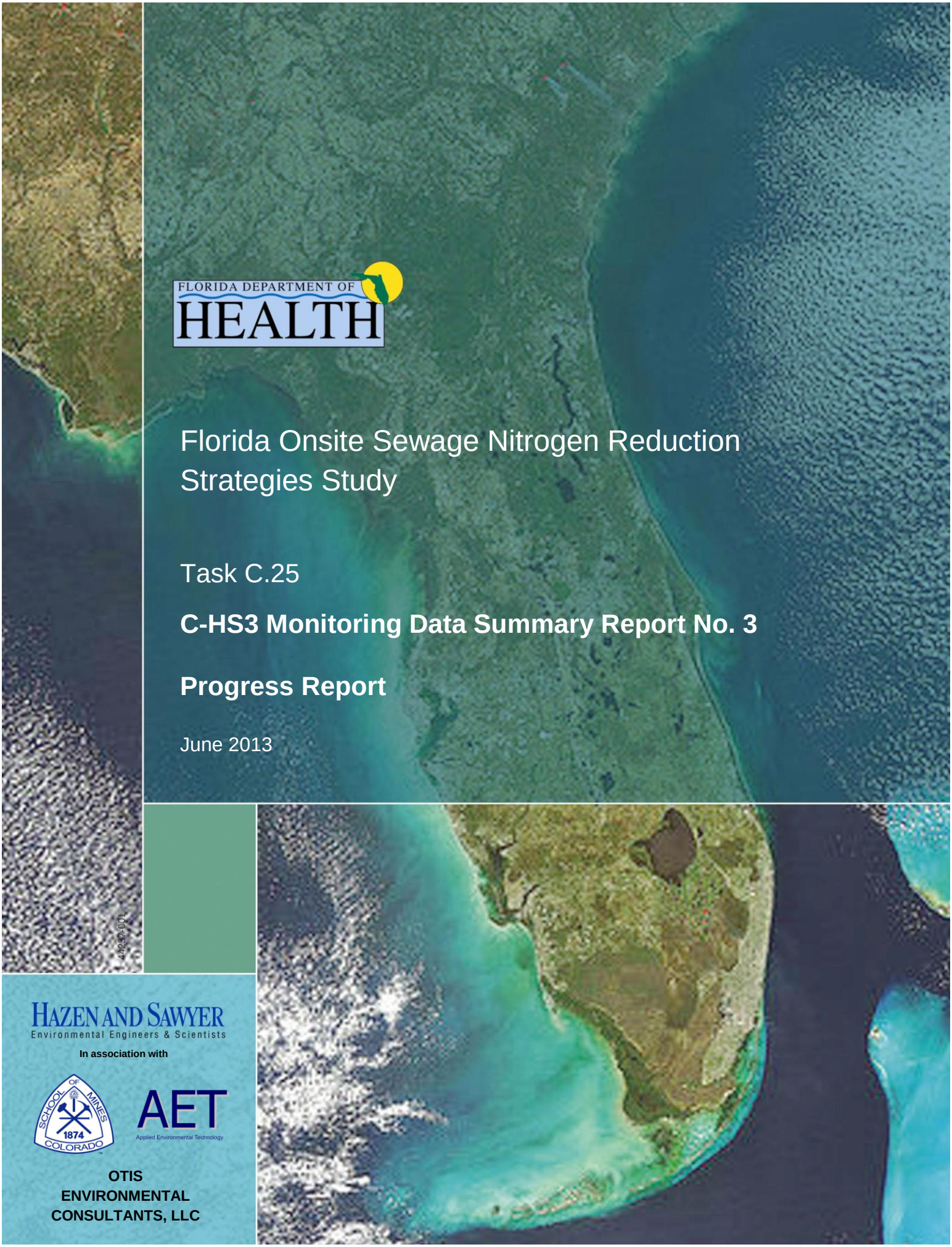

FLORIDA DEPARTMENT OF HEALTH

Florida Onsite Sewage Nitrogen Reduction Strategies Study

Task C.25

C-HS3 Monitoring Data Summary Report No. 3

Progress Report

June 2013

4423-001

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Environmental Engineers & Scientists

In association with

SCHOOL OF MINES 1874 COLORADO

AET
Applied Environmental Technology

OTIS ENVIRONMENTAL CONSULTANTS, LLC

Florida Onsite Sewage Nitrogen Reduction Strategies Study

TASK C.25
PROGRESS REPORT

C-HS3 Monitoring
Data Summary Report No. 3

Prepared for:

Florida Department of Health
Division of Disease Control and Health Protection
Bureau of Environmental Health
Onsite Sewage Programs
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June 2013

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C-HS3 Monitoring
Data Summary Report No. 3

1.0 Background

Task C of the Florida Onsite Sewage Nitrogen Reduction Strategies Study includes monitoring at field sites in Florida to evaluate nitrogen reduction in soil and groundwater, to assess groundwater impacts from various onsite wastewater systems, and to provide data for parameter estimation, verification, and validation of models developed in Task D. The Task C.5 QAPP documents the objectives, monitoring framework, sample frequency and duration, and analytical methods to be used at the field sites. The Task C.23 instrumentation report for the C-HS3 OSTDS system and plume documents the test area design, number and location of monitoring points, and preliminary field parameters from monitoring points for this Polk County, Florida field site, and also includes preliminary sample collection and analyses.

2.0 Purpose

This report documents data that was collected in the third C-HS3 monitoring and sampling event which was conducted February 25 through February 28, 2013. The corresponding sample event report was submitted as C-HS3 Sample Event Report No. 3, May 2013, as a deliverable under Task C.24. The monitoring event consisted of water use measurement from the household water meter, groundwater elevation measured within the standpipe piezometers, measurement of field parameters, and collection of effluent and groundwater samples and their analyses in a NELAC certified laboratory.

3.0 Materials and Methods

3.1 Project Site

The C-HS3 field site is located in Polk County, FL adjacent to Big Gum Lake in a rural area surrounded by commercial orange groves. The onsite sewage treatment and disposal system (OSTDS) for the residence consists of an old 750 gallon single compartment septic tank with most likely no outlet filter, and it is unknown whether an outlet tee is present. The septic tank is located adjacent to the soil treatment unit, which is a gravity fed standard bed drainfield, 10 ft by 20 ft in area.

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3.2 Monitoring and Sampling Locations and Identification

A sampling grid for groundwater screening was developed downgradient of the soil treatment unit as depicted in Figure 1. A 6-foot by 5-foot grid spacing was staked. Transect lines A through U run east-west, roughly perpendicular to the groundwater flow direction and increase (higher letter identification) moving northward from the drainfield. Transect lines 0 through 7 run north-south, roughly parallel to the groundwater flow direction and increase moving from the east to west. Based on initial screening data, 22 monitoring locations were chosen within the grid for standpipe piezometer installation. Groundwater monitoring points were installed on June 2012. One type of monitoring point was installed using either hand or drilling methods (standpipe piezometer). Standpipe piezometers consist of either ¾-inch or 1-inch diameter PVC with a 1-foot or 5-foot screen (0.010-inch slots) and riser extending to the ground surface (refer to the Task C QAPP and Task C.23 C-HS3 Instrumentation Report for additional detail).

Each monitoring location was assigned a unique identification indicating grid location (self explanatory), and depth below ground surface (bottom of the well screen in feet). For example A03-15 is a standpipe piezometer sampler located on the grid at A03 at 15 feet below ground surface. A schematic of the C-HS3 monitoring network is shown in Figure 1. A complete list of all installed standpipe piezometers and sample identification is included in Appendix A.

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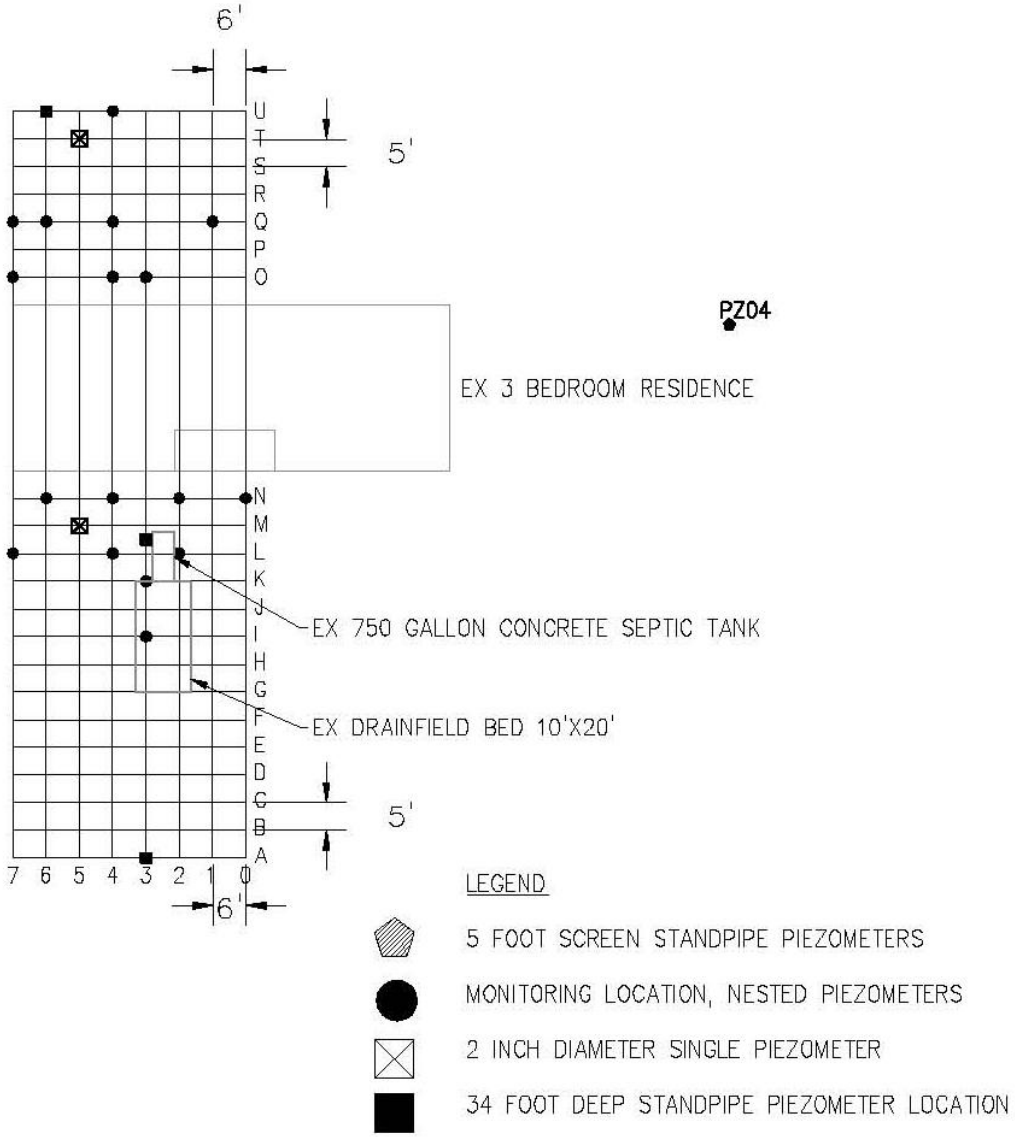

Figure 1
C-HS3 Monitoring Network

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3.3 Operational Monitoring

A water meter for the house site was installed October 30, 2012. The water meter for the house site was read and recorded. A weather station (Ben Hill Griffin Elementary School in Frostproof, FL) is located approximately 17 miles from the site. Data from this weather station is available at the following website: http://fawn.ifas.ufl.edu/.

3.4 Groundwater Elevation Measurements

Groundwater level measurements are used to determine hydraulic gradients and directions of groundwater flow. Groundwater levels were measured by inserting into monitoring wells a hand-cranked steel tape graduated in feet, to the nearest 0.01 ft. These measurements are then converted to groundwater surface elevations by using the surveyed elevation of the top of the monitoring well casing. The groundwater level within all the sampled standpipe piezometers was measured for this sampling event.

3.5 Water Quality Sample Collection and Analyses

Groundwater and septic tank effluent (STE samples) were collected February 25 through February 28, 2013 for water quality analysis. A sample was collected from the septic tank to represent the effluent delivered to the drainfield. A peristaltic pump was used to collect STE directly into the analysis-specific containers. Groundwater samples were obtained using a peristaltic pump, which was attached directly to dedicated standpipe piezometer tubing. Samples were collected after sufficient purging (the sample was clear and pH and conductivity readings had stabilized) had occurred. Field parameters were then recorded.

The analysis-specific containers were supplied by the analytical laboratory and contained appropriate preservatives. The analysis-specific containers were labeled, placed in coolers and transported on ice to the analytical laboratory. Each sample container was secured in packing material as appropriate to prevent damage and spills, and was recorded on chain-of-custody forms supplied by the laboratory. Chain of custody forms were used to document the transfer of samples from field personnel to the analytical laboratory. In addition, field sample duplicates were collected immediately subsequent to the regular samples. The field duplicate samples taken include:

- C-HS3-STE
- C-HS3-PZ-03ML-15
- C-HS3-PZ-02N-21
- C-HS3-PZ-04O-17
- C-HS3-PZ-04U-14
- C-HS3-PZ-06U-14

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Field parameters (pH, specific conductance, temperature (Temp), and dissolved oxygen (DO)) were measured using portable electronic probes with probe tips placed in an overflowing plastic beaker as groundwater was being pumped. All samples were analyzed by the laboratory for: total alkalinity, total Kjeldahl nitrogen (TKN-N), ammonia nitrogen (NH_3-N), nitrate/nitrite nitrogen (NO_X-N), and chloride (CL). At some of the locations, chemical oxygen demand (COD), total phosphorus (TP), anions, cations, total organic carbon (TOC), and dissolved organic carbon (DOC) were included. Additionally, for the STE sample, carbonaceous biological oxygen demand ($CBOD_5$), total solids (TS), total suspended solids (TSS), and fecal coliform (fecal) were included. All analyses were performed by an independent and fully certified analytical laboratory (Southern Analytical Laboratory). Table 1 lists the analytical parameters, analytical methods, and detection limits for these analyses.

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Table 1
Analytical Parameters, Method of Analysis, and Detection Limits

Analytical Parameter	Method of Analysis	Method Detection Limit (mg/L)
Total Alkalinity as $CaCO_3$	SM 2320B	2 mg/L
Chemical Oxygen Demand (COD)	EPA 410.4	10 mg/L
Carbonaceous BOD ($CBOD_5$)	SM 5210B	2 mg/L
Total Kjeldahl Nitrogen (TKN-N)	EPA 351.2	0.05 mg/L
Ammonia Nitrogen (NH_3-N)	EPA 350.1	0.005 mg/L
Nitrate/Nitrite Nitrogen (NO_X-N)	EPA 300.0	0.02 mg/L
Total Phosphorus	SM 4500P-E	0.01 mg/L
Dissolved Organic Carbon (DOC)	SM 5310B	0.5 mg/L
Total Organic Carbon (TOC)	SM 5310B	0.5 mg/L
Total Solids (TS)	EPA 160.3	0.01% by wt
Total Suspended Solids (TSS)	SM 2540D	1 mg/L
Fecal Coliform (fecal)	SM9222D	1 ct/100mL
Anions		
Fluoride	EPA 300.0	0.01 mg/L
Chloride	EPA 300.0	0.05 mg/L
Nitrate-N	EPA 300.0	0.01 mg/L
Nitrite-N	EPA 300.0	0.01 mg/L
Orthophosphate-P	EPA 300.0	0.01 mg/L
Sulfate	EPA 300.0	0.20 mg/L
Cations		
Boron	EPA 200.7	0.05 mg/L
Calcium	EPA 200.7	0.01 mg/L
Iron	EPA 200.7	0.02 mg/L
Magnesium	EPA 200.7	0.01 mg/L
Manganese	EPA 200.7	0.001 mg/L
Potassium	EPA 200.7	0.01 mg/L
Sodium	EPA 200.7	0.01 mg/L

3.7 Data Management

To allow for a better visualization of the data collected at the site the mapping program **Surfer** was utilized. **Surfer** is a grid-based mapping program that interpolates irregularly spaced XYZ data into a regularly spaced grid. Although there are several methods used in Surfer to fill in areas where data is missing, the “natural neighbor” gridding method was used as the output gave the most informative graphs.

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4.0 Results

4.1 Operational Data and Site Conditions

Table 2 summarizes the water meter readings and average daily water use for the residence at site C-HS3.

Table 2
Water Meter Readings and Water Usage for C-HS3

Residence	Date and Time Read	Meter Reading	Gallons/day
C-HS3 Residence	10/30/12 10:00	6,358.20	Installed
	11/26/12 9:00	8,800.91	90.61
	2/25/13 9:00	15,980.66	78.90

Daily recorded meteorological data is provided in Appendix B. Table 3 provides the daily averages leading up to and during the sample event.

Table 3
Meteorological Data Daily Averages Measured
February 21 through March 1, 2013

Date	Temp Avg 60 cm (°F)	Temp Avg 2m (°F)	Temp Avg 10 m (°F)	Temp Soil Avg -10 cm (°F)	Dewpoint Avg 2m (°F)	Relative Humidity Avg 2m (%)	Rain Total 2m (in)	2m Rain max over 15min (in)	10m Wind avg (mph)	ET (in/d)
21-Feb-13	69.38	68.82	68.56	69.58	60.29	77	0	0	4.93	0.11
22-Feb-13	73.33	72.99	72.56	71.23	65.00	79	0	0	6.12	0.12
23-Feb-13	75.20	74.91	74.32	72.94	67.69	81	0	0	8.35	0.12
24-Feb-13	73.62	73.02	72.41	73.71	67.55	85	0	0	6.37	0.12
25-Feb-13	73.60	73.45	73.36	74.27	65.41	79	0	0	5.86	0.11
26-Feb-13	71.05	71.12	70.99	73.90	67.47	89	0.13	0.04	8.81	0.08
27-Feb-13	66.12	65.27	65.24	72.26	57.99	79	0	0	6.08	0.10
28-Feb-13	61.85	60.92	61.04	71.10	50.62	72	0	0	6.12	0.10
1-Mar-13	55.63	54.97	55.26	69.37	42.41	64	0	0	7.01	0.06

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4.2 Groundwater Levels

Water levels were measured within the standpipe piezometers on February 25 for this sampling event as summarized in Table 4. Figure 2 illustrates the surficial groundwater contours as measured within the standpipe piezometers during Sample Event 1 on August 28, 2012, Figure 3 illustrates Sample Event 2 on November 26, 2012, and Figure 4 illustrates Sample Event 3 on February 25, 2013. A summary of all recorded groundwater elevations taken at the standpipe piezometers is presented in Appendix C. As depicted, the groundwater elevations have been found to fluctuate due to periods of dry weather and/or heavy precipitation. For example, the August contours (SE No. 1) were during the rainy season and in a week where over 5 inches of rain fell in the area, whereas the November contours (SE No. 2) were during a week of very low rainfall, and a period of less than 0.10 inches of rain in the preceding 30 days.

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Table 4
Standpipe Piezometer Groundwater Levels February 25, 2013

Identification	Water Table El[1] (ft)	Identification	Water Table El[1] (ft)
PZ01	94.03	PZ-04N-17	93.81
PZ02	93.58	PZ-04N-21	93.84
PZ03	93.79	PZ-06N-15	93.88
PZ04	93.85	PZ-06N-17	93.86
PZ05	93.61	PZ-06N-21	94.00[2]
PZ-03A-15	93.99	PZ-03O-15	93.81
PZ-03A-17	93.87	PZ-03O-17	93.76
PZ-03A-21	93.98	PZ-03O-21	93.80
PZ-03A-34	93.62[2]	PZ-04O-15	93.82
PZ-03I-15	93.96	PZ-04O-17	93.81
PZ-03I-17	93.83[2]	PZ-04O-21	93.83
PZ-03I-21	93.92	PZ-07O-15	93.80
PZ-03K-15	93.84	PZ-07O-17	93.77
PZ-03K-17	93.86	PZ-07O-20	93.79
PZ-03K-21	93.88	PZ-01Q-13	93.79
PZ-02L-15	93.87	PZ-01Q-15	93.80
PZ-02L-17	93.92	PZ-01Q-19	93.81
PZ-02L-21	93.95	PZ-04Q-13	93.60[2]
PZ-04L-15	93.91	PZ-04Q-15	93.81
PZ-04L-17	94.03	PZ-04Q-19	93.80
PZ-04L-21	93.96	PZ-06Q-13	93.80
PZ-07L-15	93.92	PZ-06Q-15	93.81
PZ-07L-17	93.93	PZ-06Q-19	93.81
PZ-07L-21	93.98	PZ-07Q-13	93.81
PZ-03ML-15	93.95	PZ-07Q-15	93.81
PZ-03ML-17	93.93	PZ-07Q-19	93.79
PZ-03ML-21	93.93	PZ-04U-12	93.78
PZ-00N-15	93.84	PZ-04U-14	93.79
PZ-00N-17	93.72	PZ-04U-18	93.74
PZ-00N-21	93.74	PZ-06U-12	93.77
PZ-02N-15	94.00	PZ-06U-14	93.76
PZ-02N-17	93.95	PZ-06U-34	93.76
PZ-02N-21	93.98	Staff gauge	93.55
PZ-04N-15	93.85		

[1]Elevation above mean sea level based on NGVD 1929
[2]Most likely erroneous instrument reading

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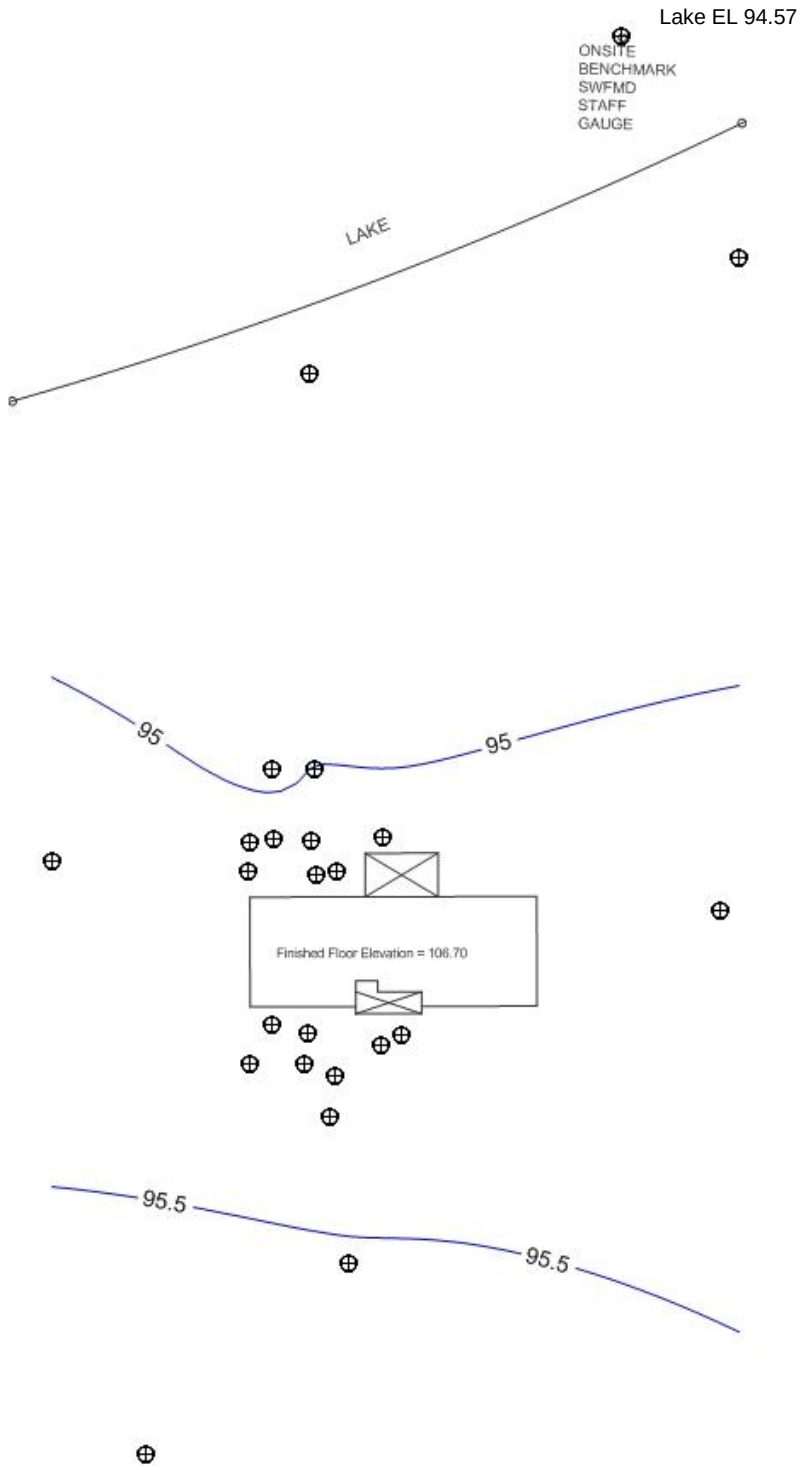

Figure 2
Surficial Groundwater Contours SE1, August 28, 2012

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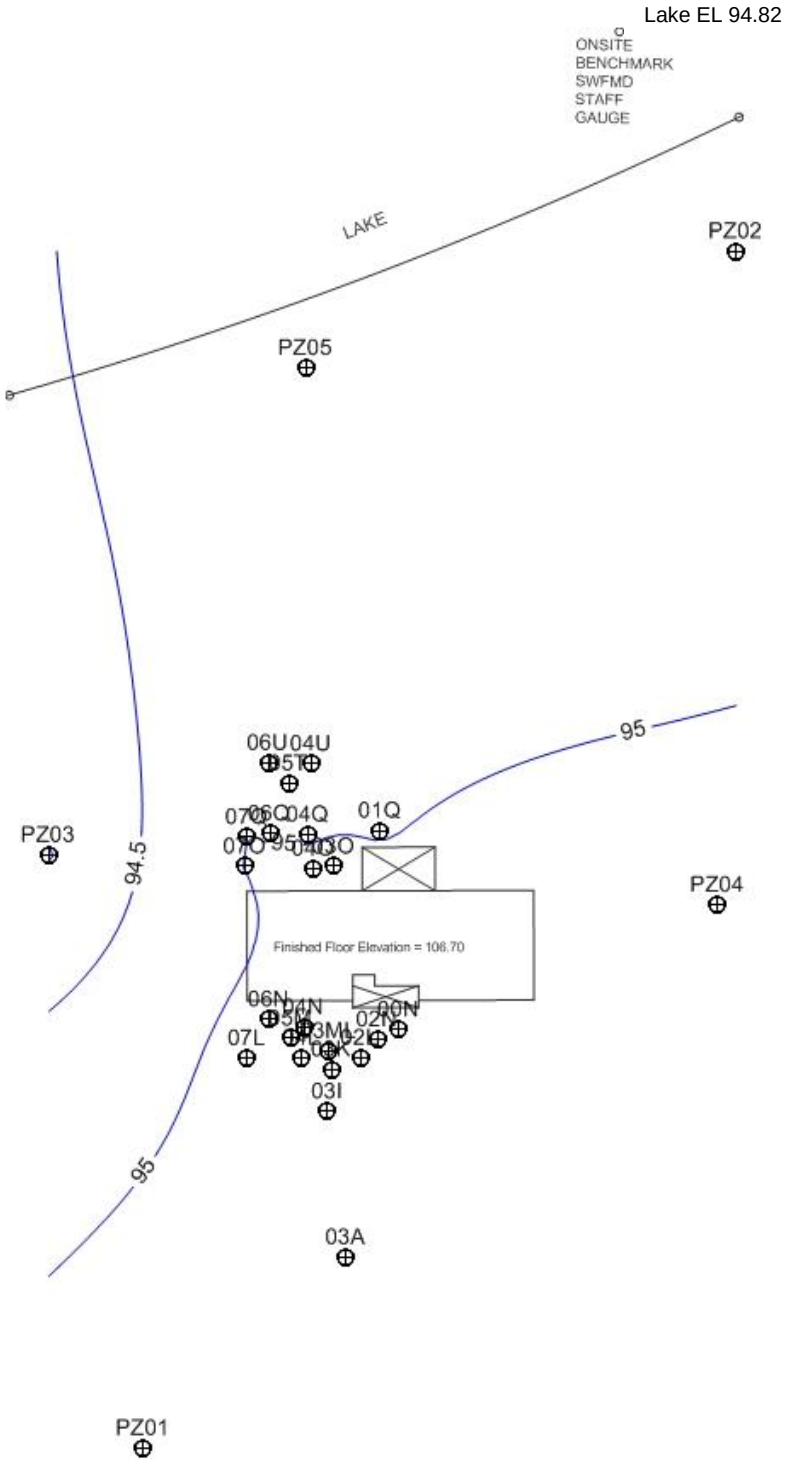

Figure 3
Surficial Groundwater Contours SE2, November 26, 2012

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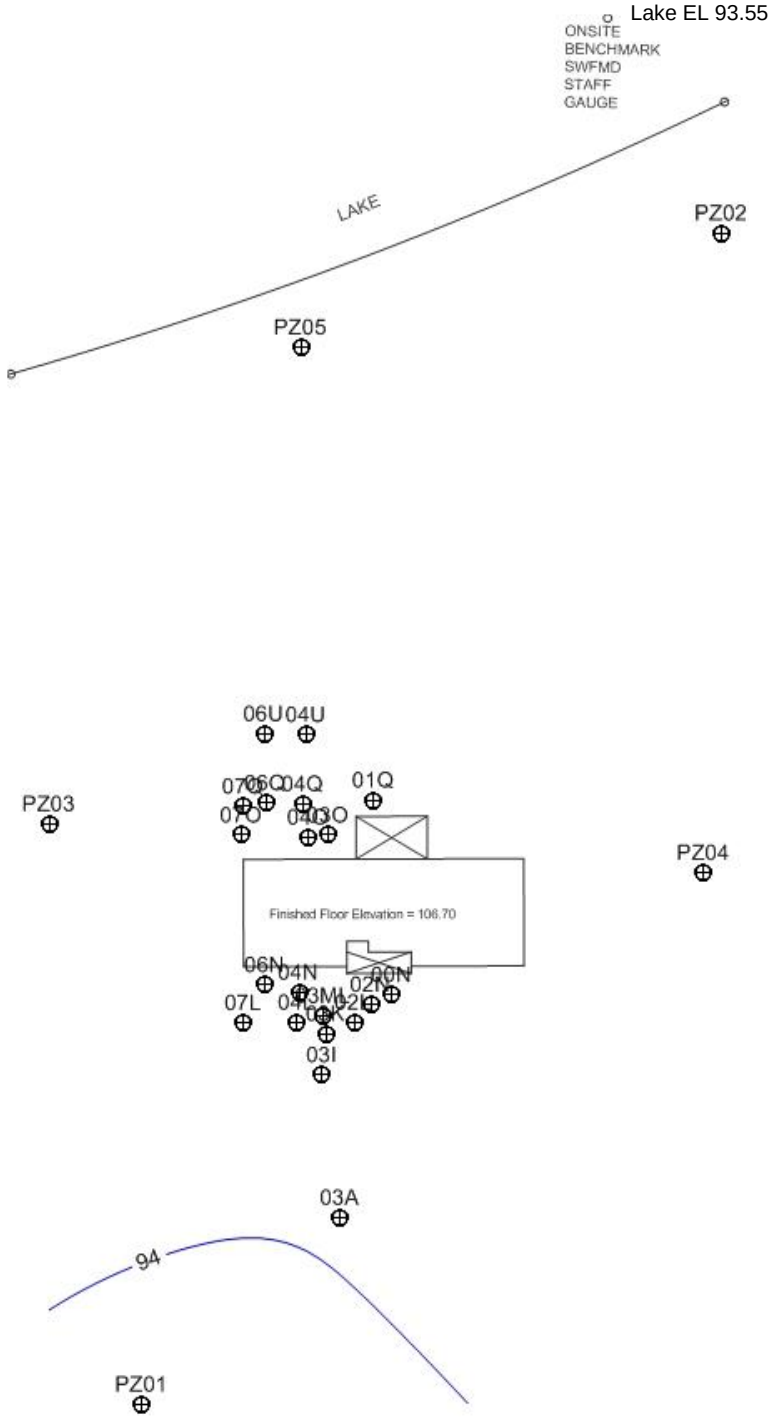

Figure 4
Surficial Groundwater Contours SE3, February 25, 2013

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4.3 Water Quality Analyses

4.3.1 Field Parameters

Field parameters (temperature, pH, dissolved oxygen (DO), and specific conductivity) were measured at all the sampling locations prior to sample collection and are provided in Appendix D. Variations in measured values between monitoring points were expected as the chemical composition of the groundwater varied due to the discharge of STE.

4.3.2 Correlations

Correlations between nitrogen parameters were investigated to determine if simple to measure field parameters could continue to be used to locate contaminant plumes. Figure 5 and 6 show scatter plots of the groundwater samples nitrogen vs conductivity and nitrogen vs. chloride, respectively. The graphs show that increasing groundwater conductivity and chloride is generally associated with increased groundwater nitrogen concentrations. A stronger linear correlation is observed for conductivity (Figure 5).

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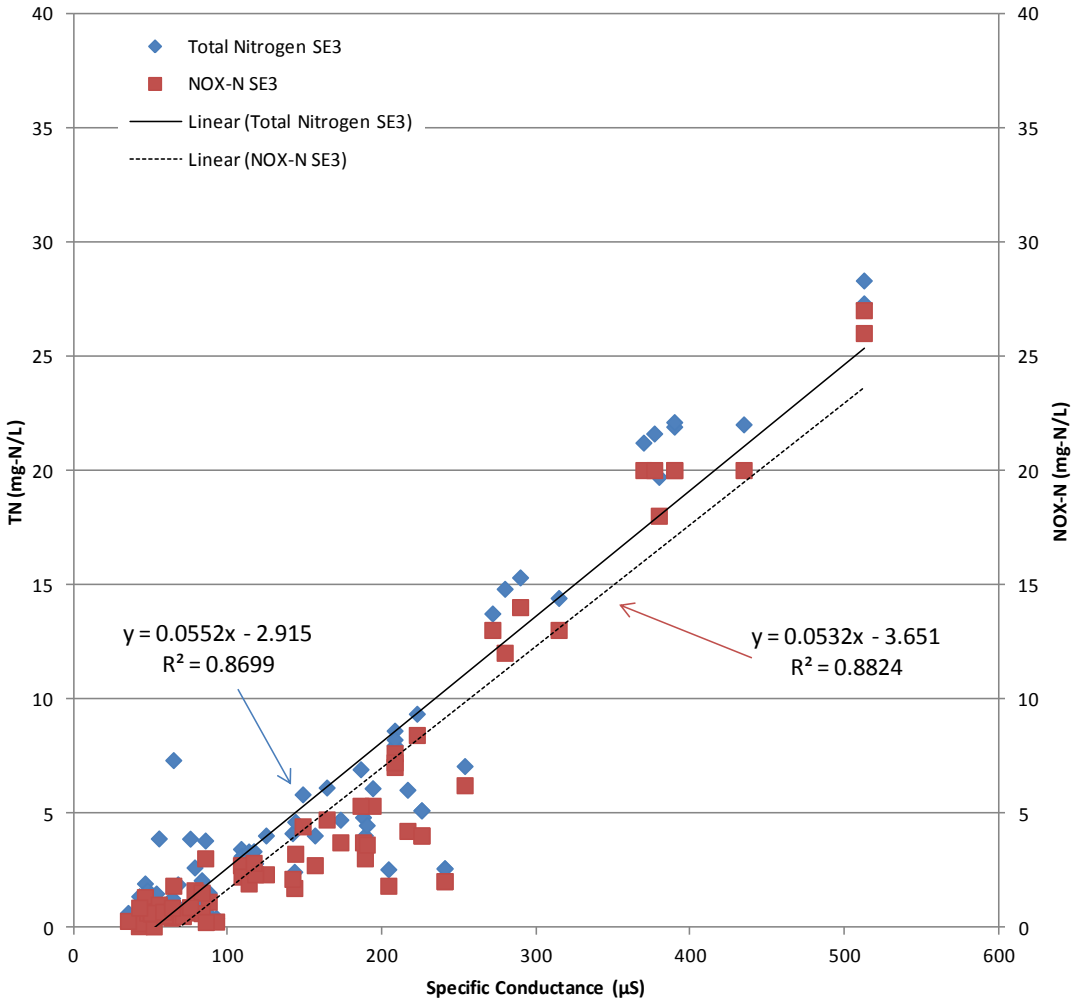

Figure 5
Correlation Between the Specific Conductance (uS) and the Concentrations of Total Nitrogen (mg-N/L) and NOX (mg-N/L)

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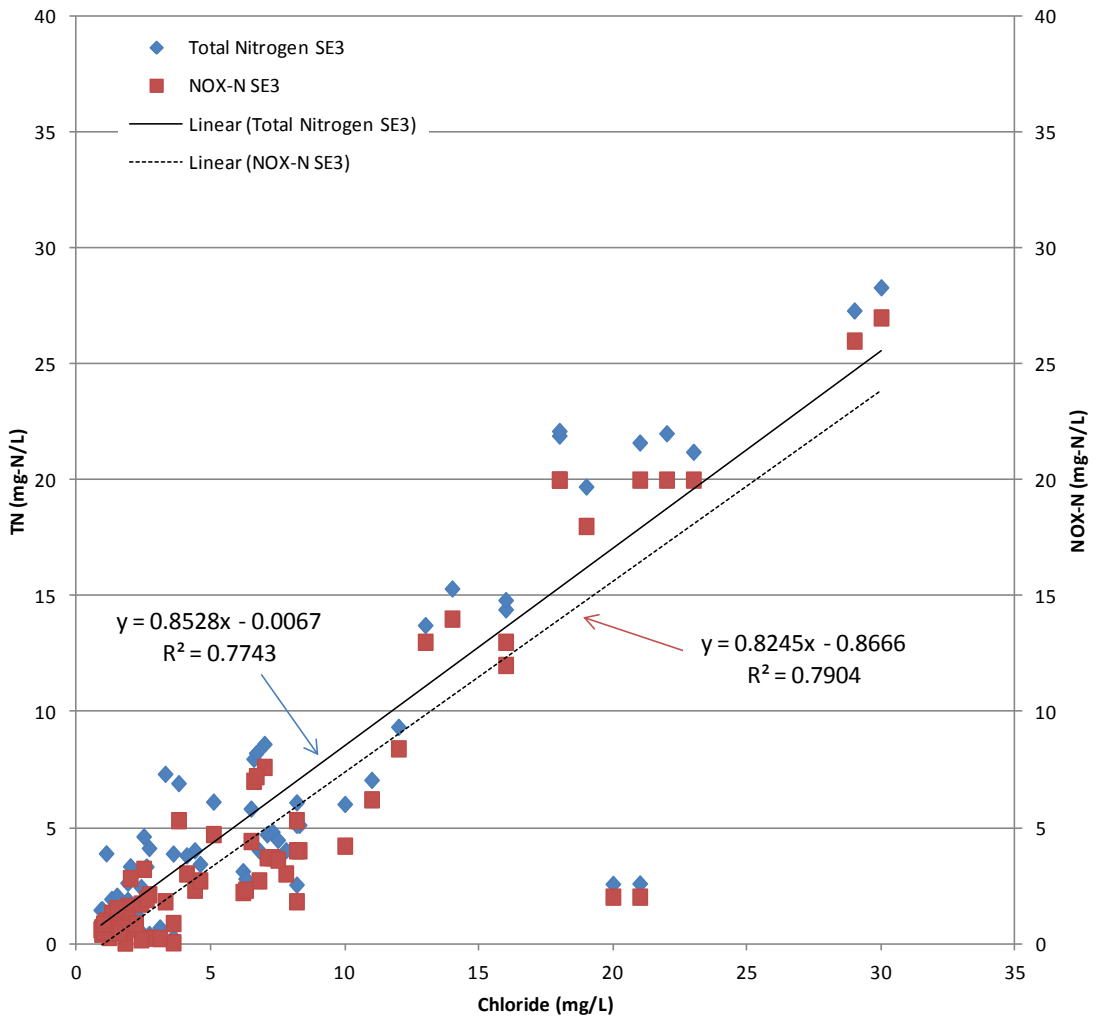

Figure 6
Correlation Between Chloride (mg/L) and
the Concentrations of Total Nitrogen (mg-N/L) and NOX (mg-N/L)

4.3.3 Analytical Parameters

In addition to measuring field parameters, all samples were analyzed for total alkalinity (as $CaCO_3$), total Kjeldahl nitrogen (TKN-N), ammonia nitrogen (NH3-N), nitrate/nitrite nitrogen (NOX-N), and chloride (CL). At some of the locations, chemical oxygen demand (COD), total phosphorus (TP), anions, cations, total organic carbon (TOC) and dissolved organic carbon (DOC) were included. Additionally, for the STE sample, carbo-

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naceous biological oxygen demand ($CBOD_5$), total solids (TS), total suspended solids (TSS), and fecal coliform (fecal) were included. By analyzing for the different nitrogen species, a clearer picture is gained on the transformation of nitrogen within the plume. The complete water quality analytical results for Sample Event No. 3 are listed in Table D.1 of Appendix D. The summary of the water quality is presented in Table E.1 of Appendix E. The laboratory report containing the raw analytical data is included in Appendix F.

4.3.4 Nitrate/Nitrite Concentrations with Groundwater Depth

The general trend of the nitrogen plume at the site can be determined with the data collected to date. The 65 piezometers installed at different locations and depths below the ground surface were mapped in **Surfer**. Although **Surfer** is an informative tool for mapping the information from the site, it cannot project a 3-dimensional view of concentrations with depth. The concentrations of NOX at all locations where groundwater samples were obtained are illustrated in Figures 7, 8, 9, and 10. Based on the distribution of points with depth, three "slices" were chosen for the groundwater data surrounding the system. The three slices were separated by elevation above sea level (NGVD29 datum). A **Surfer** schematic illustrating the "slices" of NOX concentration with depth from February 2013 are presented in Figures 7 through 9. The maps show contours of the concentrations as estimated using the "natural neighbor" gridding method in **Surfer™**. This method was used because it did not extend results past data points, as was noted on previous project results. In addition, Figure 10 presents the contours of the concentrations for the shallow piezometers across the site (including the background piezometers).

The shallow piezometer NOX results near the system (Figure 7) appear to show the plume to be confined in a northwesterly direction from the drainfield. The middle piezometers (Figure 8) again seem to indicate a high NOX concentration northwest of the system, downgradient from the house. This cannot be explained at this time and will be investigated further in subsequent monitoring events; however the **Surfer** plot is basing the high concentration at location 06U on the NOX results from only one data point, the PZ-06U-14 middle piezometer sample. The deeper piezometers (Figure 9) indicate relatively low NOX concentrations at this point in time, similar to background levels.

Similar slices of specific conductivity concentration with depth were created. The maps showed very similar trends as the NOX concentrations. For comparative purposes, Figure 11 presents the contours of the concentrations for the shallow piezometers across the site (including the background piezometers), and shows a plume similar to the shallow NOX data.

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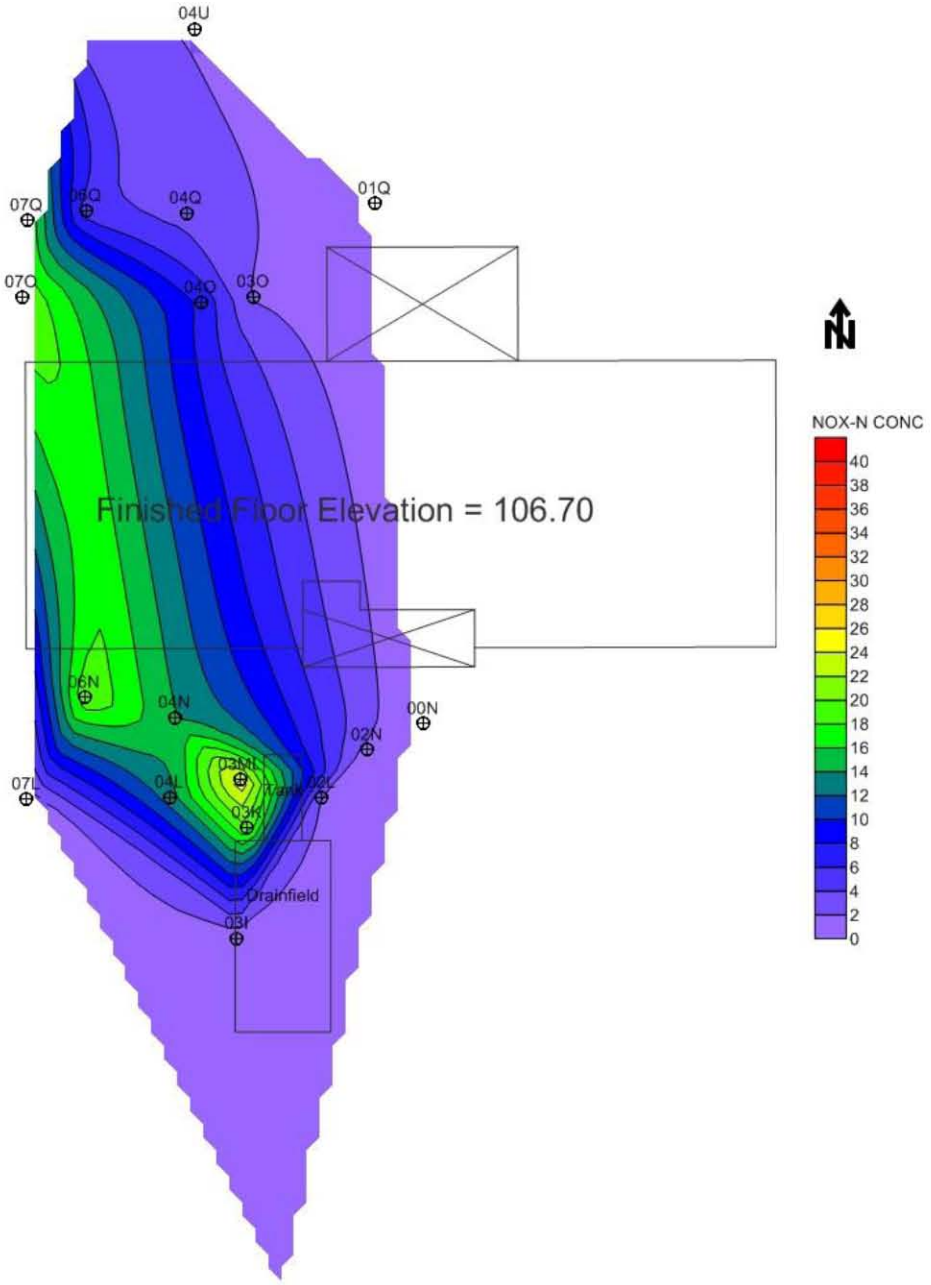

Figure 7
Shallow Elev 90-93 ft above MSL (February 2013 Sample Event)
Schematic (using Surfer) illustrating NOX concentrations in the subsurface

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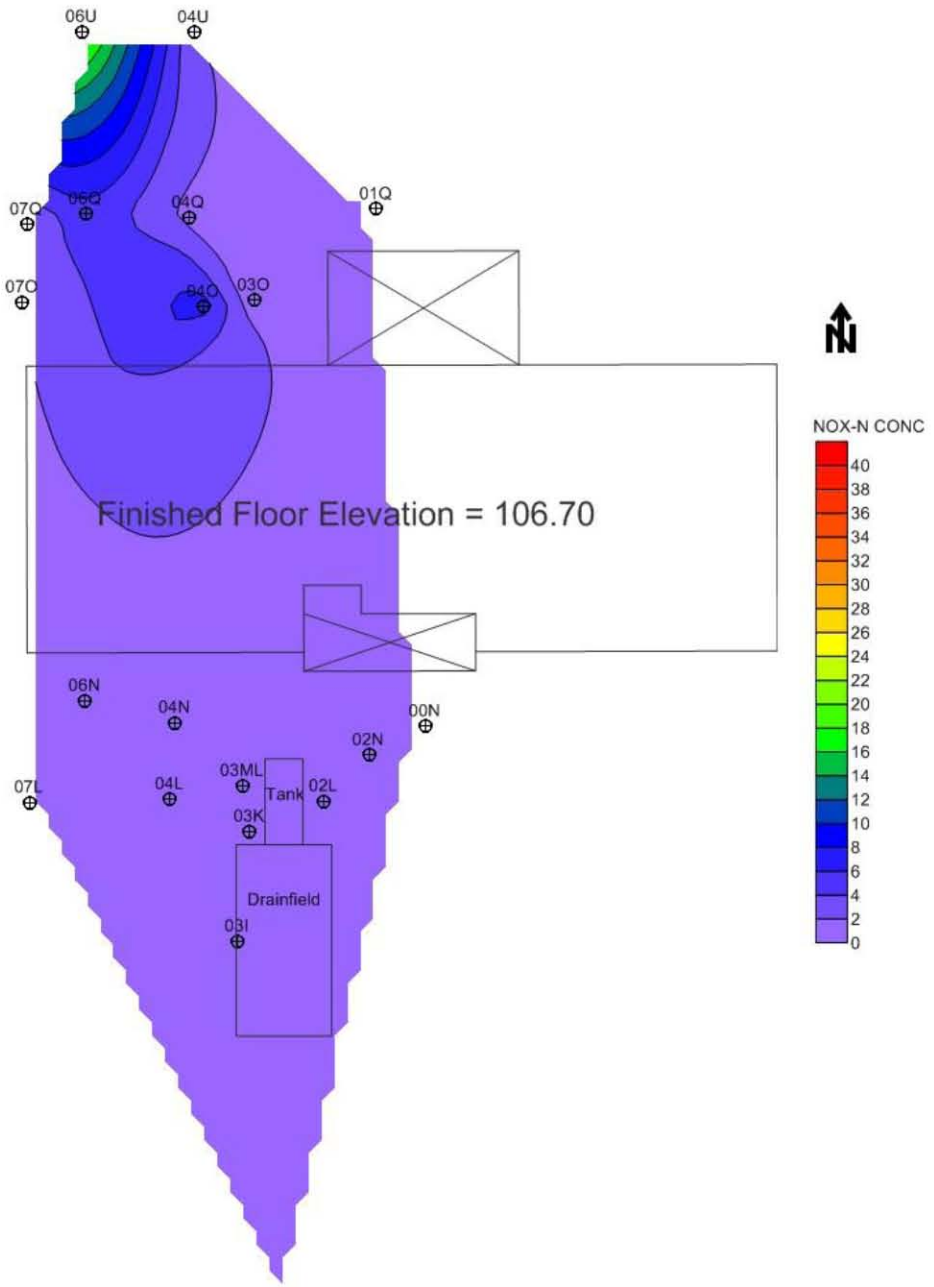

Figure 8
Elev 87-90 ft above MSL (February 2013 Sample Event)
Schematic (using Surfer) illustrating NOX concentrations in the subsurface

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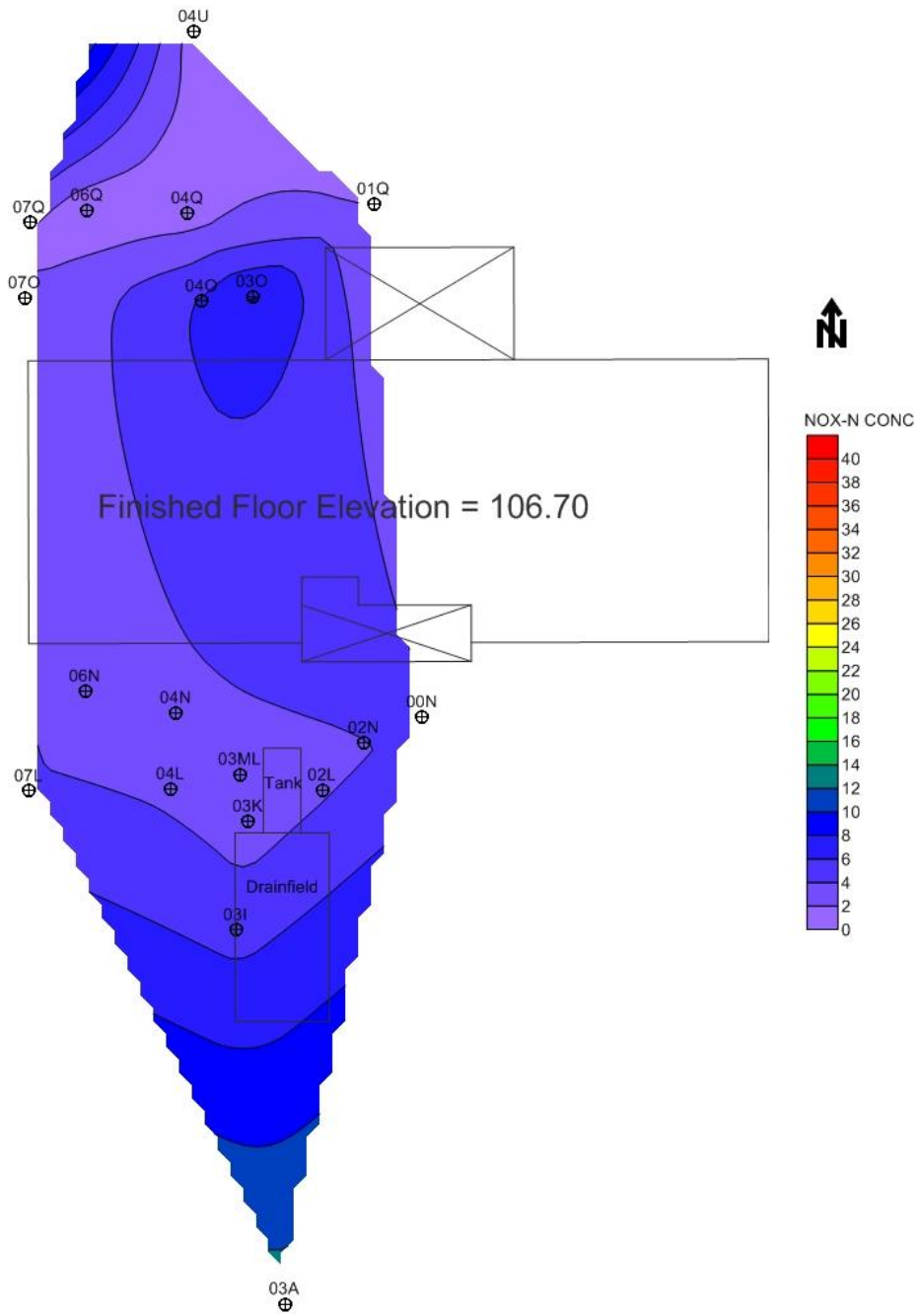

Figure 9
Elev 83-87 ft above MSL (February 2013 Sample Event)
Schematic (using Surfer) illustrating NOX concentrations in the subsurface

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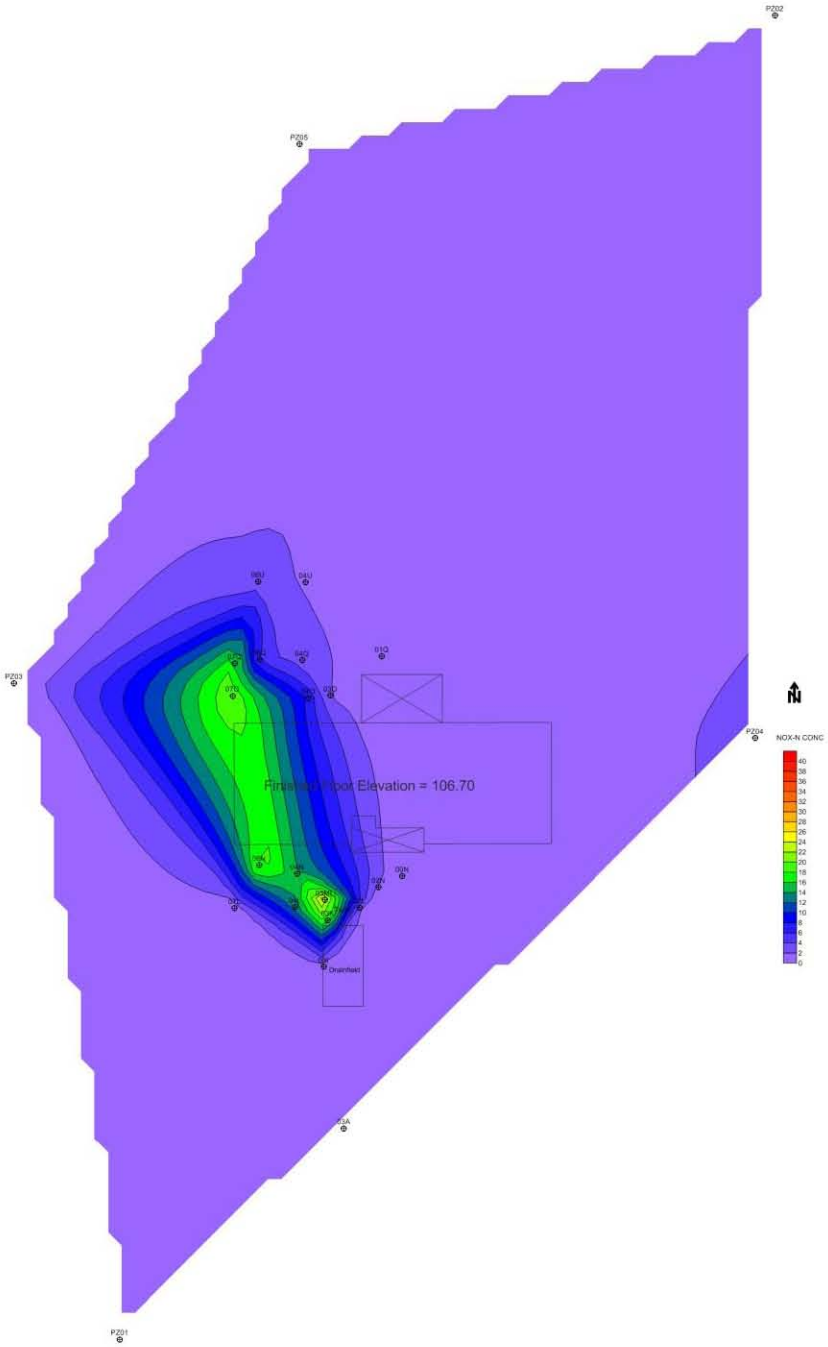

Figure 10
Shallow including Background Elev 90-93 ft above MSL
(February 2013 Sample Event)
Schematic (using Surfer) illustrating NOX concentrations in the subsurface

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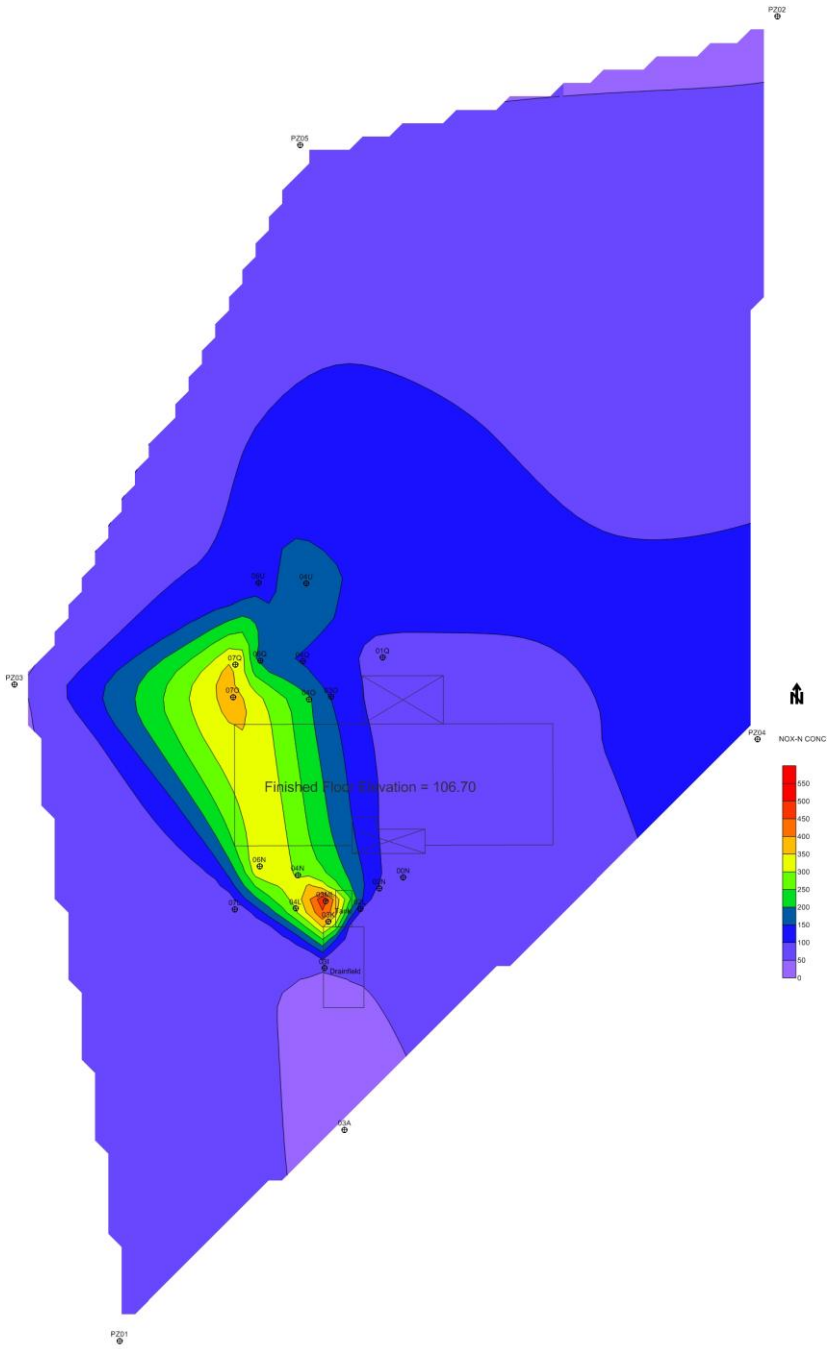

Figure 11
Shallow including Background Elev 90-93 ft above MSL
(February 2013 Sample Event)
Schematic (using Surfer) illustrating Specific Conductance concentrations in the subsurface

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5.0 C-HS3 Data Summary Report No. 3: Summary and Recommendations

5.1 Summary

The results of this third sampling event served to identify the general trend of the NOX plume and provide the basis upon which to make adjustments and modifications to future monitoring locations. Results of Sample Event No. 3 indicate that:

- The nitrogen plume continues to appear to be flowing in a north-northwest direction and similar to the groundwater contours.

