2008 ANNUAL
GROUNDWATER MONITORING REPORT
YERINGTON MINE SITE

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LIST OF ACRONYMS AND ABBREVIATIONS

ARC	Atlantic Richfield Company
BLM	Bureau of Land Management
CFC	Chlorofluorocarbon
CSM	Conceptual Site Model
DO	Dissolved Oxygen
DSR	Data Summary Report
DWS	Drinking Water Standard
EPA	Environmental Protection Agency
ESI	Environmental Standards Inc.
GMP	Groundwater Monitoring Plan
GMR	Groundwater Monitoring Report
HCSM	Hydrogeochemical Conceptual Site Model
HFA	Hydrogeologic Framework Assessment
LCS	Laboratory Control Spike
MARSSIM	Multi-Agency Radiation Survey and Site Investigation Manual
MCL	Maximum Contaminant Level
MDL	Method Detection Limit
MWMP	Meteoric Water Mobility Procedure
NAH	Norwest Applied Hydrology
NDEP	Nevada Division of Environmental Protection
ORP	Oxidation-Reduction Potential
OU	Operable Unit
PVC	Polyvinyl Chloride
PWS	Pumpback Well System
QAPP	Quality Assurance Project Plan
QA	Quality Assurance
QC	Quality Control
RI/FS	Remedial Investigation/Feasibility Study
RPM	Remedial Project Manager
SOP	Standard Operating Procedure
SOW	Scope of Work
TDS	Total Dissolved Solids
TOC	Total Organic Carbon
UAO	Unilateral Administrative Order
USGS	United States Geological Survey
µg	microgram
mg	milligram
g	gram
L	liter
µm	micrometer
feet	foot
pCi	picoCurie
µR	microRoentgen
µS	microSiemens
mV	milliVolt
mBar	milliBar
mph	miles per hour
amsl	above mean sea level
NTU	nephelometric turbidity unit
s.u.	standard units (pH)
%	percent
°C	degrees Centigrade
°F	degrees Fahrenheit
kJ/m^2	kilojoules per meter squared

EXECUTIVE SUMMARY

The Atlantic Richfield Company ("ARC") has prepared this 2008 Annual Groundwater Monitoring Report ("2008 GMR") pursuant to Section 6.0 of the Scope of Work ("SOW") attached to the Administrative Order ("Order") for Remedial Investigation and Feasibility Study ("RI/FS") for the Anaconda/Yerington Mine Site ("Site"). The Order was issued by the U.S. Environmental Protection Agency – Region 9 ("EPA") to ARC on January 12, 2007 (EPA, 2007). The Site is located adjacent to the City of Yerington, in western Nevada. This 2008 GMR provides the following information:

- a summary of the relevant regulatory background for groundwater monitoring activities at the Site;
- a general description of the groundwater monitoring program, monitoring objectives, and specific monitoring activities conducted during 2008;
- a general description of groundwater investigations conducted as part of OU-specific RI/FS activities during 2008;
- a summary of Site meteorological data and water level measurements and water quality analyses for active monitor wells (quarterly data) and select domestic wells (annual data) during 2008;
- a discussion of the quality assurance/quality control ("QA/QC") results associated with the 2008 water quality data;
- an abbreviated version of the most recent update to the Hydrogeochemical Conceptual Site Model ("HCSM") for groundwater conditions;
- proposed modifications to the groundwater monitoring plan; and
- a discussion of operational data for the pumpback well system ("PWS") including the quantities of pumped groundwater and extracted mineral salts, and PWS operations and maintenance activities.

Groundwater elevation data are presented in tabular format (both in hardcopy and electronic form) and as hydrographs and monthly potentiometric surface maps. When additional temporal data are available for evaluation, future annual groundwater monitoring reports will identify high and low water months or periods, and potentiometric surface maps will be generated for those specific time periods.

Chemical data are presented in tabular format (both in hardcopy and electronic form) and as: 1) time-concentration plots for each monitor well; and 2) maps illustrating the distribution of select chemicals in groundwater during March 2008. Future annual groundwater monitoring reports will present maps illustrating the distributions of select chemicals during the high and low water periods.

Analytical results from the 21 domestic wells indicate no significant changes in concentrations of any chemicals from previous years, and results are consistently below MCLs with the exception of arsenic and uranium. Twelve of wells sampled in 2008 have arsenic concentrations greater than the MCL of 10 ug/L, ranging from 10 to 44 ug/L. Nine of the wells have uranium values at or above the 30-ug/L MCL.

QA/QC results associated with the 2008 water quality data have been evaluated pursuant to the Site-Wide Quality Assurance Project Plan ("QAPP", Revision 4; Environmental Standards, Inc. ["ESI"] and Brown and Caldwell, 2008). A total of 369 normal and 35 field duplicate groundwater monitor well samples were collected and analyzed. A total of eleven results (2 copper and 9 nickel) by method E200.8 and one gross alpha result by Method E900.0 were rejected due to extremely low matrix spike recoveries. Completeness goals were met for every method and analyte. The primary issues that resulted in data qualification were: 1) low laboratory control spike ("LCS") and matrix spike recoveries for Radium-228; and 2) laboratory pH measurements that were performed after the 24-hour holding time. Other sporadic analytical issues resulted in a few results being qualified as estimated, but these sporadic issues have little effect on overall data quality.

The hydrogeochemical conceptual site model presented in this 2008 GMR is based on the CSM presented in Appendix B-1 of the *Conceptual Site Model for the Yerington Mine Site, Lyon County, Nevada (Revision 3)* (Brown and Caldwell and Integral Consulting, Inc., 2009), and has been revised in response to EPA comments provided on January 5, 2009 (EPA, 2009) and updated to incorporate 2008 groundwater monitoring data.

Proposed modifications to the monitoring program include the following:

- Elimination of Monitor Well MW-1S: This well became damaged and could not be sampled after the first quarterly monitoring event in 2008. The well could not be easily rehabilitated, nor was it considered necessary to continue sampling this well to meet the objectives of the GMP because it is located only 400 feet from another recently-installed well (PA-MW-2S), which exhibits very similar groundwater chemistry. ARC's request that this well be eliminated from the monitoring network (ARC, 2008) was approved by the EPA (2008).
- Changes to the Analytical Parameter List: Based on a minimum of four quarters of monitoring results, ARC recommends that 16 metals and 3 radiochemicals be eliminated from the analyte list for continuing sampling of the existing and proposed monitor wells. These parameters include silver, titanium, tin, thallium, mercury, lead, cobalt, lithium, vanadium, molybdenum, barium, potassium, boron, strontium, silicon, sodium, thorium-228, thorium-230, and thorium-232. These parameters are recommended for elimination because they: 1) are detected less than 10 percent of the time; 2) have not exceeded drinking water standards ("DWS") during the previous year; and 3) are not typically associated with copper ore processing are not considered "indicator parameters". ARC also recommends that non-isotopic thorium, analyzed by EPA Method 200.8 (ICP-MS), be added to the parameter list.

- Modification to the ORP Meter Calibration Procedure: ARC proposes that the procedure for calibrating the field meter used to measure ORP be changed in 2009 to be consistent with the instrument manufacturer's specifications. Rather than calibrating to a standard value of 220.0 millivolts (mV), the calibration value will be determined daily based on the calibration solution's manufacturer recommended value as affected by the solution temperature.
- Elimination of GeoSquirt Pump for Sample Collection: Wells USGS-2BS, USEPA2S, and W5AA-3S only marginally penetrate the shallow zone water table and the water column in these wells is too small to allow installation and use of dedicated bladder pumps for sampling. Consequently, a Geosquirt Pump was used in 2008 to sample these wells. Due to the limited column of water in the well screen and the inability to adjust the discharge rate of the GeoSquirt Pump, more than 0.3 feet of drawdown occurred in the wells and/or the wells dewatered entirely during purging and sampling. ARC recommends that future sampling of these wells be conducted using a peristaltic pump, which has the capability of being set to lower pumping rates that will help achieve the 0.3-foot drawdown criterion for groundwater purging and sampling. This proposed modification is anticipated to help achieve the minimal-drawdown criterion for groundwater purging and sample collection and, thus, improve data quality for these wells.

SECTION 1.0
INTRODUCTION

The Atlantic Richfield Company ("ARC") has prepared this 2008 Annual Groundwater Monitoring Report ("2008 GMR") pursuant to Section 6.0 of the Scope of Work ("SOW") attached to the Administrative Order ("Order") for Remedial Investigation and Feasibility Study ("RI/FS") for the Anaconda/Yerington Mine Site ("Site"). The Site is located adjacent to the City of Yerington in western Nevada (Figure 1-1).

The Order was issued by the U.S. Environmental Protection Agency – Region 9 ("EPA") to ARC on January 12, 2007 (EPA, 2007). Also pursuant to the SOW, ARC previously submitted the Draft Site-Wide Groundwater Monitoring Plan ("Draft GMP"; Brown and Caldwell and Norwest Applied Hydrology ["NAH"], 2007), which is currently under review by the EPA. The GMP incorporates information from pre-existing groundwater monitor wells in addition to monitor wells installed as a result of response action and RI activities associated with the operable units ("OUs") identified at the Site, as shown in Figure 1-2 (the Site-Wide Groundwater OU is not depicted and includes off-Site areas). This 2008 GMR provides the following information:

- a general description of the groundwater monitoring program and monitoring activities conducted during 2008;
- a general description of groundwater investigation activities conducted during 2008;
- a summary of water level measurements and water quality analyses for active monitor wells (quarterly data) and select domestic wells (annual data);
- a discussion of the quality assurance/quality control ("QA/QC") results associated with the water quality data;
- an update to the Site conceptual hydrogeologic model; and
- proposed modifications to the groundwater monitoring plan.

The remainder of Section 1.0 of this 2008 GMR describes the: 1) background for groundwater monitoring activities at the Site, and relevant regulatory background (Section 1.1); 2)

groundwater monitoring program objectives (Section 1.2); 3) groundwater investigation activities conducted during 2008 as part of the GMP (Section 1.3); and 4) groundwater investigations conducted as part of OU-specific RI/FS activities (Section 1.4).

Section 2.0 presents a description of the groundwater monitoring program. Hydrostratigraphic zone designations are discussed in Section 2.1. These designations are convenient for evaluating well screen position, general hydrogeology, and depth of contamination. Section 2.2 presents an updated description and list of active wells comprising the monitor well network including detailed well construction information and revised well names that reflect the hydrostratigraphic zone monitored for each well. Section 2.3 summarizes abandoned or inactive monitor wells.

Section 3.0 presents 2008 monitoring results including meteorological, groundwater elevation, and water quality data for monitor wells. Section 4.0 summarizes the domestic and community well sampling program, and the associated analytical results for the single sampling event conducted in 2008 for these wells. QA/QC procedures applicable to this 2008 GMR, pursuant to the Site-Wide Quality Assurance Project Plan ("QAPP", Revision 4; Environmental Standards, Inc. ["ESI"] and Brown and Caldwell, 2008), and any QA/QC issues associated with the 2008 monitoring program, are addressed in Section 5.0.

An abbreviated version of the most recent update to the Hydrogeochemical Conceptual Site Model ("HCSM") for groundwater conditions, as described in the Conceptual Site Model ("CSM") for the Yerington Mine Site (Revision 3; Brown and Caldwell and Integral Consulting, Inc., 2009), is presented in Section 6.0. Proposed modifications to the Draft GMP are presented in Section 7.0. Section 8.0 lists the references cited in this 2008 GMR.

Appendix A of this 2008 GMR contains operational data for the pumpback well system ("PWS") including the quantities of pumped groundwater and extracted mineral salts, and PWS operations and maintenance activities. Appendix B provides information, including any available construction information, on inactive monitor wells at the Site which are not subject to the

quarterly monitoring program. Construction diagrams and boring logs for active groundwater monitor wells, including wells installed in 2008 as part of the Second-Step Hydrologic Framework Assessment ("HFA"), are provided as Appendix C of this 2008 GMR.

Appendix D includes a summary report of the meteorological data acquisition, data tables, and any additional meteorological monitoring activity reports. Appendix E presents groundwater elevation data as hydrographs and monthly potentiometric surface maps. When additional temporal data are available for evaluation, future annual groundwater monitoring reports will identify high and low water months or periods, and potentiometric surface maps will be generated only for those time periods. Appendix F presents time-concentration plots for monitor wells that are representative of groundwater conditions associated with the Site.

Appendix G presents copies of field forms, field log books and analytical and validation reports. Appendix H presents maps illustrating the distribution of select chemicals in groundwater during March 2008. Future annual groundwater monitoring reports will present maps illustrating the distributions of select chemicals during the high and low water periods. Appendix I presents technical information supporting the elimination of select analytical parameters during future monitoring events, which is proposed in Section 7.0 of this 2008 GMR.

1.1 Regulatory Requirements for Groundwater Monitoring

Groundwater monitoring activities at the Site were initiated by the U.S. Geological Survey ("USGS") in 1976 (Seitz et al., 1982). Subsequently, regulatory requirements for groundwater monitoring were initiated in 1982 in response to a Nevada Division of Environmental Protection ("NDEP") Order to the Anaconda Minerals Company ("Anaconda", ARC's predecessor). The PWS and associated monitor wells were constructed under the Administrative Order on Consent, dated October 1, 1985, issued to Anaconda by NDEP. Table 1-1 provides a chronological summary of regulatory requirements and groundwater monitoring activities for the Site (see Appendix A for more detailed chronological information on the PWS).

Table 1-1. Regulatory Driven Groundwater Monitoring Requirements, Date(s) and Activities	
June 1976	USGS conducted groundwater investigations north of Site boundary.
1982 – 1984	Under NDEP 1982 order, Anaconda conducted groundwater investigations in the vicinity of the sulfide tailings ponds and evaporation ponds.
June 2002	Installation of groundwater monitor wells, MW-2002-1 and MW-2002-2 under an interim action directed by NDEP.
March 2005	Implementation of the First-Step HFA (Brown and Caldwell, 2005) under the Unilateral Administrative Order ("UAO") issued by EPA for Initial Response Activities, EPA Docket No. 9-2005-0011 resulted in the installation of the first phase of B/W wells and three monitor wells in the Process Areas.
2007 - 2008	Implementation of the Second-Step HFA (Brown and Caldwell, 2007) including the installation of the second phase of B/W wells, and the preparation of several OU-specific work plans that describe additional on-Site monitor well installations under the Administrative Order for Remedial Investigation and Feasibility Study, U.S. EPA Docket No. 9-2007-0005.
2008	Implementation of the Anaconda Evaporation Ponds Removal Action Characterization Work Plan (Brown and Caldwell, 2008a), the initial phase of the Evaporation Ponds/Sulfide Tailings Operable Unit 4 ("OU-4") RI/FS prescribed under the Administrative Order for Remedial Investigation and Feasibility Study, U.S. EPA Docket No. 9-2007-0005.

1.2 Monitoring Program Objectives

The overarching objective of the groundwater monitoring program is to collect adequate data to support technical decisions that will be made by EPA's Remedial Project Manager ("RPM"), and project team, regarding the Site-Wide Groundwater OU and other OUs that require groundwater monitoring. Specific objectives include, but are not limited to:

- Characterization of groundwater flow conditions including hydrostratigraphy, horizontal and vertical gradients in the alluvial and bedrock aquifers, and the identification of flow boundaries and recharge sources;
- Characterization of the nature and extent, including temporal trends, of mine-related groundwater and the potential off-Site migration of contaminants via the groundwater pathway;
- Assessment of any potential human health and ecological risks associated with the groundwater pathway; and
- Continued evaluation of monitoring frequency, the list of analytes to be monitored over time, and the appropriate configuration for the monitor wells network associated with the Site.

1.3 Summary of Groundwater Monitoring Activities

The current groundwater monitoring network associated with the Site, depicted in Figure 1-3 and Plate 1, has evolved over time. The groundwater monitoring program through the four quarters of 2007 consisted of 79 active monitor wells/piezometers, 11 pumpback wells, and 21 domestic/supply wells. Well installations (B/W series) installed as part of the HFA program, from 2005 through the first quarter of 2008, have resulted in a significant increase in the number of wells to be monitored. As indicated in Table 1-2, the groundwater monitoring program at the end of 2008 consisted of a total of 101 monitoring locations including 86 monitor wells (49 wells in the shallow hydrostratigraphic zone, 17 wells in the intermediate zone, 20 wells in the deep zone, and 5 wells in bedrock), 11 pumpback wells, and 21 domestic/supply wells. Of the 101 locations, eight were used for measuring water levels only, while the remaining 94 were monitored for both water levels and water quality. Well names were revised in 2008 to reflect the hydrostratigraphic zone designations, and the modified well names were initially reported in the 1Q 2008 GMR.

Table 1-2. 2007 and 2008 Monitoring Locations

Date (Through)	Total	Monitor Wells and/or Piezometers	Pumpback Wells	Domestic/Supply Wells
2007	87	76	11	22
2008	101	91	11	21

Note: One domestic well (WDW-017) typically included in the monitoring program was not sampled in 2008 per the owner's lack of response to access their property.

1.4 Summary of Groundwater Investigations

During 2008, groundwater investigation activities were completed pursuant to the Second-Step HFA Work Plan (Brown and Caldwell, 2007) and the Anaconda Evaporation Ponds Removal Action Characterization Work Plan (Brown and Caldwell, 2008a). The scope of these characterization activities is summarized below. When characterization activities resulted in installation and sampling of monitor wells, pertinent information is included in this 2008 GMR.

Second-Step HFA Work Plan

The groundwater characterization activities conducted by ARC pursuant to the Second-Step HFA Work Plan and additional hydrologic tracer investigations included:

- Drilling of 15 boreholes using a roto-sonic core drilling rig, of which 12 encountered groundwater;
- Abandonment of one monitor well, B/W-5D, on a residential property and re-drilling and installation of a replacement well, B/W-5DR;
- Lithologic logging of the cores;
- Depth-specific (zonal) sampling of groundwater in the alluvial aquifer (and bedrock where encountered) at nominal 20-foot intervals from the top of the water table to a specified depth (unless modified by field conditions) using EPA-approved low-flow, minimal drawdown purging and sampling procedures;
- Collection of field parameters from the sampled zones including total and ferrous iron, pH, specific conductivity, temperature, dissolved oxygen ("DO"), oxidation-reduction potential ("ORP"), sulfate and alkalinity using routinely-calibrated field meters and accuracy checked water quality field test kits;
- Laboratory analyses of zonal groundwater samples for total and dissolved uranium and total organic carbon ("TOC");
- Collection of aquifer solid samples at drilling locations B/W-11 (four depth intervals), B/W-18 (three depth intervals), and B/W-19 (one depth interval) and preservation of the solid samples to prevent or minimize changes in oxidative state that might adversely affect sample representativeness during future geochemical testing;
- Construction of 42 monitor wells/piezometers in total including 18 screened in the "shallow" alluvial aquifer, 12 in the "intermediate" alluvial aquifer, 10 in the "deep alluvial aquifer, and 2 screened in bedrock;
- Collection of groundwater samples from each of the constructed monitor wells using EPA-approved low-flow, minimal drawdown purging and sampling procedures, and submittal of the groundwater samples for chemical analyses including 11 physical parameters and major ions, 30 metals/metalloids and 4 radiochemicals;
- Surveying and measurement of groundwater elevations in each new monitor well;
- Collection of surface water and groundwater samples at select locations for analysis of various environmental hydrologic tracers including oxygen 18 (^{18}O) and deuterium (^{2}H or D), tritium and helium, chlorofluorocarbons ("CFCs"), $^{15}N/^{14}N$ and ^{18}O isotopes in nitrate, $^{34}S/^{32}S$ and ^{18}O isotopes in sulfate, total uranium and ^{234}U and ^{238}U isotopes, ^{36}Cl isotopes and ^{11}B isotopes;
- Hydraulic (slug) testing of 57 wells and analysis of hydraulic test data;
- Collection of 37 core samples from 19 borehole locations for grain size distribution analysis to corroborate field lithologic descriptions;

- Installation of pressure transducers/data loggers in 19 monitor wells and 2 piezometers and routine collection of water level measurements; and
- Installation and surveying of a pressure transducer/data logger in the Yerington Pit Lake and routine collection of pit lake level measurements.

Results from all Second-Step HFA field activities are presented in the Second-Step Hydrogeologic Framework Assessment Data Summary Report (Brown and Caldwell, 2008b).

Anaconda Evaporation Ponds Removal Action Characterization Work Plan

The groundwater characterization and related activities conducted by ARC in October 2008 pursuant to the Anaconda Evaporation Ponds Removal Action Characterization Work Plan (Brown and Caldwell, 2008a) included:

- Drilling of 17 boreholes using direct push Geoprobe and hollow-stem auger drilling methods and collection of shallow and deep vadose zone soil samples;
- Collection of 16 groundwater grab samples with a hand bailer or peristaltic pump through the geoprobe rods or temporary well screens;
- Geochemical analysis of soil samples collected from each of the 17 boreholes, including shallow soils beneath overlying pond sediments and from deep soils immediately above the groundwater table;
- Geotechnical characterization of samples collected from shallow and deep intervals in the vadose zone at 8 of the 17 borehole locations;
- Collection of shallow soil samples from 8 of the 17 boreholes for Meteoric Water Mobility Procedure ("MWMP") to determine the potential for metals and contaminants to leach from the underlying soils;
- Collection of pond sediment and shallow sub-surface soil samples beneath the pond sediments from 43 locations using a hand coring system and geochemical analysis of those materials; and
- Completion of a tightly spaced, 100 percent-coverage, Multi-Agency Radiation Survey and Site Investigation Manual ("MARSSIM") level gamma radiological survey on the surface of the Finger Evaporation Ponds, Lined Evaporation Ponds and Unlined Evaporation Ponds.

Results of the characterization activities around the Anaconda Evaporation Ponds will be presented in a future Anaconda Evaporation Ponds Removal Action Characterization Data Summary Report.

SECTION 2.0
GROUNDWATER MONITORING PROGRAM

This section describes general aspects of the groundwater monitoring program, and provides more specific information on active wells comprising the current monitoring network, construction details for active wells, a list of inactive wells not currently used for monitoring, water level measurements, water quality sampling, and analytical requirements pursuant to the Draft GMP. Pumpback and monitor wells are sampled quarterly, and the domestic/supply wells are sampled once a year during the second quarterly monitoring event. Groundwater samples are not collected from the piezometers, as they are intended for measurements of groundwater elevation data only. However, all monitor wells and piezometers are subject to monthly groundwater elevation measurements.

Table 2-1 summarizes the active monitor wells currently included in the monitoring network, and provides well construction information and screen intervals relative to the shallow, intermediate and deep hydrostratigraphic zones. As noted previously, well construction diagrams for active wells are provided in Appendix C, and the locations of the wells are shown in Figure 1-3 and Plate 1.

2.1 Hydrostratigraphic Zone Designations

Alluvial groundwater flow at the Site is discussed in this and other reports with respect to three hydrostratigraphic units referred to as the shallow, intermediate and deep zones. The alluvial hydrostratigraphic zones have been designated based on the occurrence of discontinuous clay or fine grained silt layers, initially identified by Seitz (1982) and encountered in several of the existing monitor wells during drilling (Brown and Caldwell, 2006; Brown and Caldwell, 2007), are defined by elevation as follows:

- Shallow: >4,300 feet amsl
- Intermediate: 4,420 to 4,300 feet amsl
- Deep: <4,240 feet amsl

Screen elevations are used to assign hydrostratigraphic zone designations for each well. A hydrostratigraphic zone designation of "bedrock" has been given to wells with screen intervals constructed in bedrock, below the alluvial soils, regardless of elevation. Monitor well screen intervals and hydrostratigraphic zone designations for the active wells that comprise the Site-wide groundwater monitoring network are presented in Figure 2-1.

Table 2-1 summarizes the active monitor wells currently included in the monitoring network, identified by the respective hydrostratigraphic zone that it represents. Figure 2-1 illustrates the relative position of the well screen for active monitor wells. The locations of the wells by shallow, intermediate, and deep hydrostratigraphic zone are shown in Figures 2-2, 2-3, and 2-4 respectively.

Table 2-1. Yerington Mine Groundwater Monitor Wells (Active)

Revised Well Name	Former Well Name	Hydrostratigraphic Zone	Well Type	Well Screen Interval feet amsl
Shallow Zone Monitor Wells				
PW-1S	PW-1	Shallow	Sampling	4335.1 - 4312.6
PW-2S	PW-2	Shallow	Sampling	4335.6 - 4315.1
PW-3S	PW-3	Shallow	Sampling	4334.0 - 4313.5
PW-4S	PW-4	Shallow	Sampling	4331.5 - 4312.0
PW-5S	PW-5	Shallow	Sampling	4334.4 - 4313.9
PW-6S	PW-6	Shallow	Sampling	4340.0 - 4323.0
PW-7S	PW-7	Shallow	Sampling	4339.3 - 4319.8
PW-8S	PW-8	Shallow	Sampling	4336.7 - 4316.7
PW-9S	PW-9	Shallow	Sampling	4337.4 - 4317.4
PW-10S	PW-10	Shallow	Sampling	4338.6 - 4318.6
PW-11S	PW-11	Shallow	Sampling	4339.7 - 4319.7
B/W-1S	B/W-1S	Shallow	Sampling	4334.6 - 4314.6
B/W-3S	B/W-3S	Shallow	Sampling	4330.7 - 4310.7
B/W-4S	B/W-4S	Shallow	Sampling	4316.8 - 4296.8
B/W-5SR	B/W-5RS	Shallow	Sampling	4326.1 - 4306.1
B/W-6S	B/W-6S	Shallow	Sampling	4326.6 - 4306.6
B/W-8S	B/W-8S	Shallow	Sampling	4326.0 - 4306.0
B/W-9S	B/W-9S	Shallow	Sampling	4331.7 - 4311.7
B/W-10S	B/W-10S	Shallow	Sampling	4321.5 - 4301.5
B/W-11S	B/W-11S	Shallow	Sampling	4330.1 - 4310.1
B/W-13S	B/W-13	Shallow	Sampling	4364.3 - 4344.3
B/W-14S	B/W-14	Shallow	Sampling	4357.0 - 4337.0
B/W-15S	B/W-15	Shallow	Sampling	4348.5 - 4328.5

Table 2-1. Yerington Mine Groundwater Monitor Wells (Active) - Continued

Revised Well Name	Former Well Name	Hydrostratigraphic Zone	Well Type	Well Screen Interval feet amsl		
Shallow Zone Monitor Wells						
B/W-16S	B/W-16	Shallow	Sampling	4328.8	-	4308.8
B/W-18S	B/W-18S	Shallow	Sampling	4333.8	-	4308.8
B/W-19S	B/W-19S	Shallow	Sampling	4331.6	-	4311.6
B/W-20S	B/W-20	Shallow	Sampling	4377.4	-	4357.4
B/W-21S	B/W-21	Shallow	Sampling	4339.0	-	4319.0
B/W-22S	B/W-22	Shallow	Sampling	4309.6	-	4289.6
B/W-25S	B/W-25S	Shallow	Sampling	4322.8	-	4302.8
B/W-27S	B/W-27S	Shallow	Sampling	4339.0	-	4319.0
B/W-28S	B/W-28S	Shallow	Sampling	4331.6	-	4311.6
B/W-29S	B/W-29S	Shallow	Sampling	4315.0	-	4295.0
B-2S	B-2	Shallow	Water Level	NR	-	NR
B-3S	B-3	Shallow	Water Level	NR	-	NR
D4BC-1S	D4BC-1	Shallow	Sampling	4333.9	-	4313.9
D5AC-1S	D5AC-1	Shallow	Sampling	4332.4	-	4327.4
MW-1S	MW-1	Shallow	Sampling	4344.0	-	4329.0
MW-2S	MW-2	Shallow	Sampling	4326.6	-	4311.6
MW-4S	MW-4	Shallow	Sampling	4325.7	-	4310.7
MW-5S	MW-5	Shallow	Sampling	4331.0	-	4316.0
MW2002-1S	MW2002-1	Shallow	Sampling	4331.9	-	4321.9
MW2002-2S	MW2002-2	Shallow	Sampling	4324.1	-	4314.1
P-1S	P-1	Shallow	Water Level	4339.1	-	4319.1
PA-MW-1S	PA-MW-1	Shallow	Sampling	4346.7	-	4326.7
PA-MW-2S	PA-MW-2	Shallow	Sampling	4347.1	-	4327.1
PA-MW-3S	PA-MW-3	Shallow	Sampling	4348.1	-	4328.1
USEPA2S	USEPA2	Shallow	Sampling	4348.3	-	4338.3
USGS-13S	USGS-13	Shallow	Sampling	4342.1	-	4332.1
USGS-2BS	USGS-2B	Shallow	Sampling	4326.5	-	4324.6
UW-1S	UW-1	Shallow	Sampling	4332.7	-	4312.7
W5AA-2S	W5AA-2	Shallow	Water Level	4333.2	-	4313.2
W5AA-3S	W5AA-3	Shallow	Sampling	4342.8	-	4332.8
W5AB-2S	W5AB-2	Shallow	Sampling	4337.5	-	4322.5
W5AD-1S	W5AD-1	Shallow	Water Level	4330.9	-	4325.9
W5BB-S	W5BB	Shallow	Sampling	4337.1	-	4307.1
WRP-1S	WRP-1	Shallow	Water Level	4382.8	-	4381.8
WRP-2S	WRP-2	Shallow	Water Level	4382.6	-	4372.6
WW-1S	WW-1	Shallow	Sampling	4364.2	-	4344.2
WW-2S	WW-2	Shallow	Sampling	4339.4	-	4319.4
Intermediate Zone Monitor Wells						
B/W-2I	B/W-2I	Intermediate	Sampling	4279.7	-	4259.7
B/W-3I	B/W-3I	Intermediate	Sampling	4266.0	-	4246.0
B/W-4I	B/W-4I	Intermediate	Sampling	4276.4	-	4256.4
B/W-5IR	B/W-5RI	Intermediate	Sampling	4278.9	-	4258.9
B/W-6I	B/W-6D	Intermediate	Sampling	4260.0	-	4250.0
B/W-7I	B/W-7	Intermediate	Sampling	4304.8	-	4284.8

Table 2-1. Yerington Mine Groundwater Monitor Wells (Active) - Continued

Revised Well Name	Former Well Name	Hydrostratigraphic Zone	Well Type	Well Screen Interval feet amsl		
Intermediate Zone Monitor Wells - Continued						
B/W-8I	B/W-8D	Intermediate	Sampling	4284.3	-	4264.3
B/W-9I	B/W-9I	Intermediate	Sampling	4281.3	-	4261.3
B/W-19I	B/W-19I	Intermediate	Sampling	4281.6	-	4261.6
B/W-25I	B/W-25I	Intermediate	Sampling	4249.9	-	4229.9
B/W-28I	B/W-28I	Intermediate	Sampling	4277.4	-	4257.4
B/W-29I	B/W-29I1	Intermediate	Sampling	4288.0	-	4278.0
MW2002-2I	MW2002-2I	Intermediate	Sampling	4249.7	-	4239.7
W4CB-1I	W4CB-1	Intermediate	Water Level	4280.2	-	4265.2
W4CB-2I	W4CB-2	Intermediate	Sampling	4307.9	-	4295.9
W5AA-1I	W5AA-1	Intermediate	Sampling	4293.4	-	4278.4
W5AB-3I	W5AB-3	Intermediate	Sampling	4309.0	-	4284.5
Deep Zone Monitor Wells						
B/W-1D1	B/W-1I1	Deep	Sampling	4230.4	-	4210.4
B/W-1D2	B/W-1I2	Deep	Sampling	4139.8	-	4119.8
B/W-1D3	B/W-1D	Deep	Sampling	4028.6	-	4018.6
B/W-2D	B/W-2D	Deep	Sampling	4224.3	-	4204.3
B/W-3D	B/W-3D	Deep	Sampling	4222.0	-	4202.0
B/W-4D	B/W-4D	Deep	Sampling	4228.1	-	4208.1
B/W-5DR	B/W-5RD	Deep	Sampling	4241.5	-	4221.5
B/W-9D	B/W-9D	Deep	Sampling	4206.8	-	4186.8
B/W-10D	B/W-10D	Deep	Sampling	4241.0	-	4221.0
B/W-11D	B/W-11D	Deep	Sampling	4197.7	-	4177.7
B/W-18D1	B/W-18I	Deep	Sampling	4232.8	-	4212.8
B/W-18D2	B/W-18D	Deep	Sampling	4194.2	-	4174.2
B/W-19D	B/W-19D	Deep	Sampling	4216.6	-	4196.6
B/W-25D	B/W-25D	Deep	Sampling	4134.0	-	4114.0
B/W-27D	B/W-27D	Deep	Sampling	4124.8	-	4104.8
B/W-28D	B/W-28D	Deep	Sampling	4221.9	-	4201.9
B/W-29D1	B/W-29I2	Deep	Sampling	4225.0	-	4215.0
B/W-29D3	B/W-29D	Deep	Sampling	4050.0	-	4030.0
W32DC-D	W32DC	Deep	Sampling	4240.4	-	4197.4
W5DB-D	W5DB	Deep	Sampling	4239.6	-	4211.6
Bedrock Monitor Wells						
B/W-11B	B/W-11D3	Bedrock	Sampling	4132.9	-	4122.9
B/W-23B	B/W-23	Bedrock	Sampling	4340.3	-	4330.3
WW-36B	WW-36	Bedrock	Sampling	4306.0	-	4106.0
WW-40B	WW-40	Bedrock	Sampling	NR	-	NR
WW-59B	WW-59	Bedrock	Sampling	4280.1	-	3888.1

Notes: NR = not recorded

2.2 Active Monitor Well Network

Wells included in the monitoring network must reliably represent site-specific groundwater conditions, and satisfy the following criteria: 1) have documentation of drilling conditions, borehole depth and lithology, and well design and construction materials; and 2) have screen intervals that are consistent in length (to the extent practicable), appropriate for the water-yielding intervals encountered in the boreholes, and generally less than or equal to 20 feet in length. Mitigating circumstances for the inclusion of monitor wells that do not meet the general and/or specific criteria discussed above include wells that have been monitored for long periods of time and wells located for meeting the monitoring objectives described in Section 1.0.

The current groundwater monitoring well network is configured to account for:

1) Potential off-Site migration of mine-related groundwater (i.e., groundwater flow directions and potential solute migration pathways);
2) Seasonal effects associated with recharge to the Site, particularly the effects of agricultural operations immediately north of the Site (i.e., the effects of the irrigation mound on groundwater flow and quality);
3) Development of background water quality conditions; and
4) Localized characterization of potential sources (i.e., OUs) of contaminants to groundwater.

Table 2-2 includes well construction information and geographical location reference information for all active wells in the groundwater monitoring network. Further, graphical well construction logs and boring logs for associated wells are included in Appendix C.

Table 2-2. Summary of Construction Details for Active Monitor Wells

							Elevation/Well Depth			Borehole & Annular Material					Well Casing & Screen					Survey Location					
Revised Well Name	Former Well Name	Note	Hydrostrati-graphic Zone	Well Type	Well Log	Completion Date	Meas. Pt. Elev.	Meas. Pt Stickup	Total Depth of Cased Well	Boring Diameter	Grout Seal Depth	Annulus Grout Seal	Filter Pack Depth	Filter Pack Material/ Size	Casing/ Screen Type	Casing/ Screen Diameter	Screen Slot Size	Well Screen Interval		Township, Range, Section				Nevada W State Plane	
							feet amsl	feet ags	feet bgs	inches	feet bgs		feet bgs			inches	inches	feet bgs	feet amsl	Twp	Rng	Sec	Qtr/Qtr	Northing	Easting
Pumpback Wells																									
PW-1S	NA	a,d	Shallow	Sampling	Y	10/01/1985	4361.35	0.75	48.5	12	17 - 19	Bentonite	19 - 48.5	#10-20 sand	S80 PVC	5.76	0.02	25.5 - 48	4335.1 - 4312.6	T13N	R25E	S4	NW/SW	1554674.40	326030.79
PW-2S	NA	a,d	Shallow	Sampling	Y	10/01/1985	4367.89	0.77	53	12	27 - 28	Bentonite	28 - 53	#10-20 sand	S80 PVC	5.76	0.02	31.5 - 52	4335.6 - 4315.1	T13N	R25E	S4	NW/SW	1554596.30	325556.17
PW-3S	NA	a,d	Shallow	Sampling	Y	10/01/1985	4372.09	0.61	58.5	12	29 - 31	Bentonite	31 - 58.5	#10-20 sand	S80 PVC	5.76	0.02	37.5 - 58	4334.0 - 4313.5	T13N	R25E	S4	SW/NW	1554732.10	325209.87
PW-4S	NA	a,d	Shallow	Sampling	Y	10/01/1985	4366.91	0.87	56	12	28 - 30	Bentonite	30 - 56	#10-20 sand	S80 PVC	5.76	0.02	34.5 - 54	4331.5 - 4312.0	T13N	R25E	S5	SE/NE	1555270.30	324927.23
PW-5S	NA	a,d	Shallow	Sampling	Y	10/01/1985	4368.76	0.36	55	12	27 - 29	Bentonite	29 - 55	#10-20 sand	S80 PVC	5.76	0.02	34 - 54.5	4334.4 - 4313.9	T13N	R25E	S5	SE/NE	1555699.20	324701.55
PW-6S	NA	a,d	Shallow	Sampling	Y	10/21/1998	4368.57	0.56	48	12	3.5 - 26	Cem/Bent	26 - 48	#3 sand	S40 PVC	4	0.02	28 - 45	4340.0 - 4323.0	T13N	R25E	S5	NW/NE	1556807.80	323803.97
PW-7S	NA	a,d	Shallow	Sampling	Y	10/22/1998	4366.44	0.59	49	12	3.5 - 25	Cem/Bent	25 - 49	#3 sand	S40 PVC	4	0.02	26.5 - 46	4339.3 - 4319.8	T13N	R25E	S5	NW/NE	1556809.40	323304.79
PW-8S	NA	a,d	Shallow	Sampling	Y	10/22/1998	4366.79	0.63	52.5	12	3.5 - 26.5	Cem/Bent	26.5 - 52.5	#3 sand	S40 PVC	4	0.02	29.5 - 49.5	4336.7 - 4316.7	T13N	R25E	S5	NW/NE	1556803.00	322804.41
PW-9S	NA	a,d	Shallow	Sampling	Y	10/23/1998	4366.99	0.58	52	12	3.5 - 26.5	Cem/Bent	26.5 - 52	#3 sand	S40 PVC	4	0.02	29 - 49	4337.4 - 4317.4	T13N	R25E	S5	NE/NW	1556795.90	322304.70
PW-10S	NA	a,d	Shallow	Sampling	Y	10/23/1998	4366.26	0.66	50	12	3.5 - 24.5	Cem/Bent	24.5 - 50	#3 sand	S40 PVC	4	0.02	27 - 47	4338.6 - 4318.6	T13N	R25E	S5	NE/NW	1556794.80	321804.19
PW-11S	NA	a,d	Shallow	Sampling	Y	10/24/1998	4369.30	0.56	52	12	3.5 - 26.5	Cem/Bent	26.5 - 52	#3 sand	S40 PVC	4	0.02	29 - 49	4339.7 - 4319.7	T13N	R25E	S5	NE/NW	1556786.80	321303.50
Shallow Monitor Wells																									
B/W-1S	NA	d	Shallow	Sampling	Y	10/22/2007	4357.60	3.00	40	6	0 - 11	Cem/Bent	17 - 40	#10-20 sand	S40 PVC	2	0.01	20 - 40	4334.6 - 4314.6	T13N	R25E	S33	SE/SW	1557627.70	327083.52
B/W-3S	NA	d	Shallow	Sampling	Y	9/26/2007	4353.37	2.67	40.5	6	0 - 11	Cem/Bent	17 - 40.5	#10-20 sand	S40 PVC	2	0.01	20 - 40	4330.7 - 4310.7	T13N	R25E	S32	SE/NW	1561212.30	322346.23
B/W-4S	NA	d	Shallow	Sampling	Y	1/21/2008	4384.87	3.07	85	6	0 - 55	Cem/Bent	61 - 85	#10-20 sand	S40 PVC	2	0.01	65 - 85	4316.8 - 4296.8	T13N	R25E	S29	NW/SE	1563798.40	322906.78
B/W-5SR	B/W-5RS	d	Shallow	Sampling	Y	11/16/2007	4359.17	3.07	50	6	0 - 20	Cem/Bent	27 - 50	#10-20 sand	S40 PVC	2	0.01	30 - 50	4326.1 - 4306.1	T13N	R25E	S31	NE/SE	1560194.80	319807.11
B/W-6S	NA	d	Shallow	Sampling	Y	1/30/2008	4434.89	3.29	145	6	0 - 95	Cem/Bent	101 - 145	#10-20 sand	S40 PVC	2	0.01	105 - 125	4326.6 - 4306.6	T13N	R25E	S6	NE/SE	1554973.10	319200.78
B/W-8S	NA	d	Shallow	Sampling	Y	10/9/2007	4468.77	2.77	160	6	0 - 131	Cem/Bent	137 - 160	#10-20 sand	S80 PVC	2	0.01	140 - 160	4326.0 - 4306.0	T13N	R25E	S6	SE/NE	1565001.30	320284.57
B/W-9S	NA	d	Shallow	Sampling	Y	11/7/2007	4354.62	2.92	40	6	0 - 11	Cem/Bent	17 - 40	#10-20 sand	S40 PVC	2	0.01	20 - 40	4331.7 - 4311.7	T13N	R25E	S29	SW/NW	1558834.20	323801.70
B/W-10S	NA	d	Shallow	Sampling	Y	1/23/2008	4344.44	2.94	40	6	0 - 10	Cem/Bent	18 - 40	#10-20 sand	S40 PVC	2	0.01	20 - 40	4321.5 - 4301.5	T13N	R25E	S20	NE/SE	1569190.90	324465.48
B/W-11S	NA	d	Shallow	Sampling	Y	11/4/2007	4371.06	2.96	58	6	0 - 29	Cem/Bent	35 - 60	#10-20 sand	S40 PVC	2	0.01	38 - 58	4330.1 - 4310.1	T13N	R25E	S5	SE/NW	1554621.20	321919.30
B/W-13S	B/W-13	a	Shallow	Sampling	Y	7/13/2005	4505.86	2.36	159.5	6	0 - 136	Cem/Bent	136 - 160	#10-20 sand	S40 PVC	2	0.02	139 - 159	4364.3 - 4344.3	T13N	R25E	S28	NE/NW	1535222.90	326838.90
B/W-14S	B/W-14	a	Shallow	Sampling	Y	7/6/2005	4396.56	2.36	57.5	6	28 - 35	Cem/Bent	34.3 - 60	#10-20 sand	S40 PVC	2	0.02	37.2 - 57.2	4357.0 - 4337.0	T13N	R25E	S21	SE/SE	1538561.10	329551.60
B/W-15S	B/W-15	a	Shallow	Sampling	Y	7/22/2005	4386.76	2.46	56	6	34 - 34	Cem/Bent	33.5 - 60	#10-20 sand	S40 PVC	2	0.02	35.8 - 55.8	4348.5 - 4328.5	T13N	R25E	S21	NE/NE	1544187.50	330160.20
B/W-16S	B/W-16	a,d	Shallow	Sampling	Y	10/7/2007	4521.69	2.89	295	6	0 - 181	Cem/Bent	187 - 213	#10-20 sand	S80 PVC	2	0.01	190 - 210	4328.8 - 4308.8	T13N	R25E	S31	SE/SW	1557432.80	316975.20
B/W-18S	NA	c,d	Shallow	Sampling	Y	2/19/2008	4351.78	2.98	45	6	0 - 1	Cem/Bent	12 - 40	#10-20 sand	S40 PVC	2	0.02	15 - 40	4333.8 - 4308.8	T13N	R25E	S32	SW/SW	1558360.40	321195.14
B/W-19S	NA	d	Shallow	Sampling	Y	1/9/2008	4424.64	3.04	110	6	0 - 80	Cem/Bent	86 - 110	#10-20 sand	S40 PVC	2	0.01	90 - 110	4331.6 - 4311.6	T13N	R25E	S32	SW/SW	1562916.40	319969.76
B/W-20S	B/W-20	a,d	Shallow	Sampling	Y	7/13/2007	4415.09	2.69	58	8	0 - 26	Cem/Bent	32 - 55	#10-20 sand	S40 PVC	4	0.01	35 - 55	4377.4 - 4357.4	T13N	R25E	S21	SW/SE	1536625.50	328655.38
B/W-21S	B/W-21	a,d	Shallow	Sampling	Y	7/24/2007	4405.76	2.76	85.5	6	0 - 56	Cem/Bent	61 - 84	#10-20 sand	S40 PVC	2	0.01	64 - 84	4339.0 - 4319.0	T13N	R25E	S16	SE/SE	1542312.70	329274.86
B/W-22S	B/W-22	a,d	Shallow	Sampling	Y	7/18/2007	4487.11	2.51	195	6	0 - 166	Cem/Bent	172 - 195	#10-20 sand	S80 PVC	2	0.01	175 - 195	4309.6 - 4289.6	T13N	R25E	S7	NE/NE	1552338.20	319305.50
B/W-25S	NA	d	Shallow	Sampling	Y	1/31/2008	4354.97	3.17	49	6	0 - 19	Cem/Bent	25 - 49	#10-20 sand	S40 PVC	2	0.01	29 - 49	4322.8 - 4302.8	T13N	R25E	S5	NE/NE	1557287.40	325020.18
B/W-27S	NA	d	Shallow	Sampling	Y	2/7/2008	4357.87	2.87	36	6	0 - 6	Cem/Bent	12 - 36	#10-20 sand	S40 PVC	2	0.01	16 - 36	4339.0 - 4319.0	T13N	R25E	S33	NE/SE	1559954.50	329140.70
B/W-28S	NA	d	Shallow	Sampling	Y	1/15/2008	4375.03	3.43	60	6	0 - 30	Cem/Bent	36 - 60	#10-20 sand	S40 PVC	2	0.01	40 - 60	4331.6 - 4311.6	T13N	R25E	S29	NE/NE	1565787.00	323816.36
B/W-29S	NA	d	Shallow	Sampling	Y	1/6/2008	4413.19	3.19	115	6	0 - 85	Cem/Bent	91 - 115	#10-20 sand	S40 PVC	2	0.01	95 - 115	4315.0 - 4295.0	T13N	R25E	S4	NE/SW	1554427.50	326956.73
B-2S	B-2	a,d	Shallow	Water Level	N	5/18/1989	4357.76	1.24	27.7	NR	NR - NR	NR	NR - NR	NR	S40 PVC	2	NR	NR - NR	NR - NR	T13N	R25E	S4	NW/SW	1554738.10	325666.75
B-3S	B-3	a,d	Shallow	Water Level	N	5/18/1989	4356.64	1.34	33.8	NR	NR - NR	NR	NR - NR	NR	S40 PVC	2	NR	NR - NR	NR - NR	T13N	R25E	S4	NW/SW	1554732.40	325395.14

Table 2-2. Summary of Construction Details for Active Monitor Wells - Continued

							Elevation/Well Depth			Borehole & Annular Material					Well Casing & Screen					Survey Location					
Revised Well Name	Former Well Name	Note	Hydrostrati-graphic Zone	Well Type	Well Log	Completion Date	Meas. Pt. Elev.	Meas. Pt Stickup	Total Depth of Cased Well	Boring Diameter	Grout Seal Depth	Annulus Grout Seal	Filter Pack Depth	Filter Pack Material/ Size	Casing/ Screen Type	Casing/ Screen Diameter	Screen Slot Size	Well Screen Interval		Township, Range, Section				Nevada W State Plane	
							feet amsl	feet ags	feet bgs	inches	feet bgs		feet bgs			inches	inches	feet bgs	feet amsl	Twp	Rng	Sec	Qtr/Qtr	Northing	Easting
Shallow Monitor Wells - Continued																									
D4BC-1S	D4BC-1	a,d	Shallow	Sampling	Partial	10/01/1985	4352.94	0.00	40	8	13 - 15	Bentonite	15 - 40	#10-20 sand	S40 PVC	4	0.02	19 - 39	4333.9 - 4313.9	T13N	R25E	S4	SW/NW	1556288.30	325041.72
D5AC-1S	D5AC-1	a,d	Shallow	Sampling	N	5/6/1984	4362.72	2.31	33	7	0 - 28	Cement	28 - 33	NR	S40 PVC	2	NR	28 - 33	4332.4 - 4327.4	T13N	R25E	S5	SE/NE	1556008.10	323923.67
MW-1S	MW-1	a,d	Shallow	Sampling	Partial	5/13/1992	4496.23	3.22	166	4.5	0 - 10	Cement	149 - 166	NR	S40 PVC	4	0.02	149 - 164	4344.0 - 4329.0	T13N	R25E	S8	SW/NE	1547538.00	322750.12
MW-2S	MW-2	a,d	Shallow	Sampling	Partial	12/13/1992	4394.59	2.95	80	10	0 - 20	Cement	20 - 100	NR	S40 PVC	4	0.02	65 - 80	4326.6 - 4311.6	T13N	R25E	S8	SW/NE	1550574.00	323340.70
MW-4S	MW-4	a,d	Shallow	Sampling	Partial	12/10/1992	4411.93	1.19	100	10	0 - 20	Cement	20 - 100	NR	S40 PVC	4	0.02	85 - 100	4325.7 - 4310.7	T13N	R25E	S5	SW/SW	1553598.30	320585.28
MW-5S	MW-5	a,d	Shallow	Sampling	Partial	10/20/1995	4382.90	1.87	65	8	0 - 50	Cement	50 - 65	NR	S40 PVC	4	0.25	50 - 65	4331.0 - 4316.0	T13N	R25E	S5	SW/NE	1553240.30	322784.56
MW2002-1S	MW2002-1	a,d	Shallow	Sampling	N	6/13/2002	4351.19	1.25	29.5	6	0 - 17	Cem/Bent	17 - 29.5	#2-12 sand	S40 PVC	2	0.02	18 - 28	4331.9 - 4321.9	T14N	R25E	S32	SW/SE	1557993.30	322547.20
MW2002-2S	MW2002-2	a,d	Shallow	Sampling	N	6/14/2002	4376.13	1.00	61.5	6	0 - 48.5	Cem/Bent	48.5 - 61.5	#2-12 sand	S40 PVC	2	0.02	51 - 61	4324.1 - 4314.1	T13N	R25E	S5	SW/NW	1556121.90	320491.30
P-1S	P-1	a,d	Shallow	Water Level	Y	9/27/2005	4368.09	2.39	46.6	6	0 - 26.5	Cem/Bent	23.5 - 50	#10-20 sand	S40 PVC	2	0.02	26.6 - 46.6	4339.1 - 4319.1	T13N	R25E	S5	NE/NW	1556783.80	321813.80
PA-MW-1S	PA-MW-1	a,d	Shallow	Sampling	Y	1/20/2005	4441.04	3.80	111	6	0 - 86	Cem/Bent	86 - 126	#3 sand	S40 PVC	2	0.02	90.5 - 111	4346.7 - 4326.7	T13N	R25E	S16	NW/NW	1546291.90	325676.01
PA-MW-2S	PA-MW-2	a,d	Shallow	Sampling	Y	1/21/2005	4484.38	2.80	155	6	0 - 130	Cem/Bent	130 - 159	#3 sand	S40 PVC	2	0.02	135 - 155	4347.1 - 4327.1	T13N	R25E	S8	SW/SE	1547230.20	322935.95
PA-MW-3S	PA-MW-3	a,d	Shallow	Sampling	Y	1/19/2005	4460.17	3.10	129.5	6	0 - 105	Cem/Bent	105 - 130	#3 sand	S40 PVC	2	0.02	109 - 129	4348.1 - 4328.1	T13N	R25E	S17	NE/NE	1546801.30	324617.22
USEPA2S	USEPA2	a,d	Shallow	Sampling	Y	10/21/2000	4358.22	-0.34	21	10	0 - 8	Cem/Bent	8 - 21	#3 sand	S40 PVC	2	NR	10.3 - 20.3	4348.3 - 4338.3	T14N	R25E	S33	SE/SE	1557370.60	329881.42
USGS-13S	USGS-13	a,d	Shallow	Sampling	N	6/10/1976	4349.22	0.87	20	NR	NR - NR	NR	NR - NR	NR	S40 PVC	2	NR	6.2 - 16.2	4342.1 - 4332.1	T14N	R25E	S32	SW/SE	1558638.20	322711.19
USGS-2BS	USGS-2B	a,d	Shallow	Sampling	Partial	6/8/1976	4354.32	0.16	29.7	NR	NR - NR	NR	NR - NR	NR	S40 PVC	2	NR	27.7 - 29.6	4326.5 - 4324.6	T13N	R25E	S4	NW/SW	1554830.10	325451.48
UW-1S	UW-1	a,d	Shallow	Sampling	Partial	10/01/1985	4443.83	2.11	129	8	80 - 81	Bentonite	105 - 130	#10-20 sand	S40 PVC	4	0.02	109 - 129	4332.7 - 4312.7	T13N	R25E	S4	NE/SE	1549483.70	324461.14
W5AA-2S	W5AA-2	a,d	Shallow	Water Level	Y	10/26/1983	4352.46	1.23	39	10	0 - 18	Cement	18 - 39	NR	FbrGlss	4.15	NR	18 - 38	4333.2 - 4313.2	T13N	R25E	S5	NE/NE	1556449.50	324540.35
W5AA-3S	W5AA-3	a,d	Shallow	Sampling	Y	10/24/1998	4356.89	4.08	20	7.25	2 - 9	Cem/Bent	9 - 20	#3 sand	FbrGlss	4.15	0.02	10 - 20	4342.8 - 4332.8	T13N	R25E	S5	SW/NE	1556563.70	324051.71
W5AB-2S	W5AB-2	a,d	Shallow	Sampling	Y	10/01/1983	4350.90	1.36	30	10	0 - 12	Cement	10 - 27	NR	FbrGlss	4.15	NR	12 - 27	4337.5 - 4322.5	T13N	R25E	S5	NW/NE	1557291.30	322713.78
W5AD-1S	W5AD-1	a,d	Shallow	Water Level	N	5/2/1982	4368.14	2.20	40	7	32 - 33	Bentonite	33 - 40	NR	S40 PVC	2	NR	35 - 40	4330.9 - 4325.9	T13N	R25E	S4	NW/SW	1554506.10	325271.35
W5BB-S	W5BB	a,d	Shallow	Sampling	Y	10/23/1983	4355.93	0.83	48	10	0 - 18	Cement	18 - 48	NR	FbrGlss	4.15	NR	18 - 48	4337.1 - 4307.1	T13N	R25E	S5	NW/NW	1557219.20	320808.58
WRP-1S	WRP-1	a,d	Shallow	Water Level	Y	6/19/2007	4393.80	2.00	19	8	0 - 5	Cem/Bent	7 - 19	#2-12 sand	S40 PVC	2	0.02	9 - 19	4382.8 - 4392.8	T13N	R25E	S21	SE/NE	1539617.70	329827.10
WRP-2S	WRP-2	a,d	Shallow	Water Level	Y	6/19/2007	4393.05	2.50	18	8	0 - 4	Cem/Bent	6 - 18	#2-12 sand	S40 PVC	2	0.02	8 - 18	4382.6 - 4372.6	T13N	R25E	S21	NE/NE	1541520.10	330064.70
WW-1S	WW-1	a,c,d	Shallow	Sampling	Partial	NR	4409.91	2.29	68.4	NR	0 - 30	Cement	30 - 68.4	Pea Gravel	Steel	8	NR	43.4 - 63.4	4364.2 - 4344.2	T13N	R25E	S16	SE/NE	1544754.70	328783.42
WW-2S	WW-2	a,c,d	Shallow	Sampling	Partial	NR	4407.07	1.48	91.2	NR	0 - 30	Cement	30 - 91.2	Pea Gravel	Steel	6	NR	66.2 - 86.2	4339.4 - 4319.4	T13N	R25E	S16	SE/NE	1544013.70	328996.37
Intermediate Wells																									
B/W-2I	NA	d	Intermediate	Sampling	Y	10/17/2007	4351.86	3.16	89	6	0 - 60	Cem/Bent	66 - 89	#10-20 sand	S40 PVC	2	0.01	69 - 89	4279.7 - 4259.7	T13N	R25E	S32	SE/SW	1557987.90	322525.68
B/W-3I	NA	d	Intermediate	Sampling	Y	9/27/2007	4353.67	3.17	104.5	6	0 - 75	Cem/Bent	81 - 105	#10-20 sand	S40 PVC	2	0.01	84.5 - 105	4266.0 - 4246.0	T13N	R25E	S32	SE/NW	1561209.30	322320.05
B/W-4I	NA	d	Intermediate	Sampling	Y	1/21/2008	4384.51	3.07	125	6	0 - 95	Cem/Bent	101 - 125	#10-20 sand	S40 PVC	2	0.01	105 - 125	4276.4 - 4256.4	T13N	R25E	S29	NW/SE	1563779.60	322893.55
B/W-5IR	B/W-5RI	d	Intermediate	Sampling	Y	11/16/2007	4359.27	2.87	100	6	0 - 66	Cem/Bent	74 - 97.5	#10-20 sand	S40 PVC	2	0.01	77.5 - 97.5	4278.9 - 4258.9	T13N	R25E	S29	NW/SE	1560181.80	319805.07
B/W-6I	B/W-6D	b	Intermediate	Sampling	Y	9/26/2005	4434.01	2.21	182	6	0 - 171	Cem/Bent	171 - 188	#10-20 sand	S40 PVC	2	0.02	172 - 182	4260.0 - 4250.0	T13N	R25E	S6	NE/SE	1554968.40	319206.90
B/W-7I	B/W-7	a	Intermediate	Sampling	Y	8/14/2005	4481.21	2.41	194.25	6	0 - 169	Cem/Bent	169 - 195	#10-20 sand	S40 PVC	2	0.02	174 - 194	4304.8 - 4284.8	T14N	R15W	S31	SW/NE	1560229.10	317572.00
B/W-8I	B/W-8D	b	Intermediate	Sampling	Y	8/21/2005	4468.33	2.43	201.8	6	0 - 178	Cem/Bent	178 - 203	#10-20 sand	S40 PVC	2	0.02	182 - 202	4284.3 - 4264.3	T14N	R15W	S29	NW/SW	1565005.70	320292.00
B/W-9I	NA	d	Intermediate	Sampling	Y	11/7/2007	4354.29	2.99	90	6	0 - 61	Cem/Bent	67 - 90	#10-20 sand	S40 PVC	2	0.01	70 - 90	4281.3 - 4261.3	T13N	R25E	S32	NW/SE	1558854.40	323802.05
B/W-19I	NA	d	Intermediate	Sampling	Y	1/11/2008	4424.58	2.98	160	6	0 - 130	Cem/Bent	136 - 160	#10-20 sand	S80 PVC	2	0.01	140 - 160	4281.6 - 4261.6	T13N	R25E	S29	SW/SW	1562917.90	319979.90
B/W-25I	NA	d	Intermediate	Sampling	Y	2/1/2008	4355.00	3.10	122	6	0 - 92	Cem/Bent	98 - 122	#10-20 sand	S40 PVC	2	0.01	102 - 122	4249.9 - 4229.9	T13N	R25E	S5	NE/NE	1557296.60	325021.36
B/W-28I	NA	d	Intermediate	Sampling	Y	1/17/2008	4375.41	3.01	115	6	0 - 85	Cem/Bent	91 - 115	#10-20 sand	S40 PVC	2	0.01	95 - 115	4277.4 - 4257.4	T13N	R25E	S29	NE/NE	1565789.70	323796.29

Table 2-2. Summary of Construction Details for Active Monitor Wells - Continued

							Elevation/Well Depth			Borehole & Annular Material					Well Casing & Screen					Survey Location					
Revised Well Name	Former Well Name	Note	Hydrostrati-graphic Zone	Well Type	Well Log	Completion Date	Meas. Pt. Elev.	Meas. Pt Stickup	Total Depth of Cased Well	Boring Diameter	Grout Seal Depth	Annulus Grout Seal	Filter Pack Depth	Filter Pack Material/ Size	Casing/ Screen Type	Casing/ Screen Diameter	Screen Slot Size	Well Screen Interval		Township, Range, Section				Nevada W State Plane	
							feet amsl	feet ags	feet bgs	inches	feet bgs		feet bgs			inches	inches	feet bgs	feet amsl	Twp	Rng	Sec	Qtr/Qtr	Northing	Easting
Intermediate Wells - Continued																									
B/W-29I	B/W-29I1	b,d	Intermediate	Sampling	Y	12/19/2007	4412.94	2.94	132	6	0 - 102	Cem/Bent	118 - 132	#10-20 sand	S40 PVC	2	0.01	122 - 132	4288.0 - 4278.0	T13N	R25E	S4	NE/SW	1554429.90	326945.93
MW2002-2I		d	Intermediate	Sampling	Y	7/12/2007	4377.28	2.58	135	6	0 - 116	Cem/Bent	122 - 141	#10-20 sand	S40 PVC	2	0.01	125 - 135	4249.7 - 4239.7	T13N	R25E	S5	SW/NW	1556124.00	320507.56
W4CB-1I	W4CB-1	a,d	Intermediate	Water Level	Y	10/27/1983	4355.89	0.69	91	10	0 - 74	Cement	74 - 90	NR	FbrGlss	4.15	NR	75 - 90	4280.2 - 4265.2	T13N	R25E	S4	NW/SW	1554814.20	325450.02
W4CB-2I	W4CB-2	a,d	Intermediate	Sampling	Y	10/28/1983	4356.10	0.75	60	10	0 - 45	Cement	45 - 60	NR	FbrGlss	4.15	NR	47.5 - 59.5	4307.9 - 4295.9	T13N	R25E	S4	NW/SW	1554810.00	325455.53
W5AA-1I	W5AA-1	a,d	Intermediate	Sampling	Y	10/26/1983	4351.75	0.35	73	10	0 - 51	Cement	51 - 73	NR	FbrGlss	4.15	NR	58 - 73	4293.4 - 4278.4	T13N	R25E	S5	NE/NE	1556454.00	324532.23
W5AB-3I	W5AB-3	a,d	Intermediate	Sampling	Y	9/19/1997	4351.47	0.77	70	6.5	0 - 39	Cem/Bent	39 - 69.7	#10-20 sand	S40 PVC	2	0.02	41.7 - 66.2	4309.0 - 4284.5	T13N	R25E	S5	NW/NE	1557230.70	322717.13
Deep Monitor Wells																									
B/W-1D1	B/W-1I1	b,d	Deep	Sampling	Y	11/5/2007	4357.76	2.36	150	6	0 - 116	Cem/Bent	122 - 150	#10-20 sand	S80 PVC	2	0.01	125 - 145	4230.4 - 4210.4	T14N	R25E	S33	SE/SW	1557614.90	327082.32
B/W-1D2	B/W-1I2	b,d	Deep	Sampling	Y	10/22/2007	4357.62	2.82	235	6	0 - 204	Cem/Bent	210 - 285	#10-20 sand	S80 PVC	2	0.01	215 - 235	4139.8 - 4119.8	T14N	R25E	S33	SE/SW	1557636.10	327089.32
B/W-1D3	B/W-1D	b	Deep	Sampling	Y	11/5/2005	4357.32	2.52	336.5	6	0 - 323	Cem/Bent	323 - 337	#10-20 sand	S80 PVC	2	0.02	326 - 336	4028.6 - 4018.6	T14N	R25E	S33	SE/SW	1557616.90	327095.40
B/W-2D	NA		Deep	Sampling	Y	9/10/2005	4351.39	2.29	145	6	0 - 121	Cem/Bent	121 - 145	#10-20 sand	S40 PVC	2	0.02	125 - 145	4224.3 - 4204.3	T14N	R25E	S32	SW/SE	1557979.50	322542.60
B/W-3D	NA		Deep	Sampling	Y	8/31/2005	4353.70	2.40	149.5	6	0 - 127	Cem/Bent	127 - 150	#10-20 sand	S40 PVC	2	0.02	129 - 149	4222.0 - 4202.0	T14N	R25E	S32	SE/NW	1561218.80	322334.80
B/W-4D	NA		Deep	Sampling	Y	8/26/2005	4383.96	2.36	173.7	6	0 - 150	Cem/Bent	150 - 174	#10-20 sand	S40 PVC	2	0.02	154 - 174	4228.1 - 4208.1	T14N	R25E	S29	SW/SE	1563779.60	322902.30
B/W-5DR	B/W-5RD	d	Deep	Sampling	Y	11/16/2007	4359.34	2.84	155	6	0 - 112	Cem/Bent	111 - 135	#10-20 sand	S80 PVC	2	0.01	115 - 135	4241.5 - 4221.5	T14N	R15W	S31	NE/SE	1560167.30	319803.21
B/W-9D	NA		Deep	Sampling	Y	9/14/2005	4353.84	2.24	165	6	0 - 143	Cem/Bent	143 - 166	#10-20 sand	S40 PVC	2	0.02	145 - 165	4206.8 - 4186.8	T14N	R25E	S32	NW/SE	1558835.30	323810.10
B/W-10D	NA		Deep	Sampling	Y	8/5/2005	4344.08	2.48	120.8	6	0 - 96	Cem/Bent	96 - 123	#10-20 sand	S40 PVC	2	0.02	101 - 121	4241.0 - 4221.0	T14N	R25E	S20	SE/SE	1569181.60	324460.10
B/W-11D	NA		Deep	Sampling	Y	9/28/2005	4370.60	2.60	190.5	6	0 - 167	Cem/Bent	167 - 194	#10-20 sand	S40 PVC	2	0.02	170 - 190	4197.7 - 4177.7	T13N	R25E	S5	NE/SW	1554614.60	321936.00
B/W-18D1	B/W-18I	b,c,d	Deep	Sampling	Y	2/19/2008	4351.49	2.69	105	6	0 - 104	Cem/Bent	113 - 136	#10-20 sand	S40 PVC	2	0.02	116 - 136	4232.8 - 4212.8	T13N	R25E	S32	SW/SW	1558357.10	321226.10
B/W-18D2	B/W-18D	b,d	Deep	Sampling	Y	12/15/2007	4351.83	2.93	220	6	0 - 146	Cem/Bent	151 - 177	#10-20 sand	S80 PVC	2	0.02	154.8 - 174.8	4194.2 - 4174.2	T13N	R25E	S32	SW/SW	1558358.70	321211.00
B/W-19D	NA	d	Deep	Sampling	Y	6/14/2007	4423.98	2.88	300	6	0 - 196	Cem/Bent	202 - 231	#10-20 sand	S80 PVC	2	0.02	205 - 225	4216.6 - 4196.6	T13N	R25E	S29	SW/SW	1562920.60	319995.57
B/W-25D	NA	d	Deep	Sampling	Y	1/19/2008	4354.63	2.63	255	6	0 - 208	Cem/Bent	214 - 238	#10-20 sand	S80 PVC	2	0.01	218 - 238	4134.0 - 4114.0	T13N	R25E	S5	NE/NE	1557277.50	325019.10
B/W-27D	NA	d	Deep	Sampling	Y	2/6/2008	4357.58	2.78	250	6	0 - 218	Cem/Bent	225 - 250	#10-20 sand	S80 PVC	2	0.01	230 - 250	4124.8 - 4104.8	T13N	R25E	S33	NE/SE	1559974.50	329141.30
B/W-28D	NA	d	Deep	Sampling	Y	6/28/2007	4374.20	2.30	172.8	6	0 - 139	Cem/Bent	147 - 173	#10-20 sand	S80 PVC	2	0.01	150 - 170	4221.9 - 4201.9	T13N	R25E	S29	NE/NE	1565797.60	323805.70
B/W-29D1	B/W-29I2	b,d	Deep	Sampling	Y	12/16/2007	4413.24	3.24	195	8	0 - 165	Cem/Bent	181 - 195	#10-20 sand	S80 PVC	2	0.01	185 - 195	4225.0 - 4215.0	T13N	R25E	S4	NE/SW	1554432.50	326934.36
B/W-29D3	B/W-29D	b,d	Deep	Sampling	Y	9/25/2007	4412.97	2.97	440	6	0 - 349	Cem/Bent	356 - 382	#10-20 sand	S80 PVC	2	0.01	360 - 380	4050.0 - 4030.0	T13N	R25E	S29	NE/NE	1554434.30	326924.80
W32DC-D	W32DC	a,d	Deep	Sampling	Y	10/25/1983	4349.15	0.75	155	10	98 - 151	Cement	98 - 151	NR	FbrGlss	4.15	NR	108 - 151	4240.4 - 4197.4	T14N	R25E	S32	SW/SE	1558633.30	322765.58
W5DB-D	W5DB	a,d	Deep	Sampling	Y	10/19/1998	4364.94	0.37	153	10	0 - 108	Cement	108 - 153	Slough	FbrGlss	4.15	NR	125 - 153	4239.6 - 4211.6	T13N	R25E	S5	NW/SE	1554636.20	323703.67
Bedrock Monitor Wells																									
B/W-11B	B/W-11D3	b,d	Bedrock	Sampling	Y	11/3/2007	4370.94	3.04	245	6	0 - 225	Cem/Bent	232 - 245	#10-20 sand	S80 PVC	2	0.01	235 - 245	4132.9 - 4122.9	T13N	R25E	S5	NE/SW	1554610.60	321933.30
B/W-23B	B/W-23	a,d	Bedrock	Sampling	Y	8/8/2007	4645.21	2.91	314	6	0 - 291	Cem/Bent	299 - 312	#10-20 sand	S80 PVC	2	0.01	302 - 312	4340.3 - 4330.3	T13N	R25E	S17	NE/NE	1544782.10	321161.90
WW-36B	WW-36	a,d	Bedrock	Sampling	Y	4/15/1969	4409.48	3.48	300	20	NR - NR	NR	0 - 300	Pea Gravel	Steel	17.18	0.25	100 - 300	4306.0 - 4106.0	T13N	R25E	S16	SE/SE	1541712.90	329194.66
WW-40B	WW-40	a,d	Bedrock	Sampling	N	NR	4417.67	4.17	NR	NR	NR - NR	NR	NR - NR	NR	Steel	20	NR	NR - NR	NR - NR	T13N	R25E	S16	SE/SE	1542136.00	328850.57
WW-59B	WW-59	a,d	Bedrock	Sampling	Y	11/20/1972	4520.92	2.81	630	17.5	NR - NR	NR	0 - 630	Pea Gravel	Steel	12	0.125	238 - 630	4280.1 - 3888.1	T13N	R25E	S17	NE/SE	1544380.80	324728.90

NOTES:
a A hydrostratigraphic zone designation (S, I, D) was added to the well name.
b The existing hydrostratigraphic zone designation was modified to reflect the correct zone designation.
c Well construction and depth information was corrected based on new information.
d Well survey information (northing, easting, elevation) was updated based on new surveys completed in April and May 2008.

Cem/Bent. = Cement and Bentonite
PVC = Polyvinyl Chloride
NR = not recorded

2.3 Summary of Inactive Monitor Wells

A number of abandoned and/or inactive monitor wells have been installed at the Site. These wells and related information are identified below in Table 2-3. Additional information regarding these wells is provided in Appendix B.

