Eagle Mine Data - Q2 2016
Mine Permit Groundwater Quality Monitoring Data
QAL023B (UMB)

Parameter	Unit	Benchmark	Q1 2016 02/09/16[T]	Q2 2016 05/18/16[T]
Field				
D.O.[1]	ppm	--	**0.3**	**0.2**
ORP	mV	--	**-137**	**-33**
pH	SU	7.8-8.8	**7.2**	**7.0**
Specific Conductance	µS/cm @ 25°C	--	**122**	**120**
Temperature	°C	--	**5.2**	**7.7**
Turbidity	NTU	--	<1	<1
Water Elevation	ft MSL	--	**1414.99**	**1415.28**
Metals				
Aluminum	ug/L	200	--	<50
Antimony	ug/L	5.5	--	<5.0
Arsenic	ug/L	6.5	<2.0	<2.0
Barium	ug/L	80	--	<20
Beryllium	ug/L	2.5	--	<1.0
Boron	ug/L	400	<100	<100
Cadmium	ug/L	2.0	--	<0.50
Chromium	ug/L	20	--	<5.0
Cobalt	ug/L	40	--	<10
Copper	ug/L	20	<5.0	<5.0
Iron	ug/L	159	**60**	**72**
Lead	ug/L	4.0	--	<1.0
Lithium	ug/L	32	--	<8.0
Manganese	ug/L	80	<20	<20
Mercury	ng/L	2.00	<0.500	<0.500
Molybdenum	ug/L	40	--	<10
Nickel	ug/L	100	<25	<25
Selenium	ug/L	4.0	<1.0	<1.0 e
Silver	ug/L	0.80	--	<0.20
Strontium	ug/L	200	--	<50
Thallium	ug/L	2.0	--	<2.0
Vanadium	ug/L	4.0	<1.0	<1.0
Zinc	ug/L	40	<10	<10
Major Anions				
Alkalinity, Bicarbonate	mg/L	67	**66**	**66**
Alkalinity, Carbonate	mg/L	8.0	<2.0 e	<2.0
Chloride	mg/L	4.0	<1.0	<1.0
Fluoride	mg/L	0.40	--	<0.10
Nitrogen, Nitrate	mg/L	0.20	<0.050	<0.050
Sulfate	mg/L	8.0	**3.7**	**3.5**
Major Cations				
Calcium	mg/L	16	**--**	**12** e
Magnesium	mg/L	3.7	**--**	**3.0**
Potassium	mg/L	2.0	--	<0.50
Sodium	mg/L	11	**9.8**	**10**
General				
Hardness	mg/L	55	**--**	**42**

Eagle Mine Data - Q2 2016
Mine Permit Groundwater Quality Monitoring Data
QAL024A (UMB)

Parameter	Unit	Benchmark	Q1 2016 02/04/16[T]	Q2 2016 05/17/16[T]
Field				
D.O.[1]	ppm	--	**11**	**11**
ORP	mV	--	**179**	**196**
pH	SU	6.1-7.1	**6.4**	**6.5**
Specific Conductance	µS/cm @ 25°C	--	**551**	**421**
Temperature	°C	--	**7.6**	**7.6**
Turbidity	NTU	--	<1	<1
Water Elevation	ft MSL	--	**1416.87**	**1417.64**
Metals				
Aluminum	ug/L	200	--	<50
Antimony	ug/L	5.5	--	<5.0
Arsenic	ug/L	6.0	<2.0	<2.0
Barium	ug/L	86	**--**	**51**
Beryllium	ug/L	2.5	--	<1.0
Boron	ug/L	400	<100	<100
Cadmium	ug/L	2.0	--	<0.50
Chromium	ug/L	20	--	<5.0
Cobalt	ug/L	40	--	<10
Copper	ug/L	20	<5.0	<5.0
Iron	ug/L	105	**35**	<20
Lead	ug/L	4.0	--	<1.0
Lithium	ug/L	32	--	<8.0
Manganese	ug/L	80	<20	<20
Mercury	ng/L	2.00	<0.500	**0.585**
Molybdenum	ug/L	40	--	<10
Nickel	ug/L	100	<25	<25
Selenium	ug/L	4.0	<1.0	<1.0 e
Silver	ug/L	0.80	--	<0.20
Strontium	ug/L	200	**--**	**84**
Thallium	ug/L	2.0	--	<2.0
Vanadium	ug/L	4.0	<1.0	<1.0
Zinc	ug/L	40	<10	<10
Major Anions				
Alkalinity, Bicarbonate	mg/L	24	**40**	**37**
Alkalinity, Carbonate	mg/L	8.0	<2.0 e	<2.0
Chloride	mg/L	4.0	**150**	**110**
Fluoride	mg/L	0.40	--	<0.10
Nitrogen, Nitrate	mg/L	0.20	**2.8**	**1.9**
Sulfate	mg/L	8.0	**4.1**	**7.6**
Major Cations				
Calcium	mg/L	48	**--**	**30** e
Magnesium	mg/L	8.1	**--**	**5.8**
Potassium	mg/L	3.7	**--**	**2.5**
Sodium	mg/L	2.0	**40**	**45**
General				
Hardness	mg/L	153	**--**	**99**

Eagle Mine Data - Q2 2016
Mine Permit Groundwater Quality Monitoring Data
QAL025A (Background)

Parameter	Unit	Benchmark	Q1 2016 02/08/16[T]	Q2 2016 05/16/16[T]
Field				
D.O.[1]	ppm	--	**12**	**12**
ORP	mV	--	**165**	**106**
pH	SU	6.4-7.4	**7.2**	**6.6**
Specific Conductance	µS/cm @ 25°C	--	**76**	**53**
Temperature	°C	--	**6.4**	**7.5**
Turbidity	NTU	--	<1	<1
Water Elevation	ft MSL	--	**1415.74**	**1416.02**
Metals				
Aluminum	ug/L	200	--	<50
Antimony	ug/L	5.5	--	<5.0
Arsenic	ug/L	6.0	<2.0	<2.0
Barium	ug/L	80	--	<20
Beryllium	ug/L	2.5	--	<1.0
Boron	ug/L	400	<100	<100
Cadmium	ug/L	2.0	--	<0.50
Chromium	ug/L	20	--	<5.0
Cobalt	ug/L	40	--	<10
Copper	ug/L	20	<5.0	<5.0
Iron	ug/L	126	<20	<20
Lead	ug/L	4.0	--	<1.0
Lithium	ug/L	32	--	<8.0
Manganese	ug/L	80	<20	<20
Mercury	ng/L	2.00	<0.500	<0.500
Molybdenum	ug/L	40	--	<10
Nickel	ug/L	100	<25	<25
Selenium	ug/L	4.0	<1.0	<1.0 e
Silver	ug/L	0.80	--	<0.20
Strontium	ug/L	200	--	<50
Thallium	ug/L	2.0	--	<2.0
Vanadium	ug/L	4.0	<1.0	<1.0
Zinc	ug/L	40	<10	<10
Major Anions				
Alkalinity, Bicarbonate	mg/L	25	**35**	**29**
Alkalinity, Carbonate	mg/L	8.0	<2.0 e	<2.0
Chloride	mg/L	4.0	**1.3**	**1.1**
Fluoride	mg/L	0.40	--	<0.10
Nitrogen, Nitrate	mg/L	1.1	**0.60**	**0.92**
Sulfate	mg/L	8.0	**2.5**	<2.0
Major Cations				
Calcium	mg/L	8.5	**--**	**7.3** e
Magnesium	mg/L	2.0	**--**	**1.5**
Potassium	mg/L	2.0	**--**	**0.80**
Sodium	mg/L	2.0	**0.94**	**1.0**
General				
Hardness	mg/L	28	**--**	**24**