5.2 Conclusions

The project team will continue to evaluate all results including those that result from implementation of the recommendations and make further adaptations as needed (observational method). Following is a list with select recommendations which the next sample event will address:

- Additional analyses of field parameters will give a better understanding of if and how they may correlate to nitrogen occurrence and reduction.
- Additional groundwater level monitoring will provide information needed to determine the necessary parameters for model development.
- Further sampling of all locations will provide a snapshot of the site needed for plume identification and for nitrogen fate and transport determination.
- Additional sucralose investigation is recommended for the next sample event.

5.2.1 High NOX Northwest of System

As discussed in Section 4.3.4, the middle depth piezometers appear to indicate a high NOX concentration northwest of the system, downgradient from the house. However, this indication is based on the results from only one piezometer PZ-06U-14. To better determine whether the nitrogen is wastewater derived within these piezometers, sucralose (Splenda) analyses is recommended to be included in the subsequent sample event. The influent wastewater (C-HS3-STE) sucralose concentration was 8.3 µg/L (November 29, 2012) and 0.30 µg/L (August 28, 2012), which indicates the source wastewater contains sucralose. The sucralose concentration was below the method detection limit for all four background piezometers analyzed for sucralose at grid location 03A which include: PZ-03A-34 (sampled November 29, 2012), PZ-03A-15, PZ-03A-17 and PZ-03A-21 (sampled August 28, 2012).

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Appendix A: C-HS3 Sample Identification

Table 3

Site C-HS3 Sample Identification

	Identification	Type of Monitoring Point	Top Elevation[1] (feet)	Bottom Elevation[1] (feet)
1	C-HS3-STE	Wastewater	N/A	N/A
2	PZ01	1" Standpipe Piezometer, 5' screen	108.53	92.73
3	PZ02	1" Standpipe Piezometer, 5' screen	98.08	91.80
4	PZ03	1" Standpipe Piezometer, 5' screen	102.84	92.04
5	PZ04	1" Standpipe Piezometer, 5' screen	104.35	92.45
6	PZ05	1" Standpipe Piezometer, 5' screen	98.68	91.08
7	PZ-03A-15	1" Standpipe Piezometer, 5' screen	106.84	91.84
8	PZ-03A-17	3/4" Standpipe Piezometer, 1' screen	106.75	89.75
9	PZ-03A-21	3/4" Standpipe Piezometer, 1' screen	106.84	85.84
10	PZ-03A-34	2" Standpipe Piezometer, 5' screen	107.12	73.12
11	PZ-03I-15	1" Standpipe Piezometer, 5' screen	106.46	91.46
12	PZ-03I-17	3/4" Standpipe Piezometer, 1' screen	106.35	89.35
13	PZ-03I-21	3/4" Standpipe Piezometer, 1' screen	106.44	85.44
14	PZ-03K-15	1" Standpipe Piezometer, 5' screen	106.12	91.12
15	PZ-03K-17	3/4" Standpipe Piezometer, 1' screen	106.11	89.11
16	PZ-03K-21	3/4" Standpipe Piezometer, 1' screen	106.13	85.13
17	PZ-02L-15	1" Standpipe Piezometer, 5' screen	106.02	91.02
18	PZ-02L-17	3/4" Standpipe Piezometer, 1' screen	105.90	88.90
19	PZ-02L-21	3/4" Standpipe Piezometer, 1' screen	105.95	84.95
20	PZ-04L-15	1" Standpipe Piezometer, 5' screen	105.86	90.86
21	PZ-04L-17	3/4" Standpipe Piezometer, 1' screen	105.84	88.84
22	PZ-04L-21	3/4" Standpipe Piezometer, 1' screen	105.78	84.78
23	PZ-07L-15	1" Standpipe Piezometer, 5' screen	105.97	90.97
24	PZ-07L-17	3/4" Standpipe Piezometer, 1' screen	105.93	88.93
25	PZ-07L-21	3/4" Standpipe Piezometer, 1' screen	105.98	84.98
26	PZ-03ML-15	1" Standpipe Piezometer, 5' screen	106.00	91.00
27	PZ-03ML-17	3/4" Standpipe Piezometer, 1' screen	106.03	89.03
28	PZ-03ML-21	3/4" Standpipe Piezometer, 1' screen	105.93	84.93
29	PZ-05M-25	2" Standpipe Piezometer, 5' screen	106.01	81.01
30	PZ-00N-15	1" Standpipe Piezometer, 5' screen	105.78	90.78
31	PZ-00N-17	3/4" Standpipe Piezometer, 1' screen	105.74	88.74

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Table 3
Site C-HS3 Sample Identification

	Identification	Type of Monitoring Point	Top Elevation[1] (feet)	Bottom Elevation[1] (feet)
32	PZ-00N-21	3/4" Standpipe Piezometer, 1' screen	105.72	84.72
33	PZ-02N-15	1" Standpipe Piezometer, 5' screen	105.90	90.90
34	PZ-02N-17	3/4" Standpipe Piezometer, 1' screen	105.87	88.87
35	PZ-02N-21	3/4" Standpipe Piezometer, 1' screen	105.86	84.86
36	PZ-04N-15	1" Standpipe Piezometer, 5' screen	105.60	90.60
37	PZ-04N-17	3/4" Standpipe Piezometer, 1' screen	105.61	88.61
38	PZ-04N-21	3/4" Standpipe Piezometer, 1' screen	105.64	84.64
39	PZ-06N-15	1" Standpipe Piezometer, 5' screen	105.73	90.73
40	PZ-06N-17	3/4" Standpipe Piezometer, 1' screen	105.70	88.70
41	PZ-06N-21	3/4" Standpipe Piezometer, 1' screen	105.80	84.80
42	PZ-03O-15	1" Standpipe Piezometer, 5' screen	104.59	89.59
43	PZ-03O-17	3/4" Standpipe Piezometer, 1' screen	104.54	87.54
44	PZ-03O-21	3/4" Standpipe Piezometer, 1' screen	104.58	83.58
45	PZ-04O-15	1" Standpipe Piezometer, 5' screen	104.10	89.10
46	PZ-04O-17	3/4" Standpipe Piezometer, 1' screen	104.09	87.09
47	PZ-04O-21	3/4" Standpipe Piezometer, 1' screen	104.11	83.11
48	PZ-07O-15	1" Standpipe Piezometer, 5' screen	103.83	88.83
49	PZ-07O-17	3/4" Standpipe Piezometer, 1' screen	103.75	86.75
50	PZ-07O-20	3/4" Standpipe Piezometer, 1' screen	103.91	83.91
51	PZ-01Q-13	1" Standpipe Piezometer, 5' screen	104.19	91.19
52	PZ-01Q-15	3/4" Standpipe Piezometer, 1' screen	104.18	89.18
53	PZ-01Q-19	3/4" Standpipe Piezometer, 1' screen	104.24	85.24
54	PZ-04Q-13	1" Standpipe Piezometer, 5' screen	103.58	90.58
55	PZ-04Q-15	3/4" Standpipe Piezometer, 1' screen	103.54	88.54
56	PZ-04Q-19	3/4" Standpipe Piezometer, 1' screen	103.60	84.60
57	PZ-06Q-13	1" Standpipe Piezometer, 5' screen	103.66	90.66
58	PZ-06Q-15	3/4" Standpipe Piezometer, 1' screen	103.66	88.66
59	PZ-06Q-19	3/4" Standpipe Piezometer, 1' screen	103.71	84.71
60	PZ-07Q-13	1" Standpipe Piezometer, 5' screen	103.56	90.56
61	PZ-07Q-15	3/4" Standpipe Piezometer, 1' screen	103.64	88.64
62	PZ-07Q-19	3/4" Standpipe Piezometer, 1' screen	103.62	84.62
63	PZ-05T-25	2" Standpipe Piezometer, 5' screen	102.73	77.73
64	PZ-04U-12	1" Standpipe Piezometer, 5' screen	102.61	90.61
65	PZ-04U-14	3/4" Standpipe Piezometer, 1' screen	102.64	88.64

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Table 3
Site C-HS3 Sample Identification

	Identification	Type of Monitoring Point	Top Elevation[1] (feet)	Bottom Elevation[1] (feet)
66	PZ-04U-18	3/4" Standpipe Piezometer, 1' screen	102.61	84.61
67	PZ-06U-12	1" Standpipe Piezometer, 5' screen	102.07	90.07
68	PZ-06U-14	3/4" Standpipe Piezometer, 1' screen	101.96	87.96
69	PZ-06U-34	3/4" Standpipe Piezometer, 1' screen	101.94	67.94

[1]Elevation above mean sea level based on NGVD 1929

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Appendix B: Weather Station Data

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Table B.1
Daily Recorded Meteorological Data
Frostproof, FL

Period	60cm T avg (F)	60cm T min (F)	60cm T max (F)	2m T avg (F)	2m T min (F)	2m T max (F)	10m T avg (F)	10m T min (F)	10m T max (F)	Tsoil avg - 10cm (F)	Tsoil min (avg) - 10cm (F)	Tsoil max (avg) - 10cm (F)	2m DewPt avg (F)	Rel Hum avg 2m (pct)	2m Rain tot (in)	2m Rain max over 15min (in)	10m Wind avg (mph)	10m Wind min (mph)	10m Wind max (mph)	WDir avg 10m (deg)
1-Dec-12	65.71	54.75	80.37	65.97	56.48	78.76	65.44	57.61	76.12	69.94	68.77	71.35	60.19	83	0	0	7.54	2.77	23.83	31
2-Dec-12	69.08	56.25	82.89	69.01	58.03	80.83	68.15	59.76	78.3	70.89	69.58	72.37	62.29	81	0	0	6.52	0	19.43	58
3-Dec-12	69.28	59.86	81.81	69.39	61.16	79.9	68.67	61.59	77.34	72.03	71.17	73.18	61.25	78	0	0	6.12	0.73	17.47	52
4-Dec-12	64.76	54.45	78.35	65.59	57.45	76.93	65.89	59.54	74.52	70.96	69.66	71.96	58.47	80	0	0	5.45	1.57	17.07	49
5-Dec-12	68.81	57.33	82.62	68.45	58.93	79.52	67.97	59.7	77.32	71.19	69.84	72.86	60.98	79	0	0	5.1	0.23	12.83	56
6-Dec-12	68.85	60.03	81.68	68.93	61.38	79.32	68.19	61.36	77.14	72.11	71.02	73.4	63.33	84	0	0	5.52	0.6	14.93	46
7-Dec-12	67.39	60.12	81.99	67.34	60.37	78.42	66.82	59.95	77.52	72.21	71.26	73.47	64.36	91	0	0	4.72	0.27	12.9	40
8-Dec-12	70.41	63.32	84.29	70.18	63.59	80.94	69.31	62.89	79.16	72.93	72.03	74.26	66.86	90	0.36	0.17	4.5	0.23	13.07	75
9-Dec-12	72.24	65.01	85.8	72.03	66.27	83.34	71.49	65.57	81.05	73.88	73.13	75.02	68	89	0.01	0.01	3.37	0	18.83	310
10-Dec-12	72.57	63.99	83.23	72.97	65.57	82.76	72.31	65.5	81.23	73.96	73.15	74.91	69.93	91	0.14	0.07	5.9	0	17.73	196
11-Dec-12	72.81	66.97	82.51	73	67.64	80.73	72.22	67.3	79.05	74.56	73.8	75.45	71.13	94	1.24	0.66	4.76	0.27	11.83	230
12-Dec-12	72.37	67.8	83.03	72.61	68.2	82.09	71.97	67.71	80.53	74.32	73.56	75.38	71.04	95	0.46	0.27	4.89	0.03	18.1	187
13-Dec-12	63.8	55.92	70.81	63.93	56.23	71.26	63.32	55.92	70.7	73.54	71.92	74.68	62.03	94	0	0	8.14	0.73	18.97	358
14-Dec-12	62.52	56.46	74.41	62.44	56.62	72.93	61.68	56.26	71.15	71.25	70.59	71.92	59.15	90	0	0	9.22	2.03	18.07	18
15-Dec-12	65.02	57.04	81.43	65.11	57.49	78.04	64.55	57.16	76.46	71.21	70.21	72.57	61.14	88	0	0	5.1	0.4	12.13	54
16-Dec-12	67.71	56.37	81.27	68.28	58.59	79.09	68.77	60.98	77.49	71.26	69.8	72.86	64.2	88	0	0	3.8	0.37	32.8	109
17-Dec-12	69.97	61.2	83.07	70.45	62.53	81.84	70.26	62.62	79.77	71.98	70.95	73.18	65.48	86	0	0	5.22	0.43	17.53	207
18-Dec-12	69.61	55	84.61	69.98	56.44	82.36	69.5	57.04	79.7	72.45	71.87	73.49	64.76	85	0.03	0.03	7.03	1.33	21.5	270
19-Dec-12	61.47	47.17	81.1	62.41	50.34	78.64	63.96	53.64	77.76	70.27	68.92	71.85	52.72	75	0	0	4.68	0.13	14.07	52
20-Dec-12	69.75	55.45	82.65	70.19	58.62	81.7	69.68	60.71	79.88	70.21	68.79	71.85	63.14	80	0	0	7.78	1.5	19.93	174
21-Dec-12	56.92	43.49	70.59	56.84	44.54	71.17	56.16	45.09	70.63	69.43	67.19	71.58	44.35	66	0.3	0.21	11.25	2.9	28.23	309
22-Dec-12	48.23	36.39	65.17	48.95	40.34	63.25	49.71	40.77	62.01	65.26	64.11	67.14	28.16	49	0	0	8.36	1.7	24.07	329
23-Dec-12	51.84	32.15	72.03	52.52	37.09	69.64	54.31	41.46	68.45	63.72	62.1	65.41	42.72	72	0	0	3.87	0.03	8.67	21
24-Dec-12	58.08	46.18	71.58	58.96	48.07	69.76	60.91	52.3	68.49	65.24	63.91	66.49	54.5	86	0	0	3.43	0	15.27	176
25-Dec-12	63.97	50.54	76.71	64.8	52.99	75.24	65.38	57.29	73.49	66.06	64.58	67.55	58.72	82	0	0	5.45	0.2	35.87	148
26-Dec-12	65.14	50.88	80.1	65.74	51.87	79.72	65.23	52.3	77.65	67.54	66.56	68.76	61.85	88	0.1	0.08	9.47	1.83	36.57	224
27-Dec-12	51.35	39.05	67.87	51.42	40.24	64.96	52.06	40.85	63.34	65.19	64.17	67.3	43.87	78	0	0	5.12	0.07	12.83	337
28-Dec-12	58.23	38.86	75.06	58.32	40.9	73.24	58.36	44.8	71.74	64.22	62.44	66.34	52.88	84	0.03	0.01	5.46	0.6	13.67	91
29-Dec-12	67.59	51.21	79.03	67.93	51.91	77.25	67.34	52.11	75.18	67.73	66.36	69.19	64.89	90	0.25	0.15	9.66	0.87	22.43	249
30-Dec-12	49.32	38.98	58.33	49.07	39.6	56.93	48.43	39.46	55.35	64.65	63.39	67.28	42.44	79	0	0	8.99	2.1	22.23	10
31-Dec-12	59.09	45.75	75.51	59.22	46.53	74.17	58.94	46.74	72.57	64.29	62.67	66.38	52.5	80	0	0	6.26	0.73	16.17	77

Table B.1 (continued)
Daily Recorded Meteorological Data
Frostproof, FL

Period	60cm T avg (F)	60cm T min (F)	60cm T max (F)	2m T avg (F)	2m T min (F)	2m T max (F)	10m T avg (F)	10m T min (F)	10m T max (F)	Tsoil avg - 10cm (F)	Tsoil min (avg) - 10cm (F)	Tsoil max(avg) - 10cm (F)	2m DewPt avg (F)	RelHum avg 2m (pct)	2m Rain tot (in)	2m Rain max over 15min(in)	10m Wind avg (mph)	10m Wind min (mph)	10m Wind max (mph)	WDir avg 10m (deg)
1-Jan-13	63.21	48.27	80.35	64.03	50.09	77.79	65.58	55.94	76.86	65.4	63.57	67.37	57.83	82	0	0	3.56	0.1	13.93	155
2-Jan-13	66.9	52.74	82.94	67.4	55.62	80.96	68.12	58.93	79.27	66.75	64.87	68.77	61.59	84	0	0	4.45	0.7	13.2	217
3-Jan-13	66.8	59.56	82.83	66.42	59.68	79.88	65.88	59.41	78.19	68.53	67.37	70.03	63.69	92	0.02	0.01	3.93	0	15.47	9
4-Jan-13	59.73	57.2	63.88	59.72	57.31	63.3	59.22	56.95	62.42	68.14	67.66	69.26	58.67	96	0.01	0.01	7.13	1.6	15.37	22
5-Jan-13	65.98	56.44	80.28	65.55	56.61	77.63	64.65	56.32	76.15	68.06	66.79	69.64	60.34	84	0	0	6.93	0.3	16.83	44
6-Jan-13	69.34	63.64	82.18	69.26	63.95	81.1	68.61	63.36	79.41	70.12	68.97	71.87	66.48	92	0	0	4.18	0	19.43	68
7-Jan-13	64.83	60.26	71.15	64.85	60.42	70.61	64.26	59.76	69.13	70.07	69.49	70.83	61.59	90	0	0	7.64	0.13	19.1	36
8-Jan-13	70.85	62.08	83.37	70.74	62.73	80.29	70.05	62.74	78.76	70.35	69.03	72	66.31	87	0	0	5.24	1.1	13	63
9-Jan-13	73.82	66.65	85.8	73.94	67.42	84.24	73.09	67.3	82.02	71.73	70.56	73.29	68.93	86	0	0	6.62	1.03	17.5	104
10-Jan-13	71.69	64.26	83.98	71.8	64.76	82.35	71.02	64.72	80.37	72.31	71.26	73.62	65.98	84	0	0	6.77	1.13	18.23	103
11-Jan-13	69.19	61.18	80.15	69.63	63.84	78.55	69.35	65.08	76.69	71.89	70.86	73.17	66.55	90	0.01	0.01	5.18	0.53	42.67	101
12-Jan-13	70.44	60.71	82.29	70.68	62.17	81.12	70.18	62.76	79.41	71.52	70.03	72.97	64.91	84	0	0	5.41	1.07	15.8	107
13-Jan-13	70.88	60.24	83.03	71.06	61.74	80.87	70.44	62.22	78.94	71.84	70.45	73.24	64.56	82	0	0	5.69	1.1	16.1	127
14-Jan-13	69.09	58.89	82.54	69.68	60.37	80.37	69.41	60.53	78.58	71.71	70.43	73	63.85	84	0	0	5.2	0.83	68.23	120
15-Jan-13	70.73	58.98	83.98	70.93	62.2	81.61	70.45	63.97	79.72	71.95	70.74	73.47	65.02	83	0	0	4.53	0.27	10.7	115
16-Jan-13	69.21	57.94	86.05	69.87	60.24	82.31	70.88	62.71	80.73	71.97	70.59	73.38	62.82	81	0	0	3.75	0	14.6	182
17-Jan-13	63.33	54.82	80.38	63.94	55.18	79.29	64.43	54.93	77.45	71.14	70.34	72.01	59.5	86	0	0	8.35	0.3	26	252
18-Jan-13	55.55	39.95	69.35	55.17	40.41	67.6	54.35	40.19	65.34	68.99	67.57	70.29	49	80	0.04	0.02	9.55	1.8	22.63	6
19-Jan-13	63.49	55.47	75.04	63.56	55.56	73.94	62.9	55.36	71.6	69.28	68.36	70.16	60.04	89	0.04	0.02	7.3	0.67	19.47	36
20-Jan-13	64.62	59.13	74.79	64.7	59.52	72.63	64.08	59.23	71.19	69.81	68.97	70.81	61.59	90	0	0	6.22	1.53	23.2	28
21-Jan-13	65.61	60.17	74.44	65.63	60.71	72.54	65.13	60.64	71.33	69.95	69.12	70.92	61.75	87	0	0	4.41	0	12.47	1
22-Jan-13	59	46.36	68.56	59.42	49.5	67.06	58.95	51.42	64.78	68.98	67.95	70.21	48.13	68	0	0	7.55	0.8	20.73	12
23-Jan-13	56.32	44	73.44	56.86	47.48	70.77	57.02	47.7	69.55	66.97	65.59	68.32	41.31	60	0	0	6.22	0.37	15	24
24-Jan-13	56.79	39.1	75.72	57.72	41.69	73.04	59.3	47.61	71.42	66.11	64.38	67.77	46.92	72	0	0	4.63	0.2	14.43	355
25-Jan-13	59.63	44.28	79.41	60.38	46.76	75.52	61.98	49.14	74.21	66.4	64.63	68.45	51.13	76	0	0	4.29	0.13	13.47	331
26-Jan-13	59.44	43.04	80.1	60.43	45.61	76.62	63	52.5	74.3	66.46	64.69	68.23	50.8	75	0	0	3.67	0	23	20
27-Jan-13	64.27	51.78	79.48	64.92	55.58	78.1	64.89	57.2	75.6	67.13	65.61	69.1	56.98	78	0	0	6.29	0.7	16.37	44
28-Jan-13	67.84	56.5	83.07	68.08	58.78	80.06	67.47	59.81	77.67	68.55	66.97	70.66	63.91	88	0	0	5.78	1.3	24.9	67
29-Jan-13	69.85	61.43	83.12	70.11	62.11	81.19	69.29	61.97	78.87	70.01	68.74	71.55	66.28	89	0	0	6.42	1.23	15.5	104
30-Jan-13	71.77	62.83	84.78	72.09	63.68	83.73	71.1	63.46	81.5	70.83	69.53	72.37	65.19	81	0	0	9.45	1.67	43.87	177
31-Jan-13	59.96	45.72	69.62	59.74	46.78	69.44	58.96	47.1	69.01	70.16	68.32	71.58	49.11	72	0.07	0.01	7.82	0.6	28.3	321

Table B.1 (continued)
Daily Recorded Meteorological Data
Frostproof, FL

Period	60cm T avg (F)	60cm T min (F)	60cm T max (F)	2m T avg (F)	2m T min (F)	2m T max (F)	10m T avg (F)	10m T min (F)	10m T max (F)	Tsoil avg - 10cm (F)	Tsoil min(avg) - 10cm (F)	Tsoil max(avg) - 10cm (F)	2m DewPt avg (F)	RelHum avg 2m (pct)	2m Rain tot (in)	2m Rain max over 15min(in)	10m Wind avg (mph)	10m Wind min (mph)	10m Wind max (mph)	WDir avg 10m (deg)
1-Feb-13	52.85	40.89	70.93	53.35	42.27	68.27	54.3	42.83	66.79	66.72	65.26	68.23	34.85	55	0	0	6.15	0.23	40.87	16
2-Feb-13	56.63	42.23	75.87	57.5	46.31	72.23	58.36	47.28	72.37	65.81	64.06	67.87	44.6	65	0	0	5.05	0	12.43	32
3-Feb-13	56.22	42.09	75.97	56.95	44.74	73.29	56.98	45.19	70.41	65.67	64.11	67.24	44.65	67	0	0	6.08	0.13	19.33	324
4-Feb-13	54.9	39.27	74.41	55.84	42.38	71.46	56.81	44.4	70.07	65.17	63.21	67.39	41.98	67	0	0	4.93	0.13	25.7	306
5-Feb-13	59.85	38.46	81.18	60.49	41.42	78.24	61.97	46.4	76.87	65.47	63.18	68.02	48.36	69	0	0	3.91	0.07	31.67	248
6-Feb-13	66.05	50.65	82.22	66.41	52.7	79.02	66.62	55.67	77.61	67.21	65.3	69.39	57.86	76	0	0	3.92	0.07	13.67	90
7-Feb-13	70.64	60.44	83.3	70.81	62.31	82.4	69.98	62.65	80.49	69.13	67.75	70.95	62.45	77	0	0	7.96	0.93	22.07	166
8-Feb-13	69.93	56.98	84.88	69.78	57.47	82.98	68.83	57.42	80.29	70.17	68.97	71.65	60.29	76	0	0	6.85	1.2	15.5	302
9-Feb-13	63.88	53.89	78.13	63.71	54.68	76.28	62.93	54.75	73.94	69.65	68.14	71.24	56.24	79	0	0	7.32	1.47	16.7	32
10-Feb-13	66.83	58.01	79.32	67.04	58.75	77.95	66.3	58.98	75.56	69.93	68.47	71.55	59.32	78	0	0	8.33	1.97	23.87	100
11-Feb-13	69.82	57.83	83.34	70.02	59.29	81.43	69.46	59.61	79.88	70.46	68.68	72.46	60.95	75	0.02	0.02	5.93	0.13	18.17	155
12-Feb-13	72.07	59.07	85.78	72.36	61.79	84.15	71.87	63.05	81.91	71.34	69.67	73.02	63.94	77	0	0	6.37	0.67	37.77	200
13-Feb-13	73.33	62.37	86.41	73.36	62.46	85.33	72.54	62.64	83.07	72.56	71.37	74.08	66.04	80	0	0	9.72	1.07	24.97	223
14-Feb-13	62.53	58.1	72.5	62.45	59.45	70.43	62.26	59.5	69.53	71.4	70.02	73.26	58.86	89	0.67	0.07	4.51	0.03	18.8	28
15-Feb-13	60.27	53.51	72.25	60.1	55.29	68.94	60.62	56.17	68.22	69.71	69.13	70.47	57.44	91	0.04	0.01	4.12	0.07	12.07	343
16-Feb-13	57.94	46.2	70.65	57.61	47.43	69.13	57.16	48.61	67.19	68.57	67.6	69.28	48.35	74	0	0	8.24	0.57	29.13	317
17-Feb-13	45.72	33.85	57.7	45.68	37.11	54.68	45.89	37.49	53.87	65.45	64.18	67.53	21.53	40	0	0	8.31	0.87	24.3	6
18-Feb-13	51.5	32.32	71.04	52.11	36.81	68.13	52.57	40.11	66.6	64.15	62.17	66.34	38.32	62	0.04	0.03	7.12	1.17	20.37	70
19-Feb-13	62.5	46.24	79.81	63.17	48.72	78.3	64.03	51.46	76.59	65.85	63.91	68.16	52.12	71	0	0	5.99	0.93	21.67	216
20-Feb-13	66.57	55.27	82.31	66.25	56.62	77.94	66.22	58.26	77.14	67.72	65.95	69.96	59.67	81	0	0	4.57	0	14.03	353
21-Feb-13	69.38	57.2	85.23	68.82	57.94	82.11	68.56	58.06	81.05	69.58	67.71	71.89	60.29	77	0	0	4.93	0.63	11.87	106
22-Feb-13	73.33	59.27	88.65	72.99	61.23	85.42	72.56	61.2	83.73	71.23	69.37	73.49	65	79	0	0	6.12	0.23	20.03	150
23-Feb-13	75.2	68.72	88.32	74.91	69.1	86.31	74.32	68.85	84.6	72.94	71.73	74.53	67.69	81	0	0	8.35	1.7	21.53	208
24-Feb-13	73.62	66.4	89.38	73.02	66.34	86.23	72.41	66.27	84.42	73.71	72.41	75.25	67.55	85	0	0	6.37	0.27	18.67	240
25-Feb-13	73.6	64.33	86.14	73.45	65.68	84.76	73.36	65.91	83.53	74.27	73.08	75.72	65.41	79	0	0	5.86	0.27	20.3	168
26-Feb-13	71.05	62.02	81.19	71.12	62.51	80.89	70.99	62.96	80.06	73.9	73.26	74.39	67.47	89	0.13	0.04	8.81	2.17	30.13	208
27-Feb-13	66.12	55.74	78.26	65.27	56.12	75.29	65.24	56.64	74.43	72.26	71.02	73.36	57.99	79	0	0	6.08	0.4	15.63	294
28-Feb-13	61.85	49.32	77.97	60.92	50.02	74.84	61.04	51.73	73.15	71.1	69.66	72.5	50.62	72	0	0	6.12	0.2	21.3	295

Appendix C: Groundwater Elevations

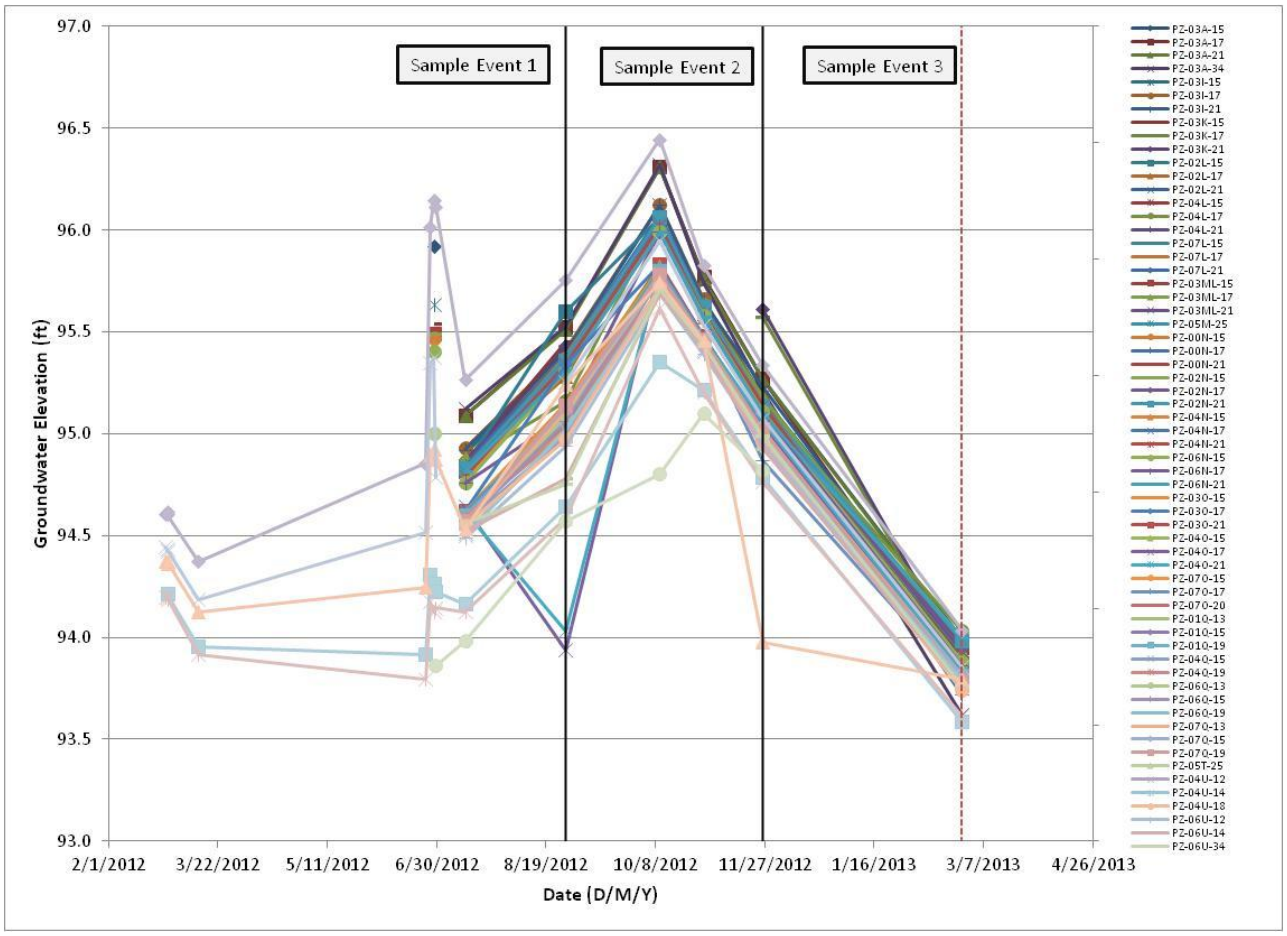

Figure C.1
Groundwater Elevations

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Table C.1
Groundwater Elevations

Date	PZ-03A-15	PZ-03A-17	PZ-03A-21	PZ-03A-34	PZ-03I-15	PZ-03I-17	PZ-03I-21	PZ-03K-15	PZ-03K-17	PZ-03K-21	PZ-02L-15	PZ-02L-17	PZ-02L-21	PZ-04L-15	PZ-04L-17	PZ-04L-21	PZ-07L-15	PZ-07L-17	PZ-07L-21	PZ-03ML-15	PZ-03ML-17	PZ-03ML-21
2/27/2012																						
2/28/2012																						
2/28/2012																						
3/13/2012																						
6/25/2012																						
6/27/2012																						
6/28/2012	95.92				95.63			95.54												95.49		
6/29/2012																						
7/13/2012	95.09	95.09	95.09	95.12	94.90	94.93	94.92	94.86	94.86	94.86	94.84	94.84	94.84	94.81	94.86	94.86				94.82	94.88	94.82
8/28/2012	95.52	95.52	95.51	95.53	95.40	95.41	95.40	95.45	95.39	95.43	95.60	95.28	95.37	95.36	95.16	95.38	95.35	95.31	95.34			
10/10/2012	96.31	96.31	96.31	96.32	96.12	96.12	96.12				96.06	96.07	96.06	96.05	96.06	96.06	96.03	96.05	96.04	96.05	96.06	96.06
10/30/2012	95.77	95.77	95.76	95.74	95.66	95.66	95.65				95.61	95.61	95.61	95.60	95.63	95.61	95.60	95.62	95.60	95.61	95.62	95.62
11/26/2012	95.27	95.27	95.27	95.21	95.18	95.17	95.23	95.56	95.57	95.61	95.12	95.12	95.14	95.13	95.14	95.14	95.12	95.12	95.13	95.13	95.18	95.13
2/25/2013	93.99	93.87	93.98	93.62	93.96	93.83	93.92	93.84	93.86	93.88	93.87	93.92	93.95	93.91	94.03	93.96	93.92	93.93	93.98	93.95	93.93	93.93

Elevation above mean sea level based on NGVD 1929

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Table C.1 (con't)
Groundwater Elevations

Date	PZ-05M-25	PZ-00N-15	PZ-00N-17	PZ-00N-21	PZ-02N-15	PZ-02N-17	PZ-02N-21	PZ-04N-15	PZ-04N-17	PZ-04N-21	PZ-06N-15	PZ-06N-17	PZ-06N-21	PZ-03O-15	PZ-03O-17	PZ-03O-21	PZ-04O-15	PZ-04O-17	PZ-04O-21	PZ-07O-15	PZ-07O-17	PZ-07O-20
2/27/2012																						
2/28/2012																						
2/28/2012																						
3/13/2012																						
6/25/2012																						
6/27/2012																						
6/28/2012	95.44	95.47			95.49			95.43			95.40											
6/29/2012																						
7/13/2012		94.81	94.84	94.80	94.81	94.82	94.83	94.78	94.81	94.79	94.76	94.76	94.81	94.62	94.62	94.62	94.62	94.64	94.62	94.60	94.62	94.59
8/28/2012		95.37	95.39	95.32	95.38	95.37	95.36	95.33	95.33	95.34	95.31	95.09	95.31	95.15	95.34	95.10	95.12	93.94	94.03	95.03	95.10	95.08
10/10/2012		96.02	96.07	96.02	96.05	96.05	96.06	96.01	96.03	96.02	95.99	95.99	95.99	95.83	95.83	95.83	95.82	95.82	95.81	95.80	95.81	95.80
10/30/2012		95.59	95.63	95.58	95.61	95.62	95.62	95.57	95.59	95.59	95.58	95.57	95.57	95.48	95.47	95.48	95.47	95.48	95.47	95.46	95.47	95.46
11/26/2012	95.12	95.12	95.13	95.12	95.12	95.12	95.14	95.10	95.11	95.14	95.11	95.10	95.10	95.03	95.02	95.03	95.02	95.04	95.06	95.01	94.87	95.00
2/25/2013		93.84	93.72	93.74	94.00	93.95	93.98	93.85	93.81	93.84	93.88	93.86	94.00	93.81	93.76	93.80	93.82	93.81	93.83	93.80	93.77	93.79

Elevation above mean sea level based on NGVD 1929

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Table C.1 (con't)
Groundwater Elevations

Date	PZ-01Q-13	PZ-01Q-15	PZ-01Q-19	PZ-04Q-13	PZ-04Q-15	PZ-04Q-19	PZ-06Q-13	PZ-06Q-15	PZ-06Q-19	PZ-07Q-13	PZ-07Q-15	PZ-07Q-19	PZ-05T-25	PZ-04U-12	PZ-04U-14	PZ-04U-18	PZ-06U-12	PZ-06U-14	PZ-06U-34	PZ01	PZ02	PZ03	PZ04	PZ05	Lake SG
2/27/2012																				94.60		94.37	94.44	94.19	
2/28/2012																				94.61	94.21	94.36	94.42	94.18	
2/28/2012																				94.60	94.21	94.37	94.43	94.19	
3/13/2012																				94.37	93.95	94.12	94.18	93.91	
6/25/2012																				94.85	93.91	94.24	94.51	93.79	
6/27/2012																				96.01	94.30	94.89	95.34	94.17	
6/28/2012							95.00													96.14	94.26	94.92	95.37	94.12	
6/29/2012																				96.11	94.22	94.87	94.78	94.14	93.86
7/13/2012	94.58	94.59	94.60		94.56	94.59	94.56	94.56	94.56	94.56	94.57	94.57		94.51	94.50	94.55	94.49	94.52	94.56	95.26	94.16	94.53		94.12	93.98
8/28/2012	95.06	95.05	95.09		94.99	95.01	95.08	95.06	95.11	95.11	95.13	95.14		95.01	95.02	94.97	94.94	94.78	94.75	95.75	94.64	95.24	95.25	94.58	94.57
10/10/2012	95.78	95.80	95.80		95.77	95.77	95.77	95.78	95.76	95.77	95.77	95.78		95.72	95.71	95.72	95.69	95.69	95.71	96.44	95.35	95.74	95.94	95.61	94.80
10/30/2012	95.44	95.45	95.46		95.45	95.45	95.43	95.45	95.45	95.45	95.44	95.46		95.40	95.41	95.43	95.39	95.42	95.44	95.82	95.21	95.45	95.53	95.20	95.10
11/26/2012	94.99	95.00	94.99		94.99	95.00	94.98	94.99	94.94	95.01	94.99	95.02	94.95	94.96	94.96	94.96	94.95	94.93	94.99	95.33	94.78	93.97	95.07	94.76	94.82
2/25/2013	93.79	93.80	93.81	93.60	93.81	93.80	93.80	93.81	93.81	93.81	93.81	93.79		93.78	93.79	93.74	93.77	93.76	93.76	94.03	93.58	93.79	93.85	93.61	93.55

Elevation above mean sea level based on NGVD 1929

Appendix D: Water Quality Analytical Results

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Table D.1
Water Quality Analytical Results
(February 25 through February 28, 2013)

Sample ID	Sample Date/Time	Temp (°C)	pH	Total Alkalinity (mg/L)	DO (mg/L)	Specific Conductance (µS)	TSS (mg/L)	$CBOD_5$ (mg/L)	COD (mg/L)	TN (mg/L N)[1]	TKN (mg/L N)	Organic N (mg/L N)[2]	NH_3-N (mg/L N)	NOx (mg/L N)	TIN (mg/L N)[3]	TP (mg/L)	Fecal (Ct/100 mL)	E-coli	TOC (mg/L)	DOC (mg/L)	Anions						Cations							TS (mg/L)
																					F^-	Cl^-	NO_3-N^-	NO_2-N^-	PO_4-P^-	SO_4^-	B	Ca	Fe	Mg	Mn	K	Na	
STE Sample																																		
STE	2/25/2013 13:10	28.3	7.20	190	1.8	593	24	8		33.0	33	5.00	28	0.03	28.03	3.2	2000				0.04	23	0.03	0.01	2.1	32	0.05	47	0.07	12	0.011	10	16	290
STE DUP	2/25/2013 13:15	28.3	7.20	180	1.8	593	24	7		32.0	32	3.00	29	0.02	29.02	3.1	200				0.03	24	0.02	0.01	2.3	31	0.05	45	0.06	11	0.011	9.5	18	290
Groundwater Samples																																		
PZ-01BKG	2/28/2013 12:25	25.0	6.33	30	7.3	93			57	0.4	0.16	0.15	0.009	0.23	0.24	0.17						2.7	0.23	0.01										
PZ-02BKG	2/28/2013 11:49	24.0	5.17	10	0.2	43			38	0.3	0.22	0.19	0.032	0.03	0.06	0.08						3.6	0.03	0.01										
PZ-03BKG	2/28/2013 12:13	23.2	5.68	10	4.5	43			20	0.5	0.31	0.30	0.015	0.16	0.18	0.4						2.4	0.16	0.01										
PZ-04BKG	2/28/2013 11:38	22.1	5.24	10	0.6	125			63	4.0	1.7	1.24	0.46	2.30	2.76	1.1						4.4	2.3	0.01										
PZ-05BKG	2/28/2013 12:00	23.4	5.60	20	0.5	52			61	0.4	0.4	0.36	0.044	0.02	0.06	0.16						1.8	0.01	0.01										
PZ-03A-15	2/27/2013 10:07	24.8	6.26	10	7.3	36			12	0.6	0.35	0.32	0.032	0.26	0.29	0.64						1.2	0.26	0.01										
PZ-03A-17	2/27/2013 10:20	25.5	6.21	20	6.5	75			10	0.9	0.31	0.27	0.037	0.63	0.67	0.32						1.9	0.63	0.01										
PZ-03A-21	2/27/2013 10:33	25.6	5.66	20	2.7	272			10	13.7	0.72	0.71	0.012	13.00	13.01	0.038						13	13	0.01										
PZ-03A-34	2/27/2013 10:48	26.3	5.92	10	4.9	86			10	3.8	0.78	0.77	0.015	3.00	3.02	0.35			7.4	5.7	0.01	4.1	3	0.01	0.23	4.9	0.05	4.9	0.02	1.8	0.04	7.1	1.6	
PZ-03I-15	2/26/2013 12:07	25.4	5.78	40	4.9	47			20	1.9	0.6	0.55	0.046	1.30	1.35	0.73						1.3	1.3	0.01										
PZ-03I-17	2/27/2013 9:43	24.7	6.08	20	2.9	48				1.6	0.97	0.89	0.077	0.62	0.70							1.4	0.62	0.01										
PZ-03I-21	2/27/2013 9:55	24.9	4.87	10	3.0	194				6.1	0.77	0.76	0.015	5.30	5.32							8.2	5.3	0.01										
PZ-03K-15	2/26/2013 11:14	25.5	6.72	20	5.5	435			10	22.0	2	1.98	0.017	20.00	20.02	3.8			3.3	2.6	0.07	22	20	0.01	0.01	29	0.05	46	0.12	8.1	0.001	8	16	
PZ-03K-17	2/26/2013 11:38	25.2	6.33	60	6.4	51				1.4	0.84	0.78	0.056	0.59	0.65							0.9	0.59	0.01										
PZ-03K-21	2/26/2013 11:53	25.7	6.01	10	2.2	157				4.0	1.3	1.28	0.016	2.70	2.72							6.8	2.7	0.01										
PZ-02L-15	2/25/2013 8:18	24.6	6.40	40	6.0	79			24	2.6	1	0.45	0.55	1.60	2.15	1.4						1.9	1.6	0.01										
PZ-02L-17	2/25/2013 8:43	25.1	6.43	50	5.3	68				1.9	1.2	1.05	0.15	0.66	0.81							1.9	0.66	0.01										
PZ-02L-21	2/25/2013 8:54	25.6	5.05	10	2.8	188				4.8	1.1	1.07	0.032	3.70	3.73							7.3	3.7	0.01										
PZ-04L-15	2/25/2013 10:30	26.7	6.48	30	4.6	315			20	14.4	1.4	1.38	0.017	13.00	13.02	0.61						16	13	0.01										
PZ-04L-17	2/25/2013 10:50	27.1	6.23	40	4.3	64				1.0	0.58	0.52	0.062	0.40	0.46							0.93	0.4	0.01										
PZ-04L-21	2/25/2013 11:00	27.1	5.16	10	2.3	173				4.7	0.99	0.98	0.01	3.70	3.71							7.1	3.7	0.01										
PZ-07L-15	2/25/2013 10:23	26.7	6.12	29	5.7	54			36	1.5	0.78	0.74	0.042	0.68	0.72	1.5						0.94	0.68	0.01										
PZ-07L-17	2/25/2013 11:40	26.6	6.23	20	5.6	63				1.0	0.48	0.44	0.037	0.47	0.51							1.2	0.47	0.01										
PZ-07L-21	2/25/2013 11:53	26.2	5.23	20	2.5	149				5.8	1.4	1.37	0.027	4.40	4.43							6.5	4.4	0.01										
PZ-03ML-15	2/25/2013 9:15	25.8	6.21	10	5.2	513			14	27.3	1.3	1.29	0.009	26.00	26.01	3.9			3.5	2.9	0.04	29	26	0.01	1.2	40	0.05	52	0.02	11	0.009	11	21	
PZ-03ML-15 DUP	2/25/2013 9:20	25.8	6.21	10	5.2	513			14	28.3	1.3	1.29	0.009	27.00	27.01	4			3.2	3.1	0.04	30	27	0.01	1.3	40	0.05	48	0.02	10	0.008	10	23	
PZ-03ML-17	2/25/2013 9:43	26.1	6.29	20	6.0	56			190	3.9	2.9	2.65	0.25	0.97	1.22	13			8.4	4.5	0.01	1.1	0.97	0.01	2.1	3.1	0.05	17	0.14	2.1	0.006	2.2	1.3	

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Table D.1 (cont'd)
Water Quality Analytical Results
(February 25 through February 28, 2013)