Table 2-3. Summary of Inactive Wells

Well Name	Other Name	Water Source	Original User	Original Use	Field Search Results
B-1	NA	Alluvium	ARC	Monitoring	No surface evidence of wellhead found 10 July 2007
B/W-5D	NA	Alluvium	ARC	Monitoring	Abandoned due to access agreement problems– redrilled November 2007
B/W-12	NA	Alluvium	ARC	NA	NA
B/W-24	NA	Alluvium	ARC	NA	NA
B/W-26	NA	Alluvium	ARC	NA	NA
D8AB-1	NA	Alluvium	ARC	Monitoring	No surface evidence of wellhead found 10 July 2007
I	None	Alluvium	No record found	Irrigation	No surface evidence of wellhead found 10 July 2007
MMW-2	NA	NA	Arimetco	NA	NA
MW-3	MW-03	Alluvium	Arimetco	Monitoring	No surface evidence of wellhead found 10 July 2007
S	None	Alluvium	No record found	Domestic	No surface evidence of wellhead found 10 July 2007
USGS-1A	1A	Alluvium	USGS	Test well	Casing found inaccessible 10 July 2007
USGS-1B	1B	Alluvium	USGS	Test well	Surface casing found plugged with soil 10 July 2007
USGS-3	3	Alluvium	USGS	Test well	No surface evidence of wellhead found 10 July 2007
USGS-4A	4A	Alluvium	USGS	Test well	No surface evidence of wellhead found 10 July 2007
USGS-4B	4B	Alluvium	USGS	Test well	No surface evidence of wellhead found 10 July 2007
USGS-5A	5A	Alluvium	USGS	Test well	No surface evidence of wellhead found 10 July 2007
USGS-5B	5B	Alluvium	USGS	Test well	No surface evidence of wellhead found 10 July 2007
USGS-6	6	Alluvium	USGS	Test well	No surface evidence of wellhead found 10 July 2007
USGS-7	7	Alluvium	USGS	Test well	No surface evidence of wellhead found 10 July 2007
USGS-8	8	Alluvium	USGS	Test well	No surface evidence of wellhead found 10 July 2007
USGS-9	9	Alluvium	USGS	Test well	No surface evidence of wellhead found 10 July 2007
USGS-10	10	Alluvium	USGS	Test well	No surface evidence of wellhead found 10 July 2007

Table 2-3. Summary of Inactive Wells - Continued

Well Name	Other Name	Water Source	Original User	Original Use	Field Search Results
USGS-11	11	Alluvium	USGS	Test well	No surface evidence of wellhead found 10 July 2007
USGS-12	12	Alluvium	USGS	Test well	No surface evidence of wellhead found 10 July 2007
W2B	NA	NA	NA	NA	NA
Well 1	None	Bedrock	Anaconda	Industrial	No surface evidence of wellhead found 10 July 2007
Well 2	PWell 2	Bedrock	Anaconda	Industrial	No surface evidence of wellhead found 10 July 2007
Well 3	PWell 3	Bedrock	Anaconda	Industrial	NA
Well 4	None	Alluvium	Anaconda	Industrial	No surface evidence of wellhead found 10 July 2007
Well 5	PWell 5	NA	Anaconda	NA	NA
Well 7	PWell 7	NA	Anaconda	NA	NA
Well 8	WW-08	NA	Anaconda	NA	NA
Well 12C	MW-12C	Alluvium	Anaconda	NA	NA
Well 22	MW-22	Alluvium	Anaconda	Industrial	No surface evidence of wellhead found 10 July 2007
Well 26	MW-26	Alluvium	Anaconda	Industrial	Surface casing found plugged with soil 10 July 2007
Well 29	MW-29	Bedrock	Anaconda	Industrial	No surface evidence of wellhead found 10 July 2007
Well 35/ 35R	MW-35	Bedrock	Anaconda	Industrial	Surface casing found plugged with soil 10 July 2007
WW-3	NA	NA	Anaconda	NA	NA
WW-4	NA	NA	Anaconda	NA	NA
WW-10	NA	Bedrock	Anaconda	NA	NA
WW-23	NA	NA	Anaconda	NA	NA
WW-56	NA	NA	Anaconda	NA	NA

Note: NA = Not applicable; USGS = U.S. Geological Survey

2.4 Water Level Monitoring

Monitor wells subject to monthly or more frequent groundwater level measurements are listed in Table 2-1 by hydrostratigraphic zone. Water levels for most wells are measured by hand on a monthly basis. Water level measurements are measured and recorded according to the requirements of the *Monitor Well Water Level Measurement Standard Operating Procedure ("SOP"-16)*. However, pursuant to the Second-Step HFA, pressure transducers and data loggers have been installed in wells B/W-1 (S and D3), MW2002-1S and B/W-2D, B/W-3 (S and D), B/W-4 (S and D), B/W-8 (S and I), B/W-9 (S and D), B/W-11 (S, D and B), B/W-25 (S and D), B/W-27 (S and D), WRP-1S and WRP-2S. Data are currently collected from these wells on an hourly basis. The results are presented in the Second-Step Hydrologic Framework Assessment

Data Summary Report (Brown and Caldwell, 2008b) and summarized in Section 3.0 of this 2008 GMR. Groundwater level measurements are not collected from supply or domestic wells or from MW-1S and WW-36B due to in-place pumping equipment.

2.5 Monitor Well Groundwater Quality Sampling

Monitor wells identified as sampling wells in Table 2-1 are sampled once per quarter for a consistent list of analytical parameters. The majority of wells are sampled using dedicated bladder pumps, actuated by either compressed air or pressurized carbon dioxide, and follow the low-flow sampling procedure in *Groundwater Sample Collection Standard Operating Procedure (SOP-09)* as well as any additional requirements identified in the Draft GMP (Brown and Caldwell and NAH, 2007). The procedures are summarized briefly, as follows. Prior to sampling, the static water level in each monitor well is measured and recorded using and electronic water level indicator probe. Water levels are also continually monitored during the purging and sampling procedure to ensure drawdown is <0.3 feet or <2 percent of the total water column.

A pumping rate between 200 and 500 ml/min is established to purge and sample the well and water quality parameters including temperature, specific conductance, DO, pH, ORP, and turbidity are monitored in a flow-through cell relative to stabilization criteria specified in the GMP. Samples are collected in laboratory provided, pre-preserved bottles, per the requirements of the QAPP. Samples that require field filtration are filtered through single-use in-line 0.45 µm filters. After labeling, samples are packaged in a cooler with ice and shipped to the analytical laboratory under chain-of-custody.

Other Sampling Procedures

Sixteen wells were sampled by a method other than the low-flow bladder pump method. A brief summary of the other sampling methods is provided below.

- Production Pump: A number of wells, including the PWS wells (PW-1S to PW-11S), WW-36B, WW-40B, and WW-59B, have established dedicated production pumps installed which are used for sample collection. These pumps are operated by either a

direct connection to electrical service lines or a temporary connection to a portable electrical generator. In the case of the pumpback wells and WW-36B (used for the Weed Heights water supply), the wells operate continuously so there is no well purge requirement. The sample is collected by opening the sample spigot and collection of the filtered and unfiltered samples in the laboratory provided bottles. Wells that are not operated continuously require a purge volume of 3 times the well casing volume. Wells WW-40B and WW-59B have very large casing volumes that require 4 to 8 hours of purge time.

- GeoSquirt: Three wells, USGS-2BS, USEPA2S, and W5AA-3S, have well screens that only marginally penetrate the shallow zone aquifer, which results in a limited column of water that precludes installation and use of a bladder pump for sampling. A small electrical pump that operates off a car battery is used. The pump operates either on or off and does not have a flow controller to allow pumping at slow rates, therefore these wells are typically pumped dry and allowed to recharge at least three times before the sample is collected. The pump and sample tubing is not dedicated and is decontaminated between each well by standard decontamination methods in SOP-5, Equipment Decontamination, using soap and distilled water.

Field Meter Calibration

All field meters, including turbidity meters and water quality parameter meters, used during sampling were calibrated or verified each morning to certified calibration standards to ensure the meters provided accurate measurements. The YSI-556 MPS meters were calibrated for pH (using a 3-point slope with 4.0, 7.0 and 10.0 calibration solutions), specific conductivity (typically calibrated to a 1,413 µS/cm standard and verified with 447 µS/cm and 8,974 µS/cm standards), ORP (calibrated to 220 mV), and DO (calibrated to barometrically adjusted open air and verified with a zero-oxygen standard). Water quality parameters for wells that were sampled by a method other than low-flow were measured using an Oakton meter that measures only pH, specific conductivity and temperature. All meters were verified with a calibration drift check procedure at the end of each day that included reading the same calibration standards and recording the readings on the calibration log sheets.

The turbidity meters used included the MicroTPW by HF Scientific which were calibrated each morning to a three-point curve using certified standards of 0.2, 10.0 and 1,000 nephelometric

turbidity units ("NTU"). The meters were also verified against the same standards at the end of the day to determine if they were still operating properly and if the accuracy of the units had drifted. All field meter calibration forms are located in Appendix G.

Laboratory Analysis

The active monitor wells listed in Table 2-1 as sampling wells are subject to quarterly sampling for the parameters listed in Table 2-4.

Table 2-4. Analyte List for Monitor Well Sampling

Parameter or Analyte	Total/ Dissolved (1)	Method (2)	Reporting Limit (2)	Units
Physical Parameters and Major Anions/Cations				
Alkalinity (Total as $CaCO_3$)	Total	SM 2320B	2.0	mg/L (as $CaCO_3$)
Bicarbonate (HCO_3 as $CaCO_3$)	Total	SM 2320B	2.0	mg/L (as $CaCO_3$)
Carbonate	Total	SM 2320B	2.0	mg/L (as $CaCO_3$)
Chloride	Total	EPA 300.0	0.5	mg/L
Fluoride	Total	EPA 300.0	0.5	mg/L
Nitrate	Total	EPA 300.0	0.1	mg/L as N
Nitrite	Total	EPA 300.0	0.1	mg/L as N
Sulfate	Total	EPA 300.0	0.5	mg/L
pH	Total	SM 4500B	0.1	pH Units
Total Dissolved Solids (TDS)	Total	SM 2540C	10	mg/L
Total Organic Carbon (TOC)	Total	SM 5310B	1.0	mg/L
Metals				
Aluminum	Dissolved	EPA 200.7	0.05	mg/L
Antimony	Dissolved	EPA 200.8	0.002	mg/L
Arsenic	Dissolved	EPA 200.8	0.001	mg/L
Barium	Dissolved	EPA 200.8	0.001	mg/L
Beryllium	Dissolved	EPA 200.8	0.0005	mg/L
Boron	Dissolved	EPA 200.7	0.05	mg/L
Cadmium	Dissolved	EPA 200.8	0.001	mg/L
Calcium	Dissolved	EPA 200.7	0.1	mg/L
Chromium	Dissolved	EPA 200.8	0.002	mg/L
Cobalt	Dissolved	EPA 200.8	0.001	mg/L
Copper	Dissolved	EPA 200.8	0.001	mg/L
Iron	Dissolved	EPA 200.7	0.04	mg/L
Lead	Dissolved	EPA 200.8	0.001	mg/L
Lithium	Dissolved	EPA 200.7	0.002	mg/L
Magnesium	Dissolved	EPA 200.7	0.02	mg/L
Manganese	Dissolved	EPA 200.8	0.001	mg/L
Mercury	Dissolved	EPA 245.1	0.0002	mg/L
Molybdenum	Dissolved	EPA 200.8	0.002	mg/L
Nickel	Dissolved	EPA 200.8	0.002	mg/L
Phosphorus	Dissolved	EPA 200.7	0.04	mg/L
Potassium	Dissolved	EPA 200.7	0.5	mg/L

Table 2-4. Analyte List for Monitor Well Sampling - Continued

Parameter or Analyte	Total/ Dissolved (1)	Method (2)	Reporting Limit (2)	Units
Metals - Continued				
Selenium	Dissolved	EPA 200.8	0.002	mg/L
Silica	Dissolved	EPA 200.7	0.05	mg/L
Silver	Dissolved	EPA 200.8	0.001	mg/L
Sodium	Dissolved	EPA 200.7	0.5	mg/L
Strontium	Dissolved	EPA 200.7	0.02	mg/L
Thallium	Dissolved	EPA 200.8	0.001	mg/L
Tin	Dissolved	EPA 200.7	0.1	mg/L
Titanium	Dissolved	EPA 200.7	0.005	mg/L
Uranium, Total	Dissolved	EPA 200.8	0.001	mg/L
Vanadium	Dissolved	EPA 200.8	0.002	mg/L
Zinc	Dissolved	EPA 200.8	0.02	mg/L
Radiochemicals				
Gross Alpha	Dissolved	EPA 900.0	1	pCi/L
Gross Beta	Dissolved	EPA 900.0	1	pCi/L
Radium-226	Dissolved	EPA 903.0	1	pCi/L
Radium-228	Dissolved	EPA 904.0	1	pCi/L
Thorium-228	Dissolved	HASL 300	1	pCi/L
Thorium-230	Dissolved	HASL 300	1	pCi/L
Thorium-232	Dissolved	HASL 300	1	pCi/L

Notes: (1) Dissolved constituents are field filtered with a disposable 0.45 micron filter.
(2) EPA laboratory analytical methods and reporting limits are consistent with those provided in the QAPP Rev.4 (ESI and Brown and Caldwell, 2008).

SECTION 3.0
2008 MONITORING RESULTS

3.1 Meteorological Monitoring Results

Meteorological monitoring locations include AM-1, AM-3, and AM-6 as seen on Figure 1-3 and Plate 1. Monitoring was conducted at locations AM-1 and AM-3 from January 1, 2008 through June 18, 2008, and at AM-6 from January 1, 2008 through December 31, 2008. Stations AM-1 and AM-3 monitored only wind speed and direction and were taken out of active service after June 18, 2008 with EPA approval. A variety of parameters are monitored at station AM-6. These parameters include temperature measured in degrees Fahrenheit ("°F"), relative humidity measured in percent, barometric pressure measured in milliBar ("mBar"), wind speed measured in miles per hour ("mph"), precipitation measured in inches, and solar radiation measured in kilojoules per square meter ("kJ/m^2"). The most relevant parameter to groundwater monitoring considerations is precipitation. Table 3-1 presents summarized monthly meteorological data for AM-6. Additional meteorological monitoring information for all three stations including calibration reports, auditing reports, maintenance reports, and data validation summaries are presented and discussed in Appendix D.

Recharge to the alluvial aquifers from precipitation in 2008 was minimal. As indicated in Table 3-1, that the total amount of precipitation in 2008 was 4.15 inches, which is lower than the long-term mean precipitation of 5.35 inches for the 1914 – 2007 period of record (Appendix A). Appendix A also includes a discussion of current U.S. Drought Monitor information that reports localized conditions to be in stage D1 – Moderate Drought conditions for most of 2008. In addition, daily pan evaporation data for the Site are included and discussed in Appendix A.

Table 3-1. AM-6 Meteorological Data Summary - Monthly Values 2008

			Precipitation Total	Temperature Avg./Min./Max.			Relative Humidity Avg./Min./Max.		
Location	**2008**	**Count**	**(inches)**	**(F)**			**(%)**		
AM-6	Jan	2,976	1.53	30.92	11.35	57.90	74.91	15.09	99.90
AM-6	Feb	2,782	1.27	37.35	16.30	70.52	65.36	19.10	98.70
AM-6	Mar	2,966	0.02	44.90	17.33	71.87	40.43	6.95	88.10
AM-6	Apr	2,880	0	50.10	20.22	81.93	31.35	7.15	81.10
AM-6	May	2,976	0.96	57.93	26.84	96.01	44.57	6.18	96.40
AM-6	Jun	2,853	0.02	69.16	35.33	95.65	27.72	6.06	78.45
AM-6	Jul	2,976	0.03	77.41	47.79	101.35	26.38	5.30	87.40
AM-6	Aug	2,976	0	76.30	46.12	100.49	25.41	3.93	74.56
AM-6	Sep	2,878	0	65.13	33.61	93.25	29.41	7.16	78.90
AM-6	Oct	2,976	0.09	51.60	18.18	87.58	37.48	9.44	96.10
AM-6	Nov	2,880	0.09	42.75	17.02	70.84	58.08	12.26	98.70
AM-6	Dec	2,976	0.14	31.10	0.14	63.82	59.73	13.11	96.70
			Solar Radiation Total	**Barometric Pressure Avg./Min./Max.**			**Wind Speed Avg./Min./Max.**		
Location	**2008**	**Count**	**(kJ/m^2)**	**(mBar)**			**(mph)**		
AM-6	Jan	2,976	266,618.74	868.01	847	882	6.095	0.004	38.319
AM-6	Feb	2,782	378,207.70	869.54	847	879	4.811	0	36.261
AM-6	Mar	2,966	605,243.23	870.38	859	880	7.494	0.004	41.406
AM-6	Apr	2,880	723,795.77	867.81	856	879	8.397	0.025	38.408
AM-6	May	2,976	748,444.12	866.32	851	877	6.429	0.096	30.803
AM-6	Jun	2,853	831,757.09	867.87	858	873	6.795	0.315	36.552
AM-6	Jul	2,976	844,677.48	867.18	860	873	5.410	0.143	23.331
AM-6	Aug	2,976	777,178.10	866.34	858	872	6.108	0.020	32.257
AM-6	Sep	2,878	615,077.99	868.63	858	875	4.148	0.085	31.362
AM-6	Oct	2,976	442,265.48	871.80	858	883	4.746	0.002	28.141
AM-6	Nov	2,880	283,212.10	872.56	857	883	3.761	0	28.588
AM-6	Dec	2,976	262,236.14	868.35	848	883	5.480	0.092	37.670

Notes: (1) Data for meteorological monitoring stations AM-1 and AM-3 consisting only of wind speed and direction are located in Appendix D.

3.2 Groundwater Level Monitoring Results

Results of manual groundwater level measurements, and associated groundwater elevation data, are summarized in Tables 3-2, 3-3, and 3-4 for the wells completed in the alluvial aquifer's shallow, intermediate and deep hydrostratigraphic zones, respectively. In addition, Table 3-5 summarizes groundwater level measurements, and associated groundwater elevation data, for the bedrock aquifer monitor wells. Results of manual groundwater level measurements are also presented as hydrographs in Appendix E-1, E-2, and E-3 for shallow zone, intermediate zone, and deep zone/bedrock aquifer monitor wells respectively. Specific wells are grouped together on a single hydrograph based on geographic location (refer to Figure 1-3 and Plate 1 for well

locations). Manual water level data have also been contoured into monthly potentiometric surface maps for the shallow, intermediate, and deep hydrostratigraphic units. The monthly potentiometric surface maps are presented in Appendix E-6.

3.2.1 Shallow Zone Manual Groundwater Level Measurements

The shallow water level data in Table 3-2 indicate that, in general, shallow groundwater levels declined from approximately one foot to 4.8 feet across the Site in 2008. However, increased water levels in 2008 were measured in piezometers WRP-1S and WRP-2S, which are located adjacent to the Walker River, and B/W-15S, which is located adjacent to an irrigated field.

The Shallow zone hydrographs indicate an overall declining trend in groundwater levels due to reduced precipitation and recharge conditions from 1999 to 2005 (including drought years), increasing levels from mid-2005 to early 2006 due to higher precipitation, and declining levels through 2007 and 2008. Despite the overall decline in water levels, the shallow zone potentiometric surface maps show regional groundwater flow to continue to be in a northwesterly direction.

Table 3-2. 2008 Shallow Zone Monthly Water Levels

Measurement Date	Depth to Water (feet bmp)	Water Elevation (feet amsl)	Measurement Date	Depth to Water (feet bmp)	Water Elevation (feet amsl)	Measurement Date	Depth to Water (feet bmp)	Water Elevation (feet amsl)	Measurement Date	Depth to Water (feet bmp)	Water Elevation (feet amsl)	Measurement Date	Depth to Water (feet bmp)	Water Elevation (feet amsl)	Measurement Date	Depth to Water (feet bmp)	Water Elevation (feet amsl)
Location:	**B-2S**		**Location:**	**B-3S**		**Location:**	**B/W-1S**		**Location:**	**B/W-3S**		**Location:**	**B/W-4S**		**Location:**	**B/W-5SR**	
19-Dec-07	20.37	4337.39	19-Dec-07	18.99	4337.65	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
29-Jan-08	21.19	4336.57	29-Jan-08	19.82	4336.82	NA	NA	NA	NA	NA	NA	NA	NA	NA	28-Jan-08	30.20	4328.97
26-Feb-08	21.52	4336.24	26-Feb-08	20.25	4336.39	26-Feb-08	21.14	4336.46	27-Feb-08	22.84	4330.53	06-Mar-08	56.40	4328.47	27-Feb-08	30.00	4329.17
28-Mar-08	21.80	4335.96	28-Mar-08	20.60	4336.04	27-Mar-08	21.13	4336.47	26-Mar-08	22.78	4330.59	26-Mar-08	56.24	4328.63	26-Mar-08	29.89	4329.28
24-Apr-08	20.50	4337.26	24-Apr-08	19.39	4337.25	23-Apr-08	27.53	4330.07	23-Apr-08	23.22	4330.15	23-Apr-08	58.15	4326.72	23-Apr-08	30.23	4328.94
28-May-08	20.41	4337.35	28-May-08	19.03	4337.61	28-May-08	26.68	4330.92	28-May-08	23.86	4329.51	28-May-08	59.75	4325.12	27-May-08	30.72	4328.45
24-Jun-08	19.72	4338.04	24-Jun-08	18.63	4338.01	23-Jun-08	29.67	4327.93	23-Jun-08	24.18	4329.19	23-Jun-08	60.00	4324.87	24-Jun-08	30.95	4328.22
29-Jul-08	18.33	4339.43	29-Jul-08	17.56	4339.08	30-Jul-08	NA	NA	30-Jul-08	24.89	4328.48	30-Jul-08	61.90	4322.97	30-Jul-08	31.51	4327.66
25-Aug-08	18.44	4339.32	25-Aug-08	17.62	4339.02	22-Aug-08	30.62	4326.98	22-Aug-08	25.38	4327.99	22-Aug-08	63.05	4321.82	22-Aug-08	31.91	4327.26
01-Oct-08	21.19	4336.57	01-Oct-08	19.60	4337.04	01-Oct-08	28.27	4329.33	01-Oct-08	26.12	4327.25	01-Oct-08	63.65	4321.22	01-Oct-08	32.45	4326.72
28-Oct-08	22.14	4335.62	28-Oct-08	20.95	4335.69	28-Oct-08	28.57	4329.03	29-Oct-08	26.35	4327.02	29-Oct-08	62.95	4321.92	29-Oct-08	32.70	4326.47
18-Nov-08	22.54	4335.22	18-Nov-08	21.15	4335.49	19-Nov-08	28.97	4328.63	19-Nov-08	26.40	4326.97	19-Nov-08	62.19	4322.68	19-Nov-08	32.78	4326.39
17-Dec-08	23.21	4334.55	17-Dec-08	21.68	4334.96	17-Dec-08	25.60	4332.00	17-Dec-08	26.33	4327.04	17-Dec-08	61.27	4323.60	17-Dec-08	32.80	4326.37
Net Change=	**-2.84**		**Net Change=**	**-2.69**		**Net Change=**	**-4.46**		**Net Change=**	**-3.49**		**Net Change=**	**-4.87**		**Net Change=**	**-2.60**	

Location:	B/W-6S		Location:	B/W-8S		Location:	B/W-9S		Location:	B/W-10S		Location:	B/W-11S		Location:	B/W-13S	
NA	NA	NA	21-Dec-07	142.79	4325.98	NA	NA	NA	NA	NA	NA	NA	NA	NA	18-Dec-07	128.94	4376.92
NA	NA	NA	28-Jan-08	141.92	4326.85	29-Jan-08	17.22	4337.40	NA	NA	NA	28-Jan-08	38.24	4332.82	28-Jan-08	127.44	4378.42
26-Feb-08	103.91	4330.98	27-Feb-08	141.24	4327.53	27-Feb-08	17.68	4336.94	26-Feb-08	22.00	4322.44	26-Feb-08	39.13	4331.93	26-Feb-08	126.59	4379.27
26-Mar-08	103.89	4331.00	26-Mar-08	140.99	4327.78	27-Mar-08	18.11	4336.51	26-Mar-08	21.70	4322.74	26-Mar-08	38.80	4332.26	27-Mar-08	126.03	4379.83
23-Apr-08	104.20	4330.69	23-Apr-08	142.64	4326.13	23-Apr-08	16.98	4337.64	23-Apr-08	23.00	4321.44	23-Apr-08	40.26	4330.80	23-Apr-08	126.75	4379.11
27-May-08	104.72	4330.17	28-May-08	144.43	4324.34	28-May-08	16.11	4338.51	27-May-08	24.41	4320.03	28-May-08	41.48	4329.58	27-May-08	129.10	4376.76
24-Jun-08	105.02	4329.87	23-Jun-08	144.65	4324.12	23-Jun-08	17.28	4337.34	23-Jun-08	24.51	4319.93	23-Jun-08	41.73	4329.33	24-Jun-08	129.62	4376.24
30-Jul-08	105.46	4329.43	30-Jul-08	146.66	4322.11	30-Jul-08	17.25	4337.37	30-Jul-08	25.97	4318.47	30-Jul-08	42.96	4328.10	30-Jul-08	131.62	4374.24
22-Aug-08	105.78	4329.11	22-Aug-08	147.93	4320.84	22-Aug-08	17.32	4337.30	22-Aug-08	26.98	4317.46	22-Aug-08	43.50	4327.56	21-Aug-08	132.93	4372.93
02-Oct-08	106.28	4328.61	01-Oct-08	148.48	4320.29	01-Oct-08	17.17	4337.45	01-Oct-08	28.63	4315.81	02-Oct-08	43.71	4327.35	01-Oct-08	134.50	4371.36
29-Oct-08	106.30	4328.59	29-Oct-08	148.00	4320.77	29-Oct-08	18.00	4336.62	29-Oct-08	28.90	4315.54	28-Oct-08	43.65	4327.41	28-Oct-08	133.81	4372.05
18-Nov-08	106.28	4328.61	19-Nov-08	147.20	4321.57	19-Nov-08	18.70	4335.92	19-Nov-08	27.96	4316.48	19-Nov-08	43.03	4328.03	19-Nov-08	132.67	4373.19
17-Dec-08	106.11	4328.78	17-Dec-08	146.22	4322.55	17-Dec-08	19.57	4335.05	17-Dec-08	26.70	4317.74	18-Dec-08	42.50	4328.56	17-Dec-08	131.20	4374.66
Net Change=	**-2.20**		**Net Change=**	**-3.43**		**Net Change=**	**-2.35**		**Net Change=**	**-4.70**		**Net Change=**	**-4.26**		**Net Change=**	**-2.26**	

Table 3-2. 2008 Shallow Zone Monthly Water Levels - Continued

Measurement Date	Depth to Water (feet bmp)	Water Elevation (feet amsl)	Measurement Date	Depth to Water (feet bmp)	Water Elevation (feet amsl)	Measurement Date	Depth to Water (feet bmp)	Water Elevation (feet amsl)	Measurement Date	Depth to Water (feet bmp)	Water Elevation (feet amsl)	Measurement Date	Depth to Water (feet bmp)	Water Elevation (feet amsl)	Measurement Date	Depth to Water (feet bmp)	Water Elevation (feet amsl)
Location:	**B/W-14S**		**Location:**	**B/W-15S**		**Location:**	**B/W-16S**		**Location:**	**B/W-18S**		**Location:**	**B/W-19S**		**Location:**	**B/W-20S**	
18-Dec-07	14.55	4382.01	18-Dec-07	12.00	4374.76	NA	NA	NA	NA	NA	NA	NA	NA	NA	18-Dec-07	33.53	4381.56
29-Jan-08	14.02	4382.54	29-Jan-08	11.73	4375.03	NA	NA	NA	NA	NA	NA	NA	NA	NA	29-Jan-08	32.41	4382.68
26-Feb-08	13.91	4382.65	26-Feb-08	11.78	4374.98	27-Feb-08	191.43	4330.26	06-Mar-08	21.00	4330.78	26-Feb-08	NA	NA	26-Feb-08	31.98	4383.11
27-Mar-08	13.78	4382.78	27-Mar-08	12.45	4374.31	26-Mar-08	191.52	4330.17	27-Mar-08	20.94	4330.84	26-Mar-08	96.3	4328.34	27-Mar-08	31.63	4383.46
23-Apr-08	18.88	4377.68	23-Apr-08	12.92	4373.84	23-Apr-08	191.54	4330.15	23-Apr-08	21.52	4330.26	23-Apr-08	97.34	4327.3	23-Apr-08	33.58	4381.51
27-May-08	15.23	4381.33	27-May-08	11.80	4374.96	27-May-08	191.92	4329.77	27-May-08	22.14	4329.64	28-May-08	98.79	4325.85	27-May-08	35.55	4379.54
24-Jun-08	17.48	4379.08	24-Jun-08	12.25	4374.51	24-Jun-08	192.02	4329.67	24-Jun-08	22.45	4329.33	24-Jun-08	99.04	4325.6	24-Jun-08	35.19	4379.90
30-Jul-08	17.66	4378.90	30-Jul-08	13.48	4373.28	30-Jul-08	192.36	4329.33	30-Jul-08	23.02	4328.76	30-Jul-08	100.5	4324.14	30-Jul-08	36.92	4378.17
21-Aug-08	21.46	4375.10	21-Aug-08	13.88	4372.88	22-Aug-08	192.56	4329.13	22-Aug-08	23.44	4328.34	22-Aug-08	101.63	4323.01	21-Aug-08	38.65	4376.44
01-Oct-08	18.01	4378.55	01-Oct-08	13.22	4373.54	01-Oct-08	192.82	4328.87	01-Oct-08	23.88	4327.90	01-Oct-08	102.37	4322.27	01-Oct-08	39.44	4375.65
28-Oct-08	19.10	4377.46	28-Oct-08	12.80	4373.96	28-Oct-08	193.00	4328.69	29-Oct-08	24.05	4327.73	29-Oct-08	102.17	4322.47	28-Oct-08	38.22	4376.87
19-Nov-08	15.98	4380.58	19-Nov-08	12.18	4374.58	18-Nov-08	192.23	4329.46	19-Nov-08	23.91	4327.87	19-Nov-08	101.68	4322.96	19-Nov-08	36.50	4378.59
17-Dec-08	15.41	4381.15	17-Dec-08	11.90	4374.86	17-Dec-08	193.25	4328.44	17-Dec-08	23.72	4328.06	17-Dec-08	101.09	4323.55	17-Dec-08	35.22	4379.87
Net Change=	**-0.86**		**Net Change=**	**0.10**		**Net Change=**	**-1.82**		**Net Change=**	**-2.72**		**Net Change=**	**-4.79**		**Net Change=**	**-1.69**	
Location:	**B/W-21S**		**Location:**	**B/W-22S**		**Location:**	**B/W-25S**		**Location:**	**B/W-27S**		**Location:**	**B/W-28S**		**Location:**	**B/W-29S**	
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
27-Feb-08	53.72	4352.04	27-Feb-08	154.94	4332.17	26-Feb-08	19.08	4335.89	06-Mar-08	18.40	4339.47	27-Feb-08	47.68	4327.35	26-Feb-08	77.00	4336.19
27-Mar-08	59.05	4346.71	26-Mar-08	154.91	4332.2	27-Mar-08	18.05	4336.92	27-Mar-08	18.08	4339.79	26-Mar-08	47.56	4327.47	27-Mar-08	76.12	4337.07
23-Apr-08	59.28	4346.48	23-Apr-08	155	4332.11	23-Apr-08	18.50	4336.47	23-Apr-08	19.48	4338.39	23-Apr-08	49.44	4325.59	23-Apr-08	77.16	4336.03
27-May-08	57.25	4348.51	27-May-08	155.69	4331.42	28-May-08	18.83	4336.14	28-May-08	19.54	4338.33	27-May-08	51.00	4324.03	27-May-08	77.90	4335.29
24-Jun-08	55.68	4350.08	24-Jun-08	155.93	4331.18	23-Jun-08	19.36	4335.61	23-Jun-08	19.55	4338.32	23-Jun-08	51.21	4323.82	24-Jun-08	78.15	4335.04
29-Jul-08	60.16	4345.60	30-Jul-08	156.33	4330.78	30-Jul-08	20.00	4334.97	30-Jul-08	20.92	4336.95	30-Jul-08	53.00	4322.03	30-Jul-08	79.07	4334.12
22-Aug-08	63.11	4342.65	22-Aug-08	156.71	4330.4	22-Aug-08	19.79	4335.18	22-Aug-08	22.03	4335.84	22-Aug-08	54.15	4320.88	21-Aug-08	79.24	4333.95
01-Oct-08	62.40	4343.36	02-Oct-08	157.37	4329.74	01-Oct-08	19.95	4335.02	01-Oct-08	23.32	4334.55	01-Oct-08	NA	NA	01-Oct-08	80.00	4333.19
28-Oct-08	59.00	4346.76	28-Oct-08	157.5	4329.61	29-Oct-08	20.23	4334.74	28-Oct-08	23.47	4334.40	29-Oct-08	54.40	4320.63	28-Oct-08	80.28	4332.91
18-Nov-08	56.06	4349.70	18-Nov-08	157.61	4329.5	18-Nov-08	20.52	4334.45	19-Nov-08	22.15	4335.72	19-Nov-08	53.48	4321.55	18-Nov-08	80.17	4333.02
17-Dec-08	55.66	4350.10	17-Dec-08	157.44	4329.67	18-Dec-08	20.73	4334.24	17-Dec-08	20.94	4336.93	18-Dec-08	52.40	4322.63	18-Dec-08	79.73	4333.46
Net Change=	**-1.94**		**Net Change=**	**-2.50**		**Net Change=**	**-1.65**		**Net Change=**	**-2.54**		**Net Change=**	**-4.72**		**Net Change=**	**-2.73**	

Table 3-2. 2008 Shallow Zone Monthly Water Levels - Continued

Measurement Date	Depth to Water (feet bmp)	Water Elevation (feet amsl)	Measurement Date	Depth to Water (feet bmp)	Water Elevation (feet amsl)	Measurement Date	Depth to Water (feet bmp)	Water Elevation (feet amsl)	Measurement Date	Depth to Water (feet bmp)	Water Elevation (feet amsl)	Measurement Date	Depth to Water (feet bmp)	Water Elevation (feet amsl)	Measurement Date	Depth to Water (feet bmp)	Water Elevation (feet amsl)
Location:	**D4BC-1S**		**Location:**	**D5AC-1S**		**Location:**	**MW-2S**		**Location:**	**MW-4S**		**Location:**	**MW-5S**		**Location:**	**MW2002-1S**	
18-Dec-07	15.00	4337.94	18-Dec-07	25.00	4337.72	21-Dec-07	58.90	4335.69	21-Dec-07	80.75	4331.18	21-Dec-07	50.14	4332.76	19-Dec-07	14.92	4336.27
29-Jan-08	15.32	4337.62	29-Jan-08	25.41	4337.31	28-Jan-08	58.60	4335.99	28-Jan-08	80.27	4331.66	28-Jan-08	49.80	4333.10	28-Jan-08	15.35	4335.84
06-Mar-08	15.54	4337.40	27-Feb-08	25.72	4337.00	26-Feb-08	58.42	4336.17	26-Feb-08	79.94	4331.99	26-Feb-08	49.92	4332.98	27-Feb-08	15.62	4335.57
28-Mar-08	15.69	4337.25	28-Mar-08	25.93	4336.79	28-Mar-08	58.12	4336.47	28-Mar-08	79.75	4332.18	28-Mar-08	49.54	4333.36	26-Mar-08	15.81	4335.38
24-Apr-08	15.00	4337.94	24-Apr-08	26.17	4336.55	24-Apr-08	59.35	4335.24	24-Apr-08	81.17	4330.76	24-Apr-08	50.38	4332.52	23-Apr-08	16.12	4335.07
28-May-08	15.82	4337.12	27-May-08	26.50	4336.22	27-May-08	59.83	4334.76	27-May-08	82.24	4329.69	28-May-08	50.76	4332.14	28-May-08	16.42	4334.77
24-Jun-08	15.67	4337.27	24-Jun-08	26.71	4336.01	24-Jun-08	60.11	4334.48	24-Jun-08	82.44	4329.49	24-Jun-08	50.90	4332.00	23-Jun-08	16.67	4334.52
29-Jul-08	14.91	4338.03	29-Jul-08	26.86	4335.86	29-Jul-08	60.73	4333.86	29-Jul-08	83.41	4328.52	29-Jul-08	51.46	4331.44	30-Jul-08	17.23	4333.96
21-Aug-08	14.34	4338.60	21-Aug-08	26.90	4335.82	21-Aug-08	60.90	4333.69	21-Aug-08	84.13	4327.80	21-Aug-08	51.76	4331.14	22-Aug-08	17.52	4333.67
02-Oct-08	16.73	4336.21	02-Oct-08	27.19	4335.53	02-Oct-08	60.91	4333.68	02-Oct-08	84.21	4327.72	02-Oct-08	51.95	4330.95	01-Oct-08	17.82	4333.37
29-Oct-08	16.35	4336.59	29-Oct-08	27.30	4335.42	29-Oct-08	61.05	4333.54	29-Oct-08	84.08	4327.85	28-Oct-08	52.14	4330.76	29-Oct-08	17.88	4333.31
18-Nov-08	17.06	4335.88	18-Nov-08	27.39	4335.33	18-Nov-08	60.94	4333.65	18-Nov-08	83.67	4328.26	18-Nov-08	52.12	4330.78	19-Nov-08	17.85	4333.34
18-Dec-08	17.47	4335.47	18-Dec-08	27.60	4335.12	18-Dec-08	60.76	4333.83	17-Dec-08	83.10	4328.83	18-Dec-08	52.00	4330.90	17-Dec-08	17.92	4333.27
Net Change=	**-2.47**		**Net Change=**	**-2.60**		**Net Change=**	**-1.86**		**Net Change=**	**-2.35**		**Net Change=**	**-1.86**		**Net Change=**	**-3.00**	
Location:	**MW2002-2S**		**Location:**	**P-1S**		**Location:**	**PW-MW-1S**		**Location:**	**PW-MW-2S**		**Location:**	**PW-MW-3S**		**Location:**	**USEPA2S[3]**	
19-Dec-07	45.94	4330.19	21-Dec-07	38.15	4329.94	21-Dec-07	96.44	4344.60	21-Dec-07	141.67	4342.71	21-Dec-07	116.40	4343.77	18-Dec-07	19.31	4338.91
28-Jan-08	45.57	4330.56	29-Jan-08	37.78	4330.31	28-Jan-08	96.34	4344.70	28-Jan-08	141.60	4342.78	28-Jan-08	116.26	4343.91	28-Jan-08	18.66	4339.56
26-Feb-08	45.36	4330.77	27-Feb-08	37.97	4330.12	26-Feb-08	96.31	4344.73	26-Feb-08	141.50	4342.88	26-Feb-08	116.22	4343.95	27-Feb-08	18.63	4339.59
26-Mar-08	45.15	4330.98	28-Mar-08	37.92	4330.17	28-Mar-08	96.31	4344.73	28-Mar-08	141.50	4342.88	28-Mar-08	116.33	4343.84	28-Mar-08	18.48	4339.74
24-Apr-08	46.15	4329.98	24-Apr-08	38.48	4329.61	24-Apr-08	96.45	4344.59	24-Apr-08	141.97	4342.41	24-Apr-08	116.44	4343.73	24-Apr-08	18.80	4339.42
27-May-08	47.00	4329.13	27-May-08	39.13	4328.96	27-May-08	96.57	4344.47	27-May-08	142.19	4342.19	27-May-08	116.63	4343.54	27-May-08	NA	NA
24-Jun-08	47.20	4328.93	24-Jun-08	39.46	4328.63	24-Jun-08	96.74	4344.30	24-Jun-08	142.44	4341.94	24-Jun-08	116.79	4343.38	24-Jun-08	19.37	4338.85
29-Jul-08	47.90	4328.23	29-Jul-08	39.60	4328.49	29-Jul-08	96.88	4344.16	29-Jul-08	142.72	4341.66	29-Jul-08	116.98	4343.19	29-Jul-08	19.38	4338.84
21-Aug-08	48.25	4327.88	21-Aug-08	39.80	4328.29	21-Aug-08	96.96	4344.08	21-Aug-08	142.94	4341.44	21-Aug-08	117.09	4343.08	21-Aug-08	19.37	4338.85
02-Oct-08	48.90	4327.23	02-Oct-08	40.38	4327.71	01-Oct-08	97.14	4343.90	01-Oct-08	143.29	4341.09	01-Oct-08	117.32	4342.85	01-Oct-08	19.38	4338.84
29-Oct-08	48.84	4327.29	29-Oct-08	40.58	4327.51	29-Oct-08	97.16	4343.88	29-Oct-08	143.27	4341.11	29-Oct-08	117.40	4342.77	28-Oct-08	19.40	4338.82
18-Nov-08	48.51	4327.62	18-Nov-08	40.43	4327.66	18-Nov-08	97.37	4343.67	18-Nov-08	143.43	4340.95	18-Nov-08	117.56	4342.61	18-Nov-08	19.39	4338.83
18-Dec-08	48.14	4327.99	18-Dec-08	40.36	4327.73	18-Dec-08	97.54	4343.50	18-Dec-08	143.53	4340.85	18-Dec-08	117.66	4342.51	17-Dec-08	19.37	4338.85
Net Change=	**-2.20**		**Net Change=**	**-2.21**		**Net Change=**	**-1.10**		**Net Change=**	**-1.86**		**Net Change=**	**-1.26**		**Net Change=**	**-0.06**	

Table 3-2. 2008 Shallow Zone Monthly Water Levels - Continued

Measurement Date	Depth to Water (feet bmp)	Water Elevation (feet amsl)	Measurement Date	Depth to Water (feet bmp)	Water Elevation (feet amsl)	Measurement Date	Depth to Water (feet bmp)	Water Elevation (feet amsl)	Measurement Date	Depth to Water (feet bmp)	Water Elevation (feet amsl)	Measurement Date	Depth to Water (feet bmp)	Water Elevation (feet amsl)	Measurement Date	Depth to Water (feet bmp)	Water Elevation (feet amsl)
Location:	**USGS-13S**		**Location:**	**USGS-2BS**		**Location:**	**UW-1S**		**Location:**	**W5AA-2S**		**Location:**	**W5AA-3S**		**Location:**	**W5AB-2S**	
19-Dec-07	12.45	4336.77	19-Dec-07	16.50	4337.82	18-Dec-07	105.18	4338.65	18-Dec-07	14.40	4338.06	18-Dec-07	19.17	4337.72	21-Dec-07	14.74	4336.16
29-Jan-08	12.87	4336.35	29-Jan-08	17.28	4337.04	28-Jan-08	105.08	4338.75	29-Jan-08	14.78	4337.68	29-Jan-08	19.55	4337.34	28-Jan-08	15.02	4335.88
06-Mar-08	13.33	4335.89	26-Feb-08	17.66	4336.66	26-Feb-08	105.10	4338.73	27-Feb-08	15.03	4337.43	26-Feb-08	19.87	4337.02	27-Feb-08	15.28	4335.62
28-Mar-08	13.52	4335.70	28-Mar-08	17.99	4336.33	28-Mar-08	104.78	4339.05	28-Mar-08	15.30	4337.16	28-Mar-08	20.03	4336.86	28-Mar-08	15.49	4335.41
23-Apr-08	13.84	4335.38	24-Apr-08	16.42	4337.90	24-Apr-08	106.00	4337.83	24-Apr-08	15.28	4337.18	24-Apr-08	20.40	4336.49	24-Apr-08	15.72	4335.18
28-May-08	14.00	4335.22	28-May-08	16.12	4338.20	27-May-08	106.34	4337.49	28-May-08	15.72	4336.74	27-May-08	20.63	4336.26	27-May-08	16.00	4334.90
23-Jun-08	14.25	4334.97	24-Jun-08	15.61	4338.71	24-Jun-08	106.51	4337.32	24-Jun-08	15.97	4336.49	24-Jun-08	20.93	4335.96	24-Jun-08	16.25	4334.65
30-Jul-08	14.73	4334.49	29-Jul-08	14.32	4340.00	29-Jul-08	107.29	4336.54	29-Jul-08	16.02	4336.44	29-Jul-08	21.27	4335.62	30-Jul-08	16.65	4334.25
22-Aug-08	15.02	4334.20	25-Aug-08	14.58	4339.74	21-Aug-08	107.20	4336.63	21-Aug-08	15.95	4336.51	21-Aug-08	21.37	4335.52	21-Aug-08	16.84	4334.06
01-Oct-08	15.29	4333.93	01-Oct-08	16.71	4337.61	01-Oct-08	107.24	4336.59	02-Oct-08	16.50	4335.96	02-Oct-08	21.58	4335.31	01-Oct-08	17.13	4333.77
29-Oct-08	15.37	4333.85	28-Oct-08	17.71	4336.61	28-Oct-08	107.35	4336.48	29-Oct-08	16.70	4335.76	29-Oct-08	21.72	4335.17	29-Oct-08	17.23	4333.67
19-Nov-08	15.40	4333.82	18-Nov-08	17.98	4336.34	18-Nov-08	107.20	4336.63	18-Nov-08	16.91	4335.55	18-Nov-08	21.83	4335.06	18-Nov-08	17.30	4333.60
17-Dec-08	15.59	4333.63	17-Dec-08	18.80	4335.52	18-Dec-08	107.80	4336.03	18-Dec-08	17.16	4335.30	18-Dec-08	22.00	4334.89	18-Dec-08	17.38	4333.52
Net Change=	**-3.14**		**Net Change=**	**-2.30**		**Net Change=**	**-2.62**		**Net Change=**	**-2.76**		**Net Change=**	**-2.83**		**Net Change=**	**-2.64**	
Location:	**W5AD-1S**		**Location:**	**W5BB-S**		**Location:**	**WRP-1S**		**Location:**	**WRP-2S**		**Location:**	**WW-1S**		**Location:**	**WW-2S**	
21-Dec-07	30.45	4337.69	21-Dec-07	26.14	4329.79	18-Dec-07	8.88	4384.92	18-Dec-07	11.73	4381.32	NA	NA	NA	NA	NA	NA
29-Jan-08	32.03	4336.11	28-Jan-08	25.76	4330.17	29-Jan-08	8.98	4384.82	29-Jan-08	11.66	4381.39	NA	NA	NA	NA	NA	NA
27-Feb-08	31.36	4336.78	26-Feb-08	25.60	4330.33	28-Feb-08	8.94	4384.86	28-Feb-08	11.45	4381.60	NA	NA	NA	NA	NA	NA
28-Mar-08	31.62	4336.52	28-Mar-08	25.40	4330.53	28-Mar-08	8.44	4385.36	28-Mar-08	10.93	4382.12	NA	NA	NA	NA	NA	NA
24-Apr-08	31.58	4336.56	24-Apr-08	26.60	4329.33	24-Apr-08	8.78	4385.02	24-Apr-08	11.20	4381.85	24-Apr-08	42.94	4366.97	24-Apr-08	43.84	4363.23
27-May-08	31.49	4336.65	27-May-08	24.44	4331.49	28-May-08	7.50	4386.30	28-May-08	9.85	4383.20	27-May-08	43.25	4366.66	27-May-08	44.82	4362.25
24-Jun-08	31.37	4336.77	24-Jun-08	27.64	4328.29	23-Jun-08	7.92	4385.88	23-Jun-08	10.29	4382.76	24-Jun-08	42.86	4367.05	24-Jun-08	44.52	4362.55
29-Jul-08	30.72	4337.42	29-Jul-08	28.40	4327.53	30-Jul-08	9.16	4384.64	30-Jul-08	11.57	4381.48	29-Jul-08	43.35	4366.56	29-Jul-08	44.97	4362.10
21-Aug-08	30.93	4337.21	21-Aug-08	29.04	4326.89	21-Aug-08	9.19	4384.61	21-Aug-08	11.76	4381.29	21-Aug-08	43.86	4366.05	21-Aug-08	45.43	4361.64
02-Oct-08	31.98	4336.16	02-Oct-08	29.23	4326.70	01-Oct-08	9.17	4384.63	01-Oct-08	11.85	4381.20	01-Oct-08	44.78	4365.13	01-Oct-08	46.34	4360.73
29-Oct-08	32.62	4335.52	29-Oct-08	29.25	4326.68	28-Oct-08	9.01	4384.79	28-Oct-08	11.79	4381.26	28-Oct-08	44.90	4365.01	28-Oct-08	46.60	4360.47
18-Nov-08	32.95	4335.19	18-Nov-08	28.86	4327.07	19-Nov-08	9.04	4384.76	19-Nov-08	11.78	4381.27	18-Nov-08	44.47	4365.44	18-Nov-08	46.26	4360.81
18-Dec-08	33.30	4334.84	17-Dec-08	28.44	4327.49	17-Dec-08	8.50	4385.30	17-Dec-08	11.47	4381.58	17-Dec-08	43.87	4366.04	17-Dec-08	45.70	4361.37
Net Change=	**-2.85**		**Net Change=**	**-2.30**		**Net Change=**	**0.38**		**Net Change=**	**0.26**		**Net Change=**	**-0.93**		**Net Change=**	**-1.86**	

Notes: (1) "feet bmp" = feet below measuring point; "feet amsl" = feet above mean sea level
(2) The Net Change reflects the difference in groundwater elevation from December 2007 through December 2008, or the initial reading at the time of installation or addition to water level monitoring program through the last reading in December 2008.
(3) Monitor well USEPA2S groundwater elevations represent a water level in the sump of the well and not the actual water table elevation.

The following bullets briefly describe the shallow zone hydrographs presented in Appendix E-1. All wells and piezometers on the shallow zone hydrographs discussed below are depicted on small inset maps on the hydrographs themselves and on Figure 1-3 and Plate 1.

- Hydrograph SH-1 Sunset Hills Area: The Sunset Hills area is located north of the Site and slightly northwest of the agricultural fields area. Hydrograph SH-1 includes water level data for monitor wells B/W-3S, B/W-4S, B/W-8S, B/W-10S, B/W-19S and B/W-28S. Although groundwater flow direction is more readily displayed on the potentiometric surface maps provided in Appendix E, inspection of the hydrograph data and the well locations on the inset maps also illustrates the groundwater flow direction. The data on the hydrograph show groundwater flow to the north. B/W-10S, the northernmost Site monitor well, has a groundwater elevation of 4317.74 feet amsl which is 9.3 feet lower than that of B/W-3S, 4327.04 feet amsl. Further, Hydrograph SH-1 indicates that typical groundwater levels fluctuate seasonally with the elevations being lower in the summer months than in the winter months. This pattern is associated with natural recharge conditions and irrigation practices.
- Hydrograph SH-2 Agricultural Fields Area: Shallow monitoring points in the area of the agricultural fields include wells B/W-1S, B/W-9S, B/W-25S, B/W-27S, and USEPA2S. Wells B/W-1S and B/W-27S show affects of agricultural pumping during the summer months. Well B/W-9S, and to a lesser extent B/W-25S, show the affect of flood irrigation via the water level increasing or staying the same throughout the summer months. Well USEPA2S does not provide useable water level data during the summer months when the water table drops below the bottom of the well screen.
- Hydrograph SH-3A Northeast Mine Area (Pumpback Ponds): Shallow monitoring points located in OU-4 and the Wabuska Drain OU ("OU-7") include wells B/W-29S, W5AA-3S, D4BC-1S, D5AC-1S and piezometer W5AA-2S. Hydrograph SH-3A shows high water levels in the 1990s declining to a low in 2005. Then, in 2006 water levels rose somewhat, but have since continued to decline through 2007 and 2008. Water level fluctuations and seasonal patterns in well D4BC-1S, and to a lesser extent W5AA-2S, are proximal to the agricultural fields and Wabuska Drain. Water levels in these two wells are affected by agricultural irrigation and occasional blockages in Wabuska Drain that temporarily impound water. These two factors locally affect the water levels and groundwater flow directions in this area.
- Hydrograph SH-3B Northeast Mine Area (Pumpback Ponds): Additional shallow monitoring points located in OU-4 and OU-7 include wells B/W-29S, and USGS-2BS and piezometers B-2S, B-3S, and W5AD-1S. As shown on Hydrograph SH-3B, water levels are high in the 1990s, subsequently decline until 2005, rise in 2006, and decline throughout 2007 and 2008. Seasonal water level fluctuations in B-2S, B-3S, W5AD-1S, and USGS-2BS illustrate the affects of agricultural irrigation and the occasional blockage in the Wabuska Drain that temporarily impounds water.
- Hydrograph SH-4 North of Mine: Shallow monitor wells located just north of the Site include B/W-5SR, B/W-18S, MW2002-1S, USGS-13S, W5AB-2S and W5BB-S.

Hydrograph SH-4 shows high water levels in the 1990s followed by a decline and low water level in 2005. Water levels increased in 2006 and then continued to decrease through 2007 and 2008. Further, hydrograph SH-4 shows two separate groupings of groundwater elevations. The first grouping include MW2002-1S, USGS-13S, and W5AB-2S; these wells do not show seasonal behavior and have higher water levels due to their proximity to the agricultural fields and the irrigation mound. The second grouping includes B/W-5SR, B/W-18S, and W5BB-S; these wells are further from the agricultural fields and exhibit typical seasonal Site groundwater elevation behavior. However, W5BB-S is somewhat affected by the PWS. Groundwater elevations for the two well groupings indicate that localized groundwater flow is more westerly, which is also evident on the shallow potentiometric surface maps in Appendix E-6.

- Hydrograph SH-5 West of Mine: Shallow monitor wells located in the western portion (OU-4) and west of the Site include B/W-6S, B/W-11S, B/W-16S, B/W-22S, MW-4S and MW2002-2S. Monitor wells in the western portion of the Site depict typical seasonal groundwater elevation behavior. In addition, data on hydrograph SH-5 shows groundwater flow direction to be northerly with the December 2008 groundwater elevation in B/W-22S (4,329.67 feet amsl) being 0.89 feet higher than that of B/W-6S (4,328.78 feet amsl) and 1.68 feet higher than that of MW2002-2S (4,327.99 feet amsl).
- Hydrograph SH-6 Process Areas: Monitor wells located in or near the Process Areas OU ("OU-3") include MW-1S, PA-MW-1S, PA-MW-2S, PA-MW-3S, MW-5S, MW-2S, and UW-1S. Monitor well MW-1S was damaged and became inaccessible for monitoring purposes in late 2008 (see Section 7.1), however the available data are included on the hydrograph for comparison to other data. In general, hydrograph SH-6 exhibits typical seasonal groundwater elevation changes; however, the changes are somewhat less dramatic than the changes in other shallow Site monitor wells.
- Hydrograph SH-7 Walker River/South Mine: Monitor wells located in and just outside of the south and southeast area of the Site include existing wells B/W-13S, B/W-14S, B/W-15S, WW-1S, WW-2S, B/W-20S, and B/W-21S and piezometers WRP-1S and WRP-2S. The two piezometers are located directly adjacent to the Walker River and, in general, show trends with slightly higher groundwater elevations in the winter and spring. Monitoring wells B/W-13S, B/W-14S, B/W-15S, and B/W-20S are also located relatively close to the Walker River and show effects of recharge from the Walker River. Finally, monitor well B/W-21S depicts a lower groundwater elevation than other wells in the area due to its vicinity to the pit, which functions as a hydraulic sink.

3.2.2 Intermediate Zone Manual Groundwater Level Measurements

Intermediate zone monthly water level data for 2008 are summarized in Tables 3-3. Like the shallow zone, the 2008 monitoring data indicate that water levels declined by 1.6 to 4.8 feet. In general intermediate zone wells on the western side of the Site near to the Singatse Range, such as B/W-6I and B/W-7I, and wells in the vicinity of the agricultural fields, such as B/W-9I and

B/W-25I, tend to show less decline in groundwater elevation than wells located north of the Site and in the Sunset Hills area. Further, the intermediate zone potentiometric surface also generally slopes northwest across the Site as shown on the intermediate potentiometric surface maps located in Appendix E-6.

Table 3-3. 2008 Intermediate Zone Monthly Water Levels - Continued

Measurement Date	Depth to Water (feet bmp)	Water Elevation (feet amsl)	Measurement Date	Depth to Water (feet bmp)	Water Elevation (feet amsl)	Measurement Date	Depth to Water (feet bmp)	Water Elevation (feet amsl)	Measurement Date	Depth to Water (feet bmp)	Water Elevation (feet amsl)	Measurement Date	Depth to Water (feet bmp)	Water Elevation (feet amsl)	Measurement Date	Depth to Water (feet bmp)	Water Elevation (feet amsl)
Location:	**BW-2I**		**Location:**	**BW-3I**		**Location:**	**BW-4I**		**Location:**	**BW-5IR**		**Location:**	**BW-6I**		**Location:**	**BW-7I**	
19-Dec-07	NA	NA	21-Dec-07	23.24	4330.43	21-Dec-07	NA	NA	21-Dec-07	NA	NA	19-Dec-07	103.50	4330.51	18-Dec-07	152.00	4329.21
28-Jan-08	NA	NA	28-Jan-08	23.02	4330.65	28-Jan-08	NA	NA	28-Jan-08	NA	NA	28-Jan-08	103.15	4330.86	28-Jan-08	151.83	4329.38
27-Feb-08	15.54	4336.32	27-Feb-08	23.22	4330.45	27-Feb-08	56.13	4328.38	27-Feb-08	30.03	4329.24	26-Feb-08	102.93	4331.08	26-Feb-08	151.63	4329.58
26-Mar-08	17.87	4333.99	26-Mar-08	23.22	4330.45	26-Mar-08	55.90	4328.61	26-Mar-08	29.89	4329.38	26-Mar-08	102.89	4331.12	26-Mar-08	151.55	4329.66
23-Apr-08	19.18	4332.68	23-Apr-08	23.85	4329.82	23-Apr-08	58.00	4326.51	23-Apr-08	30.34	4328.93	23-Apr-08	103.25	4330.76	23-Apr-08	151.94	4329.27
28-May-08	19.30	4332.56	28-May-08	24.57	4329.10	28-May-08	59.54	4324.97	27-May-08	30.87	4328.40	27-May-08	103.78	4330.23	27-May-08	152.49	4328.72
23-Jun-08	20.30	4331.56	23-Jun-08	24.97	4328.70	23-Jun-08	59.98	4324.53	24-Jun-08	31.11	4328.16	24-Jun-08	104.09	4329.92	24-Jun-08	152.65	4328.56
30-Jul-08	21.44	4330.42	30-Jul-08	25.89	4327.78	30-Jul-08	62.17	4322.34	30-Jul-08	31.74	4327.53	30-Jul-08	104.63	4329.38	30-Jul-08	153.13	4328.08
22-Aug-08	20.83	4331.03	22-Aug-08	26.39	4327.28	22-Aug-08	63.07	4321.44	22-Aug-08	32.07	4327.20	22-Aug-08	104.85	4329.16	22-Aug-08	153.49	4327.72
01-Oct-08	20.65	4331.21	01-Oct-08	27.10	4326.57	01-Oct-08	63.36	4321.15	01-Oct-08	32.58	4326.69	02-Oct-08	105.32	4328.69	02-Oct-08	153.96	4327.25
29-Oct-08	20.87	4330.99	29-Oct-08	27.28	4326.39	29-Oct-08	62.71	4321.80	29-Oct-08	32.80	4326.47	29-Oct-08	105.33	4328.68	28-Oct-08	154.10	4327.11
19-Nov-08	20.62	4331.24	19-Nov-08	27.21	4326.46	19-Nov-08	61.84	4322.67	19-Nov-08	32.89	4326.38	18-Nov-08	105.33	4328.68	18-Nov-08	154.22	4326.99
17-Dec-08	20.55	4331.31	17-Dec-08	27.00	4326.67	17-Dec-08	60.96	4323.55	17-Dec-08	32.85	4326.42	17-Dec-08	105.11	4328.90	17-Dec-08	154.13	4327.08
Net Change=	**-5.01**		**Net Change=**	**-3.76**		**Net Change=**	**-4.83**		**Net Change=**	**-2.82**		**Net Change=**	**-1.61**		**Net Change=**	**-2.13**	

Location:	**BW-8I**		**Location:**	**BW-9I**		**Location:**	**BW-19I**		**Location:**	**BW-25I**		**Location:**	**BW-28I**		**Location:**	**BW-29I**	
21-Dec-07	142.45	4325.88	21-Dec-07	NA	NA	21-Dec-07	NA	NA	21-Dec-07	NA	NA	21-Dec-07	NA	NA	21-Dec-07	NA	NA
28-Jan-08	141.43	4326.90	29-Jan-08	17.80	4336.49	29-Jan-08	NA	NA	29-Jan-08	NA	NA	29-Jan-08	NA	NA	29-Jan-08	NA	NA
27-Feb-08	140.89	4327.44	27-Feb-08	18.12	4336.17	26-Feb-08	96.51	4328.07	26-Feb-08	20.47	4334.53	27-Feb-08	48.00	4327.41	26-Feb-08	76.00	4336.94
26-Mar-08	140.57	4327.76	27-Mar-08	18.41	4335.88	26-Mar-08	96.15	4328.43	27-Mar-08	19.20	4335.80	26-Mar-08	47.80	4327.61	27-Mar-08	76.12	4336.82
23-Apr-08	142.27	4326.06	23-Apr-08	18.55	4335.74	23-Apr-08	97.50	4327.08	23-Apr-08	22.86	4332.14	23-Apr-08	49.88	4325.53	23-Apr-08	78.22	4334.72
28-May-08	144.00	4324.33	28-May-08	18.18	4336.11	28-May-08	98.89	4325.69	28-May-08	22.63	4332.37	27-May-08	51.42	4323.99	27-May-08	79.30	4333.64
23-Jun-08	144.27	4324.06	23-Jun-08	19.31	4334.98	24-Jun-08	99.22	4325.36	23-Jun-08	27.14	4327.86	23-Jun-08	51.72	4323.69	24-Jun-08	80.70	4332.24
30-Jul-08	146.24	4322.09	30-Jul-08	20.00	4334.29	30-Jul-08	100.90	4323.68	30-Jul-08	30.82	4324.18	30-Jul-08	53.57	4321.84	30-Jul-08	83.02	4329.92
22-Aug-08	147.50	4320.83	22-Aug-08	19.61	4334.68	22-Aug-08	101.85	4322.73	22-Aug-08	25.35	4329.65	22-Aug-08	54.66	4320.75	21-Aug-08	81.41	4331.53
01-Oct-08	148.13	4320.20	01-Oct-08	19.45	4334.84	01-Oct-08	102.47	4322.11	01-Oct-08	23.86	4331.14	01-Oct-08	55.26	4320.15	01-Oct-08	80.85	4332.09
29-Oct-08	147.68	4320.65	29-Oct-08	19.84	4334.45	29-Oct-08	102.20	4322.38	29-Oct-08	24.18	4330.82	29-Oct-08	54.80	4320.61	28-Oct-08	81.32	4331.62
19-Nov-08	146.84	4321.49	19-Nov-08	20.29	4334.00	19-Nov-08	101.63	4322.95	18-Nov-08	23.44	4331.56	19-Nov-08	53.85	4321.56	18-Nov-08	80.62	4332.32
17-Dec-08	145.91	4322.42	17-Dec-08	20.62	4333.67	17-Dec-08	100.93	4323.65	18-Dec-08	22.55	4332.45	18-Dec-08	52.80	4322.61	18-Dec-08	79.85	4333.09
Net Change=	**-3.46**		**Net Change=**	**-2.82**		**Net Change=**	**-4.42**		**Net Change=**	**-2.08**		**Net Change=**	**-4.80**		**Net Change=**	**-3.85**	

Table 3-3. 2008 Intermediate Zone Monthly Water Levels - Continued

Measurement Date	Depth to Water (feet bmp)	Water Elevation (feet amsl)	Measurement Date	Depth to Water (feet bmp)	Water Elevation (feet amsl)	Measurement Date	Depth to Water (feet bmp)	Water Elevation (feet amsl)	Measurement Date	Depth to Water (feet bmp)	Water Elevation (feet amsl)	Measurement Date	Depth to Water (feet bmp)	Water Elevation (feet amsl)
Location:	**MW2002-2I**		**Location:**	**W4CB-1I**		**Location:**	**W4CB-2I**		**Location:**	**W5AA-1I**		**Location:**	**W5AB-3I**	
19-Dec-07	47.45	4329.83	19-Dec-07	19.36	4336.53	19-Dec-07	19.55	4336.55	18-Dec-07	15.22	4336.53	21-Dec-07	17.12	4334.35
28-Jan-08	46.75	4330.53	29-Jan-08	19.41	4336.48	29-Jan-08	19.61	4336.49	29-Jan-08	15.36	4336.39	28-Jan-08	17.13	4334.34
26-Feb-08	46.53	4330.75	26-Feb-08	19.57	4336.32	26-Feb-08	19.69	4336.41	27-Feb-08	15.54	4336.21	26-Feb-08	17.20	4334.27
26-Mar-08	46.79	4330.49	28-Mar-08	19.52	4336.37	28-Mar-08	19.74	4336.36	28-Mar-08	15.61	4336.14	28-Mar-08	17.26	4334.21
24-Apr-08	47.26	4330.02	24-Apr-08	21.60	4334.29	24-Apr-08	21.48	4334.62	24-Apr-08	15.52	4336.23	24-Apr-08	18.95	4332.52
27-May-08	48.14	4329.14	28-May-08	22.09	4333.80	28-May-08	21.93	4334.17	28-May-08	17.75	4334.00	27-May-08	19.31	4332.16
24-Jun-08	48.35	4328.93	24-Jun-08	23.55	4332.34	24-Jun-08	23.02	4333.08	24-Jun-08	19.39	4332.36	24-Jun-08	20.58	4330.89
29-Jul-08	49.12	4328.16	29-Jul-08	25.02	4330.87	29-Jul-08	24.07	4332.03	29-Jul-08	20.89	4330.86	30-Jul-08	22.00	4329.47
21-Aug-08	49.67	4327.61	25-Aug-08	24.04	4331.85	25-Aug-08	23.35	4332.75	21-Aug-08	19.26	4332.49	21-Aug-08	20.85	4330.62
02-Oct-08	49.95	4327.33	01-Oct-08	23.19	4332.70	01-Oct-08	23.02	4333.08	02-Oct-08	18.81	4332.94	01-Oct-08	20.36	4331.11
29-Oct-08	49.93	4327.35	28-Oct-08	23.63	4332.26	28-Oct-08	23.50	4332.60	29-Oct-08	19.00	4332.75	29-Oct-08	20.56	4330.91
18-Nov-08	49.54	4327.74	18-Nov-08	22.93	4332.96	18-Nov-08	22.97	4333.13	18-Nov-08	18.67	4333.08	18-Nov-08	20.14	4331.33
18-Dec-08	49.15	4328.13	17-Dec-08	22.62	4333.27	17-Dec-08	22.75	4333.35	18-Dec-08	18.45	4333.30	18-Dec-08	19.93	4331.54
Net Change=	**-1.70**		**Net Change=**	**-3.26**		**Net Change=**	**-3.20**		**Net Change=**	**-3.23**		**Net Change=**	**-2.81**	

Notes: (1) "feet bmp" = feet below measuring point; "feet amsl" = feet above mean sea level
(2) The Net Change reflects the difference in groundwater elevation from December 2007 through December 2008, or the initial reading at the time of installation or addition to water level monitoring program through the last reading in December 2008.

The following bullets briefly describe the intermediate zone manual hydrographs presented in Appendix E-2, which exhibit similar patterns as the shallow well hydrographs. Wells and piezometers in the intermediate zone hydrographs are depicted on small inset maps on the hydrographs and can also be located on Figure 1-3 and Plate 1.

- Hydrograph I-1 Sunset Hills Area: The Sunset Hills area is located north of the Site and just northwest of the agricultural field area as shown on Figure 1-3 and Plate 1. Intermediate zone monitor wells located in the Sunset Hills area include B/W-3I, B/W-4I, B/W-19I, B/W-28I, and B/W-8I. Hydrograph I-1 shows the typical short-term seasonal water level fluctuations observed in the other Site monitor wells.
- Hydrograph I-2 Northeast Area: Intermediate zone monitoring points located in OU-4, OU-7, and just outside of the northeast portion of the Site include monitor wells B/W-9I, B/W-25I, B/W-29I, W4CB-2I, and W4AA-1I and piezometer W4CB-1I. Hydrograph I-2 shows high groundwater elevations in the 1990s, a low in 2005, water levels rising in 2006, and then declining again through 2007 and 2008. Further, hydrograph I-2 shows the typical short-term seasonal water level fluctuations observed in the other Site monitor wells. Monitor well B/W-25I appears to be somewhat more affected by irrigational pumping.
- Hydrograph I-3 Northwest Area: Intermediate zone monitor wells just inside and northwest of the Site include B/W-6I, B/W-7I, W5AB-3I, B/W-2I, B/W-5RI, and MW2002-2I. Well W5AB-1I was made inactive after March 2008 because its well screen interval straddles two hydrostratigraphic zones. However groundwater elevations are retained on this hydrograph for historical trend observations. In general, hydrograph I-3 shows the typical long-term and seasonal water level fluctuations observed in other Site wells.

3.2.3 Deep Zone and Bedrock Aquifer Manual Groundwater Measurements

Deep zone and bedrock aquifer manual groundwater level monitoring results are summarized in tables 3-4 and 3-5 respectively. In 2008, groundwater elevation in the deep zone aquifer generally declined from 1.51 to 6.53 feet.