Eagle Mine Data - Q2 2016
Mine Permit Groundwater Quality Monitoring Data
QAL025B (Background)

Parameter	Unit	Benchmark	Q1 2016 02/08/16[T]	Q2 2016 05/16/16[T]
Field				
D.O.[1]	ppm	--	**11**	**12**
ORP	mV	--	**118**	**81**
pH	SU	8.5-9.5	**9.0**	**8.8**
Specific Conductance	µS/cm @ 25°C	--	**68**	**62**
Temperature	°C	--	**6.7**	**7.0**
Turbidity	NTU	--	<1	<1
Water Elevation	ft MSL	--	**1415.61**	**1415.91**
Metals				
Aluminum	ug/L	200	--	<50
Antimony	ug/L	5.5	--	<5.0
Arsenic	ug/L	6.0	<2.0	<2.0
Barium	ug/L	80	--	<20
Beryllium	ug/L	2.5	--	<1.0
Boron	ug/L	400	<100	<100
Cadmium	ug/L	2.0	--	<0.50
Chromium	ug/L	20	--	<5.0
Cobalt	ug/L	40	--	<10
Copper	ug/L	20	<5.0	<5.0
Iron	ug/L	56	<20	<20
Lead	ug/L	4.0	--	<1.0
Lithium	ug/L	32	--	<8.0
Manganese	ug/L	80	<20	<20
Mercury	ng/L	2.00	<0.500	<0.500
Molybdenum	ug/L	40	--	<10
Nickel	ug/L	100	<25	<25
Selenium	ug/L	4.0	<1.0	<1.0 e
Silver	ug/L	0.80	--	<0.20
Strontium	ug/L	200	--	<50
Thallium	ug/L	2.0	--	<2.0
Vanadium	ug/L	4.0	**1.1**	**1.1**
Zinc	ug/L	40	<10	<10
Major Anions				
Alkalinity, Bicarbonate	mg/L	36	**27**	**27**
Alkalinity, Carbonate	mg/L	12	**8.0** e	**9.1**
Chloride	mg/L	4.0	<1.0	<1.0
Fluoride	mg/L	0.40	--	<0.10
Nitrogen, Nitrate	mg/L	0.20	**0.13**	**0.12**
Sulfate	mg/L	8.0	**2.2**	<2.0
Major Cations				
Calcium	mg/L	10	**--**	**9.4** e
Magnesium	mg/L	2.0	**--**	**1.7**
Potassium	mg/L	2.0	--	<0.50
Sodium	mg/L	4.5	**1.9**	**1.9**
General				
Hardness	mg/L	33	**--**	**30**

Eagle Mine Data - Q2 2016
Mine Permit Groundwater Quality Monitoring Data
QAL025D (Background)

Parameter	Unit	Benchmark	Q1 2016 02/02/16[T]	Q2 2016 05/09/16[T]
Field				
D.O.[1]	ppm	--	**5.6**	**6.1**
ORP	mV	--	**13**	**62**
pH	SU	8.2-9.2	**8.7**	**8.5**
Specific Conductance	µS/cm @ 25°C	--	**89**	**86**
Temperature	°C	--	**7.0**	**7.3**
Turbidity	NTU	--	<1	<1
Water Elevation	ft MSL	--	**1411.74**	**1411.53**
Metals				
Aluminum	ug/L	200	--	**110**
Antimony	ug/L	5.5	--	<5.0
Arsenic	ug/L	6.5	**2.6**	**3.1**
Barium	ug/L	80	--	<20
Beryllium	ug/L	2.5	--	<1.0
Boron	ug/L	400	<100	<100
Cadmium	ug/L	2.0	--	<0.50
Chromium	ug/L	20	--	<5.0
Cobalt	ug/L	40	--	<10
Copper	ug/L	20	<5.0	<5.0
Iron	ug/L	137	**48**	**70**
Lead	ug/L	4.0	--	<1.0
Lithium	ug/L	32	--	<8.0
Manganese	ug/L	80	<20	<20
Mercury	ng/L	2.00	<0.500	<0.500
Molybdenum	ug/L	40	--	<10
Nickel	ug/L	100	<25	<25
Selenium	ug/L	4.0	<1.0	<1.0 e
Silver	ug/L	0.80	--	<0.20
Strontium	ug/L	200	--	<50
Thallium	ug/L	2.0	--	<2.0
Vanadium	ug/L	4.0	**3.8**	**4.3**
Zinc	ug/L	40	<10	<10
Major Anions				
Alkalinity, Bicarbonate	mg/L	52	**59**	**43**
Alkalinity, Carbonate	mg/L	14	**5.0** e	**2.0**
Chloride	mg/L	4.0	<1.0	<1.0
Fluoride	mg/L	0.40	--	<0.10
Nitrogen, Nitrate	mg/L	0.20	**0.16**	**0.17**
Sulfate	mg/L	8.0	**4.6**	**4.7**
Major Cations				
Calcium	mg/L	12	**--**	**11** e
Magnesium	mg/L	2.7	**--**	**2.7**
Potassium	mg/L	2.0	**--**	**0.61**
Sodium	mg/L	12	**4.1**	**4.4**
General				
Hardness	mg/L	42	**--**	**39**

Eagle Mine Data - Q2 2016
Mine Permit Groundwater Quality Monitoring Data
QAL026A (Background)

Parameter	Unit	Benchmark	Q1 2016 02/02/16[T]	Q2 2016 05/09/16[T]
Field				
D.O.[1]	ppm	--	**14**	i
ORP	mV	--	**101**	i
pH	SU	6.2-7.2	**6.3**	i
Specific Conductance	µS/cm @ 25°C	--	**165**	i
Temperature	°C	--	**5.9**	i
Turbidity	NTU	--	<1	i
Water Elevation	ft MSL	--	**1415.70**	<1461.1 BP
Metals				
Aluminum	ug/L	236	**--**	i
Antimony	ug/L	5.5	--	i
Arsenic	ug/L	6.0	<2.0	i
Barium	ug/L	80	--	i
Beryllium	ug/L	2.5	--	i
Boron	ug/L	400	<100	i
Cadmium	ug/L	2.0	--	i
Chromium	ug/L	20	--	i
Cobalt	ug/L	40	--	i
Copper	ug/L	20	<5.0	i
Iron	ug/L	368	**90**	i
Lead	ug/L	4.0	--	i
Lithium	ug/L	32	--	i
Manganese	ug/L	80	<20	i
Mercury	ng/L	2.00	<0.500	i
Molybdenum	ug/L	40	--	i
Nickel	ug/L	100	<25	i
Selenium	ug/L	4.0	<1.0	i
Silver	ug/L	0.80	--	i
Strontium	ug/L	200	**--**	i
Thallium	ug/L	2.0	--	i
Vanadium	ug/L	4.0	<1.0	i
Zinc	ug/L	40	<10	i
Major Anions				
Alkalinity, Bicarbonate	mg/L	114	**93**	i
Alkalinity, Carbonate	mg/L	8.0	<2.0 e	i
Chloride	mg/L	4.0	**1.2**	i
Fluoride	mg/L	0.40	--	i
Nitrogen, Nitrate	mg/L	0.73	**1.3**	i
Sulfate	mg/L	8.0	<2.0	i
Major Cations				
Calcium	mg/L	40.0	**--**	i
Magnesium	mg/L	5.9	**--**	i
Potassium	mg/L	2.0	**--**	i
Sodium	mg/L	2.4	**1.5**	i
General				
Hardness	mg/L	124	**--**	i