Sample ID	Sample Date/Time	Temp (°C)	pH	Total Alkalinity (mg/L)	DO (mg/L)	Specific Conductance (µS)	TSS (mg/L)	$CBOD_5$ (mg/L)	COD (mg/L)	TN (mg/L N)[1]	TKN (mg/L N)	Organic N (mg/L N)[2]	NH_3-N (mg/L N)	NOx (mg/L N)	TIN (mg/L N)[3]	TP (mg/L)	Fecal (Ct/100 mL)	E-coli	TOC (mg/L)	DOC (mg/L)	Anions						Cations							TS (mg/L)
																					F^-	Cl^-	NO_3-N^-	NO_2-N^-	PO_4-P^-	SO_4^-	B	Ca	Fe	Mg	Mn	K	Na	
PZ-03ML-21	2/25/2013 10:08	26.1	5.95	20	1.12	189			14	4.0	1	0.97	0.03	3.00	3.03	1.1			2.8	2.6	0.02	7.8	3	0.01	0.53	34	0.05	24	0.08	4.1	0.002	5	3.1	
PZ-00N-15	2/25/2013 12:22	26.4	5.93	20	5.74	59			12	0.9	0.45	0.43	0.022	0.49	0.51	0.42						1.7	0.49	0.01										
PZ-00N-17	2/25/2013 12:40	26.6	6.26	20	5.70	59				0.8	0.34	0.33	0.009	0.46	0.47							1.6	0.46	0.01										
PZ-00N-21	2/25/2013 12:55	26.0	4.82	10	2.91	217				6.0	1.8	1.79	0.014	4.20	4.21							10	4.2	0.01										
PZ-02N-15	2/26/2013 8:48	25.4	6.56	30	6.52	88			16	1.5	0.39	0.37	0.023	1.10	1.12	1.3						1.9	1.1	0.01										
PZ-02N-17	2/26/2013 9:05	25.7	6.11	20	5.49	51				1.0	0.39	0.36	0.031	0.61	0.64							1.6	0.61	0.01										
PZ-02N-21	2/26/2013 9:18	25.8	4.64	10	2.38	226				5.1	1.1	1.09	0.009	4.00	4.01							8.3	4	0.01										
PZ-02N-21 DUP	2/26/2013 9:23	25.8	4.64	10	2.38	226				5.1	1.1	1.09	0.009	4.00	4.01							8.2	4	0.01										
PZ-04N-15	2/26/2013 9:37	25.6	6.22	20	5.19	290			12	15.3	1.3	1.28	0.017	14.00	14.02	0.8						14	14	0.01										
PZ-04N-17	2/26/2013 9:55	25.7	6.44	50	2.56	83			46	1.0	0.42	0.41	0.012	0.60	0.61	1.3						1.4	0.6	0.01										
PZ-04N-21	2/26/2013 10:07	25.8	5.67	10	2.19	191				4.5	0.85	0.84	0.009	3.60	3.61							7.5	3.6	0.01										
PZ-06N-15	2/26/2013 10:21	25.3	6.02	10	4.89	370			14	21.2	1.2	1.19	0.009	20.00	20.01	0.082			3.9	3	0.08	23	20	0.01	0.01	24	0.05	34	0.2	7.3	0.001	7.9	11	
PZ-06N-17	2/26/2013 10:37	25.4	6.32	30	4.49	59				1.0	0.47	0.46	0.01	0.50	0.51							1	0.5	0.01										
PZ-06N-21	2/26/2013 10:56	25.5	5.02	10	3.16	109				3.4	0.71	0.70	0.009	2.70	2.71							4.6	2.7	0.01										
PZ-03O-15	2/28/2013 10:50	22.7	6.73	40	6.58	144				2.4	0.71	0.69	0.024	1.70	1.72							2.4	1.7	0.01										
PZ-03O-17	2/28/2013 11:04	22.8	6.58	30	6.92	59				0.9	0.22	0.21	0.009	0.66	0.67				3.6	3.2	0.54	1.7	0.66	0.01	0.17	4.1	0.05	7.3	0.12	1.9	0.001	2.1	1.1	
PZ-03O-21	2/28/2013 11:28	24.3	4.86	10	1.73	223				9.3	0.93	0.92	0.009	8.40	8.41				1.6	1.5	0.02	12	8.4	0.01	0.01	32	0.05	20	0.03	5.1	0.011	10	3.4	
PZ-04O-15	2/27/2013 13:34	23.9	6.31	40	5.05	209			10	8.6	0.99	0.96	0.028	7.60	7.63	2.8						7	7.6	0.01										
PZ-04O-17	2/27/2013 13:44	23.9	6.25	40	5.06	209			10	8.0	0.95	0.94	0.009	7.00	7.01	2.7						6.6	7	0.01										
PZ-04O-17-DUP	2/27/2013 13:50	23.9	6.25	40	5.06	209			10	8.2	1	0.99	0.009	7.20	7.21	2.6						6.7	7.2	0.01										
PZ-04O-21	2/27/2013 13:55	24.6	5.33	10	1.85	254			16	7.0	0.84	0.82	0.021	6.20	6.22	0.082						11	6.2	0.01										
PZ-07O-15	2/27/2013 10:57	23.7	5.98	30	4.05	377			10	21.6	1.6	1.59	0.013	20.00	20.01	0.25						21	20	0.01										
PZ-07O-17	2/27/2013 11:10	23.8	6.33	30	3.20	142				4.1	2	1.82	0.18	2.10	2.28							2.7	2.1	0.01										
PZ-07O-20	2/27/2013 11:21	24.2	5.28	10	3.19	109				3.1	0.9	0.89	0.009	2.20	2.21							6.2	2.2	0.01										
PZ-01Q-13	2/28/2013 10:07	22.3	6.29	30	5.93	71			24	0.8	0.34	0.33	0.014	0.47	0.48	0.21						1.6	0.47	0.01										
PZ-01Q-15	2/28/2013 10:21	23.1	6.01	10	5.77	43			34	1.3	0.5	0.44	0.057	0.84	0.90	0.63						1	0.84	0.01										
PZ-01Q-19	2/28/2013 10:37	23.7	5.09	10	3.79	65				7.3	5.5	4.82	0.68	1.80	2.48							3.3	1.8	0.01										
PZ-04Q-13	2/27/2013 12:56	24.9	6.39	50	5.83	144			20	4.6	1.4	1.34	0.064	3.20	3.26	1.3			8.4	7.3	0.24	2.5	3.2	0.01	0.79	5.5	0.05	17	0.03	2.5	0.002	3.2	6.9	
PZ-04Q-15	2/27/2013 13:07	24.9	5.60	20	3.55	83			10	2.0	0.54	0.52	0.021	1.50	1.52	2.6						1.5	1.5	0.01										
PZ-04Q-19	2/27/2013 13:23	25.3	6.12	20	2.74	76				3.9	3	2.51	0.49	0.86	1.35				6.4	2.4		3.6	0.86	0.01										
PZ-06Q-13	2/27/2013 12:12	24.5	6.45	30	6.12	165			10	6.1	1.4	1.39	0.015	4.70	4.72	0.46						5.1	4.7	0.01										
PZ-06Q-15	2/27/2013 12:26	24.4	6.60	40	3.04	187			10	6.9	1.6	1.58	0.019	5.30	5.32	5.8			7.1	5.9	0.11	3.8	5.3	0.01	3.1	7.7	0.05	23	0.04	2.8	0.001	4	7.8	
PZ-06Q-19	2/27/2013 12:41	25.8	6.51	20	0.66	86			22	0.7	0.46	0.40	0.061	0.21	0.27	0.38						3.1	0.21											

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Table D.1 (cont'd)
Water Quality Analytical Results
(February 25 through February 28, 2013)

Sample ID	Sample Date/Time	Temp (°C)	pH	Total Alkalinity (mg/L)	DO (mg/L)	Specific Conductance (µS)	TSS (mg/L)	$CBOD_5$ (mg/L)	COD (mg/L)	TN (mg/L N)[1]	TKN (mg/L N)	Organic N (mg/L N)[2]	NH_3-N (mg/L N)	NOx (mg/L N)	TIN (mg/L N)[3]	TP (mg/L)	Fecal (Ct/100 mL)	E-coli	TOC (mg/L)	DOC (mg/L)	Anions						Cations							TS (mg/L)
																					F^-	Cl^-	NO_3-N^-	NO_2-N^-	PO_4-P^-	SO_4^-	B	Ca	Fe	Mg	Mn	K	Na	
PZ-07Q-13	2/27/2013 11:39	23.6	6.12	30	4.03	380			10	19.7	1.7	1.69	0.009	18.00	18.01	0.23						19	18	0.01										
PZ-07Q-15	2/27/2013 11:53	23.9	6.41	20	2.71	114				3.3	1.4	1.35	0.047	1.90	1.95							2.6	1.9	0.01										
PZ-07Q-19	2/27/2013 12:02	24.6	5.35	2	2.92	118				2.8	0.48	0.47	0.009	2.30	2.31							6.3	2.3	0.01										
PZ-04U-12	2/28/2013 9:28	23.4	6.52	50	4.66	205			26	2.5	0.72	0.69	0.028	1.80	1.83	0.26						8.2	1.8	0.01										
PZ-04U-14	2/28/2013 9:41	23.7	6.47	30	6.14	241				2.6	0.57	0.56	0.009	2.00	2.01							21	2	0.01										
PZ-04U-14 DUP	2/28/2013 9:46	23.7	6.47	30	6.14	241				2.6	0.55	0.54	0.009	2.00	2.01							20	2	0.01										
PZ-04U-18	2/28/2013 9:55	24.4	5.79	10	4.33	64				1.3	0.42	0.37	0.053	0.84	0.89							2.2	0.84	0.01										
PZ-06U-12	2/28/2013 8:35	22.6	6.69	20	5.33	117				3.3	0.51	0.48	0.028	2.80	2.83				4.3	3		2	2.8	0.01										
PZ-06U-14	2/28/2013 8:50	23.0	5.88	20	3.12	390				21.9	1.9	1.89	0.009	20.00	20.01				2.7	2	0.05	18	20	0.01	0.01	38	0.05	37	0.02	6.6	0.073	8	17	
PZ-06U-14-DUP	2/28/2013 8:55	23.0	5.88	20	3.12	390				22.1	2.1	2.09	0.009	20.00	20.01				2.2	1.7	0.04	18	20	0.01	0.01	38	0.05	36	0.02	6.6	0.073	7.8	18	
PZ-06U-34	2/28/2013 9:16	24.2	5.27	10	0.56	280				14.8	2.8	2.59	0.21	12.00	12.21							16	12	0.01										
Blanks																																		
FB-DI	2/28/2013 12:45	19.8	7.95	2	8.30	2	1	2	10	0.06	0.05	0.04	0.009	0.01	0.02	0.01	1		0.5	0.5	0.01	0.05	0.01	0.01	0.01	0.2	0.05	0.042	0.02	0.02	0.001	0.01	0.13	10
FB-TAP	2/28/2013 12:40	23.3	7.26	80	5.22	325	1	2	18	0.32	0.05	0.04	0.009	0.27	0.28	0.01	1		0.91	0.5	0.03	12	0.27	0.01	0.01	38	0.05	44	0.02	11	0.001	3.4	7.8	280
EB	2/28/2013 12:50	20	7.9	2	8.30	2	1	2	10	0.06	0.05	0.04	0.009	0.01	0.02	0.01	1		0.5	0.5	0.01	0.05	0.01	0.01	0.01	0.2	0.05	0.042	0.02	0.02	0.001	0.01	0.13	10

Notes:

[1]Total Nitrogen (TN) is a calculated value equal to the sum of TKN and NO_x

[2]Organic Nitrogen (ON) is a calculated value equal to the difference of TKN and NH_3

[3]Total Inorganic Nitrogen (TIN) is a calculated value equal to the sum of NH_3 and NO_x

D.O. - Dissolved oxygen

Gray-shaded data points indicate values below method detection level (mdl), mdl value used for statistical analyses.

Yellow-shaded data points indicate the reported value is between the laboratory method detection limit and the laboratory practical quantitation limit, value used for statistical analysis.

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Appendix E: Summary of Water Quality Data

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Table E.1
Summary of Water Quality Data

Sample ID	Sample Date/Time	Temp (°C)	pH	Total Alkalinity (mg/L)	DO (mg/L)	Specific Conductance (µS/cm)	TDS (mg/L)	TSS (mg/L)	$CBOD_5$ (mg/L)	COD (mg/L)	TN (mg/LN)[1]	TKN (mg/LN)	Organic N (mg/LN)[2]	NH_3-N (mg/LN)	NOx (mg/LN)	TIN (mg/LN)[3]	TP (mg/L)	Fecal (Ct/100 mL)	TOC (mg/L)	DOC (mg/L)	Anions						Cations							Hydrogen Sulfide (Unionized) (mg/L)	Sulfide (mg/L)	TS (mg/L)	Sucralose (ug/L)
																					F^-	Cl^-	NO_3-N^-	NO_2-N^-	PO_4-P^-	SO_4^-	B	Ca	Fe	Mg	Mn	K	Na				
STE samples																																					
STE	n	3	3	3	3	3	0	3	3	0	3	3	3	3	3	3	3	3	0	0	2	3	3	3	2	2	2	2	2	2	2	2	2	0	0	3	2
	MEAN	28	7.27	260	1.72	701.3		19.0	23.7		43.21	43	5.3	37.7	0.21	37.88	3.9	2,067			0.09	28	0.21	0.01	2.5	20	0.05	45	0.09	12	0.01	11	20			340	4.3
	STD. DEV.	2.41	0.13	62.45	0.10	112.73		7.81	15.04		10.01	10.00	1.53	9.07	0.32	9.12	0.76	1201.39			0.06	4.04	0.32	0.00	0.57	16.97	0.00	3.54	0.04	0.71	0.00	1.41	4.95			50.00	5.66
	MIN	25.6	7.2	190	1.6	593		10	8		33.03	33	4	28	0.03	28.03	3.2	900			0.04	23	0.03	0.01	2.1	8	0.05	42	0.07	11	0.01	10	16			290	0.3
	MAX	30.4	7.42	310	1.80	818		24	38		53.03	53	7	46	0.58	46.03	4.7	3,300			0.13	30	0.58	0.01	2.9	32	0.05	47	0.12	12	0.01	12	23			390	8.30
Groundwater samples																																					
PZ-01BKG	n	3	3	3	3	3	0	0	0	3	3	3	3	3	3	3	3	0	0	0	0	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	MEAN	26.30	6.06	17.7	6.57	63.63				30	0.7	0.3	0.31	0.01	0.4	0.42	0.26					3	0.4	0.01													
	STD. DEV.	1.18	0.25	10.69	1.45	27.57				24.13	0.43	0.18	0.19	0.01	0.25	0.24	0.09					1.41	0.25	0.00													
	MIN	25.0	5.85	11	4.9	38				10	0.39	0.16	0.15	0.01	0.23	0.24	0.17					1.60	0.23	0.01													
	MAX	27.3	6	30	7.55	92.8				57	1.21	0.52	0.51	0.02	0.69	0.7	0.34					4.4	0.69	0.01													
PZ-02BKG	n	3	3	3	3	3	0	0	0	3	3	3	3	3	3	3	3					3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	MEAN	26.30	5.04	6.50	1.53	46.0				24	0.40	0.36	0.34	0.02	0.04	0.06	0.07					3.7	0.04	0.01													
	STD. DEV.	2.10	0.34	3.08	1.51	3.84				14.00	0.13	0.13	0.14	0.01	0.02	0.02	0.02					0.12	0.02	0.00													
	MIN	24.0	4.66	4.2	0.24	43				10	0.25	0.22	0.19	0.01	0.03	0.04	0.05					3.6	0.03	0.01													
	MAX	28.1	5.3	10.0	3.2	50.2				38	0.5	0.47	0.46	0.03	0.07	0.08	0.09					3.8	0.07	0.01													
PZ-03BKG	n	3	3	3	3	3	0	0	0	3	3	3	3	3	3	3	3	0	0	0	0	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	MEAN	25.17	5.6	6.50	5.46	46.00				23.7	0.59	0.43	0.42	0.01	0.16	0.17	0.28					4.43	0.16	0.01													
	STD. DEV.	2.90	0.11	3.08	1.14	10.79				12.90	0.10	0.12	0.12	0.00	0.08	0.08	0.15					3.02	0.08	0.00													
	MIN	23.2	5.5	4.2	4.5	37.1				13	0.47	0.31	0.30	0.01	0.08	0.09	0.12					2	0.08	0.01													
	MAX	28.5	5.7	10.0	6.7	58				38	0.66	0.55	0.54	0.02	0.24	0.25	0.40					7.9	0.24	0.01													
PZ-04BKG	n	3	3	3	3	3	0	0	0	3	3	3	3	3	3	3	3	0	0	0	0	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	MEAN	24.5	5	7.2	1.11	82.20				50.0	3.28	2.0	1.71	0.32	1.25	1.57	1.66					4.1	1.25	0.01													
	STD. DEV.	2.14	0.14	2.91	0.94	37.76				12.53	0.81	0.49	0.66	0.17	0.92	1.03	1.35					0.42	0.92	0.00													
	MIN	22.1	5	4.2	0.55	54				38	2.4	1.7	1.24	0.13	0.6	0.97	0.67					3.6	0.6	0.01													
	MAX	26.2	5	10.0	2.2	125.1				63	4.00	2.6	2.47	0.46	2.30	2.76	3.2					4.4	2.30	0.01													
PZ-05BKG	n	3	3	3	3	3	0	0	0	3	3	3	3	3	3	3	3	0	0	0	0	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	MEAN	25.57	5.28	13.8	0.40	43.1				42	0.73	0.71	0.67	0.04	0.02	0.06	0.23					1.63	0.01	0.01													
	STD. DEV.	2.85	0.39	5.52	0.05	8.35				19.55	0.36	0.36	0.36	0.01	0.00	0.01	0.09					0.29	0.01	0.00													
	MIN	23.4	4.85	9.4	0.35	36				22	0.42	0.40	0.4	0.02	0.02	0.04	0.16					1.3	0.01	0.01													
	MAX	28.8	5.6	20	0	52				61	1.12	1.10	1.06	0.04	0.02	0.06	0.33					1.8	0.02	0.01													
PZ-O3A-15	n	3	3	3	3	3	0	0	0	3	3	3	3	3	3	3	3	0	2	2	2	3	3	3	2	2	2	2	2	2	2	2	2	0	0	0	1
	MEAN	26.50	6.29	11	7.41	42.7				11	1.17	0.58	0.54	0.04	0.59	0.6	0.57		4.3	3.25	0.01	1.18	0.59	0.01	0.04	2.85	0.05	3.75	0.93	1.85	0.0047	1.89	1.48				0.01
	STD. DEV.	1.61	0.31	1.53	0.15	9.91				1.15	0.51	0.22	0.20	0.03	0.38	0.36	0.29		0.99	0.49	0.00	0.23	0.38	0.00	0.05	0.64	0.00	0.49	1.09	0.49	0.00	1.29	0.88				
	MIN	24.8	6	10	7.3	35.6				10	0.6	0.4	0.32	0.01	0.26	0.29	0.25		3.6	2.9	0.01	0.94	0.26	0.01	0.01	2.4	0.05	3.4	0.16	1.5	0.0043	0.98	0.86				0.01
	MAX	28	6.62	13	7.56	54				12	1.6	0.78	0.71	0.07	1	1.01	0.82		5	3.6	0.01	1.4	1	0.01	0.08	3.3	0.05	4.1	1.7	2.2	0.0051	2.8	2.1				0.01
PZ-O3A-17	n	3	3	3	3	3	0	0	0	3	3	3	3	3	3	3	3	0	0	0	1	3	3	3	1	1	0	0	0	0	0	0	0	0	0	0	1
	MEAN	26.67	6.09	21	6.70	76.7				10	1.06	0.4	0.41	0.02	0.63	0.65	0.20				0.01	1.8	0.63	0.01	0.01	8.1											0.01
	STD. DEV.	1.39	0.26	3.21	0.36	2.87				0.00	0.13	0.11	0.12	0.02	0.09	0.09	0.11					0.23	0.09	0.00													
	MIN	25.5	5.8	19	6.5	74.6				10	0.94	0.31	0.27	0.01	0.54	0.55	0.1				0.01	1.5	0.54	0.01	0.01	8.1											0.01
	MAX	28.2	6.27	25	7.11	80				10	1.19	0.51	0.5	0.04	0.71	0.72	0.32				0.01	1.9	0.71	0.01	0.01	8.1											0.01

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Table E.1 (con't)
Summary of Water Quality Data

Sample ID	Sample Date/Time	Temp (°C)	pH	Total Alkalinity (mg/L)	DO (mg/L)	Specific Conductance (µS/cm)	TDS (mg/L)	TSS (mg/L)	$CBOD_5$ (mg/L)	COD (mg/L)	TN (mg/L N)[1]	TKN (mg/L N)	Organic N (mg/L N)[2]	NH_3-N (mg/L N)	NOx (mg/L N)	TIN (mg/L N)[3]	TP (mg/L)	Fecal (Ct/100 mL)	TOC (mg/L)	DOC (mg/L)	Anions						Cations							Hydrogen Sulfide (Unionized) (mg/L)	Sulfide (mg/L)	TS (mg/L)	Sucralose (ug/L)
																					F^-	Cl^-	NO_3-N^-	NO_2-N^-	PO_4-P^-	SO_4^-	B	Ca	Fe	Mg	Mn	K	Na				
PZ-O3A-21	n	3	3	3	3	3	0	0	0	3	3	3	3	3	3	3	3	0	0	0	1	3	3	3	1	1	0	0	0	0	0	0	0	0	0	0	1
	MEAN	26.9	5.66	17.0	2.57	261.0				10	9.7	1.2	1.23	0.01	8.5	8.48	0.06				0.01	11.10	8.5	0.01	0.01	63										0.01
	STD. DEV.	1.40	0.06	2.65	0.52	14.93				0.00	4.01	0.45	0.45	0.00	4.41	4.41	0.04					1.85	4.41	0.00												
	MIN	25.6	5.6	15	2	244				10	5.7	0.7	0.71	0.01	4.2	4.21	0.04				0.01	9.3	4.2	0.01	0.01	63										0.01
	MAX	28.4	5.71	20	3.03	272				10	13.7	1.5	1.49	0.01	13.0	13.01	0.1				0.01	13	13.0	0.01	0.01	63										0.01
PZ-O3A-34	n	3	3	3	3	3	0	0	0	3	3	3	3	3	3	3	3	0	1	1	2	3	3	3	2	2	1	1	1	1	1	1	1	0	0	0	1
	MEAN	26.3	5.0	5	2.62	228				11.7	11.7	1.4	1.34	0.05	10	10.39	1.01		7.4	5.7	0.04	15	10	0.01	0.12	15	0.05	4.9	0.02	1.8	0.04	7.1	1.6				0.01
	STD. DEV.	0.70	0.87	4.62	2.15	123.29				2.89	6.91	0.80	0.73	0.07	6.35	6.39	1.29				0.05	9.23	6.35	0.00	0.16	14.21										
	MIN	25.6	4.2	2	0.7	86				10	3.8	0.8	0.77	0.01	3	3.02	0.18		7.4	5.7	0.01	4	3	0.01	0.01	5	0.05	4.9	0.02	1.8	0.04	7.1	1.6				0.01
	MAX	27	5.9	10	4.94	305				15	16.3	2.3	2.16	0.14	14	14.14	2.5		7.4	5.7	0.08	21	14	0.01	0.23	25	0.05	4.9	0.02	1.8	0.04	7.1	1.6				0.01
PZ-O3I-15	n	3	3	3	3	3	0	0	0	3	3	3	3	3	3	3	3	0	0	0	1	3	3	3	1	1	0	0	0	0	0	0	0	0	0	0	0
	MEAN	26.5	5.88	18.23	5.82	68.5				15	3	1.03	1.0	0.05	2.27	2.3	0.72				0.55	1.4	2.27	0.01	0.16	14											
	STD. DEV.	1.63	0.24	18.97	0.81	19.00				4.51	1.31	0.38	0.38	0.02	1.00	0.99	0.28					0.31	1.00	0.00												
	MIN	25.4	5.7	5.2	4.90	46.6				11	1.9	0.6	0.55	0.03	1.3	1.35	0.44				0.55	1.1	1.3	0.01	0.16	14											
	MAX	28.4	6.15	40.0	6.4	81				20	4.5	1.3	1.23	0.07	3.3	3.33	1				0.55	1.7	3.3	0.01	0.16	14											
PZ-O3I-17	n	3	3	3	3	3	0	0	0	0	3	3	3	3	3	3	0	0	0	0	1	3	3	3	1	1	0	0	0	0	0	0	0	0	0	0	0
	MEAN	26.80	6.12	10.70	5.5	51.80					1.81	1.2	1.05	0.14	0.62	0.8					0.01	1.70	0.62	0.01	0.01	7.3											
	STD. DEV.	2.67	0.14	8.97	2.25	3.97					0.34	0.28	0.20	0.07	0.08	0.14						0.26	0.08	0.00												
	MIN	24.7	6	2.10	2.9	48.1					1.59	1.0	0.89	0.08	0.54	0.67					0.01	1.4	0.54	0.01	0.01	7.3											
	MAX	29.8	6.27	20	6.89	56					2.2	1.5	1.28	0.22	0.7	0.92					0.01	1.9	0.7	0.01	0.01	7.3											
PZ-O3I-21	n	3	3	3	3	3	0	0	0	0	3	3	3	3	3	3	0	0	0	0	1	3	3	3	1	1	0	0	0	0	0	0	0	0	0	0	0
	MEAN	26.73	4.90	5.5	3.66	183.8					4.4	0.76	0.74	0.02	3.60	3.62					0.01	7.9	3.60	0.01	0.01	39											
	STD. DEV.	2.36	0.22	3.93	0.67	9.17					1.50	0.06	0.05	0.01	1.48	1.48						0.95	1.48	0.00												
	MIN	24.9	4.7	3.2	2.97	177.2					3.29	0.69	0.68	0.01	2.6	2.61					0.01	6.8	2.6	0.01	0.01	39											
	MAX	29.4	5.13	10.0	4.3	194					6.07	0.81	0.78	0.03	5.3	5.32					0.01	8.6	5.3	0.01	0.01	39											
PZ-O3K-15	n	3	3	3	3	3	0	0	0	3	3	3	3	3	3	3	3	0	1	1	1	3	3	3	1	1	1	1	1	1	1	1	1	0	0	0	0
	MEAN	27.00	6.60	35	5.46	348				10	17.6	1.9	1.92	0.02	15.7	15.68	4.17		3.30	2.60	0.07	13.67	15.67	0.01	0.01	29.00	0.05	46.00	0.12	8.10	0.00	8.00	16.00				
	STD. DEV.	1.32	0.26	12.74	0.35	81.00				0.00	4.85	0.50	0.50	0.01	4.51	4.51	0.32					7.23	4.51	0.00												
	MIN	25.5	6.3	20	5.1	275				10	12.4	1.4	1.39	0.01	11	11.01	3.8		3.30	2.60	0.07	9.00	11.00	0.01	0.01	29.00	0.05	46.00	0.12	8.10	0.00	8.00	16.00				
	MAX	28	6.77	43	5.79	435				10	22.0	2.4	2.38	0.02	20	20.02	4.4		3.30	2.60	0.07	22.00	20.00	0.01	0.01	29.00	0.05	46.00	0.12	8.10	0.00	8.00	16.00				
PZ-O3K-17	n	3	3	3	3	3	0	0	0	0	3	3	3	3	3	3	0	0	0	0	0	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	MEAN	26.7	6.25	32.3	5.76	60.1					1.55	0.98	0.83	0.15	0.57	0.72						1.37	0.57	0.01												
	STD. DEV.	1.27	0.11	24.21	1.00	14.48					0.62	0.57	0.37	0.20	0.06	0.25						0.50	0.06	0.00												
	MIN	25.2	6.13	15	4.6	51					1	0.49	0.48	0.01	0.51	0.52						0.9	0.51	0.01												
	MAX	27.4	6.3	60	6.35	76.8					2.22	1.6	1.22	0.38	0.62	1						1.9	0.62	0.01												
PZ-O3K-21	n	3	3	3	3	3	0	0	0	0	3	3	3	3	3	3	0	0	0	0	0	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	MEAN	26.9	5.92	16.3	2.87	172.03					3.82	0.95	0.94	0.01	2.87	2.88						8.0	2.87	0.01												
	STD. DEV.	1.04	0.11	6.03	0.73	14.35					0.79	0.38	0.37	0.00	0.57	0.57						1.51	0.57	0.00												
	MIN	25.7	5.8	10	2.2	157					2.95	0.55	0.54	0.01	2.4	2.41						6.8	2.4	0.01												
	MAX	27.5	6.01	22	3.63	185.3					4.5	1	1.28	0.02	3.5	3.51						9.7	3.5	0.01												
PZ-O2L-15	n	3	3	3	3	3	0	0	0	3	3	3	3	3	3	3	3	0	0	0	0	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	MEAN	26.1	6.5	33.0	5.8	120.1				19	4.10	1.5	1.27	0.19	2.63	2.83	1.27					2.20	2.6	0.01												
	STD. DEV.	1.36	0.31	6.56	1.22	50.23				8.08	1.41	0.72	0.93	0.31	1.46	1.29	0.15					0.98	1.40	0.00												
	MIN	24.6	6.2	27	4.5	78.8				10	2.6	1.0	0.45	0.01	2	2.01	1.1					1.4	1.6	0.01												
	MAX	27.2	6.8	40	6.9	176				24	5.4	2.3	2.29	0.55	4.3	4.32	1.4					3.3	4.2	0.01												

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Table E.1 (con't)
Summary of Water Quality Data

Sample ID	Sample Date/Time	Temp (°C)	pH	Total Alkalinity (mg/L)	DO (mg/L)	Specific Conductance (µS/cm)	TDS (mg/L)	TSS (mg/L)	$CBOD_5$ (mg/L)	COD (mg/L)	TN (mg/L N)[1]	TKN (mg/L N)	Organic N (mg/L N)[2]	NH_3-N (mg/L N)	NOx (mg/L N)	TIN (mg/L N)[3]	TP (mg/L)	Fecal (Ct/100 mL)	TOC (mg/L)	DOC (mg/L)	Anions						Cations							Hydrogen Sulfide (Unionized) (mg/L)	Sulfide (mg/L)	TS (mg/L)	Sucralose (ug/L)
																					F^-	Cl^-	NO_3-N^-	NO_2-N^-	PO_4-P^-	SO_4^-	B	Ca	Fe	Mg	Mn	K	Na				
PZ-O2L-17	n	3	3	3	3	3	0	0	0	0	3	3	3	3	3	3	0	0	0	0	0	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	MEAN	26.0	6.51	29	5.2	62.93					1.71	0.79	0.71	0.08	0.92	1.0						1.47	0.92	0.01													
	STD. DEV.	0.81	0.26	18.15	0.30	4.95					0.18	0.36	0.30	0.06	0.23	0.18						0.38	0.23	0.00													
	MIN	25.1	6.3	16	4.9	58					1.51	0.51	0.48	0.03	1	0.81						1.2	1	0.01													
	MAX	26.7	6.8	50	5.49	67.9					1.86	1.20	1.05	0.15	1.1	1.16						1.9	1.1	0.01													
PZ-O2L-21	n	3	3	3	3	3	0	0	0	0	3	3	3	3	3	3	0	0	0	0	0	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	MEAN	26.10	5.24	7.17	2.83	193.1					5.50	1.4	1.41	0.03	4.07	4.09						8.4	4.07	0.01													
	STD. DEV.	0.46	0.17	2.51	0.34	14.27					1.13	0.35	0.35	0.01	0.81	0.82						1.44	0.81	0.00													
	MIN	25.6	5.1	5.2	2.5	182					4.8	1.1	1.07	0.01	3.50	3.51						7.3	3.5	0.01													
	MAX	26.5	5.38	10.0	3.18	209.2					6.8	1.8	1.77	0.04	5	5.04						10	5	0.01													
PZ-O4L-15	n	3	3	3	3	3	0	0	0	3	3	3	3	3	3	3	3	0	0	0	0	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	MEAN	27.2	6.02	34.3	5.17	242.7				28	9.97	1.63	1.58	0.06	8	8.39	1.10					8.63	8	0.01													
	STD. DEV.	0.42	0.57	5.86	0.65	77.42				10.58	4.55	0.21	0.17	0.06	4.75	4.70	0.50					7.25	4.75	0.00													
	MIN	26.7	5.38	30	4.6	161				20	5.3	1.4	1.38	0.02	3.5	3.62	0.6					1.5	3.5	0.01													
	MAX	27.5	6.5	41	5.85	315				40	14.4	1.8	1.68	0.12	13.0	13.02	1.6					16.0	13.0	0.01													
PZ-O4L-17	n	3	3	3	3	3	0	0	0	0	3	3	3	3	3	3	0	0	0	0	0	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	MEAN	27.07	6.33	27.7	4.61	64.5					1.33	0.8	0.69	0.10	0.54	0.64						1.0	0.54	0.01													
	STD. DEV.	0.25	0.12	10.69	0.79	5.82					0.56	0.44	0.33	0.11	0.14	0.24						0.14	0.14	0.00													
	MIN	26.8	6.2	21	4	59					0.98	0.49	0.48	0.01	0.40	0.46						1	0.40	0.01													
	MAX	27.3	6.47	40	5.5	71					1.98	1.3	1.07	0.23	0.68	0.91						1.2	0.68	0.01													
PZ-O4L-21	n	3	3	3	3	3	0	0	0	0	3	3	3	3	3	3	0	0	0	0	0	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	MEAN	27.07	5.29	9.10	2.4	185.03					4.28	0.98	0.97	0.01	3.3	3.31						8	3.3	0.01													
	STD. DEV.	0.55	0.13	2.48	0.13	10.14					0.81	0.13	0.13	0.01	0.69	0.69						1.49	0.69	0.00													
	MIN	26.5	5.2	6.3	2.3	173.4					3.34	0.84	0.83	0.01	2.5	2.51						6.6	2.5	0.01													
	MAX	27.6	5.42	11	2.5	192					4.8	1.1	1.09	0.01	3.7	3.71						9.4	3.7	0.01													
PZ-O7L-15	n	3	3	3	3	3	0	0	0	3	3	3	3	3	3	3	3	0	0	0	0	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	MEAN	26.67	6.22	23.3	6.08	70.7				23	2.22	1.09	1.01	0.1	1.13	1.21	1.13					1.0	1.13	0.01													
	STD. DEV.	0.95	0.20	4.93	0.56	20.12				13.01	1.19	0.53	0.43	0.10	0.67	0.77	0.83					0.14	0.67	0.00													
	MIN	25.7	6.1	20	5.7	53.9				10	1.46	0.8	0.74	0.01	0.68	0.72	0.18					1	0.68	0.01													
	MAX	27.6	6.45	29	6.72	93.0				36	3.60	1.7	1.5	0.2	1.9	2.1	1.7					1.2	1.9	0.01													
PZ-O7L-17	n	3	3	3	3	3	0	0	0	0	3	3	3	3	3	3	0	0	0	0	0	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	MEAN	26.37	6.26	22	5.57	69.30					1.45	0.66	0.62	0.04	0.79	0.83						1.3	0.79	0.01													
	STD. DEV.	0.78	0.07	2.00	0.73	13.27					0.48	0.16	0.16	0.03	0.37	0.36						0.32	0.37	0.00													
	MIN	25.5	6.2	20	4.8	60					1.0	0.5	0.44	0.01	0.5	0.51						1.1	0.5	0.01													
	MAX	27	6.34	24	6.26	84.5					1.9	0.8	0.74	0.07	1.2	1.21						1.7	1.2	0.01													
PZ-O7L-21	n	3	3	3	3	3	0	0	0	0	3	3	3	3	3	3	0	0	0	0	0	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	MEAN	26.3	5.25	10.50	3.09	147.73					4.65	0.98	0.97	0.02	3.7	3.68						6.13	3.7	0.01													
	STD. DEV.	0.40	0.16	8.25	0.75	19.18					1.04	0.38	0.37	0.01	0.67	0.68						0.35	0.67	0.00													
	MIN	25.9	5.1	5.2	2.5	128					3.77	0.67	0.66	0.01	3.1	3.11						5.8	3.1	0.01													
	MAX	26.7	5.42	20.0	3.94	166.3					5.80	1.40	1.37	0.03	4.4	4.43						6.5	4.4	0.01													
PZ-03ML-15	n	2	2	2	2	2	0	0	0	2	2	2	2	2	2	2	2	0	2	2	2	2	2	2	2	2	2	2	2	2	2	2	0	0	0	0	0
	MEAN	26.5	6.27	20	5.27	454				14	22.9	1.4	1.39	0.01	22	21.51	4.6		3.5	3.1	0.03	24	22	0.01	2	34	0.05	45	0.07	8.6	0.01	8.7	20				
	STD. DEV.	0.92	0.08	14.14	0.08	84.15				0.71	6.22	0.14	0.14	0.00	6.36	6.36	0.99		0.00	0.28	0.01	7.07	6.36	0.00	1.27	9.19	0.00	9.90	0.06	3.46	0.01	3.32	2.12				
	MIN	25.8	6.21	10	5.21	394				13	18.5	1.3	1.29	0.01	17	17.01	3.9		3.5	2.9	0.03	19	17	0.01	1	27	0.05	38	0.02	6.1	0.01	6.3	18				
	MAX	27.1	6.32	30	5.32	513				14	27.3	1.5	1.49	0.01	26	26.01	5.3		3.5	3.3	0.04	29	26	0.01	3	40	0.05	52	0.11	11.0	0.02	11.0	21				

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Table E.1 (con't)
Summary of Water Quality Data

Sample ID	Sample Date/Time	Temp (°C)	pH	Total Alkalinity (mg/L)	DO (mg/L)	Specific Conductance (µS/cm)	TDS (mg/L)	TSS (mg/L)	$CBOD_5$ (mg/L)	COD (mg/L)	TN (mg/L N)[1]	TKN (mg/L N)	Organic N (mg/L N)[2]	NH_3-N (mg/L N)	NOx (mg/L N)	TIN (mg/L N)[3]	TP (mg/L)	Fecal (Ct/100 mL)	TOC (mg/L)	DOC (mg/L)	Anions						Cations							Hydrogen Sulfide (Unionized) (mg/L)	Sulfide (mg/L)	TS (mg/L)	Sucralose (ug/L)
																					F^-	Cl^-	NO_3-N^-	NO_2-N^-	PO_4-P^-	SO_4^-	B	Ca	Fe	Mg	Mn	K	Na				
PZ-03ML-17	n	2	2	2	2	2	0	0	0	2	2	2	2	2	2	2	2	0	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	0	0	0	0
	MEAN	26.3	6.44	19	6.27	59.3				116	2.69	1.86	1.72	0.14	0.8	0.97	8.3		8.4	4.1	0.01	1.4	0.8	0.01	2.0	3.8	0.05	12.9	0.17	2.0	0.004	1.9	1.2				
	STD. DEV.	0.21	0.21	2.12	0.38	5.16				104.65	1.67	1.48	1.32	0.16	0.19	0.35	6.65		0.00	0.57	0.00	0.35	0.19	0.00	0.21	0.92	0.00	5.80	0.04	0.21	0.00	0.42	0.14				
	MIN	26.1	6.29	17	6.00	55.6				42	1.51	0.81	0.78	0.03	0.7	0.73	3.6		8.4	3.7	0.01	1.1	0.7	0.01	1.8	3.1	0.05	8.8	0.14	1.8	0.002	1.6	1.1				
	MAX	26.4	6.58	20	6.54	62.9				190	3.87	2.90	2.65	0.25	1.0	1.22	13.0		8.4	4.5	0.01	1.6	1.0	0.01	2.1	4.4	0.05	17.0	0.19	2.1	0.006	2.2	1.3				
PZ-03ML-21	n	2	2	2	2	2	0	0	0	2	2	2	2	2	2	2	2	0	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	0	0	0	0
	MEAN	27	6.06	20	2.06	206				16	4	1.2	1.13	0.02	2.9	2.87	0.99		2.5	2.1	0.01	7.8	2.9	0.01	0.45	39	0.05	24	0.06	4.5	0.003	5	3.3				
	STD. DEV.	0.64	0.15	0.00	1.32	23.83				2.12	0.00	0.21	0.23	0.01	0.21	0.23	0.16		0.49	0.78	0.01	0.00	0.21	0.00	0.11	7.07	0.00	0.00	0.03	0.49	0.00	0.21	0.28				
	MIN	26	5.95	20	1.12	189				14	4	1.0	0.97	0.01	2.7	2.71	0.87		2.1	1.5	0.01	7.8	2.7	0.01	0.37	34	0.05	24	0.04	4.1	0.002	5	3.1				
	MAX	27	6.16	20	2.99	223				17	4	1.3	1.29	0.03	3.0	3.03	1.10		2.8	2.6	0.02	7.8	3.0	0.01	0.53	44	0.05	24	0.08	4.8	0.003	5	3.5				
PZ-OON-15	n	3	3	3	3	3	0	0	0	3	3	3	3	3	3	3	3	0	0	0	0	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	MEAN	26.83	6.20	21.0	6.07	74.10				17.0	2.43	0.77	0.75	0.02	1.65	1.68	0.60					1.40	1.65	0.01													
	STD. DEV.	0.59	0.27	1.00	0.37	14.32				10.44	2.32	0.39	0.39	0.01	1.95	1.93	0.30					0.26	1.95	0.00													
	MIN	26.4	5.9	20	6	59.4				10	0.94	0.45	0.43	0.01	0.49	0.51	0.42					1.2	0.49	0.01													
	MAX	27.5	6.47	22	6.47	88				29	5.1	1.2	1.19	0.04	3.9	3.91	0.94					1.7	3.9	0.01													
PZ-OON-17	n	3	3	3	3	3	0	0	0	0	3	3	3	3	3	3	0	0	0	0	0	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	MEAN	26.90	6.12	15	5.15	59.2					1.3	0.5	0.50	0.01	1	0.83						1.1	1	0.01													
	STD. DEV.	0.26	0.19	4.51	0.55	2.11					0.46	0.15	0.15	0.00	0.31	0.31						0.47	0.31	0.00													
	MIN	27	5.91	11	4.6	57					0.8	0.3	0.33	0.01	0	0.47						0.71	0	0.01													
	MAX	27.1	6.3	20	5.70	61.2					1.6	0.6	0.59	0.02	1	1.02						1.60	1	0.01													
PZ-OON-21	n	3	3	3	3	3	0	0	0	0	3	3	3	3	3	3	0	0	0	0	0	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	MEAN	26.30	5.13	4.7	3.4	194.47					6	1.43	1.42	0.01	4.57	4.58						9.63	4.57	0.01													
	STD. DEV.	0.44	0.74	4.56	0.92	35.11					0.10	0.32	0.32	0.00	0.35	0.35						0.64	0.35	0.00													
	MIN	26.0	4.6	2.1	2.9	154					5.9	1.2	1.19	0.01	4.2	4.21						8.9	4.2	0.01													
	MAX	26.8	5.97	10.0	4.5	216.9					6.1	1.8	1.79	0.01	4.9	4.91						10.0	4.9	0.01													
PZ-O2N-15	n	3	3	3	3	3	0	0	0	3	3	3	3	3	3	3	3	0	0	0	0	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	MEAN	26.63	6.53	28	6.55	100.1				16.3	2.06	0.63	0.61	0.02	1.4	1.45	1.40					1.7	1.4	0.01													
	STD. DEV.	1.12	0.12	5.29	0.37	11.17				3.51	0.77	0.21	0.21	0.01	0.67	0.67	0.10					0.20	0.67	0.00													
	MIN	25.4	6.4	22	6.2	88.0				13	1.49	0.39	0.37	0.01	1	1.01	1.3					1.5	1	0.01													
	MAX	27.6	6.64	32	6.94	110				20	2.93	0.76	0.75	0.02	2.2	2.22	1.5					1.9	2.2	0.01													
PZ-O2N-17	n	3	3	3	3	3	0	0	0	0	3	3	3	3	3	3	0	0	0	0	0	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	MEAN	27	6.11	14.3	5.40	47.00					1.25	0.59	0.54	0.05	0.7	0.72						1.27	0.7	0.01													
	STD. DEV.	0.78	0.01	4.93	0.75	3.28					0.22	0.17	0.17	0.04	0.09	0.13						0.41	0.09	0.00													
	MIN	25.7	6.1	11	4.6	44					1.00	0.39	0.36	0.02	0.61	0.64						0.82	0.61	0.01													
	MAX	27.2	6.12	20	6.1	50.5					1.42	0.72	0.7	0.1	0.77	0.87						1.6	0.77	0.01													
PZ-O2N-21	n	3	3	3	3	3	0	0	0	0	3	3	3	3	3	3	0	0	0	0	0	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	MEAN	26.3	4.67	5.10	2.46	222					7.71	1.08	1.07	0.01	6.63	6.64						10.37	6.63	0.01													
	STD. DEV.	0.42	0.09	4.28	0.31	10.58					3.08	0.24	0.24	0.00	2.94	2.94						2.40	2.94	0.00													
	MIN	25.8	4.6	2.1	2.2	210					5.10	0.83	0.82	0.01	4.0	4.01						8.30	4.00	0.01													
	MAX	26.6	4.77	10.0	2.81	230					11.1	1.3	1.29	0.01	9.8	9.81						13.00	9.80	0.01													

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Table E.1 (con't)
Summary of Water Quality Data

Sample ID	Sample Date/Time	Temp (°C)	pH	Total Alkalinity (mg/L)	DO (mg/L)	Specific Conductance (µS/cm)	TDS (mg/L)	TSS (mg/L)	$CBOD_5$ (mg/L)	COD (mg/L)	TN (mg/L N)[1]	TKN (mg/L N)	Organic N (mg/L N)[2]	NH_3-N (mg/L N)	NOx (mg/L N)	TIN (mg/L N)[3]	TP (mg/L)	Fecal (Ct/100 mL)	TOC (mg/L)	DOC (mg/L)	Anions						Cations							Hydrogen Sulfide (Unionized) (mg/L)	Sulfide (mg/L)	TS (mg/L)	Sucralose (ug/L)
																					F^-	Cl^-	NO_3-N^-	NO_2-N^-	PO_4-P^-	SO_4^-	B	Ca	Fe	Mg	Mn	K	Na				
PZ-O4N-15	n	3	3	3	3	3	0	0	0	3	3	3	3	3	3	3	3	0	1	1	1	3	3	3	1	1	1	1	1	1	1	1	1	0	0	0	0
	MEAN	27.1	6.35	33.7	5.26	241.0				31	10.93	1.60	1.58	0.02	9	9.36	1		17.00	16.00	0.48	8.8	9	0.01	0.68	16	0.05	25	0.14	2.6	0	4.3	10				
	STD. DEV.	1.39	0.24	11.93	0.30	51.12				22.48	3.80	0.36	0.35	0.01	4.09	4.08	0.15					5.30	4.09	0.00													
	MIN	25.6	6.2	20	5	188				12	8.4	1.3	1.28	0.02	6.4	6.43	0.80		17.00	16.00	0.48	3.4	6.4	0.01	0.68	16	0.05	25	0.14	2.6	0	4.3	10				
	MAX	28.3	6.62	42	5.58	290				56	15.3	2	1.97	0.03	14.0	14.02	1.1		17.00	16.00	0.48	14	14.0	0.01	0.68	16	0.05	25	0.14	2.6	0	4.3	10				
PZ-O4N-17	n	3	3	3	3	3	0	0	0	2	3	3	3	3	3	3	2	0	0	0	0	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	MEAN	26.53	6.42	32	3.24	78.30				51	2.05	1.37	1.23	0.14	0.68	0.82	1.5					1.90	0.68	0.01													
	STD. DEV.	0.72	0.11	15.62	0.61	11.62				7.07	1.15	1.05	0.94	0.12	0.10	0.21	0.28					0.46	0.10	0.00													
	MIN	25.7	6.3	22	2.6	65				46	1.02	0.4	0.41	0.01	0.60	0.61	1.3					1	0.60	0.01													
	MAX	27	6.52	50	3.75	86.5				56	3.29	2.5	2.26	0.24	0.79	1.03	1.7					2.3	0.79	0.01													
PZ-O4N-21	n	3	3	3	3	3	0	0	0	0	3	3	3	3	3	3	0	0	0	0	0	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	MEAN	26.37	5.71	12	3.48	199.0					4.07	0.91	0.88	0.03	3.17	3.20						8.47	3.17	0.01													
	STD. DEV.	0.49	0.04	2.65	1.58	9.71					0.61	0.08	0.09	0.03	0.59	0.56						1.34	0.59	0.00													
	MIN	25.8	5.7	10	2	191					3.37	0.85	0.81	0.01	2.5	2.56						7.5	2.5	0.01													
	MAX	26.7	5.75	15	5.24	209.6					4.5	1	0.98	0.06	3.6	3.61						10	3.6	0.01													
PZ-O6N-15	n	3	3	3	3	3	0	0	0	2	3	3	3	3	3	3	2	0	1	1	1	3	3	3	1	1	1	1	1	1	1	1	1	0	0	0	0
	MEAN	26.4	6.04	18.3	4.34	285.7				17	14.57	1.37	1.31	0.05	13.2	13.25	0.7		3.9	3	0.082	13.33	13.20	0.01	0.01	24	0.05	34	0.2	7.3	0.001	7.9	11				
	STD. DEV.	0.95	0.05	13.58	0.71	179.98				4.24	10.05	0.15	0.15	0.07	10.10	10.03	0.86					11.25	10.10	0.00													
	MIN	25.3	6	10	3.54	79				14	3	1.2	1.19	0.01	1.6	1.73	0.1		3.9	3	0.082	0.98	1.6	0.01	0.01	24	0.05	34	0.2	7.3	0.001	7.9	11				
	MAX	27.1	6.09	34	4.9	408				20	21.2	1.5	1.48	0.13	20	20.01	1.3		3.9	3	0.082	23	20	0.01	0.01	24	0.05	34	0.2	7.3	0.001	7.9	11				
PZ-O6N-17	n	3	3	3	3	3	0	0	0	0	3	3	3	3	3	3	0	0	0	0	0	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	MEAN	26.30	6.33	25	4.12	73					1.33	0.65	0.59	0.06	0.69	0.74						1.29	0.69	0.01													
	STD. DEV.	0.78	0.14	4.16	0.46	14.43					0.44	0.20	0.18	0.04	0.24	0.26						0.53	0.24	0.00													
	MIN	25.4	6.2	22	3.6	59					0.97	0.47	0.46	0.01	0.5	0.51						0.96	0.50	0.01													
	MAX	26.8	6.47	30	4.49	88					1.82	0.86	0.79	0.09	0.96	1.03						1.90	0.96	0.01													
PZ-O6N-21	n	3	3	3	3	3	0	0	0	0	3	3	3	3	3	3	0	0	0	0	0	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	MEAN	26.33	5.37	10.5	2.86	139.20					2.91	0.67	0.66	0.01	2	2.25						5.3	2	0.01													
	STD. DEV.	0.72	0.40	2.34	0.32	66.73					0.54	0.08	0.08	0.00	0.57	0.57						2.00	0.57	0.00													
	MIN	25.5	5.0	8.4	2.53	93					2.33	0.58	0.57	0.01	1.60	1.62						3.8	1.6	0.01													
	MAX	26.8	5.8	13	3.2	215.7					3.41	0.73	0.71	0.02	2.70	2.71						7.6	2.7	0.01													
PZ-03O-15	n	3	3	3	3	3	0	0	0	1	3	3	3	3	3	3	1	0	0	0	0	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	MEAN	24.97	7.20	41.3	5.5	125.67				10	3.15	1.15	1.14	0.01	2.00	2.01	0.56					1.83	2	0.01													
	STD. DEV.	0.98	0.61	10.97	2.66	22.81					0.26	0.26	0.26	0.00	0.00	0.00						0.40	0.00	0.00													
	MIN	24.4	6.5	35	2.40	112.5				10	2.85	0.85	0.84	0.01	2.00	2.01	0.56					1.6	2	0.01													
	MAX	26.1	7.55	54	7	152				10	3.3	1.3	1.29	0.01	2.00	2.01	0.56					2.3	2	0.01													
PZ-03O-17	n	3	3	3	3	3	0	0	0	0	3	3	3	3	3	3	0	0	1	1	1	3	3	3	1	1	1	1	1	1	1	1	1	0	0	0	0
	MEAN	24.43	6.6	22.3	4.56	58.3					1.35	0.48	0.5	0.01	0.86	0.88			3.6	3.2	0.54	1.21	0.86	0.01	0.17	4.1	0.05	7.3	0.12	1.9	0.0011	2.1	1.1				
	STD. DEV.	1.52	0.30	7.51	2.31	1.81					0.41	0.25	0.25	0.01	0.22	0.23						0.42	0.22	0.00													
	MIN	22.8	6.3	15	2.3	56.4					0.88	0.22	0.2	0.01	0.66	0.67			3.6	3.2	0.54	0.94	0.66	0.01	0.17	4.1	0.05	7.3	0.12	1.9	0.0011	2.1	1.1				
	MAX	25.8	6.9	30	6.92	60					1.62	0.71	0.7	0.03	1.10	1.13			3.6	3.2	0.54	2	1.1	0.01	0.17	4.1	0.05	7.3	0.12	1.9	0.0011	2.1	1.1				
PZ-03O-21	n	3	3	3	3	3	0	0	0	0	3	3	3	3	3	3	0	0	1	1	1	3	3	3	1	1	1	1	1	1	1	1	1	0	0	0	0
	MEAN	25.0	4.96	4.7	2.18	204.77					10.08	1.28	1.27	0.01	9	8.81			1.6	1.5	0.02	13	9	0.01	0.01	32	0.05	20	0.034	5.1	0.011	10	3.4				
	STD. DEV.	0.70	0.52	4.56	0.45	21.54					0.92	0.30	0.30	0.00	0.78	0.78						0.58	0.78	0.00													
	MIN	24.3	4.5	2.1	1.7	181					9.3	0.9	0.92	0.01	8.3	8.31			1.6	1.5	0.02	12	8.3	0.01	0.01	32	0.05	20	0.034	5.1	0.011	10	3.4				
	MAX	25.7	5.52	10.0	2.62	223.0					11.1	1.5	1.49	0.01	9.7	9.71			1.6	1.5	0.02	13	9.7	0.01	0.01	32	0.05	20	0.034	5.1	0.011	10	3.4				

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Table E.1 (con't)
Summary of Water Quality Data

Sample ID	Sample Date/Time	Temp (°C)	pH	Total Alkalinity (mg/L)	DO (mg/L)	Specific Conductance (µS/cm)	TDS (mg/L)	TSS (mg/L)	$CBOD_5$ (mg/L)	COD (mg/L)	TN (mg/L N)[1]	TKN (mg/L N)	Organic N (mg/L N)[2]	NH_3-N (mg/L N)	NOx (mg/L N)	TIN (mg/L N)[3]	TP (mg/L)	Fecal (Ct/100 mL)	TOC (mg/L)	DOC (mg/L)	Anions						Cations							Hydrogen Sulfide (Unionized) (mg/L)	Sulfide (mg/L)	TS (mg/L)	Sucralose (ug/L)
																					F^-	Cl^-	NO_3-N^-	NO_2-N^-	PO_4-P^-	SO_4^-	B	Ca	Fe	Mg	Mn	K	Na				
PZ-04O-15	n	3	3	3	3	3	0	0	0	3	3	3	3	3	3	3	3	0	2	2	2	3	3	3	2	2	2	2	2	2	2	2	2	0	0	0	0
	MEAN	24.8	6.45	29.7	4.5	181.9				11.7	8.36	1.50	1.47	0.02	6.9	6.89	1.76		5.1	4.65	0.15	6.9	6.9	0.01	1.12	10.35	0.05	18.5	0.12	2.65	0	3.5	9.25				
	STD. DEV.	1.14	0.53	11.68	1.96	30.29				2.89	0.68	0.51	0.50	0.01	1.10	1.10	1.07		0.28	0.07	0.01	1.50	1.10	0.00	0.96	5.16	0.00	2.12	0.13	0.49	0.00	1.84	2.47				
	MIN	23.9	6	17	2.3	149				10	7.6	1.0	0.96	0.01	5.6	5.63	0.67		4.9	4.6	0.14	5.3	5.6	0.01	0.44	6.7	0.05	17	0.03	2.3	0	2.2	7.5				
	MAX	26.1	7.04	40	6.1	208.6				15	8.9	2	1.97	0.03	7.6	7.63	2.8		5.3	4.7	0.15	8.3	7.6	0.01	1.8	14	0.05	20	0.21	3	0	4.8	11				
PZ-04O-17	n	3	3	3	3	3	0	0	0	2	3	3	3	3	3	3	1	0	0	0	0	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	MEAN	24.87	6.60	27.00	3.37	136.93				10.00	5.33	0.96	0.95	0.01	4.37	4.38	2.7					3.90	4.37	0.01												
	STD. DEV.	0.95	0.56	11.36	1.47	62.07				0.00	2.27	0.04	0.04	0.00	2.29	2.29						2.34	2.29	0.00												
	MIN	23.90	6.25	19.00	2.40	100.00				10.00	3.90	0.93	0.92	0.01	2.90	2.91	2.7					2.40	2.90	0.01												
	MAX	25.80	7.25	40.00	5.06	208.60				10.00	7.95	1.00	0.99	0.01	7.00	7.01	2.7					6.60	7.00	0.01												
PZ-04O-21	n	3	3	3	3	3	0	0	0	2	3	3	3	3	3	3	1	0	0	0	0	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	MEAN	25.23	5.35	6.83	3.00	214.67				13.00	7.65	1.21	1.20	0.01	6.43	6.45	0.08					11.33	6.43	0.01												
	STD. DEV.	0.71	0.46	2.74	1.03	56.44				4.24	0.55	0.34	0.35	0.01	0.21	0.20						0.58	0.21	0.00												
	MIN	24.60	4.90	5.20	1.85	150.00				10.00	7.04	0.84	0.82	0.01	6.20	6.22	0.08					11.00	6.20	0.01												
	MAX	26.00	5.81	10.00	3.85	254.00				16.00	8.10	1.50	1.49	0.02	6.60	6.61	0.08					12.00	6.60	0.01												
PZ-07O-15	n	3	3	3	3	3	0	0	0	3	3	3	3	3	3	3	3	0	0	0	0	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	MEAN	25.13	6.09	27.00	4.61	196.60				10.00	10.03	1.23	1.22	0.01	8.80	8.81	0.30					8.00	8.80	0.01												
	STD. DEV.	1.69	0.18	5.20	0.56	156.80				0.00	10.02	0.32	0.32	0.00	9.70	9.70	0.11					11.26	9.70	0.00												
	MIN	23.70	5.98	21.00	4.05	93.00				10.00	4.10	1.00	0.99	0.01	3.00	3.01	0.22					1.40	3.00	0.01												
	MAX	27.00	6.30	30.00	5.17	377.00				10.00	21.60	1.60	1.59	0.01	20.00	20.01	0.43					21.00	20.00	0.01												
PZ-07O-17	n	3	3	3	3	3	0	0	0	0	3	3	3	3	3	3	0	0	0	0	0	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	MEAN	25.20	6.48	29.67	2.58	102.63					3.57	1.87	1.67	0.19	1.70	1.89						1.73	1.70	0.01												
	STD. DEV.	1.71	0.20	2.52	0.55	34.37					1.57	1.21	1.05	0.16	0.46	0.57						0.85	0.46	0.00												
	MIN	23.80	6.33	27.00	2.15	81.60					1.80	0.60	0.56	0.04	1.20	1.24						1.10	1.20	0.01												
	MAX	27.10	6.71	32.00	3.20	142.30					4.80	3.00	2.64	0.36	2.10	2.28						2.70	2.10	0.01												
PZ-07O-20	n	3	3	3	3	3	0	0	0	0	3	3	3	3	3	3	0	0	0	0	0	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	MEAN	25.07	5.43	8.27	3.32	114.80					5.15	1.41	1.40	0.01	3.73	3.74						7.60	3.73	0.01												
	STD. DEV.	1.03	0.24	1.50	0.21	12.40					3.68	1.03	1.03	0.00	2.66	2.66						2.96	2.66	0.00												
	MIN	24.20	5.28	7.40	3.19	106.10					2.94	0.74	0.73	0.01	2.20	2.21						5.60	2.20	0.01												
	MAX	26.20	5.70	10.00	3.56	129.00					9.40	2.60	2.59	0.01	6.80	6.81						11.00	6.80	0.01												
PZ-01Q-13	n	3	3	3	3	3	0	0	0	3	3	3	3	3	3	3	3	0	0	0	0	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	MEAN	24.37	6.43	19.33	6.06	66.87				19.33	2.00	0.67	0.63	0.04	1.33	1.37	0.28					1.50	1.33	0.03												
	STD. DEV.	1.92	0.32	9.71	0.74	16.73				8.08	1.38	0.30	0.28	0.02	1.12	1.14	0.06					0.46	1.12	0.03												
	MIN	22.30	6.21	11.00	5.40	48.40				10.00	0.81	0.34	0.33	0.01	0.47	0.48	0.21					1.00	0.47	0.01												
	MAX	26.10	6.80	30.00	6.86	81.00				24.00	3.52	0.92	0.87	0.05	2.60	2.65	0.33					1.90	2.60	0.07												
PZ-01Q-15	n	3	3	3	3	3	0	0	0	3	3	3	3	3	3	3	3	0	0	0	0	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	MEAN	24.63	6.05	7.87	5.49	44.07				28.67	2.14	0.96	0.84	0.11	1.18	1.29	0.86					0.83	1.18	0.01												
	STD. DEV.	1.39	0.05	2.44	1.18	1.93				16.65	0.78	0.73	0.60	0.14	0.39	0.36	0.76					0.15	0.39	0.00												
	MIN	23.10	6.01	5.20	4.20	42.90				10.00	1.34	0.50	0.44	0.01	0.84	0.90	0.24					0.71	0.84	0.01												
	MAX	25.80	6.10	10.00	6.51	46.30				42.00	2.90	1.80	1.53	0.27	1.60	1.61	1.70					1.00	1.60	0.01												
PZ-01Q-19	n	3	3	3	3	3	0	0	0	0	3	3	3	3	3	3	0	0	0	0	0	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	MEAN	24.80	5.14	5.10	3.70	65.80					4.72	2.25	2.02	0.24	2.47	2.70						2.30	2.47	0.01												
	STD. DEV.	0.98	0.07	4.28	0.46	10.22					2.34	2.81	2.43	0.38	0.91	0.72						0.95	0.91	0.00												
	MIN	23.70	5.09	2.10	3.20	56.00					2.74	0.62	0.61	0.01	1.80	2.12						1.40	1.80	0.01												
	MAX	25.60	5.22	10.00	4.11	76.40					7.30	5.50	4.82	0.68	3.50	3.51						3.30	3.50	0.01												

