

2016
Mine Permit Groundwater Quality Monitoring Data
HW-1L (Monitoring)
Humboldt Mill

Parameter	Unit	Recom- mended Benchmark 2014	Q1 2016 2/24/16 ^D	Q2 2016 5/17/16 ^D	Q3 2016 8/24/16 ^D
Field					
D.O. ¹	ppm	--	0.14	0.24	1.1
ORP	mV	--	-251	-250	-84
pH	SU	9.0-10.0	8.5	8.4	8.7
Specific Conductance	µS/cm	--	372	365	272
Temperature	°C	--	6.5	9.0	12
Turbidity	NTU	--	64	25	55
Water Elevation	ft MSL	--	1451.87	1478.81	1472.12
Metals					
Aluminum	ug/L	200 (p)	--	--	< 50
Antimony	ug/L	8.0 (p)	--	--	< 2.0
Arsenic	ug/L	20 (p)	< 5.0	< 5.0	< 5.0
Barium	ug/L	400 (p)	--	--	< 100
Beryllium	ug/L	4.0 (p)	--	--	< 1.0
Boron	ug/L	1200 (p)	--	--	640
Cadmium	ug/L	4.0 (p)	--	--	< 1.0
Chromium	ug/L	40 (p)	--	--	< 10
Cobalt	ug/L	80 (p)	--	--	< 20
Copper	ug/L	16 (p)	< 4.0	< 4.0	< 4.0
Iron	ug/L	1134	1100	1000	540
Lead	ug/L	12 (p)	< 3.0	< 3.0	< 3.0
Lithium	ug/L	40 (p)	--	--	22
Manganese	ug/L	23	< 50	< 50	< 50
Mercury	ng/L	4.0 (p)	< 1.0	< 1.0	< 1.0
Molybdenum	ug/L	200 (p)	--	--	< 50
Nickel	ug/L	80 (p)	< 20	< 20	< 20
Selenium	ug/L	20 (p)	--	--	< 5.0
Silver	ug/L	0.8 (p)	--	--	< 0.20
Thallium	ug/L	8.0 (p)	--	--	< 2.0
Vanadium	ug/L	16 (p)	--	--	< 4.0
Zinc	ug/L	11	< 10	< 10	< 10
Major Anions					
Alkalinity, Bicarbonate	mg/L	117	79	80	80
Alkalinity, Carbonate	mg/L	14	< 2.0	< 2.0	< 2.0
Chloride	mg/L	52	53	53	51
Fluoride	mg/L	4.0 (p)	< 1.0	< 1.0	< 1.0
Nitrogen, Ammonia	mg/L	0.04	< 0.03	< 0.03	< 0.03
Nitrogen, Nitrate	mg/L	0.40 (p)	< 0.1	< 0.1	< 0.1
Nitrogen, Nitrite	mg/L	0.40 (p)	< 0.1	< 0.1	< 0.1
Sulfate	mg/L	24	22	22	22
Sulfide	mg/L	0.80 (p)	< 0.20	< 0.20	< 0.20
Major Cations					
Calcium	mg/L	35	26	27	23
Magnesium	mg/L	17	11	11	10
Potassium	mg/L	11	1.9	1.8	1.6
Sodium	mg/L	27	27	27	24
General					
Hardness	mg/L	157	108	122	112

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

HW-1L (Monitoring)

2016
Mine Permit Groundwater Quality Monitoring Data
HW-1U LLA (Monitoring)
Humboldt Mill

Parameter	Unit	Recom- mended Benchmark 2014	Q1 2016 2/24/16 ^D	Q2 2016 5/17/16 ^D	Q3 2016 8/24/16 ^D
Field					
D.O. ¹	ppm	--	0.12	0.09	0.59
ORP	mV	--	-232	-210	-92
pH	SU	8.6-9.6	8.5	8.4	8.5
Specific Conductance	µS/cm	--	394	389	293
Temperature	°C	--	7.3	9.0	11
Turbidity	NTU	--	18	16	23
Water Elevation	ft MSL	--	1494.14	1487.61	1494.62
Metals					
Aluminum	ug/L	200 (p)	--	--	< 50
Antimony	ug/L	8.0 (p)	--	--	< 2.0
Arsenic	ug/L	20 (p)	< 5.0	< 5.0	< 5.0
Barium	ug/L	400 (p)	--	--	< 100
Beryllium	ug/L	4.0 (p)	--	--	< 1.0
Boron	ug/L	1200 (p)	--	--	< 300
Cadmium	ug/L	4.0 (p)	--	--	< 1.0
Chromium	ug/L	40 (p)	--	--	< 10
Cobalt	ug/L	80 (p)	--	--	< 20
Copper	ug/L	16 (p)	< 4.0	< 4.0	< 4.0
Iron	ug/L	800 (p)	< 200	< 200	< 200
Lead	ug/L	12 (p)	< 3.0	< 3.0	< 3.0
Lithium	ug/L	40 (p)	--	--	20
Manganese	ug/L	200 (p)	< 50	< 50	< 50
Mercury	ng/L	4.0 (p)	< 1.0	< 1.0	< 1.0
Molybdenum	ug/L	200 (p)	--	--	< 50
Nickel	ug/L	80 (p)	< 20	< 20	< 20
Selenium	ug/L	20 (p)	--	--	< 5.0
Silver	ug/L	0.8 (p)	--	--	< 0.20
Thallium	ug/L	8.0 (p)	--	--	< 2.0
Vanadium	ug/L	16 (p)	--	--	< 4.0
Zinc	ug/L	40 (p)	< 10	< 10	< 10
Major Anions					
Alkalinity, Bicarbonate	mg/L	125	100	110	110
Alkalinity, Carbonate	mg/L	66	5.0	< 2.0	< 2.0
Chloride	mg/L	40 (p)	23	22	21
Fluoride	mg/L	4.0 (p)	< 1.0	< 1.0	< 1.0
Nitrogen, Ammonia	mg/L	0.1 (p)	0.12	0.15	0.19
Nitrogen, Nitrate	mg/L	0.40 (p)	< 0.1	< 0.1	< 0.1
Nitrogen, Nitrite	mg/L	0.40 (p)	< 0.1	< 0.1	< 0.1
Sulfate	mg/L	58	52	55	56
Sulfide	mg/L	0.36	< 0.20	< 0.20	< 0.20
Major Cations					
Calcium	mg/L	29	20	21	18
Magnesium	mg/L	15	7.8	8.2	6.9
Potassium	mg/L	50	2.6	2.4	1.4
Sodium	mg/L	33	43	50	54
General					
Hardness	mg/L	132	88	90	84

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

HW-1U LLA (Monitoring)

2016
Mine Permit Groundwater Quality Monitoring Data
HW-1U UFB (Monitoring)
Humboldt Mill

Parameter	Unit	Recom- mended Benchmark 2014	Q1 2016 2/24/16 ^T	Q2 2016 5/17/16 ^D	Q3 2016 8/24/16 ^D
Field					
D.O. ¹	ppm	--	0.33	0.90	0.08
ORP	mV	--	-169	-160	-210
pH	SU	8.4-9.4	9.1	8.9	8.9
Specific Conductance	µS/cm	--	296	208	197
Temperature	°C	--	4.0	10	16
Turbidity	NTU	--	1.3	7.1	9.4
Water Elevation	ft MSL	--	1531.19	1531.51	1532.64
Metals					
Aluminum	ug/L	200 (p)	--	--	< 50
Antimony	ug/L	8.0 (p)	--	--	< 2.0
Arsenic	ug/L	11	< 5.0	< 5.0	< 5.0
Barium	ug/L	400 (p)	--	--	< 100
Beryllium	ug/L	4.0 (p)	--	--	< 1.0
Boron	ug/L	1200 (p)	--	--	< 300
Cadmium	ug/L	4.0 (p)	--	--	< 1.0
Chromium	ug/L	40 (p)	--	--	< 10
Cobalt	ug/L	80 (p)	--	--	< 20
Copper	ug/L	16 (p)	< 4.0	< 4.0	< 4.0
Iron	ug/L	800 (p)	< 200	< 200	< 200
Lead	ug/L	12 (p)	< 3.0	< 3.0	< 3.0
Lithium	ug/L	40 (p)	--	--	< 10
Manganese	ug/L	75	< 50	< 50	< 50
Mercury	ng/L	4.0 (p)	< 1.0	< 1.0	< 1.0
Molybdenum	ug/L	200 (p)	--	--	< 50
Nickel	ug/L	80 (p)	< 20	< 20	< 20
Selenium	ug/L	20 (p)	--	--	< 5.0
Silver	ug/L	0.8 (p)	--	--	< 0.20
Thallium	ug/L	8.0 (p)	--	--	< 2.0
Vanadium	ug/L	16 (p)	--	--	< 4.0
Zinc	ug/L	40 (p)	< 10	< 10	< 10
Major Anions					
Alkalinity, Bicarbonate	mg/L	127	77	81	95
Alkalinity, Carbonate	mg/L	14	14	6.1	4.0
Chloride	mg/L	121	23	<10	< 10
Fluoride	mg/L	4.0 (p)	< 1.0	< 1.0	< 1.0
Nitrogen, Ammonia	mg/L	0.12 (p)	0.07	0.04	< 0.03
Nitrogen, Nitrate	mg/L	0.67	< 0.1	< 0.1	< 0.1
Nitrogen, Nitrite	mg/L	0.40 (p)	< 0.1	< 0.1	< 0.1
Sulfate	mg/L	76	20	14	10
Sulfide	mg/L	1.3	< 0.20	< 0.20	< 0.20
Major Cations					
Calcium	mg/L	46	11	14	19
Magnesium	mg/L	17	5.3	4.6	5.8
Potassium	mg/L	22	6.1	3.3	4.0
Sodium	mg/L	91	35	22	18
General					
Hardness	mg/L	189	54	56	76

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

HW-1U UFB (Monitoring)

