring Location:	Project No.: 24CH.67201	
Contractor and Equipment: CDI	Logged By: mm / Drawn By:	
Sampling Method: HSA split spoon	Monitoring Device:	Comments:
Start Date/Time: 5-19-04 1020	Finish Date/Time: 5-19-04	
First Water (bgs):	Stabilized Water Level (bgs):	

Surface Elevation: Top Casing Elevation:

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)	Boring Abandonment/ Well Construction Details
AS-SB-002			0					
			1				hard clear to 4.5	
			2					
			3				light brown, loose, dry, silty Sand	
4.5'-0			4					
			5				some some clay	1030
			6					
			7					
			8					
9'-0			9					1040
			10				become moist	
			11				End	
			12					
			13					
			14					
			15					
			16					
			17					
			18					
			19					
			20					
			21					
			22					
			23					
			24					
			25					
			26					
			27					
			28					
			29					
			30					

Reviewed By: _____ Date: _____

ED_002369M_00000163-00121

Project: Bee Jay Scales			Log of Boring/Monitoring Well:
Boring Location:	Project No.: 94C14.67201		AS-SB-003
Contractor and Equipment: CDI	Logged By: mn	Drawn By:	
Sampling Method: HSA split spoon	Monitoring Device:		Comments:
Start Date/Time: 5-19-04 0925	Finish Date/Time: 0950		
First Water (bgs):	Stabilized Water Level (bgs):		

Surface Elevation: Top Casing Elevation:

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)	Boring Abandonment/ Well Construction Details
AS-SB-003			0					
			1				hand clear to 9.5	
			2					
			3				light brown, loose, dry silty sand	
9.5'-0	4/7/8		4					
			5				same, becomes clayey	
			6					935
			7					
			8					
9'-0	8/6/11		9				becomes slightly moist. somewhat clayey	940
			10				dark brown	
			11				turn	
			12					
			13					
			14					
			15					
			16					
			17					
			18					
			19					
			20					
			21					
			22					
			23					
			24					
			25					
			26					
			27					
			28					
			29					
			30					

Reviewed By: _____ Date: _____

ED_002369M_00000163-00122

Project: Bee Jay Scales		Log of Boring/Monitoring Well: AS-SB-004
Boring Location:	Project No.: 24CH.67201	
Contractor and Equipment: CDI	Logged By: MM / Drawn By:	
Sampling Method: HSA Split Spoon	Monitoring Device:	Comments:
Start Date/Time: 5-19-04 950	Finish Date/Time: 5-19-04 1020	
First Water (bgs):	Stabilized Water Level (bgs):	

Surface Elevation: Top Casing Elevation:

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)	Boring Abandonment/ Well Construction Details
AS-SB-004			0					
			1					
			2				hand clear to 4.5	
			3				light brown, loose, dry sand	
4.5'-0	5/6/5		4					
			5				same, clayey	1005
			6					
			7					
			8					
9'-0	6/6/9		9					1010
			10				becomes wet. ~~stg~~	
			11				Term	
			12					
			13					
			14					
			15					
			16					
			17					
			18					
			19					
			20					
			21					
			22					
			23					
			24					
			25					
			26					
			27					
			28					
			29					
			30					

Reviewed By: _____ Date: _____

ED_002369M_00000163-00123

Project: Bee Jay Scales		Log of Boring/Monitoring Well:
Boring Location:	Project No.: 24CH.67201	AS-SB-005
Contractor and Equipment: CDI	Logged By: mm / Drawn By:	
Sampling Method: 1+5A - Split Spoon	Monitoring Device:	Comments:
Start Date/Time: 5-19-04 805	Finish Date/Time:	
First Water (bgs):	Stabilized Water Level (bgs):	

Surface Elevation: Top Casing Elevation:

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)	Boring Abandonment/ Well Construction Details
AS-SB-005			0					
			1				hand clear to 4.5	
			2					
			3				brown, loose dry sand	
			4					
4.5'-0	3/2/3		5				same but becoming ~~wet~~ moist	820
			6				and clayey	
			7					
			8					
9'-0	6/7/12		9					
			10				wet	825
			11				and	
			12					
			13					
			14					
			15					
			16					
			17					
			18					
			19					
			20					
			21					
			22					
			23					
			24					
			25					
			26					
			27					
			28					
			29					
			30					

Reviewed By: _____ Date: _____

ED_002369M_00000163-00124

Project: Bee Jay Scales			Log of Boring/Monitoring Well: A5-SB-006
Boring Location:	Project No.: 24CH-67201		
Contractor and Equipment: CDI	Logged By: mm	Drawn By:	
Sampling Method: HSA Split Spoon	Monitoring Device:		Comments:
Start Date/Time: 5-19-04 715	Finish Date/Time: 730		
First Water (bgs):	Stabilized Water Level (bgs):		

Surface Elevation: Top Casing Elevation:

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)	Boring Abandonment/ Well Construction Details
A5-SB-006			0					
			1				hand clear to 4.5	
			2					
			3				light brown, loose, dry sand	
4.5-0	3/7/11		4					
			5				same, but clayey	720
			6					
			7					
			8					
9-0	4/7/11		9					725
			10				becomes slightly moist	
			11				end	
			12					
			13					
			14					
			15					
			16					
			17					
			18					
			19					
			20					
			21					
			22					
			23					
			24					
			25					
			26					
			27					
			28					
			29					
			30					

Reviewed By: _____ Date: _____

Revised By: _____ Date: _____

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Project: Bee Jay Scales			Log of Boring/Monitoring Well: AS-SB007
Boring Location:	Project No.: 24CH.67201		
Contractor and Equipment: CDI	Logged By: mm	Drawn By:	
Sampling Method: HSA Split Spoon	Monitoring Device:		Comments:
Start Date/Time: 5-19-04 745	Finish Date/Time:		
First Water (bgs):	Stabilized Water Level (bgs):		

Surface Elevation: Top Casing Elevation:

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)	Boring Abandonment/ Well Construction Details
AS-SB-007			0					
			1				hand clear to 4.5	
			2					
			3				light brown, dry silty sand	
			4					
;4.5-0	6/6/7		5				same - clayey	750
			6					
			7					
			8					
;9'-0			9					755
			10				becomes slightly moist	
			11				end	
			12					
			13					
			14					
			15					
			16					
			17					
			18					
			19					
			20					
			21					
			22					
			23					
			24					
			25					
			26					
			27					
			28					
			29					
			30					

Reviewed By: _____ Date: _____

Revised By: Date:

SECOR

Project: Bee Jay scales		Log of Boring/Monitoring Well: AS-SB-008
Boring Location:	Project No.: 24CH-67201	
Contractor and Equipment: CDI	Logged By: mm / Drawn By:	
Sampling Method: HSA	Monitoring Device:	Comments:
Start Date/Time: 051804 1230	Finish Date/Time: 051804 1240	
First Water (bgs):	Stabilized Water Level (bgs):	

Surface Elevation: Top Casing Elevation:

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)	Boring Abandonment/ Well Construction Details
AS-SB-008,			0					
			1					
			2				Hand clear to 4.5	
							Brown, loose, dry, silty sand	
			3					
4.5-0	7/6/6		4					
			5					
			6				same clayey	
			7					
			8					
9.0	8/6/11		9				same becomes moist no odors	
			10					
			11				term	
			12					
			13					
			14					
			15					
			16					
			17					
			18					
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			30					

Reviewed By: _____ Date: _____

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Project: Bee Sun Scales		Log of Boring/Monitoring Well: AS-SB-009
Boring Location:	Project No.: 24CH.67201	
Contractor and Equipment: CDI	Logged By: MM / Drawn By:	
Sampling Method:	Monitoring Device:	Comments:
Start Date/Time: 5-18-04 1245	Finish Date/Time: 1255	
First Water (bgs):	Stabilized Water Level (bgs):	

Surface Elevation: Top Casing Elevation:

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)	Boring Abandonment/ Well Construction Details
AS-SB-009			0					
			1				Hard clear to 4.5	
			2					
			3				Brown, loose, dry, silty sand	
4.5-0	6/7/7		4					
			5				same but clayey	
			6					
			7					
			8					
9-0	6/8/11		9					
			10				same, becomes moist	
			11				end	
			12					
			13					
			14					
			15					
			16					
			17					
			18					
			19					
			20					
			21					
			22					
			23					
			24					
			25					
			26					
			27					
			28					
			29					
			30					

Reviewed By: _____ Date: _____

Project: Bee Jay Scales		Log of Boring/Monitoring Well: AS-SB-010
Boring Location:	Project No.: 24CH.67201	
Contractor and Equipment: CDI	Logged By: mm / Drawn By:	
Sampling Method:	Monitoring Device:	Comments:
Start Date/Time: 5-18-04 1305	Finish Date/Time: 1320	
First Water (bgs):	Stabilized Water Level (bgs):	

Surface Elevation: Top Casing Elevation:

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)	Boring Abandonment/ Well Construction Details
AS-SB-010			0					
			1				hand clear to 4.5	
			2					
			3				Brown loose dry silty sand	
			4					
4.5'-0	10/11/10		5				same, some clays	
			6					
			7					
			8					
			9					
9.0'-0	10/9/9		10				becomes moist	
			11				end	
			12					
			13					
			14					
			15					
			16					
			17					
			18					
			19					
			20					
			21					
			22					
			23					
			24					
			25					
			26					
			27					
			28					
			29					
			30					

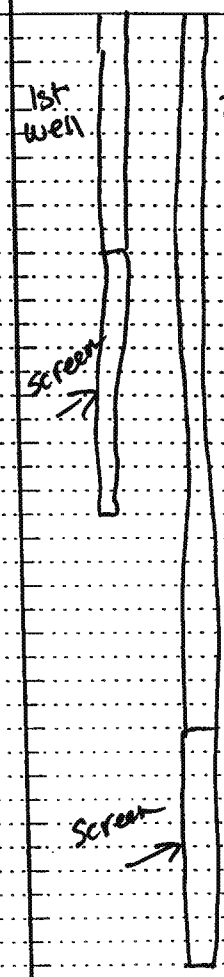
Reviewed By: _____ Date: _____

Project: Bee Jay Scales		Log of Boring/Monitoring Well: AS-VP-008
Boring Location:	Project No.: 24CH.67201.01	
Contractor and Equipment: CDI HSA	Logged By: MW Drawn By:	
Sampling Method:	Monitoring Device:	Comments: temporary monitoring wells
Start Date/Time: 5-20-04	Finish Date/Time: 5-20-04	
First Water (bgs):	Stabilized Water Level (bgs):	

Surface Elevation: Top Casing Elevation:

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)
			0				
			1				
			2				
			3				hand clear to 4.5'
No 10' sample			4				brown, loose, dry, silty sand
			5				
			6				
			7				
			8				becomes clayey
			9				becomes moist
			10				
			11				becomes wet
			12			▽	
			13				
			14				
			15				
			16				
			17				
AS-VP-008, 20'-0			18				
			19				
			20				term at 20'
			21				
			22				
			23				
			24				
			25				
			26				
			27				
			28				
			29				
			30				

Boring Abandonment/ Well Construction Details



Reviewed By: _____ Date: _____

SECOR

Page 1 of ___

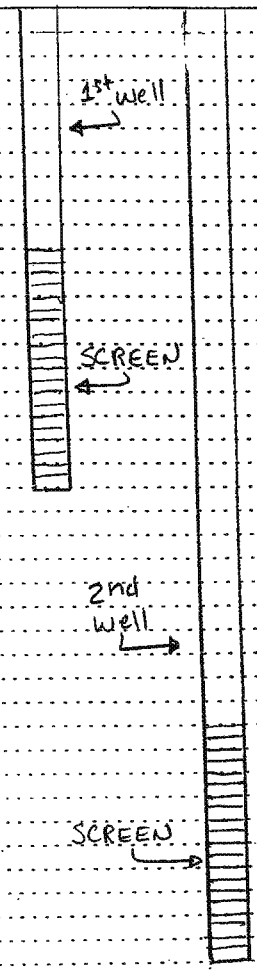
ED_002369M_00000163-00130

Project: Bee Jay Scales			Log of Boring/Monitoring Well: AS-VP-009
Boring Location:	Project No.: 24CH.67201		
Contractor and Equipment: CDI HSA	Logged By: MM	Drawn By:	
Sampling Method:	Monitoring Device:		Comments: Temporary Wells
Start Date/Time: 5-20-04	Finish Date/Time: 5-20-04		
First Water (bgs):	Stabilized Water Level (bgs):		

Surface Elevation: Top Casing Elevation:

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)
AS-VP-009			0				
			1				hand clear to 4.5'
			2				brown, loose, dry silty sand
			3				
			4				
			5				
			6				becomes moist
			7			▼	becomes wet
			8			?	
			9				
10'			10				
			11				
			12				
			13				
			14				
			15				
			16				
			17				
			18				
			19				
20'			20				term @ 20'
			21				
			22				
			23				
			24				
			25				
			26				
			27				
			28				
			29				
			30				

Boring Abandonment/ Well Construction Details



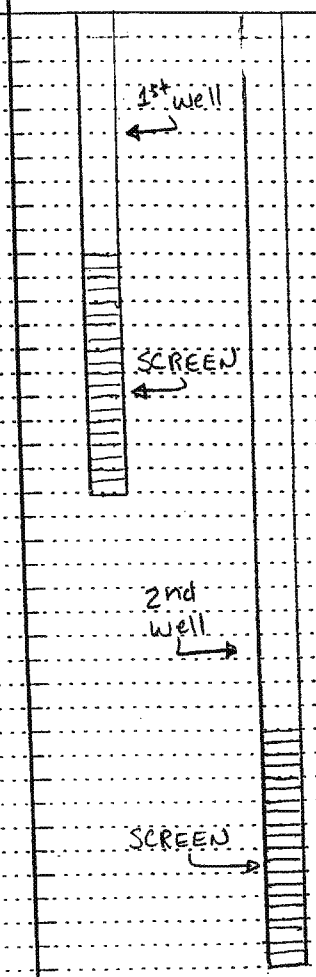
Reviewed By: _____ Date: _____

Project: Bee Jay Scales			Log of Boring/Monitoring Well: A6-VP-001
Boring Location:	Project No.: 24CH.67201		
Contractor and Equipment: CDI HSA	Logged By: MM	Drawn By:	
Sampling Method:	Monitoring Device:		Comments: Temporary Wells
Start Date/Time:	Finish Date/Time:		
First Water (bgs):	Stabilized Water Level (bgs):		

Surface Elevation: Top Casing Elevation:

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)
A6VP001			0				
			1				hand clear to 4.5
			2				
			3				
			4				light brown, loose dry silty sand
			5				
			6				becomes moist
			7			▽ 3	wet
			8				
			9				
10'			10				
			11				
			12				
			13				
			14				
			15				
			16				
			17				
			18				
			19				
20'			20				TD
			21				
			22				
			23				
			24				
			25				
			26				
			27				
			28				
			29				
			30				

Boring Abandonment/ Well Construction Details



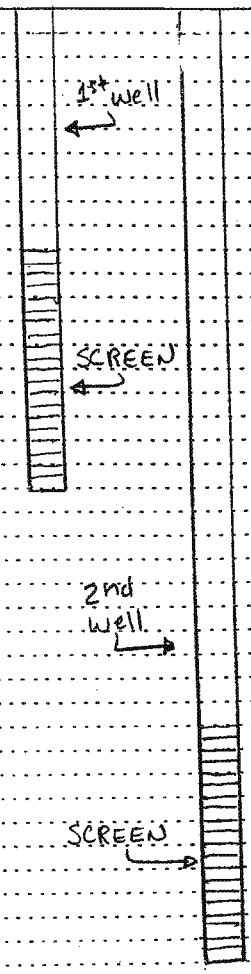
Reviewed By: _____ Date: _____

Project: Bee Jay Scales			Log of Boring/Monitoring Well: A6-VP-002
Boring Location:	Project No.: 24CH.67201		
Contractor and Equipment: CDI HSA	Logged By: MM	Drawn By:	
Sampling Method:	Monitoring Device:		Comments: Temporary Wells
Start Date/Time: 5-24-04	Finish Date/Time:		
First Water (bgs):	Stabilized Water Level (bgs):		

Surface Elevation: Top Casing Elevation:

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)
A6VP002			0				
			1				hand clear to 4.5'
			2				
			3				brown loose dry silty sand
			4				
			5				soils become somewhat greenish
			6				foul fertilizer/herbicide odor
			7				from soils
			8				
			9				
@10' (wp)			10			▼	becomes wet and clayey
			11				foul odor continues to TD
			12				
			13				
			14				
			15				
			16				
			17				
			18				
			19				
@20'			20				TD
			21				
			22				
			23				
			24				
			25				
			26				
			27				
			28				
			29				
			30				

Boring Abandonment/ Well Construction Details



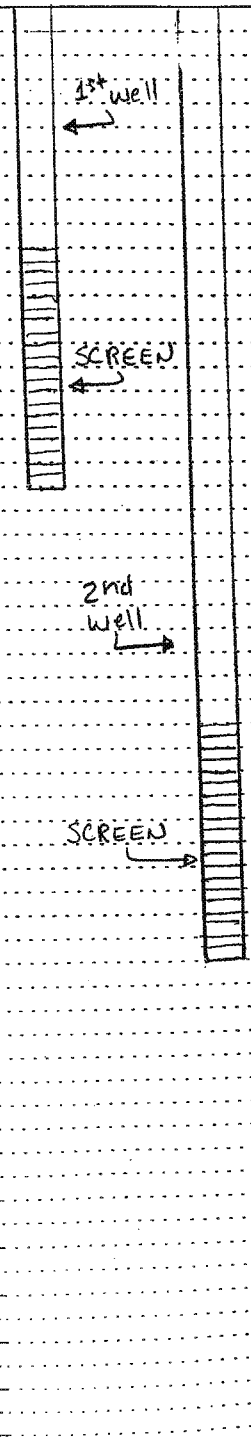
Reviewed By: _____ Date: _____

Project: Bee Jay Scales			Log of Boring/Monitoring Well: A6-VP-003
Boring Location:	Project No.: 24CH.67201		
Contractor and Equipment: CDI HSA	Logged By: MM	Drawn By:	
Sampling Method:	Monitoring Device:		Comments: Temporary Wells
Start Date/Time: 5-24-04	Finish Date/Time:		
First Water (bgs):	Stabilized Water Level (bgs):		

Surface Elevation: Top Casing Elevation:

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)
A6VP003			0				hand clear to 4.5'
			1				
			2				brown loose dry silty sand
			3				
			4				
			5				
			6				
			7				
			8				becomes moist
			9			▼ 3	becomes wet
10'			10				(purge water has greenish color and emits fertilizer/herbicide odor)
			11				
			12				
			13				
			14				
			15				
			16				
			17				
			18				
			19				
20'			20				TD
			21				
			22				
			23				
			24				
			25				
			26				
			27				
			28				
			29				
			30				

Boring Abandonment/ Well Construction Details



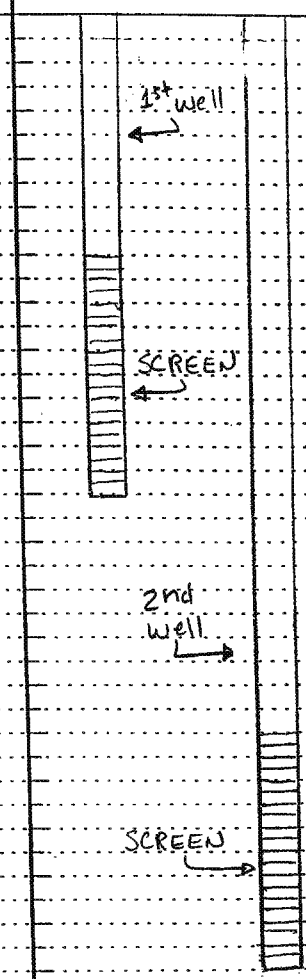
Reviewed By: _____ Date: _____

Project: Bee Jay Scales			Log of Boring/Monitoring Well: A6-VP-004
Boring Location:	Project No.: 24CH.67201		
Subcontractor and Equipment: CDI HSA	Logged By: MM	Drawn By:	
Sampling Method:	Monitoring Device:		Comments: Temporary Wells
Start Date/Time: 5-24-04	Finish Date/Time:		
First Water (bgs):	Stabilized Water Level (bgs):		

Surface Elevation: Top Casing Elevation:

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)
A6VP004			0				hand clear to 4.5'
			1				
			2				brown, loose dry silty sand
			3				
			4				
			5				
			6				
			7				
			8				
			9				becomes moist
10'			10				
			11				becomes wet
			12			▽	(purge water green with foul/strong
			13				herbicide odor)
			14				
			15				
			16				
			17				
			18				
			19				
20'			20				TD
			21				
			22				
			23				
			24				
			25				
			26				
			27				
			28				
			29				
			30				

Boring Abandonment/ Well Construction Details



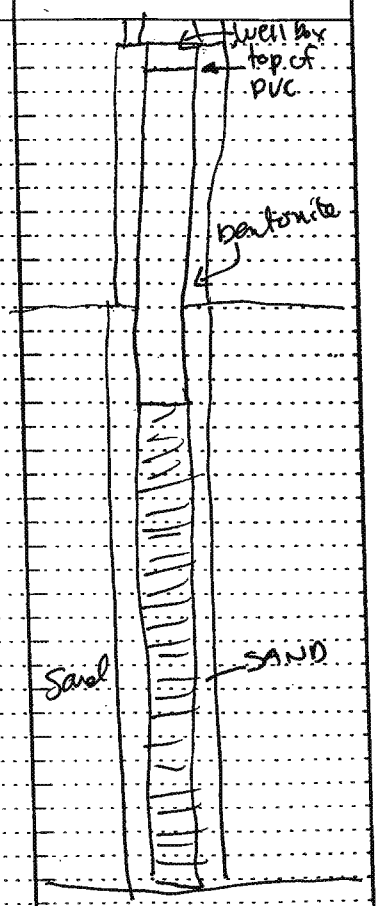
Reviewed By: _____ Date: _____

Project: Bee Jay Scales			Log of Boring/Monitoring Well: MW8
Boring Location:	Project No.: 24CH.67201		
Contractor and Equipment: CDI	Logged By: MM	Drawn By:	
Sampling Method: HSA	Monitoring Device:		Comments:
Start Date/Time: 5-18-04 1400	Finish Date/Time: 5-18-04 1515		
First Water (bgs): 9.5'	Stabilized Water Level (bgs):		

Surface Elevation: Top Casing Elevation:

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)
			0				
			1				
			2				
			3				brown loose dry silty sand
			4				
			5				
			6				
			7				same, becoming moist
			8				becomes wet
			9			▼	
			10			ξ	
			11				
			12				
			13				
			14				
			15				
			16				
			17				
			18				TD
			19				
			20				
			21				
			22				
			23				
			24				
			25				
			26				
			27				
			28				
			29				
			30				

Boring Abandonment/ Well Construction Details



Reviewed By: _____ Date: _____

Page 1 of ___

SECOR
International Incorporated

Logged By:	Date Drilled:	Drilling Contractor	Project Name:	Method/Equipment:	Boring Number:
MM	10-21-04	CDI	Bee Jay Scales	HSA	MW9

See "Legend to Logs" for sampling method, classifications and laboratory testing methods	Boring Diam.(in.):	Surface Elev.(ft.):	Groundwater Depth (ft.):	Total Depth (ft.):	Drive wt.(lbs.):	Drop Dist.(in.):
	8"		8'			

Depth (ft.)	Sample Interval	Description	PID (ppm)	SAMPLE
		Light brown loose dry silty sand. Becomes clayey and moist at 6'. Slight odor at 6' becomes stronger beyond 7'.	Concrete; bentonite chips; 6; 8; 18	Sand

The substrata descriptions above are generalized representations and based upon visual/manual classification of cuttings and/or samples obtained during drilling. Predominant material types shown on the log may contain different materials and the change from one predominant material type to another could be different than indicated. Descriptions on this log apply only at the specific location at the time of drilling and may not be representative of subsurface conditions at other locations or times.

BLANK.GPJ LOG OF BH-REDLANDS-REV1

Project No. 24CH. 67201.00
Date 10-21-04

Log of Boring/Well: MW9

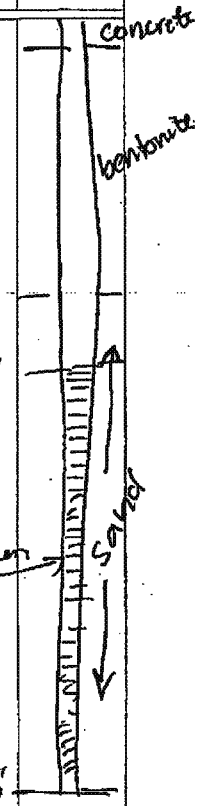
(sheet 1 of 1)

SECOR
International Incorporated

Logged By:	Date Drilled:	Drilling Contractor	Project Name:	Method/Equipment:	Boring Number:
MM	10-21-04	CDI	Bee Jay Scales	HSA	MW10

See "Legend to Logs" for sampling method, classifications and laboratory testing methods	Boring Diam.(in.):	Surface Elev.(ft.):	Groundwater Depth (ft.):	Total Depth (ft.):	Drive wt.(lbs.):	Drop Dist.(in.):
	8"		~7'	~18		

Depth (ft.)	Sample Interval	Description	PID (ppm)	SAMPLE
		brown loose dry silty sand to 6'. Slight odor (petroleum) becomes moist at 6'. Wet at 7'		
5				
		soil becomes more clayey beyond 7' odor becomes stronger	6'	
			8'	
10				
			screen	
15				
			18'	
20				



The substrata descriptions above are generalized representations and based upon visual/manual classification of cuttings and/or samples obtained during drilling. Predominant material types shown on the log may contain different materials and the change from one predominant material type to another could be different than indicated. Descriptions on this log apply only at the specific location at the time of drilling and may not be representative of subsurface conditions at other locations or times.

BLANK.GPJ LOG OF BH-REDLANDS-REV1

Project No. 24CH.67201.00
Date 10-21-04

Log of Boring/Well: MW10

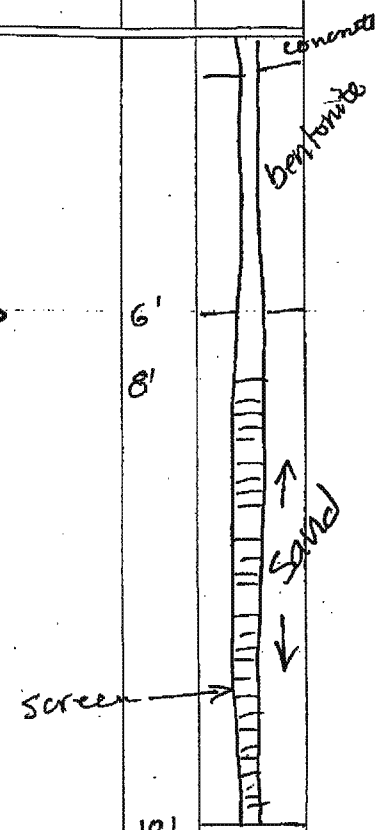
(sheet 1 of 1)

SECOR
International Incorporated

Logged By:	Date Drilled:	Drilling Contractor	Project Name:	Method/Equipment:	Boring Number:
MM	10-20-04	CDI	Bee Jay Scales	HSA	MW-11

See "Legend to Logs" for sampling method, classifications and laboratory testing methods	Boring Diam.(in.):	Surface Elev.(ft.):	Groundwater Depth (ft.):	Total Depth (ft.):	Drive wt.(lbs.):	Drop Dist.(in.):
	8"		~ 7'	18'		

Depth (ft.)	Sample Interval	Description	PID (ppm)	SAMPLE
		Light brown loose dry silty sand.		
		Becomes moist at 6.5'		
5		Becomes clayey beyond 7' no odors	6'	
			8'	
10				
15				
			18'	
20				



The substrata descriptions above are generalized representations and based upon visual/manual classification of cuttings and/or samples obtained during drilling. Predominant material types shown on the log may contain different materials and the change from one predominant material type to another could be different than indicated. Descriptions on this log apply only at the specific location at the time of drilling and may not be representative of subsurface conditions at other locations or times.

BLANK.GPJ LOG OF BH-REDLANDS-REV1

Project No. 24CH.67201.00
Date 10-20-04

Log of Boring/Well: MW 11

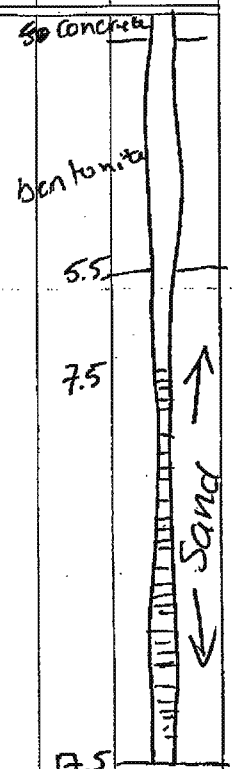
(sheet 1 of 1)

SECOR
International Incorporated

Logged By:	Date Drilled:	Drilling Contractor	Project Name:	Method/Equipment:	Boring Number:
MM	10-21-04	CDI	Bee Jay Scales	HSA	MW12

See "Legend to Logs" for sampling method, classifications and laboratory testing methods	Boring Diam.(in.):	Surface Elev.(ft.):	Groundwater Depth (ft.):	Total Depth (ft.):	Drive wt.(lbs.):	Drop Dist.(in.):
	8"		8.5'			

Depth (ft.)	Sample Interval	Description	PID (ppm)	SAMPLE
		Light brown loose dry silty sand. Becomes moist at about 7.5' and wet at 8'. Slight odor.		



The substrata descriptions above are generalized representations and based upon visual/manual classification of cuttings and/or samples obtained during drilling. Predominant material types shown on the log may contain different materials and the change from one predominant material type to another could be different than indicated. Descriptions on this log apply only at the specific location at the time of drilling and may not be representative of subsurface conditions at other locations or times.

BLANK.GPJ LOG OF BH-REDLANDS-REV1

Project No. 24CH.67201.00
Date 10-21-04

Log of Boring/Well: MW12

(sheet 1 of 1)

APPENDIX C
PHASE II GROUNDWATER PURGE AND SAMPLE FORMS

Phase II Remedial Investigation Report
Chevron Environmental Management Company
& BP America, Inc.

24CH.67201.00
May 17, 2005

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 5-20-04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: MW- A1-UP-001, 10'

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 1130 Time End Purge: 1143 Time Sampled 1145

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				2	4	6	
	10.3	7.0	3.3	0.16	0.64	1.44	0.53

Time		1135	1140	1143			
Volume Purged (gal) ~1.65							
Purge Rate (gpm)	< 1gpm	1	1.5	2			
Temperature (°C)		17.7	17.2	16.9			
Ph		7.3	7.4	7.3			
Specific Conductivity (uncorrected) (µmhos)		4460	4266	4201			
ORP							
Turbidity/Color		brown cloudy	brown cloudy				
Odor/Sheen		none	none	none			
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?		N	N	N			

Comments: Temp well

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
A1-UP-001, 10'				NO		
	7	various		NO	see COC	

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~2 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 5-20-04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: MW- A1-VP-001 @20'

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 1450 Time End Purge: 1510 Time Sampled 1510

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				(2)	4	6	
(TD-DTW) x.16	20	7.34	12.66	0.16	0.64	1.44	2.03

Time	1455	1500	1505	1509			
Volume Purged (gal) ~6.3	2	3.5	5	6			
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	16.1	16.0	15.9	15.9			
Ph	7.4	7.2	7.3	7.2			
Specific Conductivity (uncorrected) (µmhos)	5.55	5.69	5.17	5.39			
ORP							
Turbidity/Color	brown & murky			brown			
Odor/Sheen	none	none	none	none			
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?	N	N	N	N			

Comments: Temp well

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
A1-VP-001, 20'				NO		
	7	Various		NO	See COC	

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~6 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 5-21-04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: MW- A1-VP-003,10'

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 1105 Time End Purge: 1117 Time Sampled 1120

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				2	4	6	
	10.2	8.48	1.72	0.16	0.64	1.44	.28

Time	1110	1114	1116				
Volume Purged (gal)	.5	1	1.5				
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	19.3	17.0	16.7				
Ph	6.9	7.0	7.0				
Specific Conductivity (uncorrected) (µmhos)	11.45	11.34	11.29				
ORP							
Turbidity/Color	brown/murky						
Odor/Sheen	none →						
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?	N	N	N				

Comments: temp well

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
A1-VP-003@10'				NO		
	7	various		NO	see COC	

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~1.5 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 5-21-04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: MW- A1-UP-003,20'

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 1205 Time End Purge: 1220 Time Sampled 1220

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
V=(TD-DTW) X.16	20	9.8	10.2	(2)	4	6	1.63
				0.16	0.64	1.44	

Time	1205	1210	1215	1220			
Volume Purged (gal) (5)	2	3	4	5			
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	19.7	17.2	16.1	16.4			
Ph	7.3	7.3	7.2	7.2			
Specific Conductivity (uncorrected) (µmhos)	2208	2308	2392	2425			
ORP							
Turbidity/Color							
Odor/Sheen							
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?	N	N	N	N			

Comments: temp well

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
A1-UP-003,20'				NO		
	7	Various		NO		See COC

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~5.5 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 5-21-04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: MW- A1-VP-004 10'

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 930 Time End Purge: 945 Time Sampled 945

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				(2)	4	6	
(TD-DTW) x.16	10.8	7.8	3	0.16	0.64	1.44	0.48

Time	.5	1	1.5				
Volume Purged (gal)	935	940	945				
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	15.1	15.1	15.2				
Ph	7.2	7.2	7.2				
Specific Conductivity (uncorrected) (µmhos)	3170	3475	3520				
ORP							
Turbidity/Color	brown & silty						
Odor/Sheen	none	none	none				
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?	N	N	N				

Comments: temp well

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
A1-VP-004, 10'-0				NO		
	7	various		NO	see cox	

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~15 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 5-21-04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: MW- A1-UP-004-20'

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 1030 Time End Purge: 1050 Time Sampled 1055

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				2	4	6	
V=(TD-DTW) (x.5) x.16	20.1	8.95	11.45 ~~15.05~~	0.16	0.64	1.44	2.4 1.83

Time	2	4	6.5	7.5			
Volume Purged (gal) ~9.5	1034	1037	1044	1047			
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	16.2	16.1	15.8	15.6			
Ph	7.1	7.1	7.1	7.1			
Specific Conductivity (uncorrected) (µmhos)	2324	1963	1643	1633			
ORP							
Turbidity/Color	brown-murky		becoming clear	more clear			
Odor/Sheen	no odor or sheen						
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?	N	N	Y	Y			

Comments: via temp well

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
A1-UP 004,20'	7	Various	Various	NO		See COC
				NO		

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~9.5 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 5-21-04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: MW- A1VP005 10'

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 0745 Time End Purge: 820 Time Sampled 820

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				2	4	6	
	10.8	8.5	2	0.16	0.64	1.44	.32

Time	810	812	815				
Volume Purged (gal)	.5	1	1.5				
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	15.1	14.2	14.1				
Ph	7.2	7.2	7.2				
Specific Conductivity (uncorrected) (µmhos)	3934	3133	2985				
ORP							
Turbidity/Color	brown						
Odor/Sheen	no odor or sheen						
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?	N	N	Y				

Comments: temp well

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
A1-VP-005	7	various		NO		See COC
@10'				NO		

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~ 1.5 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 5-21-04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: MW- A1-VP-005 20'

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 925 Time End Purge: 945 Time Sampled 955

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				2	4	6	
(TD-DTW) X.16	20	9.5	10.5	0.16	0.64	1.44	1.68

Time	930	935	940	942			
Volume Purged (gal) ~5.5	2	3.5	5	.5			
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	15.9	15.5	15.4	15.1			
Ph	7.2	7.1	7.2	7.2			
Specific Conductivity (uncorrected) (µmhos)	2280	2017	1850	1750			
ORP							
Turbidity/Color	brown, murky, turbid						
Odor/Sheen	no odor or sheen						
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?	N	N	N	N			

Comments: _____

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
A1-VP-005, 20'	7	various		NO		see COC
				NO		

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~5.5 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 5-20-04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: MW- A1-VP-007@10'

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 1535 Time End Purge: 1551 Time Sampled 1555

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				2	4	6	
(TD-DTW) X.16	10	6.47	3.53	0.16	0.64	1.44	0.56

Time		1540	1544	1549				
Volume Purged (gal)	~1.76	.5	1	1.5				
Purge Rate (gpm)		< 1gpm						
Temperature (°C)		18.6	17.2	16.6				
Ph		7.4	7.2	7.4				
Specific Conductivity (uncorrected) (µmhos)		2965	2870	3015				
ORP								
Turbidity/Color		brown & silty						
Odor/Sheen		sheen →						
Depth to Water During Purge (ft)								
Number of Casing Volumes Removed								
Dewatered?		Y	Y	Y				

Comments: temp well

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
A1-VP-007	7	various	various	NO	See COC	
10'-0				NO		

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~1.76 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 5-20-04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: MW- A1-VP-007@20'

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 1630 Time End Purge: 1650 Time Sampled 1700

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				(2)	4	6	
(TD-DTW) x.16	20	8.21	11.79	0.16	0.64	1.44	1.89

Time	25	4	5	6			
Volume Purged (gal)	1635	1640	1645	1650			
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	17.7	17.4	17.3	17.3			
Ph	7.4	7.3	7.2	7.2			
Specific Conductivity (uncorrected) (µmhos)	1665	1411	1380	1312			
ORP							
Turbidity/Color	brown & silty		brown silty				
Odor/Sheen	none	non	none	none			
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?	Y	Y	Y				

Comments: Temp well

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
A1-VP007,20'				NO		
	7	VARIOUS		NO	See COC	

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~6 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 5-20-04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: MW- A5-VP-001,20'

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 1325 Time End Purge: 1344 Time Sampled 1345

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				(2)	4	6	
	20	10.5	9.5	0.16	0.64	1.44	1.52

Time		1330	1335	1340	1344		
Volume Purged (gal) ~4.75		2	3	4	5		
Purge Rate (gpm)	< 1gpm						
Temperature (°C)		16.4	16.2	16.1	16.2		
Ph		7.3	7.2	7.2	7.2		
Specific Conductivity (uncorrected) (µmhos)		1086	915	908	899		
ORP							
Turbidity/Color		brown & cloudy					
Odor/Sheen		none	none	none	none		
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?		N	N	N	N		

Comments: Temp well

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
A5-VP-001,20'				NO		
	7	various		NO	See COC	

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~5 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 5-19-2004

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: MW- 2 @ 10

Field Personnel: MM Static Water Level: AS-VP-002, 10'

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 1220 Time End Purge: 1245 Time Sampled ~~1345~~ - ok 1345

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				2	4	6	
(TD-DTW) X.16	10.7	9.2	1.5	0.16	0.64	1.44	0.24

Time		1225	1230	1240	1245		
Volume Purged (gal)		.5	1 ~~1.5~~	1.5	2		
Purge Rate (gpm)	< 1gpm						
Temperature (°C)		14.7	14.7	14.7	14.7		
Ph		7.2	7.2	7.2	7.2		
Specific Conductivity (uncorrected) (µmhos)		2320	1717	1659	1695		
ORP							
Turbidity/Color		brown & murky		brown & murky			
Odor/Sheen		none	none	none	none		
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?		Y	Y	Y			

Comments: ~~temp well~~

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
AS-VP-002, 10'		VARIOUS		NO	See COC	
	7			NO		

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~2 Disposal Method: On Site Drum Drum Designation(s)/Volume: ____

System Treat ____

Comments: ____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: ____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 5-20-04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: MW-A5-VP-002.20'

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 1325 Time End Purge: 1410 Time Sampled 1410

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				(2)	4	6	
(TD-DTW) X.16	20	9.11	10.89	0.16	0.64	1.44	1.74

Time	1350	1355	1400	1405			
Volume Purged (gal) ~5.5	1.5	2.5	3.4	5			
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	17.4	17.2	17.1	16.5			
Ph	7.3	7.3	7.3	7.2			
Specific Conductivity (uncorrected) (µmhos)	1508	1461	1454	1300			
ORP							
Turbidity/Color	brown	brown	brown	brown			
Odor/Sheen	none	none	none	none			
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?	N	N	N	N			

Comments: temp well

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
A5-VP-002.20'				NO		
	7	various		NO	see COC	

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~5.5 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 5-19-04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: MW- 3@10 AS-UP-003,10'

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 1210 Time End Purge: _____ Time Sampled ~~1335~~ 1235

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				(2)	4	6	
	10.4	8.3	2.1	0.16	0.64	1.44	0.34

Time		1215	1220	1225	1235		
Volume Purged (gal)		1	1.5	2	2.5		
Purge Rate (gpm)	< 1gpm						
Temperature (°C)		15.7	15.0	15.0	15.0		
Ph		7.3	7.3	7.3	7.3		
Specific Conductivity (uncorrected) (µmhos)		3880	3366	3270	3198		
ORP							
Turbidity/Color		clear	clear	clear	clear		
Odor/Sheen		none	none	none	none		
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?							

Comments: temp well

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
AS-UP-003, 10'		Various		NO	See COC	
	7			NO		

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): 2.5 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 5-20-04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: MW- AS-VP-003,20'

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 1110 Time End Purge: 1140 Time Sampled 1140

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				2	4	6	
V=(TD-DTW) x.5	20	8.18	11.82	0.16	0.64	1.44	1.9

Time		1120	1125	1130	1135		
Volume Purged (gal) ~ gsm		2	3	4	5.5		
Purge Rate (gpm)	< 1gpm						
Temperature (°C)		17.0	16.4	16.5	16.5		
Ph		7.2	7.3	7.2	7.2		
Specific Conductivity (uncorrected) (µmhos)		1558	1349	1050	1000		
ORP							
Turbidity/Color		Brown & murky	Brown/murky				
Odor/Sheen		none	none	non	none		
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?		N	N	N	N		

Comments: temp well

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
AS-VP-003,20'				NO		
	7	Various		NO	see coc	

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~6.0 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Date Well No.: MW- 4@10 AS-VP-004,10'

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 1205 Time End Purge: 1225 Time Sampled 1315

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				2	4	6	
	10.7	7.2	3.5	0.16	0.64	1.44	0.56

Time		1210	1215	1220			
Volume Purged (gal)		1.5	2	2.5			
Purge Rate (gpm)	< 1gpm						
Temperature (°C)		15.7	15.1	15.1			
Ph		7.3	7.2	7.2			
Specific Conductivity (uncorrected) (µmhos)		2355	2339 ~~2386~~	2370 ~~2366~~			
ORP							
Turbidity/Color		brown	brown	brown			
Odor/Sheen		none	none	none			
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?		N	N	N			

Comments: temp well

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
AS-VP-004,10'						
	7	Various	Various	NO	See COC	
				NO		

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): 2.5 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 5-19-20

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: MW- A5-VP004 20'

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 1350 Time End Purge: 1610 Time Sampled 1610

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				(2)	4	6	
(TD-DTW) x.16	21.5	7.5	14	0.16	0.64	1.44	2.24

Time	1355	1600	1605	1610			
Volume Purged (gal)	3	4	5	6			
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	17.0	16.9	17.0	17.1			
Ph	7.2	7.2	7.2	7.2			
Specific Conductivity (uncorrected) (µmhos)	1640	1593	1610	1585			
ORP							
Turbidity/Color	Murky	brown	Murky	Brown			
Odor/Sheen	None	None	None	None			
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?	N	N	N	N			

Comments: temp well

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
A5-VP004, 20'				NO		
	7	Various		NO	Various	

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~7 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 5-19-04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: MW- 5@10

Field Personnel: MM Static Water Level: AS-VP-005,10'

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: ____ Time End Purge: ____ Time Sampled 1300

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				2	4	6	
	10.61	6.81	3.8	0.16	0.64	1.44	0.61

Time		1155	1200	1205	1210		
Volume Purged (gal)		1	1.5	2	2.5		
Purge Rate (gpm)	< 1gpm						
Temperature (°C)		15.8	15.3	15.2	15.2		
Ph		7.3	7.2	7.2	7.2		
Specific Conductivity (uncorrected) (µmhos)		2581	2076	1406	1401		
ORP							
Turbidity/Color		brown	brown	brown	brown		
Odor/Sheen		none	none	none	none		
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?		N	N	N	N		

Comments: temp well

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
AS-VP-005,10'				NO		
	7	various		NO	see COC	

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): 2.5 Disposal Method: On Site Drum Drum Designation(s)/Volume: ____

System Treat ____

Comments: ____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: ____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 5-19-20

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: MW- AS-VP-005, 201

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 1535 Time End Purge: 1555 Time Sampled 1555

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				(2)	4	6	
TD-DTW x.16	20.5	7.1	13.4	0.16	0.64	1.44	2.14

Time	1540	1545	1550	1555			
Volume Purged (gal)	3	4	5	6			
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	17.5	17.7	16.6	17.1			
Ph	7.2	7.3	7.2	7.2			
Specific Conductivity (uncorrected) (µmhos)	789	792	896	797			
ORP							
Turbidity/Color	brown	brown	brown	brown			
Odor/Sheen	non	none	none	none			
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?	N	N	N	N			

Comments: temp well

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
AS-VP-005	20'			NO		
	7	VARIOUS		NO	VARIOUS	

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~7 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 5-19-04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: MW- 6@10

Field Personnel: MM Static Water Level: AS-VP-006, 10'

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 1145 Time End Purge: _____ Time Sampled 1245

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				2	4	6	
TD-DTW x.16	10.1	7.65	2.45	0.16	0.64	1.44	.4

Time		1150	1155	1200	1205		
Volume Purged (gal)		.5	1	1.25	1.5		
Purge Rate (gpm)	< 1gpm						
Temperature (°C)		16.0	16.0	15.8	15.7		
Ph		7.4	7.1	7.1	7.1		
Specific Conductivity (uncorrected) (µmhos)		2923	1848	1845	1841		
ORP							
Turbidity/Color		brown/murky	brown/murky				
Odor/Sheen		None					
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?		Y	Y	Y	N		

Comments: Temp well

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
AS-VP-006, 10'				NO		
	7	various		NO	See coc	

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~1.5 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 5-19-20

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: MW- AS-UP006,20'

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 1525 Time End Purge: 1545 Time Sampled 1545

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				2	4	6	
TD-DTW Y.16	20	8.65	11.35	0.16	0.64	1.44	

Time	1530	1535	1554				
Volume Purged (gal)	3	4	5				
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	16.7	16.7	16.8				
Ph	7.2	7.3	7.3				
Specific Conductivity (uncorrected) (µmhos)	1235	1166	1180				
ORP							
Turbidity/Color	brown	brown	brown				
Odor/Sheen	none	none	none				
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?	N	N	N				

Comments: temp well

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
AS-UP-006 20'				NO		
	7	various		NO	see COC	

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~6 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 5-19-04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: MW- VP-7@10

Field Personnel: MM Static Water Level: AS-UP-007, 10'

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 1150 Time End Purge: 1205 Time Sampled NA

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				2	4	6	
(TD-DTW) X.16	10.3	8.8	1.5	0.16	0.64	1.44	.75

Time		1155	1200	1205			
Volume Purged (gal)		.25	.4	.5			
Purge Rate (gpm)	< 1gpm						
Temperature (°C)		16.8	16.1	16.1			
Ph							
Specific Conductivity (uncorrected) (µmhos)		2665	1890	1780			
ORP							
Turbidity/Color		brown/murky					
Odor/Sheen		none					
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?							

