RECEIVED
OCT 07 2011
MINERALS & MINING PROGRAM

APPENDIX D

WATER-QUALITY RESULTS BY SITE

Table D-1. DWD-1 Water Quality 2006

Parameter	1/6/2006	4/4/2006	5/8/2006	8/8/2006
Calcium (Ca),Dissolved (mg/L)	33.7	21.1	6.08	29.6
Magnesium (Mg),Dissolved (mg/L)	10.1	5.42	1.94	8.5
Arsenic (As),Total (mg/L)	<0.005	<0.005	<0.005	<0.005
Cadmium (Cd),Total (mg/L)	<0.001	<0.001	<0.001	<0.001
Copper (Cu),Total (mg/L)	<0.005	<0.005	<0.005	<0.005
Gold (Au),Total (mg/L)	0.004	0.005	0.003	0.003
Zinc (Zn),Total (mg/L)	0.242	0.057	<0.05	0.091
Bicarbonate (mg/L)	29.3	26.4	15.3	34.1
Carbonate (mg/L)	0.00	0.00	0.00	0.00
Chloride (Cl-) (mg/L)	1.75	1.25	1.25	0.500
Cyanide, Total (mg/L)	<0.010	<0.010	<0.010	<0.010
Cyanide, WAD (mg/L)	<0.010	<0.010	<0.010	<0.010
Nitrogen, Nitrate (NO3) (mg/L)	<0.050	<0.050	0.348	<0.050
Nitrogen, Nitrite (NO2) (mg/L)	<0.050	<0.050	<0.050	<0.050
Potassium (K),Dissolved (mg/L)	3.43	2.64	1.04	3.38
Selenium (Se),Total (mg/L)	<0.005	<0.005	<0.005	<0.005
Sodium (Na),Dissolved (mg/L)	3.52	2.54	1.76	3.33
Sulfate (SO4) (mg/L)	117	59.1	<10	80.1
Anion - Cation Balance (%)	–3.69	–0.622	4.33	3.61
Anions (meq/L)	2.96	1.70	0.519	2.24
Cations (meq/L)	2.75	1.68	0.566	2.41
Electrical Conductivity (µmhos/cm)	316	205	70.7	269
pH (SU)	6.94	7.17	7.19	7.42
Total Dissolved Solids (mg/L)	204	141	62.0	196
Total Suspended Solids (mg/L)	<10.0	<10.0	<10.0	<10.0

Table D-2. DWD-1 Water Quality 2007

Parameter	1/11/2007	4/17/2007	5/1/2007	8/1/2007
Field Conductivity (µmhos/cm)	110	150	100	243
Field pH (SU)	7.58	7.5	7.68	7.23
Field Temperature (° C)	–1.2	3.1	9.30	13.7
Field Flow Rate (gal/min)	40	1050	756	46.7
Calcium (Ca),Dissolved (mg/L)	25.8	15.1	11.6	26.4
Magnesium (Mg),Dissolved (mg/L)	6.07	4.43	2.88	6.35
Arsenic (As),Total (mg/L)	<0.005	<0.005	<0.005	<0.005
Cadmium (Cd),Total (mg/L)	<0.001	<0.0010	<0.0010	<0.001
Copper (Cu),Total (mg/L)	<0.005	<0.005	<0.005	0.006
Gold (Au),Total (mg/L)	<0.001	0.014	0.002	<0.001
Zinc (Zn),Total (mg/L)	0.068	<0.050	<0.050	<0.050
Bicarbonate (mg/L)	29.5	13.2	38.4	65.3
Carbonate (mg/L)	0.00	0.00	0.00	0.00
Chloride (Cl-) (mg/L)	2.25	2.75	<0.500	<0.500
Cyanide, Total (mg/L)	<0.010	<0.010	<0.010	<0.010
Cyanide, WAD (mg/L)	<0.010	<0.010	<0.010	<0.010
Nitrogen, Nitrate (NO3) (mg/L)	0.085	7.88	<0.05	<0.05
Nitrogen, Nitrite (NO2) (mg/L)	<0.050	<0.050	<0.050	<0.050
Potassium (K),Dissolved (mg/L)	2.39	1.38	1.10	2.63
Selenium (Se),Total (mg/L)	<0.005	<0.005	<0.005	<0.005
Sodium (Na),Dissolved (mg/L)	2.98	2.52	1.10	2.55
Sulfate (SO4) (mg/L)	58.6	24.0	15.3	48.8
Anion - Cation Balance (%)	5.47	–3.56	–3.07	–1.67
Anions (meq/L)	1.77	1.36	0.948	2.09
Cations (meq/L)	1.98	1.26	0.892	2.02
Electrical Conductivity (µmhos/cm)	210	164	103	237
pH (SU)	7.30	7.16	7.65	7.69
Total Dissolved Solids (mg/L)	114	100	78	147
Total Suspended Solids (mg/L)	<10.0	<10.0	<10.0	<10.0

Table D-3. DWD-1 Water Quality 2008

Parameter	1/17/2008	4/15/2008	5/23/2008	8/21/2008
Field Conductivity (µmhos/cm)	280	210	80	190
Field pH (SU)	8.16	8.00	8.60	7.69
Field Temperature (° C)	-0.8	4.00	6.7	13.5
Field Flow Rate (gal/min)	20	1.50	1450	—
Calcium (Ca),Dissolved (mg/L)	35.8	23.1	9.93	16.3
Magnesium (Mg),Dissolved (mg/L)	10.2	6.52	2.29	4.90
Arsenic (As),Total (mg/L)	<0.005	<0.005	<0.005	<0.005
Cadmium (Cd),Total (mg/L)	<0.001	<0.001	<0.001	<0.001
Copper (Cu),Total (mg/L)	<0.005	0.007	<0.005	0.010
Gold (Au),Total (mg/L)	0.001	0.003	<0.001	<0.001
Zinc (Zn),Total (mg/L)	0.142	0.074	0.070	0.061
Bicarbonate (mg/L)	29.6	21.2	17.5	28.8
Carbonate (mg/L)	0.00	0.00	0.00	0.00
Chloride (Cl-) (mg/L)	1.50	0.750	0.500	1.50
Cyanide, Total (mg/L)	<0.010	<0.010	<0.010	<0.010
Cyanide, WAD (mg/L)	<0.010	<0.010	<0.010	<0.010
Nitrogen, Nitrate (NO3) (mg/L)	1.16	1.05	1.03	0.370
Nitrogen, Nitrite (NO2) (mg/L)	<0.050	<0.050	<0.050	<0.050
Potassium (K),Dissolved (mg/L)	3.35	2.53	1.30	1.68
Selenium (Se),Total (mg/L)	<0.005	<0.005	<0.005	<0.005
Sodium (Na),Dissolved (mg/L)	3.29	2.71	1.79	4.65
Sulfate (SO4) (mg/L)	114	68.1	24.5	39.4
Anion - Cation Balance (%)	–2.19	0.295	–5.32	3.57
Anions (meq/L)	2.98	1.86	0.884	1.36
Cations (meq/L)	2.85	1.87	0.795	1.46
Electrical Conductivity (µmhos/cm)	330	231	88.5	198
pH (SU)	6.77	7.18	7.22	7.33
Total Dissolved Solids (mg/L)	207	163	86.0	131
Total Suspended Solids (mg/L)	<10.0	<10.0	37.0	42.0

Table D-4. DWD-1 Water Quality 2009 (Page 1 of 2)

Parameter	1/21/2009	4/9/2009	5/14/2009	8/18/2009
Field Conductivity (µmhos/cm)	220	130	110	198
Field ORP (mV)	—	—	—	128
Field Oxygen (O2) (mg/L)	—	—	—	8.88
Field pH (SU)	7.40	8.18	8.04	7.73
Field Temperature (° C)	-0.1	2.4	4.60	10.8
Field Flow Rate (gal/min)	33.7	1759	2810	149
Calcium (Ca),Dissolved (mg/L)	21.4	6.45	8.45	—
Copper (Cu),Dissolved (mg/L)	—	—	—	<0.005
Gold (Au),Dissolved (mg/L)	—	—	—	<0.001
Magnesium (Mg),Dissolved (mg/L)	5.99	2.45	3.02	—
Silver (Ag),Dissolved (mg/L)	—	—	—	<0.001
Arsenic (As),Total (mg/L)	<0.005	<0.005	<0.005	<0.005
Cadmium (Cd),Total (mg/L)	<0.001	<0.001	<0.001	—
Copper (Cu),Total (mg/L)	0.006	0.007	0.006	—
Gold (Au),Total (mg/L)	<0.001	<0.001	<0.001	—
Mercury (Hg),Total (mg/L)	—	—	—	<0.0002
Zinc (Zn),Total (mg/L)	0.061	0.051	0.052	—
Bicarbonate (mg/L)	28.3	21.4	30.6	65.7
Carbonate (mg/L)	0.00	0.00	0.00	—
Chloride (Cl-) (mg/L)	0.750	<0.500	<0.500	—
Cyanide, Total (mg/L)	<0.010	<0.010	<0.010	<0.010
Cyanide, WAD (mg/L)	<0.010	<0.010	<0.010	<0.010
Fluoride (mg/L)	—	—	—	0.980
Nitrogen, Ammonia (NH3) (mg/L)	—	—	—	<0.050
Nitrogen, Nitrate (NO3) (mg/L)	0.554	0.328	0.190	<0.050
Nitrogen, Nitrite (NO2) (mg/L)	<0.050	<0.050	<0.050	<0.050
Potassium (K),Dissolved (mg/L)	2.49	0.970	1.28	—
Selenium (Se),Total (mg/L)	<0.005	<0.005	<0.005	<0.005
Sodium (Na),Dissolved (mg/L)	2.81	3.25	2.09	3.74

Table D-4. DWD-1 Water Quality 2009 (Page 2 of 2)

Parameter	1/21/2009	4/9/2009	5/14/2009	8/18/2009
Sulfate (SO4) (mg/L)	58.1	17.2	14.4	57.0
Anion - Cation Balance (%)	0.371	–3.00	–1.33	—
Anions (meq/L)	1.73	0.732	0.815	—
Cations (meq/L)	1.75	0.689	0.794	—
Electrical Conductivity (µmhos/cm)	217	103	107	275
pH (SU)	7.05	7.47	7.61	7.78
Total Dissolved Solids (mg/L)	142	100	51.0	140
Total Suspended Solids (mg/L)	20.0	<10.0	<10.0	<10.0

Table D-5. DWD-1 Water Quality 2010

Parameter	1/13/2010	4/21/2010	5/11/2010	8/19/2010
Field Conductivity (µmhos/cm)	139	41.3	44.0	140
Field ORP (mV)	88.0	87.0	69.0	27.0
Field Oxygen (O2) (mg/L)	10.1	9.96	10.6	7.75
Field pH (SU)	6.87	7.67	7.61	7.34
Field Temperature (° C)	0.700	5.10	3.60	12.7
Field Flow Rate (gal/min)	50.0	508	1790	30.0
Copper (Cu),Dissolved (mg/L)	<0.005	<0.005	<0.005	<0.005
Gold (Au),Dissolved (mg/L)	<0.001	<0.001	<0.001	<0.001
Silver (Ag),Dissolved (mg/L)	0.001	<0.001	<0.001	<0.001
Arsenic (As),Total (mg/L)	<0.005	<0.005	<0.005	<0.005
Mercury (Hg),Total (mg/L)	<0.0002	<0.0002	<0.0002	<0.0002
Bicarbonate (mg/L)	13.7	16.9	18.3	33.9
Cyanide, Total (mg/L)	<0.010	<0.010	<0.010	<0.010
Cyanide, WAD (mg/L)	<0.010	<0.010	<0.010	<0.010
Fluoride (mg/L)	0.598	0.252	0.231	0.566
Nitrogen, Ammonia (NH3) (mg/L)	<0.050	<0.050	<0.050	<0.050
Nitrogen, Nitrate (NO3) (mg/L)	0.275	0.572	0.508	0.077
Nitrogen, Nitrite (NO2) (mg/L)	<0.050	<0.050	<0.050	<0.050
Selenium (Se),Total (mg/L)	<0.005	<0.005	<0.005	<0.005
Sodium (Na),Dissolved (mg/L)	3.52	1.86	1.93	3.26
Sulfate (SO4) (mg/L)	88.5	<10.0	12.0	56.3
Electrical Conductivity (µmhos/cm)	247	65.0	73.1	189
pH (SU)	6.46	7.11	7.25	7.33
Total Dissolved Solids (mg/L)	171	75.0	81.0	130
Total Suspended Solids (mg/L)	<10.0	<10.0	<10.0	<10.0

Table D-6. DWD-1 Water Quality 2011

Parameter	1/12/2011	4/7/2011	5/18/2011	7/21/2011	8/25/2011
Field Conductivity (µmhos/cm)	133	48.5	50.6	170	148
Field ORP (mV)	58.0	-17.0	-45.0	67.0	52.0
Field Oxygen (O2) (mg/L)	10.1	10.9	10.1	8.56	8.05
Field pH (SU)	6.44	7.46	7.58	7.43	7.56
Field Temperature (° C)	0.200	3.60	6.10	13.2	13.8
Field Flow Rate (gal/min)	33.0	527	1430	—	36.0
Copper (Cu),Dissolved (mg/L)	<0.005	<0.005	<0.005	<0.005	<0.005
Gold (Au),Dissolved (mg/L)	<0.001	<0.001	<0.001	<0.001	<0.001
Silver (Ag),Dissolved (mg/L)	<0.001	<0.001	<0.001	<0.001	<0.001
Arsenic (As),Total (mg/L)	<0.005	<0.005	<0.005	<0.005	<0.005
Mercury (Hg),Total (mg/L)	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Bicarbonate (mg/L)	26.7	18.2	20.6	32.2	35.3
Cyanide, Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
Cyanide, WAD (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
Fluoride (mg/L)	0.827	0.265	0.247	0.451	0.611
Nitrogen, Ammonia (NH3) (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
Nitrogen, Nitrate (NO3) (mg/L)	0.161	0.637	0.483	0.288	0.171
Nitrogen, Nitrite (NO2) (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
Selenium (Se),Total (mg/L)	<0.005	<0.005	<0.005	<0.005	<0.005
Sodium (Na),Dissolved (mg/L)	3.89	2.22	1.99	3.28	3.19
Sulfate (SO4) (mg/L)	87.0	17.1	14.6	44.0	55.5
Electrical Conductivity (µmhos/cm)	250	83.6	81.1	164	196
pH (SU)	6.79	7.12	7.37	7.30	7.21
Total Dissolved Solids (mg/L)	182	82.0	73.0	95.0	124
Total Suspended Solids (mg/L)	<10.0	<10.0	<10.0	<10.0	<10.0