2016
Mine Permit Groundwater Quality Monitoring Data
HW-2 (Monitoring)
Humboldt Mill

Parameter	Unit	Recom- mended Benchmark 2014	Q1 2016 2/24/16 ^D	Q2 2016 5/18/16 ^D	Q3 2016 8/25/16 ^D
Field					
D.O. ¹	ppm	--	0.69	0.39	0.28
ORP	mV	--	-178	-205	-125
pH	SU	7.7-8.7	8.0	8.1	7.5
Specific Conductance	µS/cm	--	579	616	490
Temperature	°C	--	5.5	8.9	13
Turbidity	NTU	--	53	75	21
Water Elevation	ft MSL	--	1530.26	1530.55	1531.03
Metals					
Aluminum	ug/L	200 (p)	--	--	< 250
Antimony	ug/L	8.0 (p)	--	--	< 2.0
Arsenic	ug/L	20 (p)	< 5.0	< 5.0	< 5.0
Barium	ug/L	400 (p)	--	--	< 100
Beryllium	ug/L	4.0 (p)	--	--	< 1.0
Boron	ug/L	1200 (p)	--	--	< 300
Cadmium	ug/L	4.0 (p)	--	--	< 1.0
Chromium	ug/L	40 (p)	--	--	< 10
Cobalt	ug/L	80 (p)	--	--	< 20
Copper	ug/L	16 (p)	< 4.0	< 4.0	< 4.0
Iron	ug/L	3401	1700	1400	2200
Lead	ug/L	12 (p)	< 3.0	< 3.0	< 3.0
Lithium	ug/L	40 (p)	--	--	< 10
Manganese	ug/L	324	150	190	240
Mercury	ng/L	1.3	< 1.0	< 1.0	< 1.0
Molybdenum	ug/L	200 (p)	--	--	< 50
Nickel	ug/L	80 (p)	< 20	< 20	< 20
Selenium	ug/L	20 (p)	--	--	< 5.0
Silver	ug/L	0.8 (p)	--	--	< 0.20
Thallium	ug/L	8.0 (p)	--	--	< 2.0
Vanadium	ug/L	16 (p)	--	--	< 4.0
Zinc	ug/L	40 (p)	< 10	< 10	< 10
Major Anions					
Alkalinity, Bicarbonate	mg/L	145	130	120	120
Alkalinity, Carbonate	mg/L	8.0 (p)	< 2.0	< 2.0	< 2.0
Chloride	mg/L	25	21	26	27
Fluoride	mg/L	4.0 (p)	< 1.0	< 1.0	< 1.0
Nitrogen, Ammonia	mg/L	0.05	< 0.03	0.03	< 0.03
Nitrogen, Nitrate	mg/L	0.40 (p)	< 0.1	< 0.1	< 0.1
Nitrogen, Nitrite	mg/L	0.40 (p)	< 0.1	< 0.1	< 0.1
Sulfate	mg/L	135	140	160	170
Sulfide	mg/L	0.47	< 0.20	< 0.20	< 0.20
Major Cations					
Calcium	mg/L	72	61	61	59
Magnesium	mg/L	28	23	24	23
Potassium	mg/L	7.1	3.7	3.9	3.8
Sodium	mg/L	15	14	18	21
General					
Hardness	mg/L	277	256	278	284

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

HW-2 (Monitoring)

2016
Mine Permit Groundwater Quality Monitoring Data
HW-8U (Monitoring)
Humboldt Mill

Parameter	Unit	Recom- mended Benchmark 2014	Q1 2016 2/24/16 ^T	Q2 2016 5/17/16 ^T	Q3 2016 8/26/16 ^T
Field					
D.O. ¹	ppm	--	0.54	1.9	0.80
ORP	mV	--	-109	-115	-91
pH	SU	6.4-7.4	7.1	7.0	7.0
Specific Conductance	µS/cm	--	325	335	272
Temperature	°C	--	5.2	9.8	13
Turbidity	NTU	--	0.75	1.7	59
Water Elevation	ft MSL	--	1532.50	1533.64	1533.2
Metals					
Aluminum	ug/L	200 (p)	--	--	<100
Antimony	ug/L	8.0 (p)	--	--	< 2.0
Arsenic	ug/L	20 (p)	6.7	7.9	10
Barium	ug/L	400 (p)	--	--	< 100
Beryllium	ug/L	4.0 (p)	--	--	< 1.0
Boron	ug/L	1200 (p)	--	--	< 300
Cadmium	ug/L	4.0 (p)	--	--	< 1.0
Chromium	ug/L	40 (p)	--	--	< 10
Cobalt	ug/L	80 (p)	--	--	< 20
Copper	ug/L	16 (p)	< 4.0	< 4.0	< 4.0
Iron	ug/L	27125	9600	10000	9000
Lead	ug/L	12 (p)	< 3.0	< 3.0	< 3.0
Lithium	ug/L	40 (p)	--	--	11
Manganese	ug/L	5498	4700 ^e	4800	5500
Mercury	ng/L	4.0 (p)	< 1.0	< 1.0	< 1.0
Molybdenum	ug/L	200 (p)	--	--	< 50
Nickel	ug/L	80 (p)	< 20	< 20	< 20
Selenium	ug/L	20 (p)	--	--	< 5.0
Silver	ug/L	0.8 (p)	--	--	< 0.20
Thallium	ug/L	8.0 (p)	--	--	< 2.0
Vanadium	ug/L	16 (p)	--	--	< 4.0
Zinc	ug/L	26	< 10	< 10	< 10
Major Anions					
Alkalinity, Bicarbonate	mg/L	237	140	150	150
Alkalinity, Carbonate	mg/L	8.0 (p)	< 2.0	< 2.0	< 2.0
Chloride	mg/L	40 (p)	< 10	< 10	10
Fluoride	mg/L	4.0 (p)	< 1.0	< 1.0	< 1.0
Nitrogen, Ammonia	mg/L	0.04	< 0.03	< 0.03	< 0.03
Nitrogen, Nitrate	mg/L	0.10	< 0.1	< 0.1	< 0.1
Nitrogen, Nitrite	mg/L	0.40 (p)	< 0.1	< 0.1	< 0.1
Sulfate	mg/L	2.6	6.4	6.8	8.0
Sulfide	mg/L	0.80 (p)	< 0.20	< 0.20	< 0.20
Major Cations					
Calcium	mg/L	53	32	36	36
Magnesium	mg/L	22	12	13	12
Potassium	mg/L	4.1	2.7	3.0	2.9
Sodium	mg/L	4.4	3.4	3.9	3.6
General					
Hardness	mg/L	224	144	154	170

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

HW-8U (Monitoring)

2016
Mine Permit Groundwater Quality Monitoring Data
HYG-1 (Monitoring)
Humboldt Mill

Parameter	Unit	Recom- mended Benchmark 2014	Q1 2016 2/24/16 ^T	Q2 2016 5/18/16 ^T	Q3 2016 8/25/16 ^D
Field					
D.O. ¹	ppm	--	0.31	0.43	0.26
ORP	mV	--	54	23	-18
pH	SU	6.3-7.3	7.0	6.9	6.5
Specific Conductance	µS/cm	--	559	576	471
Temperature	°C	--	6.7	9.0	10
Turbidity	NTU	--	0.37	2.2	6.6
Water Elevation	ft MSL	--	1533.26	1533.68	1533.93
Metals					
Aluminum	ug/L	200 (p)	--	--	<100
Antimony	ug/L	8.0 (p)	--	--	7.4
Arsenic	ug/L	20 (p)	< 5.0	< 5.0	< 5.0
Barium	ug/L	400 (p)	--	--	< 100
Beryllium	ug/L	4.0 (p)	--	--	< 1.0
Boron	ug/L	1200 (p)	--	--	< 300
Cadmium	ug/L	4.0 (p)	--	--	< 1.0
Chromium	ug/L	40 (p)	--	--	< 10
Cobalt	ug/L	80 (p)	--	--	< 20
Copper	ug/L	4.4	7.6	4.2	< 4.0
Iron	ug/L	800 (p)	< 200	< 200	270
Lead	ug/L	12 (p)	< 3.0	< 3.0	< 3.0
Lithium	ug/L	40 (p)	--	--	< 10
Manganese	ug/L	286	210	580	470
Mercury	ng/L	6.2	20	22	23
Molybdenum	ug/L	200 (p)	--	--	< 50
Nickel	ug/L	80 (p)	< 20	< 20	< 20
Selenium	ug/L	20 (p)	--	--	< 5.0
Silver	ug/L	0.8 (p)	--	--	< 0.20
Thallium	ug/L	8.0 (p)	--	--	< 2.0
Vanadium	ug/L	16 (p)	--	--	< 4.0
Zinc	ug/L	19	< 10	< 10	< 10
Major Anions					
Alkalinity, Bicarbonate	mg/L	157	220	200	250
Alkalinity, Carbonate	mg/L	8.0 (p)	< 2.0	< 2.0	< 2.0
Chloride	mg/L	12	24	20	18
Fluoride	mg/L	4.0 (p)	< 1.0	< 1.0	< 1.0
Nitrogen, Ammonia	mg/L	0.38	0.20	0.24	0.33
Nitrogen, Nitrate	mg/L	0.26	0.13	< 0.1	< 0.1
Nitrogen, Nitrite	mg/L	0.40 (p)	< 0.1	< 0.1	< 0.1
Sulfate	mg/L	98	48	85	78
Sulfide	mg/L	0.80 (p)	< 0.20	< 0.20	< 0.20
Major Cations					
Calcium	mg/L	52	35	41	42
Magnesium	mg/L	28	19	22	23
Potassium	mg/L	8.4	7.5	8.9	9.7
Sodium	mg/L	14	51	46	54
General					
Hardness	mg/L	230	170	200	222

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

HYG-1 (Monitoring)