Comments: no H_2O avail for sample - no recharge

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment:____

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
N/A				NO		
				NO		

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~.5 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat_____

Comments:_____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments:_____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 5-19-20

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: MW- A5-VP-007 20'

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 1515 Time End Purge: 1530 Time Sampled 1530

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				(2)	4	6	
(TD - DTW) x.16	20	10.13	9.87	0.16	0.64	1.44	1.58

Time	1520	1525	1530				
Volume Purged (gal)	3	4	5				
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	18.8	17.4	17.7				
Ph	7.3	7.2	7.2				
Specific Conductivity (uncorrected) (µmhos)	1118	1089	1124				
ORP							
Turbidity/Color							
Odor/Sheen							
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?	N	N	N				

Comments: temp well

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
A5-VP-007, 20'				NO		
	7	various		NO	See COC	

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~5 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 5-20-04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: MW-A5-UP-008, 20'

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 1025 Time End Purge: 1040 Time Sampled 1045

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				2	4	6	
(TD - DTW) x .16	20	12.25	7.75	0.16	0.64	1.44	1.24

Time	1030	1035	1040				
Volume Purged (gal)	3	4	5				
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	18	17.5	16.8				
Ph	7.4	7.2	7.2				
Specific Conductivity (uncorrected) (µmhos)	1796	1249	1460				
ORP							
Turbidity/Color							
Odor/Sheen							
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?							

Comments: temp well

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
A5-UP-008, 20'				NO		
	7	various		NO	see COC	

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~5 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 5-20-04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: MW- AS-UP-009, 10'

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: _____ Time End Purge: _____ Time Sampled N/A

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
(TD-DTW) X.16	10.1	9.89	0.21	(2)	4	6	0.03
				0.16	0.64	1.44	

Time							
Volume Purged (gal)							
Purge Rate (gpm)	< 1gpm						
Temperature (°C)							
Ph							
Specific Conductivity (uncorrected) (µmhos)							
ORP							
Turbidity/Color							
Odor/Sheen							
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?							

Comments: not enough H2O to sample

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
N/A				NO		
				NO		

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): _____ Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 5-20-04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: MW- A5-UP-009 @20'

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 1420 Time End Purge: 1440 Time Sampled 1440

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				2	4	6	
(TD-DTW) X.16	21	7.42	13.58	0.16	0.64	1.44	2.17

Time	1425	1430	1435	1440			
Volume Purged (gal) ~6.8	2	3.5	5	6			
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	18.4	18.2	18.1	17.9			
Ph	7.1	7.2	7.1	7.1			
Specific Conductivity (uncorrected) (µmhos)	1490	1318	843	820			
ORP							
Turbidity/Color	brown, murky		brown, murky				
Odor/Sheen	none	none	none	none			
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?	N	N	N	N			

Comments: temp well

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
A5-UP-009, 20'				NO		
	7	various		NO	see COC	

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~7 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 5-24-04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: MW-A6-VP-001@10'

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 830 Time End Purge: 845 Time Sampled 845

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				(2)	4	6	
(TD-DTW) x .16	10.42	7.43	3	0.16	0.64	1.44	.48

Time	835	840	845				
Volume Purged (gal)	1	1.5	2				
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	13.8	13.4	13.3				
Ph	6.33	6.94	7.16				
Specific Conductivity (uncorrected) (µmhos)	7874	5780	5664				
ORP	219	210	220				
Turbidity/Color	brown	& cloudy					
Odor/Sheen	none	none	none				
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?							

Comments: temp well

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
A6-VP-001, 10'-0				NO		
	7	various		NO	see COC	

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~2 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 5-24-04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: MW- AG-VP-001@20'

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 925 Time End Purge: 940 Time Sampled 945

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				2	4	6	
(TD-DTW) x.16	20.41	7.41	13	0.16	0.64	1.44	2.08

Time	930	935	940	943			
Volume Purged (gal)	3	4	5	6.5			
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	17.3	15.7	15.6	15.6			
Ph	7.72	7.91	7.91	7.91			
Specific Conductivity (uncorrected) (µmhos)	1763	1677	1303	1299			
ORP	250	245	240	240			
Turbidity/Color	brown	brown	brown	brown			
Odor/Sheen	none	none	non	non			
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?	N	N	N	N			

Comments: Temporary well

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
AG-VP-001,20'		various	various	NO	See COC	
				NO		

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~7 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 5-24-04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: MW- ABVP-002@10'

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: _____ Time End Purge: _____ Time Sampled _____

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				2	4	6	
	10'	>10'		0.16	0.64	1.44	

Time							
Volume Purged (gal)							
Purge Rate (gpm)	< 1gpm						
Temperature (°C)							
Ph							
Specific Conductivity (uncorrected) (µmhos)							
ORP							
Turbidity/Color							
Odor/Sheen							
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?							

Comments: 1340 no h2o @ 10'

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
				NO		
				NO		

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): _____ Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 5-24-04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: MW- A6UP-002 20'

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 1420 Time End Purge: 1445 Time Sampled 1445

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				(2)	4	6	
(TD-DTW) x .16	20	10.36	9.64	0.16	0.64	1.44	1.54

Time	1425	1430	1435	1440			
Volume Purged (gal)	2	3	4	5			
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	19.0	17.7	17.3	17.2			
Ph	7.38	7.44	7.47	7.43			
Specific Conductivity (uncorrected) (µmhos)	7536	7208	7120	7074			
ORP	224	185	146	140			
Turbidity/Color	lime green	lime green	lime green				
Odor/Sheen	pungent fertilizer smell						
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?	Y	Y	Y	Y			

Comments: _____

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
A6UP-002,20'-0				NO		
	7	various		NO	See COC	

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~5 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 5-24-04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: MW- A6-UP-003 @10'

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 955 Time End Purge: 1010 Time Sampled 1012

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				2	4	6	
(TD-DTW) x .16	10.6	9.7	0.9	0.16	0.64	1.44	0.14

Time	1000	1005	1010				
Volume Purged (gal)	.25	.35	.5				
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	15.3	14.5	14.5				
Ph	7.76	7.66	7.67				
Specific Conductivity (uncorrected) (µmhos)	2787	2713	2616				
ORP	230	229	227				
Turbidity/Color							
Odor/Sheen							
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?	Y	Y	Y				

Comments: temporary well

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
A6-UP003,10'				NO		
	7	various		NO	see COC	

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~0.5 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 5-24-04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: MW- A6-VP-003, 20'-0

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 1110 Time End Purge: 1130 Time Sampled 1130

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				2	4	6	
(TD-DTW) X.16	20.7	9.7	11	0.16	0.64	1.44	1.76

Time	1115	1120	1125				
Volume Purged (gal)	3	4	5.5				
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	16.3	16.2	16.1				
Ph	8.63	8.64	8.64				
Specific Conductivity (uncorrected) (µmhos)	13.83	13.10	13.08				
ORP	118	124	122				
Turbidity/Color	brown	lime green	lime green				
Odor/Sheen	strong	fertilizer	odor				
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?	Y	Y	Y				

Comments: Temporary well

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
A6-VP-003, 20'-0				NO		
	7	various		NO	See COC	

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~6 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 5-24-04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: MW- AGUP-004-10'

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: _____ Time End Purge: _____ Time Sampled N/A

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				(2)	4	6	
	10.2	>10.2		0.16	0.64	1.44	

Time							
Volume Purged (gal)							
Purge Rate (gpm)	< 1gpm						
Temperature (°C)							
Ph							
Specific Conductivity (uncorrected) (µmhos)							
ORP							
Turbidity/Color							
Odor/Sheen							
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?							

Comments: 11:50 NO H2O @ 10.2'

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
N/A				NO		
				NO		

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): _____ Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 5-24-04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: MW- ABVP-004 20'

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 1225 Time End Purge: 1242 Time Sampled 1310

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				(2)	4	6	
(TD-DTW) X.16	20	11.5	8.5	0.16	0.64	1.44	1.36

Time	1230	1235	1240				
Volume Purged (gal)	2	3.5	5				
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	19.0	17.3	16.8				
Ph	6.37	6.35	6.38				
Specific Conductivity (uncorrected) (µmhos)	19.85	19.80	18.94				
ORP	225	223	217				
Turbidity/Color	brown lm grn.	lime green	lime green				
Odor/Sheen	fertilizer smell						
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?	Y	Y	Y				

Comments: Temp well

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
ABVP-004, 20'				NO		
	7	Varying		NO	See COC	

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~5 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

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SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 5-26-04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: MW-8

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 850 Time End Purge: 905 Time Sampled 910

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				(2)	4	6	
(TD-DTW) x.16	17.45	6.62	10.83	0.16	0.64	1.44	1.73

Time	840	845	855	905			
Volume Purged (gal)	2	3	4.5	5.5			
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	14.4	14.5	15.0	14.8			
Ph	7.35	7.52	7.65	7.48			
Specific Conductivity (uncorrected) (µmhos)	5228	5095	5208	5199			
ORP	158	130	149	142			
Turbidity/Color	clear	clear	clear	clear			
Odor/Sheen	none	none	none	none			
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?	NO	NO	NO	NO			

Comments: New well. 1st Sample

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
MW08-260504-0				NO		
	7	Various		NO	See COC	

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~5.5 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: (YES) NO

Inside of Well Head and Outer Casing Dry?: (YES) NO

Well Casing?: (YES) NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 10-25-04

Project Name: Bee Jay Scales Project No.: 24CH.67001.00 Well No.: MW-9

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 1345 Time End Purge: 1430 Time Sampled 1435

Measuring Point Description: North Top of Well Casing

Purge Method: peri pump Purge Depth: TD

Well Volume Calculation	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				(2)	4	6	
TD-DTW x.16	17.9	8.40	9.5	0.16	0.64	1.44	1.52

Time	1400	1407	1418	1430			
Volume Purged (gal)	2	3	4	5			
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	15.4	16.1	16.3	16.2			
Ph	7.68	7.48	7.33	7.28			
Specific Conductivity (uncorrected) (µmhos)	8498 us	6845 us	6547 us	6907			
ORP	111	110	104	98			
Turbidity/Color	Lt. brown	Lt. brown	Lt. brown	Lt. brown			
Odor/Sheen	slight	slight	slight	slight			
Dewatered?	N	N	Y	Y			

Comments: Developed well 10-25-04 AM
Myron L Ultrameter for parameters

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment:

Comments: _____

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
MW9	7			NO	See coc	See coc
				NO		

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~5 Disposal Method: on site drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: (YES) NO

Inside of Well Head and Outer Casing Dry? (YES) NO

Well Casing?: (YES) NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 10-25-04

Project Name: Bee Jay Scales Project No.: 24CH.67201.00 Well No.: MW-10

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 1100 Time End Purge: 1135 Time Sampled 1135

Measuring Point Description: North Top of Well Casing

Purge Method: _____ Purge Depth: TD

Well Volume Calculation	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				(2)	4	6	
(TD-DTW) x 0.16	18.34	7.35	10.99	0.16	0.64	1.44	1.76

Time	1.5	2.5	3.5	4.5			
Volume Purged (gal)	1107	1115	1122	1130			
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	17.1	17.3	17.5	17.3			
Ph	7.38	7.41	7.46	7.50			
Specific Conductivity (uncorrected) (µmhos)	744.3 us	740.1 us	745.0	744.1			
ORP	96	98	103	104			
Turbidity/Color	Mostly clear	Mostly clear	Mostly clear	Mostly clear			
Odor/Sheen	slight	slight	slight	slight			
Dewatered?	N	N	N	N			

Comments: _____

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: Nylon L ultrameter

Comments: _____

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
MW10	10	various	Various	NO	See COC	
				NO		

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~5.5 Disposal Method: on site drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: (YES) NO

Inside of Well Head and Outer Casing Dry?: (YES) NO

Well Casing?: (YES) NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 10-25-04

Project Name: Bee Jay Scales Project No.: 24CH.67201.00 Well No.: MW-11

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 1000 Time End Purge: 1025 Time Sampled 1030

Measuring Point Description: North Top of Well Casing

Purge Method: peri pump Purge Depth: TD

Well Volume Calculation	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				(2)	4	6	
(TD-DTW) X.16	18.24	7.26	10.98	0.16	0.64	1.44	1.76

Time	1007	1015	1022				
Volume Purged (gal)	3	4	5				
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	18.2	18.2	18.3				
Ph	5.67	6.56	6.80				
Specific Conductivity (uncorrected) (µmhos)	611.4 uS	621.8 uS	625.1 uS				
ORP	205	117	107				
Turbidity/Color	Mostly clear	mostly clear	mostly clear				
Odor/Sheen	none	none	none				
Dewatered?	N	N	N				

Comments: Myron L ultrameter for field meas.

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment:

Comments: _____

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
MW11	10	Various	Various	NO		See COC
				NO		

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~5.5 Disposal Method: on site drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: (YES) NO

Inside of Well Head and Outer Casing Dry? (YES) NO

Well Casing?: (YES) NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 10-26-04

Project Name: Bee Jay Scales Project No.: 24CH.67201.00 Well No.: MW- MW12

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 0750 Time End Purge: 0830 Time Sampled 835

Measuring Point Description: North Top of Well Casing

Purge Method: _____ Purge Depth: TD

Well Volume Calculation	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				(2)	4	6	
(TD-DTW) x 0.16	17.65	8.83	8.82	0.16	0.64	1.44	1.41

Time	807	815	823	830			
Volume Purged (gal)	1.5	2.5	3.5	4.5			
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	15.3	15.6	16.2	16.2			
Ph	7.36	7.37	7.34	7.35			
Specific Conductivity (uncorrected) (µmhos)	8255	7425	7393	7434			
ORP	119	123	126	129			
Turbidity/Color	lt green	lt green	Lt. gr.	Lt. gr			
Odor/Sheen	Slight odor						
Dewatered?							

Comments: well developed 10-25-04 (AM)

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: Myron L ultrameter

Comments: _____

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
MW12	7	various	various	NO	see coc	
				NO		

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~4.5 Disposal Method: on site drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: (YES) NO

Inside of Well Head and Outer Casing Dry? (YES) NO

Well Casing?: (YES) NO

Comments: _____

APPENDIX D
PHASE II ANALYTICAL LABORATORY REPORTS

Phase II Remedial Investigation Report
Chevron Environmental Management Company
& BP America, Inc.

24CH.67201.00
May 17, 2005

Analytical Laboratory Report

JUN 0 9 2004

Report ID: S17176.01(01)
Generated on 06/01/2004

Report to

Attention: Ms. Marisa Patterson
SECOR
2321 Club Meridian Dr. #E
Okemos, MI 48864-4505
MSA# 94023

Phone: 517-349-9499 FAX: 517-349-6863

Report produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S17176.01-S17176.15
Project: 24CH.67201.01 Bee Jay Scales
Submitted Date/Time: 05/20/2004 09:30
Sampled by: M. McMahon
P.O. #:

Report Notes

Results relate only to items tested.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
"Not detected" indicates that parameter was not found at a level equal to or greater than the RDL.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories.

Violetta F. Murshak

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample ID: S17176.01
ple Tag: A3-SB-003, 0.5'-0
Collected Date/Time: 05/18/2004 09:20
Matrix: Soil
COC Reference: 018193

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	4oz. Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Total Solids	86	%	1	160.3	05/21/04 11:10	JSP		
Organics								
NWTPH-Gx	Not detected	mg/kg	20	NWTPH - Gx	05/28/04 22:33	JGH		

Analytical Laboratory Report

Sample ID: S17176.02
ple Tag: A3-SB-003, 4.5'-0
Collected Date/Time: 05/18/2004 09:35
Matrix: Soil
COC Reference: 018193

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	4oz. Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Total Solids	77	%	1	160.3	05/21/04 11:10	JSP		
Organics								
NWTPH-Gx	Not detected	mg/kg	20	NWTPH - Gx	05/28/04 23:38	JGH		

Analytical Laboratory Report

Lab Sample ID: S17176.03
Sample Tag: A3-SB-003, 7.5'-0
Collected Date/Time: 05/18/2004 09:50
Matrix: Soil
COC Reference: 018193

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	4oz. Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Total Solids	75	%	1	160.3	05/21/04 11:10	JSP		
Organics								
NWTPH-Gx	650	mg/kg	20	NWTPH - Gx	05/29/04 02:55	JGH		

Analytical Laboratory Report

Sample ID: S17176.04
ple Tag: A3-SB-005, 0.5'-0
Collected Date/Time: 05/18/2004 09:20
Matrix: Soil
COC Reference: 018193

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	4oz. Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Total Solids	90	%	1	160.3	05/21/04 11:10	JSP		
Organics								
NWTPH-Gx	Not detected	mg/kg	20	NWTPH - Gx	05/29/04 00:11	JGH		

Analytical Laboratory Report

Sample ID: S17176.05
ple Tag: A3-SB-005, 4.5'-0
Collected Date/Time: 05/18/2004 10:20
Matrix: Soil
COC Reference: 018193

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	4oz. Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Total Solids	73	%	1	160.3	05/21/04 11:10	JSP		
Organics								
NWTPH-Gx	Not detected	mg/kg	20	NWTPH - Gx	05/29/04 00:44	JGH		

Analytical Laboratory Report

Sample ID: S17176.06
Sample Tag: A3-SB-005, 7.5'-0
Collected Date/Time: 05/18/2004 10:25
Matrix: Soil
COC Reference: 018193

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	4oz. Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Total Solids	78	%	1	160.3	05/21/04 11:10	JSP		
Organics								
NWTPH-Gx	1,800	mg/kg	20	NWTPH - Gx	05/29/04 03:27	JGH		

Analytical Laboratory Report

Sample ID: S17176.07
ple Tag: A3-SB-006, 0.5'-0
Collected Date/Time: 05/18/2004 09:20
Matrix: Soil
COC Reference: 018193

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	4oz. Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Total Solids	91	%	1	160.3	05/21/04 11:10	JSP		
Organics								
NWTPH-Gx	Not detected	mg/kg	20	NWTPH - Gx	05/29/04 01:16	JGH		

Analytical Laboratory Report

Sample ID: S17176.08
ple Tag: A3-SB-006, 4.5'-0
Collected Date/Time: 05/18/2004 10:00
Matrix: Soil
COC Reference: 018193

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	4oz. Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Total Solids	74	%	1	160.3	05/21/04 11:10	JSP		
Organics								
NWTPH-Gx	Not detected	mg/kg	20	NWTPH - Gx	05/29/04 01:49	JGH		

Analytical Laboratory Report

Sample ID: S17176.09
Sample Tag: A3-SB-006, 7.5'-0
Collected Date/Time: 05/18/2004 10:10
Matrix: Soil
COC Reference: 018193

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	4oz. Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Total Solids	76	%	1	160.3	05/21/04 11:10	JSP		
Organics								
NWTPH-Gx	360	mg/kg	20	NWTPH - Gx	05/29/04 02:22	JGH		

Analytical Laboratory Report

Merit Laboratories, Inc.

Lab Sample ID: S17176.10
Sample Tag: A5-SB-008, 4.5'-0
Collected Date/Time: 05/18/2004 12:35
Matrix: Soil
COC Reference: 018193

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	4oz. Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3050B	05/24/04 13:15	MSH		
Metal Digestion	Completed			3015A	07/30/04 13:30	MSH		
SPLP Extraction								
% Solids	100			1312	07/28/04 18:00	I M		
Sample Used g	100			1312	07/28/04 18:00	I M		
Final Volume mL	2,000			1312	07/28/04 18:00	I M		
Final Extract pH	8.9			1312	07/28/04 18:00	I M		
Inorganics								
Total Solids	79	%	1	160.3	05/21/04 11:10	JSP		
Ammonia-N, SPLP	Not detected	mg/L	0.1	350.3	08/03/04 18:00	MJC		
Nitrate-N, TCLP	14.7	mg/L	0.2	300.0	07/29/04 15:34	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	07/29/04 15:34	JDP		
[illegible]e, SPLP	16	mg/L	1	300.0	07/29/04 15:34	JDP		
[illegible]phate, SPLP	Not detected	mg/L	0.1	365.2	08/02/04 15:00	MJC		
Ammonia-N	Not detected	mg/kg	10	350.3	05/27/04 16:00	MJC		
Nitrate-N	354	mg/kg	5.0	300.0	05/21/04 17:39	JDP		
Nitrite-N	Not detected	mg/kg	5.0	300.0	05/21/04 16:12	JDP		
Sulfate	250	mg/kg	20	300.0	05/21/04 16:12	JDP		
Phosphate	1,930	mg/kg	10	365.2	05/26/04 17:00	MJC		
Metals								
Iron, SPLP	1.71	mg/L	0.02	200.8	08/02/04 14:41	PER	7439-89-6	
Iron	1,050	mg/kg	1.0	6020	05/26/04 18:01	PER	7439-89-6	

Analytical Laboratory Report

Sample ID: S17176.11
ple Tag: A5-SB-008, 9'-0
Collected Date/Time: 05/18/2004 12:40
Matrix: Soil
COC Reference: 018193

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	4oz. Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3050B	05/24/04 13:15	MSH		
Inorganics								
Total Solids	75	%	1	160.3	05/21/04 11:10	JSP		
Ammonia-N	Not detected	mg/kg	10	350.3	05/27/04 16:00	MJC		
Nitrate-N	12.9	mg/kg	5.0	300.0	05/21/04 16:35	JDP		
Nitrite-N	Not detected	mg/kg	5.0	300.0	05/21/04 16:35	JDP		
Sulfate	41	mg/kg	20	300.0	05/21/04 16:35	JDP		
Phosphate	2,290	mg/kg	10	365.2	05/26/04 17:00	MJC		
Metals								
Iron	1,860	mg/kg	1.0	6020	05/26/04 18:03	PER	7439-89-6	

Analytical Laboratory Report

Sample ID: S17176.12
ile Tag: A5-SB-009, 4.5'-0
Collected Date/Time: 05/18/2004 12:50
Matrix: Soil
COC Reference: 018193

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	4oz. Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3050B	05/24/04 13:15	MSH		
Inorganics								
Total Solids	90	%	1	160.3	05/21/04 11:10	JSP		
Ammonia-N	Not detected	mg/kg	10	350.3	05/27/04 16:00	MJC		
Nitrate-N	23.6	mg/kg	5.0	300.0	05/21/04 16:47	JDP		
Nitrite-N	Not detected	mg/kg	5.0	300.0	05/21/04 16:47	JDP		
Sulfate	42	mg/kg	20	300.0	05/21/04 16:47	JDP		
Phosphate	1,820	mg/kg	10	365.2	05/26/04 17:00	MJC		
Metals								
Iron	1,760	mg/kg	1.0	6020	05/26/04 18:05	PER	7439-89-6	

Analytical Laboratory Report

Sample ID: S17176.13
le Tag: A5-SB-009, 9'-0
Collected Date/Time: 05/18/2004 12:55
Matrix: Soil
COC Reference: 018193

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	4oz. Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3050B	05/24/04 13:15	MSH		
Inorganics								
Total Solids	76	%	1	160.3	05/21/04 11:10	JSP		
Ammonia-N	Not detected	mg/kg	10	350.3	05/27/04 16:00	MJC		
Nitrate-N	57.0	mg/kg	5.0	300.0	05/21/04 16:58	JDP		
Nitrite-N	Not detected	mg/kg	5.0	300.0	05/21/04 16:58	JDP		
Sulfate	77	mg/kg	20	300.0	05/21/04 16:58	JDP		
Phosphate	2,110	mg/kg	10	365.2	05/26/04 17:00	MJC		
Metals								
Iron	1,970	mg/kg	1.0	6020	05/26/04 18:07	PER	7439-89-6	

Analytical Laboratory Report

Sample ID: S17176.14
Sample Tag: A5-SB-010, 4.5'-0
Collected Date/Time: 05/18/2004 13:10
Matrix: Soil
COC Reference: 018193

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	4oz. Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3050B	05/24/04 13:15	MSH		
Inorganics								
Total Solids	86	%	1	160.3	05/21/04 11:10	JSP		
Ammonia-N	Not detected	mg/kg	10	350.3	05/27/04 16:00	MJC		
Nitrate-N	450	mg/kg	5.0	300.0	05/21/04 18:14	JDP		
Nitrite-N	Not detected	mg/kg	5.0	300.0	05/21/04 17:10	JDP		
Sulfate	191	mg/kg	20	300.0	05/21/04 17:10	JDP		
Phosphate	1,950	mg/kg	10	365.2	05/26/04 17:00	MJC		
Metals								
Iron	2,730	mg/kg	1.0	6020	05/26/04 18:09	PER	7439-89-6	

Analytical Laboratory Report

Sample ID: S17176.15
ple Tag: A5-SB-010, 9'-0
Collected Date/Time: 05/18/2004 13:15
Matrix: Soil
COC Reference: 013081

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	4oz. Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3050B	05/24/04 13:15	MSH		
Inorganics								
Total Solids	80	%	1	160.3	05/21/04 11:10	JSP		
Ammonia-N	Not detected	mg/kg	10	350.3	05/27/04 16:00	MJC		
Nitrate-N	146	mg/kg	5.0	300.0	05/21/04 18:25	JDP		
Nitrite-N	Not detected	mg/kg	5.0	300.0	05/21/04 17:21	JDP		
Sulfate	82	mg/kg	20	300.0	05/21/04 17:21	JDP		
Phosphate	2,120	mg/kg	10	365.2	05/26/04 17:00	MJC		
Metals								
Iron	2,020	mg/kg	1.0	6020	05/26/04 18:12	PER	7439-89-6	

Analytical Laboratory Report

AUG 0 2 2004

rt ID: S17201.01(02)
erated on 07/20/2004

Report to
Attention: Ms. Marisa Patterson
SECOR
2321 Club Meridian Dr. #E
Okemos, MI 48864-4505
MSA# 94023

Phone: 517-349-9499 FAX: 517-349-6863

Report produced by
Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary
Lab Sample ID(s): S17201.01-S17201.26
Project: 24CH.67201.01 Bee Jay Scales
Submitted Date/Time: 05/21/2004 10:00
Sampled by: Mike McMahon
P.O. #:

Report Notes
Results relate only to items tested.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
"Not detected" indicates that parameter was not found at a level equal to or greater than the RDL.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories.

Violetta F. Murshak

Violetta F. Murshak
oratory Director

Analytical Laboratory Report

Sample ID: S17201.01
ple Tag: A5-SB-001, 4.5'-0
Collected Date/Time: 05/19/2004 09:05
Matrix: Soil
COC Reference: 013080

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	32 oz Glass	None	Yes	4	3
2	4oz. Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3050B	05/24/04 13:15	MSH		
Metal Digestion	Completed			3015A	07/15/04 15:00	MSH		
SPLP Extraction								
% Solids	100			1312	07/13/04 17:00	LBR		
Sample Used g	100			1312	07/13/04 17:00	LBR		
Final Volume mL	2,000			1312	07/13/04 17:00	LBR		
Final Extract pH	7.75			1312	07/13/04 17:00	LBR		
Inorganics								
Total Solids	74	%	1	160.3	05/24/04 16:20	JSP		
Ammonia-N, SPLP	Not detected	mg/L	0.1	350.3	07/19/04 17:00	MJC		
Nitrate-N, TCLP	10.5	mg/L	0.2	300.0	07/19/04 13:17	JDP		
te-N	Not detected	mg/L	0.2	300.0	07/19/04 13:17	JDP		
ulfate, SPLP	16	mg/L	1	300.0	07/19/04 13:17	JDP		
Phosphate, SPLP	0.6	mg/L	0.1	365.2	07/19/04 15:00	MJC		
Ammonia-N	Not detected	mg/kg	10	350.3	05/27/04 16:00	MJC		
Nitrate-N	99.0	mg/kg	10.0	300.0	05/24/04 06:58	JDP		
Nitrite-N	Not detected	mg/kg	10.0	300.0	05/24/04 06:58	JDP		
Sulfate	144	mg/kg	100	300.0	05/24/04 06:58	JDP		
Phosphate	2,280	mg/kg	10	365.2	05/27/04 13:00	MJC		
Metals								
Iron, SPLP	0.09	mg/L	0.02	200.8	07/15/04 18:22	PER	7439-89-6	
Iron	2,290	mg/kg	1.0	6020	05/26/04 18:14	PER	7439-89-6	

Analytical Laboratory Report

Sample ID: S17201.02
ple Tag: A5-SB-001, 9'-0
Collected Date/Time: 05/19/2004 09:10
Matrix: Soil
COC Reference: 013080

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	32 oz Glass	None	Yes	4	3
2	4oz. Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3050B	05/24/04 13:15	MSH		
Metal Digestion	Completed			3015A	07/15/04 15:00	MSH		
SPLP Extraction								
% Solids	100			1312	07/13/04 17:00	LBR		
Sample Used g	100			1312	07/13/04 17:00	LBR		
Final Volume mL	2,000			1312	07/13/04 17:00	LBR		
Final Extract pH	8.35			1312	07/13/04 17:00	LBR		
Inorganics								
Total Solids	79	%	1	160.3	05/24/04 16:20	JSP		
Ammonia-N, SPLP	Not detected	mg/L	0.1	350.3	07/19/04 17:00	MJC		
Nitrate-N, TCLP	11.0	mg/L	0.2	300.0	07/19/04 13:29	JDP		
e-N	Not detected	mg/L	0.2	300.0	07/19/04 13:29	JDP		
fate, SPLP	9	mg/L	1	300.0	07/19/04 13:29	JDP		
Phosphate, SPLP	Not detected	mg/L	0.1	365.2	07/19/04 15:00	MJC		
Ammonia-N	Not detected	mg/kg	10	350.3	05/27/04 16:00	MJC		
Nitrate-N	304	mg/kg	10.0	300.0	05/24/04 07:21	JDP		
Nitrite-N	Not detected	mg/kg	10.0	300.0	05/24/04 07:21	JDP		
Sulfate	176	mg/kg	100	300.0	05/24/04 07:21	JDP		
Phosphate	2,590	mg/kg	10	365.2	05/27/04 13:00	MJC		
Metals								
Iron, SPLP	0.05	mg/L	0.02	200.8	07/15/04 18:24	PER	7439-89-6	
Iron	1,780	mg/kg	1.0	6020	05/26/04 18:17	PER	7439-89-6	

Analytical Laboratory Report

Sample ID: S17201.03
ple Tag: A5-SB-002, 4.5'-0
Collected Date/Time: 05/19/2004 10:30
Matrix: Soil
COC Reference: 013080

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	32 oz Glass	None	Yes	4	3
2	4oz. Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3050B	05/24/04 13:15	MSH		
Metal Digestion	Completed			3015A	07/15/04 15:00	MSH		
SPLP Extraction								
% Solids	100			1312	07/13/04 12:00	LBR		
Sample Used g	100			1312	07/13/04 12:00	LBR		
Final Volume mL	2,000			1312	07/13/04 12:00	LBR		
Final Extract pH	6.98			1312	07/13/04 12:00	LBR		
Inorganics								
Total Solids	79	%	1	160.3	05/24/04 16:20	JSP		
Ammonia-N, SPLP	0.5	mg/L	0.1	350.3	07/19/04 17:00	MJC		
Nitrate-N, TCLP	9.7	mg/L	0.2	300.0	07/19/04 13:41	JDP		
te-N	Not detected	mg/L	0.2	300.0	07/19/04 13:41	JDP		
fate, SPLP	14	mg/L	1	300.0	07/19/04 13:41	JDP		
Phosphate, SPLP	0.1	mg/L	0.1	365.2	07/19/04 15:00	MJC		
Ammonia-N	Not detected	mg/kg	10	350.3	05/27/04 16:00	MJC		
Nitrate-N	205	mg/kg	10.0	300.0	05/24/04 07:33	JDP		
Nitrite-N	Not detected	mg/kg	10.0	300.0	05/24/04 07:33	JDP		
Sulfate	244	mg/kg	100	300.0	05/24/04 07:33	JDP		
Phosphate	2,450	mg/kg	10	365.2	05/27/04 13:00	MJC		
Metals								
Iron, SPLP	0.58	mg/L	0.02	200.8	07/15/04 18:25	PER	7439-89-6	
Iron	3,190	mg/kg	1.0	6020	05/26/04 18:19	PER	7439-89-6	

Analytical Laboratory Report

Sample ID: S17201.04
ple Tag: A5-SB-002, 9'-0
Collected Date/Time: 05/19/2004 10:40
Matrix: Soil
COC Reference: 013080

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	32 oz Glass	None	Yes	4	3
2	4oz. Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3050B	05/24/04 13:15	MSH		
Inorganics								
Total Solids	73	%	1	160.3	05/24/04 16:20	JSP		
Ammonia-N	Not detected	mg/kg	10	350.3	05/27/04 16:00	MJC		
Nitrate-N	49.0	mg/kg	10.0	300.0	05/24/04 07:45	JDP		
Nitrite-N	Not detected	mg/kg	10.0	300.0	05/24/04 07:45	JDP		
Sulfate	104	mg/kg	100	300.0	05/24/04 07:45	JDP		
Phosphate	2,830	mg/kg	10	365.2	05/27/04 13:00	MJC		
Metals								
Iron	3,150	mg/kg	1.0	6020	05/26/04 18:22	PER	7439-89-6	

Analytical Laboratory Report

Sample ID: S17201.05
ple Tag: A5-SB-003, 4.5'-0
Collected Date/Time: 05/19/2004 09:35
Matrix: Soil
COC Reference: 013080

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	32 oz Glass	None	Yes	4	3
2	4oz. Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3050B	05/24/04 13:15	MSH		
Inorganics								
Total Solids	79	%	1	160.3	05/24/04 16:20	JSP		
Ammonia-N	Not detected	mg/kg	10	350.3	05/27/04 16:00	MJC		
Nitrate-N	42.8	mg/kg	10.0	300.0	05/24/04 07:56	JDP		
Nitrite-N	Not detected	mg/kg	10.0	300.0	05/24/04 07:56	JDP		
Sulfate	155	mg/kg	100	300.0	05/24/04 07:56	JDP		
Phosphate	2,080	mg/kg	10	365.2	05/27/04 13:00	MJC		
Metals								
Iron	2,280	mg/kg	1.0	6020	05/26/04 18:39	PER	7439-89-6	

Analytical Laboratory Report

Merit Laboratories, Inc.

Sample ID: S17201.06
Sample Tag: A5-SB-003, 9'-0
Collected Date/Time: 05/19/2004 09:40
Matrix: Soil
COC Reference: 013080

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	32 oz Glass	None	Yes	4	3
2	4oz. Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3050B	05/24/04 13:15	MSH		
Metal Digestion	Completed			3015A	07/30/04 13:30	MSH		
SPLP Extraction								
% Solids	100			1312	07/28/04 18:00	I M		
Sample Used g	100			1312	07/28/04 18:00	I M		
Final Volume mL	2,000			1312	07/28/04 18:00	I M		
Final Extract pH	8.3			1312	07/28/04 18:00	I M		
Inorganics								
Total Solids	77	%	1	160.3	05/24/04 16:20	JSP		
Ammonia-N, SPLP	Not detected	mg/L	0.1	350.3	08/03/04 18:00	MJC		
Nitrate-N, TCLP	2.8	mg/L	0.2	300.0	07/29/04 15:45	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	07/29/04 15:45	JDP		
Sulfate, SPLP	9	mg/L	1	300.0	07/29/04 15:45	JDP		
Phosphate, SPLP	0.3	mg/L	0.1	365.2	08/02/04 15:00	MJC		
Ammonia-N	Not detected	mg/kg	10	350.3	05/27/04 16:00	MJC		
Nitrate-N	67.2	mg/kg	10.0	300.0	05/24/04 08:08	JDP		
Nitrite-N	Not detected	mg/kg	10.0	300.0	05/24/04 08:08	JDP		
Sulfate	124	mg/kg	100	300.0	05/24/04 08:08	JDP		
Phosphate	2,220	mg/kg	10	365.2	05/27/04 13:00	MJC		
Metals								
Iron, SPLP	2.06	mg/L	0.02	200.8	08/02/04 14:43	PER	7439-89-6	
Iron	2,000	mg/kg	1.0	6020	05/26/04 18:42	PER	7439-89-6	

Analytical Laboratory Report

Sample ID: S17201.07
iple Tag: A5-SB-004, 4.5'-0
Collected Date/Time: 05/19/2004 10:05
Matrix: Soil
COC Reference: 013080

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	32 oz Glass	None	Yes	4	3
2	4oz. Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3050B	05/24/04 13:15	MSH		
Inorganics								
Total Solids	79	%	1	160.3	05/24/04 16:20	JSP		
Ammonia-N	Not detected	mg/kg	10	350.3	05/27/04 16:00	MJC		
Nitrate-N	40.1	mg/kg	10.0	300.0	05/24/04 08:44	JDP		
Nitrite-N	Not detected	mg/kg	10.0	300.0	05/24/04 08:44	JDP		
Sulfate	426	mg/kg	100	300.0	05/24/04 08:44	JDP		
Phosphate	2,190	mg/kg	10	365.2	05/27/04 13:00	MJC		
Metals								
Iron	1,960	mg/kg	1.0	6020	05/26/04 18:44	PER	7439-89-6	

Analytical Laboratory Report

Sample ID: S17201.08
ple Tag: A5-SB-004, 9'-0
Collected Date/Time: 05/19/2004 10:10
Matrix: Soil
COC Reference: 013080

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	32 oz Glass	None	Yes	4	3
2	4oz. Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3050B	05/24/04 13:15	MSH		
Inorganics								
Total Solids	78	%	1	160.3	05/24/04 16:20	JSP		
Ammonia-N	Not detected	mg/kg	10	350.3	05/27/04 16:00	MJC		
Nitrate-N	19.0	mg/kg	10.0	300.0	05/24/04 08:55	JDP		
Nitrite-N	Not detected	mg/kg	10.0	300.0	05/24/04 08:55	JDP		
Sulfate	137	mg/kg	100	300.0	05/24/04 08:55	JDP		
Phosphate	2,120	mg/kg	10	365.2	05/27/04 13:00	MJC		
Metals								
Iron	2,180	mg/kg	1.0	6020	05/26/04 18:46	PER	7439-89-6	

Analytical Laboratory Report

Sample ID: S17201.09
Sample Tag: A5-SB-005, 4.5'-0
Collected Date/Time: 05/19/2004 08:20
Matrix: Soil
COC Reference: 013080

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	32 oz Glass	None	Yes	4	3
2	4oz. Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3050B	05/24/04 13:15	MSH		
Metal Digestion	Completed			3015A	07/15/04 15:00	MSH		
SPLP Extraction								
% Solids	100			1312	07/13/04 17:00	LBR		
Sample Used g	100			1312	07/13/04 17:00	LBR		
Final Volume mL	2,000			1312	07/13/04 17:00	LBR		
Final Extract pH	9.07			1312	07/13/04 17:00	LBR		
Inorganics								
Total Solids	80	%	1	160.3	05/24/04 16:20	JSP		
Ammonia-N, SPLP	Not detected	mg/L	0.1	350.3	07/19/04 17:00	MJC		
Nitrate-N, TCLP	5.0	mg/L	0.2	300.0	07/19/04 13:52	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	07/19/04 13:52	JDP		
Sulfate, SPLP	10	mg/L	1	300.0	07/19/04 13:52	JDP		
Phosphate, SPLP	0.1	mg/L	0.1	365.2	07/19/04 15:00	MJC		
Ammonia-N	Not detected	mg/kg	10	350.3	05/27/04 16:00	MJC		
Nitrate-N	81.0	mg/kg	10.0	300.0	05/24/04 09:07	JDP		
Nitrite-N	Not detected	mg/kg	10.0	300.0	05/24/04 09:07	JDP		
Sulfate	171	mg/kg	100	300.0	05/24/04 09:07	JDP		
Phosphate	1,760	mg/kg	10	365.2	05/27/04 13:00	MJC		
Metals								
Iron, SPLP	0.14	mg/L	0.02	200.8	07/15/04 18:26	PER	7439-89-6	
Iron	2,310	mg/kg	1.0	6020	05/26/04 18:49	PER	7439-89-6	

Analytical Laboratory Report

Sample ID: S17201.10
ple Tag: A5-SB-005, 9'-0
Collected Date/Time: 05/19/2004 08:25
Matrix: Soil
COC Reference: 013080

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	32 oz Glass	None	Yes	4	3
2	4oz. Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3050B	05/24/04 13:15	MSH		
Inorganics								
Total Solids	73	%	1	160.3	05/24/04 16:20	JSP		
Ammonia-N	Not detected	mg/kg	10	350.3	05/27/04 16:00	MJC		
Nitrate-N	Not detected	mg/kg	10.0	300.0	05/24/04 09:19	JDP		
Nitrite-N	Not detected	mg/kg	10.0	300.0	05/24/04 09:19	JDP		
Sulfate	Not detected	mg/kg	100	300.0	05/24/04 09:19	JDP		
Phosphate	2,250	mg/kg	10	365.2	05/27/04 13:00	MJC		
Metals								
Iron	2,520	mg/kg	1.0	6020	05/26/04 18:51	PER	7439-89-6	

Analytical Laboratory Report

Sample ID: S17201.11
ple Tag: A5-SB-006, 4.5'-0
Collected Date/Time: 05/19/2004 07:20
Matrix: Soil
COC Reference: 013080

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	32 oz Glass	None	Yes	4	3
2	4oz. Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3050B	05/24/04 13:15	MSH		
Metal Digestion	Completed			3015A	07/15/04 15:00	MSH		
SPLP Extraction								
% Solids	100			1312	07/13/04 17:00	LBR		
Sample Used g	100			1312	07/13/04 17:00	LBR		
Final Volume mL	2,000			1312	07/13/04 17:00	LBR		
Final Extract pH	8.98			1312	07/13/04 17:00	LBR		
Inorganics								
Total Solids	84	%	1	160.3	05/24/04 16:20	JSP		
Ammonia-N, SPLP	Not detected	mg/L	0.1	350.3	07/19/04 17:00	MJC		
Nitrate-N, TCLP	4.2	mg/L	0.2	300.0	07/19/04 14:04	JDP		
ite-N	Not detected	mg/L	0.2	300.0	07/19/04 14:04	JDP		
fate, SPLP	12	mg/L	1	300.0	07/19/04 14:04	JDP		
Phosphate, SPLP	Not detected	mg/L	0.1	365.2	07/19/04 19:00	MJC		
Ammonia-N	Not detected	mg/kg	10	350.3	05/27/04 16:00	MJC		
Nitrate-N	89.4	mg/kg	10.0	300.0	05/24/04 09:42	JDP		
Nitrite-N	Not detected	mg/kg	10.0	300.0	05/24/04 09:42	JDP		
Sulfate	241	mg/kg	100	300.0	05/24/04 09:42	JDP		
Phosphate	1,830	mg/kg	10	365.2	05/27/04 13:00	MJC		
Metals								
Iron, SPLP	0.22	mg/L	0.02	200.8	07/15/04 18:28	PER	7439-89-6	
Iron	1,830	mg/kg	1.0	6020	05/26/04 18:54	PER	7439-89-6	

Analytical Laboratory Report

Sample ID: S17201.12
ple Tag: A5-SB-006, 9'-0
Collected Date/Time: 05/19/2004 07:25
Matrix: Soil
COC Reference: 013080

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	32 oz Glass	None	Yes	4	3
2	4oz. Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3050B	05/24/04 13:15	MSH		
Inorganics								
Total Solids	76	%	1	160.3	05/24/04 16:20	JSP		
Ammonia-N	Not detected	mg/kg	10	350.3	05/27/04 16:00	MJC		
Nitrate-N	Not detected	mg/kg	10.0	300.0	05/24/04 09:53	JDP		
Nitrite-N	Not detected	mg/kg	10.0	300.0	05/24/04 09:53	JDP		
Sulfate	104	mg/kg	100	300.0	05/24/04 09:53	JDP		
Phosphate	2,060	mg/kg	10	365.2	05/27/04 13:00	MJC		
Metals								
Iron	2,300	mg/kg	1.0	6020	05/26/04 18:56	PER	7439-89-6	

Analytical Laboratory Report

Sample ID: S17201.13
ple Tag: A5-SB-007, 4.5'-0
Collected Date/Time: 05/19/2004 07:50
Matrix: Soil
COC Reference: 013080