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Table E.1 (con't)
Summary of Water Quality Data

Sample ID	Sample Date/Time	Temp (°C)	pH	Total Alkalinity (mg/L)	DO (mg/L)	Specific Conductance (µS/cm)	TDS (mg/L)	TSS (mg/L)	$CBOD_5$ (mg/L)	COD (mg/L)	TN (mg/L N)[1]	TKN (mg/L N)	Organic N (mg/L N)[2]	NH_3-N (mg/L N)	NOx (mg/L N)	TIN (mg/L N)[3]	TP (mg/L)	Fecal (Ct/100 mL)	TOC (mg/L)	DOC (mg/L)	Anions						Cations							Hydrogen Sulfide (Unionized) (mg/L)	Sulfide (mg/L)	TS (mg/L)	Sucralose (ug/L)
																					F^-	Cl^-	NO_3-N^-	NO_2-N^-	PO_4-P^-	SO_4^-	B	Ca	Fe	Mg	Mn	K	Na				
PZ-04Q-13	n	3	3	3	3	3	0	0	0	3	3	3	3	3	3	3	3	0	2	2	2	3	3	3	2	2	2	2	2	2	2	2	2	0	0	0	0
	MEAN	25.27	6.46	38.00	5.84	172.30				30.33	8.47	1.87	1.78	0.08	6.60	6.68	1.40		6.75	6.20	0.24	6.37	6.60	0.01	1.30	6.35	0.05	18.50	0.03	2.75	0.002	4.00	7.15				
	STD. DEV.	1.10	0.49	10.39	0.05	24.54				22.37	3.42	0.50	0.44	0.09	2.97	3.00	0.36		2.33	1.56	0.01	4.30	2.97	0.00	0.71	1.20	0.00	2.12	0.01	0.35	0.00	1.13	0.35				
	MIN	24.40	6.00	32.00	5.80	144.10				15.00	4.60	1.40	1.34	0.01	3.20	3.26	1.10		5.10	5.10	0.23	2.50	3.20	0.01	0.79	5.50	0.05	17.00	0.02	2.50	0.002	3.20	6.90				
	MAX	26.50	6.98	50.00	5.89	188.80				56.00	11.10	2.40	2.22	0.18	8.70	8.88	1.80		8.40	7.30	0.24	11.00	8.70	0.01	1.80	7.20	0.05	20.00	0.03	3.00	0.002	4.80	7.40				
PZ-04Q-15	n	3	3	3	3	3	0	0	0	3	3	3	3	3	3	3	3	0	1	1	1	3	3	3	1	1	1	1	1	1	1	1	1	0	0	0	0
	MEAN	25.00	6.45	16.67	2.93	94.67				11.00	3.09	0.89	0.86	0.03	2.20	2.23	1.63		3.30	3.00	0.35	2.00	2.20	0.01	0.25	6.00	0.05	11.00	0.02	2.40	0.004	3.10	1.60				
	STD. DEV.	1.05	0.88	4.93	0.60	11.61				1.73	1.27	0.33	0.34	0.03	0.96	0.95	1.19					0.70	0.96	0.00													
	MIN	24.00	5.60	11.00	2.35	83.40				10.00	2.04	0.54	0.52	0.01	1.50	1.52	0.30		3.30	3.00	0.35	1.50	1.50	0.01	0.25	6.00	0.05	11.00	0.02	2.40	0.004	3.10	1.60				
	MAX	26.10	7.35	20.00	3.55	106.60				13.00	4.50	1.20	1.19	0.06	3.30	3.31	2.60		3.30	3.00	0.35	2.80	3.30	0.01	0.25	6.00	0.05	11.00	0.02	2.40	0.004	3.10	1.60				
PZ-04Q-19	n	3	3	3	3	3	0	0	0	0	3	3	3	3	3	3	0	0	1	1	0	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	MEAN	25.30	6.06	30.10	2.75	133.63					9.75	6.73	6.51	0.22	3.02	3.24			6.40	2.40		5.83	3.02	0.01													
	STD. DEV.	0.50	0.18	31.11	0.74	99.91					7.08	8.08	8.10	0.25	3.12	2.93						4.49	3.12	0.00													
	MIN	24.80	5.86	5.30	2.02	75.90					3.86	1.20	1.19	0.01	0.86	1.35			6.40	2.40		2.90	0.86	0.01													
	MAX	25.80	6.20	65.00	3.50	249.00					17.60	16.00	15.84	0.49	6.60	6.61			6.40	2.40		11.00	6.60	0.01													
PZ-06Q-13	n	3	3	3	3	3	0	0	0	3	3	3	3	3	3	3	3	0	1	1	1	3	3	3	1	1	1	1	1	1	1	1	1	0	0	0	0
	MEAN	25.50	6.48	25.67	5.96	128.27				22.33	5.07	1.14	1.09	0.05	3.93	3.99	0.47		10.00	4.60	0.06	3.13	3.93	0.01	0.01	3.60	0.05	10.00	0.07	1.20	0.001	1.90	5.90				
	STD. DEV.	1.11	0.09	4.04	1.19	41.49				21.36	2.41	0.24	0.30	0.07	2.25	2.18	0.31					1.74	2.25	0.00													
	MIN	24.50	6.40	22.00	4.70	83.00				10.00	2.32	0.92	0.79	0.01	1.40	1.53	0.17		10.00	4.60	0.06	1.80	1.40	0.01	0.01	3.60	0.05	10.00	0.07	1.20	0.001	1.90	5.90				
	MAX	26.70	6.58	30.00	7.06	164.50				47.00	6.80	1.40	1.39	0.13	5.70	5.71	0.79		10.00	4.60	0.06	5.10	5.70	0.01	0.01	3.60	0.05	10.00	0.07	1.20	0.001	1.90	5.90				
PZ-06Q-15	n	3	3	3	3	3	0	0	0	3	3	3	3	3	3	3	3	0	1	1	1	3	3	3	1	1	1	1	1	1	1	1	1	0	0	0	0
	MEAN	25.47	6.58	37.67	2.92	243.63				10.33	12.06	1.70	1.68	0.02	10.37	10.38	4.53		7.1	5.9	0.11	6.83	10.37	0.01	3.1	7.7	0.05	23	0.039	2.8	0	4	7.8				
	STD. DEV.	0.97	0.28	6.81	0.12	147.36				0.58	10.82	0.76	0.76	0.00	10.10	10.10	1.42					7.15	10.10	0.00													
	MIN	24.40	6.30	30.00	2.80	133.40				10.00	4.79	0.99	0.98	0.01	3.80	3.81	3.00		7.1	5.9	0.11	1.70	3.80	0.01	3.1	7.7	0.05	23	0.039	2.8	0.0013	4	7.8				
	MAX	26.30	6.85	43.00	3.04	411.00				11.00	24.50	2.50	2.48	0.02	22.00	22.02	5.80		7.1	5.9	0.11	15.00	22.00	0.01	3.1	7.7	0.05	23	0.039	2.8	0.0013	4	7.8				
PZ-06Q-19	n	3	3	3	3	3	0	0	0	3	3	3	3	3	3	3	3	0	0	0	0	3	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0
	MEAN	26.00	6.65	33.00	0.48	89.37				57.33	10.46	9.01	8.90	0.12	1.45	1.57						2.30	1.45	0.06													
	STD. DEV.	0.17	0.18	18.36	0.19	19.21				71.84	16.75	14.71	14.58	0.13	2.04	2.17						0.92	2.04	0.03													
	MIN	25.80	6.51	20.00	0.28	72.00				10.00	0.67	0.46	0.40	0.02	0.21	0.27						1.30	0.21	0.04													
	MAX	26.10	6.85	54.00	0.66	110.00				140.00	29.80	26.00	25.73	0.27	3.80	4.07						3.10	3.80	0.08													
PZ-07Q-13	n	3	3	3	3	3	0	0	0	3	3	3	3	3	3	3	3	0	0	0	0	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	MEAN	25.07	6.41	24.00	4.80	208.27				11.67	9.18	1.15	1.12	0.03	8.03	8.06	0.30					7.80	8.03	0.01													
	STD. DEV.	1.82	0.26	11.27	0.68	148.92				2.89	9.11	0.49	0.50	0.02	8.63	8.61	0.06					9.72	8.63	0.00													
	MIN	23.60	6.12	11.00	4.03	114.80				10.00	3.79	0.79	0.76	0.01	3.00	3.03	0.23					1.60	3.00	0.01													
	MAX	27.10	6.60	31.00	5.30	380.00				15.00	19.70	1.70	1.69	0.05	18.00	18.01	0.34					19.00	18.00	0.01													
PZ-07Q-15	n	3	3	3	3	3	0	0	0	0	3	3	3	3	3	3	0	0	0	0	0	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	MEAN	25.17	6.45	23.67	2.66	104.73					6.60	3.37	3.29	0.08	3.23	3.32						2.07	3.23	0.01													
	STD. DEV.	1.36	0.08	3.21	0.17	19.54					6.78	3.84	3.75	0.09	2.94	3.03						0.61	2.94	0.00													
	MIN	23.90	6.40	20.00	2.47	82.30					2.11	0.91	0.90	0.01	1.20	1.21						1.40	1.20	0.01													
	MAX	26.60	6.54	26.00	2.80	118.00					14.40	7.80	7.61	0.19	6.60	6.79						2.60	6.60	0.01													
PZ-07Q-19	n	3	3	3	3	3	0	0	0	0	3	3	3	3	3	3	0	0	0	0	0	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	MEAN	25.37	5.77	23.13	3.03	110.30					10.98	8.75	8.68	0.07	2.23	2.30						5.87	2.23	0.01													
	STD. DEV.	1.00	0.49	32.04	0.59	8.65					13.96	14.07	13.98	0.09	0.12	0.03						0.51	0.12	0.00													
	MIN	24.60	5.35	2.00	2.50	101.00					2.78	0.48	0.47	0.01	2.10	2.27						5.30	2.10	0.01													
	MAX	26.50	6.30	60.00	3.67	118.10					27.10	25.00	24.83	0.17	2.30	2.32						6.30	2.30	0.01													

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Table E.1 (con't)
Summary of Water Quality Data

Sample ID	Sample Date/Time	Temp (°C)	pH	Total Alkalinity (mg/L)	DO (mg/L)	Specific Conductance (µS/cm)	TDS (mg/L)	TSS (mg/L)	$CBOD_5$ (mg/L)	COD (mg/L)	TN (mg/L N)[1]	TKN (mg/L N)	Organic N (mg/L N)[2]	NH_3-N (mg/L N)	NOx (mg/L N)	TIN (mg/L N)[3]	TP (mg/L)	Fecal (Ct/100 mL)	TOC (mg/L)	DOC (mg/L)	Anions						Cations							Hydrogen Sulfide (Unionized) (mg/L)	Sulfide (mg/L)	TS (mg/L)	Sucralose (ug/L)
																					F^-	Cl^-	NO_3-N^-	NO_2-N^-	PO_4-P^-	SO_4^-	B	Ca	Fe	Mg	Mn	K	Na				
PZ-04U-12	n	3	3	3	3	3	0	0	0	3	3	3	3	3	3	3	3	0	0	0	0	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	MEAN	25.30	6.71	35.33	4.51	124.63				24.67	1.67	0.66	0.61	0.05	1.01	1.06	0.28					3.67	1.01	0.01													
	STD. DEV.	2.19	0.43	14.05	0.27	69.40				14.05	0.76	0.16	0.14	0.03	0.68	0.67	0.09					3.94	0.68	0.00													
	MIN	23.40	6.40	22.00	4.20	79.00				10.00	1.07	0.48	0.45	0.03	0.59	0.62	0.20					1.10	0.59	0.01													
	MAX	27.70	7.20	50.00	4.67	204.50				38.00	2.52	0.77	0.69	0.08	1.80	1.83	0.37					8.20	1.80	0.01													
PZ-04U-14	n	3	3	3	3	3	0	0	0	0	3	3	3	3	3	3	0	0	0	0	0	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	MEAN	25.23	6.76	36.00	5.64	143.80					5.11	3.69	3.56	0.13	1.43	1.55						7.66	1.43	0.01													
	STD. DEV.	1.60	0.48	8.72	0.90	90.13					5.10	5.47	5.27	0.20	0.52	0.40						11.56	0.52	0.00													
	MIN	23.70	6.47	30.00	4.60	63.00					1.79	0.49	0.48	0.01	0.98	1.31						0.77	0.98	0.01													
	MAX	26.90	7.32	46.00	6.18	241.00					10.98	10.00	9.64	0.36	2.00	2.01						21.00	2.00	0.01													
PZ-04U-18	n	3	3	3	3	3	0	0	0	0	3	3	3	3	3	3	0	0	0	0	0	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	MEAN	25.33	5.89	9.77	4.03	70.23					3.45	1.63	1.48	0.16	1.81	1.97						3.50	1.81	0.01													
	STD. DEV.	0.95	0.35	4.35	0.46	17.55					3.43	2.05	1.83	0.22	1.39	1.60						2.00	1.39	0.00													
	MIN	24.40	5.60	5.30	3.50	56.50					1.26	0.42	0.37	0.01	0.84	0.89						2.20	0.84	0.01													
	MAX	26.30	6.28	14.00	4.33	90.00					7.40	4.00	3.59	0.41	3.40	3.81						5.80	3.40	0.01													
PZ-06U-12	n	3	3	3	3	3	0	0	0	1	3	3	3	3	3	3	1	0	2	2	1	3	3	3	1	1	1	1	1	1	1	1	1	0	0	0	0
	MEAN	24.83	6.76	25.67	5.26	141.63				17.00	5.47	0.81	0.78	0.03	4.67	4.70	0.44		4.55	3.15	0.04	4.50	4.67	0.01	0.13	15.00	0.05	14.00	0.02	2.50	0.00	2.50	5.30				
	STD. DEV.	2.42	0.39	6.03	0.63	36.68					5.29	0.60	0.62	0.02	4.69	4.67			0.35	0.21		2.17	4.69	0.00													
	MIN	22.60	6.40	20.00	4.60	117.10				17.00	1.61	0.41	0.36	0.01	1.20	1.26	0.44		4.30	3.00	0.04	2.00	1.20	0.01	0.13	15.00	0.05	14.00	0.02	2.50	0.00	2.50	5.30				
	MAX	27.40	7.18	32.00	5.85	183.80				17.00	11.50	1.50	1.49	0.06	10.00	10.01	0.44		4.80	3.30	0.04	5.80	10.00	0.01	0.13	15.00	0.05	14.00	0.02	2.50	0.00	2.50	5.30				
PZ-06U-14	n	3	3	3	3	3	0	0	0	0	3	3	3	3	3	3	0	0	1	1	1	3	3	3	1	1	1	1	1	1	1	1	1	0	0	0	0
	MEAN	24.83	6.00	18.67	2.79	433.67					29.33	2.00	1.99	0.01	27.33	27.34			2.7	2	0.052	22.33	27.33	0.01	0.01	38	0.05	37	0.02	6.6	0.073	8	17				
	STD. DEV.	1.96	0.19	4.16	0.60	72.20					7.55	0.10	0.10	0.00	7.51	7.51						3.79	7.51	0.00													
	MIN	23.00	5.88	14.00	2.10	390.00					21.90	1.90	1.89	0.01	20.00	20.01			2.7	2	0.052	18.00	20.00	0.01	0.01	38	0.05	37	0.02	6.6	0.073	8	17				
	MAX	26.90	6.22	22.00	3.15	517.00					37.00	2.10	2.09	0.02	35.00	35.02			2.7	2	0.052	25.00	35.00	0.01	0.01	38	0.05	37	0.02	6.6	0.073	8	17				
PZ-06U-34	n	3	3	3	3	3	0	0	0	0	3	3	3	3	3	3	0	0	0	0	0	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	MEAN	25.10	5.51	8.03	0.93	270.33					13.60	2.57	2.42	0.15	11.03	11.18						14.00	11.03	0.01													
	STD. DEV.	0.90	0.34	5.23	0.39	36.47					1.08	1.17	1.05	0.12	1.67	1.61						2.00	1.67	0.01													
	MIN	24.20	5.27	2.10	0.56	230.00					12.70	1.30	1.29	0.01	9.10	9.32						12.00	9.10	0.01													
	MAX	26.00	5.90	12.00	1.33	301.00					14.80	3.60	3.38	0.22	12.00	12.21						16.00	12.00	0.02													

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Table E.1 (con't)
Summary of Water Quality Data

Sample ID	Sample Date/Time	Temp (°C)	pH	Total Alkalinity (mg/L)	DO (mg/L)	Specific Conductance (µS/cm)	TDS (mg/L)	TSS (mg/L)	$CBOD_5$ (mg/L)	COD (mg/L)	TN (mg/LN)[1]	TKN (mg/LN)	Organic N (mg/LN)[2]	NH_3-N (mg/LN)	NOx (mg/LN)	TIN (mg/LN)[3]	TP (mg/L)	Fecal (Ct/100 mL)	TOC (mg/L)	DOC (mg/L)	Anions						Cations							Hydrogen Sulfide (Unionized) (mg/L)	Sulfide (mg/L)	TS (mg/L)	Sucralose (ug/L)
																					F^-	Cl^-	NO_3-N^-	NO_2-N^-	PO_4-P^-	SO_4^-	B	Ca	Fe	Mg	Mn	K	Na				
Blanks																																					
EB	n	3	3	3	3	3	0	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	0	0	3	0
	MEAN	21.97	7.17	2.00	7.14	1.60		1.00	2.00	10.00	0.07	0.06	0.04	0.01	0.01	0.03	0.01	1.00	0.50	0.50	0.01	0.05	0.01	0.01	0.01	0.20	0.05	0.04	0.02	0.02	0.001	0.01	0.13			10.00	
	STD. DEV.	2.30	0.66	0.00	3.61	0.54		0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	
	MIN	20.00	6.60	2.00	3.10	1.00		1.00	2.00	10.00	0.06	0.05	0.04	0.01	0.01	0.02	0.01	1.00	0.50	0.50	0.01	0.05	0.01	0.01	0.01	0.20	0.05	0.04	0.02	0.02	0.001	0.01	0.13			10.00	
	MAX	24.50	7.90	2.00	10.03	2.03		1.00	2.00	10.00	0.08	0.07	0.05	0.02	0.02	0.03	0.01	1.00	0.50	0.50	0.01	0.05	0.01	0.01	0.01	0.20	0.05	0.04	0.02	0.02	0.001	0.01	0.13			10.00	
FB-DI	n	3	3	3	3	3	0	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	0	0	3	0
	MEAN	21.90	7.19	2.00	7.14	1.60		1.00	2.00	10.00	0.06	0.05	0.04	0.01	0.01	0.02	0.01	2.00	0.50	0.50	0.01	0.05	0.01	0.01	0.01	0.20	0.05	0.04	0.02	0.02	0.001	0.01	0.13			10.00	
	STD. DEV.	2.39	0.69	0.00	3.61	0.54		0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.01	0.00	1.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	
	MIN	19.80	6.60	2.00	3.10	1.00		1.00	2.00	10.00	0.06	0.05	0.04	0.01	0.01	0.02	0.01	1.00	0.50	0.50	0.01	0.05	0.01	0.01	0.01	0.20	0.05	0.04	0.02	0.02	0.001	0.01	0.13			10.00	
	MAX	24.50	7.95	2.00	10.03	2.03		1.00	2.00	10.00	0.07	0.05	0.04	0.01	0.02	0.03	0.01	4.00	0.50	0.50	0.01	0.05	0.01	0.01	0.01	0.20	0.05	0.04	0.02	0.02	0.001	0.01	0.13			10.00	
FB-TAP	n	2	2	2	2	2	0	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	0	0	2	0
	MEAN	23.20	7.39	86.50	5.33	327.50		1.00	2.00	14.00	0.47	0.16	0.15	0.01	0.31	0.32	0.02	1.00	0.71	0.50	0.03	12.00	0.31	0.01	0.01	38.00	0.05	41.50	0.02	10.50	0.002	3.55	7.50			270.00	
	STD. DEV.	0.14	0.18	9.19	0.16	3.54		0.00	0.00	5.66	0.21	0.15	0.15	0.00	0.06	0.06	0.02	0.00	0.29	0.00	0.01	0.00	0.06	0.00	0.00	0.00	0.00	3.54	0.00	0.71	0.00	0.21	0.42			14.14	
	MIN	23.10	7.26	80.00	5.22	325.00		1.00	2.00	10.00	0.32	0.05	0.04	0.01	0.27	0.28	0.01	1.00	0.50	0.50	0.02	12.00	0.27	0.01	0.01	38.00	0.05	39.00	0.02	10.00	0.001	3.40	7.20			260.00	
	MAX	23.30	7.51	93.00	5.44	330.00		1.00	2.00	18.00	0.61	0.26	0.25	0.01	0.35	0.36	0.04	1.00	0.91	0.50	0.03	12.00	0.35	0.01	0.01	38.00	0.05	44.00	0.02	11.00	0.002	3.70	7.80			280.00	

Notes:
[1]Total Nitrogen (TN) is a calculated value equal to the sum of TKN and NO_x
[2]Organic Nitrogen (ON) is a calculated value equal to the difference of TKN and NH_3
[3]Total Inorganic Nitrogen (TIN) is a calculated value equal to the sum of NH_3 and NO_x
D.O. - Dissolved oxygen
G - Grab sample
Gray-shaded data points indicate values below method detection level (mdl), mdl value used for statistical analyses.
Yellow-shaded data points indicate the reported value is between the laboratory method detection limit and the laboratory practical quantitation limit, value used for statistical analysis.
Blue-shaded data points indicate values below mdl and sample held beyond accepted holding time
Orange-shaded data points indicate estimated value

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Appendix F: Laboratory Report

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SOUTHERN ANALYTICAL LABORATORIES, INC.
110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 FAX 813-855-2218

Hazen and Sawyer
10002 Princess Palm Ave, Suite 200
Tampa, FL 33619

April 15, 2013
Work Order: 1301945

Laboratory Report

Project Name **C-HS3 SE#3**

Parameters	Units	Results *	Method	PQL	MDL	Prepared	Analyzed	Dilution
Sample Description		**STE**						
Matrix		**Wastewater**						
SAL Sample Number		**1301945-01**						
Date/Time Collected		**02/25/13 13:10**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/25/13 16:15**						
Client Provided Field Data								
pH		7.20						
Temperature		28.3 °C						
Conductivity		593 umhos						
Dissolved Oxygen		1.80 mg/L						
Inorganics								
Ammonia as N	mg/L	28	EPA 350.1	2.0	0.47		03/08/13 09:18	50
Carbonaceous BOD	mg/L	8	SM 5210B	2	2	02/27/13 07:00	03/04/13 12:52	1
Chloride	mg/L	23	EPA 300.0	0.20	0.050		02/26/13 16:54	1
Fluoride	mg/L	0.043	EPA 300.0	0.040	0.010		02/26/13 16:54	1
Nitrate (as N)	mg/L	0.03 I	EPA 300.0	0.04	0.01		02/26/13 16:54	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		02/26/13 16:54	1
Orthophosphate as P	mg/L	2.1	EPA 300.0	0.040	0.010		02/26/13 16:54	1
Phosphorous - Total as P	mg/L	3.2	SM 4500P-E	0.80	0.20	02/27/13 09:54	03/01/13 14:56	20
Sulfate	mg/L	32	EPA 300.0	0.60	0.20		02/26/13 16:54	1
Total Alkalinity	mg/L	190	SM 2320B	8.0	2.0		02/28/13 14:14	1
Total Kjeldahl Nitrogen	mg/L	33	EPA 351.2	0.20	0.05	03/01/13 07:37	03/06/13 16:20	9.62
Total Solids	mg/L	290	SM 2540B	10	10	03/04/13 08:09	03/04/13 17:05	1
Total Suspended Solids	mg/L	24	SM 2540D	1	1	02/27/13 16:35	03/01/13 10:15	1
Nitrate+Nitrite (N)	mg/L	0.03 I	EPA 300.0	0.08	0.02		02/26/13 16:54	1
Metals								
Boron	mg/L	0.050 U	EPA 200.7**	0.10	0.050	03/04/13 14:54	03/08/13 14:50	1
Calcium	mg/L	47	EPA 200.7	0.50	0.042	03/04/13 14:54	03/08/13 14:50	1
Iron	mg/L	0.067 I	EPA 200.7	0.10	0.020	03/04/13 14:54	03/08/13 14:50	1
Magnesium	mg/L	12	EPA 200.7	0.50	0.020	03/04/13 14:54	03/08/13 14:50	1
Manganese	mg/L	0.011	EPA 200.7	0.010	0.0010	03/04/13 14:54	03/08/13 14:50	1
Potassium	mg/L	10	EPA 200.7	0.050	0.010	03/04/13 14:54	03/08/13 14:50	1
Sodium	mg/L	16	EPA 200.7	0.50	0.13	03/04/13 14:54	03/08/13 14:50	1
Microbiology								
Fecal Coliforms	CFU/100 ml	2,000	SM 9222D	1	1	02/25/13 16:29	02/26/13 15:02	1

Sample Description	**STE-DUP**
Matrix	**Wastewater**
SAL Sample Number	**1301945-02**
Date/Time Collected	**02/25/13 13:15**
Collected by	**Sean Schmidt**
Date/Time Received	**02/25/13 16:15**

Florida Certification Number: E84129
NELAP Accredited

Francis I. Daniels, Laboratory Director
Leslie C. Boardman, Q.A. Manager

Hazen and Sawyer
10002 Princess Palm Ave, Suite 200
Tampa, FL 33619

April 15, 2013
Work Order: 1301945

Laboratory Report

Project Name **C-HS3 SE#3**

Parameters	Units	Results *	Method	PQL	MDL	Prepared	Analyzed	Dilution
Sample Description		**STE-DUP**						
Matrix		**Wastewater**						
SAL Sample Number		**1301945-02**						
Date/Time Collected		**02/25/13 13:15**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/25/13 16:15**						
Client Provided Field Data								
pH		7.20						
Temperature		28.3 °C						
Conductivity		593 umhos						
Dissolved Oxygen		1.80 mg/L						
Inorganics								
Ammonia as N	mg/L	29	EPA 350.1	2.0	0.47		03/08/13 09:20	50
Carbonaceous BOD	mg/L	7	SM 5210B	2	2	02/27/13 07:00	03/04/13 12:52	1
Chloride	mg/L	24	EPA 300.0	0.20	0.050		02/26/13 16:54	1
Fluoride	mg/L	0.029 I	EPA 300.0	0.040	0.010		02/26/13 16:54	1
Nitrate (as N)	mg/L	0.02 I	EPA 300.0	0.04	0.01		02/26/13 16:54	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		02/26/13 16:54	1
Orthophosphate as P	mg/L	2.3	EPA 300.0	0.040	0.010		02/26/13 16:54	1
Phosphorous - Total as P	mg/L	3.1	SM 4500P-E	0.80	0.20	02/27/13 09:54	03/01/13 14:57	20
Sulfate	mg/L	31	EPA 300.0	0.60	0.20		02/26/13 16:54	1
Total Alkalinity	mg/L	180	SM 2320B	8.0	2.0		02/28/13 14:14	1
Total Kjeldahl Nitrogen	mg/L	32	EPA 351.2	0.20	0.05	03/01/13 07:37	03/06/13 16:21	9.62
Total Solids	mg/L	290	SM 2540B	10	10	03/04/13 08:09	03/04/13 17:05	1
Total Suspended Solids	mg/L	24	SM 2540D	1	1	02/27/13 16:35	03/01/13 10:15	1
Nitrate+Nitrite (N)	mg/L	0.02 I	EPA 300.0	0.08	0.02		02/26/13 16:54	1
Metals								
Boron	mg/L	0.050 U	EPA 200.7**	0.10	0.050	03/04/13 14:54	03/08/13 15:00	1
Calcium	mg/L	45	EPA 200.7	0.50	0.042	03/04/13 14:54	03/08/13 15:00	1
Iron	mg/L	0.059 I	EPA 200.7	0.10	0.020	03/04/13 14:54	03/08/13 15:00	1
Magnesium	mg/L	11	EPA 200.7	0.50	0.020	03/04/13 14:54	03/08/13 15:00	1
Manganese	mg/L	0.011	EPA 200.7	0.010	0.0010	03/04/13 14:54	03/08/13 15:00	1
Potassium	mg/L	9.5	EPA 200.7	0.050	0.010	03/04/13 14:54	03/08/13 15:00	1
Sodium	mg/L	18	EPA 200.7	0.50	0.13	03/04/13 14:54	03/08/13 15:00	1
Microbiology								
Fecal Coliforms	CFU/100 ml	200	SM 9222D	1	1	02/25/13 16:29	02/26/13 15:02	1

Sample Description	**PZ-03A-15**
Matrix	**Groundwater**
SAL Sample Number	**1301945-03**
Date/Time Collected	**02/27/13 10:07**
Collected by	**Sean Schmidt**
Date/Time Received	**02/27/13 15:40**

Hazen and Sawyer
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Tampa, FL 33619

April 15, 2013
Work Order: 1301945

Laboratory Report

Project Name **C-HS3 SE#3**

Parameters	Units	Results *	Method	PQL	MDL	Prepared	Analyzed	Dilution
Sample Description		**PZ-03A-15**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-03**						
Date/Time Collected		**02/27/13 10:07**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/27/13 15:40**						
Client Provided Field Data								
pH		6.26						
Temperature		24.8 °C						
Conductivity		35.6 umhos						
Dissolved Oxygen		7.27 mg/L						
Inorganics								
Ammonia as N	mg/L	0.032 I	EPA 350.1	0.040	0.009		03/11/13 09:39	1
Chemical Oxygen Demand	mg/L	12 I	EPA 410.4	25	10	02/28/13 09:50	02/28/13 16:09	1
Chloride	mg/L	1.2	EPA 300.0	0.20	0.050		02/28/13 16:53	1
Nitrate (as N)	mg/L	0.26	EPA 300.0	0.04	0.01		02/28/13 16:53	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		02/28/13 16:53	1
Phosphorous - Total as P	mg/L	0.64	SM 4500P-E	0.040	0.010	03/01/13 16:03	03/05/13 16:20	1
Total Alkalinity	mg/L	10	SM 2320B	8.0	2.0		03/04/13 11:00	1
Total Kjeldahl Nitrogen	mg/L	0.35	EPA 351.2	0.20	0.05	03/08/13 14:55	03/12/13 08:59	1
Nitrate+Nitrite (N)	mg/L	0.26	EPA 300.0	0.08	0.02		02/28/13 16:53	1

Sample Description		**PZ-03A-17**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-04**						
Date/Time Collected		**02/27/13 10:20**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/27/13 15:40**						
Client Provided Field Data								
pH		6.21						
Temperature		25.5 °C						
Conductivity		74.6 umhos						
Dissolved Oxygen		6.48 mg/L						
Inorganics								
Ammonia as N	mg/L	0.037 I	EPA 350.1	0.040	0.009		03/11/13 09:39	1
Chemical Oxygen Demand	mg/L	10 U	EPA 410.4	25	10	02/28/13 09:50	02/28/13 16:09	1
Chloride	mg/L	1.9	EPA 300.0	0.20	0.050		02/28/13 16:53	1
Nitrate (as N)	mg/L	0.63	EPA 300.0	0.04	0.01		02/28/13 16:53	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		02/28/13 16:53	1
Phosphorous - Total as P	mg/L	0.32	SM 4500P-E	0.040	0.010	03/01/13 16:03	03/05/13 16:20	1
Total Alkalinity	mg/L	20	SM 2320B	8.0	2.0		03/04/13 11:00	1
Total Kjeldahl Nitrogen	mg/L	0.31	EPA 351.2	0.20	0.05	03/08/13 14:55	03/12/13 09:00	1
Nitrate+Nitrite (N)	mg/L	0.63	EPA 300.0	0.08	0.02		02/28/13 16:53	1

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April 15, 2013
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Laboratory Report

Project Name **C-HS3 SE#3**

Parameters	Units	Results *	Method	PQL	MDL	Prepared	Analyzed	Dilution
Sample Description		**PZ-03A-21**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-05**						
Date/Time Collected		**02/27/13 10:33**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/27/13 15:40**						
Client Provided Field Data								
pH		5.66						
Temperature		25.6 °C						
Conductivity		272 umhos						
Dissolved Oxygen		2.68 mg/L						
Inorganics								
Ammonia as N	mg/L	0.012 I	EPA 350.1	0.040	0.009		03/11/13 09:39	1
Chemical Oxygen Demand	mg/L	10 U	EPA 410.4	25	10	02/28/13 09:50	02/28/13 16:09	1
Chloride	mg/L	13	EPA 300.0	0.20	0.050		02/28/13 16:53	1
Nitrate (as N)	mg/L	13	EPA 300.0	0.04	0.01		02/28/13 16:53	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		02/28/13 16:53	1
Phosphorous - Total as P	mg/L	0.038 I	SM 4500P-E	0.040	0.010	03/01/13 16:03	03/05/13 16:21	1
Total Alkalinity	mg/L	20	SM 2320B	8.0	2.0		03/04/13 11:00	1
Total Kjeldahl Nitrogen	mg/L	0.72	EPA 351.2	0.20	0.05	03/08/13 14:55	03/12/13 09:02	1
Nitrate+Nitrite (N)	mg/L	13	EPA 300.0	0.08	0.02		02/28/13 16:53	1

Sample Description		**PZ-03A-34**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-06**						
Date/Time Collected		**02/27/13 10:48**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/27/13 15:40**						
Client Provided Field Data								
pH		5.92						
Temperature		26.3 °C						
Conductivity		85.7 umhos						
Dissolved Oxygen		4.94 mg/L						
Inorganics								
Ammonia as N	mg/L	0.015 I	EPA 350.1	0.040	0.009		03/11/13 09:39	1
Chemical Oxygen Demand	mg/L	10 U	EPA 410.4	25	10	02/28/13 09:50	02/28/13 16:09	1
Chloride	mg/L	4.1	EPA 300.0	0.20	0.050		02/28/13 16:53	1
Fluoride	mg/L	0.010 U	EPA 300.0	0.040	0.010		02/28/13 16:53	1
Nitrate (as N)	mg/L	3.0	EPA 300.0	0.04	0.01		02/28/13 16:53	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		02/28/13 16:53	1
Orthophosphate as P	mg/L	0.23	EPA 300.0	0.040	0.010		02/28/13 16:53	1
Phosphorous - Total as P	mg/L	0.35	SM 4500P-E	0.040	0.010	03/01/13 16:03	03/05/13 16:22	1
Sulfate	mg/L	4.9	EPA 300.0	0.60	0.20		02/28/13 16:53	1

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Parameters	Units	Results *	Method	PQL	MDL	Prepared	Analyzed	Dilution
Sample Description		**PZ-03A-34**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-06**						
Date/Time Collected		**02/27/13 10:48**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/27/13 15:40**						
Client Provided Field Data								
pH		5.92						
Temperature		26.3 °C						
Conductivity		85.7 umhos						
Dissolved Oxygen		4.94 mg/L						
Total Alkalinity	mg/L	10	SM 2320B	8.0	2.0		03/04/13 11:00	1
Total Kjeldahl Nitrogen	mg/L	0.78	EPA 351.2	0.20	0.05	03/08/13 14:55	03/12/13 09:03	1
Total Organic Carbon	mg/L	7.4	SM 5310B	1.0	0.50		02/28/13 09:59	1
Nitrate+Nitrite (N)	mg/L	3.0	EPA 300.0	0.08	0.02		02/28/13 16:53	1
Inorganic, Dissolved								
Dissolved Organic Carbon	mg/L	5.7	SM 5310B	1.0	0.50		02/28/13 12:30	1
Metals								
Boron	mg/L	0.050 U	EPA 200.7**	0.10	0.050	03/04/13 14:59	03/13/13 17:07	1
Calcium	mg/L	4.9	EPA 200.7	0.50	0.042	03/04/13 14:59	03/13/13 17:07	1
Iron	mg/L	0.020 U	EPA 200.7	0.10	0.020	03/04/13 14:59	03/13/13 17:07	1
Magnesium	mg/L	1.8	EPA 200.7	0.50	0.020	03/04/13 14:59	03/13/13 17:07	1
Manganese	mg/L	0.040	EPA 200.7	0.010	0.0010	03/04/13 14:59	03/13/13 17:07	1
Potassium	mg/L	7.1	EPA 200.7	0.050	0.010	03/04/13 14:59	03/13/13 17:07	1
Sodium	mg/L	1.6	EPA 200.7	0.50	0.13	03/04/13 14:59	03/13/13 17:07	1
Sample Description		**PZ-03I-15**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-07**						
Date/Time Collected		**02/26/13 12:07**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/26/13 14:50**						
Client Provided Field Data								
pH		5.78						
Temperature		25.4 °C						
Conductivity		46.6 umhos						
Dissolved Oxygen		4.90 mg/L						
Inorganics								
Ammonia as N	mg/L	0.046	EPA 350.1	0.040	0.009		03/11/13 09:39	1
Chemical Oxygen Demand	mg/L	20 I	EPA 410.4	25	10	02/27/13 10:22	02/27/13 15:48	1
Chloride	mg/L	1.3	EPA 300.0	0.20	0.050		02/27/13 01:41	1
Nitrate (as N)	mg/L	1.3	EPA 300.0	0.04	0.01		02/27/13 01:41	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		02/27/13 01:41	1

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Parameters	Units	Results *	Method	PQL	MDL	Prepared	Analyzed	Dilution
Sample Description		**PZ-03I-15**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-07**						
Date/Time Collected		**02/26/13 12:07**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/26/13 14:50**						
Client Provided Field Data								
pH		5.78						
Temperature		25.4 °C						
Conductivity		46.6 umhos						
Dissolved Oxygen		4.90 mg/L						
Phosphorous - Total as P	mg/L	0.73	SM 4500P-E	0.040	0.010	02/27/13 09:54	03/01/13 14:12	1
Total Alkalinity	mg/L	40	SM 2320B	8.0	2.0		03/04/13 11:00	1
Total Kjeldahl Nitrogen	mg/L	0.60	EPA 351.2	0.20	0.05	03/08/13 14:59	03/12/13 10:32	1
Nitrate+Nitrite (N)	mg/L	1.3	EPA 300.0	0.08	0.02		02/27/13 01:41	1
Sample Description		**PZ-03I-17**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-08**						
Date/Time Collected		**02/27/13 09:43**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/27/13 15:40**						
Client Provided Field Data								
pH		6.08						
Temperature		24.7 °C						
Conductivity		48.1 umhos						
Dissolved Oxygen		2.91 mg/L						
Inorganics								
Ammonia as N	mg/L	0.077	EPA 350.1	0.040	0.009		03/11/13 09:39	1
Chloride	mg/L	1.4	EPA 300.0	0.20	0.050		02/28/13 16:53	1
Nitrate (as N)	mg/L	0.62	EPA 300.0	0.04	0.01		02/28/13 16:53	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		02/28/13 16:53	1
Total Alkalinity	mg/L	20	SM 2320B	8.0	2.0		03/04/13 11:00	1
Total Kjeldahl Nitrogen	mg/L	0.97	EPA 351.2	0.20	0.05	03/08/13 14:55	03/12/13 09:04	1
Nitrate+Nitrite (N)	mg/L	0.62	EPA 300.0	0.08	0.02		02/28/13 16:53	1
Sample Description		**PZ-03I-21**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-09**						
Date/Time Collected		**02/27/13 09:55**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/27/13 15:40**						

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Sample Description		**PZ-03I-21**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-09**						
Date/Time Collected		**02/27/13 09:55**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/27/13 15:40**						
Client Provided Field Data								
pH		4.87						
Temperature		24.8 °C						
Conductivity		1940 umhos						
Dissolved Oxygen		2.97 mg/L						
Inorganics								
Ammonia as N	mg/L	0.015 I	EPA 350.1	0.040	0.009		03/11/13 09:39	1
Chloride	mg/L	8.2	EPA 300.0	0.20	0.050		02/28/13 16:53	1
Nitrate (as N)	mg/L	5.3	EPA 300.0	0.04	0.01		02/28/13 16:53	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		02/28/13 16:53	1
Total Alkalinity	mg/L	10	SM 2320B	8.0	2.0		03/04/13 11:00	1
Total Kjeldahl Nitrogen	mg/L	0.77	EPA 351.2	0.20	0.05	03/08/13 14:55	03/12/13 09:06	1
Nitrate+Nitrite (N)	mg/L	5.3	EPA 300.0	0.08	0.02		02/28/13 16:53	1

Sample Description		**PZ-03K-15**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-10**						
Date/Time Collected		**02/26/13 11:14**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/26/13 14:50**						
Client Provided Field Data								
pH		6.72						
Temperature		25.5 °C						
Conductivity		435 umhos						
Dissolved Oxygen		5.49 mg/L						
Inorganics								
Ammonia as N	mg/L	0.017 I	EPA 350.1	0.040	0.009		03/08/13 11:59	1
Chemical Oxygen Demand	mg/L	10 U	EPA 410.4	25	10	02/27/13 10:22	02/27/13 15:48	1
Chloride	mg/L	22	EPA 300.0	0.20	0.050		02/27/13 01:41	1
Fluoride	mg/L	0.068	EPA 300.0	0.040	0.010		02/27/13 01:41	1
Nitrate (as N)	mg/L	20	EPA 300.0	0.04	0.01		02/27/13 01:41	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		02/27/13 01:41	1
Orthophosphate as P	mg/L	0.010 U	EPA 300.0	0.040	0.010		02/27/13 01:41	1
Phosphorous - Total as P	mg/L	3.8	SM 4500P-E	0.80	0.20	02/27/13 09:54	03/01/13 14:58	20
Sulfate	mg/L	29	EPA 300.0	0.60	0.20		02/27/13 01:41	1
Total Alkalinity	mg/L	20	SM 2320B	8.0	2.0		02/28/13 14:14	1
Total Kjeldahl Nitrogen	mg/L	2.0	EPA 351.2	0.20	0.05	03/01/13 07:37	03/06/13 15:28	1

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Parameters	Units	Results *	Method	PQL	MDL	Prepared	Analyzed	Dilution
Sample Description		**PZ-03K-15**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-10**						
Date/Time Collected		**02/26/13 11:14**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/26/13 14:50**						
Client Provided Field Data								
pH		6.72						
Temperature		25.5 °C						
Conductivity		435 umhos						
Dissolved Oxygen		5.49 mg/L						
Total Organic Carbon	mg/L	3.3	SM 5310B	1.0	0.50		02/28/13 09:59	1
Nitrate+Nitrite (N)	mg/L	20	EPA 300.0	0.08	0.02		02/27/13 01:41	1
Inorganic, Dissolved								
Dissolved Organic Carbon	mg/L	2.6	SM 5310B	1.0	0.50		02/28/13 12:30	1
Metals								
Boron	mg/L	0.050 U	EPA 200.7**	0.10	0.050	03/04/13 14:54	03/08/13 15:04	1
Calcium	mg/L	46	EPA 200.7	0.50	0.042	03/04/13 14:54	03/08/13 15:04	1
Iron	mg/L	0.12	EPA 200.7	0.10	0.020	03/04/13 14:54	03/08/13 15:04	1
Magnesium	mg/L	8.1	EPA 200.7	0.50	0.020	03/04/13 14:54	03/08/13 15:04	1
Manganese	mg/L	0.0010 U	EPA 200.7	0.010	0.0010	03/04/13 14:54	03/08/13 15:04	1
Potassium	mg/L	8.0	EPA 200.7	0.050	0.010	03/04/13 14:54	03/08/13 15:04	1
Sodium	mg/L	16	EPA 200.7	0.50	0.13	03/04/13 14:54	03/08/13 15:04	1

Sample Description		**PZ-03K-17**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-11**						
Date/Time Collected		**02/26/13 11:38**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/26/13 14:50**						
Client Provided Field Data								
pH		6.33						
Temperature		25.2 °C						
Conductivity		50.6 umhos						
Dissolved Oxygen		6.35 mg/L						
Inorganics								
Ammonia as N	mg/L	0.056	EPA 350.1	0.040	0.009		03/08/13 13:11	1
Chloride	mg/L	0.90	EPA 300.0	0.20	0.050		02/27/13 01:41	1
Nitrate (as N)	mg/L	0.59	EPA 300.0	0.04	0.01		02/27/13 01:41	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		02/27/13 01:41	1
Total Alkalinity	mg/L	60	SM 2320B	8.0	2.0		02/28/13 14:14	1
Total Kjeldahl Nitrogen	mg/L	0.84	EPA 351.2	0.20	0.05	03/01/13 07:37	03/06/13 15:29	1
Nitrate+Nitrite (N)	mg/L	0.59	EPA 300.0	0.08	0.02		02/27/13 01:41	1

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Parameters	Units	Results *	Method	PQL	MDL	Prepared	Analyzed	Dilution
Sample Description		**PZ-03K-21**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-12**						
Date/Time Collected		**02/26/13 11:53**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/26/13 14:50**						
Client Provided Field Data								
pH		6.01						
Temperature		25.7 °C						
Conductivity		156.8 umhos						
Dissolved Oxygen		2.17 mg/L						
Inorganics								
Ammonia as N	mg/L	0.016 I	EPA 350.1	0.040	0.009		03/11/13 09:39	1
Chloride	mg/L	6.8	EPA 300.0	0.20	0.050		02/27/13 01:41	1
Nitrate (as N)	mg/L	2.7	EPA 300.0	0.04	0.01		02/27/13 01:41	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		02/27/13 01:41	1
Total Alkalinity	mg/L	10	SM 2320B	8.0	2.0		03/04/13 11:00	1
Total Kjeldahl Nitrogen	mg/L	1.3	EPA 351.2	0.20	0.05	03/08/13 14:59	03/12/13 10:33	1
Nitrate+Nitrite (N)	mg/L	2.7	EPA 300.0	0.08	0.02		02/27/13 01:41	1

Sample Description		**PZ-02L-15**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-13**						
Date/Time Collected		**02/25/13 08:18**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/25/13 16:15**						
Client Provided Field Data								
pH		6.40						
Temperature		24.6 °C						
Conductivity		78.8 umhos						
Dissolved Oxygen		6.03 mg/L						
Inorganics								
Ammonia as N	mg/L	0.55	EPA 350.1	0.040	0.009		03/08/13 13:13	1
Chemical Oxygen Demand	mg/L	24 I	EPA 410.4	25	10	02/26/13 09:52	02/26/13 16:13	1
Chloride	mg/L	1.9	EPA 300.0	0.20	0.050		02/26/13 16:54	1
Nitrate (as N)	mg/L	1.6	EPA 300.0	0.04	0.01		02/26/13 16:54	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		02/26/13 16:54	1
Phosphorous - Total as P	mg/L	1.4	SM 4500P-E	0.040	0.010	02/27/13 09:54	03/01/13 14:14	1
Total Alkalinity	mg/L	40	SM 2320B	8.0	2.0		02/28/13 14:14	1
Total Kjeldahl Nitrogen	mg/L	1.0	EPA 351.2	0.20	0.05	03/01/13 07:37	03/06/13 15:30	1
Nitrate+Nitrite (N)	mg/L	1.6	EPA 300.0	0.08	0.02		02/26/13 16:54	1

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Sample Description		**PZ-02L-17**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-14**						
Date/Time Collected		**02/25/13 08:43**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/25/13 16:15**						
Client Provided Field Data								
pH		6.43						
Temperature		25.1 °C						
Conductivity		67.9 umhos						
Dissolved Oxygen		5.31 mg/L						
Inorganics								
Ammonia as N	mg/L	0.15	EPA 350.1	0.040	0.009		03/08/13 13:50	1
Chloride	mg/L	1.9	EPA 300.0	0.20	0.050		02/26/13 16:54	1
Nitrate (as N)	mg/L	0.66	EPA 300.0	0.04	0.01		02/26/13 16:54	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		02/26/13 16:54	1
Total Alkalinity	mg/L	50	SM 2320B	8.0	2.0		02/28/13 14:14	1
Total Kjeldahl Nitrogen	mg/L	1.2	EPA 351.2	0.20	0.05	03/01/13 07:37	03/06/13 15:32	1
Nitrate+Nitrite (N)	mg/L	0.66	EPA 300.0	0.08	0.02		02/26/13 16:54	1

Sample Description		**PZ-02L-21**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-15**						
Date/Time Collected		**02/25/13 08:54**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/25/13 16:15**						
Client Provided Field Data								
pH		5.05						
Temperature		25.6 °C						
Conductivity		188.1 umhos						
Dissolved Oxygen		2.82 mg/L						
Inorganics								
Ammonia as N	mg/L	0.032 I	EPA 350.1	0.040	0.009		03/08/13 12:07	1
Chloride	mg/L	7.3	EPA 300.0	0.20	0.050		02/26/13 16:54	1
Nitrate (as N)	mg/L	3.7	EPA 300.0	0.04	0.01		02/26/13 16:54	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		02/26/13 16:54	1
Total Alkalinity	mg/L	10	SM 2320B	8.0	2.0		02/28/13 14:14	1
Total Kjeldahl Nitrogen	mg/L	1.1	EPA 351.2	0.20	0.05	03/01/13 07:37	03/06/13 15:33	1
Nitrate+Nitrite (N)	mg/L	3.7	EPA 300.0	0.08	0.02		02/26/13 16:54	1

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Sample Description		**PZ-04L-15**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-16**						
Date/Time Collected		**02/25/13 10:30**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/25/13 16:15**						
Client Provided Field Data								
pH		6.48						
Temperature		26.7 °C						
Conductivity		315 umhos						
Dissolved Oxygen		4.56 mg/L						
Inorganics								
Ammonia as N	mg/L	0.017 I	EPA 350.1	0.040	0.009		03/08/13 12:09	1
Chemical Oxygen Demand	mg/L	20 I	EPA 410.4	25	10	02/26/13 09:52	02/26/13 16:13	1
Chloride	mg/L	16	EPA 300.0	0.20	0.050		02/26/13 16:54	1
Nitrate (as N)	mg/L	13	EPA 300.0	0.04	0.01		02/26/13 16:54	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		02/26/13 16:54	1
Phosphorous - Total as P	mg/L	0.61	SM 4500P-E	0.040	0.010	02/27/13 09:54	03/01/13 14:15	1
Total Alkalinity	mg/L	30	SM 2320B	8.0	2.0		02/28/13 14:14	1
Total Kjeldahl Nitrogen	mg/L	1.4	EPA 351.2	0.20	0.05	03/01/13 07:37	03/06/13 15:34	1
Nitrate+Nitrite (N)	mg/L	13	EPA 300.0	0.08	0.02		02/26/13 16:54	1

Sample Description		**PZ-04L-17**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-17**						
Date/Time Collected		**02/25/13 10:50**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/25/13 16:15**						
Client Provided Field Data								
pH		6.23						
Temperature		27.1 °C						
Conductivity		63.9 umhos						
Dissolved Oxygen		4.34 mg/L						
Inorganics								
Ammonia as N	mg/L	0.062	EPA 350.1	0.040	0.009		03/08/13 13:17	1
Chloride	mg/L	0.93	EPA 300.0	0.20	0.050		02/26/13 16:54	1
Nitrate (as N)	mg/L	0.40	EPA 300.0	0.04	0.01		02/26/13 16:54	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		02/26/13 16:54	1
Total Alkalinity	mg/L	40	SM 2320B	8.0	2.0		02/28/13 14:14	1
Total Kjeldahl Nitrogen	mg/L	0.58	EPA 351.2	0.20	0.05	03/01/13 07:37	03/06/13 15:36	1
Nitrate+Nitrite (N)	mg/L	0.40	EPA 300.0	0.08	0.02		02/26/13 16:54	1