Table 3-4. 2008 Deep Zone Monthly Water Levels

Measurement Date	Depth to Water (feet bmp)	Water Elevation (feet amsl)	Measurement Date	Depth to Water (feet bmp)	Water Elevation (feet amsl)	Measurement Date	Depth to Water (feet bmp)	Water Elevation (feet amsl)	Measurement Date	Depth to Water (feet bmp)	Water Elevation (feet amsl)	Measurement Date	Depth to Water (feet bmp)	Water Elevation (feet amsl)
Location:	**BW-1D1**		**Location:**	**BW-1D2**		**Location:**	**BW-1D3**		**Location:**	**BW-2D**		**Location:**	**BW-3D**	
19-Dec-07	NA	NA	19-Dec-07	NA	NA	18-Dec-07	24.90	4332.42	19-Dec-07	19.95	4331.44	21-Dec-07	24.79	4328.91
28-Jan-08	NA	NA	28-Jan-08	NA	NA	28-Jan-08	24.28	4333.04	28-Jan-08	19.52	4331.87	28-Jan-08	24.22	4329.48
26-Feb-08	22.58	4335.18	26-Feb-08	NA	NA	26-Feb-08	24.14	4333.18	27-Feb-08	19.37	4332.02	27-Feb-08	23.87	4329.83
27-Mar-08	22.69	4335.07	27-Mar-08	NA	NA	27-Mar-08	24.33	4332.99	26-Mar-08	19.32	4332.07	26-Mar-08	23.77	4329.93
23-Apr-08	41.15	4316.61	23-Apr-08	49.25	4308.37	23-Apr-08	52.48	4304.84	23-Apr-08	25.33	4326.06	23-Apr-08	27.40	4326.30
28-May-08	28.45	4329.31	28-May-08	31.87	4325.75	28-May-08	33.81	4323.51	28-May-08	24.74	4326.65	28-May-08	27.66	4326.04
23-Jun-08	36.56	4321.20	23-Jun-08	48.42	4309.20	23-Jun-08	51.89	4305.43	23-Jun-08	30.77	4320.62	23-Jun-08	30.22	4323.48
30-Jul-08	59.95	4297.81	30-Jul-08	106.88	4250.74	30-Jul-08	114.24	4243.08	30-Jul-08	35.13	4316.26	30-Jul-08	33.30	4320.40
22-Aug-08	33.16	4324.60	22-Aug-08	39.06	4318.56	22-Aug-08	41.24	4316.08	22-Aug-08	28.40	4322.99	22-Aug-08	31.42	4322.28
01-Oct-08	30.75	4327.01	01-Oct-08	34.00	4323.62	01-Oct-08	35.65	4321.67	01-Oct-08	25.82	4325.57	01-Oct-08	30.50	4323.20
28-Oct-08	31.00	4326.76	28-Oct-08	35.35	4322.27	28-Oct-08	37.00	4320.32	29-Oct-08	25.81	4325.58	29-Oct-08	30.11	4323.59
19-Nov-08	39.66	4318.10	19-Nov-08	60.18	4297.44	19-Nov-08	66.03	4291.29	19-Nov-08	24.23	4327.16	19-Nov-08	28.92	4324.78
17-Dec-08	26.55	4331.21	17-Dec-08	27.97	4329.65	17-Dec-08	28.52	4328.80	17-Dec-08	23.01	4328.38	17-Dec-08	28.12	4325.58
Net Change=	**-3.97**		**Net Change=**	**21.28**		**Net Change=**	**-3.62**		**Net Change=**	**-3.06**		**Net Change=**	**-3.33**	
Location:	**BW-4D**		**Location:**	**BW-5DR**		**Location:**	**BW-9D**		**Location:**	**BW-10D**		**Location:**	**BW-11D**	
21-Dec-07	57.00	4326.96	21-Dec-07	NA	NA	19-Dec-07	21.27	4332.57	21-Dec-07	22.67	4321.41	21-Dec-07	39.55	4331.05
28-Jan-08	56.20	4327.76	28-Jan-08	30.18	4329.16	29-Jan-08	20.90	4332.94	28-Jan-08	21.48	4322.60	28-Jan-08	38.93	4331.67
27-Feb-08	55.62	4328.34	27-Feb-08	29.97	4329.37	27-Feb-08	20.82	4333.02	26-Feb-08	21.58	4322.50	26-Feb-08	38.76	4331.84
26-Mar-08	55.55	4328.41	26-Mar-08	29.85	4329.49	27-Mar-08	20.95	4332.89	26-Mar-08	21.48	4322.60	26-Mar-08	38.52	4332.08
23-Apr-08	57.97	4325.99	23-Apr-08	30.87	4328.47	23-Apr-08	27.22	4326.62	23-Apr-08	25.99	4318.09	23-Apr-08	41.88	4328.72
28-May-08	59.33	4324.63	27-May-08	31.43	4327.91	28-May-08	26.48	4327.36	27-May-08	26.20	4317.88	28-May-08	42.43	4328.17
23-Jun-08	60.04	4323.92	24-Jun-08	31.96	4327.38	23-Jun-08	33.45	4320.39	23-Jun-08	28.65	4315.43	23-Jun-08	45.32	4325.28
30-Jul-08	62.52	4321.44	30-Jul-08	32.99	4326.35	30-Jul-08	38.49	4315.35	30-Jul-08	32.13	4311.95	30-Jul-08	47.84	4322.76
22-Aug-08	63.12	4320.84	22-Aug-08	32.87	4326.47	22-Aug-08	30.64	4323.20	22-Aug-08	32.44	4311.64	22-Aug-08	44.92	4325.68
01-Oct-08	63.22	4320.74	01-Oct-08	33.14	4326.20	01-Oct-08	27.70	4326.14	01-Oct-08	30.75	4313.33	02-Oct-08	43.87	4326.73
29-Oct-08	62.45	4321.51	29-Oct-08	33.20	4326.14	29-Oct-08	27.68	4326.16	29-Oct-08	29.85	4314.23	28-Oct-08	44.00	4326.60
19-Nov-08	61.48	4322.48	19-Nov-08	33.05	4326.29	19-Nov-08	26.24	4327.60	19-Nov-08	27.87	4316.21	19-Nov-08	42.96	4327.64
17-Dec-08	60.58	4323.38	17-Dec-08	32.83	4326.51	17-Dec-08	24.77	4329.07	17-Dec-08	26.59	4317.49	18-Dec-08	42.00	4328.60
Net Change=	**-3.58**		**Net Change=**	**-2.65**		**Net Change=**	**-3.50**		**Net Change=**	**-3.92**		**Net Change=**	**-2.45**	

Table 3-4. 2008 Deep Zone Monthly Water Levels - Continued

Measurement Date	Depth to Water (feet bmp)	Water Elevation (feet amsl)	Measurement Date	Depth to Water (feet bmp)	Water Elevation (feet amsl)	Measurement Date	Depth to Water (feet bmp)	Water Elevation (feet amsl)	Measurement Date	Depth to Water (feet bmp)	Water Elevation (feet amsl)	Measurement Date	Depth to Water (feet bmp)	Water Elevation (feet amsl)
Location:	**BW-18D1**		**Location:**	**BW-18D2**		**Location:**	**BW-19D**		**Location:**	**BW-25D**		**Location:**	**BW-27D**	
19-Dec-07	NA	NA	19-Dec-07	NA	NA	19-Dec-07	NA	NA	19-Dec-07	NA	NA	19-Dec-07	NA	NA
28-Jan-08	NA	NA	28-Jan-08	NA	NA	28-Jan-08	NA	NA	28-Jan-08	NA	NA	28-Jan-08	NA	NA
06-Mar-08	19.50	4331.99	06-Mar-08	20.85	4330.98	26-Feb-08	98.82	4325.16	26-Feb-08	17.85	4336.78	06-Mar-08	25.00	4332.58
27-Mar-08	20.47	4331.02	27-Mar-08	20.84	4330.99	27-Mar-08	NA	NA	27-Mar-08	20.55	4334.08	27-Mar-08	25.60	4331.98
23-Apr-08	24.06	4327.43	23-Apr-08	24.24	4327.59	23-Apr-08	97.58	4326.40	23-Apr-08	28.95	4325.68	23-Apr-08	39.40	4318.18
27-May-08	24.42	4327.07	27-May-08	24.85	4326.98	28-May-08	98.86	4325.12	28-May-08	27.74	4326.89	28-May-08	33.60	4323.98
24-Jun-08	26.84	4324.65	24-Jun-08	27.19	4324.64	24-Jun-08	99.65	4324.33	23-Jun-08	42.04	4312.59	23-Jun-08	46.47	4311.11
30-Jul-08	29.95	4321.54	30-Jul-08	30.32	4321.51	30-Jul-08	101.95	4322.03	30-Jul-08	NA	NA	30-Jul-08	65.74	4291.84
22-Aug-08	26.83	4324.66	22-Aug-08	27.18	4324.65	22-Aug-08	102.27	4321.71	22-Aug-08	32.96	4321.67	22-Aug-08	44.81	4312.77
01-Oct-08	25.58	4325.91	01-Oct-08	25.93	4325.90	01-Oct-08	102.45	4321.53	01-Oct-08	28.41	4326.22	01-Oct-08	37.92	4319.66
29-Oct-08	25.53	4325.96	29-Oct-08	25.89	4325.94	29-Oct-08	102.00	4321.98	29-Oct-08	28.92	4325.71	28-Oct-08	36.17	4321.41
19-Nov-08	24.50	4326.99	19-Nov-08	24.84	4326.99	19-Nov-08	101.17	4322.81	18-Nov-08	25.84	4328.79	19-Nov-08	34.44	4323.14
17-Dec-08	23.77	4327.72	17-Dec-08	24.14	4327.69	17-Dec-08	100.33	4323.65	18-Dec-08	24.38	4330.25	17-Dec-08	29.35	4328.23
Net Change=	**-4.27**		**Net Change=**	**-3.29**		**Net Change=**	**-1.51**		**Net Change=**	**-6.53**		**Net Change=**	**-4.35**	
Location:	**BW-28D**		**Location:**	**BW-29D1**		**Location:**	**BW-29D3**		**Location:**	**W32DC-D**		**Location:**	**W5DB-D**	
19-Dec-07	NA	NA	19-Dec-07	NA	NA	18-Dec-07	78.90	4334.07	19-Dec-07	17.73	4331.42	21-Dec-07	31.73	4333.21
28-Jan-08	NA	NA	28-Jan-08	77.45	4335.79	28-Jan-08	78.54	4334.43	29-Jan-08	17.32	4331.83	29-Jan-08	31.30	4333.64
27-Feb-08	46.84	4327.36	26-Feb-08	77.58	4335.66	26-Feb-08	78.57	4334.40	06-Mar-08	17.14	4332.01	27-Feb-08	31.25	4333.69
26-Mar-08	46.71	4327.49	27-Mar-08	77.60	4335.64	27-Mar-08	78.61	4334.36	28-Mar-08	17.14	4332.01	28-Mar-08	31.09	4333.85
23-Apr-08	50.07	4324.13	23-Apr-08	83.28	4329.96	23-Apr-08	87.50	4325.47	23-Apr-08	22.95	4326.20	24-Apr-08	36.63	4328.31
27-May-08	50.88	4323.32	27-May-08	84.75	4328.49	27-May-08	88.14	4324.83	28-May-08	22.35	4326.80	27-May-08	37.35	4327.59
23-Jun-08	52.25	4321.95	24-Jun-08	91.04	4322.20	24-Jun-08	98.77	4314.20	23-Jun-08	27.62	4321.53	24-Jun-08	42.04	4322.90
30-Jul-08	55.19	4319.01	30-Jul-08	100.50	4312.74	30-Jul-08	NA	NA	30-Jul-08	31.93	4317.22	29-Jul-08	47.33	4317.61
22-Aug-08	55.38	4318.82	21-Aug-08	89.63	4323.61	21-Aug-08	93.17	4319.80	22-Aug-08	25.93	4323.22	21-Aug-08	40.01	4324.93
01-Oct-08	54.80	4319.40	01-Oct-08	84.27	4328.97	01-Oct-08	86.68	4326.29	01-Oct-08	23.57	4325.58	02-Oct-08	37.15	4327.79
29-Oct-08	54.00	4320.20	28-Oct-08	85.58	4327.66	28-Oct-08	87.48	4325.49	29-Oct-08	23.58	4325.57	29-Oct-08	37.44	4327.50
19-Nov-08	52.60	4321.60	18-Nov-08	82.70	4330.54	18-Nov-08	84.17	4328.80	19-Nov-08	21.94	4327.21	18-Nov-08	35.48	4329.46
18-Dec-08	51.49	4322.71	18-Dec-08	81.50	4331.74	18-Dec-08	82.50	4330.47	17-Dec-08	20.85	4328.30	18-Dec-08	34.68	4330.26
Net Change=	**-4.65**		**Net Change=**	**-4.05**		**Net Change=**	**-3.60**		**Net Change=**	**-3.12**		**Net Change=**	**-2.95**	

Notes: (1) "feet bmp" = feet below measuring point; "feet amsl" = feet above mean sea level
(2) The Net Change reflects the difference in groundwater elevation from December 2007 through December 2008, or the initial reading at the time of installation or addition to water level monitoring program through the last reading in December 2008.

Table 3-5. 2008 Bedrock Aquifer Monthly Water Levels - Continued

Measurement Date	Depth to Water (feet bmp)	Water Elevation (feet amsl)	Measurement Date	Depth to Water (feet bmp)	Water Elevation (feet amsl)	Measurement Date	Depth to Water (feet bmp)	Water Elevation (feet amsl)	Measurement Date	Depth to Water (feet bmp)	Water Elevation (feet amsl)
Location:	**B/W-11B**		**Location:**	**B/W-23B**		**Location:**	**WW-40B**		**Location:**	**WW-59B**	
19-Dec-07	NA	NA	19-Dec-07	NA	NA	19-Dec-07	NA	NA	19-Dec-07	NA	NA
26-Feb-08	38.02	4332.92	06-Mar-08	228.90	4416.31	06-Mar-08	NA	NA	06-Mar-08	NA	NA
26-Mar-08	37.88	4333.06	27-Mar-08	228.77	4416.44	27-Mar-08	NA	NA	27-Mar-08	NA	NA
23-Apr-08	40.90	4330.04	23-Apr-08	228.66	4416.55	24-Apr-08	72.40	4345.27	24-Apr-08	208.60	4312.32
28-May-08	41.72	4329.22	27-May-08	228.73	4416.48	27-May-08	69.75	4347.92	27-May-08	208.15	4312.77
23-Jun-08	43.74	4327.20	24-Jun-08	228.63	4416.58	24-Jun-08	68.23	4349.44	24-Jun-08	NA	NA
30-Jul-08	45.91	4325.03	30-Jul-08	228.76	4416.45	29-Jul-08	72.87	4344.80	30-Jul-08	208.02	4312.90
22-Aug-08	43.92	4327.02	22-Aug-08	228.72	4416.49	21-Aug-08	77.10	4340.57	22-Aug-08	208.08	4312.84
02-Oct-08	43.00	4327.94	02-Oct-08	228.60	4416.61	01-Oct-08	74.90	4342.77	01-Oct-08	208.65	4312.27
28-Oct-08	43.18	4327.76	28-Oct-08	228.75	4416.46	28-Oct-08	71.48	4346.19	28-Oct-08	208.84	4312.08
19-Nov-08	42.17	4328.77	18-Nov-08	228.59	4416.62	18-Nov-08	68.71	4348.96	18-Nov-08	209.08	4311.84
18-Dec-08	41.36	4329.58	18-Dec-08	228.44	4416.77	17-Dec-08	68.40	4349.27	17-Dec-08	209.10	4311.82
Net Change=	**-3.34**		**Net Change=**	**0.46**		**Net Change=**	**4.00**		**Net Change=**	**-0.50**	

Notes: (1) "feet bmp" = feet below measuring point; "feet amsl" = feet above mean sea level
(2) The Net Change reflects the difference in groundwater elevation from December 2007 through December 2008, or the initial reading at the time of installation or addition to water level monitoring program through the last reading in December 2008.

The December 2008 manual groundwater elevation at well B/W-29D1 (4331.74 feet amsl) was approximately three feet lower than at well B/W-11D (4328.6 feet amsl). Well B/W-29D1 is situated almost 4,950 feet due west of B/W-11D. Approximately 11,700 feet north of B/W-29D1, the water elevation at well B/W-10D (4317.49 feet amsl) was approximately 14 feet lower than B/W-29D1. These relative differences in elevation generally indicate the deep zone potentiometric surface slopes northwest across the Site from B/W-29D1 toward B/W-10D. Further, illustration of the regional groundwater flow direction in the deep alluvial aquifer is shown on the monthly Deep Zone Potentiometric Surface Maps presented in Appendix E-6.

The following bullets briefly describe the deep zone and bedrock aquifer hydrographs presented in Appendix E-3, which exhibit similar patterns as the shallow and intermediate well hydrographs. All wells and piezometers in the deep zone and bedrock aquifer hydrographs are depicted on the hydrographs and can also be located on Figure 1-3 and Plate 1.

- Hydrograph D-1 Sunset Hills Area: The Sunset Hills area is located north of the Site and just northwest of the agricultural field area as shown on Figure 1-3 and Plate 1. Deep zone wells located in the Sunset Hills area include B/W-3D, B/W-4D, B/W-10D, B/W-28D, and B/W-19D. Water level fluctuations show the typical seasonal pattern observed in other Site monitor wells, which is associated with natural recharge and agricultural activities.
- Hydrograph D-2 North of Mine: Deep zone wells located just north of the Site include B/W-2D, B/W-5D, W32DC-D, B/W-5DR, B/W-18D1, and B/W-18D2. Well B/W-5D was abandoned in 2007 and replaced with B/W-5DR, which is located approximately 200 feet west of the original well location. Data for both wells are presented on the hydrograph. Well W32DC-D water levels show higher groundwater elevations in the 1990s declining to a low in 2005, higher water levels in 2006, and declining water levels through 2007 and 2008. Hydrograph D-2 shows typical seasonal Site groundwater behavior. With the exception of B/W-5DR, the wells also appear to be somewhat affected by irrigational pumping because the hydrograph shows greater decline in groundwater elevation during July of 2008. This may be attributed to the proximity of the wells to the agricultural fields.
- Hydrograph D-3A Northeast/Agricultural Areas: Wells located northeast of the Site in the agricultural field area include B/W-1D3, B/W-1D1, B/W-1D2, B/W-9D, and B/W-27D. These wells exhibit the most significant impact of the agricultural pumping. The B/W-1 well cluster is located approximately 100 feet from agricultural supply well WDW019 and, therefore, water levels exhibit drawdown in excess of 85 feet throughout the summer irrigation season.

- Hydrograph D-3B Northeast/Agricultural Areas: Additional deep monitor wells located northeast of the site and in OU-4 and OU-7 include B/W-25D, B/W-29D1, B/W-29D3, and W5DB-D. Water level fluctuations show the typical seasonal pattern observed in other Site monitor wells, especially the effects of agricultural pumping during recent years.
- Hydrograph B-1 Bedrock Wells: Bedrock aquifer monitor wells at various locations around the Site include B/W-11B, B/W-23B, WW-40B, and WW-59B. Water levels in two bedrock monitor wells, B/W-11B and WW-40B, are influenced by nearby agricultural and industrial supply wells WDW019 and WW-36B, respectively. Further evidence of agricultural pumping affects on well B/W-11B is presented in Section 3.2.5 of this 2008 GMR. Water levels in wells B/W-23B and WW-59B have remained relatively stable during 2008.

3.2.4 Manual Groundwater Level Monitoring Vertical Gradients

Individual well cluster hydrographs are provided in Appendix E-4. These hydrographs display monthly groundwater elevation data for all wells located in a well cluster, i.e. MW2002-1S, B/W-2I, and B/W-2D, and their associated vertical gradients. In general, the well cluster hydrographs indicate that head measurements in wells screened in the shallow alluvial hydrostratigraphic zone are often higher than head measurements in nearby wells screened in the intermediate and/or deep alluvial hydrostratigraphic zones. These head differences generally indicate a downward vertical gradient in the alluvial aquifer, which can be calculated using the following equation:

$$i_v = \frac{h_1 - h_2}{d}$$

where:

h_1 = the head measurement in the shallow alluvial well, in feet amsl.

h_2 = the head measurement in the deep alluvial well, in feet amsl.

d = the distance between the midpoints of the screen intervals for the well pairs, in feet.

Head measurements and calculated vertical gradients for select well pairs are presented in Table 3-6. Note that the head differential, as defined, means that a positive value for the calculated gradient represents a downward vertical flow gradient and a negative value represents an upward vertical flow gradient.

Table 3-6. Vertical Hydraulic Gradient Data

Location	Date	Shallow Well		Deep Well		Delta Head	Dist. Between Well Screen Midpoints	Calculated Gradient
		Well ID	Head (feet amsl)	Well ID	Head (feet amsl)	(feet)	(feet)	
BW-1	11/19/2008	B/W-1S	4328.63	B/W-1D3	4291.29	37.34	301.0	0.124
BW-2	11/19/2008	MW2002-1S	4333.34	B/W-2D	4327.27	6.07	112.6	0.054
BW-3	11/19/2008	B/W-3S	4326.97	B/W-3D	4324.78	2.19	108.7	0.020
BW-4	11/19/2008	B/W-4S	4322.68	B/W-4D	4322.48	0.20	88.7	0.002
BW-5	11/19/2008	B/W-5SR	4326.39	B/W-5DR	4326.29	0.10	84.6	0.001
BW-6	11/18/2008	B/W-6S	4328.61	B/W-6I	4328.68	-0.07	61.6	-0.001
BW-8	11/19/2008	BW-8S	4321.57	BW-8I	4321.49	0.08	41.7	0.002
BW-9	11/19/2008	BW-9S	4335.92	BW-9D	4327.60	8.32	124.9	0.067
BW-10	11/19/2008	B/W-10S	4316.48	B/W-10D	4317.49	-1.01	80.5	-0.013
BW-11	11/19/2008	B/W-11S	4328.03	B/W-11D	4327.64	0.39	127.9	0.003
BW-11	11/19/2008	B/W-11D	4327.64	B/W-11B	4328.77	-1.13	59.8	-0.019
BW-18	11/19/2008	B/W-18S	4327.87	B/W-18D2	4326.99	0.88	129.7	0.007
BW-19	11/19/2008	B/W-19S	4322.96	B/W-19D	4322.81	0.15	115.0	0.001
BW-25	11/18/2008	B/W-25S	4334.45	B/W-25D	4328.79	5.66	188.8	0.030
BW-27	11/19/2008	B/W-27S	4335.72	B/W-27D	4323.14	12.58	214.2	0.059
BW-28	11/19/2008	B/W-28S	4321.55	B/W-28D	4321.60	-0.05	109.7	-0.001
BW-29	11/19/2008	B/W-29S	4333.02	B/W-29D3	4328.80	4.22	265.0	0.016
USGS-13S/ W32DC-D	11/19/2008	USGS-13S	4333.82	W32DC-D	4327.21	6.61	119.11	0.055

Notes: feet amsl = feet above mean sea level

3.2.5 Electronic Groundwater Level Monitoring Results

Pressure transducers and electronic data loggers have been installed in wells B/W-1 (S and D3), MW2002-1S and B/W-2D, B/W-3 (S and D), B/W-4 (S and D), B/W-8 (S and I), B/W-9 (S and D), B/W-11 (S, D and B), B/W-25 (S and D), B/W-27 (S and D), WRP-1S and WRP-2S. Data are currently collected from these wells on an hourly basis. The 2007 and some 2008 monitoring results are presented in the Second-Step Hydrogeologic Framework Assessment Data Summary Report (Brown and Caldwell, 2008b). This section presents the 2008 electronic groundwater level monitoring data. Appendix E-5 includes hydrograph ED-1: Instrumented Deep Zone and Bedrock Aquifer Wells, and hydrograph ESH-1: Instrumented Shallow Zone Wells.

Hydrograph ED-1 displays all hourly instrumented deep zone and bedrock aquifer groundwater elevations recorded in 2008. This hydrograph clearly defines when agricultural pumping begins on April 4, 2008 at approximately 11:00 am. Approximately one hour later, the water level in well B/W-1D3 had declined by just over 27 feet. The minimum groundwater elevation recorded was 4242.24 feet amsl at well B/W-1D3 on September 9, 2008. The end of the agricultural pumping season appears to occur on November 20th, 2008 when large variations in groundwater elevation appear to cease and the aquifer returned to steady state conditions as observed from January 2008 until April 4, 2008.

Hydrograph ESH-1 displays all hourly instrumented shallow zone wells groundwater elevations. On ESH-1 there appears to be two groupings of groundwater elevations. One group includes wells B/W-1S, MW2002-1S, B/W-9S, B/W-25S, and B/W-27S. The second group includes wells B/W-3S, B/W-4S, B/W-8S, and B/W-11S. The first group displays groundwater elevations that are approximately 5 to 15 feet higher than the second group's groundwater elevations. The difference in groundwater elevation can be directly attributed to the proximity of these wells to the agricultural fields and irrigation mounding, as observed in well B/W-9S where the groundwater elevation rises during summer months. With the exception of MW2002-1S, all wells on ESH-1 appear to be somewhat affected by agricultural pumping. However, B/W-1S is more significantly affect by pumping, such that the groundwater elevation was drawn down below the screened interval of the well; thus, causing gaps in the water level data.

Water levels in well MW2002-1S do not show impact from pumping which can be contributed to the combination of various hydraulic influences including: the well is installed in a moderately transmissive aquifer (1.5 to 3 feet/day), the groundwater mound is migrating directly towards the well as shown on the monthly shallow zone potentiometric surface maps, and/or the well is more hydraulically separated from other shallow wells in the area (multiple clay layers just under bottom of screen on B/W-2 boring log in Appendix C).

3.3 Groundwater Quality Monitoring Results

Groundwater sampling of the active monitor wells and pumpback wells, shown in Figure 1-3 and Plate 1, was conducted pursuant to the updated QAPP (Revision 4; ESI and Brown and Caldwell, 2008) and the Draft GMP. The 2008 water quality monitoring program differed from the 2007 program because it included: 1) wells constructed during the First-Step HFA and Second-Step programs; and 2) the installation and use of dedicated bladder pumps at all but 17 Site monitor wells, as discussed in Section 2.0 of this 2008 GMR.

Each sample was collected for dissolved metals and radiochemical analyses. The samples were field-filtered with a new, sealed 0.45-micron disposable filter. Field measurements taken at the time of sampling included pH, temperature, ORP, DO, and specific conductivity. All monitor well samples were analyzed by TestAmerica as follows: 1) the Irvine, California laboratory analyzed the samples for metals and inorganic compounds; 2) the Richland, Washington laboratory analyzed the samples for radiochemicals. The analytical laboratories provided the certified clean sample bottles, chemical preservatives, coolers and custody seals.

Table 3-7 and 3-8 provide the analytical results for pumpback and monitor wells, respectively, for the 2008 monitoring period. Both tables provide analytical results for wells that have been constructed in each of the three hydrostratigraphic zones in the alluvial aquifer and for wells constructed with screen intervals in bedrock.

Table 3-7. 2008 Analytical Results for Pumpback Wells

			Field Parameters						Water Quality Parameters (Lab)											Metals (Lab)										
Sample Name	Duplicate	Sample Date	pH (field)	Specific Conductance (field)	ORP (field)	Dissolved Oxygen (field)	Temperature (field)	Turbidity (field)	Total Alkalinity (as $CaCO_3$)	Bicarbonate Alkalinity (as $CaCO_3$)	Carbonate (as $CaCO_3$)	Total Dissolved Solids	Total Organic Carbon	Chloride	Fluoride	Sulfate	Nitrate	Nitrite	Nitrate-Nitrite	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium	Cobalt	Copper
			s.u.	µS/cm	mV	mg/L	Deg C	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Pumpback Wells																														
PW-01		13-Mar-08	4.16	4460	NA	NA	15.90	0.22	2 U	2 U	2 U	4700	0.84 J	53	8.6 UJ	3000	0.6 U	0.9 U	1.5 U	31	0.002 U	0.007 U	0.013	0.019	1.8	0.0086 J	470	0.007 U	0.31	1.9
PW-1		14-Mar-08	4.00	4136	NA	NA	16.63	0.81	2 U	2 U	2 U	4200	1.6	69	4.3	2900	0.39	0.13 J	0.52	28	0.002 U	0.007 U	0.014	0.021	1.4	0.0078 J	440	0.007 U	0.28	1.8
PW-1S		15-Mar-08	3.84	3800	NA	NA	18.70	1.89	2 U	2 U	2 U	3900	0.5 U	41	3.5	2600	0.91	0.78	1.7	22	0.001 U	0.0035 U	0.013 J	0.014 J	1	0.0061 J	460	0.0035 U	0.21	1.6 J
PW-1S		16-Mar-08	4.23	3725	NA	NA	12.80	6.15	2 U	2 U	2 U	4200	0.65 J	39 J	7.1	2700	0.54 J	0.61 J	1.1 J	25	0.001 U	0.0035 U	0.013	0.02	1.2	0.0068	480	0.0035 U	0.25	1.6
PW-02		17-Mar-08	4.16	4956	NA	NA	13.72	0.14	2 U	2 U	2 U	8500	2.4	120	15	5400	0.6 U	0.9 U	1.5 U	59	0.002 U	0.007 U	0.013	0.03	3.3	0.018	420	0.007 U	0.75	2.9
PW-2-D1		18-Mar-08	4.00	6816	NA	NA	14.79	0.12	2 U	2 U	2 U	7200	3.5	110	12 J	5000	0.11	3.6 UJ	3.7 U	58	0.004 U	0.014 U	0.012 J	0.028 J	3.8	0.016 J	420	0.014 U	0.73	2.8
PW-2-D2	Dup.	19-Mar-08	4.00	6816	NA	NA	14.79	0.12	2 U	2 U	2 U	7500	3.6	120	17 J	5100	0.06 U	3.6 UJ	3.7 U	57	0.004 U	0.014 U	0.012 J	0.03 J	3.8	0.016 J	410	0.014 U	0.74	2.9
PW-2S		20-Mar-08	3.95	6310	NA	NA	17.50	0.90	2 U	2 U	2 U	6900	2.6	97	9.6	6700	0.3 U	0.09 UJ	0.39 U	46	0.001 U	0.0014 U	0.01	0.025	3.3	0.012 J	420	0.0035 U	0.55	1.9
PW-2S		21-Mar-08	4.11	6509	NA	NA	13.25	5.65	2 U	2 U	2 U	7500	1.9	110	14	5100	0.06 U	0.09 U	0.15 U	48	0.001 U	0.0035 U	0.011	0.024	3.2	0.014	410	0.0035 U	0.7	2.9
PW-03D-1		22-Mar-08	4.15	8929	NA	NA	15.32	0.37	2 U	2 U	2 U	10000	3.9	220	16	6400	0.6 U	0.9 U	1.5 U	98	0.002 U	0.007 U	0.012	0.039	3.4	0.023	420	0.007 U	1.1	4.7
PW-03D-2	Dup.	23-Mar-08	4.15	8929	NA	NA	15.32	0.37	2 U	2 U	2 U	11000	3.8	250	17	7000	0.6 U	0.9 U	1.5 U	99	0.002 U	0.007 U	0.012	0.039	3.3	0.025	420	0.007 U	1.1	4.9
PW-3		24-Mar-08	3.97	8268	NA	NA	14.92	0.16	2 U	2 U	2 U	9400	5.1	200	32 J	6400	0.22	0.45 UJ	0.51 U	88	0.004 U	0.014 U	0.014 J	0.04	3.9	0.023	450	0.014 U	0.99	3.8
PW-3S		25-Mar-08	3.85	7050	NA	NA	16.10	2.67	2 U	2 U	2 U	8700	3.9	210	21	5700	0.06 U	0.09 U	0.15 U	60	0.005 U	0.018 U	0.012 J	0.032 J	3.4	0.021 J	400	0.018 U	0.94	3.8 J
PW-3S		26-Mar-08	3.85	7639	NA	NA	12.64	4.15	2 U	2 U	2 U	9100	2.9	210	22	5600	0.06 U	0.09 U	0.15 U	73	0.002 U	0.007 U	0.013	0.035	3.6	0.021	440	0.007 U	0.87	3.5
PW-3S-FD	Dup.	27-Mar-08	3.85	7050	NA	NA	16.10	2.67	2 U	2 U	2 U	8900	3.7	200	19	5700	0.06 U	0.09 U	0.15 U	59	0.005 U	0.018 U	0.012 J	0.03 J	3.4	0.021 J	400	0.018 U	0.94	3.8 J
PW-04		28-Mar-08	5.52	6140	NA	NA	13.70	9.26	56	56	2 U	6300	3.5	120	7.8	3800	0.6 U	0.9 U	1.5 U	8.6	0.002 U	0.007 U	0.015	0.0092	2.8	0.011	440	0.007 U	0.63	0.38
PW-4		29-Mar-08	5.57	5948	NA	NA	15.24	8.06	52	52	2 U	5600	5.1	110	9.7 J	3800	0.39	0.72 J	1.1	8.6	0.002 U	0.007 U	0.013	0.0089	2.7	0.01	440	0.007 U	0.57	0.35
PW-4S		30-Mar-08	5.34	5590	NA	NA	16.00	5.40	21	21	2 U	5400	4.3	110	6.3	3700	0.38	0.23 J	0.61	6.9	0.001 U	0.0047 J	0.013 J	0.011 J	2.6	0.0077 J	430	0.0035 U	0.44	0.25 J
PW-4S		31-Mar-08	5.73	5130	NA	NA	14.96	5.08	19	19	2 U	5400	3	88	7.2	3200	0.4	0.17 J	0.57 J	6	0.001 U	0.0048 J	0.014	0.0057	2.6	0.0079	430	0.0035 U	0.46	0.27
PW-05		1-Apr-08	5.95	4704	NA	NA	17.98	1.06	92	92	2 U	4500	4.2	140	2.6	2900	4.9	0.53 J	5.4	2.9	0.001 U	0.0035 U	0.016	0.0041	3	0.0053	420	0.0035 U	0.3	0.13
PW-5		2-Apr-08	5.84	4610	NA	NA	17.00	1.01	100	100	2 U	3900	5.2	110	2.6	2600	6.5	0.81	7.8	3 J	0.0002 U	0.0007 U	0.015	0.0026	3	0.0037	420	0.0007 U	0.19	0.088
PW-5S		3-Apr-08	6.17	3200	NA	NA	16.00	8.10	240	240	2 U	2700	4.5	68	1.1	1500	9	0.31	9.3	0.87	0.0002 U	0.0049	0.025 J	0.0011 J	2.1	0.0017 J	280	0.0007 U	0.1	0.057 J
PW-5S		4-Apr-08	6.21	3366	NA	NA	14.38	4.04	210	210	2 U	2900	3.1	84	1.7	1700	8.1	0.68	8.8	1.2	0.0002 U	0.0045	0.025	0.0012	2.2	0.0022	330	0.0007 U	0.12	0.07
PW-06		5-Apr-08	6.60	3960	NA	NA	14.60	2.70	320	320	2 U	3100	2	170	0.78 J	1600	3.2	0.18 U	3.2	0.04 U	0.00028 J	0.011	0.021	0.0002 U	1.7	0.00061 J	430	0.0007 U	0.0073	0.0076
PW-6		6-Apr-08	6.79	3730	NA	NA	16.60	2.20	320	320	2 U	3000	3	170	0.97	1700	3.3	1.8 UJ	3.3	0.04 U	0.00023 J	0.013	0.019	0.0002 U	1.8	0.00051 J	440	0.0007 U	0.0059	0.0057
PW-6S		7-Apr-08	6.51	3580	NA	NA	19.30	2.93	320	320	2 U	3100	1.8	170	0.81	1800	3.3	0.09 U	3.3	0.04 U	0.00025 UJ	0.0096	0.02 J	0.0002 UJ	1.6	0.00059 J	380	0.0007 U	0.0073	0.0079 J
PW-6S		8-Apr-08	6.56	3671	NA	NA	14.89	3.84	320	320	2 U	3200	1.5	160	0.81	1600	3.1	0.09 U	3.1	0.04 U	0.00026 J	0.01	0.021	0.0002 U	2	0.00063 J	430	0.0007 U	0.0096	0.011
PW-07		9-Apr-08	5.51	7460	NA	NA	14.90	8.02	100	100	2 U	7300	2.4	500	5.5	4200	0.45	0.09 U	0.45	13	0.001 U	0.0035 U	0.016	0.0092	6.6	0.01	470	0.0035 U	0.48	1
PW-7		10-Apr-08	5.60	7780	NA	NA	16.80	14.30	130	130	2 U	7000	4.5 J	490	8.3	4200 J	0.44	9 U	9.1 U	14	0.0002 U	0.002 UJ	0.012	0.005	7.2	0.006	470	0.0007 U	0.37	0.71
PW-7S		11-Apr-08	5.66	7770	NA	NA	17.80	25.92	88	88	2 U	7600	3.1	520	3.9	4400	0.39	0.55 J	0.95	14	0.0002 U	0.0015	0.011	0.009	7.4	0.0071 J	450	0.0007 U	0.42	0.8
PW-7S		12-Apr-08	5.42	7784	NA	NA	12.18	44.57	72 J	72 J	2 U	7600	3.5 J	540	8.9	4600	0.31	0.27 J	0.58 J	14	0.001 U	0.0035 U	0.015	0.0088	7.6	0.01	460	0.0035 U	0.59	1.1
PW-7S-FD	Dup.	13-Apr-08	5.42	7784	NA	NA	12.18	44.57	92 J	92 J	2 U	7400	2.4 J	560	9.1	4500	0.29	0.17 J	0.46 J	12	0.001 U	0.0037 J	0.015	0.0082	7.8	0.01	460	0.0035 U	0.56	1
PW-08		14-Apr-08	6.48	6170	NA	NA	17.40	0.77	660	660	2 U	5400	0.68 J	560	1.5 U	2500	0.6 U	0.9 U	1.5 U	0.08 U	0.00052 J	0.014	0.052	0.0002 U	3.9	0.00046 J	550	0.0017 J	0.023	0.029
PW-8		15-Apr-08	6.37	6226	NA	NA	19.12	3.12	670	670	2 U	5300	2.7	570	0.15 U	2600	0.06 U	0.09 U	0.15 U	0.08 U	0.00045 J	0.013	0.043	0.0002 UJ	4	0.00039 J	530	0.0007 U	0.015	0.018
PW-8S		16-Apr-08	6.48	6360	NA	NA	22.60	1.45	870	870	2 U	7000	1.6	590	0.8 J	3400	0.06 U	0.09 UJ	0.15 U	0.08 U	0.00039 J	0.014	0.033	0.0002 U	4	0.0009 J	520	0.0007 U	0.022	0.045
PW-8S		17-Apr-08	6.53	6277	NA	NA	17.54	2.93	660	660	2 U	5400	1.1	550	0.54 UJ	2600	0.06 U	0.09 U	0.15 U	0.12 U	0.00073 J	0.011	0.039	0.0002 U	3.2	0.0008 J	510	0.001 J	0.025 J	0.036
PW-09		18-Apr-08	6.46	11610	NA	NA	16.50	0.22	1300	1300	2 U	10000	3.1	970	0.53	5000	0.06 U	0.09 U	0.15 U	0.04 U	0.00051 J	0.046	0.025	0.0002 U	12	0.0011	430	0.0007 U	0.0028	0.011
PW-9		19-Apr-08	6.48	12140	NA	NA	17.10	2.20	1200	1200	2 U	10000	3.6	910	2.3 J	5000 J	0.06 U	9 U	9.1 U	0.04 U	0.00048 J	0.037	0.024	0.0004 U	12	0.00097 J	410	0.0057	0.0018 UJ	0.013
PW-9S		20-Apr-08	6.47	12060	NA	NA	16.80	7.76	1200	1200	2 U	10000	3.6	910	1.7	5000	0.06 U	0.09 UJ	0.15 U	0.4 U	0.00077 J	0.036	0.024	0.0004 UJ	12	0.0014 J	420	0.0014 U	0.0026	0.026
PW-9S		21-Apr-08	6.33	12360	NA	NA	15.58	4.70	1300	1300	2 U	10000	2.6	920	0.85 UJ	5000	0.06 U	0.09 U	0.15 U	0.04 U	0.00064 J	0.039	0.023	0.0004 U	12	0.0012 J	390	0.0014 U	0.0038 J	0.02
PW-10		22-Apr-08	6.31	15370	NA	NA	16.40	106.00	1100	1100	2 U	17000	2.5	730	6 UJ	10000	0.6 U	0.9 U	1.5 U	1.7	0.001 U	0.056	0.014	0.0019 J	15	0.0082	390	0.0035 U	0.37	0.22
PW-10		23-Apr-08	6.39	17140	NA	NA	18.90	22.80	1100	1100	2 U	16000	3.4	710	9	9800 J	0.06 U	0.09 U	0.15 U	1.4	0.0004 U	0.044	0.012	0.0013	16	0.0058	390	0.0014 U	0.27	0.1
PW-10S		24-Apr-08	6.42	13110	NA	NA	20.50	15.45	1400	1400	2 U	15000	3.1	610	7	8200	0.067 J	0.09 UJ	0.15 U	0.56	0.00052 J	0.077	0.015	0.00093 J	14	0.0043	330	0.0014 U	0.13	0.051
PW-10S		25-Apr-08	6.41	16832	NA	NA	13.94	42.41	1100	1100	2 U	15000	2.2	730	10	8900	0.06 U	0.09 UJ	0.15 U	0.63	0.0015 J	0.07	0.016	0.0011 J	14	0.0048 J	340	0.0035 U	0.16	0.08
PW-11		26-Apr-08	6.35	11060	NA	NA	16.20	1.78	1400	1400	2 U	10000	2	290	1.6 UJ	6100	0.6 U	0.9 U	1.5 U	0.08 U	0.001 U	0.015 UJ	0.019	0.001 U	9.8	0.0012 J	460	0.0035 U	0.06	0.012 UJ
PW-11		27-Apr-08	6.40	11220	NA	NA	17.30	4.50	1600	1600	2 U	11000	5.2 J	290	2.9 J	6200 J	0.06 U	0.09 U	0.15 U	0.04 U	0.0004 U	0.012	0.015	0.0004 U	9.8	0.00042 J	430	0.0046	0.022	0.011
PW-11S		28-Apr-08	6.50	11790	NA	NA	17.30	67.80	1600	1600	2 U	12000	8.7	280	1.9 J	6500	0.06 U	0.09 UJ	0.15 U	0.04 U	0.0004 U	0.015	0.014	0.0004 UJ	9.5	0.00065 J	410	0.0053	0.011	0.023
PW-11S		29-Apr-08	6.32	11684	NA	NA	14.53	5.38	1900	1900	2 U	11000	1.8	330	2.4 J	6200	0.06 U	0.09 UJ	0.15 U	0.2 U	0.002 U	0.016	0.016	0.002 U	8.9	0.0011 U	430	0.007 U	0.027	0.025

Table 3-7. 2008 Analytical Results for Pumpback Wells - Continued

			Metals (Lab) Continued																					Radiological (Labs)						
Sample Name	Duplicate	Sample Date	Iron	Lead	Lithium	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Phosphorus	Potassium	Selenium	Silicon	Silver	Sodium	Strontium	Thallium	Tin	Titanium	Uranium	Vanadium	Zinc	Alpha, Gross	Beta, Gross	Radium-226	Radium-228	Thorium-228	Thorium-230	Thorium-232
			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L
Pumpback Wells - Continued																														
PW-01		13-Mar-08	240	0.003 U	0.28	140	21	0.0001 U	0.002 U	0.3	0.12	14	0.012 J	98	0.003 U	300	3.2	0.002 U	0.024 U	0.004 U	0.092	0.048	0.71	20.9	32.3	0.268 J	0.524 U	0.257 U	0.179 U	0.179 U
PW-1		14-Mar-08	200	0.003 U	0.3	120	20	0.0001 U	0.002 U	0.26	0.088	13	0.01 J	89	0.003 U	260	3	0.002 U	0.024 U	0.004 U	0.072	0.047	0.7 J	14.9 J	19	1.08	0.41 UJ	0.355 U	0.35 U	0.35 U
PW-1S		15-Mar-08	160	0.0015 U	0.21	96	15	0.0001 U	0.001 U	0.2 J	0.057 J	12	0.0082 J	87	0.0015 UJ	220	3.2	0.001 U	0.024 UJ	0.004 U	0.066 J	0.032	0.53	10.2	44.4	0.657 J	0.625 J	0.258 U	0.163 U	0.163 U
PW-1S		16-Mar-08	200	0.0016 J	0.32	120	16	0.0001 U	0.001 U	0.25	0.1 UJ	14	0.0086 J	95	0.0015 U	230	3.2	0.001 U	0.024 U	0.004 U	0.07	0.035	0.58	7.79 J	32.1	0.306 U	0.534 U	0.166 U	0.16 U	0.16 U
PW-02		17-Mar-08	680	0.003 U	0.51	310	54	0.0001 U	0.002 U	0.62	0.22	17	0.017 J	97	0.003 U	700	3.4	0.002 U	0.06 U	0.01 U	0.13	0.086	1.6	26.1 J	47.7	1.25	1.12	0.215 U	0.21 U	0.21 U
PW-2-D1		18-Mar-08	650	0.006 U	0.47 J	300	60	0.00016 J	0.004 U	0.62	0.2 U	17	0.0092 J	100	0.006 U	660	3.6	0.004 U	0.12 U	0.02 U	0.12	0.089	1.5 J	28	30.9 U	1.36	0.586 U	0.272 U	0.268 U	0.268 U
PW-2-D2	Dup.	19-Mar-08	650	0.006 U	0.46 J	300	62	0.00014 J	0.004 U	0.64	0.2 U	17	0.011 J	100	0.006 U	640	3.5	0.004 U	0.12 U	0.02 U	0.12	0.091	1.5 J	28.9	52.9	1.49	0.671 U	0.176 U	0.173 J	0.173 U
PW-2S		20-Mar-08	530	0.0015 U	0.4 J	260	46	0.0001 U	0.001 U	0.47	0.2 U	18	0.0097 J	97	0.0015 U	600	3.2	0.0004 U	0.12 U	0.02 U	0.1	0.058	1	29.8	59.3	1.09	0.723 J	0.351 U	0.222 U	0.222 U
PW-2S		21-Mar-08	580	0.0015 U	0.45	280	48	0.0001 U	0.001 U	0.53	0.14 UJ	19	0.011	95	0.0015 U	600	3.2	0.001 U	0.06 U	0.01 U	0.12	0.074	1.2	35.6	55.9	0.415 J	0.612 U	0.158 U	0.174 U	0.124 U
PW-03D-1		22-Mar-08	1100	0.003 U	0.69	390	73	0.00021	0.002 U	0.79	0.31 J	18	0.02	97	0.003 U	790	3.6	0.002 U	0.12 U	0.02 U	0.25	0.15	2.1	88.3 J	83	2.16	0.729 J	0.3 U	0.209 U	0.279 J
PW-03D-2	Dup.	23-Mar-08	1100	0.003 U	0.7	390	73	0.00024	0.002 U	0.79	0.33 J	18	0.021	97	0.003 U	800	3.5	0.002 U	0.12 U	0.02 U	0.24	0.15	2.2	79.2 J	107	2.34	0.733 U	0.335	0.246 U	0.246 U
PW-3		24-Mar-08	960	0.006 U	0.5 J	380	74	0.00019 J	0.014 J	0.8	0.2 U	19 J	0.03 J	100	0.006 U	790	3.6	0.004 U	0.12 U	0.02 U	0.21	0.14	2.6	78.6 J	89.7	1.69	0.983 U	0.363 U	0.289 U	0.289 U
PW-3S		25-Mar-08	720	0.0075 U	0.43	300	66	0.0001 J	0.005 U	0.76 J	0.12 U	19	0.018 J	90	0.0075 UJ	740	3.6	0.005 U	0.072 UJ	0.012 U	0.18	0.11 J	2	56.2	73.8	0.763 J	0.729 J	0.307 U	0.194 U	0.194 U
PW-3S		26-Mar-08	890	0.003 U	0.54	350	6.4	0.00015 J	0.0076 J	0.7	0.2 U	22	0.017 J	100	0.003 U	740	3.5	0.002 U	0.12 U	0.02 U	0.2	0.11	1.8	51.5	79.8	0.506 J	1.09	0.172 U	0.168 U	0.206 U
PW-3S-FD	Dup.	27-Mar-08	710	0.0075 U	0.46	300	63	0.0001 U	0.005 U	0.77 J	0.12 U	18	0.017 J	91	0.0075 UJ	730	3.5	0.005 U	0.072 UJ	0.012 U	0.18	0.099 J	2.1	48.3	52.6	0.423 J	1.07	0.196 U	0.189 U	0.189 U
PW-04		28-Mar-08	310	0.0035 J	0.42 J	300	71	0.00017 J	0.007 UJ	0.45	0.31 J	16	0.0065 J	61	0.003 U	560	3.1	0.002 U	0.12 U	0.02 U	0.062	0.0089 J	0.74	17	48.2	0.239 U	0.417 U	0.189 U	0.184 U	0.184 U
PW-4		29-Mar-08	280	0.0045 J	0.3 U	280	68	0.00027	0.0065 J	0.4	0.2 U	15 J	0.0062 J	61	0.003 U	560	3.2	0.002 U	0.12 U	0.02 U	0.061	0.012 J	0.68	49.4 J	31	0.276 J	0.776 U	0.23 U	0.225 U	0.225 U
PW-4S		30-Mar-08	220	0.0015 J	0.23 J	250	58	0.00016 J	0.0066 J	0.29 J	0.22	17	0.0061 J	58	0.0015 UJ	540	3.3	0.001 U	0.06 UJ	0.01 U	0.058	0.01	0.49	7.19	32	0.261 U	0.549 U	0.187 U	0.182 U	0.224 U
PW-4S		31-Mar-08	210	0.0015 U	0.27	250	51	0.00027	0.0067 J	0.32	0.19 J	15	0.0047 J	57	0.0015 U	510	3	0.001 U	0.06 U	0.01 U	0.073	0.0083 J	0.54	18.9	38.8	0.229 J	1.39	0.113 U	0.109 U	0.109 U
PW-05		1-Apr-08	69	0.0015 U	0.2	170	38	0.0001 U	0.001 U	0.21	0.087 J	14	0.0069 J	38	0.0015 U	480	2.6	0.001 U	0.056 J	0.008 U	0.032	0.0035 U	0.3	8.37	26.8	0.825 J	0.681 J	0.275 U	0.269 U	0.269 U
PW-5		2-Apr-08	58	0.0003 U	0.12 U	170	40	0.0001 U	0.00084 J	0.15	0.08 U	14	0.0077	38	0.0003 U	470	2.5	0.0002 U	0.048 U	0.008 U	0.034	0.0007 U	0.18	7.71 J	31	0.838 J	0.897 J	0.174 U	0.21 U	0.171 U
PW-5S		3-Apr-08	22	0.0003 U	0.073 J	86	16	0.0001 U	0.0094	0.07 J	0.04 U	8.4	0.0068	42	0.0003 UJ	330	1.8	0.0002 U	0.024 UJ	0.004 U	0.068	0.01 J	0.096	21.4	27.2	0.205 J	0.553 U	0.247 U	0.197 U	0.197 U
PW-5S		4-Apr-08	29	0.0003 U	0.11	100	17	0.0001 U	0.0086	0.088	0.04 U	10	0.0067	44	0.0003 U	390	2.2	0.0002 U	0.024 U	0.004 U	0.071	0.0094	0.13	23	27.9	0.359 J	0.627 U	0.134 U	0.129 U	0.129 U
PW-06		5-Apr-08	0.015 U	0.00067 J	0.095	92	4.5	0.0001 U	0.078	0.015	0.06	9.7	0.001 J	56	0.0003 U	340	3.5	0.0002 U	0.012 U	0.002 U	0.23	0.015	0.017 J	76.9	62.2	0.181 U	0.521 U	0.152 U	0.181 U	0.148 U
PW-6		6-Apr-08	0.015 U	0.0003 U	0.12	100	5.1	0.0001 U	0.067	0.011	0.039 J	9.6	0.0015 J	57	0.0003 U	340	3.3	0.0002 U	0.014 J	0.002 U	0.21	0.013	0.0057 J	88 J	38.4	0.255 U	0.699 UJ	0.154 U	0.152 U	0.152 U
PW-6S		7-Apr-08	0.015 U	0.0003 U	0.086	93	6.4	0.0001 U	0.072	0.011 J	0.05	8.8	0.0013 J	52	0.0003 UJ	340	3.2	0.0002 U	0.012 UJ	0.002 U	0.17	0.014 J	0.011 J	120	52	0.316 U	0.537 U	0.08 U	0.0782 U	0.0782 U
PW-6S		8-Apr-08	0.015 U	0.0003 U	0.12	110	5.9	0.0001 U	0.074	0.0091	0.053	9.8	0.0012 J	60	0.0003 U	390	3.6	0.0002 U	0.012 U	0.002 U	0.21	0.015	0.012 UJ	117	51.2	0.28 U	0.5 U	0.103 U	0.124 J	0.0989 U
PW-07		9-Apr-08	47	0.0015 U	0.32 J	330	62	0.00047	0.0043 UJ	0.34	0.2 U	14	0.0075 J	51	0.0015 U	1000	4.5	0.001 U	0.12 U	0.02 U	0.1	0.0095 J	0.44	33.3	45.9	0.376 J	1.28	0.399 U	0.389 U	0.389 U
PW-7		10-Apr-08	53	0.0003 U	0.3 U	370	57	0.00045	0.0044	0.24	0.2 U	16	0.0086	54	0.0003 U	1100	4.8	0.0002 U	0.12 U	0.02 U	0.087	0.0098	0.27	10.7 J	37	1.34	1.15	0.302 U	0.298 U	0.34 U
PW-7S		11-Apr-08	56	0.00065 J	0.3 U	350	63	0.00059	0.0042	0.28	0.2 U	15	0.0064	50	0.0003 U	1100	4.7	0.0002 U	0.12 U	0.02 U	0.11	0.0098	0.33	26.1	45	0.539 J	1.05	0.484 U	0.307 U	0.307 U
PW-7S		12-Apr-08	61	0.0015 U	0.22 J	380	65	0.00075	0.0049 J	0.36	0.2 U	14	0.0087 J	52	0.0015 U	1200	4.9	0.001 U	0.072 U	0.012 U	0.1	0.01	0.51	21.2 J	39.1	0.246 J	1.28	0.184 U	0.178 U	0.219 U
PW-7S-FD	Dup.	13-Apr-08	60	0.0015 U	0.22 J	380	62	0.00079	0.0063 J	0.34	0.2 U	14	0.0087 J	50	0.0015 U	1200	4.9	0.001 U	0.072 U	0.012 U	0.12	0.0096 J	0.47	10.5 J	44.4	0.279 J	1.26	0.185 U	0.18 U	0.18 U
PW-08		14-Apr-08	0.03 U	0.00057 J	0.14	240	19	0.0001 U	0.017	0.021	0.17	5.2	0.0039	64	0.0003 U	750	5.2	0.0002 U	0.024 U	0.004 U	0.23	0.011	0.013 UJ	387	76.7	0.195 U	0.471 U	0.267 U	0.26 U	0.26 U
PW-8		15-Apr-08	0.052 J	0.0003 U	0.26	250	16	0.0001 U	0.014	0.021	0.17	5	0.0058	65	0.0003 U	720	5.6	0.0002 U	0.024 U	0.004 U	0.24	0.011	0.0069 J	153	61.3	0.284 U	1 UJ	0.148 U	0.146 J	0.146 U
PW-8S		16-Apr-08	0.03 U	0.00099 J	0.16	270	19	0.0001 U	0.021	0.025	0.23	5.8	0.0044	62	0.0003 U	850	5.4	0.0002 U	0.024 U	0.004 U	0.25	0.013	0.016 J	147 J	102	0.326 J	0.533 J	0.116 U	0.114 U	0.114 U
PW-8S		17-Apr-08	0.045 U	0.00057 J	0.16	240	20	0.0001 U	0.013	0.022	0.17	4.7	0.0035	60	0.0003 U	610	4.8	0.0002 U	0.036 U	0.006 U	0.22	0.01	0.015 UJ	138	60	0.306 U	0.633 U	0.123 U	0.105 U	0.0854 U
PW-09		18-Apr-08	0.015 U	0.0003 U	0.13	130	6.3	0.0001 U	0.33	0.0071	0.26	3.8	0.0077	68	0.0003 U	2800	5.2	0.0002 U	0.023 J	0.002 U	0.54	0.021	0.0093 UJ	153	156	0.189 U	0.63 U	0.447 U	0.436 U	0.436 U
PW-9		19-Apr-08	0.02 UJ	0.0006 U	0.12	140	5.5	0.00096	0.28	0.011	0.26	6.6	0.012	69	0.0006 U	2800	5.5	0.0004 U	0.012 U	0.002 U	0.48	0.02	0.0083 J	354 J	99	0.166 U	1.09 UJ	0.306 U	0.301 U	0.301 U
PW-9S		20-Apr-08	0.15 U	0.00087 J	0.3 U	130	5.3	0.00013 J	0.3	0.0063	0.21 J	5.2	0.007	67	0.0006 U	2900	5.2	0.0004 U	0.12 U	0.02 U	0.51	0.018	0.019 UJ	338	124	0.134 UJ	0.484 J	0.329 U	0.231 U	0.231 U
PW-9S		21-Apr-08	0.015 U	0.0006 U	0.15	130	5.8	0.00016 J	0.32	0.011	0.24	3.8	0.0075	67	0.0006 U	2600	5.2	0.0004 U	0.015 J	0.002 U	0.58	0.019	0.014 UJ	310 J	165	0.225 U	0.721 U	0.226 U	0.216 U	0.265 U
PW-10		22-Apr-08	32	0.0015 U	0.3 U	320	77	0.00013 J	0.45	0.29	0.45	7.3	0.012	51	0.0015 U	4800	8.1	0.001 U	0.12 U	0.02 U	0.34	0.032	0.22	80.9	93.7	0.173 U	0.428 U	0.6 U	0.472 U	0.472 U
PW-10		23-Apr-08	26	0.0006 U	0.3 U	320	71	0.0001 U	0.47	0.22	0.4	10	0.016	54	0.0006 U	4600	7.9	0.0004 U	0.12 U	0.02 U	0.31	0.029	0.097	140 J	76.5	0.509 J	0.683 UJ	0.339 U	0.272 U	0.272 U
PW-10S		24-Apr-08	7	0.0006 U	0.2 J	190	46	0.0001 U	0.35	0.14	0.27	6.3	0.009	55	0.0006 U	4500	6.4	0.0004 U	0.06 U	0.01 U	0.29	0.041	0.063 J	159 J	82.8	0.195 U	0.763 U	0.348 U	0.342 U	0.342 U
PW-10S		25-Apr-08	11	0.0015 U	0.22 J	190	44	0.00012 J	0.57	0.14	0.3	5 J	0.017	51	0.0015 U	3900	7.2	0.001 J	0.06 U	0.01 U	0.35	0.03	0.072 J	159	89.5	0.241 J	1.18	0.4 U	0.318 U	0.318 U
PW-11		26-Apr-08	0.72	0.0015 U	0.22	400	23	0.0001 U	0.014	0.072	0.26	10	0.011	69	0.0015 U	2400	9.6	0.001 U	0.024 U	0.004 U	0.59	0.027	0.022 UJ	395	146	0.202 U	0.428 U	0.302 U	0.294 U	0.294 U
PW-11		27-Apr-08	0.14	0.0006 U	0.23	440	10	0.00032	0.01	0.032	0.14	12	0.0092	73	0.0006 U	2600	10	0.0004 U	0.012 U	0.002 U	0.57	0.029	0.014 J	464 J	189	0.284 U	0.856 UJ	0.306 U	0.302 U	0.302 U
PW-11S		28-Apr-08	0.11	0.0006 U	0.24	430	8.4	0.00023	0.011	0.024	0.18	16	0.0067	71	0.0006 U	2800	12	0.0004 U	0.012 U	0.002 U	0.57	0.03	0.021 UJ	410 J	94	0.285 U	0.771 U	0.163 U	0.161 U	0.161 U
PW-11S		29-Apr-08	0.075 U	0.003 U	0.32	390	11	0.00033	0.01 J	0.036	0.17 J	9.2 J	0.0089 J	68	0.003 U	2400	9.7	0.002 U	0.06 U	0.01 U	0.66	0.026	0.025 U	344 J	146	0.11 U	0.53 U	0.175 U	0.138 U	0.138 U

Notes: NA = not available or not measured; U: non-detected at the detection limit (that's the number given); J: the value is estimated for different reasons; UJ: not detected at an estimated detection limit; R: data did not meet data quality objectives and was rejected.

Table 3-8. 2008 Analytical Results for Monitor Wells

			Field Parameters						Water Quality Parameters (Lab)											Metals (Lab)										
Sample Name	Duplicate	Sample Date	pH (field)	Specific Conductance (field)	ORP (field)	Dissolved Oxygen (field)	Temperature (field)	Turbidity (field)	Total Alkalinity (as $CaCO_3$)	Bicarbonate Alkalinity (as $CaCO_3$)	Carbonate (as $CaCO_3$)	Total Dissolved Solids	Total Organic Carbon	Chloride	Fluoride	Sulfate	Nitrate	Nitrite	Nitrate-Nitrite	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium	Cobalt	Copper
			s.u.	µS/cm	mV	mg/L	Deg C	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Shallow Wells																														
B/W-1S		18-Mar-08	6.70	1560	80.9	6.66	14.41	0.86	210	210	2 U	1100	1.8	93	0.36 J	400	25	0.09 U	25	0.04 U	0.0002 J	0.004	0.06	0.0002 U	0.48	0.00011 U	150	0.0018 J	0.00025 UJ	0.002
B/W-1S		9-Jun-08	6.60	1386	131.6	8.79	14.89	0.87	220	220	2 U	980	2.1	44	0.54	400	20	0.09 U	20	0.04 U	0.0002 U	0.002 UJ	0.055	0.0002 U	0.6	0.00011 U	140	0.0007 U	0.00037 UJ	0.002
B/W-1S		4-Nov-08	6.48	1305	189.9	5.90	14.31	2.43	260	260	2 U	990	1.3	34	0.34 J	390	15	0.09 U	15	0.04 U	0.00033 UJ	0.0031	0.048	0.0002 U	0.52	0.00011 J	130	0.0021	0.00071 UJ	0.0027
B/W-3S		13-Mar-08	7.41	1918	86.1	0.55	15.51	0.49	240	240	2 U	1400	1.5	150	0.76 UJ	640	0.88	0.09 U	0.88	0.04 U	0.00027 J	0.042	0.027	0.0002 U	1.9	0.00069 J	130	0.0007 U	0.00037 UJ	0.0022 UJ
B/W-3S		9-Jun-08	7.43	1932	115.4	0.81	15.85	4.05	240	240	2 U	1300	2.6	130	0.92	570 J	0.99	0.09 U	0.99	0.04 U	0.00033 J	0.039	0.021	0.0002 U	1.8	0.00051 J	130	0.0007 J	0.00097 UJ	0.002
B/W-3S		9-Sep-08	7.49	1867	91.2	0.20	15.62	14.31	230	230	2 U	1400	1.8	130	0.62	560	1.1	0.09 U	1.1	0.04 U	0.0002 U	0.037	0.016	0.0002 U	1.8	0.00064 J	120	0.0007 U	0.00037 UJ	0.0029
B/W-3S		10-Nov-08	7.40	1846	266.8	0.32	14.84	3.77	230	230	2 U	1300	1.3	120	0.68	500	1.1	0.09 U	1.1	0.04 U	0.00028 J	0.029	0.017	0.0002 U	1.9	0.00066 J	130	0.0007 U	0.00093 UJ	0.0023
B/W-4S		17-Mar-08	7.14	1825	106.1	0.61	15.22	9.12	200	200	2 U	1400	1.4	190	0.28 J	550	2.3	0.09 U	2.3	0.04 U	0.00023 J	0.005	0.091	0.0002 U	0.86	0.00011 U	260	0.00087 J	0.0011 UJ	0.0025
B/W-4S		12-Jun-08	6.71	1947	230.4	1.65	16.35	0.65	190	190	2 U	1500	2.3	210	0.34 J	600	2.8	0.09 U	2.8	0.04 U	0.0002 U	0.0066	0.062	0.0002 UJ	0.95	0.00011 U	280	0.0014 J	0.00034 UJ	0.0021
B/W-4S		9-Sep-08	7.24	1851	91.8	3.85	16.41	0.45	180	180	2 U	1500	1.2	190	0.24 J	570	2.9	0.09 U	2.9	0.04 U	0.00025 J	0.0068	0.049	0.0002 UJ	0.97	0.00011 U	260	0.0011 J	0.00064 UJ	0.0026
B/W-4S-FD	Dup.	9-Sep-08	7.24	1851	91.8	3.85	16.41	0.45	180	180	2 U	1400	1.5	180	0.28 J	550	2.9	0.09 U	2.9	0.04 U	0.00026 J	0.0066	0.051	0.0002 UJ	0.96	0.00011 U	250	0.0012 J	0.00053 UJ	0.0028
B/W-4S		10-Nov-08	7.04	2034	142.4	1.62	15.79	2.31	200	200	2 U	1700	1.6	230 J	0.28 J	550	3.5 J	0.09 U	3.5 J	0.04 U	0.00057 J	0.005	0.064	0.0002 U	1	0.00011 U	310	0.0021	0.00095 UJ	0.0026
B/W-5S		13-Mar-08	8.22	677	57.4	5.76	15.69	1.57	170	170	2 U	460	0.5 U	31	2	100	1.4	0.09 U	1.4	0.04 U	0.00043 J	0.027	0.011	0.0002 U	0.83	0.00029 J	11	0.0075	0.00015 U	0.00075 U
B/W-5RS		12-Jun-08	8.29	575	127.2	5.85	16.14	3.17	190	190	2 U	420	0.5 U	27	2.3	92	0.96 UJ	0.09 U	0.96 UJ	0.04 U	0.00042 J	0.041	0.0077	0.0002 U	0.92	0.0002 J	8.4	0.0083	0.0002 UJ	0.00075 U
B/W-5SR		10-Sep-08	8.21	647	130.3	6.35	16.78	1.30	180	180	2 U	430	0.5 U	27	2.2	89	0.99	0.09 U	0.99	0.04 U	0.00045 UJ	0.043	0.0079 J	0.0002 UJ	0.85	0.00026 J	8	0.0078	0.00064 J	0.00075 UR
B/W-5SR		3-Nov-08	8.04	627	169.8	6.22	15.32	1.75	180	180	2 U	420	0.5 U	26	2.2	91	0.98 J	0.09 UJ	0.98 J	0.04 U	0.00073 J	0.039	0.0082	0.0002 U	0.82	0.00037 J	7.7	0.0088	0.0016 UJ	0.00075 U
B/W-6S		17-Mar-08	8.14	760	66.8	2.83	16.66	3.34	160	160	2 U	480	0.5 U	37	2.2 J	120	1.3	0.09 U	1.3	0.04 U	0.0006 J	0.037	0.031	0.0002 U	0.8	0.00024 J	15	0.0014 J	0.0023	0.00075 U
B/W-6S		12-Jun-08	8.04	786	102.3	5.95	16.98	1.16	170	170	2 U	500	0.5 U	43	2.6	130	2	0.09 U	2	0.04 U	0.00026 J	0.052	0.022	0.0002 U	1.1	0.00015 J	15	0.0022	0.00015 U	0.00075 U
B/W-6S		8-Sep-08	8.06	767	74.4	7.52	17.59	1.39	170	170	2 U	520	0.5 U	39	2.4	130	2	0.09 U	2	0.04 U	0.00039 J	0.056	0.022	0.0002 UJ	0.96	0.00021 J	14	0.0021	0.00015 U	0.0013 J
B/W-6S		4-Nov-08	8.10	752	238.8	6.77	16.60	1.50	170	170	2 U	500	0.5 U	42	2.5	130	1.8	0.09 U	1.8	0.04 U	0.00046 UJ	0.053	0.02	0.0002 U	1	0.00021 J	15	0.0022	0.00099 UJ	0.0015 J
B/W-8S		13-Mar-08	7.83	1244	65.8	4.20	17.22	11.90	100	100	2 U	840	0.5 U	97	1	320	3.2	0.09 U	3.2	0.04 U	0.00034 J	0.012	0.05	0.0002 U	0.91	0.00016 J	44	0.003	0.0029	0.0011 UJ
B/W-8S		9-Jun-08	7.84	1240	181.6	3.55	17.84	5.00	110	110	2 U	760	0.5 U	90	1.2	390 J	3.2	0.09 U	3.2	0.04 U	0.00026 J	0.011	0.04	0.0002 U	0.93	0.00013 J	42	0.0042	0.00015 U	0.00083 J
B/W-8S		14-Sep-08	7.75	1207	293.7	4.97	19.34	165.80	110	110	2 U	810	0.5 U	87	1.1	340	3.4	0.09 U	3.4	0.04 U	0.00037 J	0.011	0.039	0.0002 U	0.95	0.00039 UJ	42	0.0046	0.00025 UJ	0.0011 J
B/W-8S		5-Nov-08	7.47	1124	175.8	5.01	17.21	5.83	110	110	2 U	760	0.5 U	86	1.2	310	3.4	0.09 U	3.4	0.04 U	0.00052 J	0.011	0.037	0.0002 U	1	0.00011 U	40	0.0044 UJ	0.00016 UJ	0.0022 UJ
B/W-9S-D1		12-Mar-08	7.36	2344	166.6	4.58	14.49	1.18	410	410	2 U	1800	2.4	66	0.63 J	600	42	0.18 U	42	0.04 U	0.00042 J	0.036	0.053	0.0002 U	1	0.00028 J	180	0.0023	0.00028 UJ	0.0039 UJ
B/W-9S-D2	Dup.	12-Mar-08	7.36	2344	166.6	4.58	14.49	1.18	420	420	2 U	1700	2.4	67	0.48 J	600	42	0.09 U	42	0.04 U	0.00043 J	0.036	0.054	0.0002 U	1	0.00029 J	180	0.0023	0.00029 UJ	0.0042 UJ
B/W-9S		10-Jun-08	7.30	2095	243.0	5.87	14.09	1.02	410	410	2 U	1500	3.3	61	0.84	550	33	0.09 U	33	0.04 U	0.00052 J	0.04	0.037	0.0002 U	1.1	0.00022 J	150	0.00094 J	0.0021	0.0037
B/W-9S		9-Sep-08	7.35	1961	66.7	5.41	15.59	1.47	390	390	2 U	1400	2.5	41	0.74	540	24 J	0.09 U	24 J	0.04 U	0.00038 J	0.037	0.029	0.0002 U	0.93	0.00018 J	140	0.00097 J	0.00021 UJ	0.0038
B/W-9S		11-Nov-08	7.19	2240	146.7	5.40	14.18	0.59	390	390	2 U	1800	2.2	46	0.65	860	32	0.09 U	32	0.04 U	0.00037 J	0.035	0.048	0.0002 U	1.1	0.00016 J	200	0.0014 J	0.00032 J	0.0054
B/W-10S		12-Mar-08	7.12	353	182.4	4.05	14.93	4.97	120	120	2 U	250	0.5 U	13	0.44 J	34	0.092 J	0.09 U	0.15 U	0.04 U	0.0002 U	0.0054 UJ	0.036	0.0002 U	0.23	0.00011 U	30	0.0007 U	0.00015 U	0.00075 U
B/W-10S		12-Jun-08	7.05	306	144.8	3.80	15.03	4.21	120	120	2 U	240	0.5 U	13	0.48 J	34	0.12 UJ	0.09 U	0.15 UJ	0.04 U	0.00021 J	0.0057	0.029	0.0002 U	0.3	0.00011 U	32	0.001 J	0.00067 UJ	0.00075 U
B/W-10S		15-Sep-08	7.19	360	272.1	4.03	14.60	2.06	120	120	2 U	230	0.5 U	14	0.54	38	0.11	0.09 U	0.15 U	0.04 U	0.00022 J	0.006	0.032	0.0002 U	0.32	0.00011 U	30	0.0007 U	0.00042 UJ	0.00079 J
B/W-10S		10-Nov-08	6.89	372	177.1	4.35	14.56	2.33	120	120	2 U	280	0.5 U	19 J	0.39 J	47	0.15 J	0.09 U	0.15 J	0.04 U	0.00025 J	0.0045	0.033	0.0002 U	0.3	0.00011 U	33	0.0007 U	0.0012 UJ	0.00075 U
B/W-11S		13-Mar-08	4.08	5293	195.4	2.99	15.63	6.56	2 U	2 U	2 U	6100	3.2	77	13	3900	0.6 U	0.9 U	1.5 U	66	0.002 U	0.09	0.019	0.025	2	0.014	440	0.007 U	0.49	2.1
B/W-11S		17-Jun-08	4.03	5293	251.0	0.24	16.00	2.22	2 U	2 U	2 U	5700	5.2 J	62	21 J	3900	0.06 UJ	4.5 UJ	4.6 UJ	78	0.002 U	0.11	0.021	0.026	2.1	0.013	420	0.007 U	0.45	2
B/W-11S		9-Sep-08	3.91	5133	266.5	0.59	16.58	49.84	2 U	2 U	2 U	5800	3.7	68	6.5	3800	0.08 J	0.09 UJ	0.15 U	63	0.002 U	0.093	0.018	0.021 J	2	0.013	430	0.007 U	0.42	1.8
B/W-11S		2-Nov-08	3.73	5125	309.4	1.64	15.55	28.04	2 U	2 U	2 U	5900	2.9	75	22	4000	0.06 U	0.09 UJ	0.15 U	86	0.01 U	0.061	0.021 J	0.024 J	1.9	0.015 J	420	0.035 U	0.53	2.4
B/W-13		17-Mar-08	7.71	675	178.4	6.34	16.06	0.30	110	110	2 U	410	0.5 U	53	0.67	120	0.48	0.09 U	0.48	0.04 U	0.00035 J	0.014	0.022	0.0002 U	0.46	0.00011 U	44	0.0012 J	0.0019	0.00075 U
B/W-13		16-Jun-08	7.39	755	232.1	6.51	17.51	0.21	120	120	2 U	480	0.5 U	66	0.69 J	140	0.59 UJ	0.13 J	0.72 UJ	0.04 U	0.00023 J	0.013	0.024	0.0002 UJ	0.56	0.00011 U	57	0.0011 UJ	0.00026 UJ	0.0011 UJ
B/W-13S		10-Sep-08	7.49	822	75.8	5.52	17.55	0.27	120	120	2 U	540	0.5 U	73	0.56	170	0.71	0.09 U	0.71	0.04 U	0.00029 UJ	0.009	0.029 J	0.0002 UJ	0.48	0.00011 UJ	62	0.0007 U	0.00076 J	0.00096 J
B/W-13S		6-Nov-08	7.63	841	255.8	6.27	17.22	1.77	120	120	2 U	580	0.5 U	90	0.66	200	0.86	0.09 U	0.86	0.04 U	0.00028 J	0.012	0.031	0.0002 U	0.49	0.00011 U	70	0.00084 J	0.00062 UJ	0.00079 J
B/W-14		18-Mar-08	7.39	532	3.0	0.39	14.24	0.35	190	190	2 U	320	2.5	33	0.75 J	27	0.06 U	0.09 U	0.15 U	0.04 U	0.00042 J	0.1	0.032	0.0002 U	0.26	0.00011 U	7.6	0.0007 U	0.00029 UJ	0.0035
B/W-14		12-Jun-08	7.27	476	9.7	0.16	14.08	0.00	200	200	2 U	350	4.2	38	0.8	28	0.06 U	0.09 U	0.15 U	0.04 U	0.00028 J	0.088	0.03	0.0002 UJ	0.34	0.00011 U	8.5	0.0007 U	0.00077 UJ	0.0027
B/W-14S		10-Sep-08	7.36	553	-8.3	0.14	14.56	0.14	200	200	2 U	360	3.4	37	0.65	26	0.06 U	0.09 U	0.15 U	0.04 U	0.00025 UJ	0.078	0.034 J	0.0002 UJ	0.33	0.00011 UJ	8.6	0.0007 U	0.00072 J	0.0033 J
B/W-14S		3-Nov-08	7.25	560	10.2	0.25	14.28	0.06	200	200	2 U	360	2.7	40	0.72 UJ	31	0.06 UJ	0.09 UJ	0.15 UJ	0.04 U	0.00044 J	0.077	0.034	0.0002 U	0.3	0.00014 J	8.7	0.0007 U	0.0018 UJ	0.0031

