

**Table 1**  
**Mine Permit Groundwater Quality Monitoring Data**  
**QAL023B (UMB)**  
**Eagle Mine**

Parameter	Unit	Benchmark	Q4 2016 10/26/16 <sup>T</sup>	Q1 2017 02/02/17 <sup>T</sup>
Field				
D.O. <sup>1</sup>	ppm	--	<b>0.2</b>	<b>0.3</b>
ORP	mV	--	<b>-128</b>	<b>-209</b>
pH	SU	7.8-8.8	<b>7.0</b>	<b>7.1</b>
Specific Conductance	µS/cm @ 25°C	--	<b>121</b>	<b>133</b>
Temperature	°C	--	<b>7.2</b>	<b>5.3</b>
Turbidity	NTU	--	<1	<1
Water Elevation	ft MSL	--	<b>1414.22</b>	<b>1413.93</b>
Metals				
Aluminum	ug/L	200	--	--
Antimony	ug/L	5.5	--	--
Arsenic	ug/L	6.5	<2.0	<2.0
Barium	ug/L	80	--	--
Beryllium	ug/L	2.5	--	--
Boron	ug/L	400	<100 e	<100 e
Cadmium	ug/L	2.0	--	--
Chromium	ug/L	20	--	--
Cobalt	ug/L	40	--	--
Copper	ug/L	20	<5.0	<5.0
Iron	ug/L	159	<b>68</b>	<b>51</b> s
Lead	ug/L	4.0	--	--
Lithium	ug/L	32	--	--
Manganese	ug/L	80	<20	<20
Mercury	ng/L	2.00	<0.500 e	<0.500
Molybdenum	ug/L	40	--	--
Nickel	ug/L	100	<25	<25
Selenium	ug/L	4.0	<1.0	<1.0 e
Silver	ug/L	0.80	--	--
Strontium	ug/L	200	--	--
Thallium	ug/L	2.0	--	--
Vanadium	ug/L	4.0	<1.0	<1.0
Zinc	ug/L	40	<10	<10 e
Major Anions				
Alkalinity, Bicarbonate	mg/L	67	<b>63</b>	<b>63</b> a
Alkalinity, Carbonate	mg/L	8.0	<2.0	<2.0
Chloride	mg/L	4.0	<b>1.2</b>	<b>1.0</b>
Fluoride	mg/L	0.40	--	--
Nitrogen, Nitrate	mg/L	0.20	<0.050	<0.050 e
Sulfate	mg/L	8.0	<b>2.2</b>	<b>3.9</b>
Major Cations				
Calcium	mg/L	16	--	--
Magnesium	mg/L	3.7	--	--
Potassium	mg/L	2.0	--	--
Sodium	mg/L	11	<b>11</b>	<b>9.9</b>
General				
Hardness	mg/L	55	--	--

Explanations of abbreviations are included on the final page of this table.

QAL023B (UMB)

**Table 1**  
**Mine Permit Groundwater Quality Monitoring Data**  
**QAL024A (UMB)**  
**Eagle Mine**

Parameter	Unit	Benchmark	Q4 2016 10/25/16 <sup>T</sup>	Q1 2017 01/31/17 <sup>T</sup>
<b>Field</b>				
D.O. <sup>1</sup>	ppm	--	10	10
ORP	mV	--	169	41
pH	SU	6.1-7.1	6.3	6.3
Specific Conductance	µS/cm @ 25°C	--	353	407
Temperature	°C	--	8.0	8.0
Turbidity	NTU	--	<1	<1
Water Elevation	ft MSL	--	1417.35	1416.76
<b>Metals</b>				
Aluminum	ug/L	200	--	--
Antimony	ug/L	5.5	--	--
Arsenic	ug/L	6.0	<2.0	<2.0
Barium	ug/L	86	--	--
Beryllium	ug/L	2.5	--	--
Boron	ug/L	400	<100 e	<100 e
Cadmium	ug/L	2.0	--	--
Chromium	ug/L	20	--	--
Cobalt	ug/L	40	--	--
Copper	ug/L	20	<5.0	<5.0
Iron	ug/L	105	22	<20
Lead	ug/L	4.0	--	--
Lithium	ug/L	32	--	--
Manganese	ug/L	80	<20	<20
Mercury	ng/L	2.00	<0.500 e	<0.500
Molybdenum	ug/L	40	--	--
Nickel	ug/L	100	<25	<25
Selenium	ug/L	4.0	<1.0	<1.0 e
Silver	ug/L	0.80	--	--
Strontium	ug/L	200	--	--
Thallium	ug/L	2.0	--	--
Vanadium	ug/L	4.0	<1.0	<1.0
Zinc	ug/L	40	<10	<10 e
<b>Major Anions</b>				
Alkalinity, Bicarbonate	mg/L	24	45	45 a
Alkalinity, Carbonate	mg/L	8.0	<2.0	<2.0
Chloride	mg/L	4.0	93	80
Fluoride	mg/L	0.40	--	--
Nitrogen, Nitrate	mg/L	0.20	1.6	1.3 e
Sulfate	mg/L	8.0	7.6	5.8
<b>Major Cations</b>				
Calcium	mg/L	48	--	--
Magnesium	mg/L	8.1	--	--
Potassium	mg/L	3.7	--	--
Sodium	mg/L	2.0	52	46
<b>General</b>				
Hardness	mg/L	153	--	--

Explanations of abbreviations are included on the final page of this table.

QAL024A (UMB)

**Table 1**  
**Mine Permit Groundwater Quality Monitoring Data**  
**QAL025A (Background)**  
**Eagle Mine**

Parameter	Unit	Benchmark	Q4 2016 10/24/16 <sup>T</sup>	Q1 2017 02/01/17 <sup>T</sup>
<b>Field</b>				
D.O. <sup>1</sup>	ppm	--	12	11
ORP	mV	--	304	151
pH	SU	6.4-7.4	6.5	6.9
Specific Conductance	µS/cm @ 25°C	--	51	67
Temperature	°C	--	7.3	7.6
Turbidity	NTU	--	<1	<1
Water Elevation	ft MSL	--	1416.14	1415.71
<b>Metals</b>				
Aluminum	ug/L	200	--	--
Antimony	ug/L	5.5	--	--
Arsenic	ug/L	6.0	<2.0	<2.0
Barium	ug/L	80	--	--
Beryllium	ug/L	2.5	--	--
Boron	ug/L	400	<100 e	<100 e
Cadmium	ug/L	2.0	--	--
Chromium	ug/L	20	--	--
Cobalt	ug/L	40	--	--
Copper	ug/L	20	<5.0	<5.0
Iron	ug/L	126	24	<20
Lead	ug/L	4.0	--	--
Lithium	ug/L	32	--	--
Manganese	ug/L	80	<20	<20
Mercury	ng/L	2.00	<0.500 e	<0.500
Molybdenum	ug/L	40	--	--
Nickel	ug/L	100	<25	<25
Selenium	ug/L	4.0	<1.0	<1.0 e
Silver	ug/L	0.80	--	--
Strontium	ug/L	200	--	--
Thallium	ug/L	2.0	--	--
Vanadium	ug/L	4.0	<1.0	<1.0
Zinc	ug/L	40	<10	<10 e
<b>Major Anions</b>				
Alkalinity, Bicarbonate	mg/L	25	30	29 a
Alkalinity, Carbonate	mg/L	8.0	<2.0	<2.0
Chloride	mg/L	4.0	1.4	1.1
Fluoride	mg/L	0.40	--	--
Nitrogen, Nitrate	mg/L	1.1	0.54	0.62 e
Sulfate	mg/L	8.0	2.2	2.0
<b>Major Cations</b>				
Calcium	mg/L	8.5	--	--
Magnesium	mg/L	2.0	--	--
Potassium	mg/L	2.0	--	--
Sodium	mg/L	2.0	0.99	1.0
<b>General</b>				
Hardness	mg/L	28	--	--

Explanations of abbreviations are included on the final page of this table.