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	32 oz Glass	None	Yes	4	3
2	4oz. Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3050B	05/24/04 13:15	MSH		
Metal Digestion	Completed			3015A	07/15/04 15:00	MSH		
SPLP Extraction								
% Solids	100			1312	07/13/04 17:00	LBR		
Sample Used g	100			1312	07/13/04 17:00	LBR		
Final Volume mL	2,000			1312	07/13/04 17:00	LBR		
Final Extract pH	7.00			1312	07/13/04 17:00	LBR		
Inorganics								
Total Solids	82	%	1	160.3	05/24/04 16:20	JSP		
Ammonia-N, SPLP	Not detected	mg/L	0.1	350.3	07/19/04 17:00	MJC		
Nitrate-N, TCLP	4.6	mg/L	0.2	300.0	07/19/04 14:16	JDP		
ite-N	Not detected	mg/L	0.2	300.0	07/19/04 14:16	JDP		
ate, SPLP	13	mg/L	1	300.0	07/19/04 14:16	JDP		
Phosphate, SPLP	0.6	mg/L	0.1	365.2	07/19/04 19:00	MJC		
Ammonia-N	Not detected	mg/kg	10	350.3	05/27/04 16:00	MJC		
Nitrate-N	60.4	mg/kg	10.0	300.0	05/24/04 10:05	JDP		
Nitrite-N	Not detected	mg/kg	10.0	300.0	05/24/04 10:05	JDP		
Sulfate	156	mg/kg	100	300.0	05/24/04 10:05	JDP		
Phosphate	1,940	mg/kg	10	365.2	05/27/04 13:00	MJC		
Metals								
Iron, SPLP	0.31	mg/L	0.02	200.8	07/15/04 18:29	PER	7439-89-6	
Iron	1,680	mg/kg	1.0	6020	05/26/04 18:59	PER	7439-89-6	

Analytical Laboratory Report

Sample ID: S17201.14
ple Tag: A5-SB-007, 9'-0
Collected Date/Time: 05/19/2004 07:55
Matrix: Soil
COC Reference: 013080

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	32 oz Glass	None	Yes	4	3
2	4oz. Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3050B	05/24/04 13:15	MSH		
Inorganics								
Total Solids	76	%	1	160.3	05/24/04 16:20	JSP		
Ammonia-N	Not detected	mg/kg	10	350.3	05/27/04 16:00	MJC		
Nitrate-N	Not detected	mg/kg	10.0	300.0	05/24/04 10:17	JDP		
Nitrite-N	Not detected	mg/kg	10.0	300.0	05/24/04 10:17	JDP		
Sulfate	110	mg/kg	100	300.0	05/24/04 10:17	JDP		
Phosphate	2,510	mg/kg	10	365.2	05/27/04 13:00	MJC		
Metals								
Iron	3,000	mg/kg	1.0	6020	05/26/04 19:01	PER	7439-89-6	

Analytical Laboratory Report

Sample ID: S17201.15
ple Tag: A5-VP-002, 10'-0
Collected Date/Time: 05/19/2004 13:45
Matrix: Groundwater
COC Reference: 018192

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1 L Amber	None	Yes	4	3
2	250ml Plastic	None	Yes	4	3
1	DO Bottle	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3
1	125ml Plastic	HNO3	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	05/24/04 17:00	MSH		
Inorganics								
pH	8.06	STD Units	0.01	150.1	05/21/04 22:26	LBR		
Alkalinity as CaCO3	227	mg/L	1	310.1	05/25/04 11:10	JKB		
Ammonia-N	6.9	mg/L	0.1	350.3	05/24/04 16:00	MJC		
Chloride	265	mg/L	1	300.0	05/22/04 06:56	JDP		
Nitrate-N	40.4	mg/L	0.2	300.0	05/22/04 06:56	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	05/22/04 06:56	JDP		
Sulfate	91	mg/L	1	300.0	05/22/04 06:45	JDP		
solved Oxygen	9.57	mg/L	1		05/21/04 22:27	LBR		
sphate	4.4	mg/L	0.1	365.2	05/26/04 13:00	MJC		
Metals								
Arsenic	0.012	mg/L	0.002	200.8	05/27/04 20:19	PER	7440-38-2	
Iron	6.68	mg/L	0.02	200.8	05/27/04 20:19	PER	7439-89-6	
Organics								
Chlorinated Herbicides								
Dicamba	Not detected	ug/L	2	8151	06/04/04 12:00	PCS		O
Dinoseb	Not detected	ug/L	0.6	8151	06/04/04 12:00	PCS		O
2,4-D	Not detected	ug/L	4	8151	06/04/04 12:00	PCS		O
2,4,5-TP (Silvex)	Not detected	ug/L	1	8151	06/04/04 12:00	PCS		O
2,4,5-T	Not detected	ug/L	1	8151	06/04/04 12:00	PCS		O

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Sample ID: S17201.16
ple Tag: A5-VP-003, 10'-0
Collected Date/Time: 05/19/2004 13:35
Matrix: Groundwater
COC Reference: 018192

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1 L Amber	None	Yes	4	3
2	250ml Plastic	None	Yes	4	3
1	DO Bottle	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3
1	125ml Plastic	HNO3	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	05/24/04 17:00	MSH		
Inorganics								
pH	7.56	STD Units	0.01	150.1	05/21/04 22:26	LBR		
Alkalinity as CaCO3	218	mg/L	1	310.1	05/25/04 11:20	JKB		
Ammonia-N	Not detected	mg/L	0.1	350.3	05/24/04 16:00	MJC		
Chloride	230	mg/L	1	300.0	05/22/04 10:01	JDP		
Nitrate-N	250	mg/L	0.2	300.0	05/22/04 10:13	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	05/22/04 07:20	JDP		
Sulfate	161	mg/L	1	300.0	05/22/04 07:20	JDP		
solved Oxygen	9.04	mg/L	1		05/21/04 22:27	LBR		
osphate	1.1	mg/L	0.1	365.2	05/26/04 16:00	MJC		
Metals								
Arsenic	0.004	mg/L	0.002	200.8	05/27/04 20:21	PER	7440-38-2	
Iron	2.08	mg/L	0.02	200.8	05/27/04 20:21	PER	7439-89-6	
Organics								
Chlorinated Herbicides								
Dicamba	Not detected	ug/L	2	8151	06/04/04 12:00	PCS		O
Dinoseb	Not detected	ug/L	0.6	8151	06/04/04 12:00	PCS		O
2,4-D	Not detected	ug/L	4	8151	06/04/04 12:00	PCS		O
2,4,5-TP (Silvex)	Not detected	ug/L	1	8151	06/04/04 12:00	PCS		O
2,4,5-T	Not detected	ug/L	1	8151	06/04/04 12:00	PCS		O

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Sample ID: S17201.17
ple Tag: A5-VP-004, 10'-0
Collected Date/Time: 05/19/2004 13:15
Matrix: Groundwater
COC Reference: 018192

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1 L Amber	None	Yes	4	3
2	250ml Plastic	None	Yes	4	3
1	DO Bottle	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3
1	125ml Plastic	HNO3	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	05/24/04 17:00	MSH		
Inorganics								
pH	7.88	STD Units	0.01	150.1	05/21/04 22:26	LBR		
Alkalinity as CaCO3	292	mg/L	1	310.1	05/25/04 11:30	JKB		
Ammonia-N	Not detected	mg/L	0.1	350.3	05/24/04 16:00	MJC		
Chloride	148	mg/L	1	300.0	05/22/04 07:31	JDP		
Nitrate-N	58	mg/L	0.2	300.0	05/22/04 10:25	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	05/22/04 07:31	JDP		
Sulfate	135	mg/L	1	300.0	05/22/04 07:31	JDP		
solved Oxygen	9.27	mg/L	1		05/21/04 22:27	LBR		
sphate	35	mg/L	1	365.2	05/26/04 16:00	MJC		
Metals								
Arsenic	0.017	mg/L	0.002	200.8	05/27/04 20:24	PER	7440-38-2	
Iron	4.29	mg/L	0.02	200.8	05/27/04 20:24	PER	7439-89-6	
Organics								
Chlorinated Herbicides								
Dicamba	Not detected	ug/L	2	8151	06/04/04 12:00	PCS		O
Dinoseb	Not detected	ug/L	0.6	8151	06/04/04 12:00	PCS		O
2,4-D	Not detected	ug/L	4	8151	06/04/04 12:00	PCS		O
2,4,5-TP (Silvex)	Not detected	ug/L	1	8151	06/04/04 12:00	PCS		O
2,4,5-T	Not detected	ug/L	1	8151	06/04/04 12:00	PCS		O

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Sample ID: S17201.18
ple Tag: A5-VP-005, 10'-0
Collected Date/Time: 05/19/2004 13:00
Matrix: Groundwater
COC Reference: 018192

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1 L Amber	None	Yes	4	3
2	250ml Plastic	None	Yes	4	3
1	DO Bottle	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3
1	125ml Plastic	HNO3	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	05/24/04 17:00	MSH		
Inorganics								
pH	8.01	STD Units	0.01	150.1	05/21/04 22:26	LBR		
Alkalinity as CaCO3	255	mg/L	1	310.1	05/25/04 11:35	JKB		
Ammonia-N	Not detected	mg/L	0.1	350.3	05/24/04 16:00	MJC		
Chloride	80	mg/L	1	300.0	05/22/04 07:43	JDP		
Nitrate-N	45.8	mg/L	0.2	300.0	05/22/04 10:36	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	05/22/04 07:43	JDP		
Sulfate	76	mg/L	1	300.0	05/22/04 07:43	JDP		
solved Oxygen	10.38	mg/L	1		05/21/04 22:27	LBR		
sphate	11.7	mg/L	0.1	365.2	05/26/04 16:00	MJC		
Metals								
Arsenic	0.049	mg/L	0.002	200.8	05/27/04 20:26	PER	7440-38-2	
Iron	5.29	mg/L	0.02	200.8	05/27/04 20:26	PER	7439-89-6	
Organics								
Chlorinated Herbicides								
Dicamba	Not detected	ug/L	2	8151	06/04/04 12:00	PCS		O
Dinoseb	Not detected	ug/L	0.6	8151	06/04/04 12:00	PCS		O
2,4-D	Not detected	ug/L	4	8151	06/04/04 12:00	PCS		O
2,4,5-TP (Silvex)	Not detected	ug/L	1	8151	06/04/04 12:00	PCS		O
2,4,5-T	Not detected	ug/L	1	8151	06/04/04 12:00	PCS		O

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Sample ID: S17201.19
Sample Tag: A5-VP-006, 10'-0
Collected Date/Time: 05/19/2004 12:45
Matrix: Groundwater
COC Reference: 018192

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1 L Amber	None	Yes	4	3
2	250ml Plastic	None	Yes	4	3
1	DO Bottle	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3
1	125ml Plastic	HNO3	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	05/24/04 17:00	MSH		
Inorganics								
pH	7.95	STD Units	0.01	150.1	05/21/04 22:26	LBR		
Alkalinity as CaCO3	256	mg/L	1	310.1	05/25/04 11:40	JKB		
Ammonia-N	Not detected	mg/L	0.1	350.3	05/24/04 16:00	MJC		
Chloride	177	mg/L	1	300.0	05/22/04 07:55	JDP		
Nitrate-N	26.6	mg/L	0.2	300.0	05/22/04 07:55	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	05/22/04 07:55	JDP		
Sulfate	88	mg/L	1	300.0	05/22/04 07:55	JDP		
Dissolved Oxygen	8.55	mg/L	1		05/21/04 22:27	LBR		
Phosphate	3.0	mg/L	0.1	365.2	05/26/04 16:00	MJC		
Metals								
Arsenic	0.013	mg/L	0.002	200.8	05/27/04 20:28	PER	7440-38-2	
Iron	12.5	mg/L	0.02	200.8	05/27/04 20:28	PER	7439-89-6	
Organics								
Chlorinated Herbicides								
Dicamba	Not detected	ug/L	2	8151	06/04/04 12:00	PCS		O
Dinoseb	Not detected	ug/L	0.6	8151	06/04/04 12:00	PCS		O
2,4-D	Not detected	ug/L	4	8151	06/04/04 12:00	PCS		O
2,4,5-TP (Silvex)	Not detected	ug/L	1	8151	06/04/04 12:00	PCS		O
2,4,5-T	Not detected	ug/L	1	8151	06/04/04 12:00	PCS		O

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Sample ID: S17201.20
le Tag: A5-VP-004, 10'-1
Collected Date/Time: 05/19/2004 13:20
Matrix: Groundwater
COC Reference: 018192

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1 L Amber	None	Yes	4	3
2	250ml Plastic	None	Yes	4	3
1	DO Bottle	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3
1	125ml Plastic	HNO3	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	05/24/04 17:00	MSH		
Inorganics								
pH	7.87	STD Units	0.01	150.1	05/21/04 22:26	LBR		
Alkalinity as CaCO3	284	mg/L	1	310.1	05/25/04 11:45	JKB		
Ammonia-N	Not detected	mg/L	0.1	350.3	05/24/04 16:00	MJC		
Chloride	149	mg/L	1	300.0	05/22/04 08:06	JDP		
Nitrate-N	57.8	mg/L	0.2	300.0	05/22/04 10:48	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	05/22/04 08:06	JDP		
Sulfate	136	mg/L	1	300.0	05/22/04 08:06	JDP		
lved Oxygen	9.58	mg/L	1		05/21/04 22:27	LBR		
phate	30	mg/L	1	365.2	05/26/04 16:00	MJC		
Metals								
Arsenic	0.018	mg/L	0.002	200.8	05/27/04 20:30	PER	7440-38-2	
Iron	5.96	mg/L	0.02	200.8	05/27/04 20:30	PER	7439-89-6	
Organics								
Chlorinated Herbicides								
Dicamba	Not detected	ug/L	2	8151	06/04/04 12:00	PCS		O
Dinoseb	Not detected	ug/L	0.6	8151	06/04/04 12:00	PCS		O
2,4-D	Not detected	ug/L	4	8151	06/04/04 12:00	PCS		O
2,4,5-TP (Silvex)	Not detected	ug/L	1	8151	06/04/04 12:00	PCS		O
2,4,5-T	Not detected	ug/L	1	8151	06/04/04 12:00	PCS		O

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Sample ID: S17201.21
le Tag: A5-VP-007, 20'-0
Collected Date/Time: 05/19/2004 15:30
Matrix: Groundwater
COC Reference: 018192

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1 L Amber	None	Yes	4	3
2	250ml Plastic	None	Yes	4	3
1	DO Bottle	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3
1	125ml Plastic	HNO3	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	05/24/04 17:00	MSH		
Inorganics								
pH	8.29	STD Units	0.01	150.1	05/21/04 22:26	LBR		
Alkalinity as CaCO3	226	mg/L	1	310.1	05/25/04 11:50	JKB		
Ammonia-N	Not detected	mg/L	0.1	350.3	05/24/04 16:00	MJC		
Chloride	67	mg/L	1	300.0	05/22/04 08:18	JDP		
Nitrate-N	3.9	mg/L	0.2	300.0	05/22/04 08:18	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	05/22/04 08:18	JDP		
Sulfate	63	mg/L	1	300.0	05/22/04 08:18	JDP		
lved Oxygen	8.78	mg/L	1		05/21/04 22:27	LBR		
phate	15.6	mg/L	0.1	365.2	05/26/04 16:00	MJC		
Metals								
Arsenic	0.020	mg/L	0.002	200.8	05/27/04 20:32	PER	7440-38-2	
Iron	6.42	mg/L	0.02	200.8	05/27/04 20:32	PER	7439-89-6	
Organics								
Chlorinated Herbicides								
Dicamba	Not detected	ug/L	2	8151	06/04/04 12:00	PCS		O
Dinoseb	Not detected	ug/L	0.6	8151	06/04/04 12:00	PCS		O
2,4-D	Not detected	ug/L	4	8151	06/04/04 12:00	PCS		O
2,4,5-TP (Silvex)	Not detected	ug/L	1	8151	06/04/04 12:00	PCS		O
2,4,5-T	Not detected	ug/L	1	8151	06/04/04 12:00	PCS		O

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Merit Laboratories, Inc.

ample ID: S17201.22
le Tag: A5-VP-006, 20'-0
Collected Date/Time: 05/19/2004 15:45
Matrix: Groundwater
COC Reference: 018192

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1 L Amber	None	Yes	4	3
2	250ml Plastic	None	Yes	4	3
1	DO Bottle	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3
1	125ml Plastic	HNO3	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	05/24/04 17:00	MSH		
Inorganics								
pH	8.23	STD Units	0.01	150.1	05/21/04 22:26	LBR		
Alkalinity as CaCO3	240	mg/L	1	310.1	05/25/04 11:55	JKB		
Ammonia-N	Not detected	mg/L	0.1	350.3	05/24/04 16:00	MJC		
Chloride	34	mg/L	1	300.0	05/22/04 08:30	JDP		
Nitrate-N	4.3	mg/L	0.2	300.0	05/22/04 08:30	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	05/22/04 08:30	JDP		
Sulfate	45	mg/L	1	300.0	05/22/04 08:30	JDP		
lved Oxygen	6.35	mg/L	1		05/21/04 22:27	LBR		
phate	26	mg/L	1	365.2	05/26/04 16:00	MJC		
Metals								
Arsenic	0.033	mg/L	0.002	200.8	05/27/04 20:35	PER	7440-38-2	
Iron	3.10	mg/L	0.02	200.8	05/27/04 20:35	PER	7439-89-6	
Organics								
Chlorinated Herbicides								
Dicamba	Not detected	ug/L	2	8151	06/04/04 12:00	PCS		O
Dinoseb	Not detected	ug/L	0.6	8151	06/04/04 12:00	PCS		O
2,4-D	Not detected	ug/L	4	8151	06/04/04 12:00	PCS		O
2,4,5-TP (Silvex)	Not detected	ug/L	1	8151	06/04/04 12:00	PCS		O
2,4,5-T	Not detected	ug/L	1	8151	06/04/04 12:00	PCS		O

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Merit Laboratories, Inc.

Sample ID: S17201.23
Sample Tag: A5-VP-005, 20'-0
Collected Date/Time: 05/19/2004 15:55
Matrix: Groundwater
COC Reference: 018192

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1 L Amber	None	Yes	4	3
2	250ml Plastic	None	Yes	4	3
1	DO Bottle	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3
1	125ml Plastic	HNO3	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	05/24/04 17:00	MSH		
Inorganics								
pH	8.12	STD Units	0.01	150.1	05/21/04 22:26	LBR		
Alkalinity as CaCO3	229	mg/L	1	310.1	05/25/04 12:00	JKB		
Ammonia-N	Not detected	mg/L	0.1	350.3	05/24/04 16:00	MJC		
Chloride	30	mg/L	1	300.0	05/22/04 08:41	JDP		
Nitrate-N	6.4	mg/L	0.2	300.0	05/22/04 08:41	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	05/22/04 08:41	JDP		
Sulfate	43	mg/L	1	300.0	05/22/04 08:41	JDP		
Dissolved Oxygen	8.25	mg/L	1		05/21/04 22:27	LBR		
Phosphate	48	mg/L	1	365.2	05/26/04 16:00	MJC		
Metals								
Arsenic	0.034	mg/L	0.002	200.8	05/27/04 20:37	PER	7440-38-2	
Iron	2.50	mg/L	0.02	200.8	05/27/04 20:37	PER	7439-89-6	
Organics								
Chlorinated Herbicides								
Dicamba	Not detected	ug/L	2	8151	06/04/04 12:00	PCS		O
Dinoseb	Not detected	ug/L	0.6	8151	06/04/04 12:00	PCS		O
2,4-D	Not detected	ug/L	4	8151	06/04/04 12:00	PCS		O
2,4,5-TP (Silvex)	Not detected	ug/L	1	8151	06/04/04 12:00	PCS		O
2,4,5-T	Not detected	ug/L	1	8151	06/04/04 12:00	PCS		O

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Merit Laboratories, Inc.

Sample ID: S17201.24
Sample Tag: A5-VP-004, 20'-0
Collected Date/Time: 05/19/2004 16:10
Matrix: Groundwater
COC Reference: 018192

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1 L Amber	None	Yes	4	3
2	250ml Plastic	None	Yes	4	3
1	DO Bottle	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3
1	125ml Plastic	HNO3	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	05/24/04 17:00	MSH		
Inorganics								
pH	8.02	STD Units	0.01	150.1	05/21/04 22:26	LBR		
Alkalinity as CaCO3	236	mg/L	1	310.1	05/25/04 12:05	JKB		
Ammonia-N	Not detected	mg/L	0.1	350.3	05/24/04 16:00	MJC		
Chloride	56	mg/L	1	300.0	05/22/04 08:53	JDP		
Nitrate-N	59.6	mg/L	0.2	300.0	05/22/04 11:11	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	05/22/04 08:53	JDP		
Sulfate	87	mg/L	1	300.0	05/22/04 08:53	JDP		
Dissolved Oxygen	8.74	mg/L	1		05/21/04 22:27	LBR		
Phosphate	47	mg/L	1	365.2	05/26/04 16:00	MJC		
Metals								
Arsenic	0.043	mg/L	0.002	200.8	05/27/04 20:49	PER	7440-38-2	
Iron	3.12	mg/L	0.02	200.8	05/27/04 20:49	PER	7439-89-6	
Organics								
Chlorinated Herbicides								
Dicamba	Not detected	ug/L	2	8151	06/04/04 12:00	PCS		O
Dinoseb	Not detected	ug/L	0.6	8151	06/04/04 12:00	PCS		O
2,4-D	Not detected	ug/L	4	8151	06/04/04 12:00	PCS		O
2,4,5-TP (Silvex)	Not detected	ug/L	1	8151	06/04/04 12:00	PCS		O
2,4,5-T	Not detected	ug/L	1	8151	06/04/04 12:00	PCS		O

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Merit Laboratories, Inc.

Sample ID: S17201.25
Sample Tag: A5-VP-004, 20'-1
Collected Date/Time: 05/19/2004 16:20
Matrix: Groundwater
COC Reference: 018192

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1 L Amber	None	Yes	4	3
2	250ml Plastic	None	Yes	4	3
1	DO Bottle	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3
1	125ml Plastic	HNO3	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	05/24/04 17:00	MSH		
Inorganics								
pH	8.24	STD Units	0.01	150.1	05/21/04 22:26	LBR		
Alkalinity as CaCO3	232	mg/L	1	310.1	05/25/04 12:10	JKB		
Ammonia-N	Not detected	mg/L	0.1	350.3	05/24/04 16:00	MJC		
Chloride	57	mg/L	1	300.0	05/22/04 09:38	JDP		
Nitrate-N	60.4	mg/L	0.2	300.0	05/22/04 11:27	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	05/22/04 09:38	JDP		
Sulfate	86	mg/L	1	300.0	05/22/04 09:38	JDP		
Dissolved Oxygen	7.86	mg/L	1		05/21/04 22:27	LBR		
Phosphate	54	mg/L	1	365.2	05/26/04 16:00	MJC		
Metals								
Arsenic	0.048	mg/L	0.002	200.8	05/27/04 21:05	PER	7440-38-2	
Iron	2.43	mg/L	0.02	200.8	05/27/04 21:05	PER	7439-89-6	
Organics								
Chlorinated Herbicides								
Dicamba	Not detected	ug/L	2	8151	06/04/04 12:00	PCS		O
Dinoseb	Not detected	ug/L	0.6	8151	06/04/04 12:00	PCS		O
2,4-D	Not detected	ug/L	4	8151	06/04/04 12:00	PCS		O
2,4,5-TP (Silvex)	Not detected	ug/L	1	8151	06/04/04 12:00	PCS		O
2,4,5-T	Not detected	ug/L	1	8151	06/04/04 12:00	PCS		O

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Merit Laboratories, Inc.

Sample ID: S17201.26
Site Tag: A5-VP-004, 20'-2
Collected Date/Time: 05/19/2004 17:00
Matrix: Groundwater
COC Reference: 018192

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1 L Amber	None	Yes	4	3
2	250ml Plastic	None	Yes	4	3
1	DO Bottle	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3
1	125ml Plastic	HNO3	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	05/24/04 17:00	MSH		
Inorganics								
pH	6.84	STD Units	0.01	150.1	05/21/04 22:26	LBR		
Alkalinity as CaCO3	Not detected	mg/L	1	310.1	05/25/04 12:15	JKB		
Ammonia-N	Not detected	mg/L	0.1	350.3	05/24/04 16:00	MJC		
Chloride	Not detected	mg/L	1	300.0	05/22/04 11:39	JDP		
Nitrate-N	Not detected	mg/L	0.2	300.0	05/22/04 09:50	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	05/22/04 09:50	JDP		
Sulfate	Not detected	mg/L	1	300.0	05/22/04 11:39	JDP		
Dissolved Oxygen	10.83	mg/L	1		05/21/04 22:27	LBR		
Phosphate	Not detected	mg/L	0.1	365.2	05/26/04 16:00	MJC		
Metals								
Arsenic	Not detected	mg/L	0.002	200.8	05/27/04 21:08	PER	7440-38-2	
Iron	Not detected	mg/L	0.02	200.8	05/27/04 21:08	PER	7439-89-6	
Organics								
Chlorinated Herbicides								
Dicamba	Not detected	ug/L	2	8151	06/04/04 12:00	PCS		O
Dinoseb	Not detected	ug/L	0.6	8151	06/04/04 12:00	PCS		O
2,4-D	Not detected	ug/L	4	8151	06/04/04 12:00	PCS		O
2,4,5-TP (Silvex)	Not detected	ug/L	1	8151	06/04/04 12:00	PCS		O
2,4,5-T	Not detected	ug/L	1	8151	06/04/04 12:00	PCS		O

O-Analysis performed by outside laboratory

Analytical Laboratory Report

JUL 0 7 2004

Report ID: S17232.01(01)
Generated on 06/16/2004

Report to

Attention: Ms. Marisa Patterson
SECOR
2321 Club Meridian Dr. #E
Okemos, MI 48864-4505
MSA# 94023

Phone: 517-349-9499 FAX: 517-349-6863

Report produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S17232.01-S17232.09
Project: 24CH.67201.01 Bee Jay Scales
Submitted Date/Time: 05/24/2004 11:00
Sampled by: Mike McMahon
P.O. #:

Report Notes

Results relate only to items tested.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
"Not detected" indicates that parameter was not found at a level equal to or greater than the RDL.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories.

Violetta F. Murshak

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Lab Sample ID: S17232.01
Sample Tag: A1-VP-005, 10'-0
Collected Date/Time: 05/21/2004 08:20
Matrix: Groundwater
COC Reference: 013062

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1 L Amber	None	Yes	4	3
2	250ml Plastic	None	Yes	4	3
1	DO Bottle	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3
1	125ml Plastic	HNO3	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	05/26/04 17:00	MSH		
Inorganics								
pH	7.57	STD Units	0.01	150.1	05/24/04 21:36	LBR		
Alkalinity as CaCO3	284	mg/L	1	310.1	05/25/04 12:35	JKB		
Ammonia-N	8.7	mg/L	0.1	350.3	05/24/04 16:00	MJC		
Chloride	324	mg/L	1	300.0	06/01/04 10:06	JDP		
Nitrate-N	206	mg/L	0.2	300.0	06/01/04 12:31	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	06/01/04 08:32	JDP		
Sulfate	224	mg/L	1	300.0	06/01/04 08:32	JDP		
Dissolved Oxygen	7.62	mg/L	1		05/24/04 16:14	LBR		
Phosphate	17.8	mg/L	0.1	365.2	05/26/04 16:00	MJC		
Metals								
Arsenic	0.024	mg/L	0.002	200.8	06/07/04 14:29	PER	7440-38-2	
Iron	5.55	mg/L	0.02	200.8	06/07/04 14:29	PER	7439-89-6	
Organics								
Chlorinated Herbicides								
Dicamba	Not detected	ug/L	2	8151	06/06/04 12:00	PCS		O
Dinoseb	Not detected	ug/L	0.6	8151	06/06/04 12:00	PCS		O
2,4-D	Not detected	ug/L	4	8151	06/06/04 12:00	PCS		O
2,4,5-TP (Silvex)	Not detected	ug/L	1	8151	06/06/04 12:00	PCS		O
2,4,5-T	Not detected	ug/L	1	8151	06/06/04 12:00	PCS		O

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Lab Sample ID: S17232.02
S[illegible] Tag: A1-VP-005, 20'-0
Co[illegible]ted Date/Time: 05/21/2004 09:55
Matrix: Groundwater
COC Reference: 013062

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1 L Amber	None	Yes	4	3
2	250ml Plastic	None	Yes	4	3
1	DO Bottle	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3
1	125ml Plastic	HNO3	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	05/26/04 17:00	MSH		
Inorganics								
pH	7.91	STD Units	0.01	150.1	05/24/04 21:36	LBR		
Alkalinity as CaCO3	228	mg/L	1	310.1	05/25/04 12:40	JKB		
Ammonia-N	1.5	mg/L	0.1	350.3	05/25/04 17:00	MJC		
Chloride	108	mg/L	1	300.0	06/01/04 08:44	JDP		
Nitrate-N	111	mg/L	0.2	300.0	06/01/04 10:18	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	06/01/04 08:44	JDP		
Sulfate	197	mg/L	1	300.0	06/01/04 08:44	JDP		
Dissolved Oxygen	6.92	mg/L	1		05/24/04 16:14	LBR		
[illegible]hate	6.3	mg/L	0.1	365.2	05/28/04 13:00	MJC		
Metals								
Arsenic	0.015	mg/L	0.002	200.8	06/07/04 14:31	PER	7440-38-2	
Iron	6.45	mg/L	0.02	200.8	06/07/04 14:31	PER	7439-89-6	
Organics								
Chlorinated Herbicides								
Dicamba	Not detected	ug/L	2	8151	06/06/04 12:00	PCS		O
Dinoseb	Not detected	ug/L	0.6	8151	06/06/04 12:00	PCS		O
2,4-D	Not detected	ug/L	4	8151	06/06/04 12:00	PCS		O
2,4,5-TP (Silvex)	Not detected	ug/L	1	8151	06/06/04 12:00	PCS		O
2,4,5-T	Not detected	ug/L	1	8151	06/06/04 12:00	PCS		O

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Lab Sample ID: S17232.03
Sample Tag: A1-VP-004, 10'-0
Collected Date/Time: 05/21/2004 09:45
Matrix: Groundwater
COC Reference: 013062

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1 L Amber	None	Yes	4	3
2	250ml Plastic	None	Yes	4	3
1	DO Bottle	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3
1	125ml Plastic	HNO3	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	05/26/04 17:00	MSH		
Inorganics								
pH	7.54	STD Units	0.01	150.1	05/24/04 21:36	LBR		
Alkalinity as CaCO3	938	mg/L	1	310.1	05/25/04 12:45	JKB		
Ammonia-N	260	mg/L	10	350.3	05/25/04 17:00	MJC		
Chloride	210	mg/L	1	300.0	06/01/04 10:30	JDP		
Nitrate-N	59.5	mg/L	0.2	300.0	06/01/04 10:30	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	06/01/04 08:55	JDP		
Sulfate	250	mg/L	1	300.0	06/01/04 08:55	JDP		
Dissolved Oxygen	8.15	mg/L	1		05/24/04 16:14	LBR		
Phosphate	22.2	mg/L	0.1	365.2	05/28/04 13:00	MJC		
Metals								
Arsenic	0.042	mg/L	0.002	200.8	06/07/04 14:34	PER	7440-38-2	
Iron	1.69	mg/L	0.02	200.8	06/07/04 14:34	PER	7439-89-6	
Organics								
Chlorinated Herbicides								
Dicamba	Not detected	ug/L	2	8151	06/06/04 12:00	PCS		O
Dinoseb	Not detected	ug/L	0.6	8151	06/06/04 12:00	PCS		O
2,4-D	Not detected	ug/L	4	8151	06/06/04 12:00	PCS		O
2,4,5-TP (Silvex)	Not detected	ug/L	1	8151	06/06/04 12:00	PCS		O
2,4,5-T	Not detected	ug/L	1	8151	06/06/04 12:00	PCS		O

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Lab Sample ID: S17232.04
S[illegible]e Tag: A1-VP-004, 20'-0
C[illegible]ted Date/Time: 05/21/2004 10:55
Matrix: Groundwater
COC Reference: 013062

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1 L Amber	None	Yes	4	3
2	250ml Plastic	None	Yes	4	3
1	DO Bottle	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3
1	125ml Plastic	HNO3	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	05/26/04 17:00	MSH		
Inorganics								
pH	7.83	STD Units	0.01	150.1	05/24/04 21:36	LBR		
Alkalinity as CaCO3	238	mg/L	1	310.1	05/25/04 12:45	JKB		
Ammonia-N	29	mg/L	1	350.3	05/25/04 17:00	MJC		
Chloride	100	mg/L	1	300.0	06/01/04 09:07	JDP		
Nitrate-N	147	mg/L	0.2	300.0	06/01/04 10:53	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	06/01/04 09:07	JDP		
Sulfate	156	mg/L	1	300.0	06/01/04 09:07	JDP		
Dissolved Oxygen	7.54	mg/L	1		05/24/04 16:14	LBR		
[illegible]hate	3.9	mg/L	0.1	365.2	05/28/04 13:00	MJC		
Metals								
Arsenic	0.011	mg/L	0.002	200.8	06/07/04 14:36	PER	7440-38-2	
Iron	5.67	mg/L	0.02	200.8	06/07/04 14:36	PER	7439-89-6	
Organics								
Chlorinated Herbicides								
Dicamba	Not detected	ug/L	2	8151	06/06/04 12:00	PCS		O
Dinoseb	Not detected	ug/L	0.6	8151	06/06/04 12:00	PCS		O
2,4-D	Not detected	ug/L	4	8151	06/06/04 12:00	PCS		O
2,4,5-TP (Silvex)	Not detected	ug/L	1	8151	06/06/04 12:00	PCS		O
2,4,5-T	Not detected	ug/L	1	8151	06/06/04 12:00	PCS		O

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Lab Sample ID: S17232.05
Sample Tag: A1-VP-003, 10'-0
Collected Date/Time: 05/21/2004 11:20
Matrix: Groundwater
COC Reference: 013062

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1 L Amber	None	Yes	4	3
2	250ml Plastic	None	Yes	4	3
1	DO Bottle	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3
1	125ml Plastic	HNO3	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	05/26/04 17:00	MSH		
Inorganics								
pH	7.62	STD Units	0.01	150.1	05/24/04 21:36	LBR		
Alkalinity as CaCO3	884	mg/L	1	310.1	05/25/04 12:50	JKB		
Ammonia-N	1,090	mg/L	10	350.3	05/25/04 17:00	MJC		
Chloride	190	mg/L	1	300.0	06/01/04 11:16	JDP		
Nitrate-N	983	mg/L	0.2	300.0	06/01/04 12:43	JDP		
Nitrite-N	34.6	mg/L	0.2	300.0	06/01/04 11:16	JDP		
Sulfate	110	mg/L	1	300.0	06/01/04 09:19	JDP		
Dissolved Oxygen	5.57	mg/L	1		05/24/04 16:14	LBR		
Bicarbonate	28.5	mg/L	0.1	365.2	05/28/04 13:00	MJC		
Metals								
Arsenic	0.047	mg/L	0.002	200.8	06/07/04 14:38	PER	7440-38-2	
Iron	3.84	mg/L	0.02	200.8	06/07/04 14:38	PER	7439-89-6	
Organics								
Chlorinated Herbicides								
Dicamba	Not detected	ug/L	10	8151	06/09/04 12:00	PCS		O
Dinoseb	28	ug/L	3	8151	06/09/04 12:00	PCS		O
2,4-D	Not detected	ug/L	20	8151	06/09/04 12:00	PCS		O
2,4,5-TP (Silvex)	Not detected	ug/L	5	8151	06/09/04 12:00	PCS		O
2,4,5-T	Not detected	ug/L	5	8151	06/09/04 12:00	PCS		O

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Lab Sample ID: S17232.06
Sample Tag: A1-VP-003, 10'-1
Collected Date/Time: 05/21/2004 11:20
Matrix: Groundwater
COC Reference: 013062

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1 L Amber	None	Yes	4	3
2	250ml Plastic	None	Yes	4	3
1	DO Bottle	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3
1	125ml Plastic	HNO3	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	05/26/04 17:00	MSH		
Inorganics								
pH	7.58	STD Units	0.01	150.1	05/24/04 21:36	LBR		
Alkalinity as CaCO3	908	mg/L	1	310.1	05/25/04 12:55	JKB		
Ammonia-N	1,060	mg/L	10	350.3	05/25/04 17:00	MJC		
Chloride	230	mg/L	1	300.0	06/01/04 11:40	JDP		
Nitrate-N	1,010	mg/L	0.2	300.0	06/01/04 12:54	JDP		
Nitrite-N	34.8	mg/L	0.2	300.0	06/01/04 11:40	JDP		
Sulfate	116	mg/L	1	300.0	06/01/04 09:30	JDP		
Dissolved Oxygen	6.99	mg/L	1		05/24/04 16:14	LBR		
Phosphate	26.6	mg/L	0.1	365.2	05/28/04 13:00	MJC		
Metals								
Arsenic	0.047	mg/L	0.002	200.8	06/07/04 14:41	PER	7440-38-2	
Iron	1.57	mg/L	0.02	200.8	06/07/04 14:41	PER	7439-89-6	
Organics								
Chlorinated Herbicides								
Dicamba	Not detected	ug/L	2	8151	06/09/04 12:00	PCS		O
Dinoseb	0.0096 PG	ug/L	0.6	8151	06/09/04 12:00	PCS		O
2,4-D	Not detected	ug/L	4	8151	06/09/04 12:00	PCS		O
2,4,5-TP (Silvex)	Not detected	ug/L	1	8151	06/09/04 12:00	PCS		O
2,4,5-T	Not detected	ug/L	1	8151	06/09/04 12:00	PCS		O

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Lab Sample ID: S17232.07
S[illegible]e Tag: A1-VP-003, 20'-0[illegible]
C[illegible]led Date/Time: 05/21/2004 12:20
Matrix: Groundwater
COC Reference: 013062

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1 L Amber	None	Yes	4	3
2	250ml Plastic	None	Yes	4	3
1	DO Bottle	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3
1	125ml Plastic	HNO3	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	05/26/04 17:00	MSH		
Inorganics								
pH	7.83	STD Units	0.01	150.1	05/24/04 21:36	LBR		
Alkalinity as CaCO3	282	mg/L	1	310.1	05/25/04 13:00	JKB		
Ammonia-N	150	mg/L	10	350.3	05/25/04 17:00	MJC		
Chloride	57	mg/L	1	300.0	06/01/04 09:42	JDP		
Nitrate-N	256	mg/L	0.2	300.0	06/01/04 12:03	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	06/01/04 09:42	JDP		
Sulfate	204	mg/L	1	300.0	06/01/04 09:42	JDP		
Dissolved Oxygen	8.2	mg/L	1		05/24/04 16:14	LBR		
[illegible]hate	21.7	mg/L	0.1	365.2	05/28/04 13:00	MJC		
Metals								
Arsenic	0.057	mg/L	0.002	200.8	06/07/04 14:43	PER	7440-38-2	
Iron	5.06	mg/L	0.02	200.8	06/07/04 14:43	PER	7439-89-6	
Organics								
Chlorinated Herbicides								
Dicamba	Not detected	ug/L	20	8151	06/09/04 12:00	PCS		O
Dinoseb	69	ug/L	6	8151	06/09/04 12:00	PCS		O
2,4-D	Not detected	ug/L	40	8151	06/09/04 12:00	PCS		O
2,4,5-TP (Silvex)	Not detected	ug/L	10	8151	06/09/04 12:00	PCS		O
2,4,5-T	Not detected	ug/L	10	8151	06/09/04 12:00	PCS		O

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Lab Sample ID: S17232.08
Sample Tag: A1-VP-003, 20'-1
Collected Date/Time: 05/21/2004 12:20
Matrix: Groundwater
COC Reference: 013062

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1 L Amber	None	Yes	4	3
2	250ml Plastic	None	Yes	4	3
1	DO Bottle	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3
1	125ml Plastic	HNO3	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	05/26/04 17:00	MSH		
Inorganics								
pH	7.88	STD Units	0.01	150.1	05/24/04 21:36	LBR		
Alkalinity as CaCO3	268	mg/L	1	310.1	05/25/04 14:10	JKB		
Ammonia-N	160	mg/L	10	350.3	05/25/04 17:00	MJC		
Chloride	56	mg/L	1	300.0	06/01/04 13:35	JDP		
Nitrate-N	258	mg/L	0.2	300.0	06/01/04 16:18	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	06/01/04 13:35	JDP		
Sulfate	203	mg/L	1	300.0	06/01/04 13:35	JDP		
Dissolved Oxygen	7.13	mg/L	1		05/24/04 16:14	LBR		
Phosphate	29.7	mg/L	0.1	365.2	05/28/04 13:00	MJC		
Metals								
Arsenic	0.059	mg/L	0.002	200.8	06/07/04 14:46	PER	7440-38-2	
Iron	4.32	mg/L	0.02	200.8	06/07/04 14:46	PER	7439-89-6	
Organics								
Chlorinated Herbicides								
Dicamba	Not detected	ug/L	10	8151	06/09/04 12:00	PCS		O
Dinoseb	69	ug/L	3	8151	06/09/04 12:00	PCS		O
2,4-D	Not detected	ug/L	20	8151	06/09/04 12:00	PCS		O
2,4,5-TP (Silvex)	Not detected	ug/L	5	8151	06/09/04 12:00	PCS		O
2,4,5-T	Not detected	ug/L	5	8151	06/09/04 12:00	PCS		O

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Lab Sample ID: S17232.09
Sample Tag: A1-VP-003, 20'-2
Collected Date/Time: 05/21/2004 13:00
Matrix: Groundwater
COC Reference: 013062

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1 L Amber	None	Yes	4	3
2	250ml Plastic	None	Yes	4	3
1	DO Bottle	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3
1	125ml Plastic	HNO3	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	05/26/04 17:00	MSH		
Inorganics								
pH	8.37	STD Units	0.01	150.1	05/24/04 21:36	LBR		
Alkalinity as CaCO3	Not detected	mg/L	1	310.1	05/25/04 14:20	JKB		
Ammonia-N	Not detected	mg/L	0.1	350.3	05/25/04 17:00	MJC		
Chloride	Not detected	mg/L	1	300.0	06/01/04 13:46	JDP		
Nitrate-N	Not detected	mg/L	0.2	300.0	06/01/04 16:30	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	06/01/04 13:46	JDP		
Sulfate	Not detected	mg/L	1	300.0	06/01/04 13:46	JDP		
Dissolved Oxygen	9.24	mg/L	1		05/24/04 16:14	LBR		
Phosphate	Not detected	mg/L	0.1	365.2	05/28/04 13:00	MJC		
Metals								
Arsenic	Not detected	mg/L	0.002	200.8	06/07/04 14:48	PER	7440-38-2	
Iron	0.04	mg/L	0.02	200.8	06/07/04 14:48	PER	7439-89-6	
Organics								
Chlorinated Herbicides								
Dicamba	Not detected	ug/L	2	8151	06/06/04 12:00	PCS		O
Dinoseb	Not detected	ug/L	0.6	8151	06/06/04 12:00	PCS		O
2,4-D	Not detected	ug/L	4	8151	06/06/04 12:00	PCS		O
2,4,5-TP (Silvex)	Not detected	ug/L	1	8151	06/06/04 12:00	PCS		O
2,4,5-T	Not detected	ug/L	1	8151	06/06/04 12:00	PCS		O

O-Analysis performed by outside laboratory

Analytical Laboratory Report

JUL 0 7 2004

Report ID: S17233.01(01)
Generated on 06/16/2004

Report to

Attention: Ms. Marisa Patterson
SECOR
2321 Club Meridian Dr. #E
Okemos, MI 48864-4505
MSA# 94023

Phone: 517-349-9499 FAX: 517-349-6863

Report produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S17233.01-S17233.12
Project: Bee Jay Scales 24CH.67201.01
Submitted Date/Time: 05/24/2004 11:00
Sampled by: Mike McMahon
P.O. #:

Report Notes

Results relate only to items tested.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
"Not detected" indicates that parameter was not found at a level equal to or greater than the RDL.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories.

