

**Mine Permit Groundwater Quality Monitoring Data  
MER-001 (Monitoring)**

Parameter	Unit	Recommended Benchmark 2018				
		Q3	Q1 2019	Q2 2019	Q3 2019	Q4 2019
<b>Field</b>						
D.O.	ppm	-	10.55	8.85	8.31	12.73
ORP	mV	-	239.2	173.4	177.2	220.5
pH	SU	6.1-7.1	6.87	6.72	<b>7.64</b>	<b>7.52</b>
Specific Conductance	uS/cm	-	76	87.4	155.7	117.6
Temperature	C	-	-0.04	11.01	12.8	0.62
Turbidity	NTU	-	1.88	2.35	11.72	2.6
Flow	cfs	-	-	-	5.1	33.5
<b>Metals</b>						
Aluminum	ug/L	200	-	-	<50.0	-
Antimony	ug/L	3.5	-	-	<1.0	-
Arsenic	ug/L	2.78	< 1.0	<1.0	<b>2.0</b>	<1.0
Barium	ug/L	11.22	-	-	<b>8.2</b>	-
Beryllium	ug/L	2.5	-	-	<1.0	-
Boron	ug/L	40	-	-	<10.0	-
Cadmium	ug/L	0.08	-	-	<b>0.007</b>	-
Chromium	ug/L	1.1	-	-	<1.0	-
Cobalt	ug/L	0.38	-	-	<b>0.105</b>	-
Copper	ug/L	0.68	<b>0.56</b>	<b>0.59</b>	<b>0.232</b>	<b>0.46</b>
Iron	ug/L	3531.79	<b>881</b>	<b>823</b>	<b>1880</b>	<b>1110</b>
Lead	ug/L	0.35	<b>0.122</b>	<b>0.123</b>	<b>0.063</b>	<b>0.135</b>
Lithium	ug/L	32	-	-	<8.0	-
Manganese	ug/L	241.96	<b>51.4</b>	<b>74.9</b>	<b>85.7</b>	<b>95.1</b>
Mercury	ng/L	8.05	<b>2.70</b>	<b>1.73</b>	<b>1.32</b>	<b>3.39</b>
Molybdenum	ug/L	4.0	-	-	<1.0	-
Nickel	ug/L	1.48	<b>0.45</b>	<b>0.63</b>	<b>0.451</b>	<b>0.8</b>
Selenium	ug/L	0.13	-	-	<b>0.077</b>	-
Silver	ug/L	0.8	-	-	<0.20	-
Thallium	ug/L	1.5	-	-	<1.0	-
Vanadium	ug/L	4.0	-	-	<1.0	-
Zinc	ug/L	5.47	<b>2.59</b>	<b>2.43</b>	<b>0.58</b>	<b>1.59</b>
<b>Major Anions</b>						
Alkalinity, Bicarbonate	mg/L	48.06	<b>13.2</b>	<b>15.0</b>	<b>45.5</b>	<b>16.4</b>
Alkalinity, Carbonate	mg/L	8.0	< 2.0	<2.0	<2.0	<2.0
Chloride	mg/L	16.08	<b>2.3</b>	<b>5.4</b>	<b>13.0</b>	<b>4.3</b>
Fluoride	mg/L	0.4	< 0.10	<0.10	<0.10	<0.10
Nitrogen, Ammonia	mg/L	2.0	<0.025	<0.025	<0.025	<0.025
Nitrogen, Nitrate	mg/L	2.0	<b>0.273</b>	< 0.10	< 0.10	< 0.10
Nitrogen, Nitrite	mg/L	2.0	< 0.10	< 0.10	< 0.10	< 0.10
Sulfate	mg/L	4.0	<b>2.4</b>	<b>3.3</b>	<b>5.4</b>	<b>3.2</b>
Sulfide	mg/L	20	< 0.20	<0.20	<0.20	<0.20
<b>Major Cations</b>						
Calcium	mg/L	14.51	<b>5.3</b>	<b>5.9</b>	<b>15.1</b>	<b>5.9</b>
Magnesium	mg/L	4.08	<b>1.6</b>	<b>1.8</b>	<b>4.2</b>	<b>1.7</b>
Potassium	mg/L	1.08	<b>0.78</b>	<b>0.50</b>	<b>0.85</b>	<0.50
Sodium	mg/L	8.51	<b>1.7</b>	<b>3.3</b>	<b>7.6</b>	<b>2.6</b>
<b>General</b>						
Hardness	mg/L	58.94	<b>19.6</b>	<b>22.3</b>	<b>55</b>	<b>21.7</b>
Total Dissolved Solids	mg/L	200	<b>37</b>	<b>27</b>	<b>79</b>	<b>39</b>
Total Suspended Solids	mg/L	13.2	< 5.0	<5.0	<b>10</b>	<5.0