Table D-7. BMT-1 Water Quality 2006

Parameter	1/6/2006	4/4/2006	5/8/2006	8/8/2006
Calcium (Ca),Dissolved (mg/L)	26.4	15.6	9.10	29.3
Magnesium (Mg),Dissolved (mg/L)	7.27	4.46	2.28	7.41
Arsenic (As),Total (mg/L)	<0.005	<0.005	<0.005	<0.005
Cadmium (Cd),Total (mg/L)	<0.001	<0.001	<0.001	<0.001
Copper (Cu),Total (mg/L)	<0.005	<0.005	<0.005	<0.005
Gold (Au),Total (mg/L)	0.003	0.003	0.003	0.002
Zinc (Zn),Total (mg/L)	<0.050	<0.050	<0.050	<0.050
Bicarbonate (mg/L)	34.7	26.8	35.1	49.7
Carbonate (mg/L)	0.00	0.00	0.00	0.00
Chloride (Cl-) (mg/L)	<0.500	<0.500	<0.500	<0.500
Cyanide, Total (mg/L)	<0.010	<0.010	<0.010	<0.010
Cyanide, WAD (mg/L)	<0.010	<0.010	<0.010	<0.010
Nitrogen, Nitrate (NO3) (mg/L)	<0.050	<0.050	0.055	<0.050
Nitrogen, Nitrite (NO2) (mg/L)	<0.050	<0.050	<0.050	<0.050
Potassium (K),Dissolved (mg/L)	3.37	2.31	0.869	3.31
Selenium (Se),Total (mg/L)	<0.005	<0.005	<0.005	<0.005
Sodium (Na),Dissolved (mg/L)	2.36	2.23	1.25	2.17
Sulfate (SO4) (mg/L)	81.5	39.7	<10	66.4
Anion - Cation Balance (%)	–3.67	1.40	–4.61	1.22
Anions (meq/L)	2.26	1.27	0.788	2.20
Cations (meq/L)	2.1	1.3	0.718	2.25
Electrical Conductivity (µmhos/cm)	249	159	86.0	254
pH (SU)	7.25	7.40	7.59	7.65
Total Dissolved Solids (mg/L)	159	113	69.0	169
Total Suspended Solids (mg/L)	<10.0	<10.0	<10.0	<10.0

Table D-8. BMT-1 Water Quality 2007

Parameter	1/11/2007	4/17/2007	5/1/2007	8/1/2007
Field Conductivity (µmhos/cm)	120	100	140	227
Field pH (SU)	8.11	7.76	7.37	7.50
Field Temperature (° C)	1.20	2.40	8.00	15.2
Field Flow Rate (gal/min)	20.0	190	187	14.2
Calcium (Ca),Dissolved (mg/L)	30.3	11.5	14.7	22.3
Magnesium (Mg),Dissolved (mg/L)	7.32	3.14	4.14	6.70
Arsenic (As),Total (mg/L)	<0.005	<0.005	<0.005	<0.005
Cadmium (Cd),Total (mg/L)	<0.001	<0.001	<0.001	<0.001
Copper (Cu),Total (mg/L)	<0.005	<0.005	<0.005	0.008
Gold (Au),Total (mg/L)	<0.001	<0.001	0.005	<0.001
Zinc (Zn),Total (mg/L)	0.058	<0.050	<0.050	<0.050
Bicarbonate (mg/L)	38.6	37.5	16.9	30.3
Carbonate (mg/L)	0.00	0.00	0.00	0.00
Chloride (Cl-) (mg/L)	<0.500	<0.500	2.00	2.25
Cyanide, Total (mg/L)	<0.010	<0.010	<0.010	<0.010
Cyanide, WAD (mg/L)	<0.010	<0.010	<0.010	<0.010
Nitrogen, Nitrate (NO3) (mg/L)	<0.050	<0.050	5.71	6.53
Nitrogen, Nitrite (NO2) (mg/L)	<0.050	<0.050	<0.050	<0.050
Potassium (K),Dissolved (mg/L)	2.75	1.15	1.56	2.95
Selenium (Se),Total (mg/L)	<0.005	<0.005	<0.005	<0.005
Sodium (Na),Dissolved (mg/L)	2.34	1.51	1.56	3.85
Sulfate (SO4) (mg/L)	72.5	18.2	19.7	48.8
Anion - Cation Balance (%)	3.27	–3.46	1.31	–3.42
Anions (meq/L)	2.14	0.994	1.15	2.04
Cations (meq/L)	2.29	0.927	1.18	1.91
Electrical Conductivity (µmhos/cm)	241	112	151	253
pH (SU)	7.38	7.69	7.25	7.27
Total Dissolved Solids (mg/L)	148	78.0	110	162
Total Suspended Solids (mg/L)	<10.0	<10.0	<10.0	12.0

Table D-9. BMT-1 Water Quality 2008 (Page 1 of 2)

Parameter	1/17/2008	4/15/2008	5/23/2008	8/21/2008
Field Conductivity (µmhos/cm)	230	110	70	210
Field pH (SU)	8.55	8.22	8.37	7.91
Field Temperature (° C)	-1.0	2.80	6.9	14.1
Field Flow Rate (gal/min)	20	1.50	269	—
Calcium (Ca),Dissolved (mg/L)	27.8	12.7	10.2	21.6
Copper (Cu),Dissolved (mg/L)	—	—	—	—
Gold (Au),Dissolved (mg/L)	—	—	—	—
Magnesium (Mg),Dissolved (mg/L)	7.40	3.57	1.85	5.90
Silver (Ag),Dissolved (mg/L)	—	—	—	—
Arsenic (As),Total (mg/L)	<0.005	<0.005	<0.005	<0.005
Cadmium (Cd),Total (mg/L)	<0.001	<0.001	<0.001	<0.001
Copper (Cu),Total (mg/L)	<0.005	<0.005	<0.005	<0.005
Gold (Au),Total (mg/L)	<0.001	0.001	<0.001	<0.001
Mercury (Hg),Total (mg/L)	—	—	—	—
Zinc (Zn),Total (mg/L)	<0.05	0.053	0.163	<0.05
Bicarbonate (mg/L)	45.2	37.0	33.1	61.8
Carbonate (mg/L)	0.00	0.00	0.00	0.00
Chloride (Cl-) (mg/L)	<0.500	<0.500	<0.500	2.50
Cyanide, Total (mg/L)	<0.010	<0.010	<0.010	<0.010
Cyanide, WAD (mg/L)	<0.010	<0.010	<0.010	<0.010
Nitrogen, Nitrate (NO3) (mg/L)	<0.050	0.063	<0.050	<0.050
Nitrogen, Nitrite (NO2) (mg/L)	<0.050	<0.050	<0.050	<0.050
Potassium (K),Dissolved (mg/L)	2.80	1.63	0.901	1.63
Selenium (Se),Total (mg/L)	<0.005	<0.005	<0.005	<0.005
Sodium (Na),Dissolved (mg/L)	1.99	1.62	1.31	4.00
Sulfate (SO4) (mg/L)	75.2	23.3	18.0	37.6
Anion - Cation Balance (%)	–3.40	–2.65	–3.00	–2.40
Anions (meq/L)	2.31	1.10	0.917	1.87
Cations (meq/L)	2.15	1.04	0.864	1.78

Table D-9. BMT-1 Water Quality 2008 (Page 2 of 2)

Parameter	1/17/2008	4/15/2008	5/23/2008	8/21/2008
Electrical Conductivity (µmhos/cm)	253	124	78.5	223
pH (SU)	7.30	7.57	7.66	7.80
Total Dissolved Solids (mg/L)	162	102	83.0	142
Total Suspended Solids (mg/L)	<10.0	53.0	<10.0	<10.0

Table D-10. BMT-1 Water Quality 2009 (Page 1 of 2)

Parameter	1/21/2009	4/9/2009	5/14/2009	8/18/2009
Field Conductivity (µmhos/cm)	130	120	100	169
Field ORP (mV)	—	—	—	169
Field Oxygen (O2) (mg/L)	—	—	—	8.93
Field pH (SU)	7.56	8.10	8.18	7.80
Field Temperature (° C)	0.0	2.3	4.90	10.3
Field Flow Rate (gal/min)	56.1	781	1170	63.0
Calcium (Ca),Dissolved (mg/L)	24.0	6.85	10.9	—
Copper (Cu),Dissolved (mg/L)	—	—	—	<0.005
Gold (Au),Dissolved (mg/L)	—	—	—	<0.001
Magnesium (Mg),Dissolved (mg/L)	6.61	2.35	3.08	—
Silver (Ag),Dissolved (mg/L)	—	—	—	<0.001
Arsenic (As),Total (mg/L)	<0.005	<0.005	<0.005	<0.005
Cadmium (Cd),Total (mg/L)	<0.001	<0.001	<0.001	—
Copper (Cu),Total (mg/L)	<0.005	0.007	<0.005	—
Gold (Au),Total (mg/L)	<0.001	<0.001	<0.001	—
Mercury (Hg),Total (mg/L)	—	—	—	<0.0002
Zinc (Zn),Total (mg/L)	<0.050	<0.05	0.052	—
Bicarbonate (mg/L)	48.6	41.4	43.9	90.1
Carbonate (mg/L)	0.00	0.00	0.00	—
Chloride (Cl-) (mg/L)	0.500	<0.500	<0.500	—
Cyanide, Total (mg/L)	<0.010	<0.010	<0.010	<0.010
Cyanide, WAD (mg/L)	<0.010	<0.010	<0.010	<0.010
Fluoride (mg/L)	—	—	—	1.16
Nitrogen, Ammonia (NH3) (mg/L)	—	—	—	<0.05
Nitrogen, Nitrate (NO3) (mg/L)	<0.050	<0.050	<0.050	<0.050
Nitrogen, Nitrite (NO2) (mg/L)	<0.050	<0.050	<0.050	<0.050
Potassium (K),Dissolved (mg/L)	2.40	0.745	0.915	—
Selenium (Se),Total (mg/L)	<0.005	<0.005	<0.005	<0.005
Sodium (Na),Dissolved (mg/L)	2.00	2.60	2.18	4.07

Table D-10. BMT-1 Water Quality 2009 (Page 2 of 2)

Parameter	1/21/2009	4/9/2009	5/14/2009	8/18/2009
Sulfate (SO4) (mg/L)	46.5	<10	11.4	25.2
Anion - Cation Balance (%)	3.03	–0.877	–2.23	—
Anions (meq/L)	1.78	0.679	0.957	—
Cations (meq/L)	1.89	0.667	0.915	—
Electrical Conductivity (µmhos/cm)	227	97.9	97.6	241
pH (SU)	7.43	7.74	7.70	7.89
Total Dissolved Solids (mg/L)	136	84.0	44	146
Total Suspended Solids (mg/L)	<10.0	<10.0	<10.0	<10.0

Table D-11. BMT-1 Water Quality 2010

Parameter	1/13/2010	4/21/2010	5/11/2010	8/19/2010
Field Conductivity (µmhos/cm)	125	51.5	54.0	174
Field ORP (mV)	115	52.0	64.0	-1.00
Field Oxygen (O2) (mg/L)	11.5	9.89	10.5	7.61
Field pH (SU)	8.41	7.84	7.77	7.52
Field Temperature (° C)	0.25	5.30	4.00	13.9
Field Flow Rate (gal/min)	30	651	1320	58.0
Copper (Cu),Dissolved (mg/L)	<0.005	<0.005	<0.005	<0.005
Gold (Au),Dissolved (mg/L)	<0.001	<0.001	<0.001	<0.001
Silver (Ag),Dissolved (mg/L)	<0.001	<0.001	<0.001	<0.001
Arsenic (As),Total (mg/L)	<0.005	<0.005	<0.005	<0.005
Mercury (Hg),Total (mg/L)	<0.0002	<0.0002	<0.0002	<0.0002
Bicarbonate (mg/L)	52.2	33.3	36.5	62.7
Cyanide, Total (mg/L)	<0.010	<0.010	<0.010	<0.010
Cyanide, WAD (mg/L)	<0.010	<0.010	<0.010	<0.010
Fluoride (mg/L)	0.284	0.134	0.111	0.303
Nitrogen, Ammonia (NH3) (mg/L)	<0.050	<0.050	<0.050	<0.050
Nitrogen, Nitrate (NO3) (mg/L)	<0.050	<0.050	<0.050	<0.050
Nitrogen, Nitrite (NO2) (mg/L)	<0.050	<0.050	<0.050	<0.050
Selenium (Se),Total (mg/L)	<0.005	<0.005	<0.005	<0.005
Sodium (Na),Dissolved (mg/L)	2.52	1.31	1.63	3.27
Sulfate (SO4) (mg/L)	65.0	10.0	10.3	56.0
Electrical Conductivity (µmhos/cm)	240	80.9	89.0	228
pH (SU)	7.61	7.45	7.56	7.79
Total Dissolved Solids (mg/L)	156	83.0	94.0	148
Total Suspended Solids (mg/L)	<10.0	<10.0	<10.0	<10.0