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Parameters	Units	Results *	Method	PQL	MDL	Prepared	Analyzed	Dilution
Sample Description		**PZ-04L-21**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-18**						
Date/Time Collected		**02/25/13 11:00**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/25/13 16:15**						
Client Provided Field Data								
pH		5.16						
Temperature		27.1 °C						
Conductivity		173.4 umhos						
Dissolved Oxygen		2.27 mg/L						
Inorganics								
Ammonia as N	mg/L	0.010 I	EPA 350.1	0.040	0.009		03/08/13 12:13	1
Chloride	mg/L	7.1	EPA 300.0	0.20	0.050		02/26/13 16:54	1
Nitrate (as N)	mg/L	3.7	EPA 300.0	0.04	0.01		02/26/13 16:54	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		02/26/13 16:54	1
Total Alkalinity	mg/L	10	SM 2320B	8.0	2.0		02/28/13 14:14	1
Total Kjeldahl Nitrogen	mg/L	0.99	EPA 351.2	0.20	0.05	03/01/13 07:37	03/06/13 15:37	1
Nitrate+Nitrite (N)	mg/L	3.7	EPA 300.0	0.08	0.02		02/26/13 16:54	1
Sample Description		**PZ-07L-15**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-19**						
Date/Time Collected		**02/25/13 10:23**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/25/13 16:15**						
Client Provided Field Data								
pH		6.12						
Temperature		26.7 °C						
Conductivity		53.9 umhos						
Dissolved Oxygen		5.71 mg/L						
Inorganics								
Ammonia as N	mg/L	0.042	EPA 350.1	0.040	0.009		03/08/13 13:18	1
Chemical Oxygen Demand	mg/L	36	EPA 410.4	25	10	02/26/13 09:52	02/26/13 16:13	1
Chloride	mg/L	0.94	EPA 300.0	0.20	0.050		02/26/13 16:54	1
Nitrate (as N)	mg/L	0.68	EPA 300.0	0.04	0.01		02/26/13 16:54	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		02/26/13 16:54	1
Phosphorous - Total as P	mg/L	1.5	SM 4500P-E	0.040	0.010	02/27/13 09:54	03/01/13 14:16	1
Total Alkalinity	mg/L	29	SM 2320B	8.0	2.0		02/28/13 14:14	1
Total Kjeldahl Nitrogen	mg/L	0.78	EPA 351.2	0.20	0.05	03/01/13 07:37	03/06/13 15:44	1
Nitrate+Nitrite (N)	mg/L	0.68	EPA 300.0	0.08	0.02		02/26/13 16:54	1

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Parameters	Units	Results *	Method	PQL	MDL	Prepared	Analyzed	Dilution
Sample Description		**PZ-07L-17**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-20**						
Date/Time Collected		**02/25/13 11:40**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/25/13 16:15**						
Client Provided Field Data								
pH		6.23						
Temperature		26.6 °C						
Conductivity		63.4 umhos						
Dissolved Oxygen		5.64 mg/L						
Inorganics								
Ammonia as N	mg/L	0.037 I	EPA 350.1	0.040	0.009		03/08/13 13:20	1
Chloride	mg/L	1.2	EPA 300.0	0.20	0.050		02/26/13 16:54	1
Nitrate (as N)	mg/L	0.47	EPA 300.0	0.04	0.01		02/26/13 16:54	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		02/26/13 16:54	1
Total Alkalinity	mg/L	20	SM 2320B	8.0	2.0		02/28/13 14:14	1
Total Kjeldahl Nitrogen	mg/L	0.48	EPA 351.2	0.20	0.05	03/01/13 07:37	03/06/13 15:45	1
Nitrate+Nitrite (N)	mg/L	0.47	EPA 300.0	0.08	0.02		02/26/13 16:54	1

Sample Description		**PZ-07L-21**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-21**						
Date/Time Collected		**02/25/13 11:53**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/25/13 16:15**						
Client Provided Field Data								
pH		5.23						
Temperature		26.2 °C						
Conductivity		148.9 umhos						
Dissolved Oxygen		2.52 mg/L						
Inorganics								
Ammonia as N	mg/L	0.027 I	EPA 350.1	0.040	0.009		03/08/13 12:28	1
Chloride	mg/L	6.5	EPA 300.0	0.20	0.050		02/26/13 16:54	1
Nitrate (as N)	mg/L	4.4	EPA 300.0	0.04	0.01		02/26/13 16:54	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		02/26/13 16:54	1
Total Alkalinity	mg/L	20	SM 2320B	8.0	2.0		02/28/13 14:14	1
Total Kjeldahl Nitrogen	mg/L	1.4	EPA 351.2	0.20	0.05	03/01/13 07:37	03/06/13 15:47	1
Nitrate+Nitrite (N)	mg/L	4.4	EPA 300.0	0.08	0.02		02/26/13 16:54	1

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Parameters	Units	Results *	Method	PQL	MDL	Prepared	Analyzed	Dilution
Sample Description		**PZ-03ML-15**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-22**						
Date/Time Collected		**02/25/13 09:15**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/25/13 16:15**						
Client Provided Field Data								
pH		6.21						
Temperature		25.8 °C						
Conductivity		513 umhos						
Dissolved Oxygen		5.21 mg/L						
Inorganics								
Ammonia as N	mg/L	0.009 U	EPA 350.1	0.040	0.009		03/08/13 13:52	1
Chemical Oxygen Demand	mg/L	14 I	EPA 410.4	25	10	02/26/13 09:52	02/26/13 16:13	1
Chloride	mg/L	29	EPA 300.0	0.20	0.050		02/26/13 16:54	1
Fluoride	mg/L	0.038 I	EPA 300.0	0.040	0.010		02/26/13 16:54	1
Nitrate (as N)	mg/L	26	EPA 300.0	0.04	0.01		02/26/13 16:54	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		02/26/13 16:54	1
Orthophosphate as P	mg/L	1.2	EPA 300.0	0.040	0.010		02/26/13 16:54	1
Phosphorous - Total as P	mg/L	3.9	SM 4500P-E	0.80	0.20	02/27/13 09:54	03/01/13 14:59	20
Sulfate	mg/L	40	EPA 300.0	0.60	0.20		02/26/13 16:54	1
Total Alkalinity	mg/L	10	SM 2320B	8.0	2.0		02/28/13 14:14	1
Total Kjeldahl Nitrogen	mg/L	1.3	EPA 351.2	0.20	0.05	03/01/13 07:34	03/06/13 12:40	1
Total Organic Carbon	mg/L	3.5	SM 5310B	1.0	0.50		02/28/13 09:59	1
Nitrate+Nitrite (N)	mg/L	26	EPA 300.0	0.08	0.02		02/26/13 16:54	1
Inorganic, Dissolved								
Dissolved Organic Carbon	mg/L	2.9	SM 5310B	1.0	0.50		02/28/13 12:30	1
Metals								
Boron	mg/L	0.050 U	EPA 200.7**	0.10	0.050	03/04/13 14:54	03/08/13 15:07	1
Calcium	mg/L	52	EPA 200.7	0.50	0.042	03/04/13 14:54	03/08/13 15:07	1
Iron	mg/L	0.020 U	EPA 200.7	0.10	0.020	03/04/13 14:54	03/08/13 15:07	1
Magnesium	mg/L	11	EPA 200.7	0.50	0.020	03/04/13 14:54	03/08/13 15:07	1
Manganese	mg/L	0.0090 I	EPA 200.7	0.010	0.0010	03/04/13 14:54	03/08/13 15:07	1
Potassium	mg/L	11	EPA 200.7	0.050	0.010	03/04/13 14:54	03/08/13 15:07	1
Sodium	mg/L	21	EPA 200.7	0.50	0.13	03/04/13 14:54	03/08/13 15:07	1

Sample Description	**PZ-03ML-15-DUP**
Matrix	**Groundwater**
SAL Sample Number	**1301945-23**
Date/Time Collected	**02/25/13 09:20**
Collected by	**Sean Schmidt**
Date/Time Received	**02/25/13 16:15**

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Parameters	Units	Results *	Method	PQL	MDL	Prepared	Analyzed	Dilution
Sample Description		**PZ-03ML-15-DUP**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-23**						
Date/Time Collected		**02/25/13 09:20**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/25/13 16:15**						
Client Provided Field Data								
pH		6.21						
Temperature		25.8 °C						
Conductivity		513 umhos						
Dissolved Oxygen		5.21 mg/L						
Inorganics								
Ammonia as N	mg/L	0.009 U	EPA 350.1	0.040	0.009		03/08/13 13:53	1
Chemical Oxygen Demand	mg/L	14 I	EPA 410.4	25	10	02/26/13 09:52	02/26/13 16:13	1
Chloride	mg/L	30	EPA 300.0	0.20	0.050		02/26/13 16:54	1
Fluoride	mg/L	0.043	EPA 300.0	0.040	0.010		02/26/13 16:54	1
Nitrate (as N)	mg/L	27	EPA 300.0	0.04	0.01		02/26/13 16:54	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		02/26/13 16:54	1
Orthophosphate as P	mg/L	1.3	EPA 300.0	0.040	0.010		02/26/13 16:54	1
Phosphorous - Total as P	mg/L	4.0	SM 4500P-E	0.80	0.20	02/27/13 09:54	03/01/13 14:59	20
Sulfate	mg/L	40	EPA 300.0	0.60	0.20		02/26/13 16:54	1
Total Alkalinity	mg/L	10	SM 2320B	8.0	2.0		02/28/13 14:14	1
Total Kjeldahl Nitrogen	mg/L	1.3	EPA 351.2	0.20	0.05	03/01/13 07:34	03/06/13 12:41	1
Total Organic Carbon	mg/L	3.2	SM 5310B	1.0	0.50		02/28/13 09:59	1
Nitrate+Nitrite (N)	mg/L	27	EPA 300.0	0.08	0.02		02/26/13 16:54	1
Inorganic, Dissolved								
Dissolved Organic Carbon	mg/L	3.1	SM 5310B	1.0	0.50		02/28/13 12:30	1
Metals								
Boron	mg/L	0.050 U	EPA 200.7**	0.10	0.050	03/04/13 14:59	03/13/13 17:11	1
Calcium	mg/L	48	EPA 200.7	0.50	0.042	03/04/13 14:59	03/13/13 17:11	1
Iron	mg/L	0.020 U	EPA 200.7	0.10	0.020	03/04/13 14:59	03/13/13 17:11	1
Magnesium	mg/L	10	EPA 200.7	0.50	0.020	03/04/13 14:59	03/13/13 17:11	1
Manganese	mg/L	0.0083 I	EPA 200.7	0.010	0.0010	03/04/13 14:59	03/13/13 17:11	1
Potassium	mg/L	10	EPA 200.7	0.050	0.010	03/04/13 14:59	03/13/13 17:11	1
Sodium	mg/L	23	EPA 200.7	0.50	0.13	03/04/13 14:59	03/13/13 17:11	1

Sample Description	**PZ-03ML-17**
Matrix	**Groundwater**
SAL Sample Number	**1301945-24**
Date/Time Collected	**02/25/13 09:43**
Collected by	**Sean Schmidt**
Date/Time Received	**02/25/13 16:15**

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Parameters	Units	Results *	Method	PQL	MDL	Prepared	Analyzed	Dilution
Sample Description		**PZ-03ML-17**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-24**						
Date/Time Collected		**02/25/13 09:43**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/25/13 16:15**						
Client Provided Field Data								
pH		6.29						
Temperature		26.1 °C						
Conductivity		55.6 umhos						
Dissolved Oxygen		6.00 mg/L						
Inorganics								
Ammonia as N	mg/L	0.25	EPA 350.1	0.040	0.009		03/08/13 13:55	1
Chemical Oxygen Demand	mg/L	190	EPA 410.4	25	10	02/26/13 09:52	02/26/13 16:13	1
Chloride	mg/L	1.1	EPA 300.0	0.20	0.050		02/26/13 16:54	1
Fluoride	mg/L	0.013 I	EPA 300.0	0.040	0.010		02/26/13 16:54	1
Nitrate (as N)	mg/L	0.97	EPA 300.0	0.04	0.01		02/26/13 16:54	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		02/26/13 16:54	1
Orthophosphate as P	mg/L	2.1	EPA 300.0	0.040	0.010		02/26/13 16:54	1
Phosphorous - Total as P	mg/L	13	SM 4500P-E	0.80	0.20	02/27/13 09:54	03/01/13 15:00	20
Sulfate	mg/L	3.1	EPA 300.0	0.60	0.20		02/26/13 16:54	1
Total Alkalinity	mg/L	20	SM 2320B	8.0	2.0		03/04/13 11:00	1
Total Kjeldahl Nitrogen	mg/L	2.9	EPA 351.2	0.20	0.05	03/01/13 07:34	03/06/13 11:56	1
Total Organic Carbon	mg/L	8.4	SM 5310B	1.0	0.50		02/28/13 09:59	1
Nitrate+Nitrite (N)	mg/L	0.97	EPA 300.0	0.08	0.02		02/26/13 16:54	1
Inorganic, Dissolved								
Dissolved Organic Carbon	mg/L	4.5	SM 5310B	1.0	0.50		02/28/13 12:30	1
Metals								
Boron	mg/L	0.050 U	EPA 200.7**	0.10	0.050	03/04/13 14:59	03/13/13 17:14	1
Calcium	mg/L	17	EPA 200.7	0.50	0.042	03/04/13 14:59	03/13/13 17:14	1
Iron	mg/L	0.14	EPA 200.7	0.10	0.020	03/04/13 14:59	03/13/13 17:14	1
Magnesium	mg/L	2.1	EPA 200.7	0.50	0.020	03/04/13 14:59	03/13/13 17:14	1
Manganese	mg/L	0.0056 I	EPA 200.7	0.010	0.0010	03/04/13 14:59	03/13/13 17:14	1
Potassium	mg/L	2.2	EPA 200.7	0.050	0.010	03/04/13 14:59	03/13/13 17:14	1
Sodium	mg/L	1.3	EPA 200.7	0.50	0.13	03/04/13 14:59	03/13/13 17:14	1

Sample Description	**PZ-03ML-21**
Matrix	**Groundwater**
SAL Sample Number	**1301945-25**
Date/Time Collected	**02/25/13 10:08**
Collected by	**Sean Schmidt**
Date/Time Received	**02/25/13 16:15**

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Parameters	Units	Results *	Method	PQL	MDL	Prepared	Analyzed	Dilution
Sample Description		**PZ-03ML-21**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-25**						
Date/Time Collected		**02/25/13 10:08**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/25/13 16:15**						
Client Provided Field Data								
pH		5.95						
Temperature		26.1 °C						
Conductivity		188.3 umhos						
Dissolved Oxygen		1.12 mg/L						
Inorganics								
Ammonia as N	mg/L	0.030 I	EPA 350.1	0.040	0.009		03/08/13 13:25	1
Chemical Oxygen Demand	mg/L	14 I	EPA 410.4	25	10	02/26/13 09:52	02/26/13 16:13	1
Chloride	mg/L	7.8	EPA 300.0	0.20	0.050		02/27/13 01:41	1
Fluoride	mg/L	0.019 I	EPA 300.0	0.040	0.010		02/27/13 01:41	1
Nitrate (as N)	mg/L	3.0	EPA 300.0	0.04	0.01		02/27/13 01:41	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		02/27/13 01:41	1
Orthophosphate as P	mg/L	0.53	EPA 300.0	0.040	0.010		02/27/13 01:41	1
Phosphorous - Total as P	mg/L	1.1	SM 4500P-E	0.040	0.010	02/27/13 09:54	03/01/13 14:23	1
Sulfate	mg/L	34	EPA 300.0	0.60	0.20		02/27/13 01:41	1
Total Alkalinity	mg/L	20	SM 2320B	8.0	2.0		03/04/13 11:00	1
Total Kjeldahl Nitrogen	mg/L	1.0	EPA 351.2	0.20	0.05	03/01/13 07:34	03/06/13 11:58	1
Total Organic Carbon	mg/L	2.8	SM 5310B	1.0	0.50		02/28/13 09:59	1
Nitrate+Nitrite (N)	mg/L	3.0	EPA 300.0	0.08	0.02		02/27/13 01:41	1
Inorganic, Dissolved								
Dissolved Organic Carbon	mg/L	2.6	SM 5310B	1.0	0.50		02/28/13 12:30	1
Metals								
Boron	mg/L	0.050 U	EPA 200.7**	0.10	0.050	03/04/13 14:59	03/13/13 17:18	1
Calcium	mg/L	24	EPA 200.7	0.50	0.042	03/04/13 14:59	03/13/13 17:18	1
Iron	mg/L	0.083 I	EPA 200.7	0.10	0.020	03/04/13 14:59	03/13/13 17:18	1
Magnesium	mg/L	4.1	EPA 200.7	0.50	0.020	03/04/13 14:59	03/13/13 17:18	1
Manganese	mg/L	0.0021 I	EPA 200.7	0.010	0.0010	03/04/13 14:59	03/13/13 17:18	1
Potassium	mg/L	5.0	EPA 200.7	0.050	0.010	03/04/13 14:59	03/13/13 17:18	1
Sodium	mg/L	3.1	EPA 200.7	0.50	0.13	03/04/13 14:59	03/13/13 17:18	1

Sample Description	**PZ-00N-15**
Matrix	**Groundwater**
SAL Sample Number	**1301945-26**
Date/Time Collected	**02/25/13 12:22**
Collected by	**Sean Schmidt**
Date/Time Received	**02/25/13 16:15**

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Parameters	Units	Results *	Method	PQL	MDL	Prepared	Analyzed	Dilution
Sample Description		**PZ-00N-15**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-26**						
Date/Time Collected		**02/25/13 12:22**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/25/13 16:15**						
Client Provided Field Data								
pH		5.93						
Temperature		26.4 °C						
Conductivity		59.4 umhos						
Dissolved Oxygen		5.74 mg/L						
Inorganics								
Ammonia as N	mg/L	0.022 I	EPA 350.1	0.040	0.009		03/08/13 12:37	1
Chemical Oxygen Demand	mg/L	12 I	EPA 410.4	25	10	02/26/13 09:52	02/26/13 16:13	1
Chloride	mg/L	1.7	EPA 300.0	0.20	0.050		02/27/13 01:41	1
Nitrate (as N)	mg/L	0.49	EPA 300.0	0.04	0.01		02/27/13 01:41	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		02/27/13 01:41	1
Phosphorous - Total as P	mg/L	0.42	SM 4500P-E	0.040	0.010	02/27/13 09:54	03/01/13 14:24	1
Total Alkalinity	mg/L	20	SM 2320B	8.0	2.0		03/04/13 11:00	1
Total Kjeldahl Nitrogen	mg/L	0.45	EPA 351.2	0.20	0.05	03/01/13 07:34	03/06/13 11:59	1
Nitrate+Nitrite (N)	mg/L	0.49	EPA 300.0	0.08	0.02		02/27/13 01:41	1

Sample Description		**PZ-00N-17**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-27**						
Date/Time Collected		**02/25/13 12:40**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/25/13 16:15**						
Client Provided Field Data								
pH		6.26						
Temperature		26.6 °C						
Conductivity		59.4 umhos						
Dissolved Oxygen		5.70 mg/L						
Inorganics								
Ammonia as N	mg/L	0.009 U	EPA 350.1	0.040	0.009		03/08/13 12:39	1
Chloride	mg/L	1.6	EPA 300.0	0.20	0.050		02/27/13 01:41	1
Nitrate (as N)	mg/L	0.46	EPA 300.0	0.04	0.01		02/27/13 01:41	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		02/27/13 01:41	1
Total Alkalinity	mg/L	20	SM 2320B	8.0	2.0		03/04/13 11:00	1
Total Kjeldahl Nitrogen	mg/L	0.34	EPA 351.2	0.20	0.05	03/01/13 07:34	03/06/13 12:00	1
Nitrate+Nitrite (N)	mg/L	0.46	EPA 300.0	0.08	0.02		02/27/13 01:41	1

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Parameters	Units	Results *	Method	PQL	MDL	Prepared	Analyzed	Dilution
Sample Description		**PZ-00N-21**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-28**						
Date/Time Collected		**02/25/13 12:55**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/25/13 16:15**						
Client Provided Field Data								
pH		4.82						
Temperature		26.0 °C						
Conductivity		216.9 umhos						
Dissolved Oxygen		2.91 mg/L						
Inorganics								
Ammonia as N	mg/L	0.014 I	EPA 350.1	0.040	0.009		03/08/13 12:41	1
Chloride	mg/L	10	EPA 300.0	0.20	0.050		02/27/13 01:41	1
Nitrate (as N)	mg/L	4.2	EPA 300.0	0.04	0.01		02/27/13 01:41	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		02/27/13 01:41	1
Total Alkalinity	mg/L	10	SM 2320B	8.0	2.0		03/04/13 11:00	1
Total Kjeldahl Nitrogen	mg/L	1.8	EPA 351.2	0.20	0.05	03/01/13 07:34	03/06/13 12:02	1
Nitrate+Nitrite (N)	mg/L	4.2	EPA 300.0	0.08	0.02		02/27/13 01:41	1

Sample Description		**PZ-02N-15**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-29**						
Date/Time Collected		**02/26/13 08:49**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/26/13 14:50**						
Client Provided Field Data								
Inorganics								
Ammonia as N	mg/L	0.023 I	EPA 350.1	0.040	0.009		03/11/13 09:39	1
Chemical Oxygen Demand	mg/L	16 I	EPA 410.4	25	10	02/27/13 10:22	02/27/13 15:48	1
Chloride	mg/L	1.9	EPA 300.0	0.20	0.050		02/27/13 17:32	1
Nitrate (as N)	mg/L	1.1	EPA 300.0	0.04	0.01		02/27/13 17:32	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		02/27/13 17:32	1
Phosphorous - Total as P	mg/L	1.3	SM 4500P-E	0.040	0.010	02/27/13 09:54	03/01/13 14:25	1
Total Alkalinity	mg/L	30	SM 2320B	8.0	2.0		03/04/13 11:00	1
Total Kjeldahl Nitrogen	mg/L	0.39	EPA 351.2	0.20	0.05	03/08/13 14:59	03/12/13 10:35	1
Nitrate+Nitrite (N)	mg/L	1.1	EPA 300.0	0.08	0.02		02/27/13 17:32	1

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Parameters	Units	Results *	Method	PQL	MDL	Prepared	Analyzed	Dilution
Sample Description		**PZ-02N-17**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-30**						
Date/Time Collected		**02/26/13 09:05**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/26/13 14:50**						
Client Provided Field Data								
Inorganics								
Ammonia as N	mg/L	0.031 I	EPA 350.1	0.040	0.009		03/08/13 08:41	1
Chloride	mg/L	1.6	EPA 300.0	0.20	0.050		02/27/13 17:32	1
Nitrate (as N)	mg/L	0.61	EPA 300.0	0.04	0.01		02/27/13 17:32	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		02/27/13 17:32	1
Total Alkalinity	mg/L	20	SM 2320B	8.0	2.0		03/04/13 11:00	1
Total Kjeldahl Nitrogen	mg/L	0.39	EPA 351.2	0.20	0.05	03/08/13 14:59	03/12/13 10:36	1
Nitrate+Nitrite (N)	mg/L	0.61	EPA 300.0	0.08	0.02		02/27/13 17:32	1
Sample Description		**PZ-02N-21**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-31**						
Date/Time Collected		**02/26/13 09:18**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/26/13 14:50**						
Client Provided Field Data								
Inorganics								
Ammonia as N	mg/L	0.009 U	EPA 350.1	0.040	0.009		03/08/13 09:40	1
Chloride	mg/L	8.3	EPA 300.0	0.20	0.050		02/27/13 17:32	1
Nitrate (as N)	mg/L	4.0	EPA 300.0	0.04	0.01		02/27/13 17:32	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		02/27/13 17:32	1
Total Alkalinity	mg/L	10	SM 2320B	8.0	2.0		03/04/13 11:00	1
Total Kjeldahl Nitrogen	mg/L	1.1	EPA 351.2	0.20	0.05	03/08/13 14:59	03/12/13 11:53	1
Nitrate+Nitrite (N)	mg/L	4.0	EPA 300.0	0.08	0.02		02/27/13 17:32	1
Sample Description		**PZ-02N-21-DUP**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-32**						
Date/Time Collected		**02/26/13 09:23**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/26/13 14:50**						
Client Provided Field Data								
Inorganics								
Ammonia as N	mg/L	0.009 U	EPA 350.1	0.040	0.009		03/08/13 09:41	1

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Parameters	Units	Results *	Method	PQL	MDL	Prepared	Analyzed	Dilution
Sample Description		**PZ-02N-21-DUP**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-32**						
Date/Time Collected		**02/26/13 09:23**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/26/13 14:50**						
Client Provided Field Data								
Chloride	mg/L	8.2	EPA 300.0	0.20	0.050		02/27/13 17:32	1
Nitrate (as N)	mg/L	4.0	EPA 300.0	0.04	0.01		02/27/13 17:32	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		02/27/13 17:32	1
Total Alkalinity	mg/L	10	SM 2320B	8.0	2.0		03/04/13 11:00	1
Total Kjeldahl Nitrogen	mg/L	1.1	EPA 351.2	0.20	0.05	03/08/13 14:59	03/12/13 11:55	1
Nitrate+Nitrite (N)	mg/L	4.0	EPA 300.0	0.08	0.02		02/27/13 17:32	1
Sample Description		**PZ-04N-15**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-33**						
Date/Time Collected		**02/26/13 09:37**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/26/13 14:50**						
Client Provided Field Data								
pH		6.22						
Temperature		25.6 °C						
Conductivity		290 umhos						
Dissolved Oxygen		5.19 mg/L						
Inorganics								
Ammonia as N	mg/L	0.017 I	EPA 350.1	0.040	0.009		03/07/13 16:06	1
Chemical Oxygen Demand	mg/L	12 I	EPA 410.4	25	10	02/27/13 10:22	02/27/13 15:48	1
Chloride	mg/L	14	EPA 300.0	0.20	0.050		02/27/13 01:41	1
Nitrate (as N)	mg/L	14	EPA 300.0	0.04	0.01		02/27/13 01:41	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		02/27/13 01:41	1
Phosphorous - Total as P	mg/L	0.80	SM 4500P-E	0.040	0.010	02/27/13 09:54	03/01/13 14:26	1
Total Alkalinity	mg/L	20	SM 2320B	8.0	2.0		03/04/13 11:00	1
Total Kjeldahl Nitrogen	mg/L	1.3	EPA 351.2	0.20	0.05	03/08/13 14:59	03/12/13 10:40	1
Nitrate+Nitrite (N)	mg/L	14	EPA 300.0	0.08	0.02		02/27/13 01:41	1
Sample Description		**PZ-04N-17**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-34**						
Date/Time Collected		**02/26/13 09:55**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/26/13 14:50**						

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Parameters	Units	Results *	Method	PQL	MDL	Prepared	Analyzed	Dilution
Sample Description		**PZ-04N-17**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-34**						
Date/Time Collected		**02/26/13 09:55**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/26/13 14:50**						
Client Provided Field Data								
pH		6.44						
Temperature		25.7 °C						
Conductivity		83.4 umhos						
Dissolved Oxygen		2.56 mg/L						
Inorganics								
Ammonia as N	mg/L	0.012 I	EPA 350.1	0.040	0.009		03/08/13 08:43	1
Chemical Oxygen Demand	mg/L	46	EPA 410.4	25	10	02/27/13 10:22	02/27/13 15:48	1
Chloride	mg/L	1.4	EPA 300.0	0.20	0.050		02/27/13 01:41	1
Nitrate (as N)	mg/L	0.60	EPA 300.0	0.04	0.01		02/27/13 01:41	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		02/27/13 01:41	1
Phosphorous - Total as P	mg/L	1.3	SM 4500P-E	0.040	0.010	02/27/13 09:54	03/01/13 14:26	1
Total Alkalinity	mg/L	50	SM 2320B	8.0	2.0		03/04/13 11:00	1
Total Kjeldahl Nitrogen	mg/L	0.42	EPA 351.2	0.20	0.05	03/08/13 14:59	03/12/13 10:42	1
Nitrate+Nitrite (N)	mg/L	0.60	EPA 300.0	0.08	0.02		02/27/13 01:41	1

Sample Description		**PZ-04N-21**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-35**						
Date/Time Collected		**02/26/13 10:07**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/26/13 14:50**						
Client Provided Field Data								
pH		5.67						
Temperature		25.8 °C						
Conductivity		190.5 umhos						
Dissolved Oxygen		2.19 mg/L						
Inorganics								
Ammonia as N	mg/L	0.009 U	EPA 350.1	0.040	0.009		03/07/13 16:10	1
Chloride	mg/L	7.5	EPA 300.0	0.20	0.050		02/27/13 01:41	1
Nitrate (as N)	mg/L	3.6	EPA 300.0	0.04	0.01		02/27/13 01:41	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		02/27/13 01:41	1
Total Alkalinity	mg/L	10	SM 2320B	8.0	2.0		03/04/13 11:00	1
Total Kjeldahl Nitrogen	mg/L	0.85	EPA 351.2	0.20	0.05	03/08/13 14:59	03/12/13 10:43	1
Nitrate+Nitrite (N)	mg/L	3.6	EPA 300.0	0.08	0.02		02/27/13 01:41	1

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Parameters	Units	Results *	Method	PQL	MDL	Prepared	Analyzed	Dilution
Sample Description		**PZ-06N-15**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-36**						
Date/Time Collected		**02/26/13 10:21**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/26/13 14:50**						
Client Provided Field Data								
pH		6.02						
Temperature		25.3 °C						
Conductivity		370 umhos						
Dissolved Oxygen		4.88 mg/L						
Inorganics								
Ammonia as N	mg/L	0.009 U	EPA 350.1	0.040	0.009		03/07/13 16:12	1
Chemical Oxygen Demand	mg/L	14 I	EPA 410.4	25	10	02/27/13 10:22	02/27/13 15:48	1
Chloride	mg/L	23	EPA 300.0	0.20	0.050		02/27/13 01:41	1
Fluoride	mg/L	0.082	EPA 300.0	0.040	0.010		02/27/13 01:41	1
Nitrate (as N)	mg/L	20	EPA 300.0	0.04	0.01		02/27/13 01:41	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		02/27/13 01:41	1
Orthophosphate as P	mg/L	0.010 U	EPA 300.0	0.040	0.010		02/27/13 01:41	1
Phosphorous - Total as P	mg/L	0.082	SM 4500P-E	0.040	0.010	02/27/13 09:54	03/01/13 14:27	1
Sulfate	mg/L	24	EPA 300.0	0.60	0.20		02/27/13 01:41	1
Total Alkalinity	mg/L	10	SM 2320B	8.0	2.0		03/04/13 11:00	1
Total Kjeldahl Nitrogen	mg/L	1.2	EPA 351.2	0.20	0.05	03/01/13 07:37	03/06/13 15:48	1
Total Organic Carbon	mg/L	3.9	SM 5310B	1.0	0.50		02/28/13 09:59	1
Nitrate+Nitrite (N)	mg/L	20	EPA 300.0	0.08	0.02		02/27/13 01:41	1
Inorganic, Dissolved								
Dissolved Organic Carbon	mg/L	3.0	SM 5310B	1.0	0.50		02/28/13 12:30	1
Metals								
Boron	mg/L	0.050 U	EPA 200.7**	0.10	0.050	03/04/13 14:59	03/13/13 17:21	1
Calcium	mg/L	34	EPA 200.7	0.50	0.042	03/04/13 14:59	03/13/13 17:21	1
Iron	mg/L	0.20	EPA 200.7	0.10	0.020	03/04/13 14:59	03/13/13 17:21	1
Magnesium	mg/L	7.3	EPA 200.7	0.50	0.020	03/04/13 14:59	03/13/13 17:21	1
Manganese	mg/L	0.0010 U	EPA 200.7	0.010	0.0010	03/04/13 14:59	03/13/13 17:21	1
Potassium	mg/L	7.9	EPA 200.7	0.050	0.010	03/04/13 14:59	03/13/13 17:21	1
Sodium	mg/L	11	EPA 200.7	0.50	0.13	03/04/13 14:59	03/13/13 17:21	1

Sample Description	**PZ-06N-17**
Matrix	**Groundwater**
SAL Sample Number	**1301945-37**
Date/Time Collected	**02/26/13 10:37**
Collected by	**Sean Schmidt**
Date/Time Received	**02/26/13 14:50**

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Parameters	Units	Results *	Method	PQL	MDL	Prepared	Analyzed	Dilution
Sample Description		**PZ-06N-17**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-37**						
Date/Time Collected		**02/26/13 10:37**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/26/13 14:50**						
Client Provided Field Data								
pH		6.32						
Temperature		25.4 °C						
Conductivity		59.2 umhos						
Dissolved Oxygen		4.49 mg/L						
Inorganics								
Ammonia as N	mg/L	0.010 I	EPA 350.1	0.040	0.009		03/08/13 08:45	1
Chloride	mg/L	1.0	EPA 300.0	0.20	0.050		02/27/13 01:41	1
Nitrate (as N)	mg/L	0.50	EPA 300.0	0.04	0.01		02/27/13 01:41	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		02/27/13 01:41	1
Total Alkalinity	mg/L	30	SM 2320B	8.0	2.0		03/04/13 11:00	1
Total Kjeldahl Nitrogen	mg/L	0.47	EPA 351.2	0.20	0.05	03/01/13 07:37	03/06/13 15:49	1
Nitrate+Nitrite (N)	mg/L	0.50	EPA 300.0	0.08	0.02		02/27/13 01:41	1

Sample Description		**PZ-06N-21**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-38**						
Date/Time Collected		**02/26/13 10:56**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/26/13 14:50**						
Client Provided Field Data								
pH		5.02						
Temperature		25.5 °C						
Conductivity		108.9 umhos						
Dissolved Oxygen		3.16 mg/L						
Inorganics								
Ammonia as N	mg/L	0.009 U	EPA 350.1	0.040	0.009		03/07/13 16:24	1
Chloride	mg/L	4.6	EPA 300.0	0.20	0.050		02/27/13 01:41	1
Nitrate (as N)	mg/L	2.7	EPA 300.0	0.04	0.01		02/27/13 01:41	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		02/27/13 01:41	1
Total Alkalinity	mg/L	10	SM 2320B	8.0	2.0		03/04/13 11:00	1
Total Kjeldahl Nitrogen	mg/L	0.71	EPA 351.2	0.20	0.05	03/01/13 07:37	03/06/13 15:51	1
Nitrate+Nitrite (N)	mg/L	2.7	EPA 300.0	0.08	0.02		02/27/13 01:41	1

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Parameters	Units	Results *	Method	PQL	MDL	Prepared	Analyzed	Dilution
Sample Description		**PZ-03O-15**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-39**						
Date/Time Collected		**02/28/13 10:50**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/28/13 15:30**						
Client Provided Field Data								
pH		6.73						
Temperature		22.7 °C						
Conductivity		143.5 umhos						
Dissolved Oxygen		6.58 mg/L						
Inorganics								
Ammonia as N	mg/L	0.024 I	EPA 350.1	0.040	0.009		03/13/13 11:55	1
Chloride	mg/L	2.4	EPA 300.0	0.20	0.050		03/01/13 17:13	1
Nitrate (as N)	mg/L	1.7	EPA 300.0	0.04	0.01		03/01/13 17:13	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		03/01/13 17:13	1
Total Alkalinity	mg/L	40	SM 2320B	8.0	2.0		03/11/13 12:01	1
Total Kjeldahl Nitrogen	mg/L	0.71	EPA 351.2	0.20	0.05	03/08/13 14:55	03/12/13 09:07	1
Nitrate+Nitrite (N)	mg/L	1.7	EPA 300.0	0.08	0.02		03/01/13 17:13	1
Sample Description		**PZ-03O-17**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-40**						
Date/Time Collected		**02/28/13 11:04**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/28/13 15:30**						
Client Provided Field Data								
pH		6.58						
Temperature		22.8 °C						
Conductivity		585 umhos						
Dissolved Oxygen		6.82 mg/L						
Inorganics								
Ammonia as N	mg/L	0.009 U	EPA 350.1	0.040	0.009		03/13/13 11:57	1
Chloride	mg/L	1.7	EPA 300.0	0.20	0.050		03/01/13 17:13	1
Fluoride	mg/L	0.54	EPA 300.0	0.040	0.010		03/01/13 17:13	1
Nitrate (as N)	mg/L	0.66	EPA 300.0	0.04	0.01		03/01/13 17:13	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		03/01/13 17:13	1
Orthophosphate as P	mg/L	0.17	EPA 300.0	0.040	0.010		03/01/13 17:13	1
Sulfate	mg/L	4.1	EPA 300.0	0.60	0.20		03/01/13 17:13	1
Total Alkalinity	mg/L	30	SM 2320B	8.0	2.0		03/11/13 12:01	1
Total Kjeldahl Nitrogen	mg/L	0.22	EPA 351.2	0.20	0.05	03/08/13 15:35	03/12/13 11:13	1
Total Organic Carbon	mg/L	3.6	SM 5310B	1.0	0.50		03/06/13 16:19	1
Nitrate+Nitrite (N)	mg/L	0.66	EPA 300.0	0.08	0.02		03/01/13 17:13	1

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Parameters	Units	Results *	Method	PQL	MDL	Prepared	Analyzed	Dilution
Sample Description		**PZ-03O-17**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-40**						
Date/Time Collected		**02/28/13 11:04**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/28/13 15:30**						
Client Provided Field Data								
pH		6.58						
Temperature		22.8 °C						
Conductivity		585 umhos						
Dissolved Oxygen		6.82 mg/L						
Inorganic, Dissolved								
Dissolved Organic Carbon	mg/L	3.2	SM 5310B	1.0	0.50		03/05/13 10:06	1
Metals								
Boron	mg/L	0.050 U	EPA 200.7**	0.10	0.050	03/04/13 14:59	03/13/13 17:25	1
Calcium	mg/L	7.3	EPA 200.7	0.50	0.042	03/04/13 14:59	03/13/13 17:25	1
Iron	mg/L	0.12	EPA 200.7	0.10	0.020	03/04/13 14:59	03/13/13 17:25	1
Magnesium	mg/L	1.9	EPA 200.7	0.50	0.020	03/04/13 14:59	03/13/13 17:25	1
Manganese	mg/L	0.0011 I	EPA 200.7	0.010	0.0010	03/04/13 14:59	03/13/13 17:25	1
Potassium	mg/L	2.1	EPA 200.7	0.050	0.010	03/04/13 14:59	03/13/13 17:25	1
Sodium	mg/L	1.1	EPA 200.7	0.50	0.13	03/04/13 14:59	03/13/13 17:25	1

Sample Description		**PZ-03O-21**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-41**						
Date/Time Collected		**02/28/13 11:28**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/28/13 15:30**						
Client Provided Field Data								
pH		4.86						
Temperature		24.3 °C						
Conductivity		223 umhos						
Dissolved Oxygen		1.73 mg/L						
Inorganics								
Ammonia as N	mg/L	0.009 U	EPA 350.1	0.040	0.009		03/13/13 11:59	1
Chloride	mg/L	12	EPA 300.0	0.20	0.050		03/01/13 17:13	1
Fluoride	mg/L	0.020 I	EPA 300.0	0.040	0.010		03/01/13 17:13	1
Nitrate (as N)	mg/L	8.4	EPA 300.0	0.04	0.01		03/01/13 17:13	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		03/01/13 17:13	1
Orthophosphate as P	mg/L	0.010 U	EPA 300.0	0.040	0.010		03/01/13 17:13	1
Sulfate	mg/L	32	EPA 300.0	0.60	0.20		03/01/13 17:13	1
Total Alkalinity	mg/L	10	SM 2320B	8.0	2.0		03/11/13 12:01	1
Total Kjeldahl Nitrogen	mg/L	0.93	EPA 351.2	0.20	0.05	03/08/13 15:35	03/12/13 11:14	1

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Parameters	Units	Results *	Method	PQL	MDL	Prepared	Analyzed	Dilution
Sample Description		**PZ-03O-21**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-41**						
Date/Time Collected		**02/28/13 11:28**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/28/13 15:30**						
Client Provided Field Data								
pH		4.86						
Temperature		24.3 °C						
Conductivity		223 umhos						
Dissolved Oxygen		1.73 mg/L						
Total Organic Carbon	mg/L	1.6	SM 5310B	1.0	0.50		03/06/13 16:19	1
Nitrate+Nitrite (N)	mg/L	8.4	EPA 300.0	0.08	0.02		03/01/13 17:13	1
Inorganic, Dissolved								
Dissolved Organic Carbon	mg/L	1.5	SM 5310B	1.0	0.50		03/05/13 10:06	1
Metals								
Boron	mg/L	0.050 U	EPA 200.7**	0.10	0.050	03/04/13 15:05	03/12/13 16:28	1
Calcium	mg/L	20	EPA 200.7	0.50	0.042	03/04/13 15:05	03/12/13 16:28	1
Iron	mg/L	0.034 I	EPA 200.7	0.10	0.020	03/04/13 15:05	03/12/13 16:28	1
Magnesium	mg/L	5.1	EPA 200.7	0.50	0.020	03/04/13 15:05	03/12/13 16:28	1
Manganese	mg/L	0.011	EPA 200.7	0.010	0.0010	03/04/13 15:05	03/12/13 16:28	1
Potassium	mg/L	10	EPA 200.7	0.050	0.010	03/04/13 15:05	03/12/13 16:28	1
Sodium	mg/L	3.4	EPA 200.7	0.50	0.13	03/04/13 15:05	03/12/13 16:28	1
Sample Description		**PZ-04O-15**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-42**						
Date/Time Collected		**02/27/13 13:34**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/27/13 15:40**						
Client Provided Field Data								
pH		6.31						
Temperature		23.9 °C						
Conductivity		208.6 umhos						
Dissolved Oxygen		5.05 mg/L						
Inorganics								
Ammonia as N	mg/L	0.028 I	EPA 350.1	0.040	0.009		03/11/13 09:39	1
Chemical Oxygen Demand	mg/L	10 U	EPA 410.4	25	10	02/28/13 09:50	02/28/13 16:09	1
Chloride	mg/L	7.0	EPA 300.0	0.20	0.050		02/28/13 16:53	1
Nitrate (as N)	mg/L	7.6	EPA 300.0	0.04	0.01		02/28/13 16:53	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		02/28/13 16:53	1
Phosphorous - Total as P	mg/L	2.8	SM 4500P-E	0.20	0.050	03/01/13 16:03	03/06/13 07:50	5
Total Alkalinity	mg/L	40	SM 2320B	8.0	2.0		03/04/13 11:00	1

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Parameters	Units	Results *	Method	PQL	MDL	Prepared	Analyzed	Dilution
Sample Description		**PZ-04O-15**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-42**						
Date/Time Collected		**02/27/13 13:34**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/27/13 15:40**						
Client Provided Field Data								
pH		6.31						
Temperature		23.9 °C						
Conductivity		208.6 umhos						
Dissolved Oxygen		5.05 mg/L						
Total Kjeldahl Nitrogen	mg/L	0.99	EPA 351.2	0.20	0.05	03/08/13 14:55	03/12/13 09:08	1
Nitrate+Nitrite (N)	mg/L	7.6	EPA 300.0	0.08	0.02		02/28/13 16:53	1
Sample Description		**PZ-04O-17**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-43**						
Date/Time Collected		**02/27/13 13:45**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/27/13 15:40**						
Client Provided Field Data								
pH		6.25						
Temperature		23.9 °C						
Conductivity		208.6 umhos						
Dissolved Oxygen		5.06 mg/L						
Inorganics								
Ammonia as N	mg/L	0.009 U	EPA 350.1	0.040	0.009		03/11/13 09:39	1
Chemical Oxygen Demand	mg/L	10 U	EPA 410.4	25	10	02/28/13 09:50	02/28/13 16:09	1
Chloride	mg/L	6.6	EPA 300.0	0.20	0.050		02/28/13 16:53	1
Nitrate (as N)	mg/L	7.0	EPA 300.0	0.04	0.01		02/28/13 16:53	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		02/28/13 16:53	1
Phosphorous - Total as P	mg/L	2.7	SM 4500P-E	0.20	0.050	03/01/13 16:03	03/06/13 07:51	5
Total Alkalinity	mg/L	40	SM 2320B	8.0	2.0		03/04/13 11:00	1
Total Kjeldahl Nitrogen	mg/L	0.95	EPA 351.2	0.20	0.05	03/08/13 14:55	03/12/13 10:09	1
Nitrate+Nitrite (N)	mg/L	7.0	EPA 300.0	0.08	0.02		02/28/13 16:53	1
Sample Description		**PZ-04O-17-DUP**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-44**						
Date/Time Collected		**02/27/13 13:50**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/27/13 13:50**						

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Sample Description		**PZ-04O-17-DUP**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-44**						
Date/Time Collected		**02/27/13 13:50**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/27/13 13:50**						
Client Provided Field Data								
pH		6.25						
Temperature		23.9 °C						
Conductivity		208.6 umhos						
Dissolved Oxygen		5.06 mg/L						
Inorganics								
Ammonia as N	mg/L	0.009 U	EPA 350.1	0.040	0.009		03/11/13 09:39	1
Chemical Oxygen Demand	mg/L	10 U	EPA 410.4	25	10	02/28/13 09:50	02/28/13 16:09	1
Chloride	mg/L	6.7	EPA 300.0	0.20	0.050		02/28/13 16:53	1
Nitrate (as N)	mg/L	7.2	EPA 300.0	0.04	0.01		02/28/13 16:53	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		02/28/13 16:53	1
Phosphorous - Total as P	mg/L	2.6	SM 4500P-E	0.20	0.050	03/01/13 16:03	03/06/13 07:52	5
Total Alkalinity	mg/L	40	SM 2320B	8.0	2.0		03/04/13 11:00	1
Total Kjeldahl Nitrogen	mg/L	1.0	EPA 351.2	0.20	0.05	03/08/13 14:55	03/12/13 10:10	1
Nitrate+Nitrite (N)	mg/L	7.2	EPA 300.0	0.08	0.02		02/28/13 16:53	1

Sample Description		**PZ-04O-21**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-45**						
Date/Time Collected		**02/27/13 13:55**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/27/13 15:40**						
Client Provided Field Data								
pH		5.35						
Temperature		24.6 °C						
Conductivity		254 umhos						
Dissolved Oxygen		1.85 mg/L						
Inorganics								
Ammonia as N	mg/L	0.021 I	EPA 350.1	0.040	0.009		03/08/13 12:42	1
Chemical Oxygen Demand	mg/L	16 I	EPA 410.4	25	10	02/28/13 09:50	02/28/13 16:09	1
Chloride	mg/L	11	EPA 300.0	0.20	0.050		02/28/13 16:53	1
Nitrate (as N)	mg/L	6.2	EPA 300.0	0.04	0.01		02/28/13 16:53	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		02/28/13 16:53	1
Phosphorous - Total as P	mg/L	0.082	SM 4500P-E	0.040	0.010	03/01/13 16:00	03/05/13 14:41	1
Total Alkalinity	mg/L	10	SM 2320B	8.0	2.0		03/04/13 11:00	1
Total Kjeldahl Nitrogen	mg/L	0.84	EPA 351.2	0.20	0.05	03/01/13 07:34	03/06/13 12:03	1
Nitrate+Nitrite (N)	mg/L	6.2	EPA 300.0	0.08	0.02		02/28/13 16:53	1

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Parameters	Units	Results *	Method	PQL	MDL	Prepared	Analyzed	Dilution
Sample Description		**PZ-07O-15**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-46**						
Date/Time Collected		**02/27/13 10:57**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/27/13 15:40**						
Client Provided Field Data								
pH		5.98						
Temperature		23.7 °C						
Conductivity		377 umhos						
Dissolved Oxygen		4.05 mg/L						
Inorganics								
Ammonia as N	mg/L	0.013 I	EPA 350.1	0.040	0.009		03/11/13 09:39	1
Chemical Oxygen Demand	mg/L	10 U	EPA 410.4	25	10	02/28/13 09:50	02/28/13 16:09	1
Chloride	mg/L	21	EPA 300.0	0.20	0.050		02/28/13 16:53	1
Nitrate (as N)	mg/L	20	EPA 300.0	0.04	0.01		02/28/13 16:53	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		02/28/13 16:53	1
Phosphorous - Total as P	mg/L	0.25	SM 4500P-E	0.040	0.010	03/01/13 16:03	03/05/13 16:26	1
Total Alkalinity	mg/L	30	SM 2320B	8.0	2.0		03/04/13 11:00	1
Total Kjeldahl Nitrogen	mg/L	1.6	EPA 351.2	0.20	0.05	03/08/13 14:55	03/12/13 09:18	1
Nitrate+Nitrite (N)	mg/L	20	EPA 300.0	0.08	0.02		02/28/13 16:53	1

Sample Description		**PZ-07O-17**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-47**						
Date/Time Collected		**02/27/13 11:10**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/27/13 15:40**						
Client Provided Field Data								
pH		6.33						
Temperature		23.8 °C						
Conductivity		142.3 umhos						
Dissolved Oxygen		3.20 mg/L						
Inorganics								
Ammonia as N	mg/L	0.18	EPA 350.1	0.040	0.009		03/11/13 09:39	1
Chloride	mg/L	2.7	EPA 300.0	0.20	0.050		02/28/13 16:53	1
Nitrate (as N)	mg/L	2.1	EPA 300.0	0.04	0.01		02/28/13 16:53	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		02/28/13 16:53	1
Total Alkalinity	mg/L	30	SM 2320B	8.0	2.0		03/04/13 11:00	1
Total Kjeldahl Nitrogen	mg/L	2.0	EPA 351.2	0.20	0.05	03/08/13 14:55	03/12/13 09:19	1
Nitrate+Nitrite (N)	mg/L	2.1	EPA 300.0	0.08	0.02		02/28/13 16:53	1

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Parameters	Units	Results *	Method	PQL	MDL	Prepared	Analyzed	Dilution
Sample Description		**PZ-07O-20**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-48**						
Date/Time Collected		**02/27/13 11:21**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/27/13 15:40**						
Client Provided Field Data								
pH		5.28						
Temperature		24.2 °C						
Conductivity		109.3 umhos						
Dissolved Oxygen		3.19 mg/L						
Inorganics								
Ammonia as N	mg/L	0.009 U	EPA 350.1	0.040	0.009		03/11/13 09:39	1
Chloride	mg/L	6.2	EPA 300.0	0.20	0.050		02/28/13 16:53	1
Nitrate (as N)	mg/L	2.2	EPA 300.0	0.04	0.01		02/28/13 16:53	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		02/28/13 16:53	1
Total Alkalinity	mg/L	10	SM 2320B	8.0	2.0		03/04/13 11:00	1
Total Kjeldahl Nitrogen	mg/L	0.90	EPA 351.2	0.20	0.05	03/08/13 14:55	03/12/13 09:21	1
Nitrate+Nitrite (N)	mg/L	2.2	EPA 300.0	0.08	0.02		02/28/13 16:53	1

Sample Description		**PZ-01Q-13**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-49**						
Date/Time Collected		**02/28/13 10:07**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/28/13 15:30**						
Client Provided Field Data								
pH		6.29						
Temperature		22.3 °C						
Conductivity		71.2 umhos						
Dissolved Oxygen		5.93 mg/L						
Inorganics								
Ammonia as N	mg/L	0.014 I	EPA 350.1	0.040	0.009		03/13/13 12:01	1
Chemical Oxygen Demand	mg/L	24 I	EPA 410.4	25	10		03/04/13 11:45	1
Chloride	mg/L	1.6	EPA 300.0	0.20	0.050		03/01/13 17:13	1
Nitrate (as N)	mg/L	0.47	EPA 300.0	0.04	0.01		03/01/13 17:13	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		03/01/13 17:13	1
Phosphorous - Total as P	mg/L	0.21	SM 4500P-E	0.040	0.010	03/08/13 11:19	03/12/13 10:06	1
Total Alkalinity	mg/L	30	SM 2320B	8.0	2.0		03/11/13 12:01	1
Total Kjeldahl Nitrogen	mg/L	0.34	EPA 351.2	0.20	0.05	03/08/13 15:35	03/12/13 11:16	1
Nitrate+Nitrite (N)	mg/L	0.47	EPA 300.0	0.08	0.02		03/01/13 17:13	1

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Parameters	Units	Results *	Method	PQL	MDL	Prepared	Analyzed	Dilution
Sample Description		**PZ-01Q-15**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-50**						
Date/Time Collected		**02/28/13 10:21**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/28/13 15:30**						
Client Provided Field Data								
pH		6.01						
Temperature		23.1 °C						
Conductivity		42.9 umhos						
Dissolved Oxygen		5.77 mg/L						
Inorganics								
Ammonia as N	mg/L	0.057	EPA 350.1	0.040	0.009		03/13/13 12:03	1
Chemical Oxygen Demand	mg/L	34	EPA 410.4	25	10		03/04/13 11:45	1
Chloride	mg/L	1.0	EPA 300.0	0.20	0.050		03/02/13 02:00	1
Nitrate (as N)	mg/L	0.84	EPA 300.0	0.04	0.01		03/02/13 02:00	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		03/02/13 02:00	1
Phosphorous - Total as P	mg/L	0.63	SM 4500P-E	0.040	0.010	03/01/13 16:05	03/05/13 16:47	1
Total Alkalinity	mg/L	10	SM 2320B	8.0	2.0		03/11/13 12:01	1
Total Kjeldahl Nitrogen	mg/L	0.50	EPA 351.2	0.20	0.05	03/08/13 15:35	03/12/13 11:17	1
Nitrate+Nitrite (N)	mg/L	0.84	EPA 300.0	0.08	0.02		03/02/13 02:00	1

Sample Description		**PZ-01Q-19**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-51**						
Date/Time Collected		**02/28/13 10:37**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/28/13 15:30**						
Client Provided Field Data								
pH		5.09						
Temperature		23.7 °C						
Conductivity		65.0 umhos						
Dissolved Oxygen		3.79 mg/L						
Inorganics								
Ammonia as N	mg/L	0.68	EPA 350.1	0.040	0.009		03/13/13 12:05	1
Chloride	mg/L	3.3	EPA 300.0	0.20	0.050		03/02/13 02:00	1
Nitrate (as N)	mg/L	1.8	EPA 300.0	0.04	0.01		03/02/13 02:00	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		03/02/13 02:00	1
Total Alkalinity	mg/L	10	SM 2320B	8.0	2.0		03/11/13 12:01	1
Total Kjeldahl Nitrogen	mg/L	5.5	EPA 351.2	0.20	0.05	03/08/13 15:35	03/12/13 12:00	9.62
Nitrate+Nitrite (N)	mg/L	1.8	EPA 300.0	0.08	0.02		03/02/13 02:00	1