2016
Mine Permit Groundwater Quality Monitoring Data
KMW-5R (COSA)
Humboldt Mill

Parameter	Unit	Recom- mended Benchmark 2014	Q1 2016 2/26/16 ^D	Q2 2016 5/19/16 ^D	Q3 2016 8/26/16 ^D
Field					
D.O. ¹	ppm	--	5.7	6.0	5.3
ORP	mV	--	-29	40	5.1
pH	SU	6.7-7.7	7.1	7.4	7.0
Specific Conductance	µS/cm	--	1142	1075	690
Temperature	°C	--	7.5	9.8	9.3
Turbidity	NTU	--	>1000	* 98	177
Water Elevation	ft MSL	--	1556.38	1559.08	1558.64
Metals					
Aluminum	ug/L	200 (p)	--	--	< 250
Antimony	ug/L	8.0 (p)	--	--	< 2.0
Arsenic	ug/L	6.0	< 5.0	< 5.0	< 5.0
Barium	ug/L	400 (p)	--	--	< 100
Beryllium	ug/L	4.0 (p)	--	--	< 1.0
Boron	ug/L	1200 (p)	--	--	< 300
Cadmium	ug/L	4.0 (p)	--	--	< 1.0
Chromium	ug/L	40 (p)	--	--	< 10
Cobalt	ug/L	80 (p)	--	--	< 20
Copper	ug/L	15	< 4.0	< 4.0	< 4.0
Iron	ug/L	33432	<200	<200	< 200
Lead	ug/L	4.8	< 3.0	< 3.0	< 3.0
Lithium	ug/L	40 (p)	--	--	17
Manganese	ug/L	2815	2200	2100	1800
Mercury	ng/L	2.1	< 1.0	< 1.0	< 1.0
Molybdenum	ug/L	200 (p)	--	--	< 50
Nickel	ug/L	80 (p)	< 20	e < 20	< 20
Selenium	ug/L	20 (p)	--	--	< 5.0
Silver	ug/L	0.8 (p)	--	--	< 0.20
Thallium	ug/L	8.0 (p)	--	--	< 2.0
Vanadium	ug/L	16 (p)	--	--	< 4.0
Zinc	ug/L	19	< 10	< 10	< 10
Major Anions					
Alkalinity, Bicarbonate	mg/L	486	360	380	360
Alkalinity, Carbonate	mg/L	3.3	< 2.0	< 2.0	< 2.0
Chloride	mg/L	139	130	65	42
Fluoride	mg/L	4.0 (p)	< 1.0	< 1.0	< 1.0
Nitrogen, Ammonia	mg/L	0.76	< 0.03	0.04	0.03
Nitrogen, Nitrate	mg/L	0.11	< 0.1	< 0.1	< 0.1
Nitrogen, Nitrite	mg/L	0.06	< 0.1	< 0.1	< 0.1
Sulfate	mg/L	123	100	120	130
Sulfide	mg/L	3.9	< 0.20	< 0.20	< 0.20
Major Cations					
Calcium	mg/L	169	150	J 130	130
Magnesium	mg/L	67	60	J 50	49
Potassium	mg/L	9.1	7.7	7.7	7.2
Sodium	mg/L	50	3.9	4.6	4.6
General					
Hardness	mg/L	800	600	568	592

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

KMW-5R (COSA)

2016
Mine Permit Groundwater Quality Monitoring Data
MW-701 QAL (Leachate)
Humboldt Mill

Parameter	Unit	Recom- mended Benchmark 2014	Q1 2016 2/25/16 ^T	Q2 2016 5/18/16 ^T	Q3 2016 8/25/16 ^T
Field					
D.O. ¹	ppm	--	7.2	8.4	7.6
ORP	mV	--	155	120	83
pH	SU	5.8-6.8	5.8	5.8	5.8
Specific Conductance	µS/cm	--	137	155	104
Temperature	°C	--	3.7	8.2	12
Turbidity	NTU	--	0.63	0.8	1.4
Water Elevation	ft MSL	--	1530.51	1531.34	1531.19
Metals					
Aluminum	ug/L	200 (p)	--	--	< 50
Antimony	ug/L	8.0 (p)	--	--	< 2.0
Arsenic	ug/L	20 (p)	< 5.0	< 5.0	< 5.0
Barium	ug/L	400 (p)	--	--	< 100
Beryllium	ug/L	4.0 (p)	--	--	< 1.0
Boron	ug/L	1200 (p)	--	--	< 300
Cadmium	ug/L	4.0 (p)	--	--	< 1.0
Chromium	ug/L	40 (p)	--	--	< 10
Cobalt	ug/L	80 (p)	--	--	< 20
Copper	ug/L	16 (p)	< 4.0	< 4.0	< 4.0
Iron	ug/L	459	< 200	< 200	< 200
Lead	ug/L	12 (p)	< 3.0	< 3.0	< 3.0
Lithium	ug/L	40 (p)	--	--	< 10
Manganese	ug/L	4801	< 50	< 50	< 50
Mercury	ng/L	11	< 1.0	< 1.0	< 1.0
Molybdenum	ug/L	200 (p)	--	--	< 50
Nickel	ug/L	80 (p)	< 20	< 20	< 20
Selenium	ug/L	20 (p)	--	--	< 5.0
Silver	ug/L	0.8 (p)	--	--	< 0.20
Thallium	ug/L	8.0 (p)	--	--	< 2.0
Vanadium	ug/L	16 (p)	--	--	< 4.0
Zinc	ug/L	40 (p)	< 10	< 10	< 10
Major Anions					
Alkalinity, Bicarbonate	mg/L	189	33	39	29
Alkalinity, Carbonate	mg/L	8.0 (p)	< 2.0	< 2.0	< 2.0
Chloride	mg/L	19	< 10	< 10	< 10
Fluoride	mg/L	4.0 (p)	< 1.0	< 1.0	< 1.0
Nitrogen, Ammonia	mg/L	0.39	< 0.03	< 0.03	< 0.03
Nitrogen, Nitrate	mg/L	3.1	0.71	1.3	0.53
Nitrogen, Nitrite	mg/L	0.40 (p)	< 0.1	< 0.1	< 0.1
Sulfate	mg/L	110	22	25	25
Sulfide	mg/L	0.22	< 0.20	< 0.20	< 0.20
Major Cations					
Calcium	mg/L	57	10	13	9.5
Magnesium	mg/L	26	4.4	5.7	4.3
Potassium	mg/L	9.2	3.3	3.4	3.0
Sodium	mg/L	14	6.9	7.6	5.8
General					
Hardness	mg/L	272	44	54	46

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

MW-701 QAL (Leachate)

2016
Mine Permit Groundwater Quality Monitoring Data
MW-701 UFB (Leachate)
Humboldt Mill

Parameter	Unit	Recom- mended Benchmark 2014	Q1 2016 2/25/16 ^D	Q2 2016 5/18/16 ^D	Q3 2016 8/25/16 ^D
Field					
D.O. ¹	ppm	--	0.28	0.20	0.20
ORP	mV	--	-161	-187	-136
pH	SU	7.2-8.2	7.4	7.4	7.0
Specific Conductance	µS/cm	--	378	362	276
Temperature	°C	--	4.8	8.5	12
Turbidity	NTU	--	72	106	37
Water Elevation	ft MSL	--	1530.79	1531.63	1530.76
Metals					
Aluminum	ug/L	200 (p)	--	--	< 50
Antimony	ug/L	8.0 (p)	--	--	< 2.0
Arsenic	ug/L	20 (p)	< 5.0	< 5.0	< 5.0
Barium	ug/L	400 (p)	--	--	150
Beryllium	ug/L	4.0 (p)	--	--	< 1.0
Boron	ug/L	1200 (p)	--	--	< 300
Cadmium	ug/L	4.0 (p)	--	--	< 1.0
Chromium	ug/L	40 (p)	--	--	< 10
Cobalt	ug/L	80 (p)	--	--	< 20
Copper	ug/L	30	< 4.0	< 4.0	< 4.0
Iron	ug/L	27405	20000	15000	15000
Lead	ug/L	12 (p)	< 3.0	< 3.0	< 3.0
Lithium	ug/L	40 (p)	--	--	12
Manganese	ug/L	6881	2600	2400	2000
Mercury	ng/L	4.0 (p)	< 1.0	< 1.0	< 1.0
Molybdenum	ug/L	200 (p)	--	--	< 50
Nickel	ug/L	80 (p)	< 20	< 20	< 20
Selenium	ug/L	20 (p)	--	--	< 5.0
Silver	ug/L	0.8 (p)	--	--	< 0.20
Thallium	ug/L	8.0 (p)	--	--	< 2.0
Vanadium	ug/L	16 (p)	--	--	< 4.0
Zinc	ug/L	26	< 10	< 10	< 10
Major Anions					
Alkalinity, Bicarbonate	mg/L	172	140	140	140
Alkalinity, Carbonate	mg/L	18	< 2.0	< 2.0	< 2.0
Chloride	mg/L	43	< 10	< 10	< 10
Fluoride	mg/L	4.0 (p)	< 1.0	< 1.0	< 1.0
Nitrogen, Ammonia	mg/L	1.6	< 0.03	< 0.03	< 0.03
Nitrogen, Nitrate	mg/L	0.40 (p)	< 0.1	< 0.1	< 0.1
Nitrogen, Nitrite	mg/L	0.40 (p)	< 0.1	< 0.1	< 0.1
Sulfate	mg/L	80	28	22	23
Sulfide	mg/L	1.7	< 0.20	< 0.20	< 0.20
Major Cations					
Calcium	mg/L	40	36	35	31
Magnesium	mg/L	16	15	15	14
Potassium	mg/L	13	2.8	3.2	2.7
Sodium	mg/L	56	4.7	5.0	4.3
General					
Hardness	mg/L	163	154	158	158

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

MW-701 UFB (Leachate)

