

**YEAR-END REPORT
FOR THE 2009 FIELD SEASON
AT LEVIATHAN MINE**

Alpine County, California

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1. INTRODUCTION

Leviathan Mine is a former sulfur mine that the State of California acquired in the early 1980s to address water quality problems caused by historical mining. Jurisdiction over Leviathan Mine rests with the State Water Resources Control Board, which, in turn, has delegated jurisdiction over clean up work to the California Regional Water Quality Control Board, Lahontan Region (Water Board). On May 11, 2000, the United States Environmental Protection Agency (USEPA) placed Leviathan Mine on the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) National Priorities List, thus making Leviathan Mine a federal Superfund site.

On July 19, 2000, pursuant to its authority under CERCLA, USEPA issued an Administrative Abatement Action (AAA) to the Water Board and directed the Water Board to implement certain pollution abatement and site monitoring activities at Leviathan Mine. With slight modifications, USEPA subsequently reissued the AAA in 2001, 2002, 2003, 2004, and 2005. In its 2005 AAA, USEPA decided, instead of issuing the AAA every year, to allow its Remedial Project Manager to notify Water Board of the necessity to continue the Work for an additional year, for each year that the first phase of Non-Time Critical Removal Action (NTCRA) continues.

This Year-End Report for the 2009 Field Season at Leviathan Mine (Year-End Report) has been prepared by the Water Board for the USEPA. This Year-End Report was prepared to comply with Paragraph No. 50 of USEPA's July 14, 2005 AAA which states:

"Within thirty (30) days after the LRWQCB [Water Board] concludes that the seasonal work on the NTCRA has been fully performed, the LRWQCB shall so notify EPA and shall schedule and conduct a pre-certification inspection to be attended by the LRWQCB and EPA. The pre-certification inspection shall be followed by a written report submitted within ninety (90) days of the inspection by the LRWQCB's Project Coordinator certifying that all work to date on the NTCRA has been completed in full satisfaction of the requirements of this Administrative Action."

The pre-certification inspection occurred on November 9, 2009. In a letter dated January 7, 2010, Water Board staff requested, and the USEPA granted in their e-mail dated February 8, 2010, an extension of the due date for the 2009 Year-End Report until March 9, 2010.

This Year-End Report constitutes the "*written report*" as referenced in Paragraph No. 50 of the AAA, and contains year-end summaries of Water Board field activities performed in 2009. The activities required of the Water Board by the USEPA are described in Paragraph No. 37 of the AAA. These activities consist of:

1. Summer treatment of Acid Mine Drainage (AMD) captured year-round in a series of ponds;
2. Site maintenance of ponds, drainage and diversion channels, and gates and fences; and
3. Site monitoring of water quality, water quantity, and meteorological information.

Water Board staff conducted the above-listed activities in accordance with the *2009 Work Plan for Leviathan Mine, Alpine County, California* (Work Plan) prepared by the Water Board. The Work Plan was transmitted to, and approved by, the USEPA.

This report describes the site activities performed in 2009, and is organized into the following sections:

- A background section that describes the site setting and history; collection and storage of AMD; and the treatment process;
- A sludge removal and pond water treatment section describing the removal and disposal of sludge and treatment of AMD in 2009;
- A site surface water monitoring section; and
- A site maintenance section.

The report summarizes data collected by the Water Board in two appendices. Appendix A summarizes the results of Pond Water Treatment (PWT) monitoring. Appendix B summarizes the results of Surface Water Monitoring (SWM).

2. BACKGROUND

2.1 SITE SETTING AND HISTORY

Leviathan Mine is located on the eastern slope of the Sierra Nevada Mountains in Alpine County, California (Figure 1). The mine is approximately six miles east of Markleeville, California and five miles west of Topaz Lake, Nevada. Based on the Final Title Search and Survey Report conducted by Science Applications International Corporation (SAIC) for the USEPA on January 31, 2000, the Leviathan Mine encompasses thirty-two patented mineral claims and a patented mill site. The majority of land disturbed by mining activities is on state-owned property, with the remainder of the disturbance located on property owned by the United States Department of Agriculture, Forest Service, Humboldt-Toiyabe National Forest (USFS). The USFS owns the majority of land surrounding the mine according to the above mentioned SAIC report, with the exception of ten private parcels along the southern boundary of the mine site.

Leviathan and Aspen Creeks (Figure 2) flow across the mine site and join below the mine. Approximately 1.5 miles downstream of the confluence of Leviathan and Aspen Creeks, Leviathan Creek joins Mountaineer Creek. The combined flow of Leviathan and Mountaineer Creeks forms Bryant Creek. Approximately 3.5 miles downstream of the confluence of Leviathan and Mountaineer Creeks, Bryant Creek flows across the Nevada state line. Approximately 1.8 miles downstream of the Nevada state line, Doud Springs enters Bryant Creek. Just below this confluence, an irrigation ditch seasonally diverts flow from Bryant Creek to the River Ranch property. Approximately 1.5 miles downstream from the irrigation diversion, Bryant Creek joins the East Fork of the Carson River.

Historical mining activities at Leviathan Mine included underground and open pit extraction of sulfur-rich ore. These activities resulted in the exposure of naturally occurring sulfide minerals to air and water. This exposure triggered a series of chemical reactions that caused local groundwater to become acidic and metal-rich. The acidic groundwater discharges from an old mine tunnel as well as seeps at several locations within the Leviathan Mine site. When this AMD enters local surface water bodies, it adversely affects water quality, which in turn affects algae, insect, and fish growth, and damages the in-stream habitat through deposition of metal-rich precipitates.

The Water Board has implemented several projects to abate AMD from entering local surface water bodies. In 1985, the Water Board completed construction of a pollution abatement project at Leviathan Mine to address certain specific problem areas. This project included the construction of AMD storage and evaporation ponds, which are a major component of the Water Board's pond water collection and treatment activities.

2.2 AMD Collection and Storage

The 1985 pollution abatement project included construction of five lined evaporation ponds (Figure 3) to capture and evaporate AMD from remnant underground mine workings. The primary sources of AMD to the pond system are the Adit and the Pit Under-Drain (PUD).

- The Adit is the location where acidic groundwater emanated from a remnant tunnel excavated during underground mining activities in the 1930s. The exact condition of the interior of the tunnel is unknown, but it is likely that portions of the tunnel have collapsed. The approximate location of the tunnel and other site features are shown in Figure 3. As part of the 1985 pollution abatement project, the Water Board contractor installed an underground drain to collect acidic groundwater emanating from the Adit. The underground drain consists of a 12-inch-diameter perforated pipe in a bed of drain rock. The perforated pipe is connected to a non-perforated 12-inch pipe that carries the AMD to a concrete flow control structure (FCS). AMD from the Adit has a pH of less than 3.0 and typically has a discharge rate between 9 and 15 gallons per minute (gpm) with rates as high as approximately 42 gpm (flow data collected from 1999 to present).
- The Water Board's contractor, Mittry-G.E.B. Inc., installed the PUD during construction of the 1985 pollution abatement project to dewater saturated soils in the bottom of the open pit prior to backfilling the pit to its current elevation. The PUD consists of approximately 1,500 linear feet of 12-inch-diameter perforated pipe set in a bed of drain rock beneath the pit bottom, buried in pit backfill material. The perforated pipes connect to a non-perforated 18-inch-diameter pipe that conveys the PUD discharge to the FCS. AMD from the PUD has a pH of less than 3.0 and typically has a flow rate between 0.1 and 4 gpm, with rates as high as approximately 38 gpm (flow data collected from 1999 to present).
- The five evaporation ponds (Ponds 1, 2 South, 2 North, 3, and 4; see Figure 3) cover a combined surface area of approximately 12.8 acres with a cumulative

holding capacity of approximately 16.5 million gallons based on an October 1998 survey conducted by ARCO Environmental Remediation, LLC. AMD from the FCS can be routed directly to Leviathan Creek or to the pond system via a weir gate. When the AMD is directed to the pond system, it can be distributed by gravity to any combination of Ponds 1, 2 South, and 2 North via a series of valves, as these ponds are interconnected and are at the same elevation. These three ponds are commonly called the "upper ponds" and have a combined volume of approximately 14 million gallons. Pond 3 can receive overflow from the upper ponds by gravity via PVC overflow pipes. Overflow from Pond 3 flows in PVC piping and can be directed by gravity, via valves, to either the Leviathan Creek or to Pond 4. Pond 4 overflows directly to the Leviathan Creek via PVC piping.

- In 2009, no AMD was routed directly from FCS to Leviathan Creek and Pond 3 received no overflow from any of the upper ponds.
- Currently, Pond 4 is not receiving any flow from Pond 3 and is utilized by Atlantic Richfield Company (ARCO) for storage and treatment of other AMD sources.

2.3 Pond Water Treatment (PWT) Plant Process

The Water Board treats and discharges treated pond water during the summer months using the PWT Plant (Plant). These activities renew pond storage capacity for the subsequent winter and spring months. The Water Board assembled a lime treatment system (the Plant) during the 1999 field season on the northeast corner of Pond 1 and tested the process at full-scale during the 1999 and 2000 field seasons. The Water Board has continued to operate the lime treatment system during the summer months from 2001 through 2009. The typical Water Board field season at Leviathan Mine runs from mid-June through mid-October.

The Water Board's treatment of AMD contained in the pond system is accomplished through lime neutralization. The neutralization of AMD by the addition of lime has long been accepted as an effective means to raise pH and remove metals in AMD. Lime (calcium hydroxide or $\text{Ca}[\text{OH}]_2$), is mixed into the AMD from the pond system; the addition of lime causes an increase in pH and the precipitation of dissolved constituents, including metals, contained in the AMD. The metals are precipitated out of solution in an earthen clarifier, and the final products are: 1) a nearly metal-free effluent with near neutral pH, and 2) waste sludge.

The Plant treats the AMD stored in the three upper ponds. The process has also been referred to as Pond 1 lime treatment because the treatment system is located on the north side of Pond 1. The Plant draws the AMD from Pond 1 for treatment, thereby lowering the water elevation of Pond 1. The lower water level in Pond 1 causes AMD from Pond 2 North and Pond 2 South to flow by gravity to Pond 1 to be treated by the treatment system. As pond water levels decline towards the end of the treatment season, portable transfer pumps have to be used to move water from Ponds 2N and 2S to Pond 1.

3. 2009 SLUDGE REMOVAL AND POND WATER TREATMENT

3.1 Sludge Removal and Disposal

As the first task of 2009 field season, approximately 484 tons of sludge generated during operation of the 2008 PWT was removed from the Pit Clarifier by the Water Board's contractor, DECON Environmental Services, Inc. (Decon) in late June and early July 2009. The sludge had been sampled, analyzed, and characterized in the fall of 2008; the results were reported in the Water Board's 2008 year-end report. The sludge was hauled to a Class I hazardous waste landfill in Beatty, Nevada for disposal. Hazardous waste manifests are available for review at the Water Board's office in South Lake Tahoe.

3.2 2009 Pond Water Treatment Plant Operation

The Water Board contracted with Decon for Plant operations for the 2009 field season. Decon chose to operate the Plant, with a few exceptions, during daylight hours on weekdays only. As in 2008, Decon used dry lime and made up lime slurry on site to neutralize AMD from the pond system. In 2009, dry lime was delivered to the site in pallets of 50 pound bags. Decon staff mixed an approximately 11% by weight lime slurry (using Leviathan Creek water from upstream of the mine) in a 1000-gallon polyethylene tank during daily operations.

Approximately 20 tons of dry lime remains stored on site following the 2009 treatment season. The lime is stored both in weather proof shipping containers and on pallets covered with tarps within the Plant area. This lime will facilitate efficient startup of the Plant next year. A summary of the treatment process including modifications to lime addition methods and pH monitoring which were used during the 2009 treatment season is described in the following paragraphs.

The primary modification from previous treatment operations was Decon's use of a single point lime addition in 2009. This is a modification from past years where a two-point lime addition was used. The single point lime addition was used in an effort to minimize the number of lime addition points required to operate the treatment plant, thus lowering maintenance requirements for successful plant operation.

A 5-horsepower (hp) electric pump conveyed AMD from Pond 1 to a 10,000-gallon fiberglass Phase 1 reaction tank (R-1). Decon used an in-line manifold with static mixers that combined a pre-set amount of lime slurry with the AMD before the mixture reached tank R-1 during 2009 operations. In previous years initial mixing of AMD and lime slurry took place in R-1. A 3-hp mixer mixed AMD and lime slurry in R-1. The lime slurry raised the pH of the AMD from approximately 2.5 to approximately 8.5 in R-1.

The partially treated AMD flowed by gravity from R-1 through a two-chambered combination flash/flocculation mix tank (FF-1) and into a Lamella clarifier (CL-1). Decon

used two mixers in the flash/flocculation tank and added an additional mixer to CL-1. Two 1.5-inch air diaphragm pumps removed precipitates from the bottom of CL-1. One of the 1.5-inch air diaphragm pumps is used to pump a portion of the precipitates back into the top of R-1. The second 1.5-inch air diaphragm pump is used to pump remaining precipitates from the bottom of CL-1 back into the top of CL-1 in an effort to keep precipitates from settling out and potentially clogging the bottom of CL-1 with solids.

Supernatant and precipitates from CL-1 flowed by gravity to the Phase 2 reaction tank (a second 10,000-gallon fiberglass tank) referred to as R-2. A 7.5-hp mixer in R-2 mixed the partially treated AMD, precipitates, and lime slurry. A pH probe in R-2 measured pH and, if necessary, metered additional lime slurry to R-2. This second lime addition was not needed in 2009.

Treated AMD and precipitates then flowed through the Phase 2 flash/flocculation mix tank (FF-2) and into the Phase 2 Lamella clarifier (CL-2). Two 10-hp mud pumps transferred the water/solid mixture from the bottom of CL-2 to the Pit Clarifier. A polyacrylamide polymer solution was injected into the sludge slurry line just upstream of the two 10-hp mud pumps to promote flocculation and settling in the Pit Clarifier. In 2009, Decon installed a pH probe in FF-2. The pH probe controlled the mud pumps, preventing transfer of treated AMD to the Pit Clarifier if the pH dropped below 7.9. This pH probe, controller, and pump combination provided additional reliability as well as a final confirmation pH measurement.

The Pit Clarifier is an earthen reservoir located in the bottom of the Leviathan Mine open pit. The Pit Clarifier has plan dimensions of approximately 150-feet by 150-feet, and includes a gravel/sand covered perforated pipe under-drain. The sludge slurry from CL-2 was pumped to the Pit Clarifier where solids settled out in near-quiet conditions. The treated water collected by the Pit Clarifier under-drain piping flowed through a weir box, where stage data was recorded and water quality control samples were collected. The weir box has a 90-degree V-notch weir and stage data were recorded at 15-minute intervals by a combination data logger/pressure transducer system. Using a valve on the Pit Clarifier under-drain piping, the controlled release of treated water from the Pit Clarifier occurred only during the days Decon was treating water.

Decon began treating AMD contained in the upper pond system on July 31, 2009. Discharge of treated water from the Pit Clarifier to Leviathan Creek began on August 6, 2009. The treatment plant was shut down on September 2, 2009 after the AMD contained in the upper ponds was treated. The single point lime addition in conjunction with the approximately 11% by weight lime slurry used by Decon was successful in treating AMD during the 2009 season.

After the pond water was treated and the Plant was shut down on September 2, 2009, treated water continued to be discharged from the Pit Clarifier and the Water Board continued to collect samples of effluent discharging from the Pit Clarifier until September 8, 2009. Effluent flow rates from the Pit Clarifier under-drain dropped to below 5 gpm on September 10, 2009 and effluent sample collection was terminated as per the approved 2009 Work Plan. By mid-September 2009, approximately 2.9 million

gallons of treated pond water had been discharged from the Pit Clarifier to Leviathan Creek.

The 2009 PWT Plant operation consumed approximately 52 standard tons of dry lime, 310 pounds of dry polymer, 4056 gallons of diesel fuel, and 708 gallons of gasoline. The Water Board's treatment effort in 2009 combined with natural evaporation resulted in the upper pond system having the maximum available storage capacity of approximately 14 million gallons.

Sludge generated by the Plant in 2009 is contained in the Pit Clarifier to allow for further dewatering. The Plant operation generated an estimated 550 cubic yards (wet volume) of sludge. Dewatering of the sludge over the winter will increase solids content and reduce both the volume and mass of the sludge. Water Board staff estimates that the 550 cubic yards of wet sludge will result in approximately 300 tons of sludge being disposed in 2010.

3.3 Pond Water Treatment Monitoring

Treatment process monitoring, sampling and analysis were performed in accordance with the Water Board's *Sampling and Analysis Plan for Leviathan Mine Site Pond Water Treatment (April 2009)* (PWT SAP), with a few deviations noted in Section 3.4.4. Effluent samples were collected for comparison with USEPA Discharge Criteria (Table 1). The USEPA Discharge Criteria are set forth in the September 25, 2008 Non-Time Critical Removal Action for the Leviathan Mine Site. A summary of the monitoring parameters, locations, and frequencies for the 2009 PWT monitoring program is presented in Table 2. Specific details of sample collection and handling are described in the PWT SAP. Both sludge and aqueous samples were analyzed by the Water Board's contracted off-site laboratory, TestAmerica Laboratories.

To characterize discharge water quality, Water Board staff collected grab samples of the treated effluent at least twice weekly while discharge to Leviathan Creek occurred. Water Board staff collected effluent samples from the weir box located near the Pit Clarifier, and pre-treatment influent samples from the line conveying pond water to the treatment plant. As specified in the USEPA-approved 2009 Work Plan, effluent sample collection stopped when the discharge of effluent from the weir dropped below 5 gpm. Between August 6 and September 8, 2009, Water Board staff collected:

- 12 treated effluent samples (at least 2 per week),
- 3 treated effluent duplicate samples (>10% sample rate)
- 5 pre-treatment influent samples (weekly)
- 2 field method blanks (>10% sample rate)

A portion of each grab sample was field filtered, preserved with nitric acid, and submitted to the Water Board's contracted off-site laboratory to be analyzed for the following dissolved metals/metalloids: aluminum (Al), arsenic (As), copper (Cu), chromium (Cr), cadmium (Cd), nickel (Ni), iron (Fe), lead (Pb), and zinc (Zn). An unfiltered portion of the daily grab sample was preserved with nitric acid and submitted for Total Recoverable Selenium (Se). Once per week, in addition to the above

analyses, Water Board staff submitted samples of influent and treated effluent for sulfate (SO₄), total dissolved solids (TDS), and the following dissolved metals: calcium (Ca), cobalt (Co), manganese (Mn), and magnesium (Mg). During influent and effluent sample collection activities, Water Board staff monitored and recorded pH and temperature in the field on sampling record forms. Sample identification tracking forms and sampling record forms will be maintained in files and are available for review at the Water Board office in South Lake Tahoe.

Analytical and field monitoring results of influent and treated effluent samples are summarized in Tables A-1 and A-2 of Appendix A (*Data Summary for 2009 Pond Water Treatment Plant Monitoring*).

To provide real-time information on effluent quality and system operation, treatment plant operators measured the pH and temperature approximately every two hours while the system was operating at four mid-process locations (R-1, R-2, FF-2, and influent to Pit Clarifier) and at one effluent location (weir box). Operators used these data to moderate lime additions, if necessary, and maintain effluent quality. The data collected by the system operators are summarized in Table A-3 of Appendix A.

Sludge generated during the 2009 treatment effort, and contained in the Pit Clarifier, was sampled in October 2009 for waste characterization and disposal purposes. Three sludge samples were collected directly from the Pit Clarifier following partial dewatering of sludge. Sludge samples were collected from three different locations in the Pit Clarifier. Sludge samples were collected from a vertical profile that represented the complete thickness of sludge. Sludge samples were analyzed for comparisons with Total Threshold Limit Concentrations (TTLCs) and Soluble Threshold Limit Concentrations (STLCs) for Title 22 metals, and aluminum and iron. Analytical results for the sludge samples are summarized in Table A-4 of Appendix A.

3.4 Sampling Results from Pond Water Treatment Monitoring

3.4.1 Monitoring Objectives

The overall objective of the monitoring program for PWT was to evaluate the effectiveness of the treatment process in terms of effluent and sludge quality.

Specific monitoring objectives are as follows:

- Identify the chemical characteristics of the treatment plant influent.
- Identify the chemical characteristics of the treated effluent.
- Identify the chemical characteristics of solids generated in the treatment process.
- Monitor the effectiveness in meeting USEPA Discharge Criteria.
- Monitor field pH at critical points within the treatment system and at the discharge point as a means to monitor and control treatment efficiency.

3.4.2 Data Summary

The results of PWT monitoring are summarized in Tables A-1 through A-5 of Appendix A. TestAmerica Laboratories produced laboratory Data Validation Checklists, as described in the *Draft Leviathan Mine Site Site-Wide Sampling and Analysis Plan, Montgomery Watson Harza, April 2002* (Site-Wide SAP), for all of their laboratory reports. They are not included in this report, but can be reviewed at the Water Board office.

Laboratory analytical results for treated effluent are summarized in Table A-1. These data are collected for comparison with the USEPA Daily Maximum Discharge Criteria, also included in Table A-1. No laboratory-confirmed exceedences of the Daily Maximum Discharge Criteria occurred in 2009. Table A-2 summarizes laboratory analytical results for Plant influent samples.

Measurements of pH taken by Water Board staff and system operators confirmed that the discharge of treated effluent to Leviathan Creek was within the Discharge Criteria for pH of 6.0 to 9.0. Results of pH and temperature are included in Tables A-1 (effluent samples) and A-2 (influent samples) for data collected by Water Board staff and in Table A-3 for data collected by Plant operators.

Results of the sludge characterization analyses are presented in Table A-4. The three sludge samples collected from the Pit Clarifier averaged approximately 8.7 percent solids (% solids). With the exception of the total concentrations for arsenic, the sludge did not exceed any other STLC or TTLC limits. The total concentrations for arsenic exceeded TTLC in two of three samples collected from the Pit Clarifier. The arithmetic average arsenic concentration for the three samples was 553 milligrams per kilogram (mg/kg). The TTLC for arsenic is 500 mg/kg.

A summary of daily discharge from the Pit Clarifier is included in Table A-5. Stage data, or the water level above the v-notch of the Pit Clarifier weir, was recorded at 15-minute intervals by a data logger. A rating curve, developed in 2008 by Water Board staff, was used to convert the stage data to flow rate. The mean daily discharge flow rates shown in Table A-5 were calculated from the mean daily stage. Typical treated effluent discharge flow rates during the 2009 treatment season were approximately 100 gallons per minute. A total of 2.9 million gallons of treated effluent was discharged to Leviathan Creek in 2009. The 15-minute stage data are available for review at the Water Board's South Lake Tahoe office.

Effluent, influent, and sludge analytical data will be submitted to ARCO for uploading to the Site-Wide Database. Final laboratory data packages, including results, Chain of Custody forms, and Data Validation Checklists will be retained in the Water Board's project files.

3.4.3 Data Quality Evaluation

Water Board staff reviewed the quality of the PWT monitoring results. Sample collection, handling, preservation, and analysis were conducted as specified in the PWT SAP, and a sampling record form was completed for each sampling event. Field quality

control samples, including Field Method Blanks (FMBs) and field duplicates, were collected as described in the PWT SAP. A Chain of Custody form was completed for each group of samples submitted to the off-site analytical laboratory. Upon receipt of the laboratory report, Water Board staff reviewed the Chain of Custody to assure that details such as the project name, sample ID numbers, sample date, sample times, and requested parameters were properly reported. Water Board staff's data review also included an evaluation of sample holding times, an assessment of precision, an assessment of anomalous data, and a review of FMB results.

Laboratory-assigned data qualifiers are presented with the PWT data in Tables A-1, A-2, and A-4. In 2009, Water Board staff did not assign any additional data qualifiers to pond water treatment data.

Water Board staff assessed the data to confirm that holding times were met. No holding times were exceeded for PWT analyses during the 2009 field season.

Water Board staff submitted field duplicate samples of the treated effluent to the laboratory to measure the precision of the entire measurement system including sampling and analytical procedures. Water Board staff collected three duplicate PWT samples for laboratory analysis in 2009. The relative percent difference (RPD) was calculated for each analyte in the primary sample and corresponding duplicate, as follows:

- If both the sample and duplicate values were equal to or greater than five times the Reporting Limit (RL), then the RPD was calculated by dividing the absolute value of the difference of the two measurements by the average of the two measurements and multiplying by 100. The RPD must be equal to or less than 25% to be within control limits.
- If either the sample or duplicate value was less than five times the RL, then the absolute difference between the sample and duplicate values had to be equal to or less than the RL to be in control limits.

All sets of duplicate data were within the control limits for the RPD detailed above. As per the PWT SAP, the control limit of 25% is based on the analytical precision goals for the laboratory matrix spike duplicate samples.

Two FMBs were collected and submitted to TestAmerica for laboratory analysis of the same parameters as PWT effluent samples. FMBs were collected and processed in the same method as that of effluent samples, except using laboratory-supplied water for each blank.

One dissolved metal was detected in the field method blank samples collected as part of the PWT monitoring program. Dissolved chromium was detected in one blank sample at 0.0039 mg/L. The USEPA Four-Day Average Criteria for chromium is 0.310 mg/L. Chromium concentrations in the treated effluent samples ranged from 0.0015 to 0.0047 mg/L. The dissolved chromium concentration detected in the field method blank sample is not considered as having an effect on the use of effluent sample data for

comparison with the USEPA Maximum or Four-Day Average Discharge Criteria because the value is so low in comparison to the criteria.

3.4.4 Deviations from the PWT SAP

Two deviations from the PWT SAP occurred during the 2009 field season.

Table B-1 of the Water Board's *2009 Work Plan for Leviathan Mine, Attachment B* indicated that the Water Board's contractor would collect daily influent pH and temperature measurements. Decon failed to monitor influent pH and temperature on a daily basis. Water Board staff collected influent pH and temperature data on a weekly basis. These data are presented in Table A-2.

The preparation of two checklists for each laboratory report, the Level A/B Screening Checklist and Data Validation Checklist for Field Quality Control, as contained in the Site-wide SAP and the PWT SAP, was not completed for this Year End Report. The information formerly contained in these forms is discussed in Section 3.4 of this report.

- The Data Validation Checklist for Field Quality Control form documented an assessment of holding times, field blanks, and field duplicates. Water Board staff performed the review and assessment of holding times, field blanks, and field duplicates but no longer use this form to document them.
- The Level A/B Screening Checklist was used to confirm that basic sample collection, handling, shipping, and documentation was performed and to assess the data as Level "A", "B", or "Unusable". The Level "A", "B", and "Unusable" designations were never adopted for use in the Site-Wide Database. The continuing use of this checklist appears to no longer serve any purpose since the designations are not used in the Site-Wide Database.

4. SURFACE WATER MONITORING AND METEOROLOGICAL INFORMATION

As required by the USEPA, the Water Board continued their efforts in 2009 field season to monitor surface water flow and quality, and to collect meteorological information in the vicinity of Leviathan Mine. All monitoring data are forwarded to ARCO for incorporation into the Site-Wide Database.

4.1 Meteorological Monitoring

A weather station is located on the Water Board's construction trailer near Pond 1. It is a Davis Integrated Sensor Suite model and has been operational since its installation in November 2002. The system measures the following conditions hourly: wind speed, wind direction, rainfall, outside temperature, outside humidity, ultraviolet radiation, and

solar radiation. Water Board staff download data from this weather station periodically and transmit the data to ARCO for incorporation into the Leviathan Mine Site-Wide Database.

The weather station has sufficient memory for approximately six months of data. Staff downloaded the weather station on December 10, 2008 and then again on March 17, 2009. Upon review of the data downloaded in March, Staff observed a significant decline in the amount of data recorded by the weather station. For the months of January, February, and March 2009, significant gaps in the data occurred:

- temperature was recorded about 45% of the time,
- humidity was recorded at about 30% of the time,
- solar radiation was collected less than 20% of the time, and
- UV was collected about 20% of the time.

The weather station was removed from the site, sent to Davis Instruments in Hayward, CA for repair, and re-installed in early May 2009. Based on data collected since re-installation, we believe the unit is functioning as designed with 100 percent of potential data recorded.

4.2 Flow Monitoring

Flow data are reported on the basis of water year. The 2009 water year begins October 1, 2008 and ends September 30, 2009. Under contract to the Water Board, the United States Geological Survey (USGS) monitored water flows and pond water level elevations at 15 locations during the 2009 water year. Flow monitoring locations, USGS station numbers, and equipment are detailed in Table 3. Appendix B, *Data Summary for 2009 Surface Water Monitoring*, Tables B-1 to B-13 summarize the daily and monthly average flow data for 11 stations with continuous flow recorders and daily and monthly average stage data for water levels in Pond 1 and Pond 4. Two additional flow monitoring stations do not have continuous records but are monitored only during USGS field visits. Tables B1- B13 (Appendix B) contain the final provisional data for water year 2009. The USGS typically publishes the data by the spring following the completion of the water year. Once published, the data is no longer provisional, and will then be submitted to ARCO by the Water Board for uploading to the Site-Wide Database.

Real-time provisional flow and stage recordings can be viewed on the web for the following seven stations: Adit, PUD, CUD, Station 15, Station 25, Pond 1, and Pond 4. The real-time data can be accessed through the USGS's website at:
<http://waterdata.usgs.gov/ca/nwis/current?type=flow>.

Published data reports can be searched by USGS station number at the USGS website: <http://ca.water.usgs.gov/waterdata/>.

Late in the fall of 2009, the USGS, under contract to the Water Board, installed three new trial stations for continuous flow monitoring, one in the Pit Junction Box (in the open pit), one on the Upper Tributary (just south of Pond 2S) and one on the Lower

Tributary (north of Pond 2N). The three new flow monitoring stations were installed in an effort to provide additional data of surface water flows at Leviathan Mine. Ice buildup in drainage channels containing the new flow monitoring hardware may prove problematic for collecting accurate stage measurements during winter and spring months. It is anticipated that equipment fine-tuning will be required to optimize reliable data collection following a review of the 2010 winter and spring data.

4.3 Surface Water Monitoring

Surface water sampling and analysis was performed in compliance with the *Sampling and Analysis Plan for Leviathan Mine Site Surface Water Monitoring (January 2004)* (SWM SAP), with one deviation noted in Section 4.4.3. The SWM SAP is not included in this report, but copies are available for review at Water Board's South Lake Tahoe office.

The Water Board conducted 12 monthly surface water quality monitoring events and two semiannual events during the 2009 water year. The Water Board's monthly and semiannual surface water quality monitoring stations are shown in Figure 4. Measured parameters and sampling frequencies are summarized in Table 4.

Samples were collected for laboratory analysis of TDS, sulfate, and total and dissolved aluminum, arsenic, calcium, cadmium, chromium, cobalt, copper, iron, magnesium, manganese, nickel, and zinc using a peristaltic pump equipped with new piece of disposable C-Flex[®] tubing for each sample. Samples collected for analysis of dissolved metals, TDS, and sulfate were field filtered through a new, disposable 0.45-micron filter for each sample. Water Board staff collected all samples in clean, new sample containers provided by the contract laboratory. Sample containers used for metals analyses were pre-preserved with nitric acid. A duplicate sample and a field method blank were collected for each sampling event. Detailed sample collection and handling procedures and QA/QC protocols are described in the SWM SAP.

Basic Laboratory analyzed the surface water samples collected from October 2008 to April 2009. TestAmerica Laboratories analyzed the surface water samples collected from May through September 2009.

4.4 Sampling Results From Surface Water Monitoring

4.4.1 Monitoring Objectives

The monitoring objectives of the SWM program, as outlined in the SWM SAP, were to collect data of sufficient quality to:

- Identify the chemical characteristics of the various surface waters in the vicinity of Leviathan Mine, including AMD sources and creek waters.
- Monitor flows of AMD discharges and selected creeks.

- Track the impacts of remediation projects on downstream surface waters.
- Identify seasonal and annual variations in the chemical characteristics and field parameters of surface waters in the vicinity of Leviathan Mine.
- Calculate the loading of metals to the downstream surface waters from the various discharges at Leviathan Mine.

4.4.2 Data Quality Evaluation and Summary

Surface water data collected for this water year is summarized in the Appendix B, *Data Summary for 2009 Surface Water Monitoring*. The analytical results of the surface water sampling, along with any qualifiers, are presented in Tables B-14 to B-25. The tables also show the field data measurements collected by Water Board staff at the time of sampling, including pH, temperature, electrical conductivity, and specific conductance.

Water Board staff reviewed the quality of the surface water monitoring results. Sample collection, handling, preservation, and analysis were conducted as specified in the SWM SAP. Field quality control samples, including FMBs and field duplicates were collected as described in the SWM SAP. A Chain of Custody form was completed for each group of samples submitted to the off site analytical laboratory. Upon receipt of the laboratory report, Water Board staff reviewed the Chain of Custody to assure that details such as the project name, sample ID numbers, sample date, sample times, and requested parameters were properly reported. Water Board staff's data review also included an evaluation of sample holding times, an assessment of precision, an assessment of anomalous data, and a review of FMB results.

Basic Laboratories and TestAmerica completed Data Validation Checklists for all sample analytical reports. Final laboratory data reports and associated Data Validation Checklists are not included in this report but are available for viewing at the Water Board's South Lake Tahoe office.

An evaluation of the completeness of the required sample collection shows that 138 samples were to be collected during the water-year (eleven stations to be sampled monthly and three stations to be sampled semiannually). The semiannual monitoring station at 4L Creek (just above its confluence with Leviathan Creek) was not sampled during the October 2008 event as the creek had no flow at the time of sampling. Station 15 had no flow in the creek during the July 2009 sampling event, so no sample was collected. All other stations and sampling events were conducted in accordance with the SWM SAP. Per the SWM SAP the completeness goal for the project is 90%. In total, 136 of the planned 138 samples were collected, resulting in a completeness of 98.5%. Of the 136 samples collected, none of the data were rejected.

Water Board staff assessed the data to confirm that holding times were met. Re-analysis for total and dissolved manganese at the Adit from the May 2009 sampling event was requested by the Water Board and performed outside the 6-month holding

time. This result was reported using the H-1 qualifier. No other holding times were exceeded for the surface water samples collected during the 2009 field season.

Laboratory-assigned data qualifiers are presented with the SWM data in Tables B-14 through B-25. In 2009, Water Board staff assigned a data qualifier of "*" for data that did not meet our field duplicate assessment, and an "A" qualifier for anomalous data. Explanations of the Water Board staff-assigned data qualifiers are summarized in Table B-26, and are also included in Tables B-14 through B-25.