QAL025A (Background)

**Table 1**  
**Mine Permit Groundwater Quality Monitoring Data**  
**QAL025B (Background)**  
**Eagle Mine**

Parameter	Unit	Benchmark	Q4 2016 10/24/16 <sup>T</sup>	Q1 2017 02/01/17 <sup>T</sup>
Field				
D.O. <sup>1</sup>	ppm	--	11	11
ORP	mV	--	281	99
pH	SU	8.5-9.5	8.7	9.0
Specific Conductance	µS/cm @ 25°C	--	55	65
Temperature	°C	--	7.3	6.6
Turbidity	NTU	--	<1	<1
Water Elevation	ft MSL	--	1415.99	1415.57
Metals				
Aluminum	ug/L	200	--	--
Antimony	ug/L	5.5	--	--
Arsenic	ug/L	6.0	<2.0	<2.0
Barium	ug/L	80	--	--
Beryllium	ug/L	2.5	--	--
Boron	ug/L	400	<100 e	<100 e
Cadmium	ug/L	2.0	--	--
Chromium	ug/L	20	--	--
Cobalt	ug/L	40	--	--
Copper	ug/L	20	<5.0	<5.0
Iron	ug/L	56	<20	22 s
Lead	ug/L	4.0	--	--
Lithium	ug/L	32	--	--
Manganese	ug/L	80	<20	<20
Mercury	ng/L	2.00	<0.500 e	<0.500
Molybdenum	ug/L	40	--	--
Nickel	ug/L	100	<25	<25
Selenium	ug/L	4.0	<1.0	<1.0 e
Silver	ug/L	0.80	--	--
Strontium	ug/L	200	--	--
Thallium	ug/L	2.0	--	--
Vanadium	ug/L	4.0	1.0	1.1
Zinc	ug/L	40	<10	<10 e
Major Anions				
Alkalinity, Bicarbonate	mg/L	36	30	26 a
Alkalinity, Carbonate	mg/L	12	4.1	5.9
Chloride	mg/L	4.0	<1.0	<1.0
Fluoride	mg/L	0.40	--	--
Nitrogen, Nitrate	mg/L	0.20	0.11	0.11 e
Sulfate	mg/L	8.0	2.1	<2.0
Major Cations				
Calcium	mg/L	10	--	--
Magnesium	mg/L	2.0	--	--
Potassium	mg/L	2.0	--	--
Sodium	mg/L	4.5	1.7	1.8
General				
Hardness	mg/L	33	--	--

Explanations of abbreviations are included on the final page of this table.

QAL025B (Background)

**Table 1**  
**Mine Permit Groundwater Quality Monitoring Data**  
**QAL025D (Background)**  
**Eagle Mine**

Parameter	Unit	Benchmark	Q4 2016 11/07/16 <sup>T</sup>	Q1 2017 02/07/17 <sup>T</sup>
<b>Field</b>				
D.O. <sup>1</sup>	ppm	--	<b>5.4</b>	<b>5.5</b>
ORP	mV	--	<b>121</b>	<b>90</b>
pH	SU	8.2-9.2	<b>8.5</b>	<b>8.7</b>
Specific Conductance	µS/cm @ 25°C	--	<b>91</b>	<b>94</b>
Temperature	°C	--	<b>7.4</b>	<b>7.1</b>
Turbidity	NTU	--	<1	<1
Water Elevation	ft MSL	--	<b>1411.91</b>	<b>1411.56</b>
<b>Metals</b>				
Aluminum	ug/L	200	--	--
Antimony	ug/L	5.5	--	--
Arsenic	ug/L	6.5	<b>2.9</b>	<b>3.0</b>
Barium	ug/L	80	--	--
Beryllium	ug/L	2.5	--	--
Boron	ug/L	400	<100 e	<100 e
Cadmium	ug/L	2.0	--	--
Chromium	ug/L	20	--	--
Cobalt	ug/L	40	--	--
Copper	ug/L	20	<5.0	<5.0
Iron	ug/L	137	<b>45</b>	<b>41</b> s
Lead	ug/L	4.0	--	--
Lithium	ug/L	32	--	--
Manganese	ug/L	80	<20	<20
Mercury	ng/L	2.00	<0.500 e	<0.500
Molybdenum	ug/L	40	--	--
Nickel	ug/L	100	<25	<25
Selenium	ug/L	4.0	<1.0	<1.0 e
Silver	ug/L	0.80	--	--
Strontium	ug/L	200	--	--
Thallium	ug/L	2.0	--	--
Vanadium	ug/L	4.0	<b>3.9</b>	<b>3.6</b>
Zinc	ug/L	40	<10	<10 e
<b>Major Anions</b>				
Alkalinity, Bicarbonate	mg/L	52	<b>39</b>	<b>42</b> a
Alkalinity, Carbonate	mg/L	14	<b>6.0</b>	<b>4.0</b>
Chloride	mg/L	4.0	<1.0	1.1
Fluoride	mg/L	0.40	--	--
Nitrogen, Nitrate	mg/L	0.20	<b>0.16</b>	<b>0.15</b> e
Sulfate	mg/L	8.0	<b>5.2</b>	<b>5.2</b>
<b>Major Cations</b>				
Calcium	mg/L	12	--	--
Magnesium	mg/L	2.7	--	--
Potassium	mg/L	2.0	--	--
Sodium	mg/L	12	<b>3.8</b>	<b>3.8</b>
<b>General</b>				
Hardness	mg/L	42	--	--

Explanations of abbreviations are included on the final page of this table.

QAL025D (Background)

**Table 1**  
**Mine Permit Groundwater Quality Monitoring Data**  
**QAL026A (Background)**  
**Eagle Mine**

Parameter	Unit	Benchmark	Q4 2016 11/07/16 <sup>T</sup>	Q1 2017 02/07/17 <sup>T</sup>
<b>Field</b>				
D.O. <sup>1</sup>	ppm	--	11	13
ORP	mV	--	185	225
pH	SU	6.2-7.2	6.3	6.3
Specific Conductance	µS/cm @ 25°C	--	144	166
Temperature	°C	--	10.7	6.4
Turbidity	NTU	--	<1	<1
Water Elevation	ft MSL	--	1416.26	1415.66
<b>Metals</b>				
Aluminum	ug/L	236	--	--
Antimony	ug/L	5.5	--	--
Arsenic	ug/L	6.0	<2.0	<2.0
Barium	ug/L	80	--	--
Beryllium	ug/L	2.5	--	--
Boron	ug/L	400	<100 e	<100 e
Cadmium	ug/L	2.0	--	--
Chromium	ug/L	20	--	--
Cobalt	ug/L	40	--	--
Copper	ug/L	20	<5.0	<5.0
Iron	ug/L	368	120	23 s
Lead	ug/L	4.0	--	--
Lithium	ug/L	32	--	--
Manganese	ug/L	80	<20	<20
Mercury	ng/L	2.00	<0.500 e	<0.500
Molybdenum	ug/L	40	--	--
Nickel	ug/L	100	<25	<25
Selenium	ug/L	4.0	<1.0	<1.0 e
Silver	ug/L	0.80	--	--
Strontium	ug/L	200	--	--
Thallium	ug/L	2.0	--	--
Vanadium	ug/L	4.0	<1.0	<1.0
Zinc	ug/L	40	<10	<10 e
<b>Major Anions</b>				
Alkalinity, Bicarbonate	mg/L	114	77	52 a
Alkalinity, Carbonate	mg/L	8.0	<2.0	4.0
Chloride	mg/L	4.0	1.1	<1.0
Fluoride	mg/L	0.40	--	--
Nitrogen, Nitrate	mg/L	0.73	0.99	0.41 e
Sulfate	mg/L	8.0	2.3	<2.0
<b>Major Cations</b>				
Calcium	mg/L	40.0	--	--
Magnesium	mg/L	5.9	--	--
Potassium	mg/L	2.0	--	--
Sodium	mg/L	2.4	1.5	1.2
<b>General</b>				
Hardness	mg/L	124	--	--

Explanations of abbreviations are included on the final page of this table.