Eagle Mine Data - Q2 2016
Mine Permit Groundwater Quality Monitoring Data
QAL026D (Background)

Parameter	Unit	Benchmark	Q1 2016 02/02/16[T]	Q2 2016 05/09/16[T]
Field				
D.O.[1]	ppm	--	**12**	**12**
ORP	mV	--	**21**	**65**
pH	SU	8.4-9.4	**8.9**	**8.4**
Specific Conductance	µS/cm @ 25°C	--	**60**	**60**
Temperature	°C	--	**7.0**	**7.4**
Turbidity	NTU	--	<1	<1
Water Elevation	ft MSL	--	**1408.61**	**1408.33**
Metals				
Aluminum	ug/L	200	--	<50
Antimony	ug/L	5.5	--	<5.0
Arsenic	ug/L	6.0	<2.0	<2.0
Barium	ug/L	80	--	<20
Beryllium	ug/L	2.5	--	<1.0
Boron	ug/L	400	<100	<100
Cadmium	ug/L	2.0	--	<0.50
Chromium	ug/L	20	--	<5.0
Cobalt	ug/L	40	--	<10
Copper	ug/L	20	<5.0	<5.0
Iron	ug/L	80	<20	<20
Lead	ug/L	4.0	--	<1.0
Lithium	ug/L	32	--	<8.0
Manganese	ug/L	80	<20	<20
Mercury	ng/L	2.00	<0.500	<0.500
Molybdenum	ug/L	40	--	<10
Nickel	ug/L	100	<25	<25
Selenium	ug/L	4.0	<1.0	<1.0 e
Silver	ug/L	0.80	--	<0.20
Strontium	ug/L	200	--	<50
Thallium	ug/L	2.0	--	<2.0
Vanadium	ug/L	4.0	<1.0	<1.0
Zinc	ug/L	40	<10	<10
Major Anions				
Alkalinity, Bicarbonate	mg/L	31	**31**	**30**
Alkalinity, Carbonate	mg/L	8.0	**4.0** e	**4.0**
Chloride	mg/L	4.0	<1.0	<1.0
Fluoride	mg/L	0.40	--	<0.10
Nitrogen, Nitrate	mg/L	0.20	**0.10**	**0.10**
Sulfate	mg/L	8.0	**2.0**	<2.0
Major Cations				
Calcium	mg/L	13	**--**	**9.6** e
Magnesium	mg/L	2.4	**--**	**1.5**
Potassium	mg/L	2.0	--	**0.50**
Sodium	mg/L	2.0	**0.65**	**0.73**
General				
Hardness	mg/L	43	**--**	**30**

Eagle Mine Data - Q2 2016
Mine Permit Groundwater Quality Monitoring Data
QAL026E (Background)

Parameter	Unit	Benchmark	Q1 2016 02/08/16[T]	Q2 2016 05/16/16[T]
Field				
D.O.[1]	ppm	--	**0.1**	**1.0**
ORP	mV	--	**-140**	**-1**
pH	SU	8.1-9.1	**8.4**	**8.4**
Specific Conductance	µS/cm @ 25°C	--	**120**	**112**
Temperature	°C	--	**6.7**	**7.1**
Turbidity	NTU	--	<1	<1
Water Elevation	ft MSL	--	**1408.71**	**1403.74**
Metals				
Aluminum	ug/L	200	--	<50
Antimony	ug/L	5.5	--	<5.0
Arsenic	ug/L	7.8	**7.4**	**7.1**
Barium	ug/L	80	--	<20
Beryllium	ug/L	2.5	--	<1.0
Boron	ug/L	400	<100	<100
Cadmium	ug/L	2.0	--	<0.50
Chromium	ug/L	20	--	<5.0
Cobalt	ug/L	40	--	<10
Copper	ug/L	20	<5.0	<5.0
Iron	ug/L	80	<20	<20
Lead	ug/L	4.0	--	<1.0
Lithium	ug/L	32	--	<8.0
Manganese	ug/L	80	<20	<20
Mercury	ng/L	2.00	<0.500	<0.500
Molybdenum	ug/L	40	--	<10
Nickel	ug/L	100	<25	<25
Selenium	ug/L	4.0	<1.0	<1.0 e
Silver	ug/L	0.80	--	<0.20
Strontium	ug/L	200	**--**	**61**
Thallium	ug/L	2.0	--	<2.0
Vanadium	ug/L	4.0	<1.0	<1.0
Zinc	ug/L	40	<10	<10
Major Anions				
Alkalinity, Bicarbonate	mg/L	91	**58**	**59**
Alkalinity, Carbonate	mg/L	8.0	<2.0 e	<2.0
Chloride	mg/L	4.0	<1.0	<1.0
Fluoride	mg/L	0.40	--	<0.10
Nitrogen, Nitrate	mg/L	0.20	<0.050	<0.050
Sulfate	mg/L	8.6	**7.3**	**7.3**
Major Cations				
Calcium	mg/L	17	**--**	**16** e
Magnesium	mg/L	4.3	**--**	**4.2**
Potassium	mg/L	2.0	**--**	**1.9**
Sodium	mg/L	2.0	**1.7**	**1.7**
General				
Hardness	mg/L	60	**--**	**57**

Eagle Mine Data - Q2 2016
Mine Permit Groundwater Quality Monitoring Data
QAL044B (UMB)

Parameter	Unit	Benchmark	Q1 2016 02/09/16[T]	Q2 2016 05/18/16[T]
Field				
D.O.[1]	ppm	--	**1.0**	**1.0**
ORP	mV	--	**-388**	**-103**
pH	SU	8.3-9.3	**9.0**	**9.3**
Specific Conductance	µS/cm @ 25°C	--	**70**	**63**
Temperature	°C	--	**6.3**	**7.9**
Turbidity	NTU	--	<1	<1
Water Elevation	ft MSL	--	**1414.11**	**1414.23**
Metals				
Aluminum	ug/L	200	--	<50
Antimony	ug/L	5.5	--	<5.0
Arsenic	ug/L	6.0	<2.0	<2.0
Barium	ug/L	80	--	<20
Beryllium	ug/L	2.5	--	<1.0
Boron	ug/L	400	<100	<100
Cadmium	ug/L	2.0	--	<0.50
Chromium	ug/L	20	--	<5.0
Cobalt	ug/L	40	--	<10
Copper	ug/L	20	<5.0	<5.0
Iron	ug/L	80	**65**	**31**
Lead	ug/L	4.0	--	<1.0
Lithium	ug/L	32	--	<8.0
Manganese	ug/L	80	<20	<20
Mercury	ng/L	2.00	<0.500	<0.500
Molybdenum	ug/L	40	--	<10
Nickel	ug/L	100	<25	<25
Selenium	ug/L	4.0	<1.0	<1.0 e
Silver	ug/L	0.80	--	<0.20
Strontium	ug/L	200	--	<50
Thallium	ug/L	2.0	--	<2.0
Vanadium	ug/L	4.0	<1.0	<1.0
Zinc	ug/L	40	<10	<10
Major Anions				
Alkalinity, Bicarbonate	mg/L	64	**30**	**21**
Alkalinity, Carbonate	mg/L	8.0	**4.0** e	**10**
Chloride	mg/L	4.0	**1.5**	**1.2**
Fluoride	mg/L	0.40	--	<0.10
Nitrogen, Nitrate	mg/L	0.20	<0.050	<0.050
Sulfate	mg/L	24	**7.5**	**8.1**
Major Cations				
Calcium	mg/L	17	**--**	**8.3** e
Magnesium	mg/L	4.0	**--**	**1.8**
Potassium	mg/L	2.0	--	**0.52**
Sodium	mg/L	2.6	**2.4**	**2.5**
General				
Hardness	mg/L	58	**--**	**28**