Table B-26 summarizes results qualified as "Anomalous" by the Water Board. In total, 21 results were qualified. Nine pairs of total and dissolved results (18 results) were qualified due to the dissolved concentration significantly exceeding the total concentration. Three results were qualified due to the results being significantly less than historical values.

Water Board staff collected one field duplicate per sampling event as required in the SWM SAP. The RPD was calculated for the duplicate and corresponding sample as described in Section 3.4.3. Data with RPD assessment results out of control limits were flagged with "*" qualifier in Appendix B, Tables B-14 to B-26. Out of 312 paired results, six sets of sample and duplicate results were flagged for exceeding the control limits for RPD.

FMBs were also collected once per sampling event (12 total samples this water year) and submitted to the laboratory for analysis of the same parameters evaluated in the surface water monitoring program. FMBs were collected and processed in the same method as surface water samples using either the Water Board's in-house laboratory distilled de-ionized water or laboratory-supplied water for each blank.

Five metals were detected at low levels above the reporting limit (RL) in the FMB samples that were collected as part of the SWM program:

- Dissolved iron was detected in two FMB samples at concentrations of 0.018 and 0.010 mg/L. The RL for iron was 0.010 mg/L. All primary samples contained dissolved iron in greater concentrations than detected in the FMB.
- Total iron was detected in two FMB samples, both at a concentration of 0.010 mg/L. The RL for iron was 0.010 mg/L. All primary samples contained total iron greater than 0.010 mg/L.
- Total manganese was detected in one FMB sample at a concentration of 0.0005 mg/L. The RL for total manganese was 0.0005 mg/L. All primary samples contained total manganese greater than 0.0005 mg/L.
- Dissolved manganese was detected in one FMB sample at a concentration of 0.0005 mg/L. The RL dissolved manganese was 0.0005 mg/L. All primary samples contained dissolved manganese greater than 0.0005 mg/L.
- Total chromium was detected in three FMB samples at concentrations of 0.0005 mg/L, 0.0006 mg/L, and 0.002 mg/L. The reporting limits were 0.0005 mg/L,

0.0006 mg/L, and 0.001 mg/L respectively. Two primary samples from the November 2008 sampling event had total chromium results that were less than the detection in the FMB, all other results were greater than or equal to the detection in the FMB.

No data qualifiers were added by the Water Board based on FMB results.

4.4.3 Deviations from the SWM SAP

There was one deviation from the SWM SAP.

The preparation of two checklists for each laboratory report, the Level A/B Screening Checklist and Data Validation Checklist for Field Quality Control, as contained in the Site-wide SAP and the PWT SAP, was not completed for this Year End Report. The information formerly contained in these forms is discussed in Section 3.4 of this report.

- The Data Validation Checklist for Field Quality Control form documented an assessment of holding times, field blanks, and field duplicates. Water Board staff performed the review and assessment of holding times, field blanks, and field duplicates but no longer use this form to document them.
- The Level A/B Screening Checklist was used to confirm that basic sample collection, handling, shipping, and documentation was performed and to assess the data as Level “A”, “B”, or “Unusable”. The Level “A”, “B”, and “Unusable” designations were never adopted for use in the Site-wide Database. The continuing use of this checklist appears to no longer serve any purpose.

5. SITE MAINTENANCE

The Water Board conducted site maintenance work during the 2009 field season in accordance with the USEPA-approved Work Plan. Routine maintenance activities include repairing perimeter fencing, removing sediment from storm water ditches, covering exposed pond liners and minor road repair. Additional work conducted during the 2009 field season included concrete culvert disposal and repairs to CUD plumbing near the USGS CUD flow monitoring station.

5.1 Off-site Concrete Culvert Disposal

A written request was received by the Water Board on September 26, 2008 from the USFS, per the 1999 “Road Access and Uses of the National Forest” agreement between the USFS and the Water Board, requesting removal of a concrete culvert being stored on USFS property north of the site. The section of concrete culvert was removed by the Water Board’s contractor, Decon, on June 24, 2009.

5.2 CUD Plumbing Refurbishment

CUD plumbing terminating at the USGS V-notch weir adjacent to Leviathan Creek was modified by ARCO's contractors during their summer 2001 field operations. The modifications made to the CUD plumbing discharging into the V-notch weir-box proved to be problematic for USGS staff's monthly weir calibration and periodic weir maintenance. CUD pipe connections used in the 2001 modification were also observed by Water Board staff to be in various states of disrepair during the 2008 field season. CUD pipe connections were replaced and all unused appurtenances were removed from the CUD terminus plumbing by Water Board staff on April 6, 2009.

5.3 Repairing Perimeter Fencing

A barbed-wire fence surrounds the majority of the site. In May and early June 2009 Lahontan Water Board staff inspected the perimeter fence and noted that repairs to the fence were required adjacent to Leviathan Creek between surface water monitoring station 4L Cr and Station 15 (Figure 3). Decon repaired the perimeter fence in June 2009.

5.4 Storm Water Conveyance Clean-out

The Water Board contracted with Ferguson Excavating of South Lake Tahoe, CA to remove accumulated sediment in the concrete-lined, storm water conveyance ditch directly behind the Pit Clarifier. Ferguson utilized a backhoe with a custom-made V-shaped bucket and a hand laborer to accomplish the task. The soil was stockpiled adjacent to the ditch, between the ditch and the Pit Clarifier.

5.5 Covering Exposed Liner

Water Board staff visually inspected cover material around each pond and detected areas where earthen cover had eroded and the pond liner was exposed. Water Board staff covered the exposed liner with fine-grained material removed from storm water conveyances.

5.6 Invasive Plant Control

The El Dorado County, Department of Agriculture (EDCDA) visited Leviathan Mine on August 3, 2009 and applied herbicide (Telar[®]) on invasive plants. This year (2009), as in 2002 through 2008, the EDCDA sprayed to eradicate tall whitetop (*Lepidium latifolium*).

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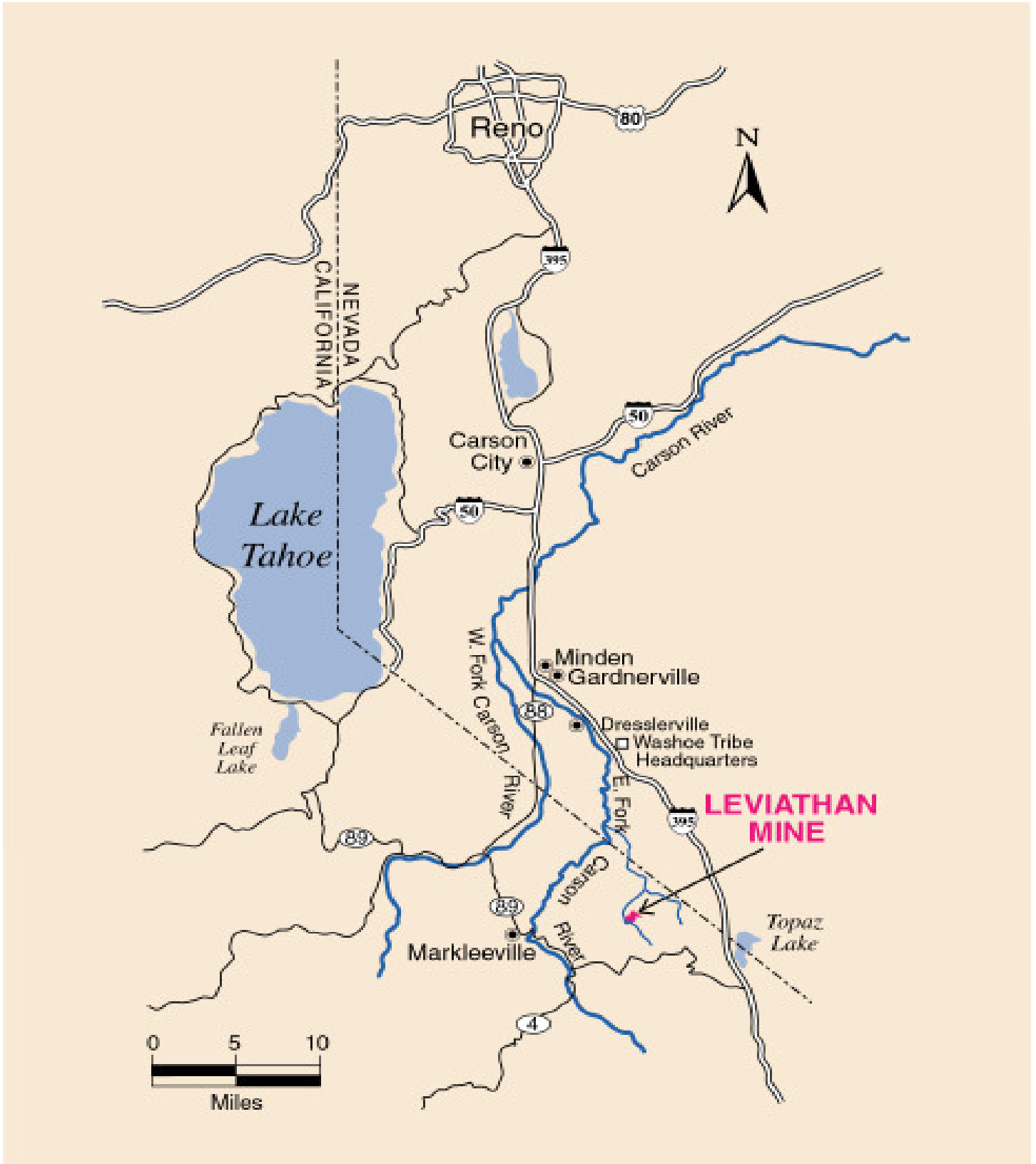


FIGURE 1
SITE LOCATION



FIGURE 2
BYRANT CREEK WATERSHED



FIGURE 3
LAHONTAN WATER BOARD AMD CAPTURE AND TREATMENT SYSTEM

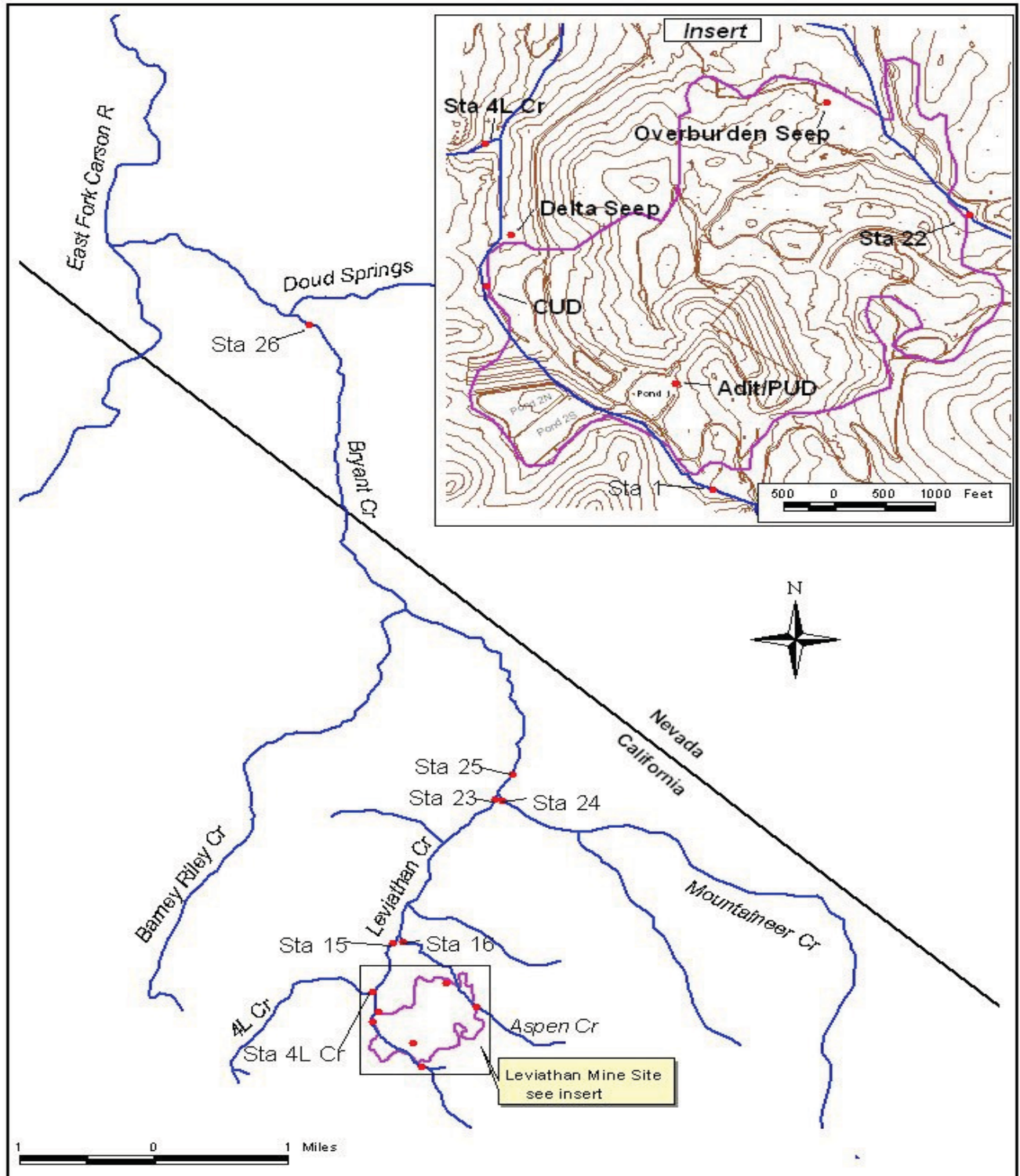


FIGURE 4
SURFACE WATER MONITORING LOCATIONS

**TABLE 1
2009 USEPA DISCHARGE CRITERIA**

Water Quality Parameter	Maximum	Four-Day Average
pH	--	Between 6.0 – 9.0 SU ²
Arsenic	0.34 mg/L ¹	0.15 mg/L ⁴
Aluminum	4.0 mg/L ¹	2.0 mg/L ⁴
Cadmium	0.009 mg/L ¹	0.004mg/L ⁴
Chromium	0.97 mg/L ¹	0.31 mg/L ⁴
Copper	0.026 mg/L ¹	0.016 mg/L ⁴
Iron	2.0 mg/L ¹	1.0 mg/L ⁴
Lead	0.136 mg/L ¹	0.005 mg/L ⁴
Nickel	0.84 mg/L ¹	0.094 mg/L ⁴
Selenium (Total Recoverable)	Not Promulgated	0.005 mg/L ^{3,4}
Zinc	0.21 mg/L ¹	0.21 mg/L ⁴

Notes:

mg/L: milligrams per liter

1: Dissolved concentration in a daily grab sample that has been field-filtered (0.45 micron) and acid fixed promptly after collection.

2: pH measurement based on 24-hour (single day) average discharge.

3: Total recoverable concentration in a daily grab sample that is acid fixed, but not filtered.

4: Concentrations based on the average of four daily grab samples. If the concentration detected by the laboratory is less than the detection limit, one-half of the detection limit shall be used in calculating the average concentration.

TABLE 2
SUMMARY OF 2009 POND WATER TREATMENT MONITORING
LEVIATHAN MINE, ALPINE COUNTY, CALIFORNIA

SAMPLE LOCATION	LOCATION DESCRIPTION	ANALYSES	SCHEDULE	SAMPLER
Influent	Sampling port just prior to Reactor 1	EPA-Required Discharge Criteria ¹ with Additional Analytes ²	weekly	Water Board staff
Mid Process	Reactor 1	pH, temperature (field)	approx. every 2 hours	contractor
Mid Process	Reactor 2	pH, temperature (field)	approx. every 2 hours	contractor
Mid Process	Influent to Pit Clarifier	pH, temperature (field)	approx. every 2 hours	contractor
Effluent	Weir Box	pH, temperature (field)	approx. every 2 hours	contractor
		EPA-Required Discharge Criteria ¹	Tuesday/Thursday	Water Board staff
		EPA-Required Discharge Criteria ¹ with Additional Analytes ²	weekly	Water Board staff
Duplicate Samples	same location as primary sample	EPA-Required Discharge Criteria ¹	minimum of 10%	Water Board staff
Field Method Blank	collected at weir box using distilled water	EPA-Required Discharge Criteria ¹	minimum of 10%	Water Board staff
Sludge	Pit Clarifier	CAM-17 ³ metals plus Al and Fe (for comparison with STLC and TTLC) ⁴	three composite samples collected once per year after treatment	Water Board staff

Notes:

1. Dissolved As, Al, Cd, Cr, Cu, Fe, Pb, Ni, Zn, total recoverable Se (off-site laboratory); pH (field)
2. Ca, Co, Mg, Mn, TDS, sulfate (off-site laboratory analysis)
3. Refers to 22 CCR 66261.24(a)(2)(A); CAM-17 metals: Sb, As, Ba, Be, Cd, Cr, Co, Cu, Pb, Hg, Mo, Ni, Se, Ag, Tl, V, Zn (off-site laboratory analysis)
4. STLC is the Soluble Threshold Limit Concentration and TTLC is the Total Threshold Limit Concentration.

TABLE 3
SUMMARY OF USGS SURFACE WATER FLOW AND STAGE MONITORING LOCATIONS
LEVIATHAN MINE, ALPINE COUNTY, CALIFORNIA

Station Location/Description	USGS Station Number	Equipment	USGS Startup Date
Leviathan Creek above the mine (Station 1)	10308783	Continuous stage/flow recorder and appurtenances, solar power supply.	October-98
Pit Under-Drain at the flow control structure (PUD)	10308785	Continuous stage/flow recorder and appurtenances, solar power supply, telemetry.	February-00
Adit at the flow control structure (Adit)	10308784	Continuous stage/flow recorder and appurtenances, solar power supply, telemetry.	October-98
Pond 1 Stage	103087853	Continuous stage recorder and appurtenances, solar power supply, telemetry.	November-99
Pond 4 Stage	103087887	Continuous stage recorder and appurtenances, solar power supply, telemetry.	October-99
Channel Under-Drain (CUD)	103087885	Continuous stage/flow recorder and appurtenances, solar power supply, telemetry.	November-99
Aspen Creek above the mine (Station 22)	103087891	Continuous stage/flow recorder and appurtenances, solar power supply.	October-03
4L Creek above its confluence with Leviathan Creek (4L Creek)	103087889	Continuous stage/flow recorder and appurtenances, solar power supply.	October-03
Leviathan Creek above its confluence with Aspen Creek (Station 15)	10308789	Continuous stage/flow recorder and appurtenances, solar power supply, telemetry.	October-98
Aspen Creek above its confluence with Leviathan Creek (Station 16)	none	None. Monthly flow measurements to establish relationship w/STA 15.	October-98
Overburden (Aspen) Seep, above the Bioreactors (OS)	103087892	Continuous stage/flow recorder and appurtenances, solar power supply.	November-98
Bryant Creek just below the confluence of Mountaineer and Leviathan Creeks (Station 25)	10308794	Continuous stage/flow recorder and appurtenances, solar power supply.	November-98
Leviathan Creek just above the confluence of Mountaineer and Leviathan Creeks (Station 23)	10308792	Continuous stage/flow recorder and appurtenances, solar power supply	December-99
Mountaineer Creek just above the confluence of Leviathan and Mountaineer Creeks (Station 24)	none	None. Monthly flow measurements to establish relationship w/STA 23.	December-99
Bryant Creek just above confluence with Doud Springs (Station 26)	10308800	Continuous stage/flow recorder and appurtenances, solar power supply	April-94

TABLE 4
SURFACE WATER QUALITY MONITORING STATIONS
LEVIATHAN MINE, ALPINE COUNTY, CALIFORNIA

Station Identification	Site Description	Sampling Frequency
Station 1	Leviathan Creek above Leviathan Mine.	Monthly
Adit	Drainage from Tunnel #5 (the Adit), prior to entering evaporation ponds.	Monthly
Pit Under-Drain (PUD)	Drainage from shallow ground water collection pipes in pit, prior to entering evaporation ponds.	Monthly
Channel Under-Drain (CUD)	Discharge from Channel Under-Drain below Leviathan Creek concrete channel.	Monthly
Delta Seep (DS)	Seepage from the toe of the Delta Slope, located north of Pond 4.	Semi-annual
Station 15	Leviathan Creek above the confluence of Leviathan and Aspen creeks.	Monthly
Station 16	Aspen Creek above the confluence of Leviathan and Aspen creeks.	Monthly
4L Creek	4L Creek just above the confluence of Leviathan Creek.	Semi-annual
Station 22	Aspen Creek above Leviathan Mine.	Monthly
Overburden Seep (OS)	Overburden seepage (a.k.a. Aspen Seep), above the bioreactors.	Monthly
Station 23	Leviathan Creek above the confluence of Leviathan and Mountaineer creeks.	Monthly
Station 24	Mountaineer Creek above the confluence of Leviathan and Mountaineer creeks.	Monthly
Station 25	Bryant Creek below the confluence of Leviathan and Mountaineer creeks.	Monthly
Station 26	Bryant Creek above the confluence of Doud Springs and Bryant Creek.	Semi-annual

Laboratory Analytical and Field Monitoring Parameters for all Stations:

1. Laboratory: Total and Dissolved Metals (aluminum, arsenic, calcium, cadmium, cobalt, chromium, copper, iron, magnesium, manganese, nickel, zinc)
2. Laboratory: Total Dissolved Solids (TDS)
3. Laboratory: Sulfate
4. Field: pH, temperature, electrical conductivity, and specific conductance

Appendix A

Data Summary for 2009 Pond Water Treatment

- Table A-1: 2009 Pond Water Treatment Effluent Field and Analytical Results
- Table A-2: 2009 Pond Water Treatment Influent Field and Analytical Results
- Table A-3: Summary of 2009 Pond Water Treatment Plant Operators' Log
- Table A-4: 2009 Pond Water Treatment Sludge Analytical Results
- Table A-5: 2009 Pond Water Treatment, Daily Discharge Summary

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**Table A-1
2009 Pond Water Treatment Effluent Field and Analytical Results**

Sample Description	Sample Date	Sample ID	pH (SU)	Temp. (°C)	Al	Q	As	Q	Ca	Q	Cd	Q	Co	Q	Cr	Q	Cu	Q	Fe	Q	Mg	Q	Mn	Q	Ni	Q	Pb	Q	Se	Q	SO4	Q	TDS	Q	Zn	Q
USEPA Daily Max Discharge Criteria:			6-9	n/a	4.0		0.34		n/a		0.009		n/a		0.97		0.026		2.0		n/a		n/a		0.84		0.136		n/a		n/a		n/a		0.21	
Pre-Discharge	07/31/2009	0910PWT001-PC	6.9	16.3	0.0076	J	0.0077				0.00012	J			0.0046		0.0066	B-1	0.0490	RL1, J					0.0009	U	0.0003	U	0.0037						0.0055	J
Pre-Discharge	08/03/2009	0910PWT002-PC	8.5	18.0	2.4000	M-3	0.0093				0.00011	U			0.0044		0.0075		0.0080	U					0.0140		0.0003	U	0.0031						0.0041	J
Pre-Discharge	08/04/2009	0910PWT003-PC	8.2	19.4	1.0000	B-1, M-3	0.0084				0.00054	J			0.0022		0.0090		0.0150						0.0420		0.0003	U	0.0028	M1					0.0056	J, B
Pre-Discharge	08/05/2009	0910PWT004-PC	8.0	16.3	0.6000	MHA	0.0082				0.00035	J			0.0034		0.0065		0.0210						0.0220		0.0003	U	0.0033						0.0035	J
PWT Effluent	08/06/2009	0910PWT006-EFF	6.8	16.8	0.0700		0.0049		580		0.00016	J	0.0022		0.0043		0.0063		0.0300	RL1,U	87		0.0450		0.0009	U	0.0003	U	0.0035	B-1	2000		2900		0.0028	J
PWT Effluent-Dup	08/06/2009	0910PWT007-EFF	6.8	16.8	0.0660		0.0052				0.00022	J			0.0047		0.0067		0.0300	RL1,U					0.0009	U	0.0003	U	0.0038	B-1					0.0049	J
PWT Effluent	08/11/2009	0910PWT008-EFF	7.0	15.3	0.0200		0.0075				0.00029	J			0.0015	J	0.0068		0.0210						0.0073		0.0003	U	0.0042						0.0069	J
PWT Effluent	08/13/2009	0910PWT010-EFF	7.1	16.2	0.0360		0.0170		720		0.00020	J	0.0023		0.0011	J	0.0069		0.0160	RL1,U	58		0.6600	B-1	0.0046		0.0003	U	0.0040		2000	MHA	3000		0.0075	J
PWT Effluent-Dup	08/13/2009	0910PWT011-EFF	7.1	16.3	0.0340		0.0140				0.00020	J			0.0010	J	0.0068		0.0190	RL1, J					0.0044		0.0003	U	0.0037						0.0069	J
PWT Effluent	08/18/2009	0910PWT013-EFF	7.1	16.6	0.0210	B	0.0098				0.00018	J			0.0008	J	0.0060		0.0170	RL1, J					0.0043		0.0003	U	0.0038	RL1, J					0.0050	J
PWT Effluent	08/19/2009	0910PWT014-EFF	7.1	17.6	0.0300	B, RL1,U	0.0110				0.00055	RL1,U			0.0035	RL1,U	0.0045	RL1, J	0.0400	RL1,U					0.0045	RL1,U	0.0015	RL1,U	0.0043						0.0120	RL1,U
PWT Effluent	08/20/2009	0910PWT015-EFF	7.1	16.6	0.0350	B, RL1, J	0.0082		580	B-1	0.00055	RL1,U	0.0016	RL1, J	0.0035	RL1,U	0.0047	RL1, J	0.0150	U	51		0.3200		0.0048	RL1, J	0.0015	RL1,U	0.0037	RL1, J	1700	B-1, MHA	2400		0.0120	RL1,U
PWT Effluent-Dup	08/20/2009	0910PWT016-EFF	7.1	16.6	0.0300	B, RL1,U	0.0098				0.00055	RL1,U			0.0035	RL1,U	0.0049	RL1, J	0.0400	RL1,U					0.0052	RL1, J	0.0015	RL1,U	0.0037	RL1, J					0.0120	RL1,U
PWT Effluent	08/25/2009	0910PWT019-EFF	7.1	16.7	0.0320		0.0050				0.00016	J			0.0020	B	0.0083		0.0260						0.0017	J	0.0003	U	0.0042						0.0075	J
PWT Effluent	08/26/2009	0910PWT020-EFF	7.1	15.6	0.0190		0.0039				0.00017	J			0.0016	B, J	0.0064		0.0300	RL1,U					0.0110		0.0003	U	0.0040						0.0097	J
PWT Effluent	08/27/2009	0910PWT021-EFF	7.2	16.3	0.0820		0.0047		620	B-1	0.00019	J	0.0031		0.0016	B, J	0.0090		0.0130		58		0.3200		0.0035		0.0003	U	0.0041		1800		2800		0.0150	J
PWT Effluent	09/01/2009	0910PWT023-EFF	7.1	14.7	0.0170		0.0028		550	M-3	0.00016	J	0.0015		0.0015		0.0080		0.0150		56	MHA	0.1100		0.0049		0.0003	C,U	0.0049		1700		2500		0.0096	J
PWT Effluent	09/03/2009	0910PWT025-EFF	7.0	14.4	0.0540		0.0067				0.00019	J			0.0013	J	0.0079		0.0160						0.0057		0.0003	C,U	0.0055						0.0072	J
PWT Effluent	09/08/2009	0910PWT026-EFF	7.1	15.0	0.0210		0.0009	U	520	M-3	0.00014	J	0.0015		0.0009	U	0.0084		0.0110	B	57	MHA	0.0550		0.0120		0.0002	U	0.0042		1600		2500		0.0080	J

Notes:

All values reported in milligrams/liter (mg/L), except pH and temperature which are in Standard Units and degrees Celsius, respectively.
 pH and Temperature readings were collected in the field at the time of sample collection.
 All parameters are dissolved, except Selenium, which is total recoverable.

Qualifiers:

U - Analyte not detected at the given Method Detection Limit (MDL).
 J - Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). The user of this data should be aware that this data is of limited reliability.
 B - Analyte was detected in the associated Method Blank.
 B-1 - Analyte was detected in the associated method blank. Analyte concentration in the sample is greater than 10x the concentration found in the method blank.
 RL1 - Reporting limit raised due to sample matrix effects.
 MHA - Due to high levels of analyte in the sample, the MS/MSD calculation does not provide useful spike recovery information. See Blank Spike (LCS).
 M-3 - Results exceeded the linear range in the MS/MSD and therefore are not available for reporting. The batch was accepted based on acceptable recovery in the Blank Spike (LCS).
 C - Calibration Verification recovery was above the method control limit for this analyte. Analyte not detected, data not impacted.

**Table A-2
2009 Pond Water Treatment Influent Field and Analytical Results**

Sample Description	Sample Date	Sample ID	pH (SU)	Temp. (°C)	Al	Q	As	Q	Ca	Q	Cd	Q	Co	Q	Cr	Q	Cu	Q	Fe	Q	Mg	Q	Mn	Q	Ni	Q	Pb	Q	Se	Q	SO4	Q	TDS	Q	Zn	Q
PWT Influent	08/06/2009	0910PWT005-INF	2.5	13.4	400	M-3	2.5	MHA	420		0.051		2.5	MHA	0.820	MHA	1.7	MHA	370		62		14	M-3	6.5	MHA	0.00300	RL1,U	0.0050	B-1	4900		7300		1.30	MHA
PWT Influent	08/13/2009	0910PWT009-INF	2.5	19.1	410	M-3	3.9		390		0.050	J, RL1	2.9		1.100	MHA	1.9		570	B-1	75		14	B-1	7.4	B-1, MHA	0.03000	RL1,U	0.0078		5100		7800		1.40	RL1, J
PWT Influent	08/20/2009	0910PWT017-INF	2.4	15.9	610	B-1	5.3		340	B-1	0.069		3.6		1.500		2.4		620		76		17		9.1		0.01500	RL1,U	0.0082	B-1	5900		9600		1.90	
PWT Influent	08/27/2009	0910PWT022-INF	2.4	22.7	650		4.6		390	B-1	0.074		3.4		1.500	B-1	2.6		640		86		21		8.3		0.00090	RL1, J	0.0150	J	6400		9200		2.70	
PWT Influent	09/01/2009	0910PWT024-INF	2.4	16.7	680		4.5		410		0.047		3.7		0.870		1.5		620		89		23		8.5		0.00064	J	0.0120		6800		10000		0.89	

Notes:

All values reported in milligrams/liter (mg/L), except pH and temperature which are in Standard Units and degrees Celsius, respectively.
 pH and Temperature readings were collected in the field at the time of sample collection.
 All parameters are dissolved, except Selenium, which is total recoverable.

Qualifiers:

U - Analyte not detected at the given Method Detection Limit (MDL).
 J - Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). The user of this data should be aware that this data is of limited reliability.
 B-1 - Analyte was detected in the associated method blank. Analyte concentration in the sample is greater than 10x the concentration found in the method blank.
 RL1 - Reporting limit raised due to sample matrix effects.
 MHA - Due to high levels of analyte in the sample, the MS/MSD calculation does not provide useful spike recovery information. See Blank Spike (LCS).
 M-3 - Results exceeded the linear range in the MS/MSD and therefore are not available for reporting. The batch was accepted based on acceptable recovery in the Blank Spike (LCS).