QAL026A (Background)

**Table 1**  
**Mine Permit Groundwater Quality Monitoring Data**  
**QAL026D (Background)**  
**Eagle Mine**

Parameter	Unit	Benchmark	Q4 2016 11/07/16 <sup>T</sup>	Q1 2017 02/07/17 <sup>T</sup>
<b>Field</b>				
D.O. <sup>1</sup>	ppm	--	11	11
ORP	mV	--	145	162
pH	SU	8.4-9.4	8.6	9.0
Specific Conductance	µS/cm @ 25°C	--	63	65
Temperature	°C	--	7.6	6.8
Turbidity	NTU	--	<1	<1
Water Elevation	ft MSL	--	1408.77	1408.60
<b>Metals</b>				
Aluminum	ug/L	200	--	--
Antimony	ug/L	5.5	--	--
Arsenic	ug/L	6.0	<2.0	<2.0
Barium	ug/L	80	--	--
Beryllium	ug/L	2.5	--	--
Boron	ug/L	400	<100 e	<100 e
Cadmium	ug/L	2.0	--	--
Chromium	ug/L	20	--	--
Cobalt	ug/L	40	--	--
Copper	ug/L	20	<5.0	<5.0
Iron	ug/L	80	<20	<20
Lead	ug/L	4.0	--	--
Lithium	ug/L	32	--	--
Manganese	ug/L	80	<20	<20
Mercury	ng/L	2.00	<0.500 e	<0.500
Molybdenum	ug/L	40	--	--
Nickel	ug/L	100	<25	<25
Selenium	ug/L	4.0	<1.0	<1.0 e
Silver	ug/L	0.80	--	--
Strontium	ug/L	200	--	--
Thallium	ug/L	2.0	--	--
Vanadium	ug/L	4.0	<1.0	<1.0
Zinc	ug/L	40	<10	<10 e
<b>Major Anions</b>				
Alkalinity, Bicarbonate	mg/L	31	27	31 a
Alkalinity, Carbonate	mg/L	8.0	8.1	4.0
Chloride	mg/L	4.0	<1.0	<1.0
Fluoride	mg/L	0.40	--	--
Nitrogen, Nitrate	mg/L	0.20	0.11	0.10 e
Sulfate	mg/L	8.0	<2.0	<2.0
<b>Major Cations</b>				
Calcium	mg/L	13	--	--
Magnesium	mg/L	2.4	--	--
Potassium	mg/L	2.0	--	--
Sodium	mg/L	2.0	0.64	0.72
<b>General</b>				
Hardness	mg/L	43	--	--

Explanations of abbreviations are included on the final page of this table.

QAL026D (Background)

**Table 1**  
**Mine Permit Groundwater Quality Monitoring Data**  
**QAL026E (Background)**  
**Eagle Mine**

Parameter	Unit	Benchmark	Q4 2016 11/07/16 <sup>T</sup>	Q1 2017 01/31/17 <sup>T</sup>
<b>Field</b>				
D.O. <sup>1</sup>	ppm	--	<b>0.3</b>	<b>0.1</b>
ORP	mV	--	<b>-9</b>	<b>-69</b>
pH	SU	8.1-9.1	<b>8.5</b>	<b>8.5</b>
Specific Conductance	µS/cm @ 25°C	--	<b>100</b>	<b>120</b>
Temperature	°C	--	<b>7.2</b>	<b>6.9</b>
Turbidity	NTU	--	<1	<1
Water Elevation	ft MSL	--	<b>1408.40</b>	<b>1408.33</b>
<b>Metals</b>				
Aluminum	ug/L	200	--	--
Antimony	ug/L	5.5	--	--
Arsenic	ug/L	7.8	<b>6.7</b>	<b>8.1</b>
Barium	ug/L	80	--	--
Beryllium	ug/L	2.5	--	--
Boron	ug/L	400	<100 e	<100 e
Cadmium	ug/L	2.0	--	--
Chromium	ug/L	20	--	--
Cobalt	ug/L	40	--	--
Copper	ug/L	20	<5.0	<5.0
Iron	ug/L	80	<20	<20
Lead	ug/L	4.0	--	--
Lithium	ug/L	32	--	--
Manganese	ug/L	80	<20	<20
Mercury	ng/L	2.00	<0.500 e	<0.500
Molybdenum	ug/L	40	--	--
Nickel	ug/L	100	<25	<25
Selenium	ug/L	4.0	<1.0	<1.0 e
Silver	ug/L	0.80	--	--
Strontium	ug/L	200	--	--
Thallium	ug/L	2.0	--	--
Vanadium	ug/L	4.0	<1.0	<1.0
Zinc	ug/L	40	<10	<10 e
<b>Major Anions</b>				
Alkalinity, Bicarbonate	mg/L	91	<b>57</b>	<b>56</b> a
Alkalinity, Carbonate	mg/L	8.0	<2.0	<2.0
Chloride	mg/L	4.0	<1.0	<b>1.2</b>
Fluoride	mg/L	0.40	--	--
Nitrogen, Nitrate	mg/L	0.20	<0.050	<0.050 e
Sulfate	mg/L	8.6	<b>7.4</b>	<b>7.3</b>
<b>Major Cations</b>				
Calcium	mg/L	17	--	--
Magnesium	mg/L	4.3	--	--
Potassium	mg/L	2.0	--	--
Sodium	mg/L	2.0	<b>1.7</b>	<b>1.7</b>
<b>General</b>				
Hardness	mg/L	60	--	--

Explanations of abbreviations are included on the final page of this table.

QAL026E (Background)



**Table 1**  
**Mine Permit Groundwater Quality Monitoring Data**  
**QAL044B (UMB)**  
**Eagle Mine**

Parameter	Unit	Benchmark	Q4 2016 10/25/16 <sup>T</sup>	Q1 2017 02/02/17 <sup>T</sup>
Field				
D.O. <sup>1</sup>	ppm	--	1.0	1.0
ORP	mV	--	-180	-155
pH	SU	8.3-9.3	9.9	9.7
Specific Conductance	µS/cm @ 25°C	--	77	82
Temperature	°C	--	7.9	6.8
Turbidity	NTU	--	<1	<1
Water Elevation	ft MSL	--	1413.98	1413.68
Metals				
Aluminum	ug/L	200	--	--
Antimony	ug/L	5.5	--	--
Arsenic	ug/L	6.0	2.6	2.3
Barium	ug/L	80	--	--
Beryllium	ug/L	2.5	--	--
Boron	ug/L	400	<100 e	<100 e
Cadmium	ug/L	2.0	--	--
Chromium	ug/L	20	--	--
Cobalt	ug/L	40	--	--
Copper	ug/L	20	<5.0	<5.0
Iron	ug/L	80	31	<20
Lead	ug/L	4.0	--	--
Lithium	ug/L	32	--	--
Manganese	ug/L	80	<20	<20
Mercury	ng/L	2.00	<0.500 e	<0.500
Molybdenum	ug/L	40	--	--
Nickel	ug/L	100	<25	<25
Selenium	ug/L	4.0	<1.0	<1.0 e
Silver	ug/L	0.80	--	--
Strontium	ug/L	200	--	--
Thallium	ug/L	2.0	--	--
Vanadium	ug/L	4.0	<1.0	<1.0
Zinc	ug/L	40	<10	<10 e
Major Anions				
Alkalinity, Bicarbonate	mg/L	64	12	25 a
Alkalinity, Carbonate	mg/L	8.0	16	18
Chloride	mg/L	4.0	1.4	1.1
Fluoride	mg/L	0.40	--	--
Nitrogen, Nitrate	mg/L	0.20	<0.050	<0.050 e
Sulfate	mg/L	24	7.4	7.0
Major Cations				
Calcium	mg/L	17	--	--
Magnesium	mg/L	4.0	--	--
Potassium	mg/L	2.0	--	--
Sodium	mg/L	2.6	2.5	2.3
General				
Hardness	mg/L	58	--	--

Explanations of abbreviations are included on the final page of this table.

QAL044B (UMB)

**Table 1**  
**Mine Permit Groundwater Quality Monitoring Data**  
**QAL060A (TDRSA-CWB)**  
**Eagle Mine**

Parameter	Unit	Benchmark	Q4 2016 10/24/16 <sup>T</sup>	Q1 2017 02/01/17 <sup>T</sup>
<b>Field</b>				
D.O. <sup>1</sup>	ppm	--	11	11
ORP	mV	--	70	-14
pH	SU	8.1-9.1	8.9	8.9
Specific Conductance	µS/cm @ 25°C	--	73	81
Temperature	°C	--	7.7	7.2
Turbidity	NTU	--	<1	<1
Water Elevation	ft MSL	--	1404.21	1403.91
<b>Metals</b>				
Aluminum	ug/L	200	--	--
Antimony	ug/L	5.5	--	--
Arsenic	ug/L	7.2	4.8	5.1
Barium	ug/L	80	--	--
Beryllium	ug/L	2.5	--	--
Boron	ug/L	400	<100 e	<100 e
Cadmium	ug/L	2.0	--	--
Chromium	ug/L	20	--	--
Cobalt	ug/L	40	--	--
Copper	ug/L	20	<5.0	<5.0
Iron	ug/L	80	<20	<20
Lead	ug/L	4.0	--	--
Lithium	ug/L	32	--	--
Manganese	ug/L	80	<20	<20
Mercury	ng/L	2.00	<0.500 e	<0.500
Molybdenum	ug/L	40	--	--
Nickel	ug/L	100	<25	<25
Selenium	ug/L	4.0	<1.0	<1.0 e
Silver	ug/L	0.80	--	--
Strontium	ug/L	200	--	--
Thallium	ug/L	2.0	--	--
Vanadium	ug/L	4.0	1.3	1.2
Zinc	ug/L	40	<10	<10 e
<b>Major Anions</b>				
Alkalinity, Bicarbonate	mg/L	62	36	35 a
Alkalinity, Carbonate	mg/L	8.0	8.1	3.9
Chloride	mg/L	4.0	1.1	<1.0
Fluoride	mg/L	0.40	--	--
Nitrogen, Nitrate	mg/L	0.20	0.18	0.20 e
Sulfate	mg/L	8.0	2.0	<2.0
<b>Major Cations</b>				
Calcium	mg/L	17	--	--
Magnesium	mg/L	4.2	--	--
Potassium	mg/L	2.0	--	--
Sodium	mg/L	2.1	0.75	0.79
<b>General</b>				
Hardness	mg/L	61	--	--

Explanations of abbreviations are included on the final page of this table.

