First Half 2015 Semi-Annual Groundwater Monitoring and Replacement Well Installation Report

Bee-Jay Scales Site
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Sign-off Sheet

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1.0 Introduction

This document summarizes installation of replacement monitoring wells and the activities and results of the first half 2015 (1H15) semi-annual groundwater monitoring event conducted by Stantec Consulting Services Inc. (Stantec) on behalf of Chevron Environmental Management Company (CEMC) and Atlantic Richfield Company (ARC) for 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) Model Toxics Control Act (MTCA) and under Consent Decree No. 132017660 (Consent Decree).

The Site is located in the City of Sunnyside, within Yakima County, and is composed of two property parcels. 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, was formerly owned by Hickenbottom & Sons, Inc., and is currently owned by Western General Land, LLC. The Site location is shown on **Figure 1**. A Site Plan, including monitoring well locations, building locations, and additional Site features, is shown on **Figure 2**. The Site was historically divided into six main study areas as follows:

- Area 1 - Liquid Fertilizer Plant and Truck Wash Area
- Area 2 - Dry Fertilizer Area
- Area 3 - Drum Storage Area
- Area 4 - Suspected Historic Washdown Area
- Area 5 - North Area
- Area 6 - Hickenbottom Property

Monitoring wells MW-4, MW-5, and MW-12 were destroyed in June 2014 prior to shallow soil excavation activities. Replacement monitoring wells MW-4R, MW-5R, and MW-12R were installed and developed on February 12, 2015, prior to the 1H15 groundwater monitoring event. Fieldwork for the 1H15 groundwater monitoring at the Site was completed between February 13 and 19, 2015. Summaries of replacement well installation activities and groundwater monitoring activities and results are presented in the following sections.

2.0 Summary of Replacement Well Installation Activities

The locations of replacement monitoring wells MW-4R, MW-5R, and MW-12R were established by survey based on coordinates provided by Stantec. The locations of wells MW-4R and MW-12R generally match the previous locations; however, the drilling company recommended relocating the wells approximately 2 feet from the previous locations to avoid issues with the bentonite used to decommission the previous wells. Well MW-5R was located approximately 17 feet south of the previous location of well MW-5 at the request of the property owner. Replacement well locations are shown on **Figure 2**.

Stantec ensured that access agreements were established with each of the property owners prior to commencing work. As required by law, Washington's Northwest Utility Notification Center was notified at least 48 hours prior to any intrusive activities. In addition, a private utility locator was contracted to locate and mark all utilities in the areas of the well locations.

2.1 BOREHOLE ADVANCEMENT

Stantec contracted Cascade Drilling, L.P., a licensed drilling company, to advance soil boreholes and subsequently install the three groundwater monitoring wells. Well depths and screen intervals are as follows:

	Total Depth (feet bgs)	Screen Interval (feet bgs)
MW-4R	17	7 - 17
MW-5R	16	6 – 16
MW-12R	17.5	7.5 – 17.5

A variance from normal borehole clearance to 8 feet below ground surface (bgs) was approved by CEMC at wells MW-4R and MW-5R. An air knife was used to clear to 8 feet bgs at well MW-12R to further decrease the risk of encountering an underground utility. A sonic drill rig was used to advance each borehole. The wells were installed in areas recently backfilled with clean fill during excavation activities; therefore, no soil samples were collected for laboratory analysis.

Detailed field records of all activities were kept by Stantec field personnel and included Site conditions, names of field personnel, pertinent dates and times, etc. A boring/well construction log was maintained during the advancement of the borehole and installation of the monitoring well. Stantec field staff recorded the soil lithology (using the Unified Soil Classification System [USCS] as a guide), relative moisture content, composition, photoionization detector (PID) readings, depth to first-encountered groundwater, well construction details, and other distinguishing characteristics such as color changes, debris, rootlets, and odor. Boring/well construction logs are included in **Appendix A**.

2.2 MONITORING WELL INSTALLATION

Two-inch diameter polyvinyl chloride (PVC) wells were installed within the 6-inch diameter boreholes drilled by sonic method. Each well screen interval was constructed with 2-inch schedule 40 PVC casing perforated with 0.010-inch slots and fitted with a PVC end cap. Each well screen casing was flush threaded to the necessary length of schedule 40 PVC blank casing to complete the well casing to ground surface. The well installations were completed with sand filter packs and hydrated bentonite seals. Wells were completed with flush-mounted well monuments. Well construction details were recorded on the boring/well construction logs, included in **Appendix A**.

Once the wells were completed, each was developed by surging and pumping to remove fine-grained sediment from the formation and filter packs, and increase the hydraulic efficiency of the well. The depth to groundwater and total length of each groundwater monitoring well were measured to determine the quantity of groundwater within each well. A surge block was used to agitate water and well construction materials prior to and during well development. A submersible pump was used to purge groundwater and sediment from well casings. Well development continued until water quality parameters (pH, temperature, specific conductivity, and turbidity) all stabilized (±10 percent), ten well casing volumes of groundwater had been purged from the monitoring well, or the monitoring well went dry without recharge. Groundwater quality parameters were recorded onto well development field logs, which are included in **Appendix B**.

2.3 DECONTAMINATION PROCEDURES

All equipment that came into contact with the ground surface or groundwater was decontaminated. Equipment was washed with Liquinox® and triple rinsed with distilled water. The water level indicator was decontaminated following each measurement by spray-washing the probe and cable with a Liquinox® solution, wiping down the probe and cable, followed by a final rinse with de-ionized water. Analytical probes that came in contact with groundwater were cleaned by thoroughly rinsing with distilled water.

2.4 SURVEYING

The well locations were surveyed following completion by White Shield, Inc., a licensed surveyor. The surveyor measured the horizontal coordinates, ground surface elevation, and top of casing (TOC) elevation. Horizontal coordinates were determined to the nearest 0.1-foot relative to the North American Datum of 1983 (NAD83), while the elevations were to the nearest 0.01-foot relative to the National Geodetic Vertical Datum of 1988 (NAVD88). Survey data are included in **Appendix C**.

2.5 WASTE MANAGEMENT

Soil cuttings and decontamination and purge water were collected and transferred to 55-gallon Department of Transportation (DOT)-rated drums. The proper label(s) were affixed, and drums

are stored in Area 1 on-site pending analysis and disposal. All investigatory-derived wastes will be removed from the property by an approved waste hauler, in accordance with state and federal regulations.

3.0 Summary of Groundwater Monitoring Activities

Groundwater samples were collected from 19 monitoring wells this event: MW-1, MW-3, MW-4R, MW-5R, MW-6 through MW-11, MW-12R, and MW-13 through MW-20. Monitoring well locations are shown on **Figure 2**.

3.1 GROUNDWATER ELEVATION MEASUREMENT

Before sampling activities commenced, an electronic water level indicator was used to measure the depth to groundwater and total well depth from the surveyed point on the rim of each well's TOC. Results were recorded on the Groundwater Field Log (**Appendix D**). Cumulative groundwater elevation data from the third quarter 2005 (3Q05) event through the 1H15 event are summarized in **Table 1**.

Groundwater contours were generated for the 1H15 groundwater monitoring event, as illustrated on **Figure 3**. Depth to groundwater ranged from 5.57 feet below the TOC elevation in well MW-11 to 13.52 feet below the TOC elevation in well MW-18. The groundwater elevation ranged from 727.78 feet above mean sea level (MSL) at off-property well MW-18 to 736.53 feet above MSL in the southwestern portion of the Site at well MW-11.

The 1H15 groundwater flow direction is generally to the northeast in the northern portion of the Site (near wells MW-1 and MW-7) and to the southeast in the southern portion of the Site and off-property, with a groundwater flow divide observed at the southern edge of Area 5. This is generally consistent with the flow direction observed during the previous groundwater monitoring events. The calculated hydraulic gradient for 1H15 ranged from approximately 0.004 to 0.027 feet per foot (ft/ft), with an average hydraulic gradient of approximately 0.013 ft/ft.

3.2 SAMPLING ACTIVITIES

Groundwater samples were collected from each of the monitoring wells using low-flow sampling procedures. During well purging, water levels and indicator field parameters were recorded on the Groundwater Sampling Field Data Sheet (**Appendix D**) every 3 to 5 minutes. Purging was considered complete and sampling began when indicator field parameters stabilized. Stabilization was considered to be achieved when three consecutive readings were within the following limits:

- Dissolved oxygen (DO) (10%)
- Conductivity (3%)
- Temperature (3%)
- pH (± 0.1 unit)
- Oxidation-reduction potential (ORP) (± 10 millivolts)

All measurements were obtained using a multi-meter with flow-through cell. Field instruments were calibrated in accordance with the manufacturer's directions prior to use. Purge volumes for each well were recorded on the Groundwater Sampling Field Data Sheet.

After collection of the samples, the pump tubing was dedicated to the well for re-sampling (by hanging the tubing inside the well) or containerized and properly disposed. Any non-dedicated sampling equipment (including water level indicator) that came into contact with the ground surface or groundwater was decontaminated between sampling points.

Purge water from the 1H15 event was collected and transferred to a 55-gallon drum that is stored on-site. Due to the low-flow sampling procedures utilized, only a small volume of purge water (generally less than 1 gallon per well) is generated per event. The drum will be disposed of during a future event, and disposal documentation will be included in the report at that time. In accordance with State of Washington and federal regulations, all drums will be removed from the property by a licensed waste hauler.

3.3 ANALYTICAL PROGRAM

Groundwater samples collected from the monitoring wells were tested for the following analytes in accordance with the protocols listed below. Groundwater analytical results are summarized in Section 4.1.

Well ID	Analytes (Method)	No. of Containers	Sample Container(s) (Preservative)
MW-1	Nitrate-N (EPA 353.2)	1	40 ml glass vial (H_2SO_4)
	Nitrite-N (EPA 353.2)	1	40 ml glass vial (no preservative)
MW-3	Arsenic (EPA 6010B)	1	250 ml plastic (HNO_3)
	pH (SM 4500-H+B-2000)	1	250 ml plastic (no preservative)
	Alkalinity (SM 2320 B-1997)	1	250 ml plastic (no preservative)
	Nitrate-N (EPA 353.2)	1	40 ml glass vial (H_2SO_4)
	Nitrite-N (EPA 353.2)	1	40 ml glass vial (no preservative)
	Ammonia-N (SM 4500-NH3 D-1997)	1	500 ml glass (H_2SO_4)
MW-4R	Arsenic, Iron, Manganese (EPA 6010B)	1	250 ml plastic (HNO_3)
	pH (SM 4500-H+B-2000)	1	250 ml plastic (no preservative)
	Sulfate (EPA 300.0)	2	40ml glass vials (no preservative)
	Alkalinity (SM 2320 B-1997)	1	250 ml plastic (no preservative)
	Nitrate-N (EPA 353.2)	1	40 ml glass vial (H_2SO_4)
	Nitrite-N (EPA 353.2)	1	40 ml glass vial (no preservative)
	Ammonia-N (SM 4500-NH3 D-1997)	1	500 ml glass (H_2SO_4)
	VOCs (EPA 8260B; EPA 524M for 1,2,3-TCP)	3	40 ml glass vials (HCl)
	Chlorinated Herbicides (EPA 8151A)	2	1000 ml glass (no preservative)

Well ID	Analytes (Method)	No. of Containers	Sample Container(s) (Preservative)
MW-5R	Iron (EPA 6010B)*	1	250 ml plastic (HNO_3)
	pH (SM 4500-H+B-2000)	1	250 ml plastic (no preservative)
	Sulfate (EPA 300.0)	2	40ml glass vials (no preservative)
	Alkalinity (SM 2320 B-1997)	1	250 ml plastic (no preservative)
	Nitrate-N (EPA 353.2)	1	40 ml glass vial (H_2SO_4)
	Nitrite-N (EPA 353.2)	1	40 ml glass vial (no preservative)
	Ammonia-N (SM 4500-NH3 D-1997)	1	500 ml glass (H_2SO_4)
MW-6	Arsenic (EPA 6010B)	1	250 ml plastic (HNO_3)
	pH (SM 4500-H+B-2000)	1	250 ml plastic (no preservative)
	Sulfate (EPA 300.0)*	2	40 ml glass vial (no preservative)
	Alkalinity (SM 2320 B-1997)	1	250 ml plastic (no preservative)
	Nitrate-N (EPA 353.2)	1	40 ml glass vial (H_2SO_4)
	Nitrite-N (EPA 353.2)	1	40 ml glass vial (no preservative)
MW-7	Nitrate-N (EPA 353.2)	1	40 ml glass vial (H_2SO_4)
	Nitrite-N (EPA 353.2)	1	40 ml glass vial (no preservative)
MW-8	pH (SM 4500-H+B-2000)	1	250 ml plastic (no preservative)
	Sulfate (EPA 300.0)	2	40 ml glass vial (no preservative)
	Alkalinity (SM 2320 B-1997)	1	250 ml plastic (no preservative)
	Nitrate-N (EPA 353.2)	1	40 ml glass vial (H_2SO_4)
	Nitrite-N (EPA 353.2)	1	40 ml glass vial (no preservative)
	Ammonia-N (SM 4500-NH3 D-1997)	1	500 ml glass (H_2SO_4)
MW-9	pH (SM 4500-H+B-2000)	1	250 ml plastic (no preservative)
	Sulfate (EPA 300.0)	2	40 ml glass vial (no preservative)
	Alkalinity (SM 2320 B-1997)	1	250 ml plastic (no preservative)
	Nitrate-N (EPA 353.2)	1	40 ml glass vial (H_2SO_4)
	Nitrite-N (EPA 353.2)	1	40 ml glass vial (no preservative)
	Ammonia-N (SM 4500-NH3 D-1997)	1	500 ml glass (H_2SO_4)
	VOCs (EPA 8260B; EPA 524M for 1,2,3-TCP)	3	40 ml glass vials (HCl)
	Chlorinated Herbicides (EPA 8151A)	2	1000 ml glass (no preservative)
MW-10	Arsenic (EPA 6010B)	1	250 ml plastic (HNO_3)
	pH (SM 4500-H+B-2000)	1	250 ml plastic (no preservative)
	Sulfate (EPA 300.0)*	2	40 ml glass vial (no preservative)
	Alkalinity (SM 2320 B-1997)	1	250 ml plastic (no preservative)
	Nitrate-N (EPA 353.2)	1	40 ml glass vial (H_2SO_4)
	Nitrite-N (EPA 353.2)	1	40 ml glass vial (no preservative)
	VOCs (EPA 8260B; EPA 524M for 1,2,3-TCP)	3	40 ml glass vials (HCl)
	TPH-Gx (ECY 97-602 NWTPH-Gx)	3	40 ml glass vials (HCl)
MW-11	Arsenic (EPA 6010B)	1	250 ml plastic (HNO_3)
	pH (SM 4500-H+B-2000)	1	250 ml plastic (no preservative)
	Sulfate (EPA 300.0)*	2	40 ml glass vial (no preservative)
	Alkalinity (SM 2320 B-1997)	1	250 ml plastic (no preservative)
	Nitrate-N (EPA 353.2)	1	40 ml glass vial (H_2SO_4)
	Nitrite-N (EPA 353.2)	1	40 ml glass vial (no preservative)
	TPH-Gx (ECY 97-602 NWTPH-Gx)	3	40 ml glass vials (HCl)

Well ID	Analytes (Method)	No. of Containers	Sample Container(s) (Preservative)
MW-12R	Arsenic, Iron (EPA 6010B)	1	250 ml plastic (HNO_3)
	pH (SM 4500-H+B-2000)	1	250 ml plastic (no preservative)
	Chloride, Sulfate (EPA 300.0)	2	40ml glass vials (no preservative)
	Alkalinity (SM 2320 B-1997)	1	250 ml plastic (no preservative)
	Nitrate-N (EPA 353.2)	1	40 ml glass vial (H_2SO_4)
	Nitrite-N (EPA 353.2)	1	40 ml glass vial (no preservative)
	Ammonia-N (SM 4500-NH3 D-1997)	1	500 ml glass (H_2SO_4)
	VOCs (EPA 8260B; EPA 524M for 1,2,3-TCP)	3	40 ml glass vials (HCl)
	Chlorinated Herbicides (EPA 8151A)	2	1000 ml glass (no preservative)
MW-13	Iron (EPA 6010B)	1	250 ml plastic (HNO_3)
	pH (SM 4500-H+B-2000)	1	250 ml plastic (no preservative)
	Sulfate (EPA 300.0)	2	40 ml glass vial (no preservative)
	Alkalinity (SM 2320 B-1997)	1	250 ml plastic (no preservative)
	Nitrate-N (EPA 353.2)	1	40 ml glass vial (H_2SO_4)
	Nitrite-N (EPA 353.2)	1	40 ml glass vial (no preservative)
	Ammonia-N (SM 4500-NH3 D-1997)	1	500 ml glass (H_2SO_4)
	Chlorinated Herbicides (EPA 8151A)	2	1000 ml glass (no preservative)
MW-14	Arsenic (EPA 6010B)	1	250 ml plastic (HNO_3)
	Nitrate-N (EPA 353.2)	1	40 ml glass vial (H_2SO_4)
	Nitrite-N (EPA 353.2)	1	40 ml glass vial (no preservative)
MW-15	Arsenic (EPA 6010B)	1	250 ml plastic (HNO_3)
	pH (SM 4500-H+B-2000)	1	250 ml plastic (no preservative)
	Alkalinity (SM 2320 B-1997)	1	250 ml plastic (no preservative)
	Nitrate-N (EPA 353.2)	1	40 ml glass vial (H_2SO_4)
	Nitrite-N (EPA 353.2)	1	40 ml glass vial (no preservative)
	Ammonia-N (SM 4500-NH3 D-1997)	1	500 ml glass (H_2SO_4)
MW-16	pH (SM 4500-H+B-2000)	1	250 ml plastic (no preservative)
	Sulfate (EPA 300.0)	2	40ml glass vials (no preservative)
	Alkalinity (SM 2320 B-1997)	1	250 ml plastic (no preservative)
	Nitrate-N (EPA 353.2)	1	40 ml glass vial (H_2SO_4)
	Nitrite-N (EPA 353.2)	1	40 ml glass vial (no preservative)
	Ammonia-N (SM 4500-NH3 D-1997)	1	500 ml glass (H_2SO_4)
	VOCs (EPA 8260B; EPA 524M for 1,2,3-TCP)	3	40 ml glass vials (HCl)
	Chlorinated Herbicides (EPA 8151A)	2	1000 ml glass (no preservative)
MW-17	Nitrate-N (EPA 353.2)	1	40 ml glass vial (H_2SO_4)
	Nitrite-N (EPA 353.2)	1	40 ml glass vial (no preservative)
MW-18	Arsenic (EPA 6010B)	1	250 ml plastic (HNO_3)
	Nitrate-N (EPA 353.2)	1	40 ml glass vial (H_2SO_4)
	Nitrite-N (EPA 353.2)	1	40 ml glass vial (no preservative)

Well ID	Analytes (Method)	No. of Containers	Sample Container(s) (Preservative)
MW-19	Arsenic, Iron (EPA 6010B)	1	250 ml plastic (HNO_3)
	pH (SM 4500-H+B-2000)	1	250 ml plastic (no preservative)
	Chloride, Sulfate (EPA 300.0)	2	40ml glass vials (no preservative)
	Alkalinity (SM 2320 B-1997)	1	250 ml plastic (no preservative)
	Nitrate-N (EPA 353.2)	1	40 ml glass vial (H_2SO_4)
	Nitrite-N (EPA 353.2)	1	40 ml glass vial (no preservative)
	Ammonia-N (SM 4500-NH3 D-1997)	1	500 ml glass (H_2SO_4)
	VOCs (EPA 8260B; EPA 524M for 1,2,3-TCP)	3	40 ml glass vials (HCl)
MW-20	Arsenic (EPA 6010B)	1	250 ml plastic (HNO_3)
	Nitrate-N (EPA 353.2)	1	40 ml glass vial (H_2SO_4)
	Nitrite-N (EPA 353.2)	1	40 ml glass vial (no preservative)

* Indicates constituents analyzed during Second Half semi-annual (or Third Quarter) sampling events only.

The method detection limit (MDL) for 1,2,3-trichloropropane was elevated in samples with detections; however, samples without detections of 1,2,3-trichloropropane achieved a MDL of 0.0000005 milligrams per liter (mg/L).

3.4 QUALITY ASSURANCE/QUALITY CONTROL PROGRAM

The following quality assurance/quality control (QA/QC) samples were collected during the groundwater sampling activities: duplicates, equipment blanks, and trip blanks. Two duplicate samples were collected to evaluate the laboratory's performance by comparing the analytical results of two samples collected at the same location. Three equipment blanks were collected to evaluate for cross-contamination due to inadequate decontamination of sampling equipment. As volatiles were part of the analytical program, trip blanks were required and were analyzed for volatile organic compounds (VOCs) only. QA/QC results are discussed in Section 4.2.

4.0 Presentation of Results

4.1 GROUNDWATER SAMPLING RESULTS

Table 2 summarizes all detected concentrations in each groundwater sample. Analytical laboratory reports are included in **Appendix E**.

Site-specific cleanup levels (CULs) for groundwater are defined in the *Cleanup Action Plan*, dated March 8, 2013. The CULs were developed from a combination of primary maximum contaminant levels (MCLs), standard MTCA Method A CULs, and standard and modified MTCA Method B CULs. Primary MCLs are set as the CUL for constituents for which they have been developed. If no MCL has been established, modified MTCA Method B CULs are generally used. In cases where modified MTCA Method B CULs have not been developed (TPH-Gx and manganese), standard MTCA Method A or Method B CULs are used.

The groundwater analytical data were compared to the site-specific CULs for applicable constituents. Concentrations of detected constituents exceeding CULs are shown at each well location on **Figure 4**. Also shown on this figure are the constituent concentrations measured at each well location during the three previous groundwater sampling events, if applicable. Concentrations of nitrate are shown at all wells on **Figure 4**, though nitrate concentrations at some wells are below the CUL. A nitrate isoconcentration map is included as **Figure 5**.

The following is a summary of detected constituents that exceeded CULs during the 1H15 semi-annual groundwater sampling event:

- Nitrate concentrations ranging from 10.4 mg/L to 612 mg/L were detected in groundwater samples collected from ten wells (MW-3, MW-4R, MW-5R, MW-6, MW-8, MW-9, MW-12R, MW-13, MW-16, and MW-19) above the CUL of 10 mg/L;
- A nitrite concentration of 3.9 mg/L was detected in the groundwater sample collected from well MW-5R above the CUL of 1 mg/L;
- 1,2-Dichloropropane concentrations ranging from 0.02 mg/L to 0.55 mg/L were detected in groundwater samples collected from five wells (MW-4R, MW-9, MW-12R, MW-16, and MW-19) above the CUL of 0.005 mg/L;
- 1,2,3-Trichloropropane concentrations ranging from 0.0068 mg/L to 0.071 mg/L were detected in groundwater samples collected from five wells (MW-4R, MW-9, MW-12R, MW-16, and MW-19) above the CUL of 0.00001 mg/L;
- Dinoseb concentrations ranging from 0.0081 mg/L to 0.73 mg/L were detected in groundwater samples collected from five wells (MW-4R, MW-9, MW-12R, MW-13, and MW-16) above the CUL of 0.007 mg/L;

- Arsenic concentrations ranging from an estimated value of 0.0150 J mg/L to 0.0457 mg/L were detected in groundwater samples collected from nine wells (MW-3, MW-6, MW-10, MW-11, MW-12R, MW-15, MW-18, MW-19, and MW-20) above the CUL of 0.01 mg/L;

- A benzene concentration of 0.006 mg/L was detected in the groundwater sample collected from well MW-12R above the CUL of 0.005 mg/L;

- A chlorobenzene concentration of 0.16 mg/L was detected in the groundwater sample collected from well MW-12R above the CUL of 0.1 mg/L; and

- An iron concentration of 21.8 mg/L was detected in the groundwater sample collected from well MW-19 above the CUL of 11.2 mg/L.

Alkalinity, ammonia, chloride, pH, and sulfate were analyzed, but do not present a human health risk (per the *Human Health Risk Assessment*, dated December 12, 2008) and no CULs are established. All detected concentrations of ammonia, chloride, and sulfate and all laboratory-measured pH and alkalinity values are included in **Table 2**. All detected concentrations of ammonia, chloride, and sulfate are shown on **Figure 4**.

Ammonia was detected in groundwater samples collected from eight wells at concentrations ranging from an estimated 0.050 J mg/L (well MW-19) to 577 mg/L (well MW-4R). Chloride was detected in groundwater samples collected from two wells at concentrations of 102 mg/L (well MW-12R) and 175 mg/L (well MW-19). Sulfate was detected in groundwater samples collected from eight wells at concentrations ranging from 99.4 mg/L (well MW-19) to 506 mg/L (well MW-16).

Alkalinity and pH were analyzed for remedial design purposes. Laboratory-measured pH values were within a normal range from 7.6 (well MW-5R) to 8.3 (well MW-3). Total alkalinity was detected in 13 wells ranging from 167 mg/L as calcium carbonate ($CaCO_3$; well MW-15) to 594 mg/L as $CaCO_3$ (well MW-16).

4.2 QUALITY ASSURANCE/QUALITY CONTROL SAMPLE RESULTS

Two duplicate samples (MW07-021815-1 from well MW-7 and MW14-021715-1 from well MW-14) were collected. The relative percent difference (RPD) was evaluated using Equation 1 and results are summarized in **Appendix F**.

Equation 1

$$RPD = \left[\frac{|S - D|}{(S + D) \div 2}\right] \times 100$$

Where: RPD = Relative Percent Difference

S = First Sample Value (original)

D = Second Sample Value (duplicate)

The average RPD was 8.08%, indicating good precision by the analytical laboratory for each given method and analytical batch.

Three equipment blanks (MW01-021915-2, MW17-021815-2, and MW18-021715-2) were submitted for analysis during groundwater sampling. There were no detections in the equipment blanks, indicating adequate decontamination between sampling locations.

Two trip blanks were submitted for analysis in association with groundwater samples. There were no detections in the trip blanks, indicating proper sample handling.

Samples from wells MW-3, MW-12R, MW-13, MW-16, MW-18, and MW-19 and any associated QA/QC samples were analyzed outside of hold time for nitrite due to a FedEx® delay attributed to winter weather; however, it does not appear that the analytical results were significantly affected by the delay.

5.0 Conclusions and Recommendations

As shown in **Figure 4**, the results of the 1H15 semi-annual groundwater monitoring event for key constituents are generally within historical limits and consistent with what was observed during previous monitoring events. Exceptions are discussed below. General results and trends relative to all historical monitoring events (discussed by area of the Site) are summarized below:

- Area 1: Concentrations of 1,2,3-trichloropropane, 1,2-dicholoropropane, ammonia, dinoseb, nitrate, and sulfate in well MW-4R were generally consistent with previous data at well MW-4, while nitrite was a historical low. Concentrations of ammonia and sulfate in well MW-8 were generally consistent with previous data, while nitrate was a historical low.

- Area 2: Concentrations of ammonia, nitrate, and sulfate in well MW-5R were generally consistent with previous data at well MW-5, while nitrite was a historical high. Concentrations of arsenic and nitrate in well MW-6 were generally consistent with previous data.

- Area 3: Concentrations of arsenic and nitrate in wells MW-10 and MW-11 were generally consistent with previous data.

- Area 4: No monitoring wells are located in Area 4.

- Area 5: Concentrations of nitrate in the wells located in the northern portion of the property (wells MW-1 and MW-7) were below the nitrate CUL, indicating they are generally not affected by the identified nitrate source areas.

- Area 6: Concentrations of ammonia, arsenic, and nitrate in well MW-3 were generally consistent with previous data. Concentrations of 1,2,3-trichloropropane, 1,2-dichloropropane, ammonia, arsenic, benzene, chlorobenzene, dinoseb, and nitrate in well MW-12R were generally consistent with previous data at well MW-12, while chloride and sulfate were historical lows.

- Off-Property: Concentrations of 1,2-dichloropropane, ammonia, dinoseb, and nitrate in well MW-9 were generally consistent with previous data, while 1,2,3-trichloropropane and sulfate were historical lows. Concentrations of ammonia, dinoseb, and nitrate in well MW-13 were generally consistent with previous data, while sulfate was a historical low. The concentration of arsenic in well MW-14 was generally consistent with previous data, while nitrate was equal to the historical high. Concentrations of arsenic and nitrate in well MW-15 were generally consistent with previous data. Concentrations of 1,2,3-trichloropropane, 1,2-dichloropropane, nitrate, and sulfate in well MW-16 were generally consistent with previous data, while ammonia and dinoseb were historical lows. The concentration of nitrate in well MW-17 was generally consistent with previous data. Concentrations of arsenic and nitrate in well MW-18 were generally consistent with previous data. Concentrations of 1,2,3-trichloropropane, 1,2-dichloropropane, ammonia,

arsenic, chloride, iron, nitrate, nitrite, and sulfate in well MW-19 were generally consistent with previous data. The concentration of arsenic in well MW-20 was generally consistent with previous data, while nitrate was equal to the historical high.

Overall, concentrations were generally consistent with previous data, though some historical highs and lows were observed. A historical low for nitrate was observed in Area 1 at well MW-8, and nitrate concentrations equal to the historical highs were observed off-property in wells MW-14 and MW-20. A historical low for nitrite was observed in Area 1 at well MW-4R (as compared to well MW-4), and a historical high for nitrite was observed in Area 2 at well MW-5R (as compared to well MW-5). Historical lows for sulfate were observed in Area 6 at well MW-12R (as compared to well MW-12) and off-property in wells MW-9 and MW-13. A historical low for chloride was observed in Area 6 at well MW-12R (as compared to well MW-12), a historical low for 1,2,3-trichloropropane was observed off-property at well MW-9, and historical lows for ammonia and dinoseb were observed off-property at well MW-16. The majority of the historical highs and lows were not of great significance as changes were less than an order of magnitude; the exception is the nitrite concentration observed at well MW-5R, which is two orders of magnitude greater than the previous maximum nitrite concentration at well MW-5.

Hydrographs were prepared for each sampled well using groundwater elevations and concentrations for key constituents (those included on **Figure 4**) and are included in **Appendix G**. Generally, constituent concentration trends are shown to be relatively stable to decreasing.

As shown in **Figure 5**, off-property wells MW-9, MW-13, MW-16, and MW-19 had nitrate concentrations above the CUL of 10 mg/L. The nitrate concentration in furthest down-gradient well MW-19 is currently above the CUL of 10 mg/L and the down-gradient edge of the nitrate plume boundary is undefined; however, nitrate concentrations below the CUL of 10 mg/L in off-property wells MW-14, MW-15, MW-17, MW-18, and MW-20 define the nitrate plume laterally. The groundwater elevations in wells MW-14 through MW-20 appear to confirm the southeastern flow direction off-property; however, as illustrated in **Figure 5**, the nitrate plume does not appear to directly follow this flow direction and instead trends south.

It is recommended that the groundwater sampling frequency at the Site remain semi-annual during First and Third Quarters, and the reduced analytical program at wells MW-14 through MW-20 continue. In addition, similar to the previous evaluation for wells MW-14 through MW-20, an evaluation was conducted to determine which analytes should continue for wells MW-1, MW-3, MW-4R, MW-5R, MW-6 through MW-11, MW-12R, and MW-13. Only constituents or constituent groups that exceeded CULs during the last four quarters or provide additional remedial design data at key wells were retained. The following analytes are proposed to be eliminated.

- Alkalinity and pH at well MW-3;
- Iron and manganese at well MW-4R;

- Iron at well MW-5R;
- Alkalinity, pH, and sulfate at well MW-6;
- Alkalinity, pH, and ammonia at well MW-8;
- Alkalinity, pH, sulfate, VOCs, and TPH-Gx at well MW-10;
- Alkalinity, pH, sulfate, and TPH-Gx at well MW-11;
- Chloride and iron at well MW-12R; and
- Ammonia and iron at well MW-13.

The recommended sampling program is contained in the table below, and will be implemented beginning Third Quarter 2015 for the Second Half 2015 groundwater monitoring and sampling event unless Ecology objects.

Well ID	Analytes (Method)	No. of Containers	Sample Container(s) (Preservative)
MW-1	Nitrate-N (EPA 353.2)	1	40 ml glass vial (H_2SO_4)
	Nitrite-N (EPA 353.2)	1	40 ml glass vial (no preservative)
MW-3	Arsenic (EPA 6010B)	1	250 ml plastic (HNO_3)
	Nitrate-N (EPA 353.2)	1	40 ml glass vial (H_2SO_4)
	Nitrite-N (EPA 353.2)	1	40 ml glass vial (no preservative)
	Ammonia-N (SM 4500-NH3 D-1997)	1	500 ml glass (H_2SO_4)
MW-4R	Arsenic (EPA 6010B)	1	250 ml plastic (HNO_3)
	pH (SM 4500-H+B-2000)	1	250 ml plastic (no preservative)
	Sulfate (EPA 300.0)	2	40ml glass vials (no preservative)
	Alkalinity (SM 2320 B-1997)	1	250 ml plastic (no preservative)
	Nitrate-N (EPA 353.2)	1	40 ml glass vial (H_2SO_4)
	Nitrite-N (EPA 353.2)	1	40 ml glass vial (no preservative)
	Ammonia-N (SM 4500-NH3 D-1997)	1	500 ml glass (H_2SO_4)
	VOCs (EPA 8260B; EPA 524M for 1,2,3-TCP)	3	40 ml glass vials (HCl)
	Chlorinated Herbicides (EPA 8151A)	2	1000 ml glass (no preservative)
MW-5R	pH (SM 4500-H+B-2000)	1	250 ml plastic (no preservative)
	Sulfate (EPA 300.0)	2	40ml glass vials (no preservative)
	Alkalinity (SM 2320 B-1997)	1	250 ml plastic (no preservative)
	Nitrate-N (EPA 353.2)	1	40 ml glass vial (H_2SO_4)
	Nitrite-N (EPA 353.2)	1	40 ml glass vial (no preservative)
	Ammonia-N (SM 4500-NH3 D-1997)	1	500 ml glass (H_2SO_4)
MW-6	Arsenic (EPA 6010B)	1	250 ml plastic (HNO_3)
	Nitrate-N (EPA 353.2)	1	40 ml glass vial (H_2SO_4)
	Nitrite-N (EPA 353.2)	1	40 ml glass vial (no preservative)

Well ID	Analytes (Method)	No. of Containers	Sample Container(s) (Preservative)
MW-7	Nitrate-N (EPA 353.2)	1	40 ml glass vial (H_2SO_4)
	Nitrite-N (EPA 353.2)	1	40 ml glass vial (no preservative)
MW-8	Sulfate (EPA 300.0)	2	40 ml glass vial (no preservative)
	Nitrate-N (EPA 353.2)	1	40 ml glass vial (H_2SO_4)
	Nitrite-N (EPA 353.2)	1	40 ml glass vial (no preservative)
MW-9	pH (SM 4500-H+B-2000)	1	250 ml plastic (no preservative)
	Sulfate (EPA 300.0)	2	40 ml glass vial (no preservative)
	Alkalinity (SM 2320 B-1997)	1	250 ml plastic (no preservative)
	Nitrate-N (EPA 353.2)	1	40 ml glass vial (H_2SO_4)
	Nitrite-N (EPA 353.2)	1	40 ml glass vial (no preservative)
	Ammonia-N (SM 4500-NH3 D-1997)	1	500 ml glass (H_2SO_4)
	VOCs (EPA 8260B; EPA 524M for 1,2,3-TCP)	3	40 ml glass vials (HCl)
	Chlorinated Herbicides (EPA 8151A)	2	1000 ml glass (no preservative)
MW-10	Arsenic (EPA 6010B)	1	250 ml plastic (HNO_3)
	Nitrate-N (EPA 353.2)	1	40 ml glass vial (H_2SO_4)
	Nitrite-N (EPA 353.2)	1	40 ml glass vial (no preservative)
MW-11	Arsenic (EPA 6010B)	1	250 ml plastic (HNO_3)
	Nitrate-N (EPA 353.2)	1	40 ml glass vial (H_2SO_4)
	Nitrite-N (EPA 353.2)	1	40 ml glass vial (no preservative)
MW-12R	Arsenic (EPA 6010B)	1	250 ml plastic (HNO_3)
	pH (SM 4500-H+B-2000)	1	250 ml plastic (no preservative)
	Sulfate (EPA 300.0)	2	40ml glass vials (no preservative)
	Alkalinity (SM 2320 B-1997)	1	250 ml plastic (no preservative)
	Nitrate-N (EPA 353.2)	1	40 ml glass vial (H_2SO_4)
	Nitrite-N (EPA 353.2)	1	40 ml glass vial (no preservative)
	Ammonia-N (SM 4500-NH3 D-1997)	1	500 ml glass (H_2SO_4)
	VOCs (EPA 8260B; EPA 524M for 1,2,3-TCP)	3	40 ml glass vials (HCl)
	Chlorinated Herbicides (EPA 8151A)	2	1000 ml glass (no preservative)
MW-13	pH (SM 4500-H+B-2000)	1	250 ml plastic (no preservative)
	Sulfate (EPA 300.0)	2	40 ml glass vial (no preservative)
	Alkalinity (SM 2320 B-1997)	1	250 ml plastic (no preservative)
	Nitrate-N (EPA 353.2)	1	40 ml glass vial (H_2SO_4)
	Nitrite-N (EPA 353.2)	1	40 ml glass vial (no preservative)
	Chlorinated Herbicides (EPA 8151A)	2	1000 ml glass (no preservative)
MW-14	Arsenic (EPA 6010B)	1	250 ml plastic (HNO_3)
	Nitrate-N (EPA 353.2)	1	40 ml glass vial (H_2SO_4)
	Nitrite-N (EPA 353.2)	1	40 ml glass vial (no preservative)
MW-15	Arsenic (EPA 6010B)	1	250 ml plastic (HNO_3)
	pH (SM 4500-H+B-2000)	1	250 ml plastic (no preservative)
	Alkalinity (SM 2320 B-1997)	1	250 ml plastic (no preservative)
	Nitrate-N (EPA 353.2)	1	40 ml glass vial (H_2SO_4)
	Nitrite-N (EPA 353.2)	1	40 ml glass vial (no preservative)
	Ammonia-N (SM 4500-NH3 D-1997)	1	500 ml glass (H_2SO_4)

Well ID	Analytes (Method)	No. of Containers	Sample Container(s) (Preservative)
MW-16	pH (SM 4500-H+B-2000)	1	250 ml plastic (no preservative)
	Sulfate (EPA 300.0)	2	40ml glass vials (no preservative)
	Alkalinity (SM 2320 B-1997)	1	250 ml plastic (no preservative)
	Nitrate-N (EPA 353.2)	1	40 ml glass vial (H_2SO_4)
	Nitrite-N (EPA 353.2)	1	40 ml glass vial (no preservative)
	Ammonia-N (SM 4500-NH3 D-1997)	1	500 ml glass (H_2SO_4)
	VOCs (EPA 8260B; EPA 524M for 1,2,3-TCP)	3	40 ml glass vials (HCl)
	Chlorinated Herbicides (EPA 8151A)	2	1000 ml glass (no preservative)
MW-17	Nitrate-N (EPA 353.2)	1	40 ml glass vial (H_2SO_4)
	Nitrite-N (EPA 353.2)	1	40 ml glass vial (no preservative)
MW-18	Arsenic (EPA 6010B)	1	250 ml plastic (HNO_3)
	Nitrate-N (EPA 353.2)	1	40 ml glass vial (H_2SO_4)
	Nitrite-N (EPA 353.2)	1	40 ml glass vial (no preservative)
MW-19	Arsenic, Iron (EPA 6010B)	1	250 ml plastic (HNO_3)
	pH (SM 4500-H+B-2000)	1	250 ml plastic (no preservative)
	Chloride, Sulfate (EPA 300.0)	2	40ml glass vials (no preservative)
	Alkalinity (SM 2320 B-1997)	1	250 ml plastic (no preservative)
	Nitrate-N (EPA 353.2)	1	40 ml glass vial (H_2SO_4)
	Nitrite-N (EPA 353.2)	1	40 ml glass vial (no preservative)
	Ammonia-N (SM 4500-NH3 D-1997)	1	500 ml glass (H_2SO_4)
	VOCs (EPA 8260B; EPA 524M for 1,2,3-TCP)	3	40 ml glass vials (HCl)
MW-20	Arsenic (EPA 6010B)	1	250 ml plastic (HNO_3)
	Nitrate-N (EPA 353.2)	1	40 ml glass vial (H_2SO_4)
	Nitrite-N (EPA 353.2)	1	40 ml glass vial (no preservative)

TABLES

Table 1
Cumulative Groundwater Elevations
Bee-Jay Scales Site, Sunnyside, Washington

Well ID	Quarter/ Half[1]	Date	TOC Elevation (feet above MSL)	Depth to GW (feet below TOC)	GW Elevation (feet above MSL)
MW-1	3Q05	09/28/05	745.86	11.67	734.19
	4Q05	01/11/06	745.86	10.74	735.12
	1Q06	03/28/06	745.86	11.12	734.74
	2Q06	06/26/06	745.86	11.29	734.57
	3Q06	09/18/06	745.86	11.87	733.99
	4Q06	12/18/06	745.86	11.39	734.47
	1Q07	03/19/07	745.86	11.35	734.51
	2Q07	06/25/07	745.86	11.68	734.18
	3Q07	09/18/07	745.86	11.81	734.05
	4Q07	12/17/07	745.86	11.18	734.68
	1Q08	03/11/08	745.86	11.30	734.56
	2Q08	06/16/08	745.86	11.70	734.16
	3Q08	09/08/08	745.86	11.94	733.92
	1H09	03/10/09	745.86	11.47	734.39
	2H09	09/14/09	745.86	12.25	733.61
	1H10	03/09/10	745.86	11.04	734.82
	2H10	08/30/10	745.86	11.78	734.08
	1H11	03/08/11	745.86	11.21	734.65
	2H11	09/12/11	745.86	11.75	734.11
	1H12	03/12/12	745.86	11.24	734.62
	2H12	08/29/12	745.86	11.67	734.19
	1H13	03/04/13	745.86	11.41	734.45
	3Q13	08/22/13	745.86	12.98	732.88
	4Q13	12/02/13	745.86	11.65	734.21
	1Q14	03/10/14	745.86	11.23	734.63
	2Q14	05/19/14	745.86	11.36	734.50
	2H14	09/08/14	745.86	11.80	734.06
	1H15	02/13/15	745.86	11.05	734.81
MW-3	3Q05	09/28/05	740.92	7.23	733.69
	4Q05	01/11/06	740.92	5.31	735.61
	1Q06	03/28/06	740.92	6.68	734.24
	2Q06	06/26/06	740.92	6.72	734.20
	3Q06	09/18/06	740.92	7.50	733.42
	4Q06	12/18/06	740.92	6.40	734.52
	1Q07	03/19/07	740.92	6.93	733.99
	2Q07	06/25/07	740.92	7.18	733.74
	3Q07	09/18/07	740.92	7.35	733.57
	4Q07	12/17/07	740.92	6.49	734.43
	1Q08	03/11/08	740.92	6.85	734.07
	2Q08	06/16/08	740.92	7.11	733.81
	3Q08	09/08/08	740.92	7.60	733.32
	1H09	03/10/09	740.92	6.71	734.21
	2H09	09/14/09	740.92	7.86	733.06
	1H10	03/09/10	740.92	6.52	734.40
	2H10	08/30/10	740.92	7.40	733.52
	1H11	03/08/11	740.92	6.78	734.14
	2H11	09/12/11	740.92	7.30	733.62
	1H12	03/12/12	740.92	6.79	734.13
	2H12	08/29/12	740.92	7.20	733.72
	1H13	03/04/13	740.92	7.01	733.91
	3Q13	08/22/13	740.92	7.72	733.20
	4Q13	12/02/13	740.92	7.15	733.77
	1Q14	03/10/14	740.92	6.48	734.44
	2Q14	05/19/14	740.92	6.82	734.10
	2H14	09/08/14	740.92	7.35	733.57
	1H15	02/13/15	740.92	6.49	734.43

Table 1
Cumulative Groundwater Elevations
Bee-Jay Scales Site, Sunnyside, Washington

Well ID	Quarter/ Half[1]	Date	TOC Elevation (feet above MSL)	Depth to GW (feet below TOC)	GW Elevation (feet above MSL)
MW-4	3Q05	09/28/05	741.88	8.30	733.58
	4Q05	01/11/06	741.88	7.03	734.85
	1Q06	03/28/06	741.88	7.83	734.05
	2Q06	06/26/06	741.88	9.15	732.73
	3Q06	09/18/06	741.88	8.52	733.36
	4Q06	12/18/06	741.88	7.80	734.08
	1Q07	03/19/07	741.88	8.07	733.81
	2Q07	06/25/07	741.88	8.31	733.57
	3Q07	09/18/07	741.88	8.45	733.43
	4Q07	12/17/07	741.88	7.68	734.20
	1Q08	03/11/08	741.88	8.04	733.84
	2Q08	06/16/08	741.88	8.32	733.56
	3Q08	09/08/08	741.88	8.82	733.06
	1H09	03/10/09	741.88	8.04	733.84
	2H09	09/14/09	741.88	8.96	732.92
	1H10	03/09/10	741.88	7.71	734.17
	2H10	08/30/10	741.88	8.54	733.34
	1H11	03/08/11	741.88	7.94	733.94
	2H11	09/12/11	741.88	8.45	733.43
	1H12	03/12/12	741.88	7.90	733.98
	2H12	08/29/12	741.88	8.30	733.58
	1H13	03/04/13	741.88	8.13	733.75
	3Q13	08/22/13	741.88	8.46	733.42
	4Q13	12/02/13	741.88	8.27	733.61
	1Q14	03/10/14	741.88	7.68	734.20
	2Q14	05/19/14	741.88	7.98	733.90
	Well Destroyed in June 2014				
MW-4R	1H15	02/13/15	741.90	7.68	734.22
MW-5	3Q05	09/28/05	741.93	7.82	734.11
	4Q05	01/11/06	741.93	6.50	735.43
	1Q06	03/28/06	741.93	7.36	734.57
	2Q06	06/26/06	741.93	7.46	734.47
	3Q06	09/18/06	741.93	8.03	733.90
	4Q06	12/18/06	741.93	7.34	734.59
	1Q07	03/19/07	741.93	7.62	734.31
	2Q07	06/25/07	741.93	7.99	733.94
	3Q07	09/18/07	741.93	7.97	733.96
	4Q07	12/17/07	741.93	7.21	734.72
	1Q08	03/11/08	741.93	7.67	734.26
	2Q08	06/16/08	741.93	7.90	734.03
	3Q08	09/08/08	741.93	8.15	733.78
	1H09	03/10/09	741.93	7.70	734.23
	2H09	09/14/09	741.93	8.45	733.48
	1H10	03/09/10	741.93	7.30	734.63
	2H10	08/30/10	741.93	8.04	733.89
	1H11	03/08/11	741.93	7.50	734.43
	2H11[7]	09/12/11	741.93	NA	NA
	1H12	03/12/12	741.93	7.41	734.52
	2H12	08/29/12	741.93	7.75	734.18
	1H13	03/04/13	741.93	7.67	734.26
	3Q13	08/22/13	741.93	8.01	733.92
	4Q13	12/02/13	741.93	7.76	734.17
	1Q14	03/10/14	741.93	7.26	734.67
	2Q14	05/19/14	741.93	7.50	734.43
	Well Destroyed in June 2014				
MW-5R	1H15	02/13/15	741.85	7.29	734.56

Table 1
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Bee-Jay Scales Site, Sunnyside, Washington