**Mine Permit Groundwater Quality Monitoring Data  
MER-002 (Monitoring)**

Parameter	Unit	Recommended Benchmark 2018				
		Q3	Q1 2019	Q2 2019	Q3 2019	Q4 2019
<b>Field</b>						
D.O.	ppm	-	11.02	8.88	8.18	12.4
ORP	mV	-	265.6	172.1	154.6	112.9
pH	SU	5.9-6.9	<b>6.93</b>	6.58	<b>7.48</b>	<b>7.49</b>
Specific Conductance	uS/cm	-	95.3	84.7	184.7	141.6
Temperature	C	-	-0.06	10.86	15.7	0.04
Turbidity	NTU	-	2.21	1.86	6.48	2.97
Flow	cfs	-	-	85.2	6.87	37.3
<b>Metals</b>						
Aluminum	ug/L	460.75	-	-	<50.0	-
Antimony	ug/L	3.5	-	-	<1.0	-
Arsenic	ug/L	5.28	< 1.0	<1.0	<b>2.6</b>	1.0
Barium	ug/L	21.04	-	-	<b>9.7</b>	-
Beryllium	ug/L	2.5	-	-	<1.0	-
Boron	ug/L	40	-	-	<b>14.6</b>	-
Cadmium	ug/L	0.08	-	-	<b>0.007</b>	-
Chromium	ug/L	4.0	-	-	<1.0	-
Cobalt	ug/L	0.4	-	-	<b>0.246</b>	-
Copper	ug/L	1.43	<b>0.6</b>	<b>0.61</b>	<b>0.260</b>	<b>0.41</b>
Iron	ug/L	6900.91	<b>1060</b>	<b>1160</b>	<b>2580</b>	<b>1420</b>
Lead	ug/L	0.34	<b>0.136</b>	<b>0.142</b>	<b>0.060</b>	<b>0.125</b>
Lithium	ug/L	1.37	-	-	<8.0	-
Manganese	ug/L	628.47	<b>68.4</b>	<b>115</b>	<b>210</b>	<b>148</b>
Mercury	ng/L	7.46	<b>3.42</b>	<b>1.34</b>	<b>1.62</b>	<b>3.17</b>
Molybdenum	ug/L	4.0	-	-	<1.0	-
Nickel	ug/L	2.05	<b>0.53</b>	<b>0.81</b>	<b>0.584</b>	<b>0.73</b>
Selenium	ug/L	0.8	-	-	<b>0.072</b>	-
Silver	ug/L	0.8	-	-	<0.20	-
Thallium	ug/L	4.0	-	-	<1.0	-
Vanadium	ug/L	4.73	-	-	<1.0	-
Zinc	ug/L	2.0	<b>2.71</b>	<b>2.73</b>	<b>0.65</b>	<b>1.67</b>
<b>Major Anions</b>						
Alkalinity, Bicarbonate	mg/L	54.22	<b>14.8</b>	<b>16.0</b>	<b>51.4</b>	<b>21.1</b>
Alkalinity, Carbonate	mg/L	8.0	< 2.0	<2.0	<2.0	<2.0
Chloride	mg/L	16.88	<b>5.7</b>	<b>5.7</b>	<b>14.5</b>	<b>6.2</b>
Fluoride	mg/L	0.4	< 0.10	<0.10	<0.10	<0.10
Nitrogen, Ammonia	mg/L	2.0	< 0.025	< 0.025	< 0.025	< 0.025
Nitrogen, Nitrate	mg/L	2	<b>0.27</b>	< 0.10	< 0.10	< 0.10
Nitrogen, Nitrite	mg/L	2.0	< 0.10	< 0.10	< 0.10	< 0.10
Sulfate	mg/L	16.28	<b>3.7</b>	<b>4.7</b>	<b>11.7</b>	<b>5.4</b>
Sulfide	mg/L	20	< 0.20	<0.20	<0.20	<0.20
<b>Major Cations</b>						
Calcium	mg/L	18.1	<b>6.0</b>	<b>6.5</b>	<b>17.7</b>	<b>7.3</b>
Magnesium	mg/L	5.19	<b>1.8</b>	<b>2.0</b>	<b>4.9</b>	<b>2.2</b>
Potassium	mg/L	1.42	<b>0.83</b>	<b>0.60</b>	<b>1.2</b>	<b>0.56</b>
Sodium	mg/L	9.88	<b>3.4</b>	<b>3.9</b>	<b>9.6</b>	<b>4.2</b>
<b>General</b>						
Hardness	mg/L	60.32	<b>22.6</b>	<b>24.6</b>	<b>64.4</b>	<b>27.2</b>
Total Dissolved Solids	mg/L	210.48	<b>45</b>	<b>32</b>	<b>93</b>	<b>56</b>
Total Suspended Solids	mg/L	5.57	< 5.0	<5.0	<5.0	<5.0