Table D-12. BMT-1 Water Quality 2011

Parameter	1/12/2011	4/7/2011	5/18/2011	7/21/2011	8/25/2011
Field Conductivity (µmhos/cm)	123	79.0	53.6	220	182
Field ORP (mV)	20.0	-34.0	-41.0	74.0	32.0
Field Oxygen (O2) (mg/L)	12.0	10.9	9.92	8.28	8.02
Field pH (SU)	7.38	7.79	7.87	7.78	7.91
Field Temperature (° C)	0.020	3.00	6.40	13.6	14.8
Field Flow Rate (gal/min)	30.0	221	955	—	6.10
Copper (Cu),Dissolved (mg/L)	<0.005	<0.005	<0.005	<0.005	<0.005
Gold (Au),Dissolved (mg/L)	<0.001	<0.001	<0.001	<0.001	<0.001
Silver (Ag),Dissolved (mg/L)	<0.001	<0.001	<0.001	<0.001	<0.001
Arsenic (As),Total (mg/L)	<0.005	<0.005	<0.005	<0.005	<0.005
Mercury (Hg),Total (mg/L)	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Bicarbonate (mg/L)	52.6	44.7	35.9	63.0	59.9
Cyanide, Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
Cyanide, WAD (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
Fluoride (mg/L)	0.242	0.212	0.133	0.269	0.319
Nitrogen, Ammonia (NH3) (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
Nitrogen, Nitrate (NO3) (mg/L)	<0.050	<0.050	<0.050	0.070	0.050
Nitrogen, Nitrite (NO2) (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
Selenium (Se),Total (mg/L)	<0.005	<0.005	<0.005	<0.005	<0.005
Sodium (Na),Dissolved (mg/L)	2.83	2.11	1.55	2.67	2.34
Sulfate (SO4) (mg/L)	69.1	27.1	<10.0	48.3	59.7
Electrical Conductivity (µmhos/cm)	247	140	85.3	215	235
pH (SU)	7.52	7.58	7.71	7.79	7.71
Total Dissolved Solids (mg/L)	173	104	76.0	124	158
Total Suspended Solids (mg/L)	<10.0	<10.0	<10.0	<10.0	<10.0

Table D-13. Annie Creek @ USGS Water Quality 2006 (Page 1 of 2)

Parameter	1/6/2006	2/6/2006	4/4/2006	5/8/2006	6/5/2006	7/3/2006	8/8/2006	9/5/2006	10/2/2006	11/2/2006	12/5/2006
Arsenic (As),Dissolved (mg/L)	0.056	0.052	0.048	0.026	0.021	0.034	0.038	0.033	0.052	0.036	0.027
Calcium (Ca),Dissolved (mg/L)	76.3	—	50.6	29.6	—	—	60.6	—	—	—	—
Magnesium (Mg),Dissolved (mg/L)	27.1	—	16.2	9.06	—	—	22.2	—	—	—	—
Arsenic (As),Total (mg/L)	0.056	0.054	0.051	0.030	0.022	0.034	0.043	0.034	0.052	0.035	0.027
Cadmium (Cd),Total (mg/L)	<0.001	—	<0.001	<0.001	—	—	<0.001	—	—	—	—
Copper (Cu),Total (mg/L)	<0.005	—	<0.005	<0.005	—	—	<0.005	—	—	—	—
Gold (Au),Total (mg/L)	0.006	—	0.007	0.004	—	—	0.003	—	—	—	—
Zinc (Zn),Total (mg/L)	<0.050	—	<0.050	<0.050	—	—	<0.050	—	—	—	—
Bicarbonate (mg/L)	286	—	186	99.6	—	—	248	—	—	—	—
Carbonate (mg/L)	0.00	—	<5.00	0.00	—	—	<5.00	—	—	—	—
Chloride (Cl-) (mg/L)	9.50	—	8.50	5.00	—	—	6.50	—	—	—	—
Cyanide, Total (mg/L)	0.046	—	0.044	<0.01	—	—	0.014	—	—	—	—
Cyanide, WAD (mg/L)	<0.01	—	<0.01	<0.01	—	—	<0.01	—	—	—	—
Nitrogen, Ammonia (NH3) (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Nitrogen, Nitrate (NO3) (mg/L)	12.9	13.4	8.10	4.5	4.89	10.2	9.93	9.79	13.3	12.1	9.19
Nitrogen, Nitrite (NO2) (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Potassium (K),Dissolved (mg/L)	3.28	—	3.74	1.88	—	—	2.89	—	—	—	—
Selenium (Se),Total (mg/L)	<0.005	—	<0.005	<0.005	—	—	<0.005	—	—	—	—
Sodium (Na),Dissolved (mg/L)	38.2	—	29.2	11.5	—	—	27.9	—	—	—	—
Sulfate (SO4) (mg/L)	88.0	—	63.9	29.6	—	—	47.2	—	—	—	—
Anion - Cation Balance (%)	0.458	—	0.240	1.07	—	—	1.62	—	—	—	—

Table D-13. Annie Creek @ USGS Water Quality 2006 (Page 2 of 2)

Parameter	1/6/2006	2/6/2006	4/4/2006	5/8/2006	6/5/2006	7/3/2006	8/8/2006	9/5/2006	10/2/2006	11/2/2006	12/5/2006
Anions (meq/L)	7.71	—	5.20	2.71	—	—	5.94	—	—	—	—
Cations (meq/L)	7.78	—	5.22	2.77	—	—	6.14	—	—	—	—
Electrical Conductivity (µmhos/cm)	726	—	522	297	—	—	588	—	—	—	—
pH (SU)	8.25	—	8.31	8.11	—	—	8.41	—	—	—	—
Total Dissolved Solids (mg/L)	452	—	326	183	—	—	390	—	—	—	—
Total Suspended Solids (mg/L)	<10.0	—	<10.0	<10.0	—	—	<10.0	—	—	—	—

Table D-14. Annie Creek @ USGS Water Quality 2007 (Page 1 of 2)

Parameter	1/17/07	2/20/07	3/23/07	4/5/07	5/3/07	6/12/07	7/11/07	8/2/07	9/26/07	10/24/07	11/28/07	12/12/07
Field Conductivity (µmhos/cm)	560	560	420	420	380	440	460	748	580	530	600	510
Field ORP (mV)	—	–67.0	–95	15.0	1.00	10.0	20.0	—	35.0	234	265	256
Field Oxygen (O2) (mg/L)	—	8.61	7.18	8.56	8.18	7.97	7.83	—	8.52	3.82	10.7	9.23
Field pH (SU)	8.72	8.76	8.63	8.83	8.70	8.38	8.54	8.67	8.78	8.72	8.72	8.75
Field Temperature (° C)	1.00	0.800	3.80	1.90	7.90	9.10	12.9	21.5	7.00	5.40	0.100	1.00
Field Flow Rate (gal/min)	—	—	1260	868	1110	2770	564	280	130	83.5	83.5	9.87
Arsenic (As),Dissolved (mg/L)	0.032	0.033	0.059	0.051	0.047	0.048	0.031	0.057	0.034	0.034	0.032	0.026
Cadmium (Cd),Dissolved (mg/L)	—	—	—	<0.001	—	—	—	—	—	—	—	—
Calcium (Ca),Dissolved (mg/L)	64.7	—	—	45.5	34.9	—	—	83.1	—	—	—	—
Copper (Cu),Dissolved (mg/L)	—	—	—	—	—	—	—	—	—	—	—	—
Gold (Au),Dissolved (mg/L)	—	—	—	—	—	—	—	—	—	—	—	—
Magnesium (Mg),Dissolved (mg/L)	26.1	—	—	13.1	10.5	—	—	27.9	—	—	—	—
Silver (Ag),Dissolved (mg/L)	—	—	—	—	—	—	—	—	—	—	—	—
Arsenic (As),Total (mg/L)	0.032	0.033	0.059	0.051	0.048	0.050	0.032	0.060	0.036	0.034	0.032	0.026
Cadmium (Cd),Total (mg/L)	<0.001	—	—	—	<0.001	—	—	<0.001	—	—	—	—
Copper (Cu),Total (mg/L)	<0.005	—	—	<0.005	<0.005	—	—	<0.005	—	—	—	—
Gold (Au),Total (mg/L)	0.002	—	—	0.002	0.004	v	—	0.001	—	—	—	—
Mercury (Hg),Total (mg/L)	—	—	—	—	—	—	—	—	—	—	—	—
Zinc (Zn),Total (mg/L)	0.061	—	—	<0.050	<0.050	—	—	<0.050	—	—	—	—
Bicarbonate (mg/L)	257	—	—	162	149	—	—	272	—	—	—	—
Carbonate (mg/L)	0.00	—	—	0.00	<5.00	—	—	10.4	—	—	—	—
Chloride (Cl-) (mg/L)	7.50	—	—	10.8	10.5	—	—	11.5	—	—	—	—

Table D-14. Annie Creek @ USGS Water Quality 2007 (Page 2 of 2)

Parameter	1/17/07	2/20/07	3/23/07	4/5/07	5/3/07	6/12/07	7/11/07	8/2/07	9/26/07	10/24/07	11/28/07	12/12/07
Cyanide, Total (mg/L)	0.022	—	—	0.036	0.02	—	—	0.059	—	—	—	—
Cyanide, WAD (mg/L)	<0.010	—	—	<0.010	<0.010	—	—	0.011	—	—	—	—
Fluoride (mg/L)	—	—	—	—	—	—	—	—	—	—	—	—
Nitrogen, Ammonia (NH3) (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Nitrogen, Nitrate (NO3) (mg/L)	13.5	13.4	9.06	8.29	6.39	7.60	6.03	14.3	10.2	9.05	9.39	7.95
Nitrogen, Nitrite (NO2) (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050	0.056	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Potassium (K),Dissolved (mg/L)	1.20	—	—	3.48	4.08	—	—	4.98	—	—	—	—
Selenium (Se),Total (mg/L)	<0.005	—	—	<0.005	<0.005	—	—	0.005	—	—	—	—
Sodium (Na),Dissolved (mg/L)	22.3	—	—	26.2	27	—	—	40.4	—	—	—	—
Sulfate (SO4) (mg/L)	53.1	—	—	49.6	36.9	—	—	96.3	—	—	—	—
Anion - Cation Balance (%)	–0.932	—	—	–0.082	–1.02	—	—	1.03	—	—	—	—
Anions (meq/L)	6.49	—	—	4.58	3.96	—	—	8.16	—	—	—	—
Cations (meq/L)	6.37	—	—	4.58	3.88	—	—	8.32	—	—	—	—
Electrical Conductivity (µmhos/cm)	635	—	—	463	414	—	—	778	—	—	—	—
pH (SU)	8.26	—	—	8.27	8.38	—	—	8.49	—	—	—	—
Total Dissolved Solids (mg/L)	373	—	—	278	229	—	—	488	—	—	—	—
Total Suspended Solids (mg/L)	<10.0	—	—	<10.0	<10.0	—	—	<10.0	—	—	—	—

Table D-15. Annie Creek @ USGS Water Quality 2008 (Page 1 of 2)

Parameter	5/7/2008	8/4/2008	9/4/2008	10/16/2008	11/19/2008	12/5/2008
Field Conductivity (µmhos/cm)	190	490	500	500	490	480
Field pH (SU)	8.70	8.83	8.79	8.80	8.72	8.68
Field Temperature (° C)	4.50	13.1	13.2	7.3	6.4	4.6
Field Flow Rate (gal/min)	4.70	301	130	—	301.1	301
Arsenic (As),Dissolved (mg/L)	0.016	0.024	0.019	0.020	0.019	0.019
Calcium (Ca),Dissolved (mg/L)	20.6	57.8	—	—	—	—
Magnesium (Mg),Dissolved (mg/L)	6.91	23.0	—	—	—	—
Arsenic (As),Total (mg/L)	0.021	0.025	0.018	0.019	0.019	0.019
Cadmium (Cd),Total (mg/L)	<0.001	<0.001	—	—	—	—
Copper (Cu),Total (mg/L)	<0.005	<0.005	—	—	—	—
Gold (Au),Total (mg/L)	0.003	<0.001	—	—	—	—
Zinc (Zn),Total (mg/L)	<0.050	<0.050	—	—	—	—
Bicarbonate (mg/L)	82.7	226	—	—	—	—
Carbonate (mg/L)	0.00	<5.00	—	—	—	—
Chloride (Cl-) (mg/L)	4.75	6.5	—	—	—	—
Cyanide, Total (mg/L)	0.013	0.016	—	—	—	—
Cyanide, WAD (mg/L)	<0.010	<0.010	—	—	—	—
Nitrogen, Ammonia (NH3) (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Nitrogen, Nitrate (NO3) (mg/L)	2.19	6.52	5.67	5.17	0.953	4.01
Nitrogen, Nitrite (NO2) (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Potassium (K),Dissolved (mg/L)	1.63	1.97	—	—	—	—
Selenium (Se),Total (mg/L)	<0.005	<0.005	—	—	—	—
Sodium (Na),Dissolved (mg/L)	7.34	14.6	—	—	—	—
Sulfate (SO4) (mg/L)	12.5	50.5	—	—	—	—
Anion - Cation Balance (%)	1.30	0.504	—	—	—	—

Table D-15. Annie Creek @ USGS Water Quality 2008 (Page 2 of 2)

Parameter	5/7/2008	8/4/2008	9/4/2008	10/16/2008	11/19/2008	12/5/2008
Anions (meq/L)	1.91	5.41	—	—	—	—
Cations (meq/L)	1.96	5.46	—	—	—	—
Electrical Conductivity (µmhos/cm)	—	533	—	—	—	—
pH (SU)	—	8.43	—	—	—	—
Total Dissolved Solids (mg/L)	148	336	—	—	—	—
Total Suspended Solids (mg/L)	11.0	<10.0	—	—	—	—

Table D-16. Annie Creek @ USGS Water Quality 2009 (Page 1 of 2)