Table 3-8. 2008 Analytical Results for Monitor Wells - Continued

			Metals (Lab) Continued																					Radiological (Labs)						
Sample Name	Duplicate	Sample Date	Iron	Lead	Lithium	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Phosphorus	Potassium	Selenium	Silicon	Silver	Sodium	Strontium	Thallium	Tin	Titanium	Uranium	Vanadium	Zinc	Alpha, Gross	Beta, Gross	Radium-226	Radium-228	Thorium-228	Thorium-230	Thorium-232
			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L
Shallow Wells - Continued																														
B/W-1S		18-Mar-08	0.015 U	0.0003 U	0.052	35	0.0017 UJ	0.0001 U	0.005	0.0009 U	0.058	3.5	0.0049	40	0.0003 U	120	1.2	0.0002 U	0.012 U	0.002 U	0.035	0.0062	0.0081 J	18.8	11.4	0.15 U	0.486 UJ	0.0839 U	0.101 U	0.082 U
B/W-1S		9-Jun-08	0.015 U	0.0003 U	0.076	34	0.0013	0.0001 U	0.0037	0.0024	0.053	5	0.004	44	0.0003 U	120	1.3	0.0002 U	0.012 U	0.002 U	0.041	0.0059	0.0025 U	24.9 J	12.3	0.321 U	0.716 UJ	0.0872 U	0.0859 U	0.0859 U
B/W-1S		4-Nov-08	0.015 U	0.0003 U	0.072	33	0.0027 UJ	0.0001 U	0.0036	0.0009 U	0.056	6.2	0.0034	45	0.0003 U	120	1.1	0.0002 U	0.012 U	0.002 U	0.043	0.0058	0.0078 UJ	23.4 J	15	0.149 U	0.499 U	0.149 U	0.145 U	0.145 U
B/W-3S		13-Mar-08	0.015 U	0.0003 U	0.05 J	32	0.12	0.0001 U	0.37	0.0009 U	0.031 J	3.7	0.0034	50	0.0003 U	270	1.1	0.0002 U	0.012 U	0.002 U	0.085	0.036	0.003 UJ	58.6	20.6	0.288 U	0.669 U	0.173 U	0.169 U	0.169 U
B/W-3S		9-Jun-08	0.015 U	0.0003 U	0.038 J	32	0.069	0.0001 U	0.36	0.0015 J	0.024 J	3.7	0.0042	51	0.0003 U	250	1.1	0.0002 U	0.012 U	0.002 U	0.086	0.034	0.0025 U	58.6 J	15.3	0.389 U	0.736 U	0.151 U	0.149 U	0.17 U
B/W-3S		9-Sep-08	0.015 U	0.0003 U	0.04 J	31	0.077	0.0001 U	0.41	0.0009 U	0.026 J	3.4	0.0025	48	0.0003 U	240	1.1	0.0002 U	0.012 U	0.002 U	0.092	0.029	0.0025 U	49.1 J	49.8	0.216 U	0.591 U	0.167 U	0.134 U	0.134 U
B/W-3S		10-Nov-08	0.015 U	0.0003 U	0.053	33	0.076	0.0001 U	0.51	0.0009 U	0.063 UJ	4.2	0.003	50	0.0003 U	230	1.1	0.0002 U	0.012 U	0.002 U	0.1	0.032	0.0025 U	26.5	21.1	0.154 UJ	0.69 U	0.186 U	0.146 U	0.146 U
B/W-4S		17-Mar-08	0.015 U	0.0003 U	0.065	49	0.21	0.0001 U	0.0068	0.0009 U	0.022 J	4.7	0.0014 J	48	0.0003 U	77	2.4	0.0002 U	0.012 U	0.002 U	0.074	0.0064	0.0061 UJ	47.1	18.9	0.427 J	0.434 U	0.13 U	0.128 U	0.128 U
B/W-4S		12-Jun-08	0.015 U	0.0003 U	0.13	52	0.00081 J	0.0001 U	0.0026	0.0023	0.022 J	3.9	0.0021	53	0.0003 U	82	2.4	0.0002 U	0.012 U	0.002 U	0.085	0.0086	0.0025 UJ	46	21.7	0.564 J	0.806 U	0.15 U	0.148 U	0.148 U
B/W-4S		9-Sep-08	0.015 U	0.0003 U	0.053	46	0.0019	0.0001 U	0.0025	0.0009 U	0.02 U	3	0.0021	53	0.0003 U	86	2.1	0.0002 U	0.012 U	0.002 U	0.064	0.0096	0.0038 UJ	44.9 J	16.8	0.293 J	0.875 U	0.155 U	0.109 U	0.109 U
B/W-4S-FD	Dup.	9-Sep-08	0.015 U	0.0003 U	0.054	45	0.0017	0.0001 U	0.0026	0.0009 U	0.02 U	2.9	0.0023	52	0.0003 U	87	2	0.0002 U	0.012 U	0.002 U	0.065	0.0095	0.0038 UJ	38.9 J	13.5	0.246 U	0.552 U	0.111 U	0.109 U	0.109 U
B/W-4S		10-Nov-08	0.015 U	0.0003 U	0.071	60	0.0013 UJ	0.0001 U	0.0019 J	0.0009 U	0.02 U	4.6	0.002	55	0.0003 U	77	2.6	0.0002 U	0.012 U	0.002 U	0.096	0.0085	0.0031 UJ	27.3	20.7	0.141 UJ	0.725 U	0.153 U	0.148 U	0.148 U
B/W-5S		13-Mar-08	0.015 U	0.0003 U	0.03 U	1.5	0.0013 UJ	0.0001 U	0.16	0.0009 U	0.022 J	0.98	0.0023	47	0.0003 U	150	0.16	0.0002 U	0.012 U	0.002 U	0.051	0.036	0.0033 UJ	26.6	8.49	0.212 U	0.689 U	0.0895 U	0.107 U	0.0873 U
B/W-5RS		12-Jun-08	0.026 J	0.0003 U	0.03 U	1.1	0.00075 U	0.0001 U	0.15	0.0009 U	0.024 J	0.73	0.0018 UJ	48	0.0003 U	140	0.11	0.0002 U	0.012 U	0.002 U	0.057	0.05	0.0025 U	37	12.7	0.246 U	0.654 UJ	0.169 U	0.167 U	0.167 U
B/W-5SR		10-Sep-08	0.015 U	0.0003 U	0.03 U	1.1	0.0016 UJ	0.0001 U	0.16	0.0009 UR	0.021 J	0.7	0.0021	46	0.0003 UJ	140	0.11	0.0002 U	0.012 UJ	0.002 U	0.051	0.053 J	0.0025 U	36.2	15.5	0.284 U	0.75 U	0.081 U	0.0792 U	0.0792 U
B/W-5SR		3-Nov-08	0.015 U	0.0003 U	0.03 U	1.1	0.0034 UJ	0.0001 U	0.16	0.00096 J	0.021 J	0.67	0.0019 J	46	0.0003 U	130	0.11	0.0002 U	0.012 U	0.002 U	0.054	0.052	0.0082 UJ	34.5	13.9	0.167 U	0.624 U	0.134 U	0.13 U	0.13 U
B/W-6S		17-Mar-08	0.015 U	0.0003 U	0.03 U	2.3	0.16	0.0001 U	0.13	0.00092 J	0.022 J	2	0.0026	36	0.0003 U	140	0.25	0.0002 U	0.012 U	0.002 U	0.014	0.033	0.0025 U	14.2	5.3	0.131 U	0.679 UJ	0.133 U	0.13 U	0.13 U
B/W-6S		12-Jun-08	0.015 U	0.0003 U	0.03 U	2.3	0.0083	0.0001 U	0.13	0.0009 U	0.02 U	2.3	0.0026	50	0.0003 U	160	0.29	0.0002 U	0.012 U	0.002 U	0.018	0.051	0.0025 U	10	8.47	0.196 U	0.726 UJ	0.118 U	0.142 U	0.116 U
B/W-6S		8-Sep-08	0.015 U	0.0003 U	0.03 J	2.1	0.0032	0.0001 U	0.13	0.0009 U	0.02 U	2.2	0.0028	52	0.0003 U	150	0.27	0.0002 U	0.012 U	0.002 U	0.018	0.055	0.0025 J	14.1	6.89 J	0.281 U	0.489 UJ	0.154 U	0.108 U	0.108 U
B/W-6S		4-Nov-08	0.015 U	0.0003 U	0.03 U	2.3	0.0017 UJ	0.0001 U	0.11	0.0009 U	0.024 J	2.3	0.0029	51	0.0003 U	140	0.28	0.0002 U	0.012 U	0.002 U	0.017	0.056	0.0067 UJ	5.48 J	6.24	0.0994 U	0.587 U	0.126 U	0.122 U	0.122 U
B/W-8S		13-Mar-08	0.015 U	0.0003 U	0.033 J	6.9	0.11	0.0001 U	0.073	0.0015 J	0.02 U	2.9	0.0022	37	0.0003 U	220	0.45	0.0002 U	0.012 U	0.002 U	0.055	0.016	0.0039 UJ	48	12.8	0.319 J	0.803 U	0.169 U	0.134 U	0.134 U
B/W-8S		9-Jun-08	0.015 U	0.0003 U	0.03 U	7.1	0.00075 U	0.0001 U	0.065	0.0009 U	0.02 U	2.6	0.0033	38	0.0003 U	200	0.41	0.0002 U	0.012 U	0.002 U	0.057	0.017	0.0025 U	35.5 J	12.7	0.468 U	0.879 UJ	0.164 U	0.132 U	0.132 U
B/W-8S		14-Sep-08	0.027 UJ	0.0003 U	0.032 J	6.8	0.002 UJ	0.0001 U	0.061	0.0009 U	0.02 U	2.5 J	0.0021	38	0.0003 U	190	0.41 J	0.00022 J	0.012 U	0.002 U	0.053	0.018	0.0025 U	41	12.3	0.23 J	0.786 U	0.129 U	0.103 U	0.144 U
B/W-8S		5-Nov-08	0.015 U	0.0003 U	0.03 J	6.6	0.00075 U	0.0001 U	0.058	0.0009 U	0.02 U	2.3	0.0023	37	0.0003 U	190	0.4	0.0003 J	0.012 U	0.002 U	0.055	0.019	0.0025 U	46.6	16.6	0.145 U	0.9 U	0.121 U	0.0954 U	0.0954 U
B/W-9S-D1		12-Mar-08	0.015 U	0.0003 U	0.059	32	0.0016 UJ	0.0001 U	0.14	0.0023	0.058	5.5	0.0066	49	0.0003 U	330	1.7	0.0002 U	0.012 U	0.002 U	0.07	0.05	0.0037 UJ	29.6	17.3	0.301 J	0.621 U	0.168 U	0.164 U	0.164 U
B/W-9S-D2	Dup.	12-Mar-08	0.015 U	0.0003 U	0.056	31	0.0016 UJ	0.0001 U	0.14	0.0022	0.049	5.3	0.0064	49	0.0003 U	340	1.7	0.0002 U	0.012 U	0.002 U	0.07	0.052	0.0042 UJ	35.9	19.4	0.248 J	0.616 U	0.167 U	0.163 U	0.163 U
B/W-9S		10-Jun-08	0.015 U	0.0003 U	0.06	27	0.0048	0.0001 U	0.13	0.0022	0.047	4.1	0.006	48	0.0003 U	280	1.3	0.0002 U	0.012 U	0.002 U	0.063	0.046	0.0026 J	37.3 J	12.2	0.251 U	0.713 U	0.164 U	0.162 U	0.162 U
B/W-9S		9-Sep-08	0.015 U	0.0003 U	0.049 J	25	0.00075 U	0.0001 U	0.12	0.0009 U	0.046	4.1	0.0046	47	0.0003 U	290	1.3	0.0002 U	0.012 U	0.002 U	0.054	0.046	0.0025 U	31.6	16.6	0.145 UJ	0.886 U	0.161 U	0.158 U	0.158 U
B/W-9S		11-Nov-08	0.015 U	0.0003 U	0.07	36	0.0012	0.0001 U	0.12	0.0009 U	0.057	5.1	0.0059	50	0.0003 U	350	1.9	0.0002 U	0.012 U	0.002 U	0.061	0.048	0.0032 UJ	32	24.2	0.211 U	0.708 U	0.19 U	0.149 U	0.149 U
B/W-10S		12-Mar-08	0.015 U	0.0003 U	0.031 J	6.5	0.0014 UJ	0.0001 U	0.001 UJ	0.0009 U	0.05	3.2	0.00031 J	41	0.0003 U	35	0.27	0.0002 U	0.012 U	0.002 U	0.004	0.0072	0.0025 U	1.79 J	3.74 J	0.193 U	0.509 U	0.126 U	0.151 U	0.123 U
B/W-10S		12-Jun-08	0.015 U	0.0003 U	0.03 U	7.1	0.0014	0.0001 U	0.0012 J	0.0009 U	0.036 J	3.2	0.0003 U	42	0.0003 U	36	0.28	0.0002 U	0.012 U	0.002 U	0.0039	0.007 J	0.0025 U	3.42	3.35 J	0.328 U	0.464 UJ	0.116 U	0.114 U	0.114 U
B/W-10S		15-Sep-08	0.015 U	0.0003 U	0.03 U	6.7	0.0063	0.0001 U	0.00078 J	0.0009 U	0.052	3.4 J	0.00073 J	40	0.0003 U	37	0.27 J	0.0002 U	0.012 U	0.002 U	0.0038	0.0062	0.0025 U	2.27 J	2.97 U	0.21 U	0.638 U	0.0808 U	0.0969 U	0.0789 U
B/W-10S		10-Nov-08	0.015 U	0.0003 U	0.031 J	7.4	0.0018 UJ	0.0001 U	0.00065 J	0.0009 U	0.048 UJ	3.2	0.00046 J	41	0.0003 U	35	0.29	0.0002 U	0.012 U	0.002 U	0.0038	0.0061	0.0025 U	2.01 J	3.08 J	0.0693 UJ	0.787 U	0.125 U	0.121 U	0.121 U
B/W-11S		13-Mar-08	610	0.0045 J	0.2 J	140	24	0.0001 U	0.0026 UJ	0.33	0.18 J	33	0.011 J	30	0.003 U	370	4.8	0.002 U	0.06 U	0.01 U	0.14	0.43	1.2	38.1	73.2	0.613 J	0.599 U	0.249 U	0.173 U	0.173 U
B/W-11S		17-Jun-08	600	0.0043 J	0.19 J	150	25	0.00012 J	0.002 U	0.33	0.1 U	33	0.0082 J	31	0.003 U	350	4.8	0.002 U	0.06 U	0.01 U	0.14	0.41	1	31.2 J	60.2	0.999 J	0.53 J	0.138 U	0.135 U	0.135 U
B/W-11S		9-Sep-08	550	0.0054 J	0.15 J	130	23	0.0001 U	0.0029 UJ	0.26	0.1 U	35	0.0085 J	27	0.003 U	360	5	0.002 U	0.06 U	0.01 U	0.13	0.35	1.1 J	35.2	75.2	0.387 J	1.17	0.128 U	0.126 U	0.126 U
B/W-11S		2-Nov-08	480	0.015 U	0.22 J	130	25	0.00046 J	0.01 U	0.39	0.1 U	34 J	0.015 U	35	0.015 U	340	5.1	0.01 U	0.06 U	0.01 U	0.18	0.26	1.6	34.8 J	68.3	1.21 J	0.668 J	0.16 U	0.192 U	0.157 U
B/W-13		17-Mar-08	0.015 U	0.0003 U	0.03 U	7.7	0.0032	0.0001 U	0.037	0.0009 U	0.02 U	3.7	0.0028	43	0.0003 U	76	0.31	0.0002 U	0.012 U	0.002 U	0.0058	0.013	0.0029 UJ	3.42	3.76 J	0.252 U	0.496 U	0.12 U	0.144 U	0.117 U
B/W-13		16-Jun-08	0.025 J	0.0003 U	0.03 U	10	0.0056 UJ	0.0001 U	0.042	0.0009 U	0.02 U	4.4 J	0.0035	46	0.0003 U	88	0.4	0.0002 U	0.012 U	0.002 U	0.0087	0.012	0.0025 U	4.79	7.29	0.277 U	0.659 UJ	0.0883 U	0.0863 U	0.0863 U
B/W-13S		10-Sep-08	0.015 U	0.0003 U	0.03 U	11	0.0012 UJ	0.0001 U	0.036	0.0009 UR	0.02 U	4.4	0.0034	42	0.0003 UJ	76	0.45	0.0002 U	0.012 UJ	0.002 U	0.0083	0.012 J	0.0028 J	8.25	6.21	0.155 U	0.649 U	0.161 U	0.156 U	0.156 U
B/W-13S		6-Nov-08	0.015 U	0.0003 U	0.03 U	12	0.00075 U	0.0001 U	0.032	0.0009 U	0.02 U	4.1	0.0036	44	0.0003 U	77	0.48	0.0002 U	0.012 U	0.002 U	0.0087	0.01	0.0025 U	6.9	6.53	0.257 U	0.471 U	0.123 U	0.0975 J	0.0975 U
B/W-14		18-Mar-08	0.02 J	0.0003 U	0.03 U	1.9	0.46	0.0001 U	0.0077	0.0009 U	1.4	2.5	0.0003 U	33	0.0003 U	110	0.068	0.00023 J	0.012 U	0.002 U	0.00065 J	0.0039	0.0025 U	7.66	6.52	0.228 U	0.838 UJ	0.172 U	0.12 U	0.12 U
B/W-14		12-Jun-08	0.043	0.0003 U	0.03 U	2.2	0.5	0.0001 U	0.006	0.00099 J	1.3	3	0.0003 U	36	0.0003 U	110	0.081	0.0002 U	0.012 U	0.002 U	0.00057 J	0.0033	0.0025 UJ	5.51	3.06 U	0.272 U	0.62 U	0.174 U	0.171 U	0.171 U
B/W-14S		10-Sep-08	0.018 J	0.0003 U	0.03 U	2.2	0.53	0.0001 U	0.006	0.0011 J	1	2.9	0.0003 U	36	0.0003 UJ	110	0.088	0.0002 U	0.012 UJ	0.002 U	0.00057 J	0.0026 J	0.0025 U	4.49	3.22 J	0.231 U	0.639 U	0.154 U	0.15 U	0.15 U
B/W-14S		3-Nov-08	0.022 J	0.0003 U	0.03 U	2.3	0.54	0.0001 U	0.0065	0.0014 J	1.1	3.3	0.00054 J	36	0.0003 U	110	0.084	0.0002 U	0.012 U	0.002 U	0.00096 J	0.0029	0.0069 UJ	6.53	2.85 U	0.172 U	0.834 U	0.0849 U	0.0824 U	0.0824 U

Table 3-8. 2008 Analytical Results for Monitor Wells - Continued

			Field Parameters						Water Quality Parameters (Lab)											Metals (Lab)										
Sample Name	Duplicate	Sample Date	pH (field)	Specific Conductance (field)	ORP (field)	Dissolved Oxygen (field)	Temperature (field)	Turbidity (field)	Total Alkalinity (as $CaCO_3$)	Bicarbonate Alkalinity (as $CaCO_3$)	Carbonate (as $CaCO_3$)	Total Dissolved Solids	Total Organic Carbon	Chloride	Fluoride	Sulfate	Nitrate	Nitrite	Nitrate-Nitrite	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium	Cobalt	Copper
			s.u.	µS/cm	mV	mg/L	Deg C	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Shallow Wells - Continued																														
B/W-15		14-Mar-08	7.27	362	125.4	0.27	13.43	0.15	110	110	2 U	240	0.5 U	15	0.47 UJ	37	0.06 U	0.09 U	0.15 U	0.04 U	0.0002 U	0.0071	0.031	0.0002 U	0.27	0.00011 U	32	0.0007 U	0.00022 UJ	0.00075 U
B/W-15		12-Jun-08	7.23	334	56.5	0.15	13.93	0.24	120	120	2 U	240	0.9 J	19	0.61	44	0.06 U	0.09 U	0.15 U	0.04 U	0.0002 U	0.0069	0.032	0.0002 UJ	0.37	0.00011 U	35	0.0007 U	0.00072 UJ	0.00088 J
B/W-15S		10-Sep-08	7.22	501	111.4	0.17	13.78	0.21	150	150	2 U	310	0.5 U	20	0.69	67	0.56	0.09 U	0.56	0.04 U	0.0002 U	0.0048	0.05 J	0.0002 UJ	0.31	0.00011 UJ	46	0.0007 U	0.0011	0.0013 J
B/W-15S		3-Nov-08	7.21	437	-40.3	0.24	13.51	0.38	140	140	2 U	270	0.5 U	16	0.46 UJ	55	0.3	0.09 U	0.3	0.04 U	0.0003 J	0.0062	0.039	0.0002 U	0.35	0.00011 U	41	0.0007 U	0.0014 UJ	0.001 J
B/W-16D		18-Mar-08	7.59	685	89.6	6.07	18.74	3.26	180	180	2 U	450	0.5 U	29	1.3	93	0.81	0.09 U	0.81	0.04 U	0.00025 J	0.015	0.011	0.0002 U	0.77	0.00019 J	16	0.0038	0.00015 U	0.00075 U
B/W-16		16-Jun-08	8.05	692	49.1	2.77	17.47	17.60	180	180	2 U	450	0.5 U	28	1.3 J	110	1 UJ	0.09 UJ	1 UJ	0.04 U	0.00022 J	0.017	0.006	0.0002 U	0.91	0.00014 J	16	0.01	0.00015 U	0.00075 U
B/W-16S		16-Sep-08	7.78	666	187.4	6.29	18.55	1.80	170	170	2 U	450	0.5 U	28	1.3	110	1.1	0.09 U	1.1	0.04 U	0.00048 J	0.019	0.0056	0.0002 U	0.88	0.00011 U	15	0.012	0.0039	0.00075 U
B/W-16S		11-Nov-08	8.01	666	178.5	6.76	17.50	0.93	160	160	2 U	480	0.5 U	27 J	1.3	100	1.1 J	0.09 U	1.1 J	0.04 U	0.00032 J	0.019	0.0055	0.0002 U	0.93	0.00011 U	16	0.012	0.0022	0.00075 U
B/W-18S		18-Mar-08	7.59	3192	51.8	0.44	14.66	26.90	230	230	2 U	2200	1	180	0.49 J	1100	0.06 U	0.09 U	0.15 U	0.04 U	0.00056 J	0.036	0.078	0.0002 U	1.5	0.00013 J	120	0.0007 U	0.0028	0.0034
B/W-18S		9-Jun-08	7.55	3981	97.7	0.36	15.19	9.64	290	290	2 U	2800	0.5 U	290	1.1	1500	0.06 U	0.09 U	0.15 U	0.04 U	0.00037 J	0.029	0.055	0.0002 U	2.2	0.00011 U	170	0.0007 U	0.0029	0.0035
B/W-18S		14-Sep-08	7.64	3970	-61.5	0.25	14.91	4.21	290	290	2 U	2900	0.5 U	270	0.45 J	1400	0.06 U	0.09 U	0.15 U	0.04 U	0.0003 J	0.025	0.043	0.0002 U	2	0.00014 UJ	170	0.0007 U	0.00081 UJ	0.0025
B/W-18S		6-Nov-08	7.49	3734	239.7	0.30	14.34	12.07	290	290	2 U	2800	0.5 U	230	0.83 J	1300	0.06 U	0.09 U	0.15 U	0.04 U	0.00069 J	0.021	0.039	0.0002 U	1.7	0.00011 U	140	0.0007 U	0.0049	0.0042 UJ
B/W-19S		13-Mar-08	7.57	1059	64.9	5.87	16.80	6.05	170	170	2 U	720	0.5 U	67	0.98 UJ	270	2.7	0.09 U	2.7	0.04 U	0.00038 J	0.011	0.027	0.0002 U	1.7	0.00011 U	42	0.0057	0.0026	0.0011 UJ
B/W-19S		9-Jun-08	7.79	1169	158.3	7.17	17.25	6.09	150	150	2 U	750	0.5 U	79	1.1	290	4	0.09 U	4	0.04 U	0.00024 J	0.014	0.025	0.0002 U	1.6	0.00011 U	45	0.0044	0.00015 U	0.0012 J
B/W-19S		10-Sep-08	7.73	1195	102.9	8.60	18.00	8.19	140	140	2 U	800	0.5 U	85	1	310	4.6	0.09 U	4.6	0.04 U	0.00024 UJ	0.016	0.021 J	0.0002 UJ	1.4	0.00011 UJ	45	0.0048	0.00068 J	0.0011 J
B/W-19S		5-Nov-08	7.49	1071	180.8	6.89	16.91	3.19	160	160	2 U	720	0.5 U	78	1.3	270	4.5	0.09 U	4.5	0.04 U	0.00051 J	0.015	0.021	0.0002 U	1.6	0.00011 U	39	0.0056	0.00037 UJ	0.002 UJ
B/W-20		14-Mar-08	7.89	347	228.8	0.24	14.47	0.28	110	110	2 U	250	0.79 J	14	0.57 UJ	32	0.06 U	0.09 U	0.15 U	0.04 U	0.0002 U	0.0092	0.044	0.0002 U	0.22	0.00011 U	31	0.00071 J	0.00021 UJ	0.00075 U
B/W-20		12-Jun-08	7.82	311	-118.1	0.20	15.12	0.04	120	120	2 U	250	1.7	14	0.65	36	0.06 U	0.09 U	0.15 U	0.04 U	0.0002 U	0.011	0.045	0.0002 UJ	0.26	0.00011 U	33	0.0007 J	0.00036 UJ	0.00075 U
B/W-20S		16-Sep-08	6.98	405	278.0	2.99	15.11	4.58	150	150	2 U	260	0.5 U	17	0.51	34	0.13	0.09 U	0.15 U	0.04 U	0.0002 U	0.013	0.028	0.0002 U	0.3	0.00011 U	40	0.0009 J	0.00081 UJ	0.00093 J
B/W-20S		11-Nov-08	7.67	388	88.4	0.65	14.45	4.04	130	130	2 U	250	0.5 U	17	0.57	36	0.06 U	0.09 U	0.15 U	0.04 U	0.00045 J	0.012	0.039	0.0002 U	0.26	0.00011 U	38	0.0007 U	0.0092	0.00081 J
B/W-21		17-Mar-08	7.10	529	193.0	2.26	14.58	0.22	150	150	2 U	320	0.5 U	22	0.46 J	66	1.1	0.09 U	1.1	0.04 U	0.00037 J	0.0073	0.039	0.0002 U	0.31	0.00011 U	45	0.0007 U	0.0025	0.0034
B/W-21		12-Jun-08	7.06	445	16.2	2.03	15.18	0.07	160	160	2 U	320	0.5 U	22	0.5	66	1.5	0.09 U	1.5	0.04 U	0.00024 J	0.0081	0.037	0.0002 U	0.37	0.00011 U	47	0.00079 J	0.00089 UJ	0.0036
B/W-21S		8-Sep-08	7.10	475	12.7	2.34	15.57	1.00	140	140	2 U	300	0.5 U	22	0.48 J	62	0.25	0.09 U	0.25 J	0.04 U	0.00029 J	0.0074	0.038	0.0002 UJ	0.34	0.00011 U	40	0.0007 U	0.00086 J	0.0042
B/W-21S-FD	Dup.	8-Sep-08	7.10	475	12.7	2.34	15.57	1.00	140	140	2 U	300	0.5 U	22	0.47 J	64	0.27	0.09 U	0.27	0.068	0.00034 J	0.0071	0.037	0.0002 UJ	0.35	0.00011 U	41	0.0007 J	0.0023 J	0.0041
B/W-21S		9-Nov-08	6.96	503	141.6	2.32	14.29	0.01	150	150	2 U	350	0.5 U	25	0.39 J	59	1.5	0.09 U	1.5	0.04 U	0.00031 J	0.0065	0.041	0.0002 U	0.31	0.00011 U	46	0.0007 U	0.00071 UJ	0.0039
B/W-22D		17-Mar-08	7.37	1681	157.4	4.70	16.91	10.93	240	240	2 U	1100	0.5 U	98	0.62 J	430	6.6	0.09 U	6.6	0.04 U	0.00028 J	0.0099	0.049	0.0002 U	0.78	0.00011 U	91	0.0018 J	0.00027 UJ	0.0015 J
B/W-22		12-Jun-08	7.33	1734	142.9	5.00	17.55	1.51	250	250	2 U	1200	0.5 U	110	0.65	480	7.7	0.09 U	7.7	0.04 U	0.0002 U	0.0083	0.052	0.0002 U	1	0.00011 U	110	0.0012 J	0.00015 U	0.00098 J
B/W-22S		10-Sep-08	7.30	1781	290.4	4.45	17.53	1.52	260	260	2 U	1200	0.5 U	110	0.56	490	8.2	0.09 U	8.2	0.04 U	0.0002 U	0.007	0.05	0.0002 U	0.98	0.00011 UJ	100	0.0007 U	0.00041 J	0.0017 J
B/W-22S		11-Nov-08	7.38	1711	148.0	5.32	16.75	3.37	250	250	2 U	1200	0.5 U	96 J	0.9	430	7.4 J	0.09 U	7.4 J	0.04 U	0.0002 U	0.0067	0.056	0.0002 U	0.98	0.00011 U	110	0.0012 J	0.00082 J	0.0018 J
B/W-25S		12-Mar-08	7.42	1406	137.6	1.67	14.51	0.52	300	300	2 U	1000	0.8 J	45	0.36 J	350	7.9 J	0.09 U	7.9 J	0.04 U	0.00031 J	0.022	0.04	0.0002 U	0.79	0.00011 U	110	0.0023	0.00019 UJ	0.0022 UJ
B/W-25S		11-Jun-08	7.30	1278	224.4	0.74	14.76	1.61	310	310	2 U	1000	2	54	0.4 J	380	12	0.09 U	12	0.04 U	0.00025 J	0.022	0.037	0.0002 U	0.9	0.00011 U	110	0.0014 J	0.00029 UJ	0.0024
B/W-25S		8-Sep-08	7.42	1404	129.5	0.70	14.95	0.76	320	320	2 U	980	0.5 U	45	0.32 J	340	9.2	0.09 U	9.8	0.04 U	0.0002 U	0.022	0.033	0.0002 U	0.83	0.00011 U	110	0.0017 J	0.00058 J	0.0025
B/W-25S		6-Nov-08	7.11	1798	69.2	0.76	14.91	1.33	400	400	2 U	1300	1.7	62	0.23 J	460	13	0.09 U	13	0.04 U	0.00038 J	0.02	0.048	0.0002 U	1.3	0.00011 U	150	0.0022	0.00031 UJ	0.0031 UJ
B/W-27S		12-Mar-08	6.75	419	189.2	5.72	12.08	NA	120	120	2 U	270	0.5 U	24	0.44 J	52	0.11	0.09 U	0.15 U	0.04 U	0.0002 U	0.0015 UJ	0.051	0.0002 U	0.28	0.00011 U	37	0.0007 U	0.00015 U	0.0014 UJ
B/W-27S		11-Jun-08	6.75	362	64.0	6.22	10.13	5.41	120	120	2 U	260	0.99 J	20	0.51	52	0.21	0.09 U	0.21	0.04 U	0.0002 U	0.00095 J	0.044	0.0002 UJ	0.45	0.00011 U	36	0.0007 U	0.00071 UJ	0.00075 U
B/W-27S		11-Sep-08	6.76	334	111.6	5.61	13.19	4.61	120	120	2 U	200	0.5 U	13	2	35	0.064 UJ	0.09 U	0.15 U	0.04 U	0.0002 U	0.001	0.035	0.0002 U	0.36	0.00011 U	25	0.0007 U	0.00018 UJ	0.00082 J
B/W-27S		11-Nov-08	6.53	353	142.4	5.23	13.03	1.91	130	130	2 U	250	0.5 U	15 J	0.4 J	38	0.06 U	0.09 U	0.15 U	0.04 U	0.0002 U	0.0007 U	0.04	0.0002 U	0.46	0.00011 U	31	0.0007 U	0.00016 J	0.0011 J
B/W-28S		17-Mar-08	7.34	1311	3.2	2.16	15.77	6.82	240	240	2 U	940	0.66 J	89	0.3 J	330	1.5	0.09 U	1.5	0.04 U	0.00024 J	0.0075	0.12	0.0002 U	0.62	0.00011 U	150	0.00073 J	0.00058 UJ	0.0018 J
B/W-28S-D1		9-Jun-08	7.38	1333	127.6	6.12	16.74	1.86	230	230	2 U	920	1.7	92	0.38 J	350	1.5	0.09 U	1.5	0.04 U	0.00021 J	0.01	0.088	0.0002 U	0.75	0.00011 U	150	0.0007 U	0.00022 UJ	0.0019 J
B/W-28S-D2	Dup.	9-Jun-08	7.38	1333	127.6	6.12	16.74	1.86	230	230	2 U	920	1.7	92	0.5	340	1.6	0.09 U	1.6	0.04 U	0.00031 J	0.012	0.09	0.0002 U	0.75	0.00011 U	160	0.0007 U	0.0023 J	0.0021
B/W-28S		11-Nov-08	7.26	1318	271.2	4.59	15.92	1.17	230	230	2 U	960	0.81 J	80	0.23 J	320	1.8	0.09 U	1.8	0.04 U	0.00026 J	0.014	0.092	0.0002 U	0.8	0.00011 U	160	0.0007 U	0.00063 J	0.002

Table 3-8. 2008 Analytical Results for Monitor Wells - Continued

Sample Name	Duplicate	Sample Date	Metals (Lab) Continued																					Radiological (Labs)						
			Iron	Lead	Lithium	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Phosphorus	Potassium	Selenium	Silicon	Silver	Sodium	Strontium	Thallium	Tin	Titanium	Uranium	Vanadium	Zinc	Alpha, Gross	Beta, Gross	Radium-226	Radium-228	Thorium-228	Thorium-230	Thorium-232
			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L
Shallow Wells - Continued																														
B/W-15		14-Mar-08	0.015 U	0.0003 U	0.031 J	7.4	0.63	0.0001 U	0.0067	0.0009 U	0.081	4	0.00038 J	23	0.0003 U	33	0.29	0.0002 U	0.012 U	0.002 U	0.0094	0.0033	0.0025 U	5.09	5	0.259 U	0.554 U	0.176 U	0.123 U	0.123 U
B/W-15		12-Jun-08	0.015 U	0.0003 U	0.042 J	8.1	0.78	0.0001 U	0.0059	0.0009 U	0.072	4.4	0.0003 U	23	0.0003 U	34	0.33	0.0002 U	0.012 U	0.002 U	0.0081	0.0031	0.0025 UJ	4.31	8.1	0.237 U	0.493 U	0.154 U	0.152 U	0.174 U
B/W-15S		10-Sep-08	0.015 U	0.0003 U	0.036 J	11	1	0.0001 U	0.0046	0.0009 UR	0.059	4.8	0.00068 J	21	0.0003 UJ	35	0.45	0.0002 U	0.012 UJ	0.002 U	0.014	0.0024 J	0.0025 U	6.37	12.4	0.204 U	0.719 U	0.128 U	0.102 U	0.142 U
B/W-15S		3-Nov-08	0.015 U	0.0003 U	0.03 J	9.6	0.91	0.0001 U	0.0049	0.0009 U	0.067	4.6 J	0.00043 J	22	0.0003 U	32	0.38	0.0002 U	0.012 U	0.002 U	0.013	0.0021	0.0025 U	4.64	6.65	0.206 U	0.46 U	0.109 U	0.106 U	0.106 U
B/W-16D		18-Mar-08	0.016 J	0.0003 U	0.033 J	1.9	0.19	0.0001 U	0.13	0.0009 U	0.022 J	2.1	0.00086 J	35	0.0003 U	130	0.11	0.0002 U	0.012 U	0.002 U	0.044	0.015	0.078	26.4	5.95	0.216 U	0.646 UJ	0.124 U	0.148 U	0.121 U
B/W-16		16-Jun-08	0.015 U	0.0003 U	0.036 J	2	0.0049 UJ	0.0001 U	0.089 J	0.0009 U	0.02 U	2.1 J	0.00099 J	45	0.0003 U	130	0.11	0.0002 U	0.012 U	0.002 U	0.054	0.018	0.0025 U	32.7	14.4	0.4 U	0.774 UJ	0.122 U	0.119 U	0.119 U
B/W-16S		16-Sep-08	0.022 UJ	0.0003 U	0.032 J	1.8	0.0078	0.0001 U	0.08	0.0009 U	0.02 U	2.3	0.00091 J	44	0.0003 U	130	0.099	0.0002 U	0.012 U	0.002 U	0.049	0.021	0.0025 U	37	13.2	0.17 U	0.726 U	0.136 U	0.108 U	0.152 U
B/W-16S		11-Nov-08	0.018 J	0.0003 U	0.037 J	2	0.0041	0.0001 U	0.087	0.0009 U	0.02 U	2.2	0.00095 J	49	0.0003 U	130	0.11	0.0002 U	0.012 U	0.002 U	0.056	0.022	0.0025 U	19.6	13.4	0.3 U	0.613 U	0.152 U	0.146 U	0.146 U
B/W-18S		18-Mar-08	0.021 J	0.0003 U	0.037 J	1.9	0.3	0.0001 U	0.052	0.0015 J	0.041	2	0.00084 J	46	0.0003 U	580	1.6	0.0002 U	0.012 U	0.002 U	0.29	0.04	0.01 J	190	51.4	0.325 J	7.98 J	0.173 U	0.137 U	0.137 U
B/W-18S		9-Jun-08	0.015 U	0.0003 U	0.069	36	0.29	0.0001 U	0.044	0.0027	0.025 J	2.4	0.0034	50	0.0003 U	730	2.1	0.0002 U	0.012 U	0.002 U	0.38	0.021	0.005 J	273 J	66.5	0.304 U	1.8 J	0.146 U	0.144 U	0.144 U
B/W-18S		14-Sep-08	0.015 U	0.0003 U	0.052	35	0.14	0.0001 U	0.038	0.0009 U	0.03 J	2.1 J	0.0014 J	50	0.0003 U	690	2.2 J	0.0002 U	0.012 U	0.002 U	0.38	0.032	0.0047 UJ	210	97.4	0.262 J	0.585 U	0.162 U	0.138 U	0.113 U
B/W-18S		6-Nov-08	0.015 U	0.0003 U	0.054	31	0.17	0.0001 U	0.033	0.00094 J	0.02 U	2	0.0012 J	46	0.0003 U	630	1.9	0.00033 J	0.012 U	0.002 U	0.4	0.028	0.0059 UJ	186	87.6	0.181 U	0.497 U	0.156 U	0.151 U	0.151 U
B/W-19S		13-Mar-08	0.015 U	0.0003 U	0.03 U	5.9	0.016	0.0001 U	0.026	0.0012 J	0.02 U	2.2	0.0027	42	0.0003 U	190	0.47	0.0002 U	0.012 U	0.002 U	0.048	0.016	0.0046 UJ	33.7	12.5	0.251 U	0.538 U	0.151 U	0.148 U	0.148 U
B/W-19S		9-Jun-08	0.015 U	0.0003 U	0.03 U	6.4	0.00075 U	0.0001 U	0.028	0.0009 U	0.02 U	2.1	0.0043	43	0.0003 U	190	0.49	0.0002 U	0.012 U	0.002 U	0.039	0.017	0.0025 U	28.9 J	11.3	0.379 U	0.68 UJ	0.0838 U	0.0826 U	0.0826 U
B/W-19S		10-Sep-08	0.015 U	0.0003 U	0.03 U	6.3	0.0016 UJ	0.0001 U	0.028	0.0009 UR	0.02 U	2	0.0029	44	0.0003 UJ	190	0.51	0.0002 U	0.012 UJ	0.002 U	0.034	0.023 J	0.0025 U	23.9	11.9	0.146 U	0.758 U	0.13 U	0.127 U	0.127 U
B/W-19S		5-Nov-08	0.015 U	0.0003 U	0.03 U	5.6	0.00075 U	0.0001 U	0.029	0.0009 U	0.02 U	1.9	0.0026	42	0.0003 U	170	0.45	0.00023 J	0.012 U	0.002 U	0.042	0.024	0.0025 U	33.6	10.7	0.148 U	0.686 U	0.186 U	0.147 U	0.147 U
B/W-20		14-Mar-08	0.054	0.0003 U	0.03 U	6.1	0.48	0.0001 U	0.0078	0.0009 U	0.14	3.3	0.0003 U	32	0.0003 U	32	0.25	0.0002 U	0.012 U	0.002 U	0.0032	0.0014 J	0.0032 J	1.77 J	5.16	0.204 U	0.721 U	0.169 U	0.165 U	0.165 U
B/W-20		12-Jun-08	0.052	0.0003 U	0.034 J	6.4	0.61	0.0001 U	0.0068	0.0009 U	0.14	3.5	0.0003 U	31	0.0003 U	33	0.26	0.0002 U	0.012 U	0.002 U	0.0036	0.0012 J	0.0025 UJ	3.27	3.69 J	0.275 U	0.68 U	0.167 U	0.165 U	0.165 U
B/W-20S		16-Sep-08	0.015 U	0.0003 U	0.03 U	5.6	0.022	0.0001 U	0.0069	0.0009 U	0.14	3.7	0.0003 U	34	0.0003 U	33	0.3	0.0002 U	0.012 U	0.002 U	0.0057	0.0051	0.0025 U	1.32 J	6.98	0.238 U	0.673 U	0.148 U	0.145 U	0.145 U
B/W-20S		11-Nov-08	0.015 U	0.0003 U	0.03 U	6.8	0.33	0.0001 U	0.0066	0.0009 U	0.15	3.8	0.0003 U	32	0.0003 U	34	0.3	0.0002 U	0.012 U	0.002 U	0.0058	0.003	0.0028 UJ	1.94 J	4.1	0.243 U	0.796 J	0.127 U	0.122 U	0.122 U
B/W-21		17-Mar-08	0.015 U	0.0003 U	0.038 J	9.9	0.0047	0.0001 U	0.0044	0.0009 U	0.06	5	0.0008 J	32	0.0003 U	48	0.38	0.0002 U	0.012 U	0.002 U	0.013	0.0044	0.0025 U	10.2	7.66	0.239 U	0.778 U	0.172 U	0.12 U	0.12 U
B/W-21		12-Jun-08	0.023 J	0.0003 U	0.033 J	10	0.0016	0.0001 U	0.0042	0.0009 U	0.039 J	5.2	0.00051 UJ	33	0.0003 U	49	0.38	0.0002 U	0.012 U	0.002 U	0.014	0.0038	0.0025 U	8.61	6.55	0.349 U	0.641 UJ	0.142 U	0.114 U	0.114 U
B/W-21S		8-Sep-08	0.015 U	0.0003 U	0.03 U	9.3	0.00075 UJ	0.0001 U	0.0022	0.0009 U	0.054	4.7	0.00039 J	25	0.0003 U	42	0.34	0.0002 U	0.012 U	0.002 U	0.012	0.0026	0.0025 UJ	7 J	8.27	0.224 U	0.602 U	0.145 U	0.102 U	0.102 U
B/W-21S-FD	Dup.	8-Sep-08	0.018 UJ	0.0003 U	0.03 U	9.4	0.0041 J	0.0001 U	0.002	0.0009 U	0.054	4.5	0.00032 J	25	0.0003 U	40	0.34	0.0002 U	0.012 U	0.002 U	0.012	0.0024	0.003 J	8.38 J	7.07	0.207 U	0.407 U	0.158 U	0.1 U	0.1 U
B/W-21S		9-Nov-08	0.015 U	0.0003 U	0.037 J	10	0.0019	0.0001 U	0.0046	0.0009 U	0.086 UJ	5.6	0.00089 J	32	0.0003 U	45	0.38	0.0002 U	0.012 U	0.002 U	0.015	0.0035	0.0025 U	6.73 J	10.6	0.221 U	0.575 U	0.103 U	0.141 J	0.0993 U
B/W-22D		17-Mar-08	0.026 J	0.0003 U	0.037 J	9	0.00098 J	0.0001 U	0.025	0.0009 U	0.02 U	2	0.0058	38	0.0003 U	250	0.68	0.0002 U	0.012 U	0.002 U	0.095	0.018	0.0046 J	99.5	24.1	0.185 U	0.489 UJ	0.0965 U	0.116 U	0.0943 U
B/W-22		12-Jun-08	0.015 U	0.0003 U	0.039 J	11	0.00075 U	0.0001 U	0.021	0.0011 J	0.02 U	2.3	0.0075	44	0.0003 U	280	0.84	0.0002 U	0.012 U	0.002 U	0.12	0.018	0.0025 U	96.2	24	0.362 U	0.493 J	0.0853 U	0.0841 U	0.0841 U
B/W-22S		10-Sep-08	0.015 U	0.0003 U	0.05	11	0.00075 U	0.0001 U	0.019	0.0009 U	0.02 U	2.2	0.006	41	0.0003 U	270	0.86	0.0002 U	0.012 U	0.002 U	0.13	0.015	0.0033 J	101	49.4	0.218 U	0.913 J	0.078 U	0.0763 U	0.0763 U
B/W-22S		11-Nov-08	0.015 U	0.0003 U	0.053	11	0.0013	0.0001 U	0.02	0.0009 U	0.02 U	2.4	0.0059	43	0.0003 U	260	0.83	0.0002 U	0.012 U	0.002 U	0.12	0.017	0.0044 UJ	52.6	28.8	0.234 U	0.756 U	0.128 U	0.0878 U	0.0878 U
B/W-25S		12-Mar-08	0.015 U	0.0003 U	0.046 J	20	0.0065	0.0001 U	0.027	0.00096 J	0.064	6.6	0.0054	49	0.0003 U	180	0.92	0.0002 U	0.012 U	0.002 U	0.062	0.028	0.0025 U	22.5	13.3	0.406 U	0.482 U	0.168 U	0.164 U	0.164 U
B/W-25S		11-Jun-08	0.025 J	0.0003 U	0.06	21	0.001 UJ	0.0001 U	0.026	0.0009 U	0.065	6.3	0.0057	48	0.0003 U	190	0.95	0.0002 U	0.012 U	0.002 U	0.064	0.026	0.0025 UJ	43.2	18.9	0.391 U	0.59 U	0.146 U	0.117 U	0.117 U
B/W-25S		8-Sep-08	0.015 U	0.0003 U	0.048 J	23	0.0013	0.0001 U	0.025	0.0009 U	0.07	5.3 J	0.0056	53	0.0003 U	160	0.81	0.0002 U	0.012 U	0.002 U	0.064	0.025	0.0025 U	17.8	15.4 J	0.317 U	0.71 UJ	0.163 U	0.115 U	0.115 U
B/W-25S		6-Nov-08	0.015 U	0.0003 U	0.048 J	30	0.00075 U	0.0001 U	0.023	0.0009 U	0.044	7.2	0.0074	47	0.0003 U	200	1.3	0.0002 U	0.012 U	0.002 U	0.12	0.028	0.0025 U	36.1	33.4	0.323 U	0.624 U	0.136 U	0.133 U	0.133 U
B/W-27S		12-Mar-08	0.015 U	0.0003 U	0.043 J	10	0.00095 UJ	0.0001 U	0.0047	0.0009 U	0.054	2.8	0.0003 U	27	0.0003 U	35	0.33	0.0002 U	0.026 J	0.002 U	0.005	0.0018 J	0.0025 U	3.17	6.8	0.349 U	0.526 U	0.147 U	0.144 U	0.144 U
B/W-27S		11-Jun-08	0.015 U	0.0003 U	0.044 J	10	0.0017 UJ	0.0001 U	0.0031	0.0009 U	0.054	2.6	0.0003 U	23	0.0003 U	35	0.33	0.0002 U	0.012 U	0.002 U	0.0054	0.0019 J	0.0025 UJ	4.29	4.84	0.245 J	0.684 UJ	0.184 U	0.148 U	0.148 U
B/W-27S		11-Sep-08	0.015 U	0.0003 U	0.03 U	6.8	0.00075 U	0.0001 U	0.0044	0.0009 U	0.045	2.7	0.0003 U	24	0.0003 U	31	0.24	0.0002 U	0.012 U	0.002 U	0.0033	0.0019 J	0.018 UJ	2.62 J	7.06	0.298 U	0.476 U	0.0809 U	0.0858 J	0.0971 U
B/W-27S		11-Nov-08	0.015 U	0.0003 U	0.032 J	9	0.00075 U	0.0001 U	0.0043	0.0009 U	0.059	3.3	0.0003 U	29	0.0003 U	36	0.3	0.0002 U	0.012 U	0.002 U	0.004	0.0017 J	0.0025 U	3.32 J	3.43 J	0.16 U	0.735 U	0.111 U	0.107 U	0.107 U
B/W-28S		17-Mar-08	0.015 U	0.0003 U	0.03 U	22	0.28	0.0001 U	0.0094	0.0009 U	0.02 U	2.6	0.0011 J	41	0.0003 U	100	1.2	0.0002 U	0.012 U	0.002 U	0.039	0.01	0.0025 U	25.4	12.4	0.281 J	0.519 UJ	0.177 U	0.141 U	0.141 U
B/W-28S-D1		9-Jun-08	0.015 U	0.0003 U	0.044 J	23	0.00075 UJ	0.0001 U	0.0053	0.0015 J	0.02 U	2.5	0.0014 J	50	0.0003 U	100	1.3	0.0002 U	0.012 U	0.002 U	0.038	0.014	0.0025 U	22.7 J	9.85	0.335 J	0.691 U	0.171 U	0.168 U	0.168 U
B/W-28S-D2	Dup.	9-Jun-08	0.015 U	0.0003 U	0.038 J	23	0.0044 J	0.0001 U	0.0051	0.0017 J	0.02 U	2.4	0.0016 J	51	0.0003 U	100	1.4	0.0002 U	0.012 U	0.002 U	0.038	0.014	0.0047 J	22.9 J	10.7	0.554 J	0.528 U	0.164 U	0.162 U	0.162 U
B/W-28S		11-Nov-08	0.015 U	0.0003 U	0.04 J	24	0.00095 J	0.0001 U	0.0053	0.0009 U	0.022 J	2.3	0.00088 J	54	0.0003 U	100	1.4	0.0002 U	0.012 U	0.002 U	0.048	0.02	0.056 UJ	27.8	16.2	0.276 U	1.23	0.113 U	0.108 U	0.108 U

Table 3-8. 2008 Analytical Results for Monitor Wells - Continued

			Field Parameters						Water Quality Parameters (Lab)											Metals (Lab)										
Sample Name	Duplicate	Sample Date	pH (field)	Specific Conductance (field)	ORP (field)	Dissolved Oxygen (field)	Temperature (field)	Turbidity (field)	Total Alkalinity (as $CaCO_3$)	Bicarbonate Alkalinity (as $CaCO_3$)	Carbonate (as $CaCO_3$)	Total Dissolved Solids	Total Organic Carbon	Chloride	Fluoride	Sulfate	Nitrate	Nitrite	Nitrate-Nitrite	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium	Cobalt	Copper
			s.u.	µS/cm	mV	mg/L	Deg C	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Shallow Wells - Continued																														
B/W-29S		14-Mar-08	5.38	3605	107.5	0.20	13.77	7.62	44	44	2 U	3400	0.5 U	93	2.2 UJ	2000	0.6 U	0.9 U	1.5 U	1.7	0.001 U	0.0085 UJ	0.016	0.0038	1.9	0.0032 J	400	0.0035 U	0.16	0.044
B/W-29S		16-Jun-08	4.26	4059	236.7	0.37	14.91	13.74	2 U	2 U	2 U	4000	2.5	110	2.4 UJ	2800	0.12 UJ	0.18 U	0.3 U	4.9	0.001 U	0.0035 J	0.01	0.006 J	2.3	0.0039 J	460	0.0035 U	0.16	0.12
B/W-29S		8-Sep-08	4.32	3879	210.5	0.24	14.75	6.30	2 U	2 U	2 U	4000	0.5 U	84	1.4	2600	0.06 UJ	0.09 UJ	0.15 UJ	4.4	0.0002 U	0.0028	0.0085	0.0043 J	2.1	0.0033	460	0.0007 U	0.12	0.099
B/W-29S		2-Nov-08	4.27	3965	232.2	0.32	14.22	4.77	2 U	2 U	2 U	3900	0.78 J	84	1.9	2600	0.06 U	0.09 UJ	0.15 U	4.4	0.002 U	0.007 U	0.011	0.0073	2.1	0.0046 J	440	0.007 U	0.18	0.15
D4BC-1		18-Mar-08	7.32	1748	137.5	2.71	17.71	0.12	430	430	2 U	1300	4.5	45	0.55	410	10	0.09 U	10	0.04 U	0.00042 J	0.026	0.032	0.0002 U	1.4	0.00017 J	110	0.00093 J	0.0002 UJ	0.0048
D4BC-1		10-Jun-08	7.33	1345	95.2	6.24	14.44	0.08	250	250	2 U	910	1.6	42	0.94	330	9.4	0.09 U	9.4	0.04 U	0.00051 J	0.028	0.028	0.0002 U	1	0.00018 J	51	0.00076 J	0.00092 UJ	0.003
D4BC-1S		14-Sep-08	6.88	1183	51.4	3.48	14.95	1.02	220	220	2 U	820	0.5 U	37	0.64	320	6.7	0.13 J	6.8	0.04 U	0.00057 J	0.022	0.032	0.0002 U	0.62	0.00015 UJ	65	0.0017 J	0.0015	0.0028
D4BC-1S		5-Nov-08	7.26	1133	128.1	3.96	15.00	1.87	210	210	2 U	800	0.5 U	39	0.48 J	320 J	6.1	0.09 U	6.1	0.04 U	0.00065 J	0.02	0.037	0.0002 U	0.59	0.00011 U	68	0.0016 UJ	0.0059	0.0025 UJ
D5AC-1		19-Mar-08	6.52	14252	140.7	1.15	14.99	0.68	660	660	2 U	13000	4.6	680	1.5 U	7000	0.6 U	0.9 U	1.5 U	0.08 U	0.001 U	0.018	0.022	0.001 U	12	0.0018 J	460	0.0035 U	0.0042 J	0.022
D5AC-1		16-Jun-08	6.53	13969	139.7	0.42	15.98	1.10	660	660	2 U	13000	5	740	5.6 J	7600	1.2 U	1.8 U	3 U	0.2 U	0.0004 U	0.024	0.017	0.0004 UJ	13	0.0015 J	430	0.0014 U	0.0062	0.02
D5AC-1S		11-Sep-08	6.55	13871	205.3	0.88	16.49	1.88	640	640	2 U	13000	3.9	740	2 J	7800	0.06 U	0.09 U	0.15 U	0.08 U	0.0002 U	0.02	0.016 J	0.0002 UJ	12	0.0019 J	400	0.0007 U	0.008	0.019 J
D5AC-1S		3-Nov-08	6.50	14218	75.4	0.76	14.87	2.99	660	660	2 U	13000	2.8	750	0.75 U	7900	0.06 U	0.09 U	0.15 U	0.08 U	0.00044 J	0.018	0.014	0.0002 U	13	0.0016	400	0.0007 U	0.011 J	0.023
MW-1		17-Mar-08	7.43	1283	NA	NA	17.50	1.82	260	260	2 U	960	0.5 U	67	1	330	4.3	0.09 U	4.3	0.04 U	0.00031 J	0.017	0.016	0.0002 U	1.1	0.00011 U	55	0.0014 J	0.00015 U	0.0094
MW-1		17-Jun-08	7.59	1452	225.8	NA	NA	2.45	270	270	2 U	900	1.8	59	0.99 J	310	4.2	0.09 UJ	4.2	0.04 U	0.00035 J	0.014	0.017	0.0002 U	1.2	0.00011 U	56	0.00096 J	0.00071 UJ	0.009
MW-2002-1		19-Mar-08	6.94	3194	76.8	0.14	14.30	6.81	320	320	2 U	2700	2.9 UJ	230	0.75 U	1300	2.2	0.45 U	2.2	0.04 U	0.0004 U	0.021	0.023	0.0004 U	1.4	0.00023 J	480	0.0014 U	0.0013 J	0.004
MW2002-1		11-Jun-08	7.04	3089	132.4	0.73	14.09	0.32	310	310	2 U	2600	2.9	230	0.7	1400	2.4	0.09 U	2.4	0.04 U	0.00022 J	0.019	0.02	0.0002 UJ	1.4	0.00019 J	470	0.0007 U	0.00067 UJ	0.0028
MW2002-1S		11-Sep-08	6.76	3087	169.9	0.22	14.50	0.25	320	320	2 U	2700	1.9	220	0.24 J	1300	2.5	0.09 U	2.5	0.04 U	0.00026 J	0.016	0.02	0.0002 U	1.3	0.00017 J	490	0.0007 U	0.00075 UJ	0.004
MW-2002-1S		12-Nov-08	7.28	3016	24.1	0.24	14.32	0.21	310	310	2 U	2800	1.5 UJ	240	0.3 J	1500	2.7	0.09 U	2.7	0.04 U	0.001 U	0.018	0.022	0.001 U	1.4	0.00019 J	480	0.0007 U	0.004	0.0043
MW-2002-2		13-Mar-08	8.15	716	146.5	5.85	15.76	67.13	140	140	2 U	500	0.5 U	46	2.3	110	3.7	0.09 U	3.7	0.04 U	0.00046 J	0.073	0.025	0.0002 U	0.63	0.00011 J	14	0.0019 J	0.00015 U	0.00075 U
MW2002-2		16-Jun-08	8.25	738	130.4	5.27	16.85	0.97	140	140	2 U	490	0.5 U	45	2.3 J	120	4	0.09 UJ	4	0.074	0.00057 J	0.073	0.021	0.0002 U	0.7	0.00013 J	14	0.0031	0.00038 UJ	0.00075 U
MW2002-2S		7-Sep-08	8.09	718	281.0	5.67	17.74	2.20	140	140	2 U	490	0.5 U	45	2.7	120	4	0.09 U	4	0.04 U	0.00025 J	0.069	0.019	0.0002 U	0.64	0.00011 J	14	0.0028	0.00015 U	0.00075 U
MW-2002-2S		9-Nov-08	8.09	695	118.1	6.98	15.67	0.36	150	150	2 U	500	0.5 U	42 J	2.1	110	3.7	0.09 U	3.7	0.04 U	0.00056 J	0.067	0.02	0.0002 U	0.69	0.00011 U	14	0.003 UJ	0.00078 UJ	0.00075 U
MW-2		20-Mar-08	4.18	6307	161.7	1.40	17.82	7.98	2 U	2 U	2 U	9000	1.9	53	6.4	5400	0.3 U	0.45 U	0.75 U	80	0.002 U	0.13	0.017	0.014	1.2 J	0.027	450	0.007 U	0.52	0.9
MW-2-D1		17-Jun-08	4.01	6228	223.0	0.32	15.57	0.60	2 U	2 U	2 U	8700 J	2.8	60	28 J	5400	0.12 U	0.18 UJ	0.3 U	99	0.02 U	0.11	0.04 U	0.032 J	1.4 UJ	0.027 J	460	0.07 U	0.86	1.5
MW-2-D2	Dup.	17-Jun-08	4.01	6228	223.0	0.32	15.57	0.60	2 U	2 U	2 U	8700	2.4	51	36 J	5500	0.12 U	0.18 UJ	0.3 U	99	0.02 U	0.12	0.04 U	0.028 J	1.3 UJ	0.029 J	450	0.07 U	0.87	1.6
MW-2S		7-Sep-08	4.05	5960	206.6	0.22	18.90	3.95	2 U	2 U	2 U	8500	2.4	59	14	5500	0.06 U	0.09 U	0.15 U	99	0.004 U	0.14	0.018 J	0.024	0.56	0.024	430	0.014 U	0.71	1.3
MW-2S		3-Nov-08	4.12	6161	190.1	0.31	17.91	1.94	2 U	2 U	2 U	8800	1.3	64	33	5200	0.06 U	0.09 UJ	0.15 U	85	0.01 U	0.18	0.022 J	0.024 J	1.1	0.027 J	430	0.035 U	0.82	1.5
MW-4		20-Mar-08	7.35	1855	134.0	3.14	16.30	0.43	300	300	2 U	1300	0.5 U	32	0.7	570	6.2	0.09 U	6.2	0.04 U	0.0033	0.017	0.024	0.0002 U	2.8	0.00011 U	61	0.0017 J	0.0011 UJ	0.033 J
MW-4		9-Jun-08	7.34	1854	220.7	3.26	16.71	0.05	310	310	2 U	1300	0.5 U	34	0.84	560 J	5.8	0.09 U	5.8	0.04 U	0.003	0.014	0.022	0.0002 U	2.6	0.00011 U	59	0.0025	0.00021 UJ	0.037
MW-4S		7-Sep-08	7.32	1766	205.2	4.45	17.35	0.24	310	310	2 U	1300	0.5 U	32	0.75	540	5.5	0.09 U	5.5	0.04 U	0.0024	0.014	0.021	0.0002 U	2.6	0.00011 U	55	0.0021	0.00015 U	0.041
MW-4S-FD	Dup.	7-Sep-08	7.34	1854	220.7	3.26	16.71	0.05	310	310	2 U	1200	0.5 U	32	0.73	540	5.5	0.09 U	5.5	0.04 U	0.0024	0.014	0.021	0.0002 U	2.6	0.00011 U	56	0.0025	0.00015 U	0.041
MW-4S		3-Nov-08	7.21	1746	205.8	3.03	16.16	0.03	300	300	2 U	1300	0.5 U	34	0.82 UJ	560	5.9	0.09 U	5.9	0.04 U	0.0036	0.015	0.021	0.0002 U	2.4	0.00011 U	55	0.0019 J	0.0027 J	0.039
MW-5		20-Mar-08	3.89	15899	203.8	2.47	15.14	NA	2 U	2 U	2 U	33000	4.8	99	63	21000	0.6 U	0.9 U	1.5 U	940	0.008 U	0.028 U	0.016 U	0.094	1.5 J	0.1	390	0.028 U	3	77
MW-5		16-Jun-08	3.84	15674	231.2	0.81	15.96	0.04	2 U	2 U	2 U	32000	5.9	90	53 J	20000	3 U	4.5 U	7.5 U	1100	0.02 U	0.07 U	0.04 U	0.14	1.3 UJ	0.097 J	430	0.07 U	3.9	53
MW-5S		11-Sep-08	3.86	15546	211.6	2.05	17.28	0.50	2 U	2 U	2 U	16000	4.5	95	120	21000	0.6 U	0.9 U	1.5 U	880	0.02 U	0.07 U	0.04 U	0.15	0.91 J	0.11	400	0.07 U	4	52
MW-5S		9-Nov-08	3.86	15489	212.0	0.50	14.92	0.04	2 U	2 U	2 U	22000	3.5	130	140	21000	0.3 U	0.45 U	0.75 U	830	0.022 J	0.07 U	0.04 U	0.16	1.2 J	0.1	440	0.07 U	4.3	60
PA-MW-1		19-Mar-08	7.47	1974	69.7	0.65	16.51	3.52	180	180	2 U	1500	0.5 U	94	0.49 J	720	2	0.09 U	2	0.04 U	0.0002 U	0.0064	0.034	0.0002 U	1.4	0.00011 U	210	0.0007 U	0.0002 J	0.0022
PA-MW-1		9-Jun-08	7.44	1955	130.8	0.89	17.91	0.47	180	180	2 U	1400	0.5 U	100	0.66	780	2	0.09 U	2	0.04 U	0.0002 U	0.0067	0.032	0.0002 U	1.5	0.00011 U	210	0.0007 U	0.00028 UJ	0.0024
PA-MW-1S		15-Sep-08	7.35	1887	164.0	0.69	17.27	1.68	180	180	2 U	1500	0.5 U	95	0.58	720	2.1	0.09 U	2.1	0.04 U	0.0002 U	0.0056	0.032	0.0002 U	1.4	0.00011 U	200	0.0007 U	0.00079 UJ	0.0021
PA-MW-1S		3-Nov-08	7.26	1868	177.1	1.02	16.61	2.77	180	180	2 U	1500	0.5 U	96	0.52 UJ	740	2	0.09 U	2	0.04 U	0.00042 J	0.0054	0.029	0.0002 U	1.3	0.00013 J	200	0.0007 U	0.00063 UJ	0.0019 J

Table 3-8. 2008 Analytical Results for Monitor Wells - Continued

			Metals (Lab) Continued																				Radiological (Labs)						
Sample Name	Duplicate	Sample Date	Iron	Lead	Lithium	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Phosphorus	Potassium	Selenium	Silicon	Silver	Sodium	Strontium	Thallium	Tin	Titanium	Uranium	Vanadium	Zinc	Alpha, Gross	Beta, Gross	Radium-226	Radium-228	Thorium-228	Thorium-230	Thorium-232
			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L
Shallow Wells - Continued																														
B/W-29S		14-Mar-08	120	0.0015 U	0.22 J	100	19	0.0001 U	0.0012 J	0.13	0.08 U	16	0.0022 J	71	0.0015 U	120	2.6	0.001 U	0.048 U	0.008 U	0.0049 J	0.0053 J	0.17	1.47 U	19.4	0.484 U	0.494 U	0.195 U	0.191 U	0.191 U
B/W-29S		16-Jun-08	130	0.0015 U	0.28	120	21	0.0001 U	0.001 U	0.15	0.053 J	18 J	0.0033 J	89	0.0015 U	320	3	0.001 U	0.024 U	0.004 U	0.0068	0.014	0.2	3.85	17.4	0.32 U	0.69 UJ	0.258 U	0.205 U	0.205 U
B/W-29S		8-Sep-08	130	0.0003 U	0.32	110	20	0.0001 U	0.0002 U	0.11	0.098 J	18	0.0025	84	0.0003 U	320	3.2	0.0002 U	0.036 U	0.006 U	0.0057	0.012	0.15 J	1.89 U	22.4 J	0.657 J	0.433 J	0.355 U	0.284 U	0.284 U
B/W-29S		2-Nov-08	130	0.003 U	0.35	110	21	0.0001 U	0.002 U	0.17	0.1 U	17 J	0.0044 J	84	0.003 U	290	3.1	0.002 U	0.06 U	0.01 U	0.0061 J	0.01 J	0.27	2.84 R	29.7	0.326 J	0.476 J	0.21 U	0.205 U	0.205 U
D4BC-1		18-Mar-08	0.015 U	0.0003 U	0.04 J	22	0.00075 U	0.0001 U	0.095	0.0009 U	0.062	2.7	0.0053	49	0.0003 U	280	0.99	0.0002 U	0.012 U	0.002 U	0.094	0.034	0.0025 U	51.5	21.6	0.248 U	0.839 UJ	0.176 U	0.123 U	0.123 U
D4BC-1		10-Jun-08	0.015 U	0.0003 U	0.046 J	10	0.0019	0.0001 U	0.097	0.0009 U	0.057	2.1	0.0038	52	0.0003 U	230	0.49	0.0002 U	0.012 U	0.002 U	0.035	0.032	0.0027 J	22.1 J	7.77	0.242 U	0.709 U	0.172 U	0.138 U	0.138 U
D4BC-1S		14-Sep-08	0.017 UJ	0.0003 U	0.046 J	14	0.0035 UJ	0.0001 U	0.046	0.0009 U	0.054	2.1 J	0.0026	56	0.0003 U	170	0.61 J	0.0002 J	0.012 U	0.002 U	0.026	0.027	0.0029 UJ	18	7.94	0.218 U	0.575 U	0.158 U	0.11 U	0.11 U
D4BC-1S		5-Nov-08	0.015 U	0.0003 U	0.046 J	14	0.011	0.0001 U	0.046	0.0009 U	0.027 J	2.3	0.0027	54	0.0003 U	140	0.63	0.0002 U	0.012 U	0.002 U	0.027	0.029	0.003 UJ	15.1	7.24	0.0842 U	0.673 U	0.129 U	0.143 U	0.102 U
D5AC-1		19-Mar-08	0.03 U	0.0015 U	0.21	410	11	0.0001 U	0.69	0.025	0.12	14	0.0071 J	60	0.0015 U	2900	8.2	0.001 U	0.052 J	0.004 U	0.17	0.034	0.014 J	103	55.8	0.201 J	5.7 J	0.313 U	0.306 U	0.306 U
D5AC-1		16-Jun-08	0.075 U	0.0006 U	0.28	470	13	0.0001 U	0.7	0.021	0.15 J	11 J	0.01	64	0.0006 U	2900	8.1	0.0004 U	0.06 U	0.01 U	0.19	0.035	0.012 J	99.5	49.1 U	0.29 U	0.662 UJ	0.577 U	0.564 U	0.564 U
D5AC-1S		11-Sep-08	0.03 U	0.0003 U	0.24	460	14	0.0001 U	0.77	0.019 J	0.1	12	0.0064	60	0.0003 UJ	3100	8.9	0.0002 U	0.024 UJ	0.004 U	0.11	0.029 J	0.018 J	99.2	53.8 U	0.316 U	0.726 U	0.647 U	0.513 U	0.513 U
D5AC-1S		3-Nov-08	0.03 U	0.0006 U	0.26	510	19	0.0001 U	0.81	0.019	0.1	12	0.0089	62	0.0003 U	2600	8.6	0.0004 U	0.024 U	0.004 U	0.18	0.031	0.022 UJ	58.1	56.5 U	0.105 U	0.579 U	0.199 U	0.193 U	0.193 U
MW-1		17-Mar-08	0.015 J	0.0003 U	0.034 J	13	0.00075 U	0.0001 U	0.054	0.0009 U	0.021 J	3.8	0.013	63	0.0003 U	230	0.69	0.0002 U	0.012 U	0.002 U	0.022	0.03	0.0035 UJ	11.6	8.06	0.218 U	0.67 U	0.157 U	0.154 U	0.154 U
MW-1		17-Jun-08	0.024 UJ	0.0003 U	0.03 U	14	0.0017 UJ	0.0001 U	0.051 J	0.0009 U	0.02 U	4.1 J	0.013	66	0.0003 U	240	0.63	0.0002 U	0.012 U	0.002 U	0.023	0.028	0.0048 J	13.3	8.31	0.423 U	0.568 UJ	0.164 U	0.16 U	0.16 U
MW-2002-1		19-Mar-08	0.015 U	0.0006 U	0.057	81	0.3	0.0001 U	0.022	0.0018 U	0.033 J	7.6	0.0018 J	53	0.0006 U	170	4.1	0.0004 U	0.012 U	0.0026 J	0.19	0.024	0.0066 J	113	42.3	0.234 U	0.41 UJ	0.144 U	0.14 U	0.14 U
MW2002-1		11-Jun-08	0.015 U	0.0003 U	0.18	82	0.3	0.0001 U	0.016	0.0038	0.025 J	7.3	0.0024	55	0.0003 U	170	4.2	0.0002 U	0.013 J	0.002 U	0.19	0.016	0.0025 J	108	40.6	0.328 U	0.601 UJ	0.111 U	0.109 U	0.109 U
MW2002-1S		11-Sep-08	0.015 U	0.0003 U	0.067	80	0.38	0.0001 U	0.014	0.0009 U	0.022 J	6.8	0.0016 J	53	0.0003 U	160	4.2	0.0002 U	0.012 U	0.002 U	0.18	0.014	0.04	117	47.3	0.223 U	0.557 U	0.233 U	0.228 U	0.228 U
MW-2002-1S		12-Nov-08	0.015 U	0.0003 U	0.082 J	85	0.43	0.0001 U	0.016	0.0009 U	0.029 J	6.9	0.0012 J	56	0.0003 U	200	5.1	0.00023 J	0.012 U	0.002 U	0.2	0.016	0.0063 UJ	92.1 J	52	0.201 U	0.545 U	0.153 U	0.147 U	0.147 U
MW-2002-2		13-Mar-08	0.015 U	0.0003 U	0.03 U	1.9	0.0012 UJ	0.0001 U	0.086	0.0009 U	0.066	1.5	0.0029	53	0.0003 U	130	0.29	0.0002 U	0.012 U	0.002 U	0.016	0.066	0.0041 UJ	16.1	5.32	0.32 U	0.489 U	0.122 U	0.146 U	0.119 U
MW2002-2		16-Jun-08	0.015 U	0.0003 U	0.03 U	2	0.00079 UJ	0.0001 U	0.081 J	0.0009 U	0.12 J	1.7 J	0.0029	51	0.0003 U	140	0.29	0.0002 U	0.012 U	0.002 U	0.015	0.063	0.003 J	11.5	7.89	0.291 U	0.699 UJ	0.172 U	0.147 U	0.12 U
MW2002-2S		7-Sep-08	0.015 U	0.0003 U	0.03 U	2	0.00075 U	0.0001 U	0.075	0.0009 U	0.092	1.5 J	0.0026	51	0.0003 U	140	0.29	0.0002 U	0.012 U	0.002 U	0.015	0.058	0.0044 J	10.2	3.26 U	0.246 U	0.659 U	0.197 U	0.138 U	0.138 U
MW-2002-2S		9-Nov-08	0.015 U	0.0003 U	0.03 U	2	0.0014	0.0001 U	0.081	0.0009 U	0.12 UJ	2	0.0031	51	0.0003 U	130	0.29	0.0002 U	0.012 U	0.002 U	0.015	0.061	0.0026 J	10.9 J	4.64	0.239 U	0.668 U	0.138 U	0.133 U	0.133 U
MW-2		20-Mar-08	1400	0.003 U	0.24 U	190	25	0.0001 U	0.002 U	0.25	0.16 U	48	0.008 J	26	0.003 U	170	5.7	0.002 U	0.096 U	0.016 U	0.19	0.42	1.6	35.2	103	1.66 J	1.23 J	0.235 U	0.229 U	0.229 U
MW-2-D1		17-Jun-08	1500	0.03 U	0.3 U	190	23	0.0001 U	0.02 U	0.41	0.2 U	56 J	0.03 U	27	0.03 U	160	6	0.02 U	0.12 U	0.02 U	0.21	0.6	2.6	56.7 J	76.1	1.93	0.659 U	0.286	0.267 J	0.152 U
MW-2-D2	Dup.	17-Jun-08	1500	0.03 U	0.3 U	190	23	0.0001 U	0.02 U	0.42	0.2 U	53 J	0.03 U	27	0.03 U	160	5.9	0.02 U	0.12 U	0.02 U	0.2	0.62	2.5	48.6 J	101	1.99	1.05	0.235 U	0.164 J	0.164 U
MW-2S		7-Sep-08	1500	0.006 U	0.3 U	190	19	0.0001 U	0.004 U	0.35	1.2	54 J	0.011 J	26	0.006 U	160	6	0.004 U	0.12 U	0.02 U	0.18	0.45	1.9	45.6	121	3.65	1.15 UJ	0.239 U	0.192 U	0.192 U
MW-2S		3-Nov-08	1400	0.015 U	0.3 U	180	22	0.0004 U	0.01 U	0.42	0.31 J	54 J	0.019 J	26	0.015 U	140	5.8	0.01 U	0.12 U	0.02 U	0.2	0.52	2.2	33.2	91.5	1.98	0.789 J	0.23	0.117 U	0.117 U
MW-4		20-Mar-08	0.015 U	0.0003 U	0.064	6.8	0.002 UJ	0.0001 U	0.0061	0.00099 J	0.031 J	2.2	0.0069	62	0.0003 U	320	0.78 J	0.0002 U	0.012 U	0.002 U	0.073	0.023	0.0025 UJ	64.9	15.7	0.216 U	0.806 UJ	0.143 U	0.139 U	0.139 U
MW-4		9-Jun-08	0.015 U	0.0003 U	0.03 U	6.8	0.00075 U	0.0001 U	0.0063	0.0009 U	0.032 J	2.6	0.0065	61	0.0003 U	340	0.75	0.0002 U	0.012 U	0.002 U	0.071	0.022	0.0025 U	52.7 J	15.1	0.275 J	0.74 UJ	0.144 U	0.115 U	0.115 U
MW-4S		7-Sep-08	0.031 UJ	0.0003 U	0.036 J	6.4	0.00075 U	0.0001 U	0.0051	0.0009 UJ	0.031 J	2.1 J	0.0053	60	0.0003 U	340	0.71	0.0002 U	0.012 U	0.002 U	0.074	0.021	0.0025 U	59.9	44.5 J	0.207 U	0.616 U	0.149 U	0.105 J	0.104 U
MW-4S-FD	Dup.	7-Sep-08	0.015 U	0.0003 U	0.036 J	6.5	0.00075 U	0.0001 U	0.0051	0.012 J	0.033 J	2.3 J	0.0052	62	0.0003 U	350	0.73	0.0002 U	0.012 U	0.002 U	0.073	0.02	0.0025 U	43.9	19.3 J	0.213 U	0.618 UJ	0.167 U	0.106 U	0.106 U
MW-4S		3-Nov-08	0.015 U	0.0003 U	0.037 J	6.3	0.0046 UJ	0.0001 U	0.0058	0.0009 U	0.027 J	2.4	0.0057	61	0.0003 U	330	0.71	0.0002 U	0.012 U	0.002 U	0.076	0.024	0.0075 UJ	54.4	21.1	0.187 U	0.506 U	0.158 U	0.125 U	0.125 U
MW-5		20-Mar-08	4700	0.015 J	0.9 U	780	140	0.00082	0.008 U	2.5	4.3	11 U	0.046 J	30	0.012 U	340	7.9	0.008 U	0.36 U	0.06 U	3.4	3.2	8.7	581	820	9.49	1.96 UJ	3.84	1.73 J	0.66 J
MW-5		16-Jun-08	5600	0.03 U	1.5 U	930	130	0.00061	0.024 J	2.8	3.9	18 U	0.072 J	35	0.03 U	370	9.1	0.02 U	0.6 U	0.1 U	3.5	3.6	9.6	712	614	11	3.62 UJ	4.09	2.13	0.77
MW-5S		11-Sep-08	5100	0.03 U	1.2 U	810	110	0.00057	0.02 U	2.8	3.4	15 U	0.072 J	31	0.03 U	330	8.2	0.02 U	0.48 U	0.08 U	3.1	3.1	10	NA	792	9.1	3.11 U	2.55	2.03	0.553 J
MW-5S		9-Nov-08	5500	0.03 U	1.2	860	110	0.00073	0.02 U	3	4.5	15 J	0.071 J	33	0.03 U	340	8.8	0.02 U	0.48 U	0.08 U	2.9	3.2	11	705 J	853	1.28	3.3 U	3.8 J	1.64 J	0.915 J
PA-MW-1		19-Mar-08	0.015 U	0.0003 U	0.03 U	32	0.00075 U	0.0001 U	0.028	0.0009 U	0.02 U	5.9	0.0095	43	0.0003 U	200	1.9	0.0002 U	0.012 U	0.002 U	0.07	0.012	0.0025 U	44.1	23.1	0.476 J	0.915 UJ	0.143 U	0.138 U	0.138 U
PA-MW-1		9-Jun-08	0.015 U	0.0003 U	0.05	35	0.00075 U	0.0001 U	0.025	0.0013 J	0.02 U	5.9	0.011	45	0.0003 U	200	2	0.0002 U	0.012 U	0.002 U	0.069	0.011	0.0025 U	48.5 J	22.6	0.586 J	1.38 UJ	0.416 U	0.41 U	0.41 U
PA-MW-1S		15-Sep-08	0.015 U	0.0003 U	0.03 U	32	0.0011 UJ	0.0001 U	0.025	0.0009 U	0.021 J	4.8 J	0.0084	42	0.0003 U	160	1.7 J	0.0002 U	0.012 U	0.002 U	0.06	0.0099	0.0031 UJ	47.6	24.5	0.599 J	1.14 U	0.16 U	0.219 U	0.156 U
PA-MW-1S		3-Nov-08	0.015 U	0.0003 U	0.038 J	32	0.00075 U	0.0001 U	0.025	0.0009 U	0.02 U	5.7	0.0083	44	0.0003 U	180	1.8	0.0002 J	0.012 U	0.002 U	0.073	0.011	0.007 UJ	42.7	27.4	0.424 J	0.849 U	0.266 U	0.184 U	0.184 U