**Mine Permit Groundwater Quality Monitoring Data  
MER-003 (Monitoring)**

Parameter	Unit	Recommended Benchmark 2018				
		Q3	Q1 2019	Q2 2019	Q3 2019	Q4 2019
<b>Field</b>						
D.O.	ppm	-	11.75	8.88	8.34	12.8
ORP	mV	-	254.9	175.7	134	230.1
pH	SU	5.7-6.7	7.24	6.99	6.78	7.09
Specific Conductance	uS/cm	-	104.3	96.0	198.1	205.7
Temperature	C	-	0.37	11.67	15.8	0.95
Turbidity	NTU	-	4.33	45.33	6.20	3.08
Flow	cfs	-	-	-	7.03	30.27
<b>Metals</b>						
Aluminum	ug/L	200	-	-	<50.0	-
Antimony	ug/L	3.5	-	-	<1.0	-
Arsenic	ug/L	2.64	< 1.0	<1.0	2.4	1.1
Barium	ug/L	14.68	-	-	9.3	-
Beryllium	ug/L	2.5	-	-	<1.0	-
Boron	ug/L	17.85	-	-	21.9	-
Cadmium	ug/L	0.08	-	-	0.007	-
Chromium	ug/L	4	-	-	<1.0	-
Cobalt	ug/L	0.4	-	-	0.190	-
Copper	ug/L	0.65	0.58	0.72	0.334	0.92
Iron	ug/L	3749.14	1150	1130	2360	1440
Lead	ug/L	0.18	0.135	0.137	0.050	0.126
Lithium	ug/L	32	-	-	<8.0	-
Manganese	ug/L	273.16	71.1	123	135	163
Mercury	ng/L	7.24	2.47	1.55	1.91	4.04
Molybdenum	ug/L	4	-	-	<1.0	-
Nickel	ug/L	1.76	0.69	0.98	1.36	0.45
Selenium	ug/L	0.28	-	-	0.074	-
Silver	ug/L	0.8	-	-	<0.20	-
Thallium	ug/L	1.5	-	-	<1.0	-
Vanadium	ug/L	4	-	-	<1.0	-
Zinc	ug/L	2.74	2.76	3.3	0.47	3.47
<b>Major Anions</b>						
Alkalinity, Bicarbonate	mg/L	58.08	15.2	17.8	51.5	24.2
Alkalinity, Carbonate	mg/L	8.0	< 2.0	<2.0	<2.0	<2.0
Chloride	mg/L	22.56	6.2	8.2	17.0	10.6
Fluoride	mg/L	0.4	< 0.10	<0.10	<0.10	<0.10
Nitrogen, Ammonia	mg/L	2.0	< 0.025	< 0.025	< 0.025	< 0.025
Nitrogen, Nitrate	mg/L	2.0	0.259	< 0.10	< 0.10	< 0.10
Nitrogen, Nitrite	mg/L	2.0	< 0.10	< 0.10	< 0.10	< 0.10
Sulfate	mg/L	20.5	5.8	13.3	14.3	24.0
Sulfide	mg/L	20	< 0.20	<0.20	<0.20	<0.20
<b>Major Cations</b>						
Calcium	mg/L	17.7	6.2	6.6	16.7	7.4
Magnesium	mg/L	5.76	1.9	2.2	4.9	2.6
Potassium	mg/L	1.72	0.87	0.73	1.2	0.89
Sodium	mg/L	12.18	4.9	9.2	12.2	14.9
<b>General</b>						
Hardness	mg/L	62.63	23.4	25.5	61.8	29.2
Total Dissolved Solids	mg/L	133.98	48	47	106	85
Total Suspended Solids	mg/L	4.01	< 5.0	<5.0	9.0	<5.0