Violetta F. Murshak

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Lab Sample ID: S17233.01
Sample Tag: A5-VP-008, 20'-0
Collected Date/Time: 05/20/2004 10:45
Matrix: Groundwater
COC Reference: 013063

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1 L Amber	None	Yes	4	3
2	250ml Plastic	None	Yes	4	3
1	DO Bottle	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3
1	125ml Plastic	HNO3	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	05/26/04 17:00	MSH		
Inorganics								
pH	8.04	STD Units	0.01	150.1	05/24/04 21:36	LBR		
Alkalinity as CaCO3	378	mg/L	1	310.1	05/25/04 14:30	JKB		
Ammonia-N	130	mg/L	10	350.3	05/25/04 17:00	MJC		
Chloride	41	mg/L	1	300.0	06/01/04 13:58	JDP		
Nitrate-N	54.6	mg/L	0.2	300.0	06/01/04 16:53	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	06/01/04 13:58	JDP		
Sulfate	90	mg/L	1	300.0	06/01/04 13:58	JDP		
Dissolved Oxygen	8.09	mg/L	1		05/24/04 16:14	LBR		
Phosphate	29.9	mg/L	0.1	365.2	05/28/04 13:00	MJC		
Metals								
Arsenic	0.028	mg/L	0.002	200.8	06/07/04 14:50	PER	7440-38-2	
Iron	4.27	mg/L	0.02	200.8	06/07/04 14:50	PER	7439-89-6	
Organics								
Chlorinated Herbicides								
Dicamba	Not detected	ug/L	2	8151	06/04/04 12:00	PCS		O
Dinoseb	Not detected	ug/L	0.6	8151	06/04/04 12:00	PCS		O
2,4-D	Not detected	ug/L	4	8151	06/04/04 12:00	PCS		O
2,4,5-TP (Silvex)	Not detected	ug/L	1	8151	06/04/04 12:00	PCS		O
2,4,5-T	Not detected	ug/L	1	8151	06/04/04 12:00	PCS		O

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Lab Sample ID: S17233.02
Sample Tag: A5-VP-003, 20'-0
Collected Date/Time: 05/20/2004 11:40
Matrix: Groundwater
COC Reference: 013063

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1 L Amber	None	Yes	4	3
2	250ml Plastic	None	Yes	4	3
1	DO Bottle	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3
1	125ml Plastic	HNO3	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	05/26/04 17:00	MSH		
Inorganics								
pH	7.79	STD Units	0.01	150.1	05/24/04 21:36	LBR		
Alkalinity as CaCO3	244	mg/L	1	310.1	05/25/04 14:35	JKB		
Ammonia-N	Not detected	mg/L	0.1	350.3	05/25/04 17:00	MJC		
Chloride	48	mg/L	1	300.0	06/01/04 14:10	JDP		
Nitrate-N	22.9	mg/L	0.2	300.0	06/01/04 14:10	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	06/01/04 14:10	JDP		
Sulfate	54	mg/L	1	300.0	06/01/04 14:10	JDP		
Dissolved Oxygen	7.03	mg/L	1		05/24/04 16:14	LBR		
Phosphate	9.5	mg/L	0.1	365.2	05/28/04 17:00	MJC		
Metals								
Arsenic	0.014	mg/L	0.002	200.8	06/07/04 15:44	PER	7440-38-2	
Iron	8.41	mg/L	0.02	200.8	06/07/04 15:44	PER	7439-89-6	
Organics								
Chlorinated Herbicides								
Dicamba	Not detected	ug/L	2	8151	06/04/04 12:00	PCS		O
Dinoseb	Not detected	ug/L	0.6	8151	06/04/04 12:00	PCS		O
2,4-D	Not detected	ug/L	4	8151	06/04/04 12:00	PCS		O
2,4,5-TP (Silvex)	Not detected	ug/L	1	8151	06/04/04 12:00	PCS		O
2,4,5-T	Not detected	ug/L	1	8151	06/04/04 12:00	PCS		O

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Lab Sample ID: S17233.03
S[illegible]e Tag: A1-VP-001, 10'-0
Co[illegible]ted Date/Time: 05/20/2004 11:45
Matrix: Groundwater
COC Reference: 013063

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1 L Amber	None	Yes	4	3
2	250ml Plastic	None	Yes	4	3
1	DO Bottle	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3
1	125ml Plastic	HNO3	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	05/26/04 17:00	MSH		
Inorganics								
pH	7.54	STD Units	0.01	150.1	05/24/04 21:36	LBR		
Alkalinity as CaCO3	206	mg/L	1	310.1	05/25/04 14:40	JKB		
Ammonia-N	0.6	mg/L	0.1	350.3	05/25/04 17:00	MJC		
Chloride	478	mg/L	1	300.0	06/01/04 17:28	JDP		
Nitrate-N	347	mg/L	0.2	300.0	06/01/04 17:17	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	06/01/04 14:21	JDP		
Sulfate	169	mg/L	1	300.0	06/01/04 14:21	JDP		
Dissolved Oxygen	8.41	mg/L	1		05/24/04 16:14	LBR		
[illegible]hate	42	mg/L	1	365.2	05/28/04 17:00	MJC		
Metals								
Arsenic	0.015	mg/L	0.002	200.8	06/07/04 15:46	PER	7440-38-2	
Iron	3.95	mg/L	0.02	200.8	06/07/04 15:46	PER	7439-89-6	
Organics								
Chlorinated Herbicides								
Dicamba	Not detected	ug/L	2	8151	06/04/04 12:00	PCS		O
Dinoseb	Not detected	ug/L	0.6	8151	06/04/04 12:00	PCS		O
2,4-D	Not detected	ug/L	4	8151	06/04/04 12:00	PCS		O
2,4,5-TP (Silvex)	Not detected	ug/L	1	8151	06/04/04 12:00	PCS		O
2,4,5-T	Not detected	ug/L	1	8151	06/04/04 12:00	PCS		O

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Lab Sample ID: S17233.04
Sample Tag: A5-VP-001, 20'-0
Collected Date/Time: 05/20/2004 13:45
Matrix: Groundwater
COC Reference: 013063

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1 L Amber	None	Yes	4	3
2	250ml Plastic	None	Yes	4	3
1	DO Bottle	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3
1	125ml Plastic	HNO3	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	05/26/04 17:00	MSH		
Inorganics								
pH	7.91	STD Units	0.01	150.1	05/24/04 21:36	LBR		
Alkalinity as CaCO3	252	mg/L	1	310.1	05/25/04 14:45	JKB		
Ammonia-N	Not detected	mg/L	0.1	350.3	05/25/04 17:00	MJC		
Chloride	86	mg/L	1	300.0	06/01/04 14:33	JDP		
Nitrate-N	5.2	mg/L	0.2	300.0	06/01/04 14:33	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	06/01/04 14:33	JDP		
Sulfate	42	mg/L	1	300.0	06/01/04 14:33	JDP		
Dissolved Oxygen	7.61	mg/L	1		05/24/04 16:14	LBR		
Phosphate	440	mg/L	10	365.2	05/28/04 17:00	MJC		
Metals								
Arsenic	0.017	mg/L	0.002	200.8	06/07/04 15:50	PER	7440-38-2	
Iron	1.12	mg/L	0.02	200.8	06/07/04 15:50	PER	7439-89-6	
Organics								
Chlorinated Herbicides								
Dicamba	Not detected	ug/L	2	8151	06/04/04 12:00	PCS		O
Dinoseb	Not detected	ug/L	0.6	8151	06/04/04 12:00	PCS		O
2,4-D	Not detected	ug/L	4	8151	06/04/04 12:00	PCS		O
2,4,5-TP (Silvex)	Not detected	ug/L	1	8151	06/04/04 12:00	PCS		O
2,4,5-T	Not detected	ug/L	1	8151	06/04/04 12:00	PCS		O

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Lab Sample ID: S17233.05
S[illegible]e Tag: A5-VP-002, 20'-0
Co[illegible]cted Date/Time: 05/20/2004 14:10
Matrix: Groundwater
COC Reference: 013063

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1 L Amber	None	Yes	4	3
2	250ml Plastic	None	Yes	4	3
1	DO Bottle	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3
1	125ml Plastic	HNO3	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	05/26/04 17:00	MSH		
Inorganics								
pH	7.71	STD Units	0.01	150.1	05/24/04 21:36	LBR		
Alkalinity as CaCO3	258	mg/L	1	310.1	05/25/04 14:50	JKB		
Ammonia-N	4.6	mg/L	0.1	350.3	05/25/04 17:00	MJC		
Chloride	19	mg/L	1	300.0	06/01/04 14:45	JDP		
Nitrate-N	39.2	mg/L	0.2	300.0	06/01/04 17:40	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	06/01/04 14:45	JDP		
Sulfate	52	mg/L	1	300.0	06/01/04 14:45	JDP		
Di[illegible]lved Oxygen	6.86	mg/L	1		05/24/04 16:14	LBR		
[illegible]hate	33	mg/L	1	365.2	05/28/04 17:00	MJC		
Metals								
Arsenic	0.018	mg/L	0.002	200.8	06/07/04 15:52	PER	7440-38-2	
Iron	6.53	mg/L	0.02	200.8	06/07/04 15:52	PER	7439-89-6	
Organics								
Chlorinated Herbicides								
Dicamba	Not detected	ug/L	2	8151	06/05/04 12:00	PCS		O
Dinoseb	Not detected	ug/L	0.6	8151	06/05/04 12:00	PCS		O
2,4-D	Not detected	ug/L	4	8151	06/05/04 12:00	PCS		O
2,4,5-TP (Silvex)	Not detected	ug/L	1	8151	06/05/04 12:00	PCS		O
2,4,5-T	Not detected	ug/L	1	8151	06/05/04 12:00	PCS		O

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Lab Sample ID: S17233.06
Sample Tag: A5-VP-009, 20'-0
Collected Date/Time: 05/20/2004 14:40
Matrix: Groundwater
COC Reference: 013063

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1 L Amber	None	Yes	4	3
2	250ml Plastic	None	Yes	4	3
1	DO Bottle	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3
1	125ml Plastic	HNO3	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	05/26/04 17:00	MSH		
Inorganics								
pH	7.95	STD Units	0.01	150.1	05/24/04 21:36	LBR		
Alkalinity as CaCO3	252	mg/L	1	310.1	05/25/04 14:55	JKB		
Ammonia-N	0.2	mg/L	0.1	350.3	05/25/04 17:00	MJC		
Chloride	49	mg/L	1	300.0	06/01/04 14:56	JDP		
Nitrate-N	6.8	mg/L	0.2	300.0	06/01/04 14:56	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	06/01/04 14:56	JDP		
Sulfate	50	mg/L	1	300.0	06/01/04 14:56	JDP		
Dissolved Oxygen	7.91	mg/L	1		05/24/04 16:14	LBR		
Phosphate	99	mg/L	1	365.2	05/28/04 17:00	MJC		
Metals								
Arsenic	0.022	mg/L	0.002	200.8	06/07/04 15:55	PER	7440-38-2	
Iron	1.15	mg/L	0.02	200.8	06/07/04 15:55	PER	7439-89-6	
Organics								
Chlorinated Herbicides								
Dicamba	Not detected	ug/L	2	8151	06/05/04 12:00	PCS		O
Dinoseb	Not detected	ug/L	0.6	8151	06/05/04 12:00	PCS		O
2,4-D	Not detected	ug/L	4	8151	06/05/04 12:00	PCS		O
2,4,5-TP (Silvex)	Not detected	ug/L	1	8151	06/05/04 12:00	PCS		O
2,4,5-T	Not detected	ug/L	1	8151	06/05/04 12:00	PCS		O

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Lab Sample ID: S17233.07
S[illegible]e Tag: A1-VP-001, 20'-0
C[illegible]ted Date/Time: 05/20/2004 15:10
Matrix: Groundwater
COC Reference: 013063

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1 L Amber	None	Yes	4	3
2	250ml Plastic	None	Yes	4	3
1	DO Bottle	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3
1	125ml Plastic	HNO3	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	05/26/04 17:00	MSH		
Inorganics								
pH	7.55	STD Units	0.01	150.1	05/24/04 21:36	LBR		
Alkalinity as CaCO3	164	mg/L	1	310.1	05/25/04 15:00	JKB		
Ammonia-N	0.6	mg/L	0.1	350.3	05/25/04 17:00	MJC		
Chloride	190	mg/L	1	300.0	06/01/04 15:08	JDP		
Nitrate-N	712	mg/L	0.2	300.0	06/01/04 17:52	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	06/01/04 15:08	JDP		
Sulfate	277	mg/L	1	300.0	06/01/04 15:08	JDP		
Dissolved Oxygen	7.68	mg/L	1		05/24/04 16:14	LBR		
[illegible]hate	22.3	mg/L	0.1	365.2	05/28/04 17:00	MJC		
Metals								
Arsenic	0.017	mg/L	0.002	200.8	06/07/04 15:57	PER	7440-38-2	
Iron	8.61	mg/L	0.02	200.8	06/07/04 15:57	PER	7439-89-6	
Organics								
Chlorinated Herbicides								
Dicamba	Not detected	ug/L	2	8151	06/05/04 12:00	PCS		O
Dinoseb	Not detected	ug/L	0.6	8151	06/05/04 12:00	PCS		O
2,4-D	Not detected	ug/L	4	8151	06/05/04 12:00	PCS		O
2,4,5-TP (Silvex)	Not detected	ug/L	1	8151	06/05/04 12:00	PCS		O
2,4,5-T	Not detected	ug/L	1	8151	06/05/04 12:00	PCS		O

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Lab Sample ID: S17233.08
S[illegible]e Tag: A1-VP-007, 10'-0
Co[illegible]ted Date/Time: 05/20/2004 15:55
Matrix: Groundwater
COC Reference: 013063

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1 L Amber	None	Yes	4	3
2	250ml Plastic	None	Yes	4	3
1	DO Bottle	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3
1	125ml Plastic	HNO3	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	05/26/04 17:00	MSH		
Inorganics								
pH	7.59	STD Units	0.01	150.1	05/24/04 21:36	LBR		
Alkalinity as CaCO3	257	mg/L	1	310.1	05/25/04 15:05	JKB		
Ammonia-N	0.3	mg/L	0.1	350.3	05/25/04 17:00	MJC		
Chloride	366	mg/L	1	300.0	06/01/04 18:03	JDP		
Nitrate-N	176	mg/L	0.2	300.0	06/01/04 18:03	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	06/01/04 15:20	JDP		
Sulfate	211	mg/L	1	300.0	06/01/04 15:20	JDP		
Di[illegible]lved Oxygen	8.56	mg/L	1		05/24/04 16:14	LBR		
[illegible]hate	21.3	mg/L	0.1	365.2	05/28/04 17:00	MJC		
Metals								
Arsenic	0.018	mg/L	0.002	200.8	06/07/04 15:59	PER	7440-38-2	
Iron	6.14	mg/L	0.02	200.8	06/07/04 15:59	PER	7439-89-6	
Organics								
Chlorinated Herbicides								
Dicamba	Not detected	ug/L	2	8151	06/05/04 12:00	PCS		O
Dinoseb	Not detected	ug/L	0.6	8151	06/05/04 12:00	PCS		O
2,4-D	Not detected	ug/L	4	8151	06/05/04 12:00	PCS		O
2,4,5-TP (Silvex)	Not detected	ug/L	1	8151	06/05/04 12:00	PCS		O
2,4,5-T	Not detected	ug/L	1	8151	06/05/04 12:00	PCS		O

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Lab Sample ID: S17233.09
S[illegible]e Tag: A1-VP-007, 10'-1
C[illegible]ted Date/Time: 05/20/2004 16:00
Matrix: Groundwater
COC Reference: 013063

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1 L Amber	None	Yes	4	3
2	250ml Plastic	None	Yes	4	3
1	DO Bottle	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3
1	125ml Plastic	HNO3	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	05/26/04 17:00	MSH		
Inorganics								
pH	7.71	STD Units	0.01	150.1	05/24/04 21:36	LBR		
Alkalinity as CaCO3	254	mg/L	1	310.1	05/25/04 15:10	JKB		
Ammonia-N	0.2	mg/L	0.1	350.3	05/25/04 17:00	MJC		
Chloride	369	mg/L	1	300.0	06/01/04 18:27	JDP		
Nitrate-N	176	mg/L	0.2	300.0	06/01/04 18:27	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	06/01/04 15:31	JDP		
Sulfate	213	mg/L	1	300.0	06/01/04 15:31	JDP		
Dissolved Oxygen	8.45	mg/L	1		05/24/04 16:14	LBR		
I[illegible]hate	17.7	mg/L	0.1	365.2	05/28/04 17:00	MJC		
Metals								
Arsenic	0.016	mg/L	0.002	200.8	06/07/04 16:02	PER	7440-38-2	
Iron	7.08	mg/L	0.02	200.8	06/07/04 16:02	PER	7439-89-6	
Organics								
Chlorinated Herbicides								
Dicamba	Not detected	ug/L	2	8151	06/05/04 12:00	PCS		O
Dinoseb	Not detected	ug/L	0.6	8151	06/05/04 12:00	PCS		O
2,4-D	Not detected	ug/L	4	8151	06/05/04 12:00	PCS		O
2,4,5-TP (Silvex)	Not detected	ug/L	1	8151	06/05/04 12:00	PCS		O
2,4,5-T	Not detected	ug/L	1	8151	06/05/04 12:00	PCS		O

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Lab Sample ID: S17233.10
Sample Tag: A1-VP-007, 20'-0
Collected Date/Time: 05/20/2004 17:00
Matrix: Groundwater
COC Reference: 013063

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1 L Amber	None	Yes	4	3
2	250ml Plastic	None	Yes	4	3
1	DO Bottle	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3
1	125ml Plastic	HNO3	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	05/26/04 17:00	MSH		
Inorganics								
pH	7.99	STD Units	0.01	150.1	05/24/04 21:36	LBR		
Alkalinity as CaCO3	248	mg/L	1	310.1	05/25/04 15:20	JKB		
Ammonia-N	Not detected	mg/L	0.1	350.3	05/25/04 17:00	MJC		
Chloride	52	mg/L	1	300.0	06/01/04 15:43	JDP		
Nitrate-N	113	mg/L	0.2	300.0	06/01/04 18:38	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	06/01/04 15:43	JDP		
Sulfate	122	mg/L	1	300.0	06/01/04 15:43	JDP		
Dissolved Oxygen	6.46	mg/L	1		05/24/04 16:14	LBR		
Phosphate	71	mg/L	1	365.2	05/28/04 17:00	MJC		
Metals								
Arsenic	0.017	mg/L	0.002	200.8	06/07/04 16:04	PER	7440-38-2	
Iron	7.47	mg/L	0.02	200.8	06/07/04 16:04	PER	7439-89-6	
Organics								
Chlorinated Herbicides								
Dicamba	Not detected	ug/L	2	8151	06/05/04 12:00	PCS		O
Dinoseb	Not detected	ug/L	0.6	8151	06/05/04 12:00	PCS		O
2,4-D	Not detected	ug/L	4	8151	06/05/04 12:00	PCS		O
2,4,5-TP (Silvex)	Not detected	ug/L	1	8151	06/05/04 12:00	PCS		O
2,4,5-T	Not detected	ug/L	1	8151	06/05/04 12:00	PCS		O

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Lab Sample ID: S17233.11
Sample Tag: A1-VP-007, 20'-1
Collected Date/Time: 05/20/2004 17:05
Matrix: Groundwater
COC Reference: 013063

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1 L Amber	None	Yes	4	3
2	250ml Plastic	None	Yes	4	3
1	DO Bottle	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3
1	125ml Plastic	HNO3	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	05/26/04 17:00	MSH		
Inorganics								
pH	7.95	STD Units	0.01	150.1	05/24/04 21:36	LBR		
Alkalinity as CaCO3	238	mg/L	1	310.1	05/25/04 15:30	JKB		
Ammonia-N	Not detected	mg/L	0.1	350.3	05/25/04 17:00	MJC		
Chloride	51	mg/L	1	300.0	06/01/04 18:50	JDP		
Nitrate-N	114	mg/L	0.2	300.0	06/01/04 19:34	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	06/01/04 18:50	JDP		
Sulfate	122	mg/L	1	300.0	06/01/04 18:50	JDP		
Dissolved Oxygen	7.26	mg/L	1		05/24/04 16:14	LBR		
Phosphate	63	mg/L	1	365.2	05/28/04 17:00	MJC		
Metals								
Arsenic	0.020	mg/L	0.002	200.8	06/07/04 16:07	PER	7440-38-2	
Iron	2.69	mg/L	0.02	200.8	06/07/04 16:07	PER	7439-89-6	
Organics								
Chlorinated Herbicides								
Dicamba	Not detected	ug/L	2	8151	06/05/04 12:00	PCS		O
Dinoseb	Not detected	ug/L	0.6	8151	06/05/04 12:00	PCS		O
2,4-D	Not detected	ug/L	4	8151	06/05/04 12:00	PCS		O
2,4,5-TP (Silvex)	Not detected	ug/L	1	8151	06/05/04 12:00	PCS		O
2,4,5-T	Not detected	ug/L	1	8151	06/05/04 12:00	PCS		O

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Lab Sample ID: S17233.12
S[illegible]e Tag: A1-VP-007, 20'-2
C[illegible]ted Date/Time: 05/20/2004 17:15
Matrix: Groundwater
COC Reference: 013063

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1 L Amber	None	Yes	4	3
2	250ml Plastic	None	Yes	4	3
1	DO Bottle	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3
1	125ml Plastic	HNO3	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	05/26/04 17:00	MSH		
Inorganics								
pH	7.76	STD Units	0.01	150.1	05/24/04 21:36	LBR		
Alkalinity as CaCO3	Not detected	mg/L	1	310.1	05/25/04 15:35	JKB		
Ammonia-N	Not detected	mg/L	0.1	350.3	05/25/04 17:00	MJC		
Chloride	Not detected	mg/L	1	300.0	06/01/04 19:02	JDP		
Nitrate-N	Not detected	mg/L	0.2	300.0	06/01/04 19:02	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	06/01/04 19:02	JDP		
Sulfate	Not detected	mg/L	1	300.0	06/01/04 19:02	JDP		
Dissolved Oxygen	7.12	mg/L	1		05/24/04 16:14	LBR		
[illegible]hate	Not detected	mg/L	0.1	365.2	05/28/04 17:00	MJC		
Metals								
Arsenic	Not detected	mg/L	0.002	200.8	06/07/04 17:10	PER	7440-38-2	
Iron	Not detected	mg/L	0.02	200.8	06/07/04 17:10	PER	7439-89-6	
Organics								
Chlorinated Herbicides								
Dicamba	Not detected	ug/L	2	8151	06/05/04 12:00	PCS		O
Dinoseb	Not detected	ug/L	0.6	8151	06/05/04 12:00	PCS		O
2,4-D	Not detected	ug/L	4	8151	06/05/04 12:00	PCS		O
2,4,5-TP (Silvex)	Not detected	ug/L	1	8151	06/05/04 12:00	PCS		O
2,4,5-T	Not detected	ug/L	1	8151	06/05/04 12:00	PCS		O

O-Analysis performed by outside laboratory

Analytical Laboratory Report

AUG 0 2 2004

F t ID: S17270.01(03)
ated on 07/20/2004

Report to
Attention: Ms. Marisa Patterson
SECOR
2321 Club Meridian Dr. #E
Okemos, MI 48864-4505
MSA# 94023

Phone: 517-349-9499 FAX: 517-349-6863

Report produced by
Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary
Lab Sample ID(s): S17270.01-S17270.12
Project: Bee Jay Scales 24CH.67201.01
Submitted Date/Time: 05/26/2004 11:20
Sampled by: Michael McMahon
P.O. #:

Report Notes
Results relate only to items tested.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
"Not detected" indicates that parameter was not found at a level equal to or greater than the RDL.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories.

Violetta F. Murshak

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample ID: S17270.01
Sample Tag: A3-SB-004, 0.5'-0
Collected Date/Time: 05/25/2004 08:45
Matrix: Soil
COC Reference: 013066

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	4oz. Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics								
NWTPH-Gx	Not detected	ug/kg	20,000	NWTPH - Gx	06/05/04 03:05	JGH		

Analytical Laboratory Report

Sample ID: S17270.02
Sample Tag: A3-SB-004, 0.5'-1
Collected Date/Time: 05/25/2004 08:45
Matrix: Soil
COC Reference: 013066

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	4oz. Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics								
NWTPH-Gx	Not detected	ug/kg	20,000	NWTPH - Gx	06/05/04 03:38	JGH		

Analytical Laboratory Report

ample ID: S17270.03
ple Tag: A3-SB-004, 4.5'-0
Collected Date/Time: 05/25/2004 08:50
Matrix: Soil
COC Reference: 013066

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	4oz. Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics								
NWTPH-Gx	Not detected	ug/kg	20,000	NWTPH - Gx	06/05/04 04:11	JGH		

Analytical Laboratory Report

ample ID: S17270.04
le Tag: A3-SB-004, 4.5'-1
Collected Date/Time: 05/25/2004 08:50
Matrix: Soil
COC Reference: 013066

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	4oz. Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics								
NWTPH-Gx	30,000	ug/kg	20,000	NWTPH - Gx	06/05/04 04:44	JGH		

Analytical Laboratory Report

Sample ID: S17270.05
Sample Tag: A3-SB-004, 7.5'-0
Collected Date/Time: 05/25/2004 08:55
Matrix: Soil
COC Reference: 013066

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	4oz. Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics								
NWTPH-Gx	280,000	ug/kg	20,000	NWTPH - Gx	06/05/04 05:16	JGH		

Analytical Laboratory Report

Sample ID: S17270.06
Sample Tag: A3-SB-004, 7.5'-1
Collected Date/Time: 05/25/2004 08:55
Matrix: Soil
COC Reference: 013066

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	4oz. Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics								
NWTPH-Gx	400,000	ug/kg	20,000	NWTPH - Gx	06/05/04 05:49	JGH		

Analytical Laboratory Report

Sample ID: S17270.07
Sample Tag: A5-SB-008, 4.5'-0
Collected Date/Time: 05/25/2004 10:45
Matrix: Soil
COC Reference: 013066

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	1 L Amber	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags

Analytical Laboratory Report

ample ID: S17270.08
ple Tag: A5-SB-008, 9'-0
Collected Date/Time: 05/25/2004 10:50
Matrix: Soil
COC Reference: 013066

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	1 L Amber	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags

Analytical Laboratory Report

Sample ID: S17270.09
Sample Tag: A5-SB-009, 4.5'-0
Collected Date/Time: 05/25/2004 10:10
Matrix: Soil
COC Reference: 013066

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	32 oz Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags

Analytical Laboratory Report

Sample ID: S17270.10
Sample Tag: A5-SB-009, 9'-0
Collected Date/Time: 05/25/2004 10:15
Matrix: Soil
COC Reference: 013066

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	1 L Amber	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags

Analytical Laboratory Report

Sample ID: S17270.11
Sample Tag: A5-SB-010, 4.5'-0
Collected Date/Time: 05/25/2004 09:45
Matrix: Soil
COC Reference: 013066

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	32 oz Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	07/15/04 15:00	MSH		
SPLP Extraction								
% Solids	100			1312	07/13/04 17:00	LBR		
Sample Used g	100			1312	07/13/04 17:00	LBR		
Final Volume mL	2,000			1312	07/13/04 17:00	LBR		
Final Extract pH	8.97			1312	07/13/04 17:00	LBR		
Inorganics								
Ammonia-N, SPLP	Not detected	mg/L	0.1	350.3	07/19/04 17:00	MJC		
Nitrate-N, TCLP	10.3	mg/L	0.2	300.0	07/19/04 14:27	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	07/19/04 14:27	JDP		
Sulfate, SPLP	11	mg/L	1	300.0	07/19/04 14:27	JDP		
Phosphate, SPLP	0.2	mg/L	0.1	365.2	07/19/04 19:00	MJC		
Metals								
Iron, SPLP	0.11	mg/L	0.02	200.8	07/15/04 18:31	PER	7439-89-6	

Analytical Laboratory Report

Sample ID: S17270.12
Sample Tag: A5-SB-010, 9'-0
Collected Date/Time: 05/25/2004 09:50
Matrix: Soil
COC Reference: 013066

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	32 oz Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	07/15/04 15:00	MSH		
SPLP Extraction								
% Solids	100			1312	07/13/04 12:00	LBR		
Sample Used g	100			1312	07/13/04 12:00	LBR		
Final Volume mL	2,000			1312	07/13/04 12:00	LBR		
Final Extract pH	9.08			1312	07/13/04 12:00	LBR		
Inorganics								
Ammonia-N, SPLP	Not detected	mg/L	0.1	350.3	07/19/04 17:00	MJC		
Nitrate-N, TCLP	1.0	mg/L	0.2	300.0	07/19/04 14:39	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	07/19/04 14:39	JDP		
Sulfate, SPLP	8	mg/L	1	300.0	07/19/04 14:39	JDP		
Phosphate, SPLP	0.3	mg/L	0.1	365.2	07/19/04 19:00	MJC		
Metals								
Iron, SPLP	0.85	mg/L	0.02	200.8	07/15/04 18:32	PER	7439-89-6	

Analytical Laboratory Report

JUL 0 7 2004

Report ID: S17271.01(01)
Generated on 06/17/2004

Report to

Attention: Ms. Marisa Patterson
SECOR
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Okemos, MI 48864-4505
MSA# 94023

Phone: 517-349-9499 FAX: 517-349-6863

Report produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S17271.01-S17271.07
Project: Bee Jay Scales 24CH.67201.01
Submitted Date/Time: 05/26/2004 11:20
Sampled by: Mike McMahon
P.O. #:

Report Notes

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Violetta F. Murshak

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Lab Sample ID: S17271.01
Sample Tag: A6-VP-001, 10'-0
Collected Date/Time: 05/24/2004 08:45
Matrix: Groundwater
COC Reference: 013065

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1 L Amber	None	Yes	4	3
2	250ml Plastic	None	Yes	4	3
1	DO Bottle	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3
1	125ml Plastic	HNO3	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	05/26/04 17:00	MSH		
Inorganics								
pH	7.56	STD Units	0.01	150.1	05/26/04 20:35	LBR		
Alkalinity as CaCO3	192	mg/L	1	310.1	06/01/04 14:50	JKB		
Ammonia-N	0.4	mg/L	0.1	350.3	06/01/04 18:00	MJC		
Chloride	175	mg/L	1	300.0	06/03/04 09:34	JDP		
Nitrate-N	661	mg/L	0.2	300.0	06/03/04 09:46	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	06/03/04 08:31	JDP		
Sulfate	226	mg/L	1	300.0	06/03/04 08:31	JDP		
Dissolved Oxygen	8.98	mg/L	1		05/26/04 20:30	LBR		
Bicarbonate	54	mg/L	1	365.2	05/31/04 15:00	MJC		
Metals								
Arsenic	0.027	mg/L	0.002	200.8	06/07/04 16:39	PER	7440-38-2	
Iron	6.49	mg/L	0.02	200.8	06/07/04 16:39	PER	7439-89-6	
Organics								
Chlorinated Herbicides								
Dicamba	Not detected	ug/L	2	8151	06/09/04 12:00	PCS		O
Dinoseb	5	ug/L	0.6	8151	06/09/04 12:00	PCS		O
2,4-D	Not detected	ug/L	4	8151	06/09/04 12:00	PCS		O
2,4,5-TP (Silvex)	Not detected	ug/L	1	8151	06/09/04 12:00	PCS		O
2,4,5-T	Not detected	ug/L	1	8151	06/09/04 12:00	PCS		O

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Lab Sample ID: S17271.02
Sample Tag: A6-VP-001, 20'-0
Collected Date/Time: 05/24/2004 09:45
Matrix: Groundwater
COC Reference: 013065

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1 L Amber	None	Yes	4	3
2	250ml Plastic	None	Yes	4	3
1	DO Bottle	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3
1	125ml Plastic	HNO3	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	05/26/04 17:00	MSH		
Inorganics								
pH	8.01	STD Units	0.01	150.1	05/26/04 20:35	LBR		
Alkalinity as CaCO3	206	mg/L	1	310.1	06/01/04 15:00	JKB		
Ammonia-N	Not detected	mg/L	0.1	350.3	06/01/04 18:00	MJC		
Chloride	60	mg/L	1	300.0	06/03/04 08:42	JDP		
Nitrate-N	46.1	mg/L	0.2	300.0	06/03/04 09:58	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	06/03/04 08:42	JDP		
Sulfate	58	mg/L	1	300.0	06/03/04 08:42	JDP		
Dissolved Oxygen	8.09	mg/L	1		05/26/04 20:30	LBR		
Phosphate	16.5	mg/L	0.1	365.2	05/31/04 15:00	MJC		
Metals								
Arsenic	0.018	mg/L	0.002	200.8	06/07/04 16:41	PER	7440-38-2	
Iron	5.01	mg/L	0.02	200.8	06/07/04 16:41	PER	7439-89-6	
Organics								
Chlorinated Herbicides								
Dicamba	Not detected	ug/L	2	8151	06/09/04 12:00	PCS		O
Dinoseb	Not detected	ug/L	0.6	8151	06/09/04 12:00	PCS		O
2,4-D	Not detected	ug/L	4	8151	06/09/04 12:00	PCS		O
2,4,5-TP (Silvex)	Not detected	ug/L	1	8151	06/09/04 12:00	PCS		O
2,4,5-T	Not detected	ug/L	1	8151	06/09/04 12:00	PCS		O

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Lab Sample ID: S17271.03
Sample Tag: A6-VP-003, 10'-0
Collected Date/Time: 05/24/2004 10:12
Matrix: Groundwater
COC Reference: 013065

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1 L Amber	None	Yes	4	3
2	250ml Plastic	None	Yes	4	3
1	DO Bottle	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3
1	125ml Plastic	HNO3	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	05/26/04 17:00	MSH		
Inorganics								
pH	7.73	STD Units	0.01	150.1	05/26/04 20:35	LBR		
Alkalinity as CaCO3	366	mg/L	1	310.1	06/01/04 15:10	JKB		
Ammonia-N	60	mg/L	1	350.3	06/01/04 18:00	MJC		
Chloride	340	mg/L	1	300.0	06/03/04 10:09	JDP		
Nitrate-N	64.5	mg/L	0.2	300.0	06/03/04 10:09	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	06/03/04 08:54	JDP		
Sulfate	129	mg/L	1	300.0	06/03/04 08:54	JDP		
Dissolved Oxygen	9.88	mg/L	1		05/26/04 20:30	LBR		
Phosphate	17.2	mg/L	0.1	365.2	05/31/04 15:00	MJC		
Metals								
Arsenic	0.018	mg/L	0.002	200.8	06/07/04 16:43	PER	7440-38-2	
Iron	6.96	mg/L	0.02	200.8	06/07/04 16:43	PER	7439-89-6	
Organics								
Chlorinated Herbicides								
Dicamba	Not detected	ug/L	10	8151	06/11/04 12:00	PCS		O
Dinoseb	31	ug/L	3	8151	06/11/04 12:00	PCS		O
2,4-D	Not detected	ug/L	20	8151	06/11/04 12:00	PCS		O
2,4,5-TP (Silvex)	Not detected	ug/L	5	8151	06/11/04 12:00	PCS		O
2,4,5-T	Not detected	ug/L	5	8151	06/11/04 12:00	PCS		O

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Lab Sample ID: S17271.04
S[illegible]e Tag: A6-VP-003, 20'-0
Co[illegible]cted Date/Time: 05/24/2004 11:30
Matrix: Groundwater
COC Reference: 013065

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1 L Amber	None	Yes	4	3
2	250ml Plastic	None	Yes	4	3
1	DO Bottle	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3
1	125ml Plastic	HNO3	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	05/26/04 17:00	MSH		
Inorganics								
pH	8.53	STD Units	0.01	150.1	05/26/04 20:35	LBR		
Alkalinity as CaCO3	2,080	mg/L	1	310.1	06/01/04 15:15	JKB		
Ammonia-N	1,750	mg/L	10	350.3	06/01/04 18:00	MJC		
Chloride	410	mg/L	1	300.0	06/03/04 09:06	JDP		
Nitrate-N	866	mg/L	0.2	300.0	06/03/04 10:21	JDP		
Nitrite-N	38.7	mg/L	0.2	300.0	06/03/04 09:06	JDP		
Sulfate	846	mg/L	1	300.0	06/03/04 09:06	JDP		
D[illegible]lved Oxygen	7.99	mg/L	1		05/26/04 20:30	LBR		
[illegible]hate	51	mg/L	1	365.2	05/31/04 15:00	MJC		
Metals								
Arsenic	0.087	mg/L	0.002	200.8	06/07/04 16:46	PER	7440-38-2	
Iron	4.78	mg/L	0.02	200.8	06/07/04 16:46	PER	7439-89-6	
Organics								
Chlorinated Herbicides								
Dicamba	Not detected	ug/L	400	8151	06/11/04 12:00	PCS		O
Dinoseb	1,400	ug/L	120	8151	06/11/04 12:00	PCS		O
2,4-D	Not detected	ug/L	800	8151	06/11/04 12:00	PCS		O
2,4,5-TP (Silvex)	Not detected	ug/L	200	8151	06/11/04 12:00	PCS		O
2,4,5-T	Not detected	ug/L	200	8151	06/11/04 12:00	PCS		O

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Lab Sample ID: S17271.05
S[illegible]e Tag: A6-VP-004, 20'-0
Co[illegible]cted Date/Time: 05/24/2004 13:10
Matrix: Groundwater
COC Reference: 013065

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1 L Amber	None	Yes	4	3
2	250ml Plastic	None	Yes	4	3
1	DO Bottle	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3
1	125ml Plastic	HNO3	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	05/26/04 17:00	MSH		
Inorganics								
pH	6.56	STD Units	0.01	150.1	05/26/04 20:35	LBR		
Alkalinity as CaCO3	1,500	mg/L	1	310.1	06/01/04 15:20	JKB		
Ammonia-N	300	mg/L	10	350.3	06/01/04 18:00	MJC		
Chloride	1,120	mg/L	1	300.0	06/03/04 11:52	JDP		
Nitrate-N	2,040	mg/L	0.2	300.0	06/03/04 13:17	JDP		
Nitrite-N	45.4	mg/L	0.2	300.0	06/03/04 10:48	JDP		
Sulfate	3,010	mg/L	1	300.0	06/03/04 12:04	JDP		
Dissolved Oxygen	6.11	mg/L	1		05/26/04 20:30	LBR		
[illegible]hate	49	mg/L	1	365.2	05/31/04 15:00	MJC		
Metals								
Arsenic	0.034	mg/L	0.002	200.8	06/07/04 16:49	PER	7440-38-2	
Iron	11.2	mg/L	0.02	200.8	06/07/04 16:49	PER	7439-89-6	
Organics								
Chlorinated Herbicides								
Dicamba	Not detected	ug/L	400	8151	06/11/04 12:00	PCS		O
Dinoseb	3,700	ug/L	120	8151	06/11/04 12:00	PCS		O
2,4-D	Not detected	ug/L	800	8151	06/11/04 12:00	PCS		O
2,4,5-TP (Silvex)	Not detected	ug/L	200	8151	06/11/04 12:00	PCS		O
2,4,5-T	Not detected	ug/L	200	8151	06/11/04 12:00	PCS		O

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Lab Sample ID: S17271.06
Sample Tag: A6-VP-002, 20'-0
Collected Date/Time: 05/24/2004 14:45
Matrix: Groundwater
COC Reference: 013065

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1 L Amber	None	Yes	4	3
2	250ml Plastic	None	Yes	4	3
1	DO Bottle	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3
1	125ml Plastic	HNO3	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	05/26/04 17:00	MSH		
Inorganics								
pH	7.6	STD Units	0.01	150.1	05/26/04 20:35	LBR		
Alkalinity as CaCO3	580	mg/L	1	310.1	06/01/04 15:25	JKB		
Ammonia-N	440	mg/L	10	350.3	06/01/04 18:00	MJC		
Chloride	196	mg/L	1	300.0	06/03/04 10:59	JDP		
Nitrate-N	511	mg/L	0.2	300.0	06/03/04 12:16	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	06/03/04 10:59	JDP		
Sulfate	869	mg/L	1	300.0	06/03/04 10:59	JDP		
Dissolved Oxygen	7.84	mg/L	1		05/26/04 20:30	LBR		
Phosphate	53	mg/L	1	365.2	05/31/04 15:00	MJC		
Metals								
Arsenic	0.025	mg/L	0.002	200.8	06/07/04 16:52	PER	7440-38-2	
Iron	3.03	mg/L	0.02	200.8	06/07/04 16:52	PER	7439-89-6	
Organics								
Chlorinated Herbicides								
Dicamba	Not detected	ug/L	200	8151	06/11/04 12:00	PCS		O
Dinoseb	1,400	ug/L	60	8151	06/11/04 12:00	PCS		O
2,4-D	1,300	ug/L	400	8151	06/11/04 12:00	PCS		O
2,4,5-TP (Silvex)	Not detected	ug/L	100	8151	06/11/04 12:00	PCS		O
2,4,5-T	Not detected	ug/L	100	8151	06/11/04 12:00	PCS		O

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Lab Sample ID: S17271.07
Sample Tag: A6-VP-002, 20'-1
Collected Date/Time: 05/24/2004 14:55
Matrix: Groundwater
COC Reference: 013065

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1 L Amber	None	Yes	4	3
1	250ml Plastic	None	Yes	4	3
2	DO Bottle	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3
1	125ml Plastic	HNO3	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	05/26/04 17:00	MSH		
Inorganics								
pH	5.9	STD Units	0.01	150.1	05/26/04 20:35	LBR		
Alkalinity as CaCO3	Not detected	mg/L	2	310.1	06/01/04 15:30	JKB		
Ammonia-N	Not detected	mg/L	0.1	350.3	06/01/04 18:00	MJC		
Chloride	Not detected	mg/L	1	300.0	06/03/04 11:11	JDP		
Nitrate-N	Not detected	mg/L	0.2	300.0	06/03/04 12:27	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	06/03/04 12:27	JDP		
Sulfate	Not detected	mg/L	1	300.0	06/03/04 11:11	JDP		
Dissolved Oxygen	9.3	mg/L	1		05/26/04 20:30	LBR		
Phosphate	Not detected	mg/L	0.1	365.2	05/31/04 15:00	MJC		
Metals								
Arsenic	Not detected	mg/L	0.002	200.8	06/07/04 17:06	PER	7440-38-2	
Iron	Not detected	mg/L	0.02	200.8	06/07/04 17:06	PER	7439-89-6	
Organics								
Chlorinated Herbicides								
Dicamba	Not detected	ug/L	2	8151	06/09/04 12:00	PCS		O
Dinoseb	Not detected	ug/L	0.6	8151	06/09/04 12:00	PCS		O
2,4-D	Not detected	ug/L	4	8151	06/09/04 12:00	PCS		O
2,4,5-TP (Silvex)	Not detected	ug/L	1	8151	06/09/04 12:00	PCS		O
2,4,5-T	Not detected	ug/L	1	8151	06/09/04 12:00	PCS		O

O-Analysis performed by outside laboratory

Analytical Laboratory Report

JUL 12 2004

ort ID: S17291.01(02)
erated on 06/28/2004

Report to

Attention: Ms. Marisa Patterson
SECOR
2321 Club Meridian Dr. #E
Okemos, MI 48864-4505
MSA# 94023

Phone: 517-349-9499 FAX: 517-349-6863

Report produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S17291.01
Project: Bee Jay Scales 24CH.67201.01
Submitted Date/Time: 05/27/2004 09:30
Sampled by: Michael McMahon
P.O. #:

Report Notes

Results relate only to items tested.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
"Not detected" indicates that parameter was not found at a level equal to or greater than the RDL.
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Violetta F. Murshak

Violetta F. Murshak
oratory Director

Analytical Laboratory Report

Sample ID: S17291.01
ple Tag: MW08-260504-0
Collected Date/Time: 05/26/2004 09:10
Matrix: Groundwater
COC Reference: 013069

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1 L Amber	None	Yes	4	3
3	DO Bottles	None	Yes	4	3
1	125ml Plastic	HNO3	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	06/03/04 16:45	MSH		
Inorganics								
pH	7.44	STD Units	0.01	150.1	05/27/04 23:49	LBR		
Alkalinity as CaCO3	228	mg/L	1	310.1	06/01/04 15:35	JKB		
Ammonia-N	5.6	mg/L	0.1	350.3	06/01/04 18:00	MJC		
Chloride	162	mg/L	1	300.0	05/28/04 10:31	JDP		
Nitrate-N	549	mg/L	0.2	300.0	05/28/04 12:21	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	05/28/04 10:31	JDP		
Sulfate	272	mg/L	1	300.0	05/28/04 10:31	JDP		
Dissolved Oxygen	7.38	mg/L	1		05/27/04 20:00	LBR		
sphate	0.6	mg/L	0.1	365.2	05/31/04 15:00	MJC		
Metals								
Arsenic	0.010	mg/L	0.002	200.8	06/07/04 16:34	PER	7440-38-2	
Iron	0.85	mg/L	0.02	200.8	06/07/04 16:34	PER	7439-89-6	
Organics								
Chlorinated Herbicides								
Dicamba	Not detected	ug/L	2	8151	06/18/04 12:00	SUB		O1
Dinoseb	0.67	ug/L	0.6	8151	06/18/04 12:00	SUB		O1
2,4-D	Not detected	ug/L	4	8151	06/18/04 12:00	SUB		O1
2,4,5-TP (Silvex)	Not detected	ug/L	1	8151	06/18/04 12:00	SUB		O1
2,4,5-T	Not detected	ug/L	1	8151	06/18/04 12:00	SUB		O1

O-Analysis performed by outside laboratory 1-* Analyzed outside of holding time

Analytical Laboratory Report

Report ID: S17387.01(01)
C ted on 06/16/2004

Report to
Attention: Ms. Marisa Patterson
SECOR
2321 Club Meridian Dr. #E
Okemos, MI 48864-4505
MSA# 94023

Phone: 517-349-9499 FAX: 517-349-6863

Report produced by
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2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary
Lab Sample ID(s): S17387.01-S17387.04
Project: LAG/SED
Submitted Date/Time: 06/04/2004 10:30
Sampled by: Unknown
P.O. #:

Report Notes
Results relate only to items tested.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
"Not detected" indicates that parameter was not found at a level equal to or greater than the RDL.
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Violetta F. Murshak

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Lab Sample ID: S17387.01
S[illegible]e Tag: LAG 0010
C[illegible]ted Date/Time: 06/02/2004 14:00
Matrix: SW Sediment
COC Reference: 017782

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	250ml Plastic	None	Yes	6	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Ammonia-N	9.0	mg/L	0.1	350.3	06/10/04 18:00	MJC		
Nitrate-N	Not detected	mg/L	0.2	300.0	06/08/04 23:13	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	06/08/04 23:13	JDP		

Analytical Laboratory Report

Lab Sample ID: S17387.02
S[illegible]e Tag: LAG 0011
C[illegible]ted Date/Time: 06/02/2004 14:00
Matrix: SW Sediment
COC Reference: 017782

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	250ml Plastic	None	Yes	6	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Ammonia-N	7.8	mg/L	0.1	350.3	06/10/04 18:00	MJC		
Nitrate-N	Not detected	mg/L	0.2	300.0	06/08/04 23:25	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	06/08/04 23:25	JDP		

Analytical Laboratory Report

Lab Sample ID: S17387.03
S[illegible]e Tag: SED 0010
C[illegible]ted Date/Time: 06/02/2004 14:15
Matrix: Solid
COC Reference: 017782

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	32 oz Glass	None	Yes	6	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Total Solids	16	%	1	160.3	06/08/04 19:13	LBR		
Ammonia-N	760	mg/kg	10	350.3	06/15/04 19:00	MJC		
Nitrate-N	Not detected	mg/kg	500	300.0	06/08/04 21:33	JDP		
Nitrite-N	Not detected	mg/kg	500	300.0	06/08/04 21:45	JDP		

Analytical Laboratory Report

Lab Sample ID: S17387.04
[illegible]e Tag: SED 0011
C[illegible]ted Date/Time: 06/02/2004 14:15
Matrix: Solid
COC Reference: 017782

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	32 oz Glass	None	Yes	6	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Total Solids	9	%	1	160.3	06/08/04 19:13	LBR		
Ammonia-N	1,440	mg/kg	10	350.3	06/15/04 19:00	MJC		
Nitrate-N	Not detected	mg/kg	500	300.0	06/08/04 21:33	JDP		
Nitrite-N	Not detected	mg/kg	500	300.0	06/08/04 21:45	JDP		

Analytical Laboratory Report

DEC 0 9 2004

ID: S19496.01(01)
Generated on 11/29/2004

Report to
Attention: Ms. Marisa Patterson
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2321 Club Meridian Dr. #E
Okemos, MI 48864-4505
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Phone: 517-349-9499 FAX: 517-349-6863

Report produced by
Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary
Lab Sample ID(s): S19496.01-S19496.04
Project: 24CH.67201.00 Bee Jay Scales
Submitted Date/Time: 10/27/2004 10:45
Sampled by: Michael McMahon
P.O. #:

Report Notes
Results relate only to items tested.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
"Not detected" indicates that parameter was not found at a level equal to or greater than the RDL.
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Violetta F. Murshak

Violetta F. Murshak
ratory Director

Analytical Laboratory Report

Sample ID: S19496.01
Tag: MW11-251004-O
Collected Date/Time: 10/25/2004 10:30
Matrix: Groundwater
COC Reference: 022721

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	1 L Amber	None	Yes	4	3
1	L Plastic	None	Yes	4	3
2	500ml Plastic	None	Yes	4	3
1	125ml Plastic	HNO3	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3
2	40 ml Glass	HCL	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	10/28/04 12:00	PER		
PNA Extraction	Completed			3510C	10/29/04 12:45	PL		
Inorganics								
pH	8.12	STD Units	0.01	150.1	10/28/04 11:17	VJH		
Alkalinity as CaCO3	228	mg/L	1	310.1	11/04/04 14:30	JKB		
Ammonia-N	Not detected	mg/L	0.1	350.3	11/08/04 18:00	MJC	7664-41-7	
Chloride	11	mg/L	1	300.0	10/27/04 16:00	JDP	16887-00-6	
Nitrate-N	4.3	mg/L	0.2	300.0	10/27/04 16:00	JDP		
[illegible]N	Not detected	mg/L	0.2	300.0	10/27/04 16:00	JDP		
[illegible] Phosphorus	0.17	mg/L	0.02	365.2	10/27/04 14:00	MJC		
Sulfate	49	mg/L	1	300.0	10/27/04 16:00	JDP	14808-79-8	
Dissolved Oxygen	8.93	mg/L	1	360.1	10/27/04 19:12	LBR		
Phosphate	0.6	mg/L	0.1	365.2	11/15/04 16:00	MJC		
Metals								
Arsenic	0.042	mg/L	0.002	200.8	10/29/04 13:46	PER	7440-38-2	
Iron	0.44	mg/L	0.02	200.8	11/01/04 13:09	PER	7439-89-6	
Organics								
Diesel	Not detected	ug/L	100	SV-8015M	11/01/04 18:24	ARH	68334-30-5	
Gasoline	Not detected	ug/L	200	Vol-8015M	11/02/04 22:07	JGH	8006-61-9	
Chlorinated Herbicides								
Dicamba	Not detected	ug/L	2	8151	11/09/04 12:00	STL		O
Dinoseb	Not detected	ug/L	0.6	8151	11/09/04 12:00	STL		O
2,4-D	Not detected	ug/L	4	8151	11/09/04 12:00	STL		O
2,4,5-TP (Silvex)	Not detected	ug/L	1	8151	11/09/04 12:00	STL		O
2,4,5-T	Not detected	ug/L	1	8151	11/09/04 12:00	STL		O
Volatile Organics								
Benzene	Not detected	ug/L	1	8260B	11/05/04 19:25	JGH	71-43-2	
Bromodichloromethane	Not detected	ug/L	1	8260B	11/05/04 19:25	JGH	75-27-4	
Bromoform	Not detected	ug/L	1	8260B	11/05/04 19:25	JGH	75-25-2	
[illegible]omethane	Not detected	ug/L	5	8260B	11/05/04 19:25	JGH	74-83-9	
[illegible]benzene	Not detected	ug/L	1	8260B	11/05/04 19:25	JGH	104-51-8	
sec-Butylbenzene	Not detected	ug/L	1	8260B	11/05/04 19:25	JGH	135-98-8	

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Merit Laboratories, Inc.