Well ID	Quarter/ Half[1]	Date	TOC Elevation (feet above MSL)	Depth to GW (feet below TOC)	GW Elevation (feet above MSL)
MW-6	3Q05	09/28/05	741.73	6.71	735.02
	4Q05	01/11/06	741.73	5.51	736.22
	1Q06	03/28/06	741.73	6.37	735.36
	2Q06	06/26/06	741.73	6.51	735.22
	3Q06	09/18/06	741.73	6.95	734.78
	4Q06	12/18/06	741.73	6.26	735.47
	1Q07	03/19/07	741.73	6.62	735.11
	2Q07	06/25/07	741.73	7.60	734.13
	3Q07	09/18/07	741.73	6.90	734.83
	4Q07	12/17/07	741.73	6.18	735.55
	1Q08	03/11/08	741.73	6.76	734.97
	2Q08	06/16/08	741.73	6.98	734.75
	3Q08	09/08/08	741.73	7.15	734.58
	1H09	03/10/09	741.73	6.85	734.88
	2H09	09/14/09	741.73	7.48	734.25
	1H10	03/09/10	741.73	6.32	735.41
	2H10	08/30/10	741.73	6.95	734.78
	1H11	03/08/11	741.73	6.48	735.25
	2H11	09/12/11	741.73	6.81	734.92
	1H12	03/12/12	741.73	6.35	735.38
	2H12	08/29/12	741.73	6.57	735.16
	1H13	03/04/13	741.73	6.64	735.09
	3Q13	08/22/13	741.73	6.90	734.83
	4Q13	12/02/13	741.73	6.70	735.03
	1Q14	03/10/14	741.73	6.35	735.38
	2Q14	05/19/14	741.73	6.50	735.23
	2H14	09/08/14	741.73	6.74	734.99
	1H15	02/13/15	741.73	6.12	735.61
MW-7	3Q05	09/28/05	744.68	10.65	734.03
	4Q05	01/11/06	744.68	9.76	734.92
	1Q06	03/28/06	744.68	10.22	734.46
	2Q06	06/26/06	744.68	10.39	734.29
	3Q06	09/18/06	744.68	10.85	733.83
	4Q06	12/18/06	744.68	10.45	734.23
	1Q07	03/19/07	744.68	10.39	734.29
	2Q07	06/25/07	744.68	10.69	733.99
	3Q07	09/18/07	744.68	10.79	733.89
	4Q07	12/17/07	744.68	10.22	734.46
	1Q08	03/11/08	744.68	10.42	734.26
	2Q08	06/16/08	744.68	10.75	733.93
	3Q08	09/08/08	744.68	10.91	733.77
	1H09	03/10/09	744.68	10.50	734.18
	2H09	09/14/09	744.68	11.25	733.43
	1H10	03/09/10	744.68	10.15	734.53
	2H10	08/30/10	744.68	10.78	733.90
	1H11	03/08/11	744.68	10.30	734.38
	2H11	09/12/11	744.68	10.78	733.90
	1H12	03/12/12	744.68	10.30	734.38
	2H12	08/29/12	744.68	10.60	734.08
	1H13	03/04/13	744.68	10.45	734.23
	3Q13	08/22/13	744.68	11.01	733.67
	4Q13	12/02/13	744.68	10.68	734.00
	1Q14	03/10/14	744.68	10.41	734.27
	2Q14	05/19/14	744.68	10.45	734.23
	2H14	09/08/14	744.68	10.82	733.86
	1H15	02/13/15	744.68	10.11	734.57

Table 1
Cumulative Groundwater Elevations
Bee-Jay Scales Site, Sunnyside, Washington

Well ID	Quarter/ Half[1]	Date	TOC Elevation (feet above MSL)	Depth to GW (feet below TOC)	GW Elevation (feet above MSL)
MW-8	3Q05	09/28/05	741.32	7.04	734.28
	4Q05	01/11/06	741.32	5.58	735.74
	1Q06	03/28/06	741.32	6.48	734.84
	2Q06	06/26/06	741.32	6.59	734.73
	3Q06	09/18/06	741.32	7.28	734.04
	4Q06	12/18/06	741.32	6.38	734.94
	1Q07	03/19/07	741.32	6.67	734.65
	2Q07	06/25/07	741.32	7.03	734.29
	3Q07	09/18/07	741.32	7.15	734.17
	4Q07	12/17/07	741.32	6.28	735.04
	1Q08	03/11/08	741.32	6.65	734.67
	2Q08	06/16/08	741.32	7.01	734.31
	3Q08	09/08/08	741.32	7.39	733.93
	1H09	03/10/09	741.32	6.61	734.71
	2H09	09/14/09	741.32	7.79	733.53
	1H10	03/09/10	741.32	6.45	734.87
	2H10	08/30/10	741.32	7.20	734.12
	1H11	03/08/11	741.32	6.52	734.80
	2H11	09/12/11	741.32	7.18	734.14
	1H12	03/12/12	741.32	6.57	734.75
	2H12	08/29/12	741.32	7.05	734.27
	1H13	03/04/13	741.32	6.75	734.57
	3Q13	08/22/13	741.32	7.31	734.01
	4Q13	12/02/13	741.32	7.00	734.32
	1Q14	03/10/14	741.32	6.39	734.93
	2Q14	05/19/14	741.32	6.68	734.64
	2H14	09/08/14	741.32	7.13	734.19
	1H15	02/13/15	741.32	6.30	735.02
MW-9	3Q05	09/28/05	741.09	8.31	732.78
	4Q05	01/11/06	741.09	7.04	734.05
	1Q06	03/28/06	741.09	7.91	733.18
	2Q06	06/26/06	741.09	8.45	732.64
	3Q06	09/18/06	741.09	8.45	732.64
	4Q06	12/18/06	741.09	7.86	733.23
	1Q07	03/19/07	741.09	8.15	732.94
	2Q07	06/25/07	741.09	8.65	732.44
	3Q07	09/18/07	741.09	8.40	732.69
	4Q07	12/17/07	741.09	7.78	733.31
	1Q08	03/11/08	741.09	8.11	732.98
	2Q08	06/16/08	741.09	8.34	732.75
	3Q08[3]	09/10/08	741.09	8.61	732.48
	1H09[5]	03/12/09	741.09	8.15	732.94
	2H09	09/14/09	741.09	8.74	732.35
	1H10	03/09/10	741.09	7.75	733.34
	2H10	08/30/10	741.09	8.50	732.59
	1H11	03/08/11	741.09	8.00	733.09
	2H11	09/12/11	741.09	8.34	732.75
	1H12	03/12/12	741.09	8.00	733.09
	2H12	08/29/12	741.09	8.24	732.85
	1H13	03/04/13	741.09	8.23	732.86
	3Q13	08/22/13	741.09	8.49	732.60
	4Q13	12/02/13	741.09	8.17	732.92
	1Q14	03/10/14	741.09	7.80	733.29
	2Q14	05/19/14	741.09	8.12	732.97
	2H14	09/08/14	741.09	8.27	732.82
	1H15	02/13/15	741.09	7.72	733.37

Table 1
Cumulative Groundwater Elevations
Bee-Jay Scales Site, Sunnyside, Washington

Well ID	Quarter/ Half[1]	Date	TOC Elevation (feet above MSL)	Depth to GW (feet below TOC)	GW Elevation (feet above MSL)
MW-10	3Q05	09/28/05	742.38	6.48	735.90
	4Q05	01/11/06	742.38	5.46	736.92
	1Q06	03/28/06	742.38	6.21	736.17
	2Q06	06/26/06	742.38	6.35	736.03
	3Q06	09/18/06	742.38	6.75	735.63
	4Q06	12/18/06	742.38	6.45	735.93
	1Q07	03/19/07	742.38	6.43	735.95
	2Q07	06/25/07	742.38	6.88	735.50
	3Q07	09/18/07	742.38	6.70	735.68
	4Q07	12/17/07	742.38	6.06	736.32
	1Q08	03/11/08	742.38	6.59	735.79
	2Q08	06/16/08	742.38	6.81	735.57
	3Q08	09/08/08	742.38	6.95	735.43
	1H09	03/10/09	742.38	6.72	735.66
	2H09	09/14/09	742.38	7.30	735.08
	1H10	03/09/10	742.38	6.09	736.29
	2H10	08/30/10	742.38	6.74	735.64
	1H11	03/08/11	742.38	6.31	736.07
	2H11	09/12/11	742.38	6.54	735.84
	1H12	03/12/12	742.38	6.16	736.22
	2H12	08/29/12	742.38	6.30	736.08
	1H13	03/04/13	742.38	6.42	735.96
	3Q13	08/22/13	742.38	6.72	735.66
	4Q13	12/02/13	742.38	6.50	735.88
	1Q14	03/10/14	742.38	6.36	736.02
	2Q14	05/19/14	742.38	6.29	736.09
	2H14	09/08/14	742.38	6.59	735.79
	1H15	02/13/15	742.38	5.91	736.47
MW-11	3Q05	09/28/05	742.10	6.01	736.09
	4Q05	01/11/06	742.10	5.03	737.07
	1Q06	03/28/06	742.10	5.85	736.25
	2Q06	06/26/06	742.10	5.99	736.11
	3Q06	09/18/06	742.10	6.30	735.80
	4Q06	12/18/06	742.10	5.72	736.38
	1Q07	03/19/07	742.10	6.07	736.03
	2Q07	06/25/07	742.10	6.50	735.60
	3Q07	09/18/07	742.10	6.21	735.89
	4Q07	12/17/07	742.10	5.71	736.39
	1Q08	03/11/08	742.10	6.29	735.81
	2Q08	06/16/08	742.10	6.41	735.69
	3Q08	09/08/08	742.10	6.47	735.63
	1H09	03/10/09	742.10	6.40	735.70
	2H09	09/14/09	742.10	6.80	735.30
	1H10	03/09/10	742.10	5.83	736.27
	2H10	08/30/10	742.10	6.20	735.90
	1H11	03/08/11	742.10	5.95	736.15
	2H11	09/12/11	742.10	6.05	736.05
	1H12	03/12/12	742.10	5.82	736.28
	2H12	08/29/12	742.10	5.82	736.28
	1H13	03/04/13	742.10	6.05	736.05
	3Q13	08/22/13	742.10	6.20	735.90
	4Q13	12/02/13	742.10	6.08	736.02
	1Q14	03/10/14	742.10	5.87	736.23
	2Q14	05/19/14	742.10	5.91	736.19
	2H14	09/08/14	742.10	6.24	735.86
	1H15	02/13/15	742.10	5.57	736.53

Table 1
Cumulative Groundwater Elevations
Bee-Jay Scales Site, Sunnyside, Washington

Well ID	Quarter/ Half[1]	Date	TOC Elevation (feet above MSL)	Depth to GW (feet below TOC)	GW Elevation (feet above MSL)
MW-12	3Q05	09/28/05	741.82	8.85	732.97
	4Q05	01/11/06	741.82	7.55	734.27
	1Q06	03/28/06	741.82	8.36	733.46
	2Q06	06/26/06	741.82	8.36	733.46
	3Q06	09/18/06	741.82	9.05	732.77
	4Q06[2]	12/18/06	741.82	8.45	733.37
	1Q07	03/19/07	741.82	8.59	733.23
	2Q07	06/25/07	741.82	8.80	733.02
	3Q07	09/18/07	741.82	8.95	732.87
	4Q07	12/17/07	741.82	8.27	733.55
	1Q08	03/11/08	741.82	8.49	733.33
	2Q08	06/16/08	741.82	8.78	733.04
	3Q08	09/08/08	741.82	9.09	732.73
	1H09	03/10/09	741.82	8.54	733.28
	2H09	09/14/09	741.82	9.32	732.50
	1H10	03/09/10	741.82	8.21	733.61
	2H10	08/30/10	741.82	8.98	732.84
	1H11	03/08/11	741.82	8.50	733.32
	2H11	09/12/11	741.82	8.85	732.97
	1H12	03/12/12	741.82	8.45	733.37
	2H12	08/29/12	741.82	8.75	733.07
	1H13	03/04/13	741.82	8.65	733.17
	3Q13	08/22/13	741.82	8.94	732.88
	4Q13	12/02/13	741.82	8.81	733.01
	1Q14	03/10/14	741.82	8.25	733.57
	2Q14	05/19/14	741.82	8.46	733.36
	Well Destroyed in June 2014				
MW-12R	1H15	02/13/15	741.48	7.85	733.63
MW-13	2Q07	06/25/07	742.20	9.89	732.31
	3Q07	09/18/07	742.20	9.85	732.35
	4Q07	12/17/07	742.20	9.48	732.72
	1Q08	03/11/08	742.20	9.61	732.59
	2Q08	06/16/08	742.20	9.80	732.40
	3Q08[4]	09/08/08	742.20	NA	NA
	1H09[6]	03/12/09	742.20	9.76	732.44
	2H09[6]	09/17/09	742.20	10.10	732.10
	1H10	03/09/10	742.20	9.51	732.69
	2H10	08/30/10	742.20	9.85	732.35
	1H11	03/08/11	742.20	9.61	732.59
	2H11	09/12/11	742.20	9.76	732.44
	1H12	03/12/12	742.20	9.53	732.67
	2H12	08/29/12	742.20	9.73	732.47
	1H13	03/04/13	742.20	9.68	732.52
	3Q13	08/22/13	742.20	9.84	732.36
	4Q13	12/02/13	742.20	9.75	732.45
	1Q14	03/10/14	742.20	9.46	732.74
	2Q14	05/19/14	742.20	9.58	732.62
	2H14	09/08/14	742.20	9.68	732.52
	1H15	02/13/15	742.20	9.40	732.80
MW-14	3Q13	08/22/13	741.37	8.04	733.33
	4Q13	12/02/13	741.37	7.89	733.48
	1Q14	03/10/14	741.37	7.69	733.68
	2Q14	05/19/14	741.37	7.72	733.65
	2H14[9]	09/10/14	741.37	7.94	733.43
	1H15	02/13/15	741.37	7.38	733.99

Table 1
Cumulative Groundwater Elevations
Bee-Jay Scales Site, Sunnyside, Washington

Well ID	Quarter/ Half[1]	Date	TOC Elevation (feet above MSL)	Depth to GW (feet below TOC)	GW Elevation (feet above MSL)
MW-15	3Q13	08/22/13	742.72	11.73	730.99
	4Q13	12/02/13	742.72	11.71	731.01
	1Q14	03/10/14	742.72	11.30	731.42
	2Q14	05/19/14	742.72	11.39	731.33
	2H14	09/08/14	742.72	11.70	731.02
	1H15	02/13/15	742.72	11.24	731.48
MW-16	3Q13	08/22/13	741.26	9.33	731.93
	4Q13	12/02/13	741.26	9.21	732.05
	1Q14	03/10/14	741.26	8.86	732.40
	2Q14[8]	05/21/14	741.26	9.02	732.24
	2H14	09/08/14	741.26	9.17	732.09
	1H15	02/13/15	741.26	8.77	732.49
MW-17	3Q13	08/22/13	741.82	10.97	730.85
	4Q13	12/02/13	741.82	10.88	730.94
	1Q14	03/10/14	741.82	10.83	730.99
	2Q14	05/19/14	741.82	10.56	731.26
	2H14	09/08/14	741.82	10.87	730.95
	1H15	02/13/15	741.82	10.38	731.44
MW-18	3Q13	08/22/13	741.30	13.51	727.79
	4Q13	12/02/13	741.30	13.57	727.73
	1Q14	03/10/14	741.30	13.54	727.76
	2Q14	05/19/14	741.30	13.52	727.78
	2H14	09/08/14	741.30	13.60	727.70
	1H15	02/13/15	741.30	13.52	727.78
MW-19	3Q13	08/22/13	739.46	8.60	730.86
	4Q13	12/02/13	739.46	8.48	730.98
	1Q14	03/10/14	739.46	8.13	731.33
	2Q14	05/19/14	739.46	8.31	731.15
	2H14	09/08/14	739.46	8.31	731.15
	1H15	02/13/15	739.46	8.05	731.41
MW-20	3Q13	08/22/13	740.51	12.79	727.72
	4Q13	12/02/13	740.51	12.82	727.69
	1Q14	03/10/14	740.51	12.65	727.86
	2Q14	05/19/14	740.51	12.70	727.81
	2H14	09/08/14	740.51	12.78	727.73
	1H15	02/13/15	740.51	12.65	727.86

Notes: GW = groundwater; NA = not accessible; MSL = mean sea level; TOC = top of casing

[1] Sampling frequency reduced from quarterly to semi-annually following the 3Q08 event, increased from semi-annually to quarterly following the 1H13 event, then reduced from quarterly to semi-annually following the 2Q14 event.

[2] Depth to GW during 4Q06 taken just prior to sampling because well was covered by a drum during gauging.

[3] Depth to GW during 3Q08 taken just prior to sampling because well was covered by boxes during gauging.

[4] Depth to GW during 3Q08 not measured because well could not be opened.

[5] Depth to GW during 1H09 taken just prior to sampling because well was covered by boxes during gauging.

[6] Depth to GW during 1H09 and 2H09 taken just prior to sampling because well could not be opened during gauging.

[7] Depth to GW during 2H11 not measured because there was biological hazard (wasp nest) adjacent to well.

[8] Depth to GW during 2Q14 taken just prior to sampling because well was covered by pallets during gauging.

[9] Depth to GW during 2H14 taken just prior to sampling because well was covered by truck during gauging.

Table 2
Comparison of First Half 2015 Detected Groundwater Concentrations to Cleanup Levels
Bee-Jay Scales Site, Sunnyside, Washington

Location ID	Date	Analyte	Analytical Results*	Units	MDL**	Qualifier	Cleanup Level
MW-1	02/19/15	Nitrate Nitrogen	5.3	mg/L	0.2		10
MW-3	02/19/15	Ammonia-Nitrogen	79.0	mg/L	1		NA
MW-3	02/19/15	Arsenic	**0.0351**	mg/L	0.0072		0.01
MW-3	02/19/15	Nitrate Nitrogen	**17.9**	mg/L	0.4		10
MW-3	02/19/15	pH	8.3	Std. Units	0.01		NA
MW-3	02/19/15	Total Alkalinity to pH 4.5	253	mg/L as CaCO3	0.7		NA
MW-4R	02/19/15	1,2,3-Trichloropropane	**0.009**	mg/L	0.00025		0.00001
MW-4R	02/19/15	1,2-Dichloropropane	**0.029**	mg/L	0.0005		0.005
MW-4R	02/19/15	2,4,5-T	0.000018	mg/L	0.000014	J	0.16
MW-4R	02/19/15	2,4-D	0.00026	mg/L	0.00015	J	0.07
MW-4R	02/19/15	Ammonia-Nitrogen	577	mg/L	5		NA
MW-4R	02/19/15	Arsenic	0.0089	mg/L	0.0072	J	0.01
MW-4R	02/19/15	Chlorobenzene	0.0008	mg/L	0.0005	J	0.1
MW-4R	02/19/15	Dalapon	0.00059	mg/L	0.00024	J	NA
MW-4R	02/19/15	Dicamba	0.00079	mg/L	0.000076		0.48
MW-4R	02/19/15	Dinoseb	**0.13**	mg/L	0.011		0.007
MW-4R	02/19/15	Iron	9.36	mg/L	0.0334		11.2
MW-4R	02/19/15	Manganese	0.923	mg/L	0.00083		2.2
MW-4R	02/19/15	Nitrate Nitrogen	**612**	mg/L	10		10
MW-4R	02/19/15	Nitrite Nitrogen	0.031	mg/L	0.015	J	1
MW-4R	02/19/15	Pentachlorophenol	0.00018	mg/L	0.000026		0.001
MW-4R	02/19/15	pH	7.8	Std. Units	0.01		NA
MW-4R	02/19/15	Sulfate	168	mg/L	7.5		NA
MW-4R	02/19/15	Total Alkalinity to pH 4.5	344	mg/L as CaCO3	0.7		NA
MW-5R	02/19/15	Ammonia-Nitrogen	107	mg/L	1		NA
MW-5R	02/19/15	Nitrate Nitrogen	**284**	mg/L	4		10
MW-5R	02/19/15	Nitrite Nitrogen	**3.9**	mg/L	0.15		1
MW-5R	02/19/15	pH	7.6	Std. Units	0.01		NA
MW-5R	02/19/15	Sulfate	392	mg/L	15		NA
MW-5R	02/19/15	Total Alkalinity to pH 4.5	325	mg/L as CaCO3	0.7		NA
MW-6	02/18/15	Arsenic	**0.0236**	mg/L	0.0072		0.01
MW-6	02/18/15	Nitrate Nitrogen	**10.4**	mg/L	0.4		10
MW-6	02/18/15	pH	8.0	Std. Units	0.01		NA
MW-6	02/18/15	Total Alkalinity to pH 4.5	302	mg/L as CaCO3	0.7		NA
MW-7	02/18/15	Nitrate Nitrogen	3.4	mg/L	0.04		10
MW-8	02/19/15	Ammonia-Nitrogen	1.7	mg/L	0.05		NA
MW-8	02/19/15	Nitrate Nitrogen	**83.6**	mg/L	4		10
MW-8	02/19/15	pH	7.9	Std. Units	0.01		NA
MW-8	02/19/15	Sulfate	157	mg/L	7.5		NA
MW-8	02/19/15	Total Alkalinity to pH 4.5	267	mg/L as CaCO3	0.7		NA
MW-9	02/19/15	1,2,3-Trichloropropane	**0.0068**	mg/L	0.00025		0.00001
MW-9	02/19/15	1,2-Dichloropropane	**0.02**	mg/L	0.0005		0.005
MW-9	02/19/15	2,4,5-TP	0.000013	mg/L	0.0000094	J	0.05
MW-9	02/19/15	2,4-D	0.0003	mg/L	0.00015	J	0.07
MW-9	02/19/15	Ammonia-Nitrogen	222	mg/L	5		NA
MW-9	02/19/15	Chlorobenzene	0.0008	mg/L	0.0005	J	0.1
MW-9	02/19/15	Dicamba	0.0008	mg/L	0.000075		0.48
MW-9	02/19/15	Dinoseb	**0.33**	mg/L	0.056		0.007
MW-9	02/19/15	Nitrate Nitrogen	**262**	mg/L	10		10
MW-9	02/19/15	Pentachlorophenol	0.000045	mg/L	0.000025	J	0.001
MW-9	02/19/15	pH	7.8	Std. Units	0.01		NA
MW-9	02/19/15	Sulfate	127	mg/L	7.5		NA
MW-9	02/19/15	Total Alkalinity to pH 4.5	467	mg/L as CaCO3	0.7		NA

Table 2
Comparison of First Half 2015 Detected Groundwater Concentrations to Cleanup Levels
Bee-Jay Scales Site, Sunnyside, Washington

Location ID	Date	Analyte	Analytical Results*	Units	MDL**	Qualifier	Cleanup Level
MW-10	02/18/15	Arsenic	**0.0199**	mg/L	0.0072	J	0.01
MW-10	02/18/15	Nitrate Nitrogen	3.2	mg/L	0.04		10
MW-10	02/18/15	pH	8.2	Std. Units	0.01		NA
MW-10	02/18/15	Total Alkalinity to pH 4.5	234	mg/L as CaCO3	0.7		NA
MW-11	02/18/15	Arsenic	**0.0437**	mg/L	0.0072		0.01
MW-11	02/18/15	Nitrate Nitrogen	5.3	mg/L	0.2		10
MW-11	02/18/15	pH	8.0	Std. Units	0.01		NA
MW-11	02/18/15	Total Alkalinity to pH 4.5	243	mg/L as CaCO3	0.7		NA
MW-12R	02/19/15	1,2,3-Trichloropropane	**0.029**	mg/L	0.001		0.00001
MW-12R	02/19/15	1,2-Dichloroethane	0.002	mg/L	0.0005		NA
MW-12R	02/19/15	1,2-Dichloropropane	**0.55**	mg/L	0.003		0.005
MW-12R	02/19/15	Ammonia-Nitrogen	302	mg/L	5		NA
MW-12R	02/19/15	Arsenic	**0.0299**	mg/L	0.0072		0.01
MW-12R	02/19/15	Benzene	**0.006**	mg/L	0.0005		0.005
MW-12R	02/19/15	Chloride	102	mg/L	10		NA
MW-12R	02/19/15	Chlorobenzene	**0.16**	mg/L	0.0005		0.1
MW-12R	02/19/15	Chloroform	0.0005	mg/L	0.0005	J	NA
MW-12R	02/19/15	Dinoseb	**0.73**	mg/L	0.011		0.007
MW-12R	02/19/15	Iron	9.74	mg/L	0.0334		11.2
MW-12R	02/19/15	Nitrate Nitrogen	**279**	mg/L	10		10
MW-12R	02/19/15	Nitrite Nitrogen***	0.023	mg/L	0.015	J	1
MW-12R	02/19/15	pH	7.7	Std. Units	0.01		NA
MW-12R	02/19/15	Sulfate	285	mg/L	15		NA
MW-12R	02/19/15	Total Alkalinity to pH 4.5	580	mg/L as CaCO3	0.7		NA
MW-13	02/18/15	Ammonia-Nitrogen	0.090	mg/L	0.05	J	NA
MW-13	02/18/15	Dinoseb	**0.0081**	mg/L	0.00011		0.007
MW-13	02/18/15	Iron	0.187	mg/L	0.0334	J	11.2
MW-13	02/18/15	Nitrate Nitrogen	**45.0**	mg/L	1		10
MW-13	02/18/15	pH	7.9	Std. Units	0.01		NA
MW-13	02/18/15	Sulfate	122	mg/L	7.5		NA
MW-13	02/18/15	Total Alkalinity to pH 4.5	250	mg/L as CaCO3	0.7		NA
MW-14	02/17/15	Arsenic	0.0083	mg/L	0.0072	J	0.01
MW-14	02/17/15	Nitrate Nitrogen	3.3	mg/L	0.04		10
MW-15	02/18/15	Arsenic	**0.0177**	mg/L	0.0072	J	0.01
MW-15	02/18/15	Nitrate Nitrogen	3.4	mg/L	0.04		10
MW-15	02/18/15	pH	8.1	Std. Units	0.01		NA
MW-15	02/18/15	Total Alkalinity to pH 4.5	167	mg/L as CaCO3	0.7		NA
MW-16	02/19/15	1,2,3-Trichloropropane	**0.071**	mg/L	0.0005		0.00001
MW-16	02/19/15	1,2-Dichloroethane	0.001	mg/L	0.0005		NA
MW-16	02/19/15	1,2-Dichloropropane	**0.26**	mg/L	0.003		0.005
MW-16	02/19/15	Dinoseb	**0.035**	mg/L	0.0028		0.007
MW-16	02/19/15	Nitrate Nitrogen	**207**	mg/L	10		10
MW-16	02/19/15	pH	7.8	Std. Units	0.01		NA
MW-16	02/19/15	Sulfate	506	mg/L	30		NA
MW-16	02/19/15	Total Alkalinity to pH 4.5	594	mg/L as CaCO3	0.7		NA
MW-17	02/18/15	Nitrate Nitrogen	3.4	mg/L	0.04		10
MW-18	02/17/15	Arsenic	**0.0234**	mg/L	0.0072		0.01
MW-18	02/17/15	Nitrate Nitrogen	3.0	mg/L	0.04		10

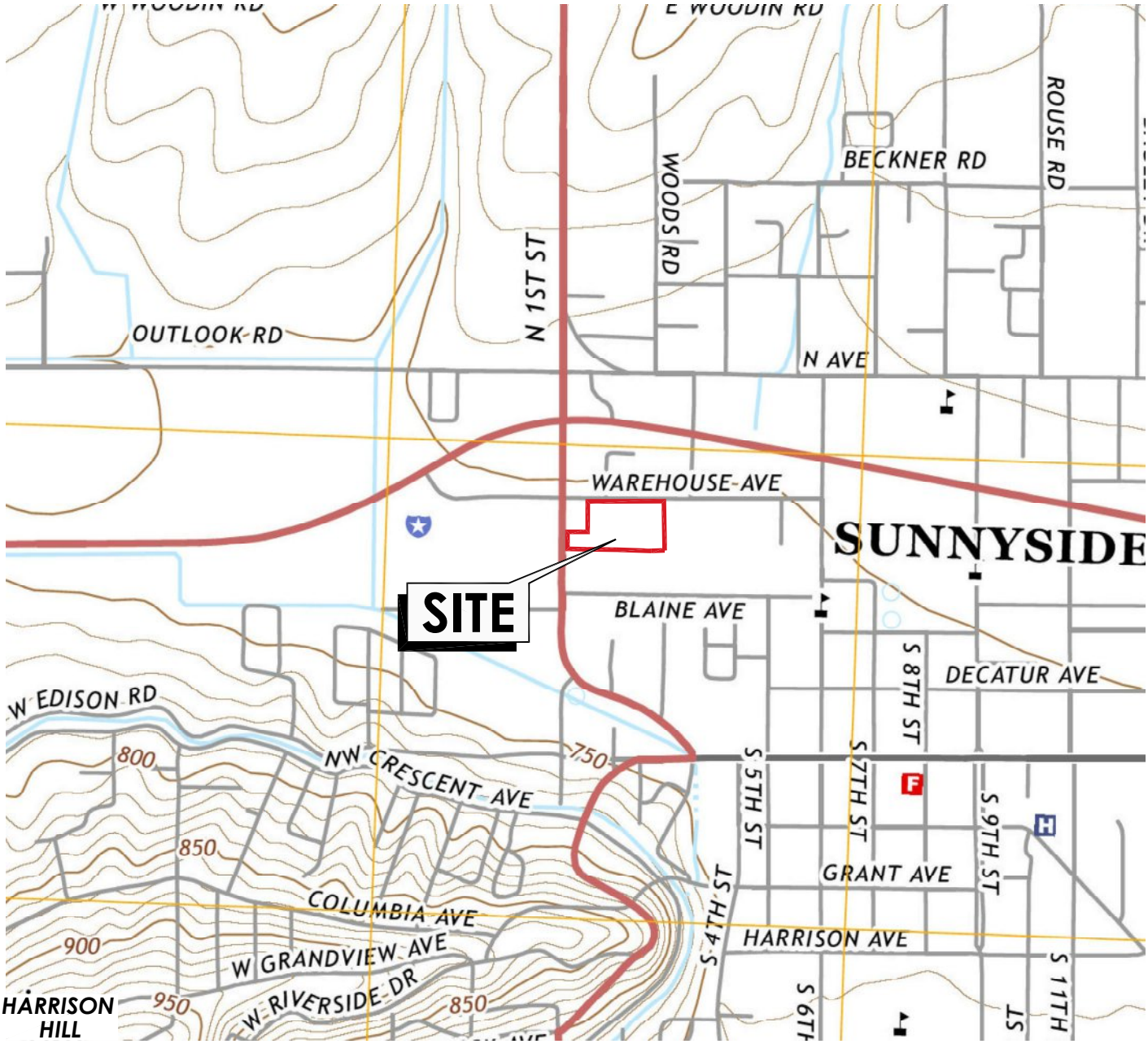
Table 2
Comparison of First Half 2015 Detected Groundwater Concentrations to Cleanup Levels
Bee-Jay Scales Site, Sunnyside, Washington

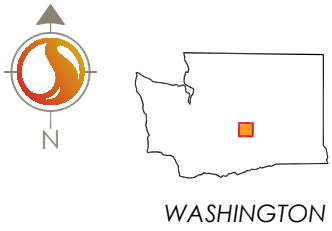
Location ID	Date	Analyte	Analytical Results*	Units	MDL**	Qualifier	Cleanup Level
MW-19	02/18/15	1,2,3-Trichloropropane	**0.015**	mg/L	0.00025		0.00001
MW-19	02/18/15	1,2-Dichloropropane	**0.15**	mg/L	0.0005		0.005
MW-19	02/18/15	Ammonia-Nitrogen	0.050	mg/L	0.05	J	NA
MW-19	02/18/15	Arsenic	**0.0457**	mg/L	0.0072		0.01
MW-19	02/18/15	Chloride	175	mg/L	10		NA
MW-19	02/18/15	Iron	**21.8**	mg/L	0.0334		11.2
MW-19	02/18/15	Nitrate Nitrogen	**18.5**	mg/L	0.4		10
MW-19	02/18/15	pH	7.9	Std. Units	0.01		NA
MW-19	02/18/15	Sulfate	99.4	mg/L	7.5		NA
MW-19	02/18/15	Total Alkalinity to pH 4.5	258	mg/L as CaCO3	0.7		NA
MW-20	02/18/15	Arsenic	**0.0150**	mg/L	0.0072	J	0.01
MW-20	02/18/15	Nitrate Nitrogen	3.7	mg/L	0.04		10

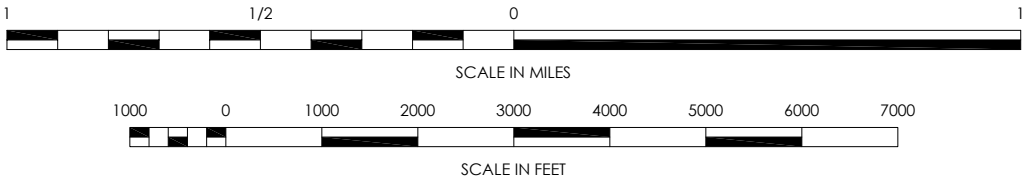
Notes:

*Results in **bold** exceed Cleanup Levels (CULs).
**MDLs for 1,2,3-trichloropropane elevated in samples with detections. Non-detect samples achieved MDL of 0.0000005 mg/L.
***Samples analyzed outside of hold time for nitrite.
J = estimated value (the result is ≥ the MDL and < the LOQ)
LOQ = limit of quantitation
MDL = method detection limit
mg/L = milligrams per liter
mg/L as CaCO3 = milligrams per liter as calcium carbonate
NA = not applicable; no CUL designated
2,4,5-T = 2,4,5-Trichlorophenoxyacetic acid
2,4,5-TP = 2-(2,4,5-Trichlorophenoxy)propanoic acid; also known as Silvex
2,4-D = 2,4-Dichlorophenoxyacetic acid

FIGURES







REFERENCE: USGS 7.5 MINUTE QUADRANGLE; SUNNYSIDE, WASHINGTON; 2013

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FOR:			FIGURE:
BEE-JAY SCALES SITE SUNNYSIDE, WASHINGTON		SITE LOCATION MAP	1

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
213202156/213202157	JRO	EEO/MRK	ASM	03/10/15

FILEPATH:P:\Chevron\Bee-Jay Scales\05_reports\Drawings\Cad\2015\BJS_GWM-2015.dwg | jopalekopsahl | Mar 11, 2015 at 13:47 | Layout: Fig 1_SLM

WAREHOUSE AVENUE

N. 1ST STREET

MW-7
MW-1
AREA 5- NORTH AREA
CARPORT
AREA 4 - SUSPECTED HISTORIC WASHDOWN AREA
BLDG.
BLDG.
AREA 6- HICKENBOTTOM PROPERTY
MW-8
AREA 1 - LIQUID FERTILIZER PLANT AND TRUCK WASH AREA
AREA 2 - DRY FERTILIZER AREA
BUILDING
MW-3
MW-10
AREA 3 - DRUM STORAGE AREA
FORMER FERTILIZER BUILDING
MW-5
FORMER LAGOON
MW-11
MW-6
MW-5R
MW-4
MW-4R
MW-12
MW-12R
CENTER OF NORTH RAIL FOR RAILROAD SIDE TRACK
MW-15
MW-9
MW-14
BUILDING
MW-17
MW-16
BUILDING
MW-13
MW-18

BLAINE AVENUE

BUILDING
BUILDING
S. 3RD STREET
MW-20
MW-19

LEGEND

- PROPERTY BOUNDARY (APPROXIMATE)
- BUILDING
- BUILDING OVERHANG
- CHAIN LINK FENCE
- RAILROAD
- DECOMMISSIONED MONITORING WELL
- MONITORING WELL

N

0 80 160

APPROXIMATE SCALE IN FEET

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FOR:			FIGURE:
BEE-JAY SCALES SITE SUNNYSIDE, WASHINGTON		SITE PLAN	2
JOB NUMBER: 213202156/213202157	DRAWN BY: JRO	CHECKED BY: EEO/MRK	APPROVED BY: ASM	DATE: 03/10/15

FILEPATH:P:\Chevron\Bee-Jay Scales\05_reports\Drawings\Cad\2015\BJS_GWM-2015.dwg | jopalekopsahl | Mar 13, 2015 at 12:13 | Layout: Fig 2_SP-RW

WAREHOUSE AVENUE

N. 1ST STREET

S. 3RD STREET

BLAINE AVENUE

MW-7 (734.57)
MW-1 (734.81)
MW-10 (736.47)
MW-11 (736.53)
MW-6 (735.61)
MW-5
MW-5R (734.56)
MW-8 (735.02)
MW-3 (734.43)
MW-4
MW-4R (734.22)
MW-12
MW-12R (733.63)
MW-15 (731.48)
MW-9 (733.37)
MW-14 (733.99)
MW-16 (732.49)
MW-17 (731.44)
MW-13 (732.80)
MW-18 (727.78)
MW-19 (731.41)
MW-20 (727.86)

735.00
736.00
734.00
733.00
732.00
731.00
730.00
729.00
728.00

AREA 1 - LIQUID FERTILIZER PLANT AND TRUCK WASH AREA
AREA 2 - DRY FERTILIZER AREA
AREA 3 - DRUM STORAGE AREA
AREA 4 - SUSPECTED HISTORIC WASHDOWN AREA
AREA 5- NORTH AREA
AREA 6- HICKENBOTTOM PROPERTY

BLDG.
CARPORT
FORMER FERTILIZER BUILDING
FORMER LAGOON
CENTER OF NORTH RAIL FOR RAILROAD SIDE TRACK
BUILDING
BUILDING
BUILDING
BUILDING
BUILDING

N

0 80 160
APPROXIMATE SCALE IN FEET

LEGEND

- PROPERTY BOUNDARY (APPROXIMATE)
- BUILDING
- BUILDING OVERHANG
- CHAIN LINK FENCE
- RAILROAD
- MONITORING WELL
- DECOMMISSIONED MONITORING WELL
- INFERRED GROUNDWATER FLOW DIRECTION
- (734.81) GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)
- GROUNDWATER ELEVATION CONTOUR (FEET ABOVE MEAN SEA LEVEL); DASHED WHERE INFERRED

NOTES

GROUNDWATER ELEVATION DATA WERE COLLECTED ON FEBRUARY 13, 2015.

GROUNDWATER CONTOURS WERE CREATED USING SURFER VERSION 11.6

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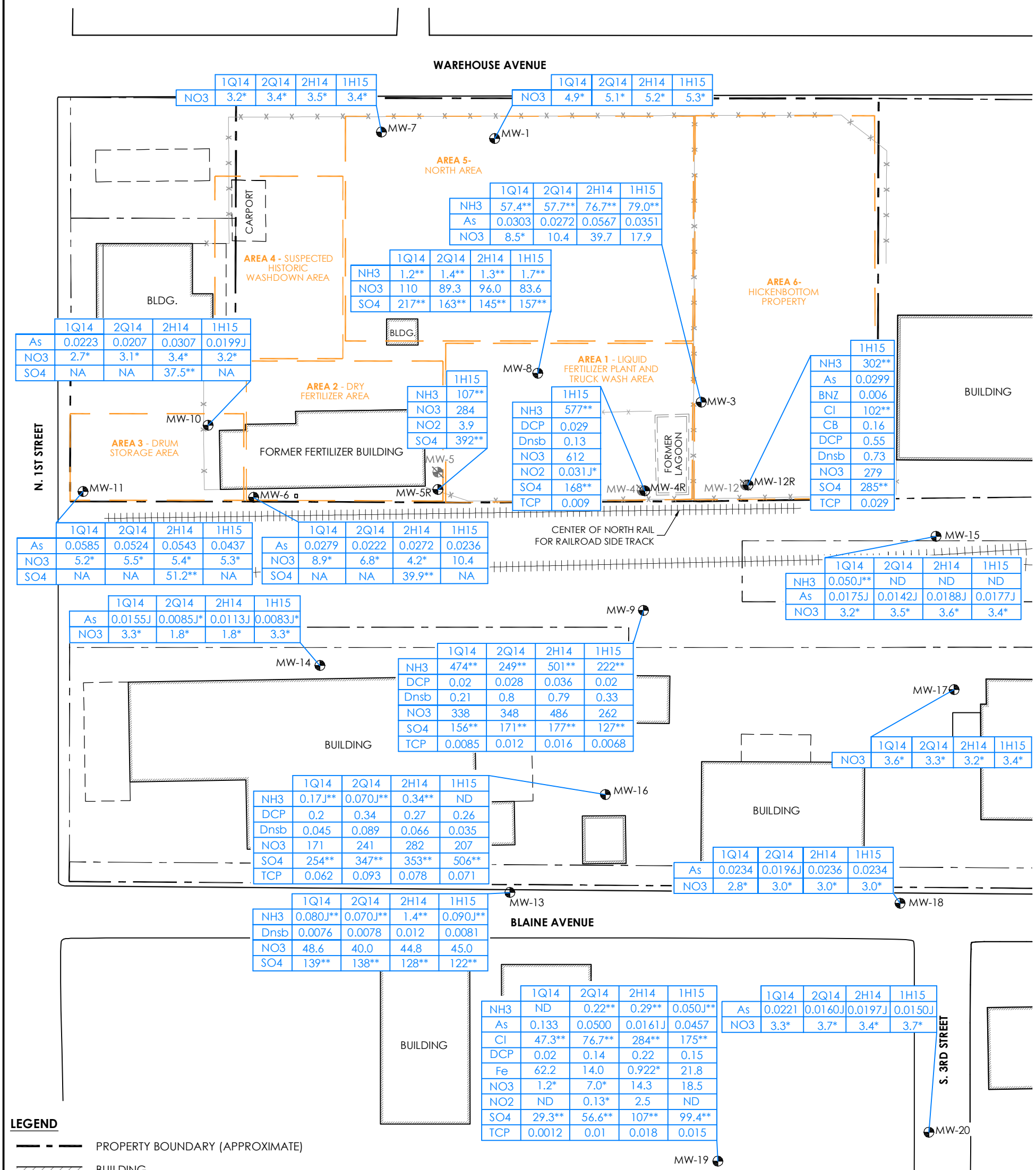
FOR:			FIGURE:
BEE-JAY SCALES SITE SUNNYSIDE, WASHINGTON		FIRST HALF 2015 GROUNDWATER ELEVATION CONTOUR MAP	3

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
213202156/213202157	JRO	EEO/MRK	ASM	03/10/15

FILEPATH:P:\Chevron\Bee-Jay Scales\05_reports\Drawings\Cad\2015\BJS_GWM-2015.dwg | jopalekopsahl | Mar 13, 2015 at 12:14 | Layout: Fig 3_GWE



	1Q14	2Q14	2H14	1H15
NO3	3.2*	3.4*	3.5*	3.4*

	1Q14	2Q14	2H14	1H15
NO3	4.9*	5.1*	5.2*	5.3*

	1Q14	2Q14	2H14	1H15
NH3	57.4**	57.7**	76.7**	79.0**
As	0.0303	0.0272	0.0567	0.0351
NO3	8.5*	10.4	39.7	17.9

	1Q14	2Q14	2H14	1H15
NH3	1.2**	1.4**	1.3**	1.7**
NO3	110	89.3	96.0	83.6
SO4	217**	163**	145**	157**

	1Q14	2Q14	2H14	1H15
As	0.0223	0.0207	0.0307	0.0199J
NO3	2.7*	3.1*	3.4*	3.2*
SO4	NA	NA	37.5**	NA

	1H15
NH3	107**
NO3	284
NO2	3.9
SO4	392**

	1H15
NH3	577**
DCP	0.029
Dnsb	0.13
NO3	612
NO2	0.031J*
SO4	168**
TCP	0.009

	1H15
NH3	302**
As	0.0299
BNZ	0.006
Cl	102**
CB	0.16
DCP	0.55
Dnsb	0.73
NO3	279
SO4	285**
TCP	0.029

	1Q14	2Q14	2H14	1H15
As	0.0585	0.0524	0.0543	0.0437
NO3	5.2*	5.5*	5.4*	5.3*
SO4	NA	NA	51.2**	NA

	1Q14	2Q14	2H14	1H15
As	0.0279	0.0222	0.0272	0.0236
NO3	8.9*	6.8*	4.2*	10.4
SO4	NA	NA	39.9**	NA

	1Q14	2Q14	2H14	1H15
NH3	0.050J**	ND	ND	ND
As	0.0175J	0.0142J	0.0188J	0.0177J
NO3	3.2*	3.5*	3.6*	3.4*

	1Q14	2Q14	2H14	1H15
As	0.0155J	0.0085J*	0.0113J	0.0083J*
NO3	3.3*	1.8*	1.8*	3.3*

	1Q14	2Q14	2H14	1H15
NH3	474**	249**	501**	222**
DCP	0.02	0.028	0.036	0.02
Dnsb	0.21	0.8	0.79	0.33
NO3	338	348	486	262
SO4	156**	171**	177**	127**
TCP	0.0085	0.012	0.016	0.0068

	1Q14	2Q14	2H14	1H15
NO3	3.6*	3.3*	3.2*	3.4*

	1Q14	2Q14	2H14	1H15
NH3	0.17J**	0.070J**	0.34**	ND
DCP	0.2	0.34	0.27	0.26
Dnsb	0.045	0.089	0.066	0.035
NO3	171	241	282	207
SO4	254**	347**	353**	506**
TCP	0.062	0.093	0.078	0.071

	1Q14	2Q14	2H14	1H15
As	0.0234	0.0196J	0.0236	0.0234
NO3	2.8*	3.0*	3.0*	3.0*

	1Q14	2Q14	2H14	1H15
NH3	0.080J**	0.070J**	1.4**	0.090J**
Dnsb	0.0076	0.0078	0.012	0.0081
NO3	48.6	40.0	44.8	45.0
SO4	139**	138**	128**	122**

	1Q14	2Q14	2H14	1H15
NH3	ND	0.22**	0.29**	0.050J**
As	0.133	0.0500	0.0161J	0.0457
Cl	47.3**	76.7**	284**	175**
DCP	0.02	0.14	0.22	0.15
Fe	62.2	14.0	0.922*	21.8
NO3	1.2*	7.0*	14.3	18.5
NO2	ND	0.13*	2.5	ND
SO4	29.3**	56.6**	107**	99.4**
TCP	0.0012	0.01	0.018	0.015

	1Q14	2Q14	2H14	1H15
As	0.0221	0.0160J	0.0197J	0.0150J
NO3	3.3*	3.7*	3.4*	3.7*

LEGEND

- PROPERTY BOUNDARY (APPROXIMATE)
- BUILDING
- BUILDING OVERHANG
- CHAIN LINK FENCE
- RAILROAD
- MONITORING WELL
- DECOMMISSIONED MONITORING WELL

	1Q14	2Q14	2H14	1H15
NO3	48.6	40.0	44.8	45.0

EVENT DATES

CONSTITUENT AND DETECTED GROUNDWATER CONCENTRATIONS

CLEANUP LEVELS IN PARENTHESES BELOW:

NH3: AMMONIA-N (NONE)
As: ARSENIC (0.01 mg/L)
BNZ: BENZENE (0.005 mg/L)
Cl: CHLORIDE (NONE)
CB: CHLOROBENZENE (0.1 mg/L)
DCP: 1,2-DICHLOROPROPANE (0.005 mg/L)
Dnsb: DINOSEB (0.007 mg/L)
Fe: IRON (11.2 mg/L)
NO3: NITRATE-N (10 mg/L)
NO2: NITRITE-N (1 mg/L)
SO4: SULFATE (NONE)
TCP: 1,2,3-TRICHLOROPROPANE (0.00001 mg/L)

NOTES

ALL CONCENTRATIONS IN MILLIGRAMS PER LITER (mg/L)

*DETECTED, BUT BELOW THE CLEANUP LEVEL

**NO CLEANUP LEVELS ARE ESTABLISHED FOR AMMONIA, CHLORIDE, AND SULFATE. ALL DETECTED CONCENTRATIONS ARE SHOWN.

ND = NOT DETECTED
NA = NOT ANALYZED
J = ESTIMATED VALUE

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FOR: BEE-JAY SCALES SITE SUNNYSIDE, WASHINGTON

FIRST HALF 2015 DETECTED GROUNDWATER CONCENTRATIONS ABOVE CLEANUP LEVELS

FIGURE: 4

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
213202156/213202157	JRO	EEO/MRK	ASM	03/10/15

FILEPATH:P:\Chevron\Bee-Jay Scales\05_reports\Drawings\Cad\2015\BJS_GWM-2015.dwg | jopalekopsahl | Mar 13, 2015 at 12:14 | Layout: Fig 4_GWC

WAREHOUSE AVENUE

N. 1ST STREET

MW-7 (3.4)

MW-1 (5.3)

AREA 5- NORTH AREA

CARPORT

AREA 4 - SUSPECTED HISTORIC WASHDOWN AREA

BLDG.