**Mine Permit Groundwater Quality Monitoring Data  
WBR-001 (Monitoring)**

Parameter	Unit	Recommended Benchmark 2018				
		Q13	Q1 2019	Q2 2019	Q3 2019	Q4 2019
<b>Field</b>						
D.O.	ppm	-	NM	7.14	7.98	11.16
ORP	mV	-	NM	254.7	78.9	249.3
pH	SU	5.7-6.7	NM	5.29	6.09	7.36
Specific Conductance	uS/cm	-	NM	60.0	115.3	145.2
Temperature	C	-	NM	12.4	14.6	0.59
Turbidity	NTU	-	NM	0.77	7.79	0.8
Flow	cfs	-	-	-	-	-
<b>Metals</b>						
Aluminum	ug/L	200	NM	-	128	-
Antimony	ug/L	3.5	NM	-	<1.0	-
Arsenic	ug/L	3.19	NM	1.2	1.8	1.6
Barium	ug/L	17.17	NM	-	8.4	-
Beryllium	ug/L	2.5	NM	-	<1.0	-
Boron	ug/L	40	NM	-	<10.0	-
Cadmium	ug/L	0.08	NM	-	0.011	-
Chromium	ug/L	1.58	NM	-	<1.0	-
Cobalt	ug/L	0.4	NM	-	0.427	-
Copper	ug/L	1.38	NM	0.82	0.578	0.5
Iron	ug/L	4873.2	NM	1220	2220	1260
Lead	ug/L	2.29	NM	0.666	0.641	0.182
Lithium	ug/L	32	NM	-	<8.0	-
Manganese	ug/L	770.15	NM	73.6	179	127
Mercury	ng/L	15.76	NM	<1.3	6.39	7.95
Molybdenum	ug/L	4.0	NM	-	<1.0	-
Nickel	ug/L	2.97	NM	0.79	0.646	0.78
Selenium	ug/L	0.28	NM	-	0.082	-
Silver	ug/L	0.8	NM	-	<0.20	-
Thallium	ug/L	1.5	NM	-	<1.0	-
Vanadium	ug/L	1.73	NM	-	<1.0	-
Zinc	ug/L	12.98	NM	8.08	2.99	5.32
<b>Major Anions</b>						
Alkalinity, Bicarbonate	mg/L	15.71	NM	<2.0	5.6	25.6
Alkalinity, Carbonate	mg/L	8.0	NM	<2.0	<2.0	<2.0
Chloride	mg/L	27.96	NM	25.3	27.3	16.7
Fluoride	mg/L	0.4	NM	<0.10	<0.10	<0.10
Nitrogen, Ammonia	mg/L	2.0	NM	< 0.025	0.055	0.030
Nitrogen, Nitrate	mg/L	2.0	NM	< 0.10	< 0.10	< 0.10
Nitrogen, Nitrite	mg/L	2.0	NM	< 0.10	< 0.10	< 0.10
Sulfate	mg/L	4.0	NM	2.6	<1.0	1.9
Sulfide	mg/L	20	NM	<0.20	<0.20	<0.20
<b>Major Cations</b>						
Calcium	mg/L	7.94	NM	2.7	5.0	4.0
Magnesium	mg/L	3.12	NM	1.1	2.0	1.6
Potassium	mg/L	1.64	NM	0.63	0.58	0.55
Sodium	mg/L	12.52	NM	7.8	12.5	13.3
<b>General</b>						
Hardness	mg/L	39.39	NM	11.2	41.2	16.7
Total Dissolved Solids	mg/L	200	NM	49	115	87
Total Suspended Solids	mg/L	13.2	NM	<5.0	6.0	<5.0