Sample ID: S19496.01 (continued)
Sample Tag: MW11-251004-O

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics (continued)								
Volatile Organics (continued)								
tert-Butylbenzene	Not detected	ug/L	1	8260B	11/05/04 19:25	JGH	98-06-6	
Carbon tetrachloride	Not detected	ug/L	1	8260B	11/05/04 19:25	JGH	56-23-5	
Chlorobenzene	Not detected	ug/L	1	8260B	11/05/04 19:25	JGH	108-90-7	
Chloroethane	Not detected	ug/L	5	8260B	11/05/04 19:25	JGH	75-00-3	
Chloroform	Not detected	ug/L	1	8260B	11/05/04 19:25	JGH	67-66-3	
Chloromethane	Not detected	ug/L	5	8260B	11/05/04 19:25	JGH	74-87-3	
Dibromochloromethane	Not detected	ug/L	1	8260B	11/05/04 19:25	JGH	124-48-1	
1,2-Dichlorobenzene	Not detected	ug/L	1	8260B	11/05/04 19:25	JGH	95-50-1	
1,3-Dichlorobenzene	Not detected	ug/L	1	8260B	11/05/04 19:25	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	8260B	11/05/04 19:25	JGH	106-46-7	
1,1-Dichloroethane	Not detected	ug/L	1	8260B	11/05/04 19:25	JGH	75-34-3	
1,2-Dichloroethane	Not detected	ug/L	1	8260B	11/05/04 19:25	JGH	107-06-2	
1,1-Dichloroethene	Not detected	ug/L	1	8260B	11/05/04 19:25	JGH	75-35-4	
cis-1,2-Dichloroethene	Not detected	ug/L	1	8260B	11/05/04 19:25	JGH	156-59-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	8260B	11/05/04 19:25	JGH	156-60-5	
1,2-Dichloropropane	Not detected	ug/L	1	8260B	11/05/04 19:25	JGH	78-87-5	
cis-1,3-Dichloropropene	Not detected	ug/L	1	8260B	11/05/04 19:25	JGH	10061-01-5	
trans-1,3-Dichloropropene	Not detected	ug/L	1	8260B	11/05/04 19:25	JGH	10061-02-6	
Ethylbenzene	Not detected	ug/L	1	8260B	11/05/04 19:25	JGH	100-41-4	
Isopropylbenzene	Not detected	ug/L	1	8260B	11/05/04 19:25	JGH	98-82-8	
[illegible]ropyltoluene	Not detected	ug/L	1	8260B	11/05/04 19:25	JGH	99-87-6	
Methylene chloride	Not detected	ug/L	5	8260B	11/05/04 19:25	JGH	75-09-2	
Naphthalene	Not detected	ug/L	5	8260B	11/05/04 19:25	JGH	91-20-3	
n-Propylbenzene	Not detected	ug/L	1	8260B	11/05/04 19:25	JGH	103-65-1	
Styrene	Not detected	ug/L	1	8260B	11/05/04 19:25	JGH	100-42-5	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	8260B	11/05/04 19:25	JGH	79-34-5	
Tetrachloroethene	Not detected	ug/L	1	8260B	11/05/04 19:25	JGH	127-18-4	
Toluene	Not detected	ug/L	1	8260B	11/05/04 19:25	JGH	108-88-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	8260B	11/05/04 19:25	JGH	71-55-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	8260B	11/05/04 19:25	JGH	79-00-5	
Trichloroethene	Not detected	ug/L	1	8260B	11/05/04 19:25	JGH	79-01-6	
1,2,4-Trimethylbenzene	Not detected	ug/L	1	8260B	11/05/04 19:25	JGH	95-63-6	
1,3,5-Trimethylbenzene	Not detected	ug/L	1	8260B	11/05/04 19:25	JGH	108-67-8	
Vinyl chloride	Not detected	ug/L	1	8260B	11/05/04 19:25	JGH	75-01-4	
o-Xylene	Not detected	ug/L	1	8260B	11/05/04 19:25	JGH	95-47-6	
p,m-Xylene	Not detected	ug/L	2	8260B	11/05/04 19:25	JGH	106-42-3	
Acetone	Not detected	ug/L	30	8260B	11/05/04 19:25	JGH	67-64-1	
2-Butanone (MEK)	Not detected	ug/L	30	8260B	11/05/04 19:25	JGH	78-93-3	
Carbon disulfide	Not detected	ug/L	5	8260B	11/05/04 19:25	JGH	75-15-0	
2-Hexanone	Not detected	ug/L	50	8260B	11/05/04 19:25	JGH	591-78-6	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	50	8260B	11/05/04 19:25	JGH	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	5	8260B	11/05/04 19:25	JGH	1634-04-4	
1,1,1,2-Tetrachloroethane	Not detected	ug/L	1	8260B	11/05/04 19:25	JGH	630-20-6	
1,2,3-Trichlorobenzene	Not detected	ug/L	5	8260B	11/05/04 19:25	JGH	87-61-6	
1,2,3-Trichloropropane	Not detected	ug/L	1	8260B	11/05/04 19:25	JGH	96-18-4	
[illegible] Trichlorobenzene	Not detected	ug/L	5	8260B	11/05/04 19:25	JGH	120-82-1	
[illegible]bromo-3-chloropropane	Not detected	ug/L	5	8260B	11/05/04 19:25	JGH	96-12-8	
1,2-Dibromoethane	Not detected	ug/L	1	8260B	11/05/04 19:25	JGH	106-93-4	
1,4-Dichloro-2-butene	Not detected	ug/L	5	8260B	11/05/04 19:25	JGH	764-41-0	

Analytical Laboratory Report

Lab Sample ID: S19496.01 (continued)
Sample Tag: MW11-251004-O

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics (continued)								
Volatile Organics (continued)								
2-Methylnaphthalene	Not detected	ug/L	5	8260B	11/05/04 19:25	JGH	91-57-6	
Acrylonitrile	Not detected	ug/L	5	8260B	11/05/04 19:25	JGH	107-13-1	
Bromobenzene	Not detected	ug/L	1	8260B	11/05/04 19:25	JGH	108-86-1	
Bromochloromethane	Not detected	ug/L	1	8260B	11/05/04 19:25	JGH	74-97-5	
Dibromomethane	Not detected	ug/L	1	8260B	11/05/04 19:25	JGH	74-95-3	
Dichlorodifluoromethane	Not detected	ug/L	5	8260B	11/05/04 19:25	JGH	75-71-8	
Diethyl ether	Not detected	ug/L	5	8260B	11/05/04 19:25	JGH	60-29-7	
Hexachloroethane	Not detected	ug/L	5	8260B	11/05/04 19:25	JGH	67-72-1	
Methyl iodide	Not detected	ug/L	1	8260B	11/05/04 19:25	JGH	74-88-4	
Tetrahydrofuran	Not detected	ug/L	100	8260B	11/05/04 19:25	JGH	109-99-9	
Trichlorofluoromethane	Not detected	ug/L	1	8260B	11/05/04 19:25	JGH	75-69-4	

Analytical Laboratory Report

Merit Laboratories, Inc.

Sample ID: S19496.02
Sample Tag: MW10-251004-O
Collected Date/Time: 10/25/2004 11:35
Matrix: Groundwater
COC Reference: 022721

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	1 L Amber	None	Yes	4	3
1	L Plastic	None	Yes	4	3
2	500ml Plastic	None	Yes	4	3
1	125ml Plastic	HNO3	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3
2	40 ml Glass	HCL	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	10/28/04 12:00	PER		
PNA Extraction	Completed			3510C	10/29/04 12:45	PL		
Inorganics								
pH	8.14	STD Units	0.01	150.1	10/28/04 11:17	VJH		
Alkalinity as CaCO3	320	mg/L	1	310.1	11/04/04 14:40	JKB		
Ammonia-N	Not detected	mg/L	0.1	350.3	11/08/04 18:00	MJC	7664-41-7	
Chloride	21	mg/L	1	300.0	10/27/04 16:12	JDP	16887-00-6	
Nitrate-N	2.2	mg/L	0.2	300.0	10/27/04 16:12	JDP		
[illegible]N	Not detected	mg/L	0.2	300.0	10/27/04 16:12	JDP		
Ortho Phosphorus	0.16	mg/L	0.02	365.2	10/27/04 14:00	MJC		
Sulfate	33	mg/L	1	300.0	10/27/04 16:12	JDP	14808-79-8	
Dissolved Oxygen	8.54	mg/L	1	360.1	10/27/04 19:12	LBR		
Phosphate	0.5	mg/L	0.1	365.2	11/15/04 16:00	MJC		
Metals								
Arsenic	0.021	mg/L	0.002	200.8	10/29/04 13:48	PER	7440-38-2	
Iron	0.36	mg/L	0.02	200.8	11/01/04 13:11	PER	7439-89-6	
Organics								
Diesel	Not detected	ug/L	100	SV-8015M	11/01/04 18:46	ARH	68334-30-5	
Gasoline	1,300	ug/L	200	Vol-8015M	11/02/04 22:40	JGH	8006-61-9	
Chlorinated Herbicides								
Dicamba	Not detected	ug/L	2	8151	11/09/04 12:00	STL		O
Dinoseb	Not detected	ug/L	0.6	8151	11/09/04 12:00	STL		O
2,4-D	Not detected	ug/L	4	8151	11/09/04 12:00	STL		O
2,4,5-TP (Silvex)	Not detected	ug/L	1	8151	11/09/04 12:00	STL		O
2,4,5-T	Not detected	ug/L	1	8151	11/09/04 12:00	STL		O
Volatile Organics								
Benzene	273	ug/L	5	8260B	11/03/04 17:56	JGH	71-43-2	Y
Bromodichloromethane	Not detected	ug/L	5	8260B	11/03/04 17:56	JGH	75-27-4	Y
Bromoform	Not detected	ug/L	5	8260B	11/03/04 17:56	JGH	75-25-2	Y
[illegible]methane	Not detected	ug/L	30	8260B	11/03/04 17:56	JGH	74-83-9	Y
[illegible]ylbenzene	Not detected	ug/L	5	8260B	11/03/04 17:56	JGH	104-51-8	Y

O-Analysis performed by outside laboratory
Y-Elevated reporting limit due to high target concentration

Analytical Laboratory Report

Merit Laboratories, Inc.

Sample ID: S19496.02 (continued)
Sample Tag: MW10-251004-O

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics (continued)								
Volatile Organics (continued)								
sec-Butylbenzene	Not detected	ug/L	5	8260B	11/03/04 17:56	JGH	135-98-8	Y
tert-Butylbenzene	Not detected	ug/L	5	8260B	11/03/04 17:56	JGH	98-06-6	Y
Carbon tetrachloride	Not detected	ug/L	5	8260B	11/03/04 17:56	JGH	56-23-5	Y
Chlorobenzene	Not detected	ug/L	5	8260B	11/03/04 17:56	JGH	108-90-7	Y
Chloroethane	Not detected	ug/L	30	8260B	11/03/04 17:56	JGH	75-00-3	Y
Chloroform	Not detected	ug/L	5	8260B	11/03/04 17:56	JGH	67-66-3	Y
Chloromethane	Not detected	ug/L	30	8260B	11/03/04 17:56	JGH	74-87-3	Y
Dibromochloromethane	Not detected	ug/L	5	8260B	11/03/04 17:56	JGH	124-48-1	Y
1,2-Dichlorobenzene	Not detected	ug/L	5	8260B	11/03/04 17:56	JGH	95-50-1	Y
1,3-Dichlorobenzene	Not detected	ug/L	5	8260B	11/03/04 17:56	JGH	541-73-1	Y
1,4-Dichlorobenzene	Not detected	ug/L	5	8260B	11/03/04 17:56	JGH	106-46-7	Y
1,1-Dichloroethane	Not detected	ug/L	5	8260B	11/03/04 17:56	JGH	75-34-3	Y
1,2-Dichloroethane	Not detected	ug/L	5	8260B	11/03/04 17:56	JGH	107-06-2	Y
1,1-Dichloroethene	Not detected	ug/L	5	8260B	11/03/04 17:56	JGH	75-35-4	Y
cis-1,2-Dichloroethene	Not detected	ug/L	5	8260B	11/03/04 17:56	JGH	156-59-2	Y
trans-1,2-Dichloroethene	Not detected	ug/L	5	8260B	11/03/04 17:56	JGH	156-60-5	Y
1,2-Dichloropropane	Not detected	ug/L	5	8260B	11/03/04 17:56	JGH	78-87-5	Y
cis-1,3-Dichloropropene	Not detected	ug/L	5	8260B	11/03/04 17:56	JGH	10061-01-5	Y
trans-1,3-Dichloropropene	Not detected	ug/L	5	8260B	11/03/04 17:56	JGH	10061-02-6	Y
Ethylbenzene	78	ug/L	5	8260B	11/03/04 17:56	JGH	100-41-4	Y
[illegible]pylbenzene	Not detected	ug/L	5	8260B	11/03/04 17:56	JGH	98-82-8	Y
p-isopropyltoluene	Not detected	ug/L	5	8260B	11/03/04 17:56	JGH	99-87-6	Y
Methylene chloride	Not detected	ug/L	30	8260B	11/03/04 17:56	JGH	75-09-2	Y
Naphthalene	Not detected	ug/L	30	8260B	11/03/04 17:56	JGH	91-20-3	Y
n-Propylbenzene	7	ug/L	5	8260B	11/03/04 17:56	JGH	103-65-1	Y
Styrene	Not detected	ug/L	5	8260B	11/03/04 17:56	JGH	100-42-5	Y
1,1,2,2-Tetrachloroethane	Not detected	ug/L	5	8260B	11/03/04 17:56	JGH	79-34-5	Y
Tetrachloroethene	Not detected	ug/L	5	8260B	11/03/04 17:56	JGH	127-18-4	Y
Toluene	29	ug/L	5	8260B	11/03/04 17:56	JGH	108-88-3	Y
1,1,1-Trichloroethane	Not detected	ug/L	5	8260B	11/03/04 17:56	JGH	71-55-6	Y
1,1,2-Trichloroethane	Not detected	ug/L	5	8260B	11/03/04 17:56	JGH	79-00-5	Y
Trichloroethene	Not detected	ug/L	5	8260B	11/03/04 17:56	JGH	79-01-6	Y
1,2,4-Trimethylbenzene	31	ug/L	5	8260B	11/03/04 17:56	JGH	95-63-6	Y
1,3,5-Trimethylbenzene	28	ug/L	5	8260B	11/03/04 17:56	JGH	108-67-8	Y
Vinyl chloride	Not detected	ug/L	5	8260B	11/03/04 17:56	JGH	75-01-4	Y
o-Xylene	30	ug/L	5	8260B	11/03/04 17:56	JGH	95-47-6	Y
p,m-Xylene	110	ug/L	10	8260B	11/03/04 17:56	JGH	106-42-3	Y
Acetone	Not detected	ug/L	100	8260B	11/03/04 17:56	JGH	67-64-1	Y
2-Butanone (MEK)	Not detected	ug/L	100	8260B	11/03/04 17:56	JGH	78-93-3	Y
Carbon disulfide	Not detected	ug/L	30	8260B	11/03/04 17:56	JGH	75-15-0	Y
2-Hexanone	Not detected	ug/L	300	8260B	11/03/04 17:56	JGH	591-78-6	Y
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	300	8260B	11/03/04 17:56	JGH	108-10-1	Y
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	30	8260B	11/03/04 17:56	JGH	1634-04-4	Y
1,1,1,2-Tetrachloroethane	Not detected	ug/L	5	8260B	11/03/04 17:56	JGH	630-20-6	Y
1,2,3-Trichlorobenzene	Not detected	ug/L	30	8260B	11/03/04 17:56	JGH	87-61-6	Y
1[illegible]Trichloropropane	Not detected	ug/L	5	8260B	11/03/04 17:56	JGH	96-18-4	Y
1,[illegible]richlorobenzene	Not detected	ug/L	30	8260B	11/03/04 17:56	JGH	120-82-1	Y
1,2-Dibromo-3-chloropropane	Not detected	ug/L	30	8260B	11/03/04 17:56	JGH	96-12-8	Y

Y-Elevated reporting limit due to high target concentration

Analytical Laboratory Report

Lab Sample ID: S19496.02 (continued)
Sample Tag: MW10-251004-O

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics (continued)								
Volatile Organics (continued)								
1,2-Dibromoethane	Not detected	ug/L	5	8260B	11/03/04 17:56	JGH	106-93-4	Y
1,4-Dichloro-2-butene	Not detected	ug/L	30	8260B	11/03/04 17:56	JGH	764-41-0	Y
2-Methylnaphthalene	Not detected	ug/L	30	8260B	11/03/04 17:56	JGH	91-57-6	Y
Acrylonitrile	Not detected	ug/L	30	8260B	11/03/04 17:56	JGH	107-13-1	Y
Bromobenzene	Not detected	ug/L	5	8260B	11/03/04 17:56	JGH	108-86-1	Y
Bromochloromethane	Not detected	ug/L	5	8260B	11/03/04 17:56	JGH	74-97-5	Y
Dibromomethane	Not detected	ug/L	5	8260B	11/03/04 17:56	JGH	74-95-3	Y
Dichlorodifluoromethane	Not detected	ug/L	30	8260B	11/03/04 17:56	JGH	75-71-8	Y
Diethyl ether	Not detected	ug/L	30	8260B	11/03/04 17:56	JGH	60-29-7	Y
Hexachloroethane	Not detected	ug/L	30	8260B	11/03/04 17:56	JGH	67-72-1	Y
Methyl iodide	Not detected	ug/L	5	8260B	11/03/04 17:56	JGH	74-88-4	Y
Tetrahydrofuran	Not detected	ug/L	500	8260B	11/03/04 17:56	JGH	109-99-9	Y
Trichlorofluoromethane	Not detected	ug/L	5	8260B	11/03/04 17:56	JGH	75-69-4	Y

Y-Elevated reporting limit due to high target concentration

Analytical Laboratory Report

Sample ID: S19496.03
Tag: MW9-251004-O
Collected Date/Time: 10/25/2004 14:30
Matrix: Groundwater
COC Reference: 022721

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1 L Amber	None	Yes	4	3
1	L Plastic	None	Yes	4	3
2	500ml Plastic	None	Yes	4	3
1	125ml Plastic	HNO3	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	10/28/04 12:00	PER		
Inorganics								
pH	7.46	STD Units	0.01	150.1	10/28/04 11:17	VJH		
Alkalinity as CaCO3	326	mg/L	1	310.1	11/04/04 14:45	JKB		
Ammonia-N	0.1	mg/L	0.1	350.3	11/08/04 18:00	MJC	7664-41-7	
Chloride	186	mg/L	1	300.0	10/27/04 16:49	JDP	16887-00-6	
Nitrate-N	1,000	mg/L	0.2	300.0	10/27/04 17:49	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	10/27/04 16:24	JDP		
Ortho Phosphorus	0.76	mg/L	0.02	365.2	10/27/04 14:00	MJC		
[illegible]	477	mg/L	1	300.0	10/27/04 16:49	JDP	14808-79-8	
Dissolved Oxygen	8.87	mg/L	1	360.1	10/27/04 19:12	LBR		
Phosphate	11.9	mg/L	0.1	365.2	11/15/04 16:00	MJC		
Metals								
Arsenic	0.016	mg/L	0.002	200.8	10/29/04 13:50	PER	7440-38-2	
Iron	11.9	mg/L	0.02	200.8	11/01/04 13:13	PER	7439-89-6	
Organics								
Chlorinated Herbicides								
Dicamba	Not detected	ug/L	2	8151	11/09/04 12:00	STL		O
Dinoseb	6.8	ug/L	0.6	8151	11/09/04 12:00	STL		O
2,4-D	Not detected	ug/L	4	8151	11/09/04 12:00	STL		O
2,4,5-TP (Silvex)	Not detected	ug/L	1	8151	11/09/04 12:00	STL		O
2,4,5-T	Not detected	ug/L	1	8151	11/09/04 12:00	STL		O

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Sample ID: S19496.04
Sample Tag: MW12-251004-O
Collected Date/Time: 10/25/2004 08:35
Matrix: Groundwater
COC Reference: 022721

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1 L Amber	None	Yes	4	3
1	L Plastic	None	Yes	4	3
2	500ml Plastic	None	Yes	4	3
1	125ml Plastic	HNO3	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	10/28/04 12:00	PER		
Inorganics								
pH	7.58	STD Units	0.01	150.1	10/28/04 11:17	VJH		
Alkalinity as CaCO3	656	mg/L	1	310.1	11/04/04 14:50	JKB		
Ammonia-N	390	mg/L	10	350.3	11/08/04 18:00	MJC	7664-41-7	
Chloride	351	mg/L	1	300.0	10/27/04 18:01	JDP	16887-00-6	
Nitrate-N	557	mg/L	0.2	300.0	10/27/04 18:24	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	10/27/04 16:35	JDP		
Ortho Phosphorus	0.18	mg/L	0.02	365.2	10/27/04 14:00	MJC		
Sulfate	711	mg/L	1	300.0	10/27/04 18:01	JDP	14808-79-8	
Dissolved Oxygen	8.88	mg/L	1	360.1	10/27/04 19:12	LBR		
Phosphate	1.2	mg/L	0.1	365.2	11/15/04 16:00	MJC		
Metals								
Arsenic	0.011	mg/L	0.002	200.8	10/29/04 13:51	PER	7440-38-2	
Iron	2.06	mg/L	0.02	200.8	11/01/04 13:15	PER	7439-89-6	
Organics								
Chlorinated Herbicides								
Dicamba	Not detected	ug/L	2	8151	11/09/04 12:00	STL		O
Dinoseb	Not detected	ug/L	0.6	8151	11/09/04 12:00	STL		O
2,4-D	470	ug/L	4	8151	11/09/04 12:00	STL		O
2,4,5-TP (Silvex)	Not detected	ug/L	1	8151	11/09/04 12:00	STL		O
2,4,5-T	Not detected	ug/L	1	8151	11/09/04 12:00	STL		O

O-Analysis performed by outside laboratory

APPENDIX E
PILOT STUDY CHAINS OF CUSTODY

Phase II Remedial Investigation Report
Chevron Environmental Management Company
& BP America, Inc.

24CH.67201.00
May 17, 2005

Merit Laboratories, Inc.

2680 East Lansing Dr., East La[illegible]g, MI 48823
Phone (517) 332-0167 Fax ([illegible]) 332-6333

C.O.C. PAGE # 1 OF 1

017772

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Marisa Patterson
COMPANY: SECOR
ADDRESS: 2321 Club Meridian Dr. Suite E
CITY: Okemos STATE: MI ZIP CODE: 48864
PHONE NO.: 517-349-9499 FAX NO.: 517-349-6863 P.O. NO.:
E-MAIL ADDRESS: mpatterson@secor.com QUOTE NO.:

PROJECT NO./NAME: 24CH.67201.01 BeeJay Scales
SAMPLER(S) - PLEASE PRINT NAME: Michael McMahon

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:

PRESERVATIVE CODE
REFRIGERATE (Y/N)
BOTTLE TYPE

SAMPLE TYPE: GW ☒ WW ☐ OIL ☐ SOIL ☐ PRODUCT ☐ SLUDGE ☐ OTHER _____

A = NONE
B = HNO_3
C = H_2SO_4
D = NaOH
E = HCL
F = _____

RUSH ANALYSES ☐ DUE DATE _____
RUSH PICK-UP ☐ APPROVED BY: _____

MERIT LAB NO.	SAMPLE COLLECTION YEAR: DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	# OF BOTTLES	ANALYSES
17902.0	7-7-04	1645	MW04-07[illegible]	12	Conv A., Conv B., ~~8260, 8270, 8081, 8151,~~ 6020/7000, NWTPH-HCID

RELINQUISHED BY: SIGNATURE: Michael McMahon ☒ SAMPLER	DATE 7-[illegible]-04	TIME 1200	
RECEIVED BY: SIGNATURE	DATE	TIME	
RELINQUISHED BY: SIGNATURE	DATE	TIME	
RECEIVED BY: SIGNATURE	DATE	TIME	

RELINQUISHED BY: SIGNATURE	DATE	TIME	
RECEIVED AT MERIT BY: SIGNATURE: Paula [illegible]	DATE 7-9-04	TIME 0930	
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL _____
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE

Merit Laboratories, Inc.

2680 East Lansing Dr., East La[illegible], MI 48823
Phone (517) 332-0167 Fax (517) 332-6333

C.O.C. PAGE # 1 OF 1

017774

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Marisa Patterson
COMPANY: SECOR
ADDRESS: 2321 Club Meridian Dr. Suite E
CITY: Okemos | STATE: MI | ZIP CODE: 48864
PHONE NO.: 517-[illegible]9-9499 | FAX NO.: 517-349-6863 | P.O. NO.:
E-MAIL ADDRESS: mpatterson@secor.com | QUOTE NO.:

PROJECT NO./NAME: 24CH.67201.00 Bee Jay Scales
SAMPLER(S) - PLEASE PRINT NAME: Michael McMahon

INVOICE TO

CONTACT NAME | ☐ SAME
COMPANY
ADDRESS
CITY | STATE | ZIP CODE
PHONE NO. | FAX NO. | P.O. NO.

PRESERVATIVE CODE: A
REFRIGERATE (Y/N):
BOTTLE TYPE:

SAMPLE TYPE: GW ☐ WW ☐ OIL ☐ SOIL ☒ PRODUCT ☐ SLUDGE ☐ OTHER _____

A = NONE
B = HNO_3
C = H_2SO_4
D = NaOH
E = HCL
F = _____

RUSH ANALYSES ☐ DUE DATE _____
RUSH PICK-UP ☐ APPROVED BY: _____

MERIT LAB NO.	SAMPLE COLLECTION YEAR: DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	# OF BOTTLES	ANALYSES
17915.01	7-8-04		IW 1	7	nitrate, nitrite, ammonia, dinoseb, total phosphorous, total organic carbon.
.02	7-8-04		IW4	7	

RELINQUISHED BY: SIGNATURE: Michael McMahon ☐ SAMPLER	DATE: 7-9-04	TIME: 1200	
RECEIVED BY: SIGNATURE	DATE	TIME	
RELINQUISHED BY: SIGNATURE	DATE	TIME	
RECEIVED BY: SIGNATURE	DATE	TIME	

RELINQUISHED BY: SIGNATURE	DATE	TIME	
RECEIVED AT MERIT BY: SIGNATURE: Paula [illegible]	DATE: 7-12-04	TIME: 0950	
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL 4
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	SH.

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE

Merit Laboratories, Inc.

2680 East Lansing Dr., East La , MI 48823
Phone (517) 332-0167 Fax (517) 332-6333
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

023494

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Marisa Patterson
COMPANY: SECOR
ADDRESS: 2321 Club Meridian dr. Suite E
CITY: Okemos | STATE: MI | ZIP CODE: 48864
PHONE NO.: 517-349-9499 | FAX NO.: 517-349-6863 | P.O. NO.:
E-MAIL ADDRESS: Mpatterson@secor.com | QUOTE NO.:

INVOICE TO

CONTACT NAME | ☐ SAME
COMPANY
ADDRESS
CITY | STATE | ZIP CODE
PHONE NO. | FAX NO. | P.O. NO.

PROJECT NO./NAME: 24CH.67201.00 Beelay Scales
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Michael McMahon

TURNAROUND TIME REQUIRED: ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED: ☒ STANDARD ☐ LEVEL II ☐ LEVEL III ☐ OTHER

MATRIX CODE: GW=GROUNDWATER, WW=WASTEWATER, S=SOIL, L=LIQUID, SD=SOLID, SL=SLUDGE, O=OIL, A=AIR, W=WASTE, M=MISC

ANALYSIS (ATTACH LIST IF MORE SPACE REQUIRED)

MERIT LAB NO.	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCL	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	Nitrate	Nitrite	Alkalinity	Ammonia	Phosphate	TOC	SPECIAL INSTRUCTIONS/NOTES
18991.01	7-29-04	1117	MW04-290704-0	GW	2								↓	↓	↓	↓	↓	↓	
.02	↓	1206	IW01-290704-0	GW	2														
.03		1259	IW02-290704-0	GW	2														
.04		1341	IW03-290704-0	GW	2														
.05		1404	IW04-290704-0	GW	2														

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
Michael McMahon SECOR	7-29-04	1445
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME
Paula [illegible]	7-30-04	1030

SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL _____
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE

Merit Laboratories, Inc.

2680 East Lansing Dr., East La[illegible], MI 48823
Phone (517) 332-0167 Fax (5[illegible]32-6333
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

023496

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Marisa Patterson
COMPANY: SECOR
ADDRESS: 2321 CLUB Meridian dr. Suite E
CITY: Okemos STATE: MI ZIP CODE: 48864
PHONE NO.: 517-349-9499 FAX NO.: 517-349-6863 P.O. NO.:
E-MAIL ADDRESS: mpatterson@secor.com QUOTE NO.:

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:

PROJECT NO./NAME: BeeJay Scales 24CH-67201
SAMPLER(S) - PLEASE PRINT/SIGN NAME: M. McMahon [signature]

TURNAROUND TIME REQUIRED: ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED: ☒ STANDARD ☐ LEVEL II ☐ LEVEL III ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE O=OIL A=AIR W=WASTE M=MISC

ANALYSIS (ATTACH LIST IF MORE SPACE REQUIRED)

MERIT LAB NO.	YEAR DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCL	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	Nitrate	Nitrite	Alkalinity	ammonia	Phosphate	TOC	SPECIAL INSTRUCTIONS/NOTES
18306.01	8-6-04	1000	MW04-060804-0	GW	2								↓	↓	↓	↓	↓	↓	
.02	↓	1054	IW01-060804-0	↓	↓														
.03		1140	IW02-060804-0																
.04		1230	IW03-060804-0																
.05		1308	IW04-060804-0																

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
[signature] SECOR	8-6-04	1430
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME
Anne Drake	8-10-04	8:00

SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL _____
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lar MI 48823
Phone (517) 332-0167 Fax (51 32-6333
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

023497

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: MARISA PATTERSON
COMPANY: SECOR
ADDRESS: 2321 CLUB MERIDIAN DR SUITE E
CITY: OKEMOS STATE: MI ZIP CODE: 48864
PHONE NO.: 517-349-9499 FAX NO.: 517-349-6863 P.O. NO.:
E-MAIL ADDRESS: mpatterson@secor.com QUOTE NO.:

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:

PROJECT NO./NAME: 24CH.67201.00.0013 BeeJay Stales
SAMPLER(S) - PLEASE PRINT/SIGN NAME: M. McMahon

TURNAROUND TIME REQUIRED: ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED: ☒ STANDARD ☐ LEVEL II ☐ LEVEL III ☐ OTHER

MATRIX CODE: GW=GROUNDWATER, SL=SLUDGE, WW=WASTEWATER, O=OIL, S=SOIL, A=AIR, L=LIQUID, W=WASTE, SD=SOLID, M=MISC

ANALYSIS (ATTACH LIST IF MORE SPACE REQUIRED)

MERIT LAB NO.	YEAR DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	NONE	HCL	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	Nitrate	Nitrite	alkalinity	ammonia	Total Phosphorus	TOC					SPECIAL INSTRUCTIONS/NOTES
18368.01	8-12-04	958	MW04-120804-0	GW	2								X	X	X	X	X	X					
.02	↓	1045	IW01-120804-0	↓	↓								↓	↓	↓	↓	↓	↓					
.03		1126	IW02-120804-0																				
.04		1211	IW03-120804-0																				
.05		1245	IW04-120804-0																				

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
[signature] SECOR	8-12-04	1345
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME
Anne Drake	8-13-04	9:45

SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS

NOTES: All SO_4 pH = 7 + 1½ mL = 1

TEMP. ON ARRIVAL

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE

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Phone (517) 332-0167 Fax (5 32-6333
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

023498

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Marisa Patterson
COMPANY: Secor
ADDRESS: 2321 Club Meridian dr. Suite E
CITY: Okemos STATE: MI ZIP CODE: 48864
PHONE NO.: 517-349-9499 FAX NO.: 517-349-6863 P.O. NO.:
E-MAIL ADDRESS: mpatterson@secor.com QUOTE NO.:

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:

PROJECT NO./NAME: 24CH.67201.00.0013 Beejay Scales
SAMPLER(S) - PLEASE PRINT/SIGN NAME: M. McMahon

TURNAROUND TIME REQUIRED: ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED: ☒ STANDARD ☐ LEVEL II ☐ LEVEL III ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE O=OIL A=AIR W=WASTE M=MISC

ANALYSIS (ATTACH LIST IF MORE SPACE REQUIRED)

SPECIAL INSTRUCTIONS/NOTES

MERIT LAB NO.	YEAR DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	NONE	HCL	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	nitrate	nitrite	alkalinity	total phosphorus	TOC
184740.01	8-19-04	1122	MW04-190804-0	GW	2								X				→
.02	↓	1204	IW01-190804-0	↓	↓								X				→
.03		1249	IW02-190804-0										X				→
.04		1333	IW03-190804-0										X				→
.05		1408	IW04-190804-0										X				→

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
Michael McM Secor	8-19-04	1500
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME
Paula Alm	8-23-04	0900

SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL _____
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE

SECOR

SECOR CHAIN-OF-CUSTODY RECORD

COC # 05901
Page 1 of 1

FIELD OFFICE INFORMATION

OFFICE: 24

Send Report To: Marisa Patterson
2321 Club Meridian dr. suite E
Okemos MI 48864

Telephone: 517-349-9499

Fax / E-Mail: 517-349-6863
mpatterson@secor.com

PROJECT INFORMATION

Project No.: 24CH.67201.00 Task: 0013

Project Name: Bee Jay Scales

Project Manager: Marisa Patterson

Laboratory: MERIT

ANALYSES / METHOD REQUEST

REMARKS / PRECAUTIONS

TAT: X Normal

REPORTING REQUIREMENTS: MS Sum; MS Dup; Raw Data; QC Sum; Other

	Sample No. / Identification	Date	SAMPLE Time	Matrix	Container & Size	Preservative	Number of Containers	nitrate	nitrite	alkalinity	ammonia	total phosphorous	TOC			
591.01	MW04-270804-0	8-27-04	0653	AQ	P			x	x	x	x	x	x			
.02	TW01-270804-0	8-27-04	0744	AQ	P											
.03	TW02-270804-0	8-27-04	0840	AQ	P											
.04	TW03-270804-0	8-27-04	0953	AQ	P											
.05	TW04-270804-0	8-27-04	1036	AQ	P											

Possible Hazard Identification: X Non-Hazardous; Flammable; Poison; Poison B; Unknown

Sample Disposal: Returned Client; X Disposal by Lab; Archive for ___ Months

Sampled by:

Shipment Method:

Airbill Number:

	Signature	Print Name	Company	Date	Time
1a Relinquished by:	Michael McMahon	Michael McMahon	SECOR	8-27-04	1100
1b Received by:	Paula Shaw	Paula Shaw	Merit	8-30-04	0900
2a Relinquished by:					
2b Received by:					
3a Relinquished by:					
3b Received by:					

*Matrix Key: AQ = Aqueous AR = Air SO = Soil WA = Waste OT = Other

**Container: A = Amber C = Clear Glass V = VOA S = Soil Jar O = Orbo T = Tedlar B = Brass P = Plastic OT = Other

SECOR CHAIN-OF-CUSTODY RECORD

SECOR

COC # 05904
Page 1 of 1

FIELD OFFICE INFORMATION

OFFICE: 24

Send Report To:
2321 Club Meridian dr.
Suite E
Okemos MI 48864

Telephone: 517-349-9499

Fax / E-Mail: mpatterson@secor.com

PROJECT INFORMATION

Project No.: 24CH.67201.00 Task: 0013

Project Name: Bee Jay Scales

Project Manager: Marisa Patterson

Laboratory: Merit

ANALYSES / METHOD REQUEST

REMARKS / PRECAUTIONS

TAT: ☒ Normal ☐ Rush ☐ Other

REPORTING REQUIREMENTS: ☐ MB ☐ SRCS ☐ DPA ☐ SWSP ☐ Raw Data ☐ CLP ☐ EPD ☐ Other

	Sample No. / Identification	Date	SAMPLE Time	Matrix*	Container & Size**	Preservative	Number of Containers	nitrate/nitrite	alkalinity	ammonia, total phosphorus, TOC	dissolved	iron, arsenic, manganese							
7270	MW04-070904-0	9-7-04	958	AQ	4	H_2SO_4 & HNO_3		X	X	X	X								
.02	IW01-070904-0	↓	1047	↓	↓	↓		↓	↓	↓	↓								
.03	IW02-070904-0		1130																
.04	IW03-070904-0		1213																
.05	IW04-070904-0		1256																

Possible Hazard Identification: ☒ Not Hazardous ☐ Flammable ☐ Poison B ☐ Radiation ☐ Unknown

Sample Disposal: ☐ Return to Client ☒ Disposal by Lab ☐ Archive for ___ Months

Sampled by:

Shipment Method:

Airbill Number:

	Signature	Print Name	Company	Date	Time
1a Relinquished by:	Michael McMahon	Michael McMahon	SECOR	9-7-04	1400
1b Received by:	Paula Shaw	Paula Shaw	Merit	9-8-04	0950
2a Relinquished by:					
2b Received by:					
3a Relinquished by:					
3b Received by:					

***Matrix Key:** AQ = Aqueous AR = Air SO = Soil WA = Waste OT = Other

****Container:** A = Amber C = Clear Glass V = VOA S = Soil Jar O = Orbo T = Tedlar B = Brass P = Plastic OT = Other

SECOR CHAIN-OF-CUSTODY RECORD

SECOR

COC # 0011
Page 1 of 1

FIELD OFFICE INFORMATION

OFFICE: 24

Send Report To: 2321 Club Meridian dr. Suite E Okemos MI 48864

Telephone: 517 349-9499

Fax / E-Mail: mpatterson@secor.com

PROJECT INFORMATION

Project No.: 24CH.6720100 Task: 0013

Project Name: Lee Jay Scales

Project Manager: Marisa Patterson

Laboratory: Merit

Sample No. / Identification	SAMPLE Date	Time	Matrix*	Container & Size**	Preservative	Number of Containers	DINOSEA									REMARKS / PRECAUTIONS
MW4-160904-0	9-16-04	1705	AQ	2 1-Ltr.	None	2	X									
IW3-160904-0	9-16-04	1750	AQ	2 1-Ltr.	None	2	X									
IW4-160904-0	9-16-04	1825	AQ	2 1-Ltr.	None	2	X									

TAT: ☒ Normal ☐ Rush ☐ Other _____

REPORTING REQUIREMENTS: ☐ MB & SURGS ☐ Dup/MS/MSD ☐ Raw Data ☐ CLP Rpt ☐ EDD ☐ Other _____

Possible Hazard Identification: ☒ Non-Hazardous ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return to Client ☒ Disposal by Lab ☐ Archive for _____ Months

Sampled by:

Shipment Method:

Airbill Number:

	Signature	Print Name	Company	Date	Time
1a Relinquished by:	Michael McMahon	Michael McMahon	Secor	9-17-04	0900
1b Received by:					
2a Relinquished by:					
2b Received by:					
3a Relinquished by:					
3b Received by:					

*Matrix Key: AQ = Aqueous AR = Air SO = Soil WA = Waste OT = Other

**Container: A = Amber C = Clear Glass V = VOA S = Soil Jar O = Orbo T = Tedlar B = Brass P = Plastic OT = Other

Merit Laboratories, Inc.