Parameter	1/15/2009	4/30/2009	5/28/2009	6/18/2009	8/18/2009
Field Conductivity (µmhos/cm)	480	230	290	—	331
Field ORP (mV)	—	—	—	—	158
Field Oxygen (O2) (mg/L)	—	—	—	—	10.2
Field pH (SU)	8.60	8.28	8.46	—	8.49
Field Temperature (° C)	4.3	3.00	6.50	—	7.60
Field Flow Rate (gal/min)	129.7	—	3590	—	346
Arsenic (As),Dissolved (mg/L)	0.025	—	—	—	—
Cadmium (Cd),Dissolved (mg/L)	—	—	—	—	—
Calcium (Ca),Dissolved (mg/L)	58.6	26.7	24.3	28.7	—
Copper (Cu),Dissolved (mg/L)	—	—	—	—	<0.005
Gold (Au),Dissolved (mg/L)	—	—	—	—	0.001
Magnesium (Mg),Dissolved (mg/L)	20.6	8.20	8.85	11.2	—
Silver (Ag),Dissolved (mg/L)	—	—	—	—	<0.001
Arsenic (As),Total (mg/L)	0.025	0.010	0.010	0.013	0.018
Cadmium (Cd),Total (mg/L)	<0.001	<0.001	<0.001	<0.001	—
Copper (Cu),Total (mg/L)	<0.005	<0.005	<0.005	<0.005	—
Gold (Au),Total (mg/L)	0.001	0.003	0.016	<0.001	—
Mercury (Hg),Total (mg/L)	—	—	—	—	<0.0002
Zinc (Zn),Total (mg/L)	<0.05	<0.05	<0.05	<0.05	–
Bicarbonate (mg/L)	252	105	114	138	240
Carbonate (mg/L)	0.00	0.00	0.00	0.00	—
Chloride (Cl-) (mg/L)	5.25	4.25	3.50	3.50	—
Cyanide, Total (mg/L)	0.022	<0.010	<0.010	<0.010	0.017
Cyanide, WAD (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
Fluoride (mg/L)	—	—	—	—	0.225
Nitrogen, Ammonia (NH3) (mg/L)	<0.050	<0.050	—	—	<0.050
Nitrogen, Nitrate (NO3) (mg/L)	5.42	2.58	2.07	1.87	5.21
Nitrogen, Nitrite (NO2) (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050

Table D-16. Annie Creek @ USGS Water Quality 2009 (Page 2 of 2)

Parameter	1/15/2009	4/30/2009	5/28/2009	6/18/2009	8/18/2009
Potassium (K),Dissolved (mg/L)	1.10	1.13	0.954	1.20	—
Selenium (Se),Total (mg/L)	<0.005	<0.005	<0.005	<0.005	<0.005
Sodium (Na),Dissolved (mg/L)	16.5	6.95	5.56	7.05	17
Sulfate (SO4) (mg/L)	18.8	11.5	<10.0	16.1	23.6
Anion - Cation Balance (%)	2.92	1.57	2.09	–2.54	—
Anions (meq/L)	5.06	2.27	2.12	2.83	—
Cations (meq/L)	5.36	2.34	2.21	2.69	—
Electrical Conductivity (µmhos/cm)	501	232	251	276	506
pH (SU)	8.30	8.05	8.05	8.21	8.37
Total Dissolved Solids (mg/L)	282	131	153	156	263
Total Suspended Solids (mg/L)	<10.0	<10.0	<10.0	<10.0	<10.0

Table D-17. Annie Creek @ USGS Water Quality 2010

Parameter	1/22/2010	4/21/2010	5/19/2010	8/20/2010
Field Conductivity (µmhos/cm)	320	104	112	376
Field ORP (mV)	104	108	94.0	83.0
Field Oxygen (O2) (mg/L)	11.8	9.98	10.3	8.58
Field pH (SU)	8.39	8.41	8.28	8.53
Field Temperature (° C)	0.290	5.80	5.30	11.1
Field Flow Rate (gal/min)	—	3910	7930	259
Copper (Cu),Dissolved (mg/L)	<0.005	<0.005	<0.005	<0.005
Gold (Au),Dissolved (mg/L)	0.002	<0.001	<0.001	<0.001
Silver (Ag),Dissolved (mg/L)	<0.001	<0.001	<0.001	<0.001
Arsenic (As),Total (mg/L)	0.018	0.009	0.014	0.014
Mercury (Hg),Total (mg/L)	<0.0002	<0.0002	<0.0002	<0.0002
Bicarbonate (mg/L)	280	76.1	77.6	259
Cyanide, Total (mg/L)	0.042	<0.01	<0.01	0.027
Cyanide, WAD (mg/L)	<0.01	<0.01	<0.01	<0.01
Fluoride (mg/L)	0.217	0.108	0.124	0.214
Nitrogen, Ammonia (NH3) (mg/L)	<0.050	<0.050	<0.050	<0.050
Nitrogen, Nitrate (NO3) (mg/L)	10.5	0.736	1.36	6.94
Nitrogen, Nitrite (NO2) (mg/L)	<0.050	<0.050	<0.050	<0.050
Selenium (Se),Total (mg/L)	<0.005	<0.005	<0.005	<0.005
Sodium (Na),Dissolved (mg/L)	22.1	4.79	4.31	19.2
Sulfate (SO4) (mg/L)	50.2	<10	14.5	39
Electrical Conductivity (µmhos/cm)	601	163	180	526
pH (SU)	8.34	7.81	7.87	8.45
Total Dissolved Solids (mg/L)	343	112	118	299
Total Suspended Solids (mg/L)	23.0	<10.0	16.0	<10.0

Table D-18. Annie Creek @ USGS Water Quality 2011 (Page 1 of 2)

Parameter	1/19/2011	4/27/2011	5/11/2011	6/28/2011	7/20/2011	8/24/2011
Field Conductivity (µmhos/cm)	283	162	85.0	290	490	387
Field ORP (mV)	113	-54.0	39.0	79.0	138	-61.0
Field Oxygen (O2) (mg/L)	12.4	11.2	10.8	9.06	8.39	9.84
Field pH (SU)	8.43	8.49	8.34	8.38	8.50	8.63
Field Temperature (° C)	—	4.40	4.20	8.70	13.4	10.9
Field Flow Rate (gal/min)	188	1970	6440	4.26	—	—
Copper (Cu),Dissolved (mg/L)	<0.005	<0.005	<0.005	—	0.005	<0.005
Gold (Au),Dissolved (mg/L)	0.002	<0.001	<0.001	—	0.001	0.003
Silver (Ag),Dissolved (mg/L)	<0.001	<0.001	<0.001	—	<0.001	<0.001
Arsenic (As),Total (mg/L)	0.015	0.010	0.009	—	0.016	0.013
Mercury (Hg),Total (mg/L)	<0.0002	<0.0002	<0.0002	—	<0.0002	<0.0002
Bicarbonate (mg/L)	268	119	73.1	—	253	257
Cyanide, Total (mg/L)	0.046	<0.010	<0.010	0.021	0.011	0.016
Cyanide, WAD (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Fluoride (mg/L)	0.217	0.156	0.100	—	0.191	0.221
Nitrogen, Ammonia (NH3) (mg/L)	<0.050	<0.050	<0.050	—	—	<0.050
Nitrogen, Nitrate (NO3) (mg/L)	6.49	2.16	0.516	—	—	7.57
Nitrogen, Nitrite (NO2) (mg/L)	<0.050	<0.050	<0.050	—	—	<0.050
Selenium (Se),Total (mg/L)	<0.005	<0.005	<0.005	—	<0.005	<0.005

Table D-18. Annie Creek @ USGS Water Quality 2011 (Page 2 of 2)

Parameter	1/19/2011	4/27/2011	5/11/2011	6/28/2011	7/20/2011	8/24/2011
Sodium (Na),Dissolved (mg/L)	22.1	8.23	3.78	—	15.6	18.4
Sulfate (SO4) (mg/L)	42.4	19.8	<10.0	—	31.5	44.6
Electrical Conductivity (µmhos/cm)	557	265	146	—	484	552
pH (SU)	8.29	8.06	7.93	—	8.46	8.53
Total Dissolved Solids (mg/L)	295	163	119	—	246	305
Total Suspended Solids (mg/L)	<10.0	<10.0	<10.0	—	<10.0	<10.0

Table D-19. Lost Camp Water Quality 2006, 2007, and 2008 (Page 1 of 2)

Parameter	6/5/2006	11/2/2006	6/12/2007	11/28/2007	6/3/2008	11/19/2008
Field Conductivity (µmhos/cm)	130	160	110	340	100	210
Field ORP (mV)	—	—	—	273	—	—
Field Oxygen (O2) (mg/L)	—	—	—	9.01	—	—
Field pH (SU)	8.09	8.21	8.45	8.19	8.63	8.73
Field Temperature (° C)	11.7	0.4	8.90	0.600	9.10	1.5
Field Flow Rate (gal/min)	913.14	54.31	910	30.0	–	69.6
Calcium (Ca),Dissolved (mg/L)	14.1	20.8	14.6	39.9	10.8	24.7
Copper (Cu),Dissolved (mg/L)	—	—	—	—	—	—
Gold (Au),Dissolved (mg/L)	—	—	—	—	—	—
Magnesium (Mg),Dissolved (mg/L)	3.82	5.81	4.05	12.8	3.18	7.43
Silver (Ag),Dissolved (mg/L)	—	—	—	—	—	—
Arsenic (As),Total (mg/L)	<0.005	<0.005	<0.005	0.008	0.005	0.007
Cadmium (Cd),Total (mg/L)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Copper (Cu),Total (mg/L)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Gold (Au),Total (mg/L)	0.002	0.002	<0.001	<0.001	0.003	<0.001
Mercury (Hg),Total (mg/L)	—	—	—	—	—	—
Zinc (Zn),Total (mg/L)	<0.050	0.056	<0.050	<0.050	<0.050	<0.050
Bicarbonate (mg/L)	63.7	88.7	65.1	187	51.3	111
Carbonate (mg/L)	0.00	0.00	0.00	0.00	0.00	0.00
Chloride (Cl-) (mg/L)	3.75	7.25	3.75	3.75	3.25	9.50

Table D-19. Lost Camp Water Quality 2006, 2007, and 2008 (Page 2 of 2)

Parameter	6/5/2006	11/2/2006	6/12/2007	11/28/2007	6/3/2008	11/19/2008
Cyanide, Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cyanide, WAD (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Nitrogen, Nitrate (NO3) (mg/L)	<0.050	0.219	0.085	1.92	<0.050	0.085
Nitrogen, Nitrite (NO2) (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Potassium (K),Dissolved (mg/L)	0.534	0.540	0.740	0.940	0.772	0.673
Selenium (Se),Total (mg/L)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Sodium (Na),Dissolved (mg/L)	2.23	3.20	2.38	5.70	2.39	2.77
Sulfate (SO4) (mg/L)	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Anion - Cation Balance (%)	–0.973	–0.187	0.189	0.084	–0.481	–2.78
Anions (meq/L)	1.15	1.67	1.18	3.31	0.933	2.09
Cations (meq/L)	1.13	1.67	1.18	3.32	0.924	1.98
Electrical Conductivity (µmhos/cm)	123	179	127	351	104	219
pH (SU)	7.96	7.95	7.78	7.84	7.92	7.99
Total Dissolved Solids (mg/L)	66.0	107	70.0	191	78	115
Total Suspended Solids (mg/L)	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0

Table D-20. Lost Camp Water Quality 2009, 2010, and 2011 (Page 1 of 2)

Parameter	6/10/2009	8/18/2009	10/5/2009	10/6/2009	10/7/2009	8/20/2010	8/24/2011
Field Conductivity (µmhos/cm)	150	149	—	—	—	169	680
Field ORP (mV)	—	152	—	—	—	113	-37.0
Field Oxygen (O2) (mg/L)	—	9.57	—	—	—	8.06	9.08
Field pH (SU)	8.30	8.12	—	—	—	8.02	8.39
Field Temperature (° C)	6.70	7.60	—	—	—	10.6	11.2
Field Flow Rate (gal/min)	—	120	—	—	—	40.0	56.0
Calcium (Ca),Dissolved (mg/L)	14.1	—	—	—	—	—	—
Copper (Cu),Dissolved (mg/L)	—	<0.005	—	—	—	<0.005	<0.005
Gold (Au),Dissolved (mg/L)	—	<0.001	—	—	—	<0.001	<0.001
Magnesium (Mg),Dissolved (mg/L)	5.12	—	—	—	—	—	—
Silver (Ag),Dissolved (mg/L)	—	<0.001	—	—	—	<0.001	<0.001
Arsenic (As),Total (mg/L)	0.008	<0.005	—	—	—	<0.005	<0.005
Cadmium (Cd),Total (mg/L)	<0.001	—	—	—	—	—	—
Copper (Cu),Total (mg/L)	<0.005	—	—	—	—	—	—
Gold (Au),Total (mg/L)	<0.001	—	—	—	—	—	—
Mercury (Hg),Total (mg/L)	—	<0.0002	—	—	—	<0.0002	<0.0002
Zinc (Zn),Total (mg/L)	<0.05	—	—	—	—	—	—
Bicarbonate (mg/L)	68.7	122	—	—	—	131	140
Carbonate (mg/L)	0.00	—	—	—	—	—	—
Chloride (Cl-) (mg/L)	4.75	—	—	—	—	—	—

Table D-20. Lost Camp Water Quality 2009, 2010, and 2011 (Page 2 of 2)

Parameter	6/10/2009	8/18/2009	10/5/2009	10/6/2009	10/7/2009	8/20/2010	8/24/2011
Cyanide, Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cyanide, WAD (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Fluoride (mg/L)	—	<0.05	—	—	—	0.109	0.108
Nitrogen, Ammonia (NH3) (mg/L)	—	<0.050	—	—	—	<0.050	<0.050
Nitrogen, Nitrate (NO3) (mg/L)	0.057	0.077	—	—	—	0.236	0.134
Nitrogen, Nitrite (NO2) (mg/L)	<0.050	<0.050	—	—	—	<0.050	<0.050
Potassium (K),Dissolved (mg/L)	3.03	—	—	—	—	—	—
Selenium (Se),Total (mg/L)	<0.005	<0.005	—	—	—	<0.005	<0.005
Sodium (Na),Dissolved (mg/L)	2.65	3.12	—	—	—	3.60	3.04
Sulfate (SO4) (mg/L)	<10.0	<10.0	—	—	—	<10.0	<10.0
Anion - Cation Balance (%)	2.04	—	—	—	—	—	—
Anions (meq/L)	1.26	—	—	—	—	—	—
Cations (meq/L)	1.32	—	—	—	—	—	—
Electrical Conductivity (µmhos/cm)	133	231	—	—	—	242	254
pH (SU)	7.88	8.00	—	—	—	8.07	8.14
Total Dissolved Solids (mg/L)	107	107	—	—	—	129	120
Total Suspended Solids (mg/L)	31.0	<10.0	—	—	—	<10.0	<10.0