\* - Lowest achievable Reporting Limit by laboratory due to matrix interference

**Mine Permit Groundwater Quality Monitoring Data  
WBR-002 (Monitoring)**

Parameter	Unit	Recommended Benchmark 2018				
		Q3	Q1 2019	Q2 2019	Q3 2019	Q4 2019
<b>Field</b>						
D.O.	ppm	-	6.78	6.68	4.4	12.21
ORP	mV	-	51.2	167.5	-39.9	232.3
pH	SU	6.2-7.2	6.45	6.03	6.53	6.92
Specific Conductance	uS/cm	-	247.6	105.7	216	225.8
Temperature	C	-	0.79	12.8	16.0	1.4
Turbidity	NTU	-	19.65	8.24	152	21.09
Flow	cfs	-	-	0.28	-	24.63
<b>Metals</b>						
Aluminum	ug/L	200	-	-	57.2	-
Antimony	ug/L	3.5	-	-	<1.0	-
Arsenic	ug/L	7.24	7.5	1.9	12.9	2.8
Barium	ug/L	16.12	-	-	16.0	-
Beryllium	ug/L	2.5	-	-	<1.0	-
Boron	ug/L	18.24	-	-	15.7	-
Cadmium	ug/L	0.08	-	-	<0.007	-
Chromium	ug/L	4.0	-	-	<1.0	-
Cobalt	ug/L	0.69	-	-	0.231	-
Copper	ug/L	1.86	0.6	1.22	0.331	0.92
Iron	ug/L	12928.4	21800	2570	12500	4710
Lead	ug/L	0.49	0.207	0.092	0.078	0.280
Lithium	ug/L	32	-	-	<8.0	-
Manganese	ug/L	708.9	989	96.6	940	90.0
Mercury	ng/L	2.99	1.43	<1.3	1.08	7.95
Molybdenum	ug/L	4.0	-	-	<1.0	-
Nickel	ug/L	2.55	2.03	1.36	0.557	1.25
Selenium	ug/L	0.28	-	-	0.081	-
Silver	ug/L	0.8	-	-	<0.20	-
Thallium	ug/L	1.5	-	-	<1.0	-
Vanadium	ug/L	4.0	-	-	1.1	-
Zinc	ug/L	2.48	2.67	3.37	0.61	1.59
<b>Major Anions</b>						
Alkalinity, Bicarbonate	mg/L	37.7	30.9	11.8	38.7	22.8
Alkalinity, Carbonate	mg/L	8.0	< 2.0	<2.0	<2.0	<2.0
Chloride	mg/L	48.06	38.3	25.3	32.8	28.7
Fluoride	mg/L	0.4	< 0.10	<0.10	0.12	<0.10
Nitrogen, Ammonia	mg/L	2.0	0.19	<0.025	0.464	<0.025
Nitrogen, Nitrate	mg/L	2.0	<0.050	<0.10	<0.10	<0.10
Nitrogen, Nitrite	mg/L	2.0	0.01	<0.10	<0.10	<0.10
Sulfate	mg/L	4.0	2.2	2.6	1.0	2.5
Sulfide	mg/L	20	< 0.20	<0.20	<0.20	<0.20
<b>Major Cations</b>						
Calcium	mg/L	9.7	9.1	4.9	9.8	6.7
Magnesium	mg/L	4.5	4.4	2.3	4.0	3.3
Potassium	mg/L	1.43	1.8	1.4	1.8	1.4
Sodium	mg/L	24.88	20.0	16.0	17.1	17.8
<b>General</b>						
Hardness	mg/L	45.64	41	21.6	41.2	30.4
Total Dissolved Solids	mg/L	200	140	67	115	117
Total Suspended Solids	mg/L	32.04	43	<5.0	6.0	<5.0