Table 3-8. 2008 Analytical Results for Monitor Wells - Continued

			Field Parameters						Water Quality Parameters (Lab)											Metals (Lab)										
Sample Name	Duplicate	Sample Date	pH (field)	Specific Conductance (field)	ORP (field)	Dissolved Oxygen (field)	Temperature (field)	Turbidity (field)	Total Alkalinity (as $CaCO_3$)	Bicarbonate Alkalinity (as $CaCO_3$)	Carbonate (as $CaCO_3$)	Total Dissolved Solids	Total Organic Carbon	Chloride	Fluoride	Sulfate	Nitrate	Nitrite	Nitrate-Nitrite	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium	Cobalt	Copper
			s.u.	µS/cm	mV	mg/L	Deg C	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Shallow Wells - Continued																														
PA-MW-2		19-Mar-08	6.99	1993	46.1	5.46	17.41	7.12	490	490	2 U	1300	0.5 U	55	2	460	3.1	0.18 U	3.1	0.04 U	0.00032 J	0.027	0.019	0.0002 U	1.8	0.00011 U	90	0.0014 J	0.00015 U	0.0017 J
PA-MW-2		9-Jun-08	6.80	2154	157.8	3.98	19.83	0.05	520	520	2 U	1500	0.5 U	50	1.9	560	3	0.09 U	3	0.04 U	0.00032 J	0.017	0.022	0.0002 U	1.9	0.00011 U	120	0.0011 J	0.0014 UJ	0.002
PA-MW-2S		15-Sep-08	6.86	1931	171.2	4.93	18.22	0.32	560	560	2 U	1300	0.5 U	57	2	460	3.4	0.09 U	3.4	0.04 U	0.00046 J	0.022	0.017	0.0002 U	1.9	0.00011 U	90	0.0016 J	0.0039	0.0018 J
PA-MW-2S		10-Nov-08	7.23	1753	150.9	7.77	17.33	0.13	490	490	2 U	1200	0.5 U	47 J	2.3	380	4	0.09 U	4	0.04 U	0.00048 J	0.034	0.015	0.0002 U	1.9	0.00011 U	52	0.0015 UJ	0.0023 UJ	0.0013 J
PA-MW-3		19-Mar-08	7.19	1756	70.8	0.72	16.69	6.82	540	540	2 U	1200	4.3	49	1	270	6.6	0.18 U	6.6	0.04 U	0.0002 J	0.011	0.019	0.0002 U	2.5	0.00012 J	60	0.0016 J	0.00015 U	0.0016 J
PA-MW-3		9-Jun-08	7.12	1744	140.2	0.69	17.98	0.22	500	500	2 U	1200	4.9	76	0.85	400	6.6	0.09 U	6.6	0.04 U	0.00028 J	0.0094	0.017	0.0002 U	2.9	0.00012 J	63	0.0007 U	0.0012 UJ	0.0019 J
PA-MW-3S		15-Sep-08	7.06	1768	162.8	0.44	17.77	0.33	520	520	2 U	1200	5	51	0.83	350	6.9	0.09 U	6.9	0.04 U	0.00032 J	0.0081	0.018	0.0002 U	2.9	0.00017 UJ	66	0.0015 J	0.003	0.0017 J
PA-MW-3S		6-Nov-08	6.91	1766	159.0	0.68	17.12	1.10	540	540	2 U	1300	5.8	55	1	310	8.1	0.09 U	8.1	0.04 U	0.00056 J	0.01	0.018	0.0002 U	2.6	0.00011 U	62	0.00098 J	0.00087 UJ	0.0015 J
USEPA-2		19-Mar-08	7.15	475			16.20	16.20	140	140	2 U	310	0.64 UJ	20	0.73	56	3.9	0.09 U	3.9	0.04 U	0.00023 J	0.0051	0.062	0.0002 U	0.27	0.00011 U	39	0.0007 U	0.00015 UJ	0.0013 UJ
USGS-13		20-Mar-08	7.18	2514	90.5	1.44	13.93	1.59	440	440	2 U	2000	3.6	130	0.32 J	890	2.9	0.09 U	2.9	0.04 U	0.0003 J	0.056	0.026	0.0002 U	2.6	0.00011 U	290	0.0011 J	0.00054 UJ	0.005 J
USGS-13		11-Jun-08	7.10	2414	117.1	1.23	13.88	0.61	430	430	2 U	1800	5.7	130	0.71	880	3.2	0.09 U	3.2	0.04 U	0.00029 J	0.045	0.024	0.0002 UJ	2.8	0.00011 U	310	0.0007 U	0.00047 UJ	0.0047
USGS-13S		11-Sep-08	7.14	2471	276.8	3.07	15.71	2.84	400	400	2 U	2000	4.3	140	0.3 J	860	3.5	0.09 U	3.5	0.04 U	0.00038 UJ	0.037	0.025	0.0002 U	2.8	0.00016 J	300	0.0007 U	0.00049 UJ	0.0061
USGS-13S		12-Nov-08	7.01	2515	181.3	1.75	14.91	0.63	400	400	2 U	2000	3.4 UJ	150	0.21 J	830	3.4	0.09 U	3.4	0.04 U	0.00043 J	0.038	0.026	0.0002 U	3	0.00018 J	340	0.0007 U	0.0044	0.0071
USGS-2B		19-Mar-08	4.13	5950	NA	NA	15.00	25.90	2 U	2 U	2 U	6300	4 UJ	110	7.3	3900	0.078 UJ	0.09 UJ	0.15 UJ	20	0.002 U	0.007 U	0.012	0.018	3.4 J	0.012	420	0.007 U	0.55	0.77
USGS-2B		11-Jun-08	3.98	5621	281.9	2.55	14.85	1.20	2 U	2 U	2 U	5700	3.4	81	5.6	4000	0.06 U	0.09 U	0.15 U	21	0.002 U	0.007 U	0.012	0.019	2.1	0.01	410	0.007 U	0.52	0.74
USGS-2BS		7-Sep-08	4.26	4770	NA	NA	17.40	36.48	2 U	2 U	2 U	4800	1.5	44	5.2	3100	0.65 UJ	1.7	2.4	17	0.0004 U	0.0014 U	0.011	0.011	1.1	0.0072	440	0.0014 U	0.39	0.46
USGS-2BS		2-Nov-08	3.87	4138	291.6	3.51	14.51	61.18	2 U	2 U	2 U	4200	1.2	50	6.3	3000	1.9	1.7	3.5	13	0.002 U	0.007 U	0.014	0.012	1.2	0.0093 J	450	0.007 U	0.41	0.62
UW-1		20-Mar-08	6.53	3504	-71.0	0.77	15.00	5.86	260	260	2 U	3400	0.5 U	66	2 J	1900	0.6 U	0.9 U	1.5 U	0.04 U	0.0002 U	0.015	0.017	0.0002 U	0.8	0.00011 U	540	0.0007 U	0.039	0.0048
UW-1		10-Jun-08	5.94	3798	14.4	0.47	15.88	0.22	140	140	2 U	3700	2.9	68	4.5	2300	0.071 J	0.09 U	0.15 U	0.04 U	0.002 U	0.039	0.015	0.002 U	1.2	0.0011 U	490	0.007 U	0.14	0.0075 U
UW-1S		14-Sep-08	5.73	3785	4.9	0.54	17.13	1.79	140	140	2 U	3900	2.1	69	5.5	2500	0.06 U	0.09 U	0.15 U	0.28	0.001 U	0.052	0.014	0.001 J	1.2	0.00055 U	480	0.0035 U	0.15	0.0043 J
UW-1S-FD	Dup.	14-Sep-08	5.73	3785	4.9	0.54	17.13	1.79	140	140	2 U	3800	2.3	69	4.5	2500	0.06 U	0.09 U	0.15 U	0.24	0.001 U	0.049	0.015	0.0015 J	1.2	0.00055 U	490	0.0035 U	0.15	0.0038 U
UW-1S		12-Nov-08	5.85	3763	8.7	1.97	15.46	2.09	96	96	2 U	3900	1.5 UJ	58	4.9	2400	0.06 U	0.09 U	0.15 U	0.14	0.001 U	0.048	0.015	0.001 U	1.4	0.00055 U	510	0.0035 U	0.17	0.0056 J
W5AA-3		19-Mar-08	6.96	5880			15.10	71.60	390	390	2 U	5200	3.1 UJ	290	1.5 U	2600	5.1	0.9 U	5.1	0.08 U	0.0004 U	0.026	0.018	0.0004 U	3.6	0.00024 J	530	0.0015 J	0.0024 UJ	0.0082 UJ
W5AA-3		11-Jun-08	6.83	5778	171.7	3.11	15.04	1.23	390	390	2 U	4800	4.5	310	1.1	2900	5.5	0.09 U	5.5	0.04 U	0.00031 J	0.022	0.017	0.0002 U	3.7	0.0002 J	500	0.0015 J	0.0013 UJ	0.0084
W5AA-3S		7-Sep-08	7.35	5730			29.50	15.02	390	390	2 U	5000	3.2	290	0.54 UJ	2800	5.8	0.09 U	5.8	0.04 U	0.0004 U	0.022	0.017	0.0004 U	3.8	0.00022 U	480	0.0016 J	0.0022 UJ	0.009 UJ
W5AA-3S		2-Nov-08	6.98	5731	96.0	7.70	14.06	66.73	380	380	2 U	4800	2.7	290	0.75 U	2800	6	0.09 UJ	6	0.2 U	0.001 U	0.023	0.017	0.001 U	3.6	0.00055 U	530	0.0035 U	0.00093 UJ	0.0083 UJ
W5AB-2		19-Mar-08	6.13	7592	160.1	1.87	14.63	1.31	550	550	2 U	6800	1.8 UJ	520	4.9	3700	0.06 U	0.09 U	0.15 U	0.24 U	0.001 U	0.0075	0.018	0.0013 J	4.6 J	0.0061	510	0.0035 U	0.14	0.046
W5AB-2		10-Jun-08	6.01	7361	182.2	2.15	14.85	5.83	510	510	2 U	6700	3	510	6.9	3800	0.06 U	1.8 U	1.9 U	0.2 U	0.0002 U	0.0027 UJ	0.015	0.0016	5.4	0.0043	500	0.0007 U	0.17	0.025
W5AB-2S		14-Sep-08	5.90	7180	158.1	1.11	15.83	11.98	390	390	2 U	6700	2	450	4.6	3700	0.06 U	0.09 U	0.15 U	0.4 U	0.0002 U	0.0041	0.017	0.0013	4.9	0.0053	480	0.0007 U	0.17	0.024
W5AB-2S		4-Nov-08	5.95	7189	167.5	0.50	15.07	0.79	450	450	2 U	6700	1.3	450	6.9	3700	0.06 U	0.45	0.45	0.4 U	0.00058 UJ	0.005	0.017	0.0022	4.6	0.0043	480	0.0007 U	0.16 J	0.031
W5BB		20-Mar-08	7.25	3659	141.1	2.72	16.14	2.40	490	490	2 U	2600	1	280	0.75 U	1100	1.2	0.45 U	1.2 J	0.04 U	0.0004 J	0.012	0.022	0.0002 U	6	0.00011 U	130	0.0092	0.00024 UJ	0.0028 J
W5BB		10-Jun-08	7.21	3425	128.5	6.04	16.44	0.21	500	500	2 U	2300	1.3	260	0.72 UJ	900	1.4	0.09 U	1.4	0.04 U	0.00044 J	0.011	0.019	0.0002 U	5.7	0.00011 U	110	0.0083	0.0011 UJ	0.0031
W5BB-S		15-Sep-08	7.10	3146	152.7	4.10	16.77	0.71	520	520	2 U	2200	0.5 U	240	0.53	890	1.2	0.09 U	1.2	0.04 U	0.00051 J	0.0095	0.018	0.0002 U	6.2	0.00011 U	100	0.0098	0.0016	0.0027
W5BB-S		9-Nov-08	7.21	3396	126.5	3.01	15.61	0.08	500	500	2 U	2400	0.55 J	260 J	0.63	1100	1.3	0.09 U	1.3	0.04 U	0.00056 J	0.0095	0.019	0.0002 U	5.9	0.00011 U	120	0.0091	0.0053	0.0022
WW-1D-1		20-Mar-08	7.89	609	-97.9	0.22	16.36	8.91	170	170	2 U	380	0.5 U	28	0.57	85	0.22	0.09 U	0.22 J	0.04 U	0.0002 U	0.0043	0.015	0.0002 U	0.52	0.00011 U	49	0.0007 U	0.00015 U	0.00075 UJ
WW-1D-2	Dup.	20-Mar-08	7.89	609	-97.9	0.22	16.36	8.91	180	180	2 U	380	0.5 U	29	0.59	88	0.25	0.09 U	0.25 J	0.04 U	0.0002 U	0.0038	0.014	0.0002 U	0.5	0.00011 U	49	0.0007 U	0.00015 U	0.00075 UJ
WW-1		12-Jun-08	7.94	516	106.5	0.21	16.28	5.15	170	170	2 U	370	0.5 U	28	0.62	91	0.06 U	0.09 U	0.15 U	0.04 U	0.0002 U	0.0033	0.011	0.0002 U	0.54	0.00011 U	49	0.0007 U	0.00064 UJ	0.00075 U
WW-1S		8-Sep-08	7.97	640	-169.1	0.18	17.06	4.07	170	170	2 U	410	0.5 U	28	0.56	110	0.06 U	0.09 U	0.15 U	0.04 U	0.00025 J	0.0024	0.014	0.0002 UJ	0.48	0.00011 U	53	0.0007 U	0.00016 J	0.00081 J
WW-1S-FD	Dup.	8-Sep-08	7.97	640	-169.1	0.18	17.06	4.07	170	170	2 U	410	0.5 U	28	0.55	110	0.06 U	0.09 U	0.15 U	0.04 U	0.0002 U	0.0021	0.014	0.0002 UJ	0.49	0.00011 U	54	0.0007 U	0.0002 J	0.00075 J
WW-1S		10-Nov-08	7.96	594	180.2	0.24	15.66	4.78	170	170	2 U	400	0.5 U	28 J	0.5	91	0.06 U	0.09 U	0.15 U	0.04 U	0.00038 J	0.0022	0.013	0.0002 U	0.49	0.00011 U	48	0.0024	0.0038 UJ	0.00075 U
WW-2		20-Mar-08	7.53	817			16.00	9.50	200	200	2 U	610	0.5 U	53	0.42 J	200	0.74	0.09 U	0.74	0.04 U	0.00032 J	0.0012	0.014	0.0002 U	0.67	0.00011 U	95	0.0007 U	0.00082 UJ	0.001 UJ
WW-2		18-Jun-08	7.77	535	-125.4	0.29	16.82	9.26	120	120	2 U	400	0.5 U	56	0.33 J	110	0.21 UJ	0.09 U	0.21 UJ	0.04 U	0.0002 U	0.001	0.0077	0.0002 U	0.63	0.00011 U	44	0.0007 U	0.00015 U	0.00075 U
WW-2S		8-Sep-08	7.81	569	-94.9	0.31	17.08	10.25	120	120	2 U	320	0.5 U	64	0.28 J	61	0.12	0.09 U	0.15 U	0.04 U	0.00028 J	0.0007 U	0.0064	0.0002 U	0.51	0.00011 U	32	0.0007 U	0.00048 J	0.0008 J
WW-2S		10-Nov-08	7.50	565	-106.3	0.25	16.19	15.23	120	120	2 U	340	0.5 U	65 J	0.18 J	60	0.082 J	0.09 U	0.15 U	0.04 U	0.0002 U	0.0007 U	0.0074	0.0002 U	0.58	0.00011 U	32	0.0007 U	0.0012 UJ	0.00075 U

Table 3-8. 2008 Analytical Results for Monitor Wells - Continued

			Metals (Lab) Continued																				Radiological (Labs)						
Sample Name	Duplicate	Sample Date	Iron	Lead	Lithium	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Phosphorus	Potassium	Selenium	Silicon	Silver	Sodium	Strontium	Thallium	Tin	Titanium	Uranium	Vanadium	Zinc	Alpha, Gross	Beta, Gross	Radium-226	Radium-228	Thorium-228	Thorium-230	Thorium-232
			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L
Shallow Wells - Continued																														
PA-MW-2		19-Mar-08	0.024 J	0.0003 U	0.037 J	45	0.0072	0.0001 U	0.034	0.0009 U	0.067	4.7	0.016	63	0.0003 U	310	1.1	0.0002 U	0.012 U	0.002 U	0.07	0.036	0.0025 U	57.6	23.1	0.22 U	0.57 UJ	0.162 U	0.128 U	0.128 U
PA-MW-2		9-Jun-08	0.015 U	0.0003 U	0.046 J	55	0.0041	0.0001 U	0.031	0.0023	0.06	5.1	0.016	63	0.0003 U	310	1.5	0.0002 U	0.012 U	0.002 U	0.078	0.022	0.0025 U	43.7 J	22.3	0.26 U	0.669 UJ	0.161 U	0.159 U	0.159 U
PA-MW-2S		15-Sep-08	0.015 U	0.0003 U	0.042 J	43	0.0073	0.0001 U	0.034	0.0009 U	0.051	4.4 J	0.014	62	0.0003 U	290	1.1 J	0.0002 U	0.012 U	0.002 U	0.071	0.03	0.004 UJ	48.2	18.1	0.196 U	0.679 U	0.0786 U	0.0942 U	0.0768 U
PA-MW-2S		10-Nov-08	0.015 U	0.0003 U	0.038 J	32	0.0041 UJ	0.0001 U	0.037	0.0009 U	0.076 UJ	5	0.015	65	0.0003 U	310	0.81	0.0002 U	0.012 U	0.002 U	0.079	0.048	0.0025 U	49.6	18.1	0.115 UJ	0.607 U	0.129 U	0.124 U	0.124 U
PA-MW-3		19-Mar-08	0.015 U	0.0003 U	0.03 U	15	0.0091	0.0001 U	0.078	0.0009 U	0.079	5.6	0.011	61	0.0003 U	320	0.8	0.0002 U	0.012 U	0.002 U	0.11	0.022	0.0025 U	38	23.5	0.222 U	0.418 UJ	0.109 U	0.105 U	0.105 U
PA-MW-3		9-Jun-08	0.015 U	0.0003 U	0.037 J	16	0.0092	0.0001 U	0.073	0.0011 J	0.071	5.4	0.013	65	0.0003 U	320	0.83	0.0002 U	0.012 U	0.002 U	0.094	0.018	0.0025 U	55.3 J	21.6	0.211 U	0.687 J	0.125 U	0.151 U	0.123 U
PA-MW-3S		15-Sep-08	0.015 U	0.0003 U	0.03 U	17	0.014	0.0001 U	0.07	0.0009 U	0.055	6 J	0.012	62	0.0003 U	320	0.92 J	0.0002 U	0.012 U	0.002 U	0.094	0.018	0.0029 UJ	38.2	29	0.207 U	0.654 U	0.196 U	0.137 U	0.137 U
PA-MW-3S		6-Nov-08	0.015 U	0.0003 U	0.03 U	16	0.016	0.0001 U	0.072	0.0009 U	0.037 J	5.2	0.012	62	0.0003 U	330	0.86	0.0002 U	0.012 U	0.002 U	0.11	0.02	0.0025 U	66.8	29.5	0.277 U	0.613 U	0.102 U	0.0991 U	0.0991 U
USEPA-2		19-Mar-08	0.015 U	0.0003 U	0.03 J	9	0.00075 U	0.0001 U	0.019	0.0009 U	0.12	4.3	0.00062 J	35	0.0003 U	45	0.37	0.0002 U	0.012 U	0.002 U	0.013	0.0062	0.0025 U	6.51	8.84	0.156 U	0.685 UJ	0.152 U	0.105 U	0.105 U
USGS-13		20-Mar-08	0.015 U	0.0003 U	0.12	64	0.0068 UJ	0.0001 U	0.0098	0.0071 J	0.034 J	2.8	0.0048	53	0.0003 U	190	2.5 J	0.0002 U	0.012 U	0.002 U	0.39	0.05	0.0025 UJ	220	73	0.274 U	0.854 UJ	0.114 U	0.137 U	0.111 U
USGS-13		11-Jun-08	0.015 U	0.0003 U	0.14	63	0.011	0.0001 U	0.0066	0.0025	0.036 J	3.5	0.0036	53	0.0003 U	210	2.5	0.0002 U	0.012 U	0.002 U	0.32	0.041	0.0025 UJ	163	46.6	0.236 U	0.897 UJ	0.153 U	0.151 U	0.172 U
USGS-13S		11-Sep-08	0.015 U	0.0003 U	0.061	63	0.041	0.0001 U	0.0076	0.0009 U	0.046	4.1	0.0034	54	0.0003 U	190	2.5	0.0002 U	0.012 U	0.002 U	0.27	0.047 J	0.007 J	NA	NA	NA	NA	NA	NA	NA
USGS-13S		12-Nov-08	0.015 U	0.0003 U	0.094	71	0.14	0.0001 U	0.0082	0.0009 U	0.06	4.8	0.0038	57	0.0003 U	240	3	0.0002 U	0.012 U	0.002 U	0.32	0.051	0.011 UJ	NA	NA	NA	NA	NA	NA	NA
USGS-2B		19-Mar-08	390	0.003 U	0.34	230	53	0.0001 U	0.002 U	0.47	0.1 U	17	0.012 J	86	0.003 U	560	2.8	0.002 U	0.06 U	0.01 U	0.044	0.025	0.82	13.7 J	33.1	0.785 J	0.911 UJ	0.366 U	0.254 U	0.254 U
USGS-2B		11-Jun-08	340	0.003 U	0.26	210	49	0.0001 U	0.002 U	0.41	0.14 J	16	0.0068 J	86	0.003 U	550	2.7	0.002 U	0.06 U	0.01 U	0.038	0.027	0.77 J	13.2 J	29.9	1.18	0.661 UJ	0.316 U	0.312 U	0.356 U
USGS-2BS		7-Sep-08	240	0.0006 U	0.23	200	35	0.0001 U	0.00044 J	0.28	0.17	14 J	0.006	87	0.0006 U	370	2.8	0.0004 U	0.048 U	0.008 U	0.032	0.011	0.42	13.8	24.8	0.802 J	0.92 U	0.346 U	0.242 U	0.242 U
USGS-2BS		2-Nov-08	180	0.003 U	0.26	170	34	0.0001 U	0.002 U	0.37	0.1 U	11 J	0.0086 J	78	0.003 U	240	2.8	0.002 U	0.06 U	0.01 U	0.033	0.0071 J	0.61	10 J	29.8	NA	0.812 U	0.173 U	0.138 U	0.138 U
UW-1		20-Mar-08	28	0.0003 U	0.064	140	13	0.0001 U	0.007	0.0009 U	0.17	6.1	0.00063 J	27	0.0003 U	190	4	0.0002 U	0.024 U	0.004 U	0.04	0.0007 U	0.0056 J	17.3	13.9	0.236 U	0.513 UJ	0.165 U	0.161 U	0.115 U
UW-1		10-Jun-08	170	0.003 U	0.16	140	12	0.0001 U	0.004 J	0.047	0.43	5.5	0.003 U	38	0.003 U	180	4	0.002 U	0.012 U	0.002 U	0.005 U	0.007 U	0.034 J	3.04 UJ	13.1 U	0.275 J	0.667 UJ	0.292 U	0.288 U	0.288 U
UW-1S		14-Sep-08	200	0.0015 U	0.086	140	11	0.0001 U	0.001 U	0.056	0.45	5.6 J	0.0015 U	41	0.0015 U	170	3.9 J	0.001 U	0.012 U	0.002 U	0.0025 U	0.0035 U	0.015 UJ	3.39 U	15.7 U	0.154 J	0.605 U	0.513 U	0.439 U	0.358 U
UW-1S-FD	Dup.	14-Sep-08	210	0.0015 U	0.099	140	11	0.0001 U	0.0018 J	0.061	0.42	6 J	0.0015 J	40	0.0015 U	180	4.3 J	0.001 U	0.012 U	0.002 U	0.0025 U	0.0035 U	0.03 UJ	3.63 U	14.7 U	0.311 U	0.755 U	0.331 U	0.263 U	0.263 U
UW-1S		12-Nov-08	210	0.0015 U	0.12	160	11	0.0001 U	0.0026 J	0.064	0.51	6.1	0.0015 U	45	0.0015 U	200	4.4	0.001 U	0.012 U	0.002 U	0.0025 U	0.0035 U	0.023 UJ	3.48 UJ	14.3 U	0.34 U	0.629 U	0.279 U	0.256 J	0.219 U
W5AA-3		19-Mar-08	0.03 U	0.0006 U	0.11	94	0.033 UJ	0.0001 U	0.12	0.0018 U	0.04 U	3.7	0.0051	57	0.0006 U	890	4.4	0.0004 U	0.024 U	0.004 U	0.19	0.032	0.0077 UJ	139	52.1	0.217 U	0.735 UJ	0.179 U	0.212 U	0.173 U
W5AA-3		11-Jun-08	0.015 U	0.0003 U	0.23	90	0.036	0.0001 U	0.088	0.0009 U	0.038 J	3.2	0.0054	57	0.0003 U	890	4.4	0.0002 U	0.018 J	0.002 U	0.17	0.031	0.0099 J	110	48.7	0.159 U	0.717 UJ	0.0915 U	0.0902 U	0.0902 U
W5AA-3S		7-Sep-08	0.015 U	0.0006 U	0.12	99	0.023 UJ	0.0001 U	0.12	0.0018 U	0.02 J	3.2 J	0.004	60	0.0006 U	890	4.6	0.0004 U	0.012 J	0.002 U	0.2	0.027	0.0082 UJ	99.4	33.4 J	0.294 U	0.54 UJ	0.19 U	0.187 U	0.187 U
W5AA-3S		2-Nov-08	0.075 U	0.0015 U	0.2 J	93	0.0066 UJ	0.0001 U	0.12	0.0045 U	0.1 U	2.6 J	0.004 J	58	0.0015 U	810	4.6	0.001 U	0.06 U	0.01 U	0.19	0.028	0.013 J	106 J	59.3	0.205 UJ	0.866 U	0.17 U	0.166 U	0.166 U
W5AB-2		19-Mar-08	0.33	0.0015 U	0.18 U	360	61	0.0001 U	0.038	0.12	0.15 J	7.3	0.0052 J	48	0.0015 U	990	5.1	0.001 U	0.072 U	0.012 U	0.34	0.0043 J	0.19	173	94.1	0.325 U	0.487 UJ	0.225 U	0.267 U	0.267 U
W5AB-2		10-Jun-08	0.089 UJ	0.0003 U	0.15 U	340	69	0.0001 U	0.026	0.099	0.1 U	2.6	0.0023	47	0.0003 U	980	4.9	0.0002 U	0.06 U	0.01 U	0.31	0.0031	0.053 J	201 J	57.6	0.458 J	0.643 UJ	0.321 U	0.317 U	0.317 U
W5AB-2S		14-Sep-08	0.42 UJ	0.0003 U	0.3 U	340	64	0.0001 U	0.032	0.12	0.2 U	7.9 J	0.003	51	0.0003 U	910	4.6 J	0.0002 U	0.12 U	0.02 U	0.15	0.0025	0.065	107	67	0.247 U	0.593 J	0.36 U	0.352 U	0.352 U
W5AB-2S		4-Nov-08	0.19 J	0.0003 U	0.3 U	360	69	0.0001 U	0.048	0.12	0.2 U	8.7	0.004	58	0.0003 U	920	5.1	0.00032 J	0.12 U	0.02 U	0.16	0.0054	0.05 UJ	96 J	54.6	0.159 J	0.971 J	0.156 U	0.152 U	0.186 U
W5BB		20-Mar-08	0.015 U	0.0003 U	0.11	25	0.00075 U	0.0001 U	0.0053	0.0028 J	0.045	4.7	0.026	65	0.0003 U	680	2.8 J	0.0002 U	0.012 U	0.002 U	0.18	0.026	0.0028 J	129	43.7	0.225 U	0.456 UJ	0.174 U	0.138 U	0.138 U
W5BB		10-Jun-08	0.015 U	0.0003 U	0.091	20	0.0022	0.0001 U	0.0052	0.0009 U	0.054	3.7	0.018	61	0.0003 U	670	2.2	0.0002 U	0.012 U	0.002 U	0.17	0.022	0.0044 J	141 J	31.9	0.371 U	0.773 J	0.0827 U	0.0816 U	0.0816 U
W5BB-S		15-Sep-08	0.015 U	0.0003 U	0.069	18	0.0029 UJ	0.0001 U	0.0051	0.0009 U	0.052	3.7	0.015	63	0.0003 U	640	2	0.0002 U	0.012 U	0.002 U	0.17	0.02	0.0032 UJ	108	38.4	0.155 U	0.631 U	0.0836 U	0.115 U	0.0817 U
W5BB-S		9-Nov-08	0.015 U	0.0003 U	0.09	21	0.0098	0.0001 U	0.005	0.0009 U	0.088 UJ	4.8	0.019	63	0.0003 U	660	2.3	0.0002 U	0.012 U	0.002 U	0.2	0.021	0.0025 U	132 J	57	0.176 U	0.546 U	0.107 U	0.103 U	0.103 U
WW-1D-1		20-Mar-08	0.5	0.0003 U	0.056	13	0.027	0.0001 U	0.018	0.0009 J	0.02 U	4.3	0.0003 U	28	0.0003 U	55	0.54 J	0.0002 U	0.012 U	0.002 U	0.013	0.0011 J	0.0025 UJ	8.79	9.04	0.244 U	0.601 UJ	0.116 U	0.113 U	0.113 U
WW-1D-2	Dup.	20-Mar-08	0.43	0.0003 U	0.057	13	0.024	0.0001 U	0.016	0.0009 UJ	0.02 U	4.4	0.0003 U	28	0.0003 U	56	0.54 J	0.0002 U	0.012 U	0.002 U	0.013	0.0012 J	0.0025 UJ	9.31	8.03	0.414 U	0.572 UJ	0.113 U	0.111 U	0.111 U
WW-1		12-Jun-08	0.59	0.0003 U	0.03 U	13	0.027	0.0001 U	0.015	0.0009 U	0.02 U	4.5	0.0003 U	27	0.0003 U	62	0.53	0.0002 U	0.012 U	0.002 U	0.0093	0.0007 U	0.0025 U	6.99	8	0.367 J	0.5 UJ	0.149 U	0.146 U	0.167 U
WW-1S		8-Sep-08	0.58	0.0003 U	0.039 J	14	0.028	0.0001 U	0.015	0.0009 U	0.02 U	4.5	0.0003 U	29	0.0003 U	60	0.59	0.0002 J	0.012 U	0.002 U	0.011	0.0007 U	0.0033 J	6.65	7.48 J	0.387 J	0.654 J	0.159 U	0.156 U	0.156 U
WW-1S-FD	Dup.	8-Sep-08	0.61	0.0003 U	0.035 J	14	0.028	0.0001 U	0.014	0.0009 U	0.02 U	4.6	0.0003 U	29	0.0003 U	62	0.62	0.0002 U	0.012 U	0.002 U	0.011	0.0007 U	0.0034 J	4.25	7.36 J	0.206 UJ	0.55 UJ	0.157 U	0.155 U	0.155 U
WW-1S		10-Nov-08	0.66	0.0003 U	0.03 U	13	0.034	0.0001 U	0.015	0.0009 U	0.02 U	4.2	0.0003 U	26	0.0003 U	57	0.56	0.0002 U	0.012 U	0.002 U	0.0082	0.0007 U	0.0025 U	7.65	9.45	0.206 J	0.723 U	0.149 U	0.144 U	0.177 U
WW-2		20-Mar-08	0.48	0.0003 U	0.073	21	0.033	0.0001 U	0.0064	0.002 J	0.02 J	3.8	0.002	36	0.0003 U	60	1 J	0.0002 U	0.012 U	0.002 U	0.071	0.0027	0.0025 UJ	35.2	17.6	0.356 U	0.679 UJ	0.12 U	0.117 U	0.0837 U
WW-2		18-Jun-08	0.041 UJ	0.0003 U	0.045 J	18	0.023	0.0001 U	0.0036	0.0009 U	0.02 U	3.7	0.00052 J	15	0.0003 U	65	0.8	0.0002 U	0.012 U	0.002 U	0.021	0.0007 U	0.0025 U	11	8.16	0.546 J	0.607 UJ	0.165 U	0.161 U	0.161 U
WW-2S		8-Sep-08	0.072 UJ	0.0003 U	0.038 J	14	0.027	0.0001 U	0.0029	0.0009 U	0.02 U	3.3	0.00042 J	11	0.0003 U	62	0.64	0.00027 J	0.012 U	0.002 U	0.015	0.0007 U	0.0029 J	7.91	6.2 J	0.434 J	0.654 UJ	0.156 U	0.153 U	0.153 U
WW-2S		10-Nov-08	0.63	0.0003 U	0.034 J	16	0.052	0.0001 U	0.0023	0.0009 U	0.02 U	3.5	0.0003 U	9.4	0.0003 U	65	0.72	0.0002 U	0.012 U	0.002 U	0.012	0.0007 U	0.0025 U	5.42	5.24	0.0881 J	0.787 U	0.209 U	0.164 U	0.164 U

Table 3-8. 2008 Analytical Results for Monitor Wells – Continued

			Field Parameters						Water Quality Parameters (Lab)											Metals (Lab)										
Sample Name	Duplicate	Sample Date	pH (field)	Specific Conductance (field)	ORP (field)	Dissolved Oxygen (field)	Temperature (field)	Turbidity (field)	Total Alkalinity (as $CaCO_3$)	Bicarbonate Alkalinity (as $CaCO_3$)	Carbonate (as $CaCO_3$)	Total Dissolved Solids	Total Organic Carbon	Chloride	Fluoride	Sulfate	Nitrate	Nitrite	Nitrate-Nitrite	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium	Cobalt	Copper
			s.u.	µS/cm	mV	mg/L	Deg C	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Intermediate Wells																														
B/W-2I		18-Mar-08	7.87	263	29.1	0.26	14.30	32.00	72	72	2 U	200	0.91 J	9.8	0.54	28	0.1 J	0.09 U	0.15 U	0.043 J	0.00031 J	0.011	0.023	0.0002 U	0.13	0.00011 U	24	0.001 J	0.0012 UJ	0.0014 J
B/W-2I		11-Jun-08	7.96	264	222.7	0.76	14.33	3.12	80	80	2 U	200	0.5 U	10	0.7	32	0.16	0.09 U	0.16 J	0.04 U	0.00024 J	0.012	0.018	0.0002 U	0.19	0.00011 U	25	0.0007 U	0.00015 U	0.00075 U
B/W-2I		11-Sep-08	8.13	263	89.7	0.58	14.51	0.94	80	80	2 U	160	0.5 U	10	0.44 J	31	0.26 UJ	0.09 U	0.26 UJ	0.044 J	0.00045 J	0.011	0.016	0.0002 U	0.16	0.00011 U	24	0.0015 J	0.0038	0.00075 U
B/W-2I		12-Nov-08	7.49	239	132.0	0.80	15.21	7.83	72	72	2 U	240	0.5 U	9.9	0.46 J	28	0.12	0.09 U	0.15 U	0.04 U	0.00028 J	0.013	0.017	0.0002 U	0.19	0.00011 U	27	0.0016 J	0.00094 J	0.00075 U
B/W-3I		13-Mar-08	8.14	289	135.5	0.18	15.04	14.23	88	88	2 U	230	0.5 U	11	0.59 UJ	30	0.06 U	0.09 U	0.15 U	0.04 U	0.0002 U	0.016	0.022	0.0002 U	0.27	0.00011 U	19	0.0007 U	0.00017 UJ	0.00075 U
B/W-3I		17-Jun-08	7.95	255	67.7	0.32	15.86	2.51	80	80	2 U	210	0.5 U	14	0.7	33	0.06 UJ	0.09 UJ	0.15 UJ	0.04 U	0.0002 U	0.029	0.016	0.0002 U	0.37	0.00011 U	15	0.0007 U	0.00015 U	0.00075 U
B/W-3I		9-Sep-08	8.31	290	-7.9	0.15	15.72	7.31	92	92	2 U	220	0.5 U	13	0.64	30	0.06 U	0.09 U	0.15 U	0.04 U	0.00034 J	0.033	0.011	0.0002 U	0.34	0.00011 UJ	14	0.0007 U	0.00032 UJ	0.00075 J
B/W-3I		10-Nov-08	8.19	299	180.0	0.24	14.83	2.42	96	96	2 U	230	0.5 U	14	0.64	33	0.06 U	0.09 U	0.15 U	0.04 U	0.00047 J	0.029	0.013	0.0002 U	0.37	0.00011 U	18	0.0007 U	0.0031 UJ	0.00075 U
B/W-4I		17-Mar-08	7.34	1441	74.4	0.19	15.48	8.23	140	140	2 U	1000	1.4	180	0.24 J	360	2.1	0.09 U	2.1	0.04 U	0.0002 U	0.0046	0.1	0.0002 U	0.36	0.00011 U	180	0.0007 U	0.0012 UJ	0.0014 J
B/W-4I		12-Jun-08	7.24	1572	136.3	0.41	16.03	0.36	140	140	2 U	1100	2.8	190	0.19 J	430	2.8	0.09 U	2.8	0.04 U	0.0002 U	0.0055	0.098	0.0002 UJ	0.46	0.00011 U	200	0.0007 U	0.00062 UJ	0.0015 J
B/W-4I		9-Sep-08	7.25	1676	107.0	0.25	16.55	0.25	160	160	2 U	1300	2	180	0.2 J	460	3.1	0.09 U	3.1	0.04 U	0.00026 J	0.0052	0.1	0.0002 UJ	0.49	0.00011 U	210	0.0007 U	0.00064 UJ	0.0022
B/W-4I		10-Nov-08	7.21	1625	138.8	0.24	15.79	1.04	140	140	2 U	1300	1.5	210 J	0.46 J	480	3.7 J	0.09 U	3.7 J	0.04 U	0.00054 J	0.0037	0.094	0.0002 U	0.49	0.00011 U	230	0.00073 J	0.0013 UJ	0.0019 J
B/W-5I		13-Mar-08	8.04	836	214.1	4.23	16.63	5.32	140	140	2 U	560	0.5 U	53	1.6	170	2.7	0.09 U	2.7	0.04 U	0.0002 U	0.015	0.018	0.0002 U	0.73	0.00021 J	19	0.0071	0.00015 U	0.00075 U
B/W-5RI		10-Jun-08	7.99	873	114.6	4.50	15.90	0.89	160	160	2 U	520	0.5 U	60	1.7	190	3.3	0.09 U	3.3	0.04 U	0.00026 J	0.013	0.017	0.0002 U	0.78	0.00014 J	18	0.0054	0.00015 U	0.00095 J
B/W-5IR		10-Sep-08	8.06	846	131.1	6.29	16.95	4.95	140	140	2 U	560	0.5 U	52	1.6	170	3.3	0.09 U	3.3	0.04 U	0.00027 J	0.014	0.014	0.0002 U	0.73	0.00012 J	16	0.0055	0.00057 J	0.00075 U
B/W-5IR		3-Nov-08	8.01	832	119.8	5.76	15.40	2.23	140	140	2 U	570	0.5 U	52	1.9	170	3.3	0.09 U	3.3	0.04 U	0.00031 J	0.014	0.014	0.0002 U	0.71	0.00015 J	17	0.0072	0.00044 UJ	0.00075 U
B/W-5IR-FD	Dup.	3-Nov-08	8.01	832	119.8	5.76	15.40	2.23	150	150	2 U	570	0.5 U	51	1.8	170	3.3	0.09 U	3.3	0.04 U	0.00036 J	0.014	0.014	0.0002 U	0.7	0.00014 J	17	0.0068 UJ	0.0014 UJ	0.00075 U
B/W-6D		17-Mar-08	7.97	647	134.8	5.69	16.85	0.18	140	140	2 U	410	0.5 U	30	1.7 J	110	0.83	0.09 U	0.83	0.04 U	0.00027 J	0.032	0.0016	0.0002 U	0.61	0.0002 J	16	0.0019 J	0.0017	0.00075 U
B/W-6D		12-Jun-08	8.01	636	125.0	5.82	17.43	0.13	140	140	2 U	400	0.5 U	30	1.9	110	0.88 UJ	0.09 U	0.88 UJ	0.04 U	0.0002 U	0.032	0.0014	0.0002 U	0.76	0.00014 J	17	0.002	0.00015 U	0.00075 U
B/W-6I		8-Sep-08	7.99	626	67.7	6.16	17.55	0.19	140	140	2 U	410	0.5 U	29	1.8	110	0.91	0.09 U	0.91	0.04 U	0.00026 J	0.031	0.0016	0.0002 UJ	0.68	0.0002 J	17	0.0018 J	0.00015 U	0.00075 U
B/W-6I-FD	Dup.	8-Sep-08	7.99	626	67.7	6.16	17.55	0.19	140	140	2 U	410	0.5 U	30	1.7	110	0.92	0.09 U	0.92	0.04 U	0.00029 J	0.03	0.0015	0.0002 UJ	0.67	0.00019 J	16	0.0018 J	0.00026 J	0.00075 U
B/W-6I		4-Nov-08	8.11	619	194.2	6.50	16.74	0.24	130	130	2 U	400	0.5 U	30	1.8	110	0.94	0.09 U	0.94	0.04 U	0.00038 UJ	0.03	0.0013	0.0002 U	0.76	0.00021 J	16	0.0017 J	0.0012 UJ	0.0013 J
B/W-7		13-Mar-08	7.09	697	63.9	2.44	17.52	0.61	140	140	2 U	450	0.5 U	29	1.1	140	3.3	0.09 U	3.3	0.04 U	0.0002 U	0.0046 UJ	0.024	0.0002 U	0.55	0.00013 J	29	0.0019 J	0.0029	0.00075 U
B/W-7-D1		16-Jun-08	7.55	671	120.6	7.06	18.49	0.36	140	140	2 U	420	0.5 U	28	1.3 J	130	3.7	0.09 UJ	3.7	0.063	0.0002 U	0.0033	0.018	0.0002 U	0.61	0.00011 U	24	0.0022	0.00015 U	0.00075 U
B/W-7-D2	Dup.	16-Jun-08	7.55	671	120.6	7.06	18.49	0.36	140	140	2 U	410	0.5 U	28	1.2 J	130	3.7	0.09 UJ	3.7	0.04 U	0.0002 U	0.0033	0.018	0.0002 U	0.63	0.00011 U	23	0.0024	0.00015 U	0.00075 U
B/W-7I		16-Sep-08	7.62	642	196.6	5.82	17.87	0.92	130	130	2 U	400	0.5 U	28	1.2	130	3.5	0.09 U	3.5	0.04 U	0.00021 J	0.005	0.012	0.0002 U	0.63	0.00011 U	21	0.0028	0.00037 UJ	0.00075 U
B/W-7I		11-Nov-08	7.84	642	139.1	6.33	17.17	0.36	130	130	2 U	420	0.5 U	24 J	1.4	120	3.9 J	0.09 U	3.9 J	0.04 U	0.0002 U	0.0039	0.011	0.0002 U	0.63	0.00011 U	22	0.0021	0.00037 J	0.00075 U
B/W-8D		13-Mar-08	7.49	1288	73.6	5.68	17.56	0.28	110	110	2 U	840	0.5 U	96	0.95	350	4.7	0.09 U	4.7	0.04 U	0.00021 J	0.0084	0.053	0.0002 U	0.73	0.00011 U	59	0.004	0.0024	0.001 UJ
B/W-8D		9-Jun-08	7.65	1218	183.3	5.03	18.12	0.61	100	100	2 U	770	0.5 U	100	1.2	360	4.4 J	0.09 UJ	4.4 J	0.04 U	0.0002 U	0.0084	0.042	0.0002 U	0.78	0.00011 U	56	0.0027	0.00015 U	0.0013 J
B/W-8I		14-Sep-08	7.72	1179	219.6	5.06	19.83	0.60	100	100	2 U	760	0.5 U	84	1.1	340	4.2	0.09 U	4.2	0.04 U	0.0002 U	0.0087	0.042	0.0002 U	0.68	0.00016 UJ	52	0.0037	0.00046 UJ	0.00087 J
B/W-8I		5-Nov-08	7.41	1103	200.4	4.53	17.44	1.60	110	110	2 U	770	0.5 U	85	1.1	320	4.1	0.09 U	4.1	0.04 U	0.0002 U	0.0083	0.044	0.0002 U	0.72	0.00011 U	52	0.0033 UJ	0.00062 UJ	0.00096 UJ
B/W-9I		12-Mar-08	7.90	580	162.4	0.17	14.05	22.00	76	76	2 U	400	0.5 U	42	0.37 J	120	0.85	0.09 U	0.85	0.04 U	0.00026 J	0.0071	0.064	0.0002 U	0.12 UJ	0.00011 U	60	0.0007 U	0.00015 U	0.00075 U
B/W-9I		10-Jun-08	7.87	589	147.4	0.17	14.82	1.52	68	68	2 U	410	8.8	47	0.41 J	130	0.95	0.09 U	0.95	0.04 U	0.00034 J	0.0087	0.066	0.0002 U	0.18 UJ	0.00011 U	59	0.0007 U	0.00015 U	0.0011 J
B/W-9I		9-Sep-08	7.83	596	69.1	0.20	15.01	2.55	80	80	2 U	430	0.5 U	46	0.32 J	130	1	0.09 U	1	0.04 U	0.00022 J	0.0079	0.057	0.0002 U	0.15	0.00011 UJ	59	0.0007 U	0.00057 UJ	0.00079 J
B/W-9I		11-Nov-08	7.62	562	112.5	0.67	13.85	5.11	84	84	2 U	410	0.5 U	52	0.33 J	150	1.1	0.09 U	1.1	0.04 U	0.001 U	0.011	0.069	0.001 U	0.17	0.00055 U	64	0.0035 U	0.00085 J	0.0038 U
B/W-19I		14-Mar-08	7.92	1086	73.6	5.71	16.71	4.01	100	100	2 U	750	0.5 U	65	0.96 UJ	340	3.8	0.09 U	3.8	0.04 U	0.0002 U	0.0066	0.03	0.0002 U	0.85	0.00011 U	43	0.0049	0.00084 UJ	0.00088 J
B/W-19I-D1		9-Jun-08	7.96	1048	84.0	6.40	17.71	0.32	140	140	2 U	700	0.5 U	50	1.1	280	3	0.09 U	3	0.04 U	0.00024 J	0.009	0.019	0.0002 U	1	0.00011 U	35	0.0057	0.00015 U	0.00088 J
B/W-19I-D2	Dup.	9-Jun-08	7.96	1048	84.0	6.40	17.71	0.32	120	120	2 U	670	0.5 U	50	1.1	270	3	0.09 U	3	0.04 U	0.00022 J	0.0093	0.019	0.0002 U	1	0.00011 U	35	0.0058	0.00015 U	0.00086 J
B/W-19I		10-Sep-08	7.83	1014	100.6	7.29	19.02	0.48	140	140	2 U	690	0.5 U	49	0.95	270	2.9	0.09 U	2.9	0.04 U	0.00025 UJ	0.0094	0.017 J	0.0002 UJ	0.97	0.00011 UJ	32	0.0065	0.0007 J	0.001 J
B/W-19I-FD	Dup.	10-Sep-08	7.83	1014	100.6	7.29	19.02	0.48	140	140	2 U	670	0.5 U	47	1.2	260	2.9	0.09 U	2.9	0.04 U	0.00021 UJ	0.009	0.016 J	0.0002 UJ	1	0.00011 UJ	32	0.0063	0.00015 U	0.00095 J
B/W-19I		5-Nov-08	7.61	968	143.9	6.74	16.82	2.77	120	120	2 U	700	0.5 U	52	0.97	280	3.3	0.09 U	3.3	0.04 U	0.00031 J	0.0089	0.017	0.0002 U	0.98	0.00011 U	35	0.0071	0.00049 UJ	0.21
B/W-25I		12-Mar-08	7.53	1152	137.1	0.15	14.55	0.99	230	230	2 U	800	0.55 J	71	0.26 J	240	4.4	0.09 U	4.4	0.04 U	0.00027 J	0.0062	0.18	0.0002 U	0.41	0.00011 U	150	0.00072 J	0.00085 UJ	0.0012 UJ
B/W-25I		11-Jun-08	7.42	1003	229.2	0.26	14.59	0.28	230	230	2 U	790	1.9	68	0.25 J	280	4.7	0.09 U	4.7	0.06	0.0002 U	0.0052	0.17	0.0002 U	0.47	0.00011 U	130	0.0007 U	0.00045 UJ	0.0012 J
B/W-25I		8-Sep-08	7.41	1140	145.1	0.38	15.09	1.09	240	240	2 U	850	0.5 U	66	0.19 J	270	5	0.09 U	5	0.04 U	0.0002 U	0.0047	0.16	0.0002 U	0.43	0.00011 U	140	0.00085 J	0.0021	0.0015 J
B/W-25I		6-Nov-08	7.04	1131	121.2	0.63	15.17	0.39	230	230	2 U	800	0.81 J	71	0.17 J	250	4.8 J	0.09 UJ	4.8 J	0.04 U	0.00051 J	0.0069	0.13	0.0002 U	0.45	0.00011 U	140	0.0007 U	0.00036 UJ	0.0011 J
B/W-25I-FD	Dup.	6-Nov-08	7.04	1131	121.2	0.63	15.17	0.39	230	230	2 U	820	0.76 J	72	0.15 U	250	4.9 J	0.09 UJ	4.9 J	0.04 U	0.0003 J	0.008	0.13	0.0002 U	0.44	0.00011 U	140	0.00077 J	0.001	0.0012 J

Table 3-8. 2008 Analytical Results for Monitor Wells - Continued

Sample Name	Duplicate	Sample Date	Metals (Lab) Continued																				Radiological (Labs)						
			Iron	Lead	Lithium	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Phosphorus	Potassium	Selenium	Silicon	Silver	Sodium	Strontium	Thallium	Tin	Titanium	Uranium	Vanadium	Zinc	Alpha, Gross	Beta, Gross	Radium-226	Radium-228	Thorium-228	Thorium-230	Thorium-232
			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L
Intermediate Wells - Continued																														
B/W-2I		18-Mar-08	0.068	0.0003 U	0.03 U	2.9	0.11	0.0001 UJ	0.013	0.0009 U	0.029 J	0.83	0.0003 U	45	0.0003 U	24	0.25	0.0002 U	0.012 U	0.0026 J	0.0054	0.01	0.0025 U	6.99	3.28 J	0.304 U	0.478 UJ	0.0855 U	0.103 U	0.0836 U
B/W-2I		11-Jun-08	0.015 U	0.0003 U	0.03 U	3	0.032	0.0001 U	0.011	0.0009 U	0.02 J	0.86	0.0003 U	48	0.0003 U	25	0.27	0.0002 U	0.012 U	0.002 U	0.006	0.011	0.0025 UJ	4.03	4.91	0.232 U	0.711 UJ	0.168 U	0.165 U	0.165 U
B/W-2I		11-Sep-08	0.023 J	0.0003 U	0.03 U	3	0.021	0.0001 U	0.0094	0.0009 U	0.02 U	1.1	0.00031 J	47	0.0003 U	23	0.26	0.0002 U	0.012 U	0.002 U	0.0056	0.0099	0.0025 U	4.47	6.1	0.224 U	0.597 U	0.116 U	0.114 U	0.114 U
B/W-2I		12-Nov-08	0.015 U	0.0003 U	0.03 U	3.3	0.019	0.0001 U	0.011	0.0009 U	0.02 U	1	0.0003 U	53	0.0003 U	25	0.28	0.0002 U	0.012 U	0.002 U	0.007	0.011	0.0033 UJ	1.21 J	5.2	0.352 U	0.658 U	0.121 U	0.117 U	0.117 U
B/W-3I		13-Mar-08	0.015 U	0.0003 U	0.03 U	2.6	0.086	0.0001 U	0.02	0.0009 U	0.02 U	0.85	0.00075 J	43	0.0003 U	39	0.19	0.0002 U	0.012 U	0.002 U	0.0078	0.01	0.0035 UJ	4.56	3.64 J	0.21 U	0.633 U	0.131 U	0.127 U	0.0908 U
B/W-3I		17-Jun-08	0.02 UJ	0.0003 U	0.03 U	2.4	0.081	0.0001 U	0.02	0.0009 U	0.02 U	0.81	0.0003 U	42	0.0003 U	42	0.17	0.0002 U	0.012 U	0.002 U	0.0052	0.017	0.0025 U	1.82 J	2.86 U	0.226 U	0.531 UJ	0.0872 U	0.0853 U	0.0853 U
B/W-3I		9-Sep-08	0.015 U	0.0003 U	0.03 U	2.1	0.051	0.0001 U	0.019	0.0009 U	0.02 U	0.63	0.0003 U	43	0.0003 U	41	0.15	0.0002 U	0.012 U	0.002 U	0.0063	0.027	0.0025 U	1.52 J	2.66 U	0.203 U	0.744 U	0.0829 U	0.0815 U	0.1 U
B/W-3I		10-Nov-08	0.015 U	0.0003 U	0.03 U	2.7	0.063	0.0001 U	0.019	0.0009 U	0.056 UJ	0.85	0.00044 J	48	0.0003 U	43	0.18	0.0002 U	0.012 U	0.002 U	0.0064	0.026	0.0025 U	2.06 J	2.77 U	0.094 UJ	0.662 U	0.164 U	0.158 U	0.194 U
B/W-4I		17-Mar-08	0.015 U	0.0003 U	0.054	32	0.38	0.0001 U	0.0042	0.0009 U	0.02 U	7.1	0.00051 J	46	0.0003 U	76	2.1	0.0002 U	0.012 U	0.002 U	0.035	0.0053	0.0025 U	20.5	16.3	0.279 J	0.488 J	0.139 U	0.136 U	0.136 U
B/W-4I		12-Jun-08	0.015 U	0.0003 U	0.093	37	0.11	0.0001 U	0.0025	0.0021	0.02 U	6.9	0.0015 J	51	0.0003 U	74	2.4	0.0002 U	0.012 U	0.002 U	0.048	0.007	0.0025 UJ	29.4	16.2	0.324 J	0.664 U	0.121 U	0.146 U	0.119 U
B/W-4I		9-Sep-08	0.015 U	0.0003 U	0.045 J	41	0.053	0.0001 U	0.0019 J	0.0009 U	0.02 U	7.5	0.00066 J	51	0.0003 U	74	2.6	0.0002 U	0.012 U	0.002 U	0.055	0.0066	0.0041 UJ	26.9	16.7	0.307 J	0.625 U	0.148 U	0.146 U	0.146 U
B/W-4I		10-Nov-08	0.015 U	0.0003 U	0.054	44	0.045	0.0001 U	0.002	0.0009 U	0.02 U	7.5	0.00058 J	55	0.0003 U	75	2.6	0.0002 U	0.012 U	0.002 U	0.059	0.0069	0.0025 U	23.2	18.6	0.126 UJ	0.53 U	0.106 U	0.102 U	0.102 U
B/W-5I		13-Mar-08	0.015 U	0.0003 U	0.044 J	2.6	0.00075 U	0.0001 U	0.11	0.0009 U	0.02 U	1.8	0.003	46	0.0003 U	160	0.28	0.0002 U	0.012 U	0.002 U	0.054	0.019	0.0028 UJ	30.8	10	0.256 U	0.757 U	0.145 U	0.141 U	0.141 U
B/W-5RI		10-Jun-08	0.015 U	0.0003 U	0.03 U	2.5	0.00075 U	0.0001 U	0.096	0.0009 U	0.02 U	1.7	0.003	46	0.0003 U	160	0.28	0.0002 U	0.012 U	0.002 U	0.045	0.018	0.0025 U	36.1 J	9.54	0.253 U	0.633 U	0.141 U	0.113 U	0.113 U
B/W-5IR		10-Sep-08	0.015 U	0.0003 U	0.04 J	2.3	0.001 UJ	0.0001 U	0.1	0.0009 U	0.02 U	1.5	0.0025	45	0.0003 U	160	0.27	0.0002 U	0.012 U	0.002 U	0.045	0.02	0.0025 U	29.8	14.7	0.327 U	0.523 J	0.0796 U	0.0779 J	0.0779 U
B/W-5IR		3-Nov-08	0.015 U	0.0003 U	0.045 J	2.4	0.002 UJ	0.0001 U	0.098	0.0009 U	0.02 U	1.5 J	0.0028	46	0.0003 U	150	0.28	0.0002 U	0.012 U	0.002 U	0.048	0.019	0.0025 U	34.6	18.7	0.0894 U	0.668 U	0.111 U	0.108 U	0.108 U
B/W-5IR-FD	Dup.	3-Nov-08	0.015 U	0.0003 U	0.04 J	2.3	0.0024 UJ	0.0001 U	0.097	0.0009 U	0.02 U	1.5 J	0.0028	45	0.0003 U	140	0.27	0.0002 U	0.012 U	0.002 U	0.047	0.018	0.0025 U	32.3	12.1	0.167 U	0.532 U	0.112 U	0.108 U	0.108 U
B/W-6D		17-Mar-08	0.015 U	0.0003 U	0.03 U	2.4	0.0031	0.0001 U	0.11	0.0009 U	0.02 U	1.8	0.002 J	33	0.0003 U	110	0.24	0.0002 U	0.012 U	0.002 U	0.02	0.028	0.0025 U	16.4	5.27	0.177 U	0.493 UJ	0.125 U	0.123 U	0.0875 U
B/W-6D		12-Jun-08	0.015 U	0.0003 U	0.03 U	2.6	0.00075 U	0.0001 U	0.11	0.0009 U	0.02 U	2.1	0.0022 UJ	37	0.0003 U	120	0.27	0.0002 U	0.012 U	0.002 U	0.021	0.028	0.016 J	13.9	5.58	0.221 U	0.686 UJ	0.165 U	0.163 U	0.163 U
B/W-6I		8-Sep-08	0.015 U	0.0003 U	0.034 J	2.5	0.00075 U	0.0001 U	0.12	0.0009 U	0.02 U	1.9	0.0019 J	36	0.0003 U	110	0.28	0.0002 U	0.012 U	0.002 U	0.02	0.027	0.0025 UJ	17.4	6.03 J	0.362 U	0.584 UJ	0.113 U	0.111 U	0.111 U
B/W-6I-FD	Dup.	8-Sep-08	0.015 U	0.0003 U	0.033 J	2.5	0.00075 U	0.0001 U	0.12	0.0009 U	0.02 U	1.8	0.0019 J	35	0.0003 U	110	0.27	0.0002 U	0.012 U	0.002 U	0.02	0.026	0.0026 J	17.9	6.64 J	0.26 U	0.398 UJ	0.173 U	0.139 U	0.139 U
B/W-6I		4-Nov-08	0.015 U	0.0003 U	0.03 U	2.6	0.002 UJ	0.0001 U	0.11	0.0009 U	0.02 U	1.8	0.0024	35	0.0003 U	110	0.27	0.0002 U	0.012 U	0.002 U	0.02	0.03	0.0075 UJ	11.3 J	9.06	0.076 U	0.617 U	0.194 U	0.154 U	0.154 U
B/W-7		13-Mar-08	0.015 U	0.0003 U	0.042 J	1.9	0.0065	0.0001 U	0.061	0.0011 J	0.02 J	1.3	0.0012 J	14	0.0003 U	120	0.89	0.0002 U	0.012 U	0.002 U	0.05	0.0025	0.0049 UJ	43	21.9	0.205 U	0.54 U	0.118 U	0.115 U	0.115 U
B/W-7-D1		16-Jun-08	0.015 U	0.0003 U	0.036 J	1.7	0.00075 U	0.0001 U	0.05 J	0.0009 U	0.033 J	1.3 J	0.0013 J	15	0.0003 U	120	0.77	0.0002 U	0.012 U	0.002 U	0.047	0.0025	0.0025 U	35.9	8.76	0.247 U	0.81 UJ	0.148 U	0.145 U	0.145 U
B/W-7-D2	Dup.	16-Jun-08	0.015 U	0.0003 U	0.033 J	1.8	0.00075 U	0.0001 U	0.051 J	0.0009 U	0.025 J	1.3 J	0.0013 J	15	0.0003 U	120	0.78	0.0002 U	0.012 U	0.002 U	0.048	0.0027	0.0025 U	21.9	9.74	0.342 U	0.469 UJ	0.11 U	0.108 U	0.108 U
B/W-7I		16-Sep-08	0.015 U	0.0003 U	0.038 J	1.5	0.00075 U	0.0001 U	0.045	0.0009 U	0.02 U	1.2	0.0011 J	15	0.0003 U	110	0.75	0.0002 U	0.012 U	0.002 U	0.045	0.0028	0.0025 U	35.1	12.2	0.169 U	0.625 U	0.144 U	0.141 U	0.141 U
B/W-7I		11-Nov-08	0.015 U	0.0003 U	0.04 J	1.6	0.00075 U	0.0001 U	0.048	0.0009 U	0.021 J	1.2	0.0012 J	16	0.0003 U	120	0.83	0.0002 U	0.012 U	0.002 U	0.048	0.0031	0.0025 U	39.1	30.9	0.231 U	0.881 U	0.146 U	0.14 U	0.14 U
B/W-8D		13-Mar-08	0.015 U	0.0003 U	0.044 J	9.7	0.0045	0.0001 U	0.05	0.001 J	0.02 U	2.3	0.0024	32	0.0003 U	200	0.63	0.0002 U	0.012 U	0.002 U	0.036	0.018	0.0033 UJ	25.5	8.32	0.35 U	0.67 U	0.153 U	0.107 U	0.107 U
B/W-8D		9-Jun-08	0.015 U	0.0003 U	0.049 J	9.3	0.00075 U	0.0001 U	0.051	0.0009 U	0.02 U	2	0.0036	30	0.0003 U	190	0.57	0.0002 U	0.012 U	0.002 U	0.03	0.016	0.0025 U	21.4 J	9.93	0.277 U	0.524 UJ	0.13 U	0.158 U	0.129 U
B/W-8I		14-Sep-08	0.015 U	0.0003 U	0.04 J	8.7	0.00091 UJ	0.0001 U	0.055	0.0009 U	0.02 U	2.1 J	0.0022	28	0.0003 U	180	0.55 J	0.0002 U	0.012 U	0.002 U	0.027	0.015	0.0025 U	29	10.2	0.347 U	0.751 U	0.0833 U	0.0998 U	0.0814 U
B/W-8I		5-Nov-08	0.015 U	0.0003 U	0.038 J	8.7	0.001	0.0001 U	0.055	0.0009 U	0.02 U	2	0.002	28	0.0003 U	170	0.55	0.00049 J	0.012 U	0.002 U	0.033	0.016	0.0025 UJ	10.9	10.5	0.0942 U	0.733 U	0.106 U	0.103 U	0.103 U
B/W-9I		12-Mar-08	0.015 U	0.0003 U	0.03 U	11	0.011	0.0001 U	0.0062	0.0009 U	0.02 U	5.5	0.0003 U	43	0.0003 U	35	0.57	0.0002 U	0.012 U	0.002 U	0.0064	0.01	0.0031 UJ	2.78 J	8.49	0.256 U	0.435 U	0.176 U	0.123 U	0.123 U
B/W-9I		10-Jun-08	0.015 U	0.0003 U	0.04 J	11	0.009	0.0001 U	0.0058	0.0009 U	0.023 J	5	0.00057 J	42	0.0003 U	33	0.54	0.00022 J	0.012 U	0.002 U	0.0064	0.011	0.01 J	2.35 J	7.28	0.351 U	0.417 U	0.121 U	0.146 U	0.119 U
B/W-9I		9-Sep-08	0.015 U	0.0003 U	0.03 U	12	0.0049	0.0001 U	0.0049	0.0009 U	0.02 U	5.1	0.0003 U	42	0.0003 U	35	0.58	0.0002 U	0.012 U	0.002 U	0.0058	0.0099	0.006 UJ	3.86	7.33	0.135 UJ	0.591 U	0.12 U	0.118 U	0.118 U
B/W-9I		11-Nov-08	0.015 U	0.0015 U	0.03 U	13	0.0054	0.0001 U	0.0055 J	0.0045 U	0.02 U	5.3	0.0015 U	44	0.0015 U	37	0.62	0.001 U	0.012 U	0.002 U	0.0066	0.01	0.025 UJ	1.37 J	7.6	0.12 U	0.529 U	0.127 U	0.122 U	0.122 U
B/W-19I		14-Mar-08	0.015 U	0.0003 U	0.055 J	5	0.0027	0.0001 U	0.037	0.0011 J	0.02 U	2	0.0024	42	0.0003 U	190	0.78	0.0002 U	0.012 U	0.002 U	0.043	0.012	0.0034 J	26.1	13.9	0.221 U	0.536 U	0.14 U	0.137 U	0.137 U
B/W-19I-D1		9-Jun-08	0.015 U	0.0003 U	0.04 J	4.1	0.00075 U	0.0001 U	0.035	0.0009 U	0.02 U	1.5	0.0026	43	0.0003 U	180	0.46	0.0002 U	0.012 U	0.002 U	0.051	0.017	0.0025 U	37.3 J	10.2	0.25 J	0.961 UJ	0.135 U	0.108 U	0.108 U
B/W-19I-D2	Dup.	9-Jun-08	0.015 U	0.0003 U	0.041 J	4.3	0.00075 U	0.0001 U	0.035	0.0009 U	0.02 U	1.4	0.0027	42	0.0003 U	180	0.46	0.0002 U	0.012 U	0.002 U	0.052	0.017	0.0025 U	35.9 J	13.3	0.185 U	1 UJ	0.141 U	0.139 U	0.139 U
B/W-19I		10-Sep-08	0.015 U	0.0003 U	0.037 J	3.7	0.0016 UJ	0.0001 U	0.038	0.0009 UR	0.02 U	1.4	0.0026	42	0.0003 UJ	170	0.42	0.0002 U	0.012 UJ	0.002 U	0.059	0.02 J	0.0027 J	22.1 J	20.1	0.263 U	0.585 U	0.129 U	0.126 U	0.126 U
B/W-19I-FD	Dup.	10-Sep-08	0.015 U	0.0003 U	0.039 J	3.9	0.00075 U	0.0001 U	0.037	0.0009 UR	0.02 U	1.4	0.0023	42	0.0003 UJ	180	0.44	0.0002 U	0.012 UJ	0.002 U	0.057	0.019 J	0.0025 U	35.8 J	19.9	0.242 U	0.845 U	0.186 U	0.13 U	0.13 U
B/W-19I		5-Nov-08	0.015 U	0.0003 U	0.041 J	4.2	0.00075 U	0.0001 U	0.034	0.0009 U	0.02 U	1.4	0.0021	43	0.0003 U	180	0.5	0.0002 U	0.012 U	0.002 U	0.053	0.02	0.0075 UJ	42.8	14.8	0.328 U	0.655 U	0.119 U	0.101 U	0.0825 U
B/W-25I		12-Mar-08	0.015 U	0.0003 U	0.044 J	32	0.0041 UJ	0.0001 U	0.0032	0.0011 J	0.023 J	8	0.0003 U	40	0.0003 U	52	1.3	0.0002 U	0.012 U	0.002 U	0.077	0.0072	0.0031 UJ	49	23	0.275 U	0.441 U	0.12 U	0.144 U	0.118 U
B/W-25I		11-Jun-08	0.015 U	0.0003 U	0.06	30	0.00075 U	0.0001 U	0.0025	0.0009 U	0.02 U	7.4	0.0003 U	37	0.0003 U	47	1.2	0.0002 U	0.012 U	0.002 U	0.073	0.0067	0.0025 UJ	49.2	19.8	0.301 J	0.687 U	0.164 U	0.161 U	0.161 U
B/W-25I		8-Sep-08	0.015 U	0.0003 U	0.034 J	33	0.0041	0.0001 U	0.0023	0.0009 U	0.02 U	7.9 J	0.00048 J	40	0.0003 U	49	1.3	0.0002 U	0.012 U	0.002 U	0.077	0.0056	0.0025 U	44.3	21.4 J	0.181 U	0.674 UJ	0.129 U	0.127 U	0.127 U
B/W-25I		6-Nov-08	0.015 U	0.0003 U	0.031 J	32	0.00075 U	0.0001 U	0.003	0.0009 U	0.02 U	7.4	0.00067 J	39	0.0003 U	47	1.3	0.00023 J	0.012 U	0.002 U	0.071	0.0063	0.0046 UJ	39.2	26.4	0.304 U	0.659 U	0.118 U	0.115 U	0.115 U
B/W-25I-FD	Dup.	6-Nov-08	0.015 U	0.0003 U	0.03 J	32	0.0016	0.0001 U	0.0026	0.0009 U	0.02 U	7.7	0.00064 J	39	0.0003 U	48	1.3	0.0002 U	0.012 U	0.002 U	0.073	0.0058	0.0044 UJ	43.6	23.4	0.268 U	0.589 U	0.216 U	0.15 U	0.15 U