2680 East Lansing Dr., East L[illegible]ng, MI 48823
Phone (517) 332-0167 Fax [illegible] 332-6333
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

026173

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Marisa Patterson
COMPANY: Secor
ADDRESS: 2321 Club Meridian Dr. Suite E
CITY: Okemos | STATE: MI | ZIP CODE: 48864
PHONE NO.: 517-349-9499 | FAX NO.: 517-349-6863 | P.O. NO.:
E-MAIL ADDRESS: mpatterson@secor.com | QUOTE NO.:

INVOICE TO

CONTACT NAME: | ☒ SAME
COMPANY:
ADDRESS:
CITY: | STATE: | ZIP CODE:
PHONE NO.: | FAX NO.: | P.O. NO.:

PROJECT NO./NAME: 24CH.67201.00 Bee Jay Scales
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Michael McMahon

TURNAROUND TIME REQUIRED ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STANDARD ☐ LEVEL II ☐ LEVEL III ☐ OTHER

MATRIX CODE: GW=GROUNDWATER SL=SLUDGE WW=WASTEWATER O=OIL S=SOIL A=AIR L=LIQUID W=WASTE SD=SOLID M=MISC

ANALYSIS (ATTACH LIST IF MORE SPACE REQUIRED)

MERIT LAB NO.	YEAR 04 DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCL	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	Nitrates	Nitrites	ammonia	dinoseb	Total Phosphorous	TOC	alkalinity	iron	arsenic	manganese	SPECIAL INSTRUCTIONS/NOTES
200470	1 Dec	1009	MW04-011204-0	GW	6	3		1	2				x	x	x	x	x	x	x	x	x	x	
.02	↓	1050	IW01-011204-0	↓	↓	3		1	2				↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	
.03	↓	1120	IW02-011204-0	↓	↓	3		1	2				↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	
.04	↓	1210	IW03-011204-0	↓	↓	3		1	2				↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	
.05	↓	1300	IW04-011204-0	↓	↓	3		1	2				↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	

		DATE	TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION	Michael McMahon Secor	2 Dec	1200
RECEIVED BY: SIGNATURE/ORGANIZATION			
RELINQUISHED BY: SIGNATURE/ORGANIZATION			
RECEIVED BY: SIGNATURE/ORGANIZATION			

		DATE	TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION			
RECEIVED BY: SIGNATURE/ORGANIZATION	Paula [illegible]	12-3-04	1015

SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL _____
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE

Merit Laboratories, Inc.
2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) [illegible]-6333

C.O.C. PAGE # 1 OF 2

01[illegible]36

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Marisa Patterson
COMPANY: SECOR
ADDRESS: 2321 Club Meridian Dr., Suite E
CITY: Okemos STATE: MI ZIP CODE: 48864
PHONE NO.: 517-349-9499 FAX NO.: 517-349-6863 P.O. NO.:
EMAIL ADDRESS: mpatterson@secor.com QUOTE NO.:
PROJECT NO./NAME: 4CH.67201.00.0011 Bee-Jay Scales
SAMPLER(S) - PLEASE PRINT NAME: Mike McMahon

INVOICE TO

CONTACT NAME: ☒ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:

PRESERVATIVE CODE: N
REFRIGERATE (Y/N): Y
BOTTLE TYPE: 40z jars
SAMPLE TYPE: GW ☐ WW ☐ OIL ☐ SOIL ☒ PRODUCT ☐ SLUDGE ☐ OTHER
A = NONE, B = HNO_3, C = H_2SO_4, D = NaOH, E = HCL, F =
RUSH ANALYSES ☐ DUE DATE
RUSH PICK-UP ☐ APPROVED BY:

MERIT LAB NO.	SAMPLE COLLECTION YEAR: DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	# OF BOTTLES		ANALYSES
0048.01	12/1/04	1415	SB-PS-001-0, 0-2'	2	X	Nitrates, nitrites, ammonia, dinoseb, total phosphorus and TOC
			~~SB-PS-001-0, 2-4'~~	~~2~~	~~X~~ MKP	
.02	12/1/04	1415	SB-PS-001-0, 2-4'	2	X	"
.03	12/1/04	1415	SB-PS-001-0, 4-6'	2	X	"
.04	12/1/04	1415	SB-PS-001-0, 6-8'	2	X	"
.05	12/1/04	1415	SB-PS-001-0, 8-10'	2	X	"
.06	12/1/04	1415	SB-PS-001-0, 10-12'	2	X	"
.07	12/1/04	1415	SB-PS-001-0, 12-14'	2	X	"
.08	12/1/04	1415	SB-PS-001-0, 14-16'	2	X	"
.09	12/1/04	1415	SB-PS-001-0, 16-18'	2	X	"
.10	12/1/04	1500	SB-PS-002-0, 0-2'	2	X	"
.11	12/1/04	1500	SB-PS-002-0, 2-4'	2	X	"
.12	12/1/04	1500	SB-PS-002-0, 4-6'	2	X	"
.13	12/1/04	1500	SB-PS-002-0, 6-8'	2	X	"

RELINQUISHED BY: SIGNATURE ☐ SAMPLER	DATE	TIME	RELINQUISHED BY: SIGNATURE	DATE	TIME
RECEIVED BY: SIGNATURE	DATE	TIME	RECEIVED AT MERIT BY: SIGNATURE: Anne Stakie	DATE 12/3/04	TIME 12:00
RELINQUISHED BY: SIGNATURE	DATE	TIME	SEAL NO. / SEAL INTACT YES ☐ NO ☐ / INITIALS	NOTES: TEMP. ON ARRIVAL	
RECEIVED BY: SIGNATURE	DATE	TIME	SEAL NO. / SEAL INTACT YES ☐ NO ☐ / INITIALS		

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE

Merit Laboratories, Inc.
2680 East Lansing Dr., East Lans' MI 48823
Phone (517) 332-0167 Fax (51' 2-6333

C.O.C. PAGE # 2 OF 2

015737

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Melissa Patterson
COMPANY: SECOR
ADDRESS: 2321 Club Meridian Dr., Suite E
CITY: Okemos STATE: MI ZIP CODE: 48864
PHONE NO.: 517-349-9499 FAX NO.: 517-349-6863 P.O. NO.:
E-MAIL ADDRESS: mpatterson@secor.com QUOTE NO.:
PROJECT NO./NAME: 4CH.6020.00.0011 Bee-Jay Sales
SAMPLER(S)- PLEASE PRINT NAME: Mike McMahon

INVOICE TO

CONTACT NAME: SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:

PRESERVATIVE CODE: A A A C
REFRIGERATE (Y/N): Y Y Y
BOTTLE TYPE: 4 oz. Glass; 500 ml Plastic; 1.5 Dram Glass

SAMPLE TYPE: GW X WW ☐ OIL ☐ SOIL X PRODUCT ☐ SLUDGE ☐ OTHER ____

A = NONE, B = HNO_3, C = H_2SO_4, D = NaOH, E = HCL, F =

RUSH ANALYSES ☐ DUE DATE ____
RUSH PICK-UP ☐ APPROVED BY: ____

MERIT LAB NO.	SAMPLE COLLECTION YEAR: DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	# OF BOTTLES	4 oz. Glass	500 ml Plastic	1.5 Dram Glass				ANALYSES
.14	12/1/04	1500	SB-PS-002-0, 8-10'	2	X						Nitrates, nitrites, ammonia, dinoseb, total phosphorous, TOC
.15	12/1/04	1500	SB-PS-002-0, 10-12'	2	X						"
.16	12/1/04	1500	SB-PS-002-0, 12-14'	2	X						"
.17	12/1/04	1500	SB-PS-002-0, 14-16'	2	X						"
.18	12/1/04	1500	SB-PS-002-0, 16-18'	2	X						"
.19	12/1/04	1225	SB-PS-003-0	2		X	X				Nitrates, nitrites, ammonia
.20	12/1/04	1335	SB-PS-004-0	2		X	X				"
.21	12/1/04	1500	SB-PS-002-L, 8-10'	2	X						Nitrates, nitrites, ammonia, dinoseb, total phosphorous, TOC

RELINQUISHED BY: SIGNATURE ☐ SAMPLER	DATE	TIME
RECEIVED BY: SIGNATURE	DATE	TIME
RELINQUISHED BY: SIGNATURE	DATE	TIME
RECEIVED BY: SIGNATURE	DATE	TIME

RELINQUISHED BY: SIGNATURE	DATE	TIME
RECEIVED AT MERIT BY: SIGNATURE Anne Drake	DATE 12/3/04	TIME 12:00

SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL ____
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE

12/03/04 11:32 FAX 517 349 6863 SECOR LANSING 003

APPENDIX F
PILOT STUDY BORING LOGS

Phase II Remedial Investigation Report
Chevron Environmental Management Company
& BP America, Inc.

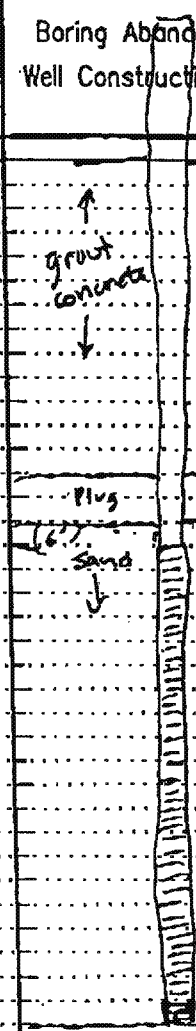
24CH.67201.00
May 17, 2005

Project: Bee Jay Scales			Log of Boring/Monitoring Well: IW1
Boring Location:	Project No.: 24CH.67201		
Contractor and Equipment: CDI HSA	Logged By: mm	Drawn By:	
Sampling Method:	Monitoring Device:		Comments:
Start Date/Time: 7-8-04 1415	Finish Date/Time: 7-8-04 1500		
First Water (bgs):	Stabilized Water Level (bgs):		

Surface Elevation: Top Casing Elevation:

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)
			0				
			1				light brown, loose dry silty sand
X			2				
			3				
			4				Hand clear to 4.5'
X			5				
			6				becomes moist clayey
X			7				becomes wet herbicide odor
			8			▽	wet clayey silty sand with
			9				herbicide odor
X			10				
			11				
X			12				
			13				
			14				
X			15				
			16				
			17				
X			18				term. 18'
			19				
			20				
			21				
			22				
			23				
			24				
			25				
			26				
			27				
			28				
			29				
			30				

Boring Abandonment/ Well Construction Details



Project: Bee Jay Scales		Log of Boring/Monitoring Well: IW4
Boring Location:	Project No.: 24CH.67201	
Contractor and Equipment: CDI HSA	Logged By: MM / Drawn By:	
Sampling Method:	Monitoring Device:	Comments:
Start Date/Time: 7-8-04 1530	Finish Date/Time: 7-8-04 1630	
First Water (bgs):	Stabilized Water Level (bgs):	

Surface Elevation: Top Casing Elevation:

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)	Boring Abandonment/ Well Construction Details
			0					
			1				light brown, dry, loose, silty sand	
X			2					Concrete/ grout
			3					
			4				hand clear to 4.5'	
X			5					
			6				becomes ~~wet~~ moist, clayey	
			7				becomes wet, herbicide odor	Plug
X			8			▽		Sand
			9				brown wet clayey silt with herbicide odor	0.020
X			10					
			11					
			12					
X			13					
			14					
X			15					
			16					
			17					
X			18				terminate boring at 18'	
			19					
			20					
			21					
			22					
			23					
			24					
			25					
			26					
			27					
			28					
			29					
			30					

International Incorporated

SB-PS-001

FACILITY Bee Jay Scales JOB #24CH.67201.00 BORING/WELL 001
LOCATION SURFACE ELEVATION
START 12-1-04 FINISH CASING TOP ELEVATION
LOGGED BY MW MONITORING DEVICE
SUBCONTRACTOR AND EQUIPMENT ESN Geoprobe
COMMENTS

PENETRATION RESULTS BLOWS 6"/6"/6"	Sample Depth Interval, feet	PID Reading	Sheen	Depth Below Surface, feet	Lithologic Description (Typical name, color, description, shape, density, moisture) Example: Clayey SILT, brown; moderately plastic; coarse to to fine sand; odor; firm and dry in places	Sample ID	Depth Below Surface, feet	Well Construction Schematic
				1			1	
				2			2	
				3	Light brown, loose dry		3	
				4	silty sand		4	
				5			5	
				6	becomes moist		6	
				7			7	
				8	▽ wet at ~8'		8	
SB-PS	001			9			9	
				10			10	
				11	Light brown medium		11	
				12	dense silty sand wet		12	
				13			13	
				14			14	
				15			15	
				16			16	
				17			17	
				18	boring Terminated at 18'		18	
				19			19	
				20			20	
				21			21	
				22			22	
				23			23	
				24			24	
				25			25	
				26			26	
				27			27	
				28			28	
				29			29	
				30			30	

Boring terminated at ___ feet, sampler advanced to ___ feet.
Groundwater encountered at approximately ___ feet during drilling.

Field Screen/Lithologic Description Sample
Preserved Sample
No Recovery
* Sample Submitted for Laboratory Analysis
▽ Groundwater Level at Time of Drilling
▼ Static Groundwater Level
SD Sheen Detected
NS No Sheen Detected
NT Not Tested
(2.5Y 4/2) Munsell (1990) Soil Color Charts
Gradational Contact
Contact Located Approximately
Contact
Concrete
Bentonite
10/20 Colorado Silica Sand
2" PVC
2" PVC

DWG:

International Incorporated

SB-PS-002

FACILITY Bee Jay Scales JOB #04CH.67201.00 BORING/WELL 002
LOCATION SURFACE ELEVATION
START 12-1-04 FINISH CASING TOP ELEVATION
LOGGED BY MMM MONITORING DEVICE
SUBCONTRACTOR AND EQUIPMENT ESN Geoprobe
COMMENTS

PENETRATION RESULTS BLOWS 6"/6"/6"	Sample Depth Interval, feet	PID Reading	Sheen	Depth Below Surface, feet	Lithologic Description (Typical name, color, description, shape, density, moisture) Example: Clayey SILT, brown; moderately plastic; coarse to to fine sand; odor; firm and dry in places	Sample ID	Depth Below Surface, feet	Well Construction Schematic
				1	Light brown loose dry silty sand		1	
				2			2	
				3			3	
				4			4	
				5			5	
				6	becomes moist		6	
				7			7	
SB-PS-002				8	▽ wet at ~8'		8	
				9			9	
				10			10	
				11	Light brown, wet, medium dense, silty sand		11	
				12			12	
				13			13	
				14			14	
				15			15	
				16			16	
				17			17	
				18	boring term at 18'		18	
				19			19	
				20			20	
				21			21	
				22			22	
				23			23	
				24			24	
				25			25	
				26			26	
				27			27	
				28			28	
				29			29	
				30			30	

Boring terminated at ___ feet, sampler advanced to ___ feet.
Groundwater encountered at approximately ___ feet during drilling.

Field Screen/Lithologic Description Sample
Preserved Sample
No Recovery
* Sample Submitted for Laboratory Analysis
▽ Groundwater Level at Time of Drilling
▼ Static Groundwater Level
SD Sheen Detected
NS No Sheen Detected
NT Not Tested
(2.5Y 4/2) Munsell (1990) Soil Color Charts
Gradational Contact
Contact Located Approximately
Contact
Concrete
Bentonite
10/20 Colorado Silica Sand
2" PVC
2" PVC

DWG:

International Incorporated

FACILITY Bee Jay Scales JOB # 24CH.67201.00 BORING/WELL 003
LOCATION SURFACE ELEVATION
START 12-1-04 FINISH CASING TOP ELEVATION
LOGGED BY MM MONITORING DEVICE
SUBCONTRACTOR AND EQUIPMENT ESN Geoprobe
COMMENTS

PENETRATION RESULTS BLOWS 6"/6"/6"	Sample Depth Interval, feet	PID Reading	Sheen	Depth Below Surface, feet	Lithologic Description (Typical name, color, description, shape, density, moisture) Example: Clayey SILT, brown; moderately plastic; coarse to to fine sand; odor; firm and dry in places	Sample ID	Depth Below Surface, feet	Well Construction Schematic
				1			1	
				2	Light brown loose		2	
				3	dry silty sand		3	
				4			4	
				5			5	
				6			6	
				7			7	
				8	▽ SB-PS-003		8	
				9	≡ cond 4957 us		9	
				10	ph 8.08		10	
				11	ORP 40		11	
				12	Temp 12.6		12	
				13			13	
				14	gw collected at ~12'		14	
				15			15	
				16			16	
				17			17	
				18			18	
				19			19	
				20			20	
				21			21	
				22			22	
				23			23	
				24			24	
				25			25	
				26			26	
				27			27	
				28			28	
				29			29	
				30			30	

Boring terminated at ___ feet, sampler advanced to ___ feet.
Groundwater encountered at approximately ___ feet during drilling.

Field Screen/Lithologic Description Sample
Preserved Sample
No Recovery
* Sample Submitted for Laboratory Analysis
▽ Groundwater Level at Time of Drilling
▼ Static Groundwater Level
SD Sheen Detected
NS No Sheen Detected
NT Not Tested
(2.5Y 4/2) Munsell (1990) Soil Color Charts
Gradational Contact
Contact Located Approximately
Contact
Concrete
Bentonite
10/20 Colorado Silica Sand
2" PVC
2" PVC

DWG:

International Incorporated

FACILITY Bee Jay Scales JOB #24CH.67201.00 BORING/WELL 004
LOCATION SURFACE ELEVATION
START 12-1-04 FINISH CASING TOP ELEVATION
LOGGED BY MM MONITORING DEVICE
SUBCONTRACTOR AND EQUIPMENT ESN Geoprobe
COMMENTS

PENETRATION RESULTS BLOWS 6"/6"/6"	Sample Depth Interval, feet	PID Reading	Sheen	Depth Below Surface, feet	Lithologic Description (Typical name, color, description, shape, density, moisture) Example: Clayey SILT, brown; moderately plastic; coarse to to fine sand; odor; firm and dry in places	Sample ID	Depth Below Surface, feet	Well Construction Schematic
				1			1	
				2	Light brown loose dry		2	
				3	silty sand		3	
				4			4	
				5			5	
				6			6	
				7	1225		7	
				8	▽ SB-PS-004-0		8	
				9	≡ ph 8.34		9	
				10	cond 4555 us		10	
				11	orp 69		11	
				12	temp 10.8		12	
				13	gw collected at ~12' bgs.		13	
				14			14	
				15			15	
				16			16	
				17			17	
				18			18	
				19			19	
				20			20	
				21			21	
				22			22	
				23			23	
				24			24	
				25			25	
				26			26	
				27			27	
				28			28	
				29			29	
				30			30	

Boring terminated at ___ feet, sampler advanced to ___ feet.
Groundwater encountered at approximately ___ feet during drilling.

Field Screen/Lithologic Description Sample
Preserved Sample
No Recovery
* Sample Submitted for Laboratory Analysis
▽ Groundwater Level at Time of Drilling
▼ Static Groundwater Level
SD Sheen Detected
NS No Sheen Detected
NT Not Tested
(2.5Y 4/2) Munsell (1990) Soil Color Charts
Gradational Contact
Contact Located Approximately
Contact
Concrete
Bentonite
10/20 Colorado Silica Sand
2" PVC
2" PVC

DWG:

APPENDIX G
PILOT STUDY GROUNDWATER PURGE AND SAMPLE FORMS

Phase II Remedial Investigation Report
Chevron Environmental Management Company
& BP America, Inc.

24CH.67201.00
May 17, 2005

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Date 7-7-04 Well No.: MW-04

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 1600 Time End Purge: 1640 Time Sampled 1645

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				(2)	4	6	
(TD-DTW)0.5	17.45	8.18	9.27	0.16	0.64	1.44	1.48

Time	1610	1620	1628	1636			
Volume Purged (gal) (~4.6)	1	2	3	4			
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	17.1	16.3	16.1	15.6			
Ph	7.16	7.41	7.36	7.39			
Specific Conductivity (uncorrected) (µmhos)	10.07	9331	9409	9485			
ORP	244	218	227	220			
Turbidity/Color							
Odor/Sheen	Lime green	/ herb. smell	Lime gr.	herb. smell			
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?	N	N	N	N			

Comments: _____

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

MW04-070704-0

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
	12	Various	Various	NO		See COC
				NO		

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~4.75 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES (NO)

Inside of Well Head and Outer Casing Dry?: (YES) NO

Well Casing?: (YES) NO

Comments: needs bolts

Date 7-29-04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: MW4

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 1038 Time End Purge: 1116 Time Sampled 1117

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				2	4	6	
(TD-DTW).5	17.39	8.24	9.15	0.16	0.64	1.44	1.46

4.58

Time	1038	1100	1108	1115			
Volume Purged (gal)	1.5	2.5	3.5	4.5			
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	20.8	20.2	20.3	19.9			
Ph	8.30	8.12	8.04	8.01			
Specific Conductivity (uncorrected) (µmhos)	22.82	23.29	23.44	23.68			
ORP	79	128	105	113			
Turbidity/Color	Lime green	Lime green	Lime green	Lime gre			
Odor/Sheen	herbicide none	herbicide none	none	herbicide none			
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?	N	N	N	N			

Comments: DTW taken from pvc top

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
MW04	2	plastic 1-250ml 1-500ml	H2SO4 none	NO		See COC
				NO		

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~4.6 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

Date 7-29-04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: IW1

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 1130 Time End Purge: 1205 Time Sampled 1206

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				(2)	4	6	
(TD-DTW).5	18.54	8.71	9.83	0.16	0.64	1.44	1.57

Time	1143	1149	1156	1205			
Volume Purged (gal)	1.5	2.5	3.5	4.5			
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	22.5	21.5	20.8	20.7			
Ph	8.26	8.26	8.29	8.32			
Specific Conductivity (uncorrected) (µmhos)	33.01	33.24	33.08	33.27			
ORP	153	96	72	88			
Turbidity/Color	murky	light green	murky light green	slight clear			
Odor/Sheen	herbicide none	herbicide none	herbicide none	herbicide none			
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?	N	N	N	N			

4.9

Comments: DTW measured from ground surface.
Water became slightly clearer at 4'

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
		plastic				
IW01	2	1-250 ml 1-500 ml	H2SO4 none	NO		See coc
				NO		

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~5 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

Date 7-29-04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: IW2

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 1215 Time End Purge: ~~1250~~ 1255 Time Sampled 1259

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				(2)	4	6	
(TD-DTW).5	18.69	8.49	10.2	0.16	0.64	1.44	1.63

Time	1226	1234	1241	1249			
Volume Purged (gal)	1.5	2.5	3.5	4.5			
Purge Rate (gpm)	< 1 gpm						
Temperature (°C)	21.8	21.0	20.9	21.1			
Ph	8.56	8.56	8.55	8.55			
Specific Conductivity (uncorrected) (µmhos)	32.27	32.13	32.41	32.50			
ORP	70	78	75	74			
Turbidity/Color	mostly clear	mostly clear	mostly clear	mostly clear			
Odor/Sheen	herb. odor none	herb odor none	herb odor none	herb odor none			
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?	N	N	N	N			

5.1

Comments: ~~dep~~ DTW taken from ground surface

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
		plastic				
IW02	2	1-250 ml 1-500 ml	H2SO4 none	NO	See COC	
				NO		

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~5.1 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO – if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

Date 7-29-04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: IW3

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 1305 Time End Purge: 1340 Time Sampled 1341

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				2	4	6	
(TD-DTW) .5	18.65	8.74	9.91	0.16	0.64	1.44	1.57

4.96

Time	1315	1322	1329	1336			
Volume Purged (gal)	1.5	2.5	3.5	4.5			
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	22.4	22.0	21.6	21.6			
Ph	8.43	8.43	8.41	8.39			
Specific Conductivity (uncorrected) (µmhos)	29.94	30.01	30.24	30.07			
ORP	70	80	81	87			
Turbidity/Color	Mostly clear	Mostly clear	Mostly clear	Mostly clear			
Odor/Sheen	herb odor none	herb. none	herb. odor none	herb odor none			
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?	N	N	N	N			

Comments: DTW taken from ground surface
slight yellow tint after 3.5 gal

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
IW03	2	plastic 1-250 ml 1-500 ml	H2SO4 none	NO	see COC	
				NO		

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~5 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

Date 7-29-04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: IW4

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 1343 Time End Purge: 1403 Time Sampled 1404

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				2	4	6	
(TD-DTW).5	16.1	8.75	7.35	0.16	0.64	1.44	8.64

Time	1348	1353	1401				
Volume Purged (gal)	1	2	3.5				
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	22.8	22.6	22.0				
Ph	8.46	8.43	8.42				
Specific Conductivity (uncorrected) (µmhos)	28.24	28.79	29.59				
ORP	59	64	76				
Turbidity/Color	slight yellow	slight yellow	slight yellow				
Odor/Sheen	herbicide	herbicide					
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?	N	N	N	N			

3.68

Comments: DTW taken from ground surface

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:
sludge in bottom of well

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
		plastic				
IW04	2	1-250 ml 1-500 ml	H2SO4 none	NO	See COC	
				NO		

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~ 3.75 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 6 AUG 04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: MW04

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 924 Time End Purge: 957 Time Sampled 1000

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				(2)	4	6	
(TD-DTW) 0.5	17.41	8.38	9.03	0.16	0.64	1.44	1.45

Time	937	944	950	957			
Volume Purged (gal)	1.5	2.5	3.5	4.5			
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	20.1	20.1	20.3	20.4			
Ph	8.11	8.15	8.14	8.18			
Specific Conductivity (uncorrected) (µmhos)	21.66 ms	21.94 ms	22.18 ms	22.74 ms			
ORP	71	77	75	83			
Turbidity/Color	Slight yellow	no color cloudy	cloudy	cloudy			
Odor/Sheen							
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?	N	N	N	N			

9.5

Comments: _____

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
		plastic				
MW04	2	1-250 ml 1-500 ml	H2SO4 none	NO	See COC	
				NO		

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~4.5 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 6 AUG 04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: IW1

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 1021 Time End Purge: 1054 Time Sampled 1054

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				(2)	4	6	
(TD - DTW)0.5	18.55	8.86	9.69	0.16	0.64	1.44	1.55

4.8

Time	1030	1038	1043	1052			
Volume Purged (gal)	1.5	2.5	3.5	4.5			
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	20.2	20.7	20.4	19.8			
Ph	8.29	8.28	8.33	8.35			
Specific Conductivity (uncorrected) (µmhos)	33.16 mS	32.97 mS	33.07 mS	33.08			
ORP	98	81	83	77			
Turbidity/Color	slight cloudy	same	same	becomes clear			
Odor/Sheen							
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?	N	N	N	N			

Comments: DTW measured from grnd surface

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
		plastic				
IW01	2	1-250 ml 1-500 ml	H2SO4 None	NO	See COC	
				NO		

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~5 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 6 AUG 04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: IW2

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 1103 Time End Purge: 1140 Time Sampled 1140

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				2	4	6	
(TD-DTW) 0.5	18.7	8.85	9.85	0.16	0.64	1.44	1.58

4.9

Time	1116	1124	1130	1137			
Volume Purged (gal)	1.5	2.5	3.5	4.5			
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	19.8	19.4	19.2	19.1			
Ph	8.48	8.49	8.51	8.53			
Specific Conductivity (uncorrected) (µmhos)	31.69 ms	31.64 ms	31.90 ms	32.10 ms			
ORP	68	77	77	79			
Turbidity/Color	Mostly clear	same	same	clear			
Odor/Sheen							
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?	N	N	N				

Comments: DTW from grnd surface

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
IW02	2	plastic 1L-250 mL 1-500 mL	H2SO4 None	NO	See COC	
				NO		

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~5 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 6 AUG 04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: IW3

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 1150 Time End Purge: 1228 Time Sampled 1230

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				(2)	4	6	
(TD-DTW)0.5	18.65	8.89	9.76	0.16	0.64	1.44	1.56

Time	1203	1211	1219	1226	1~~228~~		
Volume Purged (gal)	1.5	2.5	3.5	4.5			
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	19.4	19.2	19.1	18.8			
Ph	8.56	8.53	8.52	8.52			
Specific Conductivity (uncorrected) (µmhos)	31.02 ms	30.86 ms	30.86 ms	30.76 ms			
ORP	74	121	123	121			
Turbidity/Color	Mostly clear		clear	Mostly clear			
Odor/Sheen							
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?	N	N	N	N			

4.88

Comments: DTW from ground surface

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
		plastic				
tw04	2	1 - 250 ml 1 - 500 ml	H_2SO_4 None	NO	See COC	
				NO		

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~5 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 6 AUG 04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: IW 4

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 1238 Time End Purge: 1307 Time Sampled 1308

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				2	4	6	
(TD-DTW) 0.5	16.10	8.90	7.20	0.16	0.64	1.44	1.15

Time	1238	1257	1304				
Volume Purged (gal)	1.5	2.5	3.5				
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	19.6	19.4	19.2				
Ph	8.31	8.34	8.35				
Specific Conductivity (uncorrected) (µmhos)	30.44 ms	31.03 ms	31.26 ms				
ORP	79	76	71				
Turbidity/Color	Cloudy	Mostly clear					
Odor/Sheen							
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?	N	N	N				

3.6

Comments: DTW measured from ground surface
sludge in bottom of well

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
		plastic				
IW04	2	1-250 ml 1-500 ml	H2SO4 none	NO	See COC	
				NO		

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~ 3.75 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 12 AUG 04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: MW4

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 923 Time End Purge: 957 Time Sampled 958

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				(2)	4	6	
(TD-DTW)0.5	17.41	8.39	9.02	0.16	0.64	1.44	1.44

Time	934	941	948	956			
Volume Purged (gal)	1.5	2.5	3.5	4.5			
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	21.0	20.8	20.8	21.0			
Ph	7.99	7.97	7.98	7.97			
Specific Conductivity (uncorrected) (~~µmhos~~)	21.22 mS	21.29 mS	21.43 mS	21.77 mS			
ORP	60	58	-69	-61			
Turbidity/Color	Slight murky	becoming clear	mostly clear	mostly clear			
Odor/Sheen							
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?	N	N	N	N			

4.5

Comments: _____

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
MW04	2	plastic 250 ml 500 ml	H2SO4 none	NO	See COC	
				NO		

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~4.5 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 12 AUG 04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: IW1

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 1006 Time End Purge: 1044 Time Sampled 1045

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				(2)	4	6	
(TD-DTW)0.5	18.55	8.86	9.7	0.16	0.64	1.44	1.55

Time	1017	1025	1034	1042			
Volume Purged (gal)	1.5	2.5	3.5	4.5			
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	19.7	20.6	20.4	20.5			
Ph	8.16	8.17	8.21	8.24			
Specific Conductivity (uncorrected) (~~umhos~~)	32.82 mS	33.03 mS	32.76 mS	32.86 mS			
ORP	8	50	49	78			
Turbidity/Color	mostly clear	Mostly clear	Mostly clear	mostly clear			
Odor/Sheen							
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?	N	N	N	N			

4.85

Comments: DTW from ground surface

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type plastic	Preservative	Field Filtration	Analysis Request (Method)	Comments
IW01	2	250 ml 500 ml	H2SO4 none	NO	See COC	
				NO		

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~5 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date: 12 AUG 04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: IW2

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 1052 Time End Purge: 1126 Time Sampled 1126

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				(2)	4	6	
(TD-DTW)0.5	18.70	8.89	9.81	0.16	0.64	1.44	1.57

4.9

Time	1103	1110	1117	1124			
Volume Purged (gal)	1.5	2.5	3.5	4.5			
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	21.0	20.4	20.4	20.6			
Ph	8.33	8.37	8.39	8.41			
Specific Conductivity (uncorrected) (~~µmhos~~)	31.65 mS	31.25 mS	31.43 mS	31.56 mS			
ORP	44	63	70	77			
Turbidity/Color	mostly clear	clear	clear	clear			
Odor/Sheen							
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?	N	N	N	N			

Comments: DTW from grnd surface

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type plastic	Preservative	Field Filtration	Analysis Request (Method)	Comments
IW02	2	250 ml 500 ml	H2SO4 none	NO	See COC	
				NO		

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~5 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 12 AUG 04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: IW3

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 1134 Time End Purge: 1210 Time Sampled 1211

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				(2)	4	6	
(TD-DTW)0.5	18.65	8.86	9.8	0.16	0.64	1.44	1.57

Time	1144	1152	1159	1207			
Volume Purged (gal)	1.5	2.5	3.5	4.5			
Purge Rate (gpm)	<1gpm						
Temperature (°C)	21.4	20.9	21.4	21.1			
Ph	8.46	8.49	8.49	8.48			
Specific Conductivity (uncorrected) (µmhos)	31.32 mS	31.17 mS	31.23 mS	30.94 mS			
ORP	55	73	71	72			
Turbidity/Color	Slight cloudy	Slight cloudy	Slight cloudy	Slight cloudy			
Odor/Sheen							
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?	N	N	N	N			

4.9

Comments: DTW from grnd surface

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type plastic	Preservative	Field Filtration	Analysis Request (Method)	Comments
IW3	2	250 ml 500 ml	H2SO4 none	NO	See COC	
				NO		

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~5 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 12 AUG 04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: IW4

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 1217 Time End Purge: 1244 Time Sampled 1245

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				(2)	4	6	
(TD-DTW) 0.5	16.10	8.92	7.18	0.16	0.64	1.44	1.15

Time	1226	1235	1242				
Volume Purged (gal)	1.5	2.5	3.5				
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	22.6	22.0	22.3				
Ph	8.13	8.21	8.24				
Specific Conductivity (uncorrected) (~~µmhos~~)	31.81 mS	31.85 mS	31.67 mS				
ORP	49	61	70				
Turbidity/Color	Mostly clear	Mostly clear	Mostly clear				
Odor/Sheen							
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?	N	N	N				

3.6

Comments: DTW from grand surface
Sludge in bottom of well

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
		plastic				
IW04	2	250 ml 500 ml	H2SO4 none	NO	see COC	
				NO		

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~3.75 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO – if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date: 19-AUG-04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: MW 04

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 1048 Time End Purge: 1122 Time Sampled 1122

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				(2)	4	6	
(TD-DTW)0.5	17.41	8.41	9.0	0.16	0.64	1.44	1.44

4.5

Time	1059	1107	1114	1121			
Volume Purged (gal)	1.5	2.5	3.5	4.5			
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	21.9	22.1	22.9	23.1			
Ph	7.77	7.77	7.75	7.80			
Specific Conductivity (uncorrected) (~~µmhos~~)	20.07 mS	20.20 mS	20.32 mS	20.64 mS			
ORP	-31	-67	-66	-85			
Turbidity/Color	Slight Murky	Slight Murky	Slight Murky	Slight Murky			
Odor/Sheen							
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?							

Comments: _____

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
		plastic				
MW04	2	250ml 500ml	HCSO4 None	NO	See COC	
				NO		

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~5 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date: 19 AUG 04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: IW1

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 1130 Time End Purge: 1203 Time Sampled 1204

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				(2)	4	6	
(TD-DTW)0.5	18.55	8.91	9.64	0.16	0.64	1.44	1.54

Time	1141	1148	1155	1202			
Volume Purged (gal)	1.5	2.5	3.5	4.5			
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	22.6	22.4	22.4	22.2			
Ph	7.97	7.98	8.01	8.05			
Specific Conductivity (uncorrected) (~~µmhos~~)	31.95 mS	32.56 mS	32.55 mS	32.31 mS			
ORP	48	60	70	73			
Turbidity/Color	Slight murky	Slight murky	Slight murky	Slight murky			
Odor/Sheen							
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?							

Comments: DTW from grnd surface

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
IW01	2	plastic 250ml 500ml	H2SO4 none	NO	See COC	
				NO		

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~5 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO – if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 19 AUG 04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: IW 2

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 1214 Time End Purge: 1248 Time Sampled 1249

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				(2)	4	6	
(TD-DTW)x0.5	18.70	8.89	9.81	0.16	0.64	1.44	1.57

Time	1225	1232	1239	1246			
Volume Purged (gal)	1.5	2.5	3.5	4.5			
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	24.3	24.8	22.6	21.3			
Ph	8.16	8.18	8.22	8.25			
Specific Conductivity (uncorrected) (~~umhos~~)	31.59 mS	31.23 mS	31.13 mS	31.27 mS			
ORP	53	60	59	65			
Turbidity/Color	clear	clear	clear	clear			
Odor/Sheen							
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?	N	N	N	N			

Comments: DTW from grnd surface

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
IW2	2	plastic 250ml 500ml	H2SO4 none	NO	See COC	
				NO		

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~5 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 19 AUG 04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: IW 3

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 1255 Time End Purge: 1332 Time Sampled 1333

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				(2)	4	6	
(TD-DTW)x.5	18.65	8.88	9.77	0.16	0.64	1.44	1.56

Time	1309	1316	1323	1330			
Volume Purged (gal)							
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	23.8	22.3	22.4	21.6			
Ph	8.41	8.49	8.47	8.47			
Specific Conductivity (uncorrected) (µmhos)	31.57 mS	31.49 mS	31.31 mS	31.13 mS			
ORP	56	65	86	85			
Turbidity/Color	Slight Murky	Slight Murky	Slight Murky	Slight Murky			
Odor/Sheen							
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?	N	N	N	N			

Comments: DTW from grnd surface

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
IW03	2	plastic 250 ml 500 ml	H2SO4 none	NO	See COC	
				NO		

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~5 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO – if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 19 AUG 04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: IW4

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 1341 Time End Purge: 1407 Time Sampled 1408

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				2	4	6	
(TD - DTW) as	16.10	8.91	7.19	0.16	0.64	1.44	1.15

Time	1351	1358	1405				
Volume Purged (gal)	1.5	2.5	3.5				
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	23.7	23.5	23.9				
Ph	8.12	8.18	8.16				
Specific Conductivity (uncorrected) (~~µmhos~~)	31.74 ms	31.85 ms	31.64 ms				
ORP	37	75	97				
Turbidity/Color	slight cloudy	mostly clear	mostly clear				
Odor/Sheen							
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?	N	N	N				

Comments: DTW from grnd surface
sludge in bottom of well

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
IW04	2	plastic 250 ml 500 ml	H2SO4 none	NO	See COC	
				NO		

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~ 3.75 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUND WATER PURGE AND SAMPLE FORM

Date 8-27-04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: MW4

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 615 Time End Purge: 652 Time Sampled 653

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				(2)	4	6	
(TD-DTW) 0.5	17.41	8.16	9.25	0.16	0.64	1.44	1.48

Time	627	635	643	651			
Volume Purged (gal)	1.5	2.5	3.5	4.5			
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	19.8	19.7	19.8	19.6			
Ph	7.63	7.64	7.63	7.67			
Specific Conductivity (uncorrected) (~~µmhos~~)	18.96 mS	19.18 mS	19.23 mS	19.31 mS			
ORP	75	40	23	7			
Turbidity/Color	Mostly clear	Mostly clear	Mostly clear	Mostly clear			
Odor/Sheen							
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?	N	N	N	N			

Comments: _____

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
		plastic				
MW04	2	250 ml 500 ml	H2SO4 none	NO	see coc	
				NO		

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~5 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 8-27-04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: IW1

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 706 Time End Purge: 743 Time Sampled 744

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				(2)	4	6	
(TD-DTW) 0.5	18.55	8.65	9.9	0.16	0.64	1.44	1.58

Time	718	726	734	742			
Volume Purged (gal)	1.5	2.5	3.5	4.5			
Purge Rate (gpm)	<1gpm						
Temperature (°C)	19.0	19.0	18.9	18.7			
Ph	7.78	7.82	7.83	7.87			
Specific Conductivity (uncorrected) ~~(µmhos)~~	31.74 ms	31.89 ms	31.97 ms	32.00 ms			
ORP	17	35	34	40			
Turbidity/Color	Slight cloudy	Slight clear	Slight cloudy	Slight cloudy			
Odor/Sheen							
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?	N	N	N	N			

Comments: DTW from grnd surface

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
IW1	2	250 ml 500 ml	H2SO4 none	NO	see COC	
				NO		

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~5 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 8-27-04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: IW2

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 802 Time End Purge: 839 Time Sampled 840

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				2	4	6	
(TD-DTW) 0.5	18.70	8.65	10.05	0.16	0.64	1.44	1.60

Time	814	822	830	838			
Volume Purged (gal)	1.5	2.5	3.5	4.5			
Purge Rate (gpm)	< 1 gpm						
Temperature (°C)	18.7	18.7	18.4	18.4			
Ph	9.97	8.01	8.06	8.10			
Specific Conductivity (uncorrected) (µmhos)	30.50 ms	30.63 ms	30.71 ms	30.86 ms			
ORP	36	41	44	46			
Turbidity/Color	clear	clear	clear	clear			
Odor/Sheen							
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?	N	N	N	N			

Comments: DTW from grnd surface

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
		plastic				
IW2	2	250 ml 500 ml	H2SO4 non	NO	see coc	
				NO		

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~5 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 8-27-04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: EW 3

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 917 Time End Purge: 952 Time Sampled 953

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				(2)	4	6	
(TD-DTW)0.5	18.65	8.66	10.00	0.16	0.64	1.44	1.6

Time	928	935	943	951			
Volume Purged (gal)	1.5	2.5	3.5	4.5			
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	19.2	19.4	19.3	19.5			
Ph	8.30	8.35	8.40	8.42			
Specific Conductivity (uncorrected) ~~(µmhos)~~	31.07 mS	31.25 mS	31.35 mS	31.54 mS			
ORP	63	43	35	26			
Turbidity/Color	mostly clear	mostly clear	mostly clear	mostly clear			
Odor/Sheen							
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?	N	N	N	N			

Comments: DTW from grad surface

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: ____

Comments:

Sample No.	No. of Containers	Container Type plastic	Preservative	Field Filtration	Analysis Request (Method)	Comments
EW3	2	250 ml 500 ml	HNO3 none	NO	see coc	
				NO		

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~5 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Date 8-27-04
Well No.: MW- IW4
Field Personnel: MM Static Water Level: _____
Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR
Time Start Purge: 1000 Time End Purge: 1035 Time Sampled 1036
Measuring Point Description: North Top of Well Casing
Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				2	4	6	
(TD-DTW)0.5	17.51	8.67	8.84	0.16	0.64	1.44	1.41

Time	1012	1019	1027	1034			
Volume Purged (gal)	1.5	2.5	3.5	4.5			
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	21.0	21.1	21.3	20.8			
Ph	7.98	8.08	8.08	8.14			
Specific Conductivity (uncorrected) (µmhos)	31.20 mS	31.57 mS	31.55 mS	31.61 mS			
ORP	17	27	12	24			
Turbidity/Color	mostly clear	mostly clear	clear	clear			
Odor/Sheen							
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?	N	N	N	N			

Comments: DTW from grnd surface
Sludge in bottom of well

SAMPLE DATA:
Percent Recovery: NA Depth to Water at Sampling (ft): NM
Sampling Equipment: ____
Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
IW4	2	250 ml 500 ml	H2SO4 none	NO	See COC	
				NO		

PURGE WATER DISPOSAL NOTES:
Total Discharge (gal): ~~NB~~ ~4.5 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____
System Treat _____
Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)
Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO
Inside of Well Head and Outer Casing Dry?: YES NO
Well Casing?: YES NO
Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 7 Sept 04

Project Name: Bee Jay Scales Project No.: 24CH-67201 Well No.: MW-4

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 922 Time End Purge: 957 Time Sampled 958

Measuring Point Description: North Top of Well Casing

Purge Method: _____ Purge Depth: TD

Well Volume Calculation	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				(2)	4	6	
TD-DTW	17.41	8.23	9.18	0.16	0.64	1.44	1.47

Time	935	~~925~~ 941	948	955			
Volume Purged (gal)	1.5	2.5	3.5	4.5			
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	19.6	19.9	19.8	19.9			
Ph	7.33	7.48	7.49	7.52			
Specific Conductivity (uncorrected) (~~µmhos~~)	17.44 mS	17.58 mS	17.60 mS	17.63 mS			
ORP	-19	-39	-57	-75			
Turbidity/Color	slight cloudy	slight cloudy	slight cloudy	slight cloudy			
Odor/Sheen							
Dewatered?	N	N	N	N			

Comments: _____

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: Myron L Ultrameter

Comments: _____

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
MW4	4	plastic & amber	see COC	NO	See COC	
				NO		

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~5 Disposal Method: _____ Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 7 Sept 04

Project Name: Lee Jay Scales Project No.: 24114.67201 Well No.: MW- IW1

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 1011 Time End Purge: 1046 Time Sampled 1047

Measuring Point Description: North Top of Well Casing

Purge Method: _____ Purge Depth: TD

Well Volume Calculation	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				(2)	4	6	
TD-DTW	18.58	8.69	9.89	0.16	0.64	1.44	1.58

Time	1022	1029	1037	1044			
Volume Purged (gal)	1.5	2.5	3.5	4.5			
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	21.1	20.8	22.4	20.3			
Ph	7.79	7.77	7.77	7.79			
Specific Conductivity (uncorrected) (~~µmhos~~)	27.89 mS	28.40 mS	29.41 mS	29.77 mS			
ORP	7	24	42	46			
Turbidity/Color	Mostly clear	Mostly clear	Slight cloudy				
Odor/Sheen							
Dewatered?	N	N	N	N			

Comments: DTW from ground surface - Marked on PVC

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: myron L ultrameter

Comments: _____

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
IW1	4	plastic & amber		NO	See COC	
				NO		

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~5 Disposal Method: _____ Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 7 Sept 04

Project Name: Bee Jay Scales Project No.: 24CH.67201 Well No.: MW- IW2

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 1055 Time End Purge: 1129 Time Sampled 1130

Measuring Point Description: North Top of Well Casing

Purge Method: _____ Purge Depth: TD

Well Volume Calculation	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				(2)	4	6	
TD-DTW	18.70	8.67	10.03	0.16	0.64	1.44	1.6

Time	1107	1114	1121	1128			
Volume Purged (gal)	1.5	2.5	3.5	4.5			
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	21.2	21.4	20.8	20.5			
Ph	7.79	7.80	7.86	7.90			
Specific Conductivity (uncorrected) (~~µmhos~~)	29.13 mS	29.37 mS	29.32 mS	29.56 mS			
ORP	35	43	43	43			
Turbidity/Color	clear	clear	clear	clear			
Odor/Sheen							
Dewatered?	N	N	N				

Comments: DTW from ground surface - Marked on PVC

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: Myron L Ultrameter

Comments: _____

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
IW2	4	plastic & amber		NO	see COC	
				NO		

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~5 Disposal Method: _____ Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date 7 Sept 04

Project Name: Bee Jay Scales Project No.: 24CH-67201 Well No.: MW- IW3

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 1138 Time End Purge: 1212 Time Sampled 1213

Measuring Point Description: North Top of Well Casing

Purge Method: _____ Purge Depth: TD

Well Volume Calculation	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				(2)	4	6	
TD-DTW	18.65	8.75	9.9	0.16	0.64	1.44	1.58

Time	1150	1156	1204	1210			
Volume Purged (gal)	1.5	2.5	3.5	4.5			
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	23.5	21.6	21.7	21.0			
Ph	8.16	8.16	8.24	8.25			
Specific Conductivity (uncorrected) (µmhos)	30.46 ms	30.86 ms	31.20 ms	31.36 ms			
ORP	10	33	32	32			
Turbidity/Color	Slight cloudy	Slight cloudy	Slight cloudy	Slight cloudy			
Odor/Sheen							
Dewatered?	N	N	N	N			

Comments: DTW from ground surface - marked on PVC

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: Myron L ultrameter

Comments: _____

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
IW3	4	plastic & amber		NO	see coc	
				NO		

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~5 Disposal Method: _____ Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date

Project Name: Bee Jay Scales Project No.: 24CH.67201 Well No.: MW-IW4

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 1224 Time End Purge: 1255 Time Sampled 1256

Measuring Point Description: North Top of Well Casing

Purge Method: _____ Purge Depth: TD

Well Volume Calculation	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				(2)	4	6	
TD-DTW	17.55	8.84	8.71	0.16	0.64	1.44	1.39

Time	1234	1240	1247	1254			
Volume Purged (gal)	1.5	2.5	3.5	4.5			
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	21.7	21.9	21.5	20.6			
Ph	7.96	7.96	8.03	8.03			
Specific Conductivity (uncorrected) (~~µmhos~~)	30.33 mS	30.72 mS	30.91 mS	31.08 mS			
ORP	27	43	49	54			
Turbidity/Color	Mostly clear	Mostly clear	Mostly clear	Mostly clear			
Odor/Sheen							
Dewatered?	N	N	N	N			

Comments: DTW from grnd surface - marked on PVC. Still some sludge in bottom of well

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: Myron L ultrameter

Comments: _____

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
IW4	4	plastic & amber		NO	See COC	
				NO		

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~4.5 Disposal Method: _____ Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date: 1 Dec 04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: MW-04

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 930 Time End Purge: 1008 Time Sampled 1009

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				(2)	4	6	
(TD-DTW) 0.5	17.41	8.25	9.16	0.16	0.64	1.44	1.47

Time	941	948	955	1003			
Volume Purged (gal)	1.5	2.5	3.5	4.5			
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	16.9	16.9	16.8				
Ph	9.95	9.97	9.98	9.99			
Specific Conductivity (uncorrected) (µmhos)	16.20 ms	15.98 ms	16.46 ms	16.50 ms			
ORP	-145	~~-2~~-129	-128	-127			
Turbidity/Color	brown	brown	yellow brown	yellow brown			
Odor/Sheen							
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?	N	N	N	N			

Comments: _____

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: peri-pump & ultrameter

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
MW04	6	various		NO	see COC	
				NO		

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~ 5 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO – if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date: 1 DEC 04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: MW- IW01

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 1015 Time End Purge: 1049 Time Sampled 1050

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				2	4	6	
(TD-DTW) 0.5	18.58	8.61	9.97	0.16	0.64	1.44	1.6

Time	1028	1034	1040	1046			
Volume Purged (gal)	1.5	2.5	3.5	4.5			
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	16.0	15.9	16.2	16.3			
Ph	12.71	12.62	12.63	12.58			
Specific Conductivity (uncorrected) (~~µmhos~~)	21.43 ms	20.30 ms	21.90 ms	22.75 ms			
ORP	-122	-104	-103	-101			
Turbidity/Color	brown	brown	Yellow/brown	Yellow/brown			
Odor/Sheen							
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?	N	N	N	N			

Comments: _____

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: peri-pump & ultrameter

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
IW01	6	various		NO	see coc	
				NO		

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~5 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: injection well.