\* - Lowest achievable Reporting Limit by laboratory due to matrix interference

**Mine Permit Groundwater Quality Monitoring Data  
WBR-003 (Monitoring)**

Parameter	Unit	Recommended Benchmark 2018				
		Q3	Q1 2019	Q2 2019	Q3 2019	Q4 2019
<b>Field</b>						
D.O.	ppm	-	6.78	6.68	1.78	6.61
ORP	mV	-	51.2	167.5	-100.1	219.2
pH	SU	6.2-7.2	6.45	6.03	6.76	6.98
Specific Conductance	uS/m	-	247.6	105.7	310.6	219.2
Temperature	C	-	0.79	12.8	14.5	0.28
Turbidity	NTU	-	19.65	8.24	74.59	9.7
Flow	cfs	-	-	0.28	-	-
<b>Metals</b>						
Aluminum	ug/L	200	-	-	119	-
Antimony	ug/L	3.5	-	-	<1.0	-
Arsenic	ug/L	6.28	7.5	1.9	17.7	1.6
Barium	ug/L	26.55	-	-	30.3	-
Beryllium	ug/L	2.5	-	-	<1.0	-
Boron	ug/L	13.09	-	-	11.5	-
Cadmium	ug/L	0.08	-	-	<0.007	-
Chromium	ug/L	4.0	-	-	<1.0	-
Cobalt	ug/L	2.61	-	-	1.7	-
Copper	ug/L	0.2	0.6	1.22	0.572	0.5
Iron	ug/L	19898.23	21800	2570	35400	3260
Lead	ug/L	0.29	0.207	0.092	0.225	0.182
Lithium	ug/L	32	-	-	<8.0	-
Manganese	ug/L	2793.99	989	96.6	1550	109
Mercury	ng/L	5.71	1.43	<1.3	2.63	2.61
Molybdenum	ug/L	4.0	-	-	1.5	-
Nickel	ug/L	2.42	2.03	1.36	1.46	0.78
Selenium	ug/L	0.28	-	-	0.157	-
Silver	ug/L	0.8	-	-	<0.20	-
Thallium	ug/L	1.5	-	-	<1.0	-
Vanadium	ug/L	4.0	-	-	2.0	-
Zinc	ug/L	4.48	2.67	3.37	55.5	0.93
<b>Major Anions</b>						
Alkalinity, Bicarbonate	mg/L	88.2	30.9	11.8	90.7	25.6
Alkalinity, Carbonate	mg/L	8.0	< 2.0	<2.0	<2.0	<2.0
Chloride	mg/L	42.42	38.3	25.3	21.8	24.2
Fluoride	mg/L	0.19	< 0.10	<0.10	0.22	<0.10
Nitrogen, Ammonia	mg/L	2.0	0.19	<0.025	0.405	0.031
Nitrogen, Nitrate	mg/L	2.0	<0.050	<0.10	<0.10	<0.10
Nitrogen, Nitrite	mg/L	2.0	0.01	<0.10	<0.10	<0.10
Sulfate	mg/L	4.0	2.2	2.6	<1.0	3.7
Sulfide	mg/L	20	< 0.20	<0.20	<0.20	<0.20
<b>Major Cations</b>						
Calcium	mg/L	23.56	9.1	4.9	25.3	7.2
Magnesium	mg/L	9.59	4.4	2.3	8.4	3.5
Potassium	mg/L	2.27	1.8	1.4	1.4	1.1
Sodium	mg/L	21.5	20.0	16.0	13.5	14.4
<b>General</b>						
Hardness	mg/L	109.46	41	21.6	97.7	32.4
Total Dissolved Solids	mg/L	200	140	67	198	87
Total Suspended Solids	mg/L	27.28	43	<5.0	39	<5.0