Table D-21. SS-01 Water Quality 2008 and 2009

Parameter	1/22/2008	4/17/2008	3/19/2009
Field Conductivity (µmhos/cm)	560	640	670
Field pH (SU)	8.25	8.13	7.83
Field Temperature (° C)	6.00	7.50	8.20
Field Flow Rate (gal/min)	—	0.450	4.75
Calcium (Ca),Dissolved (mg/L)	86.1	82.3	—
Magnesium (Mg),Dissolved (mg/L)	17.3	19.9	—
Mercury (Hg),Total (mg/L)	<0.0002	<0.0002	—
Arsenic (As),Total Recoverable (mg/L)	0.015	0.013	—
Cadmium (Cd),Total Recoverable (mg/L)	<0.001	<0.001	—
Chromium (Cr),Total Recoverable (mg/L)	<0.001	<0.001	—
Copper (Cu),Total Recoverable (mg/L)	<0.005	<0.005	—
Lead (Pb),Total Recoverable (mg/L)	<0.001	<0.001	—
Nickel (Ni),Total Recoverable (mg/L)	<0.005	<0.005	—
Silver (Ag),Total Recoverable (mg/L)	<0.001	<0.001	—
Zinc (Zn),Total Recoverable (mg/L)	0.053	0.057	—
Nitrogen, Nitrate (NO3) (mg/L)	5.11	6.08	—
Nitrogen, Nitrite (NO2) (mg/L)	<0.050	<0.050	—
Selenium (Se),Total Recoverable (mg/L)	<0.005	<0.005	—
Sulfate (SO4) (mg/L)	138	217	—
Hardness (mg/L)	286	287	—
pH (SU)	7.79	7.84	7.84
Total Dissolved Solids (mg/L)	387	450	390
Total Suspended Solids (mg/L)	<10.0	<10.0	<10.0

Table D-22. SS-04 Water Quality 2006

Parameter	1/11/2006	4/10/2006	5/17/2006	8/2/2006
Arsenic (As),Dissolved (mg/L)	0.007	0.007	0.013	0.012
Copper (Cu),Dissolved (mg/L)	<0.005	<0.005	<0.005	<0.005
Zinc (Zn),Dissolved (mg/L)	<0.050	0.093	<0.050	<0.050
Mercury (Hg),Total (mg/L)	<0.0002	<0.0002	<0.0002	<0.0002
Cyanide, Total (mg/L)	<0.010	<0.010	<0.010	<0.010
Cyanide, WAD (mg/L)	<0.010	<0.010	<0.010	<0.010
Fluoride (mg/L)	0.789	0.297	0.311	0.944
Nitrogen, Nitrate (NO3) (mg/L)	0.365	0.686	0.258	<0.050
Nitrogen, Nitrite (NO2) (mg/L)	<0.050	<0.050	<0.050	<0.050
Selenium (Se),Dissolved (mg/L)	<0.005	<0.005	<0.005	<0.005
Sodium (Na),Dissolved (mg/L)	37.1	28.2	8.25	14.7
Sulfate (SO4) (mg/L)	97.8	19.3	11.9	208
Electrical Conductivity (µmhos/cm)	690	439	151	677
pH (SU)	7.42	7.50	7.49	7.12
Total Dissolved Solids (mg/L)	365	269	93.0	453
Total Suspended Solids (mg/L)	<10.0	<10.0	<10.0	<10.0

Table D-23. SS-04 Water Quality 2007

Parameter	1/3/2007	4/19/2007	5/17/2007	8/16/2007
Field Conductivity (µmhos/cm)	520	230	220	648
Field pH (SU)	7.49	7.76	7.45	7.35
Field Temperature (° C)	3.30	5.40	9.40	13.5
Field Flow Rate (gal/min)	44.7	858	350	51.8
Arsenic (As),Dissolved (mg/L)	0.010	0.010	<0.005	0.020
Copper (Cu),Dissolved (mg/L)	<0.005	<0.005	<0.005	<0.005
Zinc (Zn),Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050
Mercury (Hg),Total (mg/L)	<0.0002	<0.0002	<0.0002	<0.0002
Cyanide, Total (mg/L)	<0.010	<0.010	<0.010	<0.010
Cyanide, WAD (mg/L)	<0.010	<0.010	<0.010	<0.010
Fluoride (mg/L)	0.876	0.294	0.403	0.901
Nitrogen, Nitrate (NO3) (mg/L)	0.325	0.263	0.153	0.065
Nitrogen, Nitrite (NO2) (mg/L)	<0.050	<0.050	<0.050	<0.050
Selenium (Se),Dissolved (mg/L)	<0.005	<0.005	<0.005	<0.005
Sodium (Na),Dissolved (mg/L)	34.7	13.0	11.1	12.7
Sulfate (SO4) (mg/L)	111	17.0	37.9	223
Electrical Conductivity (µmhos/cm)	574	235	215	696
pH (SU)	7.21	7.60	7.57	7.14
Total Dissolved Solids (mg/L)	314	142	121	443
Total Suspended Solids (mg/L)	<10.0	<10.0	<10.0	<10.0

Table D-24. SS-04 Water Quality 2008

Parameter	1/30/2008	4/24/2008	5/28/2008	8/28/2008
Field Conductivity (µmhos/cm)	210	340	150	570
Field pH (SU)	7.29	8.40	8.70	6.98
Field Temperature (° C)	4.90	4.20	8.60	13.1
Field Flow Rate (gal/min)	—	256	—	—
Arsenic (As),Dissolved (mg/L)	<0.005	0.010	0.015	0.016
Copper (Cu),Dissolved (mg/L)	<0.005	<0.005	<0.005	<0.005
Zinc (Zn),Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050
Mercury (Hg),Total (mg/L)	<0.0002	<0.0002	<0.0002	<0.0002
Cyanide, Total (mg/L)	<0.010	<0.010	<0.010	<0.010
Cyanide, WAD (mg/L)	<0.010	<0.010	<0.010	<0.010
Fluoride (mg/L)	—	0.371	0.360	0.818
Nitrogen, Nitrate (NO3) (mg/L)	0.753	0.650	0.227	<0.050
Nitrogen, Nitrite (NO2) (mg/L)	<0.050	<0.050	<0.050	<0.050
Selenium (Se),Dissolved (mg/L)	<0.005	<0.005	<0.005	<0.005
Sodium (Na),Dissolved (mg/L)	4.53	22.2	8.13	15.2
Sulfate (SO4) (mg/L)	1100	26.7	5.84	141
Electrical Conductivity (µmhos/cm)	1950	365	165	577
pH (SU)	6.94	7.58	7.66	7.28
Total Dissolved Solids (mg/L)	1720	201	98.0	366
Total Suspended Solids (mg/L)	233	<10.0	18.0	<10.0

Table D-25. SS-04 Water Quality 2009

Parameter	1/22/2009	4/23/2009	5/20/2009	8/5/2009
Field Conductivity (µmhos/cm)	219	210	140	540
Field pH (SU)	7.33	7.29	7.47	7.36
Field Temperature (° C)	5.1	6.7	8.3	12.1
Field Flow Rate (gal/min)	49.4	2190	—	27.0
Arsenic (As),Dissolved (mg/L)	0.012	0.011	0.013	0.012
Copper (Cu),Dissolved (mg/L)	<0.005	<0.005	<0.005	<0.005
Zinc (Zn),Dissolved (mg/L)	<0.050	0.095	<0.050	<0.050
Mercury (Hg),Total (mg/L)	<0.0002	<0.0002	<0.0002	<0.0002
Cyanide, Total (mg/L)	<0.010	<0.010	<0.010	<0.010
Cyanide, WAD (mg/L)	<0.010	<0.010	<0.010	<0.010
Fluoride (mg/L)	1.27	0.294	0.293	0.702
Nitrogen, Nitrate (NO3) (mg/L)	0.211	0.343	0.163	0.167
Nitrogen, Nitrite (NO2) (mg/L)	<0.050	<0.050	<0.050	<0.050
Selenium (Se),Dissolved (mg/L)	<0.005	<0.005	<0.005	<0.005
Sodium (Na),Dissolved (mg/L)	19.9	9.65	4.80	16.4
Sulfate (SO4) (mg/L)	145	23.3	15.6	85.5
Electrical Conductivity (µmhos/cm)	615	207	125	474
pH (SU)	7.21	7.48	7.59	7.34
Total Dissolved Solids (mg/L)	334	134	92.0	259
Total Suspended Solids (mg/L)	14.0	43.0	<10.0	<10.0

Table D-26. SS-04 Water Quality 2010

Parameter	1/19/2010	4/26/2010	5/24/2010	8/12/2010
Field Conductivity (µmhos/cm)	760	113	98.6	409
Field pH (SU)	7.21	7.75	7.47	7.45
Field Temperature (° C)	2.20	3.90	6.06	16.5
Field Flow Rate (gal/min)	20.8	1300	1230	33.0
Arsenic (As),Dissolved (mg/L)	0.005	0.011	0.011	0.006
Copper (Cu),Dissolved (mg/L)	<0.005	<0.005	<0.005	<0.005
Zinc (Zn),Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050
Mercury (Hg),Total (mg/L)	<0.0002	—	<0.0002	<0.0002
Cyanide, Total (mg/L)	<0.010	<0.010	<0.010	<0.010
Cyanide, WAD (mg/L)	<0.010	<0.010	<0.010	<0.010
Fluoride (mg/L)	0.817	0.288	0.293	0.662
Nitrogen, Nitrate (NO3) (mg/L)	0.479	0.722	0.438	0.169
Nitrogen, Nitrite (NO2) (mg/L)	<0.05	<0.05	<0.05	<0.05
Selenium (Se),Dissolved (mg/L)	<0.005	<0.005	<0.005	<0.005
Sodium (Na),Dissolved (mg/L)	30.8	11.0	7.67	15.7
Sulfate (SO4) (mg/L)	155	11.6	13.2	109
Electrical Conductivity (µmhos/cm)	714	185	153	482
pH (SU)	7.21	7.57	7.60	7.51
Total Dissolved Solids (mg/L)	393	83.0	104	306
Total Suspended Solids (mg/L)	49.0	<10.0	<10.0	14.0

Table D-27. SS-04 Water Quality 2011

Parameter	1/7/2011	4/20/2011	5/12/11	7/19/2011	8/5/2011
Field Conductivity (µmhos/cm)	363	208	91.0	360	520
Field ORP (mV)	—	7.00	-87.0	-38.0	15.0
Field Oxygen (mg/L)	—	9.93	10.3	7.60	7.26
Field pH (SU)	7.63	6.96	7.77	7.18	7.20
Field Temperature (° C)	1.50	4.10	3.90	15.4	15.9
Field Flow Rate (gal/min)	18.0	177	1510	—	—
Arsenic (As),Dissolved (mg/L)	0.009	<0.005	0.014	0.010	0.008
Copper (Cu),Dissolved (mg/L)	<0.005	<0.005	<0.005	<0.005	<0.005
Zinc (Zn),Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
Mercury (Hg),Total (mg/L)	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Cyanide, Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
Cyanide, WAD (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
Fluoride (mg/L)	0.751	0.411	0.266	0.628	0.705
Nitrogen, Nitrate (NO3) (mg/L)	0.606	0.599	0.754	0.293	0.458
Nitrogen, Nitrite (NO2) (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
Selenium (Se),Dissolved (mg/L)	<0.005	<0.005	<0.005	<0.005	<0.005
Sodium (Na),Dissolved (mg/L)	16.4	18.4	7.42	14.2	14.9
Sulfate (SO4) (mg/L)	193	39.2	17.2	88.9	134
Electrical Conductivity (µmhos/cm)	638	335	159	405	510
pH (SU)	7.33	7.40	7.45	7.30	7.28
Total Dissolved Solids (mg/L)	391	208	109	231	284
Total Suspended Solids (mg/L)	14.0	<10.0	<10.0	<10.0	<10.0

Table D-28. SS-05 Water Quality 2004

Parameter	5/2004
Field Conductivity (µmhos/cm)	250
Field pH (SU)	7.80
Field Temperature (° C)	9.00
Field Flow Rate (gal/min)	278.28

Table D-29. SS-05 Water Quality 2010 (Page 1 of 2)

Parameter	10/7/2010	11/17/2010	12/16/2010
Field Conductivity (µmhos/cm)	363	630	337
Field ORP (mV)	86.0	96.0	135
Field Oxygen (O2) (mg/L)	8.49	12.2	10.4
Field pH (SU)	7.84	8.23	7.93
Field Temperature (° C)	10.9	1.30	0.400
Field Flow Rate (gal/min)	2.60	65.0	55.0
Calcium (Ca),Dissolved (mg/L)	61.7	81.6	78.3
Magnesium (Mg),Dissolved (mg/L)	17.2	17.5	19.1
Aluminum (Al),Total (mg/L)	0.038	0.040	0.049
Antimony (Sb),Total (mg/L)	<0.005	<0.005	<0.005
Arsenic (As),Total (mg/L)	0.007	0.005	0.005
Barium (Ba),Total (mg/L)	0.196	0.210	0.176
Beryllium (Be),Total (mg/L)	<0.001	<0.001	<0.001
Cadmium (Cd),Total (mg/L)	<0.001	<0.001	<0.001
Chromium (Cr),Total (mg/L)	<0.001	<0.001	0.001
Cobalt (Co),Total (mg/L)	<0.001	<0.001	<0.001
Copper (Cu),Total (mg/L)	<0.005	<0.005	<0.005
Gold (Au),Total (mg/L)	<0.001	<0.001	<0.001
Iron (Fe),Total (mg/L)	0.053	0.055	<0.05
Lead (Pb),Total (mg/L)	<0.001	<0.001	<0.001
Lithium (Li),Total (mg/L)	<0.002	0.010	0.008
Manganese (Mn),Total (mg/L)	<0.010	<0.010	<0.010
Mercury (Hg),Total (mg/L)	<0.0002	<0.0002	<0.0002
Molybdenum (Mo),Total (mg/L)	<0.001	<0.001	<0.001
Nickel (Ni),Total (mg/L)	<0.005	<0.005	<0.005
Silver (Ag),Total (mg/L)	<0.001	<0.001	<0.001
Strontium (Sr),Total (mg/L)	0.335	0.294	0.299
Vanadium (V),Total (mg/L)	<0.005	<0.005	<0.005