**Table A-3
Summary of 2009 Pond Water Treatment Plant Operators' Log**

Date	Time	Influent Flow Rate	R-1		R-2		FF-2		Pit Clarifier		Weir Discharge		Valve to Leviathan Creek Status	INF and EFF Samples Collected During Operations												
			pH	Temp	pH	Temp	pH	Temp	pH	Temp	pH	Temp														
7/31/09	8:00	250	9.5	--	8.8	20.6	8.5	--	7.6	--	--	--	Closed	0910PWT001-PC												
7/31/09	10:00	200	9.5	--	9.5	21.1	9.5	--	9.0	--	--	--	↓		0910PWT001-PC											
7/31/09	12:00	200	9.2	--	9.4	20.8	9.5	--	9.4	--	--	--	↓			0910PWT001-PC										
7/31/09	13:00	190	8.0	17.5	8.8	23.5	8.9	--	8.9	--	--	--	↓				0910PWT001-PC									
7/31/09	14:00	190	8.5	17.8	9.5	22.5	9.5	--	9.0	--	--	--	↓					0910PWT001-PC								
7/31/09	15:00	190	8.7	16.6	9.4	22.3	9.5	--	9.4	--	--	--	↓						0910PWT001-PC							
8/1/09	8:00	190	8.5	14.9	9.6	20.1	9.7	--	9.6	15.8	--	--	↓	0910PWT002-PC												
8/1/09	10:00	190	8.5	12.1	9.4	17.4	9.3	--	8.8	19.7	--	--	↓		0910PWT002-PC											
8/1/09	12:00	190	9.2	21.0	9.4	19.3	9.4	--	--	--	--	--	↓			0910PWT002-PC										
8/1/09	14:00	190	8.8	21.0	8.8	19.6	8.8	--	8.5	19.8	--	--	↓				0910PWT002-PC									
8/3/09	10:00	--	8.1	11.9	8.5	17.9	8.5	--	6.3	--	--	--	↓	0910PWT002-PC												
8/3/09	12:00	--	8.3	--	8.6	19.0	8.8	--	8.5	--	--	--	↓		0910PWT002-PC											
8/3/09	14:00	--	8.7	20.5	9.1	19.2	9.1	--	7.2	--	--	--	↓			0910PWT002-PC										
8/3/09	15:00	--	9.0	20.5	9.1	18.2	9.2	--	8.7	--	--	--	↓				0910PWT002-PC									
8/3/09	16:00	--	8.6	22.2	9.2	22.0	9.2	--	9.0	--	--	--	↓					0910PWT002-PC								
8/4/09	8:00	--	8.8	15.3	9.5	19.3	9.6	--	9.4	--	--	--	↓						0910PWT003-PC							
8/4/09	10:00	--	8.8	16.9	8.1	18.7	8.3	--	8.1	--	--	--	↓	0910PWT003-PC												
8/4/09	12:00	--	8.8	16.6	8.2	16.4	8.3	--	7.7	--	--	--	↓		0910PWT003-PC											
8/4/09	13:00	--	8.7	17.1	8.4	20.9	8.5	--	7.8	--	--	--	↓			0910PWT003-PC										
8/4/09	14:00	--	8.8	19.9	8.9	17.6	8.9	--	8.2	--	--	--	↓				0910PWT003-PC									
8/4/09	15:00	--	8.7	26.5	9.0	18.5	8.9	--	8.3	--	--	--	↓					0910PWT003-PC								
8/4/09	16:00	--	8.9	24.2	8.5	21.1	8.8	--	8.6	--	--	--	↓						0910PWT003-PC							
8/5/09	6:00	--	8.5	23.1	8.4	23.1	8.7	--	8.6	--	--	--	↓	0910PWT004-PC												
8/5/09	7:00	--	8.6	20.2	8.8	16.8	8.9	--	8.5	--	--	--	↓		0910PWT004-PC											
8/5/09	9:00	--	8.6	20.6	8.9	16.0	9.0	--	8.4	--	--	--	↓			0910PWT004-PC										
8/5/09	11:00	--	8.5	22.7	8.8	18.5	8.9	--	8.4	--	--	--	↓				0910PWT004-PC									
8/5/09	13:00	--	8.4	23.7	8.7	17.1	8.8	--	8.4	--	--	--	↓					0910PWT004-PC								
8/5/09	14:00	--	8.5	25.8	8.6	20.0	8.6	--	8.5	--	--	--	↓						0910PWT004-PC							
8/5/09	15:00	--	8.5	26.4	8.5	19.0	8.6	--	8.5	--	--	--	↓							0910PWT004-PC						
8/5/09	16:00	--	8.6	5.4	8.5	23.2	8.5	--	8.4	--	--	--	↓								0910PWT004-PC					
8/5/09	17:00	--	8.6	27.6	8.5	24.4	8.5	--	8.4	--	--	--	↓									0910PWT004-PC				
8/5/09	18:00	--	8.6	28.6	8.4	27.6	8.4	--	8.3	--	--	--	↓										0910PWT004-PC			
8/5/09	19:00	--	8.6	27.9	8.4	26.5	8.4	--	8.3	--	--	--	↓											0910PWT004-PC		
8/5/09	20:00	--	8.6	27.1	8.4	25.1	8.4	--	8.3	--	--	--	↓												0910PWT004-PC	
8/5/09	21:00	--	8.6	31.1	8.4	23.5	8.4	--	8.3	--	--	--	↓													0910PWT004-PC

**Table A-3
Summary of 2009 Pond Water Treatment Plant Operators' Log**

Date	Time	Influent Flow Rate	R-1		R-2		FF-2		Pit Clarifier		Weir Discharge		Valve to Leviathan Creek Status	INF and EFF Samples Collected During Operations
			pH	Temp	pH	Temp	pH	Temp	pH	Temp	pH	Temp		
8/6/09	6:00	--	8.5	21.4	8.4	23.0	8.5	--	8.3	--	--	--	↓	0910PWT005-INF 0910PWT006-EFF 0910PWT007-EFF (dup. of 006)
8/6/09	8:00	--	8.6	19.8	8.5	15.2	8.5	--	8.1	--	--	--	↓	
8/6/09	10:00	--	8.5	19.3	8.5	18.9	8.5	--	8.0	--	--	--	↓	
8/6/09	12:00	--	8.5	21.7	8.5	18.5	8.4	--	8.2	--	--	--	Opened at 1145	
8/6/09	14:00	--	8.1	22.0	8.5	21.6	8.5	--	8.3	--	--	--	↓	
8/6/09	15:00	--	8.3	22.2	8.4	20.5	8.3	--	8.0	--	--	--	↓	
8/6/09	16:00	--	8.3	24.1	8.5	18.1	8.6	--	8.4	--	--	--	↓	
8/6/09	17:00	--	8.3	22.6	8.4	16.2	8.3	--	8.0	--	--	--	↓	
8/6/09	18:00	--	8.4	23.3	8.4	17.2	8.7	--	8.3	--	--	--	↓	
8/6/09	19:00	--	8.4	27.5	8.5	19.7	8.4	--	8.3	--	--	--	↓	
8/6/09	20:00	--	8.3	22.9	8.5	17.6	8.3	--	8.0	--	--	--	↓	
8/6/09	21:00	--	8.5	21.0	8.5	19.0	8.9	--	8.4	--	--	--	↓	
8/6/09	22:00	--	8.4	20.5	8.5	17.9	8.6	--	8.3	--	--	--	↓	
8/6/09	23:00	--	8.4	20.5	8.5	19.0	8.5	--	8.1	--	--	--	↓	
8/7/09	0:00	--	8.5	19.8	8.6	16.5	8.6	--	8.2	--	--	--	↓	
8/7/09	1:00	--	8.4	19.5	8.6	17.0	8.7	--	8.3	--	--	--	↓	
8/7/09	2:00	--	8.4	18.8	8.6	15.8	8.5	--	8.1	--	--	--	↓	
8/7/09	3:00	--	8.4	17.6	8.6	16.1	8.5	--	8.1	--	--	--	↓	
8/7/09	4:00	--	8.5	17.0	8.6	14.8	8.6	--	8.2	--	--	--	↓	
8/7/09	5:00	--	8.4	18.8	8.7	15.6	8.7	--	8.3	--	--	--	↓	
8/7/09	7:00	--	8.4	16.2	8.7	11.6	8.6	--	7.9	--	--	--	↓	
8/7/09	9:00	--	8.5	15.5	8.7	10.5	8.5	--	7.9	--	--	--	↓	
8/7/09	11:00	--	8.5	17.6	8.6	11.9	8.4	--	8.2	--	--	--	↓	
8/7/09	12:00	--	8.4	17.2	8.7	15.9	8.3	--	8.1	--	--	--	Closed at 1230	
8/10/09	6:00	--	4.7	19.0	6.1	12.1	8.3	--	8.4	--	--	--	↓	0910PWT008-EFF
8/10/09	8:00	--	7.5	18.7	6.0	10.9	8.0	--	8.3	--	--	--	↓	
8/10/09	10:00	--	7.5	21.3	6.4	18.6	8.7	--	8.4	--	--	--	Opened at 1100	
8/10/09	12:00	--	9.2	23.6	5.1	19.3	6.3	--	8.2	--	--	--	↓	
8/11/09	6:00	190	8.6	19.3	8.3	17.9	8.3	--	7.9	--	--	--	↓	
8/11/09	8:00	190	8.2	19.3	8.2	15.9	8.4	--	8.0	--	--	--	↓	
8/11/09	10:00	190	8.3	21.5	8.4	17.7	8.7	--	8.2	--	--	--	↓	
8/11/09	11:00	190	8.4	20.7	8.4	19.9	8.7	--	8.2	15.7	7.5	20.2	↓	
8/11/09	12:00	190	8.3	21.0	8.4	17.8	8.7	--	8.2	19.0	7.6	21.3	↓	
8/11/09	13:00	190	8.3	23.2	8.4	17.4	8.7	--	8.4	18.8	7.6	18.5	↓	
8/11/09	14:00	190	8.4	24.3	8.4	20.1	8.7	--	8.4	21.3	7.6	20.3	↓	
8/11/09	15:00	190	8.4	24.3	8.4	23.5	8.7	--	8.4	21.7	7.6	20.4	↓	
8/11/09	16:00	190	8.4	24.6	8.3	20.6	8.7	--	8.4	21.0	7.7	20.1	↓	
8/11/09	17:00	190	8.5	24.3	8.4	24.1	8.7	--	8.4	21.5	7.8	20.4	↓	
8/11/09	18:00	190	8.5	25.1	8.4	22.6	8.7	--	8.4	21.6	7.8	20.4	↓	
8/11/09	19:00	190	8.3	27.4	8.3	23.4	8.6	--	8.4	20.3	7.8	20.0	↓	
8/11/09	20:00	190	4.7	26.2	8.2	23.7	8.5	--	8.4	19.1	7.9	18.4	↓	
8/11/09	21:00	190	4.3	26.3	8.5	22.6	8.3	--	8.2	19.6	7.9	18.1	↓	

**Table A-3
Summary of 2009 Pond Water Treatment Plant Operators' Log**

Date	Time	Influent Flow Rate	R-1		R-2		FF-2		Pit Clarifier		Weir Discharge		Valve to Leviathan Creek Status	INF and EFF Samples Collected During Operations
			pH	Temp	pH	Temp	pH	Temp	pH	Temp	pH	Temp		
8/12/09	6:00	--	8.4	21.7	7.5	21.4	8.0	--	8.2	12.9	7.7	12.8	↓	
8/12/09	8:00	--	8.5	19.4	8.2	17.4	8.2	--	8.4	15.7	8.3	15.6	↓	
8/12/09	10:00	--	8.6	20.7	8.3	17.1	8.6	--	8.3	17.4	7.7	18.6	↓	
8/12/09	12:00	--	8.4	22.3	8.2	17.5	8.5	--	8.3	19.6	7.7	19.7	↓	
8/12/09	14:00	--	8.2	25.2	8.3	20.7	8.5	--	8.2	21.4	7.5	21.2	↓	
8/12/09	16:00	--	8.1	25.4	8.3	22.6	8.3	--	8.1	22.4	7.6	21.7	↓	
8/12/09	18:00	--	8.3	26.1	8.6	26.0	8.8	--	8.4	21.4	7.6	21.4	↓	
8/12/09	20:00	--	8.3	26.0	8.4	26.1	8.6	--	8.3	20.0	7.5	19.3	↓	
8/13/09	6:00	220	8.5	23.1	8.3	24.9	8.6	--	8.3	14.2	7.4	12.0	↓	
8/13/09	8:00	220	8.4	19.8	8.2	20.0	8.4	--	8.0	15.4	7.5	14.7	↓	
8/13/09	10:00	220	8.4	21.0	8.2	18.7	8.4	--	8.0	16.7	7.6	16.1	↓	
8/13/09	12:00	250	8.2	22.5	8.1	19.5	8.4	--	8.0	17.8	7.6	17.7	↓	
8/13/09	14:00	200	8.5	25.5	8.4	21.1	8.6	--	8.0	20.7	7.3	21.1	↓	
8/13/09	16:00	200	8.6	26.2	8.3	22.5	8.5	--	8.1	20.4	7.4	21.3	↓	
8/13/09	18:00	200	8.5	26.2	8.5	22.2	8.9	--	8.6	20.9	7.5	21.1	↓	
8/13/09	20:00	200	8.5	26.4	8.3	24.0	8.5	--	8.2	20.2	7.6	19.0	↓	
8/13/09	21:00	200	8.4	26.4	8.7	23.1	8.9	--	8.4	19.7	7.7	18.1	↓	
8/14/09	7:00	220	8.4	21.8	8.8	23.7	9.1	--	8.3	16.3	7.4	13.7	↓	
8/14/09	9:00	220	8.4	19.0	8.7	18.3	8.8	--	8.0	16.1	7.7	14.7	↓	
8/14/09	11:00	220	8.5	20.2	8.7	16.4	8.7	--	8.0	16.7	7.6	16.3	↓	
8/14/09	13:00	220	8.6	24.4	8.6	19.5	8.6	--	8.0	18.7	7.4	18.5	↓	
8/14/09	15:00	220	8.6	27.5	8.5	21.7	8.5	--	8.1	20.5	7.5	20.8	↓	
8/14/09	17:00	220	8.7	27.6	8.5	20.8	8.5	--	8.1	21.0	7.6	21.1	↓	
8/14/09	19:00	220	8.7	27.2	8.4	22.2	8.5	--	8.2	21.0	7.6	19.2	↓	
8/14/09	21:00	220	8.7	27.4	8.4	26.3	8.5	--	8.2	20.4	7.7	18.6	Closed at 2000	
8/17/09	7:00	150	8.6	20.5	8.4	19.4	8.6	--	8.1	17.1	7.0	16.7	Open at 0800	
8/17/09	9:00	150	8.4	19.2	8.4	14.0	8.7	--	8.2	19.7	7.6	19.6	↓	
8/17/09	11:00	150	8.4	23.0	8.4	16.1	8.8	--	8.1	20.3	7.6	21.9	↓	
8/17/09	13:00	150	8.4	23.3	8.4	18.1	8.8	--	8.3	18.7	7.4	22.0	↓	
8/17/09	18:00	150	8.4	30.7	8.3	21.5	9.0	--	8.5	23.9	7.4	24.0	↓	
8/17/09	20:00	150	8.5	26.6	8.3	23.6	9.0	--	8.5	20.4	7.7	20.0	↓	
8/17/09	22:00	150	8.7	25.6	8.3	24.1	8.8	--	8.5	20.1	7.9	18.8	↓	
8/18/09	0:00	150	8.5	22.9	8.4	23.9	8.8	--	8.5	16.8	7.7	17.1	↓	
8/18/09	2:00	100	8.2	21.4	8.4	20.8	8.7	--	8.4	16.5	7.9	16.5	↓	
8/18/09	4:00	100	8.2	20.4	8.4	17.0	8.5	--	8.2	15.5	7.7	15.5	↓	
8/18/09	6:00	50	8.9	18.5	8.5	21.5	9.0	--	8.3	12.6	7.7	13.4	↓	
8/18/09	8:00	0	--	--	--	--	--	--	--	--	7.1	16.6	↓	
8/18/09	10:00	150	8.4	22.6	8.5	17.1	8.8	--	8.3	22.8	7.3	20.0	↓	
8/18/09	12:00	150	8.4	28.3	8.2	22.7	8.8	--	8.4	23.2	8.0	22.3	↓	
8/18/09	14:00	150	8.3	29.5	8.0	25.7	8.8	--	8.6	24.7	8.0	24.5	↓	
8/18/09	20:00	150	8.5	29.5	7.9	23.5	8.7	--	8.5	23.7	8.0	21.9	↓	
8/18/09	22:00	100	8.6	27.9	8.0	23.2	8.5	--	8.4	21.7	7.9	19.4	↓	0910PWT013-EFF

**Table A-3
Summary of 2009 Pond Water Treatment Plant Operators' Log**

Date	Time	Influent Flow Rate	R-1		R-2		FF-2		Pit Clarifier		Weir Discharge		Valve to Leviathan Creek Status	INF and EFF Samples Collected During Operations
			pH	Temp	pH	Temp	pH	Temp	pH	Temp	pH	Temp		
8/19/09	0:00	100	8.6	24.6	7.3	21.9	8.5	--	8.2	20.0	7.9	18.4	↓	0910PWT014-EFF
8/19/09	2:00	100	8.7	23.3	7.4	21.4	8.5	--	8.2	17.2	7.7	17.4	↓	
8/19/09	4:00	100	8.8	21.5	7.5	21.2	8.8	--	8.3	13.3	7.8	16.1	↓	
8/19/09	6:00	50	9.0	19.7	7.6	17.8	8.6	--	8.1	17.0	7.7	15.4	↓	
8/19/09	8:00	50	8.8	19.8	7.6	19.4	8.5	--	8.2	17.0	7.7	17.1	↓	
8/19/09	10:00	50	8.1	19.9	7.6	18.9	8.5	--	8.3	18.8	8.0	19.9	↓	
8/19/09	12:00	50	9.4	23.4	7.6	19.3	8.3	--	8.3	17.9	7.3	23.2	↓	
8/19/09	14:00	50	9.1	21.2	7.6	22.3	8.3	--	8.2	16.4	7.5	19.7	↓	
8/20/09	6:00	--	--	--	--	--	--	--	--	--	6.8	12.0	↓	0910PWT015-EFF 0910PWT016-EFF (dup of 015) 0910PWT017-INF
8/20/09	8:00	180	8.3	21.8	7.6	19.7	8.3	--	7.9	18.8	7.2	16.4	↓	
8/20/09	10:00	180	8.4	21.6	8.5	18.4	8.9	--	8.1	24.0	7.1	19.4	↓	
8/20/09	12:00	180	8.7	24.6	8.5	22.5	8.8	--	8.1	24.2	6.9	26.0	↓	
8/20/09	14:00	180	8.4	26.6	8.3	23.3	8.6	--	8.3	24.1	7.1	22.7	↓	
8/20/09	17:00	150	8.3	21.0	8.4	23.2	8.6	--	8.0	24.9	7.3	23.7	↓	
8/20/09	19:00	150	8.3	29.2	8.2	27.2	8.5	--	8.2	22.8	7.2	23.2	↓	
8/20/09	21:00	150	8.3	27.7	8.2	29.6	8.4	--	8.1	21.9	7.4	20.8	↓	
8/20/09	23:00	150	8.3	25.6	8.2	22.5	8.4	--	8.1	20.1	7.3	18.1	↓	
8/21/09	1:00	150	8.4	23.5	8.1	25.0	8.4	--	8.2	18.3	7.3	18.0	↓	0910PWT015-EFF 0910PWT016-EFF (dup of 015) 0910PWT017-INF
8/21/09	3:00	150	8.4	23.7	8.1	23.1	8.4	--	8.1	17.2	7.5	16.2	↓	
8/21/09	5:00	150	8.4	21.5	8.1	21.9	8.4	--	--	16.1	7.5	16.2	↓	
8/21/09	6:00	150	8.2	19.7	8.1	18.2	8.4	--	8.0	14.8	7.5	11.7	↓	
8/21/09	8:00	150	8.3	19.8	8.0	17.6	8.3	--	9.0	17.2	7.4	14.9	↓	
8/21/09	10:00	150	8.4	21.1	8.0	21.6	8.3	--	7.9	18.1	7.4	18.0	↓	
8/21/09	12:00	150	8.4	21.5	8.1	18.0	8.3	--	8.0	20.8	8.0	20.3	↓	
8/21/09	14:00	150	8.5	25.6	8.0	26.1	8.3	--	8.0	22.2	8.0	23.1	↓	
8/21/09	16:00	150	8.4	27.0	8.0	23.5	8.3	--	8.0	25.3	7.2	23.3	Closed at 1700	
8/21/09	18:00	150	8.2	29.1	8.0	25.4	8.2	--	8.1	25.1	--	--	↓	
8/21/09	20:00	150	8.4	29.5	8.0	24.2	8.2	--	8.1	22.0	--	--	↓	
8/21/09	22:00	150	8.3	27.9	8.0	22.0	8.2	--	8.1	21.5	--	--	↓	
8/22/09	0:00	150	8.4	24.7	8.0	25.2	8.2	--	8.0	21.2	--	--	↓	0910PWT015-EFF 0910PWT016-EFF (dup of 015) 0910PWT017-INF
8/22/09	2:00	150	8.5	22.9	8.0	24.6	8.2	--	8.0	17.6	--	--	↓	
8/22/09	4:00	150	8.5	21.3	8.0	23.2	8.3	--	8.0	16.6	--	--	↓	
8/24/09	6:00	130	8.6	19.6	8.1	16.9	8.5	--	8.0	14.0	--	--	↓	0910PWT015-EFF 0910PWT016-EFF (dup of 015) 0910PWT017-INF
8/24/09	8:00	130	8.6	18.9	8.1	22.3	8.4	--	8.0	13.2	--	--	↓	
8/24/09	10:00	130	8.4	18.1	8.5	13.9	8.9	--	8.2	15.2	7.5	17.4	Open at 0950	
8/24/09	12:00	130	8.4	21.0	8.6	19.2	8.9	--	8.3	16.2	7.5	19.0	↓	
8/24/09	14:00	150	8.2	26.4	8.5	23.9	8.7	--	8.3	19.7	7.5	21.2	↓	
8/24/09	16:00	150	8.1	26.6	8.4	25.4	8.7	--	8.2	17.3	7.5	19.4	↓	
8/24/09	18:00	150	8.2	27.6	8.2	23.4	8.5	--	8.1	22.5	7.5	22.8	↓	
8/24/09	20:00	150	8.1	27.2	8.2	25.6	8.4	--	8.1	20.4	7.4	19.0	↓	
8/24/09	22:00	150	8.2	26.7	8.2	25.4	8.4	--	8.2	19.1	7.4	16.4	↓	

**Table A-3
Summary of 2009 Pond Water Treatment Plant Operators' Log**

Date	Time	Influent Flow Rate	R-1		R-2		FF-2		Pit Clarifier		Weir Discharge		Valve to Leviathan Creek Status	INF and EFF Samples Collected During Operations
			pH	Temp	pH	Temp	pH	Temp	pH	Temp	pH	Temp		
8/25/09	0:00	150	8.2	23.3	8.1	20.8	8.5	--	8.1	18.5	7.4	16.4	↓	0910PWT019-EFF
8/25/09	2:00	150	8.2	23.8	8.1	19.3	8.5	--	8.0	16.8	7.5	15.8	↓	
8/25/09	4:00	150	8.2	20.5	8.1	19.2	8.5	--	8.1	16.7	7.4	14.9	↓	
8/25/09	6:00	150	8.3	18.2	8.2	15.8	8.6	--	8.0	14.6	7.1	14.4	↓	
8/25/09	8:00	150	8.6	18.8	8.4	15.4	8.8	--	8.0	14.8	7.7	16.6	↓	
8/25/09	10:00	150	8.5	18.2	8.3	15.0	8.8	--	7.9	14.6	7.7	16.6	↓	
8/25/09	12:00	150	8.4	22.1	8.2	15.2	8.5	17.5	8.0	18.6	7.1	18.6	↓	
8/25/09	14:00	150	8.1	25.6	8.2	18.1	8.5	20.2	8.0	18.9	7.9	19.0	↓	
8/25/09	16:00	150	8.1	29.5	8.8	21.4	8.8	22.9	8.2	21.3	7.9	19.4	↓	
8/25/09	18:00	150	8.5	29.7	8.1	28.3	8.3	26.6	8.0	24.8	7.6	22.1	↓	
8/25/09	20:00	150	8.6	25.9	8.3	25.5	8.6	24.7	8.3	20.1	7.4	17.9	↓	
8/25/09	22:00	150	8.6	24.0	8.4	23.6	8.6	23.5	8.2	18.4	7.7	17.8	↓	
8/26/09	0:00	150	8.6	20.9	8.3	24.3	8.6	22.5	8.1	17.0	7.5	15.2	↓	0910PWT020-EFF
8/26/09	2:00	150	8.5	20.9	8.3	23.6	8.6	21.8	8.1	13.8	7.5	13.1	↓	
8/26/09	4:00	150	8.5	17.9	8.4	16.6	8.7	16.7	8.0	12.7	7.5	14.0	↓	
8/26/09	6:00	150	8.6	14.0	8.4	12.3	8.7	12.9	8.1	9.8	7.4	12.9	↓	
8/26/09	8:00	150	8.3	16.1	8.3	12.7	8.7	12.9	8.1	11.5	7.3	13.6	↓	
8/26/09	10:00	150	8.4	16.7	8.4	13.5	8.6	14.7	8.1	19.5	7.5	14.1	↓	
8/26/09	12:00	150	8.5	15.0	8.4	13.3	8.7	14.3	8.1	16.1	7.0	18.7	↓	
8/26/09	14:00	150	8.2	25.2	8.1	16.3	8.4	12.1	7.9	17.4	7.7	18.6	↓	
8/26/09	16:00	150	8.5	30.7	8.2	25.9	8.4	24.7	8.0	21.7	7.2	21.9	↓	
8/27/09	6:00	150	8.3	25.9	8.3	22.8	8.5	24.0	8.0	15.3	6.6	11.9	↓	
8/27/09	8:00	150	8.4	16.5	8.3	19.8	8.6	20.3	8.1	17.5	7.7	15.5	↓	
8/27/09	10:00	150	8.4	17.4	8.4	18.2	8.8	15.9	8.0	15.2	7.8	16.1	↓	
8/27/09	12:00	150	8.3	22.2	8.5	16.1	8.9	17.0	8.2	19.2	7.1	18.9	↓	
8/27/09	14:00	150	8.4	26.3	8.6	20.6	8.9	20.7	8.4	20.8	7.1	21.8	↓	
8/27/09	16:00	150	8.4	30.6	8.6	29.5	8.8	25.7	8.3	23.9	7.8	20.4	↓	
8/28/09	6:00	150	8.1	20.5	8.6	22.1	8.9	23.7	8.3	17.9	7.6	14.4	↓	0910PWT021-EFF 0910PWT022-INF
8/28/09	8:00	150	8.3	18.4	8.5	17.7	8.8	20.4	8.3	16.0	8.0	15.3	↓	
8/28/09	10:00	150	8.4	19.2	8.5	16.5	8.9	16.2	8.0	15.8	7.8	17.3	↓	
8/28/09	12:00	150	8.1	24.3	8.2	20.6	8.5	21.4	8.3	19.4	7.3	19.0	↓	
8/28/09	14:00	150	8.3	21.7	8.4	25.1	8.6	22.9	8.3	23.5	7.4	24.9	↓	
8/28/09	16:00	150	8.4	21.9	8.4	21.7	8.6	23.1	8.1	21.2	7.9	22.6	Valve Closed at 1600	
8/31/09	8:00	150	8.4	19.9	8.4	19.6	8.9	21.7	8.0	15.8	--	--	↓	
8/31/09	10:00	150	8.5	22.1	8.5	15.4	8.9	18.2	8.2	16.1	--	--	↓	
8/31/09	12:00	150	8.0	22.7	8.4	18.2	8.7	18.7	8.3	17.5	7.9	19.2	Valve Opened at 1100	
8/31/09	14:00	150	8.0	24.3	8.4	19.6	8.7	19.9	8.1	17.9	7.3	18.3	↓	
8/31/09	16:00	150	8.1	25.5	8.6	21.5	8.9	21.9	8.1	19.8	7.4	19.4	↓	
8/31/09	18:00	150	8.0	22.7	8.4	18.4	8.8	21.7	8.0	17.6	7.4	17.8	↓	

**Table A-3
Summary of 2009 Pond Water Treatment Plant Operators' Log**

Date	Time	Influent Flow Rate	R-1		R-2		FF-2		Pit Clarifier		Weir Discharge		Valve to Leviathan Creek Status	INF and EFF Samples Collected During Operations
			pH	Temp	pH	Temp	pH	Temp	pH	Temp	pH	Temp		
9/1/09	6:00	150	8.3	19.6	8.5	17.9	8.8	20.7	8.1	17.2	6.9	7.9	↓	0910PWT023-EFF 0910PWT024-INF
9/1/09	8:00	150	8.0	21.1	8.5	24.6	8.8	21.2	8.1	16.9	7.9	13.1	↓	
9/1/09	10:00	150	8.0	20.5	8.5	18.0	8.9	17.4	8.1	16.6	7.1	18.8	↓	
9/1/09	12:00	150	8.6	23.8	8.7	21.1	9.1	18.7	8.4	18.4	7.8	19.9	↓	
9/1/09	14:00	150	8.7	23.4	8.8	19.0	9.1	19.2	8.5	18.1	7.4	18.2	↓	
9/1/09	16:00	150	8.2	26.4	8.5	24.0	8.9	22.9	8.3	21.5	7.0	19.7	↓	
9/2/09	6:00	150	8.3	18.0	8.2	19.4	8.4	20.7	8.1	11.2	7.5	7.4	↓	
9/2/09	8:00	150	8.3	17.6	8.2	18.8	8.4	21.4	8.3	12.9	7.5	14.9	↓	
9/2/09	10:00	150	8.6	19.2	8.7	20.4	8.6	15.8	8.0	14.8	7.3	16.0	↓	
9/2/09	12:00	150	8.2	16.2	8.2	18.6	8.3	18.7	8.1	15.6	7.3	16.5	↓	
9/2/09	14:00	150	8.7	23.4	8.6	21.5	8.8	20.3	8.0	20.1	7.0	22.3	↓	
9/2/09	16:00	150	8.6	21.7	8.4	21.0	8.7	19.8	8.1	19.9	7.5	19.0	↓	

Notes:

R-1 = Reactor Vessel 1; R-2 = Reactor Vessel 2; FF-2 = Flash Flocculant Vessel 2

Flow rates are in gallons/minute (gpm)

pH in Standard Units; Temperature in degrees Celsius

pH in R-1, R-2, and FF-2 recorded from in-plant pH controllers; pit clarifier and weir pH recorded using hand-held meter.

PC = pit clarifier; samples collected to evaluate treated water quality prior to discharge

INF = influent; samples collected to characterize treatment plant influent water quality

EFF = effluent; samples collected to characterize quality of water discharged to Leviathan Creek

**Table A-4
2009 Pond Water Treatment Sludge Analytical Results**

Regulatory Criteria	Percent Solids	Al		Sb		As		Ba		Be		Cd		Cr		Co		Cu		Fe		Pb		Hg		Mo		Ni		Se		Ag		Tl		V		Zn		
		AI	Q	Sb	Q	As	Q	Ba	Q	Be	Q	Cd	Q	Cr	Q	Co	Q	Cu	Q	Fe	Q	Pb	Q	Hg	Q	Mo	Q	Ni	Q	Se	Q	Ag	Q	Tl	Q	V	Q	Zn	Q	
TTLC (mg/kg)	NP	NP		500		500		10000		75		100		2500		8000		2500		NP		1000		20		3500		2000		100		500		700		2400		5000		
STLC (mg/L)	NP	NP		15		5		100		0.75		1		560		80		25		NP		5		0.2		350		20		1		5		7		24		250		
Sample ID and Testing Procedure	Percent Solids	AI	Q	Sb	Q	As	Q	Ba	Q	Be	Q	Cd	Q	Cr	Q	Co	Q	Cu	Q	Fe	Q	Pb	Q	Hg	Q	Mo	Q	Ni	Q	Se	Q	Ag	Q	Tl	Q	V	Q	Zn	Q	
0910PWT027-PC-A	9.6																																							
TTLC (mg/kg dry)		69000		9 U		570		20		2.6 J		7.4		180		410		330		72000		5.1 U		0.16 J		2.1 U		1100		10 U		8.2 U		8.2 U		30		220		
STLC (mg/L)		400		0.14 U		3.1		0.12 U		0.018 U		0.04 U		1.2		2.6		2.1		480		0.08 U		0.001 U		0.04 U		7 B-1		0.16 U		0.12 U		0.14 U		0.22		1.4		
0910PWT028-PC-B	8.1																																							
TTLC (mg/kg dry)		58000		11 U		480		11 J		2.5 U		5.5 J		140		350		250		62000		6.1 U		0.15 U		2.5 U		920		12 U		9.8 U		9.8 U		26		190		
STLC (mg/L)		340		0.14 U		2.8		0.12 U		0.018 U		0.04 U		0.99		2.3		1.6		420		0.08 U		0.001 U		0.04 U		6 B-1		0.16 U		0.12 U		0.14 U		0.15 J		1.2		
0910PWT029-PC-C	8.5																																							
TTLC (mg/kg dry)		72000		10 U		610		11 J		2.4 J		7.2		180		430		300		75000		5.9 U		0.14 U		2.3 U		1200		12 U		9.4 U		9.4 U		34		230		
STLC (mg/L)		390		0.14 U		2.7		0.12 U		0.018 U		0.04 U		1.2		2.8		1.9		480		0.08 U		0.001 U		0.04 U		7.2 B-1		0.16 U		0.12 U		0.14 U		0.22		1.4		

Notes:

TTLC - Total Threshold Limit Concentration
 STLC - Soluble Threshold Limit Concentration
 NP - Not Promulgated

Qualifiers:

U - Analyte not detected at the given Method Detection Limit (MDL).
 J - Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). The user of this data should be aware that this data is of limited reliability.
 B-1 - Analyte was detected in the associated method blank. Analyte concentration in the sample is greater than 10x the concentration found in the method blank.

**Table A-5
2009 Pond Water Treatment
Daily Discharge Summary**

Date	Daily Discharge (gallons)	Cumulative Discharge (gallons)
8/6/2009	60,961	60,961
8/7/2009	68,796	129,757
8/8/2009	0	129,757
8/9/2009	0	129,757
8/10/2009	64,693	194,451
8/11/2009	129,773	324,223
8/12/2009	166,824	491,047
8/13/2009	222,621	713,668
8/14/2009	206,429	920,097
8/15/2009	0	920,097
8/16/2009	0	920,097
8/17/2009	134,112	1,054,209
8/18/2009	187,776	1,241,985
8/19/2009	162,864	1,404,849
8/20/2009	126,006	1,530,855
8/21/2009	93,047	1,623,901
8/22/2009	0	1,623,901
8/23/2009	0	1,623,901
8/24/2009	81,732	1,705,633
8/25/2009	151,200	1,856,833
8/26/2009	150,066	2,006,899
8/27/2009	162,864	2,169,763
8/28/2009	94,868	2,264,631
8/29/2009	0	2,264,631
8/30/2009	0	2,264,631
8/31/2009	70,122	2,334,753
9/1/2009	109,872	2,444,625
9/2/2009	100,800	2,545,425
9/3/2009	100,800	2,646,225
9/4/2009	92,304	2,738,529
9/5/2009	50,400	2,788,929
9/6/2009	35,136	2,824,065
9/7/2009	23,184	2,847,249
9/8/2009	11,664	2,858,913
9/9/2009	7,776	2,866,689
9/10/2009	6,048	2,872,737
9/11/2009	4,752	2,877,489
9/12/2009	4,752	2,882,241
9/13/2009	3,600	2,885,841
9/14/2009	3,600	2,889,441
9/15/2009	2,592	2,892,033
9/16/2009	2,592	2,894,625
9/17/2009	1,728	2,896,353
9/18/2009	1,728	2,898,081
9/19/2009	1,152	2,899,233
9/20/2009	1,152	2,900,385
9/21/2009	720	2,901,105

Notes:

Discharge represents flow of treated water to Leviathan Creek via Pit Clarifier weir.

