

US EPA ARCHIVE DOCUMENT



Kennecott Eagle Minerals

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November 14, 2008

Rebecca L. Harvey
United States Environmental Protection Agency
Underground Injection Control Branch
Region 5
Attention Mail Code WU-16J
77 West Jackson Boulevard
Chicago, Illinois, 60604-3590

Subject: **Response to EPA's Request for Additional Information, dated October 30, 2008**
Kennecott Eagle Minerals Company (KEMC), UIC Permit Application Number MI-
103-5W20-0002

Dear Ms. Harvey:

On November 6, 2008 a request for additional information in a letter dated October 30, 2008, was received from the United States Environmental Protection Agency (EPA) to clarify and/or supplement information provided in KEMC's original UIC permit application and an earlier letter from KEMC dated August 21, 2008. In summary, EPA has requested information related to three items:

1. Additional information to support the degree of discontinuity and permeability of the silty-sand layer within the TWIS area.
2. Submittal of additional groundwater monitoring data within the TWIS area.
3. Additional analytical information for the TWIS area sediments.

In partial response to your request please find attached, additional information to address item number 2. KEMC intends to submit a response to address item number 1 by November 21, 2008 and information to address item number 3 will be submitted no later than December 19, 2008. The information KEMC will provide was based upon agreed submittal of information from an October 28, 2008 conference call with you and your staff.

KEMC sincerely appreciates the EPA's willingness to work collaboratively to ensure all the information to be submitted will provide EPA with sufficient information for a permitting decision.

Should you have any questions, please contact me at 906-486-1257.

Sincerely,

A handwritten signature in blue ink, appearing to read "Jon Cherry".

Jonathan C. Cherry, P.E.
General Manager

cc: Gene Smary, Warner, Norcross & Judd, LLP
Dennis Donohue, Warner, Norcross & Judd, LLP
Steve Donohue, Foth Infrastructure & Environment, LLC

Eagle Mine

2008 Background Water Quality Report for Groundwater Discharge Permit GW1810162

Prepared for

**Kennecott Eagle Minerals Company
October 2008**

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1.0 Introduction

In May 2008, Kennecott Eagle Minerals Company (KEMC) initiated six months of background groundwater quality data collection at locations associated with the proposed treated mine water discharge system at its Eagle Project (Project) in northern Marquette County, Michigan (Figure 1). This report presents the analytical water quality results and provides a characterization of background conditions as required under the schedule of compliance listed in Part 1, Condition 5 (f) of Michigan Department of Environmental Quality Groundwater Discharge Permit No. GW1810162 (Permit), issued December 14, 2007.

1.1 Site Description

The wells required for monitoring under this Permit are shown on Figure 2, along with the proposed treated water infiltration system (TWIS) location and other surface facility footprints.

The wells were installed and developed in March and April of 2008 (North Jackson Company 2008a). Potentiometric surface maps for the A zone and B/D zone are presented in Figures 3 and 4, respectively. These maps were generated from groundwater elevations recorded during May 2008 and reflect spring runoff and groundwater recharge conditions. These contours depict flow patterns consistent with those previously reported (North Jackson Company 2006a, 2006b) and described in the Permit application.

All potentiometric data strongly indicate flow towards the east/northeast from the proposed discharge area within the Salmon Trout River East Branch tributary system groundwater basin. Salmon Trout East Branch tributary streams are located approximately 3,000 to 7,000 feet downgradient from the TWIS.

As shown by the potentiometric surface contour models, downgradient wells are located at QAL050A, QAL051A/D, QAL052A, and QAL057A/D. Side-gradient and upgradient data are provided by wells QAL008A/D, QAL026A/D, QAL029A/D, QAL053A, QAL055A and QAL056A.

1.2 Scope of Document

Section 1 presents the site description, organization, content, and objectives of this report. Section 2 describes the methods used for groundwater quality sample collection and analysis. Section 3 includes field and laboratory analytical results and provides a statistical summary of background water quality for each monitoring location as required under the Permit (Part 1, Condition 5 (f)).

Supporting documentation data is included in the appendices as follows:

- Appendix A: Field Report
- Appendix B: Parameters, Analytical Methods and Reporting Limits
- Appendix C: Quality Control Report
- Appendix D: Lab Report
- Appendix E: Effect of Turbidity on Analytical Results
- Appendix F: Statistical Data Analysis

2.0 Methods

2.1 Groundwater Quality Sampling

Water quality samples were collected monthly over a 6-month period in 2008 to meet Permit requirements for establishing background conditions. Groundwater samples were collected at 14 locations (QAL008A/D, QAL026A/D, QAL029A/D, QAL051A, QAL052A, QAL053A, QAL055A, QAL056A and QAL057A/D) (Figure 2) on the following six events:

- May 14 and 15;
- June 10 and 11;
- July 1 and 2;
- August 12, 13 and 21;
- September 16, 17 and 18; and,
- October 1 and 2.

Samples were collected from each well using dedicated sampling pumps and discharge tubing. Sampling protocols comply with Michigan Department of Environmental Quality (MDEQ) requirements described in Remediation and Redevelopment Division Operational Memorandum No. 2 (MDEQ 2007) and follow low-flow (minimum drawdown) procedures recommended by the United States Environmental Protection Agency (1996). Documentation of low-flow stabilization criteria are presented in the field sampling reports (Appendix A).

Although great care was taken to fully develop each well and select appropriate filter packs and screen slot sizes for the wells, significant amounts of fine-grained material (passing #200 sieve) exist in the screened formation at some locations. Turbidity measurements recorded while purging were therefore used to guide the decision of whether or not to field filter samples collected for metals parameters.

In general, if the turbidity measurement was less than 3 NTU, the sample was not filtered. Exceptions are noted in the field report and in water quality summary tables. In order to document the potential affect of turbidity on analytical results from filtered versus unfiltered samples, several locations were selected for both filtered and unfiltered metals and cation sample collection. These locations were selected to represent a range of turbidity measurements.

Samples were shipped under chain-of-custody to TriMatrix Laboratories Inc. (Grand Rapids, Michigan) in ice-filled coolers using an overnight delivery service. Field reports associated with each monthly sampling event are contained in Appendix A.

2.2 Analytical Methods

Samples were submitted for laboratory analysis of metals (antimony, arsenic, barium, beryllium, boron, cadmium, chromium, cobalt, copper, iron, lead, lithium, manganese, mercury, molybdenum, nickel, selenium, silver, strontium, thallium, vanadium and zinc), major anions (bicarbonate alkalinity, chloride, ammonia nitrogen, nitrate nitrogen, nitrite nitrogen, total phosphorous and sulfate) and major cations (calcium, magnesium, potassium and sodium). Hardness was calculated using calcium and magnesium concentrations (Freeze and Cherry 1979). Appendix B contains the laboratory analytical method and reporting limit for each parameter.

2.3 Statistical Methods

Statistical analysis was completed for each 6-month dataset in order to determine the representative background concentration of the aquifer at each location. The minimum, maximum, range, average, standard deviation and 95% confidence limit were calculated for all datasets with at least one detection (i.e., with a reported concentration above the reporting limit for that parameter). Each non-detection was included as one-half the parameter's reporting limit for these

calculations. The minimum reported concentration is listed as one-half the reporting limit if there was at least one non-detection.

To determine the representative concentration and the upper and lower 95% confidence limits (UCL and LCL), the following procedures were used:

1. For datasets with all reported concentrations below the reporting limit, the representative concentration is listed as less than the reporting limit and no confidence limits are calculated.
2. Datasets with 50% or less non-detections were tested to see if the data exhibited normal distribution using the statistical interface provided by the MDEQ website (MDEQ 2002), which relies upon the Shapiro-Wilk goodness of fit procedure.
3. For datasets that exhibited normal distribution, the 95% UCL and LCL were calculated using the tabulated percentile values for Student's t distribution for n-1 degrees of freedom, where n is the number of values used for the analysis.
4. As a quality control procedure, UCLs were also generated for normally distributed datasets using the MDEQ statistical interface tool, which relies upon the exact method.
5. For datasets that did not exhibit normal distribution and for datasets with greater than 50% non-detections (but less than 100%) the UCL and LCL were calculated as: mean +/- 1.65 *standard deviation (Idaho Department of Environmental Quality 2008).
6. In cases where the calculated representative concentration, UCL and/or LCL is less than the reporting limit for a given parameter, the value is listed as such.

7. For datasets with 50% or less non-detections, outliers were identified by determining whether a given value was within 3 standard deviations of the mean concentration of the balance of the dataset. Outliers were removed from the statistical analysis to determine representative concentration if a basis to do so was identified.

2.4 Field and Laboratory Quality Control

Field quality control procedures consisted of collecting a masked duplicate and field blank sample on each sampling date. Laboratory quality control procedures consisted of the analysis of matrix spike recovery, matrix spike duplicate, instrument blank, laboratory control, method preparation blank, and laboratory fortified blank samples.

3.0 Results

3.1 Field and Laboratory Quality Control Data

Field and laboratory quality control procedures and results were reviewed and determined acceptable. Analytical data presented in this report are considered valid for all samples. Quality control data for the field blank and masked duplicate samples are included in Appendix C. Complete laboratory reports are contained in Appendix D.

3.2 Groundwater Quality

Analytical results for each monthly sampling event at each monitoring location are included in Table 1. Field parameters (specific conductivity, pH dissolved oxygen and turbidity) are also included on the table.

Analytical results for samples collected to assess the affect of turbidity on metals and cation concentrations are included in Appendix E. These results support the use of the sampling protocol that requires field filtering of samples with turbidity values $> \sim 3$ NTU. Parameters that appear to be most strongly affected by turbidity levels and filtering include chromium, copper, iron, and manganese and nickel (Appendix E).

Summary statistics generated for each well, including the representative concentration and 95% confidence limits, are presented in Table 2. Appendix F contains statistical output (normality test results, UCLs generated by the MDEQ statistical interface tool, and the outlier analysis). UCLs generated by the MDEQ statistical interface tool (Appendix F) were compared and found to agree with those calculated the Student's t method (Table 2).

4.0 References

Freeze, R.A. and J. A. Cherry. 1979. Groundwater. Prentice-Hall, Inc. Englewood Cliffs, New Jersey, 604 pages.

Idaho Department of Environmental Quality. 2008. Statistical Guidance for Determining Background Ground Water Quality and Degradation (draft for public review, February 2008). Published on website: http://www.deq.state.id.us/water/data_reports/ground_water/statistical_guidance_draft_february_08.pdf.

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North Jackson Company. 2006a. Eagle Project Comprehensive Summary of Hydrogeologic Reports. Prepared for Kennecott Eagle Minerals Company.

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North Jackson Company. 2008a. Monitoring Well Installation Report for Groundwater Discharge Permit GW1810161. Prepared for Kennecott Eagle Minerals Company.

North Jackson Company. 2008b. Quality Assurance Project Plan for Groundwater Discharge Monitoring GW1810161. Prepared for Kennecott Eagle Minerals Company.

United States Environmental Protection Agency. 1996. Low-Flow (Minimal Drawdown) Ground-Water Sampling Procedures, EPA/540/S-95/504. Office of Solid Waste and Emergency Response, Washington, D.C.

TABLES

Table 1
Groundwater Quality Data
Quaternary Deposit Monitoring Location QAL008A
Eagle Project

	Units	QAL008A					
		May 08	Jun 08	Jul 08	Aug 08	Sep 08	Oct 08
		5/13/08 ^T	6/11/08 ^T	7/2/08 ^T	8/13/08 ^T	9/16/08 ^T	10/1/08 ^T
Field Parameters							
Specific Conductance	µmhos/cm @ 25°C	55	56	49	53	74	76
pH	SU	9.4	9.3	9.4	9.3	9.3	9.4
D.O.*	ppm	11.4	11.2	11.2	11.4	11.7	8
Turbidity	NTU	<1	<1	<1	<1	<1	<1
Metals							
Antimony	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Arsenic	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Barium	ug/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Beryllium	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Boron	ug/L	<20	<20	<20	<20	<20	<20
Cadmium	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chromium	ug/L	<1.0	<1.0	1.3	<1.0	<1.0	<1.0
Cobalt	ug/L	<15	<15	<15	<15	<15	<15
Copper	ug/L	<1.0	<1.0	1.4	<1.0	<1.0	<1.0
Iron	ug/L	35 a	21	43	<20	<20	<20
Lead	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Lithium	ug/L	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0
Manganese	ug/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Mercury	ng/L	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
Molybdenum	ug/L	<10	<10	<10	<10	<10	<10
Nickel	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Selenium	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Silver	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Strontium	ug/L	9.5	8.1	9.6	8.2	8.8	8.5
Thallium	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Vanadium	ug/L	<1.0	1.8	<1.0	<1.0	<1.0	<1.0
Zinc	ug/L	<10	<10	<10	<10	19	<10
Major Anions							
Alkalinity, Bicarbonate	ug/L	26	20 a,e	20	26 e	24	29
Chloride	ug/L	<1.0	<1.0	1.0	1.1	<1.0	<1.0
Nitrogen, Ammonia	ug/L	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Nitrogen, Nitrate	ug/L	0.15	0.20	0.21 e	0.18	0.18	0.22
Nitrogen, Nitrite	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Phosphorus, Total	ug/L	0.0227 s	0.0334	0.0152	0.0118	<0.0100	<0.0100
Sulfate	ug/L	1.9	1.7	1.9	2.0	1.9	1.9
Major Cations							
Calcium	mg/L	8.6	7.5	8.6	8.0	7.5	7.5
Magnesium	mg/L	1.2	1.2	1.3	1.3	1.2	1.2
Potassium	mg/L	0.52	0.62	0.50	<0.50	<0.50	<0.50
Sodium	mg/L	0.52	<0.50	0.57	0.56	0.56	0.51
General Chemistry							
Hardness, (calculated) as CaCO3	mg/L	26	24	27	25	24	24

* Measured D.O. concentrations are considered to be biased high due to required sample collection methods and resulting field measurement bias.

a Estimated value. Duplicate precision for this parameter exceeded quality control limit.

e Estimated value. The laboratory statement of data qualifications indicates that a quality control limit for this parameter was exceeded.

s Potential false positive value. Compound present in blank sample.

T Sample was not filtered and all values are total concentrations.

**Table 1
Groundwater Quality Data
Quaternary Deposit Monitoring Location QAL008D
Eagle Project**

	Units	QAL008D					
		May 08	Jun 08	Jul 08	Aug 08	Sep 08	Oct 08
		5/13/08 ^T	6/10/08 ^T	7/1/08 ^T	8/13/08 ^T	9/16/08 ^T	10/1/08 ^T
Field Parameters							
Specific Conductance	µmhos/cm @ 25°C	100	90	94	65	139	143
pH	SU	8.8	8.7	9.3	8.6	8.7	8.8
D.O.*	ppm	6.0	6.1	5.4	7.8	6.4	4
Turbidity	NTU	<1	<1	<1	<1	<1	<1
Metals							
Antimony	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Arsenic	ug/L	4.3	3.7	3.6	3.7	3.6	3.7
Barium	ug/L	7.1	6.7	7.0	6.7	7.0	6.6
Beryllium	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Boron	ug/L	<20	<20	<20	<20	<20	<20
Cadmium	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chromium	ug/L	<1.0	<1.0	5.0	1.7	1.4	1.2
Cobalt	ug/L	<15	<15	<15	<15	<15	<15
Copper	ug/L	<1.0	<1.0	2.1	<1.0	<1.0	<1.0
Iron	ug/L	20 a	<20	41	<20	<20	<20
Lead	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Lithium	ug/L	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0
Manganese	ug/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Mercury	ng/L	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
Molybdenum	ug/L	<10	<10	<10	<10	<10	<10
Nickel	ug/L	<2.0	<2.0	3.6	<2.0	<2.0	<2.0
Selenium	ug/L	<1.0	<1.0	1.5	<1.0	<1.0	<1.0
Silver	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Strontium	ug/L	43	38	42	39	41	39
Thallium	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Vanadium	ug/L	2.0	1.9	1.9	1.9	2.1	2.0
Zinc	ug/L	<10	<10	<10	<10	14	<10
Major Anions							
Alkalinity, Bicarbonate	ug/L	49	88 a,e	58	53 e	55	51
Chloride	ug/L	1.1	<1.0	<1.0	<1.0	<1.0	<1.0
Nitrogen, Ammonia	ug/L	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Nitrogen, Nitrate	ug/L	0.065	0.085	<0.050	0.063	0.056	0.075
Nitrogen, Nitrite	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Phosphorus, Total	ug/L	0.0226 s	0.0202	<0.0100	0.0143	0.297	<0.0100
Sulfate	ug/L	4.8	5.1	5.0	4.7	4.8	5.0
Major Cations							
Calcium	mg/L	15	13	14	14	14	14
Magnesium	mg/L	3.1	2.8	3.0	3.1	3.0	3.1
Potassium	mg/L	0.98	1.1	0.82	0.89	0.88	0.92
Sodium	mg/L	1.3	1.2 s	1.4	1.3	1.3	1.3
General Chemistry							
Hardness, (calculated) as CaCO3	mg/L	50	44	47	48	47	48

* Measured D.O. concentrations are considered to be biased high due to required sample collection methods and resulting field measurement bias.

a Estimated value. Duplicate precision for this parameter exceeded quality control limit.

e Estimated value. The laboratory statement of data qualifications indicates that a quality control limit for this parameter was exceeded.

s Potential false positive value. Compound present in blank sample.