QAL060A (TDRSA-CWB)

**Table 1**  
**Mine Permit Groundwater Quality Monitoring Data**  
**QAL061A (TDRSA-CWB)**  
**Eagle Mine**

Parameter	Unit	Benchmark	Q4 2016 10/25/16 <sup>T</sup>	Q1 2017 02/01/17 <sup>T</sup>
<b>Field</b>				
D.O. <sup>1</sup>	ppm	--	11	11
ORP	mV	--	62	-19
pH	SU	8.1-9.1	9.1	8.9
Specific Conductance	µS/cm @ 25°C	--	79	95
Temperature	°C	--	7.4	7.7
Turbidity	NTU	--	<1	<1
Water Elevation	ft MSL	--	1405.59	1405.21
<b>Metals</b>				
Aluminum	ug/L	200	--	--
Antimony	ug/L	5.5	--	--
Arsenic	ug/L	6.0	<2.0	<2.0
Barium	ug/L	80	--	--
Beryllium	ug/L	2.5	--	--
Boron	ug/L	400	<100 e	<100 e
Cadmium	ug/L	2.0	--	--
Chromium	ug/L	20	--	--
Cobalt	ug/L	40	--	--
Copper	ug/L	20	<5.0	<5.0
Iron	ug/L	80	<20	<20
Lead	ug/L	4.0	--	--
Lithium	ug/L	32	--	--
Manganese	ug/L	80	<20	<20
Mercury	ng/L	2.00	<0.500 e	<0.500
Molybdenum	ug/L	40	--	--
Nickel	ug/L	100	<25	<25
Selenium	ug/L	4.0	<1.0	<1.0 e
Silver	ug/L	0.80	--	--
Strontium	ug/L	200	--	--
Thallium	ug/L	2.0	--	--
Vanadium	ug/L	4.0	<1.0	<1.0
Zinc	ug/L	40	<10	<10 e
<b>Major Anions</b>				
Alkalinity, Bicarbonate	mg/L	40	36	41 a
Alkalinity, Carbonate	mg/L	8.0	2.0	3.9
Chloride	mg/L	4.0	<1.0	1.1
Fluoride	mg/L	0.40	--	--
Nitrogen, Nitrate	mg/L	0.27	0.28	0.30 e
Sulfate	mg/L	8.0	<2.0	<2.0
<b>Major Cations</b>				
Calcium	mg/L	15	--	--
Magnesium	mg/L	2.2	--	--
Potassium	mg/L	2.0	--	--
Sodium	mg/L	2.0	0.72	0.76
<b>General</b>				
Hardness	mg/L	37	--	--

Explanations of abbreviations are included on the final page of this table.

QAL061A (TDRSA-CWB)

**Table 1**  
**Mine Permit Groundwater Quality Monitoring Data**  
**QAL062A (TDRSA-CWB)**  
**Eagle Mine**

Parameter	Unit	Benchmark	Q4 2016 10/24/16 <sup>T</sup>	Q1 2017 01/31/17 <sup>T</sup>
<b>Field</b>				
D.O. <sup>1</sup>	ppm	--	9.6	9.4
ORP	mV	--	111	-21
pH	SU	8.3-9.3	8.1	8.0
Specific Conductance	µS/cm @ 25°C	--	356	408
Temperature	°C	--	7.6	7.5
Turbidity	NTU	--	<1	<1
Water Elevation	ft MSL	--	1406.88	1406.81
<b>Metals</b>				
Aluminum	ug/L	200	--	--
Antimony	ug/L	5.5	--	--
Arsenic	ug/L	6.0	<2.0	<2.0
Barium	ug/L	80	--	--
Beryllium	ug/L	2.5	--	--
Boron	ug/L	400	<100 e	<100 e
Cadmium	ug/L	2.0	--	--
Chromium	ug/L	20	--	--
Cobalt	ug/L	40	--	--
Copper	ug/L	20	<5.0	<5.0
Iron	ug/L	80	<20	<20
Lead	ug/L	4.0	--	--
Lithium	ug/L	32	--	--
Manganese	ug/L	80	<20	<20
Mercury	ng/L	2.00	<0.500 e	<0.500
Molybdenum	ug/L	40	--	--
Nickel	ug/L	100	<25	<25
Selenium	ug/L	4.0	<1.0	<1.0 e
Silver	ug/L	0.80	--	--
Strontium	ug/L	200	--	--
Thallium	ug/L	2.0	--	--
Vanadium	ug/L	4.0	<1.0	<1.0
Zinc	ug/L	40	<10	<10 e
<b>Major Anions</b>				
Alkalinity, Bicarbonate	mg/L	48	120	120 a
Alkalinity, Carbonate	mg/L	8.0	<2.0	<2.0
Chloride	mg/L	4.0	46	48
Fluoride	mg/L	0.40	--	--
Nitrogen, Nitrate	mg/L	0.41	0.46	0.52 e
Sulfate	mg/L	8.0	2.2	2.2
<b>Major Cations</b>				
Calcium	mg/L	12	--	--
Magnesium	mg/L	2.2	--	--
Potassium	mg/L	2.0	--	--
Sodium	mg/L	2.0	11	14
<b>General</b>				
Hardness	mg/L	40	--	--

Explanations of abbreviations are included on the final page of this table.

QAL062A (TDRSA-CWB)

**Table 1**  
**Mine Permit Groundwater Quality Monitoring Data**  
**QAL063A (TDRSA-CWB)**  
**Eagle Mine**

Parameter	Unit	Benchmark	Q4 2016 10/24/16 <sup>T</sup>	Q1 2017 01/31/17 <sup>T</sup>
<b>Field</b>				
D.O. <sup>1</sup>	ppm	--	9.5	9.3
ORP	mV	--	61	-6
pH	SU	8.1-9.1	8.3	7.9
Specific Conductance	µS/cm @ 25°C	--	283	363
Temperature	°C	--	8.3	7.8
Turbidity	NTU	--	<1	<1
Water Elevation	ft MSL	--	1400.83	1400.96
<b>Metals</b>				
Aluminum	ug/L	200	--	--
Antimony	ug/L	5.5	--	--
Arsenic	ug/L	6.0	<2.0	<2.0
Barium	ug/L	80	--	--
Beryllium	ug/L	2.5	--	--
Boron	ug/L	400	<100 e	<100 e
Cadmium	ug/L	2.0	--	--
Chromium	ug/L	20	--	--
Cobalt	ug/L	40	--	--
Copper	ug/L	20	<5.0	<5.0
Iron	ug/L	80	<20	<20
Lead	ug/L	4.0	--	--
Lithium	ug/L	32	--	--
Manganese	ug/L	80	<20	<20
Mercury	ng/L	2.00	<0.500 e	<0.500
Molybdenum	ug/L	40	--	--
Nickel	ug/L	100	<25	<25
Selenium	ug/L	4.0	<1.0	<1.0 e
Silver	ug/L	0.80	--	--
Strontium	ug/L	200	--	--
Thallium	ug/L	2.0	--	--
Vanadium	ug/L	4.0	<1.0	<1.0
Zinc	ug/L	40	<10	<10 e
<b>Major Anions</b>				
Alkalinity, Bicarbonate	mg/L	42	110	130 a
Alkalinity, Carbonate	mg/L	8.0	<2.0	<2.0
Chloride	mg/L	4.0	24	30
Fluoride	mg/L	0.40	--	--
Nitrogen, Nitrate	mg/L	0.29	0.54	0.60 e
Sulfate	mg/L	8.0	2.0	2.1
<b>Major Cations</b>				
Calcium	mg/L	12	--	--
Magnesium	mg/L	2.0	--	--
Potassium	mg/L	2.0	--	--
Sodium	mg/L	2.0	1.4	1.9
<b>General</b>				
Hardness	mg/L	40	--	--

Explanations of abbreviations are included on the final page of this table.