2016
Mine Permit Groundwater Quality Monitoring Data
MW-702 QAL (Leachate)
Humboldt Mill

Parameter	Unit	Recom- mended Benchmark 2014	Q1 2016 2/26/16 ^D	Q2 2016 5/19/16 ^D	Q3 2016 8/25/16 ^D
Field					
D.O. ¹	ppm	--	1.6	1.3	1.5
ORP	mV	--	61	105	-33
pH	SU	9.8-10.8	10.0	9.8	10.1
Specific Conductance	µS/cm	--	463	512	341
Temperature	°C	--	6.1	7.1	11
Turbidity	NTU	--	5.3	7.2	11
Water Elevation	ft MSL	--	1530.23	1529.44	1530.14
Metals					
Aluminum	ug/L	200 (p)	--	--	< 50
Antimony	ug/L	8.0 (p)	--	--	< 2.0
Arsenic	ug/L	7.5	< 5.0	< 5.0	< 5.0
Barium	ug/L	155	--	--	< 100
Beryllium	ug/L	4.0 (p)	--	--	< 1.0
Boron	ug/L	1200 (p)	--	--	< 300
Cadmium	ug/L	4.0 (p)	--	--	< 1.0
Chromium	ug/L	40 (p)	--	--	< 10
Cobalt	ug/L	80 (p)	--	--	< 20
Copper	ug/L	16 (p)	< 4.0	< 4.0	< 4.0
Iron	ug/L	386	< 200	< 200	< 200
Lead	ug/L	12 (p)	< 3.0	< 3.0	< 3.0
Lithium	ug/L	40 (p)	--	--	< 10
Manganese	ug/L	717	150	60	< 50
Mercury	ng/L	4.0 (p)	< 1.0	< 1.0	< 1.0
Molybdenum	ug/L	200 (p)	--	--	< 50
Nickel	ug/L	80 (p)	< 20	< 20	< 20
Selenium	ug/L	20 (p)	--	--	< 5.0
Silver	ug/L	0.8 (p)	--	--	< 0.20
Thallium	ug/L	8.0 (p)	--	--	< 2.0
Vanadium	ug/L	16 (p)	--	--	4.1
Zinc	ug/L	40 (p)	< 10	< 10	< 10
Major Anions					
Alkalinity, Bicarbonate	mg/L	194	74	70	47
Alkalinity, Carbonate	mg/L	54	4.0	5.1	22
Chloride	mg/L	12	14	13	13
Fluoride	mg/L	4.0 (p)	< 1.0	< 1.0	< 1.0
Nitrogen, Ammonia	mg/L	0.03	0.04	< 0.03	< 0.03
Nitrogen, Nitrate	mg/L	1.8	0.99	1.2	1.2
Nitrogen, Nitrite	mg/L	0.12	0.17	0.11	0.14
Sulfate	mg/L	148	89	100	87
Sulfide	mg/L	0.80 (p)	< 0.20	< 0.20	< 0.20
Major Cations					
Calcium	mg/L	99	45	46	37
Magnesium	mg/L	17	9.9	7.8	8.4
Potassium	mg/L	36	5.4	5.3	5.0
Sodium	mg/L	42	36	55	49
General					
Hardness	mg/L	286	152	152	150

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

MW-702 QAL (Leachate)

2016
Mine Permit Groundwater Quality Monitoring Data
MW-702 UFB (Leachate)
Humboldt Mill

Parameter	Unit	Recom- mended Benchmark 2014	Q1 2016 3/3/16 ^D	Q2 2016 5/17/16 ^D	Q3 2016 8/24/16 ^D
Field					
D.O. ¹	ppm	--	0.40	2.9	0.69
ORP	mV	--	112	-140	265
pH	SU	8.5-9.5	5.9	7.9	4.0
Specific Conductance	µS/cm	--	305	247	175
Temperature	°C	--	6.9	7.1	10
Turbidity	NTU	--	18	19	7.6
Water Elevation	ft MSL	--	1522.62	1525.75	1524.61
Metals					
Aluminum	ug/L	200 (p)	--	--	< 50
Antimony	ug/L	8.0 (p)	--	--	< 2.0
Arsenic	ug/L	20 (p)	< 5.0	< 5.0	< 5.0
Barium	ug/L	400 (p)	--	--	< 100
Beryllium	ug/L	4.0 (p)	--	--	< 1.0
Boron	ug/L	1200 (p)	--	--	< 300
Cadmium	ug/L	4.0 (p)	--	--	< 1.0
Chromium	ug/L	40 (p)	--	--	< 10
Cobalt	ug/L	80 (p)	--	--	< 20
Copper	ug/L	16 (p)	< 4.0	< 4.0	< 4.0
Iron	ug/L	2484	850	630	540
Lead	ug/L	12 (p)	< 3.0	< 3.0	< 3.0
Lithium	ug/L	40 (p)	--	--	12
Manganese	ug/L	126	96	85	89
Mercury	ng/L	4.0 (p)	< 1.0	< 1.0	< 1.0
Molybdenum	ug/L	200 (p)	--	--	< 50
Nickel	ug/L	80 (p)	< 20	< 20	< 20
Selenium	ug/L	20 (p)	--	--	< 5.0
Silver	ug/L	0.8 (p)	--	--	< 0.20
Thallium	ug/L	8.0 (p)	--	--	< 2.0
Vanadium	ug/L	16 (p)	--	--	< 4.0
Zinc	ug/L	66	< 10	< 10	< 10
Major Anions					
Alkalinity, Bicarbonate	mg/L	125	92	89	91
Alkalinity, Carbonate	mg/L	15	< 2.0	< 2.0	< 2.0
Chloride	mg/L	40 (p)	< 10	< 10	< 10
Fluoride	mg/L	4.0 (p)	< 1.0	< 1.0	< 1.0
Nitrogen, Ammonia	mg/L	0.12 (p)	0.04	< 0.03	0.07
Nitrogen, Nitrate	mg/L	0.40 (p)	< 0.1	< 0.1	< 0.1
Nitrogen, Nitrite	mg/L	0.40 (p)	< 0.1	< 0.1	< 0.1
Sulfate	mg/L	36	32	34	31
Sulfide	mg/L	0.80 (p)	< 0.20	< 0.20	< 0.20
Major Cations					
Calcium	mg/L	49	28	30	26
Magnesium	mg/L	14	9.0	9.6	8.8
Potassium	mg/L	22	3.1	3.1	2.9
Sodium	mg/L	8.0	2.9	2.9	2.8
General					
Hardness	mg/L	160	110	118	114

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

MW-702 UFB (Leachate)

2016
Mine Permit Groundwater Quality Monitoring Data
MW-703 QAL (Compliance)
Humboldt Mill

Parameter	Unit	Recom- mended Benchmark 2014	Q1 2016 2/26/16 ^D	Q2 2016 5/18/16 ^D	Q3 2016 8/25/16 ^D
Field					
D.O. ¹	ppm	--	5.1	4.6	6.5
ORP	mV	--	148	81	65
pH	SU	7.2-8.2	6.4	6.6	6.2
Specific Conductance	µS/cm	--	155	372	89
Temperature	°C	--	5.7	7.5	9.1
Turbidity	NTU	--	3.3	3.7	3.7
Water Elevation	ft MSL	--	1533.59	1534.82	1535.66
Metals					
Aluminum	ug/L	200 (p)	--	--	< 50
Antimony	ug/L	8.0 (p)	--	--	< 2.0
Arsenic	ug/L	20 (p)	< 5.0	< 5.0	< 5.0
Barium	ug/L	400 (p)	--	--	< 100
Beryllium	ug/L	4.0 (p)	--	--	< 1.0
Boron	ug/L	1200 (p)	--	--	< 300
Cadmium	ug/L	4.0 (p)	--	--	< 1.0
Chromium	ug/L	40 (p)	--	--	< 10
Cobalt	ug/L	80 (p)	--	--	< 20
Copper	ug/L	16 (p)	< 4.0	< 4.0	< 4.0
Iron	ug/L	255	< 200	< 200	< 200
Lead	ug/L	12 (p)	< 3.0	< 3.0	< 3.0
Lithium	ug/L	40 (p)	--	--	< 10
Manganese	ug/L	105	< 50	< 50	< 50
Mercury	ng/L	4.0 (p)	< 1.0	< 1.0	< 1.0
Molybdenum	ug/L	200 (p)	--	--	< 50
Nickel	ug/L	80 (p)	< 20	< 20	< 20
Selenium	ug/L	20 (p)	--	--	< 5.0
Silver	ug/L	0.8 (p)	--	--	< 0.20
Thallium	ug/L	8.0 (p)	--	--	< 2.0
Vanadium	ug/L	16 (p)	--	--	< 4.0
Zinc	ug/L	40 (p)	<10	< 10	< 10
Major Anions					
Alkalinity, Bicarbonate	mg/L	100	57	61	53
Alkalinity, Carbonate	mg/L	8.0 (p)	< 2.0	< 2.0	< 2.0
Chloride	mg/L	40 (p)	< 10	< 10	< 10
Fluoride	mg/L	131	< 1.0	< 1.0	< 1.0
Nitrogen, Ammonia	mg/L	0.12 (p)	< 0.03	< 0.03	< 0.03
Nitrogen, Nitrate	mg/L	0.22	0.54	0.53	0.97
Nitrogen, Nitrite	mg/L	0.40 (p)	< 0.1	< 0.1	< 0.1
Sulfate	mg/L	50	21	21	12
Sulfide	mg/L	0.30	< 0.20	< 0.20	< 0.20
Major Cations					
Calcium	mg/L	40	17	17	13
Magnesium	mg/L	11	7.4	6.9	5.9
Potassium	mg/L	3.1	1.5	1.8	1.3
Sodium	mg/L	10	3.0	2.9	2.4
General					
Hardness	mg/L	136	80	72	64

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

MW-703 QAL (Compliance)