\* - Lowest achievable Reporting Limit by laboratory due to matrix interference

**Mine Permit Groundwater Quality Monitoring Data  
WBR-003 (Monitoring)**

Parameter	Unit	Recommended Benchmark 2014	Q1 2019	Q2 2019	Q3 2019	Q4 2019
<b>Field</b>						
D.O.	ppm	-	NM	NM	NM	NM
ORP	mV	-	NM	NM	NM	NM
pH	SU	5.69-6.69	NM	NM	NM	NM
Specific Conductance	uS/m	-	NM	NM	NM	NM
Temperature	C	-	NM	NM	NM	NM
Turbidity	NTU	-	NM	NM	NM	NM
Flow	cfs	-	-	-	-	-
<b>Metals</b>						
Aluminum	ug/L	200 (p)	NM	NM	NM	NM
Antimony	ug/L	2.3	NM	NM	NM	NM
Arsenic	ug/L	35	NM	NM	NM	NM
Barium	ug/L	118	NM	NM	NM	NM
Beryllium	ug/L	4.0 (p)	NM	NM	NM	NM
Boron	ug/L	36	NM	NM	NM	NM
Cadmium	ug/L	0.1	NM	NM	NM	NM
Chromium	ug/L	14	NM	NM	NM	NM
Cobalt	ug/L	3	NM	NM	NM	NM
Copper	ug/L	11	NM	NM	NM	NM
Iron	ug/L	73,409	NM	NM	NM	NM
Lead	ug/L	2.1	NM	NM	NM	NM
Lithium	ug/L	16	NM	NM	NM	NM
Manganese	ug/L	2541	NM	NM	NM	NM
Mercury	ng/L	43	NM	NM	NM	NM
Molybdenum	ug/L	4.7	NM	NM	NM	NM
Nickel	ug/L	5.6	NM	NM	NM	NM
Selenium	ug/L	0.44	NM	NM	NM	NM
Silver	ug/L	0.35	NM	NM	NM	NM
Thallium	ug/L	4.0 (p)	NM	NM	NM	NM
Vanadium	ug/L	39	NM	NM	NM	NM
Zinc	ug/L	44	NM	NM	NM	NM
<b>Major Anions</b>						
Alkalinity, Bicarbonate	mg/L	68	NM	NM	NM	NM
Alkalinity, Carbonate	mg/L	8.0 (p)	NM	NM	NM	NM
Chloride	mg/L	68	NM	NM	NM	NM
Fluoride	mg/L	0.23	NM	NM	NM	NM
Nitrogen, Ammonia	mg/L	1.9	NM	NM	NM	NM
Nitrogen, Nitrate	mg/L	2.0 (p)	NM	NM	NM	NM
Nitrogen, Nitrite	mg/L	2.0 (p)	NM	NM	NM	NM
Sulfate	mg/L	4.0 (p)	NM	NM	NM	NM
Sulfide	mg/L	20 (p)	NM	NM	NM	NM
<b>Major Cations</b>						
Calcium	mg/L	21	NM	NM	NM	NM
Magnesium	mg/L	8.1	NM	NM	NM	NM
Potassium	mg/L	3.3	NM	NM	NM	NM
Sodium	mg/L	49	NM	NM	NM	NM
<b>General</b>						
Hardness	mg/L	88	NM	NM	NM	NM
Total Dissolved Solids	mg/L	209	NM	NM	NM	NM
Total Suspended Solids	mg/L	353	NM	NM	NM	NM