T Sample was not filtered and all values are total concentrations.

Table 1
Groundwater Quality Data
Quaternary Deposit Monitoring Location QAL026A
Eagle Project

	Units	QAL026A					
		May 08	Jun 08	Jul 08	Aug 08	Sep 08	Oct 08
		5/15/08 ^T	6/10/08 ^T	7/2/08 ^T	8/12/08 ^T	9/17/08 ^T	10/1/08 ^T
Field Parameters							
Specific Conductance	µmhos/cm @ 25°C	31	34	25	27	41	44
pH	SU	7.0	7.4	7.4	7.4	7.3	7.3
D.O.*	ppm	10.7	10.8	10.9	11.4	11.6	8
Turbidity	NTU	8	<1	<1	<1	<1	<1
Metals							
Antimony	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Arsenic	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Barium	ug/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Beryllium	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Boron	ug/L	<20	<20	<20	<20	<20	<20
Cadmium	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chromium	ug/L	13**	<1.0	3.5	1.6	1.8	2.2
Cobalt	ug/L	<15	<15	<15	<15	<15	<15
Copper	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Iron	ug/L	540** a	47	150	55 e	22	82
Lead	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Lithium	ug/L	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0
Manganese	ug/L	9.7**	<5.0	<5.0	<5.0	<5.0	<5.0
Mercury	ng/L	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
Molybdenum	ug/L	<10	<10	<10	<10	<10	<10
Nickel	ug/L	9.6**	<2.0	<2.0	<2.0	<2.0	<2.0
Selenium	ug/L	<1.0	<1.0	1.2	<1.0	<1.0	<1.0
Silver	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Strontium	ug/L	10	8.2	9.5	9.1	9.6	9.1
Thallium	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Vanadium	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Zinc	ug/L	11	<10	<10	<10	<10	<10
Major Anions							
Alkalinity, Bicarbonate	ug/L	11	13 a,e	12	13 e	12	14
Chloride	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Nitrogen, Ammonia	ug/L	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Nitrogen, Nitrate	ug/L	0.33	0.33	0.20 e	0.16	0.21	0.22
Nitrogen, Nitrite	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Phosphorus, Total	ug/L	0.0243 s	0.0223	0.0195	0.0143	0.431	<0.0100
Sulfate	ug/L	2.0	1.7	1.8	1.9	2.2	2.2
Major Cations							
Calcium	mg/L	4.3	4.2	3.7	3.4	3.3	3.8
Magnesium	mg/L	0.81	0.69	0.64	0.64	0.62	0.70
Potassium	mg/L	0.72	0.80	0.59	0.51	<0.50	0.52
Sodium	mg/L	0.69	0.62 s	0.67	0.67	0.63	0.64
General Chemistry							
Hardness, (calculated) as CaCO3	mg/L	14	13	12	11	11	12

- * Measured D.O. concentrations are considered to be biased high due to required sample collection methods and resulting field measurement bias.
- a Estimated value. Duplicate precision for this parameter exceeded quality control limit.
- e Estimated value. The laboratory statement of data qualifications indicates that a quality control limit for this parameter was exceeded.
- s Potential false positive value. Compound present in blank sample.
- ^T Sample was not filtered and all values are total concentrations.
- ** Turbidity was >3 NTU however sample for this parameter was not filtered and reported concentration is elevated. This value is not included in summary statistics.

Table 1
Groundwater Quality Data
Quaternary Deposit Monitoring Location QAL026D
Eagle Project

	Units	QAL026D					
		May 08	Jun 08	Jul 08	Aug 08	Sep 08	Oct 08
		5/13/08 ^T	6/10/08 ^T	7/2/08 ^T	8/12/08 ^T	9/17/08 ^T	10/1/08 ^T
Field Parameters							
Specific Conductance	µmhos/cm @ 25°C	61	62	55	61	60	88
pH	SU	9.2	9.1	9.1	9.0	7.8	9.1
D.O.*	ppm	11.2	11.1	11.1	11.7	NM	8
Turbidity	NTU	<1	<1	<1	<1	<1	<1
Metals							
Antimony	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Arsenic	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Barium	ug/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Beryllium	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Boron	ug/L	<20	<20	<20	<20	<20	<20
Cadmium	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chromium	ug/L	<1.0	<1.0	1.4	<1.0	<1.0	1.1
Cobalt	ug/L	<15	<15	<15	<15	<15	<15
Copper	ug/L	<1.0	<1.0	<1.0	2.5	1.3	<1.0
Iron	ug/L	<20	20	13	21 e	<20	35
Lead	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Lithium	ug/L	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0
Manganese	ug/L	<5.0	<5.0	<5.0	<5.0	5.5	<5.0
Mercury	ng/L	<0.500	<0.500	0.548	<0.500	<0.500	<0.500
Molybdenum	ug/L	<10	<10	<10	<10	<10	<10
Nickel	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Selenium	ug/L	<1.0	<1.0	1.6	<1.0	<1.0	<1.0
Silver	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Strontium	ug/L	11	9.4	10	9.4	10	9.0
Thallium	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Vanadium	ug/L	<1.0	<1.0	1.0	<1.0	<1.0	<1.0
Zinc	ug/L	<10	<10	<10	<10	20	<10
Major Anions							
Alkalinity, Bicarbonate	ug/L	30	63 a,e	36	33 e	27	28
Chloride	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Nitrogen, Ammonia	ug/L	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Nitrogen, Nitrate	ug/L	0.092	0.11	0.11 e	0.093	0.078	0.12
Nitrogen, Nitrite	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Phosphorus, Total	ug/L	0.0224 s	0.0271	0.0193	0.0237	<0.0100	<0.0100
Sulfate	ug/L	2.0	1.8	2.0	2.1	2.0	2.0
Major Cations							
Calcium	mg/L	10	9.1	9.4	9.4	8.6	9.4
Magnesium	mg/L	1.4	1.2	1.3	1.4	1.3	1.4
Potassium	mg/L	0.52	0.75	0.50	<0.50	<0.50	<0.50
Sodium	mg/L	0.66	0.63 s	0.63	0.66	0.61	0.63
General Chemistry							
Hardness, (calculated) as CaCO3	mg/L	31	28	29	29	27	29

- * Measured D.O. concentrations are considered to be biased high due to required sample collection methods and resulting field measurement bias.
- a Estimated value. Duplicate precision for this parameter exceeded quality control limit.
- e Estimated value. The laboratory statement of data qualifications indicates that a quality control limit for this parameter was exceeded.
- s Potential false positive value. Compound present in blank sample.
- ^T Sample was not filtered and all values are total concentrations.
- NM Not measured.

Table 1
Groundwater Quality Data
Quaternary Deposit Monitoring Location QAL029A
Eagle Project

	Units	QAL029A					
		May 08	Jun 08	Jul 08	Aug 08	Sep 08	Oct 08
		5/14/08 ^D	6/10/08 ^D	7/1/08 ^D	8/12/08 ^D	9/16/08 ^D	10/1/08 ^D
Field Parameters							
Specific Conductance	µmhos/cm @ 25°C	53	50	68	57	32	61
pH	SU	8.4	9.1	8.7	7.4	7.1	7.2
D.O.*	ppm	11.2	11.1	11.0	NM	NM	11.5
Turbidity	NTU	24	71	54	10	6	9
Metals							
Antimony	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Arsenic	ug/L	2.0	2.8	3.6	2.1	<1.0	1.8
Barium	ug/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Beryllium	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Boron	ug/L	<20	<20	<20	<20	<20	<20
Cadmium	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chromium	ug/L	<1.0	<1.0	<1.0	2.0	<1.0	<1.0
Cobalt	ug/L	<15	<15	<15	<15	<15	<15
Copper	ug/L	<1.0	<1.0	<1.0	1.1	<1.0	<1.0
Iron	ug/L	<20	74	<20	<20	<20	<20
Lead	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Lithium	ug/L	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0
Manganese	ug/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Mercury	ng/L	4.16**	0.622 s	0.611	0.856 s	<0.500	<0.500
Molybdenum	ug/L	<10	<10	<10	<10	<10	<10
Nickel	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Selenium	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Silver	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Strontium	ug/L	6.7	7.9	11	17	7.5	7.0
Thallium	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Vanadium	ug/L	1.3	1.5	2.3	1.2	<1.0	<1.0
Zinc	ug/L	<10	<10	<10	<10	<10	<10
Major Anions							
Alkalinity, Bicarbonate	ug/L	26	23 a,e	53	42 e	34	32
Chloride	ug/L	<1.0	<1.0	1.7	<1.0	<1.0	<1.0
Nitrogen, Ammonia	ug/L	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Nitrogen, Nitrate	ug/L	<0.050	<0.050	0.056 e	0.050	<0.050	0.051
Nitrogen, Nitrite	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Phosphorus, Total	ug/L	0.0666 s	0.114	0.112	0.0280	0.0162	<0.0100
Sulfate	ug/L	3.7	5.4	10	3.7	2.5	2.3
Major Cations							
Calcium	mg/L	7.1	4.3	6.4	5.5	8.3	8.4
Magnesium	mg/L	0.75	<0.50	0.74	0.90	1.3	1.2
Potassium	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Sodium	mg/L	2.3	5.3	8.6	9.9	4.8	4.0
General Chemistry							
Hardness, (calculated) as CaCO3	mg/L	21	12	19	17	26	26

- * Measured D.O. concentrations are considered to be biased high due to required sample collection methods and resulting field measurement bias.
- a Estimated value. Duplicate precision for this parameter exceeded quality control limit.
- ^D Sample for metal and major cation parameters was filtered and values are dissolved concentrations (* indicates that mercury sample was not filtered).
- e Estimated value. The laboratory statement of data qualifications indicates that a quality control limit for this parameter was exceeded.
- s Potential false positive value. Compound present in blank sample.
- NM Not measured.
- ** Turbidity was >3 NTU however sample for this parameter was not filtered and reported concentration is elevated. This value is not included in summary statistics.

Table 1
Groundwater Quality Data
Quaternary Deposit Monitoring Location QAL029D
Eagle Project

	Units	QAL029D					
		May 08	Jun 08	Jul 08	Aug 08	Sep 08	Oct 08
		5/15/08 ^D	6/11/08 ^D	7/2/08 ^D	8/13/08 ^D	9/14/08 ^D	10/1/08 ^D
Field Parameters							
Specific Conductance	µmhos/cm @ 25°C	118	102	94	110	100	94
pH	SU	8.7	8.7	8.7	8.5	8.1	9.0
D.O.*	ppm	4.0	5.6	6.5	4.8	5.5	5.2
Turbidity	NTU	62	90	15	42	45	12
Metals							
Antimony	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Arsenic	ug/L	1.6	2.1	2.3	2.3	2.0	2.3
Barium	ug/L	7.6	7.3	6.7	7.0	6.0	5.7
Beryllium	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Boron	ug/L	<20	<20	<20	<20	<20	<20
Cadmium	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chromium	ug/L	5.9	<1.0	1.7	<1.0	<1.0	1.5
Cobalt	ug/L	<15	<15	<15	<15	<15	<15
Copper	ug/L	1.7	<1.0	<1.0	<1.0	<1.0	<1.0
Iron	ug/L	18 a	<20	<20	<20	<20	<20
Lead	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Lithium	ug/L	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0
Manganese	ug/L	15	15	13	11	<5.0	<5.0
Mercury	ng/L	5.96**	0.539 s	1.26	<0.500	<0.500	<0.500
Molybdenum	ug/L	<10	<10	<10	<10	<10	<10
Nickel	ug/L	5.8	<2.0	<2.0	<2.0	<2.0	<2.0
Selenium	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Silver	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Strontium	ug/L	29	28	26	29	24	23
Thallium	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Vanadium	ug/L	2.0	2.9	2.4	2.4	2.0	1.9
Zinc	ug/L	<10	<10	<10	<10	<10	<10
Major Anions							
Alkalinity, Bicarbonate	ug/L	82	84 a,e	60	58 e	54	53
Chloride	ug/L	1.0 s	1.2	<1.0	1.5	<1.0	<1.0
Nitrogen, Ammonia	ug/L	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Nitrogen, Nitrate	ug/L	0.059	0.092	0.10 e	0.054	0.074	0.098
Nitrogen, Nitrite	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Phosphorus, Total	ug/L	0.142	0.0868	0.121	0.100	0.0573	0.0346
Sulfate	ug/L	5.4	4.7	4.2	5.3	3.8	3.6
Major Cations							
Calcium	mg/L	16	15	15	15	15	14
Magnesium	mg/L	4.1	3.9	3.8	3.8	3.7	3.6
Potassium	mg/L	2.3	2.2	2.2	2.1	1.9	1.9
Sodium	mg/L	1.2	1.8	1.6	1.5	1.3	1.3
General Chemistry							
Hardness, (calculated) as CaCO3	mg/L	57	53	53	53	53	50

- * Measured D.O. concentrations are considered to be biased high due to required sample collection methods and resulting field measurement bias.
- a Estimated value. Duplicate precision for this parameter exceeded quality control limit.
- ^D Sample for metal and major cation parameters was filtered and values are dissolved concentrations (* indicates that mercury sample was not filtered).
- e Estimated value. The laboratory statement of data qualifications indicates that a quality control limit for this parameter was exceeded.
- s Potential false positive value. Compound present in blank sample.
- ** Turbidity was >3 NTU however sample for this parameter was not filtered and reported concentration is elevated. This value is not included in summary statistics.

Table 1
Groundwater Quality Data
Quaternary Deposit Monitoring Location QAL050A
Eagle Project

	Units	QAL050A					
		May 08	Jun 08	Jul 08	Aug 08	Sep 08	Oct 08
		5/13/08 ^T	6/11/08 ^T	7/2/08 ^T	8/13/08 ^T	9/17/08 ^T	10/1/08 ^T
Field Parameters							
Specific Conductance	µmhos/cm @ 25°C	76	70	70	79	NM	118
pH	SU	7.5	8.8	8.9	8.8	8.5	9.0
D.O.*	ppm	10.5	10.6	10.0	10.5	11.2	10
Turbidity	NTU	<1	<1	<1	<1	<1	<1
Metals							
Antimony	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Arsenic	ug/L	1.4	1.1	1.2	<1.0	<1.0	<1.0
Barium	ug/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Beryllium	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Boron	ug/L	<20	<20	<20	<20	<20	<20
Cadmium	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chromium	ug/L	<1.0	<1.0	1.2	<1.0	<1.0	<1.0
Cobalt	ug/L	<15	<15	<15	<15	<15	<15
Copper	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Iron	ug/L	<20	<20	<10	<20	<20	<20
Lead	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Lithium	ug/L	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0
Manganese	ug/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Mercury	ng/L	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
Molybdenum	ug/L	<10	<10	<10	<10	<10	<10
Nickel	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Selenium	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Silver	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Strontium	ug/L	22	19	21	19	20	19
Thallium	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Vanadium	ug/L	1.4	1.2	1.5	1.2	1.4	1.3
Zinc	ug/L	12	<10	<10	<10	<10	<10
Major Anions							
Alkalinity, Bicarbonate	ug/L	45	40 a,e	40	48 e	40	36
Chloride	ug/L	1.0 s	<1.0	<1.0	<1.0	<1.0	<1.0
Nitrogen, Ammonia	ug/L	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Nitrogen, Nitrate	ug/L	0.099	0.11	0.11 e	0.10	0.12	0.11
Nitrogen, Nitrite	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Phosphorus, Total	ug/L	0.0169 s	0.0205	0.0125	0.0103	<0.0100	<0.0100
Sulfate	ug/L	2.8	2.8	2.8	2.8	2.8	3.0
Major Cations							
Calcium	mg/L	12	11	12	11	11	12
Magnesium	mg/L	2.2	2.0	2.3	2.3	2.2	2.4
Potassium	mg/L	0.63	0.68	0.67	0.58	0.62	0.64
Sodium	mg/L	0.89	0.84 s	0.95	0.89	0.88	0.92
General Chemistry							
Hardness, (calculated) as CaCO3	mg/L	39	36	39	37	37	40

- * Measured D.O. concentrations are considered to be biased high due to required sample collection methods and resulting field measurement bias.
- a Estimated value. Duplicate precision for this parameter exceeded quality control limit.
- e Estimated value. The laboratory statement of data qualifications indicates that a quality control limit for this parameter was exceeded.
- s Potential false positive value. Compound present in blank sample.
- T Sample was not filtered and all values are total concentrations.
- NM Not measured.