2016
Mine Permit Groundwater Quality Monitoring Data
MW-703 UFB (Compliance)
Humboldt Mill

Parameter	Unit	Recom- mended Benchmark 2014	Q1 2016 2/24/16 ^D	Q2 2016 5/17/16 ^D	Q3 2016 8/24/16 ^D
Field					
D.O. ¹	ppm	--	0.24	0.87	1.0
ORP	mV	--	-14	-181	114
pH	SU	8.3-9.3	5.3	8.0	6.3
Specific Conductance	µS/cm	--	273	268	193
Temperature	°C	--	6.5	7.0	11
Turbidity	NTU	--	4.6	4.8	32
Water Elevation	ft MSL	--	1529.40	1532.30	1532.69
Metals					
Aluminum	ug/L	200 (p)	--	--	< 50
Antimony	ug/L	8.0 (p)	--	--	< 2.0
Arsenic	ug/L	20 (p)	< 5.0	< 5.0	< 5.0
Barium	ug/L	400 (p)	--	--	< 100
Beryllium	ug/L	4.0 (p)	--	--	< 1.0
Boron	ug/L	1200 (p)	--	--	< 300
Cadmium	ug/L	4.0 (p)	--	--	< 1.0
Chromium	ug/L	40 (p)	--	--	< 10
Cobalt	ug/L	80 (p)	--	--	< 20
Copper	ug/L	16 (p)	< 4.0	< 4.0	< 4.0
Iron	ug/L	2441	1100	910	490
Lead	ug/L	12 (p)	< 3.0	< 3.0	< 3.0
Lithium	ug/L	40 (p)	--	--	12
Manganese	ug/L	194	170	< 250	160
Mercury	ng/L	4.0 (p)	< 1.0	< 1.0	< 1.0
Molybdenum	ug/L	200 (p)	--	--	< 50
Nickel	ug/L	80 (p)	< 20	< 20	< 20
Selenium	ug/L	20 (p)	--	--	< 5.0
Silver	ug/L	0.8 (p)	--	--	< 0.20
Thallium	ug/L	8.0 (p)	--	--	< 2.0
Vanadium	ug/L	16 (p)	--	--	< 4.0
Zinc	ug/L	14	< 10	< 10	< 10
Major Anions					
Alkalinity, Bicarbonate	mg/L	127	83	84	83
Alkalinity, Carbonate	mg/L	28	< 2.0	< 2.0	< 2.0
Chloride	mg/L	40 (p)	< 10	< 10	< 10
Fluoride	mg/L	4.0 (p)	< 1.0	< 1.0	< 1.0
Nitrogen, Ammonia	mg/L	0.47	< 0.03	< 0.03	0.03
Nitrogen, Nitrate	mg/L	0.4 (p)	< 0.1	< 0.1	< 0.1
Nitrogen, Nitrite	mg/L	0.4 (p)	< 0.1	< 0.1	< 0.1
Sulfate	mg/L	53	45	46	45
Sulfide	mg/L	0.80 (p)	< 0.20	< 0.20	< 0.20
Major Cations					
Calcium	mg/L	53	31	32	28
Magnesium	mg/L	17	11	11	9.8
Potassium	mg/L	5.9	2.5	2.4	2.2
Sodium	mg/L	35	3.0	2.9	2.7
General					
Hardness	mg/L	193	124	126	128

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

MW-703 UFB (Compliance)

2016
Mine Permit Groundwater Quality Monitoring Data
MW-703 LLA (Compliance)
Humboldt Mill

Parameter	Unit	Recom- mended Benchmark 2014	Q1 2016 2/24/16 ^D	Q2 2016 5/17/16 ^D	Q3 2016 8/24/16 ^D
Field					
D.O. ¹	ppm	--	0.13	0.97	0.10
ORP	mV	--	-219	-219	-127
pH	SU	8.2-9.2	8.1	8.3	8.0
Specific Conductance	µS/cm	--	267	265	190
Temperature	°C	--	5.4	7.8	11
Turbidity	NTU	--	4.3	4.3	4.6
Water Elevation	ft MSL	--	1531.55	1532.15	1518.92
Metals					
Aluminum	ug/L	200 (p)	--	--	< 50
Antimony	ug/L	8.0 (p)	--	--	< 2.0
Arsenic	ug/L	20 (p)	< 5.0	< 5.0	< 5.0
Barium	ug/L	400 (p)	--	--	< 100
Beryllium	ug/L	4.0 (p)	--	--	< 1.0
Boron	ug/L	1200 (p)	--	--	< 300
Cadmium	ug/L	4.0 (p)	--	--	< 1.0
Chromium	ug/L	40 (p)	--	--	< 10
Cobalt	ug/L	80 (p)	--	--	< 20
Copper	ug/L	16 (p)	< 4.0	< 4.0	< 4.0
Iron	ug/L	2966	590	600	560
Lead	ug/L	12 (p)	< 3.0	< 3.0	< 3.0
Lithium	ug/L	30	--	--	14
Manganese	ug/L	101	74	74	78
Mercury	ng/L	4.0 (p)	< 1.0	< 1.0	< 1.0
Molybdenum	ug/L	200 (p)	--	--	< 50
Nickel	ug/L	80 (p)	< 20	< 20	< 20
Selenium	ug/L	20 (p)	--	--	< 5.0
Silver	ug/L	0.8 (p)	--	--	< 0.20
Thallium	ug/L	8.0 (p)	--	--	< 2.0
Vanadium	ug/L	16 (p)	--	--	< 4.0
Zinc	ug/L	40+	< 10	< 10	< 10
Major Anions					
Alkalinity, Bicarbonate	mg/L	84	87	86	86
Alkalinity, Carbonate	mg/L	4.0	< 2.0	< 2.0	< 2.0
Chloride	mg/L	124	14	14	12
Fluoride	mg/L	4.0 (p)	< 1.0	< 1.0	< 1.0
Nitrogen, Ammonia	mg/L	0.08	< 0.03	0.05	0.04
Nitrogen, Nitrate	mg/L	0.40 (p)	< 0.1	< 0.1	< 0.1
Nitrogen, Nitrite	mg/L	0.40 (p)	< 0.1	< 0.1	< 0.1
Sulfate	mg/L	44	27	29	30
Sulfide	mg/L	0.80 (p)	< 0.20	< 0.20	< 0.20
Major Cations					
Calcium	mg/L	39	25	26	25
Magnesium	mg/L	13	11	11	10
Potassium	mg/L	9.7	3.6	3.6	3.1
Sodium	mg/L	67	7.7	7.6	6.4
General					
Hardness	mg/L	138	106	110	118

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

MW-703 LLA (Compliance)

2016
Mine Permit Groundwater Quality Monitoring Data
MW-703 DBA (Compliance)
Humboldt Mill

Parameter	Unit	Recom- mended Benchmark 2014	Q1 2016 2/24/16 ^T	Q2 2016 5/17/16 ^T	Q3 2016 8/24/16 ^T
Field					
D.O. ¹	ppm	--	0.21	0.90	0.70
ORP	mV	--	-236	-163	-100
pH	SU	8.7-9.7	9.6	9.4	9.1
Specific Conductance	µS/cm	--	230	233	189
Temperature	°C	--	4.4	8.6	11
Turbidity	NTU	--	1.5	2.1	2.3
Water Elevation	ft MSL	--	1531.32	1531.66	1532.25
Metals					
Aluminum	ug/L	200 (p)	--	--	< 50
Antimony	ug/L	8.0 (p)	--	--	< 2.0
Arsenic	ug/L	20 (p)	< 5.0	< 5.0	< 5.0
Barium	ug/L	400 (p)	--	--	< 100
Beryllium	ug/L	4.0 (p)	--	--	< 1.0
Boron	ug/L	1200 (p)	--	--	< 300
Cadmium	ug/L	4.0 (p)	--	--	< 1.0
Chromium	ug/L	40 (p)	--	--	< 10
Cobalt	ug/L	80 (p)	--	--	< 20
Copper	ug/L	16 (p)	< 4.0	< 4.0	< 4.0
Iron	ug/L	2738	260	<200	< 200
Lead	ug/L	12 (p)	< 3.0	< 3.0	< 3.0
Lithium	ug/L	17	--	--	17
Manganese	ug/L	60	< 50	< 50	< 50
Mercury	ng/L	4.0 (p)	< 1.0	< 1.0	< 1.0
Molybdenum	ug/L	200 (p)	--	--	< 50
Nickel	ug/L	80 (p)	< 20	< 20	< 20
Selenium	ug/L	20 (p)	--	--	< 5.0
Silver	ug/L	0.8 (p)	--	--	< 0.20
Thallium	ug/L	8.0 (p)	--	--	< 2.0
Vanadium	ug/L	16 (p)	--	--	< 4.0
Zinc	ug/L	22	< 10	< 10	< 10
Major Anions					
Alkalinity, Bicarbonate	mg/L	74	41	71	91
Alkalinity, Carbonate	mg/L	27	34	12	4.0
Chloride	mg/L	20	18	18	18
Fluoride	mg/L	4.0 (p)	< 1.0	< 1.0	< 1.0
Nitrogen, Ammonia	mg/L	0.12	< 0.03	< 0.03	0.82
Nitrogen, Nitrate	mg/L	0.11	< 0.1	< 0.1	< 0.1
Nitrogen, Nitrite	mg/L	0.40 (p)	< 0.1	< 0.1	< 0.1
Sulfate	mg/L	91	<1.0	6.0	17
Sulfide	mg/L	0.80 (p)	0.75	0.36	< 0.20 e
Major Cations					
Calcium	mg/L	29	5.5	10	18
Magnesium	mg/L	17	6.2	10	14
Potassium	mg/L	15	23	17	12
Sodium	mg/L	14	14	12	9
General					
Hardness	mg/L	137	42	70	100

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

MW-703 DBA (Compliance)