Eagle Mine Data - Q2 2016
Mine Permit Groundwater Quality Monitoring Data
QAL060A (TDRSA-CWB)

Parameter	Unit	Benchmark	Q1 2016 02/04/16[T]	Q2 2016 05/16/16[T]
Field				
D.O.[1]	ppm	--	**12**	**11**
ORP	mV	--	**55**	**124**
pH	SU	8.1-9.1	**8.4**	**8.8**
Specific Conductance	µS/cm @ 25°C	--	**68**	**72**
Temperature	°C	--	**7.6**	**7.3**
Turbidity	NTU	--	<1	<1
Water Elevation	ft MSL	--	**1404.18**	**1403.86**
Metals				
Aluminum	ug/L	200	--	<50
Antimony	ug/L	5.5	--	<5.0
Arsenic	ug/L	7.2	**5.4**	**5.9**
Barium	ug/L	80	--	<20
Beryllium	ug/L	2.5	--	<1.0
Boron	ug/L	400	<100	<100
Cadmium	ug/L	2.0	--	<0.50
Chromium	ug/L	20	--	<5.0
Cobalt	ug/L	40	--	<10
Copper	ug/L	20	<5.0	<5.0
Iron	ug/L	80	<20	<20
Lead	ug/L	4.0	--	<1.0
Lithium	ug/L	32	--	<8.0
Manganese	ug/L	80	<20	<20
Mercury	ng/L	2.00	<0.500	<0.500
Molybdenum	ug/L	40	--	<10
Nickel	ug/L	100	<25	<25
Selenium	ug/L	4.0	<1.0	<1.0 e
Silver	ug/L	0.80	--	<0.20
Strontium	ug/L	200	--	<50
Thallium	ug/L	2.0	--	<2.0
Vanadium	ug/L	4.0	**1.3**	**1.3**
Zinc	ug/L	40	**11**	<10
Major Anions				
Alkalinity, Bicarbonate	mg/L	62	**36**	**34**
Alkalinity, Carbonate	mg/L	8.0	**2.0** e	<2.0
Chloride	mg/L	4.0	<1.0	<1.0
Fluoride	mg/L	0.40	--	<0.10
Nitrogen, Nitrate	mg/L	0.20	**0.15**	**0.15**
Sulfate	mg/L	8.0	<2.0	<2.0
Major Cations				
Calcium	mg/L	17	**--**	**10** e
Magnesium	mg/L	4.2	**--**	**2.5**
Potassium	mg/L	2.0	**--**	**0.69**
Sodium	mg/L	2.1	**0.76**	**0.78**
General				
Hardness	mg/L	61	**--**	**35**

Eagle Mine Data - Q2 2016
Mine Permit Groundwater Quality Monitoring Data
QAL061A (TDRSA-CWB)

Parameter	Unit	Benchmark	Q1 2016 02/04/16[T]	Q2 2016 05/16/16[T]
Field				
D.O.[1]	ppm	--	**11**	**11**
ORP	mV	--	**32**	**131**
pH	SU	8.1-9.1	**8.7**	**8.8**
Specific Conductance	µS/cm @ 25°C	--	**68**	**74**
Temperature	°C	--	**7.6**	**7.2**
Turbidity	NTU	--	<1	<1
Water Elevation	ft MSL	--	**1405.52**	**1406.21**
Metals				
Aluminum	ug/L	200	--	<50
Antimony	ug/L	5.5	--	<5.0
Arsenic	ug/L	6.0	<2.0	<2.0
Barium	ug/L	80	--	<20
Beryllium	ug/L	2.5	--	<1.0
Boron	ug/L	400	<100	<100
Cadmium	ug/L	2.0	--	<0.50
Chromium	ug/L	20	--	<5.0
Cobalt	ug/L	40	--	<10
Copper	ug/L	20	<5.0	<5.0
Iron	ug/L	80	<20	<20
Lead	ug/L	4.0	--	<1.0
Lithium	ug/L	32	--	<8.0
Manganese	ug/L	80	<20	<20
Mercury	ng/L	2.00	<0.500	<0.500
Molybdenum	ug/L	40	--	<10
Nickel	ug/L	100	<25	<25
Selenium	ug/L	4.0	<1.0	<1.0 e
Silver	ug/L	0.80	--	<0.20
Strontium	ug/L	200	--	<50
Thallium	ug/L	2.0	--	<2.0
Vanadium	ug/L	4.0	<1.0	<1.0
Zinc	ug/L	40	<10	<10
Major Anions				
Alkalinity, Bicarbonate	mg/L	40	**36**	**38**
Alkalinity, Carbonate	mg/L	8.0	**3.0** e	**2.0**
Chloride	mg/L	4.0	<1.0	<1.0
Fluoride	mg/L	0.40	--	<0.10
Nitrogen, Nitrate	mg/L	0.27	**0.27**	**0.29**
Sulfate	mg/L	8.0	<2.0	<2.0
Major Cations				
Calcium	mg/L	15	**--**	**11** e
Magnesium	mg/L	2.2	**--**	**2.0**
Potassium	mg/L	2.0	**--**	<0.50
Sodium	mg/L	2.0	**0.65**	**0.63**
General				
Hardness	mg/L	37	**--**	**36**

Eagle Mine Data - Q2 2016
Mine Permit Groundwater Quality Monitoring Data
QAL062A (TDRSA-CWB)

Parameter	Unit	Benchmark	Q1 2016 02/04/16[T]	Q2 2016 05/16/16[T]
Field				
D.O.[1]	ppm	--	**10**	**10**
ORP	mV	--	**45**	**116**
pH	SU	8.3-9.3	**8.3**	**7.9**
Specific Conductance	µS/cm @ 25°C	--	**312**	**338**
Temperature	°C	--	**7.1**	**7.2**
Turbidity	NTU	--	<1	<1
Water Elevation	ft MSL	--	**1406.88**	**1406.54**
Metals				
Aluminum	ug/L	200	--	<50
Antimony	ug/L	5.5	--	<5.0
Arsenic	ug/L	6.0	<2.0	<2.0
Barium	ug/L	80	--	20
Beryllium	ug/L	2.5	--	<1.0
Boron	ug/L	400	<100	<100
Cadmium	ug/L	2.0	--	<0.50
Chromium	ug/L	20	--	<5.0
Cobalt	ug/L	40	--	<10
Copper	ug/L	20	<5.0	<5.0
Iron	ug/L	80	<20	<20
Lead	ug/L	4.0	--	<1.0
Lithium	ug/L	32	--	<8.0
Manganese	ug/L	80	<20	<20
Mercury	ng/L	2.00	<0.500	<0.500
Molybdenum	ug/L	40	--	<10
Nickel	ug/L	100	<25	<25
Selenium	ug/L	4.0	<1.0	<1.0 e
Silver	ug/L	0.80	--	<0.20
Strontium	ug/L	200	--	**63**
Thallium	ug/L	2.0	--	<2.0
Vanadium	ug/L	4.0	<1.0	<1.0
Zinc	ug/L	40	<10	<10
Major Anions				
Alkalinity, Bicarbonate	mg/L	48	**110**	**110**
Alkalinity, Carbonate	mg/L	8.0	<2.0 e	<2.0
Chloride	mg/L	4.0	**45**	**43**
Fluoride	mg/L	0.40	--	<0.10
Nitrogen, Nitrate	mg/L	0.41	**0.39**	**0.40**
Sulfate	mg/L	8.0	<2.0	<2.0
Major Cations				
Calcium	mg/L	12	**--**	**45** e
Magnesium	mg/L	2.2	**--**	**9.1**
Potassium	mg/L	2.0	**--**	**1.6**
Sodium	mg/L	2.0	**5.2**	**9.2**
General				
Hardness	mg/L	40	**--**	**150**