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Parameters	Units	Results *	Method	PQL	MDL	Prepared	Analyzed	Dilution
Sample Description		**PZ-04Q-13**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-52**						
Date/Time Collected		**02/27/13 12:56**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/27/13 15:40**						
Client Provided Field Data								
pH		6.39						
Temperature		24.9 °C						
Conductivity		144.1 umhos						
Dissolved Oxygen		5.83 mg/L						
Inorganics								
Ammonia as N	mg/L	0.064	EPA 350.1	0.040	0.009		03/11/13 09:39	1
Chemical Oxygen Demand	mg/L	20 I	EPA 410.4	25	10	02/28/13 09:50	02/28/13 16:09	1
Chloride	mg/L	2.5	EPA 300.0	0.20	0.050		02/28/13 16:53	1
Fluoride	mg/L	0.24	EPA 300.0	0.040	0.010		02/28/13 16:53	1
Nitrate (as N)	mg/L	3.2	EPA 300.0	0.04	0.01		02/28/13 16:53	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		02/28/13 16:53	1
Orthophosphate as P	mg/L	0.79	EPA 300.0	0.040	0.010		02/28/13 16:53	1
Phosphorous - Total as P	mg/L	1.3	SM 4500P-E	0.040	0.010	03/01/13 16:00	03/05/13 14:42	1
Sulfate	mg/L	5.5	EPA 300.0	0.60	0.20		02/28/13 16:53	1
Total Alkalinity	mg/L	50	SM 2320B	8.0	2.0		03/04/13 11:00	1
Total Kjeldahl Nitrogen	mg/L	1.4	EPA 351.2	0.20	0.05	03/08/13 14:55	03/12/13 09:22	1
Total Organic Carbon	mg/L	8.4	SM 5310B	1.0	0.50		02/28/13 09:59	1
Nitrate+Nitrite (N)	mg/L	3.2	EPA 300.0	0.08	0.02		02/28/13 16:53	1
Inorganic, Dissolved								
Dissolved Organic Carbon	mg/L	7.3	SM 5310B	1.0	0.50		02/28/13 12:30	1
Metals								
Boron	mg/L	0.050 U	EPA 200.7**	0.10	0.050	03/04/13 14:59	03/13/13 17:29	1
Calcium	mg/L	17	EPA 200.7	0.50	0.042	03/04/13 14:59	03/13/13 17:29	1
Iron	mg/L	0.034 I	EPA 200.7	0.10	0.020	03/04/13 14:59	03/13/13 17:29	1
Magnesium	mg/L	2.5	EPA 200.7	0.50	0.020	03/04/13 14:59	03/13/13 17:29	1
Manganese	mg/L	0.0021 I	EPA 200.7	0.010	0.0010	03/04/13 14:59	03/13/13 17:29	1
Potassium	mg/L	3.2	EPA 200.7	0.050	0.010	03/04/13 14:59	03/13/13 17:29	1
Sodium	mg/L	6.9	EPA 200.7	0.50	0.13	03/04/13 14:59	03/13/13 17:29	1

Sample Description	**PZ-04Q-15**
Matrix	**Groundwater**
SAL Sample Number	**1301945-53**
Date/Time Collected	**02/27/13 13:07**
Collected by	**Sean Schmidt**
Date/Time Received	**02/27/13 15:07**

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Parameters	Units	Results *	Method	PQL	MDL	Prepared	Analyzed	Dilution
Sample Description		**PZ-04Q-15**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-53**						
Date/Time Collected		**02/27/13 13:07**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/27/13 15:07**						
Client Provided Field Data								
pH		5.60						
Temperature		24.9 °C						
Conductivity		83.4 umhos						
Dissolved Oxygen		3.95 mg/L						
Inorganics								
Ammonia as N	mg/L	0.021 I	EPA 350.1	0.040	0.009		03/11/13 13:03	1
Chemical Oxygen Demand	mg/L	10 U	EPA 410.4	25	10	02/28/13 09:50	02/28/13 16:09	1
Chloride	mg/L	1.5	EPA 300.0	0.20	0.050		02/28/13 16:53	1
Nitrate (as N)	mg/L	1.5	EPA 300.0	0.04	0.01		02/28/13 16:53	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		02/28/13 16:53	1
Phosphorous - Total as P	mg/L	2.6	SM 4500P-E	0.20	0.050	03/01/13 16:00	03/05/13 15:07	5
Total Alkalinity	mg/L	20	SM 2320B	8.0	2.0		03/08/13 09:30	1
Total Kjeldahl Nitrogen	mg/L	0.54	EPA 351.2	0.20	0.05	03/08/13 14:55	03/12/13 09:23	1
Nitrate+Nitrite (N)	mg/L	1.5	EPA 300.0	0.08	0.02		02/28/13 16:53	1

Sample Description		**PZ-04Q-19**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-54**						
Date/Time Collected		**02/27/13 13:23**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/27/13 15:40**						
Client Provided Field Data								
pH		6.12						
Temperature		25.3 °C						
Conductivity		75.9 umhos						
Dissolved Oxygen		2.76 mg/L						
Inorganics								
Ammonia as N	mg/L	0.49	EPA 350.1	0.040	0.009		03/11/13 13:05	1
Chloride	mg/L	3.6	EPA 300.0	0.20	0.050		02/28/13 16:53	1
Nitrate (as N)	mg/L	0.86	EPA 300.0	0.04	0.01		02/28/13 16:53	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		02/28/13 16:53	1
Total Alkalinity	mg/L	20	SM 2320B	8.0	2.0		03/08/13 09:30	1
Total Kjeldahl Nitrogen	mg/L	3.0	EPA 351.2	0.20	0.05	03/08/13 14:55	03/12/13 09:24	1
Total Organic Carbon	mg/L	6.4	SM 5310B	1.0	0.50		02/28/13 09:59	1
Nitrate+Nitrite (N)	mg/L	0.86	EPA 300.0	0.08	0.02		02/28/13 16:53	1
Inorganic, Dissolved								

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Parameters	Units	Results *	Method	PQL	MDL	Prepared	Analyzed	Dilution
Sample Description		**PZ-04Q-19**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-54**						
Date/Time Collected		**02/27/13 13:23**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/27/13 15:40**						
Client Provided Field Data								
pH		6.12						
Temperature		25.3 °C						
Conductivity		75.9 umhos						
Dissolved Oxygen		2.76 mg/L						
Dissolved Organic Carbon	mg/L	2.4	SM 5310B	1.0	0.50		02/28/13 12:30	1
Sample Description		**PZ-06Q-13**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-55**						
Date/Time Collected		**02/27/13 12:12**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/27/13 15:40**						
Client Provided Field Data								
pH		6.45						
Temperature		24.5 °C						
Conductivity		164.5 umhos						
Dissolved Oxygen		6.12 mg/L						
Inorganics								
Ammonia as N	mg/L	0.015 I	EPA 350.1	0.040	0.009		03/11/13 13:07	1
Chemical Oxygen Demand	mg/L	10 U	EPA 410.4	25	10	02/28/13 09:50	02/28/13 16:09	1
Chloride	mg/L	5.1	EPA 300.0	0.20	0.050		02/28/13 16:53	1
Nitrate (as N)	mg/L	4.7	EPA 300.0	0.04	0.01		02/28/13 16:53	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		02/28/13 16:53	1
Phosphorous - Total as P	mg/L	0.46	SM 4500P-E	0.040	0.010	03/01/13 16:00	03/05/13 14:47	1
Total Alkalinity	mg/L	30	SM 2320B	8.0	2.0		03/08/13 09:30	1
Total Kjeldahl Nitrogen	mg/L	1.4	EPA 351.2	0.20	0.05	03/08/13 14:55	03/12/13 09:26	1
Nitrate+Nitrite (N)	mg/L	4.7	EPA 300.0	0.08	0.02		02/28/13 16:53	1
Sample Description		**PZ-06Q-15**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-56**						
Date/Time Collected		**02/27/13 12:26**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/27/13 15:40**						
Client Provided Field Data								

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Parameters	Units	Results *	Method	PQL	MDL	Prepared	Analyzed	Dilution
Sample Description		**PZ-06Q-15**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-56**						
Date/Time Collected		**02/27/13 12:26**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/27/13 15:40**						
Client Provided Field Data								
pH		6.60						
Temperature		24.4 °C						
Conductivity		186.5 umhos						
Dissolved Oxygen		3.04 mg/L						
Inorganics								
Ammonia as N	mg/L	0.019 I	EPA 350.1	0.040	0.009		03/11/13 13:09	1
Chemical Oxygen Demand	mg/L	10 U	EPA 410.4	25	10	02/28/13 09:50	02/28/13 16:09	1
Chloride	mg/L	3.8	EPA 300.0	0.20	0.050		02/28/13 16:53	1
Fluoride	mg/L	0.11	EPA 300.0	0.040	0.010		02/28/13 16:53	1
Nitrate (as N)	mg/L	5.3	EPA 300.0	0.04	0.01		02/28/13 16:53	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		02/28/13 16:53	1
Orthophosphate as P	mg/L	3.1	EPA 300.0	0.040	0.010		02/28/13 16:53	1
Phosphorous - Total as P	mg/L	5.8	SM 4500P-E	0.20	0.050	03/01/13 16:00	03/05/13 15:08	5
Sulfate	mg/L	7.7	EPA 300.0	0.60	0.20		02/28/13 16:53	1
Total Alkalinity	mg/L	40	SM 2320B	8.0	2.0		03/08/13 09:30	1
Total Kjeldahl Nitrogen	mg/L	1.6	EPA 351.2	0.20	0.05	03/08/13 14:55	03/12/13 09:27	1
Total Organic Carbon	mg/L	7.1	SM 5310B	1.0	0.50		02/28/13 09:59	1
Nitrate+Nitrite (N)	mg/L	5.3	EPA 300.0	0.08	0.02		02/28/13 16:53	1
Inorganic, Dissolved								
Dissolved Organic Carbon	mg/L	5.9	SM 5310B	1.0	0.50		02/28/13 12:30	1
Metals								
Boron	mg/L	0.050 U	EPA 200.7**	0.10	0.050	03/04/13 14:59	03/13/13 17:41	1
Calcium	mg/L	23	EPA 200.7	0.50	0.042	03/04/13 14:59	03/13/13 17:41	1
Iron	mg/L	0.039 I	EPA 200.7	0.10	0.020	03/04/13 14:59	03/13/13 17:41	1
Magnesium	mg/L	2.8	EPA 200.7	0.50	0.020	03/04/13 14:59	03/13/13 17:41	1
Manganese	mg/L	0.0013 I	EPA 200.7	0.010	0.0010	03/04/13 14:59	03/13/13 17:41	1
Potassium	mg/L	4.0	EPA 200.7	0.050	0.010	03/04/13 14:59	03/13/13 17:41	1
Sodium	mg/L	7.8	EPA 200.7	0.50	0.13	03/04/13 14:59	03/13/13 17:41	1

Sample Description	**PZ-06Q-19**
Matrix	**Groundwater**
SAL Sample Number	**1301945-57**
Date/Time Collected	**02/27/13 12:41**
Collected by	**Sean Schmidt**
Date/Time Received	**02/27/13 15:40**

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Parameters	Units	Results *	Method	PQL	MDL	Prepared	Analyzed	Dilution
Sample Description		**PZ-06Q-19**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-57**						
Date/Time Collected		**02/27/13 12:41**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/27/13 15:40**						
Client Provided Field Data								
pH		6.51						
Temperature		25.8 °C						
Conductivity		86.1 umhos						
Dissolved Oxygen		0.66 mg/L						
Inorganics								
Ammonia as N	mg/L	0.061	EPA 350.1	0.040	0.009		03/11/13 13:11	1
Chemical Oxygen Demand	mg/L	22 I	EPA 410.4	25	10	02/28/13 09:50	02/28/13 16:09	1
Chloride	mg/L	3.1	EPA 300.0	0.20	0.050		03/01/13 01:40	1
Nitrate (as N)	mg/L	0.21	EPA 300.0	0.04	0.01		03/01/13 01:40	1
Nitrite (as N)	mg/L	0.07	EPA 300.0	0.04	0.01		03/01/13 01:40	1
Phosphorous - Total as P	mg/L	0.38	SM 4500P-E	0.040	0.010	03/01/13 16:00	03/05/13 14:49	1
Total Alkalinity	mg/L	20	SM 2320B	8.0	2.0		03/08/13 09:30	1
Total Kjeldahl Nitrogen	mg/L	0.46	EPA 351.2	0.20	0.05	03/08/13 14:55	03/12/13 09:28	1
Nitrate+Nitrite (N)	mg/L	0.29	EPA 300.0	0.08	0.02		03/01/13 01:40	1

Sample Description		**PZ-07Q-13**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-58**						
Date/Time Collected		**02/27/13 11:39**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/27/13 15:40**						
Client Provided Field Data								
pH		6.12						
Temperature		73.6 °C						
Conductivity		380 umhos						
Dissolved Oxygen		4.03 mg/L						
Inorganics								
Ammonia as N	mg/L	0.009 U	EPA 350.1	0.040	0.009		03/11/13 13:13	1
Chemical Oxygen Demand	mg/L	10 U	EPA 410.4	25	10	02/28/13 09:50	02/28/13 16:09	1
Chloride	mg/L	19	EPA 300.0	0.20	0.050		03/01/13 01:40	1
Nitrate (as N)	mg/L	18	EPA 300.0	0.04	0.01		03/01/13 01:40	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		03/01/13 01:40	1
Phosphorous - Total as P	mg/L	0.23	SM 4500P-E	0.040	0.010	03/01/13 16:00	03/05/13 14:50	1
Total Alkalinity	mg/L	30	SM 2320B	8.0	2.0		03/08/13 09:30	1
Total Kjeldahl Nitrogen	mg/L	1.7	EPA 351.2	0.20	0.05	03/08/13 14:59	03/12/13 10:44	1
Nitrate+Nitrite (N)	mg/L	18	EPA 300.0	0.08	0.02		03/01/13 01:40	1

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Parameters	Units	Results *	Method	PQL	MDL	Prepared	Analyzed	Dilution
Sample Description		**PZ-07Q-15**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-59**						
Date/Time Collected		**02/27/13 11:53**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/27/13 15:40**						
Client Provided Field Data								
pH		6.41						
Temperature		23.9 °C						
Conductivity		113.9 umhos						
Dissolved Oxygen		2.71 mg/L						
Inorganics								
Ammonia as N	mg/L	0.047	EPA 350.1	0.040	0.009		03/08/13 13:26	1
Chloride	mg/L	2.6	EPA 300.0	0.20	0.050		02/28/13 16:53	1
Nitrate (as N)	mg/L	1.9	EPA 300.0	0.04	0.01		02/28/13 16:53	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		02/28/13 16:53	1
Total Alkalinity	mg/L	20	SM 2320B	8.0	2.0		03/04/13 11:00	1
Total Kjeldahl Nitrogen	mg/L	1.4	EPA 351.2	0.20	0.05	03/01/13 07:34	03/06/13 12:04	1
Nitrate+Nitrite (N)	mg/L	1.9	EPA 300.0	0.08	0.02		02/28/13 16:53	1
Sample Description		**PZ-07Q-19**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-60**						
Date/Time Collected		**02/27/13 12:02**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/27/13 15:40**						
Client Provided Field Data								
pH		5.35						
Temperature		24.6 °C						
Conductivity		118.1 umhos						
Dissolved Oxygen		2.92 mg/L						
Inorganics								
Ammonia as N	mg/L	0.009 U	EPA 350.1	0.040	0.009		03/11/13 13:15	1
Chloride	mg/L	6.3	EPA 300.0	0.20	0.050		03/01/13 01:40	1
Nitrate (as N)	mg/L	2.3	EPA 300.0	0.04	0.01		03/01/13 01:40	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		03/01/13 01:40	1
Total Alkalinity	mg/L	2.0 U	SM 2320B	8.0	2.0		03/08/13 09:30	1
Total Kjeldahl Nitrogen	mg/L	0.48	EPA 351.2	0.20	0.05	03/08/13 14:59	03/12/13 10:51	1
Nitrate+Nitrite (N)	mg/L	2.3	EPA 300.0	0.08	0.02		03/01/13 01:40	1

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Parameters	Units	Results *	Method	PQL	MDL	Prepared	Analyzed	Dilution
Sample Description		**PZ-04U-12**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-61**						
Date/Time Collected		**02/28/13 09:28**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/28/13 15:30**						
Client Provided Field Data								
pH		6.52						
Temperature		23.4 °C						
Conductivity		204.5 umhos						
Dissolved Oxygen		4.66 mg/L						
Inorganics								
Ammonia as N	mg/L	0.028 I	EPA 350.1	0.040	0.009		03/13/13 12:07	1
Chemical Oxygen Demand	mg/L	26	EPA 410.4	25	10		03/04/13 11:45	1
Chloride	mg/L	8.2	EPA 300.0	0.20	0.050		03/02/13 02:00	1
Nitrate (as N)	mg/L	1.8	EPA 300.0	0.04	0.01		03/02/13 02:00	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		03/02/13 02:00	1
Phosphorous - Total as P	mg/L	0.26	SM 4500P-E	0.040	0.010	03/01/13 16:05	03/05/13 16:48	1
Total Alkalinity	mg/L	50	SM 2320B	8.0	2.0		03/11/13 12:01	1
Total Kjeldahl Nitrogen	mg/L	0.72	EPA 351.2	0.20	0.05	03/08/13 15:35	03/12/13 11:20	1
Nitrate+Nitrite (N)	mg/L	1.8	EPA 300.0	0.08	0.02		03/02/13 02:00	1

Sample Description		**PZ-04U-14**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-62**						
Date/Time Collected		**02/28/13 09:41**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/28/13 15:30**						
Client Provided Field Data								
pH		6.47						
Temperature		23.7 °C						
Conductivity		241 umhos						
Dissolved Oxygen		6.14 mg/L						
Inorganics								
Ammonia as N	mg/L	0.009 U	EPA 350.1	0.040	0.009		03/13/13 09:59	1
Chloride	mg/L	21	EPA 300.0	0.20	0.050		03/02/13 02:00	1
Nitrate (as N)	mg/L	2.0	EPA 300.0	0.04	0.01		03/02/13 02:00	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		03/02/13 02:00	1
Total Alkalinity	mg/L	30	SM 2320B	8.0	2.0		03/11/13 12:01	1
Total Kjeldahl Nitrogen	mg/L	0.57	EPA 351.2	0.20	0.05	03/08/13 15:35	03/12/13 11:21	1
Nitrate+Nitrite (N)	mg/L	2.0	EPA 300.0	0.08	0.02		03/02/13 02:00	1

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Parameters	Units	Results *	Method	PQL	MDL	Prepared	Analyzed	Dilution
Sample Description		**PZ-04U-14-DUP**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-63**						
Date/Time Collected		**02/28/13 09:46**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/28/13 15:30**						
Client Provided Field Data								
pH		6.47						
Temperature		23.7 °C						
Conductivity		241 umhos						
Dissolved Oxygen		6.14 mg/L						
Inorganics								
Ammonia as N	mg/L	0.009 U	EPA 350.1	0.040	0.009		03/13/13 10:01	1
Chloride	mg/L	20	EPA 300.0	0.20	0.050		03/02/13 02:00	1
Nitrate (as N)	mg/L	2.0	EPA 300.0	0.04	0.01		03/02/13 02:00	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		03/02/13 02:00	1
Total Alkalinity	mg/L	30	SM 2320B	8.0	2.0		03/11/13 12:01	1
Total Kjeldahl Nitrogen	mg/L	0.55	EPA 351.2	0.20	0.05	03/08/13 15:35	03/12/13 11:22	1
Nitrate+Nitrite (N)	mg/L	2.0	EPA 300.0	0.08	0.02		03/02/13 02:00	1

Sample Description		**PZ-04U-18**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-64**						
Date/Time Collected		**02/28/13 09:55**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/28/13 15:30**						
Client Provided Field Data								
pH		5.79						
Temperature		24.4 °C						
Conductivity		64.2 umhos						
Dissolved Oxygen		4.33 mg/L						
Inorganics								
Ammonia as N	mg/L	0.053	EPA 350.1	0.040	0.009		03/13/13 10:03	1
Chloride	mg/L	2.2	EPA 300.0	0.20	0.050		03/02/13 02:00	1
Nitrate (as N)	mg/L	0.84	EPA 300.0	0.04	0.01		03/02/13 02:00	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		03/02/13 02:00	1
Total Alkalinity	mg/L	10	SM 2320B	8.0	2.0		03/11/13 12:01	1
Total Kjeldahl Nitrogen	mg/L	0.42	EPA 351.2	0.20	0.05	03/08/13 15:35	03/12/13 11:24	1
Nitrate+Nitrite (N)	mg/L	0.84	EPA 300.0	0.08	0.02		03/02/13 02:00	1

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Project Name **C-HS3 SE#3**

Parameters	Units	Results *	Method	PQL	MDL	Prepared	Analyzed	Dilution
Sample Description		**PZ-06U-12**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-65**						
Date/Time Collected		**02/28/13 08:35**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/28/13 15:30**						
Client Provided Field Data								
pH		6.69						
Temperature		22.6 °C						
Conductivity		117.1 umhos						
Dissolved Oxygen		5.33 mg/L						
Inorganics								
Ammonia as N	mg/L	0.028 I	EPA 350.1	0.040	0.009		03/13/13 10:05	1
Chloride	mg/L	2.0	EPA 300.0	0.20	0.050		03/02/13 02:00	1
Nitrate (as N)	mg/L	2.8	EPA 300.0	0.04	0.01		03/02/13 02:00	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		03/02/13 02:00	1
Total Alkalinity	mg/L	20	SM 2320B	8.0	2.0		03/11/13 12:01	1
Total Kjeldahl Nitrogen	mg/L	0.51	EPA 351.2	0.20	0.05	03/08/13 15:35	03/12/13 11:25	1
Total Organic Carbon	mg/L	4.3	SM 5310B	1.0	0.50		03/06/13 16:19	1
Nitrate+Nitrite (N)	mg/L	2.8	EPA 300.0	0.08	0.02		03/02/13 02:00	1
Inorganic, Dissolved								
Dissolved Organic Carbon	mg/L	3.0	SM 5310B	1.0	0.50		03/05/13 10:06	1

Sample Description		**PZ-06U-14**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-66**						
Date/Time Collected		**02/28/13 08:50**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/28/13 15:30**						
Client Provided Field Data								
pH		5.88						
Temperature		23.0 °C						
Conductivity		390 umhos						
Dissolved Oxygen		3.12 mg/L						
Inorganics								
Ammonia as N	mg/L	0.009 U	EPA 350.1	0.040	0.009		03/13/13 10:07	1
Chloride	mg/L	18	EPA 300.0	0.20	0.050		03/02/13 02:00	1
Fluoride	mg/L	0.052	EPA 300.0	0.040	0.010		03/02/13 02:00	1
Nitrate (as N)	mg/L	20	EPA 300.0	0.04	0.01		03/01/13 17:13	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		03/02/13 02:00	1
Orthophosphate as P	mg/L	0.010 U	EPA 300.0	0.040	0.010		03/02/13 02:00	1
Sulfate	mg/L	38	EPA 300.0	0.60	0.20		03/02/13 02:00	1
Total Alkalinity	mg/L	20	SM 2320B	8.0	2.0		03/11/13 12:01	1

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Parameters	Units	Results *	Method	PQL	MDL	Prepared	Analyzed	Dilution
Sample Description		**PZ-06U-14**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-66**						
Date/Time Collected		**02/28/13 08:50**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/28/13 15:30**						
Client Provided Field Data								
pH		5.88						
Temperature		23.0 °C						
Conductivity		390 umhos						
Dissolved Oxygen		3.12 mg/L						
Total Kjeldahl Nitrogen	mg/L	1.9	EPA 351.2	0.20	0.05	03/08/13 14:55	03/12/13 09:29	1
Total Organic Carbon	mg/L	2.7	SM 5310B	1.0	0.50		03/06/13 16:19	1
Nitrate+Nitrite (N)	mg/L	20	EPA 300.0	0.08	0.02		03/02/13 02:00	1
Inorganic, Dissolved								
Dissolved Organic Carbon	mg/L	2.0	SM 5310B	1.0	0.50		03/05/13 10:06	1
Metals								
Boron	mg/L	0.050 U	EPA 200.7**	0.10	0.050	03/04/13 15:05	03/12/13 16:32	1
Calcium	mg/L	37	EPA 200.7	0.50	0.042	03/04/13 15:05	03/12/13 16:32	1
Iron	mg/L	0.020 U	EPA 200.7	0.10	0.020	03/04/13 15:05	03/12/13 16:32	1
Magnesium	mg/L	6.6	EPA 200.7	0.50	0.020	03/04/13 15:05	03/12/13 16:32	1
Manganese	mg/L	0.073	EPA 200.7	0.010	0.0010	03/04/13 15:05	03/12/13 16:32	1
Potassium	mg/L	8.0	EPA 200.7	0.050	0.010	03/04/13 15:05	03/12/13 16:32	1
Sodium	mg/L	17	EPA 200.7	0.50	0.13	03/04/13 15:05	03/12/13 16:32	1
Sample Description		**PZ-06U-14-DUP**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-67**						
Date/Time Collected		**02/28/13 08:55**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/28/13 15:30**						
Client Provided Field Data								
pH		5.88						
Temperature		23.0 °C						
Conductivity		390 umhos						
Dissolved Oxygen		3.12 mg/L						
Inorganics								
Ammonia as N	mg/L	0.009 U	EPA 350.1	0.040	0.009		03/13/13 10:09	1
Chloride	mg/L	18	EPA 300.0	0.20	0.050		03/02/13 02:00	1
Fluoride	mg/L	0.038 I	EPA 300.0	0.040	0.010		03/02/13 02:00	1
Nitrate (as N)	mg/L	20	EPA 300.0	0.04	0.01		03/01/13 17:13	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		03/02/13 02:00	1
Orthophosphate as P	mg/L	0.010 U	EPA 300.0	0.040	0.010		03/02/13 02:00	1

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Parameters	Units	Results *	Method	PQL	MDL	Prepared	Analyzed	Dilution
Sample Description		**PZ-06U-14-DUP**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-67**						
Date/Time Collected		**02/28/13 08:55**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/28/13 15:30**						
Client Provided Field Data								
pH		5.88						
Temperature		23.0 °C						
Conductivity		390 umhos						
Dissolved Oxygen		3.12 mg/L						
Sulfate	mg/L	38	EPA 300.0	0.60	0.20		03/02/13 02:00	1
Total Alkalinity	mg/L	20	SM 2320B	8.0	2.0		03/14/13 14:00	1
Total Kjeldahl Nitrogen	mg/L	2.1	EPA 351.2	0.20	0.05	03/13/13 07:49	03/21/13 09:28	1
Total Organic Carbon	mg/L	2.2	SM 5310B	1.0	0.50		03/06/13 16:19	1
Nitrate+Nitrite (N)	mg/L	20	EPA 300.0	0.08	0.02		03/02/13 02:00	1
Inorganic, Dissolved								
Dissolved Organic Carbon	mg/L	1.7	SM 5310B	1.0	0.50		03/05/13 10:06	1
Metals								
Boron	mg/L	0.050 U	EPA 200.7**	0.10	0.050	03/04/13 15:05	03/12/13 16:35	1
Calcium	mg/L	36	EPA 200.7	0.50	0.042	03/04/13 15:05	03/12/13 16:35	1
Iron	mg/L	0.020 U	EPA 200.7	0.10	0.020	03/04/13 15:05	03/12/13 16:35	1
Magnesium	mg/L	6.6	EPA 200.7	0.50	0.020	03/04/13 15:05	03/12/13 16:35	1
Manganese	mg/L	0.073	EPA 200.7	0.010	0.0010	03/04/13 15:05	03/12/13 16:35	1
Potassium	mg/L	7.8	EPA 200.7	0.050	0.010	03/04/13 15:05	03/12/13 16:35	1
Sodium	mg/L	18	EPA 200.7	0.50	0.13	03/04/13 15:05	03/12/13 16:35	1

Sample Description		**PZ-06U-34**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-68**						
Date/Time Collected		**02/28/13 09:16**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/28/13 15:30**						
Client Provided Field Data								
pH		5.27						
Temperature		24.2 °C						
Conductivity		280 umhos						
Dissolved Oxygen		0.56 mg/L						
Inorganics								
Ammonia as N	mg/L	0.21	EPA 350.1	0.040	0.009		03/13/13 10:11	1
Chloride	mg/L	16	EPA 300.0	0.20	0.050		03/02/13 02:00	1
Nitrate (as N)	mg/L	12	EPA 300.0	0.04	0.01		03/02/13 02:00	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		03/02/13 02:00	1

Florida Certification Number: E84129
NELAP Accredited

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Leslie C. Boardman, Q.A. Manager

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Parameters	Units	Results *	Method	PQL	MDL	Prepared	Analyzed	Dilution
Sample Description		**PZ-06U-34**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-68**						
Date/Time Collected		**02/28/13 09:16**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/28/13 15:30**						
Client Provided Field Data								
pH		5.27						
Temperature		24.2 °C						
Conductivity		280 umhos						
Dissolved Oxygen		0.56 mg/L						
Total Alkalinity	mg/L	10	SM 2320B	8.0	2.0		03/14/13 14:00	1
Total Kjeldahl Nitrogen	mg/L	2.8	EPA 351.2	0.20	0.05	03/13/13 07:40	03/19/13 13:20	1
Nitrate+Nitrite (N)	mg/L	12	EPA 300.0	0.08	0.02		03/02/13 02:00	1
Sample Description		**PZ-01BKG**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-69**						
Date/Time Collected		**02/28/13 12:25**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/28/13 15:30**						
Client Provided Field Data								
pH		6.33						
Temperature		25.0 °C						
Conductivity		92.8 umhos						
Dissolved Oxygen		7.26 mg/L						
Inorganics								
Ammonia as N	mg/L	0.009 U	EPA 350.1	0.040	0.009		03/13/13 10:13	1
Chemical Oxygen Demand	mg/L	57	EPA 410.4	25	10		03/04/13 11:45	1
Chloride	mg/L	2.7	EPA 300.0	0.20	0.050		03/02/13 02:00	1
Nitrate (as N)	mg/L	0.23	EPA 300.0	0.04	0.01		03/02/13 02:00	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		03/02/13 02:00	1
Phosphorous - Total as P	mg/L	0.17	SM 4500P-E	0.040	0.010	03/01/13 16:05	03/05/13 16:49	1
Total Alkalinity	mg/L	30	SM 2320B	8.0	2.0		03/14/13 14:00	1
Total Kjeldahl Nitrogen	mg/L	0.16 I	EPA 351.2	0.20	0.05	03/13/13 07:40	03/19/13 13:21	1
Nitrate+Nitrite (N)	mg/L	0.23	EPA 300.0	0.08	0.02		03/02/13 02:00	1
Sample Description		**PZ-02BKG**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-70**						
Date/Time Collected		**02/28/13 11:49**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/28/13 15:30**						

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Parameters	Units	Results *	Method	PQL	MDL	Prepared	Analyzed	Dilution
Sample Description		**PZ-02BKG**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-70**						
Date/Time Collected		**02/28/13 11:49**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/28/13 15:30**						
Client Provided Field Data								
pH		5.17						
Temperature		24.0 °C						
Conductivity		42.7 umhos						
Dissolved Oxygen		0.24 mg/L						
Inorganics								
Ammonia as N	mg/L	0.032 I	EPA 350.1	0.040	0.009		03/13/13 10:15	1
Chemical Oxygen Demand	mg/L	38	EPA 410.4	25	10		03/04/13 11:45	1
Chloride	mg/L	3.6	EPA 300.0	0.20	0.050		03/02/13 02:00	1
Nitrate (as N)	mg/L	0.03 I	EPA 300.0	0.04	0.01		03/02/13 02:00	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		03/02/13 02:00	1
Phosphorous - Total as P	mg/L	0.080	SM 4500P-E	0.040	0.010	03/01/13 16:05	03/06/13 08:01	1
Total Alkalinity	mg/L	10	SM 2320B	8.0	2.0		03/14/13 14:00	1
Total Kjeldahl Nitrogen	mg/L	0.22	EPA 351.2	0.20	0.05	03/13/13 07:40	03/19/13 13:23	1
Nitrate+Nitrite (N)	mg/L	0.03 I	EPA 300.0	0.08	0.02		03/02/13 02:00	1

Sample Description		**PZ-03BKG**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-71**						
Date/Time Collected		**02/28/13 12:13**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/28/13 15:30**						
Client Provided Field Data								
pH		5.68						
Temperature		23.2 °C						
Conductivity		42.9 umhos						
Dissolved Oxygen		4.47 mg/L						
Inorganics								
Ammonia as N	mg/L	0.015 I	EPA 350.1	0.040	0.009		03/13/13 10:17	1
Chemical Oxygen Demand	mg/L	20 I	EPA 410.4	25	10		03/04/13 11:45	1
Chloride	mg/L	2.4	EPA 300.0	0.20	0.050		03/02/13 02:00	1
Nitrate (as N)	mg/L	0.16	EPA 300.0	0.04	0.01		03/02/13 02:00	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		03/02/13 02:00	1
Phosphorous - Total as P	mg/L	0.40	SM 4500P-E	0.040	0.010	03/01/13 16:05	03/05/13 16:51	1
Total Alkalinity	mg/L	10	SM 2320B	8.0	2.0		03/14/13 14:00	1
Total Kjeldahl Nitrogen	mg/L	0.31	EPA 351.2	0.20	0.05	03/13/13 07:40	03/19/13 14:23	1.98
Nitrate+Nitrite (N)	mg/L	0.16	EPA 300.0	0.08	0.02		03/02/13 02:00	1

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Parameters	Units	Results *	Method	PQL	MDL	Prepared	Analyzed	Dilution
Sample Description		**PZ-04BKG**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-72**						
Date/Time Collected		**02/28/13 11:38**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/28/13 15:30**						
Client Provided Field Data								
pH		5.24						
Temperature		22.1 °C						
Conductivity		125.1 umhos						
Dissolved Oxygen		0.59 mg/L						
Inorganics								
Ammonia as N	mg/L	0.46	EPA 350.1	0.040	0.009		03/13/13 10:27	1
Chemical Oxygen Demand	mg/L	63	EPA 410.4	25	10		03/04/13 11:45	1
Chloride	mg/L	4.4	EPA 300.0	0.20	0.050		03/02/13 02:00	1
Nitrate (as N)	mg/L	2.3	EPA 300.0	0.04	0.01		03/02/13 02:00	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		03/02/13 02:00	1
Phosphorous - Total as P	mg/L	1.1	SM 4500P-E	0.040	0.010	03/01/13 16:05	03/05/13 16:51	1
Total Alkalinity	mg/L	10	SM 2320B	8.0	2.0		03/14/13 14:00	1
Total Kjeldahl Nitrogen	mg/L	1.7	EPA 351.2	0.20	0.05	03/13/13 07:40	03/19/13 14:24	1.98
Nitrate+Nitrite (N)	mg/L	2.3	EPA 300.0	0.08	0.02		03/02/13 02:00	1

Sample Description		**PZ-05BKG**						
Matrix		**Groundwater**						
SAL Sample Number		**1301945-73**						
Date/Time Collected		**02/28/13 12:00**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/28/13 15:30**						
Client Provided Field Data								
pH		5.60						
Temperature		23.4 °C						
Conductivity		52.3 umhos						
Dissolved Oxygen		0.45 mg/L						
Inorganics								
Ammonia as N	mg/L	0.044	EPA 350.1	0.040	0.009		03/13/13 10:29	1
Chemical Oxygen Demand	mg/L	61	EPA 410.4	25	10		03/04/13 11:45	1
Chloride	mg/L	1.8	EPA 300.0	0.20	0.050		03/02/13 02:00	1
Nitrate (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		03/02/13 02:00	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		03/02/13 02:00	1
Phosphorous - Total as P	mg/L	0.16	SM 4500P-E	0.040	0.010	03/01/13 16:05	03/05/13 16:52	1
Total Alkalinity	mg/L	20	SM 2320B	8.0	2.0		03/14/13 14:00	1
Total Kjeldahl Nitrogen	mg/L	0.40	EPA 351.2	0.20	0.05	03/13/13 07:40	03/19/13 14:25	1.98
Nitrate+Nitrite (N)	mg/L	0.02 U	EPA 300.0	0.08	0.02		03/02/13 02:00	1

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Parameters	Units	Results *	Method	PQL	MDL	Prepared	Analyzed	Dilution
Sample Description		**FB-DI**						
Matrix		**Reagent Water**						
SAL Sample Number		**1301945-74**						
Date/Time Collected		**02/28/13 12:45**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/28/13 15:30**						
Client Provided Field Data								
pH		7.95						
Temperature		19.8 °C						
Conductivity		1.77 umhos						
Dissolved Oxygen		8.30 mg/L						
Inorganics								
Ammonia as N	mg/L	0.009 U	EPA 350.1	0.040	0.009		03/13/13 10:31	1
Carbonaceous BOD	mg/L	2 U	SM 5210B	2	2	03/01/13 14:30	03/06/13 10:13	1
Chemical Oxygen Demand	mg/L	10 U	EPA 410.4	25	10		03/04/13 11:45	1
Chloride	mg/L	0.050 U	EPA 300.0	0.20	0.050		03/02/13 02:00	1
Fluoride	mg/L	0.010 U	EPA 300.0	0.040	0.010		03/02/13 02:00	1
Nitrate (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		03/02/13 02:00	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		03/02/13 02:00	1
Orthophosphate as P	mg/L	0.010 U	EPA 300.0	0.040	0.010		03/02/13 02:00	1
Phosphorous - Total as P	mg/L	0.010 U	SM 4500P-E	0.040	0.010	03/01/13 16:05	03/06/13 08:02	1
Sulfate	mg/L	0.20 U	EPA 300.0	0.60	0.20		03/02/13 02:00	1
Total Alkalinity	mg/L	2.0 U	SM 2320B	8.0	2.0		03/14/13 14:00	1
Total Kjeldahl Nitrogen	mg/L	0.05 U	EPA 351.2	0.20	0.05	03/13/13 07:40	03/19/13 14:26	1.98
Total Organic Carbon	mg/L	0.50 U	SM 5310B	1.0	0.50		03/06/13 16:19	1
Total Solids	mg/L	10 U	SM 2540B	10	10	03/04/13 08:09	03/04/13 17:05	1
Total Suspended Solids	mg/L	1 U	SM 2540D	1	1	03/04/13 13:06	03/05/13 15:50	1
Nitrate+Nitrite (N)	mg/L	0.02 U	EPA 300.0	0.08	0.02		03/02/13 02:00	1
Inorganic, Dissolved								
Dissolved Organic Carbon	mg/L	0.50 U	SM 5310B	1.0	0.50		03/05/13 10:06	1
Metals								
Boron	mg/L	0.050 U	EPA 200.7**	0.10	0.050	03/05/13 09:49	03/05/13 18:36	1
Calcium	mg/L	0.042 U	EPA 200.7	0.50	0.042	03/05/13 09:49	03/05/13 18:36	1
Iron	mg/L	0.020 U	EPA 200.7	0.10	0.020	03/05/13 09:49	03/05/13 18:36	1
Magnesium	mg/L	0.020 U	EPA 200.7	0.50	0.020	03/05/13 09:49	03/05/13 18:36	1
Manganese	mg/L	0.0010 U	EPA 200.7	0.010	0.0010	03/05/13 09:49	03/05/13 18:36	1
Potassium	mg/L	0.010 U	EPA 200.7	0.050	0.010	03/05/13 09:49	03/05/13 18:36	1
Sodium	mg/L	0.13 U	EPA 200.7	0.50	0.13	03/05/13 09:49	03/05/13 18:36	1
Microbiology								
Fecal Coliforms	CFU/100 ml	1 U	SM 9222D	1	1	02/28/13 15:58	03/01/13 14:40	1

SOUTHERN ANALYTICAL LABORATORIES, INC.
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Hazen and Sawyer
10002 Princess Palm Ave, Suite 200
Tampa, FL 33619

April 15, 2013
Work Order: 1301945

Laboratory Report

Project Name **C-HS3 SE#3**

Parameters	Units	Results *		Method	PQL	MDL	Prepared	Analyzed	Dilution
Sample Description		**FB-TAP**							
Matrix		**Drinking Water**							
SAL Sample Number		**1301945-75**							
Date/Time Collected		**02/28/13 12:40**							
Collected by		**Sean Schmidt**							
Date/Time Received		**02/28/13 15:30**							
Client Provided Field Data									
pH		7.26							
Temperature		23.3 °C							
Conductivity		325 umhos							
Dissolved Oxygen		5.22 mg/L							
Inorganics									
Ammonia as N	mg/L	0.009	U	EPA 350.1	0.040	0.009		03/13/13 10:33	1
Carbonaceous BOD	mg/L	2	U	SM 5210B	2	2	03/01/13 14:30	03/06/13 10:13	1
Chemical Oxygen Demand	mg/L	18	I	EPA 410.4	25	10		03/04/13 11:45	1
Chloride	mg/L	12		EPA 300.0	0.20	0.050		03/02/13 02:00	1
Fluoride	mg/L	0.034	I	EPA 300.0	0.040	0.010		03/02/13 02:00	1
Nitrate (as N)	mg/L	0.27		EPA 300.0	0.04	0.01		03/02/13 02:00	1
Nitrite (as N)	mg/L	0.01	U	EPA 300.0	0.04	0.01		03/02/13 02:00	1
Orthophosphate as P	mg/L	0.010	U	EPA 300.0	0.040	0.010		03/02/13 02:00	1
Phosphorous - Total as P	mg/L	0.010	U	SM 4500P-E	0.040	0.010	03/01/13 16:05	03/06/13 08:03	1
Sulfate	mg/L	38		EPA 300.0	0.60	0.20		03/02/13 02:00	1
Total Alkalinity	mg/L	80		SM 2320B	8.0	2.0		03/14/13 14:00	1
Total Kjeldahl Nitrogen	mg/L	0.05	U	EPA 351.2	0.20	0.05	03/13/13 07:40	03/19/13 14:28	1.98
Total Organic Carbon	mg/L	0.91	I	SM 5310B	1.0	0.50		03/06/13 16:19	1
Total Solids	mg/L	280		SM 2540B	10	10	03/04/13 08:09	03/04/13 17:05	1
Total Suspended Solids	mg/L	1	U	SM 2540D	1	1	03/04/13 13:06	03/05/13 15:50	1
Nitrate+Nitrite (N)	mg/L	0.27		EPA 300.0	0.08	0.02		03/02/13 02:00	1
Inorganic, Dissolved									
Dissolved Organic Carbon	mg/L	0.50	U	SM 5310B	1.0	0.50		03/05/13 10:06	1
Metals									
Boron	mg/L	0.050	U	EPA 200.7**	0.10	0.050	03/05/13 09:49	03/05/13 18:39	1
Calcium	mg/L	44		EPA 200.7	0.50	0.042	03/05/13 09:49	03/05/13 18:39	1
Iron	mg/L	0.020	U	EPA 200.7	0.10	0.020	03/05/13 09:49	03/05/13 18:39	1
Magnesium	mg/L	11		EPA 200.7	0.50	0.020	03/05/13 09:49	03/05/13 18:39	1
Manganese	mg/L	0.0013	I	EPA 200.7	0.010	0.0010	03/05/13 09:49	03/05/13 18:39	1
Potassium	mg/L	3.4		EPA 200.7	0.050	0.010	03/05/13 09:49	03/05/13 18:39	1
Sodium	mg/L	7.8		EPA 200.7	0.50	0.13	03/05/13 09:49	03/05/13 18:39	1
Microbiology									
Fecal Coliforms	CFU/100 ml	1	U	SM 9222D	1	1	02/28/13 15:58	03/01/13 14:40	1

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Tampa, FL 33619

April 15, 2013
Work Order: 1301945

Laboratory Report

Project Name **C-HS3 SE#3**

Parameters	Units	Results *	Method	PQL	MDL	Prepared	Analyzed	Dilution
Sample Description		**EB**						
Matrix		**Reagent Water**						
SAL Sample Number		**1301945-76**						
Date/Time Collected		**02/28/13 12:50**						
Collected by		**Sean Schmidt**						
Date/Time Received		**02/28/13 15:30**						
Client Provided Field Data								
pH		7.90						
Temperature		20.0 °C						
Conductivity		1.77 umhos						
Dissolved Oxygen		8.30 mg/L						
Inorganics								
Ammonia as N	mg/L	0.009 U	EPA 350.1	0.040	0.009		03/13/13 10:35	1
Carbonaceous BOD	mg/L	2 U	SM 5210B	2	2	03/01/13 14:30	03/06/13 10:13	1
Chemical Oxygen Demand	mg/L	10 U	EPA 410.4	25	10		03/04/13 11:45	1
Chloride	mg/L	0.050 U	EPA 300.0	0.20	0.050		03/02/13 02:00	1
Fluoride	mg/L	0.010 U	EPA 300.0	0.040	0.010		03/02/13 02:00	1
Nitrate (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		03/02/13 02:00	1
Nitrite (as N)	mg/L	0.01 U	EPA 300.0	0.04	0.01		03/02/13 02:00	1
Orthophosphate as P	mg/L	0.010 U	EPA 300.0	0.040	0.010		03/02/13 02:00	1
Phosphorous - Total as P	mg/L	0.010 U	SM 4500P-E	0.040	0.010	03/01/13 16:05	03/06/13 08:03	1
Sulfate	mg/L	0.20 U	EPA 300.0	0.60	0.20		03/02/13 02:00	1
Total Alkalinity	mg/L	2.0 U	SM 2320B	8.0	2.0		03/14/13 14:00	1
Total Kjeldahl Nitrogen	mg/L	0.05 U	EPA 351.2	0.20	0.05	03/13/13 07:40	03/19/13 14:29	1.98
Total Organic Carbon	mg/L	0.50 U	SM 5310B	1.0	0.50		03/06/13 16:19	1
Total Solids	mg/L	10 U	SM 2540B	10	10	03/04/13 08:09	03/04/13 17:05	1
Total Suspended Solids	mg/L	1 U	SM 2540D	1	1	03/04/13 13:06	03/05/13 15:50	1
Nitrate+Nitrite (N)	mg/L	0.02 U	EPA 300.0	0.08	0.02		03/02/13 02:00	1
Inorganic, Dissolved								
Dissolved Organic Carbon	mg/L	0.50 U	SM 5310B	1.0	0.50		03/05/13 10:06	1
Metals								
Boron	mg/L	0.050 U	EPA 200.7**	0.10	0.050	03/05/13 09:49	03/05/13 18:43	1
Calcium	mg/L	0.042 U	EPA 200.7	0.50	0.042	03/05/13 09:49	03/05/13 18:43	1
Iron	mg/L	0.020 U	EPA 200.7	0.10	0.020	03/05/13 09:49	03/05/13 18:43	1
Magnesium	mg/L	0.020 U	EPA 200.7	0.50	0.020	03/05/13 09:49	03/05/13 18:43	1
Manganese	mg/L	0.0010 U	EPA 200.7	0.010	0.0010	03/05/13 09:49	03/05/13 18:43	1
Potassium	mg/L	0.010 U	EPA 200.7	0.050	0.010	03/05/13 09:49	03/05/13 18:43	1
Sodium	mg/L	0.13 U	EPA 200.7	0.50	0.13	03/05/13 09:49	03/05/13 18:43	1
Microbiology								
Fecal Coliforms	CFU/100 ml	1 U	SM 9222D	1	1	02/28/13 15:58	03/01/13 14:40	1

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Inorganics - Quality Control

Analyte	Result	PQL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch BB32604 - COD prep										
Blank (BB32604-BLK1)					Prepared & Analyzed: 02/26/13					
Chemical Oxygen Demand	10 U	25	10	mg/L						
LCS (BB32604-BS1)					Prepared & Analyzed: 02/26/13					
Chemical Oxygen Demand	46	25	10	mg/L	50		92	90-110		
Matrix Spike (BB32604-MS1)		**Source: 1301945-19**			Prepared & Analyzed: 02/26/13					
Chemical Oxygen Demand	83	25	10	mg/L	50	36	94	85-115		
Matrix Spike Dup (BB32604-MSD1)		**Source: 1301945-19**			Prepared & Analyzed: 02/26/13					
Chemical Oxygen Demand	81	25	10	mg/L	50	36	90	85-115	2	32
Batch BB32605 - Ion Chromatography 300.0 Prep										
Blank (BB32605-BLK1)					Prepared & Analyzed: 02/26/13					
Nitrite (as N)	0.01 U	0.04	0.01	mg/L						
Chloride	0.050 U	0.20	0.050	mg/L						
Sulfate	0.20 U	0.60	0.20	mg/L						
Orthophosphate as P	0.010 U	0.040	0.010	mg/L						
Nitrate (as N)	0.01 U	0.04	0.01	mg/L						
Fluoride	0.010 U	0.040	0.010	mg/L						
LCS (BB32605-BS1)					Prepared & Analyzed: 02/26/13					
Sulfate	8.80	0.60	0.20	mg/L	9.0		98	85-115		
Orthophosphate as P	0.959	0.040	0.010	mg/L	0.90		107	85-115		
Fluoride	0.892	0.040	0.010	mg/L	0.90		99	85-115		
Chloride	2.99	0.20	0.050	mg/L	3.0		100	85-115		
Nitrate (as N)	1.66	0.04	0.01	mg/L	1.7		98	85-115		
Nitrite (as N)	1.39	0.04	0.01	mg/L	1.4		99	85-115		

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Inorganics - Quality Control

Analyte	Result	PQL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch BB32605 - Ion Chromatography 300.0 Prep										
LCS Dup (BB32605-BSD1)					Prepared & Analyzed: 02/26/13					
Chloride	2.99	0.20	0.050	mg/L	3.0		100	85-115	0	200
Orthophosphate as P	0.972	0.040	0.010	mg/L	0.90		108	85-115	1	200
Fluoride	0.890	0.040	0.010	mg/L	0.90		99	85-115	0.2	200
Nitrite (as N)	1.38	0.04	0.01	mg/L	1.4		99	85-115	0.7	200
Sulfate	8.87	0.60	0.20	mg/L	9.0		99	85-115	0.8	200
Nitrate (as N)	1.66	0.04	0.01	mg/L	1.7		98	85-115	0	200
Matrix Spike (BB32605-MS1)		**Source: 1301945-14**			Prepared & Analyzed: 02/26/13					
Fluoride	0.900	0.040	0.010	mg/L	0.90	0.0653	93	85-115		
Nitrite (as N)	1.29	0.04	0.01	mg/L	1.4	ND	92	85-115		
Nitrate (as N)	2.37	0.04	0.01	mg/L	1.7	0.663	100	85-115		
Sulfate	13.5	0.60	0.20	mg/L	9.0	5.06	94	85-115		
Chloride	4.93	0.20	0.050	mg/L	3.0	1.86	102	80-120		
Orthophosphate as P	1.50	0.040	0.010	mg/L	0.90	0.660	93	85-115		
Matrix Spike (BB32605-MS2)		**Source: 1301945-24**			Prepared & Analyzed: 02/26/13					
Sulfate	12.0	0.60	0.20	mg/L	9.0	3.08	99	85-115		
Orthophosphate as P	2.87	0.040	0.010	mg/L	0.90	2.06	90	85-115		
Nitrite (as N)	1.27	0.04	0.01	mg/L	1.4	ND	91	85-115		
Fluoride	0.891	0.040	0.010	mg/L	0.90	0.0129	98	85-115		
Chloride	3.99	0.20	0.050	mg/L	3.0	1.11	96	80-120		
Nitrate (as N)	2.68	0.04	0.01	mg/L	1.7	0.974	100	85-115		
Batch BB32606 - Ion Chromatography 300.0 Prep										
Blank (BB32606-BLK1)					Prepared & Analyzed: 02/27/13					
Sulfate	0.20 U	0.60	0.20	mg/L						
Chloride	0.050 U	0.20	0.050	mg/L						
Orthophosphate as P	0.010 U	0.040	0.010	mg/L						
Nitrite (as N)	0.01 U	0.04	0.01	mg/L						
Fluoride	0.010 U	0.040	0.010	mg/L						
Nitrate (as N)	0.01 U	0.04	0.01	mg/L						

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Inorganics - Quality Control

Analyte	Result	PQL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch BB32606 - Ion Chromatography 300.0 Prep										
LCS (BB32606-BS1)					Prepared & Analyzed: 02/27/13					
Nitrite (as N)	1.37	0.04	0.01	mg/L	1.4		98	85-115		
Fluoride	0.884	0.040	0.010	mg/L	0.90		98	85-115		
Orthophosphate as P	0.974	0.040	0.010	mg/L	0.90		108	85-115		
Chloride	3.16	0.20	0.050	mg/L	3.0		105	85-115		
Nitrate (as N)	1.68	0.04	0.01	mg/L	1.7		99	85-115		
Sulfate	8.92	0.60	0.20	mg/L	9.0		99	85-115		
LCS Dup (BB32606-BSD1)					Prepared & Analyzed: 02/27/13					
Fluoride	0.877	0.040	0.010	mg/L	0.90		97	85-115	0.8	200
Sulfate	8.80	0.60	0.20	mg/L	9.0		98	85-115	1	200
Orthophosphate as P	0.918	0.040	0.010	mg/L	0.90		102	85-115	6	200
Nitrate (as N)	1.65	0.04	0.01	mg/L	1.7		97	85-115	2	200
Chloride	3.10	0.20	0.050	mg/L	3.0		103	85-115	2	200
Nitrite (as N)	1.34	0.04	0.01	mg/L	1.4		96	85-115	2	200
Matrix Spike (BB32606-MS1)		**Source: 1302173-02**			Prepared & Analyzed: 02/27/13					
Fluoride	0.909	0.040	0.010	mg/L	0.90	0.0502	95	85-115		
Chloride	48.2 +O	0.20	0.050	mg/L	3.0	48.0	7	80-120		
Sulfate	30.7	0.60	0.20	mg/L	9.0	21.6	101	85-115		
Orthophosphate as P	2.39	0.040	0.010	mg/L	0.90	1.50	99	85-115		
Nitrite (as N)	1.85	0.04	0.01	mg/L	1.4	0.433	101	85-115		
Nitrate (as N)	2.73	0.04	0.01	mg/L	1.7	1.04	99	85-115		
Matrix Spike (BB32606-MS2)		**Source: 1301945-38**			Prepared & Analyzed: 02/27/13					
Chloride	7.87	0.20	0.050	mg/L	3.0	4.57	110	80-120		
Sulfate	29.9	0.60	0.20	mg/L	9.0	20.1	109	85-115		
Nitrate (as N)	4.49	0.04	0.01	mg/L	1.7	2.68	106	85-115		
Nitrite (as N)	1.43	0.04	0.01	mg/L	1.4	ND	102	85-115		
Orthophosphate as P	0.865	0.040	0.010	mg/L	0.90	ND	96	85-115		
Fluoride	0.891	0.040	0.010	mg/L	0.90	ND	99	85-115		

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Inorganics - Quality Control

Analyte	Result	PQL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch BB32708 - Digestion for TP by EPA 365.2/SM4500PE										
Blank (BB32708-BLK1)					Prepared: 02/27/13 Analyzed: 03/01/13					
Phosphorous - Total as P	0.010 U	0.040	0.010	mg/L						
LCS (BB32708-BS1)					Prepared: 02/27/13 Analyzed: 03/01/13					
Phosphorous - Total as P	0.876	0.040	0.010	mg/L	0.80		109	90-110		
Matrix Spike (BB32708-MS1)		**Source: 1301945-07**			Prepared: 02/27/13 Analyzed: 03/01/13					
Phosphorous - Total as P	1.71	0.040	0.010	mg/L	1.0	0.735	97	90-110		
Matrix Spike (BB32708-MS2)		**Source: 1302191-02**			Prepared: 02/27/13 Analyzed: 03/01/13					
Phosphorous - Total as P	1.09	0.040	0.010	mg/L	1.0	0.0502	104	90-110		
Matrix Spike Dup (BB32708-MSD1)		**Source: 1301945-07**			Prepared: 02/27/13 Analyzed: 03/01/13					
Phosphorous - Total as P	1.77	0.040	0.010	mg/L	1.0	0.735	103	90-110	3	25
Matrix Spike Dup (BB32708-MSD2)		**Source: 1302191-02**			Prepared: 02/27/13 Analyzed: 03/01/13					
Phosphorous - Total as P	0.964	0.040	0.010	mg/L	1.0	0.0502	91	90-110	12	25
Batch BB32710 - COD prep										
Blank (BB32710-BLK1)					Prepared & Analyzed: 02/27/13					
Chemical Oxygen Demand	10 U	25	10	mg/L						
LCS (BB32710-BS1)					Prepared & Analyzed: 02/27/13					
Chemical Oxygen Demand	49	25	10	mg/L	50		98	90-110		
LCS (BB32710-BS2)					Prepared & Analyzed: 02/27/13					
Chemical Oxygen Demand	46	25	10	mg/L	50		92	90-110		

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Inorganics - Quality Control