QAL063A (TDRSA-CWB)

**Table 1**  
**Mine Permit Groundwater Quality Monitoring Data**  
**QAL064D (UMB)**  
**Eagle Mine**

Parameter	Unit	Benchmark	Q4 2016 10/25/16 <sup>T</sup>	Q1 2017 02/02/17 <sup>T</sup>
<b>Field</b>				
D.O. <sup>1</sup>	ppm	--	<b>0.2</b>	<b>0.2</b>
ORP	mV	--	<b>-184</b>	<b>-282</b>
pH	SU	8.0-9.0	<b>8.7</b>	<b>8.6</b>
Specific Conductance	µS/cm @ 25°C	--	<b>143</b>	<b>157</b>
Temperature	°C	--	<b>7.0</b>	<b>6.9</b>
Turbidity	NTU	--	<1	<1
Water Elevation	ft MSL	--	<b>1415.58</b>	<b>1415.26</b>
<b>Metals</b>				
Aluminum	ug/L	200	--	--
Antimony	ug/L	5.5	--	--
Arsenic	ug/L	6.0	<2.0	<2.0
Barium	ug/L	80	--	--
Beryllium	ug/L	2.5	--	--
Boron	ug/L	400	<100 e	<100 e
Cadmium	ug/L	2.0	--	--
Chromium	ug/L	20	--	--
Cobalt	ug/L	40	--	--
Copper	ug/L	20	<5.0	<5.0
Iron	ug/L	80	<b>31</b>	<b>38</b> s
Lead	ug/L	4.0	--	--
Lithium	ug/L	32	--	--
Manganese	ug/L	80	<20	<20
Mercury	ng/L	2.00	<0.500 e	<0.500
Molybdenum	ug/L	40	--	--
Nickel	ug/L	100	<25	<25
Selenium	ug/L	4.0	<1.0	<1.0 e
Silver	ug/L	0.80	--	--
Strontium	ug/L	200	--	--
Thallium	ug/L	2.0	--	--
Vanadium	ug/L	4.0	<1.0	<b>1.1</b>
Zinc	ug/L	40	<10	<10 e
<b>Major Anions</b>				
Alkalinity, Bicarbonate	mg/L	82	<b>82</b>	<b>73</b> a
Alkalinity, Carbonate	mg/L	8.0	<2.0	<2.0
Chloride	mg/L	4.2	<b>2.5</b>	<b>2.1</b>
Fluoride	mg/L	0.40	--	--
Nitrogen, Nitrate	mg/L	0.20	<0.050	<0.050 e
Sulfate	mg/L	8.0	<2.0	<2.0
<b>Major Cations</b>				
Calcium	mg/L	22	--	--
Magnesium	mg/L	3.3	--	--
Potassium	mg/L	2.0	--	--
Sodium	mg/L	6.9	<b>4.2</b>	<b>3.9</b>
<b>General</b>				
Hardness	mg/L	51	--	--

Explanations of abbreviations are included on the final page of this table.

QAL064D (UMB)

**Table 1**  
**Mine Permit Groundwater Quality Monitoring Data**  
**QAL065D (UMB)**  
**Eagle Mine**

Parameter	Unit	Benchmark	Q4 2016 10/26/16 <sup>T</sup>	Q1 2017 02/02/17 <sup>T</sup>
<b>Field</b>				
D.O. <sup>1</sup>	ppm	--	1.0	0.2
ORP	mV	--	-72	-241
pH	SU	7.9-8.9	8.7	8.6
Specific Conductance	µS/cm @ 25°C	--	143	154
Temperature	°C	--	7.0	6.6
Turbidity	NTU	--	<1	<1
Water Elevation	ft MSL	--	1415.80	1415.57
<b>Metals</b>				
Aluminum	ug/L	200	--	--
Antimony	ug/L	5.5	--	--
Arsenic	ug/L	6.6	3.3	3.0
Barium	ug/L	80	--	--
Beryllium	ug/L	2.5	--	--
Boron	ug/L	400	<100 e	<100 e
Cadmium	ug/L	2.0	--	--
Chromium	ug/L	20	--	--
Cobalt	ug/L	40	--	--
Copper	ug/L	20	<5.0	<5.0
Iron	ug/L	80	51	55
Lead	ug/L	4.0	--	--
Lithium	ug/L	32	--	--
Manganese	ug/L	80	<20	<20
Mercury	ng/L	2.00	<0.500 e	<0.500
Molybdenum	ug/L	40	--	--
Nickel	ug/L	100	<25	<25
Selenium	ug/L	4.0	<1.0	<1.0 e
Silver	ug/L	0.80	--	--
Strontium	ug/L	200	--	--
Thallium	ug/L	2.0	--	--
Vanadium	ug/L	4.0	<1.0	<1.0
Zinc	ug/L	40	<10	<10 e
<b>Major Anions</b>				
Alkalinity, Bicarbonate	mg/L	86	79	77 a
Alkalinity, Carbonate	mg/L	8.7	<2.0	<2.0
Chloride	mg/L	4.0	1.2	<1.0
Fluoride	mg/L	0.40	--	--
Nitrogen, Nitrate	mg/L	0.20	<0.050	<0.050 e
Sulfate	mg/L	8.0	<2.0	<2.0
<b>Major Cations</b>				
Calcium	mg/L	14	--	--
Magnesium	mg/L	4.8	--	--
Potassium	mg/L	3.0	--	--
Sodium	mg/L	12	12	11
<b>General</b>				
Hardness	mg/L	53	--	--

Explanations of abbreviations are included on the final page of this table.

QAL065D (UMB)

**Table 1**  
**Mine Permit Groundwater Quality Monitoring Data**  
**QAL066D (UMB)**  
**Eagle Mine**

Parameter	Unit	Benchmark	Q4 2016 10/25/16 <sup>D</sup>	Q1 2017 02/02/17 <sup>D</sup>
Field				
D.O. <sup>1</sup>	ppm	--	3.2	3.8
ORP	mV	--	-3	35
pH	SU	8.7-9.7	9.1	8.5
Specific Conductance	µS/cm @ 25°C	--	121	138
Temperature	°C	--	8.3	6.4
Turbidity	NTU	--	328	302
Water Elevation	ft MSL	--	1414.85	1414.60
Metals				
Aluminum	ug/L	557	--	--
Antimony	ug/L	5.5	--	--
Arsenic	ug/L	8.9	11	9.1
Barium	ug/L	80	--	--
Beryllium	ug/L	2.5	--	--
Boron	ug/L	400	<100 e	<100 e
Cadmium	ug/L	2.0	--	--
Chromium	ug/L	20	--	--
Cobalt	ug/L	40	--	--
Copper	ug/L	20	<5.0	<5.0
Iron	ug/L	288	<20	320
Lead	ug/L	4.0	--	--
Lithium	ug/L	32	--	--
Manganese	ug/L	80	<20	<20
Mercury	ng/L	2.00	2.79 e	2.36
Molybdenum	ug/L	40	--	--
Nickel	ug/L	100	<25	<25
Selenium	ug/L	4.0	<1.0	<1.0 e
Silver	ug/L	0.80	--	--
Strontium	ug/L	367	--	--
Thallium	ug/L	2.0	--	--
Vanadium	ug/L	4.0	1.5	1.4
Zinc	ug/L	40	<10	<10 e
Major Anions				
Alkalinity, Bicarbonate	mg/L	61	56	54 a
Alkalinity, Carbonate	mg/L	52	12	9.8
Chloride	mg/L	4.0	2.5	1.2
Fluoride	mg/L	0.40	--	--
Nitrogen, Nitrate	mg/L	0.20	<0.050	0.051 e
Sulfate	mg/L	11	23	13
Major Cations				
Calcium	mg/L	58	--	--
Magnesium	mg/L	2.9	--	--
Potassium	mg/L	2.6	--	--
Sodium	mg/L	8.0	21	17
General				
Hardness	mg/L	146	--	--

Explanations of abbreviations are included on the final page of this table.