Appendix B

Data Summary for 2009 Surface Water Monitoring

Table B-1: Adit Flows
Table B-2: Pit Under-Drain Flows
Table B-3: Overburden Seep Flows
Table B-4: Channel Under-Drain Flows
Table B-5: Station 1 Flows
Table B-6: Station 22 Flows
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Table B-10: Station 25 Flows
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Table B-12: Pond 1 Stage
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Table B-14: Adit Laboratory and Field Results
Table B-15: Pit Under-Drain Laboratory and Field Results
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Table B-25: Semiannual Stations Laboratory and Field Results
Table B-26: 2009 Surface Water Monitoring Water Board Assigned Data Qualifiers

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**TABLE B-1
Adit Flow Data**

1 U.S. DEPARTMENT OF THE INTERIOR - U.S. GEOLOGICAL SURVEY - WATER RESOURCES												
STATION:10308784 LEVIATHAN MINE ADIT DRAIN NR MARKLEEVILLE CA TYPE:DITCH AGENCY:USGS STATE:06 COUNTY:003												
LATITUDE: 384215 LONGITUDE: 1193928 NAD27 DRAINAGE AREA: CONTRIBUTING DRAINAGE AREA: DATUM:7100 NGVD29												
Date Processed: 2009-12-24 11:06 By phoneywe												
Lowest aging status in period is APPROVED												
DD #2												
Discharge, cubic feet per second												
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009												
DAILY MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.0251	0.0255	0.0241	0.023	0.0215	0.0221	0.0224	0.0297	0.0249	0.0231	0.023	0.0229
2	0.0255	0.0259	0.0242	0.0233	0.0214	0.0231	0.0229	0.0303	0.025	0.0226	0.0231	0.0236
3	0.0257	0.0262	0.025	0.0227	0.0214	0.0232	0.0235	0.0301	0.0244	0.0229	0.0233	0.0233
4	0.0259	0.0261	0.0249	0.0233	0.0218	0.0225	0.0231	0.0308	0.0252	0.0228	0.0229	0.0236
5	0.0261	0.0255	0.0252	0.0228	0.0227	0.0228	0.0228	0.0306	0.025	0.023	0.0235	0.0242
6	0.0253	0.0251	0.0249	0.0226	0.0231	0.0226	0.0234	0.0307	0.0257	0.0234	0.0243	0.0237
7	0.0254	0.025	0.0253	0.0228	0.0225	0.0227	0.0237	0.0309	0.025	0.0229	0.0242	0.0237
8	0.025	0.0253	0.0247	0.0227	0.0231	0.0225	0.0239	0.0309	0.025	0.0231	0.0235	0.0244
9	0.026	0.0253	0.0248	0.0233	0.0225	0.0229	0.024	0.0306	0.0244	0.0233	0.0234	0.0237
10	0.0271	0.0252	0.0247	0.0229	0.023	0.0228	0.024	0.0306	0.0248	0.023	0.0234	0.0238
11	0.0266	0.0247	0.0249	0.0229	0.0232	0.0228	0.0239	0.0304	0.0247	0.0231	0.0231	0.0235
12	0.0266	0.025	0.0247	0.0226	0.0227	0.0232	0.024	0.0306	0.0248	0.0232	0.0229	0.0243
13	0.0267	0.0249	0.0253	0.0227	0.0231	0.0221	0.0244	0.0304	0.0247	0.023	0.0225	0.0236
14	0.0263	0.0249	0.0248	0.0231	0.022	0.0229	0.0252	0.0306	0.0248	0.0231	0.0229	0.024
15	0.0258	0.0248	0.0247	0.0228	0.0226	0.0227	0.0254	0.0298	0.0247	0.023	0.0236	0.0245
16	0.0257	0.0246	0.0243	0.0224	0.0229	0.0226	0.0253	0.0287	0.0244	0.0225	0.0233	0.0241
17	0.0254	0.0249	0.0254	0.0225	0.0221	0.0228	0.025	0.0292	0.0242	0.0225	0.0235	0.0245
18	0.0256	0.0244	0.025	0.0226	0.0222	0.0231	0.025	0.0286	0.0234	0.0223	0.0238	0.0241
19	0.026	0.0246	0.0242	0.0223	0.0225	0.0226	0.0256	0.0287	0.0238	0.0225	0.0231	0.0235
20	0.0255	0.0246	0.0244	0.0221	0.0227	0.023	0.0252	0.0283	0.024	0.0226	0.0231	0.0235
21	0.0256	0.0251	0.0242	0.022	0.0224	0.0234	0.0258	0.0281	0.0232	0.0233	0.0229	0.0235
22	0.026	0.0248	0.0245	0.0218	0.022	0.0234	0.0261	0.0281	0.024	0.0225	0.023	0.0236
23	0.0256	0.0248	0.0238	0.0219	0.0226	0.0232	0.0268	0.0271	0.0238	0.0226	0.024	0.0232
24	0.0257	0.0246	0.0242	0.022	0.022	0.023	0.0281	0.0272	0.0229	0.0227	0.0232	0.0234
25	0.0258	0.0246	0.0244	0.0223	0.0224	0.0228	0.028	0.0266	0.024	0.0232	0.0232	0.0239
26	0.0257	0.0249	0.0234	0.0222	0.0222	0.0229	0.0285	0.0266	0.024	0.0228	0.0231	0.0238
27	0.0253	0.0248	0.0239	0.0219	0.0223	0.0231	0.0292	0.0259	e0.0236	0.0236	0.0234	0.0232
28	0.0256	0.0248	0.0236	0.0222	0.0224	0.0229	0.0291	0.0262	e0.0234	0.0231	0.023	0.0233
29	0.0261	0.0245	0.0237	0.0215	---	0.0234	0.0294	0.026	0.023	0.0232	0.023	0.0237
30	0.0257	0.0246	0.0233	0.0218	---	0.0229	0.0293	0.0261	0.0234	0.023	0.0241	0.0248
31	0.0255	---	0.0234	0.0216	---	0.0231	---	0.0258	---	0.0235	0.0229	---
TOTAL	0.7999	0.75	0.7579	0.6966	0.6273	0.7091	0.763	0.8942	0.7282	0.7114	0.7222	0.7129
MEAN	0.03	0.03	0.02	0.02	0.02	0.02	0.03	0.03	0.02	0.02	0.02	0.02
MAX	0.0271	0.0262	0.0254	0.0233	0.0232	0.0234	0.0294	0.0309	0.0257	0.0236	0.0243	0.0248
MIN	0.025	0.0244	0.0233	0.0215	0.0214	0.0221	0.0224	0.0258	0.0229	0.0223	0.0225	0.0229
AC-FT	1.6	1.5	1.5	1.4	1.2	1.4	1.5	1.8	1.4	1.4	1.4	1.4
e Estimated												

**TABLE B-2
Pit Under-Drain Flow Data**

1 U.S. DEPARTMENT OF THE INTERIOR - U.S. GEOLOGICAL SURVEY - WATER RESOURCES												
STATION:10308785 LEVIATHAN MINE PIT FLOW NR MARKLEEVILLE CA TYPE:LAKE AGENCY:USGS STATE:06 COUNTY:003												
LATITUDE: 384215 LONGITUDE: 1193928 NAD27 DATUM: 7100 NGVD29												
Date Processed: 2009-12-24 11:06 By phoneywe												
Lowest aging status in period is APPROVED												
DD #2												
Discharge, cubic feet per second												
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009												
DAILY MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.0004	0.0005	0.0005	0.0005	0.0004	0.0006	e0.0014	0.0009	e0.0005	0.0004	0.0004	0.0004
2	0.0004	0.0005	0.0005	0.0005	0.0004	0.0007	e0.0014	e0.0008	e0.0005	0.0004	0.0004	0.0004
3	0.0004	0.0005	0.0005	0.0005	0.0004	0.0009	e0.0014	e0.0008	e0.0005	0.0004	0.0004	0.0004
4	0.0004	0.0005	0.0005	0.0005	0.0005	0.0009	e0.0014	0.0008	0.0004	0.0004	0.0004	e0.0004
5	0.0004	0.0005	0.0005	0.0005	0.0005	0.0008	0.0014	0.0009	0.0005	0.0004	0.0004	0.0004
6	0.0004	0.0005	0.0005	0.0004	0.0005	0.0008	e0.0014	e0.0008	0.0004	0.0004	0.0004	0.0004
7	0.0004	0.0005	0.0005	0.0004	0.0004	0.0007	e0.0013	e0.0008	0.0004	0.0004	0.0004	0.0004
8	0.0004	0.0005	0.0005	0.0005	0.0005	0.0007	e0.0013	0.0009	0.0005	0.0004	0.0004	0.0004
9	0.0005	0.0006	0.0005	0.0004	0.0005	0.0007	e0.0012	0.0008	0.0004	0.0004	0.0004	0.0004
10	0.0006	0.0005	0.0005	0.0004	0.0004	e0.0006	0.0012	e0.0008	0.0004	0.0004	0.0004	0.0004
11	0.0005	0.0005	0.0005	0.0004	0.0004	e0.0006	0.0012	e0.0008	0.0004	0.0004	0.0004	0.0004
12	0.0004	0.0005	0.0005	0.0004	0.0005	e0.0005	e0.0012	0.0008	0.0004	0.0004	0.0004	0.0004
13	0.0004	0.0006	0.0006	0.0004	0.0005	e0.0005	e0.0012	0.0008	0.0004	0.0004	0.0004	0.0004
14	0.0004	0.0006	0.0005	0.0004	0.0004	0.0005	e0.0012	0.0008	0.0004	0.0004	0.0005	0.0004
15	0.0004	0.0006	0.0005	0.0004	0.0004	e0.0005	e0.0012	e0.0007	0.0004	0.0004	0.0005	0.0004
16	0.0004	0.0006	0.0005	0.0004	0.0004	e0.0005	e0.0012	e0.0007	0.0004	0.0004	0.0005	0.0004
17	0.0004	0.0006	e0.0005	0.0004	0.0004	0.0005	e0.0013	e0.0007	0.0004	0.0004	e0.0005	0.0004
18	0.0005	0.0006	0.0005	0.0004	0.0004	0.0007	e0.0013	e0.0007	0.0004	0.0004	e0.0005	0.0004
19	0.0005	0.0005	0.0005	0.0004	0.0005	e0.0008	e0.0012	0.0007	0.0004	0.0004	e0.0005	0.0004
20	0.0004	0.0005	0.0005	0.0004	0.0005	e0.0008	0.0011	e0.0007	0.0004	0.0004	e0.0004	0.0004
21	0.0004	0.0006	0.0005	0.0004	0.0004	e0.0010	e0.0011	e0.0007	0.0004	0.0004	e0.0004	0.0004
22	0.0004	0.0005	0.0005	0.0004	0.0005	e0.0011	e0.0010	0.0007	0.0004	0.0004	e0.0004	0.0004
23	0.0004	0.0006	0.0005	0.0004	0.0005	e0.0012	e0.0010	0.0006	0.0004	0.0004	e0.0004	0.0004
24	0.0004	0.0005	0.0005	0.0004	0.0006	e0.0013	0.0009	0.0006	0.0004	0.0004	e0.0004	0.0004
25	0.0004	0.0006	0.0005	0.0004	0.0006	0.0013	0.0009	0.0006	0.0004	0.0004	e0.0004	0.0004
26	0.0004	0.0006	0.0005	0.0005	0.0006	e0.0014	0.0009	0.0006	0.0004	0.0004	0.0004	0.0004
27	0.0004	0.0006	0.0005	0.0004	0.0006	e0.0014	0.0008	0.0006	e0.0004	0.0004	0.0004	0.0004
28	0.0004	0.0005	0.0005	0.0004	0.0006	e0.0014	0.0009	e0.0006	e0.0004	0.0004	0.0004	0.0004
29	0.0005	0.0005	0.0005	0.0004	---	e0.0014	0.0009	e0.0006	0.0004	0.0004	0.0004	0.0004
30	0.0005	0.0005	0.0005	0.0004	---	e0.0014	0.0009	e0.0006	0.0004	0.0004	0.0004	0.0004
31	0.0005	---	0.0005	0.0004	---	e0.0014	---	e0.0005	---	0.0004	0.0004	---
TOTAL	0.0133	0.0162	0.0156	0.0131	0.0133	0.0276	0.0348	0.0224	0.0125	0.0124	0.013	0.012
MEAN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MAX	0.0006	0.0006	0.0006	0.0005	0.0006	0.0014	0.0014	0.0009	0.0005	0.0004	0.0005	0.0004
MIN	0.0004	0.0005	0.0005	0.0004	0.0004	0.0005	0.0008	0.0005	0.0004	0.0004	0.0004	0.0004
AC-FT	0.03	0.03	0.03	0.03	0.03	0.05	0.07	0.04	0.02	0.02	0.03	0.02
e Estimated												

**TABLE B-3
Overburden Seep Flow Data**

1 U.S. DEPARTMENT OF THE INTERIOR - U.S. GEOLOGICAL SURVEY - WATER RESOURCES												
STATION:103087892 ASPEN C OVERBURDEN SEEP NR MARKLEEVILLE CA TYPE:STREAM AGENCY:USGS STATE:06 COUNTY:003												
LATITUDE: 384245 LONGITUDE: 1193911 NAD27 DRAINAGE AREA:.06* CONTRIBUTING DRAINAGE AREA: DATUM:7100 NGVD29												
Date Processed: 2009-12-24 11:15 By phoneywe												
Lowest aging status in period is APPROVED												
DD #2												
Discharge, cubic feet per second												
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009												
DAILY MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.0126	0.0137	0.0125	0.0123	0.0119	0.015	0.017	0.0173	0.0163	0.014	0.0151	0.013
2	0.0134	0.015	0.0122	0.0128	0.012	0.0238	0.0174	0.0178	0.0171	0.0139	0.0145	0.0131
3	0.0142	0.0128	0.0118	0.0119	0.0123	0.0162	0.0182	0.0183	0.016	0.0138	0.0143	0.0132
4	0.013	0.0127	0.0117	0.0115	0.0125	0.0155	0.0172	0.0163	0.0161	0.014	0.0143	0.0137
5	0.0121	0.0125	0.0117	0.0117	0.0126	0.0147	0.0171	0.0161	0.0161	0.0139	0.0142	0.0139
6	0.0117	0.0126	0.0117	0.0118	0.0124	0.0142	0.0172	0.0156	0.0166	0.0136	0.0146	0.0147
7	0.0118	0.0124	0.0119	0.0119	0.0127	0.014	0.0172	0.0155	0.0159	0.0135	0.0145	0.0153
8	0.0119	0.0128	0.012	0.0121	0.0129	0.0141	0.0173	0.0155	0.019	0.0135	0.0143	0.0153
9	0.0119	0.0129	0.0115	0.0112	0.013	0.0137	0.0176	0.0154	0.0161	0.0133	0.0144	0.0153
10	0.0116	0.0125	0.0117	0.0107	0.0129	0.0134	0.018	0.0154	0.0157	0.0131	0.0143	0.0142
11	0.0122	0.0127	0.012	0.0107	0.0131	0.0134	0.0174	0.0155	0.0154	0.013	0.0141	0.0125
12	0.0119	0.0126	0.0122	0.0107	0.0129	0.0135	0.0174	0.0154	0.0155	0.0131	0.014	0.0139
13	0.0118	0.0124	0.012	0.0107	0.0129	0.0138	0.0179	0.0155	0.0156	0.0132	0.0139	0.0129
14	0.0119	0.0123	0.0114	0.0106	0.013	0.0139	0.0189	0.0157	0.0151	0.0132	0.0139	0.0127
15	0.0119	0.0121	0.0119	0.0107	0.0129	0.0142	0.0194	0.0157	0.0173	0.0131	0.014	0.0124
16	0.0117	0.0121	0.012	0.0106	0.0129	0.0156	0.0183	0.0153	0.0158	0.013	0.0139	0.0125
17	0.0119	0.0123	0.0119	0.0107	0.0131	0.0157	0.0179	0.0154	0.0154	0.0131	0.0139	0.0122
18	0.0121	0.0122	0.0121	0.0107	0.0129	0.0162	0.0176	0.016	0.015	0.0131	0.0139	0.012
19	0.0119	0.0124	0.0123	0.0107	0.0129	0.0169	0.0177	0.0163	0.0148	0.013	0.0139	0.0119
20	0.0118	0.0123	0.012	0.011	0.0129	0.0182	0.0184	0.0156	0.0147	0.0137	0.0139	0.012
21	0.0117	0.0122	0.0123	0.0114	0.0131	0.0185	0.019	0.0156	0.0145	0.0144	0.0137	0.0121
22	0.0116	0.0124	0.0122	0.0146	0.0143	0.0169	0.0186	0.0175	0.0147	0.0144	0.0144	0.0121
23	e0.0117	0.0122	0.0123	0.0165	0.0149	0.0158	0.0182	0.016	0.0146	0.0144	0.016	0.0123
24	e0.0120	0.0122	0.012	0.0154	0.0144	0.0152	0.0191	0.0155	0.0144	0.0144	0.014	0.0116
25	0.0123	0.0125	0.0123	0.0128	0.0136	0.0156	0.0175	0.0155	0.0148	0.0142	0.0137	0.0115
26	0.0121	0.0128	0.0119	0.0123	0.0135	0.0164	0.0168	0.0156	0.0143	0.0142	0.0135	0.0113
27	0.0121	0.0127	0.0119	0.0122	0.0136	0.0162	0.0164	0.0155	0.014	0.0143	0.0132	0.0114
28	0.0123	0.0123	0.0123	0.0123	0.0138	0.0177	0.0161	0.0159	0.0141	0.0151	0.0133	0.0114
29	0.0123	0.0122	0.0122	0.0119	---	0.0166	0.0158	0.0157	0.0139	0.0146	0.0133	0.0116
30	0.0125	0.0123	0.0119	0.0119	---	0.0163	0.0159	0.0162	0.0144	0.0145	0.0152	0.0113
31	0.013	---	0.0119	0.012	---	0.0167	---	0.0163	---	0.0182	0.0155	---
TOTAL	0.3769	0.3771	0.3717	0.3683	0.3659	0.4879	0.5285	0.4949	0.4632	0.4308	0.4397	0.3833
MEAN	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.01	0.01	0.01
MAX	0.0142	0.015	0.0125	0.0165	0.0149	0.0238	0.0194	0.0183	0.019	0.0182	0.016	0.0153
MIN	0.0116	0.0121	0.0114	0.0106	0.0119	0.0134	0.0158	0.0153	0.0139	0.013	0.0132	0.0113
AC-FT	0.7	0.7	0.7	0.7	0.7	1	1	1	0.9	0.9	0.9	0.8
e Estimated												

**TABLE B-4
Channel Under-Drain Flow Data**

1 U.S. DEPARTMENT OF THE INTERIOR - U.S. GEOLOGICAL SURVEY - WATER RESOURCES												
STATION:103087885 LEVIATHAN C CHANNEL UNDERDRAIN NR MARKLEEVILLE CA TYPE:STREAM AGENCY:USGS STATE:06 COUNTY:003												
LATITUDE: 384234 LONGITUDE: 1193941 NAD27 DRAINAGE AREA: CONTRIBUTING DRAINAGE AREA: DATUM:6800 NGVD29												
Date Processed: 2009-12-24 11:08 By phoneywe												
Lowest aging status in period is APPROVED												
DD #1												
Discharge, cubic feet per second												
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009												
DAILY MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e0.0235	e0.0209	0.0213	e0.0213	e0.0243	0.0267	0.0472	e0.0591	0.0587	0.0532	0.0393	0.0315
2	0.0232	e0.0209	0.0213	e0.0213	e0.0243	0.0275	0.0477	0.059	0.0588	0.053	0.039	0.0316
3	0.0213	e0.0210	0.0213	e0.0213	e0.0244	0.0294	0.0489	0.0589	0.0586	0.053	0.039	0.0337
4	0.0217	e0.0212	0.0213	e0.0213	e0.0244	0.0312	0.0483	e0.0591	0.0581	0.0528	0.0389	0.0348
5	0.0216	e0.0213	0.0213	e0.0213	0.0251	0.0312	0.0484	0.0592	0.0581	0.0527	0.0389	0.0342
6	0.0228	0.0213	0.0213	e0.0212	0.0255	0.0314	e0.0480	0.0592	0.0578	0.053	0.0387	0.0336
7	0.0237	0.0213	e0.0213	e0.0212	0.0262	0.0318	0.0478	0.0588	0.0578	0.0528	0.0373	0.0328
8	0.0237	0.0213	e0.0213	e0.0211	0.0267	0.0326	0.0478	0.0594	0.0578	0.0528	0.0368	0.0322
9	0.0242	0.0213	e0.0214	e0.0211	0.0271	0.0331	0.0479	0.0592	0.0593	0.0528	0.0361	0.0315
10	0.024	0.0213	e0.0214	0.0209	0.027	0.0327	0.0479	0.0594	0.0603	0.0526	0.0357	0.0308
11	0.0242	0.0213	e0.0214	0.0209	0.027	0.0331	0.0484	0.0594	0.0596	0.0525	0.0353	0.0304
12	0.0235	0.0213	e0.0214	0.0213	0.0272	0.0345	0.0483	e0.0594	0.0586	0.0514	0.0354	0.0295
13	0.023	0.0213	e0.0214	0.0213	0.0274	0.0337	0.0485	e0.0594	0.0575	0.0512	0.0355	0.029
14	0.0224	0.0213	e0.0214	0.0212	0.0271	0.0335	0.0492	e0.0597	0.057	0.0507	0.0354	0.0283
15	0.0219	0.0213	e0.0214	e0.0212	0.0271	0.0339	0.0499	e0.0592	0.0571	0.0498	0.0352	0.0279
16	0.022	0.0213	e0.0215	e0.0211	0.0268	0.0342	0.0519	0.0586	0.0567	0.0492	0.0352	0.0274
17	0.0224	0.0213	e0.0214	e0.0211	0.0272	0.0349	0.0529	0.0592	0.0576	e0.0492	0.0352	0.0272
18	0.0223	0.0213	e0.0214	e0.0211	0.0275	0.0346	0.0528	0.0599	0.0568	e0.0491	0.0351	0.0272
19	0.0218	0.0212	e0.0214	e0.0211	0.0272	0.0347	0.0532	0.0597	0.0569	e0.0491	0.0349	0.0267
20	0.0214	0.0213	e0.0214	e0.0211	0.0271	0.0371	0.0549	0.0593	0.0559	e0.0490	0.0347	0.0276
21	0.0209	0.0213	e0.0214	e0.0211	0.0267	0.0372	0.0569	0.0585	0.0547	e0.0489	0.0346	0.0274
22	0.0207	0.0213	e0.0214	e0.0211	0.0265	e0.0397	0.0578	0.058	0.0548	e0.0487	0.0345	0.0268
23	0.0205	0.0213	e0.0215	e0.0211	0.0267	e0.0417	0.0582	0.0583	0.0547	0.0485	0.0335	0.0262
24	0.0202	0.0213	e0.0214	0.0211	0.0265	e0.0442	0.058	0.058	0.0542	0.0465	0.0323	0.0258
25	0.0202	0.0213	e0.0214	0.0218	0.0264	0.0472	0.0584	0.0582	0.0538	0.0456	0.0315	0.0253
26	0.0205	0.0213	e0.0214	e0.0221	0.0263	0.0466	0.0588	0.0579	0.0536	0.0447	0.0315	0.0251
27	0.0207	0.0213	e0.0214	e0.0225	0.0262	0.0458	0.0593	0.058	0.0536	0.0447	0.0314	0.026
28	e0.0207	0.0213	e0.0214	e0.0227	0.0261	0.0464	0.0596	0.0596	0.0532	0.0426	0.0312	0.0265
29	e0.0208	0.0213	e0.0214	e0.0232	---	0.0489	e0.0594	0.0597	0.0529	0.04	0.0311	0.0261
30	e0.0208	0.0213	e0.0213	e0.0236	---	0.0483	e0.0592	0.0592	0.0529	0.0395	0.0311	0.0256
31	e0.0208	---	e0.0213	e0.0240	---	0.0476	---	0.0588	---	0.0391	0.0312	---
TOTAL	0.6814	0.6377	0.6626	0.6677	0.738	1.1454	1.5755	1.8293	1.6974	1.5187	1.0855	0.8687
MEAN	0.02	0.02	0.02	0.02	0.03	0.04	0.05	0.06	0.06	0.05	0.04	0.03
MAX	0.0242	0.0213	0.0215	0.024	0.0275	0.0489	0.0596	0.0599	0.0603	0.0532	0.0393	0.0348
MIN	0.0202	0.0209	0.0213	0.0209	0.0243	0.0267	0.0472	0.0579	0.0529	0.0391	0.0311	0.0251
AC-FT	1.4	1.3	1.3	1.3	1.5	2.3	3.1	3.6	3.4	3	2.2	1.7
e Estimated												

**TABLE B-5
Station 1 Flow Data**

1 U.S. DEPARTMENT OF THE INTERIOR - U.S. GEOLOGICAL SURVEY - WATER RESOURCES												
STATION:10308783 LEVIATHAN C AB MINE NR MARKLEEVILLE CA TYPE:STREAM AGENCY:USGS STATE:06 COUNTY:003												
LATITUDE: 384205 LONGITUDE: 1193920 NAD27 DRAINAGE AREA:4.16* CONTRIBUTING DRAINAGE AREA: DATUM:7200 NGVD29												
Date Processed: 2009-12-24 11:05 By phoneywe												
Lowest aging status in period is APPROVED												
DD #2												
Discharge, cubic feet per second												
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009												
DAILY MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.03	0.06	e0.10	e0.12	0.04	0.06	0.54	0.82	0.17	0.05	0.04	0.02
2	0.03	0.08	e0.10	e0.13	0.04	0.15	0.65	0.93	0.19	0.05	0.03	0.02
3	0.03	0.05	e0.10	e0.13	0.05	0.11	0.63	0.98	0.17	0.05	0.03	0.02
4	0.04	0.05	e0.10	e0.11	0.05	0.07	0.50	0.87	0.15	0.04	0.03	0.02
5	0.04	0.06	e0.10	e0.11	0.04	0.07	0.48	0.84	0.16	0.04	0.03	0.02
6	0.04	0.06	e0.10	e0.12	0.04	0.07	0.55	0.79	0.19	0.04	0.03	0.02
7	0.04	0.06	e0.10	e0.12	0.04	0.07	0.66	0.67	0.18	0.04	0.03	0.02
8	0.04	0.06	e0.10	e0.12	0.04	0.07	0.63	0.71	0.30	0.04	0.03	0.03
9	0.04	0.06	e0.10	e0.12	0.04	0.07	0.53	0.51	0.24	0.04	0.03	0.03
10	0.04	0.06	e0.10	e0.11	0.04	0.07	0.5	0.46	0.18	0.04	0.03	0.02
11	0.05	0.06	e0.10	e0.11	0.04	0.09	0.50	0.44	0.15	0.03	0.03	0.02
12	0.05	0.06	e0.09	e0.10	0.04	0.11	0.62	0.36	0.13	0.03	0.02	0.03
13	0.05	e0.06	e0.09	e0.11	0.04	0.11	0.79	0.29	0.13	0.03	0.02	0.04
14	0.05	e0.06	e0.08	e0.10	0.04	0.11	0.80	0.27	0.12	0.03	0.02	0.03
15	0.05	e0.06	e0.09	e0.11	0.04	0.11	0.66	0.25	0.14	0.03	0.02	0.04
16	0.04	e0.06	e0.09	e0.12	0.04	0.17	0.59	0.24	0.13	0.03	0.02	0.03
17	0.04	e0.06	e0.08	e0.12	0.04	0.22	0.64	0.22	0.11	0.03	0.02	0.03
18	0.04	e0.06	e0.10	e0.12	0.04	0.25	0.81	0.22	0.1	0.03	0.02	0.03
19	0.04	e0.06	e0.11	e0.12	0.04	0.29	1.00	0.21	0.09	0.03	0.02	0.03
20	0.04	e0.06	e0.11	e0.11	0.04	0.34	1.3	0.2	0.09	0.03	0.02	0.03
21	0.04	e0.07	e0.11	e0.13	0.04	0.32	1.4	0.19	0.08	0.02	0.02	0.03
22	0.04	e0.08	e0.12	e0.14	0.04	0.27	1.4	0.20	0.07	0.02	0.02	0.03
23	0.04	e0.08	e0.11	e0.16	0.05	0.24	1.4	0.20	0.07	0.02	0.05	0.03
24	0.04	e0.07	e0.11	e0.17	0.05	0.23	1.2	0.21	0.06	0.02	0.04	0.03
25	0.04	e0.08	e0.12	e0.16	0.05	0.26	1.00	0.20	0.06	0.02	0.03	0.03
26	0.04	e0.10	e0.13	e0.13	0.05	0.31	0.89	0.19	0.07	0.02	0.03	0.03
27	0.04	e0.10	e0.13	e0.08	0.06	0.35	0.94	0.18	0.06	0.02	0.02	0.03
28	0.04	e0.10	e0.12	0.05	0.06	0.48	0.84	0.18	0.06	0.03	0.02	0.03
29	0.04	e0.10	e0.13	0.05	---	0.58	0.80	0.18	0.05	0.03	0.02	0.03
30	0.04	e0.10	e0.13	0.05	---	0.47	0.80	0.18	0.05	0.03	0.02	0.04
31	0.05	---	e0.12	0.05	---	0.45	---	0.19	---	0.11	0.02	---
TOTAL	1.27	2.08	3.27	3.48	1.22	6.57	24.05	12.38	3.75	1.07	0.81	0.84
MEAN	0.04	0.07	0.11	0.11	0.04	0.21	0.80	0.40	0.12	0.03	0.03	0.03
MAX	0.05	0.10	0.13	0.17	0.06	0.58	1.4	0.98	0.30	0.11	0.05	0.04
MIN	0.03	0.05	0.08	0.05	0.04	0.06	0.48	0.18	0.05	0.02	0.02	0.02
AC-FT	2.5	4.1	6.5	6.9	2.4	13	48	25	7.4	2.1	1.6	1.7
e Estimated												

**TABLE B-6
Station 22 Flow Data**

1 U.S. DEPARTMENT OF THE INTERIOR - U.S. GEOLOGICAL SURVEY - WATER RESOURCES												
STATION:103087891 ASPEN C ABV LEVIATHAN MINE NR MARKLEEVILLE CA TYPE:STREAM AGENCY:USGS STATE:06 COUNTY:003												
LATITUDE: 384231 LONGITUDE: 1193855 NAD83 DRAINAGE AREA:.55* CONTRIBUTING DRAINAGE AREA: DATUM:7190 NGVD29												
Date Processed: 2009-12-24 11:08 By phoneywe												
Lowest aging status in period is APPROVED												
DD #2												
Discharge, cubic feet per second												
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009												
DAILY MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.18	0.19	0.19	0.21	0.19	0.21	0.19	0.13	0.11	0.12	0.19	0.15
2	0.19	0.21	0.19	0.22	0.19	0.25	0.19	0.15	0.12	0.11	0.20	0.15
3	0.19	0.21	0.20	0.22	0.19	0.22	0.20	0.14	0.11	0.12	0.19	0.15
4	0.19	0.21	0.19	e0.22	0.19	0.22	0.18	0.14	0.11	0.13	0.19	0.15
5	0.19	0.20	0.19	0.21	0.19	0.22	0.18	0.14	0.11	0.13	0.18	0.15
6	0.19	0.19	0.20	0.20	0.19	0.22	0.18	0.12	0.11	0.11	0.19	0.15
7	0.19	0.19	0.20	0.20	0.21	0.23	0.18	0.13	0.11	0.12	0.19	0.15
8	0.19	0.19	0.20	0.20	0.20	0.22	0.19	0.14	0.13	0.11	0.19	0.16
9	0.19	0.20	0.20	0.19	0.21	0.22	0.18	0.14	0.10	0.12	0.19	0.16
10	0.19	0.20	0.20	0.19	0.21	0.24	0.18	0.17	0.11	0.11	0.18	0.15
11	0.19	0.20	0.20	0.19	0.20	0.23	0.18	0.11	0.10	0.11	0.18	0.15
12	0.19	0.20	0.20	0.20	0.19	0.22	e0.17	0.11	0.10	0.11	0.18	0.17
13	0.19	0.20	0.21	0.20	0.19	0.23	e0.17	0.12	0.10	0.11	0.18	0.16
14	0.20	0.20	0.21	0.19	0.19	0.23	e0.16	0.11	0.10	0.11	0.18	0.16
15	0.20	0.20	0.21	0.19	0.20	0.23	e0.16	0.11	0.12	0.11	0.18	0.16
16	0.20	0.20	0.21	0.19	0.19	0.24	e0.16	0.11	0.11	0.12	0.18	0.16
17	0.19	0.19	0.20	0.20	0.20	0.25	e0.16	0.10	0.11	0.13	0.18	0.16
18	0.19	0.19	e0.20	0.19	0.19	0.24	e0.16	0.12	0.11	0.14	0.18	0.15
19	0.20	0.20	e0.20	0.18	0.20	0.25	e0.15	0.10	0.11	0.14	0.18	0.15
20	0.19	0.20	0.20	0.19	0.20	0.26	e0.15	0.10	0.11	0.15	0.17	0.15
21	0.19	0.20	0.20	0.19	0.20	0.24	0.15	0.11	0.11	0.15	0.17	0.15
22	0.19	0.20	0.20	0.21	0.21	0.21	0.12	0.11	0.12	0.15	0.18	0.15
23	0.19	0.20	0.20	0.23	0.21	0.19	0.14	0.12	0.12	0.16	0.19	0.16
24	0.19	0.20	0.20	0.22	0.20	0.19	0.14	0.12	0.12	0.16	0.18	0.16
25	0.19	0.20	0.21	0.21	0.20	0.19	0.13	0.12	0.11	0.16	0.17	0.15
26	0.19	0.20	0.20	0.20	0.20	0.20	0.12	0.11	0.12	0.16	0.17	0.15
27	0.19	0.20	0.20	e0.21	0.20	0.20	0.11	0.11	0.12	0.17	0.16	0.15
28	0.19	0.20	0.21	0.19	0.20	0.21	0.12	0.13	0.13	0.17	0.16	0.16
29	0.19	0.19	0.21	e0.20	---	0.20	0.11	0.13	0.13	0.18	0.16	0.16
30	0.19	0.19	0.21	0.19	---	0.18	0.11	0.12	0.13	0.18	0.16	0.17
31	0.18	---	0.21	0.20	---	0.19	---	0.12	---	0.20	0.15	---
TOTAL	5.91	5.95	6.25	6.23	5.54	6.83	4.72	3.79	3.40	4.25	5.53	4.65
MEAN	0.19	0.20	0.20	0.20	0.20	0.22	0.16	0.12	0.11	0.14	0.18	0.15
MAX	0.20	0.21	0.21	0.23	0.21	0.26	0.20	0.17	0.13	0.20	0.20	0.17
MIN	0.18	0.19	0.19	0.18	0.19	0.18	0.11	0.10	0.10	0.11	0.15	0.15
AC-FT	12	12	12	12	11	14	9.4	7.5	6.7	8.4	11	9.2
e Estimated												