Analyte	Result	PQL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch BB32710 - COD prep										
LCS (BB32710-BS3)					Prepared & Analyzed: 02/27/13					
Chemical Oxygen Demand	51	25	10	mg/L	50		102	90-110		
LCS (BB32710-BS4)					Prepared & Analyzed: 02/27/13					
Chemical Oxygen Demand	46	25	10	mg/L	50		92	90-110		
LCS (BB32710-BS5)					Prepared & Analyzed: 02/27/13					
Chemical Oxygen Demand	51	25	10	mg/L	50		102	90-110		
Matrix Spike (BB32710-MS1)		**Source: 1301945-07**			Prepared & Analyzed: 02/27/13					
Chemical Oxygen Demand	71	25	10	mg/L	50	20	102	85-115		
Matrix Spike Dup (BB32710-MSD1)		**Source: 1301945-07**			Prepared & Analyzed: 02/27/13					
Chemical Oxygen Demand	69	25	10	mg/L	50	20	98	85-115	3	32
Batch BB32712 - Ion Chromatography 300.0 Prep										
Blank (BB32712-BLK1)					Prepared & Analyzed: 02/27/13					
Chloride	0.050 U	0.20	0.050	mg/L						
Nitrate (as N)	0.01 U	0.04	0.01	mg/L						
Nitrite (as N)	0.01 U	0.04	0.01	mg/L						
LCS (BB32712-BS1)					Prepared & Analyzed: 02/27/13					
Nitrite (as N)	1.40	0.04	0.01	mg/L	1.4		100	85-115		
Chloride	3.00	0.20	0.050	mg/L	3.0		100	85-115		
Nitrate (as N)	1.67	0.04	0.01	mg/L	1.7		98	85-115		
LCS Dup (BB32712-BSD1)					Prepared & Analyzed: 02/27/13					
Nitrite (as N)	1.41	0.04	0.01	mg/L	1.4		101	85-115	0.7	200
Chloride	3.01	0.20	0.050	mg/L	3.0		100	85-115	0.3	200
Nitrate (as N)	1.68	0.04	0.01	mg/L	1.7		99	85-115	0.6	200

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Analyte	Result	PQL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch BB32712 - Ion Chromatography 300.0 Prep										
Matrix Spike (BB32712-MS1)		**Source: 1301066-10**			Prepared & Analyzed: 02/27/13					
Nitrate (as N)	20.7 +O	0.04	0.01	mg/L	1.7	19.5	71	85-115		
Nitrite (as N)	1.29	0.04	0.01	mg/L	1.4	ND	92	85-115		
Chloride	15.0	0.20	0.050	mg/L	3.0	12.3	90	80-120		
Matrix Spike (BB32712-MS2)		**Source: 1302223-01**			Prepared & Analyzed: 02/27/13					
Nitrite (as N)	1,400	0.04	0.01	mg/L	1400	ND	100	85-115		
Chloride	16,900	0.20	0.050	mg/L	3000	13700	107	80-120		
Nitrate (as N)	1,680	0.04	0.01	mg/L	1700	22.6	97	85-115		
Batch BB32718 - BOD										
Blank (BB32718-BLK1)					Prepared: 02/27/13 Analyzed: 03/04/13					
Carbonaceous BOD	2 U	2	2	mg/L						
LCS (BB32718-BS1)					Prepared: 02/27/13 Analyzed: 03/04/13					
Carbonaceous BOD	200	2	2	mg/L	200		100	85-115		
LCS Dup (BB32718-BSD1)					Prepared: 02/27/13 Analyzed: 03/04/13					
Carbonaceous BOD	203	2	2	mg/L	200		101	85-115	1	200
Duplicate (BB32718-DUP1)		**Source: 1302201-01**			Prepared: 02/27/13 Analyzed: 03/04/13					
Carbonaceous BOD	170	2	2	mg/L		170			5	25
Batch BB32735 - TSS prep										
Blank (BB32735-BLK1)					Prepared: 02/27/13 Analyzed: 03/01/13					
Total Suspended Solids	1 U	1	1	mg/L						

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Analyte	Result	PQL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch BB32735 - TSS prep										
LCS (BB32735-BS1)					Prepared: 02/27/13 Analyzed: 03/01/13					
Total Suspended Solids	47.5	1	1	mg/L	50		95	85-115		
Duplicate (BB32735-DUP1)		**Source: 1301945-01**			Prepared: 02/27/13 Analyzed: 03/01/13					
Total Suspended Solids	24.0	1	1	mg/L		24.0			0	30
Batch BB32807 - COD prep										
Blank (BB32807-BLK1)					Prepared & Analyzed: 02/28/13					
Chemical Oxygen Demand	10 U	25	10	mg/L						
LCS (BB32807-BS1)					Prepared & Analyzed: 02/28/13					
Chemical Oxygen Demand	49	25	10	mg/L	50		98	90-110		
Matrix Spike (BB32807-MS1)		**Source: 1301945-45**			Prepared & Analyzed: 02/28/13					
Chemical Oxygen Demand	59	25	10	mg/L	50	16	86	85-115		
Matrix Spike Dup (BB32807-MSD1)		**Source: 1301945-45**			Prepared & Analyzed: 02/28/13					
Chemical Oxygen Demand	59	25	10	mg/L	50	16	86	85-115	0	32
Batch BB32810 - TOC prep										
Blank (BB32810-BLK1)					Prepared & Analyzed: 02/28/13					
Total Organic Carbon	0.50 U	1.0	0.50	mg/L						
LCS (BB32810-BS1)					Prepared & Analyzed: 02/28/13					
Total Organic Carbon	9.19	1.0	0.50	mg/L	10		92	90-110		

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Batch BB32810 - TOC prep										
Matrix Spike (BB32810-MS1)		**Source: 1301945-56**			Prepared & Analyzed: 02/28/13					
Total Organic Carbon	15.8	1.0	0.50	mg/L	10	7.06	87	85-115		
Matrix Spike Dup (BB32810-MSD1)		**Source: 1301945-56**			Prepared & Analyzed: 02/28/13					
Total Organic Carbon	15.8	1.0	0.50	mg/L	10	7.06	87	85-115	0.2	10
Batch BB32812 - Ion Chromatography 300.0 Prep										
Blank (BB32812-BLK1)					Prepared & Analyzed: 02/28/13					
Chloride	0.050 U	0.20	0.050	mg/L						
Nitrite (as N)	0.01 U	0.04	0.01	mg/L						
Orthophosphate as P	0.010 U	0.040	0.010	mg/L						
Fluoride	0.010 U	0.040	0.010	mg/L						
Sulfate	0.20 U	0.60	0.20	mg/L						
Nitrate (as N)	0.01 U	0.04	0.01	mg/L						
LCS (BB32812-BS1)					Prepared & Analyzed: 02/28/13					
Nitrate (as N)	1.66	0.04	0.01	mg/L	1.7		98	85-115		
Sulfate	8.83	0.60	0.20	mg/L	9.0		98	85-115		
Chloride	2.99	0.20	0.050	mg/L	3.0		100	85-115		
Fluoride	0.886	0.040	0.010	mg/L	0.90		98	85-115		
Nitrite (as N)	1.37	0.04	0.01	mg/L	1.4		98	85-115		
Orthophosphate as P	0.962	0.040	0.010	mg/L	0.90		107	85-115		
LCS Dup (BB32812-BSD1)					Prepared & Analyzed: 02/28/13					
Nitrate (as N)	1.66	0.04	0.01	mg/L	1.7		98	85-115	0	200
Orthophosphate as P	0.973	0.040	0.010	mg/L	0.90		108	85-115	1	200
Fluoride	0.880	0.040	0.010	mg/L	0.90		98	85-115	0.7	200
Chloride	2.99	0.20	0.050	mg/L	3.0		100	85-115	0	200
Sulfate	8.86	0.60	0.20	mg/L	9.0		98	85-115	0.3	200
Nitrite (as N)	1.37	0.04	0.01	mg/L	1.4		98	85-115	0	200

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Batch BB32812 - Ion Chromatography 300.0 Prep										
Matrix Spike (BB32812-MS1)		**Source: 1301945-42**			Prepared & Analyzed: 02/28/13					
Nitrite (as N)	1.31	0.04	0.01	mg/L	1.4	ND	94	85-115		
Sulfate	20.7	0.60	0.20	mg/L	9.0	11.6	101	85-115		
Orthophosphate as P	2.60	0.040	0.010	mg/L	0.90	1.76	93	85-115		
Chloride	9.96	0.20	0.050	mg/L	3.0	6.98	99	80-120		
Nitrate (as N)	9.22	0.04	0.01	mg/L	1.7	7.59	96	85-115		
Fluoride	0.965	0.040	0.010	mg/L	0.90	0.115	94	85-115		
Matrix Spike (BB32812-MS2)		**Source: 1301945-56**			Prepared & Analyzed: 02/28/13					
Nitrate (as N)	7.15	0.04	0.01	mg/L	1.7	5.32	108	85-115		
Fluoride	0.959	0.040	0.010	mg/L	0.90	0.107	95	85-115		
Orthophosphate as P	4.08	0.040	0.010	mg/L	0.90	3.14	104	85-115		
Chloride	6.84	0.20	0.050	mg/L	3.0	3.78	102	80-120		
Sulfate	16.9	0.60	0.20	mg/L	9.0	7.68	102	85-115		
Nitrite (as N)	1.34	0.04	0.01	mg/L	1.4	ND	96	85-115		
Batch BB32813 - Ion Chromatography 300.0 Prep										
Blank (BB32813-BLK1)					Prepared & Analyzed: 03/01/13					
Nitrate (as N)	0.01 U	0.04	0.01	mg/L						
Chloride	0.050 U	0.20	0.050	mg/L						
Nitrite (as N)	0.01 U	0.04	0.01	mg/L						
LCS (BB32813-BS1)					Prepared & Analyzed: 03/01/13					
Nitrite (as N)	1.34	0.04	0.01	mg/L	1.4		96	85-115		
Nitrate (as N)	1.66	0.04	0.01	mg/L	1.7		98	85-115		
Chloride	3.06	0.20	0.050	mg/L	3.0		102	85-115		

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Analyte	Result	PQL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch BB32813 - Ion Chromatography 300.0 Prep										
LCS Dup (BB32813-BSD1)					Prepared & Analyzed: 03/01/13					
Nitrite (as N)	1.38	0.04	0.01	mg/L	1.4		99	85-115	3	200
Nitrate (as N)	1.68	0.04	0.01	mg/L	1.7		99	85-115	1	200
Chloride	3.15	0.20	0.050	mg/L	3.0		105	85-115	3	200
Matrix Spike (BB32813-MS1)		**Source: 1302265-01**			Prepared & Analyzed: 03/01/13					
Chloride	37.7 +O	0.20	0.050	mg/L	3.0	36.8	30	80-120		
Nitrate (as N)	1.87	0.04	0.01	mg/L	1.7	ND	110	85-115		
Nitrite (as N)	1.33	0.04	0.01	mg/L	1.4	ND	95	85-115		
Matrix Spike (BB32813-MS2)		**Source: 1302277-02**			Prepared & Analyzed: 03/01/13					
Chloride	4,690	0.20	0.050	mg/L	600	4140	92	80-120		
Nitrate (as N)	340	0.04	0.01	mg/L	340	ND	100	85-115		
Nitrite (as N)	278	0.04	0.01	mg/L	280	ND	99	85-115		
Batch BC30102 - Digestion for TKN by EPA 351.2										
Blank (BC30102-BLK1)					Prepared: 03/01/13 Analyzed: 03/06/13					
Total Kjeldahl Nitrogen	0.05 U	0.20	0.05	mg/L						
LCS (BC30102-BS1)					Prepared: 03/01/13 Analyzed: 03/06/13					
Total Kjeldahl Nitrogen	2.44	0.20	0.05	mg/L	2.5		96	90-110		
Matrix Spike (BC30102-MS1)		**Source: 1301058-01**			Prepared: 03/01/13 Analyzed: 03/06/13					
Total Kjeldahl Nitrogen	3.17	0.20	0.05	mg/L	2.5	0.573	102	90-110		
Matrix Spike (BC30102-MS2)		**Source: 1301945-28**			Prepared: 03/01/13 Analyzed: 03/06/13					
Total Kjeldahl Nitrogen	4.14	0.20	0.05	mg/L	2.5	1.79	93	90-110		

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Analyte	Result	PQL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch BC30102 - Digestion for TKN by EPA 351.2										
Matrix Spike Dup (BC30102-MSD1)		**Source: 1301058-01**			Prepared: 03/01/13 Analyzed: 03/06/13					
Total Kjeldahl Nitrogen	3.16	0.20	0.05	mg/L	2.5	0.573	102	90-110	0.3	20
Matrix Spike Dup (BC30102-MSD2)		**Source: 1301945-28**			Prepared: 03/01/13 Analyzed: 03/06/13					
Total Kjeldahl Nitrogen	4.17	0.20	0.05	mg/L	2.5	1.79	94	90-110	0.7	20
Batch BC30104 - Digestion for TKN by EPA 351.2										
Blank (BC30104-BLK1)					Prepared: 03/01/13 Analyzed: 03/06/13					
Total Kjeldahl Nitrogen	0.05 U	0.20	0.05	mg/L						
LCS (BC30104-BS1)					Prepared: 03/01/13 Analyzed: 03/06/13					
Total Kjeldahl Nitrogen	2.50	0.20	0.05	mg/L	2.5		99	90-110		
Matrix Spike (BC30104-MS1)		**Source: 1301945-10**			Prepared: 03/01/13 Analyzed: 03/06/13					
Total Kjeldahl Nitrogen	4.70	0.20	0.05	mg/L	2.5	2.04	105	90-110		
Matrix Spike (BC30104-MS2)		**Source: 1302191-02**			Prepared: 03/01/13 Analyzed: 03/06/13					
Total Kjeldahl Nitrogen	3.25	0.20	0.05	mg/L	2.5	0.725	100	90-110		
Matrix Spike Dup (BC30104-MSD1)		**Source: 1301945-10**			Prepared: 03/01/13 Analyzed: 03/06/13					
Total Kjeldahl Nitrogen	4.47	0.20	0.05	mg/L	2.5	2.04	96	90-110	5	20
Matrix Spike Dup (BC30104-MSD2)		**Source: 1302191-02**			Prepared: 03/01/13 Analyzed: 03/06/13					
Total Kjeldahl Nitrogen	3.20	0.20	0.05	mg/L	2.5	0.725	98	90-110	2	20
Batch BC30113 - Ion Chromatography 300.0 Prep										
Blank (BC30113-BLK1)					Prepared & Analyzed: 03/01/13					
Nitrate (as N)	0.01 U	0.04	0.01	mg/L						
Nitrite (as N)	0.01 U	0.04	0.01	mg/L						
Fluoride	0.010 U	0.040	0.010	mg/L						
Chloride	0.050 U	0.20	0.050	mg/L						
Orthophosphate as P	0.010 U	0.040	0.010	mg/L						
Sulfate	0.20 U	0.60	0.20	mg/L						

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Analyte	Result	PQL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch BC30113 - Ion Chromatography 300.0 Prep										
LCS (BC30113-BS1)					Prepared & Analyzed: 03/01/13					
Nitrate (as N)	1.66	0.04	0.01	mg/L	1.7		98	85-115		
Sulfate	8.78	0.60	0.20	mg/L	9.0		98	85-115		
Fluoride	0.866	0.040	0.010	mg/L	0.90		96	85-115		
Orthophosphate as P	0.963	0.040	0.010	mg/L	0.90		107	85-115		
Chloride	2.94	0.20	0.050	mg/L	3.0		98	85-115		
Nitrite (as N)	1.37	0.04	0.01	mg/L	1.4		98	85-115		
LCS Dup (BC30113-BSD1)					Prepared & Analyzed: 03/01/13					
Orthophosphate as P	0.974	0.040	0.010	mg/L	0.90		108	85-115	1	200
Sulfate	8.91	0.60	0.20	mg/L	9.0		99	85-115	1	200
Nitrite (as N)	1.38	0.04	0.01	mg/L	1.4		99	85-115	0.7	200
Chloride	2.97	0.20	0.050	mg/L	3.0		99	85-115	1	200
Fluoride	0.865	0.040	0.010	mg/L	0.90		96	85-115	0.1	200
Nitrate (as N)	1.67	0.04	0.01	mg/L	1.7		98	85-115	0.6	200
Matrix Spike (BC30113-MS1)		**Source: 1301067-02**			Prepared & Analyzed: 03/01/13					
Sulfate	35.5	0.60	0.20	mg/L	9.0	27.0	94	85-115		
Chloride	48.1 +O	0.20	0.050	mg/L	3.0	124	NR	80-120		
Nitrate (as N)	1.69	0.04	0.01	mg/L	1.7	ND	99	85-115		
Fluoride	0.923	0.040	0.010	mg/L	0.90	0.0631	96	85-115		
Orthophosphate as P	0.960	0.040	0.010	mg/L	0.90	0.128	92	85-115		
Nitrite (as N)	1.50	0.04	0.01	mg/L	1.4	ND	107	85-115		
Matrix Spike (BC30113-MS2)		**Source: 1301945-49**			Prepared & Analyzed: 03/01/13					
Chloride	4.76	0.20	0.050	mg/L	3.0	1.60	105	80-120		
Fluoride	0.879	0.040	0.010	mg/L	0.90	0.0177	96	85-115		
Nitrite (as N)	1.36	0.04	0.01	mg/L	1.4	ND	97	85-115		
Nitrate (as N)	2.07	0.04	0.01	mg/L	1.7	0.474	94	85-115		
Sulfate	12.5	0.60	0.20	mg/L	9.0	3.81	97	85-115		
Orthophosphate as P	0.965	0.040	0.010	mg/L	0.90	ND	107	85-115		

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Analyte	Result	PQL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch BC30114 - Ion Chromatography 300.0 Prep										
Blank (BC30114-BLK1)					Prepared & Analyzed: 03/02/13					
Nitrite (as N)	0.01 U	0.04	0.01	mg/L						
Fluoride	0.010 U	0.040	0.010	mg/L						
Chloride	0.050 U	0.20	0.050	mg/L						
Orthophosphate as P	0.010 U	0.040	0.010	mg/L						
Nitrate (as N)	0.01 U	0.04	0.01	mg/L						
Sulfate	0.20 U	0.60	0.20	mg/L						
LCS (BC30114-BS1)					Prepared & Analyzed: 03/02/13					
Fluoride	0.865	0.040	0.010	mg/L	0.90		96	85-115		
Sulfate	8.93	0.60	0.20	mg/L	9.0		99	85-115		
Nitrite (as N)	1.38	0.04	0.01	mg/L	1.4		99	85-115		
Orthophosphate as P	0.968	0.040	0.010	mg/L	0.90		108	85-115		
Nitrate (as N)	1.67	0.04	0.01	mg/L	1.7		98	85-115		
Chloride	3.14	0.20	0.050	mg/L	3.0		105	85-115		
LCS Dup (BC30114-BSD1)					Prepared & Analyzed: 03/02/13					
Sulfate	8.87	0.60	0.20	mg/L	9.0		99	85-115	0.7	200
Chloride	3.15	0.20	0.050	mg/L	3.0		105	85-115	0.3	200
Nitrate (as N)	1.67	0.04	0.01	mg/L	1.7		98	85-115	0	200
Orthophosphate as P	0.951	0.040	0.010	mg/L	0.90		106	85-115	2	200
Fluoride	0.861	0.040	0.010	mg/L	0.90		96	85-115	0.5	200
Nitrite (as N)	1.37	0.04	0.01	mg/L	1.4		98	85-115	0.7	200
Matrix Spike (BC30114-MS1)		**Source: 1301945-68**			Prepared & Analyzed: 03/02/13					
Nitrate (as N)	13.6	0.04	0.01	mg/L	1.7	11.7	112	85-115		
Chloride	19.2	0.20	0.050	mg/L	3.0	15.9	110	80-120		
Sulfate	52.3	0.60	0.20	mg/L	9.0	42.5	109	85-115		
Nitrite (as N)	1.40	0.04	0.01	mg/L	1.4	ND	100	85-115		
Orthophosphate as P	0.844	0.040	0.010	mg/L	0.90	ND	94	85-115		
Fluoride	0.855	0.040	0.010	mg/L	0.90	0.0122	94	85-115		

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Batch BC30114 - Ion Chromatography 300.0 Prep										
Matrix Spike (BC30114-MS2)		**Source: 1302278-01**			Prepared & Analyzed: 03/02/13					
Nitrite (as N)	14.2	0.04	0.01	mg/L	14	ND	101	85-115		
Nitrate (as N)	17.3	0.04	0.01	mg/L	17	0.498	99	85-115		
Sulfate	130	0.60	0.20	mg/L	90	40.2	100	85-115		
Orthophosphate as P	9.96	0.040	0.010	mg/L	9.0	0.476	105	85-115		
Chloride	188	0.20	0.050	mg/L	30	157	103	80-120		
Fluoride	9.31	0.040	0.010	mg/L	9.0	0.355	100	85-115		
Batch BC30127 - BOD										
Blank (BC30127-BLK1)					Prepared: 03/01/13 Analyzed: 03/06/13					
Carbonaceous BOD	2 U	2	2	mg/L						
LCS (BC30127-BS1)					Prepared: 03/01/13 Analyzed: 03/06/13					
Carbonaceous BOD	220	2	2	mg/L	200		110	85-115		
LCS Dup (BC30127-BSD1)					Prepared: 03/01/13 Analyzed: 03/06/13					
Carbonaceous BOD	215	2	2	mg/L	200		108	85-115	2	200
Duplicate (BC30127-DUP1)		**Source: 1302286-01**			Prepared: 03/01/13 Analyzed: 03/06/13					
Carbonaceous BOD	680	2	2	mg/L		700			4	25
Batch BC30133 - Digestion for TP by EPA 365.2/SM4500PE										
Blank (BC30133-BLK1)					Prepared: 03/01/13 Analyzed: 03/05/13					
Phosphorous - Total as P	0.010 U	0.040	0.010	mg/L						

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Analyte	Result	PQL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch BC30133 - Digestion for TP by EPA 365.2/SM4500PE										
LCS (BC30133-BS1)					Prepared: 03/01/13 Analyzed: 03/05/13					
Phosphorous - Total as P	0.810	0.040	0.010	mg/L	0.80		101	90-110		
Matrix Spike (BC30133-MS1)		**Source: 1301058-01**			Prepared: 03/01/13 Analyzed: 03/05/13					
Phosphorous - Total as P	1.69	0.040	0.010	mg/L	1.0	0.627	107	90-110		
Matrix Spike (BC30133-MS2)		**Source: 1302241-07**			Prepared: 03/01/13 Analyzed: 03/05/13					
Phosphorous - Total as P	1.25	0.040	0.010	mg/L	1.0	0.166	108	90-110		
Matrix Spike Dup (BC30133-MSD1)		**Source: 1301058-01**			Prepared: 03/01/13 Analyzed: 03/05/13					
Phosphorous - Total as P	1.62	0.040	0.010	mg/L	1.0	0.627	100	90-110	4	25
Matrix Spike Dup (BC30133-MSD2)		**Source: 1302241-07**			Prepared: 03/01/13 Analyzed: 03/05/13					
Phosphorous - Total as P	1.21	0.040	0.010	mg/L	1.0	0.166	104	90-110	3	25
Batch BC30134 - Digestion for TP by EPA 365.2/SM4500PE										
Blank (BC30134-BLK1)					Prepared: 03/01/13 Analyzed: 03/06/13					
Phosphorous - Total as P	0.010 U	0.040	0.010	mg/L						
LCS (BC30134-BS1)					Prepared: 03/01/13 Analyzed: 03/05/13					
Phosphorous - Total as P	0.821	0.040	0.010	mg/L	0.80		103	90-110		
Matrix Spike (BC30134-MS1)		**Source: 1302287-11**			Prepared: 03/01/13 Analyzed: 03/06/13					
Phosphorous - Total as P	1.03	0.040	0.010	mg/L	1.0	0.0402	99	90-110		
Matrix Spike (BC30134-MS2)		**Source: 1302288-07**			Prepared: 03/01/13 Analyzed: 03/05/13					
Phosphorous - Total as P	1.32	0.040	0.010	mg/L	1.0	0.328	100	90-110		

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Analyte	Result	PQL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch BC30134 - Digestion for TP by EPA 365.2/SM4500PE										
Matrix Spike Dup (BC30134-MSD1)		**Source: 1302287-11**			Prepared: 03/01/13 Analyzed: 03/05/13					
Phosphorous - Total as P	1.07	0.040	0.010	mg/L	1.0	0.0402	103	90-110	4	25
Matrix Spike Dup (BC30134-MSD2)		**Source: 1302288-07**			Prepared: 03/01/13 Analyzed: 03/05/13					
Phosphorous - Total as P	1.41	0.040	0.010	mg/L	1.0	0.328	108	90-110	6	25
Batch BC30135 - Digestion for TP by EPA 365.2/SM4500PE										
Matrix Spike (BC30135-MS1)		**Source: 1301945-74**			Prepared: 03/01/13 Analyzed: 03/06/13					
Phosphorous - Total as P	0.939	0.040	0.010	mg/L	1.0	ND	94	90-110		
Matrix Spike Dup (BC30135-MSD1)		**Source: 1301945-74**			Prepared: 03/01/13 Analyzed: 03/05/13					
Phosphorous - Total as P	0.985	0.040	0.010	mg/L	1.0	ND	98	90-110	5	25
Batch BC30408 - alkalinity										
Blank (BC30408-BLK1)					Prepared & Analyzed: 02/28/13					
Total Alkalinity	2.0 U	8.0	2.0	mg/L						
LCS (BC30408-BS1)					Prepared & Analyzed: 02/28/13					
Total Alkalinity	120	8.0	2.0	mg/L	120		96	90-110		
Matrix Spike (BC30408-MS1)		**Source: 1301945-15**			Prepared & Analyzed: 02/28/13					
Total Alkalinity	130	8.0	2.0	mg/L	120	10	96	80-120		
Matrix Spike Dup (BC30408-MSD1)		**Source: 1301945-15**			Prepared & Analyzed: 02/28/13					
Total Alkalinity	130	8.0	2.0	mg/L	120	10	96	80-120	0	26

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Analyte	Result	PQL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch BC30414 - Ion Chromatography 300.0 Prep										
Blank (BC30414-BLK1)					Prepared & Analyzed: 03/04/13					
Nitrate (as N)	0.01 U	0.04	0.01	mg/L						
LCS (BC30414-BS1)					Prepared & Analyzed: 03/04/13					
Nitrate (as N)	1.54	0.04	0.01	mg/L	1.7		91	85-115		
LCS Dup (BC30414-BSD1)					Prepared & Analyzed: 03/04/13					
Nitrate (as N)	1.62	0.04	0.01	mg/L	1.7		95	85-115	5	200
Matrix Spike (BC30414-MS1)		**Source: 1301067-06**			Prepared & Analyzed: 03/04/13					
Nitrate (as N)	17.4	0.04	0.01	mg/L	17	ND	102	85-115		
Matrix Spike (BC30414-MS2)		**Source: 1302325-03**			Prepared & Analyzed: 03/04/13					
Nitrate (as N)	18.2	0.04	0.01	mg/L	17	ND	107	85-115		
Batch BC30417 - TSS prep										
Blank (BC30417-BLK1)					Prepared: 03/04/13 Analyzed: 03/05/13					
Total Suspended Solids	1 U	1	1	mg/L						
LCS (BC30417-BS1)					Prepared: 03/04/13 Analyzed: 03/05/13					
Total Suspended Solids	45.5	1	1	mg/L	50		91	85-115		
Duplicate (BC30417-DUP1)		**Source: 1301058-01**			Prepared: 03/04/13 Analyzed: 03/05/13					
Total Suspended Solids	5.00	1	1	mg/L		5.00			0	30
Batch BC30420 - TS prep										
Blank (BC30420-BLK1)					Prepared & Analyzed: 03/04/13					
Total Solids	10 U	10	10	mg/L						

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Analyte	Result	PQL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch BC30420 - TS prep										
Duplicate (BC30420-DUP1)		**Source: 1301945-76**			Prepared & Analyzed: 03/04/13					
Total Solids	10 U	10	10	mg/L		ND				20
Batch BC30441 - COD prep										
Blank (BC30441-BLK1)					Prepared & Analyzed: 03/04/13					
Chemical Oxygen Demand	10 U	25	10	mg/L						
LCS (BC30441-BS1)					Prepared & Analyzed: 03/04/13					
Chemical Oxygen Demand	49	25	10	mg/L	50		98	90-110		
Matrix Spike (BC30441-MS1)		**Source: 1301945-76**			Prepared & Analyzed: 03/04/13					
Chemical Oxygen Demand	49	25	10	mg/L	50	ND	98	85-115		
Matrix Spike Dup (BC30441-MSD1)		**Source: 1301945-76**			Prepared & Analyzed: 03/04/13					
Chemical Oxygen Demand	51	25	10	mg/L	50	ND	102	85-115	4	32
Batch BC30519 - TOC prep										
Blank (BC30519-BLK1)					Prepared & Analyzed: 03/06/13					
Total Organic Carbon	0.50 U	1.0	0.50	mg/L						
LCS (BC30519-BS1)					Prepared & Analyzed: 03/06/13					
Total Organic Carbon	9.09	1.0	0.50	mg/L	10		91	90-110		
Matrix Spike (BC30519-MS1)		**Source: 1302365-01**			Prepared & Analyzed: 03/06/13					
Total Organic Carbon	8.91	1.0	0.50	mg/L	10	ND	89	85-115		

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Analyte	Result	PQL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch BC30519 - TOC prep										
Matrix Spike Dup (BC30519-MSD1)		**Source: 1302365-01**			Prepared & Analyzed: 03/06/13					
Total Organic Carbon	8.99	1.0	0.50	mg/L	10	ND	90	85-115	1	10
Batch BC30608 - alkalinity										
Blank (BC30608-BLK1)					Prepared & Analyzed: 03/04/13					
Total Alkalinity	2.0 U	8.0	2.0	mg/L						
Blank (BC30608-BLK2)					Prepared & Analyzed: 03/04/13					
Total Alkalinity	2.0 U	8.0	2.0	mg/L						
LCS (BC30608-BS1)					Prepared & Analyzed: 03/04/13					
Total Alkalinity	120	8.0	2.0	mg/L	120		96	90-110		
LCS (BC30608-BS2)					Prepared & Analyzed: 03/04/13					
Total Alkalinity	120	8.0	2.0	mg/L	120		96	90-110		
Matrix Spike (BC30608-MS1)		**Source: 1301945-12**			Prepared & Analyzed: 03/04/13					
Total Alkalinity	130	8.0	2.0	mg/L	120	10	96	80-120		
Matrix Spike (BC30608-MS2)		**Source: 1301945-52**			Prepared & Analyzed: 03/04/13					
Total Alkalinity	170	8.0	2.0	mg/L	120	50	96	80-120		
Matrix Spike Dup (BC30608-MSD1)		**Source: 1301945-12**			Prepared & Analyzed: 03/04/13					
Total Alkalinity	130	8.0	2.0	mg/L	120	10	96	80-120	0	26
Matrix Spike Dup (BC30608-MSD2)		**Source: 1301945-52**			Prepared & Analyzed: 03/04/13					
Total Alkalinity	170	8.0	2.0	mg/L	120	50	96	80-120	0	26

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Analyte	Result	PQL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch BC30629 - Ammonia by SEAL										
Blank (BC30629-BLK1)					Prepared & Analyzed: 03/08/13					
Ammonia as N	0.009 U	0.040	0.009	mg/L						
LCS (BC30629-BS1)					Prepared & Analyzed: 03/08/13					
Ammonia as N	0.50	0.040	0.009	mg/L	0.50		99	90-110		
Matrix Spike (BC30629-MS1)		**Source: 1301945-10**			Prepared & Analyzed: 03/08/13					
Ammonia as N	0.49	0.040	0.009	mg/L	0.50	0.017	94	90-110		
Matrix Spike (BC30629-MS2)		**Source: 1301945-21**			Prepared & Analyzed: 03/08/13					
Ammonia as N	0.49	0.040	0.009	mg/L	0.50	0.027	92	90-110		
Matrix Spike Dup (BC30629-MSD1)		**Source: 1301945-10**			Prepared & Analyzed: 03/08/13					
Ammonia as N	0.51	0.040	0.009	mg/L	0.50	0.017	98	90-110	4	10
Matrix Spike Dup (BC30629-MSD2)		**Source: 1301945-21**			Prepared & Analyzed: 03/08/13					
Ammonia as N	0.50	0.040	0.009	mg/L	0.50	0.027	95	90-110	3	10
Batch BC30703 - Ammonia by SEAL										
Blank (BC30703-BLK1)					Prepared & Analyzed: 03/07/13					
Ammonia as N	0.009 U	0.040	0.009	mg/L						
LCS (BC30703-BS1)					Prepared & Analyzed: 03/07/13					
Ammonia as N	0.49	0.040	0.009	mg/L	0.50		99	90-110		
Matrix Spike (BC30703-MS1)		**Source: 1302139-01**			Prepared & Analyzed: 03/07/13					
Ammonia as N	810	40	9.5	mg/L	500	340	94	90-110		

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Analyte	Result	PQL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch BC30703 - Ammonia by SEAL										
Matrix Spike (BC30703-MS2)		**Source: 1302139-02**			Prepared & Analyzed: 03/08/13					
Ammonia as N	900	40	9.5	mg/L	500	390	101	90-110		
Matrix Spike Dup (BC30703-MSD1)		**Source: 1302139-01**			Prepared & Analyzed: 03/07/13					
Ammonia as N	830	40	9.5	mg/L	500	340	99	90-110	3	10
Matrix Spike Dup (BC30703-MSD2)		**Source: 1302139-02**			Prepared & Analyzed: 03/08/13					
Ammonia as N	900	40	9.5	mg/L	500	390	101	90-110	0.08	10
Batch BC30812 - Digestion for TP by EPA 365.2/SM4500PE										
Blank (BC30812-BLK1)					Prepared: 03/08/13 Analyzed: 03/12/13					
Phosphorous - Total as P	0.010 U	0.040	0.010	mg/L						
LCS (BC30812-BS1)					Prepared: 03/08/13 Analyzed: 03/12/13					
Phosphorous - Total as P	0.815	0.040	0.010	mg/L	0.80		102	90-110		
Matrix Spike (BC30812-MS1)		**Source: 1302304-02**			Prepared: 03/08/13 Analyzed: 03/12/13					
Phosphorous - Total as P	0.952	0.040	0.010	mg/L	1.0	0.0395	91	90-110		
Matrix Spike (BC30812-MS2)		**Source: 1302371-02**			Prepared: 03/08/13 Analyzed: 03/12/13					
Phosphorous - Total as P	0.977	0.040	0.010	mg/L	1.0	0.0394	94	90-110		
Matrix Spike Dup (BC30812-MSD1)		**Source: 1302304-02**			Prepared: 03/08/13 Analyzed: 03/12/13					
Phosphorous - Total as P	0.940	0.040	0.010	mg/L	1.0	0.0395	90	90-110	1	25
Matrix Spike Dup (BC30812-MSD2)		**Source: 1302371-02**			Prepared: 03/08/13 Analyzed: 03/12/13					
Phosphorous - Total as P	0.950	0.040	0.010	mg/L	1.0	0.0394	91	90-110	3	25

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Analyte	Result	PQL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch BC30820 - Ammonia by SEAL										
Blank (BC30820-BLK1)					Prepared & Analyzed: 03/11/13					
Ammonia as N	0.009 U	0.040	0.009	mg/L						
LCS (BC30820-BS1)					Prepared & Analyzed: 03/11/13					
Ammonia as N	0.51	0.040	0.009	mg/L	0.50		103	90-110		
Matrix Spike (BC30820-MS1)		**Source: 1301945-53**			Prepared & Analyzed: 03/11/13					
Ammonia as N	0.53	0.040	0.009	mg/L	0.50	0.021	102	90-110		
Matrix Spike (BC30820-MS2)		**Source: 1302241-07**			Prepared & Analyzed: 03/11/13					
Ammonia as N	0.51	0.040	0.009	mg/L	0.50	0.035	94	90-110		
Matrix Spike Dup (BC30820-MSD1)		**Source: 1301945-53**			Prepared & Analyzed: 03/11/13					
Ammonia as N	0.52	0.040	0.009	mg/L	0.50	0.021	99	90-110	2	10
Matrix Spike Dup (BC30820-MSD2)		**Source: 1302241-07**			Prepared & Analyzed: 03/11/13					
Ammonia as N	0.53	0.040	0.009	mg/L	0.50	0.035	99	90-110	4	10
Batch BC30823 - Digestion for TKN by EPA 351.2										
Blank (BC30823-BLK1)					Prepared: 03/08/13 Analyzed: 03/12/13					
Total Kjeldahl Nitrogen	0.05 U	0.20	0.05	mg/L						
LCS (BC30823-BS1)					Prepared: 03/08/13 Analyzed: 03/12/13					
Total Kjeldahl Nitrogen	2.44	0.20	0.05	mg/L	2.5		96	90-110		
Matrix Spike (BC30823-MS1)		**Source: 1301945-03**			Prepared: 03/08/13 Analyzed: 03/12/13					
Total Kjeldahl Nitrogen	2.86	0.20	0.05	mg/L	2.5	0.349	99	90-110		

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Analyte	Result	PQL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch BC30823 - Digestion for TKN by EPA 351.2										
Matrix Spike (BC30823-MS2)		**Source: 1301945-66**			Prepared: 03/08/13 Analyzed: 03/12/13					
Total Kjeldahl Nitrogen	4.31	0.20	0.05	mg/L	2.5	1.87	96	90-110		
Matrix Spike Dup (BC30823-MSD1)		**Source: 1301945-03**			Prepared: 03/08/13 Analyzed: 03/12/13					
Total Kjeldahl Nitrogen	2.94	0.20	0.05	mg/L	2.5	0.349	102	90-110	3	20
Matrix Spike Dup (BC30823-MSD2)		**Source: 1301945-66**			Prepared: 03/08/13 Analyzed: 03/12/13					
Total Kjeldahl Nitrogen	4.36	0.20	0.05	mg/L	2.5	1.87	98	90-110	1	20
Batch BC30824 - Digestion for TKN by EPA 351.2										
Blank (BC30824-BLK1)					Prepared: 03/08/13 Analyzed: 03/12/13					
Total Kjeldahl Nitrogen	0.05 U	0.20	0.05	mg/L						
LCS (BC30824-BS1)					Prepared: 03/08/13 Analyzed: 03/12/13					
Total Kjeldahl Nitrogen	2.31	0.20	0.05	mg/L	2.5		91	90-110		
Matrix Spike (BC30824-MS1)		**Source: 1302230-02**			Prepared: 03/08/13 Analyzed: 03/12/13					
Total Kjeldahl Nitrogen	3.28	0.20	0.05	mg/L	2.5	0.641	104	90-110		
Matrix Spike (BC30824-MS2)		**Source: 1302241-07**			Prepared: 03/08/13 Analyzed: 03/12/13					
Total Kjeldahl Nitrogen	3.61	0.20	0.05	mg/L	2.5	0.876	108	90-110		
Matrix Spike Dup (BC30824-MSD1)		**Source: 1302230-02**			Prepared: 03/08/13 Analyzed: 03/12/13					
Total Kjeldahl Nitrogen	3.30	0.20	0.05	mg/L	2.5	0.641	105	90-110	0.5	20
Matrix Spike Dup (BC30824-MSD2)		**Source: 1302241-07**			Prepared: 03/08/13 Analyzed: 03/12/13					
Total Kjeldahl Nitrogen	3.55	0.20	0.05	mg/L	2.5	0.876	106	90-110	2	20

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Analyte	Result	PQL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch BC30826 - Ammonia by SEAL										
Blank (BC30826-BLK1)					Prepared & Analyzed: 03/11/13					
Ammonia as N	0.009 U	0.040	0.009	mg/L						
LCS (BC30826-BS1)					Prepared & Analyzed: 03/11/13					
Ammonia as N	0.49	0.040	0.009	mg/L	0.50		98	90-110		
LCS (BC30826-BS2)					Prepared & Analyzed: 03/11/13					
Ammonia as N	0.49	0.040	0.009	mg/L	0.50		98	90-110		
Matrix Spike (BC30826-MS1)		**Source: 1302288-07**			Prepared & Analyzed: 03/11/13					
Ammonia as N	0.51	0.040	0.009	mg/L	0.50	0.043	94	90-110		
Matrix Spike (BC30826-MS2)		**Source: 1301945-03**			Prepared & Analyzed: 03/11/13					
Ammonia as N	0.53	0.040	0.009	mg/L	0.50	0.032	100	90-110		
Matrix Spike Dup (BC30826-MSD1)		**Source: 1302288-07**			Prepared & Analyzed: 03/11/13					
Ammonia as N	0.53	0.040	0.009	mg/L	0.50	0.043	97	90-110	3	10
Matrix Spike Dup (BC30826-MSD2)		**Source: 1301945-03**			Prepared & Analyzed: 03/11/13					
Ammonia as N	0.56	0.040	0.009	mg/L	0.50	0.032	105	90-110	5	10
Batch BC30827 - Digestion for TKN by EPA 351.2										
Blank (BC30827-BLK1)					Prepared: 03/08/13 Analyzed: 03/12/13					
Total Kjeldahl Nitrogen	0.05 U	0.20	0.05	mg/L						
LCS (BC30827-BS1)					Prepared: 03/08/13 Analyzed: 03/12/13					
Total Kjeldahl Nitrogen	2.44	0.20	0.05	mg/L	2.5		96	90-110		

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Analyte	Result	PQL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch BC30827 - Digestion for TKN by EPA 351.2										
Matrix Spike (BC30827-MS1)		**Source: 1301945-40**			Prepared: 03/08/13 Analyzed: 03/12/13					
Total Kjeldahl Nitrogen	2.95	0.20	0.05	mg/L	2.5	0.222	108	90-110		
Matrix Spike Dup (BC30827-MSD1)		**Source: 1301945-40**			Prepared: 03/08/13 Analyzed: 03/12/13					
Total Kjeldahl Nitrogen	2.69	0.20	0.05	mg/L	2.5	0.222	98	90-110	9	20
Batch BC31104 - alkalinity										
Blank (BC31104-BLK1)					Prepared & Analyzed: 03/08/13					
Total Alkalinity	2.0 U	8.0	2.0	mg/L						
LCS (BC31104-BS1)					Prepared & Analyzed: 03/08/13					
Total Alkalinity	120	8.0	2.0	mg/L	120		96	90-110		
Matrix Spike (BC31104-MS1)		**Source: 1301945-60**			Prepared & Analyzed: 03/08/13					
Total Alkalinity	120	8.0	2.0	mg/L	120	ND	96	80-120		
Matrix Spike Dup (BC31104-MSD1)		**Source: 1301945-60**			Prepared & Analyzed: 03/08/13					
Total Alkalinity	120	8.0	2.0	mg/L	120	ND	96	80-120	0	26
Batch BC31229 - Ammonia by SEAL										
Blank (BC31229-BLK1)					Prepared & Analyzed: 03/13/13					
Ammonia as N	0.009 U	0.040	0.009	mg/L						
LCS (BC31229-BS1)					Prepared & Analyzed: 03/13/13					
Ammonia as N	0.53	0.040	0.009	mg/L	0.50		106	90-110		

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Batch BC31229 - Ammonia by SEAL										
Matrix Spike (BC31229-MS1)		**Source: 1301945-74**			Prepared & Analyzed: 03/13/13					
Ammonia as N	0.51	0.040	0.009	mg/L	0.50	ND	101	90-110		
Matrix Spike (BC31229-MS2)		**Source: 1302287-11**			Prepared & Analyzed: 03/13/13					
Ammonia as N	0.50	0.040	0.009	mg/L	0.50	ND	101	90-110		
Matrix Spike Dup (BC31229-MSD1)		**Source: 1301945-74**			Prepared & Analyzed: 03/13/13					
Ammonia as N	0.51	0.040	0.009	mg/L	0.50	ND	103	90-110	1	10
Matrix Spike Dup (BC31229-MSD2)		**Source: 1302287-11**			Prepared & Analyzed: 03/13/13					
Ammonia as N	0.50	0.040	0.009	mg/L	0.50	ND	100	90-110	0.4	10
Batch BC31230 - Ammonia by SEAL										
Blank (BC31230-BLK1)					Prepared & Analyzed: 03/13/13					
Ammonia as N	0.009 U	0.040	0.009	mg/L						
LCS (BC31230-BS1)					Prepared & Analyzed: 03/13/13					
Ammonia as N	0.48	0.040	0.009	mg/L	0.50		96	90-110		
Matrix Spike (BC31230-MS1)		**Source: 1302339-07**			Prepared & Analyzed: 03/13/13					
Ammonia as N	0.49	0.040	0.009	mg/L	0.50	0.020	93	90-110		
Matrix Spike (BC31230-MS2)		**Source: 1302365-01**			Prepared & Analyzed: 03/13/13					
Ammonia as N	0.47	0.040	0.009	mg/L	0.50	ND	95	90-110		
Matrix Spike Dup (BC31230-MSD1)		**Source: 1302339-07**			Prepared & Analyzed: 03/13/13					
Ammonia as N	0.49	0.040	0.009	mg/L	0.50	0.020	94	90-110	0.8	10

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Analyte	Result	PQL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch BC31230 - Ammonia by SEAL										
Matrix Spike Dup (BC31230-MSD2)		**Source: 1302365-01**			Prepared & Analyzed: 03/13/13					
Ammonia as N	0.48	0.040	0.009	mg/L	0.50	ND	96	90-110	1	10
Batch BC31301 - Digestion for TKN by EPA 351.2										
Blank (BC31301-BLK1)					Prepared: 03/13/13 Analyzed: 03/20/13					
Total Kjeldahl Nitrogen	0.05 U	0.20	0.05	mg/L						
LCS (BC31301-BS1)					Prepared: 03/13/13 Analyzed: 03/19/13					
Total Kjeldahl Nitrogen	2.43	0.20	0.05	mg/L	2.5		96	90-110		
Matrix Spike (BC31301-MS1)		**Source: 1301945-70**			Prepared: 03/13/13 Analyzed: 03/19/13					
Total Kjeldahl Nitrogen	2.81	0.20	0.05	mg/L	2.5	0.220	102	90-110		
Matrix Spike (BC31301-MS2)		**Source: 1302287-11**			Prepared: 03/13/13 Analyzed: 03/19/13					
Total Kjeldahl Nitrogen	MS2 passes	0.20	0.05	mg/L	2.5	ND	117	90-110		
Matrix Spike Dup (BC31301-MSD1)		**Source: 1301945-70**			Prepared: 03/13/13 Analyzed: 03/19/13					
Total Kjeldahl Nitrogen	2.83	0.20	0.05	mg/L	2.5	0.220	103	90-110	0.6	20
Matrix Spike Dup (BC31301-MSD2)		**Source: 1302287-11**			Prepared: 03/13/13 Analyzed: 03/19/13					
Total Kjeldahl Nitrogen	2.85	0.20	0.05	mg/L	2.5	ND	113	90-110	4	20
Batch BC31302 - Digestion for TKN by EPA 351.2										
Blank (BC31302-BLK1)					Prepared: 03/13/13 Analyzed: 03/21/13					
Total Kjeldahl Nitrogen	0.05 U	0.20	0.05	mg/L						

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Analyte	Result	PQL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch BC31302 - Digestion for TKN by EPA 351.2										
LCS (BC31302-BS1)					Prepared: 03/13/13 Analyzed: 03/21/13					
Total Kjeldahl Nitrogen	2.60	0.20	0.05	mg/L	2.5		103	90-110		
Matrix Spike (BC31302-MS1)		**Source: 1302339-07**			Prepared: 03/13/13 Analyzed: 03/21/13					
Total Kjeldahl Nitrogen	3.37	0.20	0.05	mg/L	2.5	0.888	98	90-110		
Matrix Spike (BC31302-MS2)		**Source: 1302395-07**			Prepared: 03/13/13 Analyzed: 03/21/13					
Total Kjeldahl Nitrogen	3.64	0.20	0.05	mg/L	2.5	1.02	103	90-110		
Matrix Spike Dup (BC31302-MSD1)		**Source: 1302339-07**			Prepared: 03/13/13 Analyzed: 03/21/13					
Total Kjeldahl Nitrogen	3.52	0.20	0.05	mg/L	2.5	0.888	104	90-110	4	20
Matrix Spike Dup (BC31302-MSD2)		**Source: 1302395-07**			Prepared: 03/13/13 Analyzed: 03/21/13					
Total Kjeldahl Nitrogen	3.53	0.20	0.05	mg/L	2.5	1.02	99	90-110	3	20
Batch BC31341 - alkalinity										
Blank (BC31341-BLK1)					Prepared & Analyzed: 03/11/13					
Total Alkalinity	2.0 U	8.0	2.0	mg/L						
LCS (BC31341-BS1)					Prepared & Analyzed: 03/11/13					
Total Alkalinity	120	8.0	2.0	mg/L	120		96	90-110		
Matrix Spike (BC31341-MS1)		**Source: 1301945-41**			Prepared & Analyzed: 03/11/13					
Total Alkalinity	130	8.0	2.0	mg/L	120	10	96	80-120		
Matrix Spike Dup (BC31341-MSD1)		**Source: 1301945-41**			Prepared & Analyzed: 03/11/13					
Total Alkalinity	130	8.0	2.0	mg/L	120	10	96	80-120	0	26

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Inorganics - Quality Control

Analyte	Result	PQL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch BC31516 - alkalinity										
Blank (BC31516-BLK1)					Prepared & Analyzed: 03/14/13					
Total Alkalinity	2.0 U	8.0	2.0	mg/L						
Blank (BC31516-BLK2)					Prepared: 03/14/13 Analyzed: 03/15/13					
Total Alkalinity	2.0 U	8.0	2.0	mg/L						
LCS (BC31516-BS1)					Prepared & Analyzed: 03/14/13					
Total Alkalinity	130	8.0	2.0	mg/L	120		104	90-110		
LCS (BC31516-BS2)					Prepared: 03/14/13 Analyzed: 03/15/13					
Total Alkalinity	120	8.0	2.0	mg/L	120		96	90-110		
Matrix Spike (BC31516-MS1)		**Source: 1302309-07**			Prepared & Analyzed: 03/14/13					
Total Alkalinity	190	8.0	2.0	mg/L	120	120	56	80-120		
Matrix Spike (BC31516-MS2)		**Source: 1302510-01**			Prepared: 03/14/13 Analyzed: 03/15/13					
Total Alkalinity	270	8.0	2.0	mg/L	120	150	96	80-120		
Matrix Spike Dup (BC31516-MSD1)		**Source: 1302309-07**			Prepared & Analyzed: 03/14/13					
Total Alkalinity	190	8.0	2.0	mg/L	120	120	56	80-120	0	26
Matrix Spike Dup (BC31516-MSD2)		**Source: 1302510-01**			Prepared: 03/14/13 Analyzed: 03/15/13					
Total Alkalinity	270	8.0	2.0	mg/L	120	150	96	80-120	0	26

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Inorganic, Dissolved - Quality Control

Analyte	Result	PQL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch BB32811 - TOC prep										
Blank (BB32811-BLK1)					Prepared & Analyzed: 02/28/13					
Dissolved Organic Carbon	0.50 U	1.0	0.50	mg/L						
LCS (BB32811-BS1)					Prepared & Analyzed: 02/28/13					
Dissolved Organic Carbon	9.55	1.0	0.50	mg/L	10		96	90-110		
Matrix Spike (BB32811-MS1)		**Source: 1301945-56**			Prepared & Analyzed: 02/28/13					
Dissolved Organic Carbon	15.6	1.0	0.50	mg/L	10	5.92	97	85-125		
Matrix Spike Dup (BB32811-MSD1)		**Source: 1301945-56**			Prepared & Analyzed: 02/28/13					
Dissolved Organic Carbon	15.7	1.0	0.50	mg/L	10	5.92	97	85-125	0.6	25
Batch BC30520 - TOC prep										
Blank (BC30520-BLK1)					Prepared & Analyzed: 03/05/13					
Dissolved Organic Carbon	0.50 U	1.0	0.50	mg/L						
LCS (BC30520-BS1)					Prepared & Analyzed: 03/05/13					
Dissolved Organic Carbon	9.81	1.0	0.50	mg/L	10		98	90-110		
Matrix Spike (BC30520-MS1)		**Source: 1301945-76**			Prepared & Analyzed: 03/05/13					
Dissolved Organic Carbon	9.37	1.0	0.50	mg/L	10	ND	94	85-125		
Matrix Spike Dup (BC30520-MSD1)		**Source: 1301945-76**			Prepared & Analyzed: 03/05/13					
Dissolved Organic Carbon	9.40	1.0	0.50	mg/L	10	ND	94	85-125	0.3	25

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Metals - Quality Control

Analyte	Result	PQL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch BC30426 - Metals Preparation for EPA Method 200.7										
Blank (BC30426-BLK1)					Prepared: 03/04/13 Analyzed: 03/08/13					
Calcium	0.042 U	0.50	0.042	mg/L						
Potassium	0.19	0.050	0.010	mg/L						
Magnesium	0.020 U	0.50	0.020	mg/L						
Manganese	0.0010 U	0.010	0.0010	mg/L						
Sodium	0.13 U	0.50	0.13	mg/L						
Boron	0.050 U	0.10	0.050	mg/L						
Iron	0.020 U	0.10	0.020	mg/L						
LCS (BC30426-BS1)					Prepared: 03/04/13 Analyzed: 03/08/13					
Boron	0.45	0.10	0.050	mg/L	0.40		112	85-115		
Potassium	19	0.050	0.010	mg/L	20		94	85-115		
Magnesium	20	0.50	0.020	mg/L	20		100	85-115		
Calcium	20	0.50	0.042	mg/L	20		102	85-115		
Sodium	22	0.50	0.13	mg/L	20		112	85-115		
Manganese	0.40	0.010	0.0010	mg/L	0.40		99	85-115		
Iron	8.0	0.10	0.020	mg/L	8.0		100	85-115		
Matrix Spike (BC30426-MS1)		**Source: 1301945-01**			Prepared: 03/04/13 Analyzed: 03/08/13					
Magnesium	33	0.50	0.020	mg/L	20	12	107	70-130		
Calcium	68	0.50	0.042	mg/L	20	47	103	70-130		
Iron	8.6	0.10	0.020	mg/L	8.0	0.067	106	70-130		
Boron	0.50	0.10	0.050	mg/L	0.40	ND	126	70-130		
Potassium	29	0.050	0.010	mg/L	20	10	96	70-130		
Sodium	37	0.50	0.13	mg/L	20	16	102	70-130		
Manganese	0.43	0.010	0.0010	mg/L	0.40	0.011	106	70-130		
Matrix Spike (BC30426-MS2)		**Source: 1302133-01**			Prepared: 03/04/13 Analyzed: 03/11/13					
Iron	12	0.10	0.020	mg/L	8.0	5.3	84	70-130		
Manganese	0.65	0.010	0.0010	mg/L	0.40	0.31	85	70-130		
Magnesium	40	0.50	0.020	mg/L	20	25	76	70-130		
Boron	3.0 J5	0.10	0.050	mg/L	0.40	2.3	165	70-130		
Calcium	190 +O	0.50	0.042	mg/L	20	150	189	70-130		
Sodium	)00,000,000 +O	0.50	0.13	mg/L	20	00000000	0	70-130		
Potassium	81	0.050	0.010	mg/L	20	70	52	70-130		