2016
Mine Permit Groundwater Quality Monitoring Data
MW-704 QAL (Compliance)
Humboldt Mill

Parameter	Unit	Recom- mended Benchmark 2014	Q1 2016 2/25/16 ^D	Q2 2016 5/18/16 ^D	Q3 2016 8/25/16 ^D
Field					
D.O. ¹	ppm	--	0.47	0.16	0.39
ORP	mV	--	170	17	103
pH	SU	5.5-6.5	5.7	5.9	5.7
Specific Conductance	µS/cm	--	250	446	226
Temperature	°C	--	2.9	7.4	12
Turbidity	NTU	--	3.4	3.1	14
Water Elevation	ft MSL	--	1534.11	1534.65	1534.57
Metals					
Aluminum	ug/L	200 (p)	--	--	< 50
Antimony	ug/L	8.0 (p)	--	--	< 2.0
Arsenic	ug/L	24	< 5.0	13	< 5.0
Barium	ug/L	400 (p)	--	--	< 100
Beryllium	ug/L	4.0 (p)	--	--	< 1.0
Boron	ug/L	1200 (p)	--	--	< 300
Cadmium	ug/L	4.0 (p)	--	--	< 1.0
Chromium	ug/L	40 (p)	--	--	< 10
Cobalt	ug/L	80 (p)	--	--	< 20
Copper	ug/L	16 (p)	< 4.0	< 4.0	< 4.0
Iron	ug/L	37038	< 200	15000	< 200
Lead	ug/L	12 (p)	< 3.0	< 3.0	< 3.0
Lithium	ug/L	40 (p)	--	--	< 10
Manganese	ug/L	7914	900	5500	520
Mercury	ng/L	6.0	< 1.0	6.1	< 1.0
Molybdenum	ug/L	200 (p)	--	--	< 50
Nickel	ug/L	80 (p)	< 20	< 20	< 20
Selenium	ug/L	20 (p)	--	--	< 5.0
Silver	ug/L	0.8 (p)	--	--	< 0.20
Thallium	ug/L	8.0 (p)	--	--	< 2.0
Vanadium	ug/L	16 (p)	--	--	< 4.0
Zinc	ug/L	44 (p)	< 10	< 10	< 10
Major Anions					
Alkalinity, Bicarbonate	mg/L	241	83	170	66
Alkalinity, Carbonate	mg/L	8.0 (p)	< 2.0	< 2.0	< 2.0
Chloride	mg/L	18	14	17	17
Fluoride	mg/L	4.0 (p)	< 1.0	< 1.0	< 1.0
Nitrogen, Ammonia	mg/L	0.04	< 0.03	0.06	< 0.03
Nitrogen, Nitrate	mg/L	0.17	0.76	0.79	1.5
Nitrogen, Nitrite	mg/L	0.40 (p)	< 0.1	< 0.1	< 0.1
Sulfate	mg/L	23	22	24	49
Sulfide	mg/L	0.80 (p)	< 0.20	< 0.20	< 0.20
Major Cations					
Calcium	mg/L	51	27	38	29
Magnesium	mg/L	9.0	9.6	10	11
Potassium	mg/L	3.1	1.9	2.5	2.4
Sodium	mg/L	27	5.1	19	8
General					
Hardness	mg/L	185	110	154	124

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

MW-704 QAL (Compliance)

2016
Mine Permit Groundwater Quality Monitoring Data
MW-704 UFB (Compliance)
Humboldt Mill

Parameter	Unit	Recom- mended Benchmark 2014	Q1 2016 2/25/16 ^D	Q2 2016 5/18/16 ^D	Q3 2016 8/24/16 ^D
Field					
D.O. ¹	ppm	--	0.29	0.22	0.29
ORP	mV	--	-80	-116	-145
pH	SU	6.4-7.4	6.7	6.6	6.9
Specific Conductance	µS/cm	--	407	452	368
Temperature	°C	--	4.3	7.7	14
Turbidity	NTU	--	33	12	15
Water Elevation	ft MSL	--	1534.49	1535.03	1535.01
Metals					
Aluminum	ug/L	200 (p)	--	--	< 250
Antimony	ug/L	8.0 (p)	--	--	< 2.0
Arsenic	ug/L	20 (p)	< 5.0	< 5.0	< 5.0
Barium	ug/L	400 (p)	--	--	< 100
Beryllium	ug/L	4.0 (p)	--	--	< 1.0
Boron	ug/L	1200 (p)	--	--	< 300
Cadmium	ug/L	4.0 (p)	--	--	< 1.0
Chromium	ug/L	40 (p)	--	--	< 10
Cobalt	ug/L	80 (p)	--	--	< 20
Copper	ug/L	5.0	< 4.0	< 4.0	< 4.0
Iron	ug/L	23040	26000	36000	37000
Lead	ug/L	4.0	< 3.0	< 3.0	< 3.0
Lithium	ug/L	40 (p)	--	--	< 10
Manganese	ug/L	618	810	700	630
Mercury	ng/L	2.0	< 1.0	< 1.0	< 1.0
Molybdenum	ug/L	200 (p)	--	--	< 50
Nickel	ug/L	80 (p)	< 20	< 20	< 20
Selenium	ug/L	20 (p)	--	--	< 5.0
Silver	ug/L	0.8 (p)	--	--	< 0.20
Thallium	ug/L	8.0 (p)	--	--	< 2.0
Vanadium	ug/L	16 (p)	--	--	< 4.0
Zinc	ug/L	15	< 10	< 10	< 10
Major Anions					
Alkalinity, Bicarbonate	mg/L	181	150	140	130
Alkalinity, Carbonate	mg/L	8.0 (p)	< 2.0	< 2.0	< 2.0
Chloride	mg/L	18	14	17	18
Fluoride	mg/L	4.0 (p)	< 1.0	< 1.0	< 1.0
Nitrogen, Ammonia	mg/L	0.27	0.03	< 0.03	0.04
Nitrogen, Nitrate	mg/L	0.40 (p)	< 0.1	< 0.1	< 0.1
Nitrogen, Nitrite	mg/L	0.14	< 0.1	< 0.1	< 0.1
Sulfate	mg/L	38	11	20	35
Sulfide	mg/L	0.80 (p)	< 0.20	< 0.20	< 0.20
Major Cations					
Calcium	mg/L	38	50	46	44
Magnesium	mg/L	7.0	7.8	7.9	9.4
Potassium	mg/L	4.0	2.8	2.6	2.6
Sodium	mg/L	65	5.1	5.0	6.1
General					
Hardness	mg/L	106	160	160	164

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

MW-704 UFB (Compliance)

2016
Mine Permit Groundwater Quality Monitoring Data
MW-704 LLA (Compliance)
Humboldt Mill

Parameter	Unit	Recom- mended Benchmark 2014	Q1 2016 2/25/16 ^D	Q2 2016 5/17/16 ^D	Q3 2016 8/24/16 ^D
Field					
D.O. ¹	ppm	--	0.50	0.43	0.56
ORP	mV	--	-211	195	-75
pH	SU	8.2-9.2	9.2	8.7	8.9
Specific Conductance	µS/cm	--	186	211	177
Temperature	°C	--	2.5	12	17
Turbidity	NTU	--	9.0	14	6.3
Water Elevation	ft MSL	--	1533.95	1534.75	1534.55
Metals					
Aluminum	ug/L	200 (p)	--	--	< 50
Antimony	ug/L	8.0 (p)	--	--	< 2.0
Arsenic	ug/L	20 (p)	< 5.0	< 5.0	< 5.0
Barium	ug/L	400 (p)	--	--	< 100
Beryllium	ug/L	4.0 (p)	--	--	< 1.0
Boron	ug/L	1200 (p)	--	--	< 300
Cadmium	ug/L	4.0 (p)	--	--	< 1.0
Chromium	ug/L	40 (p)	--	--	< 10
Cobalt	ug/L	80 (p)	--	--	< 20
Copper	ug/L	16 (p)	< 4.0	< 4.0	< 4.0
Iron	ug/L	4974	< 200	420	< 200
Lead	ug/L	12 (p)	< 3.0	< 3.0	< 3.0
Lithium	ug/L	40 (p)	--	--	26
Manganese	ug/L	90	< 50	e < 50	< 50
Mercury	ng/L	4.0 (p)	< 1.0	< 1.0	< 1.0
Molybdenum	ug/L	200 (p)	--	--	< 50
Nickel	ug/L	80 (p)	< 20	< 20	< 20
Selenium	ug/L	20 (p)	--	--	< 5.0
Silver	ug/L	0.8 (p)	--	--	< 0.20
Thallium	ug/L	8.0 (p)	--	--	< 2.0
Vanadium	ug/L	16 (p)	--	--	< 4.0
Zinc	ug/L	11	< 10	< 10	< 10
Major Anions					
Alkalinity, Bicarbonate	mg/L	132	77	55	96
Alkalinity, Carbonate	mg/L	10	7.0	2.0	4.0
Chloride	mg/L	40 (p)	< 10	< 10	< 10
Fluoride	mg/L	4.0 (p)	< 1.0	< 1.0	< 1.0
Nitrogen, Ammonia	mg/L	0.12 (p)	< 0.03	< 0.03	< 0.03
Nitrogen, Nitrate	mg/L	0.40 (p)	< 0.1	< 0.1	< 0.1
Nitrogen, Nitrite	mg/L	0.40 (p)	< 0.1	< 0.1	< 0.1
Sulfate	mg/L	23	4.7	5.1	4.2
Sulfide	mg/L	0.80 (p)	< 0.20	< 0.20	< 0.20
Major Cations					
Calcium	mg/L	33	11	15	13
Magnesium	mg/L	17	10	12	10
Potassium	mg/L	5.0	11	10	9.5
Sodium	mg/L	5.0	5.8	5.7	5.3
General					
Hardness	mg/L	149	66	84	80

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

MW-704 LLA (Compliance)