**TABLE B-7
4I Creek Flow Data**

1 U.S. DEPARTMENT OF THE INTERIOR - U.S. GEOLOGICAL SURVEY - WATER RESOURCES												
STATION:103087889 4L C NR MARKLEEVILLE CA TYPE:STREAM AGENCY:USGS STATE:06 COUNTY:003												
LATITUDE: 384239 LONGITUDE: 1193947 NAD83 DRAINAGE AREA:1.14* CONTRIBUTING DRAINAGE AREA: DATUM:6780 NGVD29												
Date Processed: 2009-12-24 11:10 By phoneywe												
Lowest aging status in period is APPROVED												
DD #2												
Discharge, cubic feet per second												
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009												
DAILY MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	e0.02	e0.02	0.16	0.11	0.03	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	e0.02	0.11	0.19	0.16	0.03	0.00	0.00	0.00
3	0.00	0.00	0.00	e0.01	e0.02	0.07	0.18	0.16	0.03	0.00	0.00	0.00
4	0.00	0.00	0.00	e0.01	e0.02	0.04	0.14	0.13	0.03	0.00	0.00	0.00
5	0.00	0.00	0.00	e0.01	e0.02	0.03	0.13	0.11	0.03	0.00	0.00	0.00
6	0.00	0.00	0.00	e0.01	e0.02	0.02	0.13	0.10	0.04	0.00	0.00	0.00
7	0.00	0.00	0.00	e0.01	e0.02	0.02	0.16	0.09	0.04	0.00	0.00	0.00
8	0.00	0.00	0.00	e0.01	e0.02	0.01	0.16	0.09	0.04	0.00	0.00	0.00
9	0.00	0.00	0.00	e0.01	e0.02	0.01	0.13	0.07	0.04	0.00	0.00	0.00
10	0.00	0.00	0.00	e0.01	e0.02	0.01	0.13	0.07	0.03	0.00	0.00	0.00
11	0.00	0.00	0.00	e0.01	e0.02	0.01	0.13	0.06	0.03	0.00	0.00	0.00
12	0.00	0.00	0.00	e0.01	e0.02	0.01	0.15	0.06	0.03	0.00	0.00	0.00
13	0.00	0.00	0.00	e0.01	e0.02	0.01	0.25	0.06	0.03	0.00	0.00	0.00
14	0.00	0.00	0.00	e0.01	e0.02	0.02	0.28	0.06	0.03	0.00	0.00	0.00
15	0.00	0.00	0.00	e0.01	e0.02	0.03	0.21	0.06	0.03	0.00	0.00	0.00
16	0.00	0.00	0.00	e0.01	e0.02	0.06	0.2	0.05	0.03	0.00	0.00	0.00
17	0.00	0.00	0.00	e0.01	e0.02	0.08	0.2	0.05	0.02	0.00	0.00	0.00
18	0.00	0.00	0.00	e0.01	e0.02	0.11	0.4	0.05	0.02	0.00	0.00	0.00
19	0.00	0.00	0.00	e0.01	e0.02	0.13	0.51	0.05	0.02	0.00	0.00	0.00
20	0.00	0.00	0.00	e0.01	e0.02	0.14	0.51	0.04	0.02	0.00	0.00	0.00
21	0.00	0.00	0.00	e0.01	e0.02	0.14	0.41	0.04	0.02	0.00	0.00	0.00
22	0.00	0.00	0.00	0.02	e0.02	0.12	0.42	0.05	0.02	0.00	0.00	0.00
23	0.00	0.00	0.00	0.04	e0.02	0.09	0.32	0.04	0.01	0.00	0.00	0.00
24	0.00	0.00	0.00	0.05	e0.02	0.08	0.23	0.04	0.01	0.00	0.00	0.00
25	0.00	0.00	0.00	e0.02	e0.02	0.09	0.19	0.04	0.01	0.00	0.00	0.00
26	0.00	0.00	0.00	e0.02	e0.02	0.11	0.16	0.03	0.01	0.00	0.00	0.00
27	0.00	0.00	0.00	e0.02	e0.02	0.11	0.14	0.03	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	e0.02	e0.02	0.14	0.13	0.03	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	e0.02	---	0.17	0.12	0.03	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	e0.02	---	0.14	0.11	0.03	0.00	0.00	0.00	0.00
31	0.00	---	0.00	e0.02	---	0.14	---	0.03	---	0.00	0.00	---
TOTAL	0.00	0.00	0.00	0.44	0.56	2.27	6.58	2.02	0.68	0.00	0.00	0.00
MEAN	0.00	0.00	0.00	0.01	0.02	0.07	0.22	0.07	0.02	0.00	0.00	0.00
MAX	0.00	0.00	0.00	0.05	0.02	0.17	0.51	0.16	0.04	0.00	0.00	0.00
MIN	0.00	0.00	0.00	0.00	0.02	0.01	0.11	0.03	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	0.9	1.1	4.5	13	4.0	1.3	0.00	0.00	0.00
e Estimated												

**TABLE B-8
Station 15 Flow Data**

1 U.S. DEPARTMENT OF THE INTERIOR - U.S. GEOLOGICAL SURVEY - WATER RESOURCES												
STATION:10308789 LEVIATHAN C AB ASPEN C NR MARKLEEVILLE CA TYPE:STREAM AGENCY:USGS STATE:06 COUNTY:003												
LATITUDE: 384301 LONGITUDE: 1193933 NAD27 DRAINAGE AREA:7.07* CONTRIBUTING DRAINAGE AREA: DATUM:6700 NGVD29												
Date Processed: 2009-12-24 11:11 By phoneywe												
Lowest aging status in period is APPROVED												
DD #2												
Discharge, cubic feet per second												
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009												
DAILY MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.11	0.08	0.11	e0.17	e0.21	0.38	1.2	0.73	0.22	0.05	0.05	0.10
2	0.07	0.16	0.11	e0.18	e0.21	1.9	1.4	1.1	0.26	0.05	0.04	0.09
3	0.05	0.09	e0.11	e0.18	e0.21	0.85	1.3	1.0	0.27	0.04	0.03	0.08
4	0.06	0.10	e0.11	e0.16	e0.19	e0.71	e1.3	0.83	0.31	0.04	0.01	0.08
5	0.05	0.08	e0.11	e0.17	0.20	1.1	e1.1	0.69	0.27	0.04	0.04	0.05
6	0.05	0.09	e0.11	e0.17	e0.21	0.34	0.90	0.61	0.23	0.08	0.06	0.04
7	0.07	0.09	e0.10	e0.18	e0.22	0.52	1.1	0.54	0.22	0.11	0.09	0.04
8	0.17	0.09	e0.10	e0.18	e0.22	0.58	1.1	0.51	0.80	0.10	0.05	0.04
9	0.18	0.10	e0.11	e0.17	e0.21	0.32	0.84	0.46	0.35	0.10	0.03	0.05
10	0.17	0.10	e0.11	e0.17	0.20	0.75	0.78	0.49	0.27	0.08	0.03	0.04
11	0.09	0.10	e0.11	e0.16	0.22	0.74	0.73	0.47	0.25	0.03	0.08	0.04
12	0.07	0.10	e0.10	e0.16	0.20	0.95	0.93	0.43	0.19	0.02	0.10	0.04
13	0.07	0.09	e0.10	e0.16	0.20	0.72	1.3	0.49	0.13	0.04	0.13	0.04
14	0.08	0.10	0.09	e0.15	0.20	0.38	1.2	0.48	0.12	0.09	0.14	0.04
15	0.08	0.09	0.09	e0.16	0.20	0.46	0.83	0.46	0.19	0.07	0.03	0.05
16	0.07	0.09	0.10	e0.16	0.20	0.94	0.67	0.34	0.22	0.02	0.02	0.04
17	0.07	0.09	0.10	e0.16	0.20	0.95	0.79	0.36	0.17	0.00	0.07	0.04
18	0.07	0.09	0.11	e0.16	0.20	1.0	1.3	0.33	0.10	0.00	0.15	0.04
19	0.08	0.09	0.13	e0.16	0.20	1.1	1.7	0.33	0.11	0.00	0.14	0.03
20	0.08	0.09	0.14	e0.18	e0.21	1.2	1.9	0.36	0.08	0.00	0.12	0.01
21	0.08	0.08	e0.15	0.20	e0.23	1.1	1.8	0.41	0.08	0.00	0.11	0.01
22	0.08	0.09	e0.15	e0.26	0.26	0.86	1.8	0.38	0.13	0.01	0.04	0.04
23	0.08	0.09	e0.14	e0.30	0.41	0.79	1.5	0.27	0.17	0.00	0.09	0.04
24	0.07	0.09	e0.15	e0.32	0.39	0.81	1.3	0.26	0.16	0.00	0.09	0.04
25	0.07	0.10	e0.15	e0.30	0.42	0.64	1.1	0.31	0.16	0.00	0.14	0.04
26	0.07	0.12	e0.16	e0.30	0.29	0.77	0.89	0.20	0.11	0.02	0.14	0.03
27	0.07	0.12	e0.16	0.27	e0.29	0.80	0.80	0.29	0.06	0.00	0.15	0.01
28	0.07	0.11	e0.17	0.21	e0.31	1.1	0.77	0.32	0.05	0.03	0.11	0.01
29	0.07	0.11	e0.17	0.21	---	1.3	0.70	0.28	0.05	0.04	0.04	0.03
30	0.07	0.11	e0.17	0.22	---	e1.2	0.65	0.21	0.05	0.04	0.04	0.05
31	0.08	---	e0.16	e0.21	---	1.0	---	0.22	---	0.22	0.06	---
TOTAL	2.55	2.93	3.88	6.14	6.71	26.26	33.68	14.16	5.78	1.32	2.42	1.28
MEAN	0.08	0.10	0.13	0.20	0.24	0.85	1.12	0.46	0.19	0.04	0.08	0.04
MAX	0.18	0.16	0.17	0.32	0.42	1.9	1.9	1.1	0.80	0.22	0.15	0.10
MIN	0.05	0.08	0.09	0.15	0.19	0.32	0.65	0.20	0.05	0.00	0.01	0.01
AC-FT	5.1	5.8	7.7	12	13	52	67	28	11	2.6	4.8	2.5
e Estimated												

**TABLE B-9
Station 23 Flow Data**

1 U.S. DEPARTMENT OF THE INTERIOR - U.S. GEOLOGICAL SURVEY - WATER RESOURCES												
STATION:10308792 LEVIATHAN C AB MOUNTAINEER C NR MARKLEEVILLE CA TYPE:STREAM AGENCY:USGS STATE:06 COUNTY:003												
LATITUDE: 384409 LONGITUDE: 1193840 NAD27 DRAINAGE AREA:10.8* CONTRIBUTING DRAINAGE AREA: DATUM:6220 NGVD29												
Date Processed: 2009-12-24 11:11 By phoneywe												
Lowest aging status in period is APPROVED												
DD #1												
Discharge, cubic feet per second												
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009												
DAILY MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.28	0.35	e0.30	0.45	0.45	0.70	1.9	1.2	0.50	0.14	0.08	0.08
2	0.18	0.65	e0.30	0.53	0.46	5.6	2.2	1.8	0.59	0.10	0.02	0.08
3	0.11	0.31	e0.30	0.45	0.50	2.2	2.1	1.7	0.55	0.10	0.02	0.05
4	0.22	0.34	e0.29	0.33	0.50	e1.9	2.1	1.3	0.62	0.08	0.02	0.07
5	0.15	0.29	e0.29	0.42	0.47	e2.3	1.6	1.1	0.59	0.07	0.02	0.04
6	0.14	0.32	e0.29	0.46	0.45	1.4	1.5	0.97	0.53	0.11	0.03	0.02
7	0.14	0.29	e0.28	0.47	0.41	e1.6	1.8	0.94	0.51	0.20	0.07	0.02
8	0.38	0.29	e0.27	0.50	0.43	e1.7	1.8	0.93	1.3	0.19	0.03	0.02
9	0.33	0.37	e0.26	0.41	0.38	1.1	1.5	0.82	0.89	0.19	0.01	0.04
10	0.47	0.32	e0.25	0.37	0.34	e2.0	1.4	0.83	0.64	0.16	0.01	0.03
11	0.33	0.32	e0.22	0.39	0.39	e2.1	1.4	0.77	0.59	0.05	0.04	0.02
12	0.22	0.31	e0.20	0.42	0.35	e1.9	1.6	0.69	0.54	0.04	0.05	0.04
13	0.25	0.30	e0.19	0.43	0.32	e1.6	2.2	0.71	0.43	0.02	0.07	0.05
14	0.26	0.29	e0.20	0.42	0.33	0.97	2.2	0.70	0.40	0.07	0.10	0.03
15	0.25	0.30	e0.22	0.43	0.35	0.98	1.8	0.68	0.64	0.06	0.02	0.05
16	0.24	0.31	e0.23	0.45	0.35	2.0	1.5	0.58	0.66	0.01	0.01	0.04
17	0.22	0.31	e0.25	e0.47	0.32	2.0	1.6	0.60	0.53	0.01	0.02	0.03
18	0.23	0.31	e0.30	e0.46	0.27	2.3	2.2	0.56	0.35	0.01	0.12	0.03
19	0.21	0.32	e0.33	e0.46	0.29	2.3	2.9	0.57	0.33	0.01	0.11	0.02
20	0.21	0.31	e0.35	e0.46	0.30	2.0	3.3	0.55	0.28	0.01	0.08	0.02
21	0.21	0.30	e0.38	0.68	0.32	1.8	3.1	0.63	0.26	0.01	0.08	0.02
22	0.23	e0.30	e0.39	e1.1	0.50	1.3	3.0	0.77	0.32	0.01	0.01	0.03
23	0.24	e0.30	e0.42	e1.3	0.94	1.2	2.6	0.57	0.44	0.01	0.14	0.04
24	0.25	e0.30	e0.45	e1.5	0.70	1.4	2.3	0.50	0.39	0.01	0.06	0.04
25	0.25	0.29	0.50	0.97	0.59	0.98	1.9	0.56	0.38	0.01	0.12	0.04
26	0.22	e0.30	0.51	0.63	0.57	1.2	1.6	0.45	0.33	0.01	0.12	0.03
27	0.23	e0.29	0.50	0.48	0.52	1.3	1.4	0.52	0.16	0.01	0.12	0.03
28	0.23	e0.29	0.51	0.51	0.52	1.9	1.3	0.54	0.15	0.02	0.09	0.03
29	0.23	e0.29	0.49	0.45	---	2.2	1.2	0.51	0.12	0.02	0.02	0.03
30	0.25	e0.29	0.43	0.44	---	1.9	1.1	0.39	0.14	0.02	0.01	0.10
31	0.27	---	0.43	0.47	---	1.5	---	0.51	---	0.39	0.02	---
TOTAL	7.43	9.56	10.33	17.31	12.32	55.33	58.1	23.95	14.16	2.15	1.72	1.17
MEAN	0.24	0.32	0.33	0.56	0.44	1.78	1.94	0.77	0.47	0.07	0.06	0.04
MAX	0.47	0.65	0.51	1.5	0.94	5.6	3.3	1.8	1.3	0.39	0.14	0.10
MIN	0.11	0.29	0.19	0.33	0.27	0.70	1.1	0.39	0.12	0.01	0.01	0.02
AC-FT	15	19	20	34	24	110	115	48	28	4.3	3.4	2.3
e Estimated												

TABLE B-10
Station 25 Flow Data

1 U.S. DEPARTMENT OF THE INTERIOR - U.S. GEOLOGICAL SURVEY - WATER RESOURCES												
STATION:10308794 BRYANT C BL MOUNTAINEER C NR MARKLEEVILLE CA TYPE:STREAM AGENCY:USGS STATE:06 COUNTY:003												
LATITUDE: 384409 LONGITUDE: 1193840 NAD27 DRAINAGE AREA:21.4* CONTRIBUTING DRAINAGE AREA: DATUM:6300 NGVD29												
Date Processed: 2009-12-24 11:11 By phoneywe												
Lowest aging status in period is APPROVED												
DD #1												
Discharge, cubic feet per second												
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009												
DAILY MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.98	1.5	e1.2	e1.6	1.6	2.4	4.1	2.5	1.6	0.83	1.0	0.89
2	1.0	1.9	e1.2	e1.7	1.7	6.4	4.5	3.1	1.7	0.8	0.83	0.92
3	0.97	1.5	e1.2	1.5	1.7	3.5	4.3	3.0	1.6	0.77	0.77	0.83
4	1.1	1.5	e1.2	1.3	1.7	2.7	4.0	2.6	1.7	0.74	0.77	0.85
5	1.0	1.4	e1.2	e1.3	1.5	3.2	3.6	2.4	1.7	0.73	0.78	0.78
6	1.0	1.5	e1.2	e1.4	1.5	2.6	3.4	2.3	1.6	0.75	0.89	0.74
7	0.99	1.5	e1.2	e1.4	1.5	2.7	3.7	2.1	1.6	0.86	1.1	0.76
8	1.2	1.5	e1.2	e1.4	1.5	3.1	3.6	2.0	2.6	0.85	0.94	0.75
9	1.2	1.6	e1.1	1.4	1.4	2.4	3.4	1.9	2.1	0.84	0.82	0.82
10	1.4	1.5	e1.1	e1.3	1.6	3.0	3.4	1.9	1.7	0.81	0.78	0.78
11	1.3	1.5	e1.1	e1.2	1.7	3.0	3.3	1.8	1.6	0.65	0.86	0.74
12	1.2	1.5	e1.1	e1.2	1.6	2.6	3.5	1.8	1.5	0.65	0.87	0.85
13	1.2	1.5	e1.0	e1.2	1.5	2.7	3.9	1.9	1.4	0.64	0.92	0.89
14	1.3	1.5	e1.0	e1.2	1.6	2.7	3.5	1.9	1.4	0.74	0.98	0.86
15	1.2	1.5	e1.1	e1.2	1.6	2.8	3.0	1.8	1.7	0.71	0.79	0.89
16	1.2	1.5	e1.2	e1.2	1.5	4.0	2.8	1.7	1.7	0.59	0.73	0.85
17	1.2	1.5	e1.2	e1.2	1.6	4.2	2.9	1.7	1.5	0.57	0.77	0.82
18	1.2	1.5	e1.3	e1.2	1.6	4.5	3.4	1.6	1.3	0.56	1.0	0.82
19	1.2	1.5	e1.3	e1.2	1.6	4.9	4.0	1.6	1.2	0.53	0.97	0.77
20	1.2	1.5	e1.4	e1.5	1.6	5.0	4.3	1.7	1.2	0.52	0.91	0.79
21	1.2	e1.5	e1.4	1.8	1.7	4.9	4.2	1.8	1.2	0.51	0.89	0.81
22	1.3	e1.4	e1.4	2.2	2.0	4.2	4.2	2.0	1.2	0.50	0.76	0.83
23	1.3	1.4	e1.5	2.6	2.6	3.8	3.9	1.7	1.3	0.54	1.3	0.86
24	1.3	e1.4	e1.6	3.1	2.4	3.9	3.7	1.6	1.3	0.56	0.98	0.84
25	1.3	e1.4	1.6	1.8	2.1	3.4	3.3	1.6	1.3	0.51	1.0	0.84
26	1.3	e1.4	1.6	1.7	2.1	3.7	3.0	1.5	1.2	0.50	1.0	0.79
27	1.3	e1.3	1.6	1.5	2.0	3.7	2.8	1.6	0.99	0.50	1.0	0.79
28	1.3	e1.3	1.7	1.7	2.1	4.4	2.7	1.6	0.97	0.58	0.95	0.79
29	1.3	e1.2	1.6	1.5	---	4.7	2.5	1.6	0.90	0.64	0.77	0.86
30	1.3	e1.2	1.6	1.6	---	4.0	2.4	1.5	0.90	0.60	0.73	1.0
31	1.4	---	1.6	1.6	---	3.8	---	1.5	---	1.3	0.76	---
TOTAL	37.34	43.9	40.7	47.7	48.6	112.9	105.3	59.3	43.66	20.88	27.62	24.81
MEAN	1.2	1.46	1.31	1.54	1.74	3.64	3.51	1.91	1.46	0.67	0.89	0.83
MAX	1.4	1.9	1.7	3.1	2.6	6.4	4.5	3.1	2.6	1.3	1.3	1.0
MIN	0.97	1.2	1.0	1.2	1.4	2.4	2.4	1.5	0.90	0.50	0.73	0.74
AC-FT	74	87	81	95	96	224	209	118	87	41	55	49
e Estimated												

**Table B-11
Station 26 Flow Data**

1 U.S. DEPARTMENT OF THE INTERIOR - U.S. GEOLOGICAL SURVEY - WATER RESOURCES												
STATION:10308800 BRYANT CK NR GARDNERVILLE, NV TYPE:STREAM AGENCY:USGS STATE:32 COUNTY:005												
LATITUDE: 384738 LONGITUDE: 1194018 NAD27 DRAINAGE AREA:31.5* CONTRIBUTING DRAINAGE AREA: DATUM:5445.91 NGVD29												
Date Processed: 2010-01-19 08:49 By snberris												
Lowest aging status in period is IN REVIEW												
DD #2												
Discharge, cubic feet per second												
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009												
DAILY MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	2.0	3.5	3.1	3.0	2.4	4.5	2.6	5.6	1.9	3.0	1.6
2	2.0	2.2	3.3	3.3	2.9	5.9	4.6	4.2	6.0	1.8	2.4	1.6
3	2.0	2.1	3.1	3.2	2.9	6.8	4.8	5.7	6.1	1.4	2.0	1.5
4	2.9	2.3	2.9	2.8	2.9	5.5	4.1	5.9	5.6	1.4	1.9	1.3
5	3.0	2.2	2.8	3.2	2.7	5.3	3.9	5.1	5.4	1.8	1.9	1.3
6	2.8	2.2	2.8	3.2	2.7	5.4	3.8	4.5	4.9	1.7	2.3	1.4
7	2.6	2.2	2.9	3.1	2.8	5.1	3.8	4.3	5.5	2.0	2.6	1.9
8	2.5	2.2	3.0	3.2	2.8	5.0	4.2	4.7	4.9	2.0	2.5	1.8
9	2.5	2.4	2.5	3.1	2.6	5.1	4.0	4.6	6.4	2.0	2.2	1.9
10	2.7	2.5	2.7	3.0	2.2	4.5	3.7	4.2	4.3	2.0	2.2	1.8
11	3.3	2.5	2.9	3.2	2.8	4.6	3.5	3.4	3.7	1.8	2.1	2.2
12	3.3	2.4	2.9	3.2	2.8	4.6	3.4	3.4	2.9	2.1	2.0	2.0
13	3.4	2.4	2.9	3.2	2.8	4.5	3.6	3.4	2.4	1.9	1.9	2.1
14	3.6	2.3	2.4	3.2	2.8	4.6	4.0	3.3	2.2	1.8	1.9	2.0
15	3.6	2.3	2.7	3.0	2.8	4.6	4.0	2.7	2.2	1.7	1.7	1.8
16	3.3	2.3	2.6	3.1	2.7	5.0	3.8	2.2	2.5	1.5	1.5	1.6
17	3.1	2.3	2.7	3.0	2.7	5.6	3.3	1.7	2.2	1.4	1.3	1.5
18	2.9	2.3	2.9	2.9	2.6	5.5	3.3	1.4	2.0	1.5	1.5	1.4
19	2.8	2.3	2.8	2.9	2.6	5.6	3.8	1.5	2.8	1.4	1.6	1.3
20	2.8	2.2	2.8	3.0	2.6	5.6	4.0	1.8	2.5	1.3	1.5	1.3
21	2.6	2.2	2.8	2.9	2.6	5.6	3.9	1.8	2.8	1.4	1.3	1.2
22	2.6	2.3	2.7	3.2	2.7	5.4	3.6	1.9	2.5	1.4	1.3	1.1
23	2.5	2.3	2.6	3.6	2.8	4.8	3.5	2.3	3.3	1.4	1.8	1.1
24	2.5	2.4	2.6	3.9	2.8	4.5	3.7	2.3	3.6	1.4	1.9	1.1
25	2.7	3.1	2.8	3.4	2.6	4.5	3.5	2.3	3.3	1.3	1.8	0.99
26	2.5	3.7	2.8	3.2	2.4	4.5	3.4	3.1	3.0	1.2	1.7	0.89
27	2.5	3.7	2.9	2.9	2.1	4.5	3.1	2.9	2.3	1.6	1.6	0.84
28	2.3	3.6	2.9	3.2	2.0	4.5	2.8	2.8	2.1	1.6	1.6	1.2
29	2.1	3.5	2.8	3.0	---	5.1	2.5	3.7	2.0	2.2	1.4	1.3
30	2.1	3.6	2.8	3.0	---	4.7	2.5	4.5	2.0	2.4	1.5	1.5
31	2.2	---	2.9	3.1	---	4.6	---	4.6	---	2.6	1.5	---
TOTAL	83.7	76	87.7	97.3	74.7	153.9	110.6	102.8	107	52.9	57.4	44.52
MEAN	2.7	2.53	2.83	3.14	2.67	4.96	3.69	3.32	3.57	1.71	1.85	1.48
MAX	3.6	3.7	3.5	3.9	3.0	6.8	4.8	5.9	6.4	2.6	3.0	2.2
MIN	2.0	2.0	2.4	2.8	2.0	2.4	2.5	1.4	2.0	1.2	1.3	0.84
AC-FT	166	151	174	193	148	305	219	204	212	105	114	88

**TABLE B-12
Pond 1 Stage Data**

1 U.S. DEPARTMENT OF THE INTERIOR - U.S. GEOLOGICAL SURVEY - WATER RESOURCES												
STATION:103087853 LEVIATHAN MINE POND 1 NR MARKLEEVILLE CA TYPE:LAKE AGENCY:USGS STATE:06 COUNTY:003												
LATITUDE: 384215 LONGITUDE: 1193929 NAD27 DATUM: 7050 NGVD29												
Date Processed: 2009-12-24 11:07 By phoneywe												
Lowest aging status in period is APPROVED												
DD #1												
Gage height, feet												
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009												
DAILY OBSERVATION AT 2400 HOURS												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.66	4.68	4.66	4.67	4.67	5.03	5.68	5.68	5.46	5.39	5.00	4.72
2	4.65	4.67	4.66	4.66	4.68	5.16	5.69	5.69	e5.46	5.37	5.03	4.73
3	4.65	4.67	4.66	4.63	4.68	5.23	5.69	5.72	5.45	5.36	5.02	4.74
4	4.64	4.64	4.66	4.66	4.70	5.30	5.69	5.72	5.45	5.34	4.93	4.73
5	4.65	4.66	4.66	4.66	4.69	5.31	5.69	5.72	5.45	5.33	4.74	4.73
6	4.65	4.66	4.66	4.66	4.72	5.32	5.69	5.70	5.47	5.30	4.69	4.73
7	4.66	4.66	4.66	4.66	4.78	5.30	5.70	5.68	5.46	5.28	4.69	4.72
8	4.66	4.66	4.66	4.66	4.77	5.31	5.70	5.68	5.57	5.26	4.70	4.72
9	4.66	4.66	4.66	4.66	4.76	5.30	5.70	5.67	5.57	5.25	4.71	4.73
10	e4.66	4.66	4.66	4.66	4.77	5.33	5.71	5.66	5.56	5.24	4.86	4.73
11	e4.66	4.66	4.66	4.66	4.79	5.34	5.71	5.64	5.56	5.22	5.00	e4.73
12	e4.66	4.67	4.66	4.67	4.80	5.34	5.71	5.62	5.56	5.19	5.01	e4.72
13	4.66	4.66	e4.66	4.67	4.80	5.35	5.71	5.62	5.55	5.18	4.71	e4.72
14	4.66	4.66	e4.66	4.67	4.83	5.36	5.71	5.61	5.55	5.16	4.71	e4.72
15	4.66	4.66	e4.66	4.66	4.84	5.38	5.68	5.60	5.57	5.15	4.71	e4.72
16	4.66	4.66	e4.66	4.66	4.86	5.40	5.71	5.59	5.56	5.13	4.71	e4.71
17	4.66	4.66	e4.66	4.66	4.86	5.44	5.71	5.58	5.56	5.11	4.72	e4.71
18	4.66	4.66	e4.66	4.66	4.87	5.47	5.71	5.57	5.55	5.10	4.72	e4.71
19	4.66	4.66	e4.66	4.66	4.87	5.49	5.71	5.55	5.54	5.08	4.70	e4.70
20	4.66	4.66	4.65	4.66	4.87	5.51	5.71	5.54	5.52	5.06	e4.70	e4.70
21	4.66	4.65	4.66	4.66	4.88	5.55	5.70	5.53	5.51	5.07	e4.71	e4.70
22	4.67	4.66	4.64	4.66	4.90	5.54	5.69	5.55	5.50	5.07	4.71	e4.69
23	4.67	4.66	4.64	4.66	4.94	5.55	5.68	5.53	5.49	5.10	4.71	e4.69
24	4.67	4.66	4.67	4.66	4.95	5.55	5.65	5.51	5.47	5.07	4.71	e4.69
25	4.67	4.66	4.65	4.66	4.95	5.57	5.68	5.50	5.47	5.05	4.72	e4.68
26	4.67	4.66	4.66	4.65	4.96	5.58	5.68	5.50	5.46	5.03	4.72	e4.68
27	4.67	4.65	4.66	4.66	4.97	5.63	5.67	5.50	e5.44	5.02	4.72	e4.68
28	4.68	4.65	4.66	4.66	4.99	5.64	5.66	5.47	e5.42	5.05	4.72	e4.67
29	4.68	4.65	4.66	4.66	---	5.65	5.65	5.46	5.41	5.06	4.72	e4.67
30	4.68	4.66	4.66	4.67	---	5.66	5.64	5.47	5.40	5.04	4.73	e4.67
31	4.68	---	4.66	4.67	---	5.67	---	5.46	---	5.05	4.73	---
MEAN	4.66	4.66	4.66	4.66	4.83	5.43	5.69	5.59	5.50	5.16	4.77	4.71
MAX	4.68	4.68	4.67	4.67	4.99	5.67	5.71	5.72	5.57	5.39	5.03	4.74
MIN	4.64	4.64	4.64	4.63	4.67	5.03	5.64	5.46	5.40	5.02	4.69	4.67
e Estimated												

**TABLE B-13
Pond 4 Stage Data**

1 U.S. DEPARTMENT OF THE INTERIOR - U.S. GEOLOGICAL SURVEY - WATER RESOURCES												
STATION:103087887 LEVIATHAN MINE POND 4 NR MARKLEEVILLE CA TYPE:LAKE AGENCY:USGS STATE:06 COUNTY:003												
LATITUDE: 384234 LONGITUDE: 1193941 NAD27 DATUM: 6800 NGVD29												
Date Processed: 2009-12-24 11:07 By phoneywe												
Lowest aging status in period is APPROVED												
DD #1												
Gage height, feet												
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009												
DAILY OBSERVATION AT 2400 HOURS												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e5.53	e3.99	4.05	4.13	4.67	4.93	e5.66	5.83	e5.88	5.67	5.52	5.38
2	5.40	e3.99	4.04	4.18	4.65	5.11	e5.66	6.18	5.97	5.83	5.69	5.48
3	5.49	e4.00	4.03	4.17	4.67	5.22	5.66	6.32	e5.91	6.15	5.91	5.44
4	5.67	3.96	4.03	4.19	4.65	5.28	e5.67	6.49	5.77	6.07	5.87	5.28
5	5.79	4.01	4.02	4.22	4.58	5.22	e5.67	6.93	5.57	6.21	5.94	5.47
6	5.96	4.00	4.04	4.23	4.60	5.30	e5.67	e7.16	5.90	5.98	5.82	5.77
7	5.69	4.05	4.03	4.24	4.67	5.26	5.67	7.37	6.18	5.72	5.72	5.90
8	5.12	4.02	4.01	4.24	4.77	5.30	e5.68	7.36	6.12	5.21	5.80	5.84
9	4.35	4.05	4.02	4.28	4.70	5.27	e5.69	e7.43	5.76	4.98	5.95	5.72
10	3.98	4.04	4.00	4.26	4.77	5.31	e5.68	e7.51	5.35	4.65	6.07	5.57
11	e4.00	4.02	3.99	4.27	4.78	5.34	5.57	7.64	5.04	4.96	6.15	5.45
12	4.02	4.06	3.99	4.26	4.69	5.33	5.60	7.60	5.19	5.13	6.30	5.73
13	4.07	4.07	3.99	4.27	4.76	5.29	5.67	7.25	5.44	4.96	6.46	5.86
14	4.06	4.03	3.98	4.28	4.73	5.29	5.62	7.22	5.66	4.45	6.65	6.03
15	3.98	4.03	4.03	4.27	4.80	5.39	5.69	6.65	5.69	4.23	6.64	5.97
16	4.01	4.04	4.04	4.29	4.78	5.38	e5.69	e6.61	5.36	4.47	6.90	5.88
17	4.07	4.03	4.02	4.28	4.75	5.32	5.62	6.48	5.05	4.69	6.95	5.86
18	4.01	4.02	4.03	4.30	4.73	5.33	5.67	e6.53	5.44	4.96	6.70	5.76
19	e4.00	4.02	4.01	4.25	4.82	5.27	5.65	6.49	5.53	5.26	6.54	5.85
20	3.99	3.99	4.02	4.28	4.80	5.36	e5.70	e6.36	5.77	5.36	6.44	5.96
21	4.06	4.01	4.03	4.27	4.77	5.35	e5.71	6.10	6.07	5.50	6.29	5.93
22	4.01	4.02	4.01	4.42	4.83	5.53	e5.68	5.83	5.95	5.67	6.38	5.68
23	e3.97	3.98	4.04	4.56	4.89	5.5	e5.67	5.90	5.60	5.61	6.17	5.55
24	3.95	3.99	4.06	4.60	4.93	5.59	5.60	e5.95	5.16	5.61	6.20	5.50
25	e3.95	4.00	4.09	4.62	4.90	5.51	e5.70	5.94	4.65	5.40	5.94	5.38
26	e3.95	4.03	4.06	4.64	4.95	5.62	e5.70	5.84	4.65	5.45	5.78	5.52
27	3.96	4.04	4.08	4.64	4.96	5.55	e5.65	e5.69	4.98	5.38	5.59	5.48
28	e3.97	4.06	4.08	4.63	4.90	5.51	e5.68	5.39	4.97	5.38	5.47	5.47
29	e3.98	4.06	4.08	4.65	---	5.62	5.58	5.37	5.22	5.39	5.5	5.33
30	3.99	4.06	4.10	4.66	---	e5.64	5.62	5.75	5.44	e5.41	5.47	5.25
31	3.96	---	4.09	4.63	---	e5.65	---	5.71	---	5.43	5.41	---
MEAN	4.42	4.02	4.04	4.36	4.77	5.37	5.66	6.48	5.51	5.33	6.07	5.64
MAX	5.96	4.07	4.10	4.66	4.96	5.65	5.71	7.64	6.18	6.21	6.95	6.03
MIN	3.95	3.96	3.98	4.13	4.58	4.93	5.57	5.37	4.65	4.23	5.41	5.25
e Estimated												