QAL066D (UMB)



**Table 1**  
**Mine Permit Groundwater Quality Monitoring Data**  
**QAL067A (TDRSA-CWB)**  
**Eagle Mine**

Parameter	Unit	Benchmark	Q4 2016 10/26/16 <sup>T</sup>	Q1 2017 01/31/17 <sup>T</sup>
<b>Field</b>				
D.O. <sup>1</sup>	ppm	--	8.7	8.7
ORP	mV	--	111	5
pH	SU	5.6-6.6	6.3	6.0
Specific Conductance	µS/cm @ 25°C	--	1675	1568
Temperature	°C	--	8.0	7.9
Turbidity	NTU	--	<1	<1
Water Elevation	ft MSL	--	1414.20	1413.81
<b>Metals</b>				
Aluminum	ug/L	200	--	--
Antimony	ug/L	5.5	--	--
Arsenic	ug/L	6.0	<2.0	<2.0
Barium	ug/L	80	--	--
Beryllium	ug/L	2.5	--	--
Boron	ug/L	400	<100 e	<100 e
Cadmium	ug/L	2.0	--	--
Chromium	ug/L	20	--	--
Cobalt	ug/L	40	--	--
Copper	ug/L	20	<5.0	<5.0
Iron	ug/L	80	<20	<20
Lead	ug/L	4.0	--	--
Lithium	ug/L	32	--	--
Manganese	ug/L	80	<20	<20
Mercury	ng/L	2.00	2.17 e	2.22
Molybdenum	ug/L	40	--	--
Nickel	ug/L	100	<25	<25
Selenium	ug/L	4.0	<1.0	<1.0 e
Silver	ug/L	0.80	--	--
Strontium	ug/L	200	--	--
Thallium	ug/L	2.0	--	--
Vanadium	ug/L	4.0	<1.0	<1.0
Zinc	ug/L	40	<10	<10 e
<b>Major Anions</b>				
Alkalinity, Bicarbonate	mg/L	51	49	54 a
Alkalinity, Carbonate	mg/L	8.0	<2.0	<2.0
Chloride	mg/L	4.0	490	410
Fluoride	mg/L	0.40	--	--
Nitrogen, Nitrate	mg/L	0.25	2.4	2.3 e
Sulfate	mg/L	8.4	19	19
<b>Major Cations</b>				
Calcium	mg/L	8.2	--	--
Magnesium	mg/L	2.0	--	--
Potassium	mg/L	2.0	--	--
Sodium	mg/L	2.0	310	270
<b>General</b>				
Hardness	mg/L	26	--	--

Explanations of abbreviations are included on the final page of this table.

QAL067A (TDRSA-CWB)

**Table 1**  
**Mine Permit Groundwater Quality Monitoring Data**  
**QAL068A (Background)**  
**Eagle Mine**

Parameter	Unit	Benchmark	Q4 2016 10/24/16 <sup>T</sup>	Q1 2017 01/31/17 <sup>T</sup>
<b>Field</b>				
D.O. <sup>1</sup>	ppm	--	12	11
ORP	mV	--	231	248
pH	SU	6.2-7.2	6.9	6.0
Specific Conductance	µS/cm @ 25°C	--	28	38
Temperature	°C	--	7.4	7.5
Turbidity	NTU	--	<1	<1
Water Elevation	ft MSL	--	1421.68	1421.43
<b>Metals</b>				
Aluminum	ug/L	200	--	--
Antimony	ug/L	5.5	--	--
Arsenic	ug/L	6.0	<2.0	<2.0
Barium	ug/L	80	--	--
Beryllium	ug/L	2.5	--	--
Boron	ug/L	400	<100 e	<100 e
Cadmium	ug/L	2.0	--	--
Chromium	ug/L	20	--	--
Cobalt	ug/L	40	--	--
Copper	ug/L	20	<5.0	<5.0
Iron	ug/L	80	<20	<20
Lead	ug/L	4.0	--	--
Lithium	ug/L	32	--	--
Manganese	ug/L	80	<20	<20
Mercury	ng/L	2.00	<0.500 e	<0.500
Molybdenum	ug/L	40	--	--
Nickel	ug/L	100	<25	<25
Selenium	ug/L	4.0	<1.0	<1.0 e
Silver	ug/L	0.80	--	--
Strontium	ug/L	200	--	--
Thallium	ug/L	2.0	--	--
Vanadium	ug/L	4.0	<1.0	<1.0
Zinc	ug/L	40	<10	<10 e
<b>Major Anions</b>				
Alkalinity, Bicarbonate	mg/L	35	16	19 a
Alkalinity, Carbonate	mg/L	8.0	<2.0	<2.0
Chloride	mg/L	4.0	<1.0	<1.0
Fluoride	mg/L	0.40	--	--
Nitrogen, Nitrate	mg/L	0.20	<0.050	<0.050 e
Sulfate	mg/L	8.0	<2.0	<2.0
<b>Major Cations</b>				
Calcium	mg/L	6.7	--	--
Magnesium	mg/L	2.0	--	--
Potassium	mg/L	2.0	--	--
Sodium	mg/L	2.0	0.64	0.72
<b>General</b>				
Hardness	mg/L	21	--	--

Explanations of abbreviations are included on the final page of this table.

QAL068A (Background)

**Table 1**  
**Mine Permit Groundwater Quality Monitoring Data**  
**QAL068B (Background)**  
**Eagle Mine**

Parameter	Unit	Benchmark	Q4 2016 10/24/16 <sup>T</sup>	Q1 2017 01/31/17 <sup>T</sup>
<b>Field</b>				
D.O. <sup>1</sup>	ppm	--	11	11
ORP	mV	--	142	210
pH	SU	8.4-9.4	8.8	8.5
Specific Conductance	µS/cm @ 25°C	--	51	62
Temperature	°C	--	7.6	7.3
Turbidity	NTU	--	<1	<1
Water Elevation	ft MSL	--	1412.68	1412.61
<b>Metals</b>				
Aluminum	ug/L	200	--	--
Antimony	ug/L	5.5	--	--
Arsenic	ug/L	6.0	<2.0	<2.0
Barium	ug/L	80	--	--
Beryllium	ug/L	2.5	--	--
Boron	ug/L	400	<100 e	<100 e
Cadmium	ug/L	2.0	--	--
Chromium	ug/L	20	--	--
Cobalt	ug/L	40	--	--
Copper	ug/L	20	<5.0	<5.0
Iron	ug/L	184	<20	<20
Lead	ug/L	4.0	--	--
Lithium	ug/L	32	--	--
Manganese	ug/L	80	<20	<20
Mercury	ng/L	2.00	<0.500 e	<0.500
Molybdenum	ug/L	40	--	--
Nickel	ug/L	100	<25	<25
Selenium	ug/L	4.0	<1.0	<1.0 e
Silver	ug/L	0.80	--	--
Strontium	ug/L	200	--	--
Thallium	ug/L	2.0	--	--
Vanadium	ug/L	4.0	1.1	1.1
Zinc	ug/L	40	<10	<10 e
<b>Major Anions</b>				
Alkalinity, Bicarbonate	mg/L	30	37	25 a
Alkalinity, Carbonate	mg/L	9.9	2.0	6.0
Chloride	mg/L	4.0	<1.0	1.1
Fluoride	mg/L	0.40	--	--
Nitrogen, Nitrate	mg/L	0.20	0.058	0.057 e
Sulfate	mg/L	8.0	2.4	2.3
<b>Major Cations</b>				
Calcium	mg/L	9.4	--	--
Magnesium	mg/L	2.0	--	--
Potassium	mg/L	2.0	--	--
Sodium	mg/L	2.0	0.91	0.95
<b>General</b>				
Hardness	mg/L	31	--	--

Explanations of abbreviations are included on the final page of this table.