Table 1
Groundwater Quality Data
Quaternary Deposit Monitoring Location QAL051A
Eagle Project

	Units	QAL051A					
		May 08	Jun 08	Jul 08	Aug 08	Sep 08	Oct 08
		5/15/08	6/11/08 ^D	7/2/08 ^D	8/21/08 ^D	9/17/08 ^D	10/2/08 ^D
Field Parameters							
Specific Conductance	µmhos/cm @ 25°C	i	i	i	i	i	i
pH	SU	i	i	i	i	i	i
D.O.*	ppm	i	i	i	i	i	i
Turbidity	NTU	i	19	i	13	21	12
Metals							
Antimony	ug/L	i	<1.0	<1.0	<1.0	<1.0	<1.0
Arsenic	ug/L	i	1.3	1.2	1.4	<1.0	1.5
Barium	ug/L	i	14	8.3	8.0	11	7.4
Beryllium	ug/L	i	<1.0	<1.0	<1.0	<1.0	<1.0
Boron	ug/L	i	38 s	20	<20	<20	<20
Cadmium	ug/L	i	<0.20	<0.20	<0.20	<0.20	<0.20
Chromium	ug/L	i	<1.0	1.2	<1.0	<1.0	<1.0
Cobalt	ug/L	i	<15	<15	<15	<15	<15
Copper	ug/L	i	<1.0	<1.0	<1.0	<1.0	<1.0
Iron	ug/L	i	<20	<20	<20	<20	<20
Lead	ug/L	i	<1.0	<1.0	<1.0	<1.0	<1.0
Lithium	ug/L	i	<8.0	<8.0	<8.0	<8.0	<8.0
Manganese	ug/L	i	10	17	22	12	11
Mercury	ng/L	i	2.37	2.22	1.74	0.801 s	0.546 s
Molybdenum	ug/L	i	46	13	<10	27	<10
Nickel	ug/L	i	<2.0	<2.0	<2.0	<2.0	<2.0
Selenium	ug/L	i	<1.0	<1.0	1.8	<1.0	<1.0
Silver	ug/L	i	<0.20	<0.20	<0.20	<0.20	<0.20
Strontium	ug/L	i	36	30	26	30	26
Thallium	ug/L	i	<2.0	<2.0	<2.0	<2.0	<2.0
Vanadium	ug/L	i	1.8	2.2	2.7	1.4	2.2
Zinc	ug/L	i	<10	<10	<10	<10	<10
Major Anions							
Alkalinity, Bicarbonate	ug/L	i	74 a,e	55	63 e	53	55
Chloride	ug/L	i	1.2	1.4	<1.0	<1.0	<1.0
Nitrogen, Ammonia	ug/L	i	<0.020	<0.020	<0.020	<0.020	<0.020
Nitrogen, Nitrate	ug/L	i	<0.050	<0.050	<0.050	<0.050	<0.050
Nitrogen, Nitrite	ug/L	i	<0.050	<0.050	<0.050	<0.050	<0.050
Phosphorus, Total	ug/L	i	0.0632	0.0367	0.0351	0.0204	0.0262
Sulfate	ug/L	i	4.1	4.1	3.3	2.7	3.1
Major Cations							
Calcium	mg/L	i	14	15	13	16	15
Magnesium	mg/L	i	2.0	2.2	1.9	2.3	2.2
Potassium	mg/L	i	5.0	2.2	1.8	3.3	1.9
Sodium	mg/L	i	3.1	1.8	1.2	1.6	1.5
General Chemistry							
Hardness, (calculated) as CaCO3	mg/L	i	43	47	40	49	47

- * Measured D.O. concentrations are considered to be biased high due to required sample collection methods and resulting field measurement bias.
- a Estimated value. Duplicate precision for this parameter exceeded quality control limit.
- ^D Sample for metal and major cation parameters was filtered and values are dissolved concentrations.
- e Estimated value. The laboratory statement of data qualifications indicates that a quality control limit for this parameter was exceeded.
- i Insufficient water for collection of field parameters and/or sample.
- s Potential false positive value. Compound present in blank sample.

**Table 1
Groundwater Quality Data
Quaternary Deposit Monitoring Location QAL051D
Eagle Project**

	Units	QAL051D					
		May 08	Jun 08	Jul 08	Aug 08	Sep 08	Oct 08
		5/13/08 ^T	6/10/08 ^T	7/1/08 ^T	8/12/08 ^T	9/16/08 ^T	10/2/08 ^T
Field Parameters							
Specific Conductance	µmhos/cm @ 25°C	117	111	116	80	172	180
pH	SU	7.4	8.7	9.5	8.5	8.5	8.7
D.O.*	ppm	0.2	0.2	0.2	0.2	0.3	0.3
Turbidity	NTU	<1	<1	<1	<1	<1	<1
Metals							
Antimony	ug/L	<1.0	<1.0	1.4	<1.0	<1.0	<1.0
Arsenic	ug/L	3.4	2.3	2.2	4.2	3.5	2.3
Barium	ug/L	15	14	15	14	16	15
Beryllium	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Boron	ug/L	23	21 s	21	21	21	21
Cadmium	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chromium	ug/L	<1.0	<1.0	1.3	<1.0	<1.0	<1.0
Cobalt	ug/L	<15	<15	<15	<15	<15	<15
Copper	ug/L	<1.0	1.3	1.2	<1.0	<1.0	1.4
Iron	ug/L	<20	<20	<20	<20	<20	<20
Lead	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Lithium	ug/L	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0
Manganese	ug/L	11	15	15	20	18	14
Mercury	ng/L	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
Molybdenum	ug/L	<10	<10	<10	<10	<10	<10
Nickel	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Selenium	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Silver	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Strontium	ug/L	86	79	88	81	88	89
Thallium	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Vanadium	ug/L	2.6	1.4	1.3	1.2	1.3	<1.0
Zinc	ug/L	<10	<10	<10	<10	<10	<10
Major Anions							
Alkalinity, Bicarbonate	ug/L	64	96 a,e	73	66 e	65	62
Chloride	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Nitrogen, Ammonia	ug/L	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Nitrogen, Nitrate	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Nitrogen, Nitrite	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Phosphorus, Total	ug/L	0.0190 s	0.0178	<0.0100	0.0124	<0.0100	<0.0100
Sulfate	ug/L	5.9	6.1	5.7	5.8	5.3	5.8
Major Cations							
Calcium	mg/L	18	16	16	16	16	16
Magnesium	mg/L	3.6	3.3	3.5	3.5	3.4	3.5
Potassium	mg/L	1.4	1.4	1.0	1.1	1.1	1.0
Sodium	mg/L	3.2	3.0	3.0	3.0	2.9	2.8
General Chemistry							
Hardness, (calculated) as CaCO3	mg/L	60	54	54	54	54	54

* Measured D.O. concentrations are considered to be biased high due to required sample collection methods and resulting field measurement bias.
a Estimated value. Duplicate precision for this parameter exceeded quality control limit.
e Estimated value. The laboratory statement of data qualifications indicates that a quality control limit for this parameter was exceeded.
s Potential false positive value. Compound present in blank sample.
T Sample was not filtered and all values are total concentrations.

Table 1
Groundwater Quality Data
Quaternary Deposit Monitoring Location QAL052A
Eagle Project

	Units	QAL052A					
		May 08	Jun 08	Jul 08	Aug 08	Sep 08	Oct 08
		5/14/08 ^D	6/11/08 ^D	7/2/08 ^D	8/13/08 ^D	9/18/08 ^D	10/1/08 ^D
Field Parameters							
Specific Conductance	µmhos/cm @ 25°C	116	111	109	78	170	180
pH	SU	8.1	8.5	8.6	8.5	8.5	8.6
D.O.*	ppm	4.0	7.2	1.2	6.2	7.5	1
Turbidity	NTU	86	63	11	23	36	6
Metals							
Antimony	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Arsenic	ug/L	1.3	<1.0	<1.0	<1.0	<1.0	<1.0
Barium	ug/L	19	13	9.4	8.7	7.6	6.8
Beryllium	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Boron	ug/L	<20	<20	<20	<20	22	<20
Cadmium	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chromium	ug/L	<1.0	<1.0	3.0	1.3	1.2	1.0
Cobalt	ug/L	<15	<15	<15	<15	<15	<15
Copper	ug/L	<1.0	<1.0	<1.0	1.6	1.2	1.1
Iron	ug/L	<20	<20	<20	<20	<20	<20
Lead	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Lithium	ug/L	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0
Manganese	ug/L	14	13	8.4	11	8.7	5.3
Mercury	ng/L	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
Molybdenum	ug/L	<10	<10	<10	<10	<10	<10
Nickel	ug/L	7.3	10	3.7	4.0	2.9	<2.0
Selenium	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Silver	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Strontium	ug/L	49	51	49	53	48	48
Thallium	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Vanadium	ug/L	2.2	1.9	1.2	1.5	<1.0	1.0
Zinc	ug/L	<10	<10	<10	<10	<10	<10
Major Anions							
Alkalinity, Bicarbonate	ug/L	76	68 a,e	61	63 e	59	61
Chloride	ug/L	<1.0	<1.0	1.1	1.1	<1.0	<1.0
Nitrogen, Ammonia	ug/L	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Nitrogen, Nitrate	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Nitrogen, Nitrite	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Phosphorus, Total	ug/L	0.0290 s	0.0295	0.0280	0.0110	0.0282	<0.0100
Sulfate	ug/L	7.3	7.4	7.2	7.0	7.0	7.3
Major Cations							
Calcium	mg/L	17	17	18	16	16	18
Magnesium	mg/L	3.8	4.0	4.1	3.9	3.8	4.1
Potassium	mg/L	1.7	1.3	1.4	1.2	1.1	1.1
Sodium	mg/L	1.3	1.6 s	1.5	1.4	1.4	1.5
General Chemistry							
Hardness, (calculated) as CaCO3	mg/L	58	59	62	56	56	62

- * Measured D.O. concentrations are considered to be biased high due to required sample collection methods and resulting field measurement bias.
- a Estimated value. Duplicate precision for this parameter exceeded quality control limit.
- ^D Sample for metal and major cation parameters was filtered and values are dissolved concentrations (* indicates that mercury sample was not filtered).
- e Estimated value. The laboratory statement of data qualifications indicates that a quality control limit for this parameter was exceeded.
- s Potential false positive value. Compound present in blank sample.

Table 1
Groundwater Quality Data
Quaternary Deposit Monitoring Location QAL053A
Eagle Project

	Units	QAL053A					
		May 08	Jun 08	Jul 08	Aug 08	Sep 08	Oct 08
		5/13/08 ^T	6/11/08 ^T	7/1/08 ^T	8/13/08 ^T	9/17/08 ^T	10/1/08 ^T
Field Parameters							
Specific Conductance	µmhos/cm @ 25°C	113	102	113	114	161	101
pH	SU	8.8	8.5	9.3	8.5	8.7	9.0
D.O.*	ppm	2.7	2.6	3.2	2.6	2.6	2.5
Turbidity	NTU	<1	<1	<1	<1	<1	<1
Metals							
Antimony	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Arsenic	ug/L	7.7	7.0	7.1	6.8	7.4	6.6
Barium	ug/L	7.9	7.8	7.7	7.1	8.0	7.3
Beryllium	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Boron	ug/L	34	27 s	31	30	31	29
Cadmium	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chromium	ug/L	<1.0	<1.0	1.1	<1.0	<1.0	<1.0
Cobalt	ug/L	<15	<15	<15	<15	<15	<15
Copper	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Iron	ug/L	<20	<20	24	<20	<20	<20
Lead	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Lithium	ug/L	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0
Manganese	ug/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Mercury	ng/L	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
Molybdenum	ug/L	<10	<10	<10	<10	<10	<10
Nickel	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Selenium	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Silver	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Strontium	ug/L	83	72	78	70	76	69
Thallium	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Vanadium	ug/L	1.5	1.4	1.5	1.2	1.5	1.3
Zinc	ug/L	<10	<10	<10	<10	<10	<10
Major Anions							
Alkalinity, Bicarbonate	ug/L	56	62 a,e	65	66 e	56	61
Chloride	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Nitrogen, Ammonia	ug/L	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Nitrogen, Nitrate	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Nitrogen, Nitrite	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Phosphorus, Total	ug/L	0.0225 s	0.0258	0.0145	0.0217	0.0103	<0.0100
Sulfate	ug/L	5.7	6.5	6.0	6.3	6.1	6.4
Major Cations							
Calcium	mg/L	15	14	16	16	15	16
Magnesium	mg/L	3.6	3.5	4.0	3.9	3.7	3.8
Potassium	mg/L	1.2	1.2	1.1	1.1	1.2	1.2
Sodium	mg/L	1.8	1.7 s	2.0	1.9	1.8	1.7
General Chemistry							
Hardness, (calculated) as CaCO3	mg/L	52	49	56	56	53	56

- * Measured D.O. concentrations are considered to be biased high due to required sample collection methods and resulting field measurement bias.
- a Estimated value. Duplicate precision for this parameter exceeded quality control limit.
- e Estimated value. The laboratory statement of data qualifications indicates that a quality control limit for this parameter was exceeded.
- s Potential false positive value. Compound present in blank sample.
- T Sample was not filtered and all values are total concentrations.

Table 1
Groundwater Quality Data
Quaternary Deposit Monitoring Location QAL055A
Eagle Project

	Units	QAL055A					
		May 08	Jun 08	Jul 08	Aug 08	Sep 08	Oct 08
		5/14/08 ^T	6/11/08 ^T	7/1/08 ^T	8/12/08 ^T	9/17/08 ^T	10/2/08 ^T
Field Parameters							
Specific Conductance	µmhos/cm @ 25°C	75	65	69	47	104	113
pH	SU	9.1	8.9	9.7	8.8	9.0	9.1
D.O.*	ppm	9.5	10.1	9.9	NM	10.2	9.9
Turbidity	NTU	<1	1	<1	2	<1	<1
Metals							
Antimony	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Arsenic	ug/L	2.0	1.4	1.4	1.3	1.0	1.0
Barium	ug/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Beryllium	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Boron	ug/L	<20	<20	<20	<20	<20	<20
Cadmium	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chromium	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Cobalt	ug/L	<15	<15	<15	<15	<15	<15
Copper	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Iron	ug/L	24 a	27	<20	24 e	<20	22
Lead	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Lithium	ug/L	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0
Manganese	ug/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Mercury	ng/L	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
Molybdenum	ug/L	<10	<10	<10	<10	<10	<10
Nickel	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Selenium	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Silver	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Strontium	ug/L	24	21	22	21	23	24
Thallium	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Vanadium	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Zinc	ug/L	<10	<10	<10	<10	<10	<10
Major Anions							
Alkalinity, Bicarbonate	ug/L	37	37 a,e	42	40 e	35	39
Chloride	ug/L	<1.0	<1.0	1.0	<1.0	<1.0	<1.0
Nitrogen, Ammonia	ug/L	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Nitrogen, Nitrate	ug/L	0.066	0.074	0.060 e	0.075	0.066	0.093
Nitrogen, Nitrite	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Phosphorus, Total	ug/L	0.0153 s	0.0162	<0.0100	0.0151	<0.0100	<0.0100
Sulfate	ug/L	2.0	2.0	2.2	2.2	2.0	2.2
Major Cations							
Calcium	mg/L	11	9.5	9.9	10	9.5	10
Magnesium	mg/L	2.4	2.0	2.3	2.3	2.2	2.4
Potassium	mg/L	0.73	0.82	0.53	0.61	0.64	0.51
Sodium	mg/L	0.97	0.85 s	1.0	0.95	0.87	0.84
General Chemistry							
Hardness, (calculated) as CaCO3	mg/L	37	32	34	34	33	35

* Measured D.O. concentrations are considered to be biased high due to required sample collection methods and resulting field measurement bias.

a Estimated value. Duplicate precision for this parameter exceeded quality control limit.

e Estimated value. The laboratory statement of data qualifications indicates that a quality control limit for this parameter was exceeded.

s Potential false positive value. Compound present in blank sample.

^T Sample was not filtered and all values are total concentrations.

NM Not measured.

Table 1
Groundwater Quality Data
Quaternary Deposit Monitoring Location QAL056A
Eagle Project

	Units	QAL056A					
		May 08	Jun 08	Jul 08	Aug 08	Sep 08	Oct 08
		5/13/08 ^T	6/10/08 ^T	7/1/08 ^T	8/12/08 ^T	9/17/08 ^T	10/1/08 ^T
Field Parameters							
Specific Conductance	µmhos/cm @ 25°C	57	57	50	56	80	51
pH	SU	9.3	9.3	9.1	9.2	9.2	9.7
D.O.*	ppm	11.6	11.5	11.5	11.8	11.8	11.4
Turbidity	NTU	<1	<1	<1	<1	<1	<1
Metals							
Antimony	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Arsenic	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Barium	ug/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Beryllium	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Boron	ug/L	<20	<20	<20	<20	<20	<20
Cadmium	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chromium	ug/L	<1.0	<1.0	1.1	<1.0	<1.0	1.2
Cobalt	ug/L	<15	<15	<15	<15	<15	<15
Copper	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Iron	ug/L	<20	24	<20	<20	<20	<20
Lead	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Lithium	ug/L	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0
Manganese	ug/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Mercury	ng/L	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
Molybdenum	ug/L	<10	<10	<10	<10	<10	<10
Nickel	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Selenium	ug/L	<1.0	<1.0	1.4	<1.0	<1.0	<1.0
Silver	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Strontium	ug/L	11	9.0	9.7	9.0	10	9.4
Thallium	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Vanadium	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Zinc	ug/L	<10	<10	<10	<10	<10	<10
Major Anions							
Alkalinity, Bicarbonate	ug/L	27	27 a,e	27	28 e	22	35
Chloride	ug/L	1.2	<1.0	1.0	<1.0	<1.0	<1.0
Nitrogen, Ammonia	ug/L	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Nitrogen, Nitrate	ug/L	0.076	0.079	0.052 e	0.071	0.055	0.069
Nitrogen, Nitrite	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Phosphorus, Total	ug/L	0.0235 s	0.0286	<0.0100	0.0143	<0.0100	<0.0100
Sulfate	ug/L	1.9	1.8	2.1	2.1	1.9	1.9
Major Cations							
Calcium	mg/L	9.1	7.9	8.3	8.2	7.8	9.0
Magnesium	mg/L	1.4	1.2	1.4	1.4	1.3	1.5
Potassium	mg/L	<0.50	0.71	<0.50	<0.50	0.50	<0.50
Sodium	mg/L	0.54	0.52 s	0.61	0.56	0.52	0.56
General Chemistry							
Hardness, (calculated) as CaCO3	mg/L	28	25	26	26	25	29

- * Measured D.O. concentrations are considered to be biased high due to required sample collection methods and resulting field measurement bias.
- a Estimated value. Duplicate precision for this parameter exceeded quality control limit.
- e Estimated value. The laboratory statement of data qualifications indicates that a quality control limit for this parameter was exceeded.
- s Potential false positive value. Compound present in blank sample.
- T Sample was not filtered and all values are total concentrations.