Table D-29. SS-05 Water Quality 2010 (Page 2 of 2)

Parameter	10/7/2010	11/17/2010	12/16/2010
Zinc (Zn),Total (mg/L)	<0.050	<0.050	<0.050
Bicarbonate (mg/L)	228	150	150
Boron (B),Total (mg/L)	0.028	<0.02	0.022
Carbonate (mg/L)	0.00	0.00	0.00
Chloride (Cl–) (mg/L)	15.3	29.4	24.8
Cyanide, Free (mg/L)	<0.010	<0.010	<0.010
Cyanide, Total (mg/L)	<0.010	<0.010	<0.010
Cyanide, WAD (mg/L)	<0.010	<0.010	<0.010
Fluoride (mg/L)	0.369	0.288	0.283
Nitrogen, Ammonia (NH3) (mg/L)	<0.050	<0.050	<0.050
Nitrogen, Nitrate (NO3) (mg/L)	0.096	0.104	0.296
Nitrogen, Nitrite (NO2) (mg/L)	<0.050	<0.050	<0.050
Potassium (K),Dissolved (mg/L)	4.02	2.50	2.58
Selenium (Se),Total (mg/L)	<0.005	<0.005	<0.005
Silicon (Si),Total (mg/L)	6.99	5.96	6.06
Sodium (Na),Dissolved (mg/L)	19.1	20.4	16.8
Sulfate (SO4) (mg/L)	64.5	147	163
Alkalinity (mg/L)	187	123	123
Anion – Cation Balance (%)	–1.02	0.721	–2.42
Anions (meq/L)	5.54	6.37	6.59
Cations (meq/L)	5.43	6.46	6.27
Electrical Conductivity (µmhos/cm)	521	612	638
Hardness (mg/L)	225	276	274
pH (SU)	7.98	8.02	7.83
Total Dissolved Solids (mg/L)	312	369	384
Total Suspended Solids (mg/L)	<10.0	<10.0	<10.0
Turbidity (NTU)	0.30	0.25	0.40

Table D-30. SS-05 Water Quality 2011 (Page 1 of 3)

Parameter	1/21/2011	2/11/2011	3/16/2011	4/14/2011	5/12/2011	6/9/2011	7/15/2011	8/5/2011
Field Conductivity (µmhos/cm)	325	290	423	212	129	184	453	610
Field ORP (mV)	116	54.0	–12.0	–	–3.00	77.0	1.00	68.0
Field Oxygen (O2) (mg/L)	10.0	11.0	11.3	–	10.6	9.09	7.39	7.91
Field pH (SU)	7.78	8.09	8.10	8.18	7.48	8.04	8.06	7.60
Field Temperature (° C)	0.900	0.200	0.400	2.6	4.00	9.50	18.7	15.3
Field Flow Rate (gal/min)	18.0	2.00	296	495	1650	517	64.0	144
Calcium (Ca),Dissolved (mg/L)	67.5	64.5	78.4	32.5	22.5	28.2	63.8	73.0
Magnesium (Mg),Dissolved (mg/L)	18.5	17.4	15.9	7.88	4.49	6.43	14.3	16.6
Aluminum (Al),Total (mg/L)	0.126	0.227	0.717	1.37	1.78	0.575	0.052	0.020
Antimony (Sb),Total (mg/L)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Arsenic (As),Total (mg/L)	0.006	0.006	0.013	0.010	0.026	0.012	0.007	0.008
Barium (Ba),Total (mg/L)	0.140	0.140	0.229	0.202	0.243	0.172	0.178	0.251
Beryllium (Be),Total (mg/L)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium (Cd),Total (mg/L)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium (Cr),Total (mg/L)	<0.001	<0.001	0.002	0.002	0.003	<0.001	<0.001	<0.001
Cobalt (Co),Total (mg/L)	<0.001	<0.001	0.001	<0.001	0.002	0.001	<0.001	<0.001
Copper (Cu),Total (mg/L)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Gold (Au),Total (mg/L)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Iron (Fe),Total (mg/L)	0.240	0.376	1.94	1.66	2.61	0.878	0.081	0.059

Table D-30. SS-05 Water Quality 2011 (Page 2 of 3)

Parameter	1/21/2011	2/11/2011	3/16/2011	4/14/2011	5/12/2011	6/9/2011	7/15/2011	8/5/2011
Lead (Pb),Total (mg/L)	<0.001	<0.001	0.002	0.002	0.003	<0.001	<0.001	<0.001
Lithium (Li),Total (mg/L)	0.009	0.008	0.016	<0.002	0.008	0.007	0.011	0.011
Manganese (Mn),Total (mg/L)	0.022	0.033	0.263	0.243	0.347	0.278	0.020	<0.010
Mercury (Hg),Total (mg/L)	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum (Mo),Total (mg/L)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nickel (Ni),Total (mg/L)	<0.005	<0.005	0.008	0.006	0.006	0.007	<0.005	<0.005
Silver (Ag),Total (mg/L)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Strontium (Sr),Total (mg/L)	0.294	0.29	0.276	0.128	0.087	0.106	0.199	0.294
Vanadium (V),Total (mg/L)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Zinc (Zn),Total (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Bicarbonate (mg/L)	162	175	101	86.9	60.0	69.2	123	160
Boron (B),Total (mg/L)	<0.020	0.021	0.030	<0.020	<0.020	<0.020	0.021	0.058
Carbonate (mg/L)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chloride (Cl–) (mg/L)	42.6	43.9	131	39.3	16.3	12.2	23.7	25.6
Cyanide, Free (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cyanide, Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.100	<0.010	<0.010	<0.010
Cyanide, WAD (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Fluoride (mg/L)	0.302	0.325	0.380	0.350	0.288	0.431	0.455	0.356
Nitrogen, Ammonia (NH3) (mg/L)	<0.050	<0.050	0.346	<0.050	<0.050	<0.050	<0.050	<0.050
Nitrogen, Nitrate (NO3) (mg/L)	0.414	0.416	1.16	0.608	0.695	0.339	0.122	0.219

Table D-30. SS-05 Water Quality 2011 (Page 3 of 3)

Parameter	1/21/2011	2/11/2011	3/16/2011	4/14/2011	5/12/2011	6/9/2011	7/15/2011	8/5/2011
Nitrogen, Nitrite (NO2) (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Potassium (K),Dissolved (mg/L)	2.72	3.23	3.10	2.05	1.68	1.98	2.83	2.98
Selenium (Se),Total (mg/L)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Silicon (Si),Total (mg/L)	6.34	6.14	9.48	9.61	9.98	7.67	8.49	9.04
Sodium (Na),Dissolved (mg/L)	23.4	23.1	46.2	23.1	10.5	10.9	16.7	18.0
Sulfate (SO4) (mg/L)	104	77.0	106	37.7	27.0	46.3	126	136
Alkalinity (mg/L)	133	143	82.9	71.2	49.2	56.7	101	131
Anion-Cation Balance (%)	–0.743	–0.164	–2.14	–0.651	–1.62	–0.366	–1.72	–2.84
Anions (meq/L)	6.07	5.76	7.66	3.38	2.07	2.49	5.34	6.21
Cations (meq/L)	5.98	5.74	7.34	3.34	2.00	2.47	5.16	5.87
Electrical Conductivity (µmhos/cm)	594	566	794	376	219	259	519	592
Hardness (mg/L)	245	233	261	114	74.7	96.9	218	251
pH (SU)	7.94	7.85	7.79	7.84	7.62	7.91	8.15	8.10
Total Dissolved Solids (mg/L)	347	314	440	219	146	126	231	342
Total Suspended Solids (mg/L)	<10.0	14.4	22.0	11.0	21.0	<10.0	<10.0	<10.0
Turbidity (NTU)	0.50	6.2	21	17	19	5.9	0.65	0.50

Table D-31. SS-06 Water Quality 2006

Parameter	1/11/2006	4/10/2006	5/8/2006	8/2/2006
Calcium (Ca),Dissolved (mg/L)	86.1	73.1	84.3	101
Magnesium (Mg),Dissolved (mg/L)	42.0	25.9	24.6	46.8
Mercury (Hg),Total (mg/L)	<0.0002	0.0004	<0.0002	<0.0002
Arsenic (As),Total Recoverable (mg/L)	0.005	0.024	0.024	0.013
Cadmium (Cd),Total Recoverable (mg/L)	<0.001	<0.001	<0.001	<0.001
Chromium (Cr),Total Recoverable (mg/L)	<0.001	<0.001	<0.001	<0.001
Copper (Cu),Total Recoverable (mg/L)	<0.005	<0.005	<0.005	<0.005
Lead (Pb),Total Recoverable (mg/L)	<0.001	0.002	0.002	<0.001
Nickel (Ni),Total Recoverable (mg/L)	<0.005	<0.005	<0.005	0.005
Silver (Ag),Total Recoverable (mg/L)	<0.001	<0.001	<0.001	<0.001
Zinc (Zn),Total Recoverable (mg/L)	<0.050	<0.050	<0.050	<0.050
Nitrogen, Nitrate (NO3) (mg/L)	1.95	3.22	3.58	3.02
Nitrogen, Nitrite (NO2) (mg/L)	<0.050	<0.050	<0.050	<0.050
Selenium (Se),Total Recoverable (mg/L)	<0.005	<0.005	<0.005	<0.005
Sulfate (SO4) (mg/L)	215	129	167	254
Hardness (mg/L)	388	289	312	445
pH (SU)	8.00	8.15	8.21	8.05
Total Dissolved Solids (mg/L)	519	377	422	631
Total Suspended Solids (mg/L)	<10.0	24.0	17.0	<10.0

Table D-32. SS-06 Water Quality 2007

Parameter	1/4/2007	4/26/2007	5/26/2007	8/16/2007
Field Conductivity (µmhos/cm)	700	500	590	709
Field pH (SU)	8.15	8.32	8.35	8.05
Field Temperature (° C)	1.00	6.40	9.60	16.8
Field Flow Rate (gal/min)	17.9	308	330	138
Calcium (Ca),Dissolved (mg/L)	111	63.9	85.2	77.9
Magnesium (Mg),Dissolved (mg/L)	44.5	25.9	31.6	37.6
Mercury (Hg),Total (mg/L)	<0.0002	<0.0002	<0.0002	<0.0002
Arsenic (As),Total Recoverable (mg/L)	<0.005	0.005	0.006	0.009
Cadmium (Cd),Total Recoverable (mg/L)	<0.001	<0.001	<0.001	<0.001
Chromium (Cr),Total Recoverable (mg/L)	<0.001	<0.001	<0.001	<0.001
Copper (Cu),Total Recoverable (mg/L)	<0.005	<0.005	<0.005	<0.005
Lead (Pb),Total Recoverable (mg/L)	<0.001	<0.001	<0.001	<0.001
Nickel (Ni),Total Recoverable (mg/L)	<0.005	<0.005	<0.005	<0.005
Silver (Ag),Total Recoverable (mg/L)	<0.001	<0.001	<0.001	<0.001
Zinc (Zn),Total Recoverable (mg/L)	<0.050	<0.050	<0.050	<0.050
Nitrogen, Nitrate (NO3) (mg/L)	3.47	1.90	2.56	2.13
Nitrogen, Nitrite (NO2) (mg/L)	<0.050	<0.050	<0.050	<0.050
Selenium (Se),Total Recoverable (mg/L)	<0.005	<0.005	<0.005	<0.005
Sulfate (SO4) (mg/L)	251	109	182	221
Hardness (mg/L)	460	266	343	349
pH (SU)	7.95	8.15	8.30	7.97
Total Dissolved Solids (mg/L)	576	390	464	527
Total Suspended Solids (mg/L)	<10.0	<10.0	<10.0	<10.0

Table D-33. SS-06 Water Quality 2008 (Page 1 of 2)

Parameter	1/24/2008	4/18/2008	5/16/2008	8/26/2008
Field Conductivity (µmhos/cm)	730	610	410	740
Field pH (SU)	8.32	8.53	8.77	8.21
Field Temperature (° C)	0.100	3.50	7.90	8.21
Field Flow Rate (gal/min)	9.00	63.4	4.00	—
Arsenic (As),Dissolved (mg/L)	—	—	0.009	—
Barium (Ba),Dissolved (mg/L)	—	—	0.0707	—
Cadmium (Cd),Dissolved (mg/L)	—	—	<0.001	—
Calcium (Ca),Dissolved (mg/L)	84.8	67.6	49.6	87.5
Chromium (Cr),Dissolved (mg/L)	—	—	<0.001	—
Copper (Cu),Dissolved (mg/L)	—	—	<0.005	—
Gold (Au),Dissolved (mg/L)	—	—	0.001	—
Iron (Fe),Dissolved (mg/L)	—	—	0.0516	—
Lead (Pb),Dissolved (mg/L)	—	—	<0.001	—
Magnesium (Mg),Dissolved (mg/L)	35.1	32.1	14.9	37.5
Zinc (Zn),Dissolved (mg/L)	—	—	<0.05	—
Mercury (Hg),Total (mg/L)	<0.0002	<0.0002	<0.0002	<0.0002
Arsenic (As),Total Recoverable (mg/L)	0.006	<0.005	0.0132	0.008
Cadmium (Cd),Total Recoverable (mg/L)	<0.001	<0.001	<0.001	<0.001
Chromium (Cr),Total Recoverable (mg/L)	<0.001	<0.001	<0.001	<0.001
Copper (Cu),Total Recoverable (mg/L)	0.010	<0.005	<0.005	<0.005
Lead (Pb),Total Recoverable (mg/L)	<0.001	<0.001	0.002	<0.001
Nickel (Ni),Total Recoverable (mg/L)	<0.005	<0.005	<0.005	<0.005
Silver (Ag),Total Recoverable (mg/L)	<0.001	<0.001	<0.001	<0.001
Zinc (Zn),Total Recoverable (mg/L)	<0.050	<0.050	<0.050	<0.050
Bicarbonate (mg/L)	—	—	148	—
Chloride (Cl-) (mg/L)	—	—	2.75	—
Cyanide, Total (mg/L)	—	—	<0.010	—
Cyanide, WAD (mg/L)	—	—	<0.010	—