QAL068B (Background)

**Table 1**  
**Mine Permit Groundwater Quality Monitoring Data**  
**QAL068D (Background)**  
**Eagle Mine**

Parameter	Unit	Benchmark	Q4 2016 10/25/16 <sup>T</sup>	Q1 2017 01/31/17 <sup>T</sup>
<b>Field</b>				
D.O. <sup>1</sup>	ppm	--	<b>2.8</b>	<b>3.5</b>
ORP	mV	--	<b>8</b>	<b>68</b>
pH	SU	8.0-9.0	<b>8.3</b>	<b>8.1</b>
Specific Conductance	µS/cm @ 25°C	--	<b>100</b>	<b>118</b>
Temperature	°C	--	<b>8.4</b>	<b>6.1</b>
Turbidity	NTU	--	<1	<1
Water Elevation	ft MSL	--	<b>1412.81</b>	<b>1412.56</b>
<b>Metals</b>				
Aluminum	ug/L	200	--	--
Antimony	ug/L	5.5	--	--
Arsenic	ug/L	7.2	<b>5.1</b>	<b>5.2</b>
Barium	ug/L	80	--	--
Beryllium	ug/L	2.5	--	--
Boron	ug/L	400	<100 e	<100 e
Cadmium	ug/L	2.0	--	--
Chromium	ug/L	20	--	--
Cobalt	ug/L	40	--	--
Copper	ug/L	20	<5.0	<5.0
Iron	ug/L	119	<20	<b>22</b> s
Lead	ug/L	4.0	--	--
Lithium	ug/L	32	--	--
Manganese	ug/L	80	<20	<20
Mercury	ng/L	2.12	<0.500 e	<0.500
Molybdenum	ug/L	40	--	--
Nickel	ug/L	100	<25	<25
Selenium	ug/L	4.0	<1.0	<1.0 e
Silver	ug/L	0.80	--	--
Strontium	ug/L	200	--	--
Thallium	ug/L	2.0	--	--
Vanadium	ug/L	4.0	<b>1.6</b>	<b>2.6</b>
Zinc	ug/L	40	<10	<10 e
<b>Major Anions</b>				
Alkalinity, Bicarbonate	mg/L	67	<b>60</b>	<b>60</b> a
Alkalinity, Carbonate	mg/L	8.0	<2.0	<2.0
Chloride	mg/L	4.0	<1.0	<b>1.2</b>
Fluoride	mg/L	0.40	--	--
Nitrogen, Nitrate	mg/L	0.21	<0.050	<0.050 e
Sulfate	mg/L	10	<b>5.6</b>	<b>5.1</b>
<b>Major Cations</b>				
Calcium	mg/L	16	--	--
Magnesium	mg/L	3.9	--	--
Potassium	mg/L	2.0	--	--
Sodium	mg/L	6.1	<b>4.7</b>	<b>4.1</b>
<b>General</b>				
Hardness	mg/L	52	--	--

Explanations of abbreviations are included on the final page of this table.

QAL068D (Background)

**Table 1**  
**Mine Permit Groundwater Quality Monitoring Data**  
**QAL069A (Background)**  
**Eagle Mine**

Parameter	Unit	Benchmark	Q4 2016 10/24/16 <sup>T</sup>	Q1 2017 02/01/17 <sup>T</sup>
<b>Field</b>				
D.O. <sup>1</sup>	ppm	--	5.2	5.5
ORP	mV	--	64	83
pH	SU	7.8-8.8	7.0	6.8
Specific Conductance	µS/cm @ 25°C	--	559	408
Temperature	°C	--	8.2	7.8
Turbidity	NTU	--	<1	<1
Water Elevation	ft MSL	--	1382.60	1382.12
<b>Metals</b>				
Aluminum	ug/L	200	--	--
Antimony	ug/L	5.5	--	--
Arsenic	ug/L	6.0	<2.0	<2.0
Barium	ug/L	80	--	--
Beryllium	ug/L	2.5	--	--
Boron	ug/L	400	<100 e	<100 e
Cadmium	ug/L	2.0	--	--
Chromium	ug/L	20	--	--
Cobalt	ug/L	40	--	--
Copper	ug/L	20	<5.0	<5.0
Iron	ug/L	80	29	82
Lead	ug/L	4.0	--	--
Lithium	ug/L	32	--	--
Manganese	ug/L	80	<20	<20
Mercury	ng/L	2.00	14.4 e	4.53
Molybdenum	ug/L	40	--	--
Nickel	ug/L	100	<25	<25
Selenium	ug/L	4.0	<1.0	<1.0 e
Silver	ug/L	0.80	--	--
Strontium	ug/L	200	--	--
Thallium	ug/L	2.0	--	--
Vanadium	ug/L	4.0	<1.0	<1.0
Zinc	ug/L	40	<10	<10 e
<b>Major Anions</b>				
Alkalinity, Bicarbonate	mg/L	138	180	160 a
Alkalinity, Carbonate	mg/L	8.0	<2.0	<2.0
Chloride	mg/L	4.0	76	32
Fluoride	mg/L	0.40	--	--
Nitrogen, Nitrate	mg/L	0.57	0.98	0.90 e
Sulfate	mg/L	8.0	8.8	7.5
<b>Major Cations</b>				
Calcium	mg/L	35	--	--
Magnesium	mg/L	18	--	--
Potassium	mg/L	2.0	--	--
Sodium	mg/L	2.0	28	29
<b>General</b>				
Hardness	mg/L	162	--	--

Explanations of abbreviations are included on the final page of this table.

QAL069A (Background)

**Table 1**  
**Mine Permit Groundwater Quality Monitoring Data**  
**QAL071A (TDRSA-CWB)**  
**Eagle Mine**

Parameter	Unit	Benchmark	Q4 2016 10/25/16 <sup>T</sup>	Q1 2017 02/01/17 <sup>T</sup>
<b>Field</b>				
D.O. <sup>1</sup>	ppm	--	11	11
ORP	mV	--	72	144
pH	SU	8.1-9.1	7.9	7.4
Specific Conductance	µS/cm @ 25°C	--	494	557
Temperature	°C	--	8.1	7.7
Turbidity	NTU	--	<1	<1
Water Elevation	ft MSL	--	1405.73	1405.22
<b>Metals</b>				
Aluminum	ug/L	200	--	--
Antimony	ug/L	5.5	--	--
Arsenic	ug/L	6.0	<2.0	<2.0
Barium	ug/L	80	--	--
Beryllium	ug/L	2.5	--	--
Boron	ug/L	400	<100 e	<100 e
Cadmium	ug/L	2.0	--	--
Chromium	ug/L	20	--	--
Cobalt	ug/L	40	--	--
Copper	ug/L	20	<5.0	<5.0
Iron	ug/L	178	<20	<20
Lead	ug/L	4.0	--	--
Lithium	ug/L	32	--	--
Manganese	ug/L	80	<20	<20
Mercury	ng/L	2.00	0.512 e	<0.500
Molybdenum	ug/L	40	--	--
Nickel	ug/L	100	<25	<25
Selenium	ug/L	4.0	<1.0	<1.0 e
Silver	ug/L	0.80	--	--
Strontium	ug/L	200	--	--
Thallium	ug/L	2.0	--	--
Vanadium	ug/L	4.0	<1.0	<1.0
Zinc	ug/L	40	<10	<10 e
<b>Major Anions</b>				
Alkalinity, Bicarbonate	mg/L	44	150	130 a
Alkalinity, Carbonate	mg/L	8.0	<2.0	<2.0
Chloride	mg/L	4.0	21	24
Fluoride	mg/L	0.40	--	--
Nitrogen, Nitrate	mg/L	0.31	28	27 e
Sulfate	mg/L	8.0	6.3	6.2
<b>Major Cations</b>				
Calcium	mg/L	12	--	--
Magnesium	mg/L	2.0	--	--
Potassium	mg/L	2.0	--	--
Sodium	mg/L	2.0	25	18
<b>General</b>				
Hardness	mg/L	38	--	--

Explanations of abbreviations are included on the final page of this table.