BLDG.

AREA 6- HICKENBOTTOM PROPERTY

BUILDING

MW-8 (83.6)

AREA 1 - LIQUID FERTILIZER PLANT AND TRUCK WASH AREA

AREA 2 - DRY FERTILIZER AREA

MW-3 (17.9)

MW-10 (3.2)

AREA 3 - DRUM STORAGE AREA

FORMER FERTILIZER BUILDING

MW-5

FORMER LAGOON

(5.3) MW-11

(10.4) MW-6

MW-5R (284)

MW-4

MW-4R (612)

MW-12

MW-12R (279)

CENTER OF NORTH RAIL FOR RAILROAD SIDE TRACK

MW-15 (3.4)

MW-9 (262)

MW-14 (3.3)

BUILDING

MW-16 (207)

BUILDING

MW-17 (3.4)

MW-13 (45.0)

BLAINE AVENUE

MW-18 (3.0)

BUILDING

BUILDING

S. 3RD STREET

MW-20 (3.7)

MW-19 (18.5)

10

100

100

10

N

0 80 160

APPROXIMATE SCALE IN FEET

LEGEND

- PROPERTY BOUNDARY (APPROXIMATE)
- BUILDING
- BUILDING OVERHANG
- CHAIN LINK FENCE
- RAILROAD
- MONITORING WELL
- DECOMMISSIONED MONITORING WELL
- INFERRED GROUNDWATER FLOW DIRECTION (1H15)
- (5.3) NITRATE CONCENTRATION (1H15)
- CONTOURS FOR SITE-SPECIFIC NITRATE PLUME; DASHED WHERE INFERRED

NOTE

ALL CONCENTRATIONS IN MILLIGRAMS PER LITER (mg/L)

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FOR: BEE-JAY SCALES SITE SUNNYSIDE, WASHINGTON

FIRST HALF 2015 NITRATE ISOCONCENTRATION MAP

FIGURE: 5

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
213202156/213202157	JRO	EEO/MRK	ASM	03/10/15

FILEPATH:P:\Chevron\Bee-Jay Scales\05_reports\Drawings\Cad\2015\BJS_GWM-2015.dwg | jopalekopsahl | Mar 13, 2015 at 12:14 | Layout: Fig 5_NO3

APPENDIX A
Boring and Well Construction Logs

PROJECT: **Bee Jay Scales**
LOCATION: **Sunnyside, WA**
PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO: **MW-4R** PAGE 1 OF 1

Stantec

DRILLING / INSTALLATION:
STARTED **2/12/15** COMPLETED: **2/12/15**
DRILLING COMPANY: **Cascade Drilling LP**
DRILLING EQUIPMENT: **Sonic Drill Rig**
DRILLING METHOD: **Sonic**
SAMPLING EQUIPMENT: **Sonic Core Tube**

NORTHING (ft): **363026.276**
LAT: **46° 19' 40.1736"**
GROUND ELEV (ft): **742.37**
INITIAL DTW (ft): **11.00**
STATIC DTW (ft): **7.68**
WELL CASING DIA. (in): **2.0**
LOGGED BY: **RM**

EASTING (ft): **1762137.430**
LONG: **120° 1' 5.3891"**
TOC ELEV (ft): **741.90**
WELL DEPTH (ft): **17.0**
BOREHOLE DEPTH (ft): **17.0**
BOREHOLE DIA. (in): **6.0**
CHECKED BY: **MK**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
			12" Road base gravel						
		SP	**SILTY SAND** ; SP; yellowish brown; medium; medium dense; moist; no gravels; non cohesive		NS			0.0 ppm	
			Brown; trace medium subrounded gravels						
5					NS			0.0 ppm	5
			Increase in moisture; large cobble (>4" diameter) @ 6.0'						
					NS			0.0 ppm	
			Some small to medium subrounded gravels						
10			Light gray with brownish gray veins; fine; no gravels; trace mica		NS			0.0 ppm	10
			Saturated						
					NS			0.0 ppm	
			Trace small rounded gravels						
15					NS			0.0 ppm	15
Sonic to 17'									
			Borehole terminated at 17 feet.						

Well Construction or Borehole Backfill

- Concrete
- Bentonite
- 2" Diameter blank casing
- 10/20 Sand
- 2" Diameter 0.010" slot casing
- End cap

GEO FORM 304 BJS REPLACEMENT WELLS - FEBRUARY 2015.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 3/27/15

PROJECT: **Bee Jay Scales**
LOCATION: **Sunnyside, WA**
PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO: **MW-5R** PAGE 1 OF 1

Stantec

DRILLING / INSTALLATION:
STARTED **2/12/15** COMPLETED: **2/12/15**
DRILLING COMPANY: **Cascade Drilling LP**
DRILLING EQUIPMENT: **Sonic Drill Rig**
DRILLING METHOD: **Sonic**
SAMPLING EQUIPMENT: **Sonic Core Tube**

NORTHING (ft): **363027.164**
LAT: **46° 19' 40.1921"**
GROUND ELEV (ft): **742.41**
INITIAL DTW (ft): **7.00**
STATIC DTW (ft): **7.29**
WELL CASING DIA. (in): **2.0**
LOGGED BY: **RM**

EASTING (ft): **1761975.111**
LONG: **120° 1' 7.7021"**
TOC ELEV (ft): **741.85**
WELL DEPTH (ft): **16.0**
BOREHOLE DEPTH (ft): **16.0**
BOREHOLE DIA. (in): **6.0**
CHECKED BY: **MK**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Well Construction or Borehole Backfill
			12" Road base gravel							Concrete
		SP	**SILTY SAND** ; SP; yellowish brown; medium; medium dense; moist; no gravels; non cohesive		NS			0.0 ppm		Bentonite
			Brown; some small subrounded gravels; increase in moisture		NS			0.0 ppm	5	2" Diameter blank casing
		GP-GM	**POORLY GRADED GRAVEL WITH SILT AND SAND** ; GP-GM; brown; saturated; fine-grained sand; medium subrounded gravels; trace mica		NS			0.0 ppm		
		SP	**SAND WITH TRACE SILT** ; SP; gray with brownish gray veins; dense; saturated; no gravels; non cohesive; trace mica		NS			0.0 ppm	10	10/20 Sand
			Grayish brown with no veins		NS			0.0 ppm		2" Diameter 0.010" slot casing
Sonic to 16' 15					NS			0.0 ppm	15	End cap
			Borehole terminated at 16 feet.							

GEO FORM 304 BJS REPLACEMENT WELLS - FEBRUARY 2015.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 3/27/15

PROJECT: **Bee Jay Scales**
LOCATION: **Sunnyside, WA**
PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO: **MW-12R** PAGE 1 OF 1

Stantec

DRILLING / INSTALLATION:
STARTED **2/12/15** COMPLETED: **2/12/15**
DRILLING COMPANY: **Cascade Drilling LP**
DRILLING EQUIPMENT: **Air Knife/Sonic Drill Rig**
DRILLING METHOD: **Sonic**
SAMPLING EQUIPMENT: **Hand Auger/Sonic Core Tube**

NORTHING (ft): **363030.806**
LAT: **46° 19' 40.2134"**
GROUND ELEV (ft): **741.96**
INITIAL DTW (ft): **8.00**
STATIC DTW (ft): **7.85**
WELL CASING DIA. (in): **2.0**
LOGGED BY: **RM**

EASTING (ft): **1762218.469**
LONG: **120° 1' 4.2339"**
TOC ELEV (ft): **741.48**
WELL DEPTH (ft): **17.5**
BOREHOLE DEPTH (ft): **17.5**
BOREHOLE DIA. (in): **6.0**
CHECKED BY: **MK**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
			4" Asphalt, 8" road base gravel						
		GW	**GRAVEL WITH SAND** ; GW; brown to olive; moist; well graded; no fines						
5					NS			0.0 ppm	5
		SP	**SAND WITH SOME GRAVEL** ; SP; brown; medium dense; moist; well graded; few fines						
Air Knife to 8.5'		SP	**SAND WITH SOME GRAVEL** ; SP; brown; medium dense; saturated; few fines						
10		SP	**SAND WITH SOME SILT** ; SP; brown; medium dense; saturated; well graded		NS			0.0 ppm	10
		SP	**SAND WITH SILT** ; SP; brown; medium dense; saturated; well graded						
15					NS			0.0 ppm	15
Sonic to 17.5'		SP	**SAND WITH SILT** ; SP; brown; dense; saturated; well graded						
			Borehole terminated at 17.5 feet.						

Well Construction or Borehole Backfill

- Concrete
- Bentonite
- 2" Diameter blank casing
- 10/20 Sand
- 2" Diameter 0.010" slot casing
- End cap

GEO FORM 304 BJS REPLACEMENT WELLS - FEBRUARY 2015.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 3/27/15

APPENDIX B
Well Development Logs

WELL DEVELOPMENT LOG

Project Number 123021561157 Well MW-4 (BBB 139)

Project Name BEE JAM SCALE Development Subcontractor CASCADE

Performed/Supervised Bob McAlister, Emily Harper

Development Method Airlift (Sub. Pump) (Surge Block) Bailer Other

Development Criteria

Equipment Cleaning Method DECON

Field Instruments Used YSI, SURGE, ~~INTERFACE~~ PROBE, WHALE PUMP

Development Water Disposal Method PURGE DRUM STAGED ONSITE (55gal drum)

Comments DRY well @ 10 gal

DEVELOPMENT DATA

Depth to Water: Start 7.70 End 10.24 Ref. Point Elev. N Height Above Ground Surface

Total Depth: Start 17.00 End 17.01

Date	Time	Cumulative Discharge (gallons)	Turbidity	Conductivity mS/cm	Color	pH	Temperature	Other ORP
2/12/14	15:00	~2	HIGH	67.86	BROWN	7.55	13.21°C	108.5
	15:03	~3.5	HIGH	62.24	BROWN	7.70	13.62	99.3
	15:06	~5.0	HIGH	61.86	BROWN	7.76	13.83	97.8
	15:09	~7.0	HIGH	60.89	BROWN	7.66	14.02	99.5
	15:12	~9.0	HIGH	61.15	BROWN	7.62	13.94	99.7
	15:15	10.0	Med.	60.86	BR/CL	7.58	14.07	99.6
			DRY @ 10 GAL					

REMARKS:

WELL DEVELOPMENT LOG

Project Number 213202156/157 Well MW-5R

Project Name BEE JAY SALES Development Subcontractor CASCADE

Performed/Supervised BOB MCALISTER, EMILY HARPER

Development Method Airlift (Sub. Pump) (Surge Block) Bailer Other

Development Criteria

Equipment Cleaning Method DECON

Field Instruments Used YSI, SURGE, WHALE PUMP, INTERFACE PROBE

Development Water Disposal Method 55 gal purge drum staged onsite

Comments

DEVELOPMENT DATA

Depth to Water: Start 7.27 End 7.32 Ref. Point Elev. N Height Above Ground Surface

Total Depth: Start 16.21 End 16.38

Date	Time	Cumulative Discharge (gallons)	Turbidity	Conductivity	Color	pH	Temperature	Other ORP
2/12/15	15:40	1.00	HIGH	39.24	BRN	8.46	13.65	114.5
	15:42	3.00	[illegible]	33.87	CL/BRN	7.71	12.79	113.7
	15:46	6.00	Med	50.76	CL/BRN	7.42	12.32	113.0
	15:49	8.00	Med	46.86	CL/BRN	7.30	12.30	106.1
	15:52	10.00	CLR	52.41	CLEAR	7.21	11.67	100.3
	15:55	13.00	CLR	49.81	CLEAR	7.18	11.85	98.1

REMARKS:

WELL DEVELOPMENT LOG

Project Number 213202156/157 Well MW-12R (BBB 141)

Project Name BEE JAY SCALES Development Subcontractor CASCADE

Performed/Supervised Bob McAlister, Emily Harper

Development Method Airlift (Sub. Pump) (Surge Block) Bailer Other _____

Development Criteria _____

Equipment Cleaning Method DECON

Field Instruments Used YSI, SURGE, WHALE PUMP, INTERFACE PROBE

Development Water Disposal Method PURGE DRUM STAGED ONSITE (55 gal)

Comments DRY AT 8.0 gal

DEVELOPMENT DATA

Depth to Water: Start 2.86 End _____ Ref. Point Elev. _____ Height Above Ground Surface _____

Total Depth: Start 16.82 End _____

Date	Time	Cumulative Discharge (gallons)	Turbidity	Conductivity	Color	pH	Temperature	Other ORP
2/12/15	16:30	1.0	HIGH	68.26	BRN	7.58	14.36°C	111.3
	16:32	4.0	HIGH	66.10	BRN	7.62	14.34	105.8
	16:42	7.0	HIGH	59.14	BRN	7.30	15.09	109.3
	16:52	8.0	Med	55.17	BRN	7.52	14.98	110.7
		DRY	AT 8	gal - waited 2	times	for recharge (1 gal		per run)

REMARKS:

APPENDIX C
Survey Data

White Shield, Inc.
23412 - 68th Avenue South
Kent, WA 98032 Phone 253.867.6070
---
320 North 20th Avenue
Pasco, WA 99301 Phone 509.547.0100

Stantec - Sunnyside Monitoring Wells
Subcontract Agreement Dated 02/18/2015

Project Name: Bee-Jay Scales Off-Property Groundwater Investigation

Units: US Survey Feet
Vertical: Existing MW-6 as Benchmark, Client Provided
Zone: Washington Coordinate System, South Zone, NAD 1983/2011
As post-processed using NGS OPUS

WSI-ID	Northing	Easting	Outer Casing	Inner PVC	Description
1054	363027.164	1761975.111	742.41	741.85	MW-5R
1055	363026.276	1762137.430	742.37	741.90	MW-4R
1056	363030.806	1762218.469	741.96	741.48	MW-12R

Note: Inner 2" PVC Typical, mark placed on North edge of the top of PVC and shots taken to this point as requested. Outer casing elevation also recorded. All wells were flush mounted casings.

SURVEYORS CERTIFICATE

I, JAMES R. HUTCHINSON, R.P.L.S. NO. 8812, A PROFESSIONAL LAND SURVEYOR IN THE STATE OF WASHINGTON, HEREBY CERTIFIES THAT THE INFORMATION HEREON CORRECTLY REPRESENTS A SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION IN CONFORMANCE WITH THE REQUIREMENTS OF THE SURVEY RECORDING ACT.

APPENDIX D
Groundwater Sampling Field Forms

Groundwater Field Log
Bee-Jay Scales Site, Sunnyside, Washington

Well ID	Date	Time	Top of Casing Elevation (feet AMSL)	Depth to Water (feet)	Total Well Depth (feet)
MW-14	2/13/15	915	741.37	7.38	15.94
MW-18		930	741.30	13.52	15.83
MW-10		935	742.38	5.91	18.51
MW-7		942	744.68	10.11	16.36
MW-17		953	741.82	10.38	15.85
MW-15		958	742.72	11.24	16.00
MW-20		1007	740.51	12.65	15.69
MW-1		945	745.86	11.05	23.00
MW-11		1013	742.10	5.57	18.40
MW-6		1017	741.73	6.12	16.23
MW-19		1030	739.46	8.05	16.13
MW-3		1037	740.92	6.49	19.19
MW-13		1042	742.20	9.40	18.80
MW-8		1048	741.32	6.30	17.57
MW-5R		1052	TBD	7.29	16.39
MW-16		1059	741.26	8.77	15.80
MW-9		1107	741.09	7.72	18.08
MW-4R		1112	TBD	7.68	16.43
MW-12R	↓	1115	TBD	7.85	17.47

Stantec Consulting Services, Inc.
GROUNDWATER SAMPLING FIELD DATA SHEET

Stantec Project No.: 213202157 (BP)/213202156 (CVX) DATE: 2/19/15 WELL NO. MW-1

FACILITY NAME: Bee-Jay Scales TEMPERATURE: ~50 °F or °C

FIELD PERSONNEL: Robert McAlister/Emily Harper WEATHER: clear, sunny

FIELD MEASUREMENTS:

A. Static Water Level (SWL) below top of casing: 11.08 FT. or IN.

B. Thickness of Free Product, if present: _____ Inches — FT. or IN.

C. Total Depth of well (TD) from top of casing: 23.00 FT. or IN.

D. Height of Water Column in casing (h = TD - SWL): 11.92 FT. or IN.

E. **Useful approximate Purge Volumes (PV) per foot of water column for common casing sizes:**

	3 Well Vols.	5 Well Vols.		
2" Diameter =	0.5 gals/ft	0.82 gals/ft	x feet of water_____ =	_____PV (Gal)
4" Diameter =	2.0 gals/ft	3.25 gals/ft	x feet of water_____ =	_____PV (Gal)
6" Diameter =	4.4 gals/ft	7.35 gals/ft	x feet of water_____ =	_____PV (Gal)

PURGING METHOD: Low-Flow (Geotech peristaltic pump) DURATION: 9 MINS

OBSERVATIONS:

Flowrate (Liters/min)	Time (24-Hr)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	pH (Units)	Temp. (°F or °C)	Conduct. (mS/cm)	SWL (Ft.)
112 mL/min	10:15	CLR	1.02	86.0	8.69	13.70	8.236	11.39
↓	10:18	CLR	0.70	88.5	8.59	13.81	8.144	11.49
	10:21	CLR	0.52	91.0	8.44	13.94	8.099	11.53
	10:24	CLR	0.47	91.4	8.36	13.92	8.088	11.55

TOTAL VOLUME OF WATER PURGED FROM WELL: ~½ GAL

PURGE WATER STORED/DISPOSED OF WHERE/HOW: ON-SITE DRUM

SAMPLES COLLECTED: Depth to Water at time of sample collection: 11.55

Sample Number(s)	Time	Size/Number of Container(s)	Preservative
MW1-021915-0	10:30	see COC	"
MW1-021915-2	10:35	"	"

COMMENTS:

Casing Capacities:
2-inch hole.....0.16 gal/lin ft.
4-inch hole.....0.65 gal/lin ft.
6.5-inch hole.....1.70 gal/lin ft.
8-inch hole.....2.60 gal/lin ft.
10-inch hole.....4.10 gal/lin ft.

Recharge Calculation at Time of Sample Collection:

Total Depth of Well:
Original Water Column: _____ x 0.80 = --(_____)
Collect sample when Depth to Water measures
Less than or equal to:

Signature: [signature]

Stantec Consulting Services, Inc.
GROUNDWATER SAMPLING FIELD DATA SHEET

Stantec Project No.: 213202157 (BP)/213202156 (CVX) DATE: 2/19/15 WELL NO. MW-3

FACILITY NAME: Bee-Jay Scales TEMPERATURE: ~50 °F or °C

FIELD PERSONNEL: Robert McAlister/Emily Harper WEATHER: clear, sunny

FIELD MEASUREMENTS:

A. Static Water Level (SWL) below top of casing: 6.53 FT. or IN.

B. Thickness of Free Product, if present: _____ Inches — FT. or IN.

C. Total Depth of well (TD) from top of casing: 19.19 FT. or IN.

D. Height of Water Column in casing (h = TD - SWL): 12.66 FT. or IN.

E. **Useful approximate Purge Volumes (PV) per foot of water column for common casing sizes:**

	3 Well Vols.	5 Well Vols.		
2" Diameter =	0.5 gals/ft	0.82 gals/ft	x feet of water_____ =	_____PV (Gal)
4" Diameter =	2.0 gals/ft	3.25 gals/ft	x feet of water_____ =	_____PV (Gal)
6" Diameter =	4.4 gals/ft	7.35 gals/ft	x feet of water_____ =	_____PV (Gal)

PURGING METHOD: Low-Flow (Geotech peristaltic pump) DURATION: 9 MINS

OBSERVATIONS:

Flowrate (Liters/min)	Time (24-Hr)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	pH (Units)	Temp. (°F or °C)	Conduct. (mS/cm)	SWL (Ft.)
158mL/min	9:10	CLR	1.16	92.6	8.32	12.31	11.80	6.95
↓	9:13	CLR	0.68	87.4	8.52	12.51	11.58	7.09
	9:16	CLR	0.52	87.8	8.57	12.58	11.54	7.14
	9:19	CLR	0.44	90.2	8.58	12.73	11.56	7.19
								NA

TOTAL VOLUME OF WATER PURGED FROM WELL: ~ ½ GAL

PURGE WATER STORED/DISPOSED OF WHERE/HOW: ON-SITE DRUM

SAMPLES COLLECTED: Depth to Water at time of sample collection: 7.19

Sample Number(s)	Time	Size/Number of Container(s)	Preservative
MW3-021915-0	9:25	See COC	

COMMENTS:

Casing Capacities:
2-inch hole.....0.16 gal/lin ft.
4-inch hole.....0.65 gal/lin ft.
6.5-inch hole.....1.70 gal/lin ft.
8-inch hole.....2.60 gal/lin ft.
10-inch hole.....4.10 gal/lin ft.

Recharge Calculation at Time of Sample Collection:

Total Depth of Well:
Original Water Column: _____ x 0.80 = --(_____)
Collect sample when Depth to Water measures
Less than or equal to:

Signature: _____

Stantec Consulting Services, Inc.
GROUNDWATER SAMPLING FIELD DATA SHEET

Stantec Project No.: 213202157 (BP)/213202156 (CVX) DATE: 2/19/15 WELL NO. MW-4R

FACILITY NAME: Bee-Jay Scales TEMPERATURE: ~50 °F or °C

FIELD PERSONNEL: Robert McAlister/Emily Harper WEATHER: clear, sunny

FIELD MEASUREMENTS:

A. Static Water Level (SWL) below top of casing: 7.70 FT. or IN.

B. Thickness of Free Product, if present: — Inches — FT. or IN.

C. Total Depth of well (TD) from top of casing: 16.43 FT. or IN.

D. Height of Water Column in casing (h = TD - SWL): 8.73 FT. or IN.

E. **Useful approximate Purge Volumes (PV) per foot of water column for common casing sizes:**

	3 Well Vols.	5 Well Vols.		
2" Diameter =	0.5 gals/ft	0.82 gals/ft	x feet of water_____ =	_____PV (Gal)
4" Diameter =	2.0 gals/ft	3.25 gals/ft	x feet of water_____ =	_____PV (Gal)
6" Diameter =	4.4 gals/ft	7.35 gals/ft	x feet of water_____ =	_____PV (Gal)

PURGING METHOD: Low-Flow (Geotech peristaltic pump) DURATION: 9 mins

OBSERVATIONS:

Flowrate (Liters/min)	Time (24-Hr)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	pH (Units)	Temp. (°F or °C)	Conduct. (mS/cm)	SWL (Ft.)
166 mL/min	11:37	CLR	0.92	89.0	7.79	12.76	88.40	8.10
↓	11:40	CLR	0.71	87.6	7.81	12.72	88.44	8.19
	11:43	CLR	0.58	91.0	7.76	12.80	88.22	8.28
	11:46	CLR	0.50	96.1	7.69	12.99	87.87	8.34

TOTAL VOLUME OF WATER PURGED FROM WELL: ~ ½ GAL

PURGE WATER STORED/DISPOSED OF WHERE/HOW: ON-SITE DRUM

SAMPLES COLLECTED: Depth to Water at time of sample collection: 8.34

Sample Number(s)	Time	Size/Number of Container(s)	Preservative
MW4R-021915-0	12:00	5oz c.oc	"

COMMENTS:

Casing Capacities:
2-inch hole.....0.16 gal/lin ft.
4-inch hole.....0.65 gal/lin ft.
6.5-inch hole.....1.70 gal/lin ft.
8-inch hole.....2.60 gal/lin ft.
10-inch hole.....4.10 gal/lin ft.

Recharge Calculation at Time of Sample Collection:

Total Depth of Well:
Original Water Column: _____ x 0.80 = -- (_____)
Collect sample when Depth to Water measures
Less than or equal to:

Signature: [signature]

Stantec Consulting Services, Inc.
GROUNDWATER SAMPLING FIELD DATA SHEET

Stantec Project No.: 213202157 (BP)/213202156 (CVX) DATE: 2/19/15 WELL NO. MW-5R

FACILITY NAME: Bee-Jay Scales TEMPERATURE: ~50 (F) or °C

FIELD PERSONNEL: Robert McAlister/Emily Harper WEATHER: Clear, Sunny

FIELD MEASUREMENTS:

A. Static Water Level (SWL) below top of casing: 7.30 FT. or IN.

B. Thickness of Free Product, if present: — Inches — FT. or IN.

C. Total Depth of well (TD) from top of casing: 16.39 FT. or IN.

D. Height of Water Column in casing (h = TD - SWL): 9.09 FT. or IN.

E. **Useful approximate Purge Volumes (PV) per foot of water column for common casing sizes:**

	3 Well Vols.	5 Well Vols.		
2" Diameter =	0.5 gals/ft	0.82 gals/ft	x feet of water_____ =	_____PV (Gal)
4" Diameter =	2.0 gals/ft	3.25 gals/ft	x feet of water_____ =	_____PV (Gal)
6" Diameter =	4.4 gals/ft	7.35 gals/ft	x feet of water_____ =	_____PV (Gal)

PURGING METHOD: Low-Flow (Geotech peristaltic pump) DURATION: 9 MINS

OBSERVATIONS:

Flowrate (Liters/min)	Time (24-Hr)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	pH (Units)	Temp. (°F or °C)	Conduct. (mS/cm)	SWL (Ft.)
170 mL/min	11:08	CLR	1.41	81.5	7.74	13.34	51.24	7.31
	11:11	CLR	0.77	73.6	7.78	13.23	51.33	7.31
	11:14	CLR	0.61	72.0	7.77	13.16	51.28	7.32
	11:17	CLR	0.54	71.5	7.76	13.06	51.33	7.32

TOTAL VOLUME OF WATER PURGED FROM WELL: ~0 ½ GAL

PURGE WATER STORED/DISPOSED OF WHERE/HOW: ON-SITE DRUM

SAMPLES COLLECTED: Depth to Water at time of sample collection: 7.32

Sample Number(s)	Time	Size/Number of Container(s)	Preservative
MW5R-021915-0	11:20	See COC	"

COMMENTS:

Casing Capacities:
2-inch hole.....0.16 gal/lin ft.
4-inch hole.....0.65 gal/lin ft.
6.5-inch hole.....1.70 gal/lin ft.
8-inch hole.....2.60 gal/lin ft.
10-inch hole.....4.10 gal/lin ft.

Recharge Calculation at Time of Sample Collection:

Total Depth of Well:
Original Water Column: _____ x 0.80 = -- (_____)
Collect sample when Depth to Water measures
Less than or equal to:

Signature: [signature]

Stantec Consulting Services, Inc.
GROUNDWATER SAMPLING FIELD DATA SHEET

Stantec Project No.: 213202157 (BP)/213202156 (CVX) DATE: 2/18/15 WELL NO. MW-6

FACILITY NAME: Bee-Jay Scales TEMPERATURE: ~55 (°F) or °C

FIELD PERSONNEL: Robert McAlister/Emily Harper WEATHER: Clear, Sunny

FIELD MEASUREMENTS:

A. Static Water Level (SWL) below top of casing: 6.12 FT. or IN.

B. Thickness of Free Product, if present: ~ Inches - FT. or IN.

C. Total Depth of well (TD) from top of casing: 116.23 FT. or IN.

D. Height of Water Column in casing (h = TD - SWL): 10.11 FT. or IN.

E. **Useful approximate Purge Volumes (PV) per foot of water column for common casing sizes:**

	3 Well Vols.	5 Well Vols.		
2" Diameter =	0.5 gals/ft	0.82 gals/ft	x feet of water_____ =	_____PV (Gal)
4" Diameter =	2.0 gals/ft	3.25 gals/ft	x feet of water_____ =	_____PV (Gal)
6" Diameter =	4.4 gals/ft	7.35 gals/ft	x feet of water_____ =	_____PV (Gal)

PURGING METHOD: Low-Flow (Geotech peristaltic pump) DURATION: 9 MINS

OBSERVATIONS:

Flowrate (Liters/min)	Time (24-Hr)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	pH (Units)	Temp. (°F or °C)	Conduct. (mS/cm)	SWL (Ft.)
132 mL/min	11:53	CLR	4.00	67.9	8.14	13.46	11.04	6.20
↓	11:56	CLR	1.93	59.9	8.17	13.43	11.06	6.25
	11:59	CLR	1.20	61.6	8.13	13.33	11.06	6.29
	12:02	CLR	1.01	62.9	8.07	13.25	11.01	6.31

TOTAL VOLUME OF WATER PURGED FROM WELL: ~ ½ GAL

PURGE WATER STORED/DISPOSED OF WHERE/HOW: ON-SITE DRUM

SAMPLES COLLECTED: Depth to Water at time of sample collection: 6.31

Sample Number(s)	Time	Size/Number of Container(s)	Preservative
MW6-021815-0	12:10	See COC	

COMMENTS:

Casing Capacities:
2-inch hole.....0.16 gal/lin ft.
4-inch hole.....0.65 gal/lin ft.
6.5-inch hole.....1.70 gal/lin ft.
8-inch hole.....2.60 gal/lin ft.
10-inch hole.....4.10 gal/lin ft.

Recharge Calculation at Time of Sample Collection:

Total Depth of Well:
Original Water Column: _____ x 0.80 = -- (_____)
Collect sample when Depth to Water measures
Less than or equal to:

Signature: _____

Stantec Consulting Services, Inc.
GROUNDWATER SAMPLING FIELD DATA SHEET

Stantec Project No.: 213202157 (BP)/213202156 (CVX) DATE: 2/18/15 WELL NO. MW-7

FACILITY NAME: Bee-Jay Scales TEMPERATURE: ~50 °F or °C

FIELD PERSONNEL: Robert McAlister/Emily Harper WEATHER: SUNNY

FIELD MEASUREMENTS:

A. Static Water Level (SWL) below top of casing: 10.12 FT. or IN.

B. Thickness of Free Product, if present: _____ Inches – FT. or IN.

C. Total Depth of well (TD) from top of casing: 16.36 FT. or IN.

D. Height of Water Column in casing (h = TD - SWL): 6.24 FT. or IN.

E. **Useful approximate Purge Volumes (PV) per foot of water column for common casing sizes:**

	3 Well Vols.	5 Well Vols.		
2" Diameter =	0.5 gals/ft	0.82 gals/ft	x feet of water_____ =	_____PV (Gal)
4" Diameter =	2.0 gals/ft	3.25 gals/ft	x feet of water_____ =	_____PV (Gal)
6" Diameter =	4.4 gals/ft	7.35 gals/ft	x feet of water_____ =	_____PV (Gal)

PURGING METHOD: Low-Flow (Geotech peristaltic pump) DURATION: 9 MINS

OBSERVATIONS:

Flowrate (Liters/min)	Time (24-Hr)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	pH (Units)	Temp. (°F or °C)	Conduct. (mS/cm)	SWL (Ft.)
184 mL/min	10:58	CLR	4.14	109.8	7.91	13.60	6.813	10.29
↓	11:01	CLR	3.13	120.4	7.59	13.59	6.828	10.41
↓	11:04	CLR	2.96	126.0	7.43	13.52	6.836	10.46
↓	11:07	CLR	2.89	127.3	7.36	13.44	6.834	10.48
								CH

TOTAL VOLUME OF WATER PURGED FROM WELL: ~ ½ GAL

PURGE WATER STORED/DISPOSED OF WHERE/HOW: ON-SITE DRUM

SAMPLES COLLECTED: Depth to Water at time of sample collection: 10.48

Sample Number(s)	Time	Size/Number of Container(s)	Preservative
MW7-021815-0	11:10	See COC	"
MW7-021815-1	11:15	"	

COMMENTS:

DUPLICATE TAKEN

Casing Capacities:
2-inch hole.....0.16 gal/lin ft.
4-inch hole.....0.65 gal/lin ft.
6.5-inch hole.....1.70 gal/lin ft.
8-inch hole.....2.60 gal/lin ft.
10-inch hole.....4.10 gal/lin ft.

Recharge Calculation at Time of Sample Collection:

Total Depth of Well:
Original Water Column: _____ x 0.80 = -- (_____)
Collect sample when Depth to Water measures
Less than or equal to:

Signature: _____

Stantec Consulting Services, Inc.
GROUNDWATER SAMPLING FIELD DATA SHEET

Stantec Project No.: 213202157 (BP)/213202156 (CVX) DATE: 2/19/15 WELL NO. MW-8

FACILITY NAME: Bee-Jay Scales TEMPERATURE: ~50 °F or °C

FIELD PERSONNEL: Robert McAlister/Emily Harper WEATHER: Clear, sunny

FIELD MEASUREMENTS:

A. Static Water Level (SWL) below top of casing: 6.29 FT. or IN.

B. Thickness of Free Product, if present: — Inches — FT. or IN.

C. Total Depth of well (TD) from top of casing: 17.57 FT. or IN.

D. Height of Water Column in casing (h = TD - SWL): 11.28 FT. or IN.

E. **Useful approximate Purge Volumes (PV) per foot of water column for common casing sizes:**

	3 Well Vols.	5 Well Vols.		
2" Diameter =	0.5 gals/ft	0.82 gals/ft	x feet of water_____ =	_____PV (Gal)
4" Diameter =	2.0 gals/ft	3.25 gals/ft	x feet of water_____ =	_____PV (Gal)
6" Diameter =	4.4 gals/ft	7.35 gals/ft	x feet of water_____ =	_____PV (Gal)

PURGING METHOD: Low-Flow (Geotech peristaltic pump) DURATION: 9 MINS

OBSERVATIONS:

Flowrate (Liters/min)	Time (24-Hr)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	pH (Units)	Temp. (°F or °C)	Conduct. (mS/cm)	SWL (Ft.)
152 mL/min	10:40	CLR	2.89	98.7	8.04	12.60	21.11	6.40
↓	10:43	CLR	1.06	83.6	8.06	12.63	21.35	6.44
↓	10:46	CLR	0.71	82.2	8.03	12.71	21.37	6.46
↓	10:49	CLR	0.58	78.8	8.01	12.74	21.38	6.47

TOTAL VOLUME OF WATER PURGED FROM WELL: ~ ½ GAL

PURGE WATER STORED/DISPOSED OF WHERE/HOW: ON-SITE DRUM

SAMPLES COLLECTED: Depth to Water at time of sample collection: 6.47

Sample Number(s)	Time	Size/Number of Container(s)	Preservative
MW8-021915-0	11:00	See COC	"

COMMENTS:

Casing Capacities:
2-inch hole.....0.16 gal/lin ft.
4-inch hole.....0.65 gal/lin ft.
6.5-inch hole.....1.70 gal/lin ft.
8-inch hole.....2.60 gal/lin ft.
10-inch hole.....4.10 gal/lin ft.

Recharge Calculation at Time of Sample Collection:

Total Depth of Well:
Original Water Column: _____ x 0.80 = --(_____)
Collect sample when Depth to Water measures
Less than or equal to:

Signature: [signature]

Stantec Consulting Services, Inc.
GROUNDWATER SAMPLING FIELD DATA SHEET

Stantec Project No.: 213202157 (BP)/213202156 (CVX) DATE: 2/19/15 WELL NO. MW-9

FACILITY NAME: Bee-Jay Scales TEMPERATURE: ~50 (°F) or °C

FIELD PERSONNEL: Robert McAlister/Emily Harper WEATHER: Clear, Sunny

FIELD MEASUREMENTS:

A. Static Water Level (SWL) below top of casing: 7.75 FT. or IN.

B. Thickness of Free Product, if present: _____ Inches — FT. or IN.

C. Total Depth of well (TD) from top of casing: 18.08 FT. or IN.

D. Height of Water Column in casing (h = TD - SWL): 10.33 FT. or IN.

E. **Useful approximate Purge Volumes (PV) per foot of water column for common casing sizes:**

	3 Well Vols.	5 Well Vols.		
2" Diameter =	0.5 gals/ft	0.82 gals/ft	x feet of water_____ =	_____PV (Gal)
4" Diameter =	2.0 gals/ft	3.25 gals/ft	x feet of water_____ =	_____PV (Gal)
6" Diameter =	4.4 gals/ft	7.35 gals/ft	x feet of water_____ =	_____PV (Gal)

PURGING METHOD: Low-Flow (Geotech peristaltic pump) DURATION: 9 MINS

OBSERVATIONS:

Flowrate (Liters/min)	Time (24-Hr)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	pH (Units)	Temp. (°F or °C)	Conduct. (mS/cm)	SWL (Ft.)
160 mL/min	12:11	CLR	0.61	98.8	7.97	13.44	56.70	7.99
	12:14	CLR	0.39	96.9	7.79	13.38	53.95	8.02
	12:17	CLR	0.33	96.7	7.71	13.25	50.40	8.02
	12:20	CLR	0.33	96.9	7.65	13.24	49.74	8.02

TOTAL VOLUME OF WATER PURGED FROM WELL: ~½ GAL

PURGE WATER STORED/DISPOSED OF WHERE/HOW: ON-SITE DRUM

SAMPLES COLLECTED: Depth to Water at time of sample collection: 8.02

Sample Number(s)	Time	Size/Number of Container(s)	Preservative
MW09-021915-0	12:30	See COC	

COMMENTS:

Casing Capacities:
2-inch hole.....0.16 gal/lin ft.
4-inch hole.....0.65 gal/lin ft.
6.5-inch hole.....1.70 gal/lin ft.
8-inch hole.....2.60 gal/lin ft.
10-inch hole.....4.10 gal/lin ft.

Recharge Calculation at Time of Sample Collection:

Total Depth of Well:
Original Water Column: _____ x 0.80 = -- (_____)
Collect sample when Depth to Water measures
Less than or equal to:

Signature: _____

Stantec Consulting Services, Inc.
GROUNDWATER SAMPLING FIELD DATA SHEET

Stantec Project No.: 213202157 (BP)/213202156 (CVX) DATE: 2/18/15 WELL NO. MW-10

FACILITY NAME: Bee-Jay Scales TEMPERATURE: ~50 °F or °C

FIELD PERSONNEL: Robert McAlister/Emily Harper WEATHER: SUNNY, clear

FIELD MEASUREMENTS:

A. Static Water Level (SWL) below top of casing: 5.93 FT. or IN.

B. Thickness of Free Product, if present: _____ Inches — FT. or IN.

C. Total Depth of well (TD) from top of casing: 18.51 FT. or IN.

D. Height of Water Column in casing (h = TD - SWL): 12.58 FT. or IN.

E. **Useful approximate Purge Volumes (PV) per foot of water column for common casing sizes:**

	3 Well Vols.	5 Well Vols.		
2" Diameter =	0.5 gals/ft	0.82 gals/ft	x feet of water_____ =	_____PV (Gal)
4" Diameter =	2.0 gals/ft	3.25 gals/ft	x feet of water_____ =	_____PV (Gal)
6" Diameter =	4.4 gals/ft	7.35 gals/ft	x feet of water_____ =	_____PV (Gal)

PURGING METHOD: Low-Flow (Geotech peristaltic pump) DURATION: 9 MINS

OBSERVATIONS:

Flowrate (Liters/min)	Time (24-Hr)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	pH (Units)	Temp. (°F or °C)	Conduct. (mS/cm)	SWL (Ft.)
138 mL/min	8:47	CLR	4.30	113.3	7.51	12.19	7.682	5.99
	8:50	CLR	1.59	94.9	7.78	12.69	7.742	6.02
	8:53	CLR	1.22	94.3	7.86	12.86	7.765	6.02
	8:56	CLR	1.01	95.4	7.88	12.95	7.774	6.03

TOTAL VOLUME OF WATER PURGED FROM WELL: ~ ½ GAL

PURGE WATER STORED/DISPOSED OF WHERE/HOW: ON-SITE DRUM

SAMPLES COLLECTED: Depth to Water at time of sample collection: 6.03

Sample Number(s)	Time	Size/Number of Container(s)	Preservative
MW10-021815-0	9:00	See COC	

COMMENTS:

Casing Capacities:
2-inch hole.....0.16 gal/lin ft.
4-inch hole.....0.65 gal/lin ft.
6.5-inch hole.....1.70 gal/lin ft.
8-inch hole.....2.60 gal/lin ft.
10-inch hole.....4.10 gal/lin ft.

Recharge Calculation at Time of Sample Collection:

Total Depth of Well:
Original Water Column: _____ x 0.80 = -- (_____)
Collect sample when Depth to Water measures
Less than or equal to:

Signature: _____

Stantec Consulting Services, Inc.
GROUNDWATER SAMPLING FIELD DATA SHEET

Stantec Project No.: 213202157 (BP)/213202156 (CVX) DATE: 2/18/15 WELL NO. MW-11

FACILITY NAME: Bee-Jay Scales TEMPERATURE: 55 °F or °C

FIELD PERSONNEL: Robert McAlister/Emily Harper WEATHER: clear, sunny

FIELD MEASUREMENTS:

A. Static Water Level (SWL) below top of casing: 5.58 FT. or IN.

B. Thickness of Free Product, if present: _____ Inches _____ FT. or IN.

C. Total Depth of well (TD) from top of casing: 18.40 FT. or IN.

D. Height of Water Column in casing (h = TD - SWL): 12.82 FT. or IN.

E. **Useful approximate Purge Volumes (PV) per foot of water column for common casing sizes:**

	3 Well Vols.	5 Well Vols.		
2" Diameter =	0.5 gals/ft	0.82 gals/ft	x feet of water_____ =	_____PV (Gal)
4" Diameter =	2.0 gals/ft	3.25 gals/ft	x feet of water_____ =	_____PV (Gal)
6" Diameter =	4.4 gals/ft	7.35 gals/ft	x feet of water_____ =	_____PV (Gal)

PURGING METHOD: Low-Flow (Geotech peristaltic pump) DURATION: 9 mins

OBSERVATIONS:

Flowrate (Liters/min)	Time (24-Hr)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	pH (Units)	Temp. (°F or °C)	Conduct. (mS/cm)	SWL (Ft.)
128 ml/min	11:28	CLR	2.16	127.1	7.30	14.35	9.222	5.61
	11:31	CLR	0.86	109.1	7.51	14.41	9.2602	5.62
	11:34	CLR	0.64	105.1	7.56	14.43	9.2603	5.62
	11:37	CLR	0.54	102.2	7.61	14.41	9.2605	5.62

TOTAL VOLUME OF WATER PURGED FROM WELL: ~ ½ GAL

PURGE WATER STORED/DISPOSED OF WHERE/HOW: ON-SITE DRUM

SAMPLES COLLECTED: Depth to Water at time of sample collection: 5.62

Sample Number(s)	Time	Size/Number of Container(s)	Preservative
MW11-021815-0	11:40	See COC	

COMMENTS:

Casing Capacities:
2-inch hole.....0.16 gal/lin ft.
4-inch hole.....0.65 gal/lin ft.
6.5-inch hole.....1.70 gal/lin ft.
8-inch hole.....2.60 gal/lin ft.
10-inch hole.....4.10 gal/lin ft.

Recharge Calculation at Time of Sample Collection:

Total Depth of Well:
Original Water Column: _____ x 0.80 = -- (_____)
Collect sample when Depth to Water measures
Less than or equal to:

Signature: _____

Stantec Consulting Services, Inc.
GROUNDWATER SAMPLING FIELD DATA SHEET

Stantec Project No.: 213202157 (BP)/213202156 (CVX) DATE: 2/19/15 WELL NO. MW-12R

FACILITY NAME: Bee-Jay Scales TEMPERATURE: ~50 °F or °C

FIELD PERSONNEL: Robert McAlister/Emily Harper WEATHER: clear, sunny

FIELD MEASUREMENTS:

A. Static Water Level (SWL) below top of casing: 7.86 FT. or IN.

B. Thickness of Free Product, if present: _____ Inches _____ FT. or IN.

C. Total Depth of well (TD) from top of casing: 17.47 FT. or IN.

D. Height of Water Column in casing (h = TD - SWL): 9.61 FT. or IN.

E. **Useful approximate Purge Volumes (PV) per foot of water column for common casing sizes:**

	3 Well Vols.	5 Well Vols.		
2" Diameter =	0.5 gals/ft	0.82 gals/ft	x feet of water_____ =	_____PV (Gal)
4" Diameter =	2.0 gals/ft	3.25 gals/ft	x feet of water_____ =	_____PV (Gal)
6" Diameter =	4.4 gals/ft	7.35 gals/ft	x feet of water_____ =	_____PV (Gal)

PURGING METHOD: Low-Flow (Geotech peristaltic pump) DURATION: 9 MINS

OBSERVATIONS:

Flowrate (Liters/min)	Time (24-Hr)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	pH (Units)	Temp. °F or °C	Conduct. (mS/cm)	SWL (Ft.)
172 mL/min	9:35	CLR	3.10	117.2	7.72	13.29	77.75	8.18
	9:38	CLR	3.08	109.6	7.68	13.01	71.12	8.34
	9:41	CLR	2.85	105.3	7.69	12.83	64.97	8.49
	9:44	CLR	2.59	102.8	7.72	12.76	61.47	8.62

TOTAL VOLUME OF WATER PURGED FROM WELL: ~ ½ GAL

PURGE WATER STORED/DISPOSED OF WHERE/HOW: ON-SITE DRUM

SAMPLES COLLECTED: Depth to Water at time of sample collection: 8.62

Sample Number(s)	Time	Size/Number of Container(s)	Preservative
MW12R-021915-0	9:50	See COC	

COMMENTS:

Casing Capacities:
2-inch hole.....0.16 gal/lin ft.
4-inch hole.....0.65 gal/lin ft.
6.5-inch hole.....1.70 gal/lin ft.
8-inch hole.....2.60 gal/lin ft.
10-inch hole.....4.10 gal/lin ft.