Table 1
Groundwater Quality Data
Quaternary Deposit Monitoring Location QAL057A
Eagle Project

	Units	QAL057A					
		May 08	Jun 08	Jul 08	Aug 08	Sep 08	Oct 08
		5/13/08 ^T	6/10/08 ^T	7/1/08 ^T	8/12/08 ^T	9/16/08 ^T	10/1/08 ^T
Field Parameters							
Specific Conductance	µmhos/cm @ 25°C	66	69	60	43	95	99
pH	SU	7.8	9.1	9.0	8.8	9.1	9.2
D.O.*	ppm	11.3	10.6	10.5	NM	11.0	11
Turbidity	NTU	1	<1	<1	<1	<1	<1
Metals							
Antimony	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Arsenic	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Barium	ug/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Beryllium	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Boron	ug/L	<20	<20	<20	<20	<20	<20
Cadmium	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chromium	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Cobalt	ug/L	<15	<15	<15	<15	<15	<15
Copper	ug/L	1.2	<1.0	<1.0	<1.0	<1.0	<1.0
Iron	ug/L	<20	<20	<20	<20	<20	<20
Lead	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Lithium	ug/L	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0
Manganese	ug/L	<5.0	5.8	<5.0	<5.0	<5.0	<5.0
Mercury	ng/L	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
Molybdenum	ug/L	<10	<10	<10	<10	<10	<10
Nickel	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Selenium	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Silver	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Strontium	ug/L	13	11	12	11	11	11
Thallium	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Vanadium	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Zinc	ug/L	<10	21	<10	<10	<10	<10
Major Anions							
Alkalinity, Bicarbonate	ug/L	36	46 a,e	37	33 e	38	34
Chloride	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Nitrogen, Ammonia	ug/L	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Nitrogen, Nitrate	ug/L	0.11	0.11	0.095 e	0.10	0.11	0.13
Nitrogen, Nitrite	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Phosphorus, Total	ug/L	0.0158 s	0.0168	<0.0100	0.0134	<0.0100	<0.0100
Sulfate	ug/L	2.1	2.1	2.7	2.3	2.2	2.2
Major Cations							
Calcium	mg/L	11	9.7	10	10	9.6	10
Magnesium	mg/L	1.8	1.7	1.8	1.8	1.7	1.8
Potassium	mg/L	0.59	0.69	<0.50	0.54	0.54	0.58
Sodium	mg/L	0.68	0.63 s	0.73	0.69	0.66	0.66
General Chemistry							
Hardness, (calculated) as CaCO3	mg/L	35	31	32	32	31	32

- * Measured D.O. concentrations are considered to be biased high due to required sample collection methods and resulting field measurement bias.
- a Estimated value. Duplicate precision for this parameter exceeded quality control limit.
- e Estimated value. The laboratory statement of data qualifications indicates that a quality control limit for this parameter was exceeded.
- s Potential false positive value. Compound present in blank sample.
- T Sample was not filtered and all values are total concentrations.
- NM Not measured.

Table 1
Groundwater Quality Data
Quaternary Deposit Monitoring Location QAL057D
Eagle Project

	Units	QAL057D					
		May 08	Jun 08	Jul 08	Aug 08	Sep 08	Oct 08
		5/13/08 ^T	6/10/08 ^T	7/1/08 ^T	8/12/08 ^T	9/16/08 ^T	10/2/08 ^T
Field Parameters							
Specific Conductance	µmhos/cm @ 25°C	104	112	97	107	174	151
pH	SU	7.6	8.7	8.7	8.8	8.3	8.8
D.O.*	ppm	4.3	3.7	3.5	3.7	5.5	5.3
Turbidity	NTU	<1	<1	<1	<1	<1	<1
Metals							
Antimony	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Arsenic	ug/L	5.3	4.7	5.2	4.5	4.9	4.6
Barium	ug/L	5.9	5.2	5.4	<5.0	5.3	<5.0
Beryllium	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Boron	ug/L	24	20 s	26	25	25	22
Cadmium	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chromium	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Cobalt	ug/L	<15	<15	<15	<15	<15	<15
Copper	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Iron	ug/L	<20	<20	<20	<20	<20	<20
Lead	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Lithium	ug/L	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0
Manganese	ug/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Mercury	ng/L	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
Molybdenum	ug/L	<10	<10	<10	<10	<10	<10
Nickel	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Selenium	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Silver	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Strontium	ug/L	64	53	60	53	56	54
Thallium	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Vanadium	ug/L	1.1	<1.0	1.1	1.0	1.2	1.1
Zinc	ug/L	<10	<10	<10	<10	<10	<10
Major Anions							
Alkalinity, Bicarbonate	ug/L	69	84 a,e	64	58 e	59	53
Chloride	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Nitrogen, Ammonia	ug/L	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Nitrogen, Nitrate	ug/L	<0.050	0.053	<0.050	0.053	0.059	<0.050
Nitrogen, Nitrite	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Phosphorus, Total	ug/L	0.0334 s	0.0291	0.0202	0.0270	0.0124	<0.0100
Sulfate	ug/L	5.4	5.7	5.2	5.3	5.2	4.8
Major Cations							
Calcium	mg/L	17	15	15	15	14	14
Magnesium	mg/L	3.6	3.1	3.4	3.3	3.2	3.3
Potassium	mg/L	1.2	1.1	0.91	1.0	1.1	0.81
Sodium	mg/L	1.4	1.2 s	1.5	1.5	1.4	1.3
General Chemistry							
Hardness, (calculated) as CaCO3	mg/L	57	50	51	51	48	49

- * Measured D.O. concentrations are considered to be biased high due to required sample collection methods and resulting field measurement bias.
- a Estimated value. Duplicate precision for this parameter exceeded quality control limit.
- e Estimated value. The laboratory statement of data qualifications indicates that a quality control limit for this parameter was exceeded.
- s Potential false positive value. Compound present in blank sample.
- T Sample was not filtered and all values are total concentrations.

Table 2
Statistical Summary of Results
May - October 2008
Quaternary Monitoring Location QAL008A
Eagle Project

Parameter	Units	QAL008A												
		RL	n	# ND	% ND	Min	Average	Max	Range	Std Dev	Normal Distn	95% LCL	Rep Conc	95% UCL
Field Parameters														
Specific Conductance	µmhos/cm @ 25°C	NA	6	0	0%	49	61	76	27	11.50	Y	51	61	70
pH	SU	NA	6	0	0%	9.3	9.3	9.4	0.2	0.06	Y	9.3	9.3	9.4
D.O.*	ppm	NA	5	0	0%	11.2	11.4	11.7	0.5	0.20	Y	11.2	11.4	11.6
Metals														
Antimony	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Arsenic	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Barium	ug/L	5.0	6	6	100%	--	--	--	--	--	--	--	<5.0	--
Beryllium	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Boron	ug/L	20	6	6	100%	--	--	--	--	--	--	--	<20	--
Cadmium	ug/L	0.20	6	6	100%	--	--	--	--	--	--	--	<0.20	--
Chromium	ug/L	1.0	6	5	83%	0.5	0.6	1.3	0.8	0.33	--	<1.0	<1.0	1.2
Cobalt	ug/L	15	6	6	100%	--	--	--	--	--	--	--	<15	--
Copper	ug/L	1.0	6	5	83%	0.5	0.7	1.4	0.9	0.37	--	<1.0	<1.0	1.3
Iron	ug/L	20	6	3	50%	10	22	43	33	14.43	Y	<20	22	33
Lead	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Lithium	ug/L	8.0	6	6	100%	--	--	--	--	--	--	--	<8.0	--
Manganese	ug/L	5.0	6	6	100%	--	--	--	--	--	--	--	<5.0	--
Mercury	ng/L	0.500	6	6	100%	--	--	--	--	--	--	--	<0.500	--
Molybdenum	ug/L	10	6	6	100%	--	--	--	--	--	--	--	<10	--
Nickel	ug/L	2.0	6	6	100%	--	--	--	--	--	--	--	<2.0	--
Selenium	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Silver	ug/L	0.20	6	6	100%	--	--	--	--	--	--	--	<0.20	--
Strontium	ug/L	5.0	6	0	0%	8.1	8.8	9.6	1.5	0.64	Y	8.3	8.8	9.3
Thallium	ug/L	2.0	6	6	100%	--	--	--	--	--	--	--	<2.0	--
Vanadium	ug/L	1.0	6	5	83%	0.5	0.7	1.8	1.3	0.53	--	<1.0	<1.0	1.6
Zinc	ug/L	10	6	5	83%	5.0	7.3	19	14	5.72	--	<10	<10	17
Major Anions														
Alkalinity, Bicarbonate	mg/L	2.0	6	0	0%	20	24	29	9	3.60	--	21	24	27
Chloride	mg/L	1.0	6	4	67%	0.5	0.7	1.1	0.6	0.29	--	<1.0	<1.0	1.2
Nitrogen, Ammonia	mg/L	0.020	6	6	100%	--	--	--	--	--	--	--	<0.020	--
Nitrogen, Nitrate	mg/L	0.050	6	0	0%	0.150	0.190	0.220	0.070	0.03	Y	0.17	0.19	0.21
Nitrogen, Nitrite	mg/L	0.050	6	6	100%	--	--	--	--	--	--	--	<0.050	--
Phosphorus, Total	mg/L	0.0100	6	2	33%	0.005	0.016	0.033	0.028	0.01	Y	<0.010	0.016	0.025
Sulfate	mg/L	1.0	6	0	0%	1.7	1.9	2.0	0.3	0.10	N	1.7	1.9	2.0
Major Cations														
Calcium	mg/L	0.50	6	0	0%	7.5	8.0	8.6	1.1	0.54	N	7.1	8.0	8.8
Magnesium	mg/L	0.50	6	0	0%	1.2	1.2	1.3	0.1	0.05	N	1.1	1.2	1.3
Potassium	mg/L	0.50	6	3	50%	0.25	0.4	0.62	0.4	0.17	Y	<0.50	<0.50	0.54
Sodium	mg/L	0.50	5	1	20%	0.51	0.5	0.57	0.1	0.03	Y	0.52	0.54	0.57
General Chemistry														
Hardness, (calculated) as CaCO3	mg/L	3	6	0	0%	24	25	27	3	1.47	Y	24	25	26

* Measured D.O. concentrations are considered to be biased high due to required sample collection methods and resulting field measurement bias.

RL Reporting limit.

n Number of data points used in analysis.

NA Not applicable.

LCL Lower confidence limit.

UCL Upper confidence limit.

Table 2
Statistical Summary of Results
May - October 2008
Quaternary Monitoring Location QAL008D
Eagle Project

Parameter	Units	QAL008D												
		RL	n	# ND	% ND	Min	Average	Max	Range	Std Dev	Normal Distn	95% LCL	Rep Conc	95% UCL
Field Parameters														
Specific Conductance	µmhos/cm @ 25°C	NA	6	0	0%	65	105	143	78	30.24	Y	80	105	130
pH	SU	NA	6	0	0%	8.6	8.8	9.3	0.7	0.24	Y	8.6	8.8	9.0
D.O.*	ppm	NA	6	0	0%	4.0	5.9	7.8	3.8	1.25	Y	4.9	5.9	7.0
Metals/Inorganics														
Antimony	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Arsenic	ug/L	1.0	6	0	0%	3.6	3.8	4.3	0.7	0.27	N	3.3	3.8	4.2
Barium	ug/L	5.0	6	0	0%	6.6	6.9	7.1	0.5	0.21	Y	6.7	6.9	7.0
Beryllium	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Boron	ug/L	20	6	6	100%	--	--	--	--	--	--	--	<20	--
Cadmium	ug/L	0.20	6	6	100%	--	--	--	--	--	--	--	<0.20	--
Chromium	ug/L	1.0	5	2	40%	0.5	1.1	1.7	1.2	0.54	Y	<1.0	1.1	1.6
Cobalt	ug/L	15	6	6	100%	--	--	--	--	--	--	--	<15	--
Copper	ug/L	1.0	6	5	83%	0.5	0.8	2.1	1.6	0.65	--	<1.0	<1.0	1.8
Iron	ug/L	20	6	4	67%	10	17	41	31	12.50	--	<20	<20	37
Lead	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Lithium	ug/L	8.0	6	6	100%	--	--	--	--	--	--	--	<8.0	--
Manganese	ug/L	5.0	6	6	100%	--	--	--	--	--	--	--	<5.0	--
Mercury	ng/L	0.500	6	6	100%	--	--	--	--	--	--	--	<0.500	--
Molybdenum	ug/L	10	6	6	100%	--	--	--	--	--	--	--	<10	--
Nickel	ug/L	2.0	6	5	83%	1.0	1.4	3.6	2.6	1.06	--	<2.0	<2.0	3.2
Selenium	ug/L	1.0	6	5	83%	0.5	0.7	1.5	1.0	0.41	--	<1.0	<1.0	1.3
Silver	ug/L	0.20	6	6	100%	--	--	--	--	--	--	--	<0.20	--
Strontium	ug/L	5.0	6	0	0%	38	40	43	5	1.97	Y	39	40	42
Thallium	ug/L	2.0	6	6	100%	--	--	--	--	--	--	--	<2.0	--
Vanadium	ug/L	1.0	6	0	0%	1.9	2.0	2.1	0.2	0.08	Y	1.9	2.0	2.0
Zinc	ug/L	10	6	6	100%	--	5.0	--	--	--	--	--	<10	--
Major Anions														
Alkalinity, Bicarbonate	mg/L	2.0	5	0	0%	49	53	58	9	3.49	Y	50	53	57
Chloride	mg/L	1.0	6	5	83%	0.5	0.6	1.1	0.6	0.24	--	<1.0	<1.0	1.0
Nitrogen, Ammonia	mg/L	0.020	6	6	100%	--	--	--	--	--	--	--	<0.020	--
Nitrogen, Nitrate	mg/L	0.050	6	1	17%	0.025	0.062	0.085	0.060	0.02	Y	0.045	0.062	0.078
Nitrogen, Nitrite	mg/L	0.050	6	6	100%	--	--	--	--	--	--	--	<0.050	--
Phosphorus, Total	mg/L	0.0100	5	2	40%	0.005	0.013	0.023	0.018	0.01	Y	<0.010	0.013	0.021
Sulfate	mg/L	1.0	6	0	0%	4.7	4.9	5.1	0.4	0.15	Y	4.8	4.9	5.0
Major Cations														
Calcium	mg/L	0.50	6	0	0%	13	14	15	2	0.63	Y	13	14	15
Magnesium	mg/L	0.50	6	0	0%	2.8	3.0	3.1	0.3	0.12	N	2.8	3.0	3.2
Potassium	mg/L	0.50	6	0	0%	0.82	0.93	1.1	0.3	0.10	Y	0.85	0.93	1.0
Sodium	mg/L	0.50	6	0	0%	1.2	1.3	1.4	0.2	0.06	Y	1.2	1.3	1.4
General Chemistry														
Hardness, (calculated) as CaCO3	mg/L	3	6	0	0%	44	47	50	6	1.99	Y	46	47	49

* Measured D.O. concentrations are considered to be biased high due to required sample collection methods and resulting field measurement bias.
 RL Reporting limit.
 n Number of data points used in analysis.
 NA Not applicable.

LCL Lower confidence limit.
 UCL Upper confidence limit.