Eagle Mine Data - Q2 2016
Mine Permit Groundwater Quality Monitoring Data
QAL063A (TDRSA-CWB)

Parameter	Unit	Benchmark	Q1 2016 02/04/16[T]	Q2 2016 05/17/16[T]
Field				
D.O.[1]	ppm	--	**10**	**10**
ORP	mV	--	**-40**	**121**
pH	SU	8.1-9.1	**8.5**	**8.4**
Specific Conductance	µS/cm @ 25°C	--	**147**	**188**
Temperature	°C	--	**7.5**	**7.9**
Turbidity	NTU	--	<1	<1
Water Elevation	ft MSL	--	**1400.77**	**1400.31**
Metals				
Aluminum	ug/L	200	--	<50
Antimony	ug/L	5.5	--	<5.0
Arsenic	ug/L	6.0	<2.0	<2.0
Barium	ug/L	80	--	<20
Beryllium	ug/L	2.5	--	<1.0
Boron	ug/L	400	<100	<100
Cadmium	ug/L	2.0	--	<0.50
Chromium	ug/L	20	--	<5.0
Cobalt	ug/L	40	--	<10
Copper	ug/L	20	<5.0	<5.0
Iron	ug/L	80	<20	<20
Lead	ug/L	4.0	--	<1.0
Lithium	ug/L	32	--	<8.0
Manganese	ug/L	80	<20	<20
Mercury	ng/L	2.00	<0.500	<0.500
Molybdenum	ug/L	40	--	<10
Nickel	ug/L	100	<25	<25
Selenium	ug/L	4.0	<1.0	<1.0 e
Silver	ug/L	0.80	--	<0.20
Strontium	ug/L	200	--	<50
Thallium	ug/L	2.0	--	<2.0
Vanadium	ug/L	4.0	<1.0	<1.0
Zinc	ug/L	40	<10	<10
Major Anions				
Alkalinity, Bicarbonate	mg/L	42	**76**	**94**
Alkalinity, Carbonate	mg/L	8.0	**3.0** e	<2.0
Chloride	mg/L	4.0	**3.5**	**7.5**
Fluoride	mg/L	0.40	--	<0.10
Nitrogen, Nitrate	mg/L	0.29	**0.28**	**0.39**
Sulfate	mg/L	8.0	<2.0	<2.0
Major Cations				
Calcium	mg/L	12	**--**	**32** e
Magnesium	mg/L	2.0	**--**	**5.6**
Potassium	mg/L	2.0	**--**	**1.1**
Sodium	mg/L	2.0	**1.0**	**1.2**
General				
Hardness	mg/L	40	**--**	**103**

Eagle Mine Data - Q2 2016
Mine Permit Groundwater Quality Monitoring Data
QAL064D (UMB)

Parameter	Unit	Benchmark	Q1 2016 02/11/16[T]		Q2 2016 05/17/16[T]	
Field						
D.O.[1]	ppm	--	<0.1		<0.1	
ORP	mV	--	**-96**		**-169**	
pH	SU	8.0-9.0	**8.1**		**8.4**	
Specific Conductance	µS/cm @ 25°C	--	**146**		**140**	
Temperature	°C	--	**6.4**		**6.7**	
Turbidity	NTU	--	<1		<1	
Water Elevation	ft MSL	--	**1415.06**		**1415.80**	
Metals						
Aluminum	ug/L	200	--		<50	
Antimony	ug/L	5.5	--		<5.0	
Arsenic	ug/L	6.0	<2.0		<2.0	
Barium	ug/L	80	--		<20	
Beryllium	ug/L	2.5	--		<1.0	
Boron	ug/L	400	<100		<100	
Cadmium	ug/L	2.0	--		<0.50	
Chromium	ug/L	20	--		<5.0	
Cobalt	ug/L	40	--		<10	
Copper	ug/L	20	<5.0		<5.0	
Iron	ug/L	80	**44**		**36**	
Lead	ug/L	4.0	--		<1.0	
Lithium	ug/L	32	--		<8.0	
Manganese	ug/L	80	<20		<20	
Mercury	ng/L	2.00	<0.500		<0.500	
Molybdenum	ug/L	40	--		<10	
Nickel	ug/L	100	<25		<25	
Selenium	ug/L	4.0	<1.0		<1.0	e
Silver	ug/L	0.80	--		<0.20	
Strontium	ug/L	200	**--**		**110**	
Thallium	ug/L	2.0	--		<2.0	
Vanadium	ug/L	4.0	<1.0		<1.0	
Zinc	ug/L	40	<10		<10	
Major Anions						
Alkalinity, Bicarbonate	mg/L	82	**77**		**79**	
Alkalinity, Carbonate	mg/L	8.0	**2.0**	e	<2.0	
Chloride	mg/L	4.2	**2.4**		**2.3**	
Fluoride	mg/L	0.40	--		<0.10	
Nitrogen, Nitrate	mg/L	0.20	<0.050		<0.050	
Sulfate	mg/L	8.0	<2.0		**2.6**	
Major Cations						
Calcium	mg/L	22	**--**		**20**	e
Magnesium	mg/L	3.3	**--**		**4.2**	
Potassium	mg/L	2.0	**--**		**1.3**	
Sodium	mg/L	6.9	**4.4**		**4.3**	
General						
Hardness	mg/L	51	**--**		**67**	

Eagle Mine Data - Q2 2016
Mine Permit Groundwater Quality Monitoring Data
QAL065D (UMB)

Parameter	Unit	Benchmark	Q1 2016 02/09/16[T]	Q2 2016 05/18/16[T]
Field				
D.O.[1]	ppm	--	**0.1**	**0.2**
ORP	mV	--	**-215**	**-176**
pH	SU	7.9-8.9	**8.6**	**8.5**
Specific Conductance	µS/cm @ 25°C	--	**150**	**143**
Temperature	°C	--	**6.2**	**6.7**
Turbidity	NTU	--	<1	<1
Water Elevation	ft MSL	--	**1415.84**	**1416.26**
Metals				
Aluminum	ug/L	200	--	<50
Antimony	ug/L	5.5	--	<5.0
Arsenic	ug/L	6.6	**3.3**	**3.3**
Barium	ug/L	80	--	<20
Beryllium	ug/L	2.5	--	<1.0
Boron	ug/L	400	<100	<100
Cadmium	ug/L	2.0	--	<0.50
Chromium	ug/L	20	--	<5.0
Cobalt	ug/L	40	--	<10
Copper	ug/L	20	<5.0	<5.0
Iron	ug/L	80	**55**	**61**
Lead	ug/L	4.0	--	<1.0
Lithium	ug/L	32	--	<8.0
Manganese	ug/L	80	<20	<20
Mercury	ng/L	2.00	<0.500	<0.500
Molybdenum	ug/L	40	--	<10
Nickel	ug/L	100	<25	<25
Selenium	ug/L	4.0	<1.0	<1.0 e
Silver	ug/L	0.80	--	<0.20
Strontium	ug/L	200	--	**210**
Thallium	ug/L	2.0	--	<2.0
Vanadium	ug/L	4.0	<1.0	<1.0
Zinc	ug/L	40	<10	<10
Major Anions				
Alkalinity, Bicarbonate	mg/L	86	**77**	**79**
Alkalinity, Carbonate	mg/L	8.7	**6.0** e	**2.0**
Chloride	mg/L	4.0	**1.1**	<1.0
Fluoride	mg/L	0.40	--	**0.15**
Nitrogen, Nitrate	mg/L	0.20	<0.050	<0.050
Sulfate	mg/L	8.0	<2.0	<2.0
Major Cations				
Calcium	mg/L	14	**--**	**13** e
Magnesium	mg/L	4.8	**--**	**4.4**
Potassium	mg/L	3.0	**--**	**2.6**
Sodium	mg/L	12	**11**	**11**
General				
Hardness	mg/L	53	**--**	**51**