Recharge Calculation at Time of Sample Collection:

Total Depth of Well:
Original Water Column: _____ x 0.80 = -- (_____)
Collect sample when Depth to Water measures
Less than or equal to:

Signature: _____

Stantec Consulting Services, Inc.
GROUNDWATER SAMPLING FIELD DATA SHEET

Stantec Project No.: 213202157 (BP)/213202156 (CVX) DATE: 2/18/15 WELL NO. MW-13

FACILITY NAME: Bee-Jay Scales TEMPERATURE: _____ °F or °C

FIELD PERSONNEL: Robert McAlister/Emily Harper WEATHER: _____

FIELD MEASUREMENTS:

A. Static Water Level (SWL) below top of casing: 9.39 FT. or IN.

B. Thickness of Free Product, if present: — Inches — FT. or IN.

C. Total Depth of well (TD) from top of casing: 18.80 FT. or IN.

D. Height of Water Column in casing (h = TD - SWL): 9.41 FT. or IN.

E. **Useful approximate Purge Volumes (PV) per foot of water column for common casing sizes:**

	3 Well Vols.	5 Well Vols.		
2" Diameter =	0.5 gals/ft	0.82 gals/ft	x feet of water_____ =	_____PV (Gal)
4" Diameter =	2.0 gals/ft	3.25 gals/ft	x feet of water_____ =	_____PV (Gal)
6" Diameter =	4.4 gals/ft	7.35 gals/ft	x feet of water_____ =	_____PV (Gal)

PURGING METHOD: Low-Flow (Geotech peristaltic pump) DURATION: 9 MINS

OBSERVATIONS:

Flowrate (Liters/min)	Time (24-Hr)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	pH (Units)	Temp. (°F or °C)	Conduct. (mS/cm)	SWL (Ft.)
162 mL/min	14:19	CLR	1.43	65.8	8.33	14.64	15.55	9.54
↓	14:22	CLR	0.76	67.8	8.16	14.81	15.57	9.60
↓	14:25	CLR	0.59	69.5	8.08	14.89	15.65	9.64
↓	14:28	CLR	0.53	70.7	8.04	14.91	15.64	9.68

TOTAL VOLUME OF WATER PURGED FROM WELL: ~ 1/2 GAL

PURGE WATER STORED/DISPOSED OF WHERE/HOW: ON-SITE DRUM

SAMPLES COLLECTED: Depth to Water at time of sample collection: 9.68

Sample Number(s)	Time	Size/Number of Container(s)	Preservative
MW13-021815-0	14:30	See C.O.C.	"

COMMENTS:

Casing Capacities:
2-inch hole.....0.16 gal/lin ft.
4-inch hole.....0.65 gal/lin ft.
6.5-inch hole.....1.70 gal/lin ft.
8-inch hole.....2.60 gal/lin ft.
10-inch hole.....4.10 gal/lin ft.

Recharge Calculation at Time of Sample Collection:

Total Depth of Well:
Original Water Column: _____ x 0.80 = -- (_____)
Collect sample when Depth to Water measures
Less than or equal to:

Signature: _____

Stantec Consulting Services, Inc.
GROUNDWATER SAMPLING FIELD DATA SHEET

Stantec Project No.: 213202157 (BP)/213202156 (CVX) DATE: 2/17/15 WELL NO. MW-14

FACILITY NAME: Bee-Jay Scales TEMPERATURE: ~60° (°F) or °C

FIELD PERSONNEL: Robert McAlister/Emily Harper WEATHER: SUNNY, BREEZY

FIELD MEASUREMENTS:

A. Static Water Level (SWL) below top of casing: 7.38 FT. or IN.

B. Thickness of Free Product, if present: — Inches — FT. or IN.

C. Total Depth of well (TD) from top of casing: 15.94 FT. or IN.

D. Height of Water Column in casing (h = TD - SWL): 8.56 FT. or IN.

E. **Useful approximate Purge Volumes (PV) per foot of water column for common casing sizes:**

	3 Well Vols.	5 Well Vols.		
2" Diameter =	0.5 gals/ft	0.82 gals/ft	x feet of water_____ =	_____PV (Gal)
4" Diameter =	2.0 gals/ft	3.25 gals/ft	x feet of water_____ =	_____PV (Gal)
6" Diameter =	4.4 gals/ft	7.35 gals/ft	x feet of water_____ =	_____PV (Gal)

PURGING METHOD: Low-Flow (Geotech peristaltic pump) DURATION: 9 MINS

OBSERVATIONS:

Flowrate (Liters/min)	Time (24-Hr)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	pH (Units)	Temp. (°F or °C)	Conduct. (mS/cm)	SWL (Ft.)
126 mL/min	13:45	CLR	1.55	109.7	7.77	12.88	14.14	~~7.43~~
↓	14:48	CLR	0.96	107.3	7.40	12.92	14.19	7.43
	15:51	CLR	0.83	104.8	7.32	12.97	14.07	7.43
	15:54	CLR	0.70	107.8	7.28	12.97	13.83	7.43

TOTAL VOLUME OF WATER PURGED FROM WELL: ~ ½ GAL

PURGE WATER STORED/DISPOSED OF WHERE/HOW: ON-SITE DRUM

SAMPLES COLLECTED: Depth to Water at time of sample collection: 7.43

Sample Number(s)	Time	Size/Number of Container(s)	Preservative
MW14-021715-0	15:10	see COC	
MW14-021715-1	15:15	"	

COMMENTS:

DUPLICATE SAMPLE TAKEN

Casing Capacities:
2-inch hole.....0.16 gal/lin ft.
4-inch hole.....0.65 gal/lin ft.
6.5-inch hole.....1.70 gal/lin ft.
8-inch hole.....2.60 gal/lin ft.
10-inch hole.....4.10 gal/lin ft.

Recharge Calculation at Time of Sample Collection:

Total Depth of Well:
Original Water Column: _____ x 0.80 = -- (_____)
Collect sample when Depth to Water measures
Less than or equal to:

Signature: [signature]

Stantec Consulting Services, Inc.
GROUNDWATER SAMPLING FIELD DATA SHEET

Stantec Project No.: 213202157 (BP)/213202156 (CVX) DATE: 2/18/15 WELL NO. MW-15

FACILITY NAME: Bee-Jay Scales TEMPERATURE: ~50 °F or °C

FIELD PERSONNEL: Robert McAlister/Emily Harper WEATHER: Sunny, clear

FIELD MEASUREMENTS:

A. Static Water Level (SWL) below top of casing: 11.24 FT. or IN.

B. Thickness of Free Product, if present: _____ Inches — FT. or IN.

C. Total Depth of well (TD) from top of casing: 16.00 FT. or IN.

D. Height of Water Column in casing (h = TD - SWL): 4.76 FT. or IN.

E. **Useful approximate Purge Volumes (PV) per foot of water column for common casing sizes:**

	3 Well Vols.	5 Well Vols.		
2" Diameter =	0.5 gals/ft	0.82 gals/ft	x feet of water_____ =	_____PV (Gal)
4" Diameter =	2.0 gals/ft	3.25 gals/ft	x feet of water_____ =	_____PV (Gal)
6" Diameter =	4.4 gals/ft	7.35 gals/ft	x feet of water_____ =	_____PV (Gal)

PURGING METHOD: Low-Flow (Geotech peristaltic pump) DURATION: 9 MINS

OBSERVATIONS:

Flowrate (Liters/min)	Time (24-Hr)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	pH (Units)	Temp. (°F or °C)	Conduct. (mS/cm)	SWL (Ft.)
126 mL/min	9:56	CLR	3.37	91.7	8.15	14.55	6.355	11.43
	9:59	CLR	2.78	98.4	8.11	14.77	6.372	11.52
	10:02	CLR	2.60	104.0	8.06	14.89	6.374	11.57
	10:05	CLR	2.52	107.2	8.00	19.93	6.381	11.60
								GA

TOTAL VOLUME OF WATER PURGED FROM WELL: ~ ½ GAL

PURGE WATER STORED/DISPOSED OF WHERE/HOW: ON-SITE DRUM

SAMPLES COLLECTED: Depth to Water at time of sample collection: 11.60

Sample Number(s)	Time	Size/Number of Container(s)	Preservative
MW15-021815-0	10:10		

COMMENTS:

Casing Capacities:
2-inch hole.....0.16 gal/lin ft.
4-inch hole.....0.65 gal/lin ft.
6.5-inch hole.....1.70 gal/lin ft.
8-inch hole.....2.60 gal/lin ft.
10-inch hole.....4.10 gal/lin ft.

Recharge Calculation at Time of Sample Collection:

Total Depth of Well:
Original Water Column: _____ x 0.80 = -- (_____)
Collect sample when Depth to Water measures
Less than or equal to:

Signature: [signature]

Stantec Consulting Services, Inc.
GROUNDWATER SAMPLING FIELD DATA SHEET

Stantec Project No.: 213202157 (BP)/213202156 (CVX) DATE: 2/19/15 WELL NO. MW-16

FACILITY NAME: Bee-Jay Scales TEMPERATURE: ~50 (°F) or °C

FIELD PERSONNEL: Robert McAlister/Emily Harper WEATHER: clear, sunny

FIELD MEASUREMENTS:

A. Static Water Level (SWL) below top of casing: 8.78 FT. or IN.

B. Thickness of Free Product, if present: — Inches — FT. or IN.

C. Total Depth of well (TD) from top of casing: 15.80 FT. or IN.

D. Height of Water Column in casing (h = TD - SWL): 7.02 FT. or IN.

E. **Useful approximate Purge Volumes (PV) per foot of water column for common casing sizes:**

	3 Well Vols.	5 Well Vols.		
2" Diameter =	0.5 gals/ft	0.82 gals/ft	x feet of water_____ =	_____PV (Gal)
4" Diameter =	2.0 gals/ft	3.25 gals/ft	x feet of water_____ =	_____PV (Gal)
6" Diameter =	4.4 gals/ft	7.35 gals/ft	x feet of water_____ =	_____PV (Gal)

PURGING METHOD: Low-Flow (Geotech peristaltic pump) DURATION: 9 MINS

OBSERVATIONS:

Flowrate (Liters/min)	Time (24-Hr)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	pH (Units)	Temp. (°F or °C)	Conduct. (mS/cm)	SWL (Ft.)
142 mL/min	8:35	CLR	1.61	130.0	7.19	13.73	94.18	8.93
	8.38	CLR	0.85	108.3	7.35	14.11	86.34	8.97
	8.41	CLR	0.69	103.8	7.41	14.06	78.94	9.01
	8.44	CLR	0.70	102.6	7.44	13.97	69.62	9.06

TOTAL VOLUME OF WATER PURGED FROM WELL: ~ 1/2 GAL

PURGE WATER STORED/DISPOSED OF WHERE/HOW: ON-SITE DRUM

SAMPLES COLLECTED: Depth to Water at time of sample collection: 9.06

Sample Number(s)	Time	Size/Number of Container(s)	Preservative
MW16-021915-0	8:45	see COC	

COMMENTS:

Casing Capacities:
2-inch hole.....0.16 gal/lin ft.
4-inch hole.....0.65 gal/lin ft.
6.5-inch hole.....1.70 gal/lin ft.
8-inch hole.....2.60 gal/lin ft.
10-inch hole.....4.10 gal/lin ft.

Recharge Calculation at Time of Sample Collection:

Total Depth of Well:
Original Water Column: _____ x 0.80 = --(_____)
Collect sample when Depth to Water measures
Less than or equal to:

Signature: [signature]

Stantec Consulting Services, Inc.
GROUNDWATER SAMPLING FIELD DATA SHEET

Stantec Project No.: 213202157 (BP)/213202156 (CVX) DATE: 2/18/15 WELL NO. MW-17

FACILITY NAME: Bee-Jay Scales TEMPERATURE: ~50 °F or °C

FIELD PERSONNEL: Robert McAlister/Emily Harper WEATHER: Clear, Sunny

FIELD MEASUREMENTS:

A. Static Water Level (SWL) below top of casing: 10.39 FT. or IN.

B. Thickness of Free Product, if present: _____ Inches — FT. or IN.

C. Total Depth of well (TD) from top of casing: 15.85 FT. or IN.

D. Height of Water Column in casing (h = TD - SWL): 5.46 FT. or IN.

E. **Useful approximate Purge Volumes (PV) per foot of water column for common casing sizes:**

	3 Well Vols.	5 Well Vols.		
2" Diameter =	0.5 gals/ft	0.82 gals/ft	x feet of water_____ =	_____PV (Gal)
4" Diameter =	2.0 gals/ft	3.25 gals/ft	x feet of water_____ =	_____PV (Gal)
6" Diameter =	4.4 gals/ft	7.35 gals/ft	x feet of water_____ =	_____PV (Gal)

PURGING METHOD: Low-Flow (Geotech peristaltic pump) DURATION: 9 MINS

OBSERVATIONS:

Flowrate (Liters/min)	Time (24-Hr)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	pH (Units)	Temp. (°F or °C)	Conduct. (mS/cm)	SWL (Ft.)
146 mL/min	9:24	CLR	4.32	96.9	8.22	13.35	6.486	10.54
	9:27	CLR	3.21	96.6	8.17	12.91	6.520	11.56
	9:30	CLR	2.99	99.1	8.14	13.45	6.504	11.60
	9:33	CLR	2.82	101.2	8.11	13.60	6.526	11.64

TOTAL VOLUME OF WATER PURGED FROM WELL: ~ ½ GAL

PURGE WATER STORED/DISPOSED OF WHERE/HOW: ON-SITE DRUM

SAMPLES COLLECTED: Depth to Water at time of sample collection: 11.64

Sample Number(s)	Time	Size/Number of Container(s)	Preservative
MW17-021815-0	9:40	See COC	
MW-17-021815-2	9:45		

COMMENTS:

Casing Capacities:
2-inch hole.....0.16 gal/lin ft.
4-inch hole.....0.65 gal/lin ft.
6.5-inch hole.....1.70 gal/lin ft.
8-inch hole.....2.60 gal/lin ft.
10-inch hole.....4.10 gal/lin ft.

Recharge Calculation at Time of Sample Collection:

Total Depth of Well:
Original Water Column: _____ x 0.80 = -- (_____)
Collect sample when Depth to Water measures
Less than or equal to:

Signature: _____

Stantec Consulting Services, Inc.
GROUNDWATER SAMPLING FIELD DATA SHEET

Stantec Project No.: 213202157 (BP)/213202156 (CVX) DATE: 2/17/15 WELL NO. MW-18

FACILITY NAME: Bee-Jay Scales TEMPERATURE: ~60 °F or °C

FIELD PERSONNEL: Robert McAlister/Emily Harper WEATHER: Sunny, breezy

FIELD MEASUREMENTS:

A. Static Water Level (SWL) below top of casing: 13.52 FT. or IN.

B. Thickness of Free Product, if present: — Inches — FT. or IN.

C. Total Depth of well (TD) from top of casing: 15.83 FT. or IN.

D. Height of Water Column in casing (h = TD - SWL): 2.31 FT. or IN.

E. **Useful approximate Purge Volumes (PV) per foot of water column for common casing sizes:**

	3 Well Vols.	5 Well Vols.		
2" Diameter =	0.5 gals/ft	0.82 gals/ft	x feet of water_____ =	_____PV (Gal)
4" Diameter =	2.0 gals/ft	3.25 gals/ft	x feet of water_____ =	_____PV (Gal)
6" Diameter =	4.4 gals/ft	7.35 gals/ft	x feet of water_____ =	_____PV (Gal)

PURGING METHOD: Low-Flow (Geotech peristaltic pump) DURATION: 9 MINS

OBSERVATIONS:

Flowrate (Liters/min)	Time (24-Hr)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	pH (Units)	Temp. (°F or °C)	Conduct. (mS/cm)	SWL (Ft.)
140 mL	15:21	CLR	3.34	128.1	7.54	16.93	6.096	13.75
	15:24	CLR	3.07	116.8	7.53	17.11	6.076	13.90
	15:27	CLR	2.98	112.6	7.47	17.28	6.104	14.03
	15:30	CLR	2.94	109.5	7.46	17.31	6.114	14.15

TOTAL VOLUME OF WATER PURGED FROM WELL: ~ ½ GAL

PURGE WATER STORED/DISPOSED OF WHERE/HOW: ON-SITE DRUM

SAMPLES COLLECTED: Depth to Water at time of sample collection: 14.15

Sample Number(s)	Time	Size/Number of Container(s)	Preservative
MW18-021715-0	15:35	See COC	
MW18-021715-2	15:40	EQUIP. Blank	

COMMENTS:

Equipment Blank taken after this sample (last of day)

Casing Capacities:
2-inch hole.....0.16 gal/lin ft.
4-inch hole.....0.65 gal/lin ft.
6.5-inch hole.....1.70 gal/lin ft.
8-inch hole.....2.60 gal/lin ft.
10-inch hole.....4.10 gal/lin ft.

Recharge Calculation at Time of Sample Collection:

Total Depth of Well:
Original Water Column: _____ x 0.80 = -- (_____)
Collect sample when Depth to Water measures
Less than or equal to:

Signature: [signature]

Stantec Consulting Services, Inc.
GROUNDWATER SAMPLING FIELD DATA SHEET

Stantec Project No.: 213202157 (BP)/213202156 (CVX) DATE: 2/18/15 WELL NO. MW-19

FACILITY NAME: Bee-Jay Scales TEMPERATURE: ~50 °F or °C

FIELD PERSONNEL: Robert McAlister/Emily Harper WEATHER: Clear, sunny

FIELD MEASUREMENTS:

A. Static Water Level (SWL) below top of casing: 8.05 FT. or IN.

B. Thickness of Free Product, if present: _____ Inches — FT. or IN.

C. Total Depth of well (TD) from top of casing: 16.13 FT. or IN.

D. Height of Water Column in casing (h = TD - SWL): 8.08 FT. or IN.

E. **Useful approximate Purge Volumes (PV) per foot of water column for common casing sizes:**

	3 Well Vols.	5 Well Vols.		
2" Diameter =	0.5 gals/ft	0.82 gals/ft	x feet of water_____ =	_____PV (Gal)
4" Diameter =	2.0 gals/ft	3.25 gals/ft	x feet of water_____ =	_____PV (Gal)
6" Diameter =	4.4 gals/ft	7.35 gals/ft	x feet of water_____ =	_____PV (Gal)

PURGING METHOD: Low-Flow (Geotech peristaltic pump) DURATION: 9 MINS

OBSERVATIONS:

Flowrate (Liters/min)	Time (24-Hr)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	pH (Units)	Temp. (°F or °C)	Conduct. (mS/cm)	SWL (Ft.)
108 mL/min	13:48	CLR	2.88	64.3	8.35	13.04	19.22	8.36
101 mL/min	13:51	CLR	1.73	61.0	8.30	13.35	19.20	8.62
↓	13:54	CLR	1.55	64.4	8.25	13.27	19.20	8.65
↓	13:57	CLR	1.39	68.2	8.20	13.21	19.22	8.73
								GW

TOTAL VOLUME OF WATER PURGED FROM WELL: ~ ½ GAL

PURGE WATER STORED/DISPOSED OF WHERE/HOW: ON-SITE DRUM

SAMPLES COLLECTED: Depth to Water at time of sample collection: 8.73

Sample Number(s)	Time	Size/Number of Container(s)	Preservative
MW19-021815-0	14:00	See COC	

COMMENTS:

Casing Capacities:
2-inch hole.... ....0.16 gal/lin ft.
4-inch hole.....0.65 gal/lin ft.
6.5-inch hole.....1.70 gal/lin ft.
8-inch hole.....2.60 gal/lin ft.
10-inch hole.....4.10 gal/lin ft.

Recharge Calculation at Time of Sample Collection:

Total Depth of Well:
Original Water Column: _____ x 0.80 = -- (_____)
Collect sample when Depth to Water measures
Less than or equal to:

Signature: _____

Stantec Consulting Services, Inc.
GROUNDWATER SAMPLING FIELD DATA SHEET

Stantec Project No.: 213202157 (BP)/213202156 (CVX) DATE: 2/18/15 WELL NO. MW-20

FACILITY NAME: Bee-Jay Scales TEMPERATURE: ~55 °F or °C

FIELD PERSONNEL: Robert McAlister/Emily Harper WEATHER: Sunny, clear

FIELD MEASUREMENTS:

A. Static Water Level (SWL) below top of casing: 12.64 FT. or IN.

B. Thickness of Free Product, if present: _____ Inches — FT. or IN.

C. Total Depth of well (TD) from top of casing: 15.69 FT. or IN.

D. Height of Water Column in casing (h = TD - SWL): 3.05 FT. or IN.

E. **Useful approximate Purge Volumes (PV) per foot of water column for common casing sizes:**

	3 Well Vols.	5 Well Vols.		
2" Diameter =	0.5 gals/ft	0.82 gals/ft	x feet of water_____ =	_____PV (Gal)
4" Diameter =	2.0 gals/ft	3.25 gals/ft	x feet of water_____ =	_____PV (Gal)
6" Diameter =	4.4 gals/ft	7.35 gals/ft	x feet of water_____ =	_____PV (Gal)

PURGING METHOD: Low-Flow (Geotech peristaltic pump) DURATION: 9 MINS

OBSERVATIONS:

Flowrate (Liters/min)	Time (24-Hr)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	pH (Units)	Temp. (°F or °C)	Conduct. (mS/cm)	SWL (Ft.)
124 mL/min	10:28	CLR	4.40	96.3	8.14	16.21	6.544	12.80
↓	10:31	CLR	2.78	90.2	8.16	16.57	6.614	12.90
	10:34	CLR	2.55	91.1	8.16	16.69	6.698	12.95
	10:37	CLR	2.40	90.3	8.15	16.69	6.680	12.99
								GW

TOTAL VOLUME OF WATER PURGED FROM WELL: ~ ½ GAL

PURGE WATER STORED/DISPOSED OF WHERE/HOW: ON-SITE DRUM

SAMPLES COLLECTED: Depth to Water at time of sample collection: 12.99

Sample Number(s)	Time	Size/Number of Container(s)	Preservative
MW20-021815-0	10:45	See COC	"

COMMENTS:

Casing Capacities:
2-inch hole.....0.16 gal/lin ft.
4-inch hole.....0.65 gal/lin ft.
6.5-inch hole.....1.70 gal/lin ft.
8-inch hole.....2.60 gal/lin ft.
10-inch hole.....4.10 gal/lin ft.

Recharge Calculation at Time of Sample Collection:

Total Depth of Well:
Original Water Column: _____ x 0.80 = -- (_____)
Collect sample when Depth to Water measures
Less than or equal to:

Signature: [signature]

APPENDIX E
Analytical Laboratory Reports

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

March 02, 2015

Project: Bee Jay Scales Site

Submittal Date: 02/20/2015
Group Number: 1539991
PO Number: 213202156/213202157
Release Number: BEE-JAY SCALES
State of Sample Origin: WA

Client Sample Description	Lancaster Labs (LL) #
MW06-021815-0 Grab Groundwater	7779339
MW07-021815-0 Grab Groundwater	7779340
MW07-021815-1 Grab Groundwater	7779341
MW10-021815-0 Grab Groundwater	7779342
MW11-021815-0 Grab Groundwater	7779343
MW14-021715-0 Grab Groundwater	7779344
MW14-021715-1 Grab Groundwater	7779345
MW15-021815-0 Grab Groundwater	7779346
MW17-021815-0 Grab Groundwater	7779347
MW17-021815-2 Grab Groundwater	7779348
MW18-021715-0 Grab Groundwater	7779349
MW18-021715-2 Grab Groundwater	7779350
MW20-021815-0 Grab Groundwater	7779351
TB-1 Water	7779352

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ .

ELECTRONIC COPY TO	STANTEC International, Inc.	Attn: Marisa Kaffenberger
ELECTRONIC COPY TO	Stantec Consulting Services	Attn: Eric Bassett

Respectfully Submitted,

Wendy A. Kozma
Principal Specialist Group Leader

(717) 556-7257

eurofins | Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: MW06-021815-0 Grab Groundwater
Bee Jay Scales Site

LL Sample # WW 7779339
LL Group # 1539991
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 02/18/2015 12:10 by EH

Submitted: 02/20/2015 10:10
Reported: 03/02/2015 09:32

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals	**SW-846 6010B**		**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	0.0236	0.0072	1
Wet Chemistry	**EPA 353.2**		**mg/l**	**mg/l**	
00220	Nitrate Nitrogen	14797-55-8	10.4	0.40	10
00219	Nitrite Nitrogen	14797-65-0	N.D.	0.015	1
	SM 2320 B-1997		**mg/l as CaCO3**	**mg/l as CaCO3**	
12150	Total Alkalinity to pH 4.5	n.a.	302	0.70	1
12707	Phenolphthalein Alk. to pH 8.3	n.a.	N.D.	0.70	1
	SM 4500-H+ B-2000		**Std. Units**	**Std. Units**	
12152	pH	n.a.	8.0	0.010	1

General Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	150585705001	03/02/2015 03:11	Tara L Snyder	1
05705	ICP-WW/TL, 3010A (tot) - U3	SW-846 3010A	1	150515705005	02/24/2015 07:31	Christopher M Klumpp	1
05705	ICP-WW/TL, 3010A (tot) - U3	SW-846 3010A	2	150575705006	02/26/2015 12:49	James L Mertz	1
05705	ICP-WW/TL, 3010A (tot) - U3	SW-846 3010A	3	150585705001	03/01/2015 09:10	James L Mertz	1
00220	Nitrate Nitrogen	EPA 353.2	1	15053106101B	02/22/2015 18:17	Joseph E McKenzie	10
00219	Nitrite Nitrogen	EPA 353.2	1	15051105101A	02/20/2015 11:47	Joseph E McKenzie	1
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	15054011201A	02/23/2015 16:28	Michele L Graham	1
12707	Phenolphthalein Alk. to pH 8.3	SM 2320 B-1997	1	15054011201A	02/23/2015 16:28	Michele L Graham	1
12152	pH	SM 4500-H+ B-2000	1	15054011201A	02/23/2015 16:28	Michele L Graham	1

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Analysis Report

Sample Description: MW07-021815-0 Grab Groundwater
Bee Jay Scales Site

LL Sample # WW 7779340
LL Group # 1539991
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 02/18/2015 11:10 by EH

Submitted: 02/20/2015 10:10
Reported: 03/02/2015 09:32

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry	**EPA 353.2**		mg/l	mg/l	
00220	Nitrate Nitrogen	14797-55-8	3.4	0.040	1
00219	Nitrite Nitrogen	14797-65-0	N.D.	0.015	1

General Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00220	Nitrate Nitrogen	EPA 353.2	1	15053106101B	02/22/2015 17:17	Joseph E McKenzie	1
00219	Nitrite Nitrogen	EPA 353.2	1	15051105101A	02/20/2015 11:41	Joseph E McKenzie	1

Sample Description: MW07-021815-1 Grab Groundwater
Bee Jay Scales Site

LL Sample # WW 7779341
LL Group # 1539991
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 02/18/2015 11:15 by EH

Submitted: 02/20/2015 10:10
Reported: 03/02/2015 09:32

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry	**EPA 353.2**		mg/l	mg/l	
00220	Nitrate Nitrogen	14797-55-8	3.4	0.040	1
00219	Nitrite Nitrogen	14797-65-0	N.D.	0.015	1

General Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00220	Nitrate Nitrogen	EPA 353.2	1	15053106101B	02/22/2015 17:18	Joseph E McKenzie	1
00219	Nitrite Nitrogen	EPA 353.2	1	15051105101A	02/20/2015 11:42	Joseph E McKenzie	1

Sample Description: MW10-021815-0 Grab Groundwater
Bee Jay Scales Site

LL Sample # WW 7779342
LL Group # 1539991
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 02/18/2015 09:00 by EH

Submitted: 02/20/2015 10:10
Reported: 03/02/2015 09:32

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

BJS10

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**EPA 524M**		**ng/l**	**ng/l**	
11017	1,2,3-Trichloropropane	96-18-4	N.D.	0.5	1
	The recovery for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and no target analytes were detected, the data is reported.				
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Acetone	67-64-1	N.D.	6	1
10335	Acrylonitrile	107-13-1	N.D.	4	1
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Bromobenzene	108-86-1	N.D.	1	1
10335	Bromochloromethane	74-97-5	N.D.	1	1
10335	Bromodichloromethane	75-27-4	N.D.	0.5	1
10335	Bromoform	75-25-2	N.D.	0.5	1
10335	Bromomethane	74-83-9	N.D.	0.5	1
10335	2-Butanone	78-93-3	N.D.	3	1
10335	n-Butylbenzene	104-51-8	N.D.	1	1
10335	sec-Butylbenzene	135-98-8	N.D.	1	1
10335	tert-Butylbenzene	98-06-6	N.D.	1	1
10335	Carbon Disulfide	75-15-0	N.D.	1	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chlorobenzene	108-90-7	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	Chloroform	67-66-3	N.D.	0.5	1
10335	Chloromethane	74-87-3	N.D.	0.5	1
10335	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	2	1
10335	Dibromochloromethane	124-48-1	N.D.	0.5	1
10335	1,2-Dibromoethane	106-93-4	N.D.	0.5	1
10335	Dibromomethane	74-95-3	N.D.	0.5	1
10335	trans-1,4-Dichloro-2-butene	110-57-6	N.D.	15	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.	1	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	1	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	1	1
10335	Dichlorodifluoromethane	75-71-8	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.5	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.5	1
10335	1,2-Dichloropropane	78-87-5	N.D.	0.5	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.5	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.5	1
10335	Ethyl ether	60-29-7	N.D.	2	1
10335	Ethylbenzene	100-41-4	N.D.	0.5	1
10335	2-Hexanone	591-78-6	N.D.	3	1
10335	Isopropylbenzene	98-82-8	N.D.	1	1
10335	p-Isopropyltoluene	99-87-6	N.D.	1	1
10335	Methyl Iodide	74-88-4	N.D.	0.5	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.	3	1
10335	Methylene Chloride	75-09-2	N.D.	2	1

Sample Description: MW10-021815-0 Grab Groundwater
Bee Jay Scales Site

LL Sample # WW 7779342
LL Group # 1539991
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 02/18/2015 09:00 by EH

Submitted: 02/20/2015 10:10
Reported: 03/02/2015 09:32

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Okemos MI 48864

BJS10

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	2-Methylnaphthalene	91-57-6	N.D.	2	1
10335	Naphthalene	91-20-3	N.D.	1	1
10335	n-Propylbenzene	103-65-1	N.D.	1	1
10335	Styrene	100-42-5	N.D.	1	1
10335	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.5	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	N.D.	0.5	1
10335	Tetrahydrofuran	109-99-9	N.D.	4	1
10335	Toluene	108-88-3	N.D.	0.5	1
10335	1,2,3-Trichlorobenzene	87-61-6	N.D.	1	1
10335	1,2,4-Trichlorobenzene	120-82-1	N.D.	1	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	N.D.	0.5	1
10335	Trichlorofluoromethane	75-69-4	N.D.	0.5	1
10335	1,2,4-Trimethylbenzene	95-63-6	N.D.	1	1
10335	1,3,5-Trimethylbenzene	108-67-8	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1
10335	m+p-Xylene	179601-23-1	N.D.	0.5	1
10335	o-Xylene	95-47-6	N.D.	0.5	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**	**ug/l**	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
Metals	**SW-846 6010B**		**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	0.0199 J	0.0072	1
Wet Chemistry	**EPA 353.2**		**mg/l**	**mg/l**	
00220	Nitrate Nitrogen	14797-55-8	3.2	0.040	1
00219	Nitrite Nitrogen	14797-65-0	N.D.	0.015	1
	SM 2320 B-1997		**mg/l as CaCO3**	**mg/l as CaCO3**	
12150	Total Alkalinity to pH 4.5	n.a.	234	0.70	1
12707	Phenolphthalein Alk. to pH 8.3	n.a.	N.D.	0.70	1
	SM 4500-H+ B-2000		**Std. Units**	**Std. Units**	
12152	pH	n.a.	8.2	0.010	1

General Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Sample Description: MW10-021815-0 Grab Groundwater
Bee Jay Scales Site

LL Sample # WW 7779342
LL Group # 1539991
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 02/18/2015 09:00 by EH

Submitted: 02/20/2015 10:10
Reported: 03/02/2015 09:32

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Okemos MI 48864

BJS10

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11017	VOCs- 25ml Water by 524M SIM	EPA 524M	1	G150551AA	02/24/2015 14:56	Jason M Long	1
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	Y150542AA	02/23/2015 15:26	Sarah A Guill	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Y150542AA	02/23/2015 15:26	Sarah A Guill	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	G150551AA	02/24/2015 14:56	Jason M Long	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	15056A53A	02/25/2015 17:31	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	15056A53A	02/25/2015 17:31	Marie D Beamenderfer	1
07035	Arsenic	SW-846 6010B	1	150585705001	03/02/2015 03:15	Tara L Snyder	1
05705	ICP-WW/TL, 3010A (tot) - U3	SW-846 3010A	1	150515705005	02/24/2015 07:31	Christopher M Klumpp	1
05705	ICP-WW/TL, 3010A (tot) - U3	SW-846 3010A	2	150575705006	02/26/2015 12:49	James L Mertz	1
05705	ICP-WW/TL, 3010A (tot) - U3	SW-846 3010A	3	150585705001	03/01/2015 09:10	James L Mertz	1
00220	Nitrate Nitrogen	EPA 353.2	1	15053106101B	02/22/2015 17:19	Joseph E McKenzie	1
00219	Nitrite Nitrogen	EPA 353.2	1	15051105101A	02/20/2015 11:32	Joseph E McKenzie	1
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	15054011201A	02/23/2015 16:43	Michele L Graham	1
12707	Phenolphthalein Alk. to pH 8.3	SM 2320 B-1997	1	15054011201A	02/23/2015 16:43	Michele L Graham	1
12152	pH	SM 4500-H+ B-2000	1	15054011201A	02/23/2015 16:43	Michele L Graham	1

Sample Description: MW11-021815-0 Grab Groundwater
Bee Jay Scales Site

LL Sample # WW 7779343
LL Group # 1539991
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 02/18/2015 11:40 by EH

Submitted: 02/20/2015 10:10
Reported: 03/02/2015 09:32

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CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles		**ECY 97-602 NWTPH-Gx**		**ug/l**	**ug/l**	
08273	NWTPH-Gx water C7-C12		n.a.	N.D.	50	1
Metals		**SW-846 6010B**		**mg/l**	**mg/l**	
07035	Arsenic		7440-38-2	0.0437	0.0072	1
Wet Chemistry		**EPA 353.2**		**mg/l**	**mg/l**	
00220	Nitrate Nitrogen		14797-55-8	5.3	0.20	5
00219	Nitrite Nitrogen		14797-65-0	N.D.	0.015	1
		SM 2320 B-1997		**mg/l as CaCO3**	**mg/l as CaCO3**	
12150	Total Alkalinity to pH 4.5		n.a.	243	0.70	1
12707	Phenolphthalein Alk. to pH 8.3		n.a.	N.D.	0.70	1
		SM 4500-H+ B-2000		**Std. Units**	**Std. Units**	
12152	pH		n.a.	8.0	0.010	1

General Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	15056A53A	02/25/2015 17:59	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	15056A53A	02/25/2015 17:59	Marie D Beamenderfer	1
07035	Arsenic	SW-846 6010B	1	150585705001	03/02/2015 03:19	Tara L Snyder	1
05705	ICP-WW/TL, 3010A (tot) - U3	SW-846 3010A	1	150515705005	02/24/2015 07:31	Christopher M Klumpp	1
05705	ICP-WW/TL, 3010A (tot) - U3	SW-846 3010A	2	150575705006	02/26/2015 12:49	James L Mertz	1
05705	ICP-WW/TL, 3010A (tot) - U3	SW-846 3010A	3	150585705001	03/01/2015 09:10	James L Mertz	1
00220	Nitrate Nitrogen	EPA 353.2	1	15053106101B	02/22/2015 17:21	Joseph E McKenzie	5
00219	Nitrite Nitrogen	EPA 353.2	1	15051105101A	02/20/2015 11:43	Joseph E McKenzie	1
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	15054011201A	02/23/2015 17:10	Michele L Graham	1
12707	Phenolphthalein Alk. to pH 8.3	SM 2320 B-1997	1	15054011201A	02/23/2015 17:10	Michele L Graham	1
12152	pH	SM 4500-H+ B-2000	1	15054011201A	02/23/2015 17:10	Michele L Graham	1

Sample Description: MW14-021715-0 Grab Groundwater
Bee Jay Scales Site

LL Sample # WW 7779344
LL Group # 1539991
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 02/17/2015 15:10 by EH

Submitted: 02/20/2015 10:10
Reported: 03/02/2015 09:32

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CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals	**SW-846 6010B**		**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	0.0083 J	0.0072	1
Wet Chemistry	**EPA 353.2**		**mg/l**	**mg/l**	
00220	Nitrate Nitrogen	14797-55-8	3.3	0.040	1
00219	Nitrite Nitrogen	14797-65-0	N.D.	0.015	1

General Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	150585705001	03/02/2015 03:23	Tara L Snyder	1
05705	ICP-WW/TL, 3010A (tot) - U3	SW-846 3010A	1	150515705005	02/24/2015 07:31	Christopher M Klumpp	1
05705	ICP-WW/TL, 3010A (tot) - U3	SW-846 3010A	2	150575705006	02/26/2015 12:49	James L Mertz	1
05705	ICP-WW/TL, 3010A (tot) - U3	SW-846 3010A	3	150585705001	03/01/2015 09:10	James L Mertz	1
00220	Nitrate Nitrogen	EPA 353.2	1	15053106101B	02/22/2015 17:22	Joseph E McKenzie	1
00219	Nitrite Nitrogen	EPA 353.2	1	15051105101A	02/20/2015 11:48	Joseph E McKenzie	1

Sample Description: MW14-021715-1 Grab Groundwater
Bee Jay Scales Site

LL Sample # WW 7779345
LL Group # 1539991
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 02/17/2015 15:15 by EH

Submitted: 02/20/2015 10:10
Reported: 03/02/2015 09:32

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Okemos MI 48864

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals	**SW-846 6010B**		**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	0.0125 J	0.0072	1
Wet Chemistry	**EPA 353.2**		**mg/l**	**mg/l**	
00220	Nitrate Nitrogen	14797-55-8	3.3	0.040	1
00219	Nitrite Nitrogen	14797-65-0	N.D.	0.015	1

General Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	150585705001	03/02/2015 03:26	Tara L Snyder	1
05705	ICP-WW/TL, 3010A (tot) - U3	SW-846 3010A	1	150515705005	02/24/2015 07:31	Christopher M Klumpp	1
05705	ICP-WW/TL, 3010A (tot) - U3	SW-846 3010A	2	150575705006	02/26/2015 12:49	James L Mertz	1
05705	ICP-WW/TL, 3010A (tot) - U3	SW-846 3010A	3	150585705001	03/01/2015 09:10	James L Mertz	1
00220	Nitrate Nitrogen	EPA 353.2	1	15053106101B	02/22/2015 17:26	Joseph E McKenzie	1
00219	Nitrite Nitrogen	EPA 353.2	1	15051105101B	02/20/2015 11:49	Joseph E McKenzie	1

Sample Description: MW15-021815-0 Grab Groundwater
Bee Jay Scales Site

LL Sample # WW 7779346
LL Group # 1539991
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 02/18/2015 10:10 by EH

Submitted: 02/20/2015 10:10
Reported: 03/02/2015 09:32

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CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals	**SW-846 6010B**		**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	0.0177 J	0.0072	1
Wet Chemistry	**EPA 353.2**		**mg/l**	**mg/l**	
00220	Nitrate Nitrogen	14797-55-8	3.4	0.040	1
00219	Nitrite Nitrogen	14797-65-0	N.D.	0.015	1
	SM 2320 B-1997		**mg/l as CaCO3**	**mg/l as CaCO3**	
12150	Total Alkalinity to pH 4.5	n.a.	167	0.70	1
12707	Phenolphthalein Alk. to pH 8.3	n.a.	N.D.	0.70	1
	SM 4500-H+ B-2000		**Std. Units**	**Std. Units**	
12152	pH	n.a.	8.1	0.010	1
	SM 4500-NH3 D-1997		**mg/l**	**mg/l**	
12677	Ammonia-Nitrogen	7664-41-7	N.D.	0.050	1

General Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	150585705001	03/02/2015 03:30	Tara L Snyder	1
05705	ICP-WW/TL, 3010A (tot) - U3	SW-846 3010A	1	150515705005	02/24/2015 07:31	Christopher M Klumpp	1
05705	ICP-WW/TL, 3010A (tot) - U3	SW-846 3010A	2	150575705006	02/26/2015 12:49	James L Mertz	1
05705	ICP-WW/TL, 3010A (tot) - U3	SW-846 3010A	3	150585705001	03/01/2015 09:10	James L Mertz	1
00220	Nitrate Nitrogen	EPA 353.2	1	15053106102A	02/22/2015 17:29	Joseph E McKenzie	1
00219	Nitrite Nitrogen	EPA 353.2	1	15051105101A	02/20/2015 11:38	Joseph E McKenzie	1
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	15054011201A	02/23/2015 16:49	Michele L Graham	1
12707	Phenolphthalein Alk. to pH 8.3	SM 2320 B-1997	1	15054011201A	02/23/2015 16:49	Michele L Graham	1
12152	pH	SM 4500-H+ B-2000	1	15054011201A	02/23/2015 16:49	Michele L Graham	1
12677	Ammonia-Nitrogen	SM 4500-NH3 D-1997	1	15056012201A	02/25/2015 14:33	Kenneth A Bell	1

Sample Description: MW17-021815-0 Grab Groundwater
Bee Jay Scales Site

LL Sample # WW 7779347
LL Group # 1539991
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 02/18/2015 09:40 by EH

Submitted: 02/20/2015 10:10
Reported: 03/02/2015 09:32

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CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry	**EPA 353.2**		mg/l	mg/l	
00220	Nitrate Nitrogen	14797-55-8	3.4	0.040	1
00219	Nitrite Nitrogen	14797-65-0	N.D.	0.015	1

General Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00220	Nitrate Nitrogen	EPA 353.2	1	15053106102A	02/22/2015 17:33	Joseph E McKenzie	1
00219	Nitrite Nitrogen	EPA 353.2	1	15051105101A	02/20/2015 11:36	Joseph E McKenzie	1

Sample Description: MW17-021815-2 Grab Groundwater
Bee Jay Scales Site

LL Sample # WW 7779348
LL Group # 1539991
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 02/18/2015 09:45 by EH

Submitted: 02/20/2015 10:10
Reported: 03/02/2015 09:32

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry	**EPA 353.2**		mg/l	mg/l	
00220	Nitrate Nitrogen	14797-55-8	N.D.	0.040	1
00219	Nitrite Nitrogen	14797-65-0	N.D.	0.015	1

General Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00220	Nitrate Nitrogen	EPA 353.2	1	15053106102A	02/22/2015 17:34	Joseph E McKenzie	1
00219	Nitrite Nitrogen	EPA 353.2	1	15051105101A	02/20/2015 11:37	Joseph E McKenzie	1

Sample Description: MW18-021715-0 Grab Groundwater
Bee Jay Scales Site

LL Sample # WW 7779349
LL Group # 1539991
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 02/17/2015 15:35 by EH

Submitted: 02/20/2015 10:10
Reported: 03/02/2015 09:32

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Okemos MI 48864

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals	**SW-846 6010B**		**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	0.0234	0.0072	1
Wet Chemistry	**EPA 353.2**		**mg/l**	**mg/l**	
00220	Nitrate Nitrogen	14797-55-8	3.0	0.040	1
00219	Nitrite Nitrogen	14797-65-0	N.D.	0.015	1

The holding time was not met. The sample was submitted to the laboratory outside of the holding time.

General Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	150585705001	03/02/2015 03:34	Tara L Snyder	1
05705	ICP-WW/TL, 3010A (tot) - U3	SW-846 3010A	1	150515705005	02/24/2015 07:31	Christopher M Klumpp	1
05705	ICP-WW/TL, 3010A (tot) - U3	SW-846 3010A	2	150575705006	02/26/2015 12:49	James L Mertz	1
05705	ICP-WW/TL, 3010A (tot) - U3	SW-846 3010A	3	150585705001	03/01/2015 09:10	James L Mertz	1
00220	Nitrate Nitrogen	EPA 353.2	1	15053106102A	02/22/2015 17:36	Joseph E McKenzie	1
00219	Nitrite Nitrogen	EPA 353.2	1	15051105101B	02/20/2015 11:53	Joseph E McKenzie	1

Sample Description: MW18-021715-2 Grab Groundwater
Bee Jay Scales Site

LL Sample # WW 7779350
LL Group # 1539991
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 02/17/2015 15:40 by EH

Submitted: 02/20/2015 10:10
Reported: 03/02/2015 09:32

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CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals	**SW-846 6010B**		**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0072	1
Wet Chemistry	**EPA 353.2**		**mg/l**	**mg/l**	
00220	Nitrate Nitrogen	14797-55-8	N.D.	0.040	1
00219	Nitrite Nitrogen	14797-65-0	N.D.	0.015	1

The holding time was not met. The sample was submitted to the laboratory outside of the holding time.

General Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	150585705001	03/02/2015 03:45	Tara L Snyder	1
05705	ICP-WW/TL, 3010A (tot) - U3	SW-846 3010A	1	150515705005	02/24/2015 07:31	Christopher M Klumpp	1
05705	ICP-WW/TL, 3010A (tot) - U3	SW-846 3010A	2	150575705006	02/26/2015 12:49	James L Mertz	1
05705	ICP-WW/TL, 3010A (tot) - U3	SW-846 3010A	3	150585705001	03/01/2015 09:10	James L Mertz	1
00220	Nitrate Nitrogen	EPA 353.2	1	15053106102A	02/22/2015 17:37	Joseph E McKenzie	1
00219	Nitrite Nitrogen	EPA 353.2	1	15051105101B	02/20/2015 11:54	Joseph E McKenzie	1

Sample Description: MW20-021815-0 Grab Groundwater
Bee Jay Scales Site

LL Sample # WW 7779351
LL Group # 1539991
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 02/18/2015 10:45 by EH

Submitted: 02/20/2015 10:10
Reported: 03/02/2015 09:32

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals	**SW-846 6010B**		**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	0.0150 J	0.0072	1
Wet Chemistry	**EPA 353.2**		**mg/l**	**mg/l**	
00220	Nitrate Nitrogen	14797-55-8	3.7	0.040	1
00219	Nitrite Nitrogen	14797-65-0	N.D.	0.015	1

General Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	150585705001	03/02/2015 03:49	Tara L Snyder	1
05705	ICP-WW/TL, 3010A (tot) - U3	SW-846 3010A	1	150515705005	02/24/2015 07:31	Christopher M Klumpp	1
05705	ICP-WW/TL, 3010A (tot) - U3	SW-846 3010A	2	150575705006	02/26/2015 12:49	James L Mertz	1
05705	ICP-WW/TL, 3010A (tot) - U3	SW-846 3010A	3	150585705001	03/01/2015 09:10	James L Mertz	1
00220	Nitrate Nitrogen	EPA 353.2	1	15053106102A	02/22/2015 17:41	Joseph E McKenzie	1
00219	Nitrite Nitrogen	EPA 353.2	1	15051105101A	02/20/2015 11:39	Joseph E McKenzie	1

Sample Description: TB-1 Water
Bee Jay Scales Site

LL Sample # WW 7779352
LL Group # 1539991
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 02/17/2015

Submitted: 02/20/2015 10:10
Reported: 03/02/2015 09:32

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

BJST1

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**EPA 524M**		**ng/l**	**ng/l**	
11017	1,2,3-Trichloropropane	96-18-4	N.D.	0.5	1
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Acetone	67-64-1	N.D.	6	1
10335	Acrylonitrile	107-13-1	N.D.	4	1
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Bromobenzene	108-86-1	N.D.	1	1
10335	Bromochloromethane	74-97-5	N.D.	1	1
10335	Bromodichloromethane	75-27-4	N.D.	0.5	1
10335	Bromoform	75-25-2	N.D.	0.5	1
10335	Bromomethane	74-83-9	N.D.	0.5	1
10335	2-Butanone	78-93-3	N.D.	3	1
10335	n-Butylbenzene	104-51-8	N.D.	1	1
10335	sec-Butylbenzene	135-98-8	N.D.	1	1
10335	tert-Butylbenzene	98-06-6	N.D.	1	1
10335	Carbon Disulfide	75-15-0	N.D.	1	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chlorobenzene	108-90-7	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	Chloroform	67-66-3	N.D.	0.5	1
10335	Chloromethane	74-87-3	N.D.	0.5	1
10335	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	2	1
10335	Dibromochloromethane	124-48-1	N.D.	0.5	1
10335	1,2-Dibromoethane	106-93-4	N.D.	0.5	1
10335	Dibromomethane	74-95-3	N.D.	0.5	1
10335	trans-1,4-Dichloro-2-butene	110-57-6	N.D.	15	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.	1	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	1	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	1	1
10335	Dichlorodifluoromethane	75-71-8	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.5	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.5	1
10335	1,2-Dichloropropane	78-87-5	N.D.	0.5	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.5	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.5	1
10335	Ethyl ether	60-29-7	N.D.	2	1
10335	Ethylbenzene	100-41-4	N.D.	0.5	1
10335	2-Hexanone	591-78-6	N.D.	3	1
10335	Isopropylbenzene	98-82-8	N.D.	1	1
10335	p-Isopropyltoluene	99-87-6	N.D.	1	1
10335	Methyl Iodide	74-88-4	N.D.	0.5	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.	3	1
10335	Methylene Chloride	75-09-2	N.D.	2	1
10335	2-Methylnaphthalene	91-57-6	N.D.	2	1
10335	Naphthalene	91-20-3	N.D.	1	1
10335	n-Propylbenzene	103-65-1	N.D.	1	1
10335	Styrene	100-42-5	N.D.	1	1

Sample Description: TB-1 Water
Bee Jay Scales Site

LL Sample # WW 7779352
LL Group # 1539991
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 02/17/2015

Submitted: 02/20/2015 10:10
Reported: 03/02/2015 09:32

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

BJST1

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.5	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	N.D.	0.5	1
10335	Tetrahydrofuran	109-99-9	N.D.	4	1
10335	Toluene	108-88-3	N.D.	0.5	1
10335	1,2,3-Trichlorobenzene	87-61-6	N.D.	1	1
10335	1,2,4-Trichlorobenzene	120-82-1	N.D.	1	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	N.D.	0.5	1
10335	Trichlorofluoromethane	75-69-4	N.D.	0.5	1
10335	1,2,4-Trimethylbenzene	95-63-6	N.D.	1	1
10335	1,3,5-Trimethylbenzene	108-67-8	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1
10335	m+p-Xylene	179601-23-1	N.D.	0.5	1
10335	o-Xylene	95-47-6	N.D.	0.5	1

General Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11017	VOCs- 25ml Water by 524M SIM	EPA 524M	1	G150551AA	02/24/2015 14:13	Jason M Long	1
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	Y150542AA	02/23/2015 12:58	Sarah A Guill	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Y150542AA	02/23/2015 12:58	Sarah A Guill	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	G150551AA	02/24/2015 14:13	Jason M Long	1

Quality Control Summary

Client Name: STANTEC International, Inc. Group Number: 1539991
Reported: 03/02/15 at 09:32 AM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: G150551AA	Sample number(s): 7779342,7779352							
1,2,3-Trichloropropane	N.D.	0.5	ng/l	109		70-130		
Batch number: Y150542AA	Sample number(s): 7779342,7779352							
Acetone	N.D.	6.	ug/l	82	101	55-129	20	30
Acrylonitrile	N.D.	4.	ug/l	96	101	55-127	5	30
Benzene	N.D.	0.5	ug/l	95	98	78-120	3	30
Bromobenzene	N.D.	1.	ug/l	90	91	80-120	2	30
Bromochloromethane	N.D.	1.	ug/l	100	101	80-120	1	30
Bromodichloromethane	N.D.	0.5	ug/l	108	109	73-120	1	30
Bromoform	N.D.	0.5	ug/l	99	99	52-123	0	30
Bromomethane	N.D.	0.5	ug/l	104	109	53-130	5	30
2-Butanone	N.D.	3.	ug/l	99	104	54-133	5	30
n-Butylbenzene	N.D.	1.	ug/l	92	96	68-120	4	30
sec-Butylbenzene	N.D.	1.	ug/l	91	96	75-120	5	30
tert-Butylbenzene	N.D.	1.	ug/l	90	94	80-120	4	30
Carbon Disulfide	N.D.	1.	ug/l	91	93	58-126	3	30
Carbon Tetrachloride	N.D.	0.5	ug/l	109	111	74-130	2	30
Chlorobenzene	N.D.	0.5	ug/l	97	98	80-120	2	30
Chloroethane	N.D.	0.5	ug/l	106	107	56-120	1	30
Chloroform	N.D.	0.5	ug/l	107	108	80-120	2	30
Chloromethane	N.D.	0.5	ug/l	112	116	63-120	3	30
1,2-Dibromo-3-chloropropane	N.D.	2.	ug/l	104	112	56-120	7	30
Dibromochloromethane	N.D.	0.5	ug/l	106	107	72-120	1	30
1,2-Dibromoethane	N.D.	0.5	ug/l	102	102	80-120	0	30
Dibromomethane	N.D.	0.5	ug/l	101	101	80-120	1	30
trans-1,4-Dichloro-2-butene	N.D.	15.	ug/l	118	123	47-139	3	30
1,2-Dichlorobenzene	N.D.	1.	ug/l	93	96	80-120	4	30
1,3-Dichlorobenzene	N.D.	1.	ug/l	90	93	80-120	4	30
1,4-Dichlorobenzene	N.D.	1.	ug/l	92	95	80-120	4	30
Dichlorodifluoromethane	N.D.	0.5	ug/l	89	91	55-127	2	30
1,1-Dichloroethane	N.D.	0.5	ug/l	103	105	80-120	2	30
1,2-Dichloroethane	N.D.	0.5	ug/l	127	126	72-127	0	30
1,1-Dichloroethene	N.D.	0.5	ug/l	101	103	76-124	2	30
cis-1,2-Dichloroethene	N.D.	0.5	ug/l	96	99	80-120	3	30
trans-1,2-Dichloroethene	N.D.	0.5	ug/l	99	102	80-120	3	30
1,2-Dichloropropane	N.D.	0.5	ug/l	99	101	80-120	2	30
cis-1,3-Dichloropropene	N.D.	0.5	ug/l	104	106	80-120	2	30
trans-1,3-Dichloropropene	N.D.	0.5	ug/l	114	115	76-120	1	30
Ethyl ether	N.D.	2.	ug/l	107	111	23-144	4	30
Ethylbenzene	N.D.	0.5	ug/l	98	100	80-120	2	30
2-Hexanone	N.D.	3.	ug/l	107	110	50-131	3	30
Isopropylbenzene	N.D.	1.	ug/l	96	98	80-120	3	30
p-Isopropyltoluene	N.D.	1.	ug/l	91	95	76-120	3	30

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: STANTEC International, Inc. Group Number: 1539991
Reported: 03/02/15 at 09:32 AM

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Methyl Iodide	N.D.	0.5	ug/l	95	97	75-128	2	30
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	106	108	75-120	1	30
4-Methyl-2-pentanone	N.D.	3.	ug/l	108	109	51-124	2	30
Methylene Chloride	N.D.	2.	ug/l	92	94	80-120	2	30
2-Methylnaphthalene	N.D.	2.	ug/l	100	113	18-120	12	30
Naphthalene	N.D.	1.	ug/l	95	101	59-120	6	30
n-Propylbenzene	N.D.	1.	ug/l	95	99	80-120	4	30
Styrene	N.D.	1.	ug/l	97	98	80-120	2	30
1,1,1,2-Tetrachloroethane	N.D.	0.5	ug/l	104	104	80-120	0	30
1,1,2,2-Tetrachloroethane	N.D.	0.5	ug/l	93	96	70-120	3	30
Tetrachloroethene	N.D.	0.5	ug/l	96	98	80-120	2	30
Tetrahydrofuran	N.D.	4.	ug/l	112	96	69-125	15	30
Toluene	N.D.	0.5	ug/l	96	98	80-120	2	30
1,2,3-Trichlorobenzene	N.D.	1.	ug/l	94	99	69-120	6	30
1,2,4-Trichlorobenzene	N.D.	1.	ug/l	94	99	73-120	6	30
1,1,1-Trichloroethane	N.D.	0.5	ug/l	92	94	66-126	2	30
1,1,2-Trichloroethane	N.D.	0.5	ug/l	98	99	80-120	1	30
Trichloroethene	N.D.	0.5	ug/l	100	102	80-120	2	30
Trichlorofluoromethane	N.D.	0.5	ug/l	106	111	58-135	5	30
1,2,4-Trimethylbenzene	N.D.	1.	ug/l	94	98	80-120	4	30
1,3,5-Trimethylbenzene	N.D.	1.	ug/l	94	97	80-120	3	30
Vinyl Chloride	N.D.	0.5	ug/l	105	109	69-120	3	30
m+p-Xylene	N.D.	0.5	ug/l	96	98	80-120	2	30
o-Xylene	N.D.	0.5	ug/l	96	100	80-120	4	30
Batch number: 15056A53A	Sample number(s): 7779342-7779343							
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	108	108	80-123	0	30
Batch number: 150585705001	Sample number(s): 7779339,7779342-7779346,7779349-7779351							
Arsenic	N.D.	0.0072	mg/l	98		80-120		
Batch number: 15051105101A	Sample number(s): 7779339-7779344,7779346-7779348,7779351							
Nitrite Nitrogen	N.D.	0.015	mg/l	103		90-110		
Batch number: 15051105101B	Sample number(s): 7779345,7779349-7779350							
Nitrite Nitrogen	N.D.	0.015	mg/l	103		90-110		
Batch number: 15053106101B	Sample number(s): 7779339-7779345							
Nitrate Nitrogen	N.D.	0.040	mg/l	97		90-110		
Batch number: 15053106102A	Sample number(s): 7779346-7779351							
Nitrate Nitrogen	N.D.	0.040	mg/l	103		90-110		
Batch number: 15054011201A	Sample number(s): 7779339,7779342-7779343,7779346							
Total Alkalinity to pH 4.5	N.D.	0.70	mg/l as CaCO3	99		90-110		
pH				102		95-105		
Batch number: 15056012201A	Sample number(s): 7779346							
Ammonia-Nitrogen	N.D.	0.050	mg/l	104		80-120		

Sample Matrix Quality Control

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: STANTEC International, Inc. Group Number: 1539991
Reported: 03/02/15 at 09:32 AM
Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 150585705001	Sample number(s): 7779339,7779342-7779346,7779349-7779351 UNSPK: P773291 BKG: P773291								
Arsenic	97	91	75-125	6	20	N.D.	N.D.	0 (1)	20
Batch number: 15051105101A	Sample number(s): 7779339-7779344,7779346-7779348,7779351 UNSPK: 7779342 BKG: 7779342								
Nitrite Nitrogen	102		90-110			N.D.	N.D.	0 (1)	20
Batch number: 15051105101B	Sample number(s): 7779345,7779349-7779350 UNSPK: 7779345 BKG: 7779345								
Nitrite Nitrogen	110		90-110			N.D.	N.D.	0 (1)	20
Batch number: 15053106101B	Sample number(s): 7779339-7779345 UNSPK: P778435 BKG: P778435								
Nitrate Nitrogen	99		90-110			0.72	0.72	1	2
Batch number: 15053106102A	Sample number(s): 7779346-7779351 UNSPK: 7779346 BKG: 7779346								
Nitrate Nitrogen	109		90-110			3.4	3.4	1	2
Batch number: 15054011201A	Sample number(s): 7779339,7779342-7779343,7779346 UNSPK: P780784 BKG: P780784								
Total Alkalinity to pH 4.5	93		17-146			134	132	2	5
pH						8.0	8.0	0	3
Phenolphthalein Alk. to pH 8.3						N.D.	N.D.	0 (1)	5
Batch number: 15056012201A	Sample number(s): 7779346 UNSPK: P783938 BKG: P783938								
Ammonia-Nitrogen	103	103	52-144	0	23	13.9	13.4	4	20

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 25ml Water by 524M SIM
Batch number: G150551AA

	Toluene-d8
7779342	128*
7779352	118
Blank	119
LCS	116
Limits:	80-120

Analysis Name: VOCs- 5ml Water by 8260B
Batch number: Y150542AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7779342	112	105	103	99
7779352	109	103	104	101
Blank	108	102	103	100
LCS	107	103	104	106
LCSD	107	99	103	104
Limits:	80-116	77-113	80-113	78-113

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

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Quality Control Summary

Client Name: STANTEC International, Inc. Group Number: 1539991
Reported: 03/02/15 at 09:32 AM

Surrogate Quality Control

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 15056A53A

	Trifluorotoluene-F
7779342	116
7779343	98
Blank	115
LCS	105
LCSD	105
Limits:	63-135

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

Acct. # 11842 Group # 1539991 Sample # 7779339-52

Client: Stantec Consulting Services, Inc.			
Project Name/#: Bee Jay Scales	Site ID #:		
Project Manager: Marisa Kaffenberger	P.O. #: 213202156/213202157		
Sampler: Emily Harper/Robert McAlister	PWSID #:		
Phone #: (714)686-4435	Quote #:		
State where sample(s) were collected: Washington			

Sample Identification	Collection Date	Collection Time	Grab	Composite	Matrix: Soil	Sediment	Water	Ground	Potable	Surface	NPDES	Other:	Total # of Containers	Analyses Requested: Nitrate / Nitrite (353.2)	Alkalinity/ pH	Herb Master (8151A)	Ammonia - Nitrogen	Sulfate (300.0)	Chloride (300.0)	NWTPH-Gx	VOCs (8260B / 524.2)	Arsenic (6010 B)	Iron (6010 B)	Manganese (6010 B)
														Preservation Codes: S/-	-	-	S		-	H	H/O	N	N	N
MW6-021815-C	2/18/15	1210	X				X						4	X	X							X		
MW7-021815-C		1110											2	X										
MW7-021815-1		1115											2	X										
MW10-021815-C		900											14	X	X					X	X	X		
MW11-021815-C		1140											7	X	X					X		X		
MW14-021715-C	2/17/15	1510											3	X								X		
MW14-021715-1		1515											3	X								X		
MW15-021815-C	2/18/15	1010											5	X	X		X					X		
MW17-021815-C		940											2	X										
MW17-021815-2		945											2	X										

For Lab Use Only
SF #: _____
SCR #: _____

Preservation Codes: H = HCl; T = Thiosulfate; N = HNO_3; B = NaOH; S = H_2SO_4; P = H_3PO_4; O = Other

Remarks

Turnaround Time Requested (TAT) (please check): Standard ☑ Rush ☐
(Rush TAT is subject to laboratory approval and surcharges.)

Date results are needed:

Rush results requested by (please check): E-Mail ☐ Phone ☐

E-mail Address: Marisa.Kaffenberger@stantec.com

Phone: (517) 349-9499 x 275

Data Package Options (please check if required)

Type I (Validation/non-CLP)	☐	MA MCP	☐
Type III (Reduced non-CLP)	☐	CT RCP	☐
Type IV (CLP SOW)	☐	TX TRRP-13	☐
Type VI (Raw Data Only)	☐		

EDD Required? Yes ☐ No ☐ If yes, format: _____

	Relinquished by:	Date	Time	Received by:	Date	Time
	ROBERT MCALISTER STANTEC	2/18/15	1330	FEDEx	2/18/15	1330
	Relinquished by:	Date	Time	Received by:	Date	Time
	Relinquished by:	Date	Time	Received by:	Date	Time
	Relinquished by:	Date	Time	Received by:	Date	Time
	Relinquished by:	Date	Time	Received by:	Date	Time

Relinquished by Commercial Carrier:
UPS _____ FedEx _____ Other _____

Temperature upon receipt: _____ °C

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02/19/2015 08:35 15098374647 BEST WESTERN GRPVNE PAGE 02/03

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

Acct. # 11842 Group # 1539991 Sample # 7779339-52

Client:	Stantec Consulting Services, Inc.		
Project Name/#:	Bee Jay Scales	Site ID #:	
Project Manager:	Marisa Kaffenberger	P.O. #:	213202156/213202157
Sampler:	Emily Harper/Robert McAllster	PWSID #:	
Phone #:	(714)686-4435	Quote #:	
State where sample(s) were collected:	Washington		

Sample Identification	Collection Date	Collection Time	Grab	Composite	Matrix: Soil	Sediment	Potable Water	Ground	NPDES	Surface	Other:	Total # of Containers	Nitrate / Nitrite (353.2)	Alkalinity/ pH	Herb Master (8151A)	Ammonia - Nitrogen	Sulfate (300.0)	Chloride (300.0)	NWTPH-Gx	VOCs (8260B / 524.2)	Arsenic (6010 B)	Iron (6010 B)	Manganese (6010 B)	Remarks
MW18-021715-0	2/17/15	1535	X				X					3	X								X			
MW18-021715-2	↓	1540	↓				↓					3	X								X			
MW20-021815-0	2/18/15	1045	↓				↓					3	X								X			
TB-1	2/17/15	—										2								X				

Analyses Requested — Preservation Codes: S/- | * | - | S | | - | H | H/O | N | N | N

Preservation Codes: H = HCl; T = Thiosulfate; N = HNO_3; B = NaOH; S = H_2SO_4; P = H_3PO_4; O = Other

For Lab Use Only: SF #: ; SCR #:

Relinquished by:	Date	Time	Received by:	Date	Time
ROBERT MCALLISTER-STANTEC	2/18/15	1330	FEDEX	2/18/15	1330
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by Commercial Carrier: UPS ____ FedEx ____ Other ____			Temperature upon receipt ____ °C		

Turnaround Time Requested (TAT) (please check): Standard ☑ Rush ☐
(Rush TAT is subject to laboratory approval and surcharges.)

Date results are needed:

Rush results requested by (please check): E-Mail ☐ Phone ☐

E-mail Address: Marisa.Kaffenberger@stantec.com

Phone: (517) 349-9499 x 275

Data Package Options (please check if required)

Type I (Validation/non-CLP) ☐ MA MCP ☐
Type III (Reduced non-CLP) ☐ CT RCP ☐
Type IV (CLP SOW) ☐ TX TRRP-13 ☐
Type VI (Raw Data Only) ☐

EDD Required? Yes ☐ No ☐ If yes, format: ____

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7045 0713

02/19/2015 08:35 15098374647 BEST WESTERN GRPVNE PAGE 03/03

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

Acct. # 11842 Group # 1539991 Sample # 7779339-52

Client: **Stantec Consulting Services, Inc.**			
Project Name/#: Bee Jay Scales	Site ID #:		
Project Manager: Marisa Kaffenberger	P.O. #: 213202156/213202157		
Sampler: Emily Harper/Robert McAlister	PWSID #:		
Phone #: (714)686-4435	Quote #:		
State where sample(s) were collected: Washington			

Sample Identification	Collection Date	Collection Time	Grab	Composite	Matrix: Soil	Sediment	Water: Potable	Ground	NPDES	Surface	Other:	Total # of Containers	Nitrate / Nitrite (353.2)	Alkalinity/ pH	Herb Master (8151A)	Ammonia - Nitrogen	Sulfate (300.0)	Chloride (300.0)	NWTPH-Gx	VOCs (8260B / 524.2)	Arsenic (6010 B)	Iron (6010 B)	Manganese (6010 B)	Remarks
													Analyses Requested / Preservation Codes: S/-	-	-	S		-	H	H/O	N	N	N	
MW6-021815-0	2/18/15	1210	X				X					4	X	X							X			
MW7-021815-0		1110										2	X											
MW7-021815-1		1115										2	X											
MW10-021815-0		900										14	X	X					X	X	X			
MW11-021815-0	↓	1140										7	X	X					X		X			
MW14-021715-0	2/17/15	1510										3	X								X			
MW14-021715-1	↓	1515										3	X								X			
MW15-021815-0	2/18/15	1010										5	X	X		X					X			
MW17-021815-0		940										2	X											
MW17-021815-2	↓	945	↓				↓					2	X											

For Lab Use Only

SF #: _____

SCR #: _____

Preservation Codes

H = HCl T = Thiosulfate

N = HNO_3 B = NaOH

S = H_2SO_4 P = H_3PO_4

O = Other

Turnaround Time Requested (TAT) (please check): Standard ☑ Rush ☐

(Rush TAT is subject to laboratory approval and surcharges.)

Date results are needed:

Rush results requested by (please check): E-Mail ☐ Phone ☐

E-mail Address: Marisa.Kaffenberger@stantec.com

Phone: (517) 349-9499 x 275

Data Package Options (please check if required)

Type I (Validation/non-CLP) ☐ MA MCP ☐

Type III (Reduced non-CLP) ☐ CT RCP ☐

Type IV (CLP SOW) ☐ TX TRRP-13 ☐

Type VI (Raw Data Only) ☐

EDD Required? Yes ☐ No ☐ If yes, format: _____

Relinquished by:	Date	Time	Received by:	Date	Time
ROBERT MCALISTER STANTEC	2/18/15	1330	FEDEx	2/18/15	1330
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
				2/20/15	1010

Relinquished by Commercial Carrier:

UPS _____ FedEx ✓ Other _____

Temperature upon receipt 0.6 °C

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

Acct. # 11842 Group # 1539991 Sample # 7779339-52

Client: **Stantec Consulting Services, Inc.**			
Project Name/#: Bee Jay Scales	Site ID #:		
Project Manager: Marisa Kaffenberger	P.O. #: 213202156/213202157		
Sampler: Emily Harper/Robert McAlister	PWSID #:		
Phone #: (714)686-4435	Quote #:		
State where sample(s) were collected: Washington			

Matrix: Soil ☐ Sediment ☐ Water: Potable ☐ Ground ☑ NPDES ☐ Surface ☐ Other: ☐

Analyses Requested — **Preservation Codes**

Sample Identification	Collection Date	Collection Time	Grab	Composite	Total # of Containers	Nitrate / Nitrite (353.2) S/-	Alkalinity/ pH -	Herb Master (8151A) -	Ammonia - Nitrogen S	Sulfate (300.0)	Chloride (300.0) -	NWTPH-Gx H	VOCs (8260B / 524.2) H/O	Arsenic (6010 B) N	Iron (6010 B) N	Manganese (6010 B) N	Remarks
MW18-021715-0	2/17/15	1535	X		3	X								X			
MW18-021715-2	↓	1540	↓		3	X								X			
MW20-021815-0	2/18/15	1045	↓		3	X								X			
TB-1	2/17/15	—			2								X				

For Lab Use Only: SF #: _____ SCR #: _____

Preservation Codes: H = HCl; T = Thiosulfate; N = HNO_3; B = NaOH; S = H_2SO_4; P = H_3PO_4; O = Other

Turnaround Time Requested (TAT) (please check): Standard ☑ Rush ☐
(Rush TAT is subject to laboratory approval and surcharges.)

Date results are needed:

Rush results requested by (please check): E-Mail ☐ Phone ☐

E-mail Address: Marisa.Kaffenberger@stantec.com

Phone: (517) 349-9499 x 275

Data Package Options (please check if required)

Type I (Validation/non-CLP) ☐ MA MCP ☐
Type III (Reduced non-CLP) ☐ CT RCP ☐
Type IV (CLP SOW) ☐ TX TRRP-13 ☐
Type VI (Raw Data Only) ☐

EDD Required? Yes ☐ No ☐ If yes, format: _____

Relinquished by:	Date	Time	Received by:	Date	Time
ROBERT MCALISTER - STANTEC	2/18/15	1330	FEDEX	2/18/15	1330

Relinquished by Commercial Carrier:

UPS _____ FedEx ✓ Other _____

Temperature upon receipt 0.6 °C

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
µg	microgram(s)	**mg**	milligram(s)
mL	milliliter(s)	**L**	liter(s)
m3	cubic meter(s)	**µL**	microliter(s)
		pg/L	picogram/liter

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Laboratory Data Qualifiers:

B - Analyte detected in the blank
C - Result confirmed by reanalysis
E - Concentration exceeds the calibration range
J (or G, I, X) - estimated value ≥ the Method Detection Limit (MDL or DL) and the < Limit of Quantitation (LOQ or RL)
P - Concentration difference between the primary and confirmation column >40%. The lower result is reported.
U - Analyte was not detected at the value indicated
V - Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference…

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, ISO17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

March 02, 2015

Project: Bee Jay Scales Site

Submittal Date: 02/21/2015
Group Number: 1540278
PO Number: 213202156/213202157
Release Number: BEE-JAY SCALES
State of Sample Origin: WA

Client Sample Description	Lancaster Labs (LL) #
MW01-021915-0 Grab Groundwater	7780894
MW01-021915-2 Grab Groundwater	7780895
MW03-021915-0 Grab Groundwater	7780896
MW04R-021915-0 Grab Groundwater	7780897
MW05R-021915-0 Grab Groundwater	7780898
MW08-021915-0 Grab Groundwater	7780899
MW09-021915-0 Grab Groundwater	7780900
MW12R-021915-0 Grab Groundwater	7780901
MW13-021815-0 Grab Groundwater	7780902
MW16-021915-0 Grab Groundwater	7780903
MW19-021815-0 Grab Groundwater	7780904
TB-2 Water	7780905

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ .

ELECTRONIC COPY TO	STANTEC International, Inc.	Attn: Marisa Kaffenberger
ELECTRONIC COPY TO	Stantec Consulting Services	Attn: Eric Bassett

Respectfully Submitted,

Wendy A. Kozma
Principal Specialist Group Leader

(717) 556-7257

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Analysis Report

Sample Description: MW01-021915-0 Grab Groundwater
Bee Jay Scales Site

LL Sample # WW 7780894
LL Group # 1540278
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 02/19/2015 10:30 by EH

Submitted: 02/21/2015 10:20
Reported: 03/02/2015 09:33

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

BJM1-

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry	**EPA 353.2**		mg/l	mg/l	
00220	Nitrate Nitrogen	14797-55-8	5.3	0.20	5
00219	Nitrite Nitrogen	14797-65-0	N.D.	0.015	1

General Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00220	Nitrate Nitrogen	EPA 353.2	1	15053106102A	02/22/2015 17:42	Joseph E McKenzie	5
00219	Nitrite Nitrogen	EPA 353.2	1	15052105101A	02/21/2015 13:04	Joseph E McKenzie	1

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Analysis Report

Sample Description: MW01-021915-2 Grab Groundwater
Bee Jay Scales Site

LL Sample # WW 7780895
LL Group # 1540278
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 02/19/2015 10:35 by EH

Submitted: 02/21/2015 10:20
Reported: 03/02/2015 09:33

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

BJM12

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry	**EPA 353.2**		mg/l	mg/l	
00220	Nitrate Nitrogen	14797-55-8	N.D.	0.040	1
00219	Nitrite Nitrogen	14797-65-0	N.D.	0.015	1

General Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00220	Nitrate Nitrogen	EPA 353.2	1	15053106102A	02/22/2015 17:43	Joseph E McKenzie	1
00219	Nitrite Nitrogen	EPA 353.2	1	15052105101A	02/21/2015 13:06	Joseph E McKenzie	1

Sample Description: MW03-021915-0 Grab Groundwater
Bee Jay Scales Site

LL Sample # WW 7780896
LL Group # 1540278
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 02/19/2015 09:25 by EH

Submitted: 02/21/2015 10:20
Reported: 03/02/2015 09:33

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

BJM3 -

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals	**SW-846 6010B**		**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	0.0351	0.0072	1
Wet Chemistry	**EPA 353.2**		**mg/l**	**mg/l**	
00220	Nitrate Nitrogen	14797-55-8	17.9	0.40	10
00219	Nitrite Nitrogen	14797-65-0	N.D.	0.015	1
	The holding time was not met. The sample was submitted to the laboratory with insufficient time remaining in the holding time.				
	SM 2320 B-1997		**mg/l as CaCO3**	**mg/l as CaCO3**	
12150	Total Alkalinity to pH 4.5	n.a.	253	0.70	1
12707	Phenolphthalein Alk. to pH 8.3	n.a.	N.D.	0.70	1
	SM 4500-H+ B-2000		**Std. Units**	**Std. Units**	
12152	pH	n.a.	8.3	0.010	1
	SM 4500-NH3 D-1997		**mg/l**	**mg/l**	
12677	Ammonia-Nitrogen	7664-41-7	79.0	1.0	20

General Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	150585705001	03/02/2015 03:53	Tara L Snyder	1
05705	ICP-WW/TL, 3010A (tot) - U3	SW-846 3010A	1	150515705005	02/24/2015 07:31	Christopher M Klumpp	1
05705	ICP-WW/TL, 3010A (tot) - U3	SW-846 3010A	2	150575705006	02/26/2015 12:49	James L Mertz	1
05705	ICP-WW/TL, 3010A (tot) - U3	SW-846 3010A	3	150585705001	03/01/2015 09:10	James L Mertz	1
00220	Nitrate Nitrogen	EPA 353.2	1	15053106102A	02/22/2015 18:27	Joseph E McKenzie	10
00219	Nitrite Nitrogen	EPA 353.2	1	15052105101A	02/21/2015 13:02	Joseph E McKenzie	1
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	15054011201A	02/23/2015 16:12	Michele L Graham	1
12707	Phenolphthalein Alk. to pH 8.3	SM 2320 B-1997	1	15054011201A	02/23/2015 16:12	Michele L Graham	1
12152	pH	SM 4500-H+ B-2000	1	15054011201A	02/23/2015 16:12	Michele L Graham	1
12677	Ammonia-Nitrogen	SM 4500-NH3 D-1997	1	15056012201A	02/25/2015 16:01	Kenneth A Bell	20

Sample Description: MW04R-021915-0 Grab Groundwater
Bee Jay Scales Site

LL Sample # WW 7780897
LL Group # 1540278
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 02/19/2015 12:00 by EH

Submitted: 02/21/2015 10:20
Reported: 03/02/2015 09:33

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

BJM4R

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**EPA 524M**		**ng/l**		**ng/l**	
11017	1,2,3-Trichloropropane	96-18-4	9,000		250	500
GC/MS Volatiles	**SW-846 8260B**		**ug/l**		**ug/l**	
10335	Acetone	67-64-1	N.D.		6	1
10335	Acrylonitrile	107-13-1	N.D.		4	1
10335	Benzene	71-43-2	N.D.		0.5	1
10335	Bromobenzene	108-86-1	N.D.		1	1
10335	Bromochloromethane	74-97-5	N.D.		1	1
10335	Bromodichloromethane	75-27-4	N.D.		0.5	1
10335	Bromoform	75-25-2	N.D.		0.5	1
10335	Bromomethane	74-83-9	N.D.		0.5	1
10335	2-Butanone	78-93-3	N.D.		3	1
10335	n-Butylbenzene	104-51-8	N.D.		1	1
10335	sec-Butylbenzene	135-98-8	N.D.		1	1
10335	tert-Butylbenzene	98-06-6	N.D.		1	1
10335	Carbon Disulfide	75-15-0	N.D.		1	1
10335	Carbon Tetrachloride	56-23-5	N.D.		0.5	1
10335	Chlorobenzene	108-90-7	0.8	J	0.5	1
10335	Chloroethane	75-00-3	N.D.		0.5	1
10335	Chloroform	67-66-3	N.D.		0.5	1
10335	Chloromethane	74-87-3	N.D.		0.5	1
10335	1,2-Dibromo-3-chloropropane	96-12-8	N.D.		2	1
10335	Dibromochloromethane	124-48-1	N.D.		0.5	1
10335	1,2-Dibromoethane	106-93-4	N.D.		0.5	1
10335	Dibromomethane	74-95-3	N.D.		0.5	1
10335	trans-1,4-Dichloro-2-butene	110-57-6	N.D.		15	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.		1	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.		1	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.		1	1
10335	Dichlorodifluoromethane	75-71-8	N.D.		0.5	1
10335	1,1-Dichloroethane	75-34-3	N.D.		0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.		0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.		0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.		0.5	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.		0.5	1
10335	1,2-Dichloropropane	78-87-5	29		0.5	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.		0.5	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.		0.5	1
10335	Ethyl ether	60-29-7	N.D.		2	1
10335	Ethylbenzene	100-41-4	N.D.		0.5	1
10335	2-Hexanone	591-78-6	N.D.		3	1
10335	Isopropylbenzene	98-82-8	N.D.		1	1
10335	p-Isopropyltoluene	99-87-6	N.D.		1	1
10335	Methyl Iodide	74-88-4	N.D.		0.5	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.5	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.		3	1
10335	Methylene Chloride	75-09-2	N.D.		2	1
10335	2-Methylnaphthalene	91-57-6	N.D.		2	1
10335	Naphthalene	91-20-3	N.D.		1	1
10335	n-Propylbenzene	103-65-1	N.D.		1	1
10335	Styrene	100-42-5	N.D.		1	1

Sample Description: MW04R-021915-0 Grab Groundwater
Bee Jay Scales Site

LL Sample # WW 7780897
LL Group # 1540278
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 02/19/2015 12:00 by EH

Submitted: 02/21/2015 10:20
Reported: 03/02/2015 09:33

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

BJM4R

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.5	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	N.D.	0.5	1
10335	Tetrahydrofuran	109-99-9	N.D.	4	1
10335	Toluene	108-88-3	N.D.	0.5	1
10335	1,2,3-Trichlorobenzene	87-61-6	N.D.	1	1
10335	1,2,4-Trichlorobenzene	120-82-1	N.D.	1	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	N.D.	0.5	1
10335	Trichlorofluoromethane	75-69-4	N.D.	0.5	1
10335	1,2,4-Trimethylbenzene	95-63-6	N.D.	1	1
10335	1,3,5-Trimethylbenzene	108-67-8	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1
10335	m+p-Xylene	179601-23-1	N.D.	0.5	1
10335	o-Xylene	95-47-6	N.D.	0.5	1
Herbicides	**SW-846 8151A**		**ug/l**	**ug/l**	
10407	2,4-D	94-75-7	0.26 J	0.15	1
10407	Dalapon	75-99-0	0.59 J	0.24	1
10407	2,4-DB	94-82-6	N.D.	0.29	1
10407	Dicamba	1918-00-9	0.79	0.076	1
10407	Dinoseb	88-85-7	130	11	100
	The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method.				
10407	2,4-DP (Dichlorprop)	120-36-5	N.D.	0.15	1
10407	MCPA	94-74-6	N.D.	48	1
10407	MCPP	93-65-2	N.D.	49	1
10407	Pentachlorophenol	87-86-5	0.18	0.026	1
10407	2,4,5-T	93-76-5	0.018 J	0.014	1
10407	2,4,5-TP	93-72-1	N.D.	0.0096	1
Metals	**SW-846 6010B**		**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	0.0089 J	0.0072	1
01754	Iron	7439-89-6	9.36	0.0334	1
07058	Manganese	7439-96-5	0.923	0.00083	1
Wet Chemistry	**EPA 300.0**		**mg/l**	**mg/l**	
00228	Sulfate	14808-79-8	168	7.5	25
	EPA 353.2		**mg/l**	**mg/l**	
00220	Nitrate Nitrogen	14797-55-8	612	10.0	250
00219	Nitrite Nitrogen	14797-65-0	0.031 J	0.015	1
	SM 2320 B-1997		**mg/l as CaCO3**	**mg/l as CaCO3**	
12150	Total Alkalinity to pH 4.5	n.a.	344	0.70	1
12707	Phenolphthalein Alk. to pH 8.3	n.a.	N.D.	0.70	1
	SM 4500-H+ B-2000		**Std. Units**	**Std. Units**	

Sample Description: MW04R-021915-0 Grab Groundwater
Bee Jay Scales Site

LL Sample # WW 7780897
LL Group # 1540278
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 02/19/2015 12:00 by EH

Submitted: 02/21/2015 10:20
Reported: 03/02/2015 09:33

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

BJM4R

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry		**SM 4500-H+ B-2000**		**Std. Units**	**Std. Units**	
12152	pH		n.a.	7.8	0.010	1
		SM 4500-NH3 D-1997		**mg/l**	**mg/l**	
12677	Ammonia-Nitrogen		7664-41-7	577	5.0	100

General Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11017	VOCs- 25ml Water by 524M SIM	EPA 524M	1	G150551AA	02/24/2015 17:05	Jason M Long	500
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	Y150552AA	02/24/2015 19:03	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G150551AA	02/24/2015 17:05	Jason M Long	500
01163	GC/MS VOA Water Prep	SW-846 5030B	2	Y150552AA	02/24/2015 19:03	Jason M Long	1
10407	Herb water 8151A Master	SW-846 8151A	1	150540003A	02/24/2015 16:35	Matthew S Listner	1
10407	Herb water 8151A Master	SW-846 8151A	1	150540003A	02/25/2015 10:54	Matthew S Listner	100
00816	Water Sample Herbicide Extract	SW-846 8151A	1	150540003A	02/23/2015 13:30	Kelli M Barto	1
07035	Arsenic	SW-846 6010B	1	150585705001	03/02/2015 03:57	Tara L Snyder	1
01754	Iron	SW-846 6010B	1	150585705001	03/02/2015 03:57	Tara L Snyder	1
07058	Manganese	SW-846 6010B	1	150585705001	03/02/2015 03:57	Tara L Snyder	1
05705	ICP-WW/TL, 3010A (tot) - U3	SW-846 3010A	1	150515705005	02/24/2015 07:31	Christopher M Klumpp	1
05705	ICP-WW/TL, 3010A (tot) - U3	SW-846 3010A	2	150575705006	02/26/2015 12:49	James L Mertz	1
05705	ICP-WW/TL, 3010A (tot) - U3	SW-846 3010A	3	150585705001	03/01/2015 09:10	James L Mertz	1
00228	Sulfate	EPA 300.0	1	15056667601A	02/25/2015 17:39	Drew M Gerhart	25
00220	Nitrate Nitrogen	EPA 353.2	1	15053106102A	02/22/2015 17:46	Joseph E McKenzie	250
00219	Nitrite Nitrogen	EPA 353.2	1	15052105101A	02/21/2015 13:53	Joseph E McKenzie	1
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	15054011202A	02/23/2015 18:48	Michele L Graham	1
12707	Phenolphthalein Alk. to pH 8.3	SM 2320 B-1997	1	15054011202A	02/23/2015 18:48	Michele L Graham	1
12152	pH	SM 4500-H+ B-2000	1	15054011202A	02/23/2015 18:48	Michele L Graham	1
12677	Ammonia-Nitrogen	SM 4500-NH3 D-1997	1	15056012201A	02/25/2015 16:07	Kenneth A Bell	100

Sample Description: MW05R-021915-0 Grab Groundwater
Bee Jay Scales Site

LL Sample # WW 7780898
LL Group # 1540278
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 02/19/2015 11:20 by EH

Submitted: 02/21/2015 10:20
Reported: 03/02/2015 09:33

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

BJM5R

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry	**EPA 300.0**		**mg/l**	**mg/l**	
00228	Sulfate	14808-79-8	392	15.0	50
	EPA 353.2		**mg/l**	**mg/l**	
00220	Nitrate Nitrogen	14797-55-8	284	4.0	100
00219	Nitrite Nitrogen	14797-65-0	3.9	0.15	10
	SM 2320 B-1997		**mg/l as CaCO3**	**mg/l as CaCO3**	
12150	Total Alkalinity to pH 4.5	n.a.	325	0.70	1
12707	Phenolphthalein Alk. to pH 8.3	n.a.	N.D.	0.70	1
	SM 4500-H+ B-2000		**Std. Units**	**Std. Units**	
12152	pH	n.a.	7.6	0.010	1
	SM 4500-NH3 D-1997		**mg/l**	**mg/l**	
12677	Ammonia-Nitrogen	7664-41-7	107	1.0	20

General Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00228	Sulfate	EPA 300.0	1	15056667601A	02/25/2015 19:01	Drew M Gerhart	50
00220	Nitrate Nitrogen	EPA 353.2	1	15053106102B	02/22/2015 18:22	Joseph E McKenzie	100
00219	Nitrite Nitrogen	EPA 353.2	1	15052105101A	02/21/2015 13:52	Joseph E McKenzie	10
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	15054011202A	02/23/2015 19:02	Michele L Graham	1
12707	Phenolphthalein Alk. to pH 8.3	SM 2320 B-1997	1	15054011202A	02/23/2015 19:02	Michele L Graham	1
12152	pH	SM 4500-H+ B-2000	1	15054011202A	02/23/2015 19:02	Michele L Graham	1
12677	Ammonia-Nitrogen	SM 4500-NH3 D-1997	1	15056012201A	02/25/2015 15:07	Kenneth A Bell	20

Sample Description: MW08-021915-0 Grab Groundwater
Bee Jay Scales Site

LL Sample # WW 7780899
LL Group # 1540278
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 02/19/2015 11:00 by EH

Submitted: 02/21/2015 10:20
Reported: 03/02/2015 09:33

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

BJM8-

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry	**EPA 300.0**		**mg/l**	**mg/l**	
00228	Sulfate	14808-79-8	157	7.5	25
	EPA 353.2		**mg/l**	**mg/l**	
00220	Nitrate Nitrogen	14797-55-8	83.6	4.0	100
00219	Nitrite Nitrogen	14797-65-0	N.D.	0.015	1
	SM 2320 B-1997		**mg/l as CaCO3**	**mg/l as CaCO3**	
12150	Total Alkalinity to pH 4.5	n.a.	267	0.70	1
12707	Phenolphthalein Alk. to pH 8.3	n.a.	N.D.	0.70	1
	SM 4500-H+ B-2000		**Std. Units**	**Std. Units**	
12152	pH	n.a.	7.9	0.010	1
	SM 4500-NH3 D-1997		**mg/l**	**mg/l**	
12677	Ammonia-Nitrogen	7664-41-7	1.7	0.050	1

General Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00228	Sulfate	EPA 300.0	1	15056667601A	02/25/2015 19:33	Drew M Gerhart	25
00220	Nitrate Nitrogen	EPA 353.2	1	15053106102B	02/22/2015 18:26	Joseph E McKenzie	100
00219	Nitrite Nitrogen	EPA 353.2	1	15052105101A	02/21/2015 13:07	Joseph E McKenzie	1
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	15054011201A	02/23/2015 16:35	Michele L Graham	1
12707	Phenolphthalein Alk. to pH 8.3	SM 2320 B-1997	1	15054011201A	02/23/2015 16:35	Michele L Graham	1
12152	pH	SM 4500-H+ B-2000	1	15054011201A	02/23/2015 16:35	Michele L Graham	1
12677	Ammonia-Nitrogen	SM 4500-NH3 D-1997	1	15056012201A	02/25/2015 15:13	Kenneth A Bell	1

Sample Description: MW09-021915-0 Grab Groundwater
Bee Jay Scales Site

LL Sample # WW 7780900
LL Group # 1540278
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 02/19/2015 12:30 by EH

Submitted: 02/21/2015 10:20
Reported: 03/02/2015 09:33

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

BJM9-

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**EPA 524M**		**ng/l**		**ng/l**	
11017	1,2,3-Trichloropropane	96-18-4	6,800		250	500
GC/MS Volatiles	**SW-846 8260B**		**ug/l**		**ug/l**	
10335	Acetone	67-64-1	N.D.		6	1
10335	Acrylonitrile	107-13-1	N.D.		4	1
10335	Benzene	71-43-2	N.D.		0.5	1
10335	Bromobenzene	108-86-1	N.D.		1	1
10335	Bromochloromethane	74-97-5	N.D.		1	1
10335	Bromodichloromethane	75-27-4	N.D.		0.5	1
10335	Bromoform	75-25-2	N.D.		0.5	1
10335	Bromomethane	74-83-9	N.D.		0.5	1
10335	2-Butanone	78-93-3	N.D.		3	1
10335	n-Butylbenzene	104-51-8	N.D.		1	1
10335	sec-Butylbenzene	135-98-8	N.D.		1	1
10335	tert-Butylbenzene	98-06-6	N.D.		1	1
10335	Carbon Disulfide	75-15-0	N.D.		1	1
10335	Carbon Tetrachloride	56-23-5	N.D.		0.5	1
10335	Chlorobenzene	108-90-7	0.8	J	0.5	1
10335	Chloroethane	75-00-3	N.D.		0.5	1
10335	Chloroform	67-66-3	N.D.		0.5	1
10335	Chloromethane	74-87-3	N.D.		0.5	1
10335	1,2-Dibromo-3-chloropropane	96-12-8	N.D.		2	1
10335	Dibromochloromethane	124-48-1	N.D.		0.5	1
10335	1,2-Dibromoethane	106-93-4	N.D.		0.5	1
10335	Dibromomethane	74-95-3	N.D.		0.5	1
10335	trans-1,4-Dichloro-2-butene	110-57-6	N.D.		15	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.		1	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.		1	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.		1	1
10335	Dichlorodifluoromethane	75-71-8	N.D.		0.5	1
10335	1,1-Dichloroethane	75-34-3	N.D.		0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.		0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.		0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.		0.5	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.		0.5	1
10335	1,2-Dichloropropane	78-87-5	20		0.5	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.		0.5	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.		0.5	1
10335	Ethyl ether	60-29-7	N.D.		2	1
10335	Ethylbenzene	100-41-4	N.D.		0.5	1
10335	2-Hexanone	591-78-6	N.D.		3	1
10335	Isopropylbenzene	98-82-8	N.D.		1	1
10335	p-Isopropyltoluene	99-87-6	N.D.		1	1
10335	Methyl Iodide	74-88-4	N.D.		0.5	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.5	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.		3	1
10335	Methylene Chloride	75-09-2	N.D.		2	1
10335	2-Methylnaphthalene	91-57-6	N.D.		2	1
10335	Naphthalene	91-20-3	N.D.		1	1
10335	n-Propylbenzene	103-65-1	N.D.		1	1
10335	Styrene	100-42-5	N.D.		1	1

Sample Description: MW09-021915-0 Grab Groundwater
Bee Jay Scales Site

LL Sample # WW 7780900
LL Group # 1540278
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 02/19/2015 12:30 by EH

Submitted: 02/21/2015 10:20
Reported: 03/02/2015 09:33

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

BJM9-

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.5	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	N.D.	0.5	1
10335	Tetrahydrofuran	109-99-9	N.D.	4	1
10335	Toluene	108-88-3	N.D.	0.5	1
10335	1,2,3-Trichlorobenzene	87-61-6	N.D.	1	1
10335	1,2,4-Trichlorobenzene	120-82-1	N.D.	1	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	N.D.	0.5	1
10335	Trichlorofluoromethane	75-69-4	N.D.	0.5	1
10335	1,2,4-Trimethylbenzene	95-63-6	N.D.	1	1
10335	1,3,5-Trimethylbenzene	108-67-8	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1
10335	m+p-Xylene	179601-23-1	N.D.	0.5	1
10335	o-Xylene	95-47-6	N.D.	0.5	1
Herbicides	**SW-846 8151A**		**ug/l**	**ug/l**	
10407	2,4-D	94-75-7	0.30 J	0.15	1
10407	Dalapon	75-99-0	N.D.	0.24	1
10407	2,4-DB	94-82-6	N.D.	0.28	1
10407	Dicamba	1918-00-9	0.80	0.075	1
10407	Dinoseb	88-85-7	330	56	500
	The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method.				
10407	2,4-DP (Dichlorprop)	120-36-5	N.D.	0.15	1
10407	MCPA	94-74-6	N.D.	47	1
10407	MCPP	93-65-2	N.D.	47	1
10407	Pentachlorophenol	87-86-5	0.045 J	0.025	1
10407	2,4,5-T	93-76-5	N.D.	0.014	1
10407	2,4,5-TP	93-72-1	0.013 J	0.0094	1
Wet Chemistry	**EPA 300.0**		**mg/l**	**mg/l**	
00228	Sulfate	14808-79-8	127	7.5	25
	EPA 353.2		**mg/l**	**mg/l**	
00220	Nitrate Nitrogen	14797-55-8	262	10.0	250
00219	Nitrite Nitrogen	14797-65-0	N.D.	0.015	1
	SM 2320 B-1997		**mg/l as CaCO3**	**mg/l as CaCO3**	
12150	Total Alkalinity to pH 4.5	n.a.	467	0.70	1
12707	Phenolphthalein Alk. to pH 8.3	n.a.	N.D.	0.70	1
	SM 4500-H+ B-2000		**Std. Units**	**Std. Units**	
12152	pH	n.a.	7.8	0.010	1
	SM 4500-NH3 D-1997		**mg/l**	**mg/l**	
12677	Ammonia-Nitrogen	7664-41-7	222	5.0	100

Sample Description: MW09-021915-0 Grab Groundwater
Bee Jay Scales Site

LL Sample # WW 7780900
LL Group # 1540278
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 02/19/2015 12:30 by EH