Table B-14: Adit Laboratory and Field Results

Adit Dissolved Metals - mg/L																														
Sample ID	Date	Time	Al	Q	As	Q	Ca	Q	Cd	Q	Co	Q	Cr	Q	Cu	Q	Fe	Q	Mg	Q	Mn	Q	Ni	Q	Zn	Q	TDS	Q	Sulfate	Q
089LM040-ADIT	10/22/2008	10:00:00 AM	260		9.77		108		0.0194	J	1.59		0.894		0.651		667		33		7.03	QM-4X	4.13		0.781		4880		4490	
089LM056-ADIT	11/18/2008	8:40:00 AM	271		10.1		107		0.0140	J, R-08	1.63		0.855		0.702		671		33		7.01		4.27		0.781		4610		5250	
089LM069-ADIT	12/10/2008	8:35:00 AM	275		9.55		108		0.0159	J, R-08	1.54		0.795		0.692		661		33		6.47		4.07		0.737		4660		4730	
089LM083-ADIT	01/14/2009	10:00:00 AM	250		9.07		100		0.0220	J, R-08	1.48		0.755		0.684		616		30		6.19		3.92		0.701		4760		4580	
089LM096-ADIT	02/04/2009	9:25:00 AM	259		9.69		98		0.0272		1.57		0.799		0.689		641		30		6.56		4.03		0.755		4500		4290	
089LM109-ADIT	03/17/2009	11:00:00 AM	249		9.07		97		0.0242	J	1.52		0.743		1.09		610		30		6.33		3.99		0.719		4200		4500	
089LM134-ADIT	04/20/2009	9:55:00 AM	309		10.2		99		0.0344		1.83		0.900		1.40		755		30		7.03		4.42		0.852		5200		4200	
089LM135-ADIT	05/27/2009	9:25:00 AM	310	M-3	9.9	M-3	100		0.027		1.3		0.71		0.89		630	B-1	33		7.5	H-1	3.0		0.54		4900		3500	
089LM151-ADIT	06/17/2009	9:55:00 AM	240		8.3		100		0.024	J, RL1	0.018	A	0.75	MHA	0.91		650		34		6.6	M-3	3.9	B-1	0.0088	J,A	4800		3600	
0910LM001-ADIT	07/22/2009	10:25:00 AM	230	M-3	8.3	MHA	100		0.027		1.3	MHA	0.66	MHA	0.74	MHA	660		34		6.0	B-1, M-3	3.4	MHA	0.67	B-1, MHA	5000		3300	
0910LM014-ADIT	08/19/2009	10:40:00 AM	250	M-3	8.5	MHA	98		0.023		1.4	MHA	0.80	MHA	0.66		580		31		6.7	MHA	3.4	MHA	0.80	MHA	4800		3200	B-1
0910LM027-ADIT	09/23/2009	10:10:00 AM	270		7.9	MHA	94	B-1, MHA	0.025		1.4	MHA	0.73	MHA	0.68	MHA	660	M-3	31	MHA	6.8	MHA	3.6	B-1, MHA	0.63	MHA	4800		3100	
0910LM039-STA D	09/23/2009	10:15:00 AM	270		7.9		100	B-1	0.024		1.2		0.62		0.61		710		33		7.6		3.1	B-1	0.55		4900		3100	

Adit Total Metals - mg/L																														
Sample ID	Date	Time	Al	Q	As	Q	Ca	Q	Cd	Q	Co	Q	Cr	Q	Cu	Q	Fe	Q	Mg	Q	Mn	Q	Ni	Q	Zn	Q	TDS	Q	Sulfate	Q
089LM040-ADIT	10/22/2008	10:00:00 AM	271	QM-4X	10.0		113		0.0258		1.68		0.852		0.745		678	QM-4X	34		7.01		4.24		0.789		4880		4490	
089LM056-ADIT	11/18/2008	8:40:00 AM	271		9.87		104		0.0157	J, R-08	1.64		0.843		0.770		667		32		6.96		4.21		0.775		4610		5250	
089LM069-ADIT	12/10/2008	8:35:00 AM	271		9.97		107		0.0157	J, R-08	1.61		0.831		0.773		664		32		6.82		4.30		0.767		4660		4730	
089LM083-ADIT	01/14/2009	10:00:00 AM	278		9.80		104		0.0130	J	1.55		0.815		0.797		661		32		6.59		4.26		0.731		4760		4580	
089LM096-ADIT	02/04/2009	9:25:00 AM	251		9.08		96		0.0135	J, R-08	1.46		0.774		0.676		629		30		6.26		3.91		0.701		4500		4290	
089LM109-ADIT	03/17/2009	11:00:00 AM	243		9.09		97		0.0266		1.47		0.751		1.11		586		30		6.32		4.01		0.725		4200		4500	
089LM134-ADIT	04/20/2009	9:55:00 AM	287		9.47		105		0.0327		1.71		0.843		1.36		705	QM-4X	33		6.53	QM-4X	4.11		0.798		5200		4200	
089LM135-ADIT	05/27/2009	9:25:00 AM	250		8.1		100		0.028		1.3		0.72		0.93		680		33		6.7	M-3,H-1	2.9		0.66		4900		3500	
089LM151-ADIT	06/17/2009	9:55:00 AM	230		9.2		110		0.025		0.59	A	0.64		0.83		580		36		6.8	M-3	3.2		0.59		4800		3200	B-1
0910LM001-ADIT	07/22/2009	10:25:00 AM	230		8.3		100		0.035		1.3		0.72		0.78		600		32		6.7		3.5		0.66	B-1	5000		3300	
0910LM014-ADIT	08/19/2009	10:40:00 AM	230	B, M-3	7.8	MHA	98		0.024	B-1	1.4	B, MHA	0.75	MHA	0.74	MHA	580		31		7.0	B-1	3.5	MHA	0.74	MHA	4800		3200	B-1
0910LM027-ADIT	09/23/2009	10:10:00 AM	260	B-1, M-3	9.9	M-3	96	B-1, MHA	0.025		1.3		0.69	MHA	0.78	MHA	740	M-3	30	B-1, MHA	8.6	M-3	3.4		0.66	MHA	4800		3100	
0910LM039-STA D	09/23/2009	10:15:00 AM	250	B-1	8.8		92	B-1	0.023		1.1		0.62		0.65		660		28	B-1	7.5		2.8		0.58		4900		3100	

Adit Field and Flow Data							
Date	Time	pH (SU)	Temp (°C)	EC (uS/cm)	SpC (uS/cm)	Daily Mean Flow (cfs) ¹	Monthly Mean Flow (cfs) ¹
10/22/2008	10:00:00 AM	2.7	11.7	3071	4120	0.0260	0.03
11/18/2008	8:40:00 AM	2.7	11.9	3043	4060	0.0244	0.03
12/10/2008	8:35:00 AM	2.5	11.4	2985	4022	0.0247	0.02
01/14/2009	10:00:00 AM	2.5	11.1	2744	3729	0.0231	0.02
02/04/2009	9:25:00 AM	2.7	9.5	2810	3971	0.0218	0.02
03/17/2009	11:00:00 AM	2.63	11.9	2819	3760	0.0228	0.02
04/20/2009	9:55:00 AM	2.6	11.8	3104	4150	0.0252	0.03
05/27/2009	9:25:00 AM	2.5	12	3176	4225	0.0259	0.03
06/17/2009	9:55:00 AM	2.5	12.0	3067	4081	0.0242	0.02
07/22/2009	10:25:00 AM	2.5	12.3	2987	3954	0.0225	0.02
08/19/2009	10:40:00 AM	2.5	12.1	3010	3994	0.0231	0.02
09/23/2009	10:10:00 AM	2.6	12.1	2999	3979	0.0232	0.02
09/23/2009	10:15:00 AM	2.6	12.1	2999	3979	0.0232	0.02

Field Data:

EC: Electrical Conductivity

SpC: Specific Conductance

Units: SU - Standard Units; °C - degrees celsius; uS/cm - micro siemen per centimeter; cfs - cubic feet per second

1: Provisional data provided by the United States Geological Survey

Q - Qualifiers:

A: Anomalous value, see Table B-26, Water Board 2009 Year End Report

B: Analyte was detected in the associated Method Blank.

B-1: Analyte was detected in the associated method blank. Analyte concentration in the sample is greater than 10x the concentration found in the method blank.

J: Analyte detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag). The J Flag is equivalent to the DNQ

Estimated Concentration flag.

H-1: Sample analysis performed past the method-specified holding time per client's approval.

M-3: Results exceeded the linear range in the MS/MSD and therefore are not available for reporting. The batch was accepted based on acceptable recovery

in the Blank Spike (LCS).

MHA: Due to high levels of analyte in the sample, the MS/MSD calculation does not provide useful spike recovery information. See Blank Spike (LCS).

QM-4X: The spike recovery was outside of QC acceptance for the MS and/or MSD due to the analyte concentration being greater than 4 times the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limit.

RL1: Reporting limit raised due to sample matrix effects.

R-08: The sample was diluted due to sample matrix resulting in elevated reporting limits.

U: Analyte included in the analysis, but not detected at the given Method Detection Limit (MDL)

Table B-15: Pit Under-Drain Laboratory and Field Results

PUD Dissolved Metals - mg/L																														
Sample ID	Date	Time	Al	Q	As	Q	Ca	Q	Cd	Q	Co	Q	Cr	Q	Cu	Q	Fe	Q	Mg	Q	Mn	Q	Ni	Q	Zn	Q	TDS	Q	Sulfate	Q
089LM041-PUD	10/22/2008	10:10:00 AM	349		0.196		388		0.0083	J	1.84		0.229		0.543		1400		159		77.1	QM-4X	3.85		3.78		9550		11600	
089LM057-PUD	11/18/2008	8:50:00 AM	361		0.168		405		0.0050	R-08, U	2.01		0.170		0.600		1410		162		82.3		4.21		3.94		8630		9050	
089LM070-PUD	12/10/2008	8:40:00 AM	355		0.113		418		0.0050	R-08, U	1.98		0.143		0.571		1480		163		81.7		4.16		3.92		7440		9920	
089LM084-PUD	01/14/2009	10:10:00 AM	331		0.212		394		0.0189	J, R-08	1.99		0.121		0.549		1330		151		81.7		4.09		3.89		8120		10100	
089LM097-PUD	02/04/2009	9:35:00 AM	315		0.246		417		0.0297		2.10		0.085		0.556		1340		158		89.3		4.14		4.16		7880		9770	
089LM110-PUD	03/17/2009	11:10:00 AM	162		0.022	J	398		0.0115	J	1.12		0.024	J	0.765		473		107		42.5		2.18		2.03		5400		5700	
089LM122-PUD	04/20/2009	10:00:00 AM	330		2.24		385		0.0267		1.34		0.288		1.27		910		114		48.2		2.68		2.56		8000		5700	
089LM136-PUD	05/27/2009	9:35:00 AM	370		1.0		380		0.015		1.1		0.25		0.44		1000	B-1	140		58	B-1	2.0		2.2		8900		9100	
089LM152-PUD	06/17/2009	10:05:00 AM	320		0.83		370		0.014	RL1, J	1.3		0.25		0.39		1200		140		60		2.5		2.1		9300		6300	
0910LM002-PUD	07/22/2009	10:35:00 AM	320		0.69		360		0.018	J	1.6		0.26		0.47		1200		150		68	B-1	3.3		3.0	B-1	10000		6600	
0910LM015-PUD	08/19/2009	10:55:00 AM	330		0.46		360		0.015		1.5		0.25		0.40		1200		140		65		3.0		3.6		9700		6100	B-1
0910LM028-PUD	09/23/2009	10:20:00 AM	350	MHA	0.19		370	B-1	0.018		1.6		0.18		0.44		1400		160		73		3.3	B-1	3.0		10000		6600	

PUD Total Metals - mg/L																										
Sample ID	Date	Time	Al	Q	As	Q	Ca	Q	Cd	Q	Co	Q	Cr	Q	Cu	Q	Fe	Q	Mg	Q	Mn	Q	Ni	Q	Zn	Q
089LM041-PUD	10/22/2008	10:10:00 AM	360	QM-4X	0.190		398		0.0204	J	1.91		0.217		0.573		1330	QM-4X	158		72.2		3.90		3.79	
089LM057-PUD	11/18/2008	8:50:00 AM	351		0.143		396		0.0050	R-08, U	2.01		0.167		0.592		1430		159		82.7		4.09		3.87	
089LM070-PUD	12/10/2008	8:40:00 AM	346		0.131		390		0.0050	R-08, U	2.02		0.145		0.584		1430		152		83.4		4.27		3.99	
089LM084-PUD	01/14/2009	10:10:00 AM	350		0.245		416		0.0050	U	2.01		0.128		0.579		1380		163		84.3		4.33		3.95	
089LM097-PUD	02/04/2009	9:35:00 AM	306		0.228		407		0.0050	R-08, U	1.97		0.081		0.519		1300		158		84.2		4.08		3.89	
089LM110-PUD	03/17/2009	11:10:00 AM	172		0.039	J	400		0.0167	J	1.20		0.033		0.842		499		109		48.8		2.43		2.19	
089LM122-PUD	04/20/2009	10:00:00 AM	325		2.16		366		0.0280		1.30		0.282		1.26		884		111		46.8		2.61		2.49	
089LM136-PUD	05/27/2009	9:35:00 AM	330		1.0		380		0.015		1.1		0.25		0.44		1100		140		59		2.0		2.1	
089LM152-PUD	06/17/2009	10:05:00 AM	330		0.68		360		0.012		1.1		0.21		0.38		1100		130		60		2.2		2.0	
0910LM002-PUD	07/22/2009	10:35:00 AM	360		0.70		420		0.018		1.3		0.27		0.40		1200		170		69		2.7		2.5	B-1
0910LM015-PUD	08/19/2009	10:55:00 AM	350	B	0.40		360		0.019	B-1	1.6	B	0.25		0.46		1200		150		77	B-1	3.1		3.2	
0910LM028-PUD	09/23/2009	10:20:00 AM	390	B-1	0.18		410	B-1	0.017		1.5		0.18		0.45		1500		160	B-1	90		3.1		2.9	

PUD Field and Flow Data							
Date	Time	pH (SU)	Temp (°C)	EC (uS/cm)	SpC (uS/cm)	Daily Mean Flow (cfs) ¹	Monthly Mean Flow (cfs) ¹
10/22/2008	10:10:00 AM	2.6	9.5	4650	6610	0.0004	0.00
11/18/2008	8:50:00 AM	2.6	7.7	4690	6980	0.0006	0.00
12/10/2008	8:40:00 AM	2.5	6.8	4346	6660	0.0005	0.00
01/14/2009	10:10:00 AM	2.4	5.2	3743	6050	0.0004	0.00
02/04/2009	9:35:00 AM	2.5	5.0	4076	6560	0.0005	0.00
03/17/2009	11:10:00 AM	2.8	5.1	2795	4517	0.0005	0.00
04/20/2009	10:00:00 AM	2.1	7.6	5050	7610	0.0011	0.00
05/27/2009	9:35:00 AM	2.2	8.6	4182	6080	0.0006	0.00
06/17/2009	10:05:00 AM	2.3	9.3	4780	6800	0.0004	0.00
07/22/2009	10:35:00 AM	2.4	10.9	4990	6600	0.0004	0.00
08/19/2009	10:55:00 AM	2.4	12.3	4910	6480	e0.0005	0.00
09/23/2009	10:20:00 AM	2.6	11.4	5180	6980	0.0004	0.00

Field Data:

EC - Electrical Conductivity

SpC - Specific Conductance

Units: SU - Standard Units; °C - degrees celsius; uS/cm - micro siemen per centimeter; cfs - cubic feet per second

e - estimated

1: Provisional data provided by the United States Geological Survey.

Q - Qualifiers:

B: Analyte was detected in the associated Method Blank.

B-1: Analyte was detected in the associated method blank. Analyte concentration in the sample is greater than 10x the concentration found in the method blank.

J: Analyte detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag). The J Flag is equivalent to the DNQ Estimated Concentration flag.

MHA: Due to high levels of analyte in the sample, the MS/MSD calculation does not provide useful spike recovery information. See Blank Spike (LCS).

QM-4X: The spike recovery was outside of QC acceptance for the MS and/or MSD due to the analyte concentration being greater than 4 times the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limit.

RL1: Reporting limit raised due to sample matrix effects.

R-08: The sample was diluted due to sample matrix resulting in elevated reporting limits.

U: Analyte included in the analysis, but not detected at the given Method Detection Limit (MDL)

Table B-16: Overburden Seep Laboratory and Field Results

OS Dissolved Metals - mg/L																														
Sample ID	Date	Time	Al	Q	As	Q	Ca	Q	Cd	Q	Co	Q	Cr	Q	Cu	Q	Fe	Q	Mg	Q	Mn	Q	Ni	Q	Zn	Q	TDS	Q	Sulfate	Q
089LM050-OS	10/22/2008	1:10:00 PM	40.5		0.002	U	296		0.0010	U	0.296		0.003	J	0.732		107		72		17.2	QM-4X	0.446		0.689		2400		2050	
089LM066-OS	11/18/2008	10:55:00 AM	38.7		0.003	U	301		0.0010	U	0.285		0.006		0.769		104		75		16.1		0.435		0.639		2430		1690	
089LM079-OS	12/10/2008	10:40:00 AM	38.4		0.003	U	301		0.0010	U	0.271		0.002	J	0.700		115		73		15.7		0.416		0.620		2240		2000	
089LM093-OS	01/14/2009	11:30:00 AM	36.0		0.003	U	292		0.0016	J	0.261		0.002	J	0.713		95.7		70		15.1		0.396		0.590		2220		1790	
089LM106-OS	02/04/2009	11:00:00 AM	36.8		0.002	U	294		0.0024	J	0.274		0.002	J	0.715		94.1		71		15.8		0.395		0.619		2200		1820	
089LM119-OS	03/18/2009	10:25:00 AM	39.7		0.002	U	293		0.0024	J	0.292		0.003	J	0.713		102		73		16.5		0.436		0.651		2300		1700	
089LM131-OS	04/20/2009	11:25:00 AM	38.6		0.005	J	310		0.0023	J	0.276		0.002	J	0.723		104		74		16.0		0.390		0.629		2300		1600	
089LM145-OS	05/27/2009	12:20:00 PM	35		0.00070	U	290		0.0014		0.26		0.0029		0.56		100	B-1	75		17	B-1	0.33		0.64		2400		1500	
089LM161-OS	06/17/2009	11:35:00 AM	33		0.00070	U	300		0.0012		0.24		0.0030		0.52		110		76		17		0.36	B-1	0.44		2400		1700	
0910LM006-OS	07/22/2009	12:15:00 PM	31		0.00070	U	280		0.0013		0.22		0.0019	J	0.50		110		73		17	B-1	0.33		0.49	B-1	2500		1700	
0910LM019-OS	08/19/2009	11:50:00 AM	41		0.00070	U	270		0.0011		0.27		0.0038		0.56		90		69		18		0.37		0.57		2300		1600	B-1
0910LM026-STA D	08/19/2009	12:00:00 PM	38		0.00070	U	270	M-3	0.0013		0.28		0.0044		0.59		91	M-3	71	M-3	18		0.38		0.52		2400		1500	B-1
0910LM032-OS	09/23/2009	11:25:00 AM	35		0.00090	U	300	B-1	0.0014		0.25		0.0027		0.53		110		73		17		0.36	B-1	0.47		2400		1600	

OS Total Metals - mg/L																										
Sample ID	Date	Time	Al	Q	As	Q	Ca	Q	Cd	Q	Co	Q	Cr	Q	Cu	Q	Fe	Q	Mg	Q	Mn	Q	Ni	Q	Zn	Q
089LM050-OS	10/22/2008	1:10:00 PM	39.4	QM-4X	0.015	U, R-08	303		0.0050	R-08, U	0.313		0.005	R-08, U	0.733		109	QM-4X	76		18.0		0.466		0.701	
089LM066-OS	11/18/2008	10:55:00 AM	39.7		0.003	U	302		0.0010	U	0.287		0.001	J	0.789		106		75		16.2		0.424		0.647	
089LM079-OS	12/10/2008	10:40:00 AM	40.8		0.003	U	298		0.0010	U	0.288		0.002	J	0.783		118		73		16.6		0.448		0.667	
089LM093-OS	01/14/2009	11:30:00 AM	38.5		0.003	U	293		0.0010	U	0.262		0.001	J	0.761		97.9		72		15.1		0.413		0.595	
089LM106-OS	02/04/2009	11:00:00 AM	37.5		0.003	U	289		0.0010	U	0.263		0.001	J, R-08	0.701		95.5		72		15.5		0.401		0.603	
089LM119-OS	03/18/2009	10:25:00 AM	36.8		0.003	U	298		0.0025	J	0.269		0.001	J	0.729		86.8		73		15.6		0.418		0.611	
089LM131-OS	04/20/2009	11:25:00 AM	38.7		0.003	U	301		0.0026	J	0.278		0.003	J	0.727		105	QM-4X	74		16.1	QM-4X	0.393		0.634	
089LM145-OS	05/27/2009	12:20:00 PM	33		0.00070	U	300		0.0014		0.25		0.0027		0.55		110		73		73		0.33		0.65	
089LM161-OS	06/17/2009	11:35:00 AM	33		0.00070	U	300		0.0012		0.23		0.0026		0.52		99		75		75		0.35		0.45	
0910LM006-OS	07/22/2009	12:15:00 PM	34		0.00070	U	280		0.0013		0.24		0.0025		0.55		110		74		74		0.35		0.52	B-1
0910LM019-OS	08/19/2009	11:50:00 AM	40	B-1	0.00070	U	280		0.0014	B	0.28	B	0.0034		0.49		92		73		73		0.37		0.58	
0910LM026-STA D	08/19/2009	12:00:00 PM	42	B-1	0.00070	U	310	M-3	0.0014	B	0.29	B	0.0040	B	0.61		100	M-3	78	M-3	78	M-3	0.40		0.58	
0910LM032-OS	09/23/2009	11:25:00 AM	36	B-1	0.00090	U	270	B-1	0.0014		0.22		0.0027		0.57		110		66	B-1	66	B-1	0.33		0.46	

OS Field and Flow Data							
Date	Time	pH (SU)	Temp (°C)	EC (uS/cm)	SpC (uS/cm)	Daily Mean Flow (cfs) ¹	Monthly Mean Flow (cfs) ¹
10/22/2008	1:10:00 PM	2.9	6.8	1585	2430	0.0116	0.01
11/18/2008	10:55:00 AM	2.9	6.0	1627	2554	0.0122	0.01
12/10/2008	10:40:00 AM	2.8	3.6	1487	2515	0.0117	0.01
01/14/2009	11:30:00 AM	2.8	2.9	1415	2449	0.0106	0.01
02/04/2009	11:00:00 AM	3.0	3.5	1458	2474	0.0125	0.01
03/18/2009	10:25:00 AM	2.8	4.5	1535	2521	0.0162	0.02
04/20/2009	11:25:00 AM	3.0	7.9	1699	2524	0.0184	0.02
05/27/2009	12:20:00 PM	2.7	11.1	1805	2460	0.0155	0.02
06/17/2009	11:35:00 AM	2.8	10.4	1824	2531	0.0154	0.02
07/22/2009	12:15:00 PM	2.8	13.2	1960	2528	0.0144	0.01
08/19/2009	11:50:00 AM	2.7	12.3	1192	1575	0.0139	0.01
08/19/2009	12:00:00 PM	2.7	12.3	1192	1575	0.0139	0.01
09/23/2009	11:25:00 AM	2.8	10.0	1795	2520	0.0123	0.01

Field Data:

EC - Electrical Conductivity

SpC - Specific Conductance

Units: SU - Standard Units; °C - degrees celsius; uS/cm - micro siemen per centimeter; cfs - cubic feet per second

1: Provisional data provided by the United States Geological Survey.

Q - Qualifiers:

B: Analyte was detected in the associated Method Blank.

B-1: Analyte was detected in the associated method blank. Analyte concentration in the sample is greater than 10x the concentration found in the method blank.

J: Analyte detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag). The J Flag is equivalent to the DNQ Estimated Concentration flag.

M-3: Results exceeded the linear range in the MS/MSD and therefore are not available for reporting. The batch was accepted based on acceptable recovery in the Blank Spike (LCS).

QM-4X: The spike recovery was outside of QC acceptance for the MS and/or MSD due to the analyte concentration being greater than 4 times the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limit.

R-08: The sample was diluted due to sample matrix resulting in elevated reporting limits.

U: Analyte included in the analysis, but not detected at the given Method Detection Limit (MDL)

Table B-17: Channel Under-Drain Laboratory and Field Results

CUD Dissolved Metals - mg/L																														
Sample ID	Date	Time	Al	Q	As	Q	Ca	Q	Cd	Q	Co	Q	Cr	Q	Cu	Q	Fe	Q	Mg	Q	Mn	Q	Ni	Q	Zn	Q	TDS	Q	Sulfate	Q
089LM042-CUD	10/22/2008	10:30:00 AM	28.6		0.267		327		0.0050	R-08, U	0.603		0.014	J	0.005	R-08, U	348		75		17.5	QM-4X	1.32		0.277		3030		3030	
089LM058-CUD	11/18/2008	9:10:00 AM	30.9		0.285		331		0.0050	R-08, U	0.649		0.012	J, R-08	0.005	R-08, U	370		77		18.4		1.43		0.289		3070		3070	
089LM071-CUD	12/10/2008	9:00:00 AM	32.7		0.245		341		0.0050	R-08, U	0.649		0.016	J, R-08	0.005	R-08, U	382		77		17.8		1.46		0.289		3210		3290	
089LM085-CUD	01/14/2009	10:35:00 AM	32.5		0.408		326		0.0050	R-08, U	0.660		0.016	J, R-08	0.005	R-08, U	369		73		17.5		1.45		0.292		3190		3080	
089LM098-CUD	02/04/2009	10:00:00 AM	32.6		0.483		331		0.0050	R-08, U	0.680		0.015	J, R-08	0.005	R-08, U	367		75		18.0		1.42		0.306		3180		3780	
089LM111-CUD	03/17/2009	1:15:00 PM	29.7		0.421		321		0.0050	U	0.614		0.009	J	0.005	U	322		73		17.2		1.30		0.274		3000		2800	
089LM123-CUD	04/20/2009	10:30:00 AM	39.7		0.506		305		0.0050	U	0.712		0.019	J	0.005	U	347		69		18.4		1.43		0.356		2800		1900	
089LM133- STA D	04/20/2009	10:35:00 AM	32.8		0.563		317		0.00085	U	0.641		0.0043		0.0012		324		72		16.9		1.47		0.222		2900		2000	
089LM137-CUD	05/27/2009	11:05:00 AM	36		0.45		290		0.00022	RL1,U	0.53		0.014		0.0091		330	B-1	71		17	B-1	0.96		0.25		3000		1900	
089LM153-CUD	06/17/2009	10:35:00 AM	39	M-3	0.44	M2	310		0.00055	RL1,U	0.46	M2	0.011		0.0069	RL1, J	350		74		18	M-3	0.93	M2	0.18	M2	3100		2800	
0910LM003-CUD	07/22/2009	11:05:00 AM	28		0.57		280		0.00055	RL1,U	0.55		0.010		0.0039	RL1, J	300		69		17	B-1	1.2		0.28		3100		2000	
0910LM016-CUD	08/19/2009	11:20:00 AM	31		0.46		300		0.00055	RL1,U	0.54		0.015		0.0047	J	320		69		17		1.2		0.29		3100		2000	B-1
0910LM029-CUD	09/23/2009	10:55:00 AM	23		0.36		290	B-1	0.0010	C, RL1,U	0.64		0.015	J	0.0050	RL1,U	370		71		17		1.4	B-1	0.27		3100		1900	

CUD Total Metals - mg/L																													
Sample ID	Date	Time	Al	Q	As	Q	Ca	Q	Cd	Q	Co	Q	Cr	Q	Cu	Q	Fe	Q	Mg	Q	Mn	Q	Ni	Q	Zn	Q			
089LM042-CUD	10/22/2008	10:30:00 AM	29.6	QM-4X	0.270		337		0.0050	R-08, U	0.631		0.014	J	0.005	R-08, U	352	QM-4X	78		17.4		1.35		0.284				
089LM058-CUD	11/18/2008	9:10:00 AM	31.0		0.277		333		0.0050	R-08, U	0.643		0.013	J, R-08	0.005	R-08, U	364		78		18.1		1.40		0.288				
089LM071-CUD	12/10/2008	9:00:00 AM	32.8		0.265		326		0.0050	R-08, U	0.667		0.015	J, R-08	0.005	R-08, U	377		74		18.3		1.50		0.309				
089LM085-CUD	01/14/2009	10:35:00 AM	35.1		0.412		340		0.0050	U	0.675		0.016	J	0.005	U	387		78		18.1		1.54		0.300				
089LM098-CUD	02/04/2009	10:00:00 AM	32.9		0.462		325		0.0050	R-08, U	0.650		0.014	J, R-08	0.005	R-08, U	371		75		17.6		1.42		0.300				
089LM111-CUD	03/17/2009	1:15:00 PM	28.6		0.429		321		0.0050	U	0.599		0.014	J	0.006	J	307		74		16.9		1.31		0.279				
089LM123-CUD	04/20/2009	10:30:00 AM	35.9		0.415		309		0.0050	U	0.637		0.016	J	0.033		310	QM-4X	72		16.4	QM-4X	1.28		0.329				
089LM133- STA D	04/20/2009	10:35:00 AM	33.3		0.440		321		0.00082	J	0.678		0.0138		0.0352		313		75		16.3		1.41		0.281				
089LM137-CUD	05/27/2009	11:05:00 AM	33		0.46		300		0.00022	RL1,U	0.52		0.015		0.011		350		73		16		0.97		0.25				
089LM153-CUD	06/17/2009	10:35:00 AM	35		0.43		320		0.00022	C, RL1,U	0.49		0.011		0.0039	RL1, J	340		78		18		1.1		0.22				
0910LM003-CUD	07/22/2009	11:05:00 AM	27		0.55		300		0.00055	C,U	0.61		0.015		0.0057	RL1, J	330		73		16		1.3		0.33	B-1			
0910LM016-CUD	08/19/2009	11:20:00 AM	29	B	0.43		310		0.00055	B, C, RL1,U	0.60	B	0.013		0.0048	RL1, J	330		75		18	B-1	1.3		0.43				
0910LM029-CUD	09/23/2009	10:55:00 AM	32	B-1	0.37		310	B-1	0.00050	C,U	0.56		0.011	J	0.0050	RL1,U	400		70	B-1	21		1.2		0.27				

CUD Field and Flow Data							
Date	Time	pH (SU)	Temp (°C)	EC (uS/cm)	SpC (uS/cm)	Daily Mean Flow (cfs) ¹	Monthly Mean Flow (cfs) ¹
10/22/2008	10:30:00 AM	4.5	8.1	1910	2774	0.0207	0.02
11/18/2008	9:10:00 AM	4.5	8.8	1930	2803	0.0213	0.02
12/10/2008	9:00:00 AM	4.4	8.7	1936	2811	e0.0214	0.02
01/14/2009	10:35:00 AM	4.3	8.7	1950	2832	0.0212	0.02
02/04/2009	10:00:00 AM	4.6	8.7	1948	2827	e0.0244	0.03
03/17/2009	1:15:00 PM	4.6	8.8	1841	2665	0.0349	0.04
04/20/2009	10:30:00 AM	4.5	8.6	1792	2620	0.0549	0.05
04/20/2009	10:35:00 AM	4.5	8.6	1792	2620	0.0549	0.05
05/27/2009	11:05:00 AM	4.4	8.7	1770	2570	0.0580	0.06
06/17/2009	10:35:00 AM	4.4	8.6	1849	2693	0.0576	0.05
07/22/2009	11:05:00 AM	4.7	8.9	1838	2654	e0.0487	0.05
08/19/2009	11:20:00 AM	4.6	9.0	1872	2687	0.0349	0.04
09/23/2009	10:55:00 AM	12:00	9.0	1889	2720	0.0262	0.03

Field Data:

EC - Electrical Conductivity

SpC - Specific Conductance

Units: SU - Standard Units; °C - degrees celsius; uS/cm - micro siemen per centimeter; cfs - cubic feet per second

1: Provisional data provided by the United States Geological Survey.

Q - Qualifiers:

B: Analyte was detected in the associated Method Blank.

B-1: Analyte was detected in the associated method blank. Analyte concentration in the sample is greater than 10x the concentration found in the method blank.

C: Calibration Verification recovery was above the method control limit for this analyte. Analyte not detected, data not impacted.

J: Analyte detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag). The J Flag is equivalent to the DNQ Estimated Concentration flag.

M2: The MS and/or MSD were below the acceptance limits due to sample matrix interference. See Blank Spike (LCS).

M-3: Results exceeded the linear range in the MS/MSD and therefore are not available for reporting. The batch was accepted based on acceptable recovery in the Blank Spike (LCS).

QM-4X: The spike recovery was outside of QC acceptance for the MS and/or MSD due to the analyte concentration being greater than 4 times the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limit.

RL1: Reporting limit raised due to sample matrix effects.

R-08: The sample was diluted due to sample matrix resulting in elevated reporting limits.