Table 3-8. 2008 Analytical Results for Monitor Wells – Continued

			Field Parameters						Water Quality Parameters (Lab)											Metals (Lab)										
Sample Name	Duplicate	Sample Date	pH (field)	Specific Conductance (field)	ORP (field)	Dissolved Oxygen (field)	Temperature (field)	Turbidity (field)	Total Alkalinity (as $CaCO_3$)	Bicarbonate Alkalinity (as $CaCO_3$)	Carbonate (as $CaCO_3$)	Total Dissolved Solids	Total Organic Carbon	Chloride	Fluoride	Sulfate	Nitrate	Nitrite	Nitrate-Nitrite	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium	Cobalt	Copper
			s.u.	µS/cm	mV	mg/L	Deg C	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Intermediate Wells - Continued																														
B/W-28I		17-Mar-08	7.56	798	49.5	0.22	15.99	3.26	110	110	2 U	570	0.5 U	58	0.33 J	210	0.48	0.09 U	0.48	0.04 U	0.0002 U	0.0057	0.068	0.0002 U	0.21	0.00011 U	91	0.0007 U	0.0008 UJ	0.00076 J
B/W-28I		12-Jun-08	7.30	906	196.7	0.30	16.45	1.37	180	180	2 U	730	2	80	0.32 J	270	1.6	0.09 U	1.6	0.04 U	0.00022 J	0.01	0.075	0.0002 UJ	0.41	0.00011 U	130	0.0065	0.00097 UJ	0.0014 J
B/W-28I		15-Sep-08	7.33	1043	226.8	0.50	16.13	0.57	180	180	2 U	750	1.5	66	0.23 J	250	1.8	0.09 U	1.8	0.04 U	0.0002 J	0.0098	0.075	0.0002 U	0.42	0.00011 U	130	0.00091 J	0.00064 UJ	0.0014 J
B/W-28I		11-Nov-08	7.31	1069	11.1	0.28	15.99	0.84	180	180	2 U	770	0.79 J	65	0.28 J	260	2.1	0.09 U	2.1	0.04 U	0.00023 J	0.009	0.081	0.0002 U	0.41	0.00011 U	140	0.0007 U	0.0028	0.0018 J
B/W-29I1-D1		14-Mar-08	6.61	4292	51.2	0.22	13.58	6.34	390	390	2 U	4100	0.72 J	110	1.5 U	2300	0.6 U	0.9 U	1.5 U	0.04 U	0.001 U	0.005 UJ	0.036	0.001 U	2.2	0.00055 U	530	0.0035 U	0.012	0.0038 U
B/W-29I1-D2	Dup.	14-Mar-08	6.61	4292	51.2	0.22	13.58	6.34	380	380	2 U	4100	0.5 U	110	1.5 U	2200	0.6 U	0.9 U	1.5 U	0.04 U	0.001 U	0.0074 UJ	0.036	0.001 U	2.1	0.00055 U	520	0.0035 U	0.012	0.0038 U
B/W-29I1		16-Jun-08	6.45	4363	104.6	0.24	15.34	14.15	390	390	2 U	4300	2.9	100	12 J	2500	0.66 UJ	4.5 U	4.6 U	0.08 U	0.0002 U	0.003	0.023	0.0002 UJ	2.2	0.00011 U	520	0.0007 U	0.021	0.0037 UJ
B/W-29I		8-Sep-08	6.46	4247	8.8	0.25	14.52	2.36	380	380	2 U	4300	0.5 U	100	1	2500	0.77	0.09 U	0.77	0.12 U	0.0004 U	0.0015 J	0.025	0.0004 U	1.8	0.00022 U	490	0.0014 U	0.033	0.0062
B/W-29I		9-Nov-08	6.51	4240	36.6	0.25	13.90	4.69	400	400	2 U	4200	0.85 J	93	0.3 J	2300	0.56	0.09 U	0.56	0.08 U	0.0002 U	0.0007 U	0.025	0.0002 U	1.9	0.00011 U	510	0.0007 U	0.027	0.0052
MW-2002-2I		13-Mar-08	8.23	531	94.7	0.72	15.05	57.45	160	160	2 U	460	0.5 U	16	2.5	65	0.06 U	0.09 U	0.15 U	0.097	0.00025 J	0.038	0.029	0.0002 U	0.53	0.00031 J	9	0.0007 U	0.00027 UJ	0.00079 UJ
MW2002-2I		10-Jun-08	8.19	522	48.7	0.76	16.91	55.14	180	180	2 U	360	0.5 U	14	2.7	56	0.06 U	0.09 U	0.15 U	4 J	0.0002 U	0.02	0.034	0.0002 U	0.63	0.00029 J	11	0.0025	0.00064 UJ	0.0048
MW2002-2I		7-Sep-08	8.24	489	76.3	0.59	17.38	21.59	170	170	2 U	330	0.5 U	14	2.4	52	0.06 U	0.09 U	0.15 U	0.096	0.0002 U	0.025	0.021	0.0002 U	0.57	0.00028 J	10	0.00092 J	0.00055 J	0.00075 U
MW-2002-2I		9-Nov-08	7.98	479	50.6	1.27	15.62	30.44	180	180	2 U	350	0.5 U	16	2.7	54	0.06 U	0.09 U	0.15 U	0.072	0.00023 J	0.031	0.022	0.0002 U	0.57	0.00016 J	10	0.00088 UJ	0.0015	0.00075 U
MW-2002-2I-FD	Dup.	9-Nov-08	7.98	479	50.6	1.27	15.62	30.44	170	170	2 U	350	0.5 U	14	2.3	51	0.06 U	0.09 U	0.15 U	0.076	0.00023 J	0.033	0.023	0.0002 U	0.57	0.00016 J	10	0.001 UJ	0.0017	0.00075 U
W4CB-1		19-Mar-08	6.90	3820	NA	NA	14.10	0.21	340	340	2 U	3400	1.5 UJ	250	1.5 U	1600	0.6 U	0.9 U	1.5 U	0.08 U	0.0004 U	0.0024	0.044	0.0004 U	0.62	0.00022 U	750	0.0014 U	0.0014 UJ	0.0037 UJ
W4CB-2		20-Mar-08	5.82	6591	20.2	0.53	13.48	1.54	200	200	2 U	6700	3.6	140	2.6	4200	0.06 UJ	0.09 UJ	0.15 UJ	0.4 U	0.001 U	0.0055	0.016	0.0021 J	3	0.00055 U	460	0.0035 U	0.42	0.0079 J
W4CB-2-D1		10-Jun-08	5.85	6017	-40.1	1.50	14.18	8.66	260	260	2 U	6200	3.9	190	4.6	4000	0.06 U	0.09 U	0.15 U	0.22 J	0.0002 U	0.00094 UJ	0.014	0.00083	2.5	0.00011 U	490	0.0007 U	0.28	0.0042
W4CB-2-D2	Dup.	10-Jun-08	5.85	6017	-40.1	1.50	14.18	8.66	260	260	2 U	5900	3.8	190	4.4	4000	0.06 U	0.09 U	0.15 U	0.25 J	0.0002 U	0.0007 U	0.012	0.00093	2.5	0.00011 U	490	0.0007 U	0.27	0.0041
W4CB-2I		14-Sep-08	5.99	5684	-27.6	1.09	14.26	3.30	230	230	2 U	5800	3.2	170	3.2	3900	0.06 U	0.09 U	0.15 U	0.3	0.001 U	0.0035 U	0.021	0.0017 J	2.1	0.00055 U	470	0.0035 U	0.39	0.0072 J
W4CB-2I		9-Nov-08	5.80	5728	0.9	1.26	13.60	1.35	200	200	2 U	6000	2.6	160 J	3.2	3700	0.06 UJ	0.13 J	0.15 UJ	0.39	0.001 U	0.0035 U	0.019	0.002 J	2.1	0.00055 U	490	0.0035 U	0.39	0.0066 J
W5AA-1		18-Mar-08	8.05	820	92.4	0.36	14.29	0.22	100	100	2 U	560	0.5 U	46	0.32 J	210	1.4	0.09 U	1.4	0.04 U	0.00037 J	0.0064	0.1	0.0002 U	0.16	0.00011 U	91	0.0007 U	0.00015 U	0.00092 J
W5AA-1-D1		10-Jun-08	7.89	925	96.4	0.53	14.71	0.29	120	120	2 U	690	0.5 U	52	0.42 J	250	2.3	0.19	2.5	0.04 U	0.00022 J	0.0059	0.11	0.0002 U	0.26	0.00011 U	110	0.0007 U	0.00018 UJ	0.0013 J
W5AA-1-D2	Dup.	10-Jun-08	7.89	925	96.4	0.53	14.71	0.29	120	120	2 U	680	0.5 U	52	0.34 J	270	2.3	0.098 J	2.4	0.04 U	0.00024 J	0.006	0.11	0.0002 U	0.25	0.00011 U	110	0.0007 U	0.00044 UJ	0.0013 J
W5AA-1I		14-Sep-08	7.29	678	260.9	0.87	14.89	1.03	88	88	2 U	450	0.5 U	44	0.37 J	170	0.5	0.09 U	0.5	0.04 U	0.00037 J	0.007	0.077	0.0002 U	0.2	0.00047 UJ	73	0.0032	0.0027	0.0011 J
W5AA-1I		5-Nov-08	8.01	687	88.9	0.23	14.28	0.96	100	100	2 U	490	0.5 U	44	0.31 J	180	1.4	0.09 U	1.4	0.04 U	0.00052 J	0.0059	0.082	0.0002 U	0.21	0.00011 U	74	0.001 UJ	0.0054 J	0.0013 UJ
W5AA-1I-FD	Dup.	5-Nov-08	8.01	687	88.9	0.23	14.28	0.96	110	110	2 U	490	0.5 U	44	0.25 J	180	1.2	0.09 U	1.2	0.04 U	0.00051 J	0.0059	0.08	0.0002 U	0.22	0.00011 U	77	0.00099 UJ	0.00053 UJ	0.001 UJ
W5AB-3		19-Mar-08	6.84	2946	161.2	0.47	14.85	7.70	350	350	2 U	2400	0.85 UJ	340	0.17 J	830	0.06 U	0.09 U	0.15 U	0.04 U	0.0002 U	0.0031	0.053	0.0002 U	0.94	0.00011 U	470	0.0007 U	0.00045 J	0.0022
W5AB-3		10-Jun-08	6.77	3029	81.5	0.36	15.30	11.15	360	360	2 U	2500	0.88 J	360	11 J	880	0.06 U	0.09 U	0.15 U	0.4	0.0002 U	0.0032 UJ	0.069	0.0002 U	1.1	0.00011 U	480	0.0007 U	0.00072 UJ	0.0036
W5AB-3I		14-Sep-08	6.69	3354	106.4	0.21	14.90	9.94	460	460	2 U	2700	0.5 U	410	0.34 J	1100	0.06 U	0.09 U	0.15 U	0.04 U	0.0002 U	0.0019	0.059	0.0002 U	1.7	0.00042 UJ	570	0.0007 U	0.0012 UJ	0.0028
W5AB-3I		4-Nov-08	6.72	3236	111.7	0.22	14.32	6.17	430	430	2 U	2600	0.5 U	400	0.16 J	980	0.06 U	0.09 U	0.15 U	0.04 U	0.00027 UJ	0.0027	0.045	0.0002 U	1.5	0.00011 U	540	0.0007 U	0.0012 UJ	0.0034
Deep Wells																														
B/W-1I1		18-Mar-08	7.40	979	73.9	0.36	15.04	7.63	300	300	2 U	660	0.5 U	31	0.22 J	170	4.9	0.19 J	5.1	0.04 U	0.0002 U	0.0024	0.12	0.0002 U	0.38	0.00011 U	110	0.001 J	0.00056 UJ	0.00075 U
B/W-1I1		17-Jun-08	7.30	830	135.6	0.89	15.55	1.88	300	300	2 U	630	0.5 U	29	0.22 J	180	5.5	0.09 UJ	5.5	0.04 U	0.0002 U	0.0034	0.11	0.0002 U	0.46	0.00011 U	100	0.00072 J	0.00016 UJ	0.00075 U
B/W-1D1		11-Sep-08	7.31	958	98.6	0.37	16.13	1.31	280	280	2 U	640	0.5 U	32	0.19 J	170	5.4	0.09 U	5.4	0.04 U	0.0002 J	0.0037	0.09	0.0002 U	0.44	0.00011 U	110	0.00092 J	0.00027 UJ	0.00081 J
B/W-1D1		4-Nov-08	7.12	859	120.2	0.59	15.17	5.95	280	280	2 U	600	0.5 U	29	0.23 J	140	5	0.09 U	5	0.04 U	0.00038 UJ	0.0046	0.083	0.0002 U	0.41	0.00011 U	100	0.0013 J	0.0022 UJ	0.00076 J
B/W-1I2		10-Apr-08	8.05	341	-43.5	0.56	15.35	6.48	96	96	2 U	220	0.5 U	14	0.48 J	40	0.7	0.09 U	0.7	0.04 U	0.00035 J	0.0075	0.055	0.0002 U	0.18 UJ	0.00011 U	30	0.0014 J	0.0006 J	0.00075 U
B/W-1I2		17-Jun-08	7.69	268	132.1	0.78	15.47	0.21	100	100	2 U	200	0.5 U	13	0.5 J	39	0.81	0.09 UJ	0.81	0.04 U	0.0002 U	0.0083	0.035	0.0002 U	0.19 UJ	0.00011 U	27	0.0024	0.00015 U	0.00075 U
B/W-1D2		11-Sep-08	7.93	252	64.5	0.83	15.91	0.18	86	86	2 U	200	0.5 U	8.7	0.52	27	0.39 UJ	0.09 U	0.39 UJ	0.04 U	0.00033 J	0.0094	0.024	0.0002 U	0.17	0.00011 U	21	0.0025	0.00069 UJ	0.00075 U
B/W-1D2		4-Nov-08	7.54	310	178.8	0.83	14.79	1.40	100	100	2 U	230	0.5 U	15	0.4 J	41	0.88	0.09 U	0.88	0.04 U	0.00033 UJ	0.0088	0.033	0.0002 U	0.18	0.00011 U	29	0.0024	0.00044 UJ	0.00075 U
B/W-1D2-FD	Dup.	4-Nov-08	7.54	310	178.8	0.83	14.79	1.40	96	96	2 U	220	0.5 U	14	0.44 J	40	0.89	0.09 U	0.89	0.04 U	0.0004 UJ	0.0089	0.033	0.0002 U	0.18	0.00011 U	29	0.0025	0.002 UJ	0.00075 U
B/W-1D		18-Mar-08	7.90	490	69.9	2.51	15.38	6.82	120	120	2 U	350	0.5 U	16	0.58 J	96	1.2	0.09 U	1.2	0.04 U	0.00026 J	0.01	0.025	0.0002 U	0.23	0.00011 U	42	0.0036	0.00015 U	0.00075 U
B/W-1D		17-Jun-08	7.61	335	16.7	2.85	15.55	0.09	120	120	2 U	260	0.5 U	13	0.7 J	59	0.28	0.09 UJ	0.28	0.04 U	0.0002 J	0.012	0.017	0.0002 U	0.29	0.00011 U	32	0.0038	0.00015 U	0.00075 U
B/W-1D3		11-Sep-08	7.72	404	55.3	3.20	16.41	0.17	100	100	2 U	260	0.5 U	12	0.68	52	0.18 UJ	0.09 U	0.18 UJ	0.04 U	0.00025 UJ	0.015	0.012 J	0.0002 UJ	0.23	0.00011 UJ	23	0.0035	0.00029 UJ	0.0015 J
B/W-1D3		13-Nov-08	7.02	416	103.4	2.84	15.02	1.05	110	110	2 U	360	0.5 U	12	0.59	80	0.12	0.09 U	0.15 U	0.04 U	0.00025 J	0.013	0.022	0.0002 U	0.29	0.00011 U	40	0.0035	0.00037 J	0.00079 J
B/W-2D		19-Mar-08	7.74	256	53.9	0.20	14.13	0.30	76	76	2 U	190	0.5 U	7.7	0.53	24	0.12	0.09 U	0.19 J	0.04 U	0.00027 J	0.015	0.034	0.0002 U	0.13	0.00011 U	21	0.00076 J	0.00033 J	0.00075 U
B/W-2D		11-Jun-08	7.82	252	65.9	0.51	14.61	0.10	84	84	2 U	180	0.5 U	7.6	0.5	26	0.097 J	0.09 U	0.15 U	0.04 U	0.0002 U	0.015	0.038	0.0002 U	0.2	0.00011 U	22	0.0007 U	0.00015 U	0.00075 U
B/W-2D		11-Sep-08	7.98	268	-42.1	0.31	15.02	0.26	82	82	2 U	160	0.5 U	9.2	0.43 J	30	0.18 UJ	0.09 U	0.18 UJ	0.04 U	0.00031 J	0.015	0.046	0.0002 U	0.17	0.00011 U	22	0.0011 J	0.00033 UJ	0.00075 U
B/W-2D		12-Nov-08	6.92	257	124.1	0.29	14.39	0.24	84	84	2 U	200	0.5 U	9.3	0.62	30	0.094 J	0.09 U	0.15 U	0.04 U	0.00033 J	0.017	0.043	0.0002 U	0.21	0.00011 U	24	0.0007 U	0.0012	0.00075 U

Table 3-8. 2008 Analytical Results for Monitor Wells - Continued

			Metals (Lab) Continued																				Radiological (Lab)						
Sample Name	Duplicate	Sample Date	Iron	Lead	Lithium	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Phosphorus	Potassium	Selenium	Silicon	Silver	Sodium	Strontium	Thallium	Tin	Titanium	Uranium	Vanadium	Zinc	Alpha, Gross	Beta, Gross	Radium-226	Radium-228	Thorium-228	Thorium-230	Thorium-232
			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L
Intermediate Wells - Continued																														
B/W-28I		17-Mar-08	0.021 J	0.0003 U	0.03 U	16	0.44	0.0001 U	0.014	0.0013 J	0.02 U	2.2	0.00031 J	38	0.0003 U	48	0.83	0.0002 U	0.012 U	0.002 U	0.014	0.005	0.0025 U	8.77	9.37	0.149 U	0.571 UJ	0.152 U	0.106 U	0.106 U
B/W-28I		12-Jun-08	0.015 U	0.0003 U	0.065	23	0.016	0.0001 U	0.005	0.0027	0.02 U	2.6	0.00035 J	50	0.0003 U	64	1.4	0.0002 U	0.012 U	0.002 U	0.037	0.011	0.0028 J	25.7	9.91	0.406 U	0.534 UJ	0.0927	0.0833 J	0.0833 U
B/W-28I		15-Sep-08	0.015 U	0.0003 U	0.035 J	24	0.0051	0.0001 U	0.0046	0.0009 U	0.02 U	2.4 J	0.00032 J	50	0.0003 U	57	1.3 J	0.0002 U	0.012 U	0.002 U	0.032	0.011	0.0027 UJ	28.1	11.8	0.215 U	0.995 U	0.197 U	0.183 J	0.157 U
B/W-28I		11-Nov-08	0.015 U	0.0003 U	0.042 J	25	0.015	0.0001 U	0.0048	0.0009 U	0.021 J	2.6	0.0003 U	53	0.0003 U	65	1.5	0.0002 U	0.012 U	0.002 U	0.048	0.011	0.0027 UJ	27.8	13.2	0.29 U	0.674 U	0.131 U	0.144 U	0.103 U
B/W-29I1-D1		14-Mar-08	0.45	0.0015 U	0.1 J	190	11	0.0001 U	0.0031 J	0.019	0.049	17	0.002 J	46	0.0015 U	340	3.5	0.001 U	0.012 U	0.002 U	0.061	0.0035 U	0.012 U	23.6	24.8	0.243 J	0.694 U	0.328 U	0.321 U	0.321 U
B/W-29I1-D2	Dup.	14-Mar-08	0.42	0.0015 U	0.11 J	180	12	0.0001 U	0.0028 J	0.017	0.048	18	0.0024 J	45	0.0015 U	320	3.3	0.001 U	0.012 U	0.002 U	0.062	0.0035 U	0.012 J	33.8	23.8	0.254 U	0.599 U	0.29 U	0.283 U	0.283 U
B/W-29I1		16-Jun-08	0.25	0.0003 U	0.11	250	25	0.0001 U	0.003	0.01	0.04 U	16 J	0.0026	47	0.0003 U	290	2.7	0.0002 U	0.024 U	0.004 U	0.05	0.0012 J	0.0064 J	28.3	27.7	0.379 U	0.76 J	0.156 U	0.214 U	0.153 U
B/W-29I		8-Sep-08	2.1	0.0006 U	0.15 J	250	25	0.0001 U	0.0016 J	0.0087	0.06 J	16 J	0.0021 J	42	0.0006 U	300	2.9	0.0004 U	0.036 U	0.006 U	0.051	0.0014 U	0.0077 J	12.1	40.6 J	0.391 J	0.607 UJ	0.114 U	0.112 U	0.138 U
B/W-29I		9-Nov-08	1.1	0.0003 U	0.19	220	21	0.0001 U	0.0015 J	0.0056	0.083 UJ	18	0.002	41	0.0003 U	300	3.1	0.0002 U	0.024 U	0.004 U	0.055	0.0007 U	0.0067 J	38.8 J	40.4	0.176 U	0.702 U	0.108 U	0.104 U	0.104 U
MW-2002-2I		13-Mar-08	0.041	0.0003 U	0.034 J	1.4	0.14	0.0001 U	0.23	0.0009 U	0.02 U	2	0.00087 J	34	0.0003 U	100	0.13	0.0002 U	0.012 U	0.002 U	0.013	0.026	0.0042 UJ	12.4	8.29	0.159 U	0.705 U	0.168 U	0.164 U	0.164 U
MW2002-2I		10-Jun-08	1.2	0.002	0.03 U	2.1	0.24	0.0001 U	0.16	0.0021	0.057	2.4	0.00067 J	41	0.0003 U	110	0.13	0.0002 U	0.012 U	0.027	0.0068	0.011	0.026	8.19 J	5.63	0.739 J	0.649 U	0.21	0.103 J	0.0887 U
MW2002-2I		7-Sep-08	0.051 UJ	0.0003 U	0.03 U	1.7	0.066	0.0001 U	0.16	0.0009 U	0.026 J	2 J	0.00048 J	36	0.0003 U	100	0.12	0.0002 U	0.012 U	0.002 U	0.0088	0.011	0.0025 U	8.01	4.73	0.239 U	0.404 U	0.159 U	0.112 U	0.112 U
MW-2002-2I		9-Nov-08	0.037 J	0.0003 U	0.03 U	1.7	0.047	0.0001 U	0.15	0.0009 U	0.052 UJ	2.4	0.00087 J	36	0.0003 U	92	0.12	0.0002 U	0.012 U	0.002 U	0.0096	0.016	0.0025 U	2.2 J	4.86 J	0.171 U	0.815 U	0.104 U	0.1 U	0.1 U
MW-2002-2I-FD	Dup.	9-Nov-08	0.038 J	0.0003 U	0.03 U	1.7	0.045	0.0001 U	0.16	0.0009 U	0.06 UJ	2.3	0.00084 J	36	0.0003 U	94	0.13	0.0002 U	0.012 U	0.002 U	0.0098	0.017	0.0025 U	5.11 J	9.74 J	0.223 U	0.884 U	0.102 U	0.0981 U	0.0981 U
W4CB-1		19-Mar-08	0.47	0.0006 U	0.076 J	100	0.15	0.0001 U	0.0025 J	0.0018 U	0.045 J	7.3	0.0033 J	52	0.0006 U	100	5.9	0.0004 U	0.05 J	0.004 U	0.25	0.0016 J	0.0057 UJ	166	51.3	0.204 U	0.791 J	0.154 U	0.226 UJ	0.151 U
W4CB-2		20-Mar-08	270	0.0015 U	0.45 J	400	63	0.0001 U	0.0012 J	0.3 J	0.19 J	23	0.0042 J	55	0.0015 U	590	3.6 J	0.001 U	0.072 U	0.012 U	0.025	0.0035 U	0.14 J	6.78	33.3	0.37 U	0.702 J	0.187 U	0.223 U	0.182 U
W4CB-2-D1		10-Jun-08	200	0.0003 U	0.24 J	360	53	0.0001 U	0.00046 J	0.17	0.13 J	22	0.0032	52	0.0003 U	540	3.5	0.0002 U	0.06 U	0.01 U	0.052	0.0007 U	0.041	10.1 J	32	0.431 J	0.81 U	0.269 U	0.216 U	0.216 U
W4CB-2-D2	Dup.	10-Jun-08	210	0.0003 U	0.21 J	380	54	0.0001 U	0.00032 J	0.16	0.14 J	23	0.0027	53	0.0003 U	580	3.6	0.0002 U	0.06 U	0.01 U	0.047	0.0007 U	0.039	9.32 J	35.4	0.467 J	0.611 U	0.378 U	0.304 U	0.304 U
W4CB-2I		14-Sep-08	190	0.0015 U	0.31	300	53	0.0001 U	0.001 U	0.27	0.1 U	21 J	0.0031 J	50	0.0015 U	500	3.5 J	0.001 U	0.06 U	0.01 U	0.048	0.0035 U	0.15	8.23	32.1	0.276 U	0.826 U	0.323 U	0.255 U	0.255 U
W4CB-2I		9-Nov-08	200	0.0015 U	0.38	330	48	0.0001 U	0.001 U	0.26	0.13 UJ	9.9	0.0033 J	51	0.0015 U	500	3.7	0.001 U	0.06 U	0.01 U	0.05	0.0035 U	0.1	8.54 J	48.8	0.232 U	0.599 U	0.208 U	0.2 U	0.2 U
W5AA-1		18-Mar-08	0.015 U	0.0003 U	0.03 U	15	0.014	0.0001 U	0.0043	0.0009 J	0.026 J	6.1	0.0003 U	42	0.0003 U	41	0.76	0.0002 U	0.012 U	0.002 U	0.02	0.009	0.0025 U	16.2	7.57	0.335 U	1.29 J	0.115 U	0.113 U	0.0803 U
W5AA-1-D1		10-Jun-08	0.015 U	0.0003 U	0.048 J	19	0.014	0.0001 U	0.0031	0.0009 U	0.022 J	7	0.0003 U	43	0.0003 U	45	1	0.0002 U	0.012 U	0.002 U	0.025	0.0079	0.0027 J	16.7 J	13.1	0.261 J	0.711 U	0.167 U	0.165 U	0.165 U
W5AA-1-D2	Dup.	10-Jun-08	0.015 U	0.0003 U	0.05	19	0.015	0.0001 U	0.0031	0.0009 U	0.02 U	7	0.0003 U	43	0.0003 U	44	1	0.0002 U	0.012 U	0.002 U	0.026	0.008	0.0025 UJ	14.1 J	13.3	0.189 U	0.864 U	0.163 U	0.16 U	0.16 U
W5AA-1I		14-Sep-08	0.015 U	0.0003 U	0.03 U	13	0.0094	0.0001 U	0.005	0.0009 U	0.024 J	6.3 J	0.0003 U	44	0.0003 U	36	0.66 J	0.0002 U	0.012 U	0.002 U	0.0085	0.0099	0.0025 U	5.87	9.23	0.226 U	0.475 U	0.193 U	0.135 U	0.135 U
W5AA-1I		5-Nov-08	0.015 U	0.0003 U	0.03 U	13	0.016 J	0.0001 U	0.004	0.0009 U	0.02 U	5.8	0.0003 U	42	0.0003 U	33	0.67	0.0002 U	0.012 U	0.002 U	0.014	0.009	0.0035 UJ	5.57	10.1	0.129 U	0.701 U	0.135 U	0.149 U	0.107 U
W5AA-1I-FD	Dup.	5-Nov-08	0.015 U	0.0003 U	0.03 U	14	0.0068 J	0.0001 U	0.0038	0.0009 U	0.02 U	6	0.0003 U	44	0.0003 U	35	0.7	0.0002 U	0.012 U	0.002 U	0.014	0.0088	0.0053 UJ	5.98	6.57	0.125 J	0.627 U	0.133 U	0.13 U	0.13 U
W5AB-3		19-Mar-08	0.015 U	0.0003 U	0.046 J	46	0.0072	0.0005	0.0017 UJ	0.0009 U	0.02 U	1.7	0.0019 J	57	0.0003 U	110	3.2	0.0002 U	0.012 U	0.002 U	0.27	0.0042	0.0027 J	152	60.7	0.259 U	0.682 UJ	0.157 U	0.152 U	0.152 U
W5AB-3		10-Jun-08	0.46	0.00036 J	0.15	46	0.027	0.00071	0.0019 J	0.0009 U	0.045	1.9	0.0006 J	59	0.0003 U	130	3.3	0.0002 U	0.012 U	0.026	0.27	0.0055	0.0043 J	192 J	56.5	0.401 U	1.01	0.135 U	0.133 U	0.133 U
W5AB-3I		14-Sep-08	0.015 U	0.0003 U	0.078	64	0.009	0.00044	0.0013 J	0.0009 U	0.026 J	2.1 J	0.0015 J	63	0.0003 U	190	4.6 J	0.0002 U	0.012 U	0.002 U	0.3	0.003	0.0036 UJ	146	57.8	0.237 U	0.634 U	0.186 U	0.13 U	0.13 U
W5AB-3I		4-Nov-08	0.015 U	0.0003 U	0.09	56	0.0082 UJ	0.00056	0.0017 J	0.0009 U	0.02 U	1.9	0.0018 J	59	0.0003 U	150	4	0.0002 U	0.012 U	0.002 U	0.33	0.0049	0.0068 UJ	187 J	77	0.0948 U	0.652 U	0.108 U	0.105 U	0.105 U
Deep Wells																														
B/W-1I1		18-Mar-08	0.015 U	0.0003 U	0.03 J	25	0.29	0.0001 U	0.007	0.0009 U	0.02 J	7.3	0.00083 J	35	0.0003 U	58	0.9	0.0002 U	0.012 U	0.002 U	0.069	0.0035	0.0035 J	29.1	26.2	0.333 J	0.636 UJ	0.116 U	0.114 U	0.0812 U
B/W-1I1		17-Jun-08	0.015 U	0.0003 U	0.03 U	26	0.00075 U	0.0001 U	0.0014 J	0.0009 U	0.02 U	7.2 J	0.001 J	38	0.0003 U	55	0.89	0.0002 U	0.012 U	0.002 U	0.074	0.005	0.0034 J	43.5 J	21.7	0.24 J	0.699 U	0.122 U	0.168 U	0.12 U
B/W-1D1		11-Sep-08	0.015 U	0.0003 U	0.037 J	26	0.00075 U	0.0001 U	0.00097 J	0.0009 U	0.021 J	7.1	0.00065 J	38	0.0003 U	53	0.96	0.0002 U	0.012 U	0.002 U	0.066	0.0045	0.0025 U	43.3	19.6	0.165 U	0.589 U	0.0785 U	0.0768 U	0.0768 U
B/W-1D1		4-Nov-08	0.015 U	0.0003 U	0.039 J	24	0.0082 UJ	0.0001 U	0.0018 J	0.0009 U	0.02 U	6.9	0.00071 J	40	0.0003 U	49	0.86	0.0002 U	0.012 U	0.002 U	0.071	0.0053	0.0068 UJ	41 J	10.3	0.14 U	0.654 U	0.138 U	0.134 U	0.134 U
B/W-1I2		10-Apr-08	0.015 U	0.0003 U	0.03 U	6.6	0.14	0.0001 U	0.01	0.0009 U	0.02 U	4.5	0.0008 J	45	0.0003 U	27	0.28	0.0002 U	0.012 U	0.002 U	0.0063	0.0069	0.024	2.6 J	6.91	0.293 U	0.804 UJ	0.158 U	0.126 U	0.126 U
B/W-1I2		17-Jun-08	0.015 U	0.0003 U	0.03 U	6.1	0.0015 UJ	0.0001 U	0.0091 J	0.0009 U	0.02 U	4.4 J	0.0003 U	50	0.0003 U	26	0.24	0.0002 U	0.012 U	0.002 U	0.0048	0.0092	0.0025 U	2.8 J	5.15	0.373 U	0.714 U	0.168 U	0.164 U	0.164 U
B/W-1D2		11-Sep-08	0.015 U	0.0003 U	0.03 U	4.6	0.0013	0.0001 U	0.0093	0.0009 U	0.02 U	3.6	0.00032 J	49	0.0003 U	23	0.19	0.0002 U	0.012 U	0.002 U	0.0029	0.0095	0.0025 U	0.986 J	4.65	0.199 U	1.01 U	0.131 U	0.128 U	0.128 U
B/W-1D2		4-Nov-08	0.015 U	0.0003 U	0.03 U	6.3	0.00075 U	0.0001 U	0.008	0.0009 U	0.021 J	4.4	0.00043 J	50	0.0003 U	25	0.26	0.0002 U	0.012 U	0.002 U	0.0054	0.01	0.0065 UJ	4.28 J	6.8	0.0751 U	0.635 U	0.119 U	0.116 U	0.116 U
B/W-1D2-FD	Dup.	4-Nov-08	0.015 U	0.0003 U	0.03 U	6.3	0.0031 UJ	0.0001 U	0.0082	0.0009 U	0.02 U	4.3	0.00042 J	49	0.0003 U	24	0.26	0.0002 U	0.012 U	0.002 U	0.0056	0.01	0.0078 UJ	3.54 J	6.48	0.0908 U	0.653 U	0.193 U	0.153 U	0.153 U
B/W-1D		18-Mar-08	0.015 U	0.0003 U	0.03 U	9.2	0.00075 U	0.0001 U	0.017	0.0009 U	0.02 U	3.4	0.00056 J	48	0.0003 U	47	0.36	0.0002 U	0.012 U	0.002 U	0.015	0.014	0.026	8.48	5.18	0.194 U	1.22 J	0.0852 U	0.102 U	0.0831 U
B/W-1D		17-Jun-08	0.015 U	0.0003 U	0.03 U	7.3	0.00075 U	0.0001 U	0.026 J	0.0009 U	0.02 U	3 J	0.00039 J	52	0.0003 U	38	0.27	0.0002 U	0.012 U	0.002 U	0.014	0.015	0.0066 J	7.63 J	5.67	0.276 U	0.745 U	0.0891 U	0.167 J	0.0872 U
B/W-1D3		11-Sep-08	0.015 U	0.0003 U	0.03 U	5.1	0.00095 J	0.0001 U	0.027	0.0009 UR	0.02 U	2.6	0.00034 J	49	0.0003 UJ	34	0.22	0.0002 U	0.012 UJ	0.002 U	0.0076	0.018 J	0.0034 J	14.9	7.97	0.217 U	0.802 U	0.187 U	0.13 U	0.13 U
B/W-1D3		13-Nov-08	0.015 U	0.0003 U	0.03 U	8.9	0.00075 U	0.0001 U	0.025	0.0009 U	0.02 U	3.1	0.00056 J	53	0.0003 U	42	0.37	0.00021 J	0.012 U	0.002 U	0.022	0.015	0.022 UJ	9.77 J	7.46	0.206 U	0.585 U	0.139 U	0.153 U	0.109 U
B/W-2D		19-Mar-08	0.015 U	0.0003 U	0.03 U	3.8	0.14	0.0001 U	0.011	0.0009 U	0.021 J	2.5	0.0003 U	43	0.0003 U	24	0.22	0.0002 U	0.012 U	0.002 U	0.004	0.014	0.0025 U	2.83 J	3.77 J	0.239 U	0.575 UJ	0.123 U	0.12 U	0.0857 U
B/W-2D		11-Jun-08	0.015 U	0.0003 U	0.03 U	3.7	0.18	0.0001 U	0.012	0.0009 U	0.024 J	2.5	0.0003 U	45	0.0003 U	24	0.22	0.0002 U	0.012 U	0.002 U	0.0043	0.014	0.0025 UJ	2.74 J	4.26	0.179 U	0.727 UJ	0.161 U	0.158 U	0.158 U
B/W-2D		11-Sep-08	0.032 J	0.0003 U	0.03 U	4	0.24	0.0001 U	0.0098	0.0009 U	0.02 U	2.8	0.00034 J	44	0.0003 U	23	0.23	0.0002 U	0.012 U	0.002 U	0.0043	0.012	0.012 UJ	2.02 J	5.56	0.187 U	0.604 U	0.157 U	0.11 U	0.11 U
B/W-2D		12-Nov-08	0.015 U	0.0003 U	0.03 U	4.3	0.095	0.0001 U	0.012	0.0009 U	0.02 J	3.1	0.00043 J	48	0.0003 U	25	0.24	0.00034 J	0.012 U	0.002 U	0.0053	0.015	0.0045 UJ	3.29 J	4.9	0.155 U	0.458 U	0.104 U	0.1 U	0.1 U

Table 3-8. 2008 Analytical Results for Monitor Wells - Continued

			Field Parameters						Water Quality Parameters (Lab)											Metals (Lab)										
Sample Name	Duplicate	Sample Date	pH (field)	Specific Conductance (field)	ORP (field)	Dissolved Oxygen (field)	Temperature (field)	Turbidity (field)	Total Alkalinity (as $CaCO_3$)	Bicarbonate Alkalinity (as $CaCO_3$)	Carbonate (as $CaCO_3$)	Total Dissolved Solids	Total Organic Carbon	Chloride	Fluoride	Sulfate	Nitrate	Nitrite	Nitrate-Nitrite	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium	Cobalt	Copper
			s.u.	µS/cm	mV	mg/L	Deg C	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Deep Wells																														
B/W-3D		14-Mar-08	7.97	212	37.9	0.19	15.12	0.34	80	80	2 U	190	0.5 U	4.4	0.57 UJ	14	0.06 U	0.09 U	0.15 U	0.04 U	0.0002 U	0.021	0.0099	0.0002 U	0.17	0.00011 U	14	0.00086 J	0.0031	0.00075 U
B/W-3D-D1		17-Jun-08	7.57	190	53.5	0.29	15.91	0.07	92	92	2 U	150	0.5 U	4.4	0.57	16	0.06 UJ	0.09 UJ	0.15 UJ	0.04 U	0.0002 U	0.018	0.014	0.0002 U	0.24	0.00011 U	13	0.0007 U	0.00015 U	0.00075 U
B/W-3D-D2	Dup.	17-Jun-08	7.57	190	53.5	0.29	15.91	0.07	88	88	2 U	170	0.5 U	4.4	0.55	16	0.06 UJ	0.09 UJ	0.15 UJ	0.04 U	0.0002 U	0.018	0.014	0.0002 U	0.23	0.00011 U	13	0.0007 U	0.00015 U	0.00075 U
B/W-3D		9-Sep-08	8.22	224	2.7	0.22	15.88	0.31	80	80	2 U	170	0.5 U	4.6	0.53	17	0.06 U	0.09 U	0.15 U	0.04 U	0.0002 J	0.017	0.013	0.0002 U	0.21	0.00011 UJ	11	0.0007 U	0.00015 U	0.0011 J
B/W-3D		10-Nov-08	7.83	218	77.3	0.31	15.11	0.12	80	80	2 U	190	0.5 U	5.1 J	0.7	19	0.06 U	0.09 U	0.15 U	0.04 U	0.00063 J	0.018	0.013	0.0002 U	0.23	0.00011 U	13	0.00087 J	0.0025 UJ	0.00075 U
B/W-4D		17-Mar-08	7.78	648	58.7	0.09	15.46	8.08	110	110	2 U	440	0.5 U	53	0.33 J	140	0.59	0.09 U	0.59	0.04 U	0.0002 U	0.0089	0.054	0.0002 U	0.16	0.00011 U	73	0.0007 U	0.00015 U	0.00075 U
B/W-4D		12-Jun-08	7.76	788	134.2	0.33	16.31	0.11	100	100	2 U	540	1.7	77	0.45 J	180	0.92 UJ	0.09 U	0.92 UJ	0.04 U	0.0002 U	0.0092	0.067	0.0002 UJ	0.22 UJ	0.00011 U	95	0.0007 U	0.00015 U	0.00075 U
B/W-4D		9-Sep-08	7.81	858	33.9	0.13	16.50	0.14	110	110	2 U	620	0.5 U	80	0.27 J	190	1	0.09 U	1	0.04 U	0.00024 J	0.0072	0.071	0.0002 UJ	0.19	0.00011 U	99	0.0007 U	0.00026 UJ	0.0011 J
B/W-4D		10-Nov-08	7.57	825	104.7	0.20	15.95	0.16	110	110	2 U	600	0.52 J	74 J	0.28 J	170	1.1 J	0.09 U	1.1 J	0.04 U	0.00027 J	0.0068	0.073	0.0002 U	0.22	0.00011 U	100	0.0007 U	0.00026 UJ	0.00095 J
B/W-5D		14-Mar-08	7.89	1090	75.6	4.32	15.65	16.00	120	120	2 U	760	0.5 U	86	1.3	280	4.3	0.09 U	4.3	0.04 U	0.0002 U	0.0092	0.027	0.0002 U	0.72	0.00016 J	35	0.0045	0.00047 UJ	0.00075 U
B/W-5RD		10-Jun-08	7.93	1047	84.5	5.21	16.33	1.25	120	120	2 U	690	0.5 U	75	1.6	260	4.3	0.09 U	4.3	0.04 U	0.0002 J	0.0088	0.022	0.0002 U	0.81	0.00013 J	32	0.0047	0.00015 U	0.00075 J
B/W-5DR		10-Sep-08	7.82	1018	126.1	6.85	16.52	2.47	130	130	2 U	680	0.5 U	69	1.4	240	4.3	0.09 U	4.3	0.04 U	0.0002 U	0.0098	0.02	0.0002 U	0.73	0.00012 J	28	0.0041	0.00027 J	0.00099 J
B/W-5DR		3-Nov-08	7.81	1013	142.2	6.44	15.45	5.04	130	130	2 U	680	0.5 U	75	1.6	240	4.5	0.09 U	4.5	0.04 U	0.001 U	0.0079	0.02	0.001 U	0.69	0.00055 U	30	0.0058 UJ	0.0076	0.0038 U
B/W-9D		12-Mar-08	7.94	254	133.0	0.30	14.48	2.43	88	88	2 U	200	0.5 U	7.9	0.46 J	24	0.23	0.09 U	0.23 J	0.04 U	0.00032 J	0.012	0.04	0.0002 U	0.12 UJ	0.00011 U	21	0.0018 J	0.00015 U	0.00075 U
B/W-9D		10-Jun-08	7.84	239	121.4	0.23	14.93	1.04	72	72	2 U	210	0.5 U	6.5	0.6 UJ	22	0.13	0.09 U	0.15 U	0.04 U	0.00031 J	0.013	0.038	0.0002 U	0.19	0.00011 U	19	0.0007 U	0.00015 U	0.00075 U
B/W-9D		9-Sep-08	7.91	228	30.0	0.31	16.11	0.82	76	76	2 U	180	0.5 U	5.6	0.43 J	20	0.13	0.09 U	0.15 U	0.04 U	0.00028 J	0.013	0.031	0.0002 U	0.15	0.00011 UJ	17	0.00089 J	0.00042 UJ	0.00075 U
B/W-9D		11-Nov-08	7.84	214	117.4	0.68	13.94	0.02	76	76	2 U	190	0.5 U	5.6 J	0.44 J	19	0.065 J	0.09 U	0.15 U	0.04 U	0.0003 J	0.011	0.031	0.0002 U	0.18	0.00011 U	19	0.00098 J	0.00025 J	0.00075 U
B/W-9D-FD	Dup.	11-Nov-08	7.84	214	117.4	0.68	13.94	0.02	80	80	2 U	190	0.5 U	5.5 J	0.37 J	19	0.06 U	0.09 U	0.15 U	0.04 U	0.00032 J	0.013	0.034	0.0002 U	0.18	0.00011 U	19	0.0013 J	0.00015 U	0.00075 U
B/W-10D		12-Mar-08	7.94	314	183.2	0.34	14.97	3.51	88	88	2 U	220	0.5 U	13	0.43 J	36	0.5	0.09 U	0.5	0.04 U	0.00023 J	0.011	0.034	0.0002 U	0.14 UJ	0.00011 U	29	0.0017 J	0.00015 U	0.00075 U
B/W-10D		12-Jun-08	7.88	318	215.3	0.36	15.32	2.13	120	120	2 U	250	0.5 U	14	0.42 J	43	0.71 UJ	0.09 U	0.71 UJ	0.04 U	0.00025 J	0.01	0.037	0.0002 U	0.2 UJ	0.00011 U	37	0.002	0.00069 UJ	0.00075 U
B/W-10D		15-Sep-08	7.93	416	195.1	0.40	15.39	1.04	120	120	2 U	270	0.5 U	17	0.38 J	49	0.91	0.09 U	0.91	0.04 U	0.00032 J	0.0078	0.045	0.0002 U	0.15	0.00011 U	43	0.0011 J	0.0013 UJ	0.00075 U
B/W-10D		10-Nov-08	7.38	333	183.3	0.89	14.92	9.98	100	100	2 U	270	0.5 U	14 J	0.3 J	39	0.6 J	0.09 U	0.6 J	0.04 U	0.00034 J	0.0086	0.033	0.0002 U	0.18	0.00011 U	34	0.0027	0.0008 UJ	0.00075 U
B/W-11D1		13-Mar-08	6.04	9049	-7.9	0.42	15.16	1.06	1900	1900	2 U	9200	3.6	120	1.5 U	5000	0.6 U	0.9 U	1.5 U	0.08 U	0.001 U	0.0056 UJ	0.028	0.001 U	2.2	0.00055 U	520	0.0035 U	0.028	0.0083 UJ
B/W-11D		17-Jun-08	6.09	8387	-5.3	0.42	16.61	0.79	2400	2400	2 U	8200	5.8 J	99	15 U	4300	0.06 UJ	9 UJ	9.1 UJ	0.08 U	0.0004 U	0.012	0.026	0.0004 U	2.2	0.00022 U	520	0.0021 J	0.018	0.007
B/W-11D		9-Sep-08	6.05	8052	31.0	0.57	17.17	5.88	2100	2100	2 U	8200	4.5	97	0.97 J	4000	0.06 U	0.18 UJ	0.24 U	0.08 U	0.0004 U	0.0098	0.021	0.0004 UJ	2	0.00023 J	520	0.0019 J	0.01	0.01
B/W-11D		2-Nov-08	5.99	8350	-48.2	2.84	15.23	0.60	2100	2100	2 U	8500	3.7	110	1.5 U	4500	0.06 U	0.09 UJ	0.15 U	0.08 U	0.001 U	0.016	0.02	0.001 U	2.1	0.00055 U	480	0.0035 U	0.011	0.012
B/W-18I		18-Mar-08	8.03	590	89.8	0.37	14.58	82.90	110	110	2 U	410	0.5 U	29	0.61 J	110	0.068 J	0.09 U	0.15 U	0.042 J	0.00039 J	0.022	0.021	0.0002 U	0.3	0.00011 U	15	0.00074 J	0.0016	0.00075 U
B/W-18I		18-Jun-08	7.90	607	260.9	0.07	15.24	2.65	88	88	2 U	510	0.5 U	41	0.63	160	0.074 UJ	0.09 U	0.074 UJ	0.04 U	0.00024 J	0.028	0.021	0.0002 U	0.37	0.00011 U	18	0.0007 U	0.00015 U	0.00075 U
B/W-18D1		14-Sep-08	8.16	732	266.0	0.20	15.24	2.05	82	82	2 U	480	0.5 U	48	0.6	190	0.06 U	0.09 U	0.15 U	0.04 U	0.00046 J	0.026	0.021	0.0002 U	0.35	0.00011 U	20	0.0009 J	0.00015 U	0.0019 J
B/W-18D1		6-Nov-08	8.20	717	104.2	0.39	15.43	3.00	84	84	2 U	530	0.5 U	44	0.62	170	0.06 UJ	0.09 UJ	0.15 UJ	0.04 U	0.0004 J	0.03	0.02	0.0002 U	0.36	0.00011 U	19	0.0007 U	0.00056 UJ	0.00075 U
B/W-18D1-FD	Dup.	6-Nov-08	8.20	717	104.2	0.39	15.43	3.00	86	86	2 U	510	0.5 U	44	0.52	170	0.06 UJ	0.09 UJ	0.15 UJ	0.04 U	0.00033 J	0.03	0.019	0.0002 U	0.36	0.00011 U	19	0.0007 U	0.00015 U	0.00075 U
B/W-18D		18-Mar-08	8.17	450	77.9	0.23	14.80	302.00	140	140	2 U	440	0.5 U	11	0.74 J	55	0.06 U	0.09 U	0.15 U	0.065	0.00064 J	0.025	0.018	0.0002 U	0.33	0.00023 J	7.2	0.0007 U	0.0007 UJ	0.00075 U
B/W-18D		18-Jun-08	8.31	439	-51.0	0.08	15.29	34.52	160	160	2 U	400	0.5 U	11	0.83	75	0.06 U	0.09 U	0.15 U	0.04 U	0.00021 J	0.018	0.019	0.0002 U	0.44	0.00026 J	6.1	0.0007 U	0.00015 U	0.00075 U
B/W-18D2		14-Sep-08	8.65	451	-38.7	0.24	15.40	62.81	160	160	2 U	360	0.5 U	11	0.67	49	0.11 J	0.09 U	0.15 U	0.042 J	0.00064 J	0.042	0.013	0.0002 U	0.45	0.00036 UJ	4.7	0.0011 J	0.0044	0.00075 U
B/W-18D2		6-Nov-08	8.44	466	87.0	0.28	14.98	54.00	170	170	2 U	320	0.5 U	11	0.59	53	0.06 U	0.09 U	0.15 U	0.04 U	0.00052 J	0.023	0.015	0.0002 U	0.44	0.00019 J	5.5	0.0007 U	0.0046	0.00075 U
B/W-19D-D1		10-Apr-08	8.02	977	-43.4	1.79	17.38	0.57	96	96	2 U	590	0.5 U	54	0.91	240	1.8	0.09 U	1.8	0.04 U	0.00049 J	0.0039	0.031	0.0002 U	0.56	0.00011 U	39	0.0018 J	0.0011	0.0014 UJ
B/W-19D-D2	Dup.	10-Apr-08	8.02	977	-43.4	1.79	17.38	0.57	94	94	2 U	590	0.5 U	52	0.89	240	1.8	0.09 U	1.8	0.04 U	0.00041 J	0.0037	0.031	0.0002 U	0.57	0.00011 U	38	0.0021	0.00039 J	0.001 UJ
B/W-19D		10-Jun-08	7.90	1034	118.2	3.44	17.85	0.22	96	96	2 U	620	0.5 U	69	1.1	300	2.9	0.09 U	2.9	0.04 U	0.0002 U	0.0048	0.024	0.0002 U	0.62	0.00011 U	36	0.0016 J	0.00015 U	0.00099 J
B/W-19D		10-Sep-08	7.88	1031	52.6	5.34	18.52	1.33	100	100	2 U	690	0.5 U	57	0.96	300	3.3	0.09 U	3.3	0.04 U	0.00028 UJ	0.0051	0.026 J	0.0002 UJ	0.64	0.00011 UJ	37	0.0023	0.00021 J	0.0012 J
B/W-19D		5-Nov-08	7.90	959	120.7	4.48	16.76	0.60	90	90	2 U	700	0.5 U	58	0.97	310	3.3	0.09 U	3.3	0.04 U	0.00028 J	0.0047	0.022	0.0002 U	0.63	0.00012 J	39	0.0037 UJ	0.00062 UJ	0.0011 J
B/W-27D		12-Mar-08	7.51	606	138.7	0.30	13.34	NA	160	160	2 U	380	0.5 U	30	0.35 J	87	0.87	0.16	1	0.04 U	0.0002 U	0.0027 UJ	0.11	0.0002 U	0.11 UJ	0.00011 U	65	0.0007 U	0.00032 UJ	0.00075 U
B/W-27D		11-Jun-08	7.54	516	15.6	0.38	13.27	0.12	160	160	2 U	380	0.5 U	30	0.31 J	89	1	0.09 U	1	0.04 U	0.0002 J	0.0038	0.098	0.0002 U	0.19 UJ	0.00011 U	66	0.0007 U	0.00096 UJ	0.00075 U
B/W-27D		11-Sep-08	7.61	545	69.2	6.10	15.04	2.17	160	160	2 U	330	0.5 U	29	0.65	79	0.89 UJ	0.09 U	0.89 UJ	0.04 U	0.0002 U	0.0038	0.092	0.0002 U	0.14	0.00092 J	56	0.0019 J	0.00045 UJ	0.00075 U
B/W-27D		12-Nov-08	7.07	523	87.8	0.83	13.50	1.53	170	170	2 U	370	0.5 U	28	0.23 J	76	1	0.09 U	1	0.04 U	0.0002 U	0.0048	0.1	0.0002 U	0.17	0.00011 U	65	0.0009 J	0.00093 J	0.00075 U

Table 3-8. 2008 Analytical Results for Monitor Wells - Continued

			Metals (Lab) Continued																				Radiological (Lab)						
Sample Name	Duplicate	Sample Date	Iron	Lead	Lithium	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Phosphorus	Potassium	Selenium	Silicon	Silver	Sodium	Strontium	Thallium	Tin	Titanium	Uranium	Vanadium	Zinc	Alpha, Gross	Beta, Gross	Radium-226	Radium-228	Thorium-228	Thorium-230	Thorium-232
			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L
Deep Wells - Continued																														
B/W-3D		14-Mar-08	0.015 U	0.0003 U	0.03 U	2.1	0.009	0.0001 U	0.011	0.0009 J	0.02 U	1.3	0.0003 U	51	0.0003 U	30	0.15	0.0002 U	0.012 U	0.002 U	0.0048	0.014	0.0027 J	3.94	3.35 J	0.236 U	0.686 U	0.121 U	0.145 U	0.118 U
B/W-3D-D1		17-Jun-08	0.015 U	0.0003 U	0.031 J	2.1	0.013	0.0001 U	0.014	0.0009 U	0.02 U	1	0.0003 U	44	0.0003 U	31	0.15	0.0002 U	0.012 U	0.002 U	0.0043	0.0099	0.0025 U	2.45 J	2.52 U	0.258 U	0.561 UJ	0.118 U	0.162 U	0.115 U
B/W-3D-D2	Dup.	17-Jun-08	0.015 U	0.0003 U	0.03 U	1.9	0.013	0.0001 U	0.014	0.0009 U	0.02 U	1.2	0.0003 U	45	0.0003 U	31	0.15	0.0002 U	0.012 U	0.002 U	0.0043	0.011	0.0025 U	2.76 J	2.95 U	0.344 U	0.606 UJ	0.17 U	0.145 U	0.119 U
B/W-3D		9-Sep-08	0.015 U	0.0003 U	0.03 U	1.6	0.024	0.0001 U	0.014	0.0009 U	0.02 U	1.1	0.0003 U	42	0.0003 U	33	0.13	0.0002 U	0.012 U	0.002 U	0.0043	0.0085	0.0025 U	3.21	2.54 U	0.253 J	0.516 U	0.083 U	0.0816 U	0.1 U
B/W-3D		10-Nov-08	0.015 U	0.0003 U	0.03 U	2	0.016	0.0001 U	0.013	0.0009 U	0.02 U	1.1	0.0003 U	47	0.0003 U	31	0.14	0.0002 U	0.012 U	0.002 U	0.0045	0.011	0.0025 U	1.76 J	2.77 U	0.128 UJ	0.658 U	0.116 U	0.112 U	0.112 U
B/W-4D		17-Mar-08	0.015 U	0.0003 U	0.03 U	13	0.016	0.0001 U	0.0073	0.0009 U	0.02 U	5	0.0003 U	42	0.0003 U	37	0.79	0.0002 U	0.012 U	0.002 U	0.018	0.0098	0.0025 U	15.4	8.19	0.318 U	0.615 U	0.118 U	0.116 U	0.0826 U
B/W-4D		12-Jun-08	0.084	0.0003 U	0.048 J	16	0.0048	0.0001 U	0.0059	0.0012 J	0.02 U	5.4	0.0003 U	44	0.0003 U	42	1	0.0002 U	0.012 U	0.002 U	0.022	0.0098	0.0025 UJ	15.1	7.59	0.252 U	0.435 U	0.116 U	0.114 U	0.114 U
B/W-4D		9-Sep-08	0.015 U	0.0003 U	0.031 J	18	0.0028	0.0001 U	0.0054	0.0009 U	0.02 U	5.4	0.0003 U	42	0.0003 U	40	1.1	0.0002 U	0.012 U	0.002 U	0.023	0.008	0.003 UJ	10.2	11.5	0.235 J	0.73 U	0.172 U	0.138 U	0.138 U
B/W-4D		10-Nov-08	0.015 U	0.0003 U	0.031 J	18	0.0037 UJ	0.0001 U	0.0056	0.0009 U	0.02 U	5.4	0.0003 U	45	0.0003 U	40	1	0.0002 U	0.012 U	0.002 U	0.025	0.0088	0.0025 U	9.14	14	0.165 J	0.829 U	0.316 U	0.348 U	0.248 U
B/W-5D		14-Mar-08	0.023 J	0.0003 U	0.059 J	4.9	0.0068	0.0001 U	0.083	0.0009 U	0.02 U	2.5	0.0043	47	0.0003 U	190	0.52	0.0002 U	0.012 U	0.002 U	0.039	0.012	0.003 J	22.3	9.73	0.448 U	0.589 U	0.169 U	0.134 U	0.134 U
B/W-5RD		10-Jun-08	0.015 U	0.0003 U	0.058	4.7	0.00075 U	0.0001 U	0.081	0.0009 U	0.02 U	2.5	0.0047	49	0.0003 U	190	0.48	0.0002 U	0.012 U	0.002 U	0.035	0.013	0.0025 U	25.2 J	13.4	0.327 U	0.522 U	0.14 U	0.113 U	0.113 U
B/W-5DR		10-Sep-08	0.015 U	0.0003 U	0.05	4	0.00075 U	0.0001 U	0.085	0.0009 U	0.02 U	2.2	0.0042	46	0.0003 U	170	0.43	0.0002 U	0.012 U	0.002 U	0.038	0.014	0.0025 U	26.6	9.19	0.272 U	0.52 U	0.0811 U	0.0794 U	0.0975 U
B/W-5DR		3-Nov-08	0.015 U	0.0015 U	0.057	4.1	0.014	0.0001 U	0.076	0.0045 U	0.02 U	2.1 J	0.0042 J	47	0.0015 U	180	0.45	0.001 U	0.012 U	0.002 U	0.042	0.011	0.012 U	11.1	11.8	0.158 U	0.526 U	0.101 U	0.0981 U	0.0981 U
B/W-9D		12-Mar-08	0.015 U	0.0003 U	0.03 U	4.8	0.005	0.0001 U	0.0092	0.0009 U	0.02 U	3.7	0.0003 U	45	0.0003 U	22	0.19	0.0002 U	0.012 U	0.002 U	0.003	0.015	0.0025 U	1.24 U	4.41	0.23 U	0.583 U	0.122 U	0.119 U	0.119 U
B/W-9D		10-Jun-08	0.015 U	0.0003 U	0.03 U	4.4	0.0033	0.0001 U	0.011	0.0009 U	0.02 J	3.6	0.0003 U	43	0.0003 U	22	0.17	0.0002 U	0.012 U	0.002 U	0.0029	0.014	0.0025 UJ	2.07 J	4.06	0.214 U	0.744 U	0.173 U	0.139 U	0.139 U
B/W-9D		9-Sep-08	0.015 U	0.0003 U	0.03 U	4	0.01	0.0001 U	0.01	0.0009 U	0.02 U	3.4	0.0003 U	42	0.0003 U	21	0.16	0.0002 U	0.012 U	0.002 U	0.0024	0.014	0.0025 U	1.67 J	5.02	0.154 J	0.927 U	0.154 U	0.108 U	0.108 U
B/W-9D		11-Nov-08	0.015 U	0.0003 U	0.03 U	4.5	0.0014	0.0001 U	0.01	0.0009 U	0.025 J	3.6	0.0003 U	45	0.0003 U	22	0.18	0.0002 U	0.012 U	0.002 U	0.0024	0.013	0.0025 U	0.841 U	3.86 J	0.203 U	0.681 U	0.109 U	0.105 U	0.105 U
B/W-9D-FD	Dup.	11-Nov-08	0.015 U	0.0003 U	0.03 U	4.4	0.0012	0.0001 U	0.011	0.0009 U	0.02 U	3.6	0.0003 U	45	0.0003 U	22	0.17	0.0002 U	0.012 U	0.002 U	0.0026	0.014	0.0025 U	1.4 J	4.45	0.268 U	0.798 J	0.124 U	0.0969 U	0.0969 U
B/W-10D		12-Mar-08	0.015 U	0.0003 U	0.03 U	5.6	0.0018 UJ	0.0001 U	0.0075	0.0009 U	0.02 U	3.2	0.0003 U	45	0.0003 U	26	0.27	0.0002 U	0.012 U	0.002 U	0.0074	0.014	0.0025 U	4.48	4.42	0.247 U	0.688 U	0.146 U	0.142 U	0.142 U
B/W-10D		12-Jun-08	0.018 J	0.0003 U	0.03 U	7.5	0.0027	0.0001 U	0.0071	0.0009 U	0.02 U	4.6	0.0003 U	45	0.0003 U	29	0.34	0.0002 U	0.012 U	0.002 U	0.01	0.012	0.0025 U	8.55	5.93	0.257 U	0.789 UJ	0.148 U	0.146 U	0.146 U
B/W-10D		15-Sep-08	0.015 U	0.0003 U	0.03 U	8.6	0.0044	0.0001 U	0.005	0.0009 U	0.02 U	4.8 J	0.0003 U	43	0.0003 U	30	0.39 J	0.0002 U	0.012 U	0.002 U	0.012	0.0098	0.0065 UJ	10.9	8.04	0.217 U	0.687 U	0.161 U	0.138 U	0.112 U
B/W-10D		10-Nov-08	0.015 U	0.0003 U	0.03 U	6.8	0.0014 UJ	0.0001 U	0.0064	0.0011 J	0.02 U	4.2	0.0003 U	46	0.0003 U	26	0.31	0.0002 U	0.012 U	0.002 U	0.0092	0.012	0.0026 UJ	5.79	5.75	0.0958 UJ	0.654 U	0.13 U	0.125 U	0.125 U
B/W-11D1		13-Mar-08	3	0.0015 U	0.3	990	15	0.0001 UJ	0.032	0.089	0.22	15	0.0074 J	71	0.0015 U	840	8.1	0.001 U	0.026 J	0.004 U	0.19	0.0074 J	0.024 UJ	110	59.8	0.276 J	0.508 U	0.324 U	0.316 U	0.316 U
B/W-11D		17-Jun-08	4.1	0.0006 U	0.38	880	7.6	0.0001 U	0.028	0.061	0.057 J	14	0.0075	76	0.0006 U	880	7.7	0.0004 U	0.024 U	0.004 U	0.2	0.0097	0.0063 J	142 J	74.3	0.394 J	0.589 U	0.392 U	0.383 U	0.383 U
B/W-11D		9-Sep-08	2.2	0.0006 U	0.31	740	4.6	0.0001 U	0.014	0.037	0.12	16	0.006	78	0.0006 U	1100	8.6	0.0004 U	0.024 U	0.004 U	0.19	0.012	0.017 J	122 J	46.5	0.702 J	0.702 J	0.174 U	0.171 U	0.171 U
B/W-11D		2-Nov-08	2.4	0.0015 U	0.34	850	9.6	0.0001 U	0.018	0.071	0.14	14 J	0.02	77	0.0015 U	800	8.5	0.001 U	0.024 U	0.004 U	0.19	0.01	0.022 J	119 J	65.7	0.553 J	0.725 J	0.187 U	0.149 U	0.149 U
B/W-18I		18-Mar-08	0.034 J	0.0003 U	0.03 U	3.2	0.032	0.0001 U	0.051	0.0009 U	0.023 J	2.1	0.0011 J	45	0.0003 U	100	0.15	0.0002 U	0.012 U	0.002 U	0.01	0.028	0.0066 J	6.75	13.3	0.236 U	0.594 UJ	0.159 U	0.156 U	0.156 U
B/W-18I		18-Jun-08	0.015 U	0.0003 U	0.03 U	4	0.0097	0.0001 U	0.019	0.0009 U	0.02 U	2.1	0.00039 J	51	0.0003 U	120	0.23	0.0002 U	0.012 U	0.002 U	0.0055	0.036	0.0025 U	4.3	4.62	0.364 U	0.756 UJ	0.137 U	0.109 U	0.109 U
B/W-18D1		14-Sep-08	0.015 U	0.0003 U	0.03 U	4.1	0.0042	0.0001 U	0.02	0.0009 U	0.02 U	2.3 J	0.00038 J	49	0.0003 U	120	0.23 J	0.00024 J	0.012 U	0.002 U	0.0053	0.037	0.0025 U	1.16 J	3.13 U	0.173 U	0.856 U	0.149 U	0.119 U	0.119 U
B/W-18D1		6-Nov-08	0.015 U	0.0003 U	0.03 U	4	0.0071	0.0001 U	0.021	0.0009 U	0.02 U	2	0.00051 J	50	0.0003 U	120	0.22	0.0002 U	0.012 U	0.002 U	0.0057	0.038	0.0036 UJ	3.56	3.95 J	0.225 U	0.594 U	0.111 U	0.0774 U	0.0774 U
B/W-18D1-FD	Dup.	6-Nov-08	0.015 U	0.0003 U	0.03 U	4	0.0065	0.0001 U	0.022	0.0009 U	0.02 U	2	0.00055 J	51	0.0003 U	120	0.22	0.0002 U	0.012 U	0.002 U	0.0057	0.038	0.0039 UJ	2.86 J	5.66	0.214 U	0.804 U	0.162 U	0.128 U	0.128 U
B/W-18D		18-Mar-08	0.031 J	0.0003 U	0.03 U	1.6	0.12	0.0001 U	0.14	0.0009 U	0.023 J	1.8	0.0013 J	35	0.0003 U	86	0.075	0.0002 U	0.012 U	0.002 U	0.0078	0.023	0.0025 U	4.72	3.1 J	0.182 U	0.703 UJ	0.168 U	0.165 U	0.165 U
B/W-18D		18-Jun-08	0.015 U	0.0003 U	0.03 U	1.4	0.097	0.0001 U	0.17	0.0009 U	0.02 U	1.9	0.00042 J	34	0.0003 U	100	0.082	0.0002 U	0.012 U	0.002 U	0.0059	0.0076	0.0025 U	4.97	3.28 J	0.433 U	0.841 UJ	0.194 U	0.135 U	0.135 U
B/W-18D2		14-Sep-08	0.028 UJ	0.0003 U	0.03 U	1	0.073	0.0001 U	0.17	0.0009 U	0.021 J	1.8 J	0.001 J	42	0.0003 U	93	0.059 J	0.0002 U	0.012 U	0.002 U	0.01	0.029	0.0025 U	7.34	7.95	0.172 U	0.513 U	0.197 U	0.157 U	0.157 U
B/W-18D2		6-Nov-08	0.041	0.0003 U	0.03 U	1.1	0.094	0.0001 U	0.15	0.0009 U	0.02 U	1.8	0.00033 J	37	0.0003 U	90	0.063	0.0002 U	0.012 U	0.002 U	0.0087	0.015	0.0044 UJ	5.46	5.61	0.255 U	0.697 U	0.182 U	0.177 U	0.218 U
B/W-19D-D1		10-Apr-08	0.015 U	0.0003 U	0.048 J	4.5	0.17	0.0001 U	0.061	0.0009 U	0.02 U	2.3	0.0025	28	0.0003 U	150	0.65	0.0002 U	0.012 U	0.002 U	0.035	0.0065	0.0084 J	26.8	6.65	0.35 U	0.672 UJ	0.164 U	0.161 U	0.161 U
B/W-19D-D2	Dup.	10-Apr-08	0.015 U	0.0003 U	0.047 J	4.6	0.18	0.0001 U	0.062	0.0009 U	0.02 U	2.2	0.0022	27	0.0003 U	150	0.66	0.0002 U	0.012 U	0.002 U	0.036	0.0067	0.0034 J	24.4	8.94	0.307 U	0.615 UJ	0.155 U	0.152 U	0.152 U
B/W-19D		10-Jun-08	0.015 U	0.0003 U	0.03 U	3.9	0.0028	0.0001 U	0.044	0.0009 U	0.02 U	1.9	0.0019 J	33	0.0003 U	160	0.63	0.0002 U	0.012 U	0.002 U	0.033	0.0078	0.0025 U	18.6 J	8	0.337 U	0.643 U	0.18 U	0.144 U	0.144 U
B/W-19D		10-Sep-08	0.015 U	0.0003 U	0.049 J	4.2	0.00093 UJ	0.0001 U	0.043	0.0009 UR	0.02 U	2.1	0.002	34	0.0003 UJ	160	0.67	0.0002 U	0.012 UJ	0.002 U	0.032	0.01 J	0.0025 U	29.2	8.02	0.2 U	0.845 U	0.0795 U	0.0778 U	0.0955 U
B/W-19D		5-Nov-08	0.015 U	0.0003 U	0.051	4.5	0.01	0.0001 U	0.04	0.0009 U	0.02 U	2.1	0.0018 J	36	0.0003 U	170	0.7	0.0002 U	0.012 U	0.002 U	0.035	0.01	0.016 UJ	30.9	9.34	0.169 U	0.624 U	0.0787 U	0.0764 U	0.0764 U
B/W-27D		12-Mar-08	0.015 U	0.0003 U	0.036 J	15	0.061	0.0001 U	0.0078	0.0009 U	0.022 J	5	0.00033 J	33	0.0003 U	34	0.54	0.0002 U	0.028 J	0.002 U	0.022	0.0024	0.026	13.9	11.1	0.335 U	0.389 U	0.12 U	0.118 U	0.118 U
B/W-27D		11-Jun-08	0.015 U	0.0003 U	0.042 J	15	0.011	0.0001 U	0.0049	0.0013 J	0.022 J	5.4	0.0003 U	35	0.0003 U	35	0.55	0.0002 U	0.012 U	0.002 U	0.025	0.0039	0.0025 U	16.5	8.7	0.292 J	0.588 UJ	0.17 U	0.136 U	0.136 U
B/W-27D		11-Sep-08	0.015 U	0.0003 U	0.03 U	13	0.0027	0.0001 U	0.0039	0.0009 U	0.02 U	4.6	0.00035 J	33	0.0003 U	30	0.46	0.0002 U	0.012 U	0.002 U	0.018	0.0037	0.0025 U	12.4	9.66	0.236 U	0.548 U	0.16 U	0.156 U	0.156 U
B/W-27D		12-Nov-08	0.015 U	0.0003 U	0.03 J	15	0.0019	0.0001 U	0.0045	0.0009 U	0.031 J	5.1	0.00033 J	37	0.0003 U	36	0.55	0.0002 U	0.012 U	0.002 U	0.027	0.0039	0.0039 UJ	11 J	8.01	0.329 U	0.542 U	0.122 U	0.118 U	0.118 U