Eagle Mine Data - Q2 2016
Mine Permit Groundwater Quality Monitoring Data
QAL066D (UMB)

Parameter	Unit	Benchmark	Q1 2016 02/09/16[T]	Q2 2016 05/18/16[D]
Field				
D.O.[1]	ppm	--	**1.5**	**1.1**
ORP	mV	--	**-253**	**12**
pH	SU	8.7-9.7	**9.9**	**9.1**
Specific Conductance	µS/cm @ 25°C	--	**118**	**125**
Temperature	°C	--	**5.1**	**8.6**
Turbidity	NTU	--	<1	**272**
Water Elevation	ft MSL	--	**1415.01**	**1415.09**
Metals				
Aluminum	ug/L	557	--	<50
Antimony	ug/L	5.5	--	<5.0
Arsenic	ug/L	8.9	**9.0**	**9.3**
Barium	ug/L	80	--	<20
Beryllium	ug/L	2.5	--	<1.0
Boron	ug/L	400	<100	<100
Cadmium	ug/L	2.0	--	<0.50
Chromium	ug/L	20	--	<5.0
Cobalt	ug/L	40	--	<10
Copper	ug/L	20	<5.0	<5.0
Iron	ug/L	288	**1300**	<20
Lead	ug/L	4.0	--	<1.0
Lithium	ug/L	32	--	<8.0
Manganese	ug/L	80	<20	<20
Mercury	ng/L	2.00	**3.89**	**0.679**
Molybdenum	ug/L	40	--	<10
Nickel	ug/L	100	<25	<25
Selenium	ug/L	4.0	<1.0	<1.0 e
Silver	ug/L	0.80	--	<0.20
Strontium	ug/L	367	**--**	<50
Thallium	ug/L	2.0	--	<2.0
Vanadium	ug/L	4.0	**2.2**	**1.8**
Zinc	ug/L	40	<10	<10
Major Anions				
Alkalinity, Bicarbonate	mg/L	61	**44**	**60**
Alkalinity, Carbonate	mg/L	52	**16** e	**6.1**
Chloride	mg/L	4.0	**2.0**	**1.1**
Fluoride	mg/L	0.40	--	<0.10
Nitrogen, Nitrate	mg/L	0.20	<0.050	<0.050
Sulfate	mg/L	11	**15**	**15**
Major Cations				
Calcium	mg/L	58	**--**	**10** e
Magnesium	mg/L	2.9	**--**	**1.7**
Potassium	mg/L	2.6	**--**	**1.1**
Sodium	mg/L	8.0	**14**	**16**
General				
Hardness	mg/L	146	**--**	**32**

Eagle Mine Data - Q2 2016
Mine Permit Groundwater Quality Monitoring Data
QAL067A (TDRSA-CWB)

Parameter	Unit	Benchmark	Q1 2016 02/04/16[T]	Q2 2016 05/16/16[T]
Field				
D.O.[1]	ppm	--	**9.1**	**8.9**
ORP	mV	--	**259**	**262**
pH	SU	5.6-6.6	**6.1**	**6.1**
Specific Conductance	µS/cm @ 25°C	--	**2160**	**2314**
Temperature	°C	--	**7.5**	**7.9**
Turbidity	NTU	--	<1	<1
Water Elevation	ft MSL	--	**1414.06**	**1413.65**
Metals				
Aluminum	ug/L	200	--	<50
Antimony	ug/L	5.5	--	<5.0
Arsenic	ug/L	6.0	<2.0	<2.0
Barium	ug/L	80	**--**	**220**
Beryllium	ug/L	2.5	--	<1.0
Boron	ug/L	400	<100	<100
Cadmium	ug/L	2.0	--	<0.50
Chromium	ug/L	20	--	<5.0
Cobalt	ug/L	40	--	<10
Copper	ug/L	20	<5.0	<5.0
Iron	ug/L	80	<20	<20
Lead	ug/L	4.0	--	<1.0
Lithium	ug/L	32	--	<8.0
Manganese	ug/L	80	<20	<20
Mercury	ng/L	2.00	**2.07**	**2.38**
Molybdenum	ug/L	40	--	<10
Nickel	ug/L	100	<25	<25
Selenium	ug/L	4.0	<1.0	<1.0 e
Silver	ug/L	0.80	**--**	<0.20
Strontium	ug/L	200	**--**	**180**
Thallium	ug/L	2.0	--	<2.0
Vanadium	ug/L	4.0	**1.1**	<1.0
Zinc	ug/L	40	<10	<10
Major Anions				
Alkalinity, Bicarbonate	mg/L	51	**50**	**48**
Alkalinity, Carbonate	mg/L	8.0	<2.0 e	<2.0
Chloride	mg/L	4.0	**730**	**730**
Fluoride	mg/L	0.40	--	<0.10
Nitrogen, Nitrate	mg/L	0.25	**2.0**	**2.1**
Sulfate	mg/L	8.4	**13**	**16**
Major Cations				
Calcium	mg/L	8.2	**--**	**32** e
Magnesium	mg/L	2.0	**--**	**18**
Potassium	mg/L	2.0	**--**	**4.6**
Sodium	mg/L	2.0	**430**	**440**
General				
Hardness	mg/L	26	**--**	**154**

Eagle Mine Data - Q2 2016
Mine Permit Groundwater Quality Monitoring Data
QAL068A (Background)