U: Analyte included in the analysis, but not detected at the given Method Detection Limit (MDL)

Table B-18: Station 1 Laboratory and Field Results

Sta 1 Dissolved Metals - mg/L																														
Sample ID	Date	Time	Al	Q	As	Q	Ca	Q	Cd	Q	Co	Q	Cr	Q	Cu	Q	Fe	Q	Mg	Q	Mn	Q	Ni	Q	Zn	Q	TDS	Q	Sulfate	Q
089LM043-STA 1	10/22/2008	9:35:00 AM	0.0583		0.0030	CONF	13		0.0005	U	0.0002	J	0.0015		0.0004	J	0.103		5		0.0040		0.0005	J	0.0011	J	116		8.18	
089LM059-STA 1	11/18/2008	8:25:00 AM	0.0550		0.0026	CONF	13		0.0005	U	0.0002	J	0.0012		0.0004	J	0.109		5		0.0033		0.0005	J	0.0008	J	132		8.60	
089LM072-STA 1	12/10/2008	8:20:00 AM	0.102		0.0027	CONF	16		0.0005	U	0.0003	J	0.0009		0.0006		0.116		6		0.0035		0.0009	J	0.0011	J	158		11.9	
089LM086-STA 1	01/14/2009	9:45:00 AM	0.0887		0.0022		12		0.0005	U	0.0003	J	0.0006		0.0004	J	0.091		4	J, R-08	0.0030		0.0007	J	0.0009	J	133		9.55	
089LM099-STA 1	02/04/2009	9:05:00 AM	0.140		0.0021		12		0.0005	U	0.0003	J	0.0014	A	0.0005		0.119		4	J, R-08	0.0024		0.0007	J	0.0008	J	137		10.2	
089LM112-STA 1	03/17/2009	11:50:00 AM	0.800		0.0021		12		0.0006	J	0.0019	A	0.0007		0.0012		0.590		4	J	0.0073		0.0013		0.0029		140		16	
089LM124-STA 1	04/20/2009	9:35:00 AM	1.52		0.0016	J	11		0.0005	U	0.0004	J	0.0014		0.0015		0.885		3	J	0.0067		0.0014		0.0036		120		8.4	
089LM138-STA 1	05/27/2009	9:05:00 AM	0.19	M1	0.0016		14		0.0011	U	0.0019	A	0.0007	U	0.00097	J	0.18	B-1	4.6		0.0082	B-1	0.00090	U	0.0029	J	120		12	
089LM154-STA 1	06/17/2009	9:25:00 AM	0.060		0.00070	U	15		0.0011	U	0.00015	U	0.00070	B,U	0.00091	J	0.13		4.9		0.0042		0.00090	B,U	0.0025	U	140		11	
089LM163-STA D	06/17/2009	9:30:00 AM	0.067		0.00070	U	14		0.0011	U	0.00017	J	0.00070	B,U	0.0017	J	0.14		4.7		0.0039		0.00090	B,U	0.0025	U	140		11	
0910LM004-STA 1	07/22/2009	9:55:00 AM	0.045		0.0024		15		0.0011	U	0.00037	J	0.00070	U	0.00075	U	0.19		5.5		0.0054	B	0.00090	U	0.0050	U	140		10	
0910LM017-STA 1	08/19/2009	10:15:00 AM	0.073		0.0043		13		0.0011	U	0.00081	J	0.00070	U	0.00075	U	0.18		4.8		0.0066		0.00090	U	0.0060	J	130		8.6	B-1
0910LM030-STA 1	09/23/2009	9:45:00 AM	0.063		0.0040		12	B-1	0.0010	C,U	0.0011	A	0.00090	U	0.00055	J	0.19		4.8		0.0080		0.00066	B-1, J	0.0025	U	130		8.5	

Sta 1 Total Metals - mg/L																										
Sample ID	Date	Time	Al	Q	As	Q	Ca	Q	Cd	Q	Co	Q	Cr	Q	Cu	Q	Fe	Q	Mg	Q	Mn	Q	Ni	Q	Zn	Q
089LM043-STA 1	10/22/2008	9:35:00 AM	0.118		0.0022	CONF	13		0.0006	U	0.0001	U	0.0013		0.0007		0.181		5		0.0074		0.0006	J	0.0020	J
089LM059-STA 1	11/18/2008	8:25:00 AM	0.101		0.0020		13		0.0006	U	0.0001	U	0.0024		0.0008		0.148		5		0.0042		0.0006	J	0.0036	
089LM072-STA 1	12/10/2008	8:20:00 AM	0.181		0.0021		17		0.0006	U	0.0001	J	0.0016		0.0009		0.111		6		0.0062		0.0007	J	0.0026	
089LM086-STA 1	01/14/2009	9:45:00 AM	0.120	QM-07	0.0022		12		0.0011	J	0.0001	U	0.0011		0.0004	J	0.129		4	J, R-08	0.0047		0.0004	J	0.0005	J
089LM099-STA 1	02/04/2009	9:05:00 AM	0.208		0.0023		12		0.0006	U	0.0001	J	0.0007	A	0.0008		0.200		4	J, R-08	0.0042		0.0007	J	0.0019	J
089LM112-STA 1	03/17/2009	11:50:00 AM	1.22		0.0023		13		0.0005	J	0.0004	J,A	0.0008		0.0019		1.11		5		0.0141		0.0015		0.0053	
089LM124-STA 1	04/20/2009	9:35:00 AM	1.71		0.0020		10		0.0005	U	0.0004	J	0.0014		0.0023		1.42		3	J	0.0186		0.0016		0.0082	
089LM138-STA 1	05/27/2009	9:05:00 AM	0.45	MHA	0.0028		14		0.0010	U	0.00021	J,A	0.0013	J	0.0011	J	0.52		4.6		0.0098		0.00050	U	0.0069	J
089LM154-STA 1	06/17/2009	9:25:00 AM	0.30		0.0011		15		0.0011	C,U	0.00048	J	0.00090	U	0.0014	J	0.42		5.0		0.010		0.00068	J	0.0025	U
089LM163-STA D	06/17/2009	9:30:00 AM	0.27	M1	0.00089	J	15		0.0011	C,U	0.00020	J	0.00070	U	0.0010	J	0.38		4.9		0.0090		0.00059	J	0.0025	U
0910LM004-STA 1	07/22/2009	9:55:00 AM	0.22		0.0040		15		0.0011	C,U	0.00018	J	0.00070	U	0.0016	J	0.47		5.4		0.010		0.00090	U	0.0050	U
0910LM017-STA 1	08/19/2009	10:15:00 AM	0.50	B	0.0052		14		0.0011	B, C,U	0.00028	B, J	0.00077	J	0.0012	J	0.56		5.3		0.015	B-1	0.00090	U	0.0029	J
0910LM030-STA 1	09/23/2009	9:45:00 AM	0.19	B-1	0.0039		13	B-1	0.0010	J	0.00031	J,A	0.0013	J	0.00077	J	0.33		4.7	B-1	0.014		0.0010	J	0.0048	J

Sta 1 Field and Flow Data							
Date	Time	pH (SU)	Temp (°C)	EC (uS/cm)	SpC (uS/cm)	Daily Mean Flow (cfs) ¹	Monthly Mean Flow (cfs) ¹
10/22/2008	9:35:00 AM	7.4	0.4	80	Lerr	0.04	0.04
11/18/2008	8:25:00 AM	6.7	0.2	78	Lerr	e0.06	0.07
12/10/2008	8:20:00 AM	6.7	0.0	95	Lerr	e0.10	0.11
01/14/2009	9:45:00 AM	7.0	0.0	45	Lerr	e0.10	0.11
02/04/2009	9:05:00 AM	7.0	0.4	56	Lerr	0.05	0.04
03/17/2009	11:50:00 AM	6.7	0.0	78	Lerr	0.22	0.21
04/20/2009	9:35:00 AM	6.7	2.0	62	110	1.30	0.80
05/27/2009	9:05:00 AM	7.0	7.4	102	154	0.18	0.40
06/17/2009	9:25:00 AM	7.2	8.9	109	157	0.11	0.12
06/17/2009	9:30:00 AM	7.2	8.9	109	157	0.11	0.12
07/22/2009	9:55:00 AM	8.0	10.7	80	110	0.02	0.03
08/19/2009	10:15:00 AM	7.9	9.4	108	155	0.02	0.03
09/23/2009	9:45:00 AM	7.1	5.0	98	158	0.03	0.03

Field Data:

EC - Electrical Conductivity
 SpC - Specific Conductance
 Units: SU - Standard Units; °C - degrees celsius; uS/cm - micro siemen per centimeter; cfs - cubic feet per second
 Lerr - Instrument reading when instrument cannot compute SpC due to low water temperature.
 e - estimated

1: Provisional data provided by the United States Geological Survey.

Q - Qualifiers:

A: Anomalous value, see Table B-26, Water Board 2009 Year End Report
 B: Analyte was detected in the associated Method Blank.
 B-1: Analyte was detected in the associated method blank. Analyte concentration in the sample is greater than 10x the concentration found in the method blank.
 C: Calibration Verification recovery was above the method control limit for this analyte. Analyte not detected, data not impacted.
 CONF: Sample was re-analyzed and confirmed.
 J: Analyte detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag). The J Flag is equivalent to the DNQ Estimated Concentration flag.
 M1: The MS and/or MSD were above the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
 MHA: Due to high levels of analyte in the sample, the MS/MSD calculation does not provide useful spike recovery information. See Blank Spike (LCS).
 QM-07: The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
 R-08: The sample was diluted due to sample matrix resulting in elevated reporting limits.
 U: Analyte included in the analysis, but not detected at the given Method Detection Limit (MDL)

Table B-19: Station 15 Laboratory and Field Results

Sta 15 Dissolved Metals - mg/L																														
Sample ID	Date	Time	Al	Q	As	Q	Ca	Q	Cd	Q	Co	Q	Cr	Q	Cu	Q	Fe	Q	Mg	Q	Mn	Q	Ni	Q	Zn	Q	TDS	Q	Sulfate	Q
089LM044-STA 15	10/22/2008	1:50:00 PM	2.62		0.0060	J, R-08	215		0.00025	R-08, U	0.125		0.0005	R-08, U	0.0106		12.5		41		5.78		0.300		0.0609		1200		838	
089LM060-STA 15	11/18/2008	9:25:00 AM	2.44		0.0037	J	182		0.00114	J	0.0955		0.0010	U	0.0092		6.48		39		4.72		0.248		0.0656		1020		757	
089LM073-STA 15	12/10/2008	9:20:00 AM	2.71		0.0045	CONF	195		0.00043		0.0897		0.0001	J	0.0075		6.48		42		5.38		0.214		0.0468		1040		705	I-04
089LM081-STA D	12/10/2008	9:25:00 AM	2.64		0.0045		196		0.00041		0.0886		0.0001	J	0.0075		6.56		42		5.31		0.215		0.0464		1060		707	I-04
089LM087-STA 15	01/14/2009	12:30:00 PM	0.759		0.0056		141		0.00028		0.0901		0.0003	J	0.0050		8.63		31		4.29		0.177		0.0375		854		593	
089LM100-STA 15	02/04/2009	11:45:00 AM	0.832		0.0083		139		0.00030		0.0778		0.0001	J	0.0077		9.78		32		3.78		0.174		0.0402		842		551	
089LM113-STA 15	03/18/2009	11:05:00 AM	0.619		0.0075		122		0.00078		0.0709		0.0006		0.0520		8.71		28		3.13		0.158		0.0706		730		460	
089LM125-STA 15	04/20/2009	12:15:00 PM	0.0316		0.0038		46		0.00015	J	0.0310		0.0008		0.0025		3.79		11		1.25		0.0663		0.0154		290		160	
089LM139-STA 15	05/27/2009	12:50:00 PM	0.091		0.00080	J	200		0.00011	J	0.027		0.00070	U	0.0055		0.11	B	27		2.0	B-1	0.058		0.0082	J	920		600	
089LM155-STA 15	06/17/2009	12:10:00 PM	0.093		0.0013		230		0.00011	U	0.017		0.00070	B,U	0.0023		0.17		24		0.64		0.041	B-1	0.0054	J	1100		720	
	07/22/2009	creek dry, no sample collected																												
0910LM020-STA 15	08/19/2009	1:20:00 PM	0.11		0.0035		540		0.00012	J	0.017		0.0012	J	0.0053		0.49		61		1.8		0.043		0.012		2500		1600	B-1
0910LM033-STA 15	09/23/2009	12:35:00 PM	0.38		0.0011		330	B-1	0.00016	J	0.033		0.00090	U	0.0048		0.58		58		2.8		0.096	B-1	0.014		1900		1300	

Sta 15 Total Metals - mg/L																										
Sample ID	Date	Time	Al	Q	As	Q	Ca	Q	Cd	Q	Co	Q	Cr	Q	Cu	Q	Fe	Q	Mg	Q	Mn	Q	Ni	Q	Zn	Q
089LM044-STA 15	10/22/2008	1:50:00 PM	4.89		0.0107		230		0.00038	J, R-08	0.123		0.0018	J, R-08	0.0132		13.4		44		5.59		0.290		0.0577	
089LM060-STA 15	11/18/2008	9:25:00 AM	6.39		0.0061		176		0.00033		0.179		0.0071		0.0188		13.1		38		9.05		0.477		0.117	
089LM073-STA 15	12/10/2008	9:20:00 AM	3.54		0.0038		199		0.00035		0.112		0.0011		0.0097		7.11		43		5.28		0.245		0.0520	
089LM081-STA D	12/10/2008	9:25:00 AM	3.77		0.0049		200		0.00036		0.112		0.0009		0.0096		7.10		43		5.73		0.249		0.0523	
089LM087-STA 15	01/14/2009	12:30:00 PM	2.89	QM-07	0.0073		145		0.00023	J	0.0751		0.0005	J	0.0070		8.15		33		4.15		0.185		0.0357	
089LM100-STA 15	02/04/2009	11:45:00 AM	3.04		0.0125		136		0.00031		0.0813		0.0004	J	0.0138		10.9		32		4.05		0.182		0.0435	
089LM113-STA 15	03/18/2009	11:05:00 AM	5.01		0.0119		124		0.00087		0.0738		0.0036		0.0835		11.5		29		3.15		0.171		0.0875	
089LM125-STA 15	04/20/2009	12:15:00 PM	2.50		0.0119		47		0.00020	J	0.0337		0.0014		0.0139		8.62		12		1.18		0.0756		0.0260	
089LM139-STA 15	05/27/2009	12:50:00 PM	0.47		0.0029		200		0.00013	J	0.028		0.0035		0.0078		1.7		26		2.1		0.059		0.011	J
089LM155-STA 15	06/17/2009	12:10:00 PM	0.37		0.0024		240		0.00013	J	0.017		0.00090	J	0.0043		0.91		26		0.66		0.044		0.022	
	07/22/2009	creek dry, no sample collected																								
0910LM020-STA 15	08/19/2009	1:20:00 PM	0.27	B	0.0043		540		0.00015	J, B	0.017	B-1	0.00070	U	0.0057		0.62		62		1.7	B-1	0.044		0.028	
0910LM033-STA 15	09/23/2009	12:35:00 PM	0.57	B-1	0.0020		340	B-1	0.00017	J	0.030		0.00090	C,U	0.0045		0.63		57	B-1	2.9		0.087		0.039	

Sta 15 Field and Flow Data							
Date	Time	pH (SU)	Temp (°C)	EC (uS/cm)	SpC (uS/cm)	Daily Mean Flow (cfs) ¹	Monthly Mean Flow (cfs) ¹
10/22/2008	1:50:00 PM	4.8	6.9	928	1420	0.08	0.08
11/18/2008	9:25:00 AM	4.2	2.0	680	1214	0.09	0.10
12/10/2008	9:20:00 AM	4.3	0.0	682	Lerr	e0.11	0.13
12/10/2008	9:25:00 AM	4.3	0.0	682	Lerr	e0.11	0.13
01/14/2009	12:30:00 PM	5.2	0.9	485	Lerr	e0.15	0.20
02/04/2009	11:45:00 AM	5.2	1.8	572	Lerr	e0.19	0.24
03/18/2009	11:05:00 AM	5.0	3.2	526	901	1.00	0.85
04/20/2009	12:15:00 PM	6.4	10.6	286	394	1.90	1.12
05/27/2009	12:50:00 PM	7.3	14.2	902	1152	0.29	0.46
06/17/2009	12:10:00 PM	7.1	14.5	1052	1316	0.17	0.19
07/22/2009	creek dry, no sample collected					0.01	0.04
08/19/2009	1:20:00 PM	6.5	17.5	1425	1664	0.14	0.08
09/23/2009	12:35:00 PM	5.5	11.8	1494	1999	0.04	0.04

Field Data:

EC - Electrical Conductivity

SpC - Specific Conductance

Units: SU - Standard Units; °C - degrees celsius; uS/cm - micro siemen per centimeter; cfs - cubic feet per second

Lerr - Instrument reading when instrument cannot compute SpC due to low water temperature.

e - estimated

1: Provisional data provided by the United States Geological Survey.

Q - Qualifiers:

B: Analyte was detected in the associated Method Blank.

B-1: Analyte was detected in the associated method blank. Analyte concentration in the sample is greater than 10x the concentration found in the method blank.

C: Calibration Verification recovery was above the method control limit for this analyte. Analyte not detected, data not impacted.

CONF: Sample was re-analyzed and confirmed.

J: Analyte detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag). The J Flag is equivalent to the DNQ Estimated Concentration flag.

QM-07: The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

R-08: The sample was diluted due to sample matrix resulting in elevated reporting limits.

U: Analyte included in the analysis, but not detected at the given Method Detection Limit (MDL)

Table B-20: Station 16 Laboratory and Field Results

Sta 16 Dissolved Metals - mg/L																														
Sample ID	Date	Time	Al	Q	As	Q	Ca	Q	Cd	Q	Co	Q	Cr	Q	Cu	Q	Fe	Q	Mg	Q	Mn	Q	Ni	Q	Zn	Q	TDS	Q	Sulfate	Q
089LM045-STA 16	10/22/2008	1:40:00 PM	0.0469		0.0118		58		0.00005	U	0.0084		0.0017		0.0019		0.034		14		0.699		0.0218		0.0029		330		164	
089LM061-STA 16	11/18/2008	9:35:00 AM	0.0066		0.0111		53		0.00005	U	0.0028		0.0016		0.0017		0.032		13		0.266	CONF	0.0090		0.0012	J	315		137	
089LM068-STA D	11/18/2008	9:40:00 AM	0.0080		0.0112		54		0.00006	J	0.0037		0.0016		0.0017		0.032		14		0.323		0.0108		0.0018	J	327		148	
089LM074-STA 16	12/10/2008	9:35:00 AM	0.0153		0.0089		60		0.00005	U	0.0077		0.0011		0.0015		0.084		15		0.586		0.0166		0.0022		338		150	
089LM088-STA 16	01/14/2009	12:40:00 PM	0.0046		0.0089		50		0.00005	U	0.0031		0.0009		0.0015		0.025		12		0.272		0.0102		0.0013	J	295		142	
089LM101-STA 16	02/04/2009	11:55:00 AM	0.0068		0.0081		53		0.00005	U	0.0046		0.0014	A	0.0012		0.023		13		0.412		0.0124		0.0017	J	313		149	
089LM114-STA 16	03/18/2009	11:15:00 AM	0.0978		0.0117		63		0.00005	U	0.0043		0.0008		0.0018		0.107		16		0.449		0.0117		0.0022		370		190	
089LM126-STA 16	04/20/2009	12:20:00 PM	0.0067		0.0206		56		0.00005	U	0.0012		0.0005		0.0022		0.037		13		0.127		0.0057		0.0011	J	310		140	
089LM140-STA 16	05/27/2009	12:55:00 PM	0.040		0.014		74		0.00011	U	0.0086		0.00070	U	0.0035		0.031	B, J	19		1.1	B-1	0.021		0.0030	J	450		260	
089LM156-STA 16	06/17/2009	12:25:00 PM	0.026		0.018		65		0.00011	U	0.0070		0.00070	B,U	0.0022		0.023	J	17		0.42		0.017	B-1	0.0025	U	420		210	
0910LM008-STA 16	07/22/2009	1:25:00 PM	0.024		0.025		46		0.00011	U	0.0039		0.00070	U	0.0028		0.033	J	12		0.69	B-1	0.0092		0.0050	U	300		140	
0910LM021-STA 16	08/19/2009	1:30:00 PM	0.073		0.017		54		0.00011	U	0.0072		0.0026		0.0027		0.035	J	13		0.86		0.015		0.014		300		150	B-1
0910LM034-STA 16	09/23/2009	12:45:00 PM	0.037		0.018		42	B-1	0.00010	C,U	0.0076		0.00090	U	0.0025		0.049		11		0.72		0.012	B-1	0.0033	J	260		120	

Sta 16 Total Metals - mg/L																										
Sample ID	Date	Time	Al	Q	As	Q	Ca	Q	Cd	Q	Co	Q	Cr	Q	Cu	Q	Fe	Q	Mg	Q	Mn	Q	Ni	Q	Zn	Q
089LM045-STA 16	10/22/2008	1:40:00 PM	0.338		0.0211		60		0.00006	U	0.0108		0.0018		0.0088		0.746		15		0.991		0.0257		0.0073	
089LM061-STA 16	11/18/2008	9:35:00 AM	0.0754		0.0103		51		0.00006	U	0.0028	*	0.0027		0.0031		0.174		13		0.294		0.0091		0.0037	
089LM068-STA D	11/18/2008	9:40:00 AM	0.0705		0.0100		52		0.00006	U	0.0032	*	0.0025		0.0030		0.186		13		0.338		0.0101		0.0037	
089LM074-STA 16	12/10/2008	9:35:00 AM	0.175		0.0100		58		0.00006	U	0.0095		0.0007		0.0035		0.460		14		0.705		0.0180		0.0043	
089LM088-STA 16	01/14/2009	12:40:00 PM	0.190	QM-07	0.0121		52		0.00006	U	0.0032		0.0006	CONF	0.0037		0.340		13		0.369		0.0092		0.0023	J
089LM101-STA 16	02/04/2009	11:55:00 AM	0.176		0.0113		50		0.00006	U	0.0046		0.0001	U, A	0.0034		0.324		13		0.492		0.0131		0.0038	
089LM114-STA 16	03/18/2009	11:15:00 AM	0.489		0.0141		65		0.00005	U	0.0041		0.0008		0.0034		0.555		16		0.484		0.0123		0.0049	
089LM126-STA 16	04/20/2009	12:20:00 PM	0.135		0.0212		54		0.00005	U	0.0014		0.0002	J	0.0038		0.233		13		0.166		0.0070		0.0054	
089LM140-STA 16	05/27/2009	12:55:00 PM	0.21		0.017		75		0.00011	U	0.010		0.00070	U	0.0046		0.41		19		1.2		0.021		0.0034	J
089LM156-STA 16	06/17/2009	12:25:00 PM	0.38		0.022		67		0.00011	U	0.0079		0.0013	J	0.0052		0.60		17		0.48		0.019		0.0058	J
0910LM008-STA 16	07/22/2009	1:25:00 PM	0.55		0.037		49		0.00011	U	0.0059		0.00070	U	0.0087		0.75		12		1.1		0.012		0.0058	B, J
0910LM021-STA 16	08/19/2009	1:30:00 PM	0.45	B	0.031		54		0.00011	B, C,U	0.0092	B-1	0.0012	J, B	0.0079		0.88		13		1.2	B-1	0.018		0.0040	J
0910LM034-STA 16	09/23/2009	12:45:00 PM	0.26	B-1	0.024		45	B-1	0.00010	C,U	0.0065		0.00090	U	0.0074		0.59		11	B-1	0.83		0.011		0.0043	J

Sta 16 Field Data					
Date	Time	pH (SU)	Temp (°C)	EC (uS/cm)	SpC (uS/cm)
10/22/2008	1:40:00 PM	7.3	5.5	309	492
11/18/2008	9:35:00 AM	6.7	2.2	308	549
11/18/2008	9:40:00 AM	6.7	2.2	308	549
12/10/2008	9:35:00 AM	6.7	0.0	292	Lerr
01/14/2009	12:40:00 PM	6.2	0.4	320	Lerr
02/04/2009	11:55:00 AM	6.9	0.9	246	Lerr
03/18/2009	11:15:00 AM	7.4	4.5	365	601
04/20/2009	12:20:00 PM	7.5	16.2	593	720
05/27/2009	12:55:00 PM	7.8	18.1	523	600
06/17/2009	12:25:00 PM	7.9	18.6	449	510
07/22/2009	1:25:00 PM	8.2	23.1	378	390
08/19/2009	1:30:00 PM	7.8	20.5	240	263
09/23/2009	12:45:00 PM	7.3	14.1	278	351

Field Data:

EC - Electrical Conductivity

SpC - Specific Conductance

Units: SU - Standard Units; °C - degrees celsius; uS/cm - micro siemen per centimeter;

Lerr - Instrument reading when instrument cannot compute SpC due to low water temperature.

Q - Qualifiers:

A: Anomalous value, see Table B-26, Water Board 2009 Year End Report

B: Analyte was detected in the associated Method Blank.

B-1: Analyte was detected in the associated method blank. Analyte concentration in the sample is greater than 10x the concentration found in the method blank.

C: Calibration Verification recovery was above the method control limit for this analyte. Analyte not detected, data not impacted.

CONF: Sample was re-analyzed and confirmed.

J: Analyte detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag). The J Flag is equivalent to the DNQ Estimated Concentration flag.

QM-07: The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

U: Analyte included in the analysis, but not detected at the given Method Detection Limit (MDL)

*: Result failed the Relative Percent Difference assessment

Table B-21: Station 22 Laboratory and Field Results

Sta 22 Dissolved Metals - mg/L																														
Sample ID	Date	Time	Al	Q	As	Q	Ca	Q	Cd	Q	Co	Q	Cr	Q	Cu	Q	Fe	Q	Mg	Q	Mn	Q	Ni	Q	Zn	Q	TDS	Q	Sulfate	Q
089LM046-STA 22	10/22/2008	12:45:00 PM	0.0023		0.0005	J	23		0.00005	U	0.0002	J	0.0014		0.0002	J	0.019		5		0.0087		0.0006	J	0.0008	J	120		1.24	
089LM062-STA 22	11/18/2008	11:10:00 AM	0.0017	J	0.0006	J	24		0.00007	J	0.0003	J	0.0020		0.0002	J	0.024		5		0.0010		0.0006	J	0.0004	U	129		1.27	
089LM075-STA 22	12/10/2008	11:15:00 AM	0.0022		0.0006	J	24		0.00009	J	0.0003	J	0.0003	J	0.0003	J	0.012		5		0.0019		0.0011		0.0005	J	123		1.32	
089LM089-STA 22	01/14/2009	11:10:00 AM	0.0013	J	0.0005	J	23		0.00005	U	0.0002	J	0.0009		0.0002	J	0.014		5		0.0007		0.0008	J	0.0005	J	125		1.59	
089LM102-STA 22	02/04/2009	10:40:00 AM	0.0030		0.0005	J	23		0.00005	U	0.0001	J	0.0025	A	0.0003	J	0.012		5		0.0006		0.0007	J	0.0004	U	134		1.49	
089LM115-STA 22	03/18/2009	10:05:00 AM	0.0111		0.0005	J	24		0.00005	U	0.0007		0.0003	J	0.0003	J	0.024		5		0.0017		0.0008	J	0.0006	J	130		2.9	
089LM127-STA 22	04/20/2009	11:05:00 AM	0.0163		0.0009	J	25		0.00005	U	0.0005		0.0005		0.0003	J	0.115		5		0.0060		0.0012		0.0006	J	120		2.4	
089LM141-STA 22	05/27/2009	12:05:00 PM	0.0060	U	0.00070	U	23		0.00061	J	0.00023	J	0.00070	U	0.00075	U	0.080		5.2		0.0022	B	0.00090	U	0.013		110		0.94	
089LM157-STA 22	06/17/2009	11:15:00 AM	0.0092	J	0.00070	U	23		0.00011	U	0.00022	J	0.00070	B,U	0.00075	U	0.020	J	5.4		0.0029		0.00090	B,U	0.0025	U	140		1.2	
0910LM005-STA 22	07/22/2009	11:35:00 AM	0.0060	U	0.00070	U	22		0.00011	U	0.00025	J	0.00070	U	0.00075	U	0.015	U	5.1		0.00086	B, J	0.00090	U	0.0050	U	120		1.1	
0910LM013-STA D	07/22/2009	11:45:00 AM	0.0060	U	0.00070	U	22		0.00011	U	0.00017	J	0.00070	U	0.00075	U	0.023	J	5.1		0.00076	B, J	0.00090	U	0.0050	U	120		1.1	
0910LM018-STA 22	08/19/2009	12:25:00 PM	0.0094	J	0.0011		21		0.00011	U	0.00046	J	0.00070	U	0.0013	J	0.018	J	4.7		0.0015		0.00090	U	0.0050	U	110		1.1	B-1
0910LM031-STA 22	09/23/2009	11:50:00 AM	0.0085	U	0.0011		21	B-1	0.00010	C,U	0.00071	J	0.00090	U	0.00050	U	0.036		4.8		0.0023		0.00050	B,U	0.0025	U	120		1.2	

Sta 22 Total Metals - mg/L																														
Sample ID	Date	Time	Al	Q	As	Q	Ca	Q	Cd	Q	Co	Q	Cr	Q	Cu	Q	Fe	Q	Mg	Q	Mn	Q	Ni	Q	Zn	Q				
089LM046-STA 22	10/22/2008	12:45:00 PM	0.212		0.0001	U	24		0.00006	U	0.0002	J	0.0014		0.0005	J	0.262		5		0.0093		0.0007	J	0.0045					
089LM062-STA 22	11/18/2008	11:10:00 AM	0.123		0.0001	U	24		0.00006	U	0.0001	J	0.0025		0.0006		0.161		5		0.0064		0.0007	J	0.0027					
089LM075-STA 22	12/10/2008	11:15:00 AM	0.174		0.0001	U	24		0.00006	U	0.0001	J	0.0003	J	0.0004	J	0.093		5		0.0069		0.0005	J	0.0026					
089LM089-STA 22	01/14/2009	11:10:00 AM	0.0889	QM-07	0.0005	J	24		0.00006	U	0.0001	U	0.0012		0.0004	J	0.112		5		0.0039		0.0007	J	0.0007	J				
089LM102-STA 22	02/04/2009	10:40:00 AM	0.148		0.0003	J	24		0.00006	U	0.0001	J	0.0007	A	0.0006		0.150		5		0.0052		0.0009	J	0.0025					
089LM115-STA 22	03/18/2009	10:05:00 AM	0.221		0.0005		24		0.00005	U	0.0002	J	0.0006		0.0008		0.249		5		0.0074		0.0009	J	0.0054					
089LM127-STA 22	04/20/2009	11:05:00 AM	0.337		0.0007		26		0.00005	U	0.0002	J	0.0003	J	0.0008		0.413		6		0.0108		0.0011		0.0039					
089LM141-STA 22	05/27/2009	12:05:00 PM	0.14		0.00076	J	23		0.00011	U	0.00019	J	0.00070	U	0.00075	U	0.20		5.2		0.0060		0.00090	U	0.0070	J				
089LM157-STA 22	06/17/2009	11:15:00 AM	0.079		0.00070	U	24		0.00011	C,U	0.00016	J	0.00070	U	0.00075	U	0.10		5.5		0.0038		0.00090	U	0.0035	J				
0910LM005-STA 22	07/22/2009	11:35:00 AM	0.040		0.00070	U	23		0.00011	C,U	0.00015	U	0.00070	U	0.00075	U	0.050		5.3		0.0022		0.00090	U	0.0050	U				
0910LM013-STA D	07/22/2009	11:45:00 AM	0.045		0.00070	U	22		0.00011	C,U	0.00015	U	0.00070	C,U	0.00075	U	0.035	J	4.9		0.0019		0.00090	U	0.0050	U				
0910LM018-STA 22	08/19/2009	12:25:00 PM	0.055	B	0.00070	U	23		0.00011	B, C,U	0.00015	B,U	0.00070	U	0.00075	U	0.10		5.2		0.0037		0.00090	U	0.0050	U				
0910LM031-STA 22	09/23/2009	11:50:00 AM	0.12	B-1	0.0011		22	B-1	0.00010	C,U	0.00021	J	0.00090	C,U	0.00084	J	0.17		4.8	B-1	0.0097		0.00057	J	0.0025	U				

Sta 22 Field and Flow Data							
Date	Time	pH (SU)	Temp (°C)	EC (uS/cm)	SpC (uS/cm)	Daily Mean Flow (cfs) ¹	Monthly Mean Flow (cfs) ¹
10/22/2008	12:45:00 PM	7.4	8.5	123	179	0.19	0.19
11/18/2008	11:10:00 AM	7.5	7.6	128	191	0.19	0.20
12/10/2008	11:15:00 AM	7.2	4.9	117	190	0.20	0.20
01/14/2009	11:10:00 AM	7.6	2.8	0.0	0.2	0.19	0.20
02/04/2009	10:40:00 AM	7.5	3.9	115	192	0.19	0.20
03/18/2009	10:05:00 AM	7.5	5.4	75	120	0.24	0.22
04/20/2009	11:05:00 AM	7.4	13.2	141	182	e0.15	0.16
05/27/2009	12:05:00 PM	7.5	17.4	167	196	0.11	0.12
06/17/2009	11:15:00 AM	7.5	14	157	198	0.11	0.11
07/22/2009	11:35:00 AM	8.4	16.5	155	185	0.15	0.14
07/22/2009	11:45:00 AM	8.4	16.5	155	185	0.15	0.14
08/19/2009	12:25:00 PM	8.0	15.7	107	129	0.18	0.18
09/23/2009	11:50:00 AM	7.3	11.5	140	189	0.16	0.15

Field Data:

EC - Electrical Conductivity

SpC - Specific Conductance

Units: SU - Standard Units; °C - degrees celsius; uS/cm - micro siemen per centimeter; cfs - cubic feet per second

e - estimated

1: Provisional data provided by the United States Geological Survey.

Q - Qualifiers:

A: Anomalous value, see Table B-26, Water Board 2009 Year End Report

B: Analyte was detected in the associated Method Blank.

B-1: Analyte was detected in the associated method blank. Analyte concentration in the sample is greater than 10x the concentration found in the method blank.

C: Calibration Verification recovery was above the method control limit for this analyte. Analyte not detected, data not impacted.

J: Analyte detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag). The J Flag is equivalent to the DNQ Estimated Concentration flag.