2016
Mine Permit Groundwater Quality Monitoring Data
MW-704 DBA (Compliance)
Humboldt Mill

Parameter	Unit	Recom- mended Benchmark 2014	Q1 2016 2/25/16 ^T	Q2 2016 5/17/16 ^T	Q3 2016 8/24/16 ^T
Field					
D.O. ¹	ppm	--	0.53	1.9	0.53
ORP	mV	--	-205	-208	-114
pH	SU	8.6-9.6	8.7	8.6	8.7
Specific Conductance	µS/cm	--	214	1.8	208
Temperature	°C	--	2.4	12	17
Turbidity	NTU	--	0.90	0.85	2.7
Water Elevation	ft MSL	--	1533.25	1534.34	1533.90
Metals					
Aluminum	ug/L	200 (p)	--	--	< 50
Antimony	ug/L	8.0 (p)	--	--	< 2.0
Arsenic	ug/L	20 (p)	< 5.0	< 5.0	< 5.0
Barium	ug/L	400 (p)	--	--	< 100
Beryllium	ug/L	4.0 (p)	--	--	< 1.0
Boron	ug/L	1480	--	--	< 300
Cadmium	ug/L	4.0 (p)	--	--	< 1.0
Chromium	ug/L	40 (p)	--	--	< 10
Cobalt	ug/L	80 (p)	--	--	< 20
Copper	ug/L	16 (p)	< 4.0	< 4.0	< 4.0
Iron	ug/L	9645	660	660	410
Lead	ug/L	12 (p)	< 3.0	< 3.0	< 3.0
Lithium	ug/L	40 (p)	--	--	15
Manganese	ug/L	58	< 50	< 50	< 50
Mercury	ng/L	4.0 (p)	< 1.0	< 1.0	< 1.0
Molybdenum	ug/L	200 (p)	--	--	< 50
Nickel	ug/L	80 (p)	< 20	< 20	< 20
Selenium	ug/L	20 (p)	--	--	< 5.0
Silver	ug/L	0.8 (p)	--	--	< 0.20
Thallium	ug/L	8.0 (p)	--	--	< 2.0
Vanadium	ug/L	16 (p)	--	--	< 4.0
Zinc	ug/L	11	< 10	< 10	< 10
Major Anions					
Alkalinity, Bicarbonate	mg/L	129	110	120	120
Alkalinity, Carbonate	mg/L	32	16	2.0	2.0
Chloride	mg/L	40 (p)	< 10	< 10	< 10
Fluoride	mg/L	4.0 (p)	< 1.0	< 1.0	< 1.0
Nitrogen, Ammonia	mg/L	0.04	< 0.03	< 0.03	< 0.03
Nitrogen, Nitrate	mg/L	0.40 (p)	< 0.1	< 0.1	< 0.1
Nitrogen, Nitrite	mg/L	0.40 (p)	< 0.1	< 0.1	< 0.1
Sulfate	mg/L	6.0	< 1.0	< 1.0	< 1.0
Sulfide	mg/L	0.80 (p)	< 0.20	< 0.20	< 0.20
Major Cations					
Calcium	mg/L	27	21	21	19
Magnesium	mg/L	14	11	12	10
Potassium	mg/L	4.0	2.9	2.8	2.6
Sodium	mg/L	14	11	11	10
General					
Hardness	mg/L	111	98	106	106

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

MW-704 DBA (Compliance)

2016
Mine Permit Groundwater Quality Monitoring Data
MW-705 QAL (Cutoff Wall Key-In)
Humboldt Mill

Parameter	Unit	Recom- mended Benchmark 2014	Q1 2016 2/25/16 ^T	Q2 2016 5/18/16 ^T	Q3 2016 8/25/16 ^D
Field					
D.O. ¹	ppm	--	0.35	0.15	0.21
ORP	mV	--	-16	-83	-18
pH	SU	5.6-6.6	6.3	6.3	5.9
Specific Conductance	µS/cm	--	250	249	205
Temperature	°C	--	3.2	7.4	12
Turbidity	NTU	--	2.1	1.9	8.1
Water Elevation	ft MSL	--	1533.96	1536.06	1534.92
Metals					
Aluminum	ug/L	200 (p)	--	--	< 50
Antimony	ug/L	8.0 (p)	--	--	< 2.0
Arsenic	ug/L	20 (p)	< 5.0	< 5.0	< 5.0
Barium	ug/L	400 (p)	--	--	< 100
Beryllium	ug/L	4.0 (p)	--	--	< 1.0
Boron	ug/L	1200 (p)	--	--	< 300
Cadmium	ug/L	4.0 (p)	--	--	< 1.0
Chromium	ug/L	40 (p)	--	--	< 10
Cobalt	ug/L	80 (p)	--	--	< 20
Copper	ug/L	16 (p)	< 4.0	< 4.0	< 4.0
Iron	ug/L	14081	10000	8300	8800
Lead	ug/L	12 (p)	< 3.0	< 3.0	< 3.0
Lithium	ug/L	40 (p)	--	--	< 10
Manganese	ug/L	1674	870	790	810
Mercury	ng/L	1.0	< 1.0	< 1.0	< 1.0
Molybdenum	ug/L	200 (p)	--	--	< 50
Nickel	ug/L	80 (p)	< 20	< 20	< 20
Selenium	ug/L	20 (p)	--	--	< 5.0
Silver	ug/L	0.8 (p)	--	--	< 0.20
Thallium	ug/L	8.0 (p)	--	--	< 2.0
Vanadium	ug/L	16 (p)	--	--	< 4.0
Zinc	ug/L	174	< 10	< 10	< 10
Major Anions					
Alkalinity, Bicarbonate	mg/L	94	62	41	47
Alkalinity, Carbonate	mg/L	8.0 (p)	< 2.0	< 2.0	< 2.0
Chloride	mg/L	66	31	40	44
Fluoride	mg/L	4.0 (p)	< 1.0	< 1.0	< 1.0
Nitrogen, Ammonia	mg/L	0.10	0.11	0.11	0.13
Nitrogen, Nitrate	mg/L	0.40 (p)	< 0.1	< 0.1	< 0.1
Nitrogen, Nitrite	mg/L	0.40 (p)	< 0.1	< 0.1	< 0.1
Sulfate	mg/L	6.0	3.6	8.1	4.4
Sulfide	mg/L	0.80 (p)	< 0.20	< 0.20	< 0.20
Major Cations					
Calcium	mg/L	27	17	15	16
Magnesium	mg/L	13	7.4	6.7	7.4
Potassium	mg/L	3.0	2.4	2.3	3.0
Sodium	mg/L	17	12	12	15
General					
Hardness	mg/L	115	72	66	76

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

MW-705 QAL (Cutoff Wall Key-In)

2016
Mine Permit Groundwater Quality Monitoring Data
MW-705 UFB (Cutoff Wall Key-In)
Humboldt Mill

Parameter	Unit	Recom- mended Benchmark 2014	Q1 2016 2/26/16 ^D	Q2 2016 5/18/16 ^D	Q3 2016 8/25/16 ^D
Field					
D.O. ¹	ppm	--	0.60	0.42	1.7
ORP	mV	--	-202	-38	-21
pH	SU	6.7-7.7	8.1	6.8	7.2
Specific Conductance	µS/cm	--	279	256	197
Temperature	°C	--	7.8	8.4	10
Turbidity	NTU	--	49	29	14
Water Elevation	ft MSL	--	1533.52	1535.77	1534.46
Metals					
Aluminum	ug/L	200 (p)	--	--	< 50
Antimony	ug/L	8.0 (p)	--	--	< 2.0
Arsenic	ug/L	20 (p)	< 5.0	< 5.0	< 5.0
Barium	ug/L	400 (p)	--	--	< 100
Beryllium	ug/L	4.0 (p)	--	--	< 1.0
Boron	ug/L	1200 (p)	--	--	< 300
Cadmium	ug/L	4.0 (p)	--	--	< 1.0
Chromium	ug/L	40 (p)	--	--	< 10
Cobalt	ug/L	80 (p)	--	--	< 20
Copper	ug/L	16 (p)	< 4.0	< 4.0	< 4.0
Iron	ug/L	11214	9400	9200	8600
Lead	ug/L	12 (p)	< 3.0	< 3.0	< 3.0
Lithium	ug/L	40 (p)	--	--	12
Manganese	ug/L	866	820	750	600
Mercury	ng/L	4.0 (p)	< 1.0	< 1.0	< 1.0
Molybdenum	ug/L	200 (p)	--	--	< 50
Nickel	ug/L	80 (p)	< 20	< 20	< 20
Selenium	ug/L	20 (p)	--	--	< 5.0
Silver	ug/L	0.8 (p)	--	--	< 0.20
Thallium	ug/L	8.0 (p)	--	--	< 2.0
Vanadium	ug/L	16 (p)	--	--	< 4.0
Zinc	ug/L	17	< 10	30	< 10
Major Anions					
Alkalinity, Bicarbonate	mg/L	103	81	85	87
Alkalinity, Carbonate	mg/L	8.0 (p)	< 2.0	< 2.0	< 2.0
Chloride	mg/L	40 (p)	16	20	23
Fluoride	mg/L	4.0 (p)	< 1.0	< 1.0	< 1.0
Nitrogen, Ammonia	mg/L	0.12 (p)	< 0.03	< 0.03	< 0.03 e
Nitrogen, Nitrate	mg/L	0.40 (p)	< 0.1	< 0.1	< 0.1
Nitrogen, Nitrite	mg/L	0.40 (p)	< 0.1	< 0.1	< 0.1
Sulfate	mg/L	15	4.2	4.7	4.0
Sulfide	mg/L	0.80 (p)	< 0.20	< 0.20	< 0.20
Major Cations					
Calcium	mg/L	26	20	21	20
Magnesium	mg/L	12	9.9	11	10
Potassium	mg/L	4.0	3.6	3.4	3.3
Sodium	mg/L	3.0	2.8	3.4	2.5
General					
Hardness	mg/L	111	98	102	108

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

MW-705 UFB (Cutoff Wall Key-In)