Table 3-8. 2008 Analytical Results for Monitor Wells - Continued

			Field Parameters						Water Quality Parameters (Lab)											Metals (Lab)											
Sample Name	Duplicate	Sample Date	pH (field)	Specific Conductance (field)	ORP (field)	Dissolved Oxygen (field)	Temperature (field)	Turbidity (field)	Total Alkalinity (as $CaCO_3$)	Bicarbonate Alkalinity (as $CaCO_3$)	Carbonate (as $CaCO_3$)	Total Dissolved Solids	Total Organic Carbon	Chloride	Fluoride	Sulfate	Nitrate	Nitrite	Nitrate-Nitrite	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron
			s.u.	µS/cm	mV	mg/L	Deg C	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Deep Wells - Continued																															
B/W-28D		17-Mar-08	8.29	640	-106.7	0.20	15.78	6.08	80	80	2 U	460	0.5 U	47	0.46 J	140	0.21	0.09 U	0.21 J	0.04 U	0.0002 J	0.0056	0.072	0.0002 U	0.16	0.00012 J	39	0.0007 U	0.00018 UJ	0.00075 U	0.015 U
B/W-28D		12-Jun-08	7.91	558	47.9	0.24	16.32	3.32	68	68	2 U	440	0.5 U	57	0.35 J	160	0.33 UJ	0.09 U	0.33 UJ	0.04 U	0.0002 U	0.01	0.067	0.0002 UJ	0.24	0.00011 U	74	0.0007 U	0.00046 UJ	0.00075 U	0.015 U
B/W-28D		15-Sep-08	7.87	644	158.9	0.22	16.47	1.84	84	84	2 U	420	0.5 U	50	0.33 J	150	0.55	0.09 U	0.55	0.04 U	0.00021 J	0.011	0.054	0.0002 U	0.21	0.00011 U	69	0.0007 U	0.00051 UJ	0.00075 U	0.015 U
B/W-28D-FD	Dup.	15-Sep-08	7.87	644	158.9	0.22	16.47	1.84	80	80	2 U	440	0.5 U	55	0.3 J	160	0.55	0.09 U	0.55	0.04 U	0.0002 J	0.012	0.051	0.0002 U	0.22	0.00011 U	70	0.0007 U	0.00023 UJ	0.00075 U	0.015 U
B/W-28D		11-Nov-08	7.83	658	30.6	0.16	16.10	0.86	80	80	2 U	460	0.5 U	50	0.19 J	150	0.38	0.09 U	0.38	0.04 U	0.00021 J	0.011	0.061	0.0002 U	0.23	0.00011 U	75	0.0007 U	0.00081 J	0.00081 J	0.015 U
B/W-29I2		14-Mar-08	7.41	2624	6.7	0.21	13.70	7.68	230	230	2 U	2300	0.5 U	72	0.18 UJ	1200	2.3	0.46	2.8	0.04 U	0.0002 U	0.0028 UJ	0.041	0.0002 U	0.92	0.00011 U	360	0.0007 U	0.0028	0.002 J	0.015 U
B/W-29I2		18-Jun-08	7.27	2560	73.9	0.25	14.88	1.32	240	240	2 U	2200	1 J	72	0.16 J	1200	2.6	0.09 U	2.6	0.04 U	0.0002 U	0.0026	0.026	0.0002 U	0.98	0.00011 U	350	0.0007 U	0.0014	0.0027	0.015 U
B/W-29D1		8-Sep-08	7.36	2526	57.1	0.22	14.84	0.25	250	250	2 U	2200	1.1	69	0.15 U	1200	2.8	0.09 U	2.8	0.04 U	0.0002 U	0.0034	0.024	0.0002 U	0.9	0.00011 U	350	0.00087 J	0.00075 J	0.0038	0.015 U
B/W-29D1		9-Nov-08	7.25	2509	196.4	0.18	13.98	6.72	260	260	2 U	2200	0.5 U	71	0.18 J	1200	2.9	0.09 U	2.9	0.04 U	0.0002 U	0.0026	0.023	0.0002 U	0.93	0.00011 U	360	0.0007 U	0.0015	0.0029	0.015 U
B/W-29D		19-Mar-08	7.90	1963	-86.6	0.07	14.49	8.61	70	70	2 U	1500	1 UJ	100	1 J	780	0.12 U	0.18 U	0.3 U	0.04 U	0.00023 J	0.0097	0.045	0.0002 U	0.3	0.00011 U	170	0.0007 U	0.0008 J	0.0017 J	0.19
B/W-29D		16-Jun-08	7.77	1916	4.1	0.18	15.34	0.46	64	64	2 U	1500	0.5 U	100	0.95 J	830	0.1 UJ	0.09 UJ	0.15 U	0.04 U	0.00044 J	0.012	0.034	0.0002 U	0.35	0.00011 U	170	0.0007 U	0.0029	0.0025 UJ	0.015 U
B/W-29D3		8-Sep-08	7.66	1871	-14.5	0.23	15.16	0.57	68	68	2 U	1400	0.5 U	97	0.83	810	0.13	0.09 U	0.15 U	0.04 U	0.0002 U	0.013	0.033	0.0002 U	0.32	0.00011 U	160	0.001 J	0.0012	0.0028	0.015 U
B/W-29D3		2-Nov-08	7.50	1869	79.3	0.33	14.66	0.47	56	56	2 U	1500	0.5 U	100	1.3	820	0.092 J	0.09 U	0.15 U	0.04 U	0.0002 J	0.014	0.031	0.0002 U	0.32	0.00011 U	160	0.0007 U	0.00042 UJ	0.0017 J	0.015 U
B/W-29D3-FD	Dup.	2-Nov-08	7.50	1869	79.3	0.33	14.66	0.47	68	68	2 U	1500	0.5 U	100	0.92 UJ	820	0.1 J	0.09 U	0.15 U	0.04 U	0.00026 J	0.014	0.031	0.0002 U	0.32	0.00011 U	160	0.0012 UJ	0.00077 UJ	0.0019 J	0.015 U
W32DC-D1		20-Mar-08	8.17	251	78.4	0.15	14.00	0.97	76	76	2 U	190	0.5 U	6.2	0.81	25	0.06 U	0.09 U	0.15 U	0.04 U	0.00062 J	0.045	0.015	0.0002 U	0.32	0.00011 U	17	0.0007 U	0.0004 UJ	0.00076 J	0.015 U
W32DC-D2	Dup.	20-Mar-08	8.17	251	78.4	0.15	14.00	0.97	80	80	2 U	190	0.5 U	6.1	0.68	24	0.06 U	0.09 U	0.15 U	0.04 U	0.00064 J	0.045	0.015	0.0002 U	0.34	0.00011 U	17	0.0007 U	0.00015 U	0.00075 U	0.015 U
W32DC		11-Jun-08	8.22	251	58.4	0.63	14.66	0.42	88	88	2 U	180	0.5 U	6.3	0.94	25	0.06 U	0.09 U	0.15 U	0.04 U	0.0004 J	0.045	0.012	0.0002 UJ	0.48	0.00011 U	18	0.0007 U	0.00015 U	0.00075 U	0.015 U
W32DC-D		11-Sep-08	8.29	249	20.8	0.23	14.72	0.35	84	84	2 U	190	0.5 U	6	0.71	25	0.06 U	0.09 U	0.15 U	0.04 U	0.00044 UJ	0.04	0.012 J	0.0002 UJ	0.36	0.00011 UJ	15	0.0007 U	0.00053 UJ	0.00075 UR	0.015 U
W32DC-D		12-Nov-08	7.51	246	88.0	0.18	14.32	0.79	88	88	2 U	170	0.5 U	5.8	0.65	24	0.06 U	0.09 U	0.15 U	0.04 U	0.00048 J	0.043	0.013	0.0002 U	0.4	0.00011 U	17	0.0007 U	0.0022	0.00075 U	0.015 U
W5DB		20-Mar-08	7.51	842	79.3	1.31	14.69	1.12	160	160	2 U	600	1.5	30	0.42 J	220	0.75	0.09 U	0.75	0.04 U	0.00022 J	0.0079	0.05	0.0002 U	0.33	0.00011 J	86	0.0018 J	0.0017	0.0011 J	0.015 U
W5DB		16-Jun-08	7.71	795	8.9	1.63	15.56	0.48	150	150	2 U	550	0.5 U	29	0.43 J	210	0.83 UJ	4 UJ	0.83 UJ	0.04 U	0.0002 U	0.0051	0.037	0.0002 U	0.4	0.00011 U	76	0.0016 J	0.0007 UJ	0.00086 UJ	0.015 U
W5DB-D		7-Sep-08	7.73	745	-40.3	1.95	14.93	0.22	140	140	2 U	540	0.5 U	31	0.37 J	210	0.89	0.09 U	0.89	0.04 U	0.0002 U	0.0054	0.042	0.0002 U	0.36	0.00011 U	73	0.0015 J	0.00015 U	0.0011 J	0.015 U
W5DB-D-FD	Dup.	7-Sep-08	7.73	745	-40.3	1.95	14.93	0.22	140	140	2 U	540	0.5 U	30	0.34 J	210	0.91	0.09 U	0.91	0.04 U	0.0002 U	0.0055	0.041	0.0002 U	0.35	0.00011 U	73	0.0017 J	0.00029 J	0.00098 J	0.015 U
W5DB-D		9-Nov-08	7.72	784	70.7	1.61	14.25	0.31	140	140	2 U	580	0.5 U	29	0.24 J	200	0.83	0.09 U	0.83	0.04 U	0.00022 J	0.0052	0.043	0.0002 U	0.38	0.00011 U	80	0.0016 UJ	0.00064 UJ	0.0011 J	0.015 U
Bedrock Wells																															
B/W-11D3		19-Mar-08	7.00	1021	-144.2	0.32	17.56	2.89	500	500	2 U	1200	0.98 UJ	44	1	410	0.06 U	0.09 U	0.15 U	0.04 U	0.0002 U	0.0019	0.14	0.0002 U	1.2	0.00013 J	130	0.0007 U	0.0042	0.0014 J	19
B/W-11D3-D1		18-Jun-08	6.89	1374	-93.9	0.33	17.79	0.30	490	490	2 U	710	0.5 UJ	34	1.2	190	0.06 U	0.09 U	0.15 U	0.04 U	0.0002 U	0.002	0.11	0.0002 U	1.1	0.00011 J	73	0.0007 U	0.0005 UJ	0.00075 U	12
B/W-11D3-D2		18-Jun-08	6.89	1374	-93.9	0.33	17.79	0.30	470	470	2 U	860	1.9 J	34	1.2	190	0.06 U	0.09 U	0.15 U	0.04 U	0.0002 U	0.0024	0.11	0.0002 U	1.1	0.00012 J	71	0.0007 U	0.0011 UJ	0.00075 U	12
B/W-11B		9-Sep-08	6.40	1857	-25.8	0.78	16.21	10.53	350	350	2 U	650	0.5 U	29	1.3	130	0.06 U	0.09 U	0.15 U	0.044 J	0.0002 U	0.0017	0.068	0.0002 UJ	0.99	0.00012 J	48	0.0007 U	0.00024 UJ	0.00075 U	6.4
B/W-11B		2-Nov-08	6.97	916	-139.0	0.96	15.54	3.27	320	320	2 U	570	0.67 J	26	1.4	110	0.06 U	0.09 U	0.15 U	0.04 U	0.00036 J	0.0017	0.058	0.0002 U	0.9	0.00012 J	38	0.0007 U	0.00025 J	0.00075 U	3.5
B/W-23D		19-Mar-08	7.71	683	7.9	1.43	16.39	6.75	160	160	2 U	430	0.5 U	21	1.3	120	0.45	0.09 U	0.45	0.04 U	0.00031 J	0.007	0.024	0.0002 U	0.73	0.0003 J	31	0.0007 U	0.00051 J	0.00075 U	0.015 U
B/W-23		16-Jun-08	7.00	660	22.4	3.05	17.92	0.51	170	170	2 U	430	0.5 U	21	1.4 J	120	0.45 UJ	0.09 UJ	0.49 UJ	0.078	0.0002 U	0.0056	0.026	0.0002 U	0.86	0.00024 J	32	0.0007 U	0.0004 UJ	0.00075 U	0.061
B/W-23B		10-Sep-08	6.32	714	27.0	1.81	17.93	0.62	210	210	2 U	460	0.5 U	21	1.1	120	0.31	0.09 U	0.31	0.04 U	0.0002 U	0.0024	0.041	0.0002 U	0.84	0.00019 J	36	0.0007 U	0.003	0.00075 U	1.5
B/W-23B		12-Nov-08	5.93	684	79.4	1.91	17.11	0.94	230	230	2 U	530	0.5 U	20	1	110	0.23	0.09 U	0.23 J	0.04 U	0.00024 J	0.0015	0.057	0.0002 U	0.93	0.00015 J	44	0.0007 U	0.0042	0.00075 U	3.9
WW-36		17-Mar-08	7.35	482	NA	NA	8.90	0.21	150	150	2 U	300	0.5 U	19	0.48 J	67	0.62	0.09 U	0.62	0.04 U	0.00029 J	0.0094	0.03	0.0002 U	0.28	0.00011 U	43	0.0007 U	0.00016 UJ	0.016	0.015 U
WW-36		17-Jun-08	7.39	509	NA	NA	22.77	1.27	160	160	2 U	280	0.5 U	19	0.5 J	64	0.57	0.09 UJ	0.59	0.04 U	0.0002 J	0.0049	0.034	0.0002 U	0.37	0.00011 U	44	0.0007 U	0.00015 U	0.014	0.015 U
WW-36B		8-Sep-08	6.90	522	NA	NA	14.20	1.53	160	160	2 U	320	0.5 U	21	0.46 J	70	0.8	0.09 U	0.8	0.04 U	0.00026 J	0.007	0.033	0.0002 U	0.34	0.00011 U	45	0.0007 U	0.0014	0.02	0.015 U
WW-36B		4-Nov-08	7.22	486	NA	NA	13.12	1.78	160	160	2 U	310	0.5 U	21	0.4 J	63	0.79	0.09 U	0.79	0.04 U	0.00036 UJ	0.008	0.026	0.0002 U	0.37	0.00011 U	43	0.0007 U	0.00045 UJ	0.015	0.018 J
WW-40		18-Mar-08	7.13	501	NA	NA	15.30	0.09	150	150	2 U	350	1	25	0.52	71	0.88	0.09 U	0.88	0.04 U	0.0003 J	0.0083	0.048	0.0002 U	0.28	0.00011 U	49	0.0007 U	0.0006 UJ	0.024	0.015 U
WW-40		16-Jun-08	7.30	552	NA	NA	15.10	1.70	160	160	2 U	340	1.9	24	0.52 J	71	1 UJ	0.09 UJ	1 UJ	0.04 U	0.00028 J	0.0075	0.048	0.0002 U	0.38	0.00011 U	50	0.00071 J	0.00026 UJ	0.0086	0.015 U
WW-40B		9-Sep-08	7.37	674	NA	NA	16.90	1.05	160	160	2 U	340	0.5 U	26	0.49 J	76	0.97	0.09 U	0.97	0.04 U	0.00025 J	0.0089	0.042	0.0002 U	0.34	0.00011 UJ	48	0.0007 U	0.00021 UJ	0.0079	0.015 U
WW-40B		4-Nov-08	7.28	535	NA	NA	10.80	5.70	150	150	2 U	340	0.5 U	27	0.46 J	69	1	0.09 U	1	0.04 U	0.00035 UJ	0.0084	0.041	0.0002 U	0.36	0.00011 U	48	0.0007 U	0.0003 UJ	0.015 J	0.015 U
WW-40B-FD	Dup.	4-Nov-08	7.28	535	NA	NA	10.80	5.70	160	160	2 U	290	0.5 U	28	0.53	69	1	0.09 U	1	0.04 U	0.00037 UJ	0.0084	0.042	0.0002 U	0.37	0.00011 U	49	0.0007 U	0.00038 UJ	0.0087 J	0.015 U
WW-59		17-Mar-08	7.60	821	NA	NA	18.30	0.40	150	150	2 U	600	0.5 U	39	1.1	220	0.61	0.09 U	0.61	0.04 U	0.00077 J	0.0068	0.028	0.0002 U	0.58	0.00011 J	51	0.0007 U	0.00061 UJ	0.0016 J	0.16
WW-59		17-Jun-08	7.56	961	NA	NA	19.75	2.19	160	160	2 U	590	0.5 U	42	1.3 J	240	0.64	0.09 UJ	0.64	0.04 U	0.00068 J	0.0043	0.031	0.0002 U	0.7	0.00011 U	55	0.0007 U	0.00056 UJ	0.0011 J	0.18
WW-59B		8-Sep-08	7.31	950	NA	NA	19.90	3.05	170	170	2 U	640	0.5 U	42	1.1	250	0.68	0.09 U	0.68	0.04 U	0.00078 J	0.0042	0.032	0.0002 U	0.67	0.00011 J	58	0.0007 U	0.0061	0.0017 J	0.2
WW-59B		5-Nov-08	7.53	934	NA	NA	17.74	2.84	160	160	2 U	660	0.5 U	43	1.1	250	0.63	0.09 U	0.63	0.04 U	0.0011 J	0.0053	0.034	0.0002 U	0.7	0.00011 J	55	0.0007 U	0.0025	0.00075 U	0.2

Table 3-8. 2008 Analytical Results for Monitor Wells - Continued

Sample Name	Duplicate	Sample Date	Metals (Lab) Continued																				Radiological (Lab)						
			Lead	Lithium	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Phosphorus	Potassium	Selenium	Silicon	Silver	Sodium	Strontium	Thallium	Tin	Titanium	Uranium	Vanadium	Zinc	Alpha, Gross	Beta, Gross	Radium-226	Radium-228	Thorium-228	Thorium-230	Thorium-232
			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L
Deep Wells - Continued																													
B/W-28D		17-Mar-08	0.0003 U	0.03 U	6.7	0.3	0.0001 U	0.071	0.0009 U	0.023 J	2.1	0.0003 U	27	0.0003 U	79	0.43	0.0002 U	0.012 U	0.002 U	0.0039	0.0024	0.0025 U	2.32 J	3.17 J	0.268 U	0.762 UJ	0.169 U	0.165 U	0.165 U
B/W-28D		12-Jun-08	0.0003 U	0.043 J	13	0.41	0.0001 U	0.016	0.0015 J	0.02 U	2.8	0.0003 U	44	0.0003 U	40	0.77	0.0002 U	0.012 U	0.002 U	0.0057	0.0086	0.0025 UJ	3.01	4.75	0.356 U	0.767 UJ	0.166 U	0.163 U	0.163 U
B/W-28D		15-Sep-08	0.0003 U	0.03 U	12	0.15	0.0001 U	0.011	0.0009 U	0.02 U	2.4 J	0.0003 U	45	0.0003 U	35	0.69 J	0.0002 U	0.012 U	0.002 U	0.0061	0.011	0.0037 UJ	5.1	5.94 J	0.213 U	0.923 U	0.0855 U	0.117 U	0.0836 U
B/W-28D-FD	Dup.	15-Sep-08	0.0003 U	0.03 U	12	0.14	0.0001 U	0.0096	0.0009 U	0.02 U	2.5	0.0003 U	46	0.0003 U	37	0.71	0.0002 U	0.012 U	0.002 U	0.0067	0.01	0.0025 U	5.25	3.18 J	0.166 U	0.6 U	0.165 U	0.141 U	0.115 U
B/W-28D		11-Nov-08	0.0003 U	0.031 J	13	0.18	0.0001 U	0.014	0.0009 U	0.02 U	2.6	0.0003 U	45	0.0003 U	39	0.77	0.0002 U	0.012 U	0.002 U	0.0085	0.011	0.0031 UJ	5.95	5.07	0.316 U	0.689 U	0.112 U	0.107 U	0.107 U
B/W-29I2		14-Mar-08	0.0003 U	0.085 J	82	0.51	0.0001 U	0.0052	0.0058	0.026 J	12	0.0027	39	0.0003 U	170	2.3	0.0002 U	0.012 U	0.002 U	0.073	0.0023	0.0099 J	47	20.1	0.201 U	0.721 U	0.174 U	0.17 U	0.17 U
B/W-29I2		18-Jun-08	0.0003 U	0.03 J	88	0.053	0.0001 U	0.0023	0.0009 U	0.02 U	13	0.0024	41	0.0003 U	150	2.4	0.0002 U	0.012 U	0.002 U	0.076	0.0035	0.0025 U	51.3	23.2	0.468 U	0.833 J	0.201 U	0.16 U	0.16 U
B/W-29D1		8-Sep-08	0.0003 U	0.059	82	0.023	0.00024	0.0018 J	0.0009 U	0.02 U	11 J	0.0024	40	0.0003 U	150	2.2	0.0002 U	0.012 U	0.002 U	0.076	0.0034	0.0025 J	43.9	27.8 J	0.222 J	0.645 UJ	0.0893 U	0.0878 U	0.0878 U
B/W-29D1		9-Nov-08	0.0003 U	0.082	80	0.023	0.00011 J	0.0014 J	0.0009 U	0.059 UJ	14	0.0026	40	0.0003 U	140	2.1	0.0002 U	0.012 U	0.002 U	0.082	0.0033	0.0025 U	31.9 J	24.8	0.151 U	0.687 U	0.119 U	0.115 U	0.115 U
B/W-29D		19-Mar-08	0.0003 U	0.03 U	46	0.94	0.0001 UJ	0.014	0.0009 U	0.027 J	5.6	0.0036	45	0.0003 U	190	1.4	0.0002 U	0.012 U	0.002 U	0.008	0.0037	0.0025 U	6.69	14.7	0.284 U	0.641 UJ	0.176 U	0.172 U	0.172 U
B/W-29D		16-Jun-08	0.0003 U	0.03 U	46	0.41	0.0006	0.011 J	0.0009 U	0.02 U	5.8 J	0.0033	51	0.0003 U	190	1.3	0.0002 U	0.012 U	0.002 U	0.0091	0.013	0.0062 J	6.05	8.12	0.374 U	0.614 UJ	0.209 U	0.167 U	0.167 U
B/W-29D3		8-Sep-08	0.0003 U	0.036 J	46	0.15	0.0016	0.0094	0.0009 U	0.02 U	4.4 J	0.0036	53	0.0003 U	170	1.1	0.0002 U	0.012 U	0.002 U	0.011	0.014	0.0032 J	6.97	10.4	0.234 U	0.638 UJ	0.112 U	0.11 U	0.11 U
B/W-29D3		2-Nov-08	0.0003 U	0.043 J	42	0.21	0.00073	0.0099	0.0009 U	0.02 U	5 J	0.0033	49	0.0003 U	170	1.3	0.0002 U	0.012 U	0.002 U	0.0093	0.013	0.0025 U	7.41 J	14.6	0.45 J	0.761 U	0.0766 U	0.0749 U	0.0749 U
B/W-29D3-FD	Dup.	2-Nov-08	0.0003 U	0.052	42	0.21	0.00069	0.0098	0.0009 U	0.02 U	5.1 J	0.0035	50	0.0003 U	180	1.3	0.0002 U	0.012 U	0.002 U	0.01	0.013	0.0064 J	9.02 J	12	0.287 J	0.628 U	0.109 U	0.0933 U	0.076 U
W32DC-D1		20-Mar-08	0.0003 U	0.03 U	1.9	0.02	0.0001 U	0.023	0.0009 U	0.02 U	0.9	0.0003 U	37	0.0003 U	36	0.19	0.0002 U	0.012 U	0.002 U	0.0059	0.028	0.0025 U	5.48	2.75 U	0.229 U	0.672 UJ	0.166 U	0.162 U	0.162 U
W32DC-D2	Dup.	20-Mar-08	0.0003 U	0.03 U	1.9	0.019	0.0001 U	0.024	0.0009 U	0.02 U	0.87	0.0003 U	38	0.0003 U	36	0.2	0.0002 U	0.012 U	0.002 U	0.0059	0.029	0.0025 U	3.15	2.55 U	0.251 U	0.742 UJ	0.161 U	0.156 U	0.156 U
W32DC		11-Jun-08	0.0003 U	0.03 U	2	0.019	0.0001 U	0.021	0.0009 U	0.02 U	0.8	0.0003 U	41	0.0003 U	38	0.21	0.0002 U	0.012 U	0.002 U	0.0054	0.022	0.0025 UJ	3.51	2.72 J	0.253 U	0.668 UJ	0.121 U	0.147 U	0.12 U
W32DC-D		11-Sep-08	0.0003 U	0.03 U	1.8	0.022	0.0001 U	0.021	0.0009 UR	0.02 U	0.82	0.0003 U	37	0.0003 UJ	33	0.2	0.0002 U	0.012 UJ	0.002 U	0.005	0.02 J	0.0025 U	3.04	2.86 J	0.302 U	0.621 U	0.155 U	0.152 U	0.152 U
W32DC-D		12-Nov-08	0.0003 U	0.03 U	2	0.028	0.0001 U	0.023	0.0009 U	0.022 J	0.69	0.0003 U	41	0.0003 U	35	0.2	0.0002 U	0.012 U	0.002 U	0.0065	0.02	0.0026 UJ	1.49 J	2.87 U	0.159 U	0.629 U	0.148 U	0.142 U	0.142 U
W5DB		20-Mar-08	0.0003 U	0.03 U	13	0.029	0.0001 U	0.013	0.0009 U	0.035 J	1.4	0.0022	49	0.0003 U	77	0.84	0.0002 U	0.012 U	0.002 U	0.064	0.0095	0.0025 U	35.7	12.9	0.249 U	0.941 UJ	0.087 U	0.104 U	0.0847 U
W5DB		16-Jun-08	0.0003 U	0.03 U	11	0.0058 UJ	0.0001 U	0.012 J	0.0009 U	0.035 J	1.3 J	0.002	51	0.0003 U	69	0.75	0.0002 U	0.012 U	0.002 U	0.04	0.0094	0.0025 U	22.9 J	10.3	0.256 U	0.667 U	0.154 U	0.15 U	0.15 U
W5DB-D		7-Sep-08	0.0003 U	0.03 U	11	0.024	0.0001 U	0.012	0.0009 U	0.033 J	1.4 J	0.0021	50	0.0003 U	71	0.8	0.0002 U	0.012 U	0.002 U	0.037	0.008	0.0025 U	18	9.29	0.189 U	0.625 U	0.125 U	0.123 U	0.123 U
W5DB-D-FD	Dup.	7-Sep-08	0.0003 U	0.03 U	11	0.024	0.0001 U	0.012	0.0009 U	0.03 J	1.1 J	0.002	50	0.0003 U	66	0.74	0.0002 U	0.012 U	0.002 U	0.037	0.0078	0.0025 U	23.3	6.21	0.24 U	0.635 U	0.167 U	0.164 U	0.164 U
W5DB-D		9-Nov-08	0.0003 U	0.032 J	11	0.0041	0.0001 U	0.012	0.0009 U	0.072 UJ	1.4	0.0023	53	0.0003 U	66	0.78	0.0002 U	0.012 U	0.002 U	0.041	0.0088	0.0027 J	28.4	10.4	0.157 UJ	0.698 U	0.12 U	0.116 U	0.116 U
Bedrock Wells - Continued																													
B/W-11D3		19-Mar-08	0.0003 U	0.07	17	3.3	0.0001 U	0.084	0.0029	0.02 U	3.9	0.0017 J	33	0.0003 U	290	1.2	0.0002 U	0.012 U	0.002 U	0.096	0.0007 U	0.045	49.9	28.1	0.573 J	0.559 U	0.162 U	0.127 U	0.127 U
B/W-11D3-D1		18-Jun-08	0.0003 U	0.05	11	1.8	0.0001 U	0.05	0.0009 U	0.02 U	2.8	0.00065 J	28	0.0003 U	220	0.77	0.0002 U	0.012 U	0.002 U	0.033	0.0012 J	0.0036 J	20.2	12.1	0.328 J	0.657 UJ	0.108 U	0.106 U	0.106 U
B/W-11D3-D2		18-Jun-08	0.0003 U	0.05	10	1.8	0.0001 U	0.051	0.00098 J	0.02 U	2.7	0.00061 J	27	0.0003 U	210	0.74	0.0002 U	0.012 U	0.002 U	0.033	0.0012 J	0.0043 J	21.1	15.1	0.548 J	0.76 UJ	0.0854 U	0.0835 J	0.0835 U
B/W-11B		9-Sep-08	0.0003 U	0.042 J	6.8	0.86	0.0001 U	0.053	0.0009 U	0.02 U	2.5	0.0003 U	25	0.0003 U	180	0.49	0.0002 U	0.012 U	0.002 U	0.022	0.0007 U	0.0025 UJ	13.4	12.2	0.315 J	0.655 U	0.155 U	0.0985 U	0.0985 U
B/W-11B		2-Nov-08	0.0003 U	0.045 J	5.2	0.67	0.0001 U	0.056	0.0009 U	0.02 U	2.1	0.00032 J	22	0.0003 U	140	0.39	0.0002 U	0.012 U	0.002 U	0.016	0.0007 U	0.0025 U	7.66 J	9.36	0.303 UJ	0.73 U	0.151 U	0.105 U	0.105 U
B/W-23D		19-Mar-08	0.0003 U	0.03 U	4.7	0.18	0.0001 U	0.15	0.0009 U	0.02 U	2.6	0.003	30	0.0003 U	100	0.24	0.0002 U	0.012 U	0.002 U	0.021	0.007	0.15	9.66	7.23	0.213 U	0.718 UJ	0.211 U	0.207 U	0.207 U
B/W-23		16-Jun-08	0.0003 U	0.03 U	4.8	0.2	0.0001 U	0.15 J	0.0009 U	0.02 U	2.8 J	0.0025	34	0.0003 U	100	0.25	0.0002 U	0.012 U	0.002 U	0.02	0.0059	0.036	15.7	11.6	0.365 U	1.57 UJ	0.498 U	0.347 U	0.347 U
B/W-23B		10-Sep-08	0.0003 U	0.03 U	5.3	0.3	0.0001 U	0.12	0.0028	0.02 U	3.1	0.0017 J	33	0.0003 U	110	0.28	0.0002 U	0.012 U	0.002 U	0.021	0.0015 J	0.22	19.4	10.6	0.52 J	0.916 U	0.0818 U	0.08 U	0.0982 U
B/W-23B		12-Nov-08	0.0003 U	0.03 U	6.5	0.35	0.0001 U	0.1	0.0025	0.02 U	3.5	0.0016 J	38	0.0003 U	120	0.33	0.0002 U	0.012 U	0.002 U	0.026	0.0007 U	0.12	18.7 J	9.37	0.205 U	0.485 U	0.157 U	0.151 U	0.185 U
WW-36		17-Mar-08	0.0003 U	0.03 U	9.2	0.00075 U	0.0001 U	0.0052	0.0009 U	0.078	4.3	0.0003 U	26	0.0003 U	43	0.34	0.0002 U	0.012 U	0.002 U	0.019	0.0044	0.0038 J	8.82	9.07	0.34 J	0.42 U	0.168 U	0.134 U	0.134 U
WW-36		17-Jun-08	0.00077 J	0.03 J	10	0.0078	0.0001 U	0.0049 J	0.00091 J	0.066 J	4.7 J	0.0003 U	29	0.0003 U	43	0.36	0.0002 U	0.012 U	0.002 U	0.018	0.0032	0.014 J	6.91	9.05	0.75 J	0.691 UJ	0.115 U	0.113 U	0.113 U
WW-36B		8-Sep-08	0.0013	0.036 J	9.8	0.0029	0.0001 U	0.0052	0.0009 U	0.073	4.7	0.00036 J	28	0.0003 U	44	0.39	0.0002 U	0.012 U	0.002 U	0.02	0.0032	0.019 J	11	7.78	0.423 U	0.723 UJ	0.0813 U	0.0933 J	0.08 U
WW-36B		4-Nov-08	0.00096 J	0.03 U	9.3	0.0015 UJ	0.0001 U	0.0048	0.0009 U	0.077	4.4	0.00045 J	28	0.0003 U	39	0.36	0.0002 U	0.012 U	0.002 U	0.017	0.0045	0.014 UJ	5.26 J	14.1	0.365 J	0.638 U	0.104 U	0.101 U	0.101 U
WW-40		18-Mar-08	0.004	0.033 J	9.8	0.0025 UJ	0.0001 U	0.0057	0.0009 U	0.061	4.1	0.00037 J	29	0.0003 U	46	0.42	0.0002 U	0.012 U	0.002 U	0.02	0.0052	0.062	14.3	13.1	0.323 U	0.561 UJ	0.192 U	0.153 U	0.153 U
WW-40		16-Jun-08	0.0015	0.032 J	11	0.002 UJ	0.0001 U	0.0061 J	0.0009 U	0.061 J	4.8 J	0.00038 J	32	0.0003 U	47	0.42	0.0002 U	0.012 U	0.002 U	0.022	0.005	0.033	11.9	7.77	0.408 U	0.499 UJ	0.12 U	0.164 U	0.117 U
WW-40B		9-Sep-08	0.00082 J	0.039 J	10	0.0011	0.0001 U	0.0057	0.0009 U	0.055	4.7	0.00034 J	31	0.0003 U	45	0.43	0.0002 U	0.012 U	0.002 U	0.021	0.0054	0.022	9.21	7.58	0.314 J	0.623 U	0.0827 U	0.0813 U	0.0998 U
WW-40B		4-Nov-08	0.0031 J	0.031 J	9.8	0.0012 UJ	0.0001 U	0.0054	0.0009 U	0.061	4.7	0.00047 J	30	0.0003 U	43	0.43	0.0002 U	0.012 U	0.002 U	0.019	0.0056	0.11 J	12.3 J	10.1	0.137 J	0.674 U	0.116 U	0.0985 U	0.0803 U
WW-40B-FD	Dup.	4-Nov-08	0.0019 J	0.032 J	10	0.0011 UJ	0.0001 U	0.0055	0.0009 U	0.064	4.5	0.00054 J	31	0.0003 U	41	0.42	0.0002 U	0.012 U	0.002 U	0.02	0.0058	0.066 J	12.8 J	12.4	0.162 J	0.821 U	0.112 U	0.109 U	0.109 U
WW-59		17-Mar-08	0.0003 U	0.03 U	11	0.12	0.0001 U	0.066	0.0009 U	0.047	3.4	0.0035	35	0.0003 U	120	0.44	0.0002 U	0.012 U	0.002 U	0.031	0.003	0.083	30.7	20.5	2.07	0.86 J	1.74 U	1.7 U	1.7 U
WW-59		17-Jun-08	0.0003 U	0.03 U	12	0.16	0.0001 U	0.065 J	0.0009 U	0.041 J	4 J	0.0036	39	0.0003 U	130	0.5	0.0002 U	0.012 U	0.002 U	0.031	0.0022	0.081	33.8	19.3	1.32	2 UJ	0.612 U	0.593 U	0.593 U
WW-59B		8-Sep-08	0.00049 J	0.037 J	13	0.14	0.0001 U	0.065	0.0009 U	0.049	3.5 J	0.004	39	0.0003 U	130	0.53	0.0002 U	0.012 U	0.002 U	0.035	0.001 J	0.1	24.4	15.2	4.82 J	1.45 UJ	1 U	0.636 U	0.636 U
WW-59B		5-Nov-08	0.0003 U	0.03 U	12	0.14	0.0001 U	0.07	0.0009 U	0.044	3.6	0.004	38	0.0003 U	120	0.52	0.0002 U	0.012 U	0.002 U	0.032	0.0007 U	0.078	19.8	20.9	2.97	1.92 U	0.425 U	0.412 U	0.412 U

Notes:
NA = Not available and/or not measured
U: non-detected at the detection limit (that's the number given);
J: the value is estimated for different reasons;
UJ: not detected at an estimated detection limit;
R: data did not meet data quality objectives and was rejected

Historic groundwater monitoring activities and recent investigations of groundwater conditions at the Site have indicated that mine-related groundwater is characterized by low to moderate pH values, elevated concentrations of total dissolved solids ("TDS"), sulfate, dissolved iron (hereafter described as iron) and other metals, and radiochemicals such as uranium. Because elevated concentrations of sulfate and iron, and pH values have historically served as indicator parameters for mine-related groundwater, time-concentration plots for these parameters, in addition to alkalinity, chloride, and arsenic, have been updated and are provided as Appendix F of this 2008 GMR.

The plots included in Appendix F-1 represent pumpback well and monitor well chemistry from the shallow alluvial hydrostratigraphic zone. Appendices F-2 and F-3 include time-concentration plots for wells screened in the intermediate and deep zone/bedrock aquifer wells respectively. In general, concentrations of indicator parameters in the deep zone are less than in the shallow zone. The following bullets briefly describe the time-concentration plots presented in Appendix F-1, F-2, and F-3. Wells shown on the time concentration plots are depicted on small inset maps on the plots themselves, and are also shown on Figure 1-3 or Plate 1.

- Appendix F-1 plot Eastern Pumpback Wells (PW-1S through PW-5S): This appendix shows time-concentration plots for pumpback wells PW-1S through PW-5S. In general, pH, alkalinity, chloride, and arsenic values in these pumpback wells exhibit relatively consistent long-term values that are overprinted with seasonal fluctuations. Concentrations of sulfate, iron, and uranium have decreased over the monitoring period and also exhibit seasonal fluctuations. However, pH, alkalinity and uranium in PW-5 appear to have increased slightly during 2008.
- Appendix F-1 plot Western Pumpback Wells (PW-6S through PW-11S): This appendix shows time-concentration plots for pumpback wells PW-6S through PW-11S and piezometer P-1. In general, the parameters in these pumpback wells also exhibit relatively consistent long-term values that are overprinted with seasonal fluctuations.
- Appendix F-1 plot SH-1 Sunset Hills: This appendix shows time-concentration plots for monitor wells B/W-3S, B/W-4S, B/W-8S, B/W-10S, B/W-19S, and B/W-28S. These recently-installed wells have been monitored quarterly during 2008. With few exceptions, the parameters in these wells have remained relatively constant over the one-year monitoring period.
- Appendix F-1 plot SH-2 Agricultural Area: This appendix shows time-concentration plots for wells B/W-1S, B/W-9S, B/W-25S, B/W-27S, and USEPA2S. With the exception of well USEPA2S, these wells have been recently installed and only

monitored (quarterly) during 2008. Parameter values in these wells have remained generally consistent over the monitoring period. Well USEPA2S marginally penetrates the shallow water level. During low-water time periods (such as times of agricultural pumping or drought), the water collected for laboratory analysis is from the well sump and is not representative of the quality of the shallow aquifer.

- Appendix F-1 plot SH-3 Northeast Mine Area: This appendix shows time-concentration plots for shallow monitor wells USGS-2BS, W5AA-3S, D4BC-1S, D5AC-1S, and B/W-29S located in OU-4, OU-7 and just outside of the northeast portion of the Site. In general, values of pH, chloride, iron, and arsenic have remained relatively stable over the past 5 to 13 years, while concentrations of sulfate, alkalinity, and uranium have decreased over the past five years. However, well D5AC-1S shows an increasing trend in chloride (490 to 750 mg/L) and sulfate (4,330 to 7,900 mg/L).
- Appendix F-1 plot SH-4 North of Mine Area: This appendix shows time-concentration plots for shallow monitor wells USGS-13S, W5AB-2S, MW2002-1S, W5BB-S, B/W-5SR, and B/W-18S. In general, values for pH, alkalinity, iron, and sulfate have remained relatively stable. However, well W5AB-2S shows a decrease in sulfate concentration from approximately 5,200 mg/L to 3,700 mg/L over the past 13 years. Concentrations of chloride in W5AB-2S appear to have decreased slightly, and concentrations of uranium appear to have increased slightly, over the past five years.
- Appendix F-1 plot SH-5 West of Mine Area: This appendix shows time-concentration plots for shallow monitor wells MW2002-2S, MW-4S, B/W-6S, B/W-16S, and B/W-22S. In general, values for pH, alkalinity, sulfate, chloride, and uranium have remained relatively stable. Similarly, values for arsenic and iron have remained relatively stable but also exhibit seasonal variability. However, well MW2002-2S shows an increase from approximately 0.055 to 0.067 mg/L of arsenic over the past six years.
- Appendix F-1 plot SH-6 Process Areas: This appendix shows time-concentration plots for shallow monitor wells UW-1S, MW-1S, MW-2S, PA-MW-1S, PA-MW-2S, PA-MW-3S, MW-5S, and B/W-11S. In general, values of pH, alkalinity, iron, arsenic, and chloride have remained relatively stable, although chloride and arsenic concentrations appear to have some seasonal variability. In wells MW-2S and MW-5S, concentrations of arsenic and iron appear to have decrease over the past six years. Concentrations of uranium in well MW-5S have decreased from 6.7 to 2.9 mg/L over the past five years.
- Appendix F-1 plot SH-7 Walker River/South of Mine: This appendix shows time-concentration plots for shallow monitor wells B/W-13S, B/W-14S, B/W-15S, B/W-20S, B/W-21S, WW-1S, and WW-2S. Wells located along the Walker River or south of the Site are located hydraulically downgradient of the Site and are considered to be background wells for groundwater quality. In general, values for pH values, alkalinity, sulfate, chloride, arsenic, iron, and uranium have remained relatively stable and/or exhibit seasonal variability. However, arsenic in well B/W-14S decreased over the past three years and iron and uranium in well WW-2S decreased over the past five years.
- Appendix F-2 plot I-1 Sunset Hills Area: This appendix shows time-concentration plots for intermediate monitor wells B/W-3I, B/W-4I, B/W-8I, B/W-19I, and B/W-28I. In general, values for the parameters have remained relatively stable with the following

exceptions. pH values in well B/W-8I were elevated during the first two of three quarterly sampling events following well installation, but values appear to have stabilized to approximately 7.5 during the last 9 sampling events. Sulfate in well B/W-4I and arsenic in well B/W-3I have increased slightly.

- Appendix F-2 plot I-2 Northeast of the Mine Site: This appendix shows time-concentration plots for intermediate monitor wells W5AA-1I, W4CB-2I, B/W-9I, B/W-25I, and B/W-29I. Values for pH, alkalinity, iron and uranium have remained relatively stable. Except for well W5AA-1I, sulfate concentrations appear to be stable with seasonal variability. In well W5AA-1I, sulfate concentrations have increased from 62 to 180 mg/L over the past 13 years. Chloride concentrations in well W4CB-2I exhibit a slight decrease; whereas, well W5AA-1I exhibits a slight increase. Arsenic values for the wells shown on plot I-2 have decreased over the past five years.
- Appendix F-2 plot I-3 Northwest of Mine Site: This appendix shows time-concentration plots for intermediate monitor wells B/W-2I, B/W-5IR, B/W-6I, B/W-7I, MW2002-2I, and W5AB-3I. Values for pH, iron and uranium are relatively stable and/or exhibit some seasonal variability. Concentrations of alkalinity, sulfate, chloride, and arsenic appear to be stable with the exception of well W5AB-3I. In well W5AB-3I, alkalinity increased from 320 to 430 mg/L over six years, sulfate increased from 660 to 980 mg/L over the past 11 years, and chloride increased from 290 to 400 mg/L over the past six years.
- Appendix F-3 plot D-1 Sunset Hills Area: This appendix shows time-concentration plots for deep zone monitor wells B/W-3D, B/W-4D, B/W-10D, B/W-19D, and B/W-28D. In general, values for alkalinity, sulfate, chloride, arsenic, iron and uranium are relatively stable. Values for pH exhibit apparent seasonal variability, and well B/W-4D exhibited elevated pH values after initial well installation that subsequently stabilized at values around 7.5 to 8.0. In addition, chloride and sulfate concentrations in well B/W-4D increased over the past four years.
- Appendix F-3 plot D-2 North of Mine Site: This appendix shows time concentration plots for deep monitor wells W32DC-D, B/W-2D, B/W-5D, B/W-5DR, B/W-18D1, and B/W-18D2. As mentioned previously, well B/W-5D was abandoned in 2007 and replaced with well B/W-5DR. Monitoring results for both wells are shown on the time concentration plot. Concentrations of alkalinity, sulfate, chloride, iron and uranium appear to be stable during the monitoring period, while pH values and arsenic concentrations exhibit some seasonal variability.
- Appendix F-3 plot D-3 Agricultural Field Area: This appendix shows time concentration plots for deep monitor wells B/W-1D1, B/W-1D2, B/W-1D3, and B/W-9D. Values of pH are generally stable but exhibit some seasonal variability and concentrations of alkalinity, sulfate, chloride, arsenic, iron and uranium are relatively stable. Well B/W-1D3 appears to have more seasonal variability in pH values and seasonal variability in alkalinity and sulfate concentrations. Finally, well B/W-1D1 appears to consistently be 0.05 mg/L higher in uranium concentration than the other deep wells in the vicinity.

- Appendix F-3 plot D-4 Northeast of Mine Site: This appendix shows time-concentration plots for deep monitor wells B/W-25D, B/W-27D, B/W-29D1, and B/W-29D3. All wells shown on plot D-4 are newly installed Second-Step HFA monitor wells and will require additional monitoring over time. Based on the available data, pH values and concentrations of alkalinity, sulfate, chloride, arsenic, iron, and uranium were relatively stable throughout 2008.
- Appendix F-4 plot B-1 Bedrock Wells: This appendix shows time-concentration plots for bedrock aquifer monitoring wells B/W-11B, B/W-23B, WW-36B, WW-40B, and WW-59B. Wells B/W-11B and B/W-23B are newly installed HFA II wells and will require additional monitoring over time to provide a valid comparison of results to other monitor wells. This is especially apparent for parameter pH and analytes alkalinity, sulfate, iron, and possibly uranium where wells B/W-11B and B/W-23B illustrate trends which may or may not be attributed to seasonal variations. Otherwise, pH values and concentrations of sulfate, chloride, arsenic, iron and uranium are generally stable with very little seasonal variability. Sulfate concentrations in well WW-59B increased from 160 to 250 mg/L over the past six years.

SECTION 4.0
DOMESTIC WELL SAMPLING RESULTS

Annual sampling of select domestic wells continued in 2008 (second quarter sampling event), and included the following wells shown in Figure 4-1 and Plate 1: DW-02, DW-04, DW-10, DW-18, DW-36, DW-38, DW-39, DW-40, DW-41, DW-43, DW-45, DW-46, DW-47 (Phipps well), DW-48, DW-49, DW-50, DW-52, TW06, WDW018, WDW019 (Peri irrigation well) and Well 4. The 21 wells sampled in 2008, relative to the 23 listed in the Draft GMP, reflect the fact that one domestic well owner (DW-42) declined to have his well sampled in 2007 and was subsequently removed from the sampling program, and one domestic well owner (WDW017) did not respond to ARC's request for permission to conduct monitoring activities in 2008. Table 4-1 summarizes the 2008 analytical results for the 21 domestic wells, and includes the available pre-2008 (all results are for total analyses). Maximum Contaminant Levels ("MCLs") and secondary drinking water standards are also listed in Table 4-1 for analytes with applicable levels and standards.

Analytical results from the 21 domestic wells indicate no significant changes in concentrations of any chemicals from previous years, and results are consistently below MCLs with the exception of arsenic and uranium. Twelve of wells sampled in 2008 have arsenic concentrations greater than the MCL of 10 ug/L, ranging from 10 to 44 ug/L. Nine of the wells have uranium values at or above the 30-ug/L MCL.

Table 4-1. 2008 Analytical Results for Domestic Wells

Sample Name	Sample Date	Temperature (field)	pH (lab)	Specific Conductance (field)	Total Dissolved Solids	Total Alkalinity (as $CaCO_3$)	Bicarbonate (as $CaCO_3$)	Chloride	Fluoride	Nitrate (as N)	Sulfate	Calcium	Magnesium	Potassium	Sodium	Aluminum
		degree C	s.u.	uS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Primary DWS										**10**						
Secondary DWS			**6.5-8.5**		**500**			**250**	**4**		**250**					**0.05-0.2**
DW-02	27-Jun-02	--	7.88	--	540	110	110	52	0.23	12	200	98	16	2.0	50	0.4 U
DW-02	4-Jun-03	19.80	8.13	890	580	120	120	47	0.26	0.84	200	93	16	2.1	46	0.05 U
DW-02	9-Mar-04	21.40	8.11	1000	540	130	130	48	0.27	0.96	220	95	17	2.2	50	0.05 U
DW-02	7-Jun-05	17.50	8.06	848	600	130	130	60	0.3	1.6	200	110	18	2.3	52	0.05 U
DW-02	13-Jun-06	17.21	7.81 J 1	902	610	130	130	72	0.44 UJ	2.1 J	190	110	18	2.2	50	0.04 U
DW-02	18-May-07	17.60	7.96 J 1	1063	650	110	110	94	0.4 J	2.3 J	210	110	18	2.3	53	0.04 UJ
DW-2	18-Jun-08	--	8.02 J	--	830	140	140	140 J	0.35 J	4.3	260	130	24	2.9	64	0.04 U
DW-04	27-Jun-02	--	7.79	--	1000	70	70	160	0.1 U	1.8	440	180	18	2.4	130	0.4 U
DW-04	4-Jun-03	17.90	8.05	1680	1100	69	69	180	0.16	0.15	450	150	16	2.8	150	0.05 U
DW-04 FD	4-Jun-03	--	8.01	--	1100	64	64	190	0.15	0.17	450	150	16	2.5 U	140	0.05 U
DW-04	9-Mar-04	19.60	8.00	1870	950	61	61	180	0.12	0.22	430	140	15	2.2	160	0.05 U
DW-04	7-Jun-05	16.80	7.95	1446	970	63	63	180	0.15	0.18	390	110	12	1.9	160	0.05 U
DW-04	13-Jun-06	17.15	7.89 J	1338	900	54	54	160	0.4 UJ	0.21 J	340	95	10	1.8	170	0.04 U
DW-04	18-May-07	16.30	7.98 J	1343	880	64	64	120	0.33 J	0.17 J	360	120	13	2.0	110	0.04 U
DW-4	18-Jun-08		7.87 J		910	68	68	130	0.23 J	0.3 UJ	400	110	12	1.9	130	0.04 U
DW-10	27-Jun-02	--	7.73	--	680	108	108	75	0.19	0.73	220	110	20	3.4	58	0.4 U
DW-10	3-Jun-03	16.90	8.11	1030	630	130	130	82	0.24	0.78	250	110	20	3.4	53	0.05 U
DW-10	8-Mar-04	20.60	8.01	1220	650	110	110	90	0.24	1	270	120	21	3.4	58	0.05 U
DW-10	7-Jun-05	19.50	8.04	946	630	150	150	69	0.24	0.7	220	120	21	3.6	58	0.05 U
DW-10	13-Jun-06	17.18	7.74 J 1	923	660	120	120	78	0.39 UJ	0.77 J	210	100	19	3.4	55	0.04 U
DW-10	17-May-07	17.70	7.91 J 1	1081	670	88	88	100	0.41 J	1.4 J	230	110	19	3.3	53	0.04 U
DW-10-D1	18-Jun-08	--	7.9 J	--	820	110	110	120	0.27 J	1.9 UJ	280	120	23	3.6	59	0.04 U
DW-10-D2	18-Jun-08	--	7.9 J	--	770	120	120	110	0.27 J	2 UJ	280	130	24	3.8	60	0.04 U
DW-18	27-Jun-02	--	7.63	--	780	100	100	170	0.26	12	200	140	20	2.6	96	0.4 U
DW-18	3-Jun-03	18.60	7.97	1370	820	98	98	180	0.32	13	210	140	22	2.9	87	0.05 U
DW-18	8-Mar-04	19.00	7.95	1520	750	88	88	170	0.27	14	210	130	21	2.7	82	0.05 U
DW-18	7-Jun-05	17.80	7.91	1247	840	89	89	170	0.28	16	210	130	21	2.9	85	0.05 U
DW-18	12-Jun-06	18.69	7.73 J	1358	300	82	82	150	0.43 UJ	13 J	200	130	21	2.7	82	0.04 U
DW-18	18-May-07	17.70	7.8 J	1360	860	68	68	180	0.62	14 J	230	130	20	2.7	80	0.04 UJ
DW-18	18-Jun-08	--	7.92 J	--	940	84	84	190 J	0.37 J	14	250	130	22	2.8	86	0.04 U

Table 4-1. 2008 Analytical Results for Domestic Wells - Continued

Sample Name	Sample Date	Arsenic	Barium	Beryllium	Boron	Cadmium	Cobalt	Copper	Iron	Manganese	Nickel	Silica	Strontium	Uranium	Vanadium	Zinc
		ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	mg/L	mg/L	ug/L	ug/L	ug/L
Primary DWS		**10**	**2000**	**4**		**5**		**1300**								
Secondary DWS								**1000**	**0.3**	**50**				**30**		**5000**
DW-02	27-Jun-02	6	58	2 U	0.25 U	2 U	2 U	2	0.25 U	2 U	4	--	0.95	--	8	32
DW-02	4-Jun-03	7	63	2 U	0.23	2 U	2 U	6	0.05 U	2 U	2 U	--	0.96	--	7	69
DW-02	9-Mar-04	6	67	2 U	0.24	2 U	2 U	2 U	0.05 U	2 U	2 U	--	0.98	51.2	9	140
DW-02	7-Jun-05	8	74	1 U	0.25	1 U	1 U	2	0.06	1 U	2	51	1.1	48	10	30
DW-02	13-Jun-06	8	75	0.075 U	0.24	0.025 U	0.098 J	231	0.018 J	0.63 UJ	0.35 U	49	1.1	49	9	59
DW-02	18-May-07	8.3	82	0.075 U	0.3	0.11 U	0.15 J	28	0.03 J	1.3	0.9 U	48	1.1	56	10	69
DW-2	18-Jun-08	6.6	100	0.2 U	0.34	0.11 U	0.19 UJ	49	0.21	1.9 UJ	0.9 U	46	1.5	52	8.9	160
DW-04	27-Jun-02	2 U	40	2 U	0.25 U	2 U	2 U	2	0.25 U	2 U	6	--	1.4	--	2	56
DW-04	4-Jun-03	2	45	2 U	0.25	2 U	2 U	4	0.05 U	2 U	2	--	1.4	--	3	44
DW-04 FD	4-Jun-03	3	42	2 U	0.27	2 U	2 U	4	0.05 U	2 U	2 U	--	1.3	--	3	47
DW-04	9-Mar-04	2 U	35	2 U	0.27	2 U	2 U	2 U	0.1	2 U	2 U	--	1.2	18.8	3	30
DW-04	7-Jun-05	3	41	1 U	0.26	1 U	1 U	3	0.23	16	2	49	1	14	5	40
DW-04	13-Jun-06	4.2	35	0.075 U	0.26	0.025 U	0.099 J	1.3 J	0.19	17	0.35 U	44	0.85	13	7.1	12 J
DW-04	18-May-07	1.8	38	0.075 U	0.28	0.11 U	0.16 J	1 J	0.074	3.7	0.9 U	45	1.1	25	4.1	17 UJ
DW-4	18-Jun-08	2.7 UJ	31	0.2 U	0.28	0.11 U	0.15 U	1 J	0.053 UJ	2 UJ	0.9 U	41	1.1	18	3.8	25
DW-10	27-Jun-02	8	58	2 U	0.25 U	2 U	2 U	2 U	0.25 U	2 U	4	--	1.2	--	10	14
DW-10	3-Jun-03	10	71	2 U	0.26	2 U	2 U	3	0.05 U	2 U	2 U	--	1.3	--	10	23
DW-10	8-Mar-04	12	68	2 U	0.26	2 U	2 U	5	0.05 U	2	3	--	1.3	31.8	13	50
DW-10	7-Jun-05	12	79	1 U	0.27	1 U	1 U	2	0.05 U	1 U	2	50	1.3	44	13	40
DW-10	13-Jun-06	11	71	0.075 U	0.26	0.025 U	0.098 J	1.8 J	0.015 U	0.64 UJ	0.35 U	51	1.2	31	13	19 J
DW-10	17-May-07	11	81	0.075 U	0.26	0.11 U	0.16 J	1.4 J	0.018 J	0.75 U	0.9 U	47	1.2	29	13	29
DW-10-D1	18-Jun-08	9.6	91	0.2 U	0.3	0.11 U	0.15 U	1.3 J	0.015 U	0.75 U	0.9 U	44	1.5	29	12	7.1 J
DW-10-D2	18-Jun-08	10	86	0.2 U	0.3	0.11 U	0.15 U	1.5 J	0.015 U	0.75 U	0.9 U	46	1.5	28	12	3.5 J
DW-18	27-Jun-02	6	52	2 U	0.25 U	2 U	2 U	2	0.25 U	2 U	4	--	1.2	--	10	14
DW-18	3-Jun-03	8	60	2 U	0.59	2 U	2 U	3	0.05 U	2 U	2 U	--	1.2	--	9	34
DW-18	8-Mar-04	9	60	2 U	0.52	2 U	2 U	19	0.05 U	2 U	3	--	1.2	21.1	12	30
DW-18	7-Jun-05	8	64	1 U	0.5	1 U	1 U	3	0.14	3	2	53	1.3	18	11	60
DW-18	12-Jun-06	8.8	62	0.075 U	0.5	0.025 U	0.13 J	3.5	0.029 J	0.76 UJ	0.35 U	53	1.2	19	13	15 J
DW-18	18-May-07	7.7	58	0.075 U	0.51	0.11 U	0.22 J	1.2 J	0.038 J	1.8	0.9 U	49	1.2	20	13	10 UJ
DW-18	18-Jun-08	7.2	61	0.2 U	0.54	0.11 U	0.2 UJ	1.7 J	0.015 U	1.4 UJ	0.9 U	47	1.3	17	12	8.1 J

Table 4-1. 2008 Analytical Results for Domestic Wells - Continued

Sample Name	Sample Date	Temperature (field)	pH (lab)	Specific Conductance (field)	Total Dissolved Solids	Total Alkalinity (as CaCO3)	Bicarbonate (as CaCO3)	Chloride	Fluoride	Nitrate (as N)	Sulfate	Calcium	Magnesium	Potassium	Sodium	Aluminum
		degree C	S.U.	uS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Primary DWS										**10**						
Secondary DWS			**6.5-8.5**		**500**			**250**	**4**		**250**					**0.05-0.2**
DW-36	28-Jun-02	--	7.91	--	400	96	96	31	0.35	0.5 U	130	66	10	2.2	36	0.25 U
DW-36	4-Jun-03	18.30	8.17	670	420	120	120	42	0.3	0.39	130	71	12	2.5	38	0.05 U
DW-36	8-Mar-04	21.70	8.09	690	310	92	92	34	0.3	0.37	110	57	9.4	2.1	32	0.05 U
DW-36	7-Jun-05	18.40	8.09	470	320	94	94	33	0.35	0.38	87	52	8	2	32	0.05 U
DW-36	12-Jun-06	16.93	7.98 J	294	290	88	88	25	0.48 UJ	0.3 J	87	47	7.9	1.9	31	0.04 U
DW-36	17-May-07	17.00	8.06 J	641	400	80 J	80 J	33	0.39 J	0.47 J	130	61	9.9	2.1	38	0.04 U
DW-36 FD	17-May-07	--	8.08 J	--	370	100 J	100 J	32	0.37 J	0.39 J	130	62	10	2.3	35	0.04 U
DW-36	18-Jun-08	--	7.96 J	--	500	110	110	47	0.39 J	1.1 UJ	200	83	15	2.6	38	0.04 U
DW-38	27-Jun-02	--	7.94	--	860	137	137	100	1.2	4.3	330	68	10	3.4	200	0.4 U
DW-38	2-Jun-03	17.50	8.04	--	920	150	150	110	1.8	3.5	400	66	11	2.6	210	0.05 U
DW-38	9-Mar-04	16.60	8.12	1930	980	160	160	140	1.6	3.3	390	67	11	3.5	250	0.05 U
DW-38	7-Jun-05	17.60	8.13	1326	860	150	150	110	1.9	3	330	58	9.4	3.8	240	0.05 U
DW-38	13-Jun-06	16.75	7.91 J	1202	830	150	150	97	1.7	3.1 J	270	50	8.3	3.3	200	0.04 U
DW-38	15-May-07	17.00	7.99 J	1258	780	120	120	99	1.8	3.2	250	45	7.5	2.9	200	0.04 U
DW-38 FD	15-May-07	--	7.97 J	--	790	120	120	110	1.7	3.2	270	46	7.7	3	210	0.04 U
DW-38	18-Jun-08	--	8.02 J	--	870	150	150	120	1.8	3.7	310	49	8.7	3.4	200	0.04 U
DW-39	28-Jun-02	--	8.20	--	400	142	142	30	1.8	0.8	96	15	3	2.6	120	0.25 U
DW-39	2-Jun-03	19.20	8.24	--	390	150	150	31	1.7	0.94	110	14	3.2	2.3	120	0.05 U
DW-39	9-Mar-04	18.10	8.35	860	380	146	143	32	1.7	0.91	100	15	3.2	2.6	120	0.05 U
DW-39	7-Jun-05	19.00	8.27	613	400	150	150	32	1.8	0.93	110	15	3.3	2.7	120	0.05 U
DW-39	14-Jun-06	19.58	8.2 J	668	410	150	150	29	1.7	0.76	98	14	3.2	2.6	110	0.04 U
DW-39	15-May-07	17.30	8.3 J	672	400	130	130	32	1.8	0.76	100	14	3	2.5	120	0.04 U
DW-39	18-Jun-08	--	8.22 J	--	410	140	140	33	1.8	0.93 UJ	110	14	3.1	2.6	110	0.04 U
DW-40	28-Jun-02	--	7.85	--	490	88	88	62	0.3	0.51	170	88	15	2.8	42	0.25 U
DW-40	3-Jun-03	19.00	8.02	830	500	91	91	71	0.23	0.53	190	90	17	3	42	0.05 U
DW-40	8-Mar-04	20.00	8.02	1010	470	84	84	67	0.25	0.59	200	87	16	3.2	41	0.05 U
DW-40	7-Jun-05	18.20	8.00	820	580	91	91	81	0.32	0.84	220	100	19	3.7	45	0.05 U
DW-40	14-Jun-06	17.12	7.82 J	850	560	80	80	68	0.42 UJ	0.7	210	95	16	3.4	41	0.04 U
DW-40	17-May-07	16.80	7.9 J	1022	620	96	96	84	0.34 J	1.2 J	250	110	20	3.5	50	0.04 U
DW-40	18-Jun-08	--	7.86 J	--	680	96	96	78	0.27 J	1.1 UJ	270	110	21	3.7	45	0.04 U

Table 4-1. 2008 Analytical Results for Domestic Wells - Continued

Sample Name	Sample Date	Arsenic	Barium	Beryllium	Boron	Cadmium	Cobalt	Copper	Iron	Manganese	Nickel	Silica	Strontium	Uranium	Vanadium	Zinc
		ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	mg/L	mg/L	ug/L	ug/L	ug/L
Primary DWS		**10**	**2000**	**4**		**5**		**1300**								
Secondary DWS								**1000**	**0.3**	**50**				**30**		**5000**
DW-36	28-Jun-02	6	20	2 U	0.25 U	2 U	2 U	2 U	0.25 U	2 U	2 U	--	0.6	--	4	10 U
DW-36	4-Jun-03	8	35	2 U	0.41	2 U	2 U	2 U	0.05 U	2 U	2 U	--	0.65	--	7	23
DW-36	8-Mar-04	10	27	2 U	0.29	2 U	2 U	2 U	0.05 U	3	2 U	--	0.57	20.4	9	10 U
DW-36	7-Jun-05	9	25	1 U	0.26	1 U	1 U	1 U	0.05 U	2	1 U	51	0.51	16	9	20 U
DW-36	12-Jun-06	11	23	0.075 U	0.27	0.025 U	0.049 J	0.89 J	0.015 U	2.2 UJ	0.35 U	50	0.47	15	9.3	5.4 J
DW-36	17-May-07	9.1	33	0.075 U	0.37	0.11 U	0.15 U	0.75 UJ	0.015 U	2	0.9 U	47	0.66	22	8.5	5.5 J
DW-36 FD	17-May-07	9.3	33	0.075 U	0.37	0.11 U	0.15 U	4.2 J	0.015 U	2.3	0.9 U	47	0.66	21	9	7.9 J
DW-36	18-Jun-08	9.1	40	0.2 U	0.43	0.11 U	0.15 U	1.4 J	0.015 U	1.4 UJ	0.9 U	46	0.9	29	7.7	3.1 J
DW-38	27-Jun-02	34	38	2 U	0.25 U	2 U	2 U	6	0.25 U	2 U	2	--	0.9	--	24	18
DW-38	2-Jun-03	29	37	2 U	1.8	2 U	2 U	5	0.05 U	2 U	2 U	--	1.1	--	21	42
DW-38	9-Mar-04	30	30	2 U	2.3	2 U	2 U	4	0.1	3	2 U	--	1.1	43	25	80
DW-38	7-Jun-05	34	35	1 U	1.7	1 U	1 U	5	0.05 U	1 U	2	52	0.9	39	27	30
DW-38	13-Jun-06	31	31	0.075 U	1.5	0.16 J	0.098 J	6.6	0.015 J	1.2 UJ	1.1 J	55	0.76	29	28	18 J
DW-38	15-May-07	29	29	0.075 U	1.6	0.16 J	0.15 U	4.3	0.024 J	2.2	0.9 U	54	0.72	32	26	49
DW-38 FD	15-May-07	29	30	0.075 U	1.6	0.18 J	0.15 U	3.5	0.025 J	2.2	0.9 U	55	0.74	31	26	48
DW-38	18-Jun-08	31	26	0.2 U	1.6	0.11 U	0.15 U	7	0.015 U	0.75 U	1.4 J	52	0.83	31	26	25
DW-39	28-Jun-02	34	18	2 U	0.25 U	2 U	2 U	2	0.25 U	2 U	2 U	--	0.25 U	--	28	10 U
DW-39	2-Jun-03	35	22	2 U	0.66	2 U	2 U	3	0.05 U	2 U	2 U	--	0.05 U	--	29	33
DW-39	9-Mar-04	36	22	2 U	0.7	2 U	2 U	2 U	0.12	2 U	2 U	--	0.05 U	22.4	29	10 U
DW-39	7-Jun-05	34	22	1 U	0.72	1 U	1 U	1	0.09	1 U	1 U	47	0.05 U	18	30	30
DW-39	14-Jun-06	39	21	0.075 U	0.72	0.11 J	0.045 J	621	0.18	4.4	0.35 U	47	0.025	17	36	18 J
DW-39	15-May-07	35	21	0.075 U	0.71	0.19 J	0.15 U	0.98 J	0.17	1.9	0.9 U	45	0.024	18	31	3.3 J
DW-39	18-Jun-08	35	21	0.2 U	0.72	0.14 J	0.15 U	0.75 U	0.018 UJ	0.75 U	0.9 U	44	0.025	16	31	2.7 J
DW-40	28-Jun-02	10	40	2 U	0.25 U	2 U	2 U	2 U	0.25 U	4	4	--	1.1	--	8	10 U
DW-40	3-Jun-03	9	47	2 U	0.2	2 U	2 U	2	0.05	3	2 U	--	1.1	--	7	24
DW-40	8-Mar-04	11	48	2 U	0.2	2 U	2 U	2	0.05	5	2	--	1.1	12	10	10 U
DW-40	7-Jun-05	10	58	1 U	0.21	1 U	1 U	1	0.16	5	2	49	1.2	12	10	30
DW-40	14-Jun-06	12	53	0.075 U	0.19	0.025 U	0.11 J	3.4	0.024 J	3.4	0.35 U	47	1.1	10	11	17 J
DW-40	17-May-07	9.8	64	0.075 U	0.23	0.11 U	0.15 J	1.5 J	0.036 J	7.3	0.9 U	47	1.3	17	9.5	20
DW-40	18-Jun-08	8.2	68	0.2 U	0.24	0.11 U	0.15 U	1.2 J	0.015 U	7.3	0.9 U	45	1.4	16	8.7	5.6 J