QM-07: The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recover

U: Analyte included in the analysis, but not detected at the given Method Detection Limit (MDL)

Table B-22: Station 23 Laboratory and Field Results

Sta 23 Dissolved Metals - mg/L																														
Sample ID	Date	Time	Al	Q	As	Q	Ca	Q	Cd	Q	Co	Q	Cr	Q	Cu	Q	Fe	Q	Mg	Q	Mn	Q	Ni	Q	Zn	Q	TDS	Q	Sulfate	Q
089LM047-STA 23	10/22/2008	2:20:00 PM	0.0152		0.0014	J, R-08	110		0.00025	R-08, U	0.0079		0.0017	J, R-08	0.0014	J, R-08	0.053		21		0.560		0.0378		0.0051	J, R-08	586		308	
089LM063-STA 23	11/18/2008	10:15:00 AM	0.0194		0.0015	CONF, J	101		0.00011	J	0.0134		0.0009		0.0011		0.030		22		0.859		0.0465		0.0054		542		337	
089LM076-STA 23	12/10/2008	9:55:00 AM	0.0188		0.0012	CONF, J	114		0.00008	J	0.0132		0.0007		0.0011		0.039		25		0.798		0.0448		0.0060		562		332	
089LM090-STA 23	01/14/2009	1:00:00 PM	0.0112		0.0009	J	94		0.00005	J	0.0087		0.0005		0.0012		0.016		21		0.637		0.0387		0.0051		539		337	
089LM095-STA D	01/14/2009	1:05:00 PM	0.0098		0.0008	J	95		0.00009	J	0.0088		0.0005		0.0011		0.012		22		0.629		0.0391		0.0052		536		332	
089LM103-STA 23	02/04/2009	12:45:00 PM	0.0111		0.0009	J	96		0.00005	J	0.0182		0.0008	A	0.0012		0.027		22		0.998		0.0556		0.0083		552		337	
089LM116-STA 23	03/18/2009	11:55:00 AM	0.123		0.0014	J	85		0.00021	J	0.0231		0.0011		0.0052		0.289		20		1.10		0.0597		0.0148		490		300	
089LM128-STA 23	04/20/2009	12:45:00 PM	0.0347		0.0012	J	49		0.00005	U	0.0168		0.0013		0.0020		0.077		12		0.804		0.0413		0.0044		280		150	
089LM142-STA 23	05/27/2009	1:40:00 PM	0.033		0.0031		74		0.00011	U	0.0020		0.00070	U	0.0033		0.015	B,U	17		0.27	B-1	0.011		0.0086	J	420		250	
089LM158-STA 23	06/17/2009	1:20:00 PM	0.019		0.0036		140		0.00011	U	0.0030		0.00070	B,U	0.0022		0.015	U	22		0.18		0.014	B	0.0025	U	740		430	
0910LM009-STA 23	07/22/2009	2:15:00 PM	0.017		0.0038		62		0.00011	U	0.0040	J	0.00070	U	0.0022		0.017	J	13		0.0063	B	0.0019	J	0.0050	U	370		210	
0910LM022-STA 23	08/19/2009	2:00:00 PM	0.017		0.0041		320		0.00011	U	0.0026		0.00070	U	0.0035		0.015	U	44		0.31		0.015		0.0047	J	1600		1000	B-1
0910LM035-STA 23	09/23/2009	1:10:00 PM	0.015		0.0046		75	B-1	0.00010	C,U	0.00059	J	0.00090	U	0.0026		0.026		16		0.0064		0.0037	B-1	0.0043	J	450		260	

Sta 23 Total Metals - mg/L																														
Sample ID	Date	Time	Al	Q	As	Q	Ca	Q	Cd	Q	Co	Q	Cr	Q	Cu	Q	Fe	Q	Mg	Q	Mn	Q	Ni	Q	Zn	Q		Q		Q
089LM047-STA 23	10/22/2008	2:20:00 PM	0.0305		0.0017	J, R-08	110		0.00006	U	0.0069		0.0010	J, R-08	0.0012	J, R-08	0.089		22		0.521		0.0334		0.0034	J, R-08				
089LM063-STA 23	11/18/2008	10:15:00 AM	0.195		0.0016		100		0.00006	U	0.0119		0.0019		0.0017		0.259		22		0.806		0.0435		0.0079					
089LM076-STA 23	12/10/2008	9:55:00 AM	0.107		0.0013		109		0.00006	U	0.0150		0.0009		0.0016		0.099		24		0.818		0.0463		0.0076					
089LM090-STA 23	01/14/2009	1:00:00 PM	0.0897	QM-07	0.0014		99		0.00006	U	0.0091		0.0007		0.0012		0.158		23		0.536		0.0409		0.0060					
089LM095-STA D	01/14/2009	1:05:00 PM	0.0936	QM-07	0.0009		98		0.00006	U	0.0089		0.0007		0.0012		0.161		23		0.543		0.0400		0.0059					
089LM103-STA 23	02/04/2009	12:45:00 PM	0.461		0.0030		97		0.00009	J	0.0184		0.0001	J,A	0.0042		0.923		23		1.02		0.0572		0.0120					
089LM116-STA 23	03/18/2009	11:55:00 AM	2.12		0.0065		86		0.00034		0.0241		0.0017		0.0268		2.92		21		1.15		0.0646		0.0294					
089LM128-STA 23	04/20/2009	12:45:00 PM	1.32		0.0077		49		0.00006	J	0.0176		0.0009		0.0093		4.15		12		0.777		0.0491		0.0165					
089LM142-STA 23	05/27/2009	1:40:00 PM	0.35		0.0059		75		0.00011	U	0.0029		0.00070	U	0.0049		1.1		18		0.37		0.012		0.0031	J				
089LM158-STA 23	06/17/2009	1:20:00 PM	0.26		0.0051		150		0.00011	U	0.0034		0.00070	U	0.0028		0.48		23		0.19		0.014		0.0088	J				
0910LM009-STA 23	07/22/2009	2:15:00 PM	0.067		0.0040		65		0.00011	U	0.00034	J	0.00070	U	0.0022		0.18		14		0.018		0.0020		0.0050	U				
0910LM022-STA 23	08/19/2009	2:00:00 PM	0.040	B	0.0038		310		0.00011	B, C,U	0.0022	B	0.00070	U	0.0037		0.059		44		0.33	B-1	0.016		0.0028	J				
0910LM035-STA 23	09/23/2009	1:10:00 PM	0.038		0.0041		81	B-1	0.00010	C,U	0.00029	J	0.00090	U	0.0024		0.069		15	B-1	0.011		0.0032		0.013					

Sta 23 Field and Flow Data							
Date	Time	pH (SU)	Temp (°C)	EC (uS/cm)	SpC (uS/cm)	Daily Mean Flow (cfs) ¹	Monthly Mean Flow (cfs) ¹
10/22/2008	2:20:00 PM	7.5	4.4	466	769	0.23	0.24
11/18/2008	10:15:00 AM	6.7	0.9	402	Lerr	0.31	0.32
12/10/2008	9:55:00 AM	7.1	0.0	422	Lerr	e0.25	0.33
01/14/2009	1:00:00 PM	6.8	0.0	383	Lerr	0.42	0.56
01/14/2009	1:05:00 PM	6.8	0.0	383	Lerr	0.42	0.56
02/04/2009	12:45:00 PM	7.5	0.0	392	Lerr	0.50	0.44
03/18/2009	11:55:00 AM	6.9	2.6	291	503	2.3	1.78
04/20/2009	12:45:00 PM	7.1	9.9	284	399	3.3	1.94
05/27/2009	1:40:00 PM	7.7	17.3	503	590	0.52	0.77
06/17/2009	1:20:00 PM	8.0	14.8	755	937	0.53	0.47
07/22/2009	2:15:00 PM	8.4	23.5	487	501	0.01	0.07
08/19/2009	2:00:00 PM	8.0	18.8	1155	1310	0.11	0.06
09/23/2009	1:10:00 PM	7.7	11.4	468	632	0.04	0.04

Field Data:

EC - Electrical Conductivity

SpC - Specific Conductance

Units: SU - Standard Units; °C - degrees celsius; uS/cm - micro siemen per centimeter; cfs - cubic feet per second

Lerr - Instrument reading when instrument cannot compute SpC due to low water temperature.

e - estimated

1: Provisional data provided by the United States Geological Survey.

Q - Qualifiers:

A: Anomalous value, see Table B-26, Water Board 2009 Year End Report

B: Analyte was detected in the associated Method Blank.

B-1: Analyte was detected in the associated method blank. Analyte concentration in the sample is greater than 10x the concentration found in the method blank.

C: Calibration Verification recovery was above the method control limit for this analyte. Analyte not detected, data not impacted.

CONF: Sample was re-analyzed and confirmed.

J: Analyte detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag). The J Flag is equivalent to the DNQ Estimated Concentration flag.

QM-07: The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

R-08: The sample was diluted due to sample matrix resulting in elevated reporting limits.

U: Analyte included in the analysis, but not detected at the given Method Detection Limit (MDL)

Table B-23: Station 24 Laboratory and Field Results

Sta 24 Dissolved Metals - mg/L																														
Sample ID	Date	Time	Al	Q	As	Q	Ca	Q	Cd	Q	Co	Q	Cr	Q	Cu	Q	Fe	Q	Mg	Q	Mn	Q	Ni	Q	Zn	Q	TDS	Q	Sulfate	Q
089LM048-STA 24	10/22/2008	2:10:00 PM	0.0042		0.0012	CONF, J	16		0.00005	U	0.0003	J	0.0020		0.0002	J	0.044		5		0.0024		0.0006	J	0.0013	J	101		1.18	
089LM064-STA 24	11/18/2008	10:25:00 AM	0.0030		0.0012	J	18		0.00007	J	0.0003	J	0.0019		0.0003	J	0.015		6		0.0022		0.0006	J	0.0004	U	119		1.48	
089LM077-STA 24	12/10/2008	10:05:00 AM	0.0081		0.0012	CONF, J	18		0.00005	U	0.0004	J	0.0011		0.0003	J	0.021	CONF	6		0.0019		0.0008	J	0.0004	U	115		1.64	
089LM091-STA 24	01/14/2009	1:10:00 PM	0.0052		0.0011	J	17		0.00005	U	0.0003	J	0.0009		0.0002	J	0.021		6		0.0013		0.0007	J	0.0004	U	116		1.77	
089LM104-STA 24	02/04/2009	12:30:00 PM	0.0077		0.0011	J	16		0.00005	U	0.0002	J	0.0013	A,*	0.0003	J	0.018		6		0.0013		0.0005	J	0.0004	U	119		1.79	
089LM108-STA D	02/04/2009	12:35:00 PM	0.0061		0.0011	J	17		0.00005	U	0.0001	U	0.0001	U,*	0.0003	J	0.017		6		0.0012		0.0005	J	0.0004	U	117		1.82	
089LM117-STA 24	03/18/2009	12:05:00 PM	0.156		0.0012	J	17		0.00005	U	0.0005		0.0007		0.0014		0.189		6		0.0026		0.0008	J	0.0006	J	120		3.6	
089LM129-STA 24	04/20/2009	12:50:00 PM	0.0390		0.0014	J	17		0.00005	U	0.0005		0.0009		0.0005		0.057		6		0.0019		0.0007	J	0.0004	U	110		2.8	
089LM143-STA 24	05/27/2009	1:50:00 PM	0.011		0.00070	U	17		0.00011	U	0.00019	J	0.00070	U	0.00075	U	0.023	B, J	6.1		0.0047	B	0.00090	U	0.0025	U	110		1.2	
089LM159-STA 24	06/17/2009	1:10:00 PM	0.0067	J	0.0012		17		0.00011	U	0.00021	J	0.00070	U	0.00075	U	0.028	J	6.0		0.0037		0.00090	B,U	0.0025	U	120		1.0	
0910LM010-STA 24	07/22/2009	2:05:00 PM	0.0075	J	0.00070	U	16		0.00011	U	0.00015	U	0.00070	U	0.00075	U	0.021	J	5.5		0.0056	B	0.00090	U	0.0050	U	120		0.80	
0910LM023-STA 24	08/19/2009	1:50:00 PM	0.014		0.0013		16		0.00011	U	0.00085	J	0.0012	J, B	0.00075	U	0.022	J	5.5		0.0051		0.0011	J	0.0050	U	95		0.95	B-1
0910LM036-STA 24	09/23/2009	1:00:00 PM	0.0094	J	0.0015		14	B-1	0.00010	C,U	0.00067	J	0.00090	U	0.00050	U	0.023		4.9		0.0049		0.00050	B,U	0.0037	J	100		1.1	

Sta 24 Total Metals - mg/L																												
Sample ID	Date	Time	Al	Q	As	Q	Ca	Q	Cd	Q	Co	Q	Cr	Q	Cu	Q	Fe	Q	Mg	Q	Mn	Q	Ni	Q	Zn	Q		
089LM048-STA 24	10/22/2008	2:10:00 PM	0.0323		0.0004	CONF, J	17		0.00006	U	0.0001	U	0.0032		0.0003	J	0.035		6		0.0060		0.0005	J	0.0012	J		
089LM064-STA 24	11/18/2008	10:25:00 AM	0.0286		0.0001	U	17		0.00006	U	0.0001	U	0.0032		0.0006		0.045		6		0.0045		0.0006	J	0.0023	J		
089LM077-STA 24	12/10/2008	10:05:00 AM	0.0349		0.0001	CONF, U	18		0.00006	U	0.0001	U	0.0013		0.0006		0.037		6		0.0044		0.0004	J	0.0017	J		
089LM091-STA 24	01/14/2009	1:10:00 PM	0.0376	QM-07	0.0010		17		0.00006	U	0.0001	U	0.0009		0.0002	J	0.030		6		0.0033		0.0004	J	0.0005	U		
089LM104-STA 24	02/04/2009	12:30:00 PM	0.0446		0.0010		16		0.00006	U	0.0001	U	0.0002	J,A	0.0005	J	0.045		6		0.0044		0.0006	J	0.0010	J		
089LM108-STA D	02/04/2009	12:35:00 PM	0.0372		0.0008		17		0.00006	U	0.0001	U	0.0004	J	0.0005	J	0.035		6		0.0038		0.0006	J	0.0010	J		
089LM117-STA 24	03/18/2009	12:05:00 PM	0.453		0.0012		17		0.00005	U	0.0003	J	0.0004	J	0.0011		0.580		6		0.0086		0.0010		0.0023			
089LM129-STA 24	04/20/2009	12:50:00 PM	0.119		0.0011		16		0.00005	U	0.0001	J	0.0004	J	0.0007		0.140		6		0.0055		0.0007	J	0.0025			
089LM143-STA 24	05/27/2009	1:50:00 PM	0.37		0.00099	J	17		0.00011	U	0.00042	J	0.00070	U	0.00075	U	0.44		6.0		0.045		0.00090	U	0.0037	J		
089LM159-STA 24	06/17/2009	1:10:00 PM	0.13		0.00070	U	17		0.00011	U	0.00019	J	0.00070	U	0.00075	U	0.23		6.1		0.021		0.00090	U	0.0025	U		
0910LM010-STA 24	07/22/2009	2:05:00 PM	0.12		0.00070	U	16		0.00011	C,U	0.00016	J	0.00070	C,U	0.00075	U	0.090		5.4		0.018		0.00090	U	0.0050	U		
0910LM023-STA 24	08/19/2009	1:50:00 PM	0.11	B	0.0018		16		0.00011	B, C,U	0.00022	J, B	0.0012	J, B	0.00075	U	0.18		5.6		0.020	B-1	0.00090	U	0.0050	U		
0910LM036-STA 24	09/23/2009	1:00:00 PM	0.085		0.00090	U	15	B-1	0.00010	C,U	0.00014	J	0.00090	U	0.00050	U	0.13		5.1	B-1	0.015		0.00050	U	0.013			

Sta 24 Field Data					
Date	Time	pH (SU)	Temp (°C)	EC (uS/cm)	SpC (uS/cm)
10/22/2008	2:10:00 PM	7.5	4.1	95	158
11/18/2008	10:25:00 AM	7.6	2.4	93	163
12/10/2008	10:05:00 AM	7.5	0.0	89	Lerr
01/14/2009	1:10:00 PM	7.8	0.2	88	Lerr
02/04/2009	12:30:00 PM	7.7	1.2	89	Lerr
02/04/2009	12:35:00 PM	7.7	1.2	89	Lerr
03/18/2009	12:05:00 PM	7.6	4.5	99	163
04/20/2009	12:50:00 PM	8.0	10.4	113	157
05/27/2009	1:50:00 PM	8.0	15.1	136	168
06/17/2009	1:10:00 PM	8.0	14.8	755	937
07/22/2009	2:05:00 PM	8.6	18.6	68	78
08/19/2009	1:50:00 PM	8.3	15.4	108	132
09/23/2009	1:00:00 PM	7.4	9.8	109	154

Field Data:

EC - Electrical Conductivity

SpC - Specific Conductance

Units: SU - Standard Units; °C - degrees celsius; uS/cm - micro siemen per centimeter;

Lerr - Instrument reading when instrument cannot compute SpC due to low water temperature.

Q - Qualifiers:

A: Anomalous value, see Table B-26, Water Board 2009 Year End Report

B: Analyte was detected in the associated Method Blank.

B-1: Analyte was detected in the associated method blank. Analyte concentration in the sample is greater than 10x the concentration found in the method blank.

C: Calibration Verification recovery was above the method control limit for this analyte. Analyte not detected, data not impacted.

CONF: Sample was re-analyzed and confirmed.

J: Analyte detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag). The J Flag is equivalent to the DNQ Estimated Concentration flag.

QM-07: The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

U: Analyte included in the analysis, but not detected at the given Method Detection Limit (MDL)

*: Result failed the Relative Percent Difference assessment

Table B-24: Station 25 Laboratory and Field Results

Sta 25 Dissolved Metals - mg/L																														
Sample ID	Date	Time	Al	Q	As	Q	Ca	Q	Cd	Q	Co	Q	Cr	Q	Cu	Q	Fe	Q	Mg	Q	Mn	Q	Ni	Q	Zn	Q	TDS	Q	Sulfate	Q
089LM049-STA 25	10/22/2008	2:40:00 PM	0.0050		0.0013	CONF, J	35		0.00005	U	0.0010		0.0017		0.0004	J	0.024		9		0.0638		0.0048		0.0008	J	197		66.7	
089LM065-STA 25	11/18/2008	10:35:00 AM	0.0062		0.0013	CONF, J	36		0.00008	J	0.0024		0.0014		0.0004	J	0.023		10		0.148		0.0091		0.0012	J	218		70.2	
089LM078-STA 25	12/10/2008	10:20:00 AM	0.0069		0.0014	CONF, J	35		0.00005	U	0.0020		0.0011		0.0004	J	0.015	CONF	10		0.109		0.0077		0.0011	J	205		60.7	
089LM092-STA 25	01/14/2009	1:15:00 PM	0.0084		0.0012	J	36		0.00005	U	0.0018		0.0008		0.0004	J	0.020		10		0.103		0.0103		0.0010	J	222		83.0	
089LM105-STA 25	02/04/2009	1:00:00 PM	0.0081		0.0012	J	40		0.00005	U	0.0046		0.0014	A	0.0006		0.016		11		0.233		0.0143		0.0018	J	239		97.4	
089LM118-STA 25	03/18/2009	12:15:00 PM	0.0754		0.0012	J	48		0.00005	U	0.0089		0.0005		0.0027		0.095		12		0.434		0.0241		0.0041		290		130	
089LM121-STA D	03/18/2009	12:25:00 PM	0.0734		0.0012	J	47		0.00005	U	0.0091		0.0006		0.0028		0.093		12		0.444		0.0249		0.0040		290		130	
089LM130-STA 25	04/20/2009	1:10:00 PM	0.0474		0.0014	J	36		0.00005	U	0.0076		0.0005		0.0015		0.051		9		0.366		0.0192		0.0014	J	200		85	
089LM144-STA 25	05/27/2009	2:05:00 PM	0.016		0.0017		40		0.00011	U	0.00058	J	0.00070	U	0.0015	J	0.019	B, J	11		0.067	B-1	0.0026		0.015		220		93	
089LM160-STA 25	06/17/2009	1:50:00 PM	0.0081	J	0.0014		58		0.00011	U	0.00072	J	0.00070	B, U	0.0010	J	0.019		11		0.083		0.0035	B	0.0025	U	320		140	
0910LM011-STA 25	07/22/2009	2:40:00 PM	0.0060	U	0.00070	U	21		0.00011	U	0.00017	J	0.00070	U	0.00075	U	0.015	J	6.7		0.0074	B	0.00090	U	0.0027	J	140		24	
0910LM024-STA 25	08/19/2009	2:20:00 PM	0.014		0.0018		110		0.00011	U	0.00060	J	0.00070	U	0.0016	J	0.015	U	18		0.050		0.0038		0.0025	U	550		280	B-1
0910LM037-STA 25	09/23/2009	1:20:00 PM	0.0085	U	0.0013		24	B-1	0.00010	C, U	0.00090	J	0.00090	U	0.00050	U	0.023		6.9		0.0043		0.00088	B, J	0.0025	U	160		39	

Sta 25 Total Metals - mg/L																														
Sample ID	Date	Time	Al	Q	As	Q	Ca	Q	Cd	Q	Co	Q	Cr	Q	Cu	Q	Fe	Q	Mg	Q	Mn	Q	Ni	Q	Zn	Q				
089LM049-STA 25	10/22/2008	2:40:00 PM	0.0234		0.0002	CONF, J	36		0.00006	U	0.0009		0.0014		0.0006		0.041		9		0.0687		0.0052		0.0016	J				
089LM065-STA 25	11/18/2008	10:35:00 AM	0.0435		0.0001	CONF, U	36		0.00006	U	0.0020		0.0022		0.0008		0.075		10		0.145		0.0092		0.0032					
089LM078-STA 25	12/10/2008	10:20:00 AM	0.0356		0.0009		34		0.00006	U	0.0020		0.0013		0.0006		0.056		9		0.120		0.0072		0.0020	J				
089LM092-STA 25	01/14/2009	1:15:00 PM	0.0375	QM-07	0.0014		37		0.00006	U	0.0015		0.0009		0.0005	J	0.048		10		0.104		0.0085		0.0012	J				
089LM105-STA 25	02/04/2009	1:00:00 PM	0.120		0.0015		40		0.00006	U	0.0044		0.0001	J, A	0.0014		0.222		11		0.244		0.0150		0.0033					
089LM118-STA 25	03/18/2009	12:15:00 PM	1.11		0.0043		49		0.00014	J	0.0100		0.0008		0.0121		1.64		13		0.485		0.0272		0.0178					
089LM121-STA D	03/18/2009	12:25:00 PM	1.23		0.0043		49		0.00014	J	0.0103		0.0006		0.0125		1.81		13		0.493		0.0278		0.0149					
089LM130-STA 25	04/20/2009	1:10:00 PM	0.716		0.0047		35		0.00005	U	0.0086		0.0005		0.0052		2.27		10		0.403		0.0249		0.0092					
089LM144-STA 25	05/27/2009	2:05:00 PM	0.35		0.0023		39		0.00011	U	0.0016		0.00070	U	0.0023		0.69		10		0.14		0.0047		0.0043	J				
089LM160-STA 25	06/17/2009	1:50:00 PM	0.19		0.0011		58		0.00011	U	0.0011		0.00070	U	0.0033		0.32		12		0.11		0.0045		0.0025	U				
0910LM011-STA 25	07/22/2009	2:40:00 PM	0.11		0.0011		22		0.00011	C, U	0.00057	J	0.00070	C, U	0.00075	J	0.16		6.8		0.038		0.0011	J	0.0050	U				
0910LM024-STA 25	08/19/2009	2:20:00 PM	0.11	B	0.0024		110		0.00011	B, C, U	0.00096	J, B	0.00070	U	0.0067		0.22		18		0.080	B-1	0.0050		0.0037	J				
0910LM037-STA 25	09/23/2009	1:20:00 PM	0.054		0.00090	U	26	B-1	0.00010	C, U	0.00017	J	0.00090	U	0.00057	J	0.074		7.0	B-1	0.0097		0.00072	J	0.0025	U				

Sta 25 Field and Flow Data							
Date	Time	pH (SU)	Temp (°C)	EC (uS/cm)	SpC (uS/cm)	Daily Mean Flow (cfs) ¹	Monthly Mean Flow (cfs) ¹
10/22/2008	2:40:00 PM	8.0	5.0	188	303	1.3	1.2
11/18/2008	10:35:00 AM	7.5	2.0	174	311	1.5	1.46
12/10/2008	10:20:00 AM	7.7	0.0	161	Lerr	e1.1	1.31
01/14/2009	1:15:00 PM	7.7	0.5	174	Lerr	e1.2	1.54
02/04/2009	1:00:00 PM	7.9	1.3	194	Lerr	1.7	1.74
03/18/2009	12:15:00 PM	7.4	4.1	243	403	3.2	3.64
03/18/2009	12:25:00 PM	7.4	4.1	243	403	3.2	3.64
04/20/2009	1:10:00 PM	7.7	11.1	216	295	4.3	3.51
05/27/2009	2:05:00 PM	8.0	16.8	294	348	1.6	1.91
06/17/2009	1:50:00 PM	7.9	14.2	306	386	1.5	1.46
07/22/2009	2:40:00 PM	8.7	20.9	193	209	0.50	0.67
08/19/2009	2:20:00 PM	8.2	17.8	637	739	0.97	0.89
09/23/2009	1:20:00 PM	7.6	11.3	177	240	0.86	0.83

Field Data:

EC - Electrical Conductivity
 SpC - Specific Conductance
 Units: SU - Standard Units; °C - degrees celsius; uS/cm - micro siemen per centimeter; cfs - cubic feet per second

Lerr - Instrument reading when instrument cannot compute SpC due to low water temperature.

e - estimated

1: Provisional data provided by the United States Geological Survey.

Q - Qualifiers:

A: Anomalous value, see Table B-26, Water Board 2009 Year End Report

B: Analyte was detected in the associated Method Blank.

B-1: Analyte was detected in the associated method blank. Analyte concentration in the sample is greater than 10x the concentration found in the method blank.

C: Calibration Verification recovery was above the method control limit for this analyte. Analyte not detected, data not impacted.

CONF: Sample was re-analyzed and confirmed.

J: Analyte detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag). The J Flag is equivalent to the DNQ Estimated Concentration flag.

QM-07: The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

U: Analyte included in the analysis, but not detected at the given Method Detection Limit (MDL)

Table B-25: Semiannual Stations Laboratory and Field Results

Dissolved Metals - mg/L																															
Station	Sample ID	Date	Time	Al	Q	As	Q	Ca	Q	Cd	Q	Co	Q	Cr	Q	Cu	Q	Fe	Q	Mg	Q	Mn	Q	Ni	Q	Zn	Q	TDS	Q	Sulfate	Q
Delta Seep	089LM053-DS	10/22/2008	10:50:00 AM	3.97		0.072		280		0.0010	U	0.205		0.001	U	0.030		19.7		74		13.3	QM-4X	0.389		0.116		1610		1030	
Delta Seep	089LM052-STA D	10/22/2008	11:00:00 AM	4.46		0.065		278		0.0010	U	0.198		0.001	U	0.029		19.6		73		13.0		0.379		0.113		1630		1040	
Delta Seep	089LM148-DS	05/27/2009	10:50:00 AM	0.83		0.061		270		0.00011	U	0.18		0.00070	U	0.0070		20	B-1	80		14	B-1	0.33		0.051		1600		1100	
STA 26	089LM055-STA 26	10/22/2008	3:40:00 PM	0.0035		0.0055		30		0.00005	U	0.0004	J	0.0022		0.0004	J	0.034		10		0.0172		0.0019		0.0007	J	202		41.5	
STA 26	089LM150-STA 26	05/27/2009	3:05:00 PM	0.012		0.0047		32		0.00011	U	0.00038	J	0.00070	U	0.0019	J	0.034	B, J	11		0.027	B-1	0.0016	J	0.0039	J	200		53	
4L Creek		10/22/2008	no sample - station dry																												
4L Creek	089LM149-4L	05/27/2009	10:15:00 AM	0.017		0.0029		42		0.00011	U	0.00056	J	0.00070	U	0.0016	J	0.015	B,U	11		0.0017		0.0011	J	0.0025	U	260		130	
4L Creek	089LM147-STA D	05/27/2009	10:25:00 AM	0.017		0.0024		43		0.00011	U	0.00033	J	0.00070	U	0.0012	J	0.015	B,U	11		0.0016		0.00090	U	0.0025	U	260		130	

Total Metals - mg/L																											
Station	Sample ID	Date	Time	Al	Q	As	Q	Ca	Q	Cd	Q	Co	Q	Cr	Q	Cu	Q	Fe	Q	Mg	Q	Mn	Q	Ni	Q	Zn	Q
Delta Seep	089LM053-DS	10/22/2008	10:50:00 AM	1.78	QM-4X, *	0.050	*	277		0.0010	U	0.201		0.001	J	0.009	*	27.8	QM-4X	73		12.9		0.352		0.058	*
Delta Seep	089LM052-STA D	10/22/2008	11:00:00 AM	5.60	*	0.078	*	276		0.0010	U	0.198		0.002	J	0.037	*	26.4		76		13.0	QM-4X	0.381		0.112	*
Delta Seep	089LM148-DS	05/27/2009	10:50:00 AM	0.89		0.063		280		0.00011	U	0.17		0.00070	U	0.0084		23		81		14		0.33		0.051	
STA 26	089LM055-STA 26	10/22/2008	3:40:00 PM	0.0424		0.0047		29		0.00006	U	0.0003	J	0.0030		0.0007		0.142		10		0.0256		0.0021		0.0022	J
STA 26	089LM150-STA 26	05/27/2009	3:05:00 PM	0.12		0.0048		31		0.00011	U	0.00076	J	0.00070	U	0.0017	J	0.25		10		0.055		0.0024		0.012	
4L Creek		10/22/2008	no sample - station dry																								
4L Creek	089LM149-4L	05/27/2009	10:15:00 AM	0.12		0.0032		42		0.00011	U	0.00015	J	0.00070	U	0.0016	J	0.022	J	11		0.0022		0.00090	U	0.0077	J
4L Creek	089LM147-STA D	05/27/2009	10:25:00 AM	0.10		0.0030		43		0.00011	U	0.00015	U	0.00070	U	0.0013	J	0.035		11		0.0021		0.00090	U	0.0025	U

Field and Flow Data								
Station	Date	Time	pH (SU)	Temp (°C)	EC (uS/cm)	SpC (uS/cm)	Daily Mean Flow (cfs) ¹	Monthly Mean Flow (cfs) ¹
Delta Seep	10/22/2008	10:50:00 AM	5.3	8.3	1219	1784	NA	NA
Delta Seep	10/22/2008	11:00:00 AM	5.3	8.3	1219	1784	NA	NA
Delta Seep	05/27/2009	10:50:00 AM	4.7	9.4	1370	1950	NA	NA
STA 26	10/22/2008	3:40:00 PM	7.7	11.3	213	288	2.6	2.7
STA 26	05/27/2009	3:05:00 PM	7.7	19.7	250	278	2.9	3.32
4L Creek	10/22/2008	no sample - station dry						
4L Creek	05/27/2009	10:15:00 AM	7.2	9.3	274	392	0.03	0.07
4L Creek	05/27/2009	10:25:00 AM	7.2	9.3	274	392	0.03	0.07

Field Data:

EC - Electrical Conductivity

SpC - Specific Conductance

Units: SU - Standard Units; °C - degrees celsius; uS/cm - micro siemen per centimeter; cfs - cubic feet per second

NA - Not Available

1: Provisional data provided by the United States Geological Survey.

Q - Qualifiers:

B: Analyte was detected in the associated Method Blank.

B-1: Analyte was detected in the associated method blank. Analyte concentration in the sample is greater than 10x the concentration found in the method blank.

J: Analyte detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag). The J Flag is equivalent to the DNQ Estimated Concentration flag.

QM-4X: The spike recovery was outside of QC acceptance for the MS and/or MSD due to the analyte concentration being greater than 4 times the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limit.

U: Analyte included in the analysis, but not detected at the given Method Detection Limit (MDL)

**Table B-26
2009 Surface Water Monitoring
Water Board Assigned Data Qualifiers**

Station Identification	Laboratory Report #	Sample Date	Sample Identification	LRWQCB-assigned Data Qualifier	Qualified Parameter(s)	Description of Anomalous Value(s)
Delta Seep (DS)	9020897	10/22/2008	089LM053-DS	*	Total Al Total As Total Cu Total Zn	Fails field duplicate RPD assessment (duplicate sample = 089LM052-Sta D)
Delta Seep (DS)	9020897	10/22/2008	089LM052-Sta D	*	Total Al Total As Total Cu Total Zn	Fails field duplicate RPD assessment (primary sample = 089LM053-DS)
Station 16	9030781	11/18/2008	089LM061-Sta 16	*	Total Co	Fails field duplicate RPD assessment (duplicate sample = 089LM068-Sta D)
Station 16	9030781	11/18/2008	089LM068-Sta D	*	Total Co	Fails field duplicate RPD assessment (primary sample = 089LM061-Sta 16)
Station 1	9041048	2/4/2009	089LM099-Sta 1	A	Total and Dissolved Cr	diss = 0.0014 mg/L; total = 0.0007 mg/L; dissolved concentration significantly exceeds total concentration
Station 16	9041048	2/4/2009	089LM101-Sta 16	A	Total and Dissolved Cr	diss = 0.0014 mg/L; total = <0.0001 mg/L; dissolved concentration significantly exceeds total concentration
Station 22	9041048	2/4/2009	089LM102-Sta 22	A	Total and Dissolved Cr	diss = 0.0025 mg/L; total = 0.0007 mg/L; dissolved concentration significantly exceeds total concentration
Station 23	9041048	2/4/2009	089LM103-Sta 23	A	Total and Dissolved Cr	diss = 0.0008 mg/L; total = 0.0001 mg/L; dissolved concentration significantly exceeds total concentration
Station 24	9041048	2/4/2009	089LM104-Sta 24	*	Dissolved Cr	Fails field duplicate RPD assessment (duplicate sample = 089LM108-Sta D)
Station 24	9041048	2/4/2009	089LM108-Sta D	*	Dissolved Cr	Fails field duplicate RPD assessment (primary sample = 089LM104-Sta 24)
Station 24	9041048	2/4/2009	089LM104-Sta 24	A	Total and Dissolved Cr	diss = 0.0013 mg/L; total = 0.0002 mg/L; dissolved concentration significantly exceeds total concentration
Station 25	9041048	2/4/2009	089LM105-Sta 25	A	Total and Dissolved Cr	diss = 0.0014 mg/L; total = <0.0001 mg/L; dissolved concentration significantly exceeds total concentration
Station 1	9051210	3/17/2009	089LM112-Sta 1	A	Total and Dissolved Co	diss = 0.0019 mg/L; total = 0.0004 mg/L; dissolved concentration significantly exceeds total concentration
Station 1	ISE2864	5/27/2009	089LM138-Sta 1	A	Total and Dissolved Co	diss = 0.0019 mg/L; total = 0.00021 mg/L; dissolved concentration significantly exceeds total concentration
Adit	ISF2080	6/17/2009	089LM151-Adit	A	Total Co Dissolved Co Dissolved Zn	significantly below historic levels
Station 1	ISI2231	9/23/2009	0910LM030-Sta 1	A	Total Co Dissolved Co	diss=0.011 mg/L; total=0.00031; dissolved concentration significantly exceeds total concentration

Qualifiers

* : Results failed the Relative Percent Difference (RPD) assessment

A: Anomalous value