Submitted: 02/21/2015 10:20
Reported: 03/02/2015 09:33

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

BJM9-

General Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11017	VOCs- 25ml Water by 524M SIM	EPA 524M	1	G150551AA	02/24/2015 15:39	Jason M Long	500
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	Y150542AA	02/23/2015 16:08	Sarah A Guill	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Y150542AA	02/23/2015 16:08	Sarah A Guill	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	G150551AA	02/24/2015 15:39	Jason M Long	500
10407	Herb water 8151A Master	SW-846 8151A	1	150540003A	02/24/2015 17:08	Matthew S Listner	1
10407	Herb water 8151A Master	SW-846 8151A	1	150540003A	02/25/2015 12:00	Matthew S Listner	500
00816	Water Sample Herbicide Extract	SW-846 8151A	1	150540003A	02/23/2015 13:30	Kelli M Barto	1
00228	Sulfate	EPA 300.0	1	15056667601A	02/25/2015 20:06	Drew M Gerhart	25
00220	Nitrate Nitrogen	EPA 353.2	1	15053106102B	02/22/2015 17:59	Joseph E McKenzie	250
00219	Nitrite Nitrogen	EPA 353.2	1	15052105101A	02/21/2015 13:11	Joseph E McKenzie	1
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	15054011201A	02/23/2015 16:20	Michele L Graham	1
12707	Phenolphthalein Alk. to pH 8.3	SM 2320 B-1997	1	15054011201A	02/23/2015 16:20	Michele L Graham	1
12152	pH	SM 4500-H+ B-2000	1	15054011201A	02/23/2015 16:20	Michele L Graham	1
12677	Ammonia-Nitrogen	SM 4500-NH3 D-1997	1	15056012201A	02/25/2015 15:19	Kenneth A Bell	100

Sample Description: MW12R-021915-0 Grab Groundwater
Bee Jay Scales Site

LL Sample # WW 7780901
LL Group # 1540278
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 02/19/2015 09:50 by EH

Submitted: 02/21/2015 10:20
Reported: 03/02/2015 09:33

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

BJ12R

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**EPA 524M**		**ng/l**		**ng/l**	
11017	1,2,3-Trichloropropane	96-18-4	29,000		1,000	2000
GC/MS Volatiles	**SW-846 8260B**		**ug/l**		**ug/l**	
10335	Acetone	67-64-1	N.D.		6	1
10335	Acrylonitrile	107-13-1	N.D.		4	1
10335	Benzene	71-43-2	6		0.5	1
10335	Bromobenzene	108-86-1	N.D.		1	1
10335	Bromochloromethane	74-97-5	N.D.		1	1
10335	Bromodichloromethane	75-27-4	N.D.		0.5	1
10335	Bromoform	75-25-2	N.D.		0.5	1
10335	Bromomethane	74-83-9	N.D.		0.5	1
10335	2-Butanone	78-93-3	N.D.		3	1
10335	n-Butylbenzene	104-51-8	N.D.		1	1
10335	sec-Butylbenzene	135-98-8	N.D.		1	1
10335	tert-Butylbenzene	98-06-6	N.D.		1	1
10335	Carbon Disulfide	75-15-0	N.D.		1	1
10335	Carbon Tetrachloride	56-23-5	N.D.		0.5	1
10335	Chlorobenzene	108-90-7	160		0.5	1
10335	Chloroethane	75-00-3	N.D.		0.5	1
10335	Chloroform	67-66-3	0.5	J	0.5	1
10335	Chloromethane	74-87-3	N.D.		0.5	1
10335	1,2-Dibromo-3-chloropropane	96-12-8	N.D.		2	1
10335	Dibromochloromethane	124-48-1	N.D.		0.5	1
10335	1,2-Dibromoethane	106-93-4	N.D.		0.5	1
10335	Dibromomethane	74-95-3	N.D.		0.5	1
10335	trans-1,4-Dichloro-2-butene	110-57-6	N.D.		15	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.		1	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.		1	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.		1	1
10335	Dichlorodifluoromethane	75-71-8	N.D.		0.5	1
10335	1,1-Dichloroethane	75-34-3	N.D.		0.5	1
10335	1,2-Dichloroethane	107-06-2	2		0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.		0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.		0.5	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.		0.5	1
10335	1,2-Dichloropropane	78-87-5	550		3	5
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.		0.5	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.		0.5	1
10335	Ethyl ether	60-29-7	N.D.		2	1
10335	Ethylbenzene	100-41-4	N.D.		0.5	1
10335	2-Hexanone	591-78-6	N.D.		3	1
10335	Isopropylbenzene	98-82-8	N.D.		1	1
10335	p-Isopropyltoluene	99-87-6	N.D.		1	1
10335	Methyl Iodide	74-88-4	N.D.		0.5	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.5	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.		3	1
10335	Methylene Chloride	75-09-2	N.D.		2	1
10335	2-Methylnaphthalene	91-57-6	N.D.		2	1
10335	Naphthalene	91-20-3	N.D.		1	1
10335	n-Propylbenzene	103-65-1	N.D.		1	1
10335	Styrene	100-42-5	N.D.		1	1

Sample Description: MW12R-021915-0 Grab Groundwater
Bee Jay Scales Site

LL Sample # WW 7780901
LL Group # 1540278
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 02/19/2015 09:50 by EH

Submitted: 02/21/2015 10:20
Reported: 03/02/2015 09:33

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

BJ12R

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.5	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	N.D.	0.5	1
10335	Tetrahydrofuran	109-99-9	N.D.	4	1
10335	Toluene	108-88-3	N.D.	0.5	1
10335	1,2,3-Trichlorobenzene	87-61-6	N.D.	1	1
10335	1,2,4-Trichlorobenzene	120-82-1	N.D.	1	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	N.D.	0.5	1
10335	Trichlorofluoromethane	75-69-4	N.D.	0.5	1
10335	1,2,4-Trimethylbenzene	95-63-6	N.D.	1	1
10335	1,3,5-Trimethylbenzene	108-67-8	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1
10335	m+p-Xylene	179601-23-1	N.D.	0.5	1
10335	o-Xylene	95-47-6	N.D.	0.5	1
Herbicides	**SW-846 8151A**		**ug/l**	**ug/l**	
10407	2,4-D	94-75-7	N.D.	7.6	50
10407	Dalapon	75-99-0	N.D.	12	50
10407	2,4-DB	94-82-6	N.D.	14	50
10407	Dicamba	1918-00-9	N.D.	3.8	50
10407	Dinoseb	88-85-7	730	11	100
	The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method.				
10407	2,4-DP (Dichlorprop)	120-36-5	N.D.	7.6	50
10407	MCPA	94-74-6	N.D.	2,400	50
10407	MCPP	93-65-2	N.D.	2,400	50
10407	Pentachlorophenol	87-86-5	N.D.	1.3	50
10407	2,4,5-T	93-76-5	N.D.	0.71	50
10407	2,4,5-TP	93-72-1	N.D.	0.47	50
	Reporting limits were raised due to interference from the sample matrix.				
Metals	**SW-846 6010B**		**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	0.0299	0.0072	1
01754	Iron	7439-89-6	9.74	0.0334	1
Wet Chemistry	**EPA 300.0**		**mg/l**	**mg/l**	
00224	Chloride	16887-00-6	102	10.0	50
00228	Sulfate	14808-79-8	285	15.0	50
	EPA 353.2		**mg/l**	**mg/l**	
00220	Nitrate Nitrogen	14797-55-8	279	10.0	250
00219	Nitrite Nitrogen	14797-65-0	0.023 J	0.015	1
	The holding time was not met. The sample was submitted to the laboratory with insufficient time remaining in the holding time.				
	SM 2320 B-1997		**mg/l as CaCO3**	**mg/l as CaCO3**	
12150	Total Alkalinity to pH 4.5	n.a.	580	0.70	1
12707	Phenolphthalein Alk. to pH 8.3	n.a.	N.D.	0.70	1

Sample Description: MW12R-021915-0 Grab Groundwater
Bee Jay Scales Site

LL Sample # WW 7780901
LL Group # 1540278
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 02/19/2015 09:50 by EH

Submitted: 02/21/2015 10:20
Reported: 03/02/2015 09:33

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

BJ12R

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry	**SM 4500-H+ B-2000**		**Std. Units**	**Std. Units**	
12152	pH	n.a.	7.7	0.010	1
	SM 4500-NH3 D-1997		**mg/l**	**mg/l**	
12677	Ammonia-Nitrogen	7664-41-7	302	5.0	100

General Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11017	VOCs- 25ml Water by 524M SIM	EPA 524M	1	G150551AA	02/24/2015 16:44	Jason M Long	2000
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	Y150542AA	02/23/2015 16:29	Sarah A Guill	1
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	Y150552AA	02/24/2015 19:24	Jason M Long	5
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Y150542AA	02/23/2015 16:29	Sarah A Guill	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	G150551AA	02/24/2015 16:44	Jason M Long	2000
01163	GC/MS VOA Water Prep	SW-846 5030B	3	Y150552AA	02/24/2015 19:24	Jason M Long	5
10407	Herb water 8151A Master	SW-846 8151A	1	150540003A	02/25/2015 13:06	Matthew S Listner	50
10407	Herb water 8151A Master	SW-846 8151A	1	150540003A	02/25/2015 13:39	Matthew S Listner	100
00816	Water Sample Herbicide Extract	SW-846 8151A	1	150540003A	02/23/2015 13:30	Kelli M Barto	1
07035	Arsenic	SW-846 6010B	1	150585705001	03/02/2015 04:01	Tara L Snyder	1
01754	Iron	SW-846 6010B	1	150585705001	03/02/2015 04:01	Tara L Snyder	1
05705	ICP-WW/TL, 3010A (tot) - U3	SW-846 3010A	1	150515705005	02/24/2015 07:31	Christopher M Klumpp	1
05705	ICP-WW/TL, 3010A (tot) - U3	SW-846 3010A	2	150575705006	02/26/2015 12:49	James L Mertz	1
05705	ICP-WW/TL, 3010A (tot) - U3	SW-846 3010A	3	150585705001	03/01/2015 09:10	James L Mertz	1
00224	Chloride	EPA 300.0	1	15056667601A	02/25/2015 20:38	Drew M Gerhart	50
00228	Sulfate	EPA 300.0	1	15056667601A	02/25/2015 20:38	Drew M Gerhart	50
00220	Nitrate Nitrogen	EPA 353.2	1	15053106102B	02/22/2015 18:01	Joseph E McKenzie	250
00219	Nitrite Nitrogen	EPA 353.2	1	15052105101A	02/21/2015 13:03	Joseph E McKenzie	1
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	15054011202A	02/23/2015 18:41	Michele L Graham	1
12707	Phenolphthalein Alk. to pH 8.3	SM 2320 B-1997	1	15054011202A	02/23/2015 18:41	Michele L Graham	1
12152	pH	SM 4500-H+ B-2000	1	15054011202A	02/23/2015 18:41	Michele L Graham	1
12677	Ammonia-Nitrogen	SM 4500-NH3 D-1997	1	15056012201A	02/25/2015 15:25	Kenneth A Bell	100

Sample Description: MW13-021815-0 Grab Groundwater
Bee Jay Scales Site

LL Sample # WW 7780902
LL Group # 1540278
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 02/18/2015 14:30 by EH

Submitted: 02/21/2015 10:20
Reported: 03/02/2015 09:33

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

BJM13

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Herbicides	**SW-846 8151A**		**ug/l**	**ug/l**	
10407	2,4-D	94-75-7	N.D.	0.15	1
10407	Dalapon	75-99-0	N.D.	0.24	1
10407	2,4-DB	94-82-6	N.D.	0.29	1
10407	Dicamba	1918-00-9	N.D.	0.077	1
10407	Dinoseb	88-85-7	8.1	0.11	1
	The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method.				
10407	2,4-DP (Dichlorprop)	120-36-5	N.D.	0.15	1
10407	MCPA	94-74-6	N.D.	48	1
10407	MCPP	93-65-2	N.D.	48	1
10407	Pentachlorophenol	87-86-5	N.D.	0.026	1
10407	2,4,5-T	93-76-5	N.D.	0.014	1
10407	2,4,5-TP	93-72-1	N.D.	0.0096	1
Metals	**SW-846 6010B**		**mg/l**	**mg/l**	
01754	Iron	7439-89-6	0.187 J	0.0334	1
Wet Chemistry	**EPA 300.0**		**mg/l**	**mg/l**	
00228	Sulfate	14808-79-8	122	7.5	25
	EPA 353.2		**mg/l**	**mg/l**	
00220	Nitrate Nitrogen	14797-55-8	45.0	1.0	25
00219	Nitrite Nitrogen	14797-65-0	N.D.	0.015	1
	The holding time was not met. The sample was submitted to the laboratory outside of the holding time.				
	SM 2320 B-1997		**mg/l as CaCO3**	**mg/l as CaCO3**	
12150	Total Alkalinity to pH 4.5	n.a.	250	0.70	1
12707	Phenolphthalein Alk. to pH 8.3	n.a.	N.D.	0.70	1
	SM 4500-H+ B-2000		**Std. Units**	**Std. Units**	
12152	pH	n.a.	7.9	0.010	1
	SM 4500-NH3 D-1997		**mg/l**	**mg/l**	
12677	Ammonia-Nitrogen	7664-41-7	0.090 J	0.050	1

General Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor

Sample Description: MW13-021815-0 Grab Groundwater
Bee Jay Scales Site

LL Sample # WW 7780902
LL Group # 1540278
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 02/18/2015 14:30 by EH

Submitted: 02/21/2015 10:20
Reported: 03/02/2015 09:33

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

BJM13

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10407	Herb water 8151A Master	SW-846 8151A	1	150540003A	02/24/2015 18:14	Matthew S Listner	1
00816	Water Sample Herbicide Extract	SW-846 8151A	1	150540003A	02/23/2015 13:30	Kelli M Barto	1
01754	Iron	SW-846 6010B	1	150585705001	03/02/2015 04:05	Tara L Snyder	1
05705	ICP-WW/TL, 3010A (tot) - U3	SW-846 3010A	1	150515705005	02/24/2015 07:31	Christopher M Klumpp	1
05705	ICP-WW/TL, 3010A (tot) - U3	SW-846 3010A	2	150575705006	02/26/2015 12:49	James L Mertz	1
05705	ICP-WW/TL, 3010A (tot) - U3	SW-846 3010A	3	150585705001	03/01/2015 09:10	James L Mertz	1
00228	Sulfate	EPA 300.0	1	15056667601A	02/25/2015 21:11	Drew M Gerhart	25
00220	Nitrate Nitrogen	EPA 353.2	1	15053106102B	02/22/2015 18:02	Joseph E McKenzie	25
00219	Nitrite Nitrogen	EPA 353.2	1	15052105101B	02/21/2015 13:19	Joseph E McKenzie	1
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	15054011202A	02/23/2015 19:20	Michele L Graham	1
12707	Phenolphthalein Alk. to pH 8.3	SM 2320 B-1997	1	15054011202A	02/23/2015 19:20	Michele L Graham	1
12152	pH	SM 4500-H+ B-2000	1	15054011202A	02/23/2015 19:20	Michele L Graham	1
12677	Ammonia-Nitrogen	SM 4500-NH3 D-1997	1	15056012201A	02/25/2015 15:30	Kenneth A Bell	1

Sample Description: MW16-021915-0 Grab Groundwater
Bee Jay Scales Site

LL Sample # WW 7780903
LL Group # 1540278
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 02/19/2015 08:45 by EH

Submitted: 02/21/2015 10:20
Reported: 03/02/2015 09:33

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

BJM16

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**EPA 524M**		**ng/l**	**ng/l**	
11017	1,2,3-Trichloropropane	96-18-4	71,000	500	1000
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Acetone	67-64-1	N.D.	6	1
10335	Acrylonitrile	107-13-1	N.D.	4	1
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Bromobenzene	108-86-1	N.D.	1	1
10335	Bromochloromethane	74-97-5	N.D.	1	1
10335	Bromodichloromethane	75-27-4	N.D.	0.5	1
10335	Bromoform	75-25-2	N.D.	0.5	1
10335	Bromomethane	74-83-9	N.D.	0.5	1
10335	2-Butanone	78-93-3	N.D.	3	1
10335	n-Butylbenzene	104-51-8	N.D.	1	1
10335	sec-Butylbenzene	135-98-8	N.D.	1	1
10335	tert-Butylbenzene	98-06-6	N.D.	1	1
10335	Carbon Disulfide	75-15-0	N.D.	1	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chlorobenzene	108-90-7	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	Chloroform	67-66-3	N.D.	0.5	1
10335	Chloromethane	74-87-3	N.D.	0.5	1
10335	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	2	1
10335	Dibromochloromethane	124-48-1	N.D.	0.5	1
10335	1,2-Dibromoethane	106-93-4	N.D.	0.5	1
10335	Dibromomethane	74-95-3	N.D.	0.5	1
10335	trans-1,4-Dichloro-2-butene	110-57-6	N.D.	15	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.	1	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	1	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	1	1
10335	Dichlorodifluoromethane	75-71-8	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.5	1
10335	1,2-Dichloroethane	107-06-2	1	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.5	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.5	1
10335	1,2-Dichloropropane	78-87-5	260	3	5
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.5	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.5	1
10335	Ethyl ether	60-29-7	N.D.	2	1
10335	Ethylbenzene	100-41-4	N.D.	0.5	1
10335	2-Hexanone	591-78-6	N.D.	3	1
10335	Isopropylbenzene	98-82-8	N.D.	1	1
10335	p-Isopropyltoluene	99-87-6	N.D.	1	1
10335	Methyl Iodide	74-88-4	N.D.	0.5	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.	3	1
10335	Methylene Chloride	75-09-2	N.D.	2	1
10335	2-Methylnaphthalene	91-57-6	N.D.	2	1
10335	Naphthalene	91-20-3	N.D.	1	1
10335	n-Propylbenzene	103-65-1	N.D.	1	1
10335	Styrene	100-42-5	N.D.	1	1

Sample Description: MW16-021915-0 Grab Groundwater
Bee Jay Scales Site

LL Sample # WW 7780903
LL Group # 1540278
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 02/19/2015 08:45 by EH

Submitted: 02/21/2015 10:20
Reported: 03/02/2015 09:33

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

BJM16

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.5	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	N.D.	0.5	1
10335	Tetrahydrofuran	109-99-9	N.D.	4	1
10335	Toluene	108-88-3	N.D.	0.5	1
10335	1,2,3-Trichlorobenzene	87-61-6	N.D.	1	1
10335	1,2,4-Trichlorobenzene	120-82-1	N.D.	1	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	N.D.	0.5	1
10335	Trichlorofluoromethane	75-69-4	N.D.	0.5	1
10335	1,2,4-Trimethylbenzene	95-63-6	N.D.	1	1
10335	1,3,5-Trimethylbenzene	108-67-8	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1
10335	m+p-Xylene	179601-23-1	N.D.	0.5	1
10335	o-Xylene	95-47-6	N.D.	0.5	1
Herbicides	**SW-846 8151A**		**ug/l**	**ug/l**	
10407	2,4-D	94-75-7	N.D.	0.15	1
10407	Dalapon	75-99-0	N.D.	0.24	1
10407	2,4-DB	94-82-6	N.D.	0.28	1
10407	Dicamba	1918-00-9	N.D.	0.075	1
10407	Dinoseb	88-85-7	35	2.8	25
	The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method.				
10407	2,4-DP (Dichlorprop)	120-36-5	N.D.	0.15	1
10407	MCPA	94-74-6	N.D.	47	1
10407	MCPP	93-65-2	N.D.	47	1
10407	Pentachlorophenol	87-86-5	N.D.	0.025	1
10407	2,4,5-T	93-76-5	N.D.	0.014	1
10407	2,4,5-TP	93-72-1	N.D.	0.0094	1
Wet Chemistry	**EPA 300.0**		**mg/l**	**mg/l**	
00228	Sulfate	14808-79-8	506	30.0	100
	EPA 353.2		**mg/l**	**mg/l**	
00220	Nitrate Nitrogen	14797-55-8	207	10.0	250
00219	Nitrite Nitrogen	14797-65-0	N.D.	0.015	1
	The holding time was not met. The sample was submitted to the laboratory with insufficient time remaining in the holding time.				
	SM 2320 B-1997		**mg/l as CaCO3**	**mg/l as CaCO3**	
12150	Total Alkalinity to pH 4.5	n.a.	594	0.70	1
12707	Phenolphthalein Alk. to pH 8.3	n.a.	N.D.	0.70	1
	SM 4500-H+ B-2000		**Std. Units**	**Std. Units**	
12152	pH	n.a.	7.8	0.010	1
	SM 4500-NH3 D-1997		**mg/l**	**mg/l**	

Sample Description: MW16-021915-0 Grab Groundwater
Bee Jay Scales Site

LL Sample # WW 7780903
LL Group # 1540278
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 02/19/2015 08:45 by EH

Submitted: 02/21/2015 10:20
Reported: 03/02/2015 09:33

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

BJM16

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry	**SM 4500-NH3 D-1997**		**mg/l**	**mg/l**	
12677	Ammonia-Nitrogen	7664-41-7	N.D.	0.050	1

General Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11017	VOCs- 25ml Water by 524M SIM	EPA 524M	1	G150551AA	02/24/2015 16:22	Jason M Long	1000
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	Y150542AA	02/23/2015 16:51	Sarah A Guill	1
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	Y150552AA	02/24/2015 19:45	Jason M Long	5
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Y150542AA	02/23/2015 16:51	Sarah A Guill	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	G150551AA	02/24/2015 16:22	Jason M Long	1000
01163	GC/MS VOA Water Prep	SW-846 5030B	3	Y150552AA	02/24/2015 19:45	Jason M Long	5
10407	Herb water 8151A Master	SW-846 8151A	1	150540003A	02/24/2015 18:48	Matthew S Listner	1
10407	Herb water 8151A Master	SW-846 8151A	1	150540003A	02/25/2015 14:45	Matthew S Listner	25
00816	Water Sample Herbicide Extract	SW-846 8151A	1	150540003A	02/23/2015 13:30	Kelli M Barto	1
00228	Sulfate	EPA 300.0	1	15056667601A	02/25/2015 22:16	Drew M Gerhart	100
00220	Nitrate Nitrogen	EPA 353.2	1	15053106102B	02/22/2015 18:03	Joseph E McKenzie	250
00219	Nitrite Nitrogen	EPA 353.2	1	15052105101A	02/21/2015 13:12	Joseph E McKenzie	1
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	15054011202A	02/23/2015 20:03	Michele L Graham	1
12707	Phenolphthalein Alk. to pH 8.3	SM 2320 B-1997	1	15054011202A	02/23/2015 20:03	Michele L Graham	1
12152	pH	SM 4500-H+ B-2000	1	15054011202A	02/23/2015 20:03	Michele L Graham	1
12677	Ammonia-Nitrogen	SM 4500-NH3 D-1997	1	15056012201A	02/25/2015 15:36	Kenneth A Bell	1

Sample Description: MW19-021815-0 Grab Groundwater
Bee Jay Scales Site

LL Sample # WW 7780904
LL Group # 1540278
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 02/18/2015 14:00 by EH

Submitted: 02/21/2015 10:20
Reported: 03/02/2015 09:33

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

BJM19

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**EPA 524M**		**ng/l**	**ng/l**	
11017	1,2,3-Trichloropropane	96-18-4	15,000	250	500
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Acetone	67-64-1	N.D.	6	1
10335	Acrylonitrile	107-13-1	N.D.	4	1
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Bromobenzene	108-86-1	N.D.	1	1
10335	Bromochloromethane	74-97-5	N.D.	1	1
10335	Bromodichloromethane	75-27-4	N.D.	0.5	1
10335	Bromoform	75-25-2	N.D.	0.5	1
10335	Bromomethane	74-83-9	N.D.	0.5	1
10335	2-Butanone	78-93-3	N.D.	3	1
10335	n-Butylbenzene	104-51-8	N.D.	1	1
10335	sec-Butylbenzene	135-98-8	N.D.	1	1
10335	tert-Butylbenzene	98-06-6	N.D.	1	1
10335	Carbon Disulfide	75-15-0	N.D.	1	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chlorobenzene	108-90-7	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	Chloroform	67-66-3	N.D.	0.5	1
10335	Chloromethane	74-87-3	N.D.	0.5	1
10335	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	2	1
10335	Dibromochloromethane	124-48-1	N.D.	0.5	1
10335	1,2-Dibromoethane	106-93-4	N.D.	0.5	1
10335	Dibromomethane	74-95-3	N.D.	0.5	1
10335	trans-1,4-Dichloro-2-butene	110-57-6	N.D.	15	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.	1	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	1	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	1	1
10335	Dichlorodifluoromethane	75-71-8	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.5	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.5	1
10335	1,2-Dichloropropane	78-87-5	150	0.5	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.5	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.5	1
10335	Ethyl ether	60-29-7	N.D.	2	1
10335	Ethylbenzene	100-41-4	N.D.	0.5	1
10335	2-Hexanone	591-78-6	N.D.	3	1
10335	Isopropylbenzene	98-82-8	N.D.	1	1
10335	p-Isopropyltoluene	99-87-6	N.D.	1	1
10335	Methyl Iodide	74-88-4	N.D.	0.5	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.	3	1
10335	Methylene Chloride	75-09-2	N.D.	2	1
10335	2-Methylnaphthalene	91-57-6	N.D.	2	1
10335	Naphthalene	91-20-3	N.D.	1	1
10335	n-Propylbenzene	103-65-1	N.D.	1	1
10335	Styrene	100-42-5	N.D.	1	1

Sample Description: MW19-021815-0 Grab Groundwater
Bee Jay Scales Site

LL Sample # WW 7780904
LL Group # 1540278
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 02/18/2015 14:00 by EH

Submitted: 02/21/2015 10:20
Reported: 03/02/2015 09:33

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

BJM19

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.5	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	N.D.	0.5	1
10335	Tetrahydrofuran	109-99-9	N.D.	4	1
10335	Toluene	108-88-3	N.D.	0.5	1
10335	1,2,3-Trichlorobenzene	87-61-6	N.D.	1	1
10335	1,2,4-Trichlorobenzene	120-82-1	N.D.	1	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	N.D.	0.5	1
10335	Trichlorofluoromethane	75-69-4	N.D.	0.5	1
10335	1,2,4-Trimethylbenzene	95-63-6	N.D.	1	1
10335	1,3,5-Trimethylbenzene	108-67-8	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1
10335	m+p-Xylene	179601-23-1	N.D.	0.5	1
10335	o-Xylene	95-47-6	N.D.	0.5	1
Metals	**SW-846 6010B**		**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	0.0457	0.0072	1
01754	Iron	7439-89-6	21.8	0.0334	1
Wet Chemistry	**EPA 300.0**		**mg/l**	**mg/l**	
00224	Chloride	16887-00-6	175	10.0	50
00228	Sulfate	14808-79-8	99.4	7.5	25
	EPA 353.2		**mg/l**	**mg/l**	
00220	Nitrate Nitrogen	14797-55-8	18.5	0.40	10
00219	Nitrite Nitrogen	14797-65-0	N.D.	0.015	1
	The holding time was not met. The sample was submitted to the laboratory outside of the holding time.				
	SM 2320 B-1997		**mg/l as CaCO3**	**mg/l as CaCO3**	
12150	Total Alkalinity to pH 4.5	n.a.	258	0.70	1
12707	Phenolphthalein Alk. to pH 8.3	n.a.	N.D.	0.70	1
	SM 4500-H+ B-2000		**Std. Units**	**Std. Units**	
12152	pH	n.a.	7.9	0.010	1
	SM 4500-NH3 D-1997		**mg/l**	**mg/l**	
12677	Ammonia-Nitrogen	7664-41-7	0.050 J	0.050	1

General Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Sample Description: MW19-021815-0 Grab Groundwater
Bee Jay Scales Site

LL Sample # WW 7780904
LL Group # 1540278
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 02/18/2015 14:00 by EH

Submitted: 02/21/2015 10:20
Reported: 03/02/2015 09:33

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

BJM19

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11017	VOCs- 25ml Water by 524M SIM	EPA 524M	1	G150571AA	02/26/2015 11:11	Jason M Long	500
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	Y150542AA	02/23/2015 17:12	Sarah A Guill	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Y150542AA	02/23/2015 17:12	Sarah A Guill	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	G150571AA	02/26/2015 11:11	Jason M Long	500
07035	Arsenic	SW-846 6010B	1	150585705001	03/02/2015 04:09	Tara L Snyder	1
01754	Iron	SW-846 6010B	1	150585705001	03/02/2015 04:09	Tara L Snyder	1
05705	ICP-WW/TL, 3010A (tot) - U3	SW-846 3010A	1	150515705005	02/24/2015 07:31	Christopher M Klumpp	1
05705	ICP-WW/TL, 3010A (tot) - U3	SW-846 3010A	2	150575705006	02/26/2015 12:49	James L Mertz	1
05705	ICP-WW/TL, 3010A (tot) - U3	SW-846 3010A	3	150585705001	03/01/2015 09:10	James L Mertz	1
00224	Chloride	EPA 300.0	1	15056667601A	02/26/2015 16:46	Drew M Gerhart	50
00228	Sulfate	EPA 300.0	1	15056667601A	02/25/2015 22:49	Drew M Gerhart	25
00220	Nitrate Nitrogen	EPA 353.2	1	15053106103A	02/22/2015 18:13	Joseph E McKenzie	10
00219	Nitrite Nitrogen	EPA 353.2	1	15052105101A	02/21/2015 13:13	Joseph E McKenzie	1
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	15054011201A	02/23/2015 16:06	Michele L Graham	1
12707	Phenolphthalein Alk. to pH 8.3	SM 2320 B-1997	1	15054011201A	02/23/2015 16:06	Michele L Graham	1
12152	pH	SM 4500-H+ B-2000	1	15054011201A	02/23/2015 16:06	Michele L Graham	1
12677	Ammonia-Nitrogen	SM 4500-NH3 D-1997	1	15056012201A	02/25/2015 15:42	Kenneth A Bell	1

Sample Description: TB-2 Water
Bee Jay Scales Site

LL Sample # WW 7780905
LL Group # 1540278
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 02/18/2015

Submitted: 02/21/2015 10:20
Reported: 03/02/2015 09:33

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

BJTB2

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**EPA 524M**		**ng/l**	**ng/l**	
11017	1,2,3-Trichloropropane	96-18-4	N.D.	0.5	1
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Acetone	67-64-1	N.D.	6	1
10335	Acrylonitrile	107-13-1	N.D.	4	1
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Bromobenzene	108-86-1	N.D.	1	1
10335	Bromochloromethane	74-97-5	N.D.	1	1
10335	Bromodichloromethane	75-27-4	N.D.	0.5	1
10335	Bromoform	75-25-2	N.D.	0.5	1
10335	Bromomethane	74-83-9	N.D.	0.5	1
10335	2-Butanone	78-93-3	N.D.	3	1
10335	n-Butylbenzene	104-51-8	N.D.	1	1
10335	sec-Butylbenzene	135-98-8	N.D.	1	1
10335	tert-Butylbenzene	98-06-6	N.D.	1	1
10335	Carbon Disulfide	75-15-0	N.D.	1	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chlorobenzene	108-90-7	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	Chloroform	67-66-3	N.D.	0.5	1
10335	Chloromethane	74-87-3	N.D.	0.5	1
10335	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	2	1
10335	Dibromochloromethane	124-48-1	N.D.	0.5	1
10335	1,2-Dibromoethane	106-93-4	N.D.	0.5	1
10335	Dibromomethane	74-95-3	N.D.	0.5	1
10335	trans-1,4-Dichloro-2-butene	110-57-6	N.D.	15	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.	1	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	1	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	1	1
10335	Dichlorodifluoromethane	75-71-8	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.5	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.5	1
10335	1,2-Dichloropropane	78-87-5	N.D.	0.5	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.5	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.5	1
10335	Ethyl ether	60-29-7	N.D.	2	1
10335	Ethylbenzene	100-41-4	N.D.	0.5	1
10335	2-Hexanone	591-78-6	N.D.	3	1
10335	Isopropylbenzene	98-82-8	N.D.	1	1
10335	p-Isopropyltoluene	99-87-6	N.D.	1	1
10335	Methyl Iodide	74-88-4	N.D.	0.5	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.	3	1
10335	Methylene Chloride	75-09-2	N.D.	2	1
10335	2-Methylnaphthalene	91-57-6	N.D.	2	1
10335	Naphthalene	91-20-3	N.D.	1	1
10335	n-Propylbenzene	103-65-1	N.D.	1	1
10335	Styrene	100-42-5	N.D.	1	1

Sample Description: TB-2 Water
Bee Jay Scales Site

LL Sample # WW 7780905
LL Group # 1540278
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 02/18/2015

Submitted: 02/21/2015 10:20
Reported: 03/02/2015 09:33

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

BJTB2

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.5	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	N.D.	0.5	1
10335	Tetrahydrofuran	109-99-9	N.D.	4	1
10335	Toluene	108-88-3	N.D.	0.5	1
10335	1,2,3-Trichlorobenzene	87-61-6	N.D.	1	1
10335	1,2,4-Trichlorobenzene	120-82-1	N.D.	1	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	N.D.	0.5	1
10335	Trichlorofluoromethane	75-69-4	N.D.	0.5	1
10335	1,2,4-Trimethylbenzene	95-63-6	N.D.	1	1
10335	1,3,5-Trimethylbenzene	108-67-8	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1
10335	m+p-Xylene	179601-23-1	N.D.	0.5	1
10335	o-Xylene	95-47-6	N.D.	0.5	1

General Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11017	VOCs- 25ml Water by 524M SIM	EPA 524M	1	G150551AA	02/24/2015 14:35	Jason M Long	1
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	Y150542AA	02/23/2015 13:19	Sarah A Guill	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Y150542AA	02/23/2015 13:19	Sarah A Guill	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	G150551AA	02/24/2015 14:35	Jason M Long	1

Quality Control Summary

Client Name: STANTEC International, Inc. Group Number: 1540278
Reported: 03/02/15 at 09:33 AM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: G150551AA	Sample number(s): 7780897,7780900-7780901,7780903,7780905							
1,2,3-Trichloropropane	N.D.	0.5	ng/l	109		70-130		
Batch number: G150571AA	Sample number(s): 7780904							
1,2,3-Trichloropropane	N.D.	0.5	ng/l	99		70-130		
Batch number: Y150542AA	Sample number(s): 7780900-7780901,7780903-7780905							
Acetone	N.D.	6.	ug/l	82	101	55-129	20	30
Acrylonitrile	N.D.	4.	ug/l	96	101	55-127	5	30
Benzene	N.D.	0.5	ug/l	95	98	78-120	3	30
Bromobenzene	N.D.	1.	ug/l	90	91	80-120	2	30
Bromochloromethane	N.D.	1.	ug/l	100	101	80-120	1	30
Bromodichloromethane	N.D.	0.5	ug/l	108	109	73-120	1	30
Bromoform	N.D.	0.5	ug/l	99	99	52-123	0	30
Bromomethane	N.D.	0.5	ug/l	104	109	53-130	5	30
2-Butanone	N.D.	3.	ug/l	99	104	54-133	5	30
n-Butylbenzene	N.D.	1.	ug/l	92	96	68-120	4	30
sec-Butylbenzene	N.D.	1.	ug/l	91	96	75-120	5	30
tert-Butylbenzene	N.D.	1.	ug/l	90	94	80-120	4	30
Carbon Disulfide	N.D.	1.	ug/l	91	93	58-126	3	30
Carbon Tetrachloride	N.D.	0.5	ug/l	109	111	74-130	2	30
Chlorobenzene	N.D.	0.5	ug/l	97	98	80-120	2	30
Chloroethane	N.D.	0.5	ug/l	106	107	56-120	1	30
Chloroform	N.D.	0.5	ug/l	107	108	80-120	2	30
Chloromethane	N.D.	0.5	ug/l	112	116	63-120	3	30
1,2-Dibromo-3-chloropropane	N.D.	2.	ug/l	104	112	56-120	7	30
Dibromochloromethane	N.D.	0.5	ug/l	106	107	72-120	1	30
1,2-Dibromoethane	N.D.	0.5	ug/l	102	102	80-120	0	30
Dibromomethane	N.D.	0.5	ug/l	101	101	80-120	1	30
trans-1,4-Dichloro-2-butene	N.D.	15.	ug/l	118	123	47-139	3	30
1,2-Dichlorobenzene	N.D.	1.	ug/l	93	96	80-120	4	30
1,3-Dichlorobenzene	N.D.	1.	ug/l	90	93	80-120	4	30
1,4-Dichlorobenzene	N.D.	1.	ug/l	92	95	80-120	4	30
Dichlorodifluoromethane	N.D.	0.5	ug/l	89	91	55-127	2	30
1,1-Dichloroethane	N.D.	0.5	ug/l	103	105	80-120	2	30
1,2-Dichloroethane	N.D.	0.5	ug/l	127	126	72-127	0	30
1,1-Dichloroethene	N.D.	0.5	ug/l	101	103	76-124	2	30
cis-1,2-Dichloroethene	N.D.	0.5	ug/l	96	99	80-120	3	30
trans-1,2-Dichloroethene	N.D.	0.5	ug/l	99	102	80-120	3	30
1,2-Dichloropropane	N.D.	0.5	ug/l	99	101	80-120	2	30
cis-1,3-Dichloropropene	N.D.	0.5	ug/l	104	106	80-120	2	30
trans-1,3-Dichloropropene	N.D.	0.5	ug/l	114	115	76-120	1	30
Ethyl ether	N.D.	2.	ug/l	107	111	23-144	4	30
Ethylbenzene	N.D.	0.5	ug/l	98	100	80-120	2	30

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: STANTEC International, Inc. Group Number: 1540278
Reported: 03/02/15 at 09:33 AM

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
2-Hexanone	N.D.	3.	ug/l	107	110	50-131	3	30
Isopropylbenzene	N.D.	1.	ug/l	96	98	80-120	3	30
p-Isopropyltoluene	N.D.	1.	ug/l	91	95	76-120	3	30
Methyl Iodide	N.D.	0.5	ug/l	95	97	75-128	2	30
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	106	108	75-120	1	30
4-Methyl-2-pentanone	N.D.	3.	ug/l	108	109	51-124	2	30
Methylene Chloride	N.D.	2.	ug/l	92	94	80-120	2	30
2-Methylnaphthalene	N.D.	2.	ug/l	100	113	18-120	12	30
Naphthalene	N.D.	1.	ug/l	95	101	59-120	6	30
n-Propylbenzene	N.D.	1.	ug/l	95	99	80-120	4	30
Styrene	N.D.	1.	ug/l	97	98	80-120	2	30
1,1,1,2-Tetrachloroethane	N.D.	0.5	ug/l	104	104	80-120	0	30
1,1,2,2-Tetrachloroethane	N.D.	0.5	ug/l	93	96	70-120	3	30
Tetrachloroethene	N.D.	0.5	ug/l	96	98	80-120	2	30
Tetrahydrofuran	N.D.	4.	ug/l	112	96	69-125	15	30
Toluene	N.D.	0.5	ug/l	96	98	80-120	2	30
1,2,3-Trichlorobenzene	N.D.	1.	ug/l	94	99	69-120	6	30
1,2,4-Trichlorobenzene	N.D.	1.	ug/l	94	99	73-120	6	30
1,1,1-Trichloroethane	N.D.	0.5	ug/l	92	94	66-126	2	30
1,1,2-Trichloroethane	N.D.	0.5	ug/l	98	99	80-120	1	30
Trichloroethene	N.D.	0.5	ug/l	100	102	80-120	2	30
Trichlorofluoromethane	N.D.	0.5	ug/l	106	111	58-135	5	30
1,2,4-Trimethylbenzene	N.D.	1.	ug/l	94	98	80-120	4	30
1,3,5-Trimethylbenzene	N.D.	1.	ug/l	94	97	80-120	3	30
Vinyl Chloride	N.D.	0.5	ug/l	105	109	69-120	3	30
m+p-Xylene	N.D.	0.5	ug/l	96	98	80-120	2	30
o-Xylene	N.D.	0.5	ug/l	96	100	80-120	4	30
Batch number: Y150552AA	Sample number(s): 7780897,7780901,7780903							
Acetone	N.D.	6.	ug/l	101	100	55-129	1	30
Acrylonitrile	N.D.	4.	ug/l	96	98	55-127	2	30
Benzene	N.D.	0.5	ug/l	96	98	78-120	1	30
Bromobenzene	N.D.	1.	ug/l	92	92	80-120	0	30
Bromochloromethane	N.D.	1.	ug/l	101	101	80-120	1	30
Bromodichloromethane	N.D.	0.5	ug/l	102	103	73-120	1	30
Bromoform	N.D.	0.5	ug/l	85	85	52-123	0	30
Bromomethane	N.D.	0.5	ug/l	104	103	53-130	1	30
2-Butanone	N.D.	3.	ug/l	97	99	54-133	2	30
n-Butylbenzene	N.D.	1.	ug/l	97	98	68-120	1	30
sec-Butylbenzene	N.D.	1.	ug/l	96	96	75-120	0	30
tert-Butylbenzene	N.D.	1.	ug/l	92	91	80-120	1	30
Carbon Disulfide	N.D.	1.	ug/l	89	89	58-126	0	30
Carbon Tetrachloride	N.D.	0.5	ug/l	111	108	74-130	3	30
Chlorobenzene	N.D.	0.5	ug/l	99	98	80-120	1	30
Chloroethane	N.D.	0.5	ug/l	102	100	56-120	2	30
Chloroform	N.D.	0.5	ug/l	107	106	80-120	1	30
Chloromethane	N.D.	0.5	ug/l	101	104	63-120	3	30
1,2-Dibromo-3-chloropropane	N.D.	2.	ug/l	98	105	56-120	6	30
Dibromochloromethane	N.D.	0.5	ug/l	99	100	72-120	2	30
1,2-Dibromoethane	N.D.	0.5	ug/l	102	101	80-120	0	30
Dibromomethane	N.D.	0.5	ug/l	100	100	80-120	0	30
trans-1,4-Dichloro-2-butene	N.D.	15.	ug/l	100	103	47-139	2	30
1,2-Dichlorobenzene	N.D.	1.	ug/l	95	96	80-120	1	30
1,3-Dichlorobenzene	N.D.	1.	ug/l	94	93	80-120	1	30
1,4-Dichlorobenzene	N.D.	1.	ug/l	95	94	80-120	0	30
Dichlorodifluoromethane	N.D.	0.5	ug/l	95	96	55-127	0	30

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: STANTEC International, Inc. Group Number: 1540278
Reported: 03/02/15 at 09:33 AM

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
1,1-Dichloroethane	N.D.	0.5	ug/l	103	102	80-120	1	30
1,2-Dichloroethane	N.D.	0.5	ug/l	122	120	72-127	2	30
1,1-Dichloroethene	N.D.	0.5	ug/l	104	101	76-124	2	30
cis-1,2-Dichloroethene	N.D.	0.5	ug/l	99	97	80-120	2	30
trans-1,2-Dichloroethene	N.D.	0.5	ug/l	102	103	80-120	1	30
1,2-Dichloropropane	N.D.	0.5	ug/l	97	97	80-120	1	30
cis-1,3-Dichloropropene	N.D.	0.5	ug/l	100	101	80-120	1	30
trans-1,3-Dichloropropene	N.D.	0.5	ug/l	106	110	76-120	4	30
Ethyl ether	N.D.	2.	ug/l	78	77	23-144	0	30
Ethylbenzene	N.D.	0.5	ug/l	100	100	80-120	0	30
2-Hexanone	N.D.	3.	ug/l	103	105	50-131	2	30
Isopropylbenzene	N.D.	1.	ug/l	97	98	80-120	1	30
p-Isopropyltoluene	N.D.	1.	ug/l	95	94	76-120	1	30
Methyl Iodide	N.D.	0.5	ug/l	95	94	75-128	0	30
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	105	104	75-120	0	30
4-Methyl-2-pentanone	N.D.	3.	ug/l	102	104	51-124	1	30
Methylene Chloride	N.D.	2.	ug/l	92	92	80-120	0	30
2-Methylnaphthalene	N.D.	2.	ug/l	111	114	18-120	3	30
Naphthalene	N.D.	1.	ug/l	100	101	59-120	1	30
n-Propylbenzene	N.D.	1.	ug/l	97	98	80-120	0	30
Styrene	N.D.	1.	ug/l	97	99	80-120	2	30
1,1,1,2-Tetrachloroethane	N.D.	0.5	ug/l	103	101	80-120	1	30
1,1,2,2-Tetrachloroethane	N.D.	0.5	ug/l	95	95	70-120	0	30
Tetrachloroethene	N.D.	0.5	ug/l	97	96	80-120	1	30
Tetrahydrofuran	N.D.	4.	ug/l	106	101	69-125	4	30
Toluene	N.D.	0.5	ug/l	98	98	80-120	0	30
1,2,3-Trichlorobenzene	N.D.	1.	ug/l	96	99	69-120	3	30
1,2,4-Trichlorobenzene	N.D.	1.	ug/l	95	96	73-120	1	30
1,1,1-Trichloroethane	N.D.	0.5	ug/l	92	92	66-126	0	30
1,1,2-Trichloroethane	N.D.	0.5	ug/l	100	100	80-120	0	30
Trichloroethene	N.D.	0.5	ug/l	103	103	80-120	0	30
Trichlorofluoromethane	N.D.	0.5	ug/l	116	115	58-135	1	30
1,2,4-Trimethylbenzene	N.D.	1.	ug/l	99	97	80-120	1	30
1,3,5-Trimethylbenzene	N.D.	1.	ug/l	98	96	80-120	1	30
Vinyl Chloride	N.D.	0.5	ug/l	107	105	69-120	2	30
m+p-Xylene	N.D.	0.5	ug/l	99	99	80-120	0	30
o-Xylene	N.D.	0.5	ug/l	99	98	80-120	1	30
Batch number: 150540003A	Sample number(s): 7780897,7780900-7780903							
2,4-D	N.D.	0.16	ug/l	103	109	68-155	5	30
Dalapon	N.D.	0.25	ug/l	64	71	27-127	11	30
2,4-DB	N.D.	0.30	ug/l	99	102	60-172	3	30
Dicamba	N.D.	0.080	ug/l	97	100	65-142	4	30
Dinoseb	N.D.	0.12	ug/l	86	90	16-163	4	30
2,4-DP (Dichlorprop)	N.D.	0.16	ug/l	117	121	91-181	3	30
MCPA	N.D.	50.	ug/l	92	95	65-128	3	30
MCPP	N.D.	50.	ug/l	96	100	61-145	4	30
Pentachlorophenol	N.D.	0.027	ug/l	103	106	71-161	3	30
2,4,5-T	N.D.	0.015	ug/l	110	110	67-163	0	30
2,4,5-TP	N.D.	0.010	ug/l	102	107	71-162	5	30
Batch number: 150585705001	Sample number(s): 7780896-7780897,7780901-7780902,7780904							
Arsenic	N.D.	0.0072	mg/l	98		80-120		
Iron	N.D.	0.0334	mg/l	100		80-120		
Manganese	0.0013 J	0.00083	mg/l	98		80-120		

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: STANTEC International, Inc. Group Number: 1540278
Reported: 03/02/15 at 09:33 AM