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Analyte	Result	PQL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch BC30426 - Metals Preparation for EPA Method 200.7										
Matrix Spike Dup (BC30426-MSD1)		**Source: 1301945-01**			Prepared: 03/04/13 Analyzed: 03/08/13					
Calcium	69	0.50	0.042	mg/L	20	47	110	70-130	2	30
Iron	8.5	0.10	0.020	mg/L	8.0	0.067	105	70-130	1	30
Manganese	0.43	0.010	0.0010	mg/L	0.40	0.011	105	70-130	0.9	30
Magnesium	33	0.50	0.020	mg/L	20	12	106	70-130	1	30
Boron	0.51	0.10	0.050	mg/L	0.40	ND	127	70-130	0.6	30
Sodium	41	0.50	0.13	mg/L	20	16	124	70-130	12	30
Potassium	30	0.050	0.010	mg/L	20	10	101	70-130	3	30
Matrix Spike Dup (BC30426-MSD2)		**Source: 1302133-01**			Prepared: 03/04/13 Analyzed: 03/11/13					
Sodium	)00,000,000 +O	0.50	0.13	mg/L	20	00000000	0	70-130	0	30
Boron	2.3 J5	0.10	0.050	mg/L	0.40	2.3	9	70-130	24	30
Iron	12	0.10	0.020	mg/L	8.0	5.3	83	70-130	0.4	30
Calcium	160 +O	0.50	0.042	mg/L	20	150	47	70-130	17	30
Manganese	0.64	0.010	0.0010	mg/L	0.40	0.31	84	70-130	0.5	30
Potassium	88	0.050	0.010	mg/L	20	70	87	70-130	8	30
Magnesium	39	0.50	0.020	mg/L	20	25	70	70-130	3	30
Batch BC30427 - Metals Preparation for EPA Method 200.7										
Blank (BC30427-BLK1)					Prepared: 03/04/13 Analyzed: 03/14/13					
Magnesium	0.020 U	0.50	0.020	mg/L						
Calcium	0.042 U	0.50	0.042	mg/L						
Sodium	0.13 U	0.50	0.13	mg/L						
Potassium	0.14	0.050	0.010	mg/L						
Manganese	0.0010 U	0.010	0.0010	mg/L						
Iron	0.020 U	0.10	0.020	mg/L						
Boron	0.050 U	0.10	0.050	mg/L						

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Analyte	Result	PQL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch BC30427 - Metals Preparation for EPA Method 200.7										
LCS (BC30427-BS1)					Prepared: 03/04/13 Analyzed: 03/13/13					
Magnesium	20	0.50	0.020	mg/L	20		98	85-115		
Boron	0.38	0.10	0.050	mg/L	0.40		96	85-115		
Sodium	18	0.50	0.13	mg/L	20		89	85-115		
Potassium	20	0.050	0.010	mg/L	20		99	85-115		
Manganese	0.39	0.010	0.0010	mg/L	0.40		97	85-115		
Iron	8.0	0.10	0.020	mg/L	8.0		100	85-115		
Calcium	20	0.50	0.042	mg/L	20		99	85-115		
Matrix Spike (BC30427-MS1)		**Source: 1302164-01**			Prepared: 03/04/13 Analyzed: 03/13/13					
Calcium	96	0.50	0.042	mg/L	20	75	105	70-130		
Boron	0.86	0.10	0.050	mg/L	0.40	0.42	110	70-130		
Potassium	21	0.050	0.010	mg/L	20	2.1	95	70-130		
Magnesium	25	0.50	0.020	mg/L	20	5.7	98	70-130		
Sodium	110	0.50	0.13	mg/L	20	91	76	70-130		
Iron	19	0.10	0.020	mg/L	8.0	11	108	70-130		
Manganese	0.43	0.010	0.0010	mg/L	0.40	0.028	102	70-130		
Matrix Spike (BC30427-MS2)		**Source: 1302250-02**			Prepared: 03/04/13 Analyzed: 03/13/13					
Magnesium	23	0.50	0.020	mg/L	20	4.3	94	70-130		
Potassium	21	0.050	0.010	mg/L	20	2.7	89	70-130		
Sodium	22	0.50	0.13	mg/L	20	3.1	94	70-130		
Calcium	23	0.50	0.042	mg/L	20	3.9	94	70-130		
Boron	0.41	0.10	0.050	mg/L	0.40	ND	103	70-130		
Manganese	0.41	0.010	0.0010	mg/L	0.40	0.024	97	70-130		
Iron	14	0.10	0.020	mg/L	8.0	5.9	96	70-130		
Matrix Spike Dup (BC30427-MSD1)		**Source: 1302164-01**			Prepared: 03/04/13 Analyzed: 03/13/13					
Boron	0.87	0.10	0.050	mg/L	0.40	0.42	114	70-130	2	30
Iron	20	0.10	0.020	mg/L	8.0	11	112	70-130	1	30
Sodium	94	0.50	0.13	mg/L	20	91	17	70-130	12	30
Calcium	100	0.50	0.042	mg/L	20	75	121	70-130	3	30
Manganese	0.44	0.010	0.0010	mg/L	0.40	0.028	104	70-130	2	30
Magnesium	26	0.50	0.020	mg/L	20	5.7	104	70-130	4	30
Potassium	22	0.050	0.010	mg/L	20	2.1	99	70-130	3	30

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Analyte	Result	PQL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch BC30427 - Metals Preparation for EPA Method 200.7										
Matrix Spike Dup (BC30427-MSD2)		**Source: 1302250-02**			Prepared: 03/04/13 Analyzed: 03/13/13					
Calcium	23	0.50	0.042	mg/L	20	3.9	98	70-130	3	30
Iron	14	0.10	0.020	mg/L	8.0	5.9	99	70-130	2	30
Manganese	0.42	0.010	0.0010	mg/L	0.40	0.024	99	70-130	2	30
Boron	0.43	0.10	0.050	mg/L	0.40	ND	106	70-130	3	30
Magnesium	24	0.50	0.020	mg/L	20	4.3	98	70-130	4	30
Potassium	22	0.050	0.010	mg/L	20	2.7	97	70-130	7	30
Sodium	22	0.50	0.13	mg/L	20	3.1	96	70-130	2	30
Batch BC30428 - Metals Preparation for EPA Method 200.7										
Blank (BC30428-BLK1)					Prepared: 03/04/13 Analyzed: 03/13/13					
Magnesium	0.041 I	0.50	0.020	mg/L						
Boron	0.050 U	0.10	0.050	mg/L						
Potassium	0.59	0.050	0.010	mg/L						
Calcium	0.042 U	0.50	0.042	mg/L						
Iron	0.020 U	0.10	0.020	mg/L						
Sodium	0.15 I	0.50	0.13	mg/L						
Manganese	0.0010 U	0.010	0.0010	mg/L						
LCS (BC30428-BS1)					Prepared: 03/04/13 Analyzed: 03/12/13					
Boron	0.39	0.10	0.050	mg/L	0.40		97	85-115		
Calcium	19	0.50	0.042	mg/L	20		95	85-115		
Magnesium	19	0.50	0.020	mg/L	20		95	85-115		
Potassium	19	0.050	0.010	mg/L	20		97	85-115		
Manganese	0.39	0.010	0.0010	mg/L	0.40		98	85-115		
Iron	8.0	0.10	0.020	mg/L	8.0		100	85-115		
Sodium	20	0.50	0.13	mg/L	20		99	85-115		

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Analyte	Result	PQL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch BC30428 - Metals Preparation for EPA Method 200.7										
Matrix Spike (BC30428-MS1)		**Source: 1302334-02**			Prepared: 03/04/13 Analyzed: 03/13/13					
Sodium	25	0.50	0.13	mg/L	20	3.7	105	70-130		
Iron	11	0.10	0.020	mg/L	8.0	3.4	101	70-130		
Calcium	55	0.50	0.042	mg/L	20	32	113	70-130		
Manganese	0.48	0.010	0.0010	mg/L	0.40	0.086	99	70-130		
Boron	0.42	0.10	0.050	mg/L	0.40	ND	106	70-130		
Magnesium	23	0.50	0.020	mg/L	20	2.6	100	70-130		
Potassium	22	0.050	0.010	mg/L	20	0.55	107	70-130		
Matrix Spike (BC30428-MS2)		**Source: 1302335-01**			Prepared: 03/04/13 Analyzed: 03/13/13					
Manganese	0.50	0.010	0.0010	mg/L	0.40	0.096	100	70-130		
Boron	0.44	0.10	0.050	mg/L	0.40	ND	110	70-130		
Sodium	30	0.50	0.13	mg/L	20	7.0	115	70-130		
Potassium	22	0.050	0.010	mg/L	20	1.2	106	70-130		
Calcium	200	0.50	0.042	mg/L	20	180	83	70-130		
Iron	14	0.10	0.020	mg/L	8.0	5.7	105	70-130		
Magnesium	25	0.50	0.020	mg/L	20	4.9	100	70-130		
Matrix Spike Dup (BC30428-MSD1)		**Source: 1302334-02**			Prepared: 03/04/13 Analyzed: 03/13/13					
Manganese	0.52	0.010	0.0010	mg/L	0.40	0.086	109	70-130	8	30
Sodium	27	0.50	0.13	mg/L	20	3.7	118	70-130	10	30
Iron	13	0.10	0.020	mg/L	8.0	3.4	116	70-130	10	30
Magnesium	25	0.50	0.020	mg/L	20	2.6	111	70-130	10	30
Calcium	59	0.50	0.042	mg/L	20	32	134	70-130	7	30
Potassium	24	0.050	0.010	mg/L	20	0.55	115	70-130	8	30
Boron	0.44	0.10	0.050	mg/L	0.40	ND	110	70-130	4	30
Matrix Spike Dup (BC30428-MSD2)		**Source: 1302335-01**			Prepared: 03/04/13 Analyzed: 03/13/13					
Manganese	0.50	0.010	0.0010	mg/L	0.40	0.096	101	70-130	0.06	30
Calcium	200	0.50	0.042	mg/L	20	180	83	70-130	0.06	30
Potassium	23	0.050	0.010	mg/L	20	1.2	107	70-130	1	30
Boron	0.44	0.10	0.050	mg/L	0.40	ND	109	70-130	0.6	30
Magnesium	25	0.50	0.020	mg/L	20	4.9	102	70-130	2	30
Iron	14	0.10	0.020	mg/L	8.0	5.7	102	70-130	2	30
Sodium	30	0.50	0.13	mg/L	20	7.0	114	70-130	0.5	30

Hazen and Sawyer
10002 Princess Palm Ave, Suite 200
Tampa, FL 33619

April 15, 2013
Work Order: 1301945

Metals - Quality Control

Analyte	Result	PQL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch BC30513 - Metals Preparation for EPA Method 200.7										
Blank (BC30513-BLK1)					Prepared & Analyzed: 03/05/13					
Potassium	0.010 U	0.050	0.010	mg/L						
Manganese	0.0010 U	0.010	0.0010	mg/L						
Calcium	0.042 U	0.50	0.042	mg/L						
Boron	0.050 U	0.10	0.050	mg/L						
Sodium	0.13 U	0.50	0.13	mg/L						
Magnesium	0.020 U	0.50	0.020	mg/L						
Iron	0.020 U	0.10	0.020	mg/L						
LCS (BC30513-BS1)					Prepared & Analyzed: 03/05/13					
Calcium	20	0.50	0.042	mg/L	20		98	85-115		
Potassium	18	0.050	0.010	mg/L	20		90	85-115		
Manganese	0.38	0.010	0.0010	mg/L	0.40		94	85-115		
Boron	0.36	0.10	0.050	mg/L	0.40		89	85-115		
Iron	7.6	0.10	0.020	mg/L	8.0		95	85-115		
Sodium	20	0.50	0.13	mg/L	20		102	85-115		
Magnesium	20	0.50	0.020	mg/L	20		98	85-115		
Matrix Spike (BC30513-MS1)		**Source: 1302156-01**			Prepared & Analyzed: 03/05/13					
Magnesium	41	0.50	0.020	mg/L	20	15	129	70-130		
Boron	0.40	0.10	0.050	mg/L	0.40	ND	101	70-130		
Potassium	28	0.050	0.010	mg/L	20	3.9	122	70-130		
Manganese	0.37	0.010	0.0010	mg/L	0.40	0.0014	91	70-130		
Iron	11	0.10	0.020	mg/L	8.0	ND	134	70-130		
Sodium	110	0.50	0.13	mg/L	20	89	85	70-130		
Calcium	88	0.50	0.042	mg/L	20	64	118	70-130		
Matrix Spike (BC30513-MS2)		**Source: 1302326-01**			Prepared: 03/05/13 Analyzed: 03/06/13					
Manganese	0.36	0.010	0.0010	mg/L	0.40	ND	90	70-130		
Magnesium	16	0.50	0.020	mg/L	20	ND	78	70-130		
Calcium	16	0.50	0.042	mg/L	20	0.19	77	70-130		
Boron	0.36	0.10	0.050	mg/L	0.40	ND	90	70-130		
Potassium	18	0.050	0.010	mg/L	20	2.3	79	70-130		
Iron	6.6	0.10	0.020	mg/L	8.0	0.092	81	70-130		
Sodium	70	0.50	0.13	mg/L	20	55	77	70-130		

Hazen and Sawyer
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Tampa, FL 33619

April 15, 2013
Work Order: 1301945

Metals - Quality Control

Analyte	Result	PQL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch BC30513 - Metals Preparation for EPA Method 200.7										
Matrix Spike Dup (BC30513-MSD1)		**Source: 1302156-01**			Prepared & Analyzed: 03/05/13					
Boron	0.41	0.10	0.050	mg/L	0.40	ND	102	70-130	0.6	30
Calcium	86	0.50	0.042	mg/L	20	64	110	70-130	2	30
Iron	10	0.10	0.020	mg/L	8.0	ND	126	70-130	6	30
Manganese	0.37	0.010	0.0010	mg/L	0.40	0.0014	91	70-130	0.1	30
Magnesium	40	0.50	0.020	mg/L	20	15	123	70-130	3	30
Sodium	100	0.50	0.13	mg/L	20	89	77	70-130	2	30
Potassium	27	0.050	0.010	mg/L	20	3.9	114	70-130	6	30
Matrix Spike Dup (BC30513-MSD2)		**Source: 1302326-01**			Prepared: 03/05/13 Analyzed: 03/06/13					
Manganese	0.35	0.010	0.0010	mg/L	0.40	ND	89	70-130	2	30
Iron	6.3	0.10	0.020	mg/L	8.0	0.092	77	70-130	5	30
Potassium	17	0.050	0.010	mg/L	20	2.3	75	70-130	5	30
Magnesium	15	0.50	0.020	mg/L	20	ND	74	70-130	5	30
Calcium	15	0.50	0.042	mg/L	20	0.19	73	70-130	5	30
Sodium	69	0.50	0.13	mg/L	20	55	73	70-130	1	30
Boron	0.35	0.10	0.050	mg/L	0.40	ND	88	70-130	2	30

Hazen and Sawyer
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April 15, 2013
Work Order: 1301945

Microbiology - Quality Control

Analyte	Result	PQL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch BB32534 - FC-MF										
Blank (BB32534-BLK1)					Prepared: 02/25/13	Analyzed: 02/26/13				
Fecal Coliforms	1 U	1	1	CFU/100 ml						
Duplicate (BB32534-DUP1)		**Source: 1301945-01**			Prepared: 02/25/13	Analyzed: 02/26/13				
Fecal Coliforms	1 U	1	1	CFU/100 ml		2000				200
Batch BB32833 - FC-MF										
Blank (BB32833-BLK1)					Prepared: 02/28/13	Analyzed: 03/01/13				
Fecal Coliforms	1 U	1	1	CFU/100 ml						
Duplicate (BB32833-DUP1)		**Source: 1301945-74**			Prepared: 02/28/13	Analyzed: 03/01/13				
Fecal Coliforms	1 U	1	1	CFU/100 ml		ND				200

SOUTHERN ANALYTICAL LABORATORIES, INC.
110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 FAX 813-855-2218

Hazen and Sawyer
10002 Princess Palm Ave, Suite 200
Tampa, FL 33619

April 15, 2013
Work Order: 1301945

* Qualifiers, Notes and Definitions

Results followed by a "U" indicate that the sample was analyzed but the compound was not detected. Results followed by "I" indicate that the reported value is between the laboratory method detection limts and the laboratory practical quantitation limit.

A statement of estimated uncertainty of test results is available upon request.

For methods marked with **, all QC criteria have been met for this method which is equivalent to a SAL certified method.

Test results in this report meet all the requirements of the NELAC standards. Any applicable qualifiers are shown below.

J5 Matrix spike of this sample was outside typical range. All other QC criteria were acceptable.
+O Matrix spike source sample was over the reccommended range for the method.

Questions regarding this report should be directed to :

Kathryn Nordmark
Telephone (813) 855-1844 FAX (813) 855-2218
Kathryn@southernanalyticallabs.com

Kathryn@southernanalyticallabs.com

SOUTHERN ANALYTICAL LABORATORIES, INC.

110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 fax 813-855-2218

SAL Project No. 1301945

Client Name: Hazen and Sawyer

Contact / Phone:

Project Name / Location: C-HS3 SE#3

Samplers: (Signature)

Matrix Codes: DW-Drinking Water WW-Wastewater SW-SurfaceWater SL-Sludge SO-Soil GW-Groundwater SA-Saline Water O-Other R-Reagent Water

PARAMETER / CONTAINER DESCRIPTION

SAL Use Only Sample No.	Sample Description	Date	Time	Matrix	Composite	Grab	500mLP, Cool Total Alkalinity, TSS, TS, CBOD, NOx, Cl, F, OP, SO_4 250mL	~~125mL~~ P, H_2SO_4 TKN, NH_3, TP	~~125mL~~ 125mL P, $Na_2S_2O_3$ FC-MF	250mL P, HNO_3 B, Ca, Fe, Mg, Mn, K, Na	500mLP, Cool Total Alkalinity, NOx, Cl 250mL	~~125mL~~ P, H_2SO_4 COD, TKN, NH_3, TP	500mLP, Cool Total Alkalinity, NOx, Cl, F, OP, SO_4	40mLaV, HCl TOC	~~250mL~~ 250mLaG, Cool DOC 250mL	~~125mL~~ 125mLP, H_2SO_4 TKN, NH_3	DO	pH	Conductivity	Temperature	No. of Containers (Total per each location)
01	STE	2/25/13	1310	WW		X	1	1	2	1							1.80	7.20	593	28.3	
02	STE-DUP		1315	WW		X	1	1	2	1							1.80	7.20	593	28.3	
03	PZ-03A-15			GW		X					1	1									
04	PZ-03A-17			GW		X					1	1									
05	PZ-03A-21			GW		X					1	1									
06	PZ-03A-34			GW		X				1		1	1	2	1						
07	PZ-03I-15			GW		X					1	1									
08	PZ-03I-17			GW		X					1					1					
09	PZ-03I-21			GW		X					1					1					
10	PZ-03K-15			GW		X				1		1	1	2	1						
11	PZ-03K-17			GW		X					1					1					
12	PZ-03K-21			GW		X					1					1					

Relinquished:	Date/Time:	Received:	Date/Time:
Containers Prepared/ Relinquished: J. Chambers	2-20-13 14:50		1450 2/20/13
Relinquished:	1615 2/25/13	Received: K Mudman	Date/Time: 1615 2/25/13
Relinquished:	Date/Time:	Received:	Date/Time:
Relinquished:	Date/Time:	Received:	Date/Time:
Relinquished:	Date/Time:	Received:	Date/Time:

Seal intact? Y N (N/A)

Samples intact upon arrival? (Y) N N/A

Received on ice? Temp_____ (Y) N N/A

Proper preservatives indicated? (Y) N N/A

Rec'd within holding time? (Y) N N/A

Volatiles rec'd w/out headspace Y N (N/A)

Proper containers used? (Y) N N/A

Chain of Custody.xls
Rev.Date 11/19/01

Chain of Custody

SOUTHERN ANALYTICAL LABORATORIES, INC.

110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 fax 813-855-2218

SAL Project No. 1301945

Client Name: Hazen and Sawyer

Contact / Phone:

Project Name / Location: C-HS3 SE#3

Samplers: (Signature)

Matrix Codes: DW-Drinking Water WW-Wastewater SW-SurfaceWater SL-Sludge SO-Soil GW-Groundwater SA-Saline Water O-Other R-Reagent Water

PARAMETER / CONTAINER DESCRIPTION

SAL Use Only Sample No.	Sample Description	Date	Time	Matrix	Composite	Grab	500mLP, Cool Total Alkalinity, TSS, TS, CBOD, NOx, Cl, F, OP, SO_4	~~125mL~~ 250mL P, H_2SO_4 TKN, NH_3, TP	~~125mL~~ 250mL P, $Na_2S_2O_3$ FC-MF	250mL P, HNO_3 B, Ca, Fe, Mg, Mn, K, Na	500mLP, Cool Total Alkalinity, NOx, Cl	~~125mL~~ 250mL P, H_2SO_4 COD, TKN, NH_3, TP	500mLP, Cool Total Alkalinity, NOx, Cl, F, OP, SO_4	40mLaV, HCl TOC	~~125mL~~ 250mLaG, Cool DOC	~~125mL~~ 250mL P, H_2SO_4 TKN, NH_3	DO	pH	Conductivity	Temperature	No. of Containers (Total per each location)
01	STE			WW		X	1	1	2	1											
02	STE-DUP			WW		X	1	1	2	1											
03	PZ-03A-15			GW		X					1	1									
04	PZ-03A-17			GW		X					1	1									
05	PZ-03A-21			GW		X					1	1									
06	PZ-03A-34			GW		X				1		1	1	2	1						
07	PZ-03I-15	2/26/13	1207	GW		X					1	1					4.40	5.78	46.6	25.4	
08	PZ-03I-17			GW		X					1					1					
09	PZ-03I-21			GW		X					1					1					
10	PZ-03K-15	2/26/13	1114	GW		X				1		1	1	2	1		5.49	6.72	475	25.5	
11	PZ-03K-17		1138	GW		X					1					1	6.35	6.35	50.6	25.2	
12	PZ-03K-21		1153	GW		X					1					1	2.17	6.01	156.8	25.7	

Relinquished:	Date/Time:	Received:	Date/Time:
Containers Prepared/ Relinquished: J. Chapman	2-20-13 14:50		1450 2/20/13
Relinquished:	1450 2/26/13	K Mahmoud	1450 2/26/13
Relinquished:	Date/Time:	Received:	Date/Time:
Relinquished:	Date/Time:	Received:	Date/Time:
Relinquished:	Date/Time:	Received:	Date/Time:

Seal intact? Y N N/A

Samples intact upon arrival? Y N N/A

Received on ice? Temp_____ Y N N/A

Proper preservatives indicated? Y N N/A

Rec'd within holding time? Y N N/A

Volatiles rec'd w/out headspace Y N N/A

Proper containers used? Y N N/A

Chain of Custody.xls
Rev.Date 11/13/01

Chain of Custody

SOUTHERN ANALYTICAL LABORATORIES, INC.

110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 fax 813-855-2218

SAL Project No. 1301945

Client Name: Hazen and Sawyer

Contact / Phone:

Project Name / Location: C-HS3 SE#3

Samplers: (Signature)

Matrix Codes: DW-Drinking Water WW-Wastewater SW-SurfaceWater SL-Sludge SO-Soil GW-Groundwater SA-Saline Water O-Other R-Reagent Water

PARAMETER / CONTAINER DESCRIPTION

SAL Use Only Sample No.	Sample Description	Date	Time	Matrix	Composite	Grab	500mLP, Cool Total Alkalinity, TSS, TS, CBOD, NOx, Cl, F, OP, SO_4	250mL P, H_2SO_4 TKN, NH_3, TP	125mL P, $Na_2S_2O_3$ FC-MF	250mL P, HNO_3 B, Ca, Fe, Mg, Mn, K, Na	500mLP, Cool Total Alkalinity, NOx, Cl	250mL P, H_2SO_4 COD, TKN, NH_3, TP	500mLP, Cool Total Alkalinity, NOx, Cl, F, OP, SO_4	40mLaV, HCl TOC	250mLaG, Cool DOC	250mLP, H_2SO_4 TKN, NH_3	DO	pH	Conductivity	Temperature	No. of Containers (Total per each location)
01	STE			WW		X	1	1	2	1											
02	STE-DUP			WW		X	1	1	2	1											
03	PZ-03A-15	2/27/13	1007	GW		X					1	1					7.27	6.26	356	24.8	
04	PZ-03A-17		1020	GW		X					1	1					6.38	6.21	796	25.5	
05	PZ-03A-21		1033	GW		X					1	1					2.68	5.66	272	25.6	
06	PZ-03A-34		1048	GW		X				1		1	1	2	1		4.94	5.92	857	26.3	
07	PZ-03I-15			GW		X					1	1									
08	PZ-03I-17	2/27/13	0843	GW		X					1					1	2.91	6.08	481	24.7	
09	PZ-03I-21		0855	GW		X					1					1	2.97	4.87	1945	24.9	
10	PZ-03K-15			GW		X				1		1	1	2	1						
11	PZ-03K-17			GW		X					1					1					
12	PZ-03K-21			GW		X					1					1					

Containers Prepared/ Relinquished:	Date/Time:	Received:	Date/Time:
J. Chambers	2-20-13 14:50		1450 2/20/13
Relinquished:	Date/Time:	Received:	Date/Time:
	1540 2/27/13	K Mudmach	1540 2/27/13
Relinquished:	Date/Time:	Received:	Date/Time:
Relinquished:	Date/Time:	Received:	Date/Time:
Relinquished:	Date/Time:	Received:	Date/Time:

Seal intact? Y N N/A

Samples intact upon arrival? Y N N/A

Received on ice? Temp_____ Y N N/A

Proper preservatives indicated? Y N N/A

Rec'd within holding time? Y N N/A

Volatiles rec'd w/out headspace Y N N/A

Proper containers used? Y N N/A

Chain of Custody.xls
Rev.Date 11/15/01

Chain of Custody

SOUTHERN ANALYTICAL LABORATORIES, INC.

110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 fax 813-855-2218

SAL Project No. 1301945

Client Name: Hazen and Sawyer

Contact / Phone:

Project Name / Location: C-HS3 SE#3

Samplers: (Signature)

Matrix Codes: DW-Drinking Water WW-Wastewater SW-SurfaceWater SL-Sludge SO-Soil GW-Groundwater SA-Saline Water O-Other R-Reagent Water

PARAMETER / CONTAINER DESCRIPTION

SAL Use Only Sample No.	Sample Description	Date	Time	Matrix	Composite	Grab	500mLP, Cool Total Alkalinity, TSS, TS, CBOD, NOx, Cl, F, OP, SO_4	250mL P, H_2SO_4 TKN, NH_3, TP	125mL P, $Na_2S_2O_3$ FC-MF	250mL P, HNO_3 B, Ca, Fe, Mg, Mn, K, Na	500mLP, Cool Total Alkalinity, NOx, Cl	250mL P, H_2SO_4 COD, TKN, NH_3, TP	500mLP, Cool Total Alkalinity, NOx, Cl, F, OP, SO_4	40mLaV, HCl TOC	40mLaG, Cool DOC	250mL P, H_2SO_4 TKN, NH_3	DO	pH	Conductivity	Temperature	No. of Containers (Total per each location)
13	PZ-02L-15	2/25/13	0818	GW		X					1	1					6.03	6.40	78.8	24.6	
14	PZ-02L-17		0643	GW		X					1					1	5.31	6.49	67.9	25.1	
15	PZ-02L-21		0854	GW		X					1					1	2.82	5.05	182.1	29.6	
16	PZ-04L-15		1030	GW		X					1	1					4.56	6.48	315	26.7	
17	PZ-04L-17		1050	GW		X					1					1	4.31	6.23	63.9	27.1	
18	PZ-04L-21		1100	GW		X					1					1	2.27	5.16	173.4	27.1	
19	PZ-07L-15		1023	GW		X					1	1					5.71	6.12	53.9	26.7	
20	PZ-07L-17		1140	GW		X					1					1	5.64	6.23	63.4	26.6	
21	PZ-07L-21		1153	GW		X					1					1	2.52	5.25	148.9	26.2	
22	PZ-03ML-15		0915	GW		X				1		1	1	2	1		5.21	6.21	513	25.8	
23	PZ-03ML-15-DUP		0920	GW		X				1		1	1	2	1		5.21	6.21	513	25.8	
24	PZ-03ML-17		0943	GW		X				1		1	1	2	1		6.60	6.29	55.6	26.1	

Relinquished:	Date/Time:	Received:	Date/Time:
Containers Prepared/ Relinquished: J. Chambers	2-20-13 14:50		2/20/13 1450
Relinquished:	2/25/13 1615	K Mudmenk	2/25/13 1615
Relinquished:	Date/Time:	Received:	Date/Time:
Relinquished:	Date/Time:	Received:	Date/Time:
Relinquished:	Date/Time:	Received:	Date/Time:

Seal intact? Y N (N/A)

Samples intact upon arrival? (Y) N N/A

Received on ice? Temp_____ (Y) N N/A

Proper preservatives indicated? (Y) N N/A

Rec'd within holding time? (Y) N N/A

Volatiles rec'd w/out headspace Y N (N/A)

Proper containers used? (Y) N N/A

Chain of Custody.xls
Rev.Date 11/19/01

Chain of Custody

SOUTHERN ANALYTICAL LABORATORIES, INC.

11D BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 fax 813-855-2218

SAL Project No. 1301945

Client Name: Hazen and Sawyer

Contact / Phone:

Project Name / Location: C-HS# SE#3

Samplers: (Signature)

Matrix Codes: DW-Drinking Water WW-Wastewater SW-SurfaceWater SL-Sludge SO-Soil GW-Groundwater SA-Saline Water O-Other R-Reagent Water

PARAMETER / CONTAINER DESCRIPTION

SAL Use Only Sample No.	Sample Description	Date	Time	Matrix	Composite	Grab	500mLP, Cool Total Alkalinity, TSS, TS, CBOD, NOx, Cl, F, OP, SO_4	250mL P, H_2SO_4 TKN, NH_3, TP	125mL P, $Na_2S_2O_3$ FC-MF	250mL P, HNO_3 B, Ca, Fe, Mg, Mn, K, Na	500mLP, Cool Total Alkalinity, NOx, Cl	250mL P, H_2SO_4 COD, TKN, NH_3, TP	500mLP, Cool Total Alkalinity, NOx, Cl, F, OP, SO_4	40mLaV, HCl TOC	40mLaG, Cool DOC	250mL P, H_2SO_4 TKN, NH_3	DO	pH	Conductivity	Temperature	No. of Containers (Total per each location)
25	PZ-03ML-21	2/25/13	1008	GW		X				1		1	1	2	1		1.12	5.96	1.89	26.1	
26	PZ-00N-15		1222	GW		X					1	1					5.74	5.93	59.6	26.4	
27	PZ-00N-17		1240	GW		X					1					1	5.70	6.24	59.4	26.6	
28	PZ-00N-21		1255	GW		X					1					1	2.91	4.82	266.9	26.0	
29	PZ-02N-15			GW		X					1	1									
30	PZ-02N-17			GW		X					1					1					
31	PZ-02N-21			GW		X					1					1					
32	PZ-02N-21-DUP			GW		X					1					1					
33	PZ-04N-15			GW		X					1	1									
34	PZ-04N-17			GW		X					1	1									
35	PZ-04N-21			GW		X					1					1					
36	PZ-06N-15			GW		X				1			1	2	1	1					

Relinquished:	Date/Time:	Received:	Date/Time:
Containers Prepared/ Relinquished: J. Chambers	2-20-13 14:50		1450 2/20/13
Relinquished:	1615 2/25/13	K Mudmack	1615 2/25/13
Relinquished:	Date/Time:	Received:	Date/Time:
Relinquished:	Date/Time:	Received:	Date/Time:
Relinquished:	Date/Time:	Received:	Date/Time:

Seal intact? Y N (N/A)

Samples intact upon arrival? (Y) N N/A

Received on ice? Temp_____ (Y) N N/A

Proper preservatives indicated? (Y) N N/A

Rec'd within holding time? (Y) N N/A

Volatiles rec'd w/out headspace Y N (N/A)

Proper containers used? (Y) N N/A

Chain of Custody.xls
Rev.Date 11/19/01

Chain of Custody

SOUTHERN ANALYTICAL LABORATORIES, INC.

110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 fax 813-855-2218

SAL Project No. 1301945

Client Name: Hazen and Sawyer

Contact / Phone:

Project Name / Location: C-HS# SE#3

Samplers: (Signature)

Matrix Codes: DW-Drinking Water WW-Wastewater SW-SurfaceWater SL-Sludge SO-Soil GW-Groundwater SA-Saline Water O-Other R-Reagent Water

PARAMETER / CONTAINER DESCRIPTION

SAL Use Only Sample No.	Sample Description	Date	Time	Matrix	Composite	Grab	500mLP, Cool Total Alkalinity, TSS, TS, CBOD, NOx, Cl, F, OP, SO_4	250mL P, H_2SO_4 TKN, NH_3, TP	125mL P, $Na_2S_2O_3$ FC-MF	250mL P, HNO_3 B, Ca, Fe, Mg, Mn, K, Na	500mLP, Cool Total Alkalinity, NOx, Cl	250mL P, H_2SO_4 COD, TKN, NH_3, TP	500mLP, Cool Total Alkalinity, NOx, Cl, F, OP, SO_4	40mLaV, HCl TOC	40mLaG, Cool DOC	250mL P, H_2SO_4 TKN, NH_3	DO	pH	Conductivity	Temperature	No. of Containers (Total per each location)
25	PZ-03ML-21			GW		X				1		1	1	2	1						
26	PZ-00N-15			GW		X					1	1									
27	PZ-00N-17			GW		X					1					1					
28	PZ-00N-21			GW		X					1					1					
29	PZ-02N-15	2/26	2/26/13 0849	GW		X					1	1									
30	PZ-02N-17		0905	GW		X					1					1					
31	PZ-02N-21		0918	GW		X					1					1					
32	PZ-02N-21-DUP		0923	GW		X					1					1					
33	PZ-04N-15	2/26/13	0937	GW		X					1	1					5.19	6.22	290	25.6	
34	PZ-04N-17		0955	GW		X					1	1					2.56	6.44	83.4	25.7	
35	PZ-04N-21		1007	GW		X					1					1	2.19	5.67	1905	25.0	
36	PZ-06N-15		1021	GW		X				1			1	2	1	1	4.89	6.02	370	25.3	

Containers Prepared/ Relinquished:	Date/Time:	Received:	Date/Time:
J. Chambers	2-20-13 14:50		1450 2/20/13
Relinquished:	Date/Time: 1450 2/26/13	Received: K Mudmark	Date/Time: 1450 2/26/13
Relinquished:	Date/Time:	Received:	Date/Time:
Relinquished:	Date/Time:	Received:	Date/Time:
Relinquished:	Date/Time:	Received:	Date/Time:

Seal intact?	Y N N/A
Samples intact upon arrival?	Y N N/A
Received on ice? Temp_____	Y N N/A
Proper preservatives indicated?	Y N N/A
Rec'd within holding time?	Y N N/A
Volatiles rec'd w/out headspace	Y N N/A
Proper containers used?	Y N N/A

Chain of Custody.xls
Rev.Date 11/19/01

Chain of Custody

SOUTHERN ANALYTICAL LABORATORIES, INC.

110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 fax 813-855-2218

SAL Project No. 1301945

Client Name: Hazen and Sawyer

Contact / Phone:

Project Name / Location: C-HS3 SE#3

Samplers: (Signature)

Matrix Codes: DW-Drinking Water WW-Wastewater SW-SurfaceWater SL-Sludge SO-Soil GW-Groundwater SA-Saline Water O-Other R-Reagent Water

PARAMETER / CONTAINER DESCRIPTION

SAL Use Only Sample No.	Sample Description	Date	Time	Matrix	Composite	Grab	500mLP, Cool Total Alkalinity, TSS, TS, CBOD, NOx, Cl, F, OP, SO_4	250mL P, H_2SO_4 TKN, NH_3, TP	125mL P, $Na_2S_2O_3$ FC-MF	250mL P, HNO_3 B, Ca, Fe, Mg, Mn, K, Na	500mLP, Cool Total Alkalinity, NOx, Cl	250mL P, H_2SO_4 COD, TKN, NH_3, TP	500mLP, Cool Total Alklainity, NOx, Cl, F, OP, SO_4	40mLaV, HCl TOC	500mLaG, Cool DOC	250mLP, H_2SO_4 TKN, NH_3	DO	pH	Conductivity	Temperature	No. of Containers (Total per each location)
37	PZ-06N-17	2/26/13	1037	GW		X					1					1	4.49	6.82	59.2	25.4	
38	PZ-06N-21		1056	GW		X					1					1	3.16	5.02	108.9	25.5	
39	PZ-03O-15			GW		X					1					1					
40	PZ-03O-17			GW		X				1			1	2	1	1					
41	PZ-03O-21			GW		X				1			1	2	1	1					
42	PZ-04O-15			GW		X					1	1									
43	PZ-04O-17			GW		X					1	1									
44	PZ-04O-17-DUP			GW		X					1	1									
45	PZ-04O-21			GW		X					1	1									
46	PZ-07O-15			GW		X					1	1									
47	PZ-07O-17			GW		X					1					1					
48	PZ-07O-20			GW		X					1					1					

Relinquished	Date/Time	Received	Date/Time
Containers Prepared/ Relinquished: J. Chambers	2-2013 15:30		1530 2/20/13
Relinquished:	1450 2/26/13	K Mudmad	1450 2/26/13
Relinquished:			
Relinquished:			
Relinquished:			

Seal intact? Y N N/A

Samples intact upon arrival? Y N N/A

Received on ice? Temp_____ Y N N/A

Proper preservatives indicated? Y N N/A

Rec'd within holding time? Y N N/A

Volatiles rec'd w/out headspace Y N N/A

Proper containers used? Y N N/A

Chain of Custody.xls
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Chain of Custody

SOUTHERN ANALYTICAL LABORATORIES, INC.

110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 fax 813-855-2218

SAL Project No. 1301945

Client Name: Hazen and Sawyer

Contact / Phone:

Project Name / Location: C-HS3 SE#3

Samplers: (Signature)

Matrix Codes: DW-Drinking Water WW-Wastewater SW-SurfaceWater SL-Sludge SO-Soil GW-Groundwater SA-Saline Water O-Other R-Reagent Water

PARAMETER / CONTAINER DESCRIPTION

SAL Use Only Sample No	Sample Description	Date	Time	Matrix	Composite	Grab	500mLP, Cool Total Alkalinity, TSS, TS, CBOD, NOx, Cl, F, OP, SO_4	250mL P, H_2SO_4 TKN, NH_3, TP	125mL P, $Na_2S_2O_3$ FC-MF	250mL P, HNO_3 B, Ca, Fe, Mg, Mn, K, Na	500mLP, Cool Total Alkalinity, NOx, Cl	250mL P, H_2SO_4 COD, TKN, NH_3, TP	500mLP, Cool Total Alklainity, NOx, Cl, F, OP, SO_4	40mLaV, HCl TOC	500mLaG, Cool DOC	250mL P, H_2SO_4 TKN, NH_3	DO	pH	Conductivity	Temperature	No. of Containers (Total per each location)
37	PZ-06N-17			GW		X					1					1					
38	PZ-06N-21			GW		X					1					1					
39	PZ-03O-15			GW		X					1					1					
40	PZ-03O-17			GW		X				1			1	2	1	1					
41	PZ-03O-21			GW		X				1			1	2	1	1					
42	PZ-04O-15	2/27/13	1334	GW		X					1	1					5.05	6.34	208.6	23.9	
43	PZ-04O-17		1345	GW		X					1	1					5.06	6.25	208.6	23.9	
44	PZ-04O-17-DUP		1350	GW		X					1	1					5.06	6.25	208.6	23.9	
45	PZ-04O-21		1355	GW		X					1	1					1.85	5.33	254	24.6	
46	PZ-07O-15		1057	GW		X					1	1					4.05	5.98	377	23.7	
47	PZ-07O-17		1110	GW		X					1					1	3.20	6.33	142.2	23.8	
48	PZ-07O-20		1121	GW		X					1					1	3.19	5.28	109.3	24.2	

Containers Prepared/ Relinquished:	Date/Time:	Received:	Date/Time:
J. Chambers	2-20-13 15:30		1530 2/20/13
Relinquished:	Date/Time: 1540 2/27/13	Received: K Mudmach	Date/Time: 2/27/13 1540
Relinquished:	Date/Time:	Received:	Date/Time:
Relinquished:	Date/Time:	Received:	Date/Time:
Relinquished:	Date/Time:	Received:	Date/Time:

Seal intact? Y N (N/A)

Samples intact upon arrival? (Y) N N/A

Received on ice? Temp_____ (Y) N N/A

Proper preservatives indicated? (Y) N N/A

Rec'd within holding time? (Y) N N/A

Volatiles rec'd w/out headspace Y N (N/A)

Proper containers used? (Y) N N/A

Chain of Custody.xls
Rev.Date 11/19/01

Chain of Custody

SOUTHERN ANALYTICAL LABORATORIES, INC.

110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 fax 813-855-2218

SAL Project No. 1301945

Client Name: Hazen and Sawyer

Contact / Phone:

Project Name / Location: C-HS3 SE#3

Samplers: (Signature)

Matrix Codes: DW-Drinking Water WW-Wastewater SW-SurfaceWater SL-Sludge SO-Soil GW-Groundwater SA-Saline Water O-Other R-Reagent Water

PARAMETER / CONTAINER DESCRIPTION

SAL Use Only Sample No.	Sample Description	Date	Time	Matrix	Composite	Grab	500mLP, Cool Total Alkalinity, TSS, TS, CBOD, NOx, Cl, F, OP, SO_4	250mL P, H_2SO_4 TKN, NH_3, TP	125mL P, $Na_2S_2O_3$ FC-MF	250mL P, HNO_3 B, Ca, Fe, Mg, Mn, K, Na	500mLP, Cool Total Alkalinity, NOx, Cl	250mL P, H_2SO_4 COD, TKN, NH_3, TP	500mLP, Cool Total Alkalinity, NOx, Cl, F, OP, SO_4	40mLaV, HCl TOC	40mLaG, Cool DOC	250mLP, H_2SO_4 TKN, NH_3	DO	pH	Conductivity	Temperature	No. of Containers (Total per each location)
37	PZ-06N-17			GW		X					1					1					
38	PZ-06N-21			GW		X					1					1					
39	PZ-03O-15	2/28/13	1050	GW		X					1					1	6.55	6.79	1425	22.7	
40	PZ-03O-17	2/28/13	1104	GW		X				1			1	2	1	1	6.52	6.58	585	22.8	
41	PZ-03O-21	/	1128	GW		X				1			1	2	1	1	1.73	4.56	223	24.3	
42	PZ-04O-15			GW		X					1	1									
43	PZ-04O-17			GW		X					1	1									
44	PZ-04O-17-DUP			GW		X					1	1									
45	PZ-04O-21			GW		X					1	1									
46	PZ-07O-15			GW		X					1	1									
47	PZ-07O-17			GW		X					1					1					
48	PZ-07O-20			GW		X					1					1					

Relinquished	Date/Time	Received	Date/Time
Containers Prepared/ Relinquished: J. Champeys	2-20-13 15:30		1530 2/20/13
Relinquished:	1530 2/24/13	K Mulmont	1530 2/28/13
Relinquished:	Date/Time:	Received:	Date/Time:
Relinquished:	Date/Time:	Received:	Date/Time:
Relinquished:	Date/Time:	Received:	Date/Time:

Seal intact? Y N N/A

Samples intact upon arrival? Y N N/A

Received on ice? Temp_____ Y N N/A

Proper preservatives indicated? Y N N/A

Rec'd within holding time? Y N N/A

Volatiles rec'd w/out headspace Y N N/A

Proper containers used? Y N N/A

Chain of Custody.xls
Rev.Date 11/19/01

Chain of Custody

SOUTHERN ANALYTICAL LABORATORIES, INC.

11D BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 fax 813-855-2218

SAL Project No. 1301945

Client Name: Hazen and Sawyer

Contact / Phone:

Project Name / Location: C-HS3 SE#3

Samplers: (Signature)

Matrix Codes: DW-Drinking Water WW-Wastewater SW-SurfaceWater SL-Sludge SO-Soil GW-Groundwater SA-Saline Water O-Other R-Reagent Water

PARAMETER / CONTAINER DESCRIPTION

SAL Use Only Sample No.	Sample Description	Date	Time	Matrix	Composite	Grab	500mLP, Cool Total Alkalinity, TSS, TS, CBOD, NOx, Cl, F, OP, SO_4	250mL P, H_2SO_4 TKN, NH_3, TP	125mL P, $Na_2S_2O_3$ FC-MF	250mL P, HNO_3 B, Ca, Fe, Mg, Mn, K, Na	500mLP, Cool Total Alkalinity, NOx, Cl	250mL P, H_2SO_4 COD, TKN, NH_3, TP	500mLP, Cool Total Alklainity, NOx, Cl, F, OP, SO_4	40mLaV, HCl TOC	125mLaG, Cool DOC	125mLP, H_2SO_4 TKN, NH_3	DO	pH	Conductivity	Temperature	No. of Containers (Total per each location)
49	PZ-01Q-13			GW		X					1	1									
50	PZ-01Q-15			GW		X					1	1									
51	PZ-01Q-19			GW		X					1					1					
52	PZ-04Q-13	2/27/13	1256	GW		X				1		1	1	2	1		5.83	6.39	144.1	24.9	
53	PZ-04Q-15		1307	GW		X					1	1					3.55	5.60	83.4	24.9	
54	PZ-04Q-19		1323	GW		X					1			2	1	1	2.74	6.12	75.9	25.3	
55	PZ-06Q-13		1212	GW		X					1	1					6.12	6.45	164.5	24.5	
56	PZ-06Q-15		1226	GW		X				1		1	1	2	1		3.04	6.60	156.5	24.4	
57	PZ-06Q-19		1241	GW		X					1	1					2.66	6.57	86.1	25.8	
58	PZ-07Q-13		1139	GW		X					1	1					4.03	6.12	380	23.6	
59	PZ-07Q-15		1153	GW		X					1					1	2.71	6.41	113.9	23.9	
60	PZ-07Q-19		1202	GW		X					1					1	2.92	5.35	119.1	24.6	

Relinquished:	Date/Time:	Received:	Date/Time:
Containers Prepared/ Relinquished: D. Chambers	2-20-13 16:00		1600 2/20/13
Relinquished:	1540 2/27/13	C. Mudmark	1540 2/27/13
Relinquished:	Date/Time:	Received:	Date/Time:
Relinquished:	Date/Time:	Received:	Date/Time:
Relinquished:	Date/Time:	Received:	Date/Time:

Seal intact? Y N N/A

Samples intact upon arrival? Y N N/A

Received on ice? Temp_____ Y N N/A

Proper preservatives indicated? Y N N/A

Rec'd within holding time? Y N N/A

Volatiles rec'd w/out headspace Y N N/A

Proper containers used? Y N N/A

Chain of Custody.xls
Rev.Date 11/19/01

Chain of Custody

SOUTHERN ANALYTICAL LABORATORIES, INC.

11D BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 fax 813-855-2218

SAL Project No. 1301945

Client Name: Hazen and Sawyer

Contact / Phone:

Project Name / Location: C-HS3-SE#3

Samplers: (Signature)

Matrix Codes: DW-Drinking Water WW-Wastewater SW-SurfaceWater SL-Sludge SO-Soil GW-Groundwater SA-Saline Water O-Other R-Reagent Water

PARAMETER / CONTAINER DESCRIPTION

SAL Use Only Sample No.	Sample Description	Date	Time	Matrix	Composite	Grab	500mLP, Cool Total Alkalinity, TSS, TS, CBOD, NOx, Cl, F, OP, SO_4	250mL P, H_2SO_4 TKN, NH_3, TP	125mL P, $Na_2S_2O_3$ FC-MF	250mL P, HNO_3 B, Ca, Fe, Mg, Mn, K, Na	500mLP, Cool Total Alkalinity, NOx, Cl	250mL P, H_2SO_4 COD, TKN, NH_3, TP	500mLP, Cool Total Alkalinity, NOx, Cl, F, OP, SO_4	40mLaV, HCl TOC	150mLaG, Cool DOC	125mLP, H_2SO_4 TKN, NH_3	DO	pH	Conductivity	Temperature	No. of Containers (Total per each location)
49	PZ-01Q-13	2/28/13	1007	GW		X					1	1					5.83	6.29	71.2	22.3	
50	PZ-01Q-15		1021	GW		X					1	1					5.77	6.01	42.9	23.1	
51	PZ-01Q-19		1037	GW		X					1					1	2.79	5.09	65.[illegible]	23.7	
52	PZ-04Q-13			GW		X				1		1	1	2	1						
53	PZ-04Q-15			GW		X					1	1									
54	PZ-04Q-19			GW		X					1			2	1	1					
55	PZ-06Q-13			GW		X					1	1									
56	PZ-06Q-15			GW		X				1		1	1	2	1						
57	PZ-06Q-19			GW		X					1	1									
58	PZ-07Q-13			GW		X					1	1									
59	PZ-07Q-15			GW		X					1					1					
60	PZ-07Q-19			GW		X					1					1					

Containers Prepared/ Relinquished:	Date/Time: 2-20-13 16:00	Received:	Date/Time: 1600 2/20/13
Relinquished:	Date/Time: 1530 2/28/13	Received: K Mudmark	Date/Time: 1530 2/28/13
Relinquished:	Date/Time:	Received:	Date/Time:
Relinquished:	Date/Time:	Received:	Date/Time:
Relinquished:	Date/Time:	Received:	Date/Time:

Seal intact? Y N N/A

Samples intact upon arrival? Y N N/A

Received on ice? Temp_____ Y N N/A

Proper preservatives indicated? Y N N/A

Rec'd within holding time? Y N N/A

Volatiles rec'd w/out headspace Y N N/A

Proper containers used? Y N N/A

Chain of Custody.xls
Rev.Date 11/19/01

Chain of Custody

SOUTHERN ANALYTICAL LABORATORIES, INC.

110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 fax 813-855-2218

SAL Project No. 1301945

Client Name: Hazen and Sawyer

Contact / Phone:

Project Name / Location: C-HS3 SE#3

Samplers: (Signature)

Matrix Codes: DW-Drinking Water WW-Wastewater SW-SurfaceWater SL-Sludge SO-Soil GW-Groundwater SA-Saline Water O-Other R-Reagent Water

PARAMETER / CONTAINER DESCRIPTION

SAL Use Only Sample No.	Sample Description	Date	Time	Matrix	Composite	Grab	500mLP, Cool Total Alkalinity, TSS, TS, CBOD, NOx, Cl, F, OP, SO_4	250mL P, H_2SO_4 TKN, NH_3, TP	125mL P, $Na_2S_2O_3$ FC-MF	250mL P, HNO_3 B, Ca, Fe, Mg, Mn, K, Na	500mLP, Cool Total Alkalinity, NOx, Cl	250mL P, H_2SO_4 COD, TKN, NH_3, TP	500mLP, Cool Total Alkalinity, NOx, Cl, F, OP, SO_4	40mLaV, HCl TOC	40mLaG, Cool DOC	250mL P, H_2SO_4 TKN, NH_3	DO	pH	Conductivity	Temperature	No. of Containers (Total per each location)
61	PZ-04U-12	2/28/13	0928	GW		X					1	1					4.66	6.52	208.5	23.4	
62	PZ-04U-14		0944	GW		X					1					1	6.14	6.47	241	23.7	
63	PZ-04U-14-DUP		0946	GW		X					1					1	6.14	6.49	241	23.7	
64	PZ-04U-18		0955	GW		X					1					1	4.33	5.79	64.2	24.4	
65	PZ-06U-12		0835	GW		X					1			2	1	1	5.33	6.69	117.1	22.6	
66	PZ-06U-14		0850	GW		X				1			1	2	1	1	3.12	5.88	390	23.0	
67	PZ-06U-14-DUP		0855	GW		X				1			1	2	1	1	3.12	5.88	390	23.0	
68	PZ-06U-34		0916	GW		X					1					1	0.56	5.27	280	24.2	
69	PZ-01BKG		1225	GW		X					1	1					7.20	6.33	42.4	25.8	
70	PZ-02BKG		1149	GW		X					1	1					0.24	5.17	42.7	24.0	
71	PZ-03BKG		1213	GW		X					1	1					9.47	5.68	42.9	23.2	
72	PZ-04BKG		1138	GW		X					1	1					0.59	5.24	125.1	22.1	

Containers Prepared/ Relinquished:	Date/Time:	Received:	Date/Time:
J. Chambers	2-20-13 16:05		16:05 2/20/13
Relinquished:	Date/Time:	Received:	Date/Time:
	1539 2/28/13	K. Medment	1530 2/28/13
Relinquished:	Date/Time:	Received:	Date/Time:
Relinquished:	Date/Time:	Received:	Date/Time:
Relinquished:	Date/Time:	Received:	Date/Time:

Seal intact? Y N (N/A)

Samples intact upon arrival? (Y) N N/A

Received on ice? Temp_____ (Y) N N/A

Proper preservatives indicated? (Y) N N/A

Rec'd within holding time? (Y) N N/A

Volatiles rec'd w/out headspace Y N (N/A)

Proper containers used? (Y) N N/A

Chain of Custody.xls
Rev.Date 11/19/01

Chain of Custody

SOUTHERN ANALYTICAL LABORATORIES, INC.

110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 fax 813-855-2218

SAL Project No. 1301945

Client Name: Hazen and Sawyer

Contact / Phone:

Project Name / Location: C-HS3-SE#3

Samplers: (Signature)

Matrix Codes: DW-Drinking Water WW-Wastewater SW-SurfaceWater SL-Sludge SO-Soil GW-Groundwater SA-Saline Water O-Other R-Reagent Water

PARAMETER / CONTAINER DESCRIPTION

SAL Use Only Sample No.	Sample Description	Date	Time	Matrix	Composite	Grab	500mLP, Cool Total Alkalinity, TSS, TS, CBOD, NOx, Cl, F, OP, SO_4	250mL P, H_2SO_4 TKN, NH_3, TP	125mL P, $Na_2S_2O_3$ FC-MF	250mL P, HNO_3 B, Ca, Fe, Mg, Mn, K, Na	500mLP, Cool Total Alkalinity, NOx, Cl	250mL P, H_2SO_4 COD, TKN, NH_3, TP	500mLP, Cool Total Alkalinity, NOx, Cl, F, OP, SO_4	40mLaV, HCl TOC	40mLaG, Cool DOC	250mL P, H_2SO_4 TKN, NH_3	DO	pH	Conductivity	Temperature	No. of Containers (Total per each location)
73	PZ-05BKG	2/28/13	1200	GW		X					1	1					0.45	5.60	523	23.4	
74	FB-DI		1245	R		X	1		2	1		1		2	1		8.30	7.95	1.77	19.4	
75	FB-TAP		1240	DW		X	1		2	1		1		2	1		5.22	7.26	325	23.3	
76	EB		1250	R		X	1		2	1		1		2	1		8.30	7.90	1.77	20.0	

Containers Prepared/ Relinquished:	Date/Time:	Received:	Date/Time:
J. Champlin	2-20-13 16:15		16:15 2/20/13
Relinquished:	Date/Time: 1530 2/28/13	Received: K Mudsmack	Date/Time: 2/28/13 1530
Relinquished:	Date/Time:	Received:	Date/Time:
Relinquished:	Date/Time:	Received:	Date/Time:
Relinquished:	Date/Time:	Received:	Date/Time:

Seal intact? Y N N/A

Samples intact upon arrival? Y N N/A

Received on ice? Temp_____ Y N N/A

Proper preservatives indicated? Y N N/A

Rec'd within holding time? Y N N/A

Volatiles rec'd w/out headspace Y N N/A

Proper containers used? Y N N/A

Chain of Custody.xls
Rev.Date 11/19/01

Chain of Custody