Parameter	Unit	Benchmark	Q1 2016 02/08/16[T]	Q2 2016 05/16/16[T]
Field				
D.O.[1]	ppm	--	**12**	**12**
ORP	mV	--	**93**	**109**
pH	SU	6.2-7.2	**6.7**	**6.4**
Specific Conductance	µS/cm @ 25°C	--	**37**	**42**
Temperature	°C	--	**7.2**	**7.4**
Turbidity	NTU	--	<1	<1
Water Elevation	ft MSL	--	**1421.61**	**1420.57**
Metals				
Aluminum	ug/L	200	--	<50
Antimony	ug/L	5.5	--	<5.0
Arsenic	ug/L	6.0	<2.0	<2.0
Barium	ug/L	80	--	<20
Beryllium	ug/L	2.5	--	<1.0
Boron	ug/L	400	<100	<100
Cadmium	ug/L	2.0	--	<0.50
Chromium	ug/L	20	--	<5.0
Cobalt	ug/L	40	--	<10
Copper	ug/L	20	<5.0	<5.0
Iron	ug/L	80	<20	<20
Lead	ug/L	4.0	--	<1.0
Lithium	ug/L	32	--	<8.0
Manganese	ug/L	80	<20	<20
Mercury	ng/L	2.00	<0.500	<0.500
Molybdenum	ug/L	40	--	<10
Nickel	ug/L	100	<25	<25
Selenium	ug/L	4.0	<1.0	<1.0 e
Silver	ug/L	0.80	--	<0.20
Strontium	ug/L	200	--	<50
Thallium	ug/L	2.0	--	<2.0
Vanadium	ug/L	4.0	<1.0	<1.0
Zinc	ug/L	40	<10	<10
Major Anions				
Alkalinity, Bicarbonate	mg/L	35	**21**	**25**
Alkalinity, Carbonate	mg/L	8.0	<2.0 e	<2.0
Chloride	mg/L	4.0	**1.4**	<1.0
Fluoride	mg/L	0.40	--	<0.10
Nitrogen, Nitrate	mg/L	0.20	<0.050	<0.050
Sulfate	mg/L	8.0	<2.0	<2.0
Major Cations				
Calcium	mg/L	6.7	**--**	**6.3** e
Magnesium	mg/L	2.0	**--**	**1.2**
Potassium	mg/L	2.0	**--**	**1.1**
Sodium	mg/L	2.0	**0.69**	**0.76**
General				
Hardness	mg/L	21	**--**	**21**

Eagle Mine Data - Q2 2016
Mine Permit Groundwater Quality Monitoring Data
QAL068B (Background)

Parameter	Unit	Benchmark	Q1 2016 02/08/16[T]	Q2 2016 05/16/16[T]
Field				
D.O.[1]	ppm	--	**12**	**12**
ORP	mV	--	**20**	**72**
pH	SU	8.4-9.4	**9.0**	**8.8**
Specific Conductance	µS/cm @ 25°C	--	**59**	**57**
Temperature	°C	--	**6.9**	**7.2**
Turbidity	NTU	--	<1	<1
Water Elevation	ft MSL	--	**1412.87**	**1412.39**
Metals				
Aluminum	ug/L	200	--	<50
Antimony	ug/L	5.5	--	<5.0
Arsenic	ug/L	6.0	<2.0	<2.0
Barium	ug/L	80	--	<20
Beryllium	ug/L	2.5	--	<1.0
Boron	ug/L	400	<100	<100
Cadmium	ug/L	2.0	--	<0.50
Chromium	ug/L	20	--	<5.0
Cobalt	ug/L	40	--	<10
Copper	ug/L	20	<5.0	<5.0
Iron	ug/L	184	<20	<20
Lead	ug/L	4.0	--	<1.0
Lithium	ug/L	32	--	<8.0
Manganese	ug/L	80	<20	<20
Mercury	ng/L	2.00	<0.500	<0.500
Molybdenum	ug/L	40	--	<10
Nickel	ug/L	100	<25	<25
Selenium	ug/L	4.0	<1.0	<1.0 e
Silver	ug/L	0.80	--	<0.20
Strontium	ug/L	200	--	<50
Thallium	ug/L	2.0	--	<2.0
Vanadium	ug/L	4.0	**1.1**	**1.1**
Zinc	ug/L	40	<10	<10
Major Anions				
Alkalinity, Bicarbonate	mg/L	30	**27**	**31**
Alkalinity, Carbonate	mg/L	9.9	**7.0** e	**2.0**
Chloride	mg/L	4.0	**1.2**	<1.0
Fluoride	mg/L	0.40	--	<0.10
Nitrogen, Nitrate	mg/L	0.20	**0.068**	**0.064**
Sulfate	mg/L	8.0	**2.5**	**2.0**
Major Cations				
Calcium	mg/L	9.4	--	**8.9** e
Magnesium	mg/L	2.0	--	**1.8**
Potassium	mg/L	2.0	--	**0.62**
Sodium	mg/L	2.0	**0.98**	**0.98**
General				
Hardness	mg/L	31	--	**30**

Eagle Mine Data - Q2 2016
Mine Permit Groundwater Quality Monitoring Data
QAL068D (Background)

Parameter	Unit	Benchmark	Q1 2016 02/08/16[T]	Q2 2016 05/16/16[T]
Field				
D.O.[1]	ppm	--	**2.6**	**4.5**
ORP	mV	--	**-83**	**5**
pH	SU	8.0-9.0	**8.4**	**8.3**
Specific Conductance	µS/cm @ 25°C	--	**115**	**111**
Temperature	°C	--	**6.1**	**7.3**
Turbidity	NTU	--	<1	<1
Water Elevation	ft MSL	--	**1413.03**	**1412.52**
Metals				
Aluminum	ug/L	200	--	<50
Antimony	ug/L	5.5	--	<5.0
Arsenic	ug/L	7.2	**5.2**	**4.8**
Barium	ug/L	80	--	<20
Beryllium	ug/L	2.5	--	<1.0
Boron	ug/L	400	<100	<100
Cadmium	ug/L	2.0	--	<0.50
Chromium	ug/L	20	--	<5.0
Cobalt	ug/L	40	--	<10
Copper	ug/L	20	<5.0	<5.0
Iron	ug/L	119	<20	<20
Lead	ug/L	4.0	--	<1.0
Lithium	ug/L	32	--	<8.0
Manganese	ug/L	80	<20	<20
Mercury	ng/L	2.12	<0.500	<0.500
Molybdenum	ug/L	40	--	<10
Nickel	ug/L	100	<25	<25
Selenium	ug/L	4.0	<1.0	<1.0 e
Silver	ug/L	0.80	--	<0.20
Strontium	ug/L	200	--	<50
Thallium	ug/L	2.0	--	<2.0
Vanadium	ug/L	4.0	**3.0**	**2.5**
Zinc	ug/L	40	<10	<10
Major Anions				
Alkalinity, Bicarbonate	mg/L	67	**61**	**59**
Alkalinity, Carbonate	mg/L	8.0	<2.0 e	<2.0
Chloride	mg/L	4.0	**1.2**	**1.1**
Fluoride	mg/L	0.40	--	<0.10
Nitrogen, Nitrate	mg/L	0.21	<0.050	<0.050
Sulfate	mg/L	10	**5.5**	**5.6**
Major Cations				
Calcium	mg/L	16	**--**	**14** e
Magnesium	mg/L	3.9	**--**	**3.9**
Potassium	mg/L	2.0	**--**	**1.2**
Sodium	mg/L	6.1	**4.4**	**4.6**
General				
Hardness	mg/L	52	**--**	**51**

Eagle Mine Data - Q2 2016
Mine Permit Groundwater Quality Monitoring Data
QAL069A (Background)