2016
Mine Permit Groundwater Quality Monitoring Data
MW-706 QAL (MSB & Crusher)
Humboldt Mill

Parameter	Unit	Recom- mended Benchmark 2014	Q1 2016 2/26/16 ^T	Q2 2016 5/19/16 ^T	Q3 2016 8/26/16 ^T
Field					
D.O. ¹	ppm	--	0.33	0.34	0.34
ORP	mV	--	46	45	46
pH	SU	6.2-7.2	5.9	6.0	5.6
Specific Conductance	µS/cm	--	898	928	701
Temperature	°C	--	6.0	9.2	11
Turbidity	NTU	--	0.78	2.0	2.1
Water Elevation	ft MSL	--	1558.11	1560.78	1560.65
Metals					
Aluminum	ug/L	200 (p)	--	--	< 200
Antimony	ug/L	8.0 (p)	--	--	< 2.0
Arsenic	ug/L	16	<5.0	< 5.0	< 5.0
Barium	ug/L	400 (p)	--	--	< 100
Beryllium	ug/L	4.0 (p)	--	--	< 1.0
Boron	ug/L	1200 (p)	--	--	< 300
Cadmium	ug/L	4.0 (p)	--	--	< 1.0
Chromium	ug/L	40 (p)	--	--	< 10
Cobalt	ug/L	80 (p)	--	--	30
Copper	ug/L	16 (p)	< 4.0	< 4.0	< 4.0
Iron	ug/L	10846	5400 ^e	4900	4600
Lead	ug/L	12 (p)	< 3.0	< 3.0	< 3.0
Lithium	ug/L	40 (p)	--	--	12
Manganese	ug/L	27225	17000	17000	< 50
Mercury	ng/L	4.0 (p)	< 1.0	< 1.0	< 1.0
Molybdenum	ug/L	200 (p)	--	--	< 50
Nickel	ug/L	80 (p)	24	25	26
Selenium	ug/L	20 (p)	--	--	< 5.0
Silver	ug/L	0.8 (p)	--	--	< 0.20
Thallium	ug/L	8.0 (p)	--	--	< 2.0
Vanadium	ug/L	16 (p)	--	--	< 4.0
Zinc	ug/L	55	< 10	< 10	< 10
Major Anions					
Alkalinity, Bicarbonate	mg/L	153	83	82	73
Alkalinity, Carbonate	mg/L	8.0 (p)	< 2.0	< 2.0	< 2.0
Chloride	mg/L	105	120	130	140
Fluoride	mg/L	4.0 (p)	< 1.0	< 1.0	< 1.0
Nitrogen, Ammonia	mg/L	1.4	0.41 ^J	0.43	0.44
Nitrogen, Nitrate	mg/L	0.4 (p)	< 0.1	< 0.1	< 0.1
Nitrogen, Nitrite	mg/L	0.4 (p)	< 0.1	< 0.1	< 0.1
Sulfate	mg/L	479	200	200	180
Sulfide	mg/L	0.80 (p)	< 0.20	< 0.20	< 0.20
Major Cations					
Calcium	mg/L	183	89	85	85
Magnesium	mg/L	56	32	32	33
Potassium	mg/L	6.0	4.3	4.7	4.5
Sodium	mg/L	234	26	26	26
General					
Hardness	mg/L	609	384	178	70

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

MW-706 QAL (MSB & Crusher)

2016
Mine Permit Groundwater Quality Monitoring Data
MW-707 QAL (Concentrator & CLO)
Humboldt Mill

Parameter	Unit	Recom- mended Benchmark 2014	Q1 2016 2/26/16 ^T	Q2 2016 5/19/16 ^T	Q3 2016 8/26/16 ^T
Field					
D.O. ¹	ppm	--	0.64	0.77	0.32
ORP	mV	--	-95	-101	-93
pH	SU	6.3-7.3	7.0	7.1	6.8
Specific Conductance	µS/cm	--	318	320	236
Temperature	°C	--	5.5	9.8	11
Turbidity	NTU	--	1.3	1.4	2.5
Water Elevation	ft MSL	--	1581.84	1583.28	1582.64
Metals					
Aluminum	ug/L	200 (p)	--	--	< 50
Antimony	ug/L	8.0 (p)	--	--	< 2.0
Arsenic	ug/L	20 (p)	< 5.0	< 5.0	< 5.0
Barium	ug/L	400 (p)	--	--	< 100
Beryllium	ug/L	4.0 (p)	--	--	< 1.0
Boron	ug/L	1200 (p)	--	--	< 300
Cadmium	ug/L	4.0 (p)	--	--	< 1.0
Chromium	ug/L	40 (p)	--	--	< 10
Cobalt	ug/L	80 (p)	--	--	< 20
Copper	ug/L	16 (p)	< 4.0	< 4.0	< 4.0
Iron	ug/L	7493	5700	5100	4800
Lead	ug/L	12 (p)	< 3.0	< 3.0	< 3.0
Lithium	ug/L	40 (p)	--	--	< 10
Manganese	ug/L	1189	1000	950	< 50
Mercury	ng/L	4.0 (p)	< 1.0	< 1.0	< 1.0
Molybdenum	ug/L	200 (p)	--	--	< 50
Nickel	ug/L	80 (p)	< 20	< 20	< 20
Selenium	ug/L	20 (p)	--	--	< 5.0
Silver	ug/L	0.8 (p)	--	--	< 0.20
Thallium	ug/L	8.0 (p)	--	--	< 2.0
Vanadium	ug/L	16 (p)	--	--	< 4.0
Zinc	ug/L	19	11	< 10	25
Major Anions					
Alkalinity, Bicarbonate	mg/L	150	160	150	160
Alkalinity, Carbonate	mg/L	8.0 (p)	< 2.0	< 2.0	< 2.0
Chloride	mg/L	40 (p)	< 10	< 10	< 10
Fluoride	mg/L	4.0 (p)	< 1.0	< 1.0	< 1.0
Nitrogen, Ammonia	mg/L	0.34	0.27	0.27	0.26
Nitrogen, Nitrate	mg/L	0.40 (p)	< 0.1	< 0.1	< 0.1
Nitrogen, Nitrite	mg/L	0.40 (p)	< 0.1	< 0.1	< 0.1
Sulfate	mg/L	8.0	6.8	4.4	6.3
Sulfide	mg/L	0.80 (p)	< 0.20	< 0.20	< 0.20
Major Cations					
Calcium	mg/L	51	41	39	39
Magnesium	mg/L	15	12	11	11
Potassium	mg/L	3.0	2.3	2.3	2.3
Sodium	mg/L	4.0	2.7	3.0	2.8
General					
Hardness	mg/L	149	156	154	156

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

MW-707 QAL (Concentrator & CLO)

2016
Mine Permit Groundwater Quality Monitoring Data
MW-9R (Concentrator)
Humboldt Mill

Parameter	Unit	Recom- mended Benchmark 2014	Q1 2016 2/26/16 ^T	Q2 2016 5/19/16 ^T	Q3 2016 8/26/16 ^T
Field					
D.O. ¹	ppm	--	1.8	0.21	0.56
ORP	mV	--	226	91	107
pH	SU	5.4-6.4	5.4	6.4	5.8
Specific Conductance	µS/cm	--	554	295	454
Temperature	°C	--	6.0	8.6	14
Turbidity	NTU	--	1.3	1.8	2.4
Water Elevation	ft MSL	--	1595.7	1595.74	1596.71
Metals					
Aluminum	ug/L	200 (p)	--	--	< 200
Antimony	ug/L	8.0 (p)	--	--	< 2.0
Arsenic	ug/L	25	< 5.0	< 5.0	< 5.0
Barium	ug/L	400 (p)	--	--	< 100
Beryllium	ug/L	4.0 (p)	--	--	< 1.0
Boron	ug/L	1200 (p)	--	--	< 300
Cadmium	ug/L	4.0 (p)	--	--	< 1.0
Chromium	ug/L	40 (p)	--	--	< 10
Cobalt	ug/L	80 (p)	--	--	< 20
Copper	ug/L	5.0	4.8	< 4.0	4.1
Iron	ug/L	25558	<200	<200	< 200
Lead	ug/L	0.04	<3.0	< 3.0	< 3.0
Lithium	ug/L	40 (p)	--	--	< 10
Manganese	ug/L	1694	430	79	< 50
Mercury	ng/L	1.0	1.0	< 1.0	< 1.0
Molybdenum	ug/L	200 (p)	--	--	< 50
Nickel	ug/L	80 (p)	51	< 20	29
Selenium	ug/L	20 (p)	--	--	< 5.0
Silver	ug/L	0.8 (p)	--	--	< 0.20
Thallium	ug/L	8.0 (p)	--	--	< 2.0
Vanadium	ug/L	16 (p)	--	--	< 4.0
Zinc	ug/L	25	18	21	19
Major Anions					
Alkalinity, Bicarbonate	mg/L	137	29	24	59
Alkalinity, Carbonate	mg/L	2.0	< 2.0	< 2.0	< 2.0
Chloride	mg/L	711	16	23	32
Fluoride	mg/L	4.0 (p)	< 1.0	< 1.0	< 1.0
Nitrogen, Ammonia	mg/L	0.36	< 0.03	< 0.03	< 0.03
Nitrogen, Nitrate	mg/L	1.0	2.1	0.18	1.5
Nitrogen, Nitrite	mg/L	0.07	< 0.1	< 0.1	< 0.1
Sulfate	mg/L	343	210	77	170
Sulfide	mg/L	1.0	<0.20	< 0.20	< 0.20
Major Cations					
Calcium	mg/L	123	55	26	59
Magnesium	mg/L	48	21	10	22
Potassium	mg/L	8.0	2.9	2.1	3.5
Sodium	mg/L	289	17	8.2	15
General					
Hardness	mg/L	510	232	114	242

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

MW-9R (Concentrator)

2016
Mine Permit Groundwater Quality Monitoring Data
Abbreviations & Data Qualifiers
Humboldt Mill

Notes:
Benchmarks are calculated based on guidance from Eagles Mine's Development of Site Specific Benchmarks for Mine Permit Water Quality Monitoring.
Results in bold text indicate that the parameter was detected at a level greater than the laboratory reporting limit.
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.
(p) = Due to less than two detections in baseline dataset, benchmark defaulted to four times the reporting limit.
--Denotes no benchmark required or parameter was not required to be collected during the sampling quarter.
T = Sample was not filtered and all values are total concentrations.
D = Samples for metals and major cation parameters were filtered and values are dissolved concentrations.
e = estimated value, results of laboratory control parameters were outside of established control limits.
* = estimated value, turbidity reading was greater than the upper range of the meter.