US EPA ARCHIVE DOCUMENT

Table 2
Statistical Summary of Results
May - October 2008
Quaternary Monitoring Location QAL026A
Eagle Project

Parameter	Units	QAL026A												
		RL	n	# ND	% ND	Min	Average	Max	Range	Std Dev	Normal Distn	95% LCL	Rep Conc	95% UCL
Field Parameters														
Specific Conductance	µmhos/cm @ 25°C	NA	6	0	0%	25	34	44	19	7.58	Y	27	34	40
pH	SU	NA	6	0	0%	7.0	7.3	7.4	0.4	0.15	Y	7.2	7.3	7.4
D.O.*	ppm	NA	5	0	0%	10.7	11.1	11.6	0.9	0.40	Y	10.7	11.1	11.5
Metals/Inorganics														
Antimony	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Arsenic	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Barium	ug/L	5.0	6	6	100%	--	--	--	--	--	--	--	<5.0	--
Beryllium	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Boron	ug/L	20	6	6	100%	--	--	--	--	--	--	--	<20	--
Cadmium	ug/L	0.20	6	6	100%	--	--	--	--	--	--	--	<0.20	--
Chromium	ug/L	1.0	5	1	20%	0.5	1.9	3.5	3.0	1.08	Y	<1.0	1.9	3.0
Cobalt	ug/L	15	6	6	100%	--	--	--	--	--	--	--	<15	--
Copper	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Iron	ug/L	20	5	0	0%	22	71	150	128	48.98	Y	25	71	118
Lead	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Lithium	ug/L	8.0	6	6	100%	--	--	--	--	--	--	--	<8.0	--
Manganese	ug/L	5.0	5	5	100%	--	--	--	--	--	--	--	<5.0	--
Mercury	ng/L	0.500	6	6	100%	--	--	--	--	--	--	--	<0.500	--
Molybdenum	ug/L	10	6	6	100%	--	--	--	--	--	--	--	<10	--
Nickel	ug/L	2.0	5	5	100%	--	--	--	--	--	--	--	<2.0	--
Selenium	ug/L	1.0	6	5	83%	0.5	0.6	1.2	0.7	0.29	--	<1.0	<1.0	1.1
Silver	ug/L	0.20	6	6	100%	--	--	--	--	--	--	--	<0.20	--
Strontium	ug/L	5.0	6	0	0%	8.2	9.3	10	1.8	0.62	Y	8.7	9.3	9.8
Thallium	ug/L	2.0	6	6	100%	--	--	--	--	--	--	--	<2.0	--
Vanadium	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Zinc	ug/L	10	6	5	83%	5	6	11	6	2.45	--	<10	<10	10
Major Anions														
Alkalinity, Bicarbonate	mg/L	2.0	6	0	0%	11	13	14	3	1.05	Y	12	13	13
Chloride	mg/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Nitrogen, Ammonia	mg/L	0.020	6	6	100%	--	--	--	--	--	--	--	<0.020	--
Nitrogen, Nitrate	mg/L	0.050	6	0	0%	0.160	0.242	0.330	0.170	0.07	Y	0.18	0.24	0.30
Nitrogen, Nitrite	mg/L	0.050	6	6	100%	--	--	--	--	--	--	--	<0.050	--
Phosphorus, Total	mg/L	0.0100	5	1	20%	0.005	0.017	0.024	0.019	0.01	Y	0.010	0.017	0.024
Sulfate	mg/L	1.0	6	0	0%	1.7	2.0	2.2	0.5	0.21	Y	1.8	2.0	2.1
Major Cations														
Calcium	mg/L	0.50	6	0	0%	3.3	3.8	4.3	1.0	0.41	Y	3.4	3.8	4.1
Magnesium	mg/L	0.50	6	0	0%	0.62	0.68	0.81	0.19	0.07	Y	0.63	0.68	0.74
Potassium	mg/L	0.50	6	1	17%	0.25	0.57	0.80	0.55	0.19	Y	<0.50	0.57	0.72
Sodium	mg/L	0.50	6	0	0%	0.62	0.65	0.69	0.07	0.03	Y	0.63	0.65	0.68
General Chemistry														
Hardness, (calculated) as CaCO3	mg/L	3	6	0	0%	11	12	14	3	1.27	Y	11	12	13

* Measured D.O. concentrations are considered to be biased high due to required sample collection methods and resulting field measurement bias.
 RL Reporting limit.
 n Number of data points used in analysis.
 NA Not applicable.

LCL Lower confidence limit.
 UCL Upper confidence limit.

US EPA ARCHIVE DOCUMENT

Table 2
Statistical Summary of Results
May - October 2008
Quaternary Monitoring Location QAL026D
Eagle Project

Parameter	Units	QAL026D												
		RL	n	# ND	% ND	Min	Average	Max	Range	Std Dev	Normal Distn	95% LCL	Rep Conc	95% UCL
Field Parameters														
Specific Conductance	µmhos/cm @ 25°C	NA	5	0	0%	55	60	62	7	2.77	Y	57	60	62
pH	SU	NA	5	0	0%	9.0	9.10	9.2	0.2	0.07	Y	9.0	9.1	9.2
D.O.*	ppm	NA	5	0	0%	8.0	10.6	11.7	3.7	1.49	N	8.2	10.6	13.1
Metals/Inorganics														
Antimony	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Arsenic	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Barium	ug/L	5.0	6	6	100%	--	--	--	--	--	--	--	<5.0	--
Beryllium	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Boron	ug/L	20	6	6	100%	--	--	--	--	--	--	--	<20	--
Cadmium	ug/L	0.20	6	6	100%	--	--	--	--	--	--	--	<0.20	--
Chromium	ug/L	1.0	6	4	67%	0.5	0.8	1.4	0.9	0.40	--	<1.0	0.8	1.4
Cobalt	ug/L	15	6	6	100%	--	--	--	--	--	--	--	<15	--
Copper	ug/L	1.0	6	4	67%	0.5	1.0	2.5	2.0	0.82	--	<1.0	1.0	2.3
Iron	ug/L	20	6	2	33%	10	18	35	25	9.54	Y	<20	<20	26
Lead	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Lithium	ug/L	8.0	6	6	100%	--	--	--	--	--	--	--	<8.0	--
Manganese	ug/L	5.0	6	5	83%	2.5	3.0	5.5	3.0	1.22	--	<5.0	<5.0	5.0
Mercury	ng/L	0.500	6	5	83%	0.25	0.30	0.55	0.30	0.12	--	<0.50	<0.50	0.50
Molybdenum	ug/L	10	6	6	100%	--	--	--	--	--	--	--	<10	--
Nickel	ug/L	2.0	6	6	100%	--	--	--	--	--	--	--	<2.0	--
Selenium	ug/L	1.0	6	5	83%	0.5	0.7	1.6	1.1	0.45	--	<1.0	0.7	1.4
Silver	ug/L	0.20	6	6	100%	--	--	--	--	--	--	--	<0.20	--
Strontium	ug/L	5.0	6	0	0%	9.0	10	11	2.0	0.70	Y	9.2	9.8	10.4
Thallium	ug/L	2.0	6	6	100%	--	--	--	--	--	--	--	<2.0	--
Vanadium	ug/L	1.0	6	5	83%	0.5	0.6	1.0	0.5	0.20	--	<1.0	<1.0	0.9
Zinc	ug/L	10	6	5	83%	5	8	20	15	6.12	--	<10	<10	18
Major Anions														
Alkalinity, Bicarbonate	mg/L	2.0	5	0	0%	27	31	36	9	3.70	Y	27	31	34
Chloride	mg/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Nitrogen, Ammonia	mg/L	0.020	6	6	100%	--	--	--	--	--	--	--	<0.020	--
Nitrogen, Nitrate	mg/L	0.050	6	0	0%	0.078	0.101	0.120	0.042	0.02	Y	0.088	0.101	0.113
Nitrogen, Nitrite	mg/L	0.050	6	6	100%	--	--	--	--	--	--	--	<0.050	--
Phosphorus, Total	mg/L	0.0100	6	2	33%	0.005	0.017	0.027	0.022	0.01	Y	<0.010	0.017	0.025
Sulfate	mg/L	1.0	6	0	0%	1.8	2.0	2.1	0.3	0.10	N	1.8	2.0	2.1
Major Cations														
Calcium	mg/L	0.50	6	0	0%	8.6	9.3	10	1.4	0.46	Y	8.9	9.3	9.7
Magnesium	mg/L	0.50	6	0	0%	1.2	1.3	1.4	0.2	0.08	Y	1.3	1.3	1.4
Potassium	mg/L	0.50	6	3	50%	0.25	0.4	0.75	0.5	0.21	Y	<0.50	<0.50	0.59
Sodium	mg/L	0.50	6	0	0%	0.61	0.6	0.66	0.1	0.02	Y	0.62	0.64	0.65
General Chemistry														
Hardness, (calculated) as CaCO3	mg/L	3	6	0	0%	27	29	31	4	1.36	Y	28	29	30

* Measured D.O. concentrations are considered to be biased high due to required sample collection methods and resulting field measurement bias.
 RL Reporting limit.
 n Number of data points used in analysis.
 NA Not applicable.

LCL Lower confidence limit.
 UCL Upper confidence limit.

US EPA ARCHIVE DOCUMENT

Table 2
Statistical Summary of Results
May - October 2008
Quaternary Monitoring Location QAL029A
Eagle Project

Parameter	Units	QAL029A												
		RL	n	# ND	% ND	Min	Average	Max	Range	Std Dev	Normal Distn	95% LCL	Rep Conc	95% UCL
Field Parameters														
Specific Conductance	µmhos/cm @ 25°C	NA	6	0	0%	32	54	68	36	12.28	Y	43	54	64
pH	SU	NA	6	0	0%	7.1	8	9.1	2.0	0.86	Y	7.3	8.0	8.7
D.O.*	ppm	NA	4	0	0%	11.0	11.2	11.5	0.5	0.22	Y	10.9	11.2	11.4
Metals/Inorganics														
Antimony	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Arsenic	ug/L	1.0	6	1	17%	0.5	2.1	3.6	3.1	1.04	Y	1.3	2.1	3.0
Barium	ug/L	5.0	6	6	100%	--	--	--	--	--	--	--	<5.0	--
Beryllium	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Boron	ug/L	20	6	6	100%	--	--	--	--	--	--	--	<20	--
Cadmium	ug/L	0.20	6	6	100%	--	--	--	--	--	--	--	<0.20	--
Chromium	ug/L	1.0	6	5	83%	0.5	0.8	2	1.5	0.61	--	<1.0	<1.0	1.8
Cobalt	ug/L	15	6	6	100%	--	--	--	--	--	--	--	<15	--
Copper	ug/L	1.0	6	5	83%	0.5	0.6	1.1	0.6	0.24	--	<1.0	<1.0	1.0
Iron	ug/L	20	6	5	83%	10	21	74	64	26.13	--	<20	21	64
Lead	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Lithium	ug/L	8.0	6	6	100%	--	--	--	--	--	--	--	<8.0	--
Manganese	ug/L	5.0	6	6	100%	--	--	--	--	--	--	--	<5.0	--
Mercury	ng/L	0.500	5	2	40%	0.25	0.52	0.86	0.61	0.26	Y	<0.50	0.52	0.77
Molybdenum	ug/L	10	6	6	100%	--	--	--	--	--	--	--	<10	--
Nickel	ug/L	2.0	6	6	100%	--	--	--	--	--	--	--	<2.0	--
Selenium	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Silver	ug/L	0.20	6	6	100%	--	--	--	--	--	--	--	<0.20	--
Strontium	ug/L	5.0	5	0	0%	6.7	8.0	11	4.3	1.73	Y	6.4	8.0	9.7
Thallium	ug/L	2.0	6	6	100%	--	--	--	--	--	--	--	<2.0	--
Vanadium	ug/L	1.0	6	2	33%	0.5	1.2	2.3	1.8	0.68	Y	<1.0	1.2	1.8
Zinc	ug/L	10	6	6	100%	--	--	--	--	--	--	--	<10	--
Major Anions														
Alkalinity, Bicarbonate	mg/L	2.0	6	0	0%	23	35	53	30	11.03	Y	26	35	44
Chloride	mg/L	1.0	6	5	83%	0.5	0.7	1.7	1.2	0.49	--	<1.0	<1.0	1.5
Nitrogen, Ammonia	mg/L	0.020	6	6	100%	--	--	--	--	--	--	--	<0.020	--
Nitrogen, Nitrate	mg/L	0.050	6	3	50%	0.025	0.039	0.056	0.031	0.02	N	<0.050	<0.050	0.064
Nitrogen, Nitrite	mg/L	0.050	6	6	100%	--	--	--	--	--	--	--	<0.050	--
Phosphorus, Total	mg/L	0.0100	6	1	17%	0.005	0.057	0.114	0.109	0.05	Y	0.017	0.057	0.097
Sulfate	mg/L	1.0	6	0	0%	2.3	4.6	10.0	7.7	2.87	Y	2.2	4.6	7.0
Major Cations														
Calcium	mg/L	0.50	6	0	0%	4.3	6.7	8.4	4.1	1.61	Y	5.3	6.7	8.0
Magnesium	mg/L	0.50	6	1	17%	0.25	0.9	1.3	1.1	0.38	Y	0.5	0.9	1.2
Potassium	mg/L	0.50	6	6	100%	--	0.3	--	--	--	--	--	<0.50	--
Sodium	mg/L	0.50	6	0	0%	2.3	5.8	9.9	7.6	2.88	Y	3.4	5.8	8.2
General Chemistry														
Hardness, (calculated) as CaCO3	mg/L	3	6	0	0%	12	20	26	14.3	5.43	Y	16	20	25

* Measured D.O. concentrations are considered to be biased high due to required sample collection methods and resulting field measurement bias.
 RL Reporting limit.
 n Number of data points used in analysis.
 NA Not applicable.

LCL Lower confidence limit.
 UCL Upper confidence limit.

US EPA ARCHIVE DOCUMENT

Table 2
Statistical Summary of Results
May - October 2008
Quaternary Monitoring Location QAL029D
Eagle Project

Parameter	Units	QAL029D												
		RL	n	# ND	% ND	Min	Average	Max	Range	Std Dev	Normal Distn	95% LCL	Rep Conc	95% UCL
Field Parameters														
Specific Conductance	µmhos/cm @ 25°C	NA	6	0	0%	94	103	118	24	9.44	Y	95	103	111
pH	SU	NA	6	0	0%	8.1	8.6	9.0	0.9	0.30	Y	8.4	8.6	8.9
D.O.*	ppm	NA	6	0	0%	4.0	5.3	6.5	2.5	0.83	Y	4.6	5.3	5.9
Metals/Inorganics														
Antimony	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Arsenic	ug/L	1.0	6	0	0%	1.6	2.1	2.3	0.7	0.28	Y	1.9	2.1	2.3
Barium	ug/L	5.0	6	0	0%	5.7	6.7	7.6	1.9	0.74	Y	6.1	6.7	7.3
Beryllium	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Boron	ug/L	20	6	6	100%	--	--	--	--	--	--	--	<20	--
Cadmium	ug/L	0.20	6	6	100%	--	--	--	--	--	--	--	<0.20	--
Chromium	ug/L	1.0	6	3	50%	0.5	1.8	5.9	5.4	2.10	N	1.0	1.8	5.2
Cobalt	ug/L	15	6	6	100%	--	--	--	--	--	--	--	<15	--
Copper	ug/L	1.0	6	5	83%	0.5	0.7	1.7	1.2	0.49	--	<1.0	<1.0	1.5
Iron	ug/L	20	6	5	83%	10	11.3	18	8.0	3.27	--	<20	<20	<20
Lead	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Lithium	ug/L	8.0	6	6	100%	--	--	--	--	--	--	--	<8.0	--
Manganese	ug/L	5.0	6	2	33%	2.5	9.8	15	12.5	5.87	Y	5.0	9.8	15
Mercury	ng/L	0.500	5	3	60%	0.250	0.5	1.260	1.0	0.44	--	<1.0	0.5	1.2
Molybdenum	ug/L	10	6	6	100%	--	--	--	--	--	--	--	<10	--
Nickel	ug/L	2.0	6	5	83%	1.0	1.8	5.8	4.8	1.96	--	<2.0	<2.0	5.0
Selenium	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Silver	ug/L	0.20	6	6	100%	--	--	--	--	--	--	--	<0.20	--
Strontium	ug/L	5.0	6	0	0%	23	27	29	6	2.59	Y	24	27	29
Thallium	ug/L	2.0	6	6	100%	--	--	--	--	--	--	--	<2.0	--
Vanadium	ug/L	1.0	6	0	0%	1.9	2.3	2.9	1.0	0.38	Y	2.0	2.3	2.6
Zinc	ug/L	10	6	6	100%	--	--	--	--	--	--	--	<10	--
Major Anions														
Alkalinity, Bicarbonate	mg/L	2.0	6	0	0%	53	65	84	31	14.06	Y	54	65	77
Chloride	mg/L	1.0	6	3	50%	0.5	0.9	1.5	1.0	0.43	Y	<1.0	<1.0	1.2
Nitrogen, Ammonia	mg/L	0.020	6	6	100%	--	--	--	--	--	--	--	<0.020	--
Nitrogen, Nitrate	mg/L	0.050	6	0	0%	0.054	0.080	0.100	0.046	0.02	Y	0.063	0.080	0.096
Nitrogen, Nitrite	mg/L	0.050	6	6	100%	--	--	--	--	--	--	--	<0.050	--
Phosphorus, Total	mg/L	0.0100	6	0	0%	0.035	0.090	0.142	0.107	0.04	Y	0.058	0.090	0.123
Sulfate	mg/L	1.0	6	0	0%	3.6	4.5	5.4	1.8	0.76	Y	3.9	4.5	5.1
Major Cations														
Calcium	mg/L	0.50	6	0	0%	14	15	16	2	0.63	Y	14	15	16
Magnesium	mg/L	0.50	6	0	0%	3.6	3.8	4.1	0.50	0.17	Y	3.7	3.8	4.0
Potassium	mg/L	0.50	6	0	0%	1.9	2.1	2.3	0.40	0.17	Y	2.0	2.1	2.2
Sodium	mg/L	0.50	6	0	0%	1.2	1.5	1.8	0.6	0.23	Y	1.3	1.5	1.6
General Chemistry														
Hardness, (calculated) as CaCO3	mg/L	3	6	0	0%	50	53	57	7	2.25	Y	51	53	55

* Measured D.O. concentrations are considered to be biased high due to required sample collection methods and resulting field measurement bias.
 RL Reporting limit.
 n Number of data points used in analysis.
 NA Not applicable.

LCL Lower confidence limit.
 UCL Upper confidence limit.