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date: 1DEC04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: MW- IW02

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 1053 Time End Purge: 1120 Time Sampled 1120

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				(2)	4	6	
(TD-DTW) 0.5	18.70	8.62	10.08	0.16	0.64	1.44	1.61

Time	1100	1106	1112	1118			
Volume Purged (gal)	1.5	2.5	3.5	4.5			
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	16.6	16.4	16.7	16.8			
Ph	12.27	12.12	12.14	12.13			
Specific Conductivity (uncorrected) (~~umhos~~)	25.56 ms	26.77 ms	27.81 ms	28.33 ms			
ORP	-92	-82	-72	-82			
Turbidity/Color	slight yellow	slight yellow	slight yellow	slight yellow			
Odor/Sheen							
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?	N	N	N	N			

Comments: _____

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: peri-pump & ultrameter

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
IW02	6	various		NO	See COC	
				NO		

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~5 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: Injection well

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO – if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date: 1 Dec 04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: MW- IW03

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 1140 Time End Purge: 1209 Time Sampled 1210

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				2	4	6	
(TD-DTW) 0.5	18.65	8.65	10.0	0.16	0.64	1.44	1.60

Time	1153	1159	1206				
Volume Purged (gal)	2	3	4				
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	15.3	16.6	16.5				
Ph	12.80	12.82	12.81				
Specific Conductivity (uncorrected) ~~(µmhos)~~	29.31 ms	32.20 ms	32.94 ms				
ORP	-80	-76	-85				
Turbidity/Color	Slight yellow	Slight yellow	Slight yellow				
Odor/Sheen							
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?	N	N	N				

Comments: _____

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: peri-pump & ultrameter

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
IW03	~~various~~ 6	various		NO	see COC	
				NO		

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~5 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: injection well

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO -- if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: _____

SECOR GROUNDWATER PURGE AND SAMPLE FORM

Date: 1 Dec 04

Project Name: Bee Jay Scales Project No.: 24CH.67201.01 Well No.: MW- IW04

Field Personnel: MM Static Water Level: _____

Water Level Measurement Method: SLOPE WATER LEVEL INDICATOR

Time Start Purge: 1230 Time End Purge: 1300 Time Sampled 1300

Measuring Point Description: North Top of Well Casing

Purge Method: Low Flow Pump Purge Depth: TD

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)			Casing Volume (gal)
				(2)	4	6	
(TD-DTW) 0.5	17.55	8.79	8.76	0.16	0.64	1.44	1.4

Time	1233	1240	1246	1253			
Volume Purged (gal)	1	2	3	4			
Purge Rate (gpm)	< 1gpm						
Temperature (°C)	15.6	16.79	16.4	16.9			
Ph	12.86	12.79	12.92	12.93			
Specific Conductivity (uncorrected) (~~µmhos~~)	23.74 ms	28.01 ms	30.61 ms	30.88 ms			
ORP	-61	-75	-78	-73			
Turbidity/Color	brown	Slight yellow	Slight yellow	Slight yellow			
Odor/Sheen							
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?	N	N	N	N			

Comments: _____

SAMPLE DATA:

Percent Recovery: NA Depth to Water at Sampling (ft): NM

Sampling Equipment: peri-pump & ultrameter

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
IW04	6	various ~~various~~		NO	Secor	
				NO		

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): ~4.5 Disposal Method: On Site Drum Drum Designation(s)/Volume: _____

System Treat _____

Comments: _____

WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO – if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: YES NO

Inside of Well Head and Outer Casing Dry?: YES NO

Well Casing?: YES NO

Comments: injection well

APPENDIX H
PILOT STUDY ANALYTICAL LABORATORY REPORTS

Phase II Remedial Investigation Report
Chevron Environmental Management Company
& BP America, Inc.

24CH.67201.00
May 17, 2005

Analytical Laboratory Report

Revised Report

port ID: S17902.01(02)
Generated on 03/31/2005

Report to

Attention: Ms. Marisa Patterson
SECOR
2321 Club Meridian Dr. #E
Okemos, MI 48864-4505
MSA# 94023

Phone: 517-349-9499 FAX: 517-349-6863

Report produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S17902.01
Project: Bee Jay Scales 24CH.67201.01
Submitted Date/Time: 07/09/2004 09:30
Sampled by: Michael McMahon
P.O. #:

Report Notes

Results relate only to items tested.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
"Not detected" indicates that parameter was not found at a level equal to or greater than the RDL.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories.

Violetta F. Murshak

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Revised Report

Merit Laboratories, Inc.

Sample ID: S17902.01
Sample Tag: MW04-070704-0
Collected Date/Time: 07/07/2004 16:45
Matrix: Groundwater
COC Reference: 017772

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
5	1 L Amber	None	Yes	2	3
1	32 oz Glass	None	Yes	2	3
2	250ml Plastic	H2SO4	Yes	2	3
1	250ml Plastic	None	Yes	2	3
1	125ml Plastic	HNO3	Yes	2	3
2	40 ml Glass	HCL	Yes	2	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	07/19/04 12:00	MSH		
Inorganics								
Alkalinity as CaCO3	490	mg/L	1	310.1	07/12/04 16:20	JKB		
Ammonia-N	780	mg/L	10	350.3	07/13/04 19:00	MJC	7664-41-7	
Nitrate-N	962	mg/L	0.2	300.0	07/15/04 13:39	JDP		
Nitrite-N	6.7	mg/L	0.2	300.0	07/15/04 13:09	JDP		
TOC	10	mg/L	1	415.1	07/19/04 12:00	JTW		O
Total Phosphorus	0.10	mg/L	0.02	365.2	07/15/04 13:00	MJC	7723-14-0T	
etals								
Arsenic, Dissolved	0.007	mg/L	0.002	200.8	07/28/04 15:00	PER	7440-38-2	
Iron, Dissolved	0.70	mg/L	0.02	200.8	07/28/04 15:00	PER	7439-89-6	
Manganese, Dissolved	0.377	mg/L	0.005	200.8	07/28/04 15:00	PER	7439-96-5	
Organics								
Chlorinated Herbicides								
Dicamba	Not detected	ug/L	2	8151	07/15/04 12:00	STL		O1
Dinoseb	320	ug/L	0.6	8151	07/15/04 12:00	STL		O1
2,4-D	Not detected	ug/L	4	8151	07/15/04 12:00	STL		O1
2,4,5-TP (Silvex)	Not detected	ug/L	1	8151	07/15/04 12:00	STL		O1
2,4,5-T	Not detected	ug/L	1	8151	07/15/04 12:00	STL		O1
Other / Misc.								
Subcontracting Shipped (Replicate 01)	Completed				07/12/04 15:30	PCS		

O-Analysis performed by outside laboratory

1-* The recoveries for the LCS/LCSD in batch 4196048 were low and outside of acceptance criteria.

Analytical Laboratory Report

AUG 2 5 2004

rt ID: S17915.01(01)
erated on 08/12/2004

Report to

Attention: Ms. Marisa Patterson
SECOR
2321 Club Meridian Dr. #E
Okemos, MI 48864-4505
MSA# 94023

Phone: 517-349-9499 FAX: 517-349-6863

Report produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S17915.01-S17915.02
Project: 24CH.67201.00 Bee Jay Scales
Submitted Date/Time: 07/12/2004 09:50
Sampled by: Michael McMahon
P.O. #:

Report Notes

Results relate only to items tested.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
"Not detected" indicates that parameter was not found at a level equal to or greater than the RDL.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories.

Violetta F. Murshak

Violetta F. Murshak
oratory Director

Analytical Laboratory Report

ample ID: S17915.01
Sample Tag: IW 1
Collected Date/Time: 07/08/2004
Matrix: Soil
COC Reference: 017774

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
7	Metal Cylinders	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Total Solids	82	%	1	160.3	07/15/04 7:04	LBR		
Ammonia-N	80	mg/kg	10	350.3	07/13/04 19:00	MJC		
Nitrate-N	332	mg/kg	20	300.0	07/15/04 11:23	JDP		
Nitrite-N	Not detected	mg/kg	20	300.0	07/15/04 11:23	JDP		
TOC	450	mg/kg	100	415.1	08/02/04 12:00	STL		O
Total Phosphorus	780	mg/kg	10	365.2	07/15/04 10:00	MJC		
Organics								
Chlorinated Herbicides								
Dicamba	Not detected	ug/kg	50	8150	08/06/04 12:00	STL		O1
Dinoseb	Not detected	ug/kg	20	8150	08/06/04 12:00	STL		O1
2,4-D	Not detected	ug/kg	200	8150	08/06/04 12:00	STL		O1
2,4,5-TP (Silvex)	Not detected	ug/kg	50	8150	08/06/04 12:00	STL		O1
2,4,5-T (and salts and esters)	Not detected	ug/kg	50	8150	08/06/04 12:00	STL		O1
Other / Misc.								
Subcontracting Shipped (Replicate 01)	Completed				07/21/04 15:00	PCS		

O-Analysis performed by outside laboratory
1-*The LCS associtated with batch 4204254 was recovered low and outside of criteria. All samples in the batch were re-extracted outside of holding time.

Analytical Laboratory Report

Sample ID: S17915.02
Sample Tag: IW 4
Collected Date/Time: 07/08/2004
Matrix: Soil
COC Reference: 017774

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
7	Metal Cylinders	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Total Solids	73	%	1	160.3	07/15/04 7:04	LBR		
Ammonia-N	1,260	mg/kg	10	350.3	07/13/04 19:00	MJC		
Nitrate-N	239	mg/kg	20	300.0	07/15/04 11:35	JDP		
Nitrite-N	Not detected	mg/kg	20	300.0	07/15/04 11:35	JDP		
TOC	440	mg/kg	100	415.1	08/02/04 12:00	STL		O
Total Phosphorus	760	mg/kg	10	365.2	07/15/04 10:00	MJC		
Organics								
Chlorinated Herbicides								
Dicamba	Not detected	ug/kg	50	8150	08/06/04 12:00	STL		O1
Dinoseb	Not detected	ug/kg	20	8150	08/06/04 12:00	STL		O1
2,4-D	Not detected	ug/kg	200	8150	08/06/04 12:00	STL		O1
2,4,5-TP (Silvex)	Not detected	ug/kg	50	8150	08/06/04 12:00	STL		O1
2,4,5-T (and salts and esters)	Not detected	ug/kg	50	8150	08/06/04 12:00	STL		O1
Other / Misc.								
Subcontracting Shipped (Replicate 01)	Completed				07/21/04 15:00	PCS		

O-Analysis performed by outside laboratory
1-*The LCS associtated with batch 4204254 was recovered low and outside of criteria. All samples in the batch were re-extracted outside of holding time.

Analytical Laboratory Report

AUG 25 2004

Report ID: S18191.01(01)
Generated on 08/16/2004

Report to

Attention: Ms. Marisa Patterson
SECOR
2321 Club Meridian Dr. #E
Okemos, MI 48864-4505
MSA# 94023

Phone: 517-349-9499 FAX: 517-349-6863

Report produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S18191.01-S18191.05
Project: 24CH.67201.00 BeeJay Scales
Submitted Date/Time: 07/30/2004 10:30
Sampled by: Michael McMahon
P.O. #:

Report Notes

Results relate only to items tested.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
"Not detected" indicates that parameter was not found at a level equal to or greater than the RDL.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories.

Violetta F. Murshak

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample ID: S18191.01
Sample Tag: MW04-290704-0
Collected Date/Time: 07/29/2004 11:17
Matrix: Groundwater
COC Reference: 023494

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	250ml Plastic	H2SO4	Yes	4	3
1	500ml Plastic	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Alkalinity as CaCO3	7,690	mg/L	1	310.1	08/02/04 13:55	JKB		
Ammonia-N	450	mg/L	10	350.3	08/03/04 18:00	MJC		
Nitrate-N	68.1	mg/L	0.2	300.0	07/30/04 17:28	JDP		
Nitrite-N	65.9	mg/L	0.2	300.0	07/30/04 17:28	JDP		
TOC	8,600	mg/L	1	415.1	08/11/04 12:00	Fiber		O
Total Phosphorus	5.30	mg/L	0.02	365.2	08/02/04 18:00	MJC		

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Sample ID: S18191.02
ple Tag: IW01-290704-0
Collected Date/Time: 07/29/2004 12:06
Matrix: Groundwater
COC Reference: 023494

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	250ml Plastic	H2SO4	Yes	4	3
1	500ml Plastic	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Alkalinity as CaCO3	12,600	mg/L	1	310.1	08/02/04 14:00	JKB		
Ammonia-N	62	mg/L	1	350.3	08/03/04 18:00	MJC		
Nitrate-N	Not detected	mg/L	0.2	300.0	07/30/04 16:04	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	07/30/04 16:04	JDP		
TOC	15,000	mg/L	1	415.1	08/11/04 12:00	Fiber		O
Total Phosphorus	19.6	mg/L	0.1	365.2	08/02/04 18:00	MJC		

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Sample ID: S18191.03
Sample Tag: IW02-290704-0
Collected Date/Time: 07/29/2004 12:59
Matrix: Groundwater
COC Reference: 023494

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	250ml Plastic	H2SO4	Yes	4	3
1	500ml Plastic	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Alkalinity as CaCO3	11,600	mg/L	1	310.1	08/02/04 14:05	JKB		
Ammonia-N	32	mg/L	1	350.3	08/03/04 18:00	MJC		
Nitrate-N	Not detected	mg/L	0.2	300.0	07/30/04 16:16	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	07/30/04 16:16	JDP		
TOC	14,000	mg/L	1	415.1	08/11/04 12:00	Fiber		O
Total Phosphorus	16.2	mg/L	0.1	365.2	08/02/04 18:00	MJC		

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Sample ID: S18191.04
Sample Tag: IW03-290704-0
Collected Date/Time: 07/29/2004 13:41
Matrix: Groundwater
COC Reference: 023494

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	250ml Plastic	H2SO4	Yes	4	3
1	500ml Plastic	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Alkalinity as CaCO3	11,300	mg/L	1	310.1	08/02/04 14:10	JKB		
Ammonia-N	19.5	mg/L	0.1	350.3	08/03/04 18:00	MJC		
Nitrate-N	Not detected	mg/L	0.2	300.0	07/30/04 16:27	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	07/30/04 16:27	JDP		
TOC	13,000	mg/L	1	415.1	08/11/04 12:00	Fiber		O
Total Phosphorus	15.2	mg/L	0.1	365.2	08/02/04 18:00	MJC		

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Sample ID: S18191.05
Sample Tag: IW04-290704-0
Collected Date/Time: 07/29/2004 14:04
Matrix: Groundwater
COC Reference: 023494

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	250ml Plastic	H2SO4	Yes	4	3
1	500ml Plastic	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Alkalinity as CaCO3	11,200	mg/L	1	310.1	08/02/04 14:15	JKB		
Ammonia-N	62	mg/L	1	350.3	08/03/04 18:00	MJC		
Nitrate-N	Not detected	mg/L	0.2	300.0	07/30/04 16:39	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	07/30/04 16:39	JDP		
TOC	13,000	mg/L	1	415.1	08/11/04 12:00	Fiber		
Total Phosphorus	15.3	mg/L	0.1	365.2	08/02/04 18:00	MJC		

Analytical Laboratory Report

ort ID: S18306.01(01)
erated on 08/23/2004

Report to

Attention: Ms. Marisa Patterson
SECOR
2321 Club Meridian Dr. #E
Okemos, MI 48864-4505
MSA# 94023

Phone: 517-349-9499 FAX: 517-349-6863

Report produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S18306.01-S18306.05
Project: BeeJay Scales 24CH-67201
Submitted Date/Time: 08/10/2004 08:00
Sampled by: M. McMahon
P.O. #:

Report Notes

Results relate only to items tested.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
"Not detected" indicates that parameter was not found at a level equal to or greater than the RDL.
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Violetta F. Murshak

Violetta F. Murshak
oratory Director

Analytical Laboratory Report

Sample ID: S18306.01
Sample Tag: MW04-060804-0
Collected Date/Time: 08/06/2004 10:00
Matrix: Groundwater
COC Reference: 023496

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	250ml Plastic	H2SO4	Yes	8	3
1	500ml Plastic	None	Yes	8	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Alkalinity as CaCO3	7,940	mg/L	1	310.1	08/11/04 14:50	JKB		
Ammonia-N	490	mg/L	1	350.3	08/10/04 12:00	MJC		
Nitrate-N	Not detected	mg/L	0.2	300.0	08/12/04 08:14	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	08/12/04 08:14	JDP		
TOC	8,400	mg/L	1	415.1	08/16/04 12:00	Fiber		
Total Phosphorus	4.35	mg/L	0.02	365.2	08/18/04 15:00	MJC		

Analytical Laboratory Report

Sample ID: S18306.02
nple Tag: IW01-060804-0
Collected Date/Time: 08/06/2004 10:54
Matrix: Groundwater
COC Reference: 023496

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	250ml Plastic	H2SO4	Yes	8	3
1	500ml Plastic	None	Yes	8	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Alkalinity as CaCO3	10,880	mg/L	1	310.1	08/11/04 15:00	JKB		
Ammonia-N	63	mg/L	1	350.3	08/10/04 12:00	MJC		
Nitrate-N	Not detected	mg/L	0.2	300.0	08/12/04 08:26	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	08/12/04 08:26	JDP		
TOC	14,000	mg/L	1	415.1	08/16/04 12:00	Fiber		
Total Phosphorus	19.0	mg/L	0.1	365.2	08/18/04 15:00	MJC		

Analytical Laboratory Report

Sample ID: S18306.03
Sample Tag: IW02-060804-0
Collected Date/Time: 08/06/2004 11:40
Matrix: Groundwater
COC Reference: 023496

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	250ml Plastic	H2SO4	Yes	8	3
1	500ml Plastic	None	Yes	8	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Alkalinity as CaCO3	10,020	mg/L	1	310.1	08/11/04 15:05	JKB		
Ammonia-N	48	mg/L	1	350.3	08/10/04 12:00	MJC		
Nitrate-N	Not detected	mg/L	0.2	300.0	08/12/04 08:38	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	08/12/04 08:38	JDP		
TOC	14,000	mg/L	1	415.1	08/16/04 12:00	Fiber		
Total Phosphorus	14.8	mg/L	0.1	365.2	08/18/04 15:00	MJC		

Analytical Laboratory Report

Sample ID: S18306.04
Sample Tag: IW03-060804-0
Collected Date/Time: 08/06/2004 12:30
Matrix: Groundwater
COC Reference: 023496

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	250ml Plastic	H2SO4	Yes	8	3
1	500ml Plastic	None	Yes	8	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Alkalinity as CaCO3	9,680	mg/L	1	310.1	08/11/04 15:10	JKB		
Ammonia-N	25	mg/L	1	350.3	08/10/04 12:00	MJC		
Nitrate-N	Not detected	mg/L	0.2	300.0	08/12/04 08:49	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	08/12/04 08:49	JDP		
TOC	14,000	mg/L	1	415.1	08/16/04 12:00	Fiber		
Total Phosphorus	14.0	mg/L	0.1	365.2	08/18/04 15:00	MJC		

Analytical Laboratory Report

Sample ID: S18306.05
ple Tag: IW04-060804-0
Collected Date/Time: 08/06/2004 13:08
Matrix: Groundwater
COC Reference: 023496

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	250ml Plastic	H2SO4	Yes	8	3
1	500ml Plastic	None	Yes	8	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Alkalinity as CaCO3	10,080	mg/L	1	310.1	08/11/04 15:15	JKB		
Ammonia-N	70	mg/L	1	350.3	08/10/04 12:00	MJC		
Nitrate-N	Not detected	mg/L	0.2	300.0	08/12/04 09:01	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	08/12/04 09:01	JDP		
TOC	13,000	mg/L	1	415.1	08/16/04 12:00	Fiber		
Total Phosphorus	14.6	mg/L	0.1	365.2	08/18/04 15:00	MJC		

Analytical Laboratory Report

Report ID: S18368.01(01)
Generated on 08/23/2004

Report to

Attention: Ms. Marisa Patterson
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2321 Club Meridian Dr. #E
Okemos, MI 48864-4505
MSA# 94023

Phone: 517-349-9499 FAX: 517-349-6863

Report produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S18368.01-S18368.05
Project: 24CH.67201.00.0013 Bee Jay Scales
Submitted Date/Time: 08/13/2004 09:45
Sampled by: M. McMahon
P.O. #:

Report Notes

Results relate only to items tested.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
"Not detected" indicates that parameter was not found at a level equal to or greater than the RDL.
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Violetta F. Murshak

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample ID: S18368.01
ple Tag: MW04-120804-0
Collected Date/Time: 08/12/2004 09:58
Matrix: Groundwater
COC Reference: 023497

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	500ml Plastic	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Alkalinity as CaCO3	7,630	mg/L	1	310.1	08/16/04 11:25	JKB		
Ammonia-N	530	mg/L	10	350.3	08/17/04 17:00	MJC		
Nitrate-N	Not detected	mg/L	0.2	300.0	08/13/04 12:50	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	08/13/04 12:50	JDP		
TOC	8,000	mg/L	1	415.1	08/16/04 12:00	Fiber		
Total Phosphorus	4.20	mg/L	0.02	365.2	08/18/04 15:00	MJC		

Analytical Laboratory Report

Sample ID: S18368.02
ple Tag: IW01-120804-0
Collected Date/Time: 08/12/2004 10:45
Matrix: Groundwater
COC Reference: 023497

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	500ml Plastic	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Alkalinity as CaCO3	11,600	mg/L	1	310.1	08/16/04 11:35	JKB		
Ammonia-N	87	mg/L	1	350.3	08/17/04 17:00	MJC		
Nitrate-N	Not detected	mg/L	0.2	300.0	08/13/04 13:02	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	08/13/04 13:02	JDP		
TOC	15,000	mg/L	1	415.1	08/16/04 12:00	Fiber		
Total Phosphorus	16.0	mg/L	0.1	365.2	08/18/04 15:00	MJC		

Analytical Laboratory Report

Sample ID: S18368.03
ple Tag: IW02-120804-0
Collected Date/Time: 08/12/2004 11:26
Matrix: Groundwater
COC Reference: 023497

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	500ml Plastic	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Alkalinity as CaCO3	12,100	mg/L	1	310.1	08/16/04 11:40	JKB		
Ammonia-N	58	mg/L	1	350.3	08/17/04 17:00	MJC		
Nitrate-N	Not detected	mg/L	0.2	300.0	08/13/04 13:13	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	08/13/04 13:13	JDP		
TOC	13,000	mg/L	1	415.1	08/16/04 12:00	Fiber		
Total Phosphorus	12.1	mg/L	0.1	365.2	08/18/04 15:00	MJC		

Analytical Laboratory Report

Sample ID: S18368.04
Sample Tag: IW03-120804-0
Collected Date/Time: 08/12/2004 12:11
Matrix: Groundwater
COC Reference: 023497

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	500ml Plastic	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Alkalinity as CaCO3	9,760	mg/L	1	310.1	08/16/04 11:45	JKB		
Ammonia-N	25	mg/L	1	350.3	08/17/04 17:00	MJC		
Nitrate-N	Not detected	mg/L	0.2	300.0	08/13/04 13:25	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	08/13/04 13:25	JDP		
TOC	14,000	mg/L	1	415.1	08/16/04 12:00	Fiber		
Total Phosphorus	12.0	mg/L	0.1	365.2	08/18/04 15:00	MJC		

Analytical Laboratory Report

Sample ID: S18368.05
Sample Tag: IW04-120804-0
Collected Date/Time: 08/12/2004 12:45
Matrix: Groundwater
COC Reference: 023497

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	500ml Plastic	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Alkalinity as CaCO3	10,300	mg/L	1	310.1	08/16/04 11:55	JKB		
Ammonia-N	66	mg/L	1	350.3	08/17/04 17:00	MJC		
Nitrate-N	Not detected	mg/L	0.2	300.0	08/13/04 13:37	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	08/13/04 13:37	JDP		
TOC	14,000	mg/L	1	415.1	08/16/04 12:00	Fiber		
Total Phosphorus	13.6	mg/L	0.1	365.2	08/18/04 15:00	MJC		

Analytical Laboratory Report

rt ID: S18474.01(01)
erated on 08/31/2004

Report to

Attention: Ms. Marisa Patterson
SECOR
2321 Club Meridian Dr. #E
Okemos, MI 48864-4505
MSA# 94023

Phone: 517-349-9499 FAX: 517-349-6863

Report produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S18474.01-S18474.05
Project: 24CH.67201.00.0013 Bee Jay Scales
Submitted Date/Time: 08/23/2004 09:00
Sampled by: M. McMahon
P.O. #:

Report Notes

Results relate only to items tested.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
"Not detected" indicates that parameter was not found at a level equal to or greater than the RDL.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories.

Violetta F. Murshak

Violetta F. Murshak
oratory Director

Analytical Laboratory Report

Sample ID: S18474.01
ple Tag: MW04-190804-0
Collected Date/Time: 08/19/2004 11:22
Matrix: Groundwater
COC Reference: 023498

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	500ml Plastic	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Alkalinity as CaCO3	6,800	mg/L	1	310.1	08/26/04 16:45	JKB		
Ammonia-N	550	mg/L	10	350.3	08/26/04 18:00	MJC		
Nitrate-N	Not detected	mg/L	0.2	300.0	08/23/04 15:26	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	08/23/04 15:26	JDP		
TOC	6,200	mg/L	1	415.1	08/26/04 12:00	JTW		O
Total Phosphorus	2.53	mg/L	0.02	365.2	08/23/04 19:00	MJC		

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Sample ID: S18474.02
ple Tag: IW01-190804-0
Collected Date/Time: 08/19/2004 12:04
Matrix: Groundwater
COC Reference: 023498

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	500ml Plastic	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Alkalinity as CaCO3	10,300	mg/L	1	310.1	08/26/04 16:50	JKB		
Ammonia-N	160	mg/L	10	350.3	08/26/04 18:00	MJC		
Nitrate-N	Not detected	mg/L	0.2	300.0	08/23/04 15:37	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	08/23/04 15:37	JDP		
TOC	14,000	mg/L	1	415.1	08/26/04 12:00	JTW		O
Total Phosphorus	14.7	mg/L	0.1	365.2	08/23/04 19:00	MJC		

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Sample ID: S18474.03
ple Tag: IW02-190804-0
Collected Date/Time: 08/19/2004 12:49
Matrix: Groundwater
COC Reference: 023498

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	500ml Plastic	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Alkalinity as CaCO3	10,700	mg/L	1	310.1	08/26/04 16:55	JKB		
Ammonia-N	83	mg/L	1	350.3	08/26/04 18:00	MJC		
Nitrate-N	Not detected	mg/L	0.2	300.0	08/23/04 15:49	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	08/23/04 15:49	JDP		
TOC	8,400	mg/L	1	415.1	08/26/04 12:00	JTW		O
Total Phosphorus	11.4	mg/L	0.1	365.2	08/23/04 19:00	MJC		

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Sample ID: S18474.04
ple Tag: IW03-190804-0
Collected Date/Time: 08/19/2004 13:33
Matrix: Groundwater
COC Reference: 023498

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	500ml Plastic	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Alkalinity as CaCO3	10,700	mg/L	1	310.1	08/26/04 17:00	JKB		
Ammonia-N	37	mg/L	1	350.3	08/26/04 18:00	MJC		
Nitrate-N	Not detected	mg/L	0.2	300.0	08/23/04 16:01	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	08/23/04 16:01	JDP		
TOC	13,000	mg/L	1	415.1	08/26/04 12:00	JTW		O
Total Phosphorus	10.5	mg/L	0.1	365.2	08/23/04 19:00	MJC		

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Sample ID: S18474.05
ple Tag: IW04-190804-0
Collected Date/Time: 08/19/2004 14:08
Matrix: Groundwater
COC Reference: 023498

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	500ml Plastic	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Alkalinity as CaCO3	9,700	mg/L	1	310.1	08/26/04 17:05	JKB		
Ammonia-N	83	mg/L	1	350.3	08/26/04 18:00	MJC		
Nitrate-N	Not detected	mg/L	0.2	300.0	08/23/04 16:12	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	08/23/04 16:12	JDP		
TOC	13,000	mg/L	1	415.1	08/26/04 12:00	JTW		O
Total Phosphorus	14.0	mg/L	0.1	365.2	08/23/04 19:00	MJC		

O-Analysis performed by outside laboratory

Analytical Laboratory Report

SEP 1 6 2004

ort ID: S18591.01(01)
erated on 09/08/2004

Report to

Attention: Ms. Marisa Patterson
SECOR
2321 Club Meridian Dr. #E
Okemos, MI 48864-4505
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Report produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S18591.01-S18591.05
Project: 24CH.67201.00 Task #0013
Submitted Date/Time: 08/30/2004 09:00
Sampled by: M. McMahon
P.O. #:

Report Notes

Results relate only to items tested.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
"Not detected" indicates that parameter was not found at a level equal to or greater than the RDL.
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Violetta F. Murshak

Violetta F. Murshak
oratory Director

Analytical Laboratory Report

Sample ID: S18591.01
ple Tag: MW04-270804-0
Collected Date/Time: 08/27/2004 06:53
Matrix: Groundwater
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	250ml Plastic	H2SO4	Yes	1	3
1	500ml Plastic	None	Yes	1	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Alkalinity as CaCO3	6,000	mg/L	1	310.1	09/03/04 16:35	JKB		
Ammonia-N	550	mg/L	10	350.3	09/06/04 20:00	MJC		
Nitrate-N	Not detected	mg/L	0.2	300.0	09/02/04 07:47	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	09/02/04 07:47	JDP		
TOC	6,100	mg/L	1	415.1	09/01/04 12:00	JTW		O
Total Phosphorus	2.06	mg/L	0.02	365.2	09/01/04 20:00	MJC		

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Sample ID: S18591.02
ple Tag: IW01-270804-0
Collected Date/Time: 08/27/2004 07:44
Matrix: Groundwater
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	250ml Plastic	H2SO4	Yes	1	3
1	500ml Plastic	None	Yes	1	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Alkalinity as CaCO3	9,600	mg/L	1	310.1	09/03/04 16:40	JKB		
Ammonia-N	250	mg/L	10	350.3	09/06/04 20:00	MJC		
Nitrate-N	Not detected	mg/L	0.2	300.0	09/02/04 08:11	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	09/02/04 08:11	JDP		
TOC	13,000	mg/L	1	415.1	09/01/04 12:00	JTW		O
Total Phosphorus	14.4	mg/L	0.1	365.2	09/01/04 20:00	MJC		

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Sample ID: S18591.03
ple Tag: IW02-270804-0
Collected Date/Time: 08/27/2004 08:40
Matrix: Groundwater
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	250ml Plastic	H2SO4	Yes	1	3
1	500ml Plastic	None	Yes	1	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Alkalinity as CaCO3	10,100	mg/L	1	310.1	09/03/04 16:45	JKB		
Ammonia-N	110	mg/L	10	350.3	09/06/04 20:00	MJC		
Nitrate-N	Not detected	mg/L	0.2	300.0	09/02/04 08:22	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	09/02/04 08:22	JDP		
TOC	13,000	mg/L	1	415.1	09/01/04 12:00	JTW		O
Total Phosphorus	9.04	mg/L	0.02	365.2	09/01/04 20:00	MJC		

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Sample ID: S18591.04
ple Tag: IW03-270804-0
Collected Date/Time: 08/27/2004 09:53
Matrix: Groundwater
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	250ml Plastic	H2SO4	Yes	1	3
1	500ml Plastic	None	Yes	1	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Alkalinity as CaCO3	9,200	mg/L	1	310.1	09/03/04 16:50	JKB		
Ammonia-N	41	mg/L	1	350.3	09/06/04 20:00	MJC		
Nitrate-N	Not detected	mg/L	0.2	300.0	09/02/04 08:34	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	09/02/04 08:34	JDP		
TOC	14,000	mg/L	1	415.1	09/01/04 12:00	JTW		O
Total Phosphorus	10.2	mg/L	0.1	365.2	09/01/04 20:00	MJC		

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Sample ID: S18591.05
ple Tag: IW04-270804-0
Collected Date/Time: 08/27/2004 10:36
Matrix: Groundwater
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	250ml Plastic	H2SO4	Yes	1	3
1	500ml Plastic	None	Yes	1	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Alkalinity as CaCO3	10,400	mg/L	1	310.1	09/03/04 16:55	JKB		
Ammonia-N	100	mg/L	10	350.3	09/06/04 20:00	MJC		
Nitrate-N	Not detected	mg/L	0.2	300.0	09/02/04 08:46	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	09/02/04 08:46	JDP		
TOC	13,000	mg/L	1	415.1	09/01/04 12:00	JTW		O
Total Phosphorus	16.6	mg/L	0.1	365.2	09/01/04 20:00	MJC		

O-Analysis performed by outside laboratory

Analytical Laboratory Report

rt ID: S18727.01(01)
rated on 10/21/2004

Report to

Attention: Ms. Marisa Patterson
SECOR
2321 Club Meridian Dr. #E
Okemos, MI 48864-4505
MSA# 94023

Phone: 517-349-9499 FAX: 517-349-6863

Report produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S18727.01-S18727.05
Project: 24CH.67201.00.0013 Bee Jay Scales
Submitted Date/Time: 09/08/2004 09:50
Sampled by: Unknown
P.O. #:

Report Notes

Results relate only to items tested.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
"Not detected" indicates that parameter was not found at a level equal to or greater than the RDL.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories.

Violetta F. Murshak

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample ID: S18727.01
ple Tag: MW04-070904-0
Collected Date/Time: 09/07/2004 09:58
Matrix: Groundwater
COC Reference: 05904

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	500ml Plastic	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3
1	125ml Plastic	HNO3	Yes	4	3
2	1 L Amber	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	09/17/04 13:30	MSH		
Inorganics								
Alkalinity as CaCO3	6,250	mg/L	1	310.1	09/10/04 11:55	JKB		
Ammonia-N	560	mg/L	10	350.3	09/14/04 17:00	MJC	7664-41-7	
Nitrate-N	Not detected	mg/L	0.2	300.0	09/09/04 10:31	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	09/09/04 10:31	JDP		
TOC	5,500	mg/L	1	415.1	09/10/04 12:00	Fiber		
Total Phosphorus	1.71	mg/L	0.02	365.2	09/13/04 15:00	MJC	7723-14-0T	
Metals								
nic	0.069	mg/L	0.002	200.8	09/20/04 16:38	PER	7440-38-2	
	4.59	mg/L	0.02	200.8	09/20/04 16:38	SLS	7439-89-6	
Manganese	7.54	mg/L	0.005	200.8	09/20/04 16:38	SLS	7439-96-5	
Organics								
Dinoseb	Not detected	ug/L	0.6	8151	09/28/04 12:00	STL		O
Other / Misc.								
Subcontracting Shipped (Replicate 01)	Completed				09/20/04 16:00	PCS		

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Sample ID: S18727.02
ple Tag: IW01-070904-0
Collected Date/Time: 09/07/2004 10:47
Matrix: Groundwater
COC Reference: 05904

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	500ml Plastic	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3
1	125ml Plastic	HNO3	Yes	4	3
1	1 L Amber	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	09/17/04 13:30	MSH		
Inorganics								
Alkalinity as CaCO3	11,000	mg/L	1	310.1	09/10/04 12:00	JKB		
Ammonia-N	330	mg/L	10	350.3	09/14/04 17:00	MJC	7664-41-7	
Nitrate-N	Not detected	mg/L	0.2	300.0	09/09/04 10:42	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	09/09/04 10:42	JDP		
TOC	11,000	mg/L	1	415.1	09/10/04 12:00	Fiber		
Total Phosphorus	11.6	mg/L	0.1	365.2	09/13/04 15:00	MJC	7723-14-0T	
Metals								
nic	0.124	mg/L	0.002	200.8	09/20/04 16:40	PER	7440-38-2	
	2.29	mg/L	0.02	200.8	09/20/04 16:40	SLS	7439-89-6	
Manganese	7.56	mg/L	0.005	200.8	09/20/04 16:40	SLS	7439-96-5	
Organics								
Dinoseb	Not detected	ug/L	0.6	8151	09/26/04 12:00	STL		O
Other / Misc.								
Subcontracting Shipped (Replicate 01)	Completed				09/08/04 16:00	PCS		

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Sample ID: S18727.03
ple Tag: IW02-070904-0
Collected Date/Time: 09/07/2004 11:30
Matrix: Groundwater
COC Reference: 05904

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	500ml Plastic	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3
1	125ml Plastic	HNO3	Yes	4	3
1	1 L Amber	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	09/17/04 13:30	MSH		
Inorganics								
Alkalinity as CaCO3	10,500	mg/L	1	310.1	09/10/04 12:10	JKB		
Ammonia-N	200	mg/L	10	350.3	09/14/04 17:00	MJC	7664-41-7	
Nitrate-N	Not detected	mg/L	0.2	300.0	09/09/04 10:54	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	09/09/04 10:54	JDP		
TOC	12,000	mg/L	1	415.1	09/10/04 12:00	Fiber		
Total Phosphorus	6.52	mg/L	0.02	365.2	09/13/04 15:00	MJC	7723-14-0T	
Metals								
nic	0.071	mg/L	0.002	200.8	09/20/04 16:42	PER	7440-38-2	
	1.27	mg/L	0.02	200.8	09/20/04 16:42	SLS	7439-89-6	
Manganese	3.61	mg/L	0.005	200.8	09/20/04 16:42	SLS	7439-96-5	
Organics								
Dinoseb	Not detected	ug/L	0.6	8151	09/26/04 12:00	STL		O
Other / Misc.								
Subcontracting Shipped (Replicate 01)	Completed				09/08/04 16:00	PCS		

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Sample ID: S18727.04
Sample Tag: IW03-070904-0
Collected Date/Time: 09/07/2004 12:13
Matrix: Groundwater
COC Reference: 05904

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	500ml Plastic	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3
1	125ml Plastic	HNO3	Yes	4	3
2	1 L Amber	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	09/17/04 13:30	MSH		
Inorganics								
Alkalinity as CaCO3	10,600	mg/L	1	310.1	09/10/04 12:15	JKB		
Ammonia-N	67	mg/L	1	350.3	09/14/04 17:00	MJC	7664-41-7	
Nitrate-N	Not detected	mg/L	0.2	300.0	09/09/04 11:06	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	09/09/04 11:06	JDP		
TOC	11,000	mg/L	1	415.1	09/10/04 12:00	Fiber		
Total Phosphorus	9.18	mg/L	0.02	365.2	09/13/04 15:00	MJC	7723-14-0T	
Metals								
Arsenic	0.046	mg/L	0.002	200.8	09/20/04 16:45	PER	7440-38-2	
Iron	1.84	mg/L	0.02	200.8	09/20/04 16:45	SLS	7439-89-6	
Manganese	3.96	mg/L	0.005	200.8	09/20/04 16:45	SLS	7439-96-5	
Organics								
Dinoseb	Not detected	ug/L	0.6	8151	09/28/04 12:00	STL		O
Other / Misc.								
Subcontracting Shipped (Replicate 01)	Completed				09/20/04 16:00	PCS		

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Sample ID: S18727.05
ple Tag: IW04-070904-0
Collected Date/Time: 09/07/2004 12:56
Matrix: Groundwater
COC Reference: 05904

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	500ml Plastic	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3
1	125ml Plastic	HNO3	Yes	4	3
2	1 L Amber	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	09/17/04 13:30	MSH		
Inorganics								
Alkalinity as CaCO3	11,000	mg/L	1	310.1	09/10/04 12:20	JKB		
Ammonia-N	130	mg/L	10	350.3	09/14/04 17:00	MJC	7664-41-7	
Nitrate-N	Not detected	mg/L	0.2	300.0	09/09/04 11:18	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	09/09/04 11:18	JDP		
TOC	13,000	mg/L	1	415.1	09/10/04 12:00	Fiber		
Total Phosphorus	10.6	mg/L	0.1	365.2	09/13/04 15:00	MJC	7723-14-0T	
Metals								
nic	0.061	mg/L	0.002	200.8	09/20/04 16:47	PER	7440-38-2	
	0.73	mg/L	0.02	200.8	09/20/04 16:47	SLS	7439-89-6	
Manganese	2.99	mg/L	0.005	200.8	09/20/04 16:47	SLS	7439-96-5	
Organics								
Dinoseb	Not detected	ug/L	0.6	8151	09/28/04 12:00	STL		O
Other / Misc.								
Subcontracting Shipped (Replicate 01)	Completed				09/20/04 16:00	PCS		

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Report ID: S20047.01(01)
Generated on 12/23/2004

Report to

Attention: Ms. Marisa Patterson
SECOR
2321 Club Meridian Dr. #E
Okemos, MI 48864-4505
MSA# 94023

Phone: 517-349-9499 FAX: 517-349-6863

Report produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S20047.01-S20047.05
Project: 24CH.67201.00.0013 Bee Jay Scales
Submitted Date/Time: 12/03/2004 10:15
Sampled by: Michael McMahon
P.O. #:

Report Notes

Results relate only to items tested.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
"Not detected" indicates that parameter was not found at a level equal to or greater than the RDL.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories.