**Mine Permit Groundwater Quality Monitoring Data  
WBR-003 (Monitoring)**

Parameter	Unit	Recommended Benchmark 2018				
		*	Q1 2019	Q2 2019	Q3 2019	Q4 2019
<b>Field</b>						
D.O.	ppm		NM	5.84	2.83	11.46
ORP	mV		NM	324.1	204	247
pH	SU	6.6-7.6	NM	6.78	7.28	6.97
Specific Conductance	uS/m		NM	654.95	209.4	158.3
Temperature	C		NM	11.24	13.7	1.6
Turbidity	NTU		NM	2.97	3.12	3.05
Flow	cfs		-	-	-	-
<b>Metals</b>						
Aluminum	ug/L	-	NM	-	<50.0	-
Antimony	ug/L	-	NM	-	<1.0	-
Arsenic	ug/L	6.0	NM	<1.0	<b>1.2</b>	<1.0
Barium	ug/L	-	NM	-	<b>7.7</b>	-
Beryllium	ug/L	-	NM	-	<1.0	-
Boron	ug/L	-	NM	-	<b>21.0</b>	-
Cadmium	ug/L	-	NM	-	<0.007	-
Chromium	ug/L	-	NM	-	<1.0	-
Cobalt	ug/L	-	NM	-	<b>0.207</b>	-
Copper	ug/L	1300	NM	<b>1.77</b>	<b>1.13</b>	<b>1.26</b>
Iron	ug/L	1758.94	NM	<b>859</b>	<b>1280</b>	<b>1130</b>
Lead	ug/L	6.36	NM	<b>0.131</b>	<b>0.047</b>	<b>0.130</b>
Lithium	ug/L	-	NM	-	<8.0	-
Manganese	ug/L	855.5	NM	<b>26.8</b>	<b>86.1</b>	<b>68.8</b>
Mercury	ng/L	1.24	NM	<b>1.63</b>	<b>2.36</b>	<b>3.89</b>
Molybdenum	ug/L	-	NM	-	1.4	-
Nickel	ug/L	172.08	NM	<b>3.13</b>	<b>3.18</b>	<b>2.13</b>
Selenium	ug/L	-	NM	-	<b>0.006</b>	-
Silver	ug/L	-	NM	-	<0.20	-
Thallium	ug/L	-	NM	-	<1.0	-
Vanadium	ug/L	-	NM	-	<1.0	-
Zinc	ug/L	64.27	NM	<b>2.88</b>	<b>0.48</b>	<b>1.97</b>
<b>Major Anions</b>						
Alkalinity, Bicarbonate	mg/L	100.8	NM	<b>21.3</b>	<b>59.9</b>	<b>24.2</b>
Alkalinity, Carbonate	mg/L	8	NM	<2.0	<2.0	<2.0
Chloride	mg/L	37.3	NM	<b>6.0</b>	<b>15.5</b>	<b>7.0</b>
Fluoride	mg/L	2.73	NM	<0.10	<0.10	<0.10
Nitrogen, Ammonia	mg/L	2	NM	<0.025	<0.025	<0.025
Nitrogen, Nitrate	mg/L	0.16	NM	<0.10	<0.10	<0.10
Nitrogen, Nitrite	mg/L	2	NM	<0.10	<0.10	<0.10
Sulfate	mg/L	207.45	NM	<b>5.5</b>	<b>9.8</b>	<b>6.2</b>
Sulfide	mg/L	20	NM	<0.20	<0.20	<0.20
<b>Major Cations</b>						
Calcium	mg/L	77.48	NM	<b>6.7</b>	<b>19.2</b>	<b>8.5</b>
Magnesium	mg/L	66.48	NM	<b>2.2</b>	<b>5.5</b>	<b>2.6</b>
Potassium	mg/L	86.72	NM	<b>0.7</b>	<b>1.4</b>	<b>0.72</b>
Sodium	mg/L	37.45	NM	<b>4.1</b>	<b>10.1</b>	<b>4.7</b>
<b>General</b>						
Hardness	mg/L	342.27	NM	<b>25.8</b>	<b>70.7</b>	<b>31.7</b>
Total Dissolved Solids	mg/L	529.47	NM	<b>27.0</b>	<b>108</b>	<b>72</b>
Total Suspended Solids	mg/L	13.20	NM	<5.0	<b>9.0</b>	<5.0

\* - Recommended Benchmarks are for Q2 - Insufficient Q3 Data to Develop Benchmarks