US EPA ARCHIVE DOCUMENT

Table 2
Statistical Summary of Results
May - October 2008
Quaternary Monitoring Location QAL050A
Eagle Project

Parameter	Units	QAL050A												
		RL	n	# ND	% ND	Min	Average	Max	Range	Std Dev	Normal Distn	95% LCL	Rep Conc	95% UCL
Field Parameters														
Specific Conductance	µmhos/cm @ 25°C	NA	4	0	0%	70	74	79	9	4.50	Y	68	74	79
pH	SU	NA	5	0	0%	8.5	8.8	9.0	0.5	0.17	Y	8.6	8.8	9.0
D.O.*	ppm	NA	6	0	0%	10.0	10.5	11.2	1.2	0.44	Y	10.1	10.5	10.8
Metals/Inorganics														
Antimony	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Arsenic	ug/L	1.0	6	3	50%	0.5	0.9	1.4	0.9	0.41	Y	<1.0	<1.0	1.2
Barium	ug/L	5.0	6	6	100%	--	--	--	--	--	--	--	<5.0	--
Beryllium	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Boron	ug/L	20	6	6	100%	--	--	--	--	--	--	--	<20	--
Cadmium	ug/L	0.20	6	6	100%	--	--	--	--	--	--	--	<0.20	--
Chromium	ug/L	1.0	6	5	83%	0.5	0.6	1.2	0.7	0.29	--	<1.0	<1.0	1.1
Cobalt	ug/L	15	6	6	100%	--	--	--	--	--	--	--	<15	--
Copper	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Iron	ug/L	20	6	6	100%	--	--	--	--	--	--	--	<20	--
Lead	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Lithium	ug/L	8.0	6	6	100%	--	--	--	--	--	--	--	<8.0	--
Manganese	ug/L	5.0	6	6	100%	--	--	--	--	--	--	--	<5.0	--
Mercury	ng/L	0.500	6	6	100%	--	--	--	--	--	--	--	<0.500	--
Molybdenum	ug/L	10	6	6	100%	--	--	--	--	--	--	--	<10	--
Nickel	ug/L	2.0	6	6	100%	--	--	--	--	--	--	--	<2.0	--
Selenium	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Silver	ug/L	0.20	6	6	100%	--	--	--	--	--	--	--	<0.20	--
Strontium	ug/L	5.0	6	0	0%	19	20	22	3	1.26	Y	19	20	21
Thallium	ug/L	2.0	6	6	100%	--	--	--	--	--	--	--	<2.0	--
Vanadium	ug/L	1.0	6	0	0%	1.2	1.3	1.5	0.3	0.13	Y	1.2	1.3	1.4
Zinc	ug/L	10	6	5	83%	5.0	6.2	12.0	7.0	2.86	--	<10	<10	10.9
Major Anions														
Alkalinity, Bicarbonate	mg/L	2.0	6	0	0%	36	42	48	12	4.28	Y	38	42	45
Chloride	mg/L	1.0	6	5	83%	0.5	0.6	1.0	0.5	0.20	--	<1.0	<1.0	<1.0
Nitrogen, Ammonia	mg/L	0.020	6	6	100%	--	--	--	--	--	--	--	<0.020	--
Nitrogen, Nitrate	mg/L	0.050	6	0	0%	0.099	0.108	0.120	0.021	0.01	Y	0.10	0.11	0.11
Nitrogen, Nitrite	mg/L	0.050	6	6	100%	--	--	--	--	--	--	--	<0.050	--
Phosphorus, Total	mg/L	0.0100	6	2	33%	0.005	0.012	0.021	0.016	0.01	Y	<0.010	0.012	0.017
Sulfate	mg/L	1.0	6	0	0%	2.8	2.8	3.0	0.2	0.08	N	2.7	2.8	3.0
Major Cations														
Calcium	mg/L	0.50	6	0	0%	11	12	12	1.0	0.55	N	11	12	12
Magnesium	mg/L	0.50	6	0	0%	2.0	2.2	2.4	0.4	0.14	Y	2.1	2.2	2.3
Potassium	mg/L	0.50	6	0	0%	0.6	0.6	0.68	0.1	0.04	Y	0.6	0.6	0.7
Sodium	mg/L	0.50	6	0	0%	0.84	0.9	0.95	0.1	0.04	Y	0.9	0.9	0.9
General Chemistry														
Hardness, (calculated) as CaCO3	mg/L	3	6	0	0%	36	38	40	4	1.73	Y	36	38	39

* Measured D.O. concentrations are considered to be biased high due to required sample collection methods and resulting field measurement bias.
 RL Reporting limit.
 n Number of data points used in analysis.
 NA Not applicable.

LCL Lower confidence limit.
 UCL Upper confidence limit.

Table 2
Statistical Summary of Results
May - October 2008
Quaternary Monitoring Location QAL051A
Eagle Project

Parameter	Units	QAL051A											95% LCL	Rep Conc	95% UCL
		RL	n	# ND	% ND	Min	Average	Max	Range	Std Dev	Normal Distn				
Field Parameters															
Specific Conductance	µmhos/cm @ 25°C	NA	--	--	--	--	--	--	--	--	--	--	--	--	--
pH	SU	NA	--	--	--	--	--	--	--	--	--	--	--	--	--
D.O.*	ppm	NA	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals/Inorganics															
Antimony	ug/L	1.0	5	5	100%	--	--	--	--	--	--	--	<1.0	--	--
Arsenic	ug/L	1.0	5	1	20%	0.5	1.2	1.5	1.0	0.40	Y	<1.0	1.2	1.6	
Barium	ug/L	5.0	5	0	0%	7.4	9.7	14	6.6	2.75	Y	7.1	9.7	12	
Beryllium	ug/L	1.0	5	5	100%	--	--	--	--	--	--	--	<1.0	--	
Boron	ug/L	20	5	3	60%	10	18	38	28	12.20	--	<20	<20	29	
Cadmium	ug/L	0.20	5	5	100%	--	--	--	--	--	--	--	<0.20	--	
Chromium	ug/L	1.0	5	4	80%	0.5	0.6	1.2	0.7	0.31	--	<1.0	<1.0	<1.0	
Cobalt	ug/L	15	5	5	100%	--	--	--	--	--	--	--	<15	--	
Copper	ug/L	1.0	5	5	100%	--	--	--	--	--	--	--	<1.0	--	
Iron	ug/L	20	5	5	100%	--	--	--	--	--	--	--	<20	--	
Lead	ug/L	1.0	5	5	100%	--	--	--	--	--	--	--	<1.0	--	
Lithium	ug/L	8.0	5	5	100%	--	--	--	--	--	--	--	<8.0	--	
Manganese	ug/L	5.0	5	0	0%	10	14	22	12	5.03	Y	10	14	19	
Mercury	ng/L	0.500	5	0	0%	0.55	1.54	2.37	1.82	0.83	Y	0.75	1.54	2.32	
Molybdenum	ug/L	10	5	2	40%	5	19	46	41	17.47	Y	<10	19	36	
Nickel	ug/L	2.0	5	5	100%	--	--	--	--	--	--	--	<2.0	--	
Selenium	ug/L	1.0	5	5	100%	--	--	--	--	--	--	--	<1.0	--	
Silver	ug/L	0.20	5	5	100%	--	--	--	--	--	--	--	<0.20	--	
Strontium	ug/L	5.0	5	0	0%	26	30	36	10	4.10	Y	26	30	34	
Thallium	ug/L	2.0	5	5	100%	--	--	--	--	--	--	--	<2.0	--	
Vanadium	ug/L	1.0	5	0	0%	1.4	2.1	2.7	1.3	0.49	Y	1.6	2.1	2.5	
Zinc	ug/L	10	5	5	100%	--	--	--	--	--	--	--	<10	--	
Major Anions															
Alkalinity, Bicarbonate	mg/L	2.0	5	0	0%	53	60	74	21	8.72	Y	52	60	68	
Chloride	mg/L	1.0	5	3	60%	0.5	0.8	1.4	0.9	0.44	--	<1.0	<1.0	1.2	
Nitrogen, Ammonia	mg/L	0.020	5	5	100%	--	--	--	--	--	--	--	<0.020	--	
Nitrogen, Nitrate	mg/L	0.050	5	5	100%	--	--	--	--	--	--	--	<0.050	--	
Nitrogen, Nitrite	mg/L	0.050	5	5	100%	--	--	--	--	--	--	--	<0.050	--	
Phosphorus, Total	mg/L	0.0100	5	0	0%	0.020	0.036	0.063	0.043	0.02	Y	0.021	0.036	0.052	
Sulfate	mg/L	1.0	5	0	0%	2.7	3.5	4.1	1.4	0.62	Y	2.9	3.5	4.1	
Major Cations															
Calcium	mg/L	0.50	5	0	0%	13	15	16	3	1.14	Y	14	15	16	
Magnesium	mg/L	0.50	5	0	0%	1.9	2.1	2.3	0.4	0.16	Y	2.0	2.1	2.3	
Potassium	mg/L	0.50	5	0	0%	1.8	2.8	5.0	3.2	1.35	Y	1.6	2.8	4.1	
Sodium	mg/L	0.50	5	0	0%	1.20	1.8	3.1	1.9	0.74	Y	1.1	1.8	2.5	
General Chemistry															
Hardness, (calculated) as CaCO3	mg/L	3	5	0	0%	40	45	49	9	3.52	Y	42	45	49	

* Measured D.O. concentrations are considered to be biased high due to required sample collection methods and resulting field measurement bias.
 RL Reporting limit.
 n Number of data points used in analysis.
 NA Not applicable.

LCL Lower confidence limit.
 UCL Upper confidence limit.

Table 2
Statistical Summary of Results
May - October 2008
Quaternary Monitoring Location QAL051D
Eagle Project

Parameter	Units	QAL051D												
		RL	n	# ND	% ND	Min	Average	Max	Range	Std Dev	Normal Distn	95% LCL	Rep Conc	95% UCL
Field Parameters														
Specific Conductance	µmhos/cm @ 25°C	NA	6	0	0%	80	129	180	100	38.70	Y	97	129	161
pH	SU	NA	6	0	0%	7.4	8.5	9.5	2.1	0.68	Y	8.0	8.5	9.1
D.O.*	ppm	NA	6	0	0%	0.2	0.2	0.3	0.1	0.06	Y	0.2	0.2	0.3
Metals/Inorganics														
Antimony	ug/L	1.0	6	5	83%	0.5	0.7	1.4	0.9	0.37	--	<1.0	<1.0	<1.0
Arsenic	ug/L	1.0	6	0	0%	2.2	3.0	4.2	2.0	0.83	Y	2.3	3.0	3.7
Barium	ug/L	5.0	6	0	0%	14	15	16	2.0	0.75	Y	14	15	15
Beryllium	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Boron	ug/L	20	6	0	0%	21	21	23	2.0	0.82	N	<20	21	23
Cadmium	ug/L	0.20	6	6	100%	--	--	--	--	--	--	--	<0.20	--
Chromium	ug/L	1.0	6	5	83%	0.5	0.6	1.3	0.8	0.33	--	<1.0	<1.0	<1.0
Cobalt	ug/L	15	6	6	100%	--	--	--	--	--	--	--	<15	--
Copper	ug/L	1.0	6	3	50%	0.5	0.9	1.4	0.9	0.44	N	<1.0	<1.0	1.6
Iron	ug/L	20	6	6	100%	--	--	--	--	--	--	--	<20	--
Lead	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Lithium	ug/L	8.0	6	6	100%	--	--	--	--	--	--	--	<8.0	--
Manganese	ug/L	5.0	6	0	0%	11	16	20	9.0	3.15	Y	13	16	18
Mercury	ng/L	0.500	6	6	100%	--	--	--	--	--	--	--	<0.500	--
Molybdenum	ug/L	10	6	6	100%	--	--	--	--	--	--	--	<10	--
Nickel	ug/L	2.0	6	6	100%	--	--	--	--	--	--	--	<2.0	--
Selenium	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Silver	ug/L	0.20	6	6	100%	--	--	--	--	--	--	--	<0.20	--
Strontium	ug/L	5.0	6	0	0%	79	85	89	10	4.17	Y	82	85	89
Thallium	ug/L	2.0	6	6	100%	--	--	--	--	--	--	--	<2.0	--
Vanadium	ug/L	1.0	6	1	17%	0.5	1.4	2.6	2.1	0.68	Y	<1.0	1.4	1.9
Zinc	ug/L	10	6	6	100%	--	--	--	--	--	--	--	<10	--
Major Anions														
Alkalinity, Bicarbonate	mg/L	2.0	5	0	0%	62	66	73	11	4.18	Y	62	66	70
Chloride	mg/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Nitrogen, Ammonia	mg/L	0.020	6	6	100%	--	--	--	--	--	--	--	<0.020	--
Nitrogen, Nitrate	mg/L	0.050	6	6	100%	--	--	--	--	--	--	--	<0.050	--
Nitrogen, Nitrite	mg/L	0.050	6	6	100%	--	--	--	--	--	--	--	<0.050	--
Phosphorus, Total	mg/L	0.0100	6	3	50%	0.005	0.011	0.019	0.014	0.01	Y	<0.010	0.011	0.016
Sulfate	mg/L	1.0	6	0	0%	5.3	5.8	6.1	0.8	0.27	Y	5.5	5.8	6.0
Major Cations														
Calcium	mg/L	0.50	6	0	0%	16	16	18	2	0.82	N	15	16	18
Magnesium	mg/L	0.50	6	0	0%	3.3	3.5	3.6	0.3	0.10	Y	3.4	3.5	3.6
Potassium	mg/L	0.50	6	0	0%	1.0	1.2	1.4	0.4	0.19	N	0.9	1.2	1.5
Sodium	mg/L	0.50	6	0	0%	2.80	3.0	3.2	0.4	0.13	Y	2.9	3.0	3.1
General Chemistry														
Hardness, (calculated) as CaCO3	mg/L	3	6	0	0%	54	55	60	6	2.33	N	51	55	59

* Measured D.O. concentrations are considered to be biased high due to required sample collection methods and resulting field measurement bias.
 RL Reporting limit.
 n Number of data points used in analysis.
 NA Not applicable.

LCL Lower confidence limit.
 UCL Upper confidence limit.

US EPA ARCHIVE DOCUMENT

Table 2
Statistical Summary of Results
May - October 2008
Quaternary Monitoring Location QAL052A
Eagle Project

Parameter	Units	QAL052A												
		RL	n	# ND	% ND	Min	Average	Max	Range	Std Dev	Normal Distn	95% LCL	Rep Conc	95% UCL
Field Parameters														
Specific Conductance	µmhos/cm @ 25°C	NA	6	0	0%	78	127	180	102	39.39	Y	95	127	160
pH	SU	NA	5	0	0%	8.5	9	8.6	0.1	0.06	Y	8.5	8.5	8.6
D.O.*	ppm	NA	6	0	0%	1.0	4.5	7.5	6.5	2.92	Y	2.1	4.5	6.9
Metals/Inorganics														
Antimony	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Arsenic	ug/L	1.0	6	5	83%	0.5	0.6	1.3	0.8	0.33	--	<1.0	<1.0	<1.0
Barium	ug/L	5.0	6	0	0%	6.8	10.8	19	12.2	4.58	Y	7.0	11	15
Beryllium	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Boron	ug/L	20	6	5	83%	1	9	22	21.5	7.95	--	<20	<20	<20
Cadmium	ug/L	0.20	6	6	100%	--	--	--	--	--	--	--	<0.20	--
Chromium	ug/L	1.0	6	2	33%	0.5	1.3	3	2.5	0.92	Y	<1.0	1.3	2.0
Cobalt	ug/L	15	6	6	100%	--	--	--	--	--	--	--	<15	--
Copper	ug/L	1.0	6	3	50%	0.5	0.9	1.6	1.1	0.47	Y	<1.0	<1.0	1.3
Iron	ug/L	20	6	6	100%	--	--	--	--	--	--	--	<20	--
Lead	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Lithium	ug/L	8.0	6	6	100%	--	--	--	--	--	--	--	<8.0	--
Manganese	ug/L	5.0	6	0	0%	5.3	10.1	14	8.7	3.23	Y	7.4	10	13
Mercury	ng/L	0.500	6	6	100%	--	--	--	--	--	--	--	<0.500	--
Molybdenum	ug/L	10	6	6	100%	--	--	--	--	--	--	--	<10	--
Nickel	ug/L	2.0	6	1	17%	1.0	4.8	10.0	9.0	3.26	Y	2.1	4.8	7.5
Selenium	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Silver	ug/L	0.20	6	6	100%	--	--	--	--	--	--	--	<0.20	--
Strontium	ug/L	5.0	6	0	0%	48	50	53	5	1.97	Y	48	50	51
Thallium	ug/L	2.0	6	6	100%	--	--	--	--	--	--	--	<2.0	--
Vanadium	ug/L	1.0	6	1	17%	0.5	1.4	2.2	1.7	0.62	Y	0.9	1.4	1.9
Zinc	ug/L	10	6	6	100%	--	--	--	--	--	--	--	<10	--
Major Anions														
Alkalinity, Bicarbonate	mg/L	2.0	6	0	0%	59	65	76	17	6.35	Y	59	65	70
Chloride	mg/L	1.0	6	4	67%	0.5	0.7	1.1	0.6	0.31	--	<1.0	<1.0	<1.0
Nitrogen, Ammonia	mg/L	0.020	6	6	100%	--	--	--	--	--	--	--	<0.020	--
Nitrogen, Nitrate	mg/L	0.050	6	6	100%	--	--	--	--	--	--	--	<0.050	--
Nitrogen, Nitrite	mg/L	0.050	6	6	100%	--	--	--	--	--	--	--	<0.050	--
Phosphorus, Total	mg/L	0.0100	6	1	17%	0.005	0.022	0.030	0.025	0.01	Y	0.013	0.022	0.031
Sulfate	mg/L	1.0	6	0	0%	7.0	7.2	7.4	0.4	0.17	Y	7.1	7.2	7.3
Major Cations														
Calcium	mg/L	0.50	6	0	0%	16	17	18	2	0.89	Y	16	17	18
Magnesium	mg/L	0.50	6	0	0%	3.8	4.0	4.1	0.3	0.14	Y	3.8	4.0	4.1
Potassium	mg/L	0.50	6	0	0%	1.1	1.3	1.7	0.6	0.23	Y	1.1	1.3	1.5
Sodium	mg/L	0.50	6	0	0%	1.30	1.5	1.6	0.3	0.10	Y	1.4	1.5	1.5
General Chemistry														
Hardness, (calculated) as CaCO3	mg/L	3	6	0	0%	56	59	62	6	2.71	Y	56	59	61

* Measured D.O. concentrations are considered to be biased high due to required sample collection methods and resulting field measurement bias.
 RL Reporting limit.
 n Number of data points used in analysis.
 NA Not applicable.