Violetta F. Murshak

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample ID: S20047.01
ple Tag: MW04-011204-0
Collected Date/Time: 12/01/2004 10:09
Matrix: Groundwater
COC Reference: 026173

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	500ml Plastic	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3
1	125ml Plastic	HNO3	Yes	4	3
2	1 L Amber	None	Yes	4	3
1	125ml Amber	H2SO4	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	12/14/04 14:00	SLS		
Inorganics								
Alkalinity as CaCO3	11,200	mg/L	1	310.1	12/15/04 12:20	JKB		
Ammonia-N	460	mg/L	10	350.3	12/10/04 22:00	MJC	7664-41-7	
Nitrate-N	Not detected	mg/L	0.2	300.0	12/06/04 10:35	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	12/06/04 10:35	JDP		
TOC	838	mg/L	1.0	415.1	12/10/04 09:30	JDP		
Total Phosphorus	4.15	mg/L	0.02	365.2	12/06/04 21:00	MJC	7723-14-0T	
als								
enic	0.277	mg/L	0.002	200.8	12/14/04 17:59	SLS	7440-38-2	
Iron	7.14	mg/L	0.02	200.8	12/14/04 15:48	SLS	7439-89-6	
Manganese	0.275	mg/L	0.005	200.8	12/14/04 15:48	SLS	7439-96-5	
Organics								
Dinoseb	2.6	ug/L	0.6	8151	12/21/04 12:00	STL		O1

O-Analysis performed by outside laboratory 1-*The percent difference between the original and confirmation analyses is greater than 40%

Analytical Laboratory Report

Sample ID: S20047.02
ple Tag: IW01-011204-0
Collected Date/Time: 12/01/2004 10:50
Matrix: Groundwater
COC Reference: 026173

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	500ml Plastic	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3
1	125ml Plastic	HNO3	Yes	4	3
2	1 L Amber	None	Yes	4	3
1	125ml Amber	H2SO4	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	12/14/04 14:00	SLS		
Inorganics								
Alkalinity as CaCO3	11,900	mg/L	1	310.1	12/15/04 12:30	JKB		
Ammonia-N	490	mg/L	10	350.3	12/10/04 22:00	MJC	7664-41-7	
Nitrate-N	159	mg/L	0.2	300.0	12/06/04 13:59	JDP		
Nitrite-N	10.1	mg/L	0.2	300.0	12/06/04 13:07	JDP		
TOC	2,420	mg/L	1.0	415.1	12/10/04 10:00	JDP		
Total Phosphorus	37	mg/L	1	365.2	12/06/04 21:00	MJC	7723-14-0T	
als								
nic	3.59	mg/L	0.002	200.8	12/14/04 18:01	SLS	7440-38-2	
Iron	3.90	mg/L	0.02	200.8	12/14/04 15:51	SLS	7439-89-6	
Manganese	0.291	mg/L	0.005	200.8	12/14/04 15:51	SLS	7439-96-5	
Organics								
Dinoseb	3.1	ug/L	0.6	8151	12/21/04 12:00	STL		O1

O-Analysis performed by outside laboratory 1-*The percent difference between the original and confirmation analyses is greater than 40%

Analytical Laboratory Report

Sample ID: S20047.03
ple Tag: IW02-011204-0
Collected Date/Time: 12/01/2004 11:20
Matrix: Groundwater
COC Reference: 026173

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	500ml Plastic	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3
1	125ml Plastic	HNO3	Yes	4	3
2	1 L Amber	None	Yes	4	3
1	125ml Amber	H2SO4	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	12/14/04 14:00	SLS		
Inorganics								
Alkalinity as CaCO3	13,300	mg/L	1	310.1	12/15/04 12:35	JKB		
Ammonia-N	450	mg/L	10	350.3	12/10/04 22:00	MJC	7664-41-7	
Nitrate-N	Not detected	mg/L	0.2	300.0	12/06/04 10:59	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	12/06/04 10:59	JDP		
TOC	7,560	mg/L	1.0	415.1	12/10/04 10:30	JDP		
Total Phosphorus	23.2	mg/L	0.1	365.2	12/06/04 21:00	MJC	7723-14-0T	
ls								
nic	1.98	mg/L	0.002	200.8	12/14/04 18:03	SLS	7440-38-2	
Iron	0.72	mg/L	0.02	200.8	12/14/04 15:53	SLS	7439-89-6	
Manganese	0.234	mg/L	0.005	200.8	12/14/04 15:53	SLS	7439-96-5	
Organics								
Dinoseb	Not detected	ug/L	0.6	8151	12/21/04 12:00	STL		O1

O-Analysis performed by outside laboratory 1-*The difference between the original and confirmation analyses is greater than 40%

Analytical Laboratory Report

Sample ID: S20047.04
ple Tag: IW03-011204-0
Collected Date/Time: 12/01/2004 12:10
Matrix: Groundwater
COC Reference: 026173

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	500ml Plastic	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3
1	125ml Plastic	HNO3	Yes	4	3
2	1 L Amber	None	Yes	4	3
1	125ml Amber	H2SO4	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	12/14/04 14:00	SLS		
Inorganics								
Alkalinity as CaCO3	13,300	mg/L	1	310.1	12/15/04 12:40	JKB		
Ammonia-N	450	mg/L	10	350.3	12/10/04 22:00	MJC	7664-41-7	
Nitrate-N	Not detected	mg/L	0.2	300.0	12/06/04 11:10	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	12/06/04 11:10	JDP		
TOC	8,230	mg/L	1.0	415.1	12/10/04 10:45	JDP		
Total Phosphorus	17.2	mg/L	0.1	365.2	12/06/04 21:00	MJC	7723-14-0T	
als								
nic	1.86	mg/L	0.002	200.8	12/14/04 18:05	SLS	7440-38-2	
Iron	2.42	mg/L	0.02	200.8	12/14/04 15:55	SLS	7439-89-6	
Manganese	0.189	mg/L	0.005	200.8	12/14/04 15:55	SLS	7439-96-5	
Organics								
Dinoseb	3.1	ug/L	0.6	8151	12/21/04 12:00	STL		O1

O-Analysis performed by outside laboratory 1-*The difference between the original and confirmation analyses is greater than 40%

Analytical Laboratory Report

Sample ID: S20047.05
ple Tag: IW04-011204-0
Collected Date/Time: 12/01/2004 13:00
Matrix: Groundwater
COC Reference: 026173

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	500ml Plastic	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3
1	125ml Plastic	HNO3	Yes	4	3
2	1 L Amber	None	Yes	4	3
1	125ml Amber	H2SO4	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			3015A	12/14/04 14:00	SLS		
Inorganics								
Alkalinity as CaCO3	14,500	mg/L	1	310.1	12/15/04 12:45	JKB		
Ammonia-N	600	mg/L	10	350.3	12/10/04 22:00	MJC	7664-41-7	
Nitrate-N	0.4	mg/L	0.2	300.0	12/06/04 14:57	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	12/06/04 14:57	JDP		
TOC	5,420	mg/L	1.0	415.1	12/10/04 11:00	JDP		
Total Phosphorus	30	mg/L	1	365.2	12/06/04 21:00	MJC	7723-14-0T	
als								
enic	2.44	mg/L	0.002	200.8	12/14/04 18:07	SLS	7440-38-2	
Iron	4.05	mg/L	0.02	200.8	12/14/04 15:57	SLS	7439-89-6	
Manganese	0.379	mg/L	0.005	200.8	12/14/04 15:57	SLS	7439-96-5	
Organics								
Dinoseb	1.4	ug/L	0.6	8151	12/21/04 12:00	STL		O1

O-Analysis performed by outside laboratory 1-*The percent difference between the original and confirmation analyses is greater than 40%

Analytical Laboratory Report

F t ID: S20048.01(01)
ated on 12/21/2004

Report to

Attention: Ms. Marisa Patterson
SECOR
2321 Club Meridian Dr. #E
Okemos, MI 48864-4505
MSA# 94023

Phone: 517-349-9499 FAX: 517-349-6863

Report produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S20048.01-S20048.21
Project: 24CH.67201.00.0013 Bee-Jay Scales
Submitted Date/Time: 12/03/2004 12:00
Sampled by: Mike McMahon
P.O. #:

Report Notes

Results relate only to items tested.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
"Not detected" indicates that parameter was not found at a level equal to or greater than the RDL.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories.

Violetta F. Murshak

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample ID: S20048.01
Sample Tag: SB-PS-001-0, 0-2'
Collected Date/Time: 12/01/2004 14:15
Matrix: Soil
COC Reference: 013736

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	4oz. Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Total Solids	82	%	1	160.3	12/08/04 17:00	PCS		
Ammonia-N	Not detected	mg/kg	10	350.3	12/09/04 19:00	MJC	7664-41-7	
Nitrate-N	980	mg/kg	30	300.0	12/14/04 09:33	JDP		
Nitrite-N	Not detected	mg/kg	30	300.0	12/14/04 08:54	JDP		
TOC	1,100	mg/kg	100	415.1	12/18/04 12:00	STL		O
Total Phosphorus	828	mg/kg	1	365.2	12/21/04 11:00	MJC	7723-14-0T	
Organics								
Dinoseb	Not detected	ug/kg	15	8151A	12/18/04 12:00	STL		O
Other / Misc.								
Subcontracting Shipped (Replicate 01)	Completed				12/03/04 16:00	PCS		

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Sample ID: S20048.02
Sample Tag: SB-PS-001-0, 2-4'
Collected Date/Time: 12/01/2004 14:15
Matrix: Soil
COC Reference: 013736

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	4oz. Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Total Solids	74	%	1	160.3	12/08/04 17:00	PCS		
Ammonia-N	Not detected	mg/kg	10	350.3	12/09/04 19:00	MJC	7664-41-7	
Nitrate-N	1,860	mg/kg	30	300.0	12/14/04 12:00	JDP		
Nitrite-N	Not detected	mg/kg	30	300.0	12/14/04 09:06	JDP		
TOC	510	mg/kg	100	415.1	12/18/04 12:00	STL		O
Total Phosphorus	977	mg/kg	1	365.2	12/21/04 11:00	MJC	7723-14-0T	
Organics								
Dinoseb	Not detected	ug/kg	15	8151A	12/18/04 12:00	STL		O
Other / Misc.								
Subcontracting Shipped (Replicate 01)	Completed				12/03/04 16:00	PCS		

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Sample ID: S20048.03
Sample Tag: SB-PS-001-0, 4-6'
Collected Date/Time: 12/01/2004 14:15
Matrix: Soil
COC Reference: 013736

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	4oz. Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Total Solids	77	%	1	160.3	12/08/04 17:00	PCS		
Ammonia-N	80	mg/kg	10	350.3	12/09/04 19:00	MJC	7664-41-7	
Nitrate-N	190	mg/kg	30	300.0	12/14/04 10:24	JDP		
Nitrite-N	Not detected	mg/kg	30	300.0	12/14/04 10:24	JDP		
TOC	800	mg/kg	100	415.1	12/18/04 12:00	STL		O
Total Phosphorus	910	mg/kg	1	365.2	12/21/04 11:00	MJC	7723-14-0T	
Organics								
Dinoseb	Not detected	ug/kg	15	8151A	12/18/04 12:00	STL		O
Other / Misc.								
Subcontracting Shipped (Replicate 01)	Completed				12/03/04 16:00	PCS		

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Sample ID: S20048.04
Sample Tag: SB-PS-001-0, 6-8'
Collected Date/Time: 12/01/2004 14:15
Matrix: Soil
COC Reference: 013736

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	4oz. Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Total Solids	80	%	1	160.3	12/08/04 17:00	PCS		
Ammonia-N	440	mg/kg	10	350.3	12/09/04 19:00	MJC	7664-41-7	
Nitrate-N	37	mg/kg	30	300.0	12/14/04 12:23	JDP		
Nitrite-N	Not detected	mg/kg	30	300.0	12/14/04 12:23	JDP		
TOC	430	mg/kg	100	415.1	12/18/04 12:00	STL		O
Total Phosphorus	830	mg/kg	1	365.2	12/21/04 11:00	MJC	7723-14-0T	
Organics								
Dinoseb	Not detected	ug/kg	15	8151A	12/18/04 12:00	STL		O
Other / Misc.								
Subcontracting Shipped (Replicate 01)	Completed				12/03/04 16:00	PCS		

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Sample ID: S20048.05
Sample Tag: SB-PS-001-0, 8-10'
Collected Date/Time: 12/01/2004 14:15
Matrix: Soil
COC Reference: 013736

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	4oz. Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Total Solids	76	%	1	160.3	12/08/04 17:00	PCS		
Ammonia-N	700	mg/kg	10	350.3	12/09/04 19:00	MJC	7664-41-7	
Nitrate-N	Not detected	mg/kg	30	300.0	12/14/04 12:35	JDP		
Nitrite-N	Not detected	mg/kg	30	300.0	12/14/04 12:35	JDP		
TOC	150	mg/kg	100	415.1	12/18/04 12:00	STL		O
Total Phosphorus	704	mg/kg	1	365.2	12/21/04 11:00	MJC	7723-14-0T	
Organics								
Dinoseb	Not detected	ug/kg	15	8151A	12/18/04 12:00	STL		O
Other / Misc.								
Subcontracting Shipped (Replicate 01)	Completed				12/03/04 16:00	PCS		

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Sample ID: S20048.06
Sample Tag: SB-PS-001-0, 10-12'
Collected Date/Time: 12/01/2004 14:15
Matrix: Soil
COC Reference: 013736

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	4oz. Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Total Solids	76	%	1	160.3	12/08/04 17:00	PCS		
Ammonia-N	810	mg/kg	10	350.3	12/09/04 19:00	MJC	7664-41-7	
Nitrate-N	Not detected	mg/kg	30	300.0	12/14/04 12:47	JDP		
Nitrite-N	Not detected	mg/kg	30	300.0	12/14/04 12:47	JDP		
TOC	550	mg/kg	100	415.1	12/18/04 12:00	STL		O
Total Phosphorus	708	mg/kg	1	365.2	12/21/04 11:00	MJC	7723-14-0T	
Organics								
Dinoseb	Not detected	ug/kg	16	8151A	12/18/04 12:00	STL		O
Other / Misc.								
Subcontracting Shipped (Replicate 01)	Completed				12/03/04 16:00	PCS		

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Sample ID: S20048.07
ple Tag: SB-PS-001-0, 12-14'
Collected Date/Time: 12/01/2004 14:15
Matrix: Soil
COC Reference: 013736

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	4oz. Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Total Solids	76	%	1	160.3	12/08/04 17:00	PCS		
Ammonia-N	1,060	mg/kg	10	350.3	12/09/04 19:00	MJC	7664-41-7	
Nitrate-N	Not detected	mg/kg	30	300.0	12/14/04 12:58	JDP		
Nitrite-N	Not detected	mg/kg	30	300.0	12/14/04 12:58	JDP		
TOC	160	mg/kg	100	415.1	12/18/04 12:00	STL		O
Total Phosphorus	688	mg/kg	1	365.2	12/21/04 11:00	MJC	7723-14-0T	
Organics								
Dinoseb	Not detected	ug/kg	16	8151A	12/18/04 12:00	STL		O
Other / Misc.								
Subcontracting Shipped (Replicate 01)	Completed				12/03/04 16:00	PCS		

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Sample ID: S20048.08
Sample Tag: SB-PS-001-0, 14-16'
Collected Date/Time: 12/01/2004 14:15
Matrix: Soil
COC Reference: 013736

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	4oz. Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Total Solids	78	%	1	160.3	12/08/04 17:00	PCS		
Ammonia-N	760	mg/kg	10	350.3	12/09/04 19:00	MJC	7664-41-7	
Nitrate-N	Not detected	mg/kg	30	300.0	12/14/04 13:10	JDP		
Nitrite-N	Not detected	mg/kg	30	300.0	12/14/04 13:10	JDP		
TOC	540	mg/kg	100	415.1	12/18/04 12:00	STL		O
Total Phosphorus	740	mg/kg	1	365.2	12/21/04 11:00	MJC	7723-14-0T	
Organics								
Dinoseb	Not detected	ug/kg	15	8151A	12/18/04 12:00	STL		O
Other / Misc.								
Subcontracting Shipped (Replicate 01)	Completed				12/03/04 16:00	PCS		

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Sample ID: S20048.09
ple Tag: SB-PS-001-0, 16-18'
Collected Date/Time: 12/01/2004 14:15
Matrix: Soil
COC Reference: 013736

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	4oz. Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Total Solids	77	%	1	160.3	12/08/04 17:00	PCS		
Ammonia-N	500	mg/kg	10	350.3	12/09/04 19:00	MJC	7664-41-7	
Nitrate-N	Not detected	mg/kg	30	300.0	12/14/04 13:22	JDP		
Nitrite-N	Not detected	mg/kg	30	300.0	12/14/04 13:22	JDP		
TOC	250	mg/kg	100	415.1	12/18/04 12:00	STL		O
Total Phosphorus	735	mg/kg	1	365.2	12/21/04 11:00	MJC	7723-14-0T	
Organics								
Dinoseb	Not detected	ug/kg	16	8151A	12/18/04 12:00	STL		O
Other / Misc.								
Subcontracting Shipped (Replicate 01)	Completed				12/03/04 16:00	PCS		

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Sample ID: S20048.10
ple Tag: SB-PS-002-0, 0-2'
Collected Date/Time: 12/01/2004 15:00
Matrix: Soil
COC Reference: 013736

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	4oz. Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Total Solids	85	%	1	160.3	12/08/04 17:00	PCS		
Ammonia-N	Not detected	mg/kg	10	350.3	12/09/04 19:00	MJC	7664-41-7	
Nitrate-N	220	mg/kg	30	300.0	12/14/04 14:09	JDP		
Nitrite-N	Not detected	mg/kg	30	300.0	12/14/04 14:09	JDP		
TOC	4,400	mg/kg	100	415.1	12/18/04 12:00	STL		O
Total Phosphorus	754	mg/kg	1	365.2	12/21/04 11:00	MJC	7723-14-0T	
Organics								
Dinoseb	Not detected	ug/kg	14	8151A	12/18/04 12:00	STL		O
Other / Misc.								
Subcontracting Shipped (Replicate 01)	Completed				12/03/04 16:00	PCS		

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Sample ID: S20048.11
ple Tag: SB-PS-002-0, 2-4'
Collected Date/Time: 12/01/2004 15:00
Matrix: Soil
COC Reference: 013736

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	4oz. Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Total Solids	80	%	1	160.3	12/08/04 17:00	PCS		
Ammonia-N	Not detected	mg/kg	10	350.3	12/09/04 19:00	MJC	7664-41-7	
Nitrate-N	690	mg/kg	30	300.0	12/14/04 15:46	JDP		
Nitrite-N	Not detected	mg/kg	30	300.0	12/14/04 14:20	JDP		
TOC	1,000	mg/kg	100	415.1	12/18/04 12:00	STL		O
Total Phosphorus	996	mg/kg	1	365.2	12/21/04 11:00	MJC	7723-14-0T	
Organics								
Dinoseb	Not detected	ug/kg	15	8151A	12/18/04 12:00	STL		O
Other / Misc.								
Subcontracting Shipped (Replicate 01)	Completed				12/03/04 16:00	PCS		

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Sample ID: S20048.12
Sample Tag: SB-PS-002-0, 4-6'
Collected Date/Time: 12/01/2004 15:00
Matrix: Soil
COC Reference: 013736

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	4oz. Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Total Solids	80	%	1	160.3	12/08/04 17:00	PCS		
Ammonia-N	100	mg/kg	10	350.3	12/09/04 19:00	MJC	7664-41-7	
Nitrate-N	200	mg/kg	30	300.0	12/14/04 14:32	JDP		
Nitrite-N	31	mg/kg	30	300.0	12/14/04 14:32	JDP		
TOC	450	mg/kg	100	415.1	12/18/04 12:00	STL		O
Total Phosphorus	845	mg/kg	1	365.2	12/21/04 11:00	MJC	7723-14-0T	
Organics								
Dinoseb	Not detected	ug/kg	16	8151A	12/18/04 12:00	STL		O
Other / Misc.								
Subcontracting Shipped (Replicate 01)	Completed				12/03/04 16:00	PCS		

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Sample ID: S20048.13
Sample Tag: SB-PS-002-0, 6-8'
Collected Date/Time: 12/01/2004 15:00
Matrix: Soil
COC Reference: 013736

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	4oz. Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Total Solids	76	%	1	160.3	12/08/04 17:00	PCS		
Ammonia-N	720	mg/kg	10	350.3	12/09/04 19:00	MJC	7664-41-7	
Nitrate-N	120	mg/kg	30	300.0	12/14/04 14:44	JDP		
Nitrite-N	Not detected	mg/kg	30	300.0	12/14/04 14:44	JDP		
TOC	Not detected	mg/kg	130	415.1	12/18/04 12:00	STL		O
Total Phosphorus	715	mg/kg	1	365.2	12/21/04 11:00	MJC	7723-14-0T	
Organics								
Dinoseb	Not detected	ug/kg	15	8151A	12/18/04 12:00	STL		O
Other / Misc.								
Subcontracting Shipped (Replicate 01)	Completed				12/03/04 16:00	PCS		

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Sample ID: S20048.14
ple Tag: SB-PS-002-0, 8-10'
Collected Date/Time: 12/01/2004 15:00
Matrix: Soil
COC Reference: 013737

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	4oz. Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Total Solids	77	%	1	160.3	12/08/04 17:00	PCS		
Ammonia-N	820	mg/kg	10	350.3	12/09/04 19:00	MJC	7664-41-7	
Nitrate-N	160	mg/kg	30	300.0	12/14/04 16:10	JDP		
Nitrite-N	Not detected	mg/kg	30	300.0	12/14/04 16:10	JDP		
TOC	470	mg/kg	100	415.1	12/18/04 12:00	STL		O
Total Phosphorus	817	mg/kg	1	365.2	12/21/04 11:00	MJC	7723-14-0T	
Organics								
Dinoseb	Not detected	ug/kg	16	8151A	12/18/04 12:00	STL		O
Other / Misc.								
Subcontracting Shipped (Replicate 01)	Completed				12/03/04 16:00	PCS		

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Sample ID: S20048.15
ple Tag: SB-PS-002-0, 10-12'
Collected Date/Time: 12/01/2004 15:00
Matrix: Soil
COC Reference: 013737

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	4oz. Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Total Solids	76	%	1	160.3	12/08/04 17:00	PCS		
Ammonia-N	990	mg/kg	10	350.3	12/09/04 19:00	MJC	7664-41-7	
Nitrate-N	170	mg/kg	30	300.0	12/14/04 16:21	JDP		
Nitrite-N	Not detected	mg/kg	30	300.0	12/14/04 16:21	JDP		
TOC	Not detected	mg/kg	130	415.1	12/18/04 12:00	STL		O
Total Phosphorus	756	mg/kg	1	365.2	12/21/04 11:00	MJC	7723-14-0T	
Organics								
Dinoseb	Not detected	ug/kg	15	8151A	12/18/04 12:00	STL		O
Other / Misc.								
Subcontracting Shipped (Replicate 01)	Completed				12/03/04 16:00	PCS		

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Sample ID: S20048.16
ple Tag: SB-PS-002-0, 12-14'
Collected Date/Time: 12/01/2004 15:00
Matrix: Soil
COC Reference: 013737

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	4oz. Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Total Solids	76	%	1	160.3	12/08/04 17:00	PCS		
Ammonia-N	1,230	mg/kg	10	350.3	12/09/04 19:00	MJC	7664-41-7	
Nitrate-N	250	mg/kg	30	300.0	12/14/04 16:33	JDP		
Nitrite-N	Not detected	mg/kg	30	300.0	12/14/04 16:33	JDP		
TOC	460	mg/kg	100	415.1	12/18/04 12:00	STL		O
Total Phosphorus	675	mg/kg	1	365.2	12/21/04 11:00	MJC	7723-14-0T	
Organics								
Dinoseb	Not detected	ug/kg	16	8151A	12/18/04 12:00	STL		O
Other / Misc.								
Subcontracting Shipped (Replicate 01)	Completed				12/03/04 16:00	PCS		

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Sample ID: S20048.17
ple Tag: SB-PS-002-0, 14-16'
Collected Date/Time: 12/01/2004 15:00
Matrix: Soil
COC Reference: 013737

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	4oz. Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Total Solids	80	%	1	160.3	12/08/04 17:00	PCS		
Ammonia-N	870	mg/kg	10	350.3	12/09/04 19:00	MJC	7664-41-7	
Nitrate-N	250	mg/kg	30	300.0	12/14/04 16:45	JDP		
Nitrite-N	Not detected	mg/kg	30	300.0	12/14/04 16:45	JDP		
TOC	250	mg/kg	100	415.1	12/18/04 12:00	STL		O
Total Phosphorus	790	mg/kg	1	365.2	12/21/04 11:00	MJC	7723-14-0T	
Organics								
Dinoseb	Not detected	ug/kg	15	8151A	12/18/04 12:00	STL		O
Other / Misc.								
Subcontracting Shipped (Replicate 01)	Completed				12/03/04 16:00	PCS		

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Sample ID: S20048.18
Sample Tag: SB-PS-002-0, 16-18'
Collected Date/Time: 12/01/2004 15:00
Matrix: Soil
COC Reference: 013737

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	4oz. Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Total Solids	77	%	1	160.3	12/08/04 17:00	PCS		
Ammonia-N	990	mg/kg	10	350.3	12/09/04 19:00	MJC	7664-41-7	
Nitrate-N	480	mg/kg	30	300.0	12/14/04 16:56	JDP		
Nitrite-N	Not detected	mg/kg	30	300.0	12/14/04 16:56	JDP		
TOC	350	mg/kg	100	415.1	12/18/04 12:00	STL		O
Total Phosphorus	739	mg/kg	1	365.2	12/21/04 11:00	MJC	7723-14-0T	
Organics								
Dinoseb	Not detected	ug/kg	15	8151A	12/18/04 12:00	STL		O
Other / Misc.								
Subcontracting Shipped (Replicate 01)	Completed				12/03/04 16:00	PCS		

O-Analysis performed by outside laboratory

Analytical Laboratory Report

Sample ID: S20048.19
ple Tag: SB-PS-003-0
Collected Date/Time: 12/01/2004 12:25
Matrix: Groundwater
COC Reference: 013737

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	500ml Plastic	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Ammonia-N	450	mg/L	10	350.3	12/10/04 22:00	MJC	7664-41-7	
Nitrate-N	388	mg/L	0.2	300.0	12/14/04 17:49	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	12/14/04 13:45	JDP		

Analytical Laboratory Report

Sample ID: S20048.20
ple Tag: SB-PS-004-0
Collected Date/Time: 12/01/2004 13:35
Matrix: Groundwater
COC Reference: 013737

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	500ml Plastic	None	Yes	4	3
1	250ml Plastic	H2SO4	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Ammonia-N	400	mg/L	10	350.3	12/10/04 22:00	MJC	7664-41-7	
Nitrate-N	317	mg/L	0.2	300.0	12/14/04 18:01	JDP		
Nitrite-N	Not detected	mg/L	0.2	300.0	12/14/04 13:57	JDP		

Analytical Laboratory Report

Sample ID: S20048.21
ple Tag: SB-PS-002-1, 8-10'
Collected Date/Time: 12/01/2004 15:00
Matrix: Soil
COC Reference: 013737

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	4oz. Glass	None	Yes	4	3

Analysis	Results	Units	RDL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Total Solids	74	%	1	160.3	12/08/04 17:00	PCS		
Ammonia-N	840	mg/kg	10	350.3	12/09/04 19:00	MJC	7664-41-7	
Nitrate-N	180	mg/kg	30	300.0	12/14/04 17:08	JDP		
Nitrite-N	Not detected	mg/kg	30	300.0	12/14/04 17:08	JDP		
TOC	270	mg/kg	100	415.1	12/18/04 12:00	STL		O
Total Phosphorus	769	mg/kg	1	365.2	12/21/04 11:00	MJC	7723-14-0T	
Organics								
Dinoseb	Not detected	ug/kg	17	8151A	12/18/04 12:00	STL		O
Other / Misc.								
Subcontracting Shipped (Replicate 01)	Completed				12/03/04 16:00	PCS		

O-Analysis performed by outside laboratory

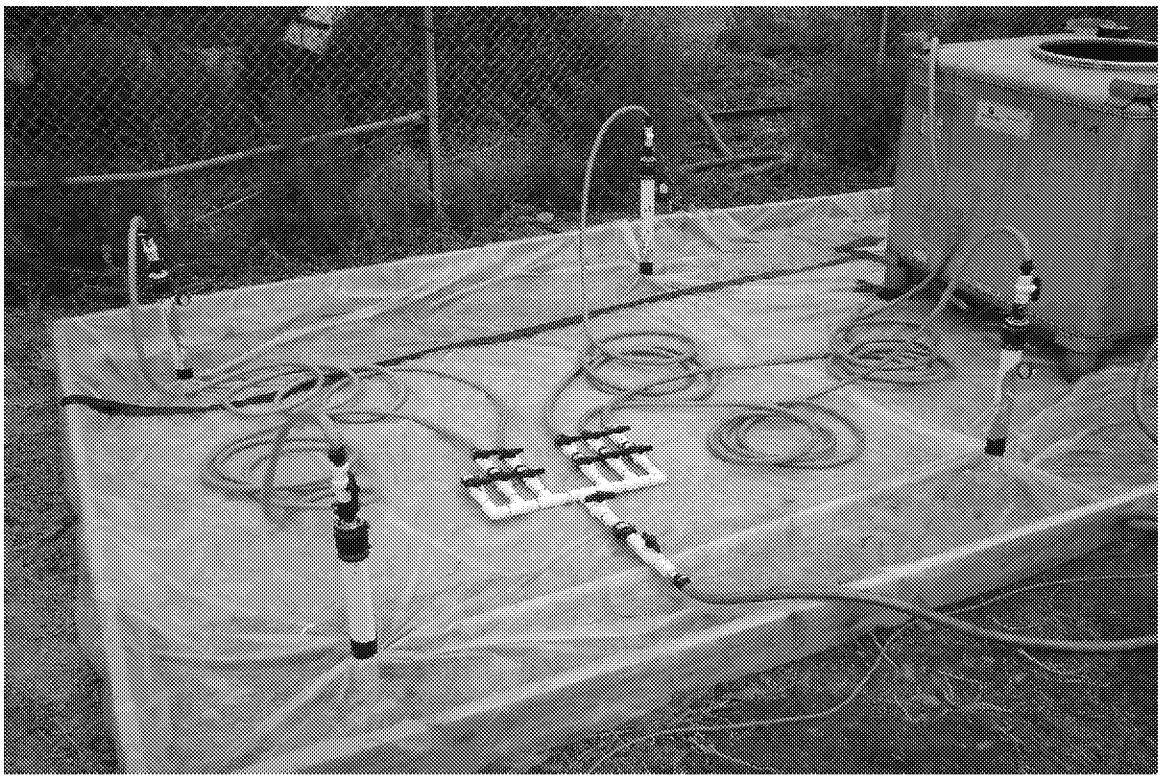
APPENDIX I
PILOT STUDY PHOTOGRAPHS

Phase II Remedial Investigation Report
Chevron Environmental Management Company
& BP America, Inc.

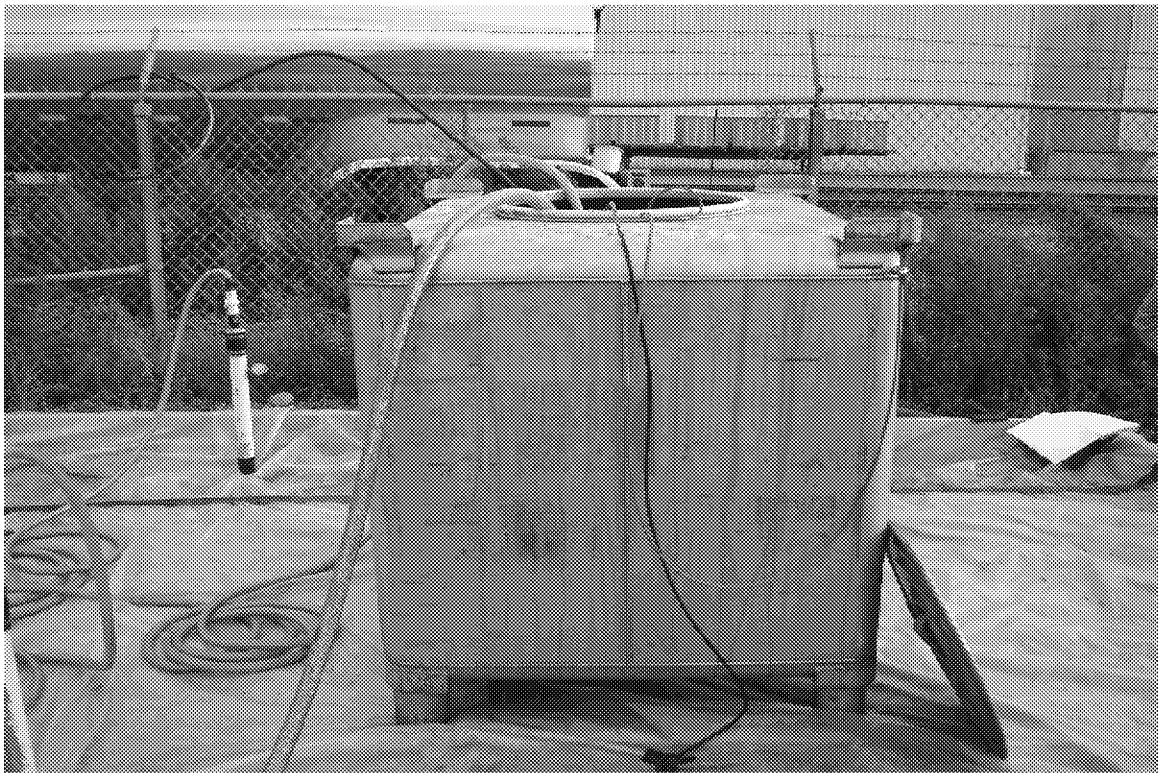
24CH.67201.00
May 17, 2005

Injection wells IW-1 through IW-4 installed around MW-4.

Berm constructed around injection wells.



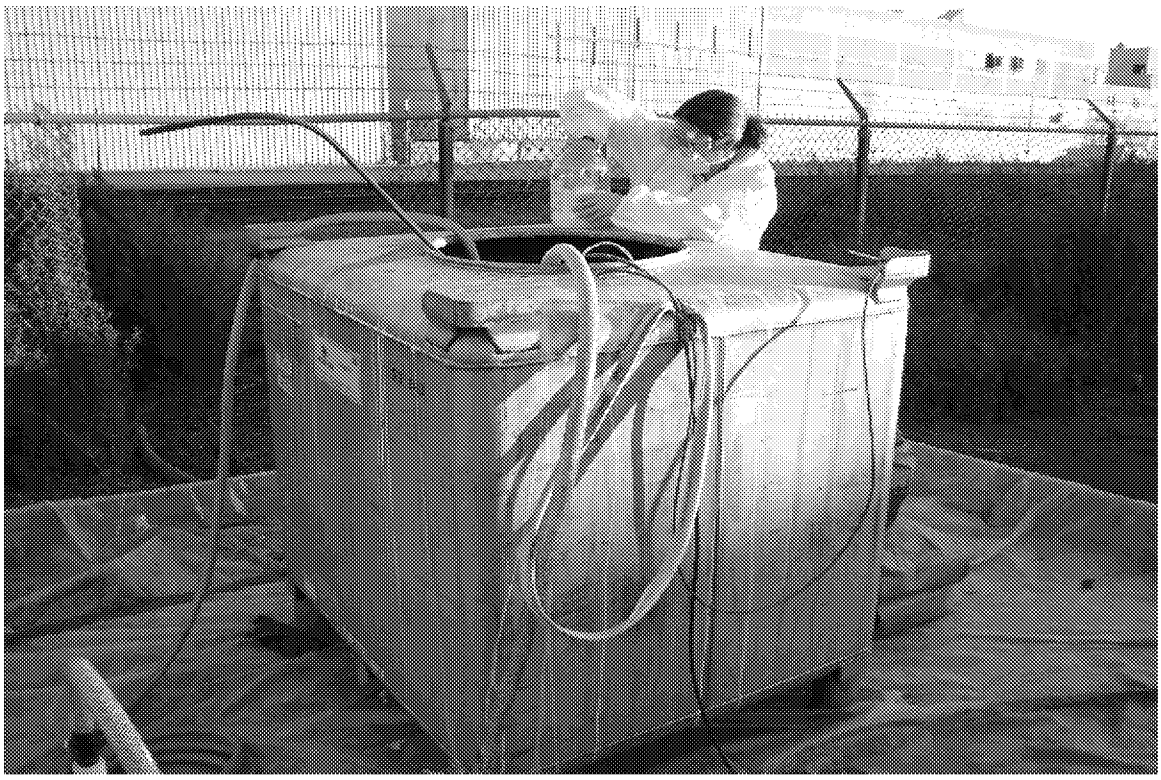
Manifold for delivery of sodium acetate solution to injection wells.



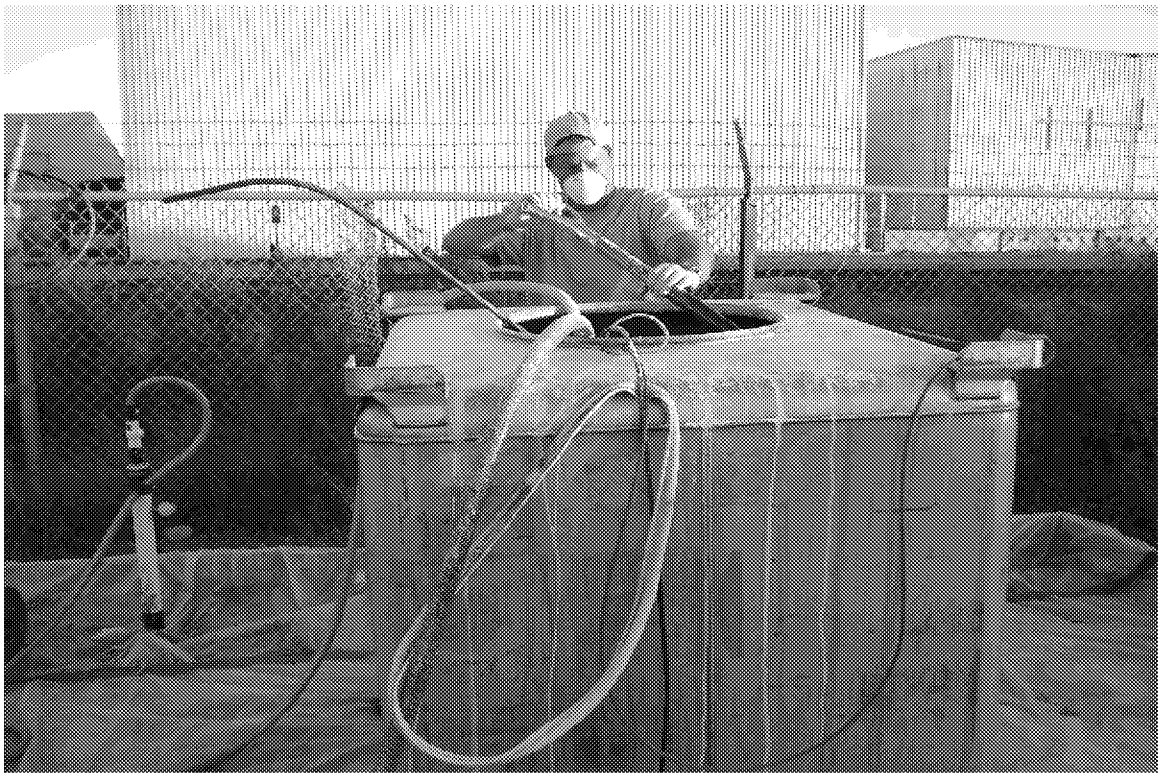
Stainless steel tank for mixing of sodium acetate, disodium phosphate, and water.

Pilot study mixing and injection system.

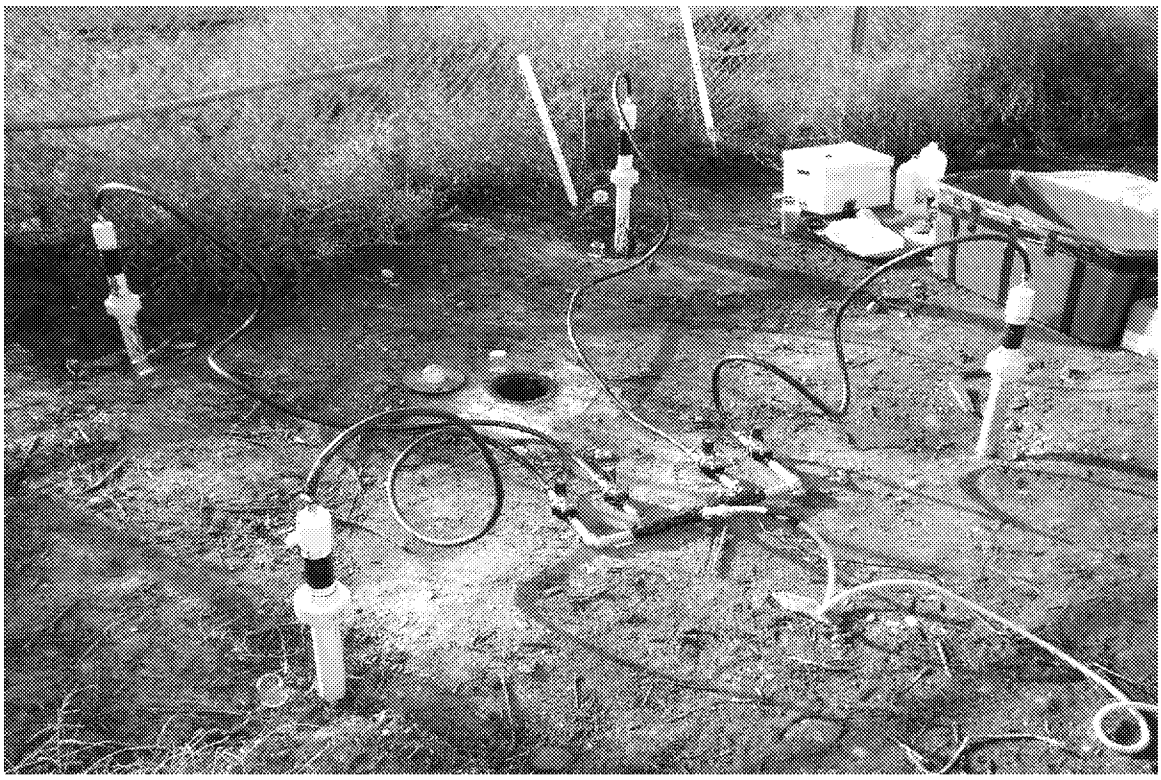
Addition of sodium acetate to solution.



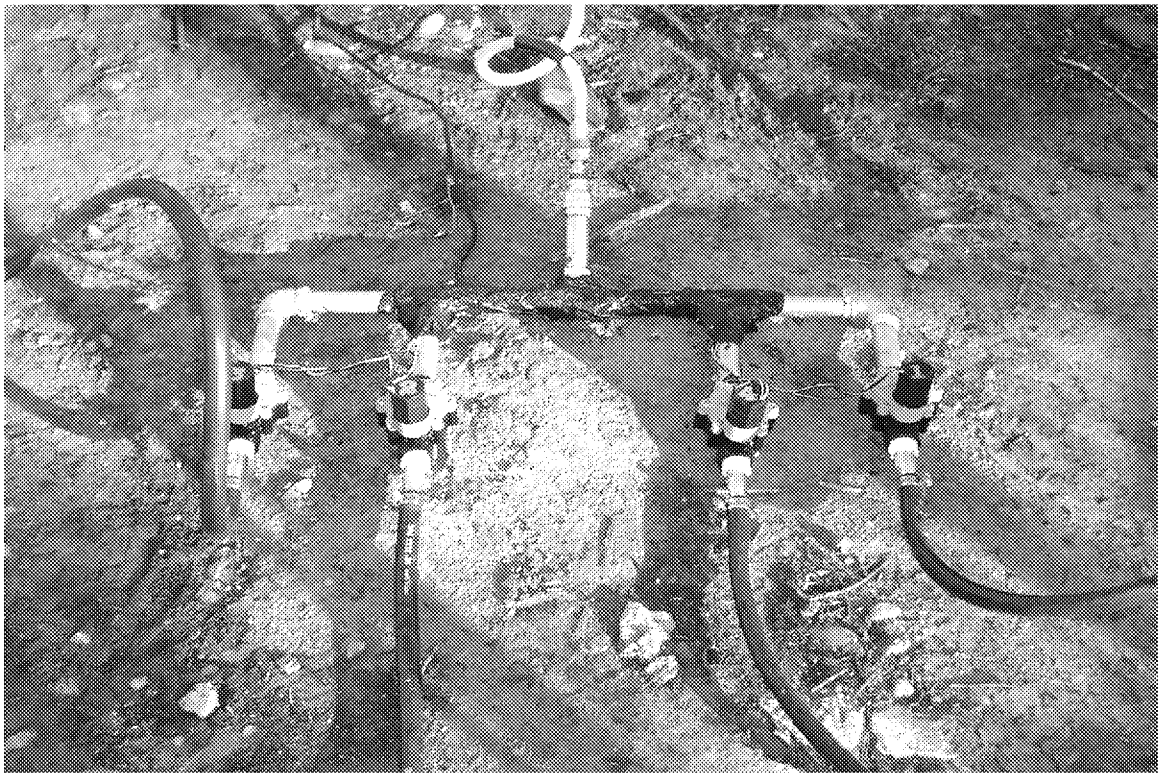
Addition of disodium phosphate to solution.



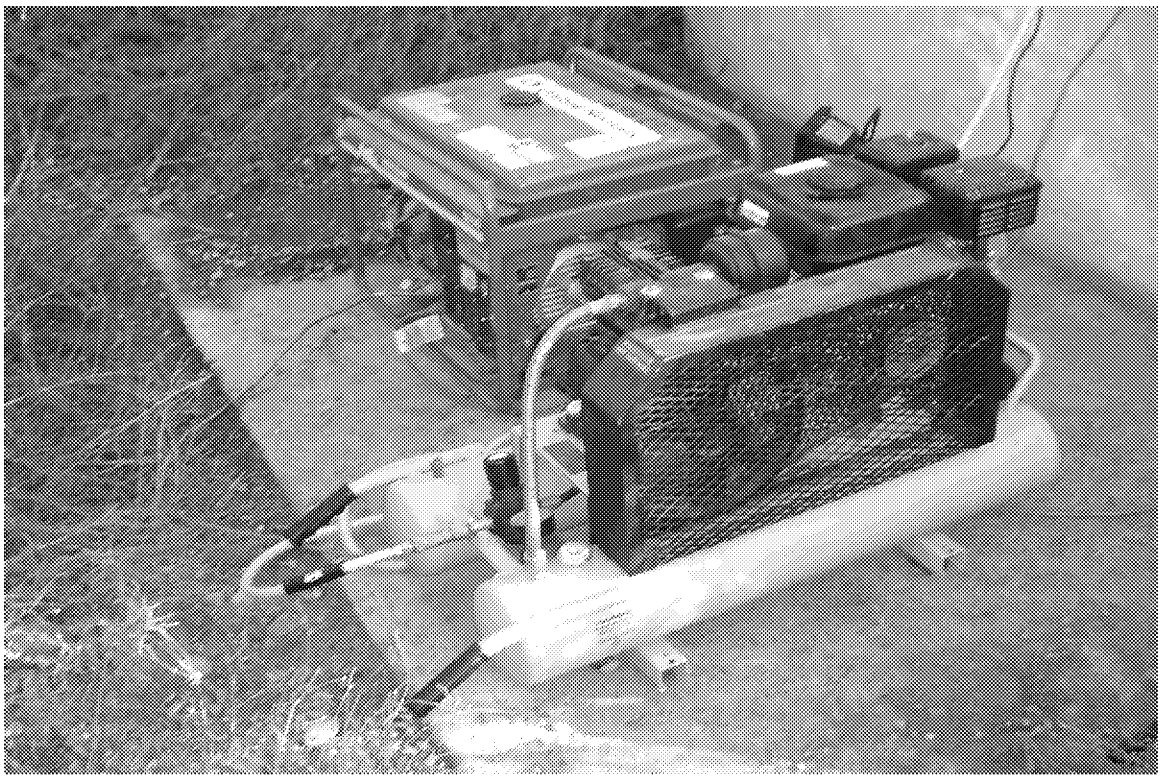
Mixing of injection solution.



Air injection system.



Air injection manifold.



5-HP air compressor and generator setup.

Ammonia test kits for groundwater collected from MW-4 and IW-1 through IW-4.