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 15052105101A	Sample number(s): 7780894-7780901,7780903-7780904							
Nitrite Nitrogen	N.D.	0.015	mg/l	102		90-110		
Batch number: 15052105101B	Sample number(s): 7780902							
Nitrite Nitrogen	N.D.	0.015	mg/l	102		90-110		
Batch number: 15053106102A	Sample number(s): 7780894-7780897							
Nitrate Nitrogen	N.D.	0.040	mg/l	103		90-110		
Batch number: 15053106102B	Sample number(s): 7780898-7780903							
Nitrate Nitrogen	N.D.	0.040	mg/l	103		90-110		
Batch number: 15053106103A	Sample number(s): 7780904							
Nitrate Nitrogen	N.D.	0.040	mg/l	101		90-110		
Batch number: 15056667601A	Sample number(s): 7780897-7780904							
Chloride	N.D.	0.20	mg/l	100	105	90-110	4	20
Sulfate	N.D.	0.30	mg/l	98	98	90-110	1	20
Batch number: 15054011201A	Sample number(s): 7780896,7780899-7780900,7780904							
Total Alkalinity to pH 4.5	N.D.	0.70	mg/l as CaCO3	99		90-110		
pH				102		95-105		
Batch number: 15054011202A	Sample number(s): 7780897-7780898,7780901-7780903							
Total Alkalinity to pH 4.5	N.D.	0.70	mg/l as CaCO3	98		90-110		
pH				102		95-105		
Batch number: 15056012201A	Sample number(s): 7780896-7780904							
Ammonia-Nitrogen	N.D.	0.050	mg/l	104		80-120		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: Y150552AA	Sample number(s): 7780897,7780901,7780903 BKG: P781604								
Acetone						N.D.	N.D.	0 (1)	30
Benzene						N.D.	N.D.	0 (1)	30
Bromochloromethane						N.D.	N.D.	0 (1)	30
Bromodichloromethane						N.D.	N.D.	0 (1)	30
Bromoform						N.D.	N.D.	0 (1)	30
Bromomethane						N.D.	N.D.	0 (1)	30
2-Butanone						N.D.	N.D.	0 (1)	30
Carbon Disulfide						N.D.	N.D.	0 (1)	30
Carbon Tetrachloride						N.D.	N.D.	0 (1)	30
Chlorobenzene						N.D.	N.D.	0 (1)	30
Chloroethane						N.D.	N.D.	0 (1)	30
Chloroform						N.D.	N.D.	0 (1)	30
Chloromethane						N.D.	N.D.	0 (1)	30

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: STANTEC International, Inc. Group Number: 1540278
Reported: 03/02/15 at 09:33 AM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc		DUP Conc		DUP RPD	Dup RPD Max
1,2-Dibromo-3-chloropropane						N.D.		N.D.		0 (1)	30
Dibromochloromethane						N.D.		N.D.		0 (1)	30
1,2-Dibromoethane						N.D.		N.D.		0 (1)	30
1,2-Dichlorobenzene						N.D.		N.D.		0 (1)	30
1,3-Dichlorobenzene						N.D.		N.D.		0 (1)	30
1,4-Dichlorobenzene						N.D.		N.D.		0 (1)	30
Dichlorodifluoromethane						N.D.		N.D.		0 (1)	30
1,1-Dichloroethane						N.D.		N.D.		0 (1)	30
1,2-Dichloroethane						N.D.		N.D.		0 (1)	30
1,1-Dichloroethene						N.D.		N.D.		0 (1)	30
cis-1,2-Dichloroethene						32		32		1	30
trans-1,2-Dichloroethene						0.7	J	0.7	J	0 (1)	30
1,2-Dichloropropane						N.D.		N.D.		0 (1)	30
cis-1,3-Dichloropropene						N.D.		N.D.		0 (1)	30
trans-1,3-Dichloropropene						N.D.		N.D.		0 (1)	30
Ethylbenzene						N.D.		N.D.		0 (1)	30
2-Hexanone						N.D.		N.D.		0 (1)	30
Isopropylbenzene						N.D.		N.D.		0 (1)	30
Methyl Tertiary Butyl Ether						N.D.		N.D.		0 (1)	30
4-Methyl-2-pentanone						N.D.		N.D.		0 (1)	30
Methylene Chloride						N.D.		N.D.		0 (1)	30
Styrene						N.D.		N.D.		0 (1)	30
1,1,2,2-Tetrachloroethane						N.D.		N.D.		0 (1)	30
Tetrachloroethene						76		78		2	30
Toluene						N.D.		N.D.		0 (1)	30
1,2,3-Trichlorobenzene						N.D.		N.D.		0 (1)	30
1,2,4-Trichlorobenzene						N.D.		N.D.		0 (1)	30
1,1,1-Trichloroethane						N.D.		N.D.		0 (1)	30
1,1,2-Trichloroethane						N.D.		N.D.		0 (1)	30
Trichloroethene						1		0.9	J	6 (1)	30
Trichlorofluoromethane						N.D.		N.D.		0 (1)	30
Vinyl Chloride						4		4		1 (1)	30
m+p-Xylene						N.D.		N.D.		0 (1)	30
o-Xylene						N.D.		N.D.		0 (1)	30
Batch number: 150585705001	Sample number(s): 7780896-7780897,7780901-7780902,7780904 UNSPK: P773291 BKG: P773291										
Arsenic	97	91	75-125	6	20	N.D.		N.D.		0 (1)	20
Iron	78	45*	75-125	10	20	2.71		2.30		16	20
Manganese	98	81	75-125	16	20	0.101		0.0861		16	20
Batch number: 15052105101A	Sample number(s): 7780894-7780901,7780903-7780904 UNSPK: 7780904 BKG: 7780904										
Nitrite Nitrogen	100		90-110			N.D.		N.D.		0 (1)	20
Batch number: 15052105101B	Sample number(s): 7780902 UNSPK: 7780902 BKG: 7780902										
Nitrite Nitrogen	101		90-110			N.D.		N.D.		0 (1)	20
Batch number: 15053106102A	Sample number(s): 7780894-7780897 UNSPK: P779346 BKG: P779346										
Nitrate Nitrogen	109		90-110			3.4		3.4		1	2
Batch number: 15053106102B	Sample number(s): 7780898-7780903 UNSPK: P780003 BKG: P780003										
Nitrate Nitrogen	97		90-110			0.11		0.11		6* (1)	2

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: STANTEC International, Inc. Group Number: 1540278
Reported: 03/02/15 at 09:33 AM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 15053106103A	Sample number(s): 7780904 UNSPK: P780011 BKG: P780011								
Nitrate Nitrogen	104		90-110			0.052 J	0.050 J	4* (1)	2
Batch number: 15056667601A	Sample number(s): 7780897-7780904 UNSPK: P782407 BKG: P782407								
Chloride	116*		90-110			36.2	36.8	2 (1)	20
Sulfate	109		90-110			263	269	2	20
Batch number: 15054011201A	Sample number(s): 7780896,7780899-7780900,7780904 UNSPK: P780784 BKG: P780784								
Total Alkalinity to pH 4.5	93		17-146			134	132	2	5
pH						8.0	8.0	0	3
Phenolphthalein Alk. to pH 8.3						N.D.	N.D.	0 (1)	5
Batch number: 15054011202A	Sample number(s): 7780897-7780898,7780901-7780903 UNSPK: P781029 BKG: P781029								
Total Alkalinity to pH 4.5	88	88	17-146	1	5	76.8	77.1	0	5
pH						6.6	6.7	1	3
Phenolphthalein Alk. to pH 8.3						N.D.	N.D.	0 (1)	5
Batch number: 15056012201A	Sample number(s): 7780896-7780904 UNSPK: P783938 BKG: P783938								
Ammonia-Nitrogen	103	103	52-144	0	23	13.9	13.4	4	20

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed
unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 25ml Water by 524M SIM
Batch number: G150551AA

	Toluene-d8
7780897	112
7780900	109
7780901	119
7780903	118
7780905	118
Blank	119
LCS	116
Limits:	80-120

Analysis Name: VOCs- 25ml Water by 524M SIM
Batch number: G150571AA

	Toluene-d8
7780904	117
Blank	116
LCS	115
Limits:	80-120

Analysis Name: VOCs- 5ml Water by 8260B
Batch number: Y150542AA

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: STANTEC International, Inc. Group Number: 1540278
Reported: 03/02/15 at 09:33 AM

Surrogate Quality Control

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7780900	112	105	103	100
7780901	111	102	104	101
7780903	112	105	103	100
7780904	112	104	103	100
7780905	108	102	103	99
Blank	108	102	103	100
LCS	107	103	104	106
LCSD	107	99	103	104
Limits:	80-116	77-113	80-113	78-113

Analysis Name: VOCs- 5ml Water by 8260B
Batch number: Y150552AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7780897	111	105	103	98
Blank	109	104	103	100
DUP	112	106	101	98
LCS	106	106	104	105
LCSD	105	105	104	104
Limits:	80-116	77-113	80-113	78-113

Analysis Name: Herb water 8151A Master
Batch number: 150540003A

	2,4-Dichlorophenylacetic acid
7780897	101
7780900	93
7780901	136
7780902	84
7780903	92
Blank	88
LCS	93
LCSD	94
Limits:	26-136

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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Acct # 11842 Group # 1540278 Sample # 780894-905

Client: Stantec Consulting Services, Inc.			
Project Name/#: Bee Jay Scales	Site ID #:		
Project Manager: Marisa Kaffenberger	P.O. #: 213202156/213202157		
Sampler: Emily Harper/Robert McAlister	PWSID #:		
Phone #: (714)686-4435	Quote #:		
State where sample(s) were collected: Washington			

Matrix: Soil ☐ Sediment ☐ Water ☑ Ground ☐ Potable ☐ Surface ☐ NPDES ☐ Other: ☐

Sample Identification	Collection Date	Collection Time	Grab	Composite	Total # of Containers	Nitrate / Nitrite (353.2)	Alkalinity/ pH	Herb Master (8151A)	Ammonia - Nitrogen	Sulfate (300.0)	Chloride (300.0)	NWTPH-Gx	VOCs (8260B / 524.2)	Arsenic (6010 B)	Iron (6010 B)	Manganese (6010 B)	Remarks
					Preservation Codes	S/-	-	-	S		-	H	H/O	N	N	N	
MW1-021915-0	2/19/15	1030	X		2	X											
MW1-021915-2		1035			2	X											
MW3-021915-0		925			5	X	X		X					X			
MW4R-021915-0		1200			16	X	X	X	X	X			X	X	X	X	
MW5R-021915-0		820			6	X	X		X	X							
MW8-021915-0		1100			6	X	X		X	X							
MW9-021915-0		1230			15	X	X	X	X	X			X				
MW12R-021915-0	↓	950			16	X	X	X	X	X	X		X	X	X		
MW13-021815-0	2/18/15	1430			9	X	X	X	X	X					X		
MW16-021915-0	2/19/15	845	↓		15	X	X	X	X	X			X				

Analyses Requested / Preservation Codes

Preservation Codes: H = HCl; T = Thiosulfate; N = HNO_3; B = NaOH; S = H_2SO_4; P = H_3PO_4; O = Other

For Lab Use Only: SF #: _____ SCR #: _____

Turnaround Time Requested (TAT) (please check): Standard ☑ Rush ☐
(Rush TAT is subject to laboratory approval and surcharges.)

Date results are needed:

Rush results requested by (please check): E-Mail ☐ Phone ☐

E-mail Address: Marisa.Kaffenberger@stantec.com

Phone: (517) 349-9499 x 275

Data Package Options (please check if required)

Type I (Validation/non-CLP)	☐	MA MCP	☐
Type III (Reduced non-CLP)	☐	CT RCP	☐
Type IV (CLP SOW)	☐	TX TRRP-13	☐
Type VI (Raw Data Only)	☐		

EDD Required? Yes ☐ No ☐ If yes, format: _____

Relinquished by:	Date	Time	Received by:	Date	Time
[signature] ROBERT MCALISTER - STANTEC	2/19/15	1400	FED EX	2/19/15	1400
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time

Relinquished by Commercial Carrier: UPS _____ FedEx _____ Other _____

Temperature upon receipt _____ °C

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7045 0713

02/20/2015 09:07 15098374647 BEST WESTERN GRPVNE PAGE 02/03

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Environmental Analysis Request/Chain of Custody

Acct. # 11842 Group # 1540278 Sample # 7780894-905

Client: Stantec Consulting Services, Inc.	
Project Name/#: Bee Jay Scales	Site ID #:
Project Manager: Marisa Kaffenberger	P.O. #: 213202156/213202157
Sampler: Emily Harper/Robert McAlister	PWSID #:
Phone #: (714)686-4435	Quote #:
State where sample(s) were collected: Washington	

Matrix: Sediment ☐ Soil ☐ | Water: Ground ☑ Surface ☐ Potable ☐ NPDES ☐ | Other:

Analyses Requested / Preservation Codes

Sample Identification	Collection Date	Collection Time	Grab	Composite	Soil	Water	Other	Total # of Containers	Nitrate / Nitrite (353.2)	Alkalinity/pH	Herb Master (8151A)	Ammonia - Nitrogen	Sulfate (300.0)	Chloride (300.0)	NWTPH-Gx	VOCs (8260B / 524.2)	Arsenic (6010 B)	Iron (6010 B)	Manganese (6010 B)
Preservation Codes									S/-	-	-	S		-	H	H/O	N	N	N
MW19-021815-0	2/18/15	1400	X			X		14	X	X		X	X	X		X	X	X	
TB-2	↓	–	↓			↓		2								X			

For Lab Use Only
SF #: ____
SCR #: ____

Preservation Codes
H = HCl T = Thiosulfate
N = HNO_3 B = NaOH
S = H_2SO_4 P = H_3PO_4
O = Other

Remarks

Turnaround Time Requested (TAT) (please check): Standard ☑ Rush ☐
(Rush TAT is subject to laboratory approval and surcharges.)

Date results are needed:

Rush results requested by (please check): E-Mail ☐ Phone ☐

E-mail Address: Marisa.Kaffenberger@stantec.com

Phone: (517) 349-9499 x 275

Data Package Options (please check if required)

Type I (Validation/non-CLP) ☐ MA MCP ☐
Type III (Reduced non-CLP) ☐ CT RCP ☐
Type IV (CLP SOW) ☐ TX TRRP-13 ☐
Type VI (Raw Data Only) ☐

EDD Required? Yes ☐ No ☐ If yes, format: ____

Relinquished by:	Date	Time	Received by:	Date	Time
[signature] Robert McAlister-Stantec	2/19/15	1400	FED EX	2/19/15	1400

Relinquished by Commercial Carrier:
UPS ____ FedEx ____ Other ____

Temperature upon receipt ____ °C

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Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

Acct. # 11842 Group # 1540278 Sample # 7780894-905

Client: **Stantec Consulting Services, Inc.**			
Project Name/#: Bee Jay Scales	Site ID #:		
Project Manager: Marisa Kaffenberger	P.O. #: 213202156/213202157		
Sampler: Emily Harper/Robert McAlister	PWSID #:		
Phone #: (714)686-4435	Quote #:		
State where sample(s) were collected: Washington			

Sample Identification	Collection Date	Collection Time	Grab	Composite	Matrix: Soil	Sediment	Potable Water	Ground Water	NPDES Water	Surface Water	Other:	Total # of Containers	Nitrate / Nitrite (353.2)	Alkalinity/ pH	Herb Master (8151A)	Ammonia - Nitrogen	Sulfate (300.0)	Chloride (300.0)	NWTPH-Gx	VOCs (8260B / 524.2)	Arsenic (6010 B)	Iron (6010 B)	Manganese (6010 B)
													S/-	-	-	S		-	H	H/O	N	N	N
MW1-021915-0	2/19/15	1030	X					X				2	X										
MW1-021915-2		1035										2	X										
MW3-021915-0		925										5	X	X		X					X		
MW4R-021915-0		1200										16	X	X	X	X	X			X	X	X	X
MW5R-021915-0		1120										6	X	X		X	X						
MW8-021915-0		1100										6	X	X		X	X						
MW9-021915-0		1230										15	X	X	X	X	X			X			
MW12R-021915-0		950										16	X	X	X	X	X	X		X	X	X	
MW13-021815-0	2/18/15	1430										9	X	X	X	X	X					X	
MW16-021915-0	2/19/15	845										15	X	X	X	X	X			X			

Analyses Requested — **Preservation Codes**

For Lab Use Only

SF #: _____

SCR #: _____

Preservation Codes

H = HCl T = Thiosulfate

N = HNO_3 B = NaOH

S = H_2SO_4 P = H_3PO_4

O = Other

Remarks

Turnaround Time Requested (TAT) (please check): Standard ☑ Rush ☐

(Rush TAT is subject to laboratory approval and surcharges.)

Date results are needed:

Rush results requested by (please check): E-Mail ☐ Phone ☐

E-mail Address: Marisa.Kaffenberger@stantec.com

Phone: (517) 349-9499 x 275

Data Package Options (please check if required)

Type I (Validation/non-CLP) ☐ MA MCP ☐

Type III (Reduced non-CLP) ☐ CT RCP ☐

Type IV (CLP SOW) ☐ TX TRRP-13 ☐

Type VI (Raw Data Only) ☐

EDD Required? Yes ☐ No ☐ If yes, format: _____

Relinquished by:	Date	Time	Received by:	Date	Time
ROBERT MCALISTER - STANTEC	2/19/15	1400	FED EX	2/19/15	1400
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	2.21.15	1070

Relinquished by Commercial Carrier:

UPS _____ FedEx X Other _____

Temperature upon receipt 0.8-1.5 °C

Environmental Analysis Request/Chain of Custody

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Acct. # 11842 Group # 1540278 Sample # 7780894-905

Client: **Stantec Consulting Services, Inc.**			
Project Name/#: Bee Jay Scales	Site ID #:		
Project Manager: Marisa Kaffenberger	P.O. #: 213202156/213202157		
Sampler: Emily Harper/Robert McAlister	PWSID #:		
Phone #: (714)686-4435	Quote #:		
State where sample(s) were collected: Washington			

Sample Identification	Collection Date	Collection Time	Grab	Composite	Matrix: Soil	Sediment	Water: Potable	Ground	NPDES	Surface	Other:	Total # of Containers	Nitrate / Nitrite (353.2)	Alkalinity/ pH	Herb Master (8151A)	Ammonia - Nitrogen	Sulfate (300.0)	Chloride (300.0)	NWTPH-Gx	VOCs (8260B / 524.2)	Arsenic (6010 B)	Iron (6010 B)	Manganese (6010 B)	Remarks
													Analyses Requested / Preservation Codes											
													S/-	-	-	S		-	H	H/O	N	N	N	
MW19-021815-0	2/18/15	1400	X				X					14	X	X		X	X	X		X	X	X		
TB-2	↓	–	↓				↓					2								X				

For Lab Use Only

SF #: _____

SCR #: _____

Preservation Codes

H = HCl T = Thiosulfate

N = HNO_3 B = NaOH

S = H_2SO_4 P = H_3PO_4

O = Other

Turnaround Time Requested (TAT) (please check): Standard ☑ Rush ☐

(Rush TAT is subject to laboratory approval and surcharges.)

Date results are needed:

Rush results requested by (please check): E-Mail ☐ Phone ☐

E-mail Address: Marisa.Kaffenberger@stantec.com

Phone: (517) 349-9499 x 275

Data Package Options (please check if required)

Type I (Validation/non-CLP) ☐ MA MCP ☐

Type III (Reduced non-CLP) ☐ CT RCP ☐

Type IV (CLP SOW) ☐ TX TRRP-13 ☐

Type VI (Raw Data Only) ☐

EDD Required? Yes ☐ No ☐ If yes, format: _____

	Relinquished by:	Date	Time	Received by:	Date	Time
1	ROBERT MCALISTER-STANTEC	2/19/15	1400	FED EX	2/19/15	1400
2						
3						
4						
5				Yuty	2.21.15	1030

Relinquished by Commercial Carrier:

UPS _____ FedEx ☑ Other _____

Temperature upon receipt 0.8-1.5 °C

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
µg	microgram(s)	**mg**	milligram(s)
mL	milliliter(s)	**L**	liter(s)
m3	cubic meter(s)	**µL**	microliter(s)
		pg/L	picogram/liter

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Laboratory Data Qualifiers:

B - Analyte detected in the blank
C - Result confirmed by reanalysis
E - Concentration exceeds the calibration range
J (or G, I, X) - estimated value ≥ the Method Detection Limit (MDL or DL) and the < Limit of Quantitation (LOQ or RL)
P - Concentration difference between the primary and confirmation column >40%. The lower result is reported.
U - Analyte was not detected at the value indicated
V - Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference…

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, ISO17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

APPENDIX F
Summary of First Half 2015 Duplicate Relative Percent Difference

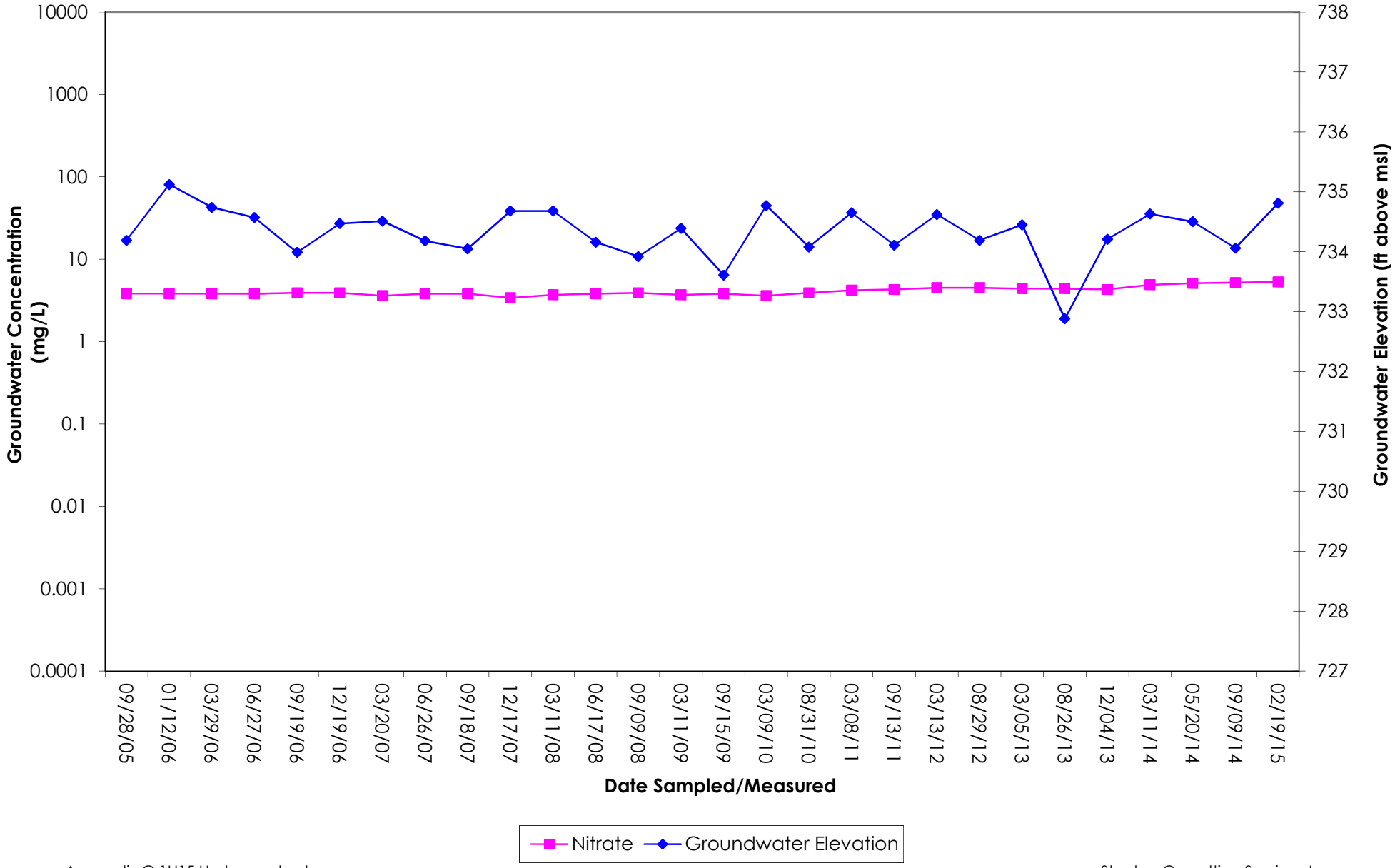
Summary of First Half 2015 Duplicate Relative Percent Difference
Bee-Jay Scales Site, Sunnyside, Washington

Location ID	Sample ID	Analyte	Less than MDL	Analytical Results	Qualifier	Units	RPD
MW-7	MW07-021815-0	Nitrate Nitrogen		3.4		mg/L	0.00%
MW-7	MW07-021815-1	Nitrate Nitrogen		3.4		mg/L	
MW-7	MW07-021815-0	Nitrite Nitrogen	<	0.015	U	mg/L	0.00%
MW-7	MW07-021815-1	Nitrite Nitrogen	<	0.015	U	mg/L	
MW-14	MW14-021715-0	Arsenic		0.0083	J	mg/L	40.38%
MW-14	MW14-021715-1	Arsenic		0.0125	J	mg/L	
MW-14	MW14-021715-0	Nitrate Nitrogen		3.3		mg/L	0.00%
MW-14	MW14-021715-1	Nitrate Nitrogen		3.3		mg/L	
MW-14	MW14-021715-0	Nitrite Nitrogen	<	0.015	U	mg/L	0.00%
MW-14	MW14-021715-1	Nitrite Nitrogen	<	0.015	U	mg/L	
AVERAGE							**8.08%**

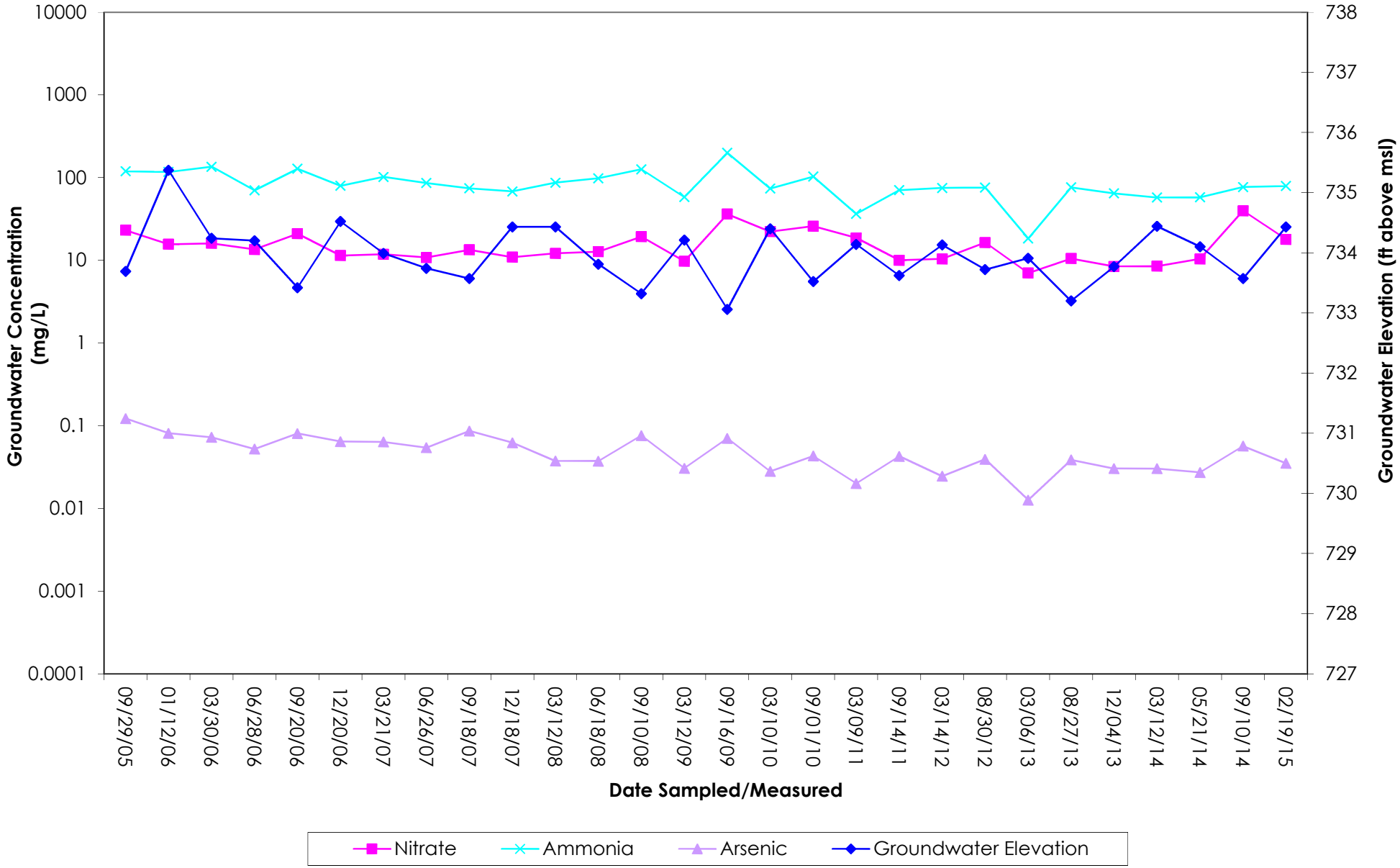
Notes:
LOQ = limit of quantitation
MDL = method detection limit
RPD = relative percent difference
mg/L = milligrams per liter
U = compound was not detected above MDL
J = estimated value (the result is ≥ the MDL and < the LOQ)

APPENDIX G
Hydrographs

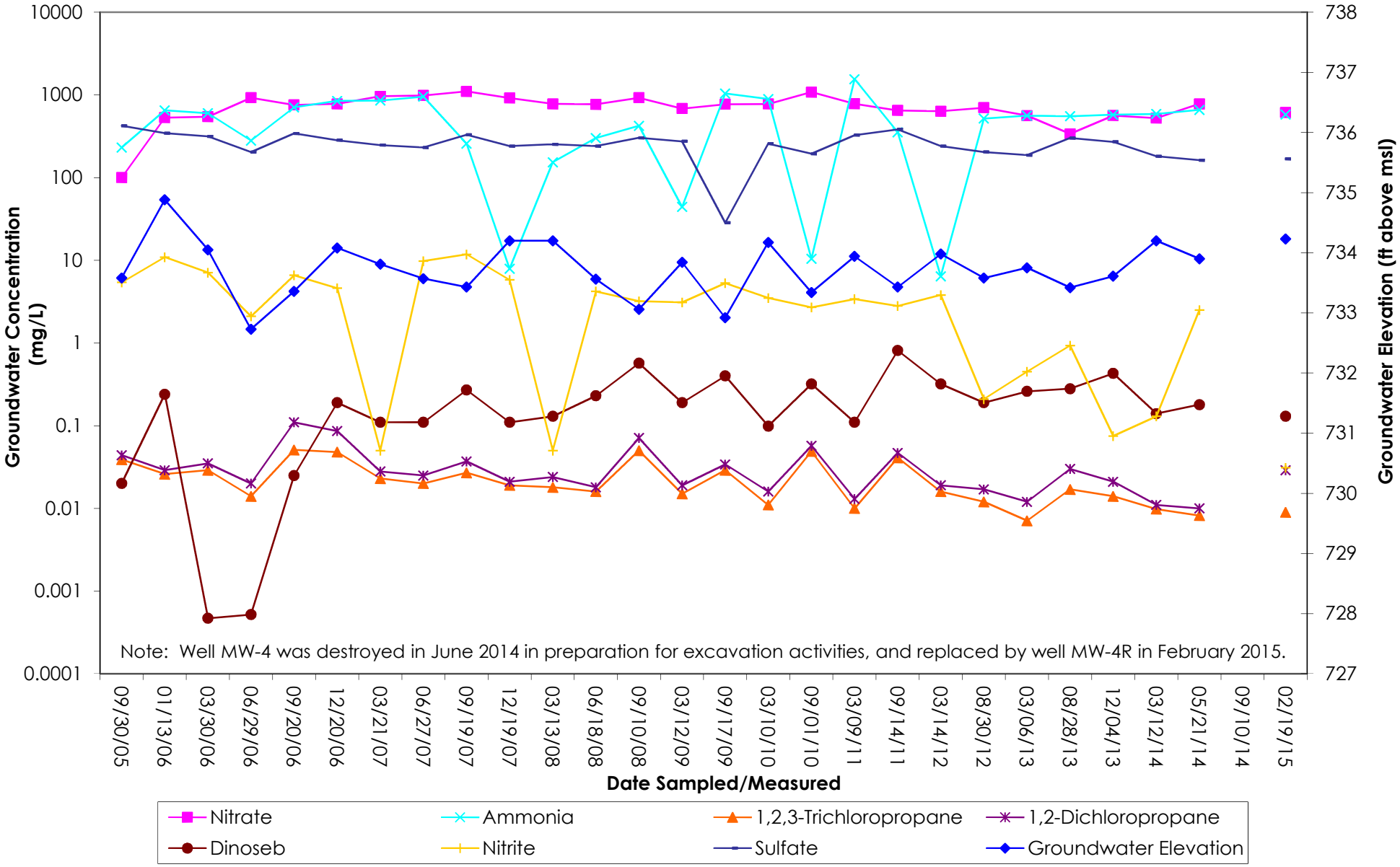
MW-1 Groundwater Concentrations and Elevations vs. Time
Bee-Jay Scales Site
Sunnyside, Washington



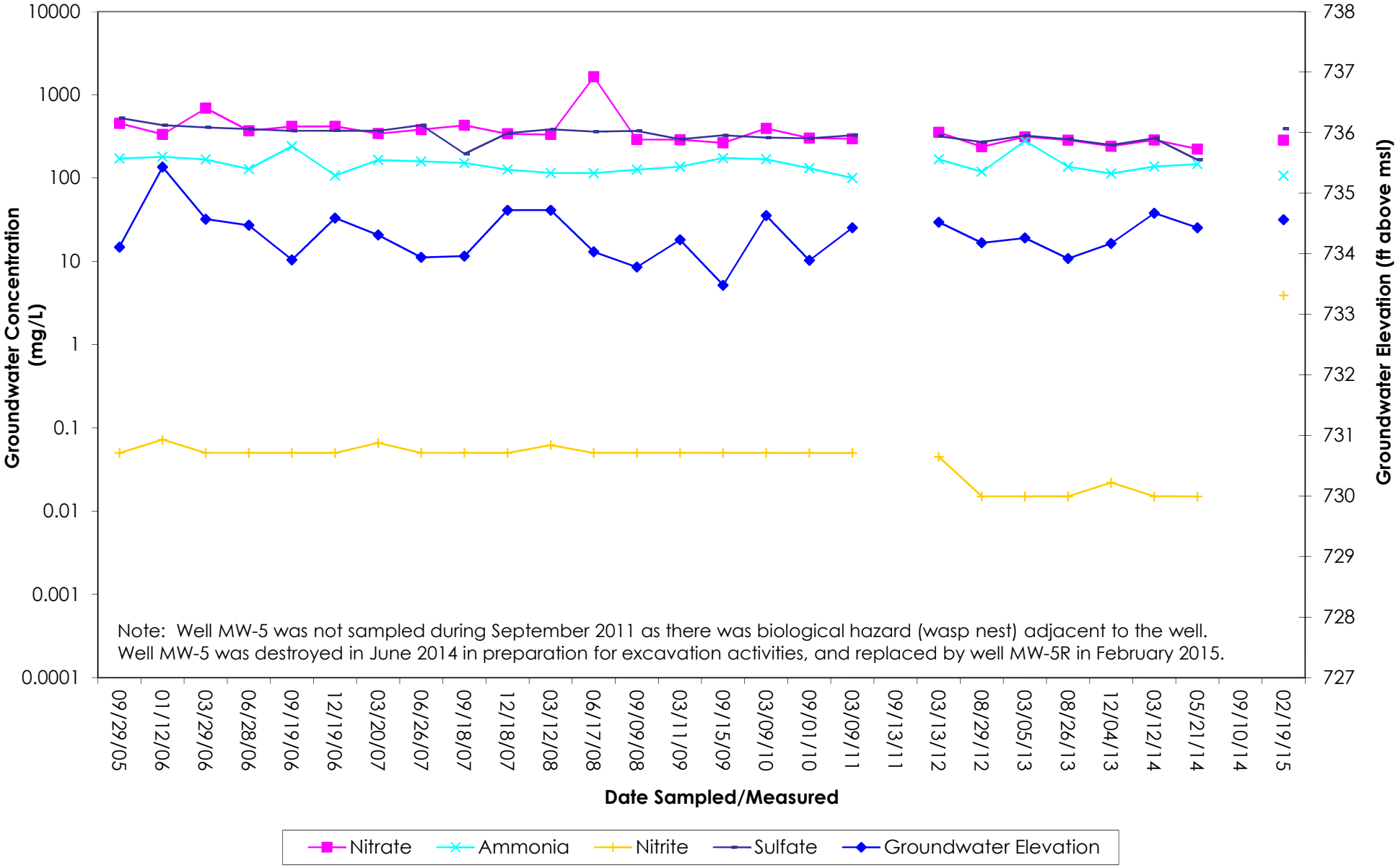
MW-3 Groundwater Concentrations and Elevations vs. Time
Bee-Jay Scales Site
Sunnyside, Washington



MW-4/MW-4R Groundwater Concentrations and Elevations vs. Time
Bee-Jay Scales Site
Sunnyside, Washington

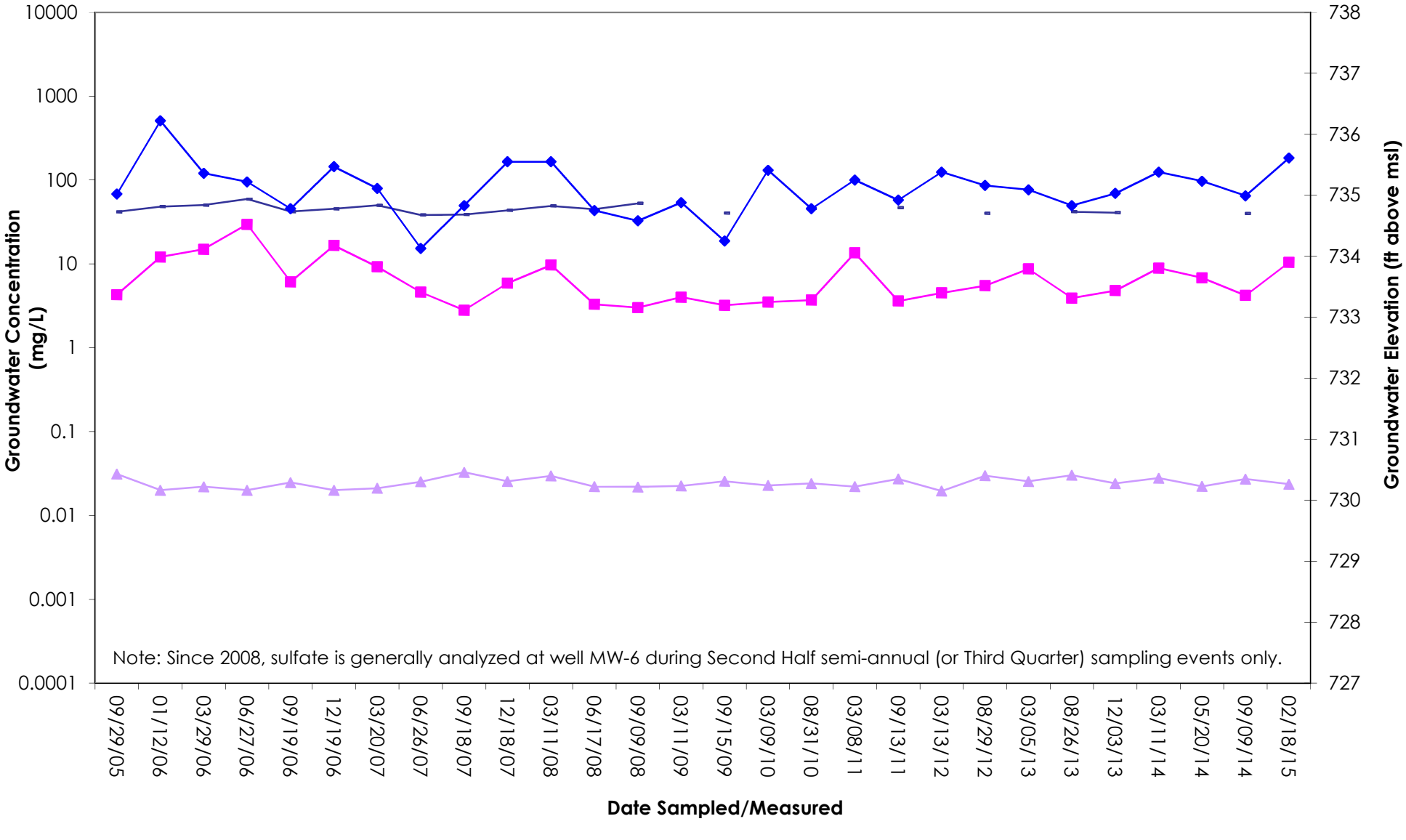


MW-5/MW-5R Groundwater Concentrations and Elevations vs. Time
Bee-Jay Scales Site
Sunnyside, Washington

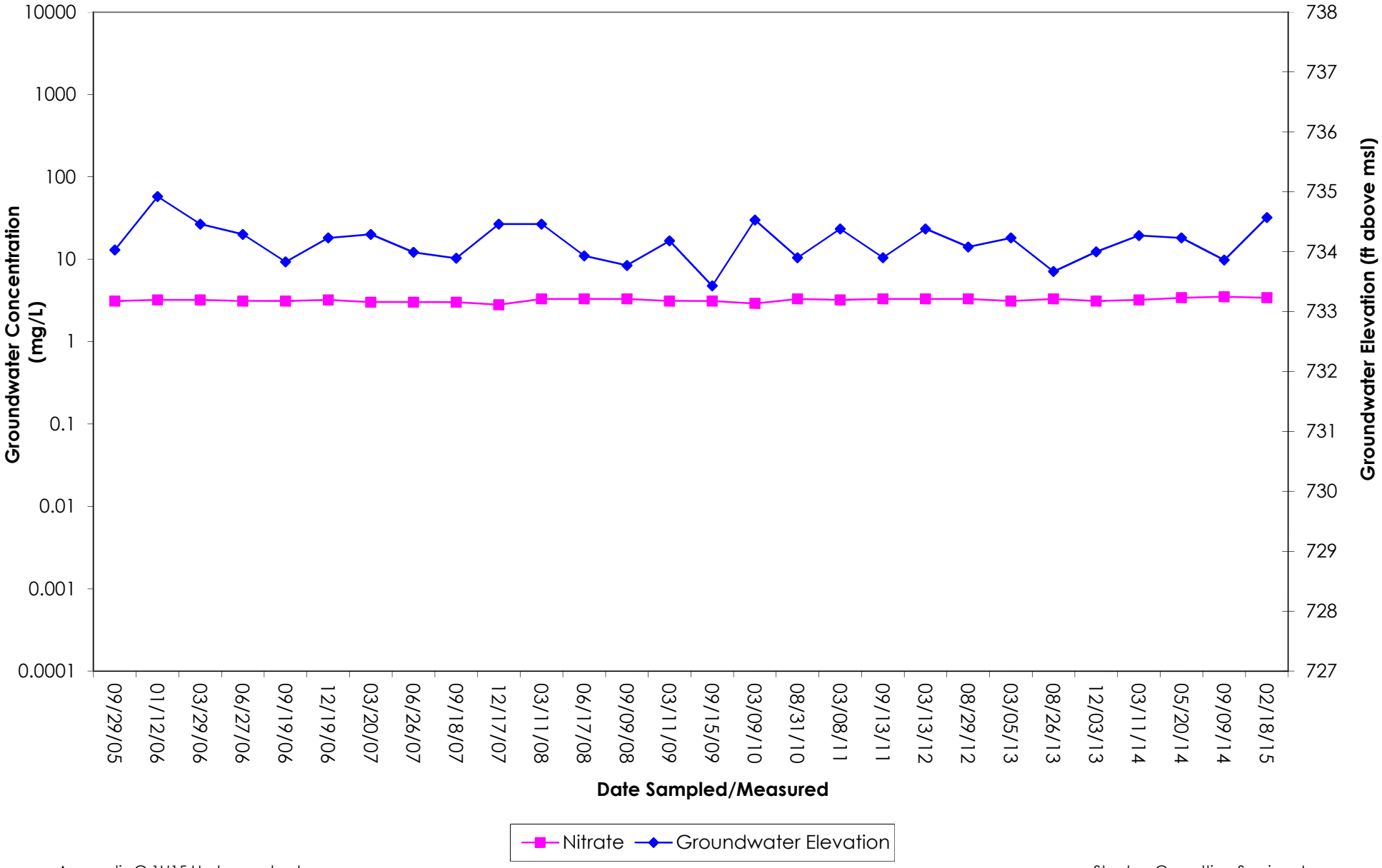


Note: Well MW-5 was not sampled during September 2011 as there was biological hazard (wasp nest) adjacent to the well.
Well MW-5 was destroyed in June 2014 in preparation for excavation activities, and replaced by well MW-5R in February 2015.