Table D-33. SS-06 Water Quality 2008 (Page 2 of 2)

Parameter	1/24/2008	4/18/2008	5/16/2008	8/26/2008
Fluoride (mg/L)	—	—	0.31	—
Nitrogen, Nitrate (NO3) (mg/L)	1.76	4.05	2.15	2.96
Nitrogen, Nitrite (NO2) (mg/L)	<0.050	<0.050	<0.050	<0.050
Selenium (Se),Dissolved (mg/L)	—	—	<0.005	—
Selenium (Se),Total Recoverable (mg/L)	<0.005	<0.005	<0.005	<0.005
Sodium (Na),Dissolved (mg/L)	—	—	4.25	—
Sulfate (SO4) (mg/L)	222	186	95.7	227
Electrical Conductivity (µmhos/cm)	—	—	456	—
Hardness (mg/L)	356	301	185	373
pH (SU)	7.96	8.08	8.20	8.26
Total Dissolved Solids (mg/L)	497	430	287	532
Total Suspended Solids (mg/L)	<10.0	<10.0	<10.0	<10.0

Table D-34. SS-06 Water Quality 2009

Parameter	1/19/2009	4/22/2009	5/20/2009	8/6/2009
Field Conductivity (µmhos/cm)	520	430	820	820
Field pH (SU)	8.65	8.19	8.34	8.28
Field Temperature (° C)	7.5	6.8	10.4	13.8
Field Flow Rate (gal/min)	20.2	2360	—	76.0
Calcium (Ca),Dissolved (mg/L)	63.7	48.6	86.2	99.9
Magnesium (Mg),Dissolved (mg/L)	31.6	15.0	28.8	41.4
Mercury (Hg),Total (mg/L)	<0.0002	<0.0002	<0.0002	<0.0002
Arsenic (As),Total Recoverable (mg/L)	<0.005	0.046	0.010	0.00501
Cadmium (Cd),Total Recoverable (mg/L)	<0.001	<0.001	<0.001	<0.001
Chromium (Cr),Total Recoverable (mg/L)	<0.001	0.002	<0.001	<0.001
Copper (Cu),Total Recoverable (mg/L)	<0.005	0.005	<0.005	<0.005
Lead (Pb),Total Recoverable (mg/L)	<0.001	0.007	<0.001	<0.001
Nickel (Ni),Total Recoverable (mg/L)	<0.005	0.006	<0.005	<0.005
Silver (Ag),Total Recoverable (mg/L)	<0.001	<0.001	<0.001	<0.001
Zinc (Zn),Total Recoverable (mg/L)	<0.050	0.083	<0.050	<0.050
Nitrogen, Nitrate (NO3) (mg/L)	1.18	1.70	2.59	2.75
Nitrogen, Nitrite (NO2) (mg/L)	<0.05	<0.05	<0.05	<0.05
Selenium (Se),Total Recoverable (mg/L)	<0.005	<0.005	<0.005	<0.005
Sulfate (SO4) (mg/L)	188	72.2	180	246
Hardness (mg/L)	289	183	334	420
pH (SU)	8.05	8.01	8.24	8.17
Total Dissolved Solids (mg/L)	464	274	451	574
Total Suspended Solids (mg/L)	<10.0	46.0	<10.0	<10.0

Table D-35. SS-06 Water Quality 2010

Parameter	1/21/2010	4/21/2010	5/26/2010	8/26/2010
Field Conductivity (µmhos/cm)	900	367	415	664
Field ORP (mV)	—	62.0	—	206
Field Oxygen (O2) (mg/L)	—	9.36	—	8.49
Field pH (SU)	8.28	8.39	8.17	8.20
Field Temperature (° C)	0.900	7.30	6.80	12.6
Field Flow Rate (gal/min)	35.0	207	705	48.0
Calcium (Ca),Dissolved (mg/L)	94.7	60.0	79.8	107
Magnesium (Mg),Dissolved (mg/L)	46.2	22.0	22.7	41.3
Mercury (Hg),Total (mg/L)	<0.0002	<0.0002	<0.0002	<0.0002
Arsenic (As),Total Recoverable (mg/L)	<0.005	0.011	0.010	0.007
Cadmium (Cd),Total Recoverable (mg/L)	—	<0.001	<0.001	<0.001
Chromium (Cr),Total Recoverable (mg/L)	—	<0.001	<0.001	<0.001
Copper (Cu),Total Recoverable (mg/L)	<0.005	<0.005	<0.005	<0.005
Lead (Pb),Total Recoverable (mg/L)	<0.001	<0.001	<0.001	<0.001
Nickel (Ni),Total Recoverable (mg/L)	—	<0.005	<0.005	0.008
Silver (Ag),Total Recoverable (mg/L)	<0.001	<0.001	<0.001	<0.001
Zinc (Zn),Total Recoverable (mg/L)	<0.050	<0.050	<0.050	<0.050
Nitrogen, Nitrate (NO3) (mg/L)	2.61	2.23	2.84	3.09
Nitrogen, Nitrite (NO2) (mg/L)	<0.05	<0.05	<0.05	<0.05
Selenium (Se),Total Recoverable (mg/L)	<0.005	<0.005	<0.005	<0.005
Sodium (Na),Dissolved (mg/L)	—	—	—	—
Sulfate (SO4) (mg/L)	277	122	158	289
Electrical Conductivity (µmhos/cm)	—	—	—	—
Hardness (mg/L)	427	240	293	437
pH (SU)	8.09	8.13	8.02	8.13
Total Dissolved Solids (mg/L)	577	352	416	630
Total Suspended Solids (mg/L)	<10.0	<10.0	<10.0	<10.0

Table D-36. SS-06 Water Quality 2011 (Page 1 of 2)

Parameter	1/19/2011	4/14/2011	5/24/2011	8/26/2011
Field Conductivity (µmhos/cm)	323	314	225	672
Field ORP (mV)	12.0	—	—	-56.0
Field Oxygen (O2) (mg/L)	11.5	—	—	8.27
Field pH (SU)	8.49	8.12	7.88	8.24
Field Temperature (° C)	0.300	3.80	7.10	14.0
Field Flow Rate (gal/min)	56.0	509	4340	30.0
Arsenic (As), Dissolved (mg/L)	—	—	0.018	—
Cadmium (Cd), Dissolved (mg/L)	—	—	<0.001	—
Calcium (Ca),Dissolved (mg/L)	80.80	64.2	47.2	108
Chromium (Cr), Dissolved (mg/L)	—	—	<0.001	—
Copper (Cu), Dissolved (mg/L)	—	—	<0.005	—
Lead (Pb), Dissolved (mg/L)	—	—	<0.001	—
Magnesium (Mg),Dissolved (mg/L)	41.4	23.1	11.1	40.8
Nickel (Ni), Dissolved (mg/L)	—	—	<0.005	—
Selenium (Se), Dissolved (mg/L)	—	—	<0.005	—
Silver (Ag), Dissolved (mg/L)	—	—	<0.001	—
Zinc (Zn), Dissolved (mg/L)	—	—	<0.050	—
Mercury (Hg),Total (mg/L)	<0.0002	<0.0002	<0.0002	<0.0002
Arsenic (As),Total Recoverable (mg/L)	<0.005	0.008	0.127	0.005
Cadmium (Cd),Total Recoverable (mg/L)	<0.001	<0.001	<0.001	<0.001
Chromium (Cr),Total Recoverable (mg/L)	<0.001	<0.001	0.002	<0.001
Copper (Cu),Total Recoverable (mg/L)	<0.005	<0.005	0.008	<0.005
Lead (Pb),Total Recoverable (mg/L)	<0.001	<0.001	0.006	<0.001
Nickel (Ni),Total Recoverable (mg/L)	<0.005	<0.005	<0.005	<0.005
Selenium (Se),Total Recoverable (mg/L)	<0.005	<0.005	<0.005	<0.005
Silver (Ag),Total Recoverable (mg/L)	<0.001	<0.001	<0.001	<0.001
Zinc (Zn),Total Recoverable (mg/L)	<0.050	<0.050	0.063	<0.050
Nitrogen, Nitrate (NO3) (mg/L)	1.52	2.30	1.54	2.38
Nitrogen, Nitrite (NO2) (mg/L)	<0.050	<0.050	<0.050	<0.050

Table D-36. SS-06 Water Quality 2011 (Page 2 of 2)

Parameter	1/19/2011	4/14/2011	5/24/2011	8/26/2011
Sulfate (SO4) (mg/L)	231	119	—	300
Hardness (mg/L)	372	255	164	438
pH (SU)	8.02	8.03	7.96	8.21
Total Dissolved Solids (mg/L)	518	342	233	605
Total Suspended Solids (mg/L)	<10.0	<10.0	39.0	<10.0

Table D-37. SS-12 Water Quality 2006

Parameter	4/11/2006	5/17/2006	8/2/2006
Arsenic (As),Dissolved (mg/L)	0.005	0.008	0.022
Copper (Cu),Dissolved (mg/L)	<0.005	<0.005	<0.005
Zinc (Zn),Dissolved (mg/L)	<0.05	<0.05	<0.05
Mercury (Hg),Total (mg/L)	<0.0002	<0.0002	<0.0002
Cyanide, Total (mg/L)	<0.010	<0.010	<0.010
Cyanide, WAD (mg/L)	<0.010	<0.010	<0.010
Fluoride (mg/L)	0.158	0.154	0.16
Nitrogen, Nitrate (NO3) (mg/L)	4.89	1.03	7.42
Nitrogen, Nitrite (NO2) (mg/L)	<0.050	<0.050	<0.050
Selenium (Se),Dissolved (mg/L)	<0.005	<0.005	<0.005
Sodium (Na),Dissolved (mg/L)	3.51	2.14	7.71
Sulfate (SO4) (mg/L)	142	37.8	352
Electrical Conductivity (µmhos/cm)	565	197	1,020
pH (SU)	7.79	7.62	7.60
Total Dissolved Solids (mg/L)	367	131	761
Total Suspended Solids (mg/L)	<10.0	<10.0	<10.0

Table D-6. SS-12 Water Quality 2007

Parameter	1/4/2007	4/17/2007	5/26/2007	8/16/2007
Field Conductivity (µmhos/cm)	950	260	320	971
Field pH (SU)	7.98	8.00	7.80	8.04
Field Temperature (° C)	0.700	8.10	6.90	14.5
Field Flow Rate (gal/min)	11.1	299	279	201
Arsenic (As),Dissolved (mg/L)	0.006	0.009	0.006	0.011
Copper (Cu),Dissolved (mg/L)	<0.005	<0.005	<0.005	<0.005
Zinc (Zn),Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050
Mercury (Hg),Total (mg/L)	<0.0002	<0.0002	<0.0002	<0.0002
Cyanide, Total (mg/L)	<0.010	<0.010	<0.010	<0.010
Cyanide, WAD (mg/L)	<0.010	<0.010	<0.010	<0.010
Fluoride (mg/L)	0.155	0.161	0.127	0.164
Nitrogen, Nitrate (NO3) (mg/L)	12.1	1.52	2.30	8.08
Nitrogen, Nitrite (NO2) (mg/L)	<0.050	<0.050	<0.050	<0.050
Selenium (Se),Dissolved (mg/L)	<0.005	<0.005	<0.005	<0.005
Sodium (Na),Dissolved (mg/L)	8.96	2.77	2.97	6.80
Sulfate (SO4) (mg/L)	414	65.9	88.3	363
Electrical Conductivity (µmhos/cm)	1170	274	346	1,050
pH (SU)	7.70	7.52	7.88	7.89
Total Dissolved Solids (mg/L)	844	180	224	752
Total Suspended Solids (mg/L)	<10.0	40.0	16.0	14.0

Table D-39. SS-12 Water Quality 2008

Parameter	1/22/2008	4/22/2008	5/28/2008	8/28/2008	9/16/2008
Field Conductivity (µmhos/cm)	1,460	760	160	580	—
Field pH (SU)	8.04	8.01	8.06	7.87	—
Field Temperature (° C)	–0.300	7.20	8.70	10.4	—
Field Flow Rate (gal/min)	—	44.9	—	—	—
Arsenic (As),Dissolved (mg/L)	0.009	0.005	0.009	0.012	—
Copper (Cu),Dissolved (mg/L)	<0.005	<0.005	<0.005	<0.005	—
Zinc (Zn),Dissolved (mg/L)	<0.05	0.082	<0.05	<0.05	—
Mercury (Hg),Total (mg/L)	<0.0002	<0.0002	<0.0002	<0.0002	—
Cyanide, Total (mg/L)	<0.010	<0.010	<0.010	<0.010	—
Cyanide, WAD (mg/L)	<0.010	<0.010	<0.010	<0.010	—
Fluoride (mg/L)	0.189	0.203	0.141	0.158	—
Nitrogen, Nitrate (NO3) (mg/L)	16.4	4.65	0.730	3.93	—
Nitrogen, Nitrite (NO2) (mg/L)	<0.050	<0.050	<0.050	<0.050	—
Selenium (Se),Dissolved (mg/L)	0.005	<0.005	<0.005	<0.005	—
Sodium (Na),Dissolved (mg/L)	10.4	6.65	1.94	5.65	—
Sulfate (SO4) (mg/L)	626	271	40.2	182	—
Electrical Conductivity (µmhos/cm)	1,520	832	174	636	—
pH (SU)	7.57	7.90	7.63	7.99	—
Total Dissolved Solids (mg/L)	1,160	586	138	434	—
Total Suspended Solids (mg/L)	24.0	<10.0	<10.0	17.0	—
Gross Alpha (pCi/L)	—	—	—	—	5.1
Radium-226 (pCi/L)	—	—	—	—	<0.300
Radium-228 (pCi/L)	—	—	—	—	<0.60