LCL Lower confidence limit.
 UCL Upper confidence limit.

Table 2
Statistical Summary of Results
May - October 2008
Quaternary Monitoring Location QAL053A
Eagle Project

Parameter	Units	QAL053A												
		RL	n	# ND	% ND	Min	Average	Max	Range	Std Dev	Normal Distn	95% LCL	Rep Conc	95% UCL
Field Parameters														
Specific Conductance	µmhos/cm @ 25°C	NA	5	0	0%	101	109	114	13	6.50	N	98	109	119
pH	SU	NA	6	0	0%	8.5	8.8	9.3	0.9	0.32	Y	8.5	8.8	9.1
D.O.*	ppm	NA	5	0	0%	2.5	2.6	2.7	0.2	0.07	Y	2.5	2.6	2.7
Metals/Inorganics														
Antimony	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Arsenic	ug/L	1.0	6	0	0%	6.6	7.1	7.7	1.1	0.40	Y	6.8	7.1	7.4
Barium	ug/L	5.0	6	0	0%	7.1	7.6	8	0.9	0.36	Y	7.3	7.6	7.9
Beryllium	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Boron	ug/L	20	6	0	0%	27	30	34	7.0	2.34	Y	28	30	32
Cadmium	ug/L	0.20	6	6	100%	--	--	--	--	--	--	--	<0.20	--
Chromium	ug/L	1.0	6	5	83%	0.5	0.6	1.1	0.6	0.24	--	<1.0	<1.0	<1.0
Cobalt	ug/L	15	6	6	100%	--	--	--	--	--	--	--	<15	--
Copper	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Iron	ug/L	20	6	5	83%	10	12	24	14.0	5.72	--	<20	<20	<20
Lead	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Lithium	ug/L	8.0	6	6	100%	--	--	--	--	--	--	--	<8.0	--
Manganese	ug/L	5.0	6	6	100%	--	--	--	--	--	--	--	<5.0	--
Mercury	ng/L	0.500	6	6	100%	--	--	--	--	--	--	--	<0.500	--
Molybdenum	ug/L	10	6	6	100%	--	--	--	--	--	--	--	<10	--
Nickel	ug/L	2.0	6	6	100%	--	--	--	--	--	--	--	<2.0	--
Selenium	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Silver	ug/L	0.20	6	6	100%	--	--	--	--	--	--	--	<0.20	--
Strontium	ug/L	5.0	6	0	0%	69	75	83	14	5.35	Y	70	75	79
Thallium	ug/L	2.0	6	6	100%	--	--	--	--	--	--	--	<2.0	--
Vanadium	ug/L	1.0	6	0	0%	1.2	1.4	1.5	0.3	0.13	Y	1.3	1.4	1.5
Zinc	ug/L	10	6	6	100%	--	--	--	--	--	--	--	<10	--
Major Anions														
Alkalinity, Bicarbonate	mg/L	2.0	6	0	0%	56	61	66	10	4.29	Y	57	61	65
Chloride	mg/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Nitrogen, Ammonia	mg/L	0.020	6	6	100%	--	--	--	--	--	--	--	<0.020	--
Nitrogen, Nitrate	mg/L	0.050	6	6	100%	--	--	--	--	--	--	--	<0.050	--
Nitrogen, Nitrite	mg/L	0.050	6	6	100%	--	--	--	--	--	--	--	<0.050	--
Phosphorus, Total	mg/L	0.0100	6	1	17%	0.005	0.017	0.026	0.021	0.01	Y	0.010	0.017	0.023
Sulfate	mg/L	1.0	6	0	0%	5.7	6.2	6.5	0.8	0.29	Y	5.9	6.2	6.4
Major Cations														
Calcium	mg/L	0.50	6	0	0%	14	15	16	2	0.82	Y	15	15	16
Magnesium	mg/L	0.50	6	0	0%	3.5	3.8	4	0.5	0.19	Y	3.6	3.8	3.9
Potassium	mg/L	0.50	6	0	0%	1.1	1.2	1.2	0.1	0.05	N	1.1	1.2	1.3
Sodium	mg/L	0.50	6	0	0%	1.70	1.8	2	0.3	0.12	Y	1.7	1.8	1.9
General Chemistry														
Hardness, (calculated) as CaCO3	mg/L	3	6	0	0%	49	54	56	7	2.76	Y	51	54	56

* Measured D.O. concentrations are considered to be biased high due to required sample collection methods and resulting field measurement bias.
 RL Reporting limit.
 n Number of data points used in analysis.
 NA Not applicable.

LCL Lower confidence limit.
 UCL Upper confidence limit.

US EPA ARCHIVE DOCUMENT

Table 2
Statistical Summary of Results
May - October 2008
Quaternary Monitoring Location QAL055A
Eagle Project

Parameter	Units	QAL055A												
		RL	n	# ND	% ND	Min	Average	Max	Range	Std Dev	Normal Distn	95% LCL	Rep Conc	95% UCL
Field Parameters														
Specific Conductance	µmhos/cm @ 25°C	NA	6	0	0%	47	79	113	66	24.97	Y	58	79	99
pH	SU	NA	6	0	0%	8.8	9.1	9.7	0.9	0.31	Y	8.8	9.1	9.3
D.O.*	ppm	NA	5	0	0%	9.5	9.9	10.2	0.6	0.25	Y	9.7	9.9	10.2
Metals/Inorganics														
Antimony	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Arsenic	ug/L	1.0	6	0	0%	1.0	1.4	2	1.0	0.37	Y	1.0	1.4	1.7
Barium	ug/L	5.0	6	6	100%	--	--	--	--	--	--	--	<5.0	--
Beryllium	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Boron	ug/L	20	6	6	100%	--	--	--	--	--	--	--	<20	--
Cadmium	ug/L	0.20	6	6	100%	--	--	--	--	--	--	--	<0.20	--
Chromium	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Cobalt	ug/L	15	6	6	100%	--	--	--	--	--	--	--	<15	--
Copper	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Iron	ug/L	20	6	2	33%	10	20	27	17	7.53	Y	<20	<20	26
Lead	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Lithium	ug/L	8.0	6	6	100%	--	--	--	--	--	--	--	<8.0	--
Manganese	ug/L	5.0	6	6	100%	--	--	--	--	--	--	--	<5.0	--
Mercury	ng/L	0.500	6	6	100%	--	--	--	--	--	--	--	<0.500	--
Molybdenum	ug/L	10	6	6	100%	--	--	--	--	--	--	--	<10	--
Nickel	ug/L	2.0	6	6	100%	--	--	--	--	--	--	--	<2.0	--
Selenium	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Silver	ug/L	0.20	6	6	100%	--	--	--	--	--	--	--	<0.20	--
Strontium	ug/L	5.0	6	0	0%	21	23	24	3	1.38	Y	21	23	24
Thallium	ug/L	2.0	6	6	100%	--	--	--	--	--	--	--	<2.0	--
Vanadium	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Zinc	ug/L	10	6	6	100%	--	--	--	--	--	--	--	<10	--
Major Anions														
Alkalinity, Bicarbonate	mg/L	2.0	6	0	0%	35	38	42	7	2.50	Y	36	38	40
Chloride	mg/L	1.0	6	5	83%	0.5	0.6	1.0	0.5	0.20	--	<1.0	<1.0	<1.0
Nitrogen, Ammonia	mg/L	0.020	6	6	100%	--	--	--	--	--	--	--	<0.020	--
Nitrogen, Nitrate	mg/L	0.050	6	0	0%	0.060	0.072	0.093	0.033	0.01	Y	0.063	0.072	0.082
Nitrogen, Nitrite	mg/L	0.050	6	6	100%	--	--	--	--	--	--	--	<0.050	--
Phosphorus, Total	mg/L	0.0100	6	3	50%	0.005	0.010	0.016	0.011	0.01	N	<0.010	0.010	0.020
Sulfate	mg/L	1.0	6	0	0%	2.0	2.1	2.2	0.2	0.11	N	1.9	2.1	2.3
Major Cations														
Calcium	mg/L	0.50	6	0	0%	9.5	10	11	1.5	0.55	Y	9.5	10	10
Magnesium	mg/L	0.50	6	0	0%	2.0	2.3	2.4	0.4	0.15	Y	2.1	2.3	2.4
Potassium	mg/L	0.50	6	0	0%	0.5	0.6	0.82	0.3	0.12	Y	0.5	0.6	0.7
Sodium	mg/L	0.50	6	0	0%	0.84	0.9	1	0.2	0.07	Y	0.9	0.9	1.0
General Chemistry														
Hardness, (calculated) as CaCO3	mg/L	3	6	0	0%	32	34	37	5	1.87	Y	33	34	36

* Measured D.O. concentrations are considered to be biased high due to required sample collection methods and resulting field measurement bias.
 RL Reporting limit.
 n Number of data points used in analysis.
 NA Not applicable.

LCL Lower confidence limit.
 UCL Upper confidence limit.

Table 2
Statistical Summary of Results
May - October 2008
Quaternary Monitoring Location QAL056A
Eagle Project

Parameter	Units	QAL056A												
		RL	n	# ND	% ND	Min	Average	Max	Range	Std Dev	Normal Distn	95% LCL	Rep Conc	95% UCL
Field Parameters														
Specific Conductance	µmhos/cm @ 25°C	NA	5	0	0%	50	54	57	7	3.42	Y	51	54	57
pH	SU	NA	6	0	0%	9.1	9	9.7	0.6	0.22	Y	9.1	9.3	9.5
D.O.*	ppm	NA	6	0	0%	11.4	11.6	11.8	0.4	0.17	Y	11.5	11.6	11.7
Metals/Inorganics														
Antimony	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Arsenic	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Barium	ug/L	5.0	6	6	100%	--	--	--	--	--	--	--	<5.0	--
Beryllium	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Boron	ug/L	20	6	6	100%	--	--	--	--	--	--	--	<20	--
Cadmium	ug/L	0.20	6	6	100%	--	--	--	--	--	--	--	<0.20	--
Chromium	ug/L	1.0	6	4	67%	0.5	0.7	1.2	0.7	0.34	--	<1.0	<1.0	<1.0
Cobalt	ug/L	15	6	6	100%	--	--	--	--	--	--	--	<15	--
Copper	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Iron	ug/L	20	6	5	83%	10	12	24	14.0	5.72	--	<20	<20	<20
Lead	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Lithium	ug/L	8.0	6	6	100%	--	--	--	--	--	--	--	<8.0	--
Manganese	ug/L	5.0	6	6	100%	--	--	--	--	--	--	--	<5.0	--
Mercury	ng/L	0.500	6	6	100%	--	--	--	--	--	--	--	<0.500	--
Molybdenum	ug/L	10	6	6	100%	--	--	--	--	--	--	--	<10	--
Nickel	ug/L	2.0	6	6	100%	--	--	--	--	--	--	--	<2.0	--
Selenium	ug/L	1.0	6	5	83%	0.5	0.7	1.4	0.9	0.37	--	<1.0	<1.0	<1.0
Silver	ug/L	0.20	6	6	100%	--	--	--	--	--	--	--	<0.20	--
Strontium	ug/L	5.0	6	0	0%	9.0	9.7	11	2.0	0.75	Y	9.1	9.7	10.3
Thallium	ug/L	2.0	6	6	100%	--	--	--	--	--	--	--	<2.0	--
Vanadium	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Zinc	ug/L	10	6	6	100%	--	--	--	--	--	--	--	<10	--
Major Anions														
Alkalinity, Bicarbonate	mg/L	2.0	6	0	0%	22	28	35	13	4.18	Y	24	28	31
Chloride	mg/L	1.0	6	4	67%	0.5	0.7	1.2	0.7	0.32	--	<1.0	<1.0	<1.0
Nitrogen, Ammonia	mg/L	0.020	6	6	100%	--	--	--	--	--	--	--	<0.020	--
Nitrogen, Nitrate	mg/L	0.050	6	0	0%	0.052	0.067	0.079	0.027	0.01	Y	0.058	0.067	0.076
Nitrogen, Nitrite	mg/L	0.050	6	6	100%	--	--	--	--	--	--	--	<0.050	--
Phosphorus, Total	mg/L	0.0100	6	3	50%	0.005	0.014	0.029	0.024	0.01	Y	<0.010	0.014	0.022
Sulfate	mg/L	1.0	6	0	0%	1.8	2.0	2.1	0.3	0.12	Y	1.8	2.0	2.1
Major Cations														
Calcium	mg/L	0.50	6	0	0%	7.8	8.4	9.1	1.3	0.55	Y	7.9	8.4	8.8
Magnesium	mg/L	0.50	6	0	0%	1.2	1.4	1.5	0.3	0.10	Y	1.3	1.4	1.5
Potassium	mg/L	0.50	6	4	67%	0.25	0.37	0.71	0.46	0.19	--	<0.50	<0.50	0.53
Sodium	mg/L	0.50	6	0	0%	0.52	0.55	0.61	0.09	0.03	Y	0.52	0.55	0.58
General Chemistry														
Hardness, (calculated) as CaCO3	mg/L	3	6	0	0%	25	27	29	4	1.72	Y	25	27	28

* Measured D.O. concentrations are considered to be biased high due to required sample collection methods and resulting field measurement bias.
 RL Reporting limit.
 n Number of data points used in analysis.
 NA Not applicable.

LCL Lower confidence limit.
 UCL Upper confidence limit.

US EPA ARCHIVE DOCUMENT

Table 2
Statistical Summary of Results
May - October 2008
Quaternary Monitoring Location QAL057A
Eagle Project

Parameter	Units	QAL057A												
		RL	n	# ND	% ND	Min	Average	Max	Range	Std Dev	Normal Distn	95% LCL	Rep Conc	95% UCL
Field Parameters														
Specific Conductance	µmhos/cm @ 25°C	NA	6	0	0%	43	72	99	56	21.39	Y	54	72	90
pH	SU	NA	5	0	0%	8.8	9.0	9.2	0.4	0.14	Y	8.9	9.0	9.2
D.O.*	ppm	NA	5	0	0%	10.5	10.9	11.3	0.8	0.32	Y	10.6	10.9	11.2
Metals/Inorganics														
Antimony	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Arsenic	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Barium	ug/L	5.0	6	6	100%	--	--	--	--	--	--	--	<5.0	--
Beryllium	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Boron	ug/L	20	6	6	100%	--	--	--	--	--	--	--	<20	--
Cadmium	ug/L	0.20	6	6	100%	--	--	--	--	--	--	--	<0.20	--
Chromium	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Cobalt	ug/L	15	6	6	100%	--	--	--	--	--	--	--	<15	--
Copper	ug/L	1.0	6	5	83%	0.5	0.6	1.2	0.7	0.29	--	<1.0	<1.0	<1.0
Iron	ug/L	20	6	6	100%	--	--	--	--	--	--	--	<20	--
Lead	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Lithium	ug/L	8.0	6	6	100%	--	--	--	--	--	--	--	<8.0	--
Manganese	ug/L	5.0	6	5	83%	2.5	3.1	5.8	3.3	1.35	--	<5.0	<5.0	<5.0
Mercury	ng/L	0.500	6	6	100%	--	--	--	--	--	--	--	<0.500	--
Molybdenum	ug/L	10	6	6	100%	--	--	--	--	--	--	--	<10	--
Nickel	ug/L	2.0	6	6	100%	--	--	--	--	--	--	--	<2.0	--
Selenium	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Silver	ug/L	0.20	6	6	100%	--	--	--	--	--	--	--	<0.20	--
Strontium	ug/L	5.0	6	0	0%	11	12	13	2	0.84	N	10	12	13
Thallium	ug/L	2.0	6	6	100%	--	--	--	--	--	--	--	<2.0	--
Vanadium	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Zinc	ug/L	10	6	5	83%	5	7.7	21	16	6.53	--	<10	<10	13
Major Anions														
Alkalinity, Bicarbonate	mg/L	2.0	6	0	0%	33	37	46	13	4.63	Y	34	37	41
Chloride	mg/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Nitrogen, Ammonia	mg/L	0.020	6	6	100%	--	--	--	--	--	--	--	<0.020	--
Nitrogen, Nitrate	mg/L	0.050	6	0	0%	0.095	0.109	0.130	0.035	0.01	Y	0.099	0.109	0.119
Nitrogen, Nitrite	mg/L	0.050	6	6	100%	--	--	--	--	--	--	--	<0.050	--
Phosphorus, Total	mg/L	0.0100	6	3	50%	0.005	0.010	0.017	0.012	0.01	N	<0.010	0.010	0.020
Sulfate	mg/L	1.0	5	0	0%	2.1	2.2	2.3	0.2	0.08	Y	2.1	2.2	2.3
Major Cations														
Calcium	mg/L	0.50	6	0	0%	9.6	10	11	1.4	0.50	N	9.2	10	11
Magnesium	mg/L	0.50	6	0	0%	1.7	1.8	1.8	0.1	0.05	N	1.7	1.8	1.9
Potassium	mg/L	0.50	6	1	17%	0.25	0.53	0.69	0.44	0.15	Y	<0.50	0.53	0.65
Sodium	mg/L	0.50	6	0	0%	0.63	0.68	0.73	0.10	0.03	Y	0.65	0.68	0.70
General Chemistry														
Hardness, (calculated) as CaCO3	mg/L	3	6	0	0%	31	32	35	4	1.38	Y	31	32	34

* Measured D.O. concentrations are considered to be biased high due to required sample collection methods and resulting field measurement bias.
 RL Reporting limit.
 n Number of data points used in analysis.
 NA Not applicable.