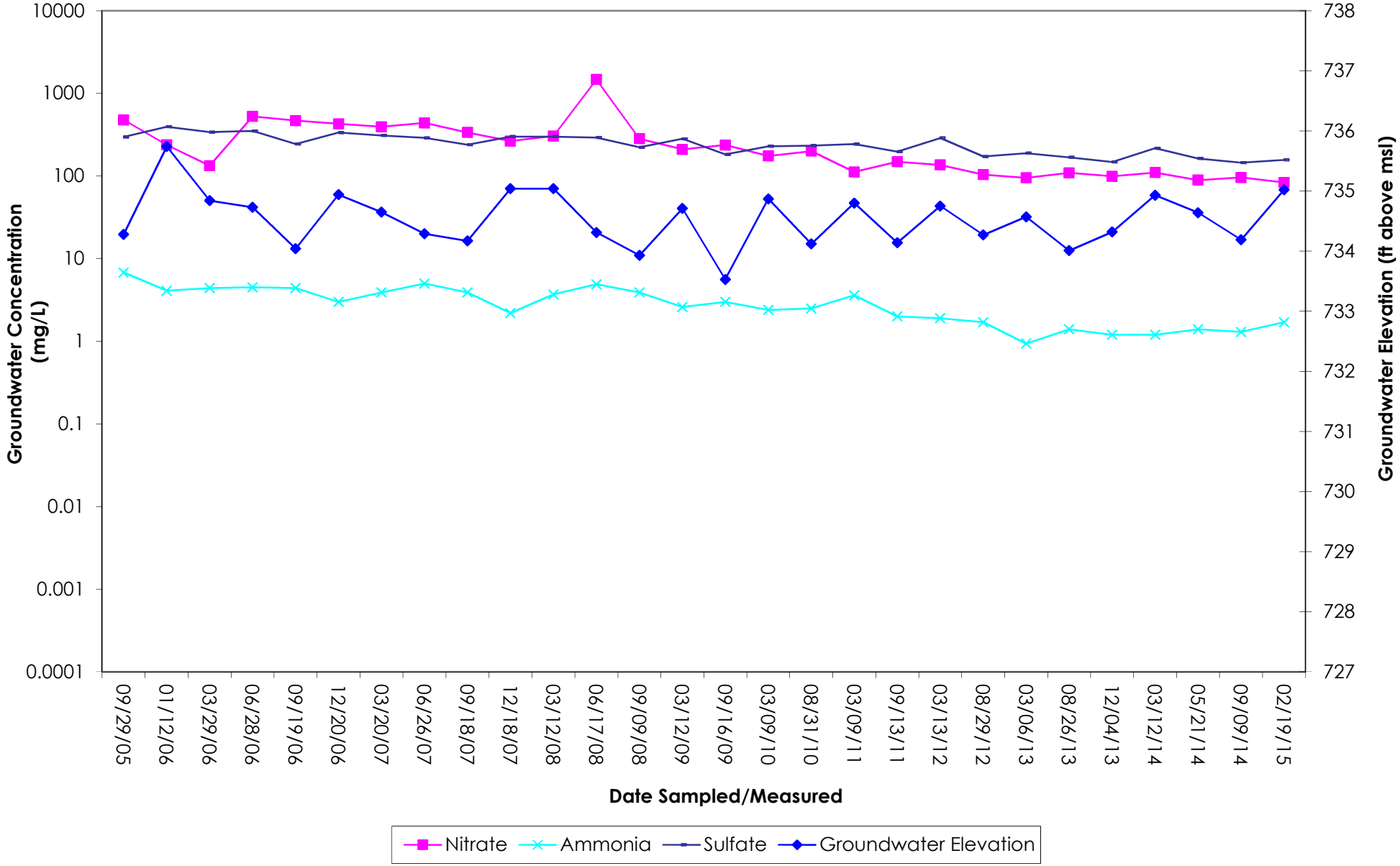
MW-6 Groundwater Concentrations and Elevations vs. Time
Bee-Jay Scales Site
Sunnyside, Washington



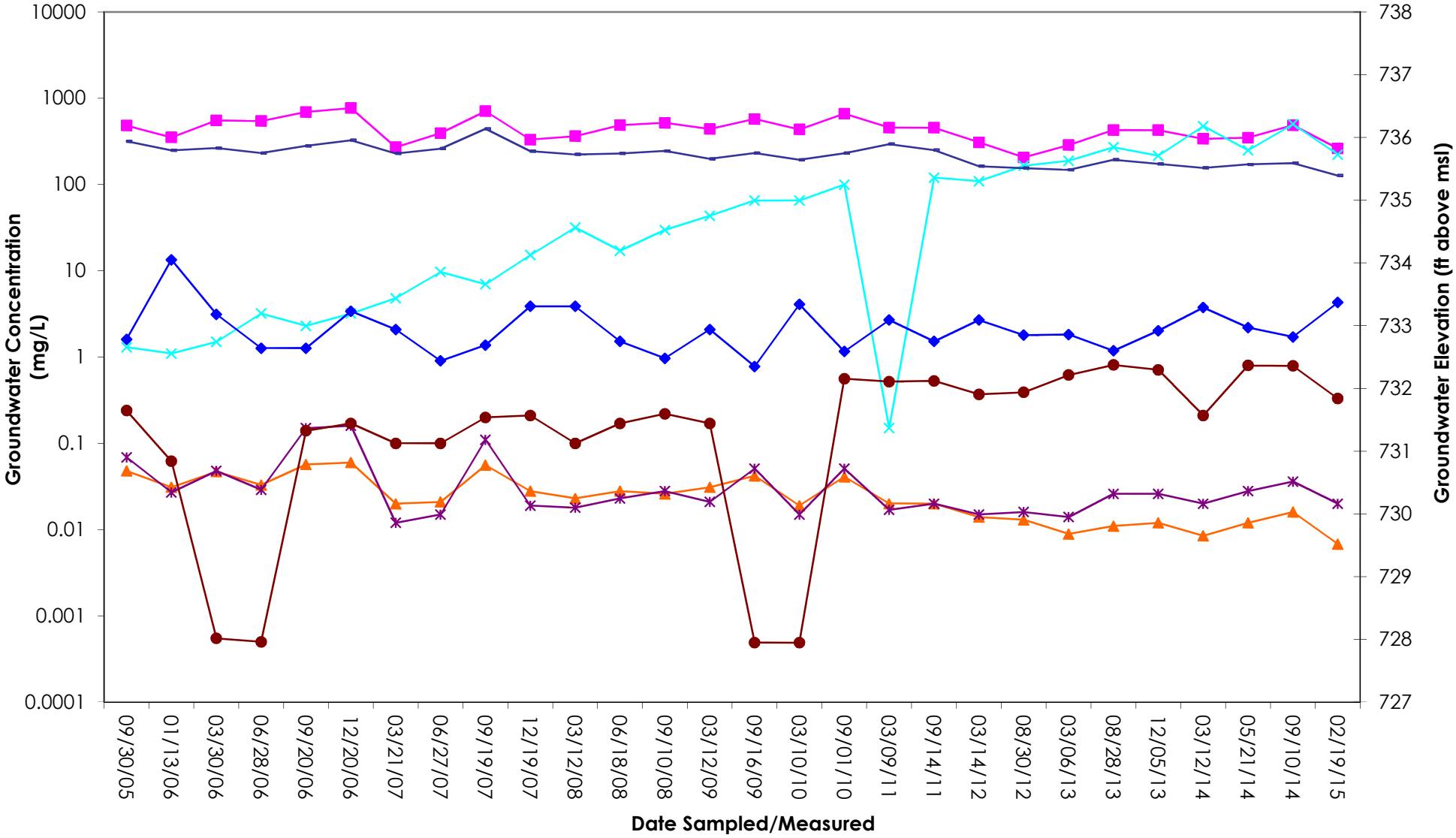
MW-7 Groundwater Concentrations and Elevations vs. Time
Bee-Jay Scales Site
Sunnyside, Washington



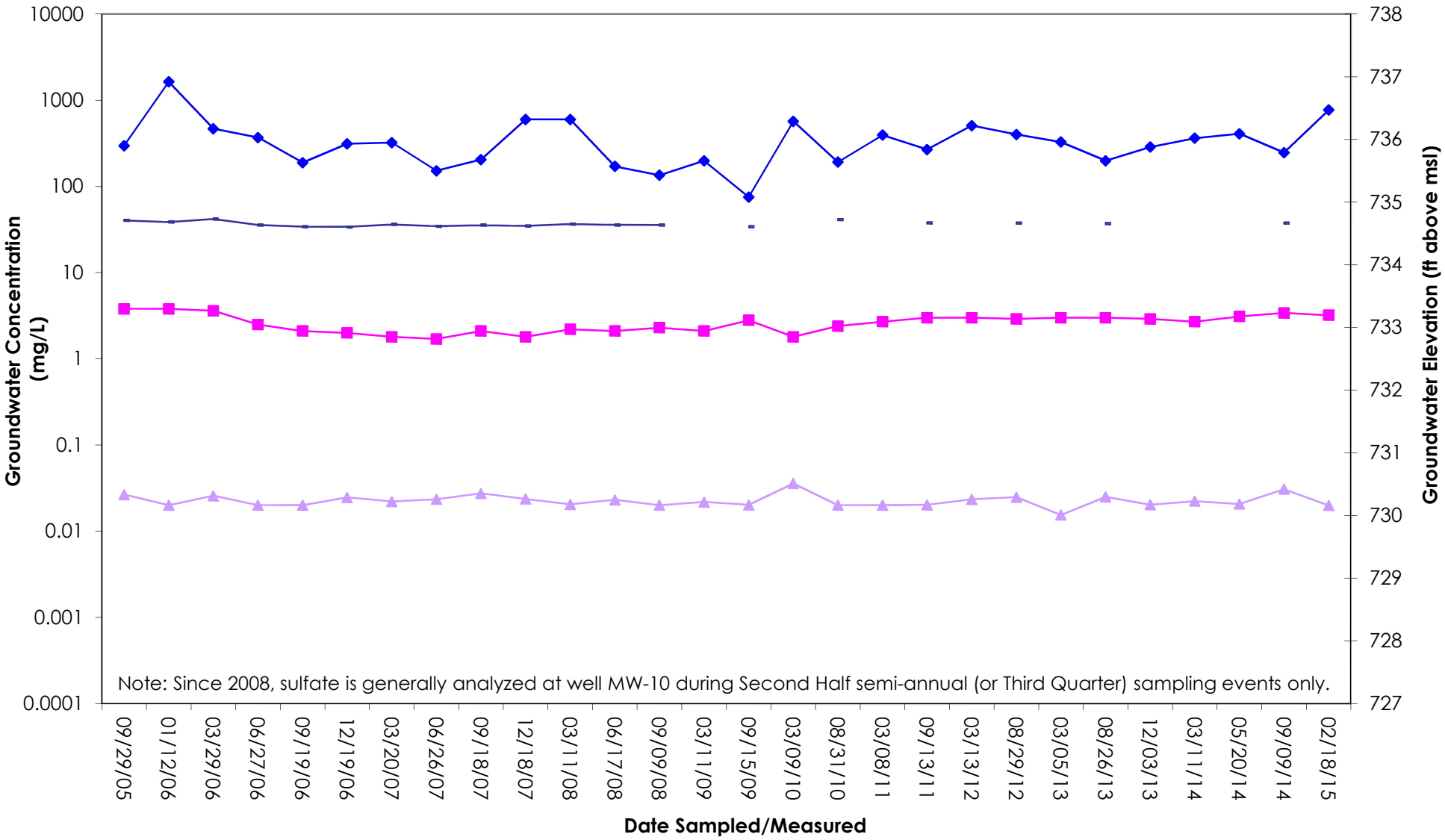
MW-8 Groundwater Concentrations and Elevations vs. Time
Bee-Jay Scales Site
Sunnyside, Washington



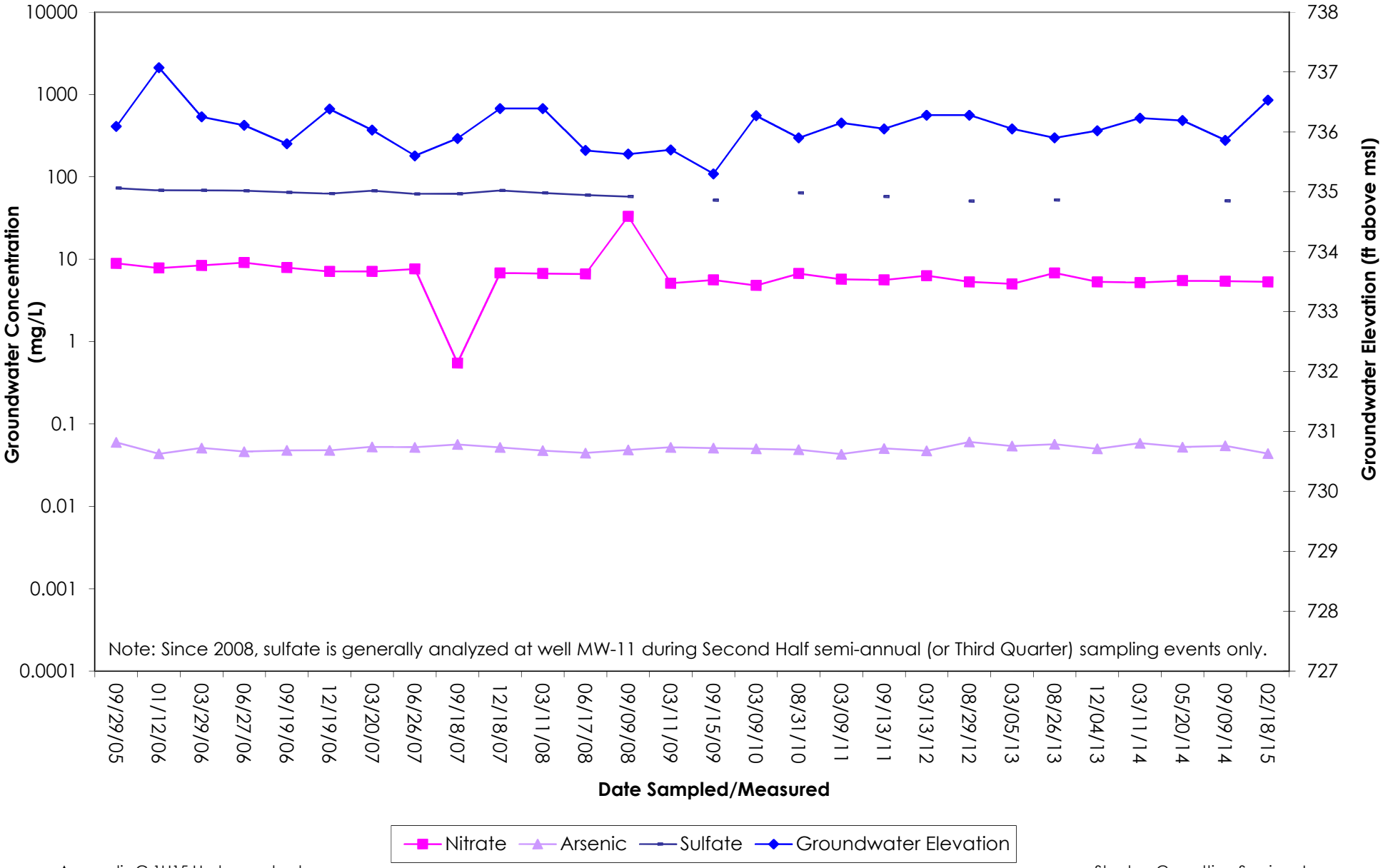
MW-9 Groundwater Concentrations and Elevations vs. Time
Bee-Jay Scales Site
Sunnyside, Washington



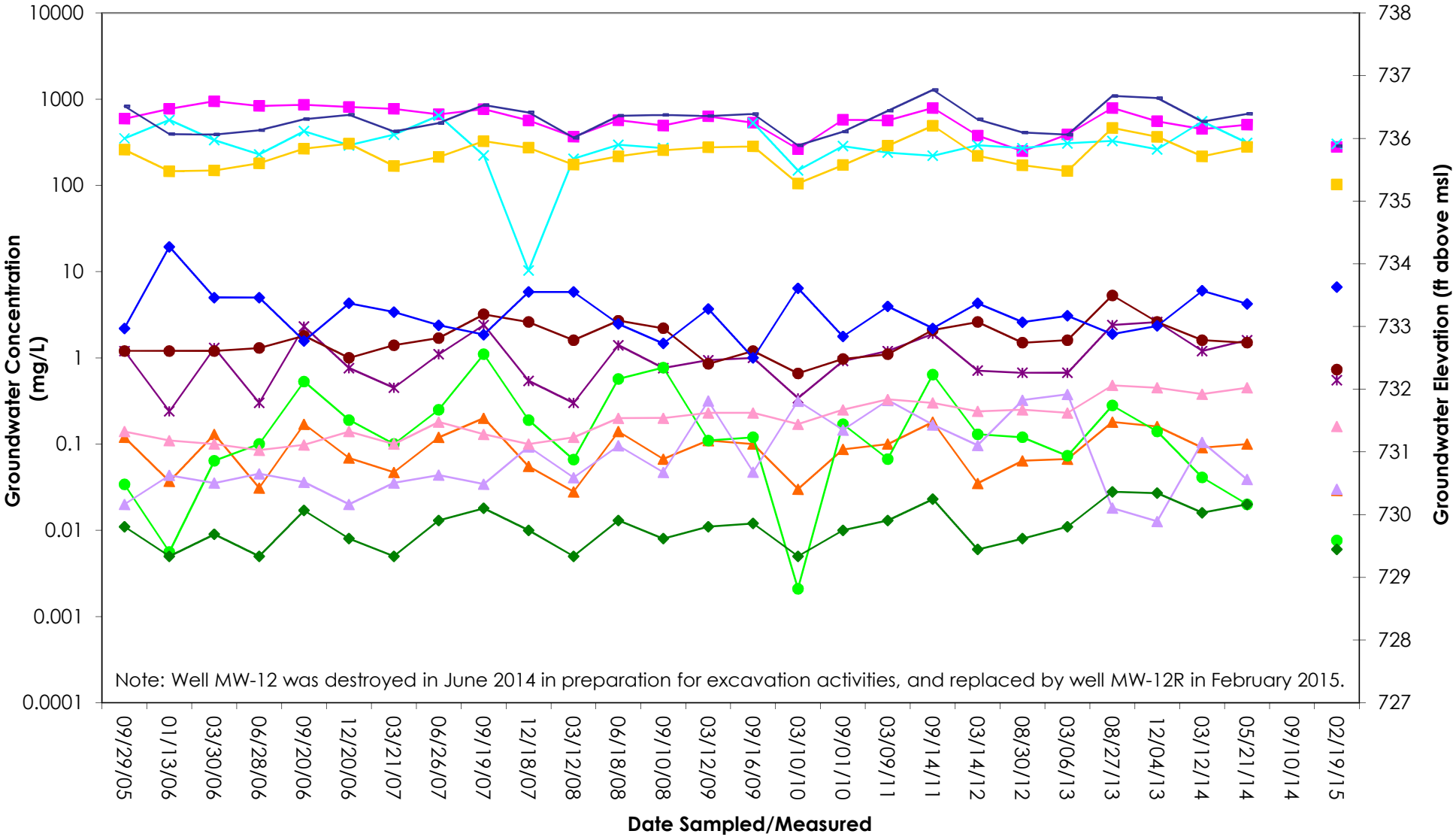
MW-10 Groundwater Concentrations and Elevations vs. Time
Bee-Jay Scales Site
Sunnyside, Washington



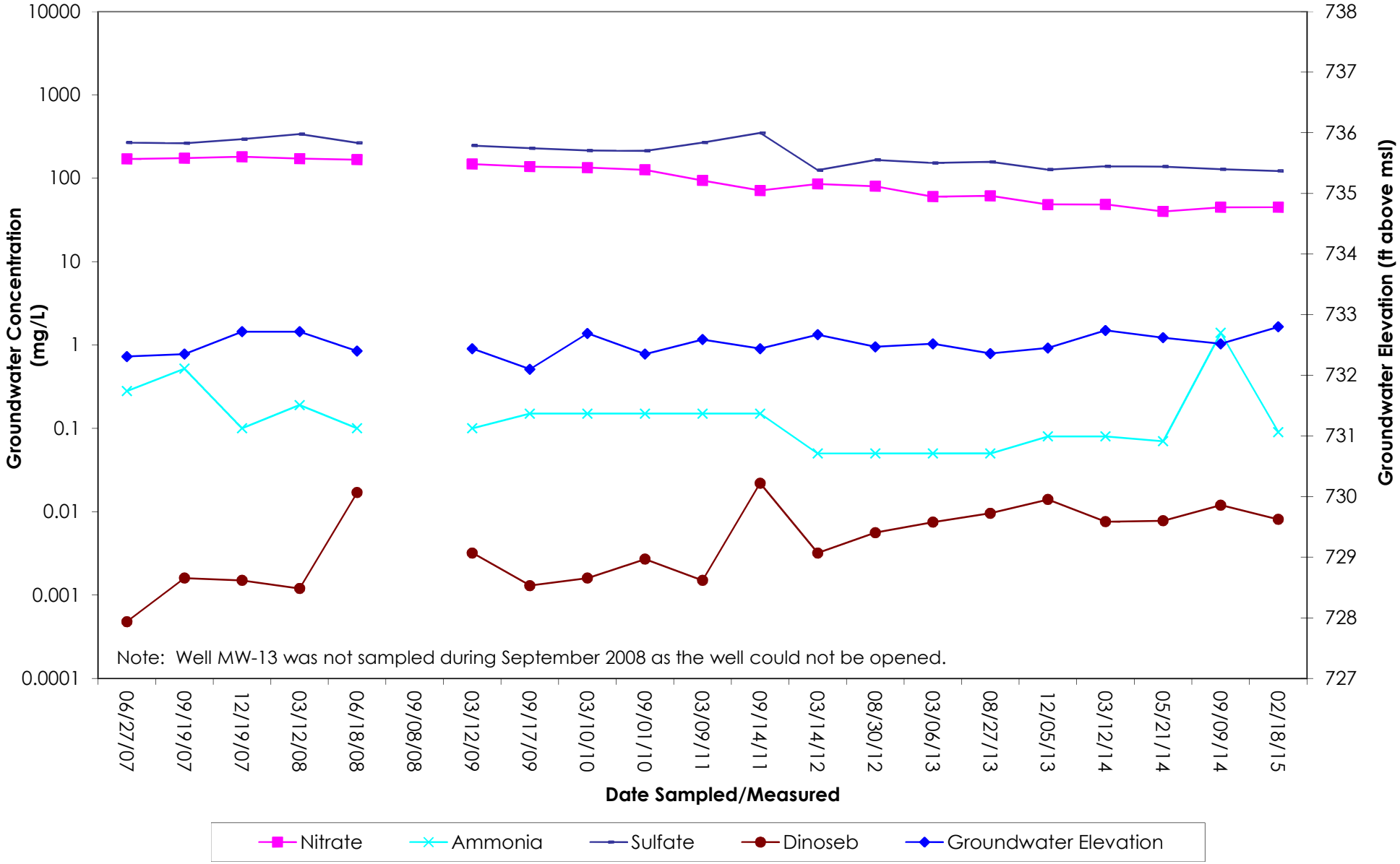
MW-11 Groundwater Concentrations and Elevations vs. Time
Bee-Jay Scales Site
Sunnyside, Washington



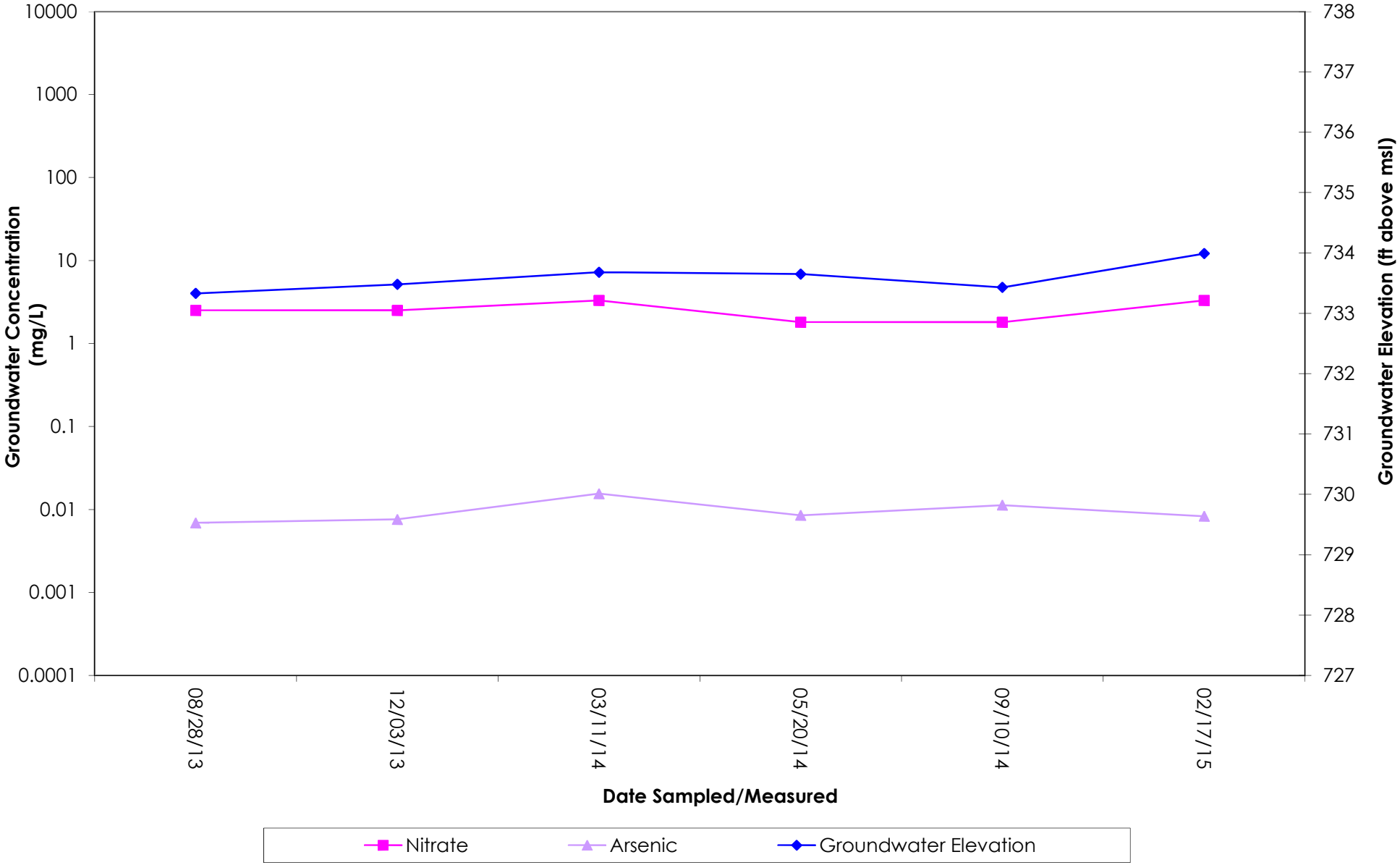
MW-12/MW-12R Groundwater Concentrations and Elevations vs. Time
Bee-Jay Scales Site
Sunnyside, Washington



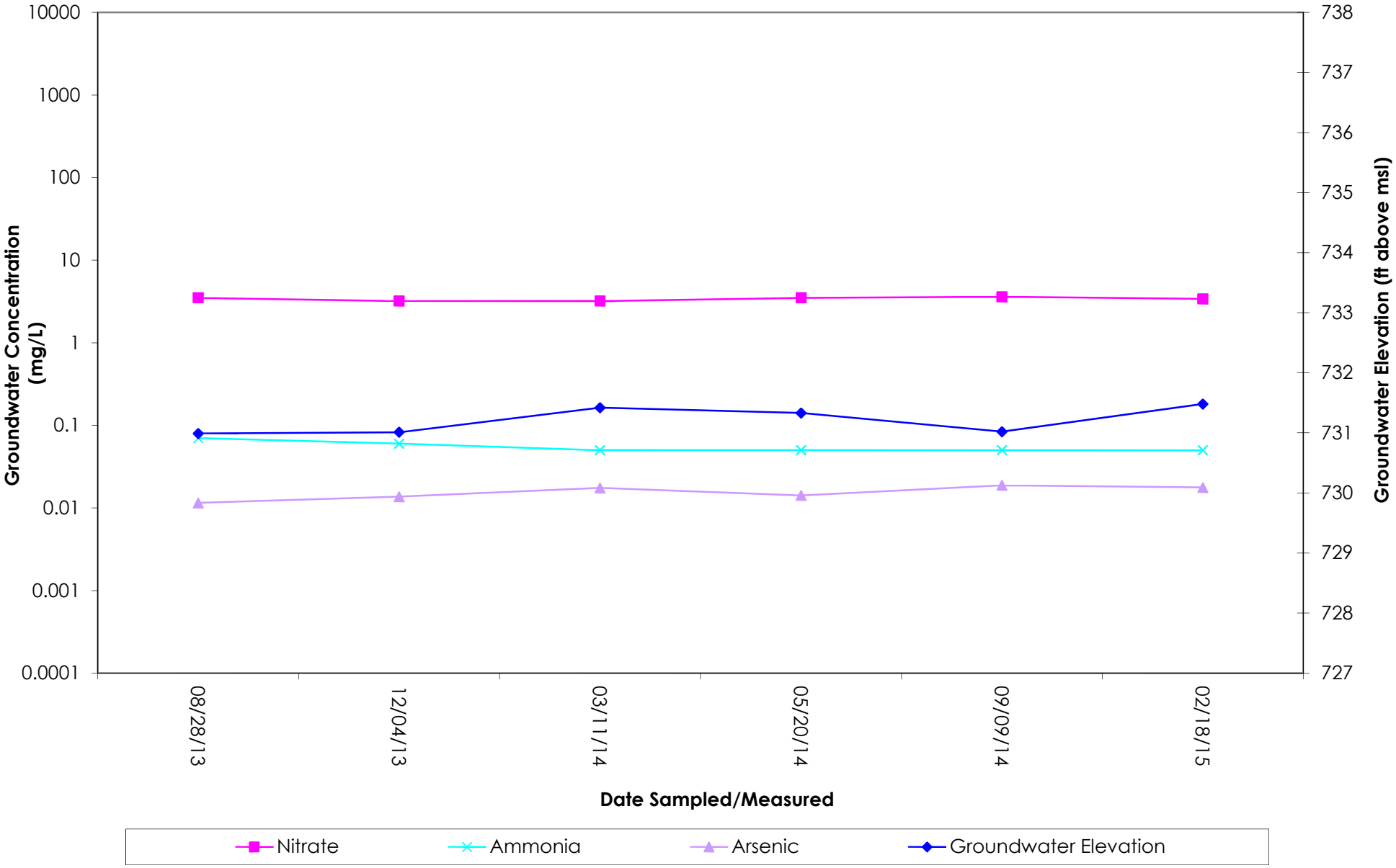
MW-13 Groundwater Concentrations and Elevations vs. Time
Bee-Jay Scales Site
Sunnyside, Washington



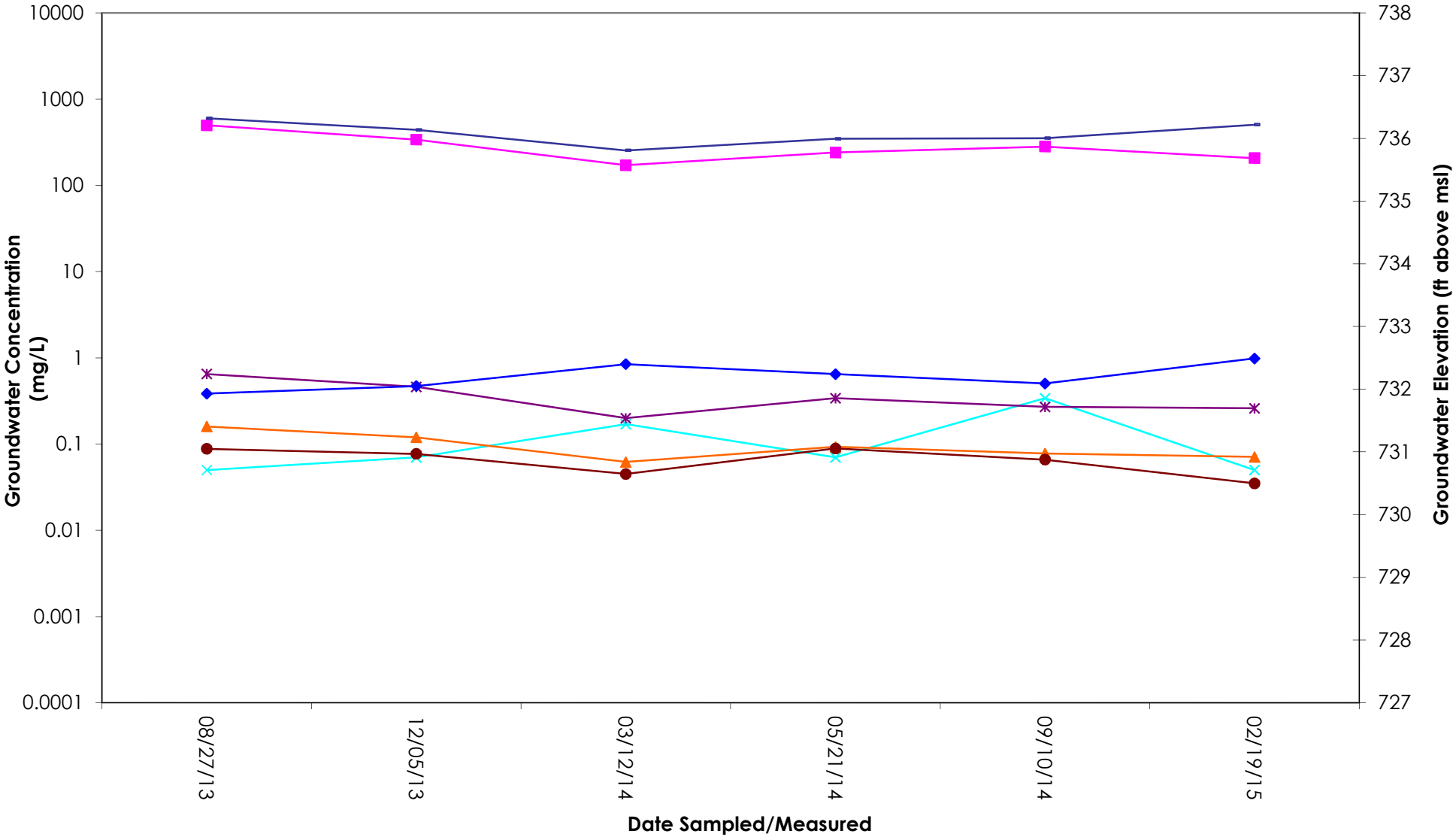
MW-14 Groundwater Concentrations and Elevations vs. Time
Bee-Jay Scales Site
Sunnyside, Washington



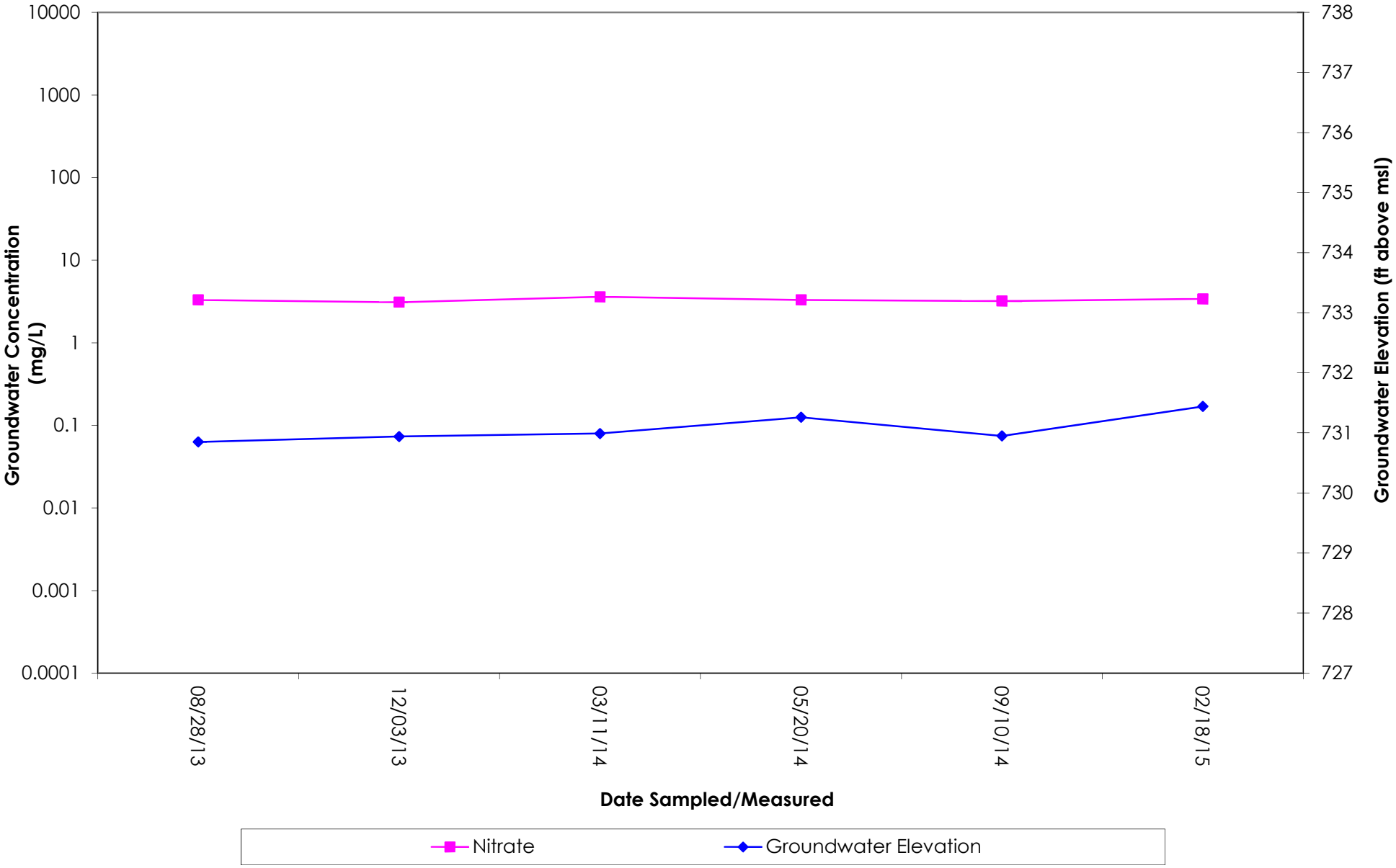
MW-15 Groundwater Concentrations and Elevations vs. Time
Bee-Jay Scales Site
Sunnyside, Washington



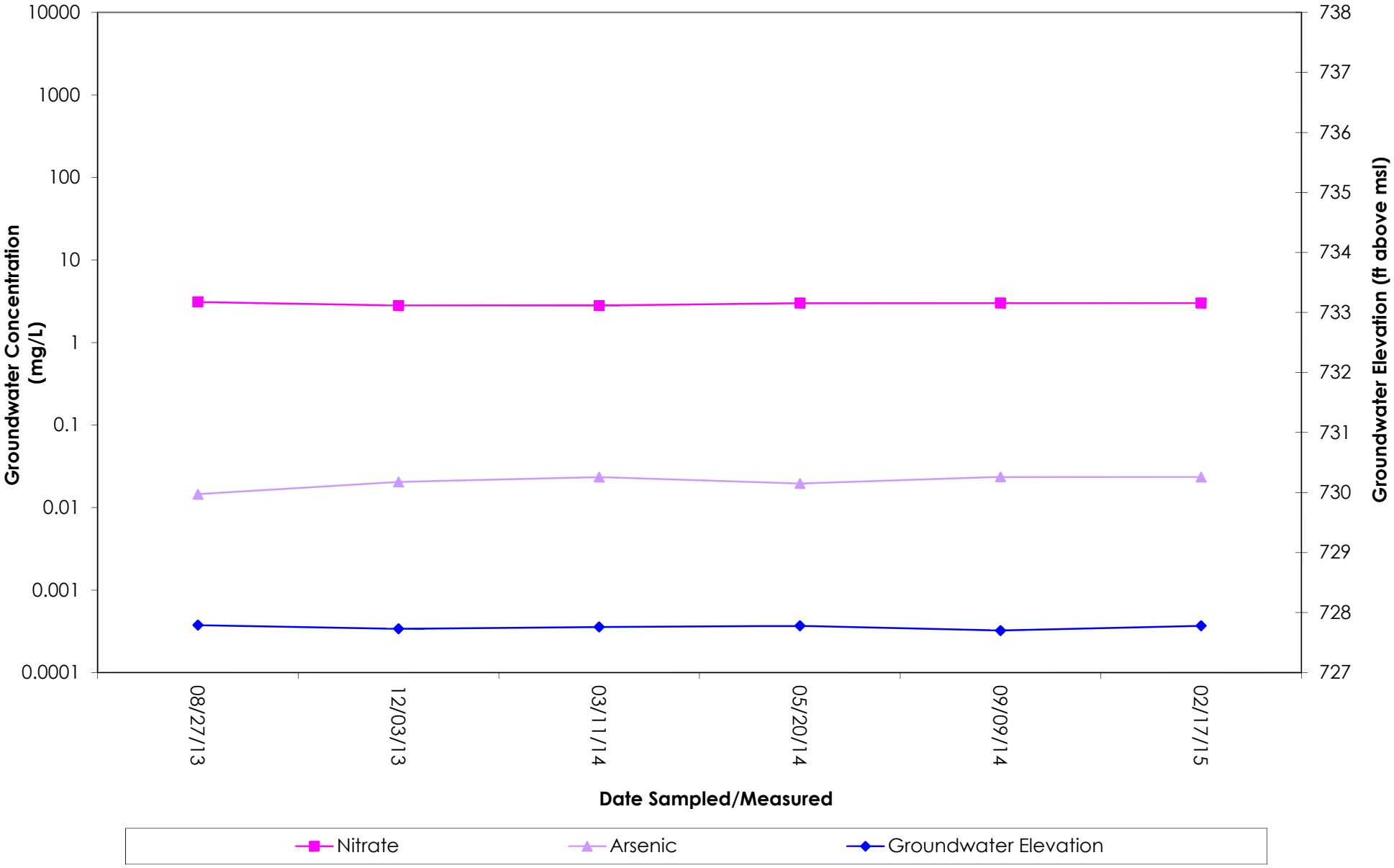
MW-16 Groundwater Concentrations and Elevations vs. Time
Bee-Jay Scales Site
Sunnyside, Washington



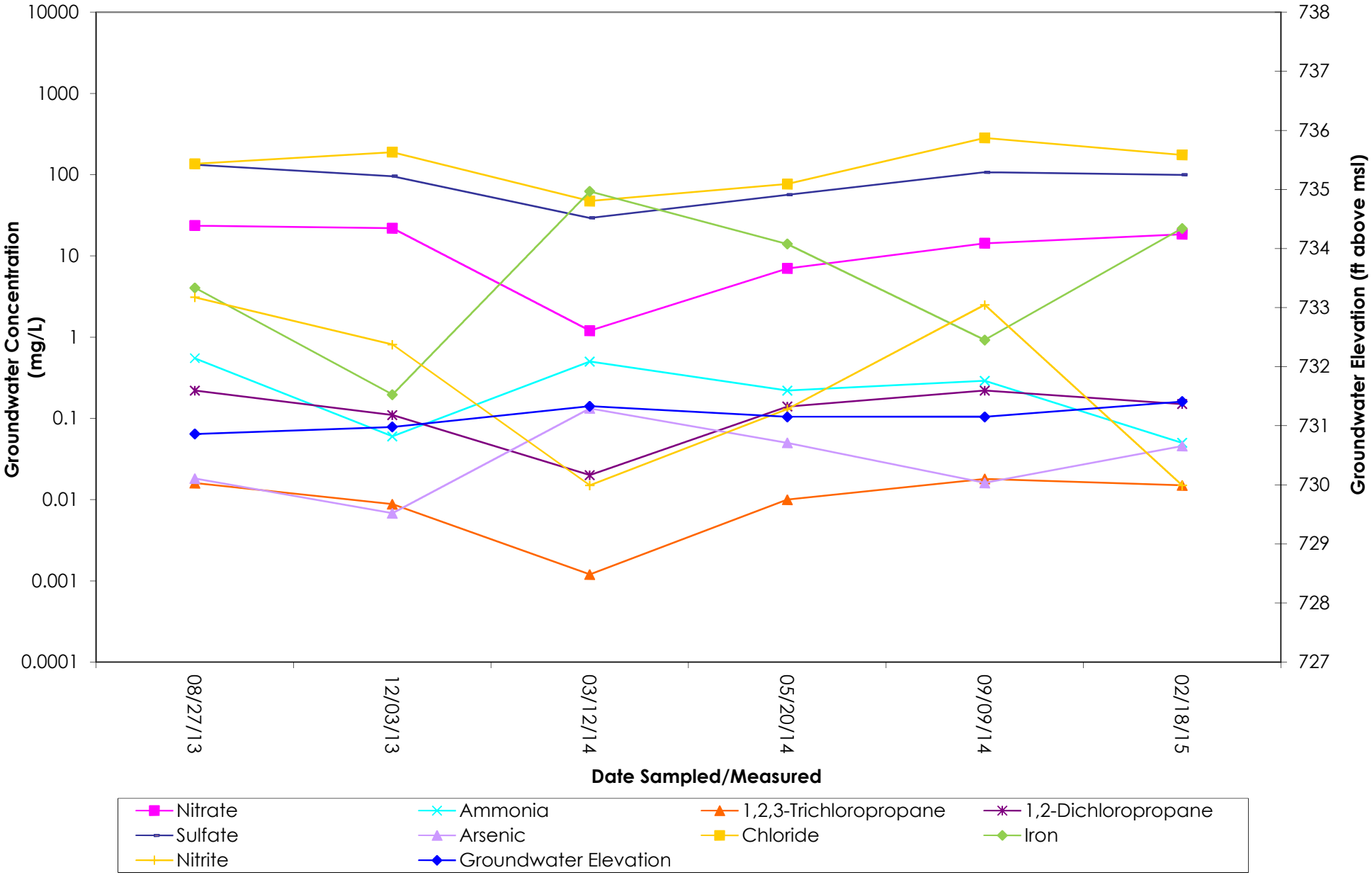
MW-17 Groundwater Concentrations and Elevations vs. Time
Bee-Jay Scales Site
Sunnyside, Washington



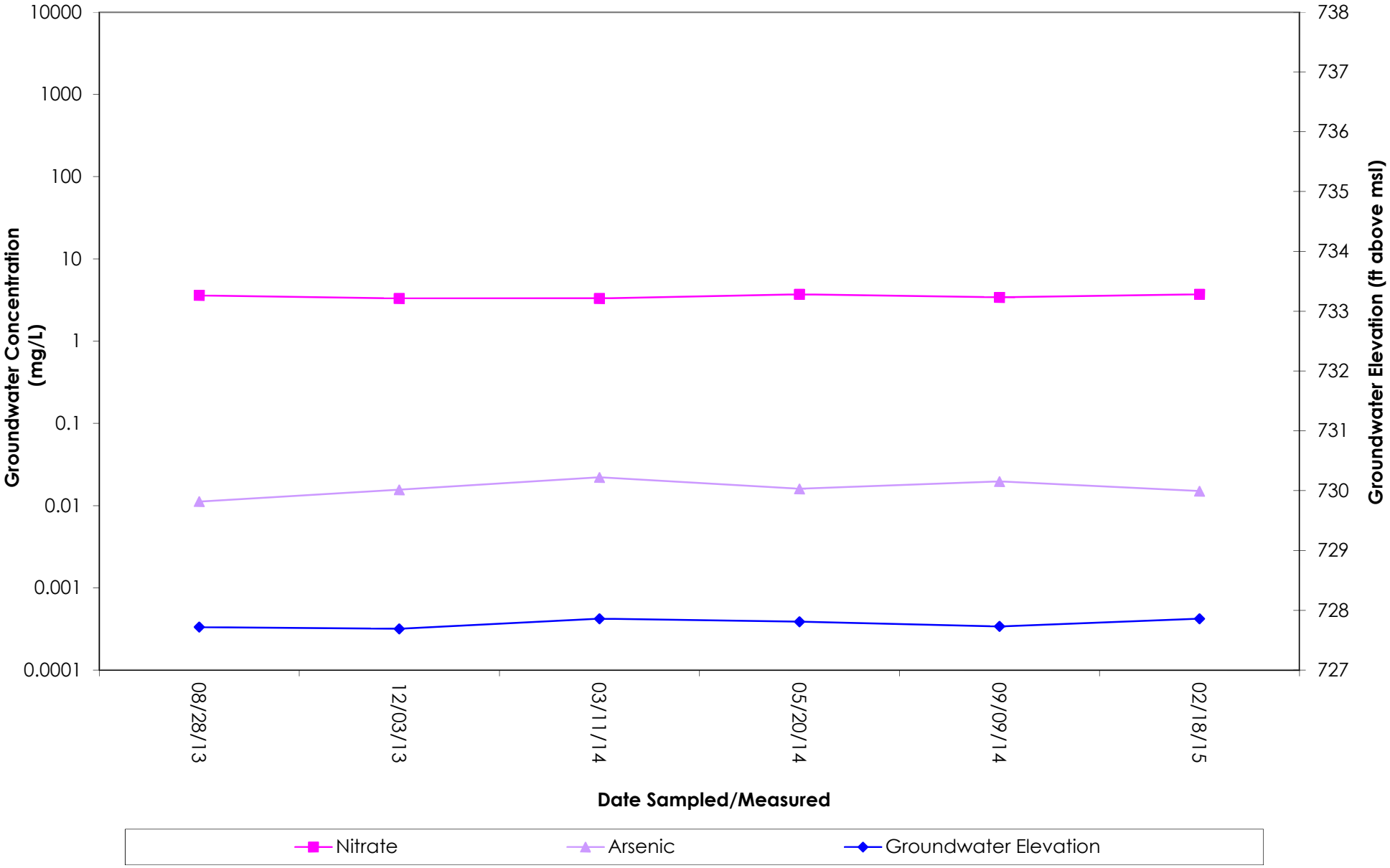
MW-18 Groundwater Concentrations and Elevations vs. Time
Bee-Jay Scales Site
Sunnyside, Washington



MW-19 Groundwater Concentrations and Elevations vs. Time
Bee-Jay Scales Site
Sunnyside, Washington



MW-20 Groundwater Concentrations and Elevations vs. Time
Bee-Jay Scales Site
Sunnyside, Washington



Nitrate Concentrations versus Time
Bee-Jay Scales Site, Sunnyside, Washington