Parameter	Unit	Benchmark	Q1 2016 02/08/16[T]	Q2 2016 05/17/16[T]
Field				
D.O.[1]	ppm	--	**7.7**	**8.1**
ORP	mV	--	**137**	**166**
pH	SU	7.8-8.8	**7.0**	**7.1**
Specific Conductance	µS/cm @ 25°C	--	**429**	**376**
Temperature	°C	--	**6.7**	**7.9**
Turbidity	NTU	--	<1	<1
Water Elevation	ft MSL	--	**1381.38**	**1381.68**
Metals				
Aluminum	ug/L	200	--	<50
Antimony	ug/L	5.5	--	<5.0
Arsenic	ug/L	6.0	<2.0	<2.0
Barium	ug/L	80	--	<20
Beryllium	ug/L	2.5	--	<1.0
Boron	ug/L	400	<100	<100
Cadmium	ug/L	2.0	--	<0.50
Chromium	ug/L	20	--	<5.0
Cobalt	ug/L	40	--	<10
Copper	ug/L	20	<5.0	<5.0
Iron	ug/L	80	<20	<20
Lead	ug/L	4.0	--	<1.0
Lithium	ug/L	32	--	<8.0
Manganese	ug/L	80	<20	<20
Mercury	ng/L	2.00	**2.35**	**2.25**
Molybdenum	ug/L	40	--	<10
Nickel	ug/L	100	<25	<25
Selenium	ug/L	4.0	<1.0	<1.0 e
Silver	ug/L	0.80	--	<0.20
Strontium	ug/L	200	**--**	**69**
Thallium	ug/L	2.0	--	<2.0
Vanadium	ug/L	4.0	<1.0	<1.0
Zinc	ug/L	40	<10	<10
Major Anions				
Alkalinity, Bicarbonate	mg/L	138	**210**	**210**
Alkalinity, Carbonate	mg/L	8.0	<2.0 e	<2.0
Chloride	mg/L	4.0	**15**	**4.1**
Fluoride	mg/L	0.40	--	<0.10
Nitrogen, Nitrate	mg/L	0.57	**1.3**	**0.98**
Sulfate	mg/L	8.0	**8.6**	**7.5**
Major Cations				
Calcium	mg/L	35	**--**	**50** e
Magnesium	mg/L	18	**--**	**21**
Potassium	mg/L	2.0	**--**	**1.9**
Sodium	mg/L	2.0	**13**	**6.6**
General				
Hardness	mg/L	162	**--**	**211**

Eagle Mine Data - Q2 2016
Mine Permit Groundwater Quality Monitoring Data
QAL070A (NCWIB)

Parameter	Unit	Benchmark	Q2 2015 05/13/15[T]		Q2 2016 05/17/16[T]	
Field						
D.O.[1]	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**	

Eagle Mine Data - Q2 2016
Mine Permit Groundwater Quality Monitoring Data
QAL071A (TDRSA-CWB)

Parameter	Unit	Benchmark	Q1 2016 02/08/16[T]	Q2 2016 05/17/16[T]
Field				
D.O.[1]	ppm	--	**11**	**11**
ORP	mV	--	**20**	**62**
pH	SU	8.1-9.1	**8.0**	**7.8**
Specific Conductance	µS/cm @ 25°C	--	**345**	**418**
Temperature	°C	--	**7.3**	**8.0**
Turbidity	NTU	--	<1	<1
Water Elevation	ft MSL	--	**1403.89**	**1404.82**
Metals				
Aluminum	ug/L	200	--	<50
Antimony	ug/L	5.5	--	<5.0
Arsenic	ug/L	6.0	<2.0	<2.0
Barium	ug/L	80	**--**	**25**
Beryllium	ug/L	2.5	--	<1.0
Boron	ug/L	400	<100	<100
Cadmium	ug/L	2.0	--	<0.50
Chromium	ug/L	20	--	<5.0
Cobalt	ug/L	40	--	<10
Copper	ug/L	20	<5.0	<5.0
Iron	ug/L	178	<20	<20
Lead	ug/L	4.0	--	<1.0
Lithium	ug/L	32	--	<8.0
Manganese	ug/L	80	<20	<20
Mercury	ng/L	2.00	<0.500	<0.500
Molybdenum	ug/L	40	--	<10
Nickel	ug/L	100	<25	<25
Selenium	ug/L	4.0	<1.0	<1.0 e
Silver	ug/L	0.80	--	<0.20
Strontium	ug/L	200	**--**	**73**
Thallium	ug/L	2.0	--	<2.0
Vanadium	ug/L	4.0	<1.0	<1.0
Zinc	ug/L	40	<10	<10
Major Anions				
Alkalinity, Bicarbonate	mg/L	44	**120**	**140**
Alkalinity, Carbonate	mg/L	8.0	<2.0 e	<2.0
Chloride	mg/L	4.0	**25**	**36**
Fluoride	mg/L	0.40	--	<0.10
Nitrogen, Nitrate	mg/L	0.31	**10**	**14**
Sulfate	mg/L	8.0	**7.3**	**7.0**
Major Cations				
Calcium	mg/L	12	**--**	**67** e
Magnesium	mg/L	2.0	**--**	**10**
Potassium	mg/L	2.0	**--**	**1.3**
Sodium	mg/L	2.0	**10**	**8.2**
General				
Hardness	mg/L	38	**--**	**209**

Eagle Mine Data - Q2 2016
Mine Permit Groundwater Quality Monitoring Data
QAL073A (NCWIB)

Parameter	Unit	Benchmark	Q2 2015 05/13/15[T]		Q2 2016 05/17/16[T]	
Field						
D.O.[1]	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**	

Eagle Mine Data - Q2 2016
Mine Permit Groundwater Quality Monitoring Data
QAL074A (Septic & WWTP)

Parameter	Unit	Benchmark	Q1 2016 02/16/16[T]	Q2 2016 05/17/16[T]
Field				
D.O.[1]	ppm	--	**11**	**11**
ORP	mV	--	**138**	**59**
pH	SU	8.4-9.4	**8.6**	**8.6**
Specific Conductance	µS/cm @ 25°C	--	**267**	**245**
Temperature	°C	--	**5.3**	**10**
Turbidity	NTU	--	<1	<1
Water Elevation	ft MSL	--	**1403.03**	**1403.77**
Metals				
Aluminum	ug/L	200	**--**	<50
Antimony	ug/L	5.5	--	<5.0
Arsenic	ug/L	6.0	<2.0	<2.0
Barium	ug/L	80	--	<20
Beryllium	ug/L	2.5	--	<1.0
Boron	ug/L	400	<100	<100
Cadmium	ug/L	2.0	--	<0.50
Chromium	ug/L	20	--	<5.0
Cobalt	ug/L	40	--	<10
Copper	ug/L	20	<5.0	<5.0
Iron	ug/L	212	**45**	**31**
Lead	ug/L	4.0	--	<1.0
Lithium	ug/L	32	--	<8.0
Manganese	ug/L	80	<20	<20
Mercury	ng/L	2.00	**0.954**	**0.817**
Molybdenum	ug/L	40	--	<10
Nickel	ug/L	100	<25	<25
Selenium	ug/L	4.0	<1.0	<1.0 e
Silver	ug/L	0.80	--	<0.20
Strontium	ug/L	200	--	<50
Thallium	ug/L	2.0	--	<2.0
Vanadium	ug/L	4.0	<1.0	<1.0
Zinc	ug/L	40	<10	<10
Major Anions				
Alkalinity, Bicarbonate	mg/L	39	**43**	**49**
Alkalinity, Carbonate	mg/L	8.0	<2.0 e	<2.0
Chloride	mg/L	4.0	**47**	**53**
Fluoride	mg/L	0.40	--	<0.10
Nitrogen, Nitrate	mg/L	0.43	**1.6**	**1.3**
Sulfate	mg/L	8.0	**6.8**	**6.9**
Major Cations				
Calcium	mg/L	31	--	**32** e
Magnesium	mg/L	5.9	--	**6.4**
Potassium	mg/L	2.0	**--**	**1.1**
Sodium	mg/L	3.5	**6.8**	**9.1**
General				
Hardness	mg/L	103	**--**	**106**

Eagle Mine Data - Q2 2016
Mine Permit Groundwater Quality Monitoring Data
Abbreviations & Data Qualifiers

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
	Highlighted Cell = Value is equal to or above site-specific benchmark. An exceedance occurs if there are 2 consecutive sampling events with a value equal to or greater than the benchmark at a **compliance** monitoring location.