LCL Lower confidence limit.
 UCL Upper confidence limit.

Table 2
Statistical Summary of Results
May - October 2008
Quaternary Monitoring Location QAL057D
Eagle Project

Parameter	Units	QAL057D												
		RL	n	# ND	% ND	Min	Average	Max	Range	Std Dev	Normal Distn	95% LCL	Rep Conc	95% UCL
Field Parameters														
Specific Conductance	µmhos/cm @ 25°C	NA	6	0	0%	97	124	174	77	30.95	Y	99	124	150
pH	SU	NA	6	0	0%	7.6	8.5	8.8	1.2	0.47	N	7.7	8.5	9.3
D.O.*	ppm	NA	6	0	0%	3.5	4.3	5.5	2.0	0.89	Y	3.6	4.3	5.1
Metals/Inorganics														
Antimony	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Arsenic	ug/L	1.0	6	0	0%	4.5	4.9	5.3	0.8	0.33	Y	4.6	4.9	5.1
Barium	ug/L	5.0	6	2	33%	2.5	4.5	5.9	3.4	1.54	N	<5.0	<5.0	7.0
Beryllium	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Boron	ug/L	20	6	0	0%	20	24	26	6.0	2.25	Y	22	24	26
Cadmium	ug/L	0.20	6	6	100%	--	--	--	--	--	--	--	<0.20	--
Chromium	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Cobalt	ug/L	15	6	6	100%	--	--	--	--	--	--	--	<15	--
Copper	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Iron	ug/L	20	6	6	100%	--	--	--	--	--	--	--	<20	--
Lead	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Lithium	ug/L	8.0	6	6	100%	--	--	--	--	--	--	--	<8.0	--
Manganese	ug/L	5.0	6	6	100%	--	--	--	--	--	--	--	<5.0	--
Mercury	ng/L	0.500	6	6	100%	--	--	--	--	--	--	--	<0.500	--
Molybdenum	ug/L	10	6	6	100%	--	--	--	--	--	--	--	<10	--
Nickel	ug/L	2.0	6	6	100%	--	--	--	--	--	--	--	<2.0	--
Selenium	ug/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Silver	ug/L	0.20	6	6	100%	--	--	--	--	--	--	--	<0.20	--
Strontium	ug/L	5.0	6	0	0%	53	57	64	11	4.46	Y	53	57	60
Thallium	ug/L	2.0	6	6	100%	--	--	--	--	--	--	--	<2.0	--
Vanadium	ug/L	1.0	5	1	20%	1.0	1.1	1.2	0.2	0.07	Y	<1.0	1.1	1.2
Zinc	ug/L	10	6	6	100%	--	--	--	--	--	--	--	<10	--
Major Anions														
Alkalinity, Bicarbonate	mg/L	2.0	6	0	0%	53	65	84	31	11.00	Y	55	65	74
Chloride	mg/L	1.0	6	6	100%	--	--	--	--	--	--	--	<1.0	--
Nitrogen, Ammonia	mg/L	0.020	6	6	100%	--	--	--	--	--	--	--	<0.020	--
Nitrogen, Nitrate	mg/L	0.050	6	3	50%	0.025	0.040	0.059	0.034	0.02	N	<0.050	<0.050	0.067
Nitrogen, Nitrite	mg/L	0.050	6	6	100%	--	--	--	--	--	--	--	<0.050	--
Phosphorus, Total	mg/L	0.0100	6	1	17%	0.005	0.021	0.033	0.028	0.01	Y	0.012	0.021	0.030
Sulfate	mg/L	1.0	6	0	0%	4.8	5.3	5.7	0.9	0.29	Y	5.0	5.3	5.5
Major Cations														
Calcium	mg/L	0.50	6	0	0%	14	15	17	3	1.10	Y	14	15	16
Magnesium	mg/L	0.50	6	0	0%	3.1	3.3	3.6	0.5	0.17	Y	3.2	3.3	3.5
Potassium	mg/L	0.50	6	0	0%	0.81	1.0	1.2	0.4	0.14	Y	0.9	1.0	1.1
Sodium	mg/L	0.50	6	0	0%	1.20	1.4	1.5	0.3	0.12	Y	1.3	1.4	1.5
General Chemistry														
Hardness, (calculated) as CaCO3	mg/L	3	6	0	0%	49	52	57	9	2.97	Y	49	52	54

* Measured D.O. concentrations are considered to be biased high due to required sample collection methods and resulting field measurement bias.
 RL Reporting limit.
 n Number of data points used in analysis.
 NA Not applicable.

LCL Lower confidence limit.
 UCL Upper confidence limit.

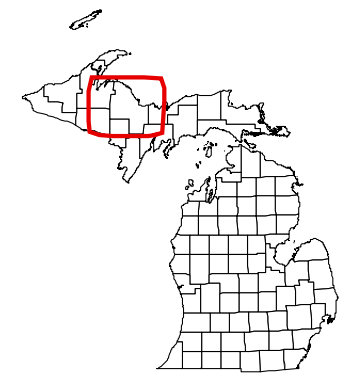
US EPA ARCHIVE DOCUMENT

FIGURES



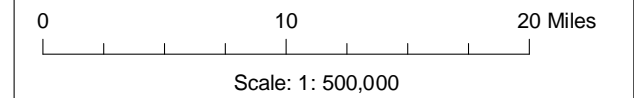
SITE LOCATION MAP

- EAGLE PROJECT
- AIRPORT
- HIGHWAY
- MAJOR ROAD
- ROAD
- COUNTY BOUNDARY
- URBAN AREA
- HYDROGRAPHY
- RAILROAD



Reference

Data provided by: ESRI, Kennecott Eagle Minerals, North Jackson Company
 Projection & Datum: UTM NAD 83 Zone 16N



Eagle Mine
 2008 Background Water Quality Report
 for Groundwater Discharge Permit
 GW1810161



North Jackson Company
 ENVIRONMENTAL SCIENCE & ENGINEERING

Figure: 1



431900

432900

5178000

5178000







431900

432900

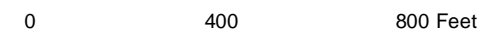
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MONITORING WELL LOCATIONS

-  OUTCROP
-  PROPOSED MINE FACILITIES
-  TREATED WATER INFILTRATION SYSTEM (TWIS)
-  MONITORING WELL

Reference

Data provided by Michigan Center for Geographic Information, North Jackson Company
Projection & Datum: UTM NAD 83 Zone 16N

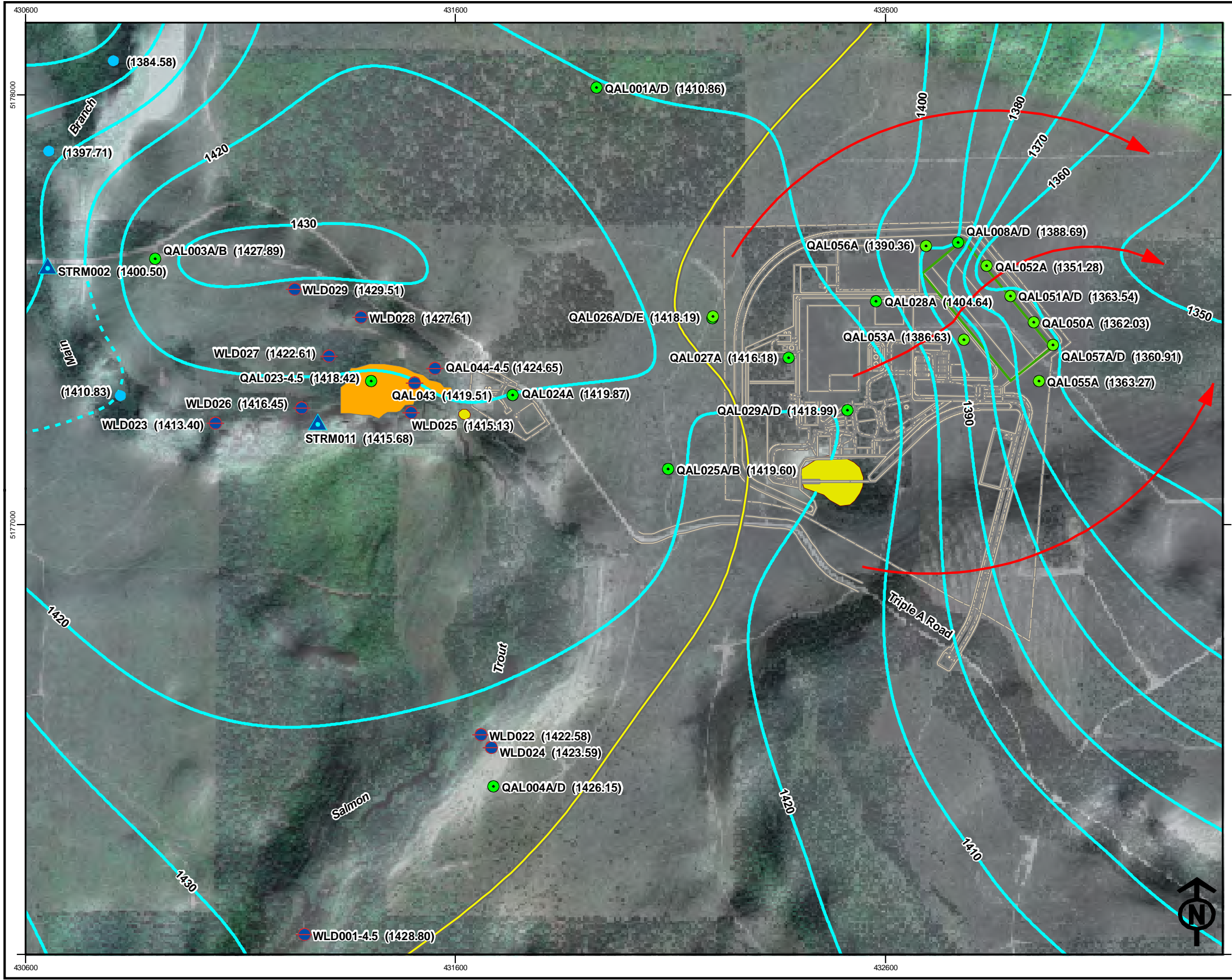


Scale: 1:4,800

 **Kennecott Eagle Minerals** Eagle Mine
2008 Backwater Quality Report
for Groundwater Discharge Permit
GW1810161

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Figure: 2



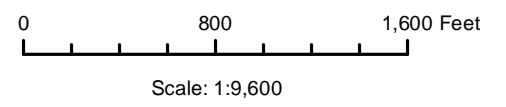
A ZONE GROUNDWATER ELEVATION CONTOURS, MAY 2008

- ORE BODY
- OUTCROP
- GROUNDWATER FLOWLINE
- PROPOSED MINE FACILITIES
- GROUNDWATER CONTOUR ELEVATION
(10' CONTOUR INTERVAL, DASHED WHERE INFERRED)
- GROUNDWATER BASIN DIVIDE
- TREATED WATER INFILTRATION SYSTEM (TWIS)
- STREAM ELEVATION POINT
(SOURCE: DIGITAL ELEVATION MODEL: 98 ft resolution)
- MONITORING WELL
- WETLAND PIEZOMETER
- SURFACE WATER MONITORING STATION

(1415.59) GROUNDWATER ELEVATION
(ft MSL on 5/29/2008)

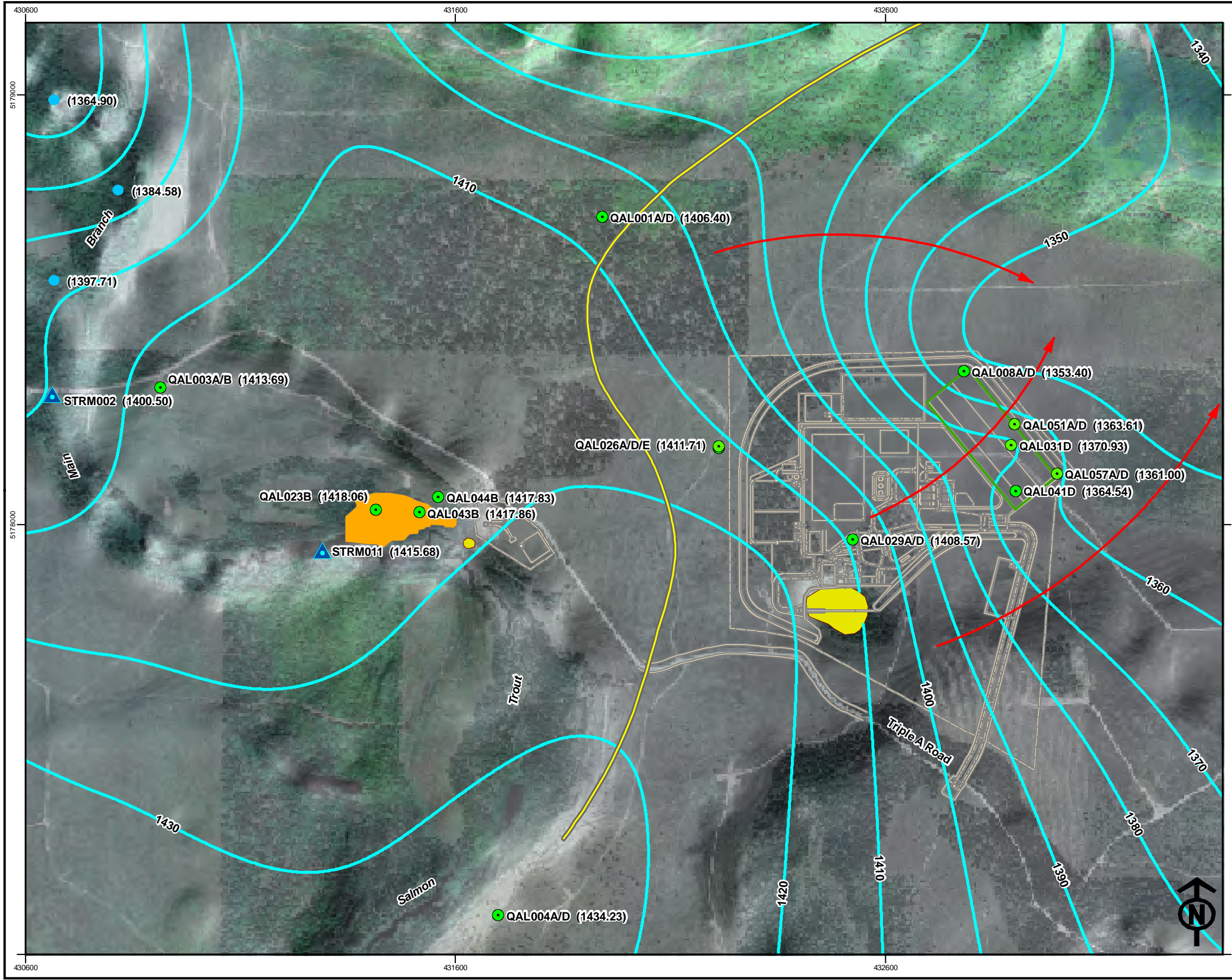
Reference

Data provided by Michigan Center for Geographic Information, North Jackson Company
Projection & Datum: UTM NAD 83 Zone 16N



Eagle Mine
2008 Backwater Quality Report
for Groundwater Discharge Permit
GW1810161

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ENVIRONMENTAL SCIENCE & ENGINEERING **Figure: 3**



B/D ZONE GROUNDWATER ELEVATION CONTOURS, MAY 2008

- ORE BODY
- OUTCROP
- GROUNDWATER FLOWLINE
- TREATED WATER INFILTRATION SYSTEM (TWIS)
- PROPOSED MINE FACILITIES
- GROUNDWATER CONTOUR ELEVATION
(10' CONTOUR INTERVAL)
- GROUNDWATER BASIN DIVIDE
- STREAM ELEVATION POINT
(SOURCE: DIGITAL ELEVATION MODEL: 98 ft resolution)
- MONITORING WELL
- WETLAND PIEZOMETER
- SURFACE WATER MONITORING STATION

(1364.54) GROUNDWATER ELEVATION
(ft MSL on 5/29/2008)

Reference
Data provided by Michigan Center for Geographic Information, North Jackson Company
Projection & Datum: UTM NAD 83 Zone 16N

Scale: 1:9,600

Kennecott
Eagle Minerals

Eagle Mine
2008 Background Water Quality Report
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GW1810161

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Figure: 4