QAL071A (TDRSA-CWB)

**Table 1**  
**Mine Permit Groundwater Quality Monitoring Data**  
**QAL074A (Septic & WWTP)**  
**Eagle Mine**

Parameter	Unit	Benchmark	Q4 2016 10/26/16 <sup>T</sup>	Q1 2017 02/01/17 <sup>T</sup>
Field				
D.O. <sup>1</sup>	ppm	--	9.0	12
ORP	mV	--	82	-29
pH	SU	8.4-9.4	8.0	8.5
Specific Conductance	μS/cm @ 25°C	--	230	307
Temperature	°C	--	6.0	0.6
Turbidity	NTU	--	<1	2
Water Elevation	ft MSL	--	1404.16	1404.10
Metals				
Aluminum	ug/L	200	--	--
Antimony	ug/L	5.5	--	--
Arsenic	ug/L	6.0	<2.0	<2.0
Barium	ug/L	80	--	--
Beryllium	ug/L	2.5	--	--
Boron	ug/L	400	<100 e	<100 e
Cadmium	ug/L	2.0	--	--
Chromium	ug/L	20	--	--
Cobalt	ug/L	40	--	--
Copper	ug/L	20	<5.0	<5.0
Iron	ug/L	212	20	80
Lead	ug/L	4.0	--	--
Lithium	ug/L	32	--	--
Manganese	ug/L	80	<20	<20
Mercury	ng/L	2.00	1.82 e	<0.500
Molybdenum	ug/L	40	--	--
Nickel	ug/L	100	<25	<25
Selenium	ug/L	4.0	<1.0	<1.0 e
Silver	ug/L	0.80	--	--
Strontium	ug/L	200	--	--
Thallium	ug/L	2.0	--	--
Vanadium	ug/L	4.0	<1.0	<1.0
Zinc	ug/L	40	<10	<10 e
Major Anions				
Alkalinity, Bicarbonate	mg/L	39	51	53 a
Alkalinity, Carbonate	mg/L	8.0	<2.0	<2.0
Chloride	mg/L	4.0	52	48
Fluoride	mg/L	0.40	--	--
Nitrogen, Nitrate	mg/L	0.43	1.3	1.1 e
Sulfate	mg/L	8.0	7.8	6.9
Major Cations				
Calcium	mg/L	31	--	--
Magnesium	mg/L	5.9	--	--
Potassium	mg/L	2.0	--	--
Sodium	mg/L	3.5	9.6	9.7
General				
Hardness	mg/L	103	--	--

Explanations of abbreviations are included on the final page of this table.

QAL074A (Septic & WWTP)

**Table 1**  
**Groundwater Quality Data**  
**Mine Permit Monitoring**  
**Explanation of Abbreviations and Data Qualifiers**  
**Eagle Project**

Abbreviation or Data Qualifier	Explanation
1	Many D.O. values are elevated due to well screen configuration and aquifer characteristics and the low-flow sampling method. Super-saturated DO values are rejected (see R data qualifier) as not being representative of true conditions.
a	Estimated value. Duplicate precision for this parameter exceeded quality control limit.
b	Estimated value. Sample received after EPA established hold time expired.
BP	Below pump. Maximum water elevation is shown.
CWB	Contact Water Basin
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.
f	Value should be considered an estimate because field stabilization was not achieved of at least one parameter.
i	Insufficient water for collection of field parameters and/or sample.
NM	Not measured.
p	Pending. Some parameters/locations require additional baseline data to calculate a benchmark.
Q	Quarter.
R	Measured value was rejected based on quality control procedures.
RL	Laboratory reporting limit.
s	Potential false positive value. Compound present in blank sample.
t	Trending. Benchmarks are not proposed for baseline datasets that appear to be trending (using samples collected through Q4 2012) because the data do not represent a random distribution about the baseline mean. Trend analysis is recommended in place of benchmark screening for parameters that appear to be trending.
T	Sample was not filtered and all values are total concentrations.
TDRSA	Temporary Development Rock Storage Area
UMB	Underground Mine Boundary
	Value is equal to or above site-specific benchmark at a compliance monitoring location. An exceedance occurs if there are 2 consecutive sampling events with a value equal to or greater than the benchmark. Color also indicates compliance monitoring location when applied to column headers.
	Value is equal to or above site-specific benchmark at a background monitoring location. Color also indicates background monitoring location when applied to column headers.



**Table 1**  
**Mine Permit Groundwater Quality Monitoring Data**  
**QAL073A (NCWIB)**  
**Eagle Mine**

Parameter	Unit	Benchmark	Q2 2015 05/13/15 <sup>T</sup>	Q2 2016 05/17/16 <sup>T</sup>
Field				
D.O. <sup>1</sup>	ppm	--	11	11
ORP	mV	--	167	102
pH	SU	6.1-7.1	6.8	6.7
Specific Conductance	µS/cm @ 25°C	--	160	207
Temperature	°C	--	10	10
Turbidity	NTU	--	<1	<1
Water Elevation	ft MSL	--	1382.45	1381.68
Metals				
Aluminum	ug/L	200	110	<50
Antimony	ug/L	5.5	<5.0	<5.0
Arsenic	ug/L	6.0	<2.0	<2.0
Barium	ug/L	80	<20	<20
Beryllium	ug/L	2.5	<1.0	<1.0
Boron	ug/L	400	<100	<100
Cadmium	ug/L	2.0	<0.50	<0.50
Chromium	ug/L	20	<5.0	<5.0
Cobalt	ug/L	40	<10	<10
Copper	ug/L	20	<5.0	<5.0
Iron	ug/L	132	130	74
Lead	ug/L	4.0	<1.0	<1.0
Lithium	ug/L	32	<8.0	<8.0
Manganese	ug/L	80	<20	<20
Mercury	ng/L	2.00	0.942 e	0.632
Molybdenum	ug/L	40	<10	<10
Nickel	ug/L	100	<25	<25
Selenium	ug/L	4.0	<1.0	<1.0 e
Silver	ug/L	0.80	<0.20	<0.20
Strontium	ug/L	200	94	98
Thallium	ug/L	2.0	<2.0	<2.0
Vanadium	ug/L	4.0	<2.0	<1.0
Zinc	ug/L	40	<10	<10
Major Anions				
Alkalinity, Bicarbonate	mg/L	44	97	100
Alkalinity, Carbonate	mg/L	8.0	<2.0 e	<2.0
Chloride	mg/L	20	8.4	5.6
Fluoride	mg/L	0.40	<0.10	<0.10
Nitrogen, Nitrate	mg/L	0.60	2.0 e	1.6
Sulfate	mg/L	8.0	7.9	9.4
Major Cations				
Calcium	mg/L	9.2	32	34 e
Magnesium	mg/L	2.5	7.0	7.5
Potassium	mg/L	2.0	1.3	1.3
Sodium	mg/L	2.0	1.8	2.8
General				
Hardness	mg/L	33	109	116

Explanations of abbreviations are included on the final page of this table.

QAL073A (NCWIB)

**Table 1**  
**Mine Permit Groundwater Quality Monitoring Data**  
**QAL070A (NCWIB)**  
**Eagle Mine**

Parameter	Unit	Benchmark	Q2 2015 05/13/15 <sup>T</sup>	Q2 2016 05/17/16 <sup>T</sup>
Field				
D.O. <sup>1</sup>	ppm	--	11	10
ORP	mV	--	167	55
pH	SU	8.3-9.3	8.6	8.5
Specific Conductance	µS/cm @ 25°C	--	188	440
Temperature	°C	--	9.0	9.0
Turbidity	NTU	--	<1	<1
Water Elevation	ft MSL	--	1370.25	1369.67
Metals				
Aluminum	ug/L	200	<50	<50
Antimony	ug/L	5.5	<5.0	<5.0
Arsenic	ug/L	6.0	<2.0	<2.0
Barium	ug/L	80	<20	24
Beryllium	ug/L	2.5	<1.0	<1.0
Boron	ug/L	400	<100	<100
Cadmium	ug/L	2.0	<0.50	<0.50
Chromium	ug/L	20	<5.0	<5.0
Cobalt	ug/L	40	<10	<10
Copper	ug/L	20	<5.0	<5.0
Iron	ug/L	80	<20	75
Lead	ug/L	4.0	<1.0	<1.0
Lithium	ug/L	32	<8.0	<8.0
Manganese	ug/L	80	<20	<20
Mercury	ng/L	2.00	0.680 e,s	0.535
Molybdenum	ug/L	40	<10	<10
Nickel	ug/L	100	<25	<25
Selenium	ug/L	4.0	<1.0	<1.0 e
Silver	ug/L	0.80	<0.20	<0.20
Strontium	ug/L	200	59	77
Thallium	ug/L	2.0	<2.0	<2.0
Vanadium	ug/L	4.0	<2.0	<1.0
Zinc	ug/L	40	<10	<10
Major Anions				
Alkalinity, Bicarbonate	mg/L	42	40	45
Alkalinity, Carbonate	mg/L	8.0	<2.0 e	<2.0
Chloride	mg/L	4.0	58	120
Fluoride	mg/L	0.40	<0.10	<0.10
Nitrogen, Nitrate	mg/L	0.22	0.98 e	1.0
Sulfate	mg/L	8.0	3.5	4.3
Major Cations				
Calcium	mg/L	11	31	51 e
Magnesium	mg/L	3.0	6.4	9.7
Potassium	mg/L	2.0	1.2	1.8
Sodium	mg/L	2.0	5.5	19
General				
Hardness	mg/L	40	104	167

Explanations of abbreviations are included on the final page of this table.

QAL070A (NCWIB)