Table D-40. SS-12 Water Quality 2009

Parameter	1/27/2009	4/22/2009	5/19/2009	8/5/2009
Field Conductivity (µmhos/cm)	1410	210	160	770
Field pH (SU)	7.91	7.76	7.79	7.66
Field Temperature (° C)	9.8	5.70	7.40	19.9
Field Flow Rate (gal/min)	—	6,380	963	21.0
Arsenic (As),Dissolved (mg/L)	0.009	0.007	0.006	0.013
Copper (Cu),Dissolved (mg/L)	<0.005	<0.005	<0.005	<0.005
Zinc (Zn),Dissolved (mg/L)	<0.050	0.100	<0.050	<0.050
Mercury (Hg),Total (mg/L)	<0.0002	<0.0002	<0.0002	<0.0002
Cyanide, Total (mg/L)	<0.010	<0.010	<0.010	<0.010
Cyanide, WAD (mg/L)	<0.010	<0.010	<0.010	<0.010
Fluoride (mg/L)	0.183	0.152	0.156	0.168
Nitrogen, Nitrate (NO3) (mg/L)	9.12	0.837	0.460	3.85
Nitrogen, Nitrite (NO2) (mg/L)	<0.050	<0.050	<0.050	0.123
Selenium (Se),Dissolved (mg/L)	<0.005	<0.005	<0.005	<0.005
Sodium (Na),Dissolved (mg/L)	7.79	2.12	1.91	5.63
Sulfate (SO4) (mg/L)	413	39.6	16.9	238
Electrical Conductivity (µmhos/cm)	1,130	204	158	714
pH (SU)	7.81	7.55	7.71	7.54
Total Dissolved Solids (mg/L)	833	148	109	482
Total Suspended Solids (mg/L)	<10.0	11.0	<10.0	11.0

Table D-41. SS-12 Water Quality 2010

Parameter	1/19/2010	4/13/2010	5/25/2010	8/17/2010
Field Conductivity (µmhos/cm)	1,280	345	109	622
Field ORP (mV)	—	—	—	39.0
Field Oxygen (O2) (mg/L)	—	—	—	6.80
Field pH (SU)	7.93	7.86	7.67	8.00
Field Temperature (° C)	0.800	8.10	7.10	17.9
Field Flow Rate (gal/min)	2.10	325	1,510	167
Arsenic (As),Dissolved (mg/L)	0.008	0.006	0.009	0.010
Copper (Cu),Dissolved (mg/L)	<0.005	<0.005	<0.005	<0.005
Zinc (Zn),Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050
Mercury (Hg),Total (mg/L)	<0.0002	<0.0002	<0.0002	<0.0002
Cyanide, Total (mg/L)	<0.010	<0.010	<0.010	<0.010
Cyanide, WAD (mg/L)	<0.010	<0.010	<0.010	<0.010
Fluoride (mg/L)	0.183	0.153	0.149	0.143
Nitrogen, Nitrate (NO3) (mg/L)	11.5	2.65	0.698	5.58
Nitrogen, Nitrite (NO2) (mg/L)	<0.050	<0.050	<0.050	<0.050
Selenium (Se),Dissolved (mg/L)	<0.005	<0.005	<0.005	<0.005
Sodium (Na),Dissolved (mg/L)	8.55	4.20	2.81	6.57
Sulfate (SO4) (mg/L)	471	138	35.1	254
Electrical Conductivity (µmhos/cm)	1,230	501	166	731
pH (SU)	7.94	7.86	7.54	7.99
Total Dissolved Solids (mg/L)	900	338	124	498
Total Suspended Solids (mg/L)	<10.0	89.0	<10.0	14.0

Table D-42. SS-12 Water Quality 2011

Parameter	1/14/2011	4/29/2011	5/25/2011	8/3/2011
Field Conductivity (µmhos/cm)	645	173	98.8	710
Field ORP (mV)	—	-17.0	111	128
Field Oxygen (O2) (mg/L)	—	10.4	10.3	7.78
Field pH (SU)	8.11	7.95	7.41	7.94
Field Temperature (° C)	0.200	4.40	5.50	17.2
Field Flow Rate (gal/min)	2.00	742	3040	96.0
Arsenic (As),Dissolved (mg/L)	0.011	<0.005	0.009	0.010
Copper (Cu),Dissolved (mg/L)	<0.005	<0.005	<0.005	<0.005
Zinc (Zn),Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050
Mercury (Hg),Total (mg/L)	<0.0002	<0.0002	<0.0002	<0.0002
Cyanide, Total (mg/L)	<0.010	<0.010	<0.010	<0.010
Cyanide, WAD (mg/L)	<0.010	<0.010	<0.010	<0.010
Fluoride (mg/L)	0.174	0.148	0.138	0.156
Nitrogen, Nitrate (NO3) (mg/L)	10.8	1.15	0.614	5.03
Nitrogen, Nitrite (NO2) (mg/L)	<0.050	<0.050	<0.050	<0.050
Selenium (Se),Dissolved (mg/L)	0.007	<0.005	<0.005	<0.005
Sodium (Na),Dissolved (mg/L)	9.67	3.44	2.53	5.78
Sulfate (SO4) (mg/L)	492	73.0	34.1	284
Electrical Conductivity (µmhos/cm)	1240	282	164	781
pH (SU)	7.83	7.64	7.66	7.98
Total Dissolved Solids (mg/L)	902	190	137	559
Total Suspended Solids (mg/L)	29.0	<10.0	<10.0	<10.0

Table D-43. SS-14A Water Quality 2008 and 2009

Parameter	4/18/2008	9/16/2008	3/19/2009
Field Conductivity (µmhos/cm)	730	—	900
Field pH (SU)	8.21	—	7.57
Field Temperature (° C)	5.50	—	4.70
Field Flow Rate (gal/min)	1.00	—	0.840
Calcium (Ca),Dissolved (mg/L)	79.1	—	—
Magnesium (Mg),Dissolved (mg/L)	37.6	—	—
Mercury (Hg),Total (mg/L)	<0.0002	—	—
Arsenic (As),Total Recoverable (mg/L)	0.006	—	—
Cadmium (Cd),Total Recoverable (mg/L)	<0.001	—	—
Chromium (Cr),Total Recoverable (mg/L)	<0.001	—	—
Copper (Cu),Total Recoverable (mg/L)	<0.005	—	—
Lead (Pb),Total Recoverable (mg/L)	<0.001	—	—
Nickel (Ni),Total Recoverable (mg/L)	<0.005	—	—
Silver (Ag),Total Recoverable (mg/L)	<0.001	—	—
Zinc (Zn),Total Recoverable (mg/L)	<0.050	—	—
Nitrogen, Nitrate (NO3) (mg/L)	4.99	—	—
Nitrogen, Nitrite (NO2) (mg/L)	<0.050	—	—
Selenium (Se),Total Recoverable (mg/L)	<0.005	—	—
Sulfate (SO4) (mg/L)	250	—	—
Hardness (mg/L)	352	—	—
pH (SU)	7.97	—	7.88
Total Dissolved Solids (mg/L)	516	—	563
Total Suspended Solids (mg/L)	<10.0	—	<10.0
Gross Alpha (pCi/L)	—	9.9	—
Radium-226 (pCi/L)	—	0.500	—
Radium-228 (pCi/L)	—	<0.60	—

Table D-44. SS-20 Water Quality 2009 (Page 1 of 2)

Parameter	11/3/2009	12/16/2009
Calcium (Ca),Dissolved (mg/L)	39.0	28.7
Magnesium (Mg),Dissolved (mg/L)	9.45	6.69
Aluminum (Al),Total (mg/L)	0.060	0.149
Antimony (Sb),Total (mg/L)	<0.005	<0.005
Arsenic (As),Total (mg/L)	0.013	0.010
Barium (Ba),Total (mg/L)	0.598	0.523
Beryllium (Be),Total (mg/L)	<0.001	<0.001
Cadmium (Cd),Total (mg/L)	<0.001	<0.001
Chromium (Cr),Total (mg/L)	<0.001	<0.001
Cobalt (Co),Total (mg/L)	<0.001	<0.001
Copper (Cu),Total (mg/L)	<0.005	<0.005
Gold (Au),Total (mg/L)	0.003	0.001
Iron (Fe),Total (mg/L)	<0.05	0.160
Lead (Pb),Total (mg/L)	<0.001	<0.001
Lithium (Li),Total (mg/L)	—	—
Manganese (Mn),Total (mg/L)	<0.010	0.011
Mercury (Hg),Total (mg/L)	<0.0002	<0.0002
Molybdenum (Mo),Total (mg/L)	<0.001	<0.001
Nickel (Ni),Total (mg/L)	<0.005	<0.005
Silver (Ag),Total (mg/L)	<0.001	<0.001
Strontium (Sr),Total (mg/L)	0.193	0.142
Vanadium (V),Total (mg/L)	<0.005	<0.005
Zinc (Zn),Total (mg/L)	<0.050	<0.050
Bicarbonate (mg/L)	101	83.0
Boron (B),Total (mg/L)	0.047	0.024
Carbonate (mg/L)	0.00	0.00
Chloride (Cl-) (mg/L)	103	75
Cyanide, Free (mg/L)	<0.010	<0.010

Table D-44. SS-20 Water Quality 2009 (Page 2 of 2)

Parameter	11/3/2009	12/16/2009
Cyanide, Total (mg/L)	<0.010	<0.010
Cyanide, WAD (mg/L)	<0.010	<0.010
Fluoride (mg/L)	0.269	0.262
Nitrogen, Ammonia (NH3) (mg/L)	<0.050	<0.050
Nitrogen, Nitrate (NO3) (mg/L)	2.28	1.13
Nitrogen, Nitrite (NO2) (mg/L)	<0.050	<0.050
Potassium (K),Dissolved (mg/L)	—	2.23
Selenium (Se),Total (mg/L)	<0.005	<0.005
Silicon (Si),Total (mg/L)	6.77	3.42
Sodium (Na),Dissolved (mg/L)	—	40.4
Sulfate (SO4) (mg/L)	<10.0	<10.0
Alkalinity (mg/L)	82.9	68.0
Anion - Cation Balance (%)	—	0.512
Anions (meq/L)	—	3.76
Cations (meq/L)	—	3.80
Electrical Conductivity (µmhos/cm)	503	413
Hardness (mg/L)	136	99.2
pH (SU)	7.68	7.43
Total Dissolved Solids (mg/L)	257	204
Total Suspended Solids (mg/L)	<10.0	<10.0
Turbidity (NTU)	0.60	2.3

Table D-45. SS-20 Water Quality 2010 (Page 1 of 3)

Parameter	1/21/2010	3/16/2010	4/27/2010	5/19/2010	6/17/2010	7/28/2010	10/29/2010
Field Conductivity (µmhos/cm)	550	600	164	182	197	215	839
Field ORP (mV)	–	–	–	92.0	116	–	150
Field Oxygen (O2) (mg/L)	–	–	–	8.54	7.08	–	7.42
Field pH (SU)	7.80	6.90	7.38	8.12	7.77	6.92	7.29
Field Temperature (°C)	2.60	5.30	4.80	5.20	7.60	10.3	10.0
Field Flow Rate (gal/min)	0.140	2.00	113	26.0	95.0	2.00	–
Calcium (Ca),Dissolved (mg/L)	43.0	38.4	17.5	24.3	25.6	24.8	20.6
Magnesium (Mg), Dissolved (mg/L)	9.04	8.13	4.66	5.04	5.16	4.90	5.47
Alúminum (Al),Total (mg/L)	3.60	0.218	1.14	0.924	1.41	0.195	0.384
Antimony (Sb),Total (mg/L)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Arsenic (As),Total (mg/L)	0.048	0.007	0.017	0.021	0.021	0.015	0.016
Barium (Ba),Total (mg/L)	0.774	0.475	0.227	0.178	0.234	0.325	0.381
Beryllium (Be),Total (mg/L)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium (Cd),Total (mg/L)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium (Cr),Total (mg/L)	0.007	<0.001	0.001	0.001	0.002	<0.001	<0.001
Cobalt (Co),Total (mg/L)	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Copper (Cu),Total (mg/L)	0.007	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Gold (Au),Total (mg/L)	<0.001	<0.001	<0.001	<0.001	0.005	<0.001	<0.001
Iron (Fe),Total (mg/L)	3.89	0.148	0.735	0.517	0.771	0.120	0.269

D-62

Table D-45. SS-20 Water Quality 2010 (Page 2 of 3)

Parameter	1/21/2010	3/16/2010	4/27/2010	5/19/2010	6/17/2010	7/28/2010	10/29/2010
Lead (Pb),Total (mg/L)	0.007	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Lithium (Li),Total (mg/L)	0.044	0.002	0.004	0.005	0.002	<0.002	0.006
Manganese (Mn),Total (mg/L)	0.164	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Mercury (Hg),Total (mg/L)	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum (Mo),Total (mg/L)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nickel (Ni),Total (mg/L)	0.00817	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Silver (Ag),Total (mg/L)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Strontium (Sr),Total (mg/L)	0.169	0.150	0.094	0.101	0.114	0.098	0.114
Vanadium (V),Total (mg/L)	0.009	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Zinc (Zn),Total (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Bicarbonate (mg/L)	68.8	55