Table 4-1. 2008 Analytical Results for Domestic Wells - Continued

Sample Name	Sample Date	Temperature (field)	pH (lab)	Specific Conductance (field)	Total Dissolved Solids	Total Alkalinity (as CaCO3)	Bicarbonate (as CaCO3)	Chloride	Fluoride	Nitrate (as N)	Sulfate	Calcium	Magnesium	Potassium	Sodium	Aluminum
		degree C	S.U.	uS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Primary DWS										**10**						
Secondary DWS			**6.5-8.5**		**500**			**250**	**4**		**250**					**0.05-0.2**
DW-41	28-Jun-02	--	7.77	--	670	84	84	120	0.26	4.1	210	100	15	2.2	94	0.25 U
DW-41	3-Jun-03	18.10	8.00	1090	640	92	92	120	0.29	4.5	230	93	15	2.2	87	0.05 U
DW-41	8-Mar-04	17.10	8.03	1460	710	100	100	150	0.28	9.3	250	120	19	2.7	96	0.05 U
DW-41	7-Jun-05	18.20	8.00	1004	660	91	91	110	0.27	5.1	220	100	16	2.4	86	0.05 U
DW-41 FD	7-Jun-05	--	8.01	--	670	90	90	110	0.25	5.1	220	100	16	2.4	86	0.05 U
DW-41	14-Jun-06	17.63	7.82 J	1070	650	88	88	94	0.44 UJ	4.9	230	96	16	2.3	85	0.04 U
DW-41	17-May-07	17.80	7.95 J	1221	700	64	64	130	0.39 J	6.7 J	260	110	18	2.6	92	0.04 U
DW-41	18-Jun-08	--	7.86 J	--	860	92	92	170	0.31 J	8.6 UJ	280	120	21	2.6	90	0.04 U
DW-42	28-Jun-02	--	8.04	--	800	76	76	160	0.35	5.5	260	64	8	1.9	190	0.25 U
DW-42	3-Jun-03	20.00	7.97	1420	810	78	78	170	0.35	5.5	290	63	9.4	1.9	180	0.05 U
DW-42	8-Mar-04	19.40	8.08	1610	750	73	73	170	0.27	5.3	290	66	9.4	2.2	190	0.05 U
DW-42	7-Jun-05	17.40	8.06	1276	800	75	75	170	0.31	3.9	270	55	7.1	2.2	210	0.05 U
DW-42	14-Jun-06	Not sampled - Owner requested to be removed from sampling program.								--	--	--	--	--	--	--
DW-43	28-Jun-02	--	7.49	--	410	220	220	19	0.21	1.9	76	76	18	6.4	36	0.5
DW-43	4-Jun-03	16.30	5.59	730	440	220	220	23	0.18	1.9	90	79	19	6.3	34	0.05 U
DW-43	9-Mar-04	19.60	8.16	9000	430	230	230	25	0.15	2.1	110	83	21	6.3	37	0.05 U
DW-43	7-Jun-05	16.70	7.98	720	470	230	230	27	0.16	2.4	120	92	21	6.8	39	0.05 U
DW-43	13-Jun-06	16.96	7.46 J	740	480	240	240	24	0.34 UJ	2.5 J	110	85	21	6.0	36	0.04 U
DW-43	18-May-07	15.90	7.68 J	836	500	200	200	24	0.36 J	3 J	19	85	20	6.3	37	0.04 U
DW-43	17-Jun-08	--	7.61 J	--	480	250	250	27	0.22 J	3.4	130	92	22	6.7	40	0.04 U
DW-45	27-Jun-02	--	7.85	--	390	94	94	47	0.26	8	130	70	13	5.0	34	0.4 U
DW-45	8-Mar-04	16.80	8.02	980	500	110	110	64	0.24	1.2	190	94	19	5.3	37	0.05 U
DW-45 FD	8-Mar-04	21.80	8.02	--	500	110	110	65	0.25	1.2	190	94	19	5.2	38	0.05 U
DW-45	7-Jun-05	16.60	8.05	632	440	99	99	49	0.25	1	140	73	14	5.0	35	0.05 U
DW-45	13-Jun-06	16.00	7.83 J	844	610	120	120	59	0.39 UJ	1.3 J	200	98	20	5.4	38	0.04 U
DW-45	18-May-07	15.20	7.98 J	787	480	84	84	59	0.4 J	1.1 J	160	75	14	4.9	33	0.04 U
DW-45	18-Jun-08	--	7.91 J	--	550	96	96	67	0.35 J	1.4 UJ	200	89	18	5.6	37	0.04 U
DW-46	28-Jun-02	--	7.78	--	980	80	80	190	0.29	6.8	290	130	19	2.2	130	0.25 U
DW-46	3-Jun-03	18.00	7.95	1710	990	85	85	230	0.31	7.2	360	140	23	3.6	150	0.05 U
DW-46	8-Mar-04	19.00	8.01	2000	1000	82	82	230	0.21	7.1	350	150	23	3.0	160	0.05 U
DW-46	7-Jun-05	17.80	7.99	1518	1000	84	84	220	0.38	7	340	150	22	3.1	150	0.05 U
DW-46	13-Jun-06	17.77	7.86 J	1472	980	80	80	190	0.46 UJ	5.6 J	330	120	21	3.0	150	0.04 U
DW-46	18-May-07	17.20	8.01 J	1561	1000	68	68	190	0.44 J	5.8 J	350	120	18	2.7	130	0.04 UJ
DW-46	18-Jun-08	--	7.91 J	--	1000	92	92	210	0.39 J	6.3	350	130	21	2.9	150	0.04 U

Table 4-1. 2008 Analytical Results for Domestic Wells - Continued

Sample Name	Sample Date	Arsenic	Barium	Beryllium	Boron	Cadmium	Cobalt	Copper	Iron	Manganese	Nickel	Silica	Strontium	Uranium	Vanadium	Zinc
		ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	mg/L	mg/L	ug/L	ug/L	ug/L
Primary DWS		**10**	**2000**	**4**		**5**		**1300**								
Secondary DWS								**1000**	**0.3**	**50**				**30**		**5000**
DW-41	28-Jun-02	6	58	2 U	0.25 U	2 U	2 U	2 U	0.25 U	2 U	4	--	0.95	--	10	12
DW-41	3-Jun-03	6	65	2 U	0.37	2 U	2 U	3	0.05 U	2 U	2 U	--	0.89	--	10	31
DW-41	8-Mar-04	8	90	2 U	0.47	2 U	2 U	3	0.13	3	3	--	1.2	32.3	10	110
DW-41	7-Jun-05	7	69	1 U	0.37	1 U	1 U	1	0.07	1	2	49	0.98	28	12	40
DW-41 FD	7-Jun-05	7	65	1 U	0.36	1 U	1 U	2	0.05	1	2	47	0.97	27	11	40
DW-41	14-Jun-06	7.2	71	0.075 U	0.34	0.032 J	0.11 J	2.6	0.021 J	0.75 J	0.35 U	52	0.98	24	12	20
DW-41	17-May-07	6.4	81	0.075 U	0.36	0.11 U	0.18 J	2.2	0.044	7.7	0.9 U	50	1.2	30	11	24 UJ
DW-41	18-Jun-08	6.5	89	0.2 U	0.37	0.11 U	0.15 U	1.2 J	0.45	1.1 UJ	0.9 U	44	1.3	30	10	17 J
DW-42	28-Jun-02	18	40	2 U	0.3	2 U	2 U	2	0.25 U	2 U	2	--	0.65	--	22	16
DW-42	3-Jun-03	17	42	2 U	0.32	2 U	2 U	2 U	0.06	2 U	2 U	--	0.61	--	19	69
DW-42	8-Mar-04	18	44	2 U	0.53	2 U	2 U	4	0.14	2	2 U	--	0.7	19.4	20	100
DW-42	7-Jun-05	20	46	1 U	0.43	1 U	1 U	2	0.26	4	1	46	0.62	17	24	70
DW-42	14-Jun-06	Not sampled - Owner requested to be removed from sampling program.								--	--	--	--	--	--	--
DW-43	28-Jun-02	4	92	2 U	0.35	2 U	2 U	2	0.25 U	2 U	4	--	0.6	--	2	10 U
DW-43	4-Jun-03	3	110	2 U	0.47	2 U	2 U	2 U	0.05 U	2 U	2 U	--	0.69	--	3	20
DW-43	9-Mar-04	2	110	2 U	0.48	2 U	2 U	2 U	0.05 U	2 U	2 U	--	0.73	67.6	4	20
DW-43	7-Jun-05	3	130	1 U	0.48	1 U	1 U	2	0.05 U	1 U	2	35	0.81	48	4	30
DW-43	13-Jun-06	1.9	120	0.075 U	0.47	0.036 J	0.14 J	0.85 J	0.015 U	1.5 UJ	0.35 U	37	0.75	44	3	9 J
DW-43	18-May-07	2.1	130	0.075 U	0.47	0.11 U	0.15 U	0.81 J	0.02 J	1.3	0.9 U	35	0.76	55	3.5	5.3 UJ
DW-43	17-Jun-08	2.2	140	0.2 U	0.49	0.11 U	0.15 U	1.8 J	0.04 UJ	1.7 UJ	0.9 U	33	0.82	48	3	15 J
DW-45	27-Jun-02	8	38	2 U	0.25 U	2 U	2 U	2	0.25 U	2 U	4	--	0.6	--	8	10 U
DW-45	8-Mar-04	8	34	2 U	0.24	2 U	2 U	2	0.05 U	2 U	2	--	0.85	18.4	9	120
DW-45 FD	8-Mar-04	9	35	2 U	0.24	2 U	2 U	2	0.05 U	2 U	2	--	0.86	20.3	9	140
DW-45	7-Jun-05	8	46	1 U	0.17	1 U	1 U	1 U	0.07	1	1	44	0.7	9	9	50
DW-45	13-Jun-06	7.4	50	0.075 U	0.23	0.025 U	0.11 J	1.2 J	0.015 U	1.5 UJ	0.35 U	43	0.93	20	8.7	56
DW-45	18-May-07	7.9	53	0.075 U	0.18	0.11 U	0.15 U	1.7 J	0.015 U	0.93 J	0.9 U	41	0.71	12	9	10 UJ
DW-45	18-Jun-08	8.7	60	0.2 U	0.2	0.11 U	0.15 U	0.77 J	0.015 U	0.75 U	0.9 U	39	0.87	12	8.8	21
DW-46	28-Jun-02	6	42	2 U	0.25 U	2 U	2 U	2	0.25 U	2 U	6	--	1.2	--	10	22
DW-46	3-Jun-03	6	50	2 U	1.2	2 U	2 U	4	0.05 U	2 U	2 U	--	1.5	--	9	52
DW-46	8-Mar-04	9	49	2 U	1.3	2 U	2 U	9	0.05 U	2 U	3	--	1.5	33.6	11	20
DW-46	7-Jun-05	7	46	1 U	1.2	1 U	1 U	2	0.1	3	2	48	1.4	29	11	90
DW-46	13-Jun-06	7.7	43	0.075 U	1.1	0.028 J	0.12 J	2.2	0.02 J	2 UJ	0.35 U	50	1.3	28	12	42
DW-46	18-May-07	7.8	42	0.075 U	0.92	0.11 U	0.18 J	1.6 J	0.021 J	2.5	0.9 U	46	1.2	31	12	40 UJ
DW-46	18-Jun-08	7.6	40	0.2 U	1.2	0.11 U	0.15 UJ	1.1 J	0.015 U	0.93 UJ	0.9 U	46	1.4	32	11	32

Table 4-1. 2008 Analytical Results for Domestic Wells - Continued

Sample Name	Sample Date	Temperature (field)	pH (lab)	Specific Conductance (field)	Total Dissolved Solids	Total Alkalinity (as CaCO3)	Bicarbonate (as CaCO3)	Chloride	Fluoride	Nitrate (as N)	Sulfate	Calcium	Magnesium	Potassium	Sodium	Aluminum
		degree C	S.U.	uS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Primary DWS										**10**						
Secondary DWS			**6.5-8.5**		**500**			**250**	**4**		**250**					**0.05-0.2**
DW-47	27-Jun-02	--	7.84	--	740	132	132	110	0.1 U	8.3	220	41	9.2	3.6	180	0.4 U
DW-47	18-Dec-02	--	7.83	--	1200	120	120	190	1.5	11	410	70	17	4.7	250	0.05 U
DW-47	11-Mar-03	--	8.03	--	1100	120	120	170	2	9.9	350	60	13	3.0	200	0.08
DW-47	2-Jun-03	18.00	8.11	--	900	130	130	150	1.6	8.6	320	58	14	3.6	220	0.05 U
DW-47	16-Sep-03	21.20	8.16	1560	940	130	130	130	1.6	8.7	300	53	13	4.0	220	0.05 U
DW-47	10-Dec-03	15.50	8.02	1530	980	120	120	150	1.5	7.4	380	60	14	4.0	230	0.1 U
DW-47	8-Mar-04	16.10	8.15	1790	900	130	130	140	1.5	7.2	360	57	13	4.3	230	0.05 U
DW-47	8-Jun-04	17.40	8.15	--	980	130	130	140	1.4	7.3	330	50	12	3.9	220	0.05 U
DW-47	13-Sep-04	18.10	7.98	1750	940	130	130	140	1.4		340	57	13	4.1	230	0.05 U
DW-47	7-Jun-05	18.10	8.13	1463	960	140	140	130	1.6	7.4	360	63	14	4.6	260	0.05 U
DW-47	12-Jun-06	17.33	7.91 J	1449	870	150	150	100	1.5	6 J	280	47	11	3.8	210	0.04 U
DW-47	15-May-07	17.10	8.06 J	1138	700	140	140	85	1.7	4.9	220	34	7.7	3.2	190	0.04 U
DW-47-D1	18-Jun-08	--	8.05 J	--	830	150	150	100	1.5	6.3	300	44	11	3.8	190	0.04 U
DW-47-D2	18-Jun-08	--	8.05 J	--	840	150	150	100	1.6	6.1	300	44	10	3.9	190	0.04 U
DW-48	28-Jun-02	--	7.49	--	860	280	280	64	0.18	2.2	240	160	30	6.0	68	0.55
DW-48	4-Jun-03	17.20	8.07	1410	940	300	300	68	0.21	2.9	290	170	32	5.7	68	0.05 U
DW-48	9-Mar-04	22.90	8.03	1530	850	300	300	68	0.15	3.2	290	170	34	5.6	70	0.05 U
DW-48 FD	9-Mar-04	21.50	8.05	--	860	310	310	67	0.15	3.2	290	170	34	5.6	70	0.05 U
DW-48	7-Jun-05	15.80	7.92	1215	850	290	290	60	0.17	3.1	270	160	31	5.6	70	0.05 U
DW-48	14-Jun-06	15.14	7.54 J	1241	860	280	280	57	0.37 UJ	2.7	250	150	28	5.1	64	0.04 U
DW-48	18-May-07	15.00	7.82 J	1151	770	220	220	56	0.34 J	2.5 J	230	120	24	4.7	59	0.04 UJ
DW-48	18-Jun-08	--	7.95 J	--	790	280	280	55 J	0.29 J	3.2	240	130	27	5.2	68	0.04 U
DW-49	27-Jun-02	12.60	8.09	--	600	141	141	60	1.1	2.9	200	32	4.4	3.9	170	0.4
DW-49	2-Jun-03	18.90	8.13	--	550	150	150	49	1.7	2.3	180	25	3.9	3.1	160	0.05 U
DW-49	9-Mar-04	17.60	8.25	1100	540	150	150	49	1.7	2.1	180	23	3.6	3.3	150	0.05 U
DW-49	7-Jun-05	19.20	8.15	924	600	140	140	55	1.5	3	220	32	5.2	3.7	160	0.05 U
DW-49 FD	7-Jun-05	--	8.15	--	630	140	140	55	1.5	3	210	31	5.2	3.5	160	0.05 U
DW-49	14-Jun-06	18.38	7.97 J	1003	620	140	140	49	1.4	3.1 J	210	33	5.5	3.3	160	0.14
DW-49	15-May-07	20.20	8.03 J	1025	640	120	120	56	1.4	3.5	230	34	5.6	3.2	160	0.04 U
DW-49	18-Jun-08	--	8.04 J	--	650	140	140	54	1.4	3.9	240	32	5.4	3.3	150	0.04 U

Table 4-1. 2008 Analytical Results for Domestic Wells - Continued

Sample Name	Sample Date	Arsenic	Barium	Beryllium	Boron	Cadmium	Cobalt	Copper	Iron	Manganese	Nickel	Silica	Strontium	Uranium	Vanadium	Zinc
		ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	mg/L	mg/L	ug/L	ug/L	ug/L
Primary DWS		**10**	**2000**	**4**		**5**		**1300**								
Secondary DWS								**1000**	**0.3**	**50**				**30**		**5000**
DW-47	27-Jun-02	32	40	2 U	0.25 U	2 U	2 U	2	0.25 U	2 U	4	--	0.4	--	28	10 U
DW-47	18-Dec-02	25	66	2 U	0.86	2 U	2 U	6	0.05 U	5	2	--	0.8	--	22	100
DW-47	11-Mar-03	27	50	2 U	0.8	2 U	2 U	4	0.7	6	2 U	--	0.74	--	21	90
DW-47	2-Jun-03	30	53	2 U	0.79	2 U	2 U	3	0.05 U	2 U	2 U	--	0.6	--	25	26
DW-47	16-Sep-03	28	52	5 U	0.8	5 U	5 U	5 U	0.05 U	5 U	5 U	--	0.62	--	25	25 U
DW-47	10-Dec-03	28	54	2 U	0.9	2 U	2 U	3	0.1 U	2 U	2 U	--	0.6	15	25	60
DW-47	8-Mar-04	26	44	2 U	0.88	2 U	2 U	2 U	0.18	2 U	2 U	--	0.64	23.6	24	70
DW-47	8-Jun-04	28	48	1 U	0.77	1 U	1 U	1	0.05 U	1 U	1 U	--	0.59	15	25	21
DW-47	13-Sep-04	30	50	1 U	0.85	1 U	1 U	20 U	0.05 U	1 U	3	--	0.59	18.7	25	33
DW-47	7-Jun-05	29	48	1 U	0.9	1 U	1 U	2	0.07	2	2	54	0.68	20	25	20
DW-47	12-Jun-06	30	40	0.075 U	0.95	0.094 J	0.089 J	1.3 J	0.015 U	0.5 U	0.35 U	56	0.55	21	31	5.9 J
DW-47	15-May-07	32	31	0.075 U	0.97	0.13 J	0.15 U	1.1 J	0.052	2.2	0.9 U	55	0.39	22	30	13 J
DW-47-D1	18-Jun-08	28	36	0.2 U	0.97	0.11 U	0.15 U	1.8 J	0.015 U	0.75 U	0.9 U	52	0.51	20	29	11 J
DW-47-D2	18-Jun-08	29	32	0.2 U	0.94	0.11 U	0.15 U	1.6 J	0.015 U	0.75 U	0.9 U	51	0.51	21	28	11 J
DW-48	28-Jun-02	6	86	2 U	0.65	2 U	2 U	2	0.25 U	2 U	6	--	1.4	--	6	10 U
DW-48	4-Jun-03	6	120	2 U	0.75	2 U	2 U	5	0.05 U	2 U	2	--	1.5	--	8	32
DW-48	9-Mar-04	6	110	2 U	0.74	2 U	2 U	2 U	0.05 U	2 U	3	--	1.4	128	10	10 U
DW-48 FD	9-Mar-04	5	110	2 U	0.72	2 U	2 U	2 U	0.05 U	2 U	3	--	1.4	122	10	10 U
DW-48	7-Jun-05	6	100	1 U	0.73	1 U	1 U	3	0.05 U	1 U	2	49	1.4	92	8	110
DW-48	14-Jun-06	6.1	120	0.075 U	0.69	0.028 J	0.27 J	3.2	0.015 U	0.5 U	0.35 U	51	1.2	89	9.7	11 UJ
DW-48	18-May-07	5.9	85	0.075 U	0.62	0.11 U	0.19 J	28	0.015 U	0.75 U	0.9 U	49	1.1	75	9.4	24 UJ
DW-48	18-Jun-08	6	96	0.2 U	0.77	0.11 U	0.18 UJ	1.9 J	0.015 U	0.75 U	0.9 U	46	1.2	79	9	2.5 U
DW-49	27-Jun-02	30	48	2 U	0.25 U	2 U	2 U	12	0.25 U	2 U	2 U	--	0.45	--	34	18
DW-49	2-Jun-03	35	51	2 U	0.98	2 U	2 U	2 U	0.05 U	2 U	2 U	--	0.42	--	37	26
DW-49	9-Mar-04	34	45	2 U	0.96	2 U	2 U	2 U	0.16	3	2 U	--	0.39	20.8	34	20
DW-49	7-Jun-05	24	40	1 U	1.2	1 U	1 U	2	0.11	6	1	50	0.55	20	26	40
DW-49 FD	7-Jun-05	26	41	1 U	1.2	1 U	1 U	3	0.1	6	1	50	0.55	22	27	50
DW-49	14-Jun-06	24	41	0.075 U	1.2	0.088 J	0.054 J	14	0.096	5.2	0.35 U	53	0.57	20	29	26
DW-49	15-May-07	22	43	0.075 U	1.3	0.12 J	0.15 U	21	0.047	2.7	0.9 U	52	0.61	23	25	21
DW-49	18-Jun-08	23	41	0.2 U	1.1	0.11 U	0.15 U	5.4	0.045 UJ	3.5 UJ	0.9 U	48	0.6	20	27	9.5 J

Table 4-1. 2008 Analytical Results for Domestic Wells - Continued

Sample Name	Sample Date	Temperature (field)	pH (lab)	Specific Conductance (field)	Total Dissolved Solids	Total Alkalinity (as CaCO3)	Bicarbonate (as CaCO3)	Chloride	Fluoride	Nitrate (as N)	Sulfate	Calcium	Magnesium	Potassium	Sodium	Aluminum
		degree C	S.U.	uS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Primary DWS										**10**						
Secondary DWS			**6.5-8.5**		**500**			**250**	**4**		**250**					**0.05-0.2**
DW-50	27-Jun-02	12.90	8.08	--	570	112	112	79	1.1	0.5 U	170	30	8.8	1.6	130	0.3
DW-50	3-Jun-03	18.10	8.08	1070	590	120	120	94	0.91	3.9	200	35	11	2.3	160	0.05 U
DW-50	8-Mar-04	15.60	8.24	1250	580	110	110	94	0.95	4	210	34	10	2.0	150	0.05 U
DW-50	7-Jun-05	18.10	8.16	1012	610	120	120	90	1.1	4.7	210	37	11	2.2	160	0.05 U
DW-50	14-Jun-06	17.64	8.09 J	1090	650	110	110	91	1.1 UJ	4.5	200	40	12	2.4	170	0.04 U
DW-50	17-May-07	17.70	8.19 J	1151	660	100	100	100	0.94	5.3 J	220	40	12	2.2	170	0.04 U
DW-50	18-Jun-08	--	8.18 J	--	700	110	110	110 J	0.96	6.6	230	41	12	2.3	170	0.04 U
DW-52	8-Mar-04	18.50	8.19	350	160	87	87	11	0.36	0.29	32	24	4.9	2.9	24	0.05 U
DW-52	7-Jun-05	16.80	8.14	281	200	90	90	12	0.37	0.31	35	27	5.3	3.2	25	0.05 U
DW-52 FD	7-Jun-05	--	8.14	--	200	91	91	12	0.4	0.32	35	25	5	3.0	24	0.05 U
DW-52	13-Jun-06	16.96	8.04 J	280	190	92	92	10	0.52 UJ	0.28 J	34	25	5.3	2.9	24	0.04 U
DW-52	17-May-07	18.20	8.14 J	324	210	72	72	13	0.54	0.31 J	39	26	5.1	2.9	27	0.04 U
DW-52	18-Jun-08	--	8.11 J	--	190	96	96	14	0.5	0.32 UJ	38	25	5.4	2.8	23	0.04 U
TW06	27-Jun-02	15.60	7.66	--	250	150	150	20	0.62	0.5 U	59	54	12	5.6	28	0.05 U
TW06	12-Jun-03	--	7.77	--	320	160	160	22	0.19	0.1	66	51	13	5.4	25	0.05 U
TW06	8-Mar-04	18.00	8.00	750	300	170	170	24	0.17	0.11	67	59	14	6.1	28	0.05 U
TW06	7-Jun-05	15.80	8.01	509	330	170	170	24	0.16	0.1	61	60	14	6.4	29	0.05 U
TW06	13-Jun-06	16.58	7.66 J	505	330	170	170	22	0.35 UJ	0.11 J	65	54	14	6.4	28	0.04 U
TW06 FD	13-Jun-06	--	7.68 J	--	340	160	160	22	0.34 UJ	0.12 J	64	55	14	6.3	28	0.04 U
TW06	16-May-07	15.30	7.84 J	574	370	140	140	24	0.44 J	0.15 J	66	57	13	6.4	31	0.051
TW-6	18-Jun-08	--	8.04 J	--	500	170	170	26 J	0.32 J	0.19 UJ	70	56	13	6.3	28	0.04 U
WDW017	27-Jun-02	13.10	8.26	--	310	180	180	14	1.5	5	53	11	2.4	1 U	110	0.4 U
WDW017	4-Jun-03	14.60	8.33	570	350	170	170	14	1.9	0.36	58	12	3.3	2.2	100	0.05 U
WDW017	9-Mar-04	16.70	8.48	650	300	179	170	14	1.8	0.24	51	10	3.4	1.8	100	0.05 U
WDW017	7-Jun-05	0.90	8.30	1010	340	180	180	15	2	0.44	52	10	2.2	1.6	100	0.05 U
WDW017	14-Jun-06	19.28	8.26 J	544	320	180	180	14	1.9	0.4	55	9.8	2.3	1.8	100	0.04 U
WDW017	15-May-07	16.90	8.21 J	577	230	170	170	21	2	0.45	58	11	2.3	1.6	110	0.04 U
WDW017	18-Jun-08	Not sampled, unable to contact homeowner.			--	--	--	--	--	--	--	--	--	--	--	--

Table 4-1. 2008 Analytical Results for Domestic Wells - Continued

Sample Name	Sample Date	Arsenic	Barium	Beryllium	Boron	Cadmium	Cobalt	Copper	Iron	Manganese	Nickel	Silica	Strontium	Uranium	Vanadium	Zinc
		ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	mg/L	mg/L	ug/L	ug/L	ug/L
Primary DWS		**10**	**2000**	**4**		**5**		**1300**								
Secondary DWS								**1000**	**0.3**	**50**				**30**		**5000**
DW-50	27-Jun-02	26	38	2 U	0.25 U	2 U	2 U	2 U	0.25 U	2 U	2 U	--	0.25 U	--	32	44
DW-50	3-Jun-03	26	46	2 U	0.59	2 U	2 U	2	0.06	2 U	2 U	--	0.28	--	31	65
DW-50	8-Mar-04	21	40	2 U	0.6	2 U	2 U	3	0.18	4	2 U	--	0.28	19	28	1400
DW-50	7-Jun-05	24	45	1 U	0.64	1 U	1 U	6	0.09	3	1	39	0.31	20	30	110
DW-50	14-Jun-06	27	45	0.075 U	0.72	0.084 UJ	0.13 UJ	2.3	0.14	5	0.35 U	40	0.34	21	37	120
DW-50	17-May-07	27	49	0.075 U	0.71	0.11 U	0.15 U	2.9	0.23	6.7	0.9 U	41	0.34	25	37	78
DW-50	18-Jun-08	23	49	0.2 U	0.76	0.11 U	0.15 U	2.7	0.08 UJ	3 UJ	1.1 J	37	0.36	24	31	120
DW-52	8-Mar-04	13	19	2 U	0.16	2 U	2 U	2 U	0.21	5	2 U	--	0.25	3.68	11	40
DW-52	7-Jun-05	12	20	1 U	0.16	1 U	1 U	1 U	0.12	4	1 U	40	0.27	4	11	40
DW-52 FD	7-Jun-05	13	20	1 U	0.15	1 U	1 U	1 U	0.13	4	1 U	40	0.26	4	11	30
DW-52	13-Jun-06	12	19	0.075 U	0.14	0.025 U	0.035 U	2.7	0.065	3.4	0.35 U	42	0.26	3.8	11	27
DW-52	17-May-07	11	20	0.075 U	0.16	0.11 U	0.15 U	3.6	0.056	6.5	0.9 U	40	0.28	4.4	11	40 UJ
DW-52	18-Jun-08	11	17	0.2 U	0.17	0.11 U	0.15 U	1.1 J	0.076 UJ	2.3 UJ	0.9 U	39	0.28	3.5	11	45
TW06	27-Jun-02	6	60	2 U	0.08	2 U	2 U	2 U	0.19	4	4	--	0.4	--	4	22
TW06	12-Jun-03	3	63	2 U	0.13	2 U	2 U	2 U	0.07	3	2 U	--	0.43	--	3	57
TW06	8-Mar-04	6	69	2 U	0.17	2 U	2 U	2 U	0.22	8	2 U	--	0.5	26.6	6	50
TW06	7-Jun-05	5	79	1 U	0.16	1 U	1 U	1	0.12	2	2	42	0.52	23	5	40
TW06	13-Jun-06	4.1	73	0.075 U	0.15	0.027 J	0.09 J	8.6	0.084	4.2	0.35 U	42	0.5	22	4.4	16 J
TW06 FD	13-Jun-06	3.9	74	0.075 U	0.15	0.03 J	0.095 J	2.6	0.088	4.5	0.35 U	42	0.51	23	4.4	14 J
TW06	16-May-07	4.5	79	0.075 U	0.16	0.11 U	0.15 U	2.8	0.038 J	2.5	0.9 U	39	0.52	26	5.2	7.2 J
TW-6	18-Jun-08	4.2	76	0.2 U	0.17	0.11 U	0.15 U	1.6 J	0.016 UJ	1.9 UJ	0.9 U	36	0.51	23	5	6 J
WDW017	27-Jun-02	44	6	2 U	0.25 U	2 U	2 U	22	0.25 U	2 U	2 U	--	0.25 U	--	42	10 U
WDW017	4-Jun-03	48	7	2 U	0.7	2 U	2 U	24	0.13	4	2 U	--	0.13	--	47	22
WDW017	9-Mar-04	43	7	2 U	0.66	2 U	2 U	12	0.92	100	2 U	--	0.13	20.5	34	10 U
WDW017	7-Jun-05	42	6	1 U	0.69	1 U	1 U	2	0.05 U	1 U	1 U	51	0.14	17	42	20
WDW017	14-Jun-06	51	7.1	0.075 U	0.71	0.17 J	0.041 J	6.3	0.015 U	0.5 U	0.35 U	51	0.13	18	51	5 UJ
WDW017	15-May-07	50	7.5	0.075 U	0.75	0.25 J	0.15 U	15	0.023 J	1	0.9 U	51	0.14	21	49	5.9 J
WDW017	18-Jun-08	Not sampled, unable to contact homeowner				--	--	--	--	--	--	--	--	--	--	--

Table 4-1. 2008 Analytical Results for Domestic Wells - Continued

Sample Name	Sample Date	Temperature (field)	pH (lab)	Specific Conductance (field)	Total Dissolved Solids	Total Alkalinity (as CaCO3)	Bicarbonate (as CaCO3)	Chloride	Fluoride	Nitrate (as N)	Sulfate	Calcium	Magnesium	Potassium	Sodium	Aluminum
		degree C	S.U.	uS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Primary DWS										**10**						
Secondary DWS			**6.5-8.5**		**500**			**250**	**4**		**250**					**0.05-0.2**
WDW018	25-Jun-02	12.30	8.12	--	580	160	160	48	1.5	0.5 U	200	28	6	2.5 U	170	0.05 U
WDW018	4-Jun-03	19.60	8.27	900	550	140	140	39	1.5	0.17	170	24	5.5	1.9	150	0.05 U
WDW018	8-Mar-04	18.50	8.32	790	380	181	178	22	1.7	0.2	93	15	3.4	1.5	120	0.05 U
WDW018	7-Jun-05	18.90	8.31	575	380	180	180	20	1.8	0.18	78	14	3.1	1.6	120	0.05 U
WDW018 FD	7-Jun-05	--	8.30	--	380	180	180	20	1.8	0.18	76	14	3.1	1.5	120	0.05 U
WDW018	14-Jun-06	17.28	8.26 J	576	340	190	190	14	1.9	0.19	60	11	2.5	1.4	100	0.04 U
WDW018	15-May-07	16.60	8.17 J	672	370	170	170	25	1.7	0.15	92	16	3.5	1.6	120	0.04 U
WDW018	18-Jun-08	--	8.24 J	--	480	250	250	33	1.7	0.18 UJ	130	21	4.7	1.7	120	0.04 U
WDW019	24-Jun-02	12.10	7.44	--	840	320	1100	46	1 U	6.9	270	140	31	5.7	92	0.86
WDW019	4-Jun-03	16.00	8.14	1150	710	270	270	34	0.24	4.9	220	120	26	6.7	75	0.05 U
WDW019	9-Jun-04	19.50	7.91	--	660	240	240	29	0.18	7.2	200	92	22	6.0	76	0.28
WDW019	13-Sep-05	20.40	7.87	1079	810	250	250	36	0.3	6.5	280	130	30	5.9	81	0.05U
WDW019	14-Jun-06	Well out of service.		--	--	--	--	--	--	--	--	--	--	--	--	--
WDW019	15-May-07	--	7.71 J	--	890	240	240	36	0.23 J	10	280	140	31	7.8	89	0.81
WDW019	19-Jun-08	--	7.63 J	--	1200	270	270	50	0.31 J	3.3	520	180	45	7.5	97	0.04 U
Well 4	27-Jun-02	15.90	7.71	--	240	140	140	17	0.54	0.8	46	46	8.6	2.8	36	0.05 U
Well 4	12-Jun-03	--	7.71	--	310	120	120	27	0.77	0.69	67	35	9.7	1.6	43	0.05 U
Well 4	8-Mar-04	18.50	8.18	580	250	120	120	26	0.52	0.53	56	34	8.9	1.7	44	0.05 U
Well 4	7-Jun-05	18.10	8.15	470	300	130	130	29	0.62	0.64	59	39	9.9	1.8	48	0.05 U
Well 4	15-Jun-06	20.15	7.39 J	484	290	150	150	16	0.5	0.98 J	46	47	9.2	3.1	38	0.04 U
Well 4	16-May-07	15.40	8.06 J	458	310	140	140	15	0.49 J	0.71 J	42	39	7.3	3.0	36	0.04 U
Well 4	18-Jun-08	--	8.17 J	--	370	150	150	17 J	0.51	0.93 UJ	47	40	8.1	3.3	35	0.04 U

Table 4-1. 2008 Analytical Results for Domestic Wells - Continued

Sample Name	Sample Date	Arsenic	Barium	Beryllium	Boron	Cadmium	Cobalt	Copper	Iron	Manganese	Nickel	Silica	Strontium	Uranium	Vanadium	Zinc
		ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	mg/L	mg/L	ug/L	ug/L	ug/L
Primary DWS		**10**	**2000**	**4**		**5**		**1300**								
Secondary DWS								**1000**	**0.3**	**50**				**30**		**5000**
WDW018	25-Jun-02	30	16	2 U	0.73	2 U	2 U	2 U	0.05 U	2 U	4	--	0.45	--	34	10 U
WDW018	4-Jun-03	34	15	2 U	0.78	2 U	2 U	3	0.05 U	2 U	2 U	--	0.37	--	40	41
WDW018	8-Mar-04	48	11	2 U	0.76	2 U	2 U	2	0.05 U	2 U	2 U	--	0.23	31.3	44	10 U
WDW018	7-Jun-05	46	10	1 U	0.75	1 U	1 U	2	0.05 U	1 U	1 U	54	0.22	28	44	40
WDW018 FD	7-Jun-05	46	10	1 U	0.75	1 U	1 U	2	0.05 U	1 U	1 U	55	0.22	26	43	40
WDW018	14-Jun-06	58	9.8	0.075 U	0.72	0.23 J	0.035 J	0.76 J	0.015 U	0.5 U	0.35 U	54	0.16	30	54	8.1 UJ
WDW018	15-May-07	49	16	0.075 U	0.78	0.36 J	0.15 U	0.98 J	0.015 U	0.75 U	0.9 U	54	0.24	28	44	6.6 J
WDW018	18-Jun-08	44	15	0.2 U	0.71	0.24 J	0.15 U	0.94 J	0.015 U	0.75 U	0.9 U	49	0.35	26	41	2.9 J
WDW019	24-Jun-02	0.004	0.09	0.002 U	0.46	0.002 U	0.002 U	0.004	0.05	6	0.024	--	1.2	--	0.004	0.01 U
WDW019	4-Jun-03	0.006	0.071	0.002 U	0.4	0.002 U	0.002 U	0.002 U	0.05 U	2 U	0.002	--	0.97	--	0.006	0.026
WDW019	9-Jun-04	0.002 U	0.049	0.002 U	0.61	0.002 U	0.002 U	0.003	0.32	15	0.002	54	0.74	34.6	0.003	0.02
WDW019	13-Sep-05	0.006	0.064	0.002	0.44	0.002	0.002U	0.003	0.09	14	0.004	43	1	--	0.006	0.17
WDW019	14-Jun-06	Well out of service		--	--	--	--	--	--	--	--	--	--	--	--	--
WDW019	15-May-07	5	82	0.11 J	0.46	0.11 U	0.69 J	3.5	1.6	31	0.94 J	46	1.1	65	6.8	4.8 J
WDW019	19-Jun-08	4.2	65	0.2 U	0.45	0.11 U	0.19 UJ	1.6 J	0.015 U	0.75 U	1.1 J	45	1.5	110	6.3	5.8 J
Well 4	27-Jun-02	18	46	2 U	0.2	2 U	2 U	4	0.05 U	2 U	2	--	0.35	--	16	10 U
Well 4	12-Jun-03	23	13	2 U	0.22	2 U	2 U	2 U	0.05 U	2 U	2 U	--	0.3	--	24	45
Well 4	8-Mar-04	26	14	2 U	0.26	2 U	2 U	2	0.05 U	2 U	2 U	--	0.32	21.2	26	70
Well 4	7-Jun-05	25	16	1 U	0.25	1 U	1 U	3	0.05 U	1 U	1 U	51	0.37	22	27	40
Well 4	15-Jun-06	18	51	0.075 U	0.27	0.025 U	0.043 J	1.5 J	0.015 U	0.5 U	0.35 U	47	0.42	25	20	10 J
Well 4	16-May-07	19	50	0.075 U	0.26	0.11 U	0.15 U	0.75 U	0.015 U	0.75 U	0.9 U	42	0.36	24	19	6.5 J
Well 4	18-Jun-08	16	50	0.2 U	0.27	0.11 U	0.15 U	2.2	0.015 U	0.75 U	0.9 U	41	0.38	21	18	3.7 J

Notes:
NA = Not available and/or not measured
U: non-detected at the detection limit (that's the number given);
J: the value is estimated for different reasons;
UJ: not detected at an estimated detection limit.

SECTION 5.0
QUALITY ASSURANCE/QUALITY CONTROL SUMMARY

A total of 369 normal and 35 field duplicate groundwater monitor well samples were collected and analyzed. A total of eleven results (2 copper and 9 nickel) by method E200.8 and one gross alpha result by Method E900.0 were rejected due to extremely low matrix spike recoveries. Rejected results should not be used for any purpose. All non-rejected data are considered usable for the stated purposes. Completeness goals were met for every method and analyte. Most methods had greater than 70 percent quantitative results. The primary issues that resulted in data qualification were: 1) low laboratory control spike ("LCS") and matrix spike recoveries for Radium-228; and 2) laboratory pH measurements that were performed after the 24-hour holding time. Other sporadic analytical issues resulted in a few results being qualified as estimated, but these sporadic issues have little effect on overall data quality. Table 5-1 provides a summary of the results that were qualified by method.

Table 5-1. Analytical Completeness by Method

				Number of Results				Completeness	
Method	**Parameter**	**Samples Analyzed (N+FD)**	**Analytes per sample**	**Total**	**Rejected**	**Estimated due to QC deficiencies**	**Estimated due to >MDL but <PQL**	**Percent usable**	**Percent quantitative***
B0S7	Gross Alpha	188+15	1	203	0	52	14	100%	74%
E200.7	ICP Metals	392+37	13	5477	0	192	280	100%	96%
E200.8	ICP-MS Metals	398+37	18	7556	11	692	985	99.8%	91%
E245.1	Mercury	369+35	1	404	0	3	14	100%	99%
E300	Anions	390+37	6	2550	0	276	167	100%	89%
E900.0	Gross Alpha and Beta	179+20	1-2	300	1	65	18	99.7	78%
E903.0	Total Alpha Radium (Ra-226)	178+20	1	198	0	39	46	100%	80%
E904.0	Radium-228	367+35	1	402	0	128	30	100%	68%
HASL 300	Isotopic Thorium	179+20	3	597	0	3	10	100%	99%
ISOTH	Isotopic Thorium	188+15	3	609	0	2	10	100%	99%
RICHRC5027	Total Alpha Radium (Ra-226)	275+25	1	300	0	15	54	100%	95%
SM2320B	Alkalinity (as $CaCO_3$)	390+37	4	1708	0	4	0	100%	99%
SM2540C	Total Dissolved Solids	390+37	1	427	0	1	0	100%	99%
SM4500	pH (lab)	390+37	1	427	0	420	0	100%	2%
SM5310B	Total Organic Carbon	369+35	1	404	0	21	21	100%	95%
SW9310	Gross Beta	188+15	1	203	0	0	13	100%	100%

* Note: Estimations due solely to results <PQL do not affect the calculated completeness
Calculations do not include any required field or laboratory QC samples, except field duplicates.
N = normal environmental samples FD = field duplicate samples
MDL=method detection limit PQL=practical quantitation limit

SECTION 6.0
UPDATED HYDROGEOCHEMICAL CONCEPTUAL SITE MODEL

The hydrogeochemical conceptual site model ("HCSM") presented herein is generally based on the CSM presented in Appendix B-1 of the *Conceptual Site Model for the Yerington Mine Site, Lyon County, Nevada (Revision 3*,Brown and Caldwell and Integral Consulting, Inc., 2009). The HCSM has been revised in response to EPA comments provided on January 5, 2009 (EPA, 2009), and updated to incorporate 2008 groundwater monitoring data.

The conceptual hydrogeologic and groundwater geochemical models for the Site include a general description of the geologic setting, and more detailed information on groundwater conditions based on recent field investigations. As described in the CSM, the Site is located in the Mason Valley, a structurally down-dropped basin surrounded by uplifted mountain ranges, which is typical of basin-and-range topography. The mountain blocks are primarily composed of granitic, metamorphic, and volcanic rocks with minor amounts of semi-consolidated to unconsolidated alluvial fan deposits. The Singatse Range is an area of regional metals mineralization and hydrothermal alteration and hosts the porphyry copper deposits mined from the Yerington and MacArthur open pits.

Other local areas of mineralization include the Blue Stone and Ann Mason mines, and the Bear copper porphyry deposit. The Bear ore deposit is located beneath the sulfide tailings at the Site, in a structurally uplifted segment of the Singatse Range (the "Singatse Spur"). The porphyry copper deposits and associated hydrothermal alteration haloes, near surface and at depth, have the potential to influence groundwater quality in the alluvial aquifer associated with the Site, both in the geologic past and in the present.

Groundwater flow within the alluvial fan, which is composed of transitional and fluvial sedimentary deposits in the vicinity of the Site, occurs within a wedge-shaped graben located beneath the Site and between the Singatse Range and Singatse Spur. The depth to bedrock in this graben increases from 0 feet to approximately 600 feet below ground surface (bgs) in a

northward direction from the area of the open pit to approximately the area of Luzier Lane north of the Site. Figure 6-1 presents a north-south hydrogeologic cross section through the Site, which extends from the southernmost (B/W-13) to the northernmost (B/W-10) groundwater monitor wells installed as part of the hydrogeologic framework assessment (HFA) program. This generalized cross section (10x vertical exaggeration) depicts the relationship between the bedrock and alluvial groundwater flow systems, groundwater elevations (measured in July 2007) and the surface of the Yerington Pit Lake (surveyed in September 2007). Key elements of the cross-section include:

- The plane of the cross-section does not intercept a fault-contact relationship between the alluvium and the bedrock. The contacts illustrated are assumed to be depositional, and are more confidently known around the area of the open pit. Note that the precise geometry of the alluvial bedrock contact is unknown along most of the length of the cross-section, except at the pit walls, at B/W-13 and at B/W-11D3 where bedrock was intercepted at a depth of 226 feet bgs during Second-Step HFA investigations.
- The groundwater elevation for B/W-13 is higher than other alluvial groundwater elevations, and represents recharge from the Walker River to the Site. Alluvial groundwater elevations within the Site boundary from PA-MW-3 to MW-5 decrease seven feet over a distance of 6,750 feet, a gradient of 0.001 feet per foot, indicating a relatively flat potentiometric surface (note that the monitor wells located north of the Site are constructed in the deeper portion of the alluvial aquifer).
- Groundwater elevations in the bedrock and alluvial aquifers around the Yerington Pit Lake appear to be consistent with a refilling pit lake recharged by the alluvial and bedrock flow systems. The majority of the recharge is conceptualized to occur from the Walker River. The dashed potentiometric surface from B/W-13 to the pit lake, and from alluvial well PA-MW-3 to bedrock well WW-59 to the lake illustrates this concept. Note that the area of the pit lake is geologically and hydrologically complex, and groundwater conditions in this area will be evaluated further as part of a future Pit Lake RI Work Plan.

The majority of the unconsolidated alluvial deposits in the vicinity of the Site were derived by erosion of the uplifted mountain block of the Singatse Range, with minor deposition of fluvial sediments in the Walker River flood-plain. In addition, lacustrine deposits derived from ancestral Lake Lahontan occur north of the Site (Reheis, 1999). Uplift and erosion of the Singatse Range formed the east-dipping alluvial fan deposits, which include distal facies that extend into the transitional environment. Concurrent with the development of the alluvial fan, the Walker River laid flat-lying sand and gravel deposits in the transitional environment and the

main fluvial channel. Flat-lying clay-rich deposits have been preserved in the transitional setting, and are interpreted to have formed within the ancestral Lake Lahontan depositional environment.

Historic reports (e.g., AHA, 1983 and Dalton, 1999) described three hydrostratigraphic zones or aquifers (shallow, intermediate, and deep zones within the alluvial aquifer) in the vicinity of the Evaporation Ponds. These zones were defined on the basis of the occurrence of discrete clay layers, referred to as the Shallow Clay and Deep Clay. Recent borehole information (- and Caldwell, 2006) indicates that most of the clay horizons are discontinuous. However, a relatively continuous clay horizon may occur at an elevation of approximately 4,240 feet amsl based on its occurrence in adjacent boreholes.

Recharge to bedrock groundwater beneath the Site is conceptualized to occur from Walker River seepage and, to a lesser degree, from the percolation of precipitation and runoff through the fractured bedrock of the Singatse Range. Recharge to the alluvial flow system beneath the Site occurs as a result of Walker River seepage and, to a limited degree, direct percolation of surface and meteoric water. Recharge from direct precipitation on the valley floor was considered to be negligible by Huxel (1969), who estimated the following distribution of recharge to the alluvial aquifers to the Mason Valley hydrographic basin: 3 percent from precipitation that falls on the surrounding mountain ranges; 97 percent from the river and associated agricultural diversions; and less than 0.1 percent from direct precipitation on the valley floor. Based on the results of recent HFA investigations, these relative contributions to groundwater recharge appear to be valid concepts. The pit lake currently has the potential to recharge the alluvial flow system at the western margin of the open pit. Finally, agricultural irrigation practices immediately north of the Site augment natural recharge to the alluvial aquifer. The following bullets summarize the hydrogeologic and groundwater flow aspects of the Site conceptual model:

- Regionally, alluvial groundwater in the Mason Valley flows approximately north near the Site (Nork, 1989). In the vicinity of the Site, the alluvial groundwater flow regime is locally affected by: 1) the Yerington Pit and Pit Lake; 2) bedrock outcrops on the eastern margin of the Site (the Singatse Spur); 3) irrigation and groundwater pumping associated

with agricultural activities immediately north of the Site; and 4) groundwater extraction associated with the pumpback well system, which is located on the east and north sides of the Evaporation Ponds.

- Monitor wells installed relatively close to the Walker River southeast of the Site consistently yield the highest groundwater elevations, suggesting that the river is the major source of recharge to the Site, consistent with historic regional interpretations (Huxel, 1969; Seitz et al., 1982; Nork, 1989). Groundwater beneath the Process Areas flows northwesterly, based on groundwater elevation data obtained from monitor wells PA-MW-1S through PA-MW-3S.
- Refilling of the Yerington Pit with groundwater derived from bedrock and alluvial flow systems will eventually reach a water balance condition with a range of lake levels influenced by natural recharge and discharge components on a seasonal basis (i.e., recharge from the alluvial and bedrock aquifers during the spring and discharge from the lake surface due to evaporation during the summer).
- The north-northwest groundwater flow direction beneath the Process Areas, and the Site in general (as indicated on the potentiometric surface maps in Appendix E), results from recharge from the Walker River at the southeast margin of the Site (i.e., in the vicinity, and south, of the Yerington Mine open pit). Bedrock outcrops on the eastern margin of the Site (i.e., the Singatse Spur) and west of the Walker River may impede recharge from the river to the alluvial aquifer beneath the northern portion of the Site. Seepage from the West Campbell Ditch and the Walker River north of the Singatse Spur recharge the alluvial aquifer(s) north of the Site.
- The degree or potential for hydraulic communication between the bedrock and alluvial flow systems at various locations within and adjacent to the Site (e.g., Singatse Spur area and the area of the pit lake) is not completely known. Based on the hydrogeologic cross-section (Figure 6-1), the two systems appear to be hydraulically connected in the area of the pit lake.
- Groundwater flow in the shallow and possibly the intermediate hydrostratigraphic zones north of the Site is affected by a groundwater mound that develops during the approximate six-to-seven month irrigation season. Mounding occurs when surface water diverted from the Walker River via West Campbell Ditch and a smaller amount of pumped groundwater are applied to the large agricultural area located immediately north of the Site (north of the sulfide tailings area). Differences in the saturated thickness of the alluvial aquifer before and after the onset of pumping (Figures 6-2 and 6-3, respectively) are shown on Figure 6-4. The groundwater mound along the southwest and east edge of the agricultural fields is clearly evident, as is the reduced saturated thickness immediately around the pumping well near monitor well B/W-1S. The geometry and duration of this mound throughout each year is expected to vary, and likely depends upon the relative amounts of applied surface water and extracted groundwater. During years when flood irrigation occurs for alfalfa crops, the mound is likely to persist for a longer period because of the higher volume of applied water.

- In the deep hydrostratigraphic zone beneath and north of the Site, groundwater flows to the northeast in response to groundwater pumping for agricultural irrigation. Beneath the Evaporation Ponds, the potentiometric surface of the deep hydrostratigraphic zone is relatively flat with a hydraulic gradient of approximately 0.0003 feet/foot (i.e., 0.03 percent). To the northeast of the mine, the hydraulic gradient steepens due to the cone of depression around the pumping irrigation well.
- Seasonal pumping of groundwater from beneath the agricultural area and the distribution of groundwater and surface water conveyed from the Walker River via West Campbell Ditch results in a complex pattern of vertical re-distribution and mixing of water types. These processes affect groundwater flow directions, groundwater chemical quality and geochemical conditions in the alluvial aquifer(s) around the northwest and northwestern margins of the Site.
- Where aquitards (i.e., clay-rich sediments) are not present in the area immediately north of the Site, as noted at the location of MW2002-1S (shallow well with a screen interval from 19 to 29 feet bgs) and B/W-2D (deep well with a screen interval from 125 to 145 feet bgs), a slight downward vertical gradient (1.63 feet) has been observed.
- The 11 groundwater pumpback wells located on the northern portion of the Site appear to have limited capture zones (approximately 100-foot radius in plan view), based on a limited assessment conducted as part of the First-Step HFA. During the irrigation season, and during those years when the mound persists after the irrigation season ends, groundwater flows to the west in the area of the pumpback wells. This condition would further limit the effectiveness of the system in capturing mine-related groundwater along the northern array of pumpback wells oriented in an east-west direction.
- The groundwater flow velocity in the alluvial aquifer is currently estimated to be less than 100 feet/yr based on a variety of large- and small-scale hydraulic test methods and data evaluation techniques. The groundwater flow velocity in the alluvial aquifer was estimated by Sietz et al. (1982) to be 0.2 feet per day (feet/day), or about 75 feet per year (feet/yr) based on a correlation of aquifer transmissivity to specific capacity, well drilling data for the deeper Anaconda wells located north of the Site, and standard assumptions regarding well efficiencies (e.g., fully efficient) and aquifer characteristics (e.g., homogeneity and isotropy). Based on (unspecified) geotechnical investigations, Nork (1989) reported hydraulic conductivity values ranging from 0.35 to 0.50 feet per day for older alluvial fan deposits and 0.23 to 1.5 feet/day for weathered intrusive rocks, and calculated that the groundwater flow velocity ranged from 16 to 82 feet/yr assuming a porosity of 0.20 and a hydraulic gradient of 0.03 equivalent to the slope of the land surface. Groundwater flow velocities have been estimated to range from approximately 4 to 26 feet/yr in the shallow zone, 6 to 11 feet/yr in the intermediate zone, and 8 feet/yr in the deep zone (Table 3-4 of the Second-Step HFA Data Summary Report ("DSR")) based on an assumed porosity of 0.30, geometric mean hydraulic conductivity values derived from slug tests in 57 monitor wells, and horizontal hydraulic gradients in areas largely outside of the cones of depression induced by agricultural pumping and the PWS (Brown and Caldwell, 2008b).

- Hydraulic conductivity was calculated (AHA, 1999) from reported transmissivity values determined from aquifer testing in five shallow hydrostratigraphic zone wells (PW-6, PW-7, PW-9, PW-10 and PW-11) associated with the pumpback well system. Based on an aquifer thickness of 50 feet, the hydraulic conductivity values in the five wells ranged from 6.4 to 32.5 feet/day, and had a geometric mean of 16 feet/day.
- Inactive OUs (i.e., oxide and sulfide tailings, evaporation ponds, waste rock areas, process areas, and the Wabuska Drain) are not likely to be a source of continuous, long-term chemical loading to groundwater given that the low average precipitation and high evaporation on the valley floor would limit infiltration and provide no hydraulic head to allow percolation of chemicals through the vadose zone.
- Deep percolation and chemical loading to groundwater may occur locally (e.g., in topographic depressions) or temporarily (e.g., during larger precipitation events). Such potential conditions will be characterized during the OU-specific RIs, as appropriate (e.g., vadose zone characterization described in the Process Areas RI Work Plan). Given that ongoing fluid management operations are associated with the Arimetco Facilities, sourcing of chemicals to the vadose zone, and potentially to groundwater, may continue to occur from these operations.

Geochemical aspects of the conceptual model for the Site are preliminary and general in nature, and will be further refined based on data collected pursuant to the Site-Wide Groundwater RI Work Plan and/or other field investigations. Select wells and chemicals discussed below represent geochemical conditions associated with Site-wide locations that have been subjected to initial HFA investigations, and are not intended to be comprehensive. The term 'elevated', as used below, is based on empirical observations and must be subjected to a more rigorous evaluation, including a statistical analysis of background groundwater chemical conditions up-gradient and down-gradient of the Site.

Chemical concentration contour maps illustrating the distribution of selected chemicals in the shallow, intermediate and deep hydrostratigraphic zones at the Site during March 2008 were provided in the Second-Step HFA Data Summary Report (Brown and Caldwell, 2008b) and are included in Appendix H of this 2008 GWR. Future annual groundwater monitoring reports will include chemical distribution maps during high and low water periods concurrent with high and low water potentiometric surface maps. The following bullets summarize the geochemical aspects of the Site conceptual model:

- Potential groundwater quality end members include: 1) background waters in both mineralized and non-mineralized geologic settings; 2) mine-related groundwater; and 3) irrigation water composed of pumped groundwater and Walker River water (relative volumes of each may change during the course of an irrigation season). Background waters include areas where chemical compositions appear to be directly related to surface water recharge from the Walker River (e.g., B/W-14S and-15S) and irrigation conveyances (e.g., the West Campbell Ditch), and areas where groundwater composition may be influenced by mineralization and hydrothermal alteration (e.g., down-gradient of the MacArthur Mine or in contact with the alteration halo associated with the Bear porphyry copper deposit beneath the sulfide tailings at the Site).
- Aquifer geochemical processes include: 1) chemical reactions associated with mixing of different water types having different chemical compositions, oxidation-reduction potential, ionic strengths and/or chemical activities that may result in precipitation and/or dissolution of various mineral phases; 2) sorption and/or desorption of metals and metalloids on aquifer solids; and 3) potential evapo-concentration of constituents due to groundwater recycling and enrichment of chemicals during operation of the pumpback well system. Other processes affecting chemical fate and transport include advection/dispersion and, possibly, colloid transport.
- Groundwater quality in the five hydraulically up-gradient monitor wells (B/W-13S, -14S, -15S, -20S, and -21S), recharged by the Walker River, indicates: 1) circum-neutral pH with average values of 6.96 to 7.89 s.u. during 2008; 2) relatively low TDS concentrations that ranged from 240 to 580 milligrams per liter (mg/L) during 2008; and 3) relatively low concentrations of major ions, metals/metalloids and radiochemicals with minor exceptions (e.g., elevated arsenic concentrations in B/W-14S and elevated sulfate concentrations in B/W-13S).
- Groundwater quality data in the area of the Singatse Range alluvial fan, as represented by B/W-13S, indicate: 1) circum-neutral pH that averaged 7.56 s.u. during 2008; 2) a mixed major ion water composition with average sulfate and total alkalinity concentrations of 158 and 118 mg/L, respectively, during 2008; and 3) low concentrations of major ions, metals/metalloids and radiochemicals.
- Mine-related groundwater compositions are variable depending on the nature of the historic mineral processing activity at various locations throughout the Site, and/or ongoing fluid management operations associated with the Arimetco Facilities. Irrigation water composition appears to vary temporally and exhibit a complex pattern of vertical re-distribution and mixing of water types that include ambient groundwater north of the Site pumped from the agricultural wells and surface water.
- Data from Process Areas borehole grab samples and monitor wells PA-MW-1S, -2S and -3S indicate: circum-neutral pH (6.80 to 7.47 s.u. in the monitor wells during 2008); locally elevated concentrations of major ions (sulfate, calcium, magnesium, sodium and potassium), metals/metalloids (aluminum, beryllium, cadmium, chromium, copper, cobalt, iron, mercury, nickel, lead, selenium, thallium and zinc) and uranium; elevated chemicals in groundwater grab samples from PA-GW18, PA-GW19 and PA-GW23

associated with the inactive iron launders; and elevated concentrations from grab samples PA-GW7 and PA-GW4, which appear to have resulted from historic ore processing activities located to the south of the Process Areas.

- Data from beneath the remainder of the Site, as represented by shallow monitor wells near the Oxide Tailings (e.g., MW-2S and UW-1S), Phase IV – VLT Heap Leach Pad (e.g., MW-5S) and pumpback wells in the area of the Lined and Pumpback Evaporation Ponds (e.g., PW-1 through PW-11) indicate: 1) acidic to slightly acidic pH with values ranging from approximately 3.7 to 5.0 in groundwater near the Oxide Tailings, Arimetco Phase IV – VLT Heap Leach Pad, unlined Evaporation Ponds and extreme southeastern portion of the pumpback well system (e.g., PW-1 to PW-3); 2) elevated major ions, especially sulfate; 3) depressed or non-detectable total alkalinity beneath the unlined Evaporation Ponds; 4) elevated alkalinity (e.g., >500 mg/L) near the pumpback well system, especially down-gradient of the Weed Heights Sewage Lagoons; and 5) elevated metals/metalloids (e.g., aluminum, copper, iron, manganese, nickel, vanadium and zinc) and uranium.
- Beneath the unlined Evaporation Ponds and Arimetco Phase IV – VLT Heap Leach Pad, where the most elevated chemical concentrations in groundwater occur in existing monitor wells, concentrations generally decrease from the shallow to deeper hydrostratigraphic zones. Concentrations of sulfate and uranium decrease by approximately one order of magnitude, iron decreases by approximately three orders of magnitude, total alkalinity increases by approximately three orders of magnitude, and pH increases by approximately two standard units (s.u.), between the shallow and deep hydrostratigraphic zones. Elevated chemical concentrations in groundwater beneath the unlined Evaporation Ponds and Arimetco Phase IV – VLT Heap Leach Pad also decrease laterally by varying orders of magnitude as a result of various attenuation processes. For example, during 2008, sulfate decreases from 20,000 mg/L in shallow well MW-5S to 600 mg/L in shallow well B/W-4S, and uranium decreases from 3,500 ug/L in well MW-5S to 85 ug/L in shallow well B/W-4S.
- Groundwater data in the areas located to the west, northwest and north of the Site (as represented by monitor wells B/W-1 through B/W-10 and domestic wells DW-2, -4, -10, -18, -36, -38, -39, -40, -41, -43, -45, -46, -47, -48, -49, -50, and -52) indicate: 1) a circum-neutral pH ranging from approximately 7.0 to slightly less than 8.0 s.u.; 2) variable but generally low concentrations of major ions, metals/metalloids and radionuclides; 3) an area with elevated salt concentrations (e.g., sodium, potassium and chloride) and sulfate located west and northwest of the inactive Lined Evaporation Ponds and west of the western margin of the Sunset Hills development; and 4) an area of groundwater dominated by calcium located north of the Sulfide Tailings and east of the western margin of the Sunset Hills development.
- The sulfate contour map for the shallow aquifer (Figure 5-9 in Appendix H) indicates that: 1) elevated concentrations (in excess of 1,000 mg/L) underlie most of the evaporation ponds and a portion of the sulfide tailings, and appear to extend north of the Site by approximately 3,000 feet; 2) concentrations in excess of 10,000 mg/L occur in the area of the pumpback wells and the evaporation ponds; 3) west of the pumpback wells, lower sulfate concentrations may result from the seepage of treated sewage into

groundwater, potentially reducing sulfate to sulfides; 4) the geometry of the contours north of the Site suggests that sulfate concentrations are affected by agricultural applications; and 5) the lateral occurrence of sulfate north of the Site is generally consistent with electrical geophysical survey results performed by the Bureau of Land Management ("BLM";Lewis, 2000).

- The sulfate contour map for the intermediate aquifer (Figure 5-10 in Appendix H) indicates that: 1) the lateral extent of data is limited relative to that for the shallow aquifer, and will be further addressed during the Site-Wide Groundwater RI; 2) elevated concentrations (in excess of 1,000 mg/L) occur in the area of the evaporation ponds and along the northern margin of the sulfide tailings; and 3) a limited number of locations with concentrations in excess of 100 mg/L occur north of the Site, which do not appear to be continuous with the elevated concentrations beneath the northern portion of the Site.
- The sulfate contour map for the deep aquifer (Figure 5-11 in Appendix H) indicates: 1) the lateral extent of data is very limited relative to the shallow aquifer; 2) elevated concentrations (in excess of 1,000 mg/L) occur in the area of the evaporation ponds and along the northern margin of the sulfide tailings; and 3) concentrations ranging from approximately 140 – 240 mg/L occur north of the Site.
- The uranium contour map for the shallow aquifer (Figure 5-21 in Appendix H) indicates that: 1) elevated concentrations (in excess of 100 ug/L) underlie most of the evaporation ponds and a portion of the sulfide tailings, and appear to extend north of the pumpback wells by approximately 3,000 feet (uranium concentrations further north exhibit a potentially random distribution with values up to 100 ug/L); 2) concentrations in excess of 1,000 ug/L occur in the area of the evaporation ponds; 3) the highest uranium concentrations occur in well MW-5S, which is located immediately adjacent to the Arimetco Phase IV VLT Heap Leach Pad; and 4) several locations in the Process Areas exceed 50 ug/L.
- The uranium contour map for the intermediate aquifer (Figure 5-22 in Appendix H) indicates that: 1) concentrations in excess of 50 ug/L randomly occur beneath the evaporation ponds and along the northern margin of the sulfide tailings; and 2) uranium values further north exhibit a potentially random distribution with values up to approximately 50 ug/L.
- The uranium contour map for the deep aquifer (Figure 5-23 in Appendix H) indicates that: 1) concentrations in excess of 50 ug/L sporadically occur beneath the evaporation ponds and along the northern margin of the sulfide tailings; and 2) uranium concentrations further north exhibit a potentially random distribution with values up to approximately 50 ug/L.
- The alkalinity contour map for the shallow aquifer (Figure 5-18 in Appendix H) indicates that: 1) elevated concentrations in excess of 250 mg/L occur beneath the Process Areas and the Lined Evaporation Ponds, in a small area below the west side of the Peri agricultural area, and north of the Site by approximately 1,500 feet (alkalinity values further north exhibit a potentially random distribution with values up to 200 mg/L); 2) the highest concentrations occur in pumpback wells PW-9 through PW-11, considered to be

hydraulically down-gradient of the Weed Heights Sewage Lagoons; and 3) very low values (<1 mg/L) occur beneath the Unlined Evaporation Pond and the west side of the sulfide tailings.

- The alkalinity contour map for the intermediate aquifer (Figure 5-19 in Appendix H) indicates: 1) elevated values in excess of 250 mg/L beneath the lined evaporation ponds, and along the northern margin of the sulfide tailings; and 2) concentrations beneath the Site, up-gradient of the Site and north of the Site vary from 50 to 170 mg/L.
- The alkalinity contour map for the deep aquifer (Figure 5-20 in Appendix H) indicates that: 1) the highest concentrations (of about 2,000 mg/L) occur at the northwest corner of the Unlined Evaporation Pond, and at one location of 250 mg/L north of the sulfide tailings; and 2) concentrations beneath the Site, up-gradient of the Site and north of the Site vary from 70 to 165 mg/L.
- The iron distribution map for the shallow aquifer (Figure 5-12 in Appendix H) indicates that: 1) elevated concentrations in excess of 100 mg/L occur along or adjacent to the western margin of the unlined evaporation ponds; 2) concentrations of about 30 mg/L occur at two other locations beneath the sulfide tailings; 3) concentrations of about 10 mg/L beneath the Lined Evaporation Ponds and along the PWS; and 4) the remaining concentrations beneath the Site, up-gradient of the Site and north of the Site are low, generally less than 0.1 mg/L.
- The iron distribution map for the intermediate aquifer (Figure 5-13 in Appendix H) indicates that: 1) an elevated concentration in excess of 250 mg/L occurs near the northwest corner of the sulfide tailings; and 2) the remaining concentrations beneath the Site, up-gradient of the Site and north of the Site are low, generally less than 0.1 mg/L.
- The iron distribution map for the deep aquifer (Figure 5-14 in Appendix H) indicates that, with the exception of a single elevated value of 3.0 mg/L near the northwest corner of the unlined evaporation ponds, concentrations beneath the Site, up-gradient of the Site and north of the Site are less than 0.1 mg/L.
- The pH distribution map for the shallow aquifer (Figure 5-1 in Appendix H) indicates that: 1) values less than 6 s.u. occur in the area of the evaporation ponds and the northern margin of the sulfide tailings, including a number of locations with values less than 4 s.u. near the northwest corner of the sulfide tailings extending along the Pumpback System Evaporation Ponds; 2) values west of the Site equal to or greater than 8 s.u.; and 3) circum-neutral values for locations up-gradient and north of the Site, and portions of the site south of the sulfide tailings, including the Process Areas.
- The pH distribution map for the intermediate aquifer (Figure 5-2 in Appendix H) indicates that: 1) relative to the shallow aquifer, a greater number of values at locations west and north of the Site are equal to or greater than 8 s.u.; and 2) all remaining locations exhibit circum-neutral values.
- The pH distribution map for the deep aquifer (Figure 5-3 in Appendix H) indicates it is very similar to that of the intermediate aquifer, with the location near the northwest corner of the unlined evaporation pond exhibiting a value between 6 and 7 s.u.

SECTION 7.0
MODIFICATIONS TO THE GROUNDWATER MONITORING PLAN

As described in the Draft GMP, potential future modifications of the groundwater monitoring program may include, but not be limited to, the elimination or addition of monitor wells, changes to the frequency for groundwater level and water quality monitoring, the elimination or addition of laboratory analytical parameters, and changes to calibration or sampling methods. Modifications to the monitoring program are discussed below.

7.1 Elimination of Monitor Well MW-1S

After the first quarterly monitoring event in 2008, monitor well MW-1S became damaged and could not be sampled during subsequent monitoring events. Monitor well MW-1S is a 16-year old well with a broken PVC discharge line at an elevation at or immediately below the ground surface and a deeper obstruction, the cause of which is unknown. During the 2Q through 4Q 2008 quarterly monitoring events, the obstruction prevented measurement of water levels and the broken discharge line prevented the collection of groundwater samples. The well could not be easily rehabilitated, nor was it considered necessary to continue sampling this well to meet the objectives of the GMP because it is located only 400 feet from another recently-installed well (PA-MW-2S), which exhibits very similar groundwater chemistry. ARC's request that this well be eliminated from the monitoring network (ARC, 2008) was approved by the EPA (2008).

7.2 Monitoring Frequency

As discussed in the Draft GMP, the decision process for modifying the frequency for monitor well sampling will take into consideration the following criteria: 1) the objectives of the Draft GMP and OU-specific remedial investigations; 2) the rationale for initially including a monitor well within the network; 3) monitoring data collected up to the time of the proposed modification; 4) the analysis of groundwater flow and geochemical conditions in the area of the well, including the potential of future chemical loading to groundwater from specific Site sources; and 5) the importance of continued monitoring data from the well(s) to be eliminated in

Site-wide or OU-specific human health and ecological risk assessments. Based on monitoring data presented in this 2008 GMR, no changes are proposed to the frequency of monitoring.

7.3 Laboratory Analytical Parameters

Groundwater samples have been obtained and analyzed quarterly for the suite of analytes presented in Table 2-4 for at least one year. Analytical results from these sampling events are summarized in Tables I-1 through I-3 of Appendix I. The frequency of detection has been determined for each analyte, as well as the frequency that each analyzed parameter exceeds established primary and secondary drinking water standards ("DWS"). Each analyte has been ranked by increasing frequency of detection, and presented in graphical form in Charts I-1 through H-3.

The *metals* group of analytes is presented in Table I-1 and Charts I-1. Two "Parameter Censuring Criteria" have been applied to determine which parameters should be eliminated or retained for continued analysis.

Parameter Censuring Criterion 1 - Metals that are detected less than 10 percent of the time are recommended for elimination. These metals have been detected too infrequently and at levels only slightly above laboratory detection limits and therefore provide little value in groundwater data evaluation. These metals include silver (Ag), titanium (Ti), tin (Sn), thallium (Tl), mercury (Hg), and lead (Pb).

Parameter Censuring Criterion 2 - Metals that are not typically associated with copper ore processing are not considered "indicator parameters", have not exceeded drinking water standards during the previous year, and have been reported at generally low levels shall be recommended for elimination. These metals include cobalt (Co), lithium (Li), vanadium (V), molybdenum (Mo), barium (Ba), potassium (K), boron (B), strontium (Sr), silicon (Si), and sodium (Na).

Physical parameters have been presented in Tables I-2 and charts I-2 of Appendix I for evaluation. Because all the listed parameters may be relevant in groundwater characterization activities at the Yerington Mine Site, no censuring criteria have been applied and these constituents should be retained.

Radiochemicals have been presented in table I-3 and charts I-3 of Appendix I. Three parameters met censuring criterion 1 described above. These parameters include thorium-228 (Th-228), thorium-230 (Th-230), and thorium-232 (Th-232). ARC proposes that these three thorium isotopes be eliminated from the parameter list and that non-isotopic thorium, analyzed by EPA Method 200.8 (ICP-MS), be added to the parameter list.

ARC recommends that 16 metals and 3 radiochemicals be eliminated from the analyte list for continuing sampling of the existing and proposed monitor wells, and that non-isotopic thorium be added to the parameter list. ARC also recommends that all physical parameters be retained for ongoing monitoring. A summary of proposed changes to the parameter list is provided in the table below.

Table 7-1. Parameter Reduction Recommendation

Analyte	Retain	Eliminate	Added	Analyte	Retain	Eliminate	Added
Metals				**Radiochemicals**			
Aluminum	X			Alpha, Gross	X		
Antimony	X			Beta, Gross	X		
Arsenic	X			Radium-226	X		
Barium		X		Radium-228	X		
Beryllium	X			Thorium-228		X	
Boron		X		Thorium-230		X	
Cadmium	X			Thorium-232		X	
Calcium	X						
Chromium	X			**Physical Parameters**			
Cobalt		X		Alkalinity, Total	X		
Copper	X			Bicarbonate Alkalinity	X		
Iron	X			Chloride	X		
Lead		X		Fluoride	X		
Lithium		X		Nitrate	X		

Table 7-1. Parameter Reduction Recommendation - Continued							
Analyte	**Retain**	**Eliminate**	**Added**	**Analyte**	**Retain**	**Eliminate**	**Added**
Metals - Continued				**Physical Parameters - Continued**			
Magnesium	X			Nitrate-Nitrite	X		
Manganese	X			Nitrite	X		
Mercury		X		pH	X		
Molybdenum		X		Phosphorus	X		
Nickel	X			Sulfate	X		
Potassium		X		Total Dissolved Solids	X		
Selenium	X			Total Organic Carbon	X		
Silicon		X					
Silver		X					
Sodium		X					
Strontium		X					
Thallium		X					
Thorium			X				
Tin		X					
Titanium		X					
Uranium	X						
Vanadium		X					
Zinc	X						

7.4 ORP Calibration Procedure

The procedure for calibrating the field meter used to measure ORP will be changed in 2009 to be consistent with the instrument manufacturer's specifications. Rather than calibrating to a standard value of 220.0 mV, the calibration value will be determined daily based on the calibration solution's manufacturer recommended value as affected by the solution temperature.

7.5 Elimination of Geosquirt Pump

In 2008 wells USGS-2BS, USEPA2S, and W5AA-3S were sampled with a Geosquirt Pump. As discussed in Section 2.5, these wells only marginally penetrate the shallow zone water table. Consequently, the water column in these wells is too small to allow installation and use of dedicated bladder pumps like other wells in the monitoring network. Due to the limited column of water in the well screen and the inability to adjust the discharge rate of the GeoSquirt Pump, more than 0.3 feet of drawdown occurred in the wells and/or the wells dewatered entirely during

purging and sampling. ARC recommends that future sampling of these wells be conducted using a peristaltic pump, which has the capability of being set to lower pumping rates that will help achieve the 0.3-foot drawdown criterion for groundwater purging and sampling. This proposed modification is anticipated to help achieve the minimal-drawdown criterion for groundwater purging and sample collection and, thus, improve data quality for these wells.

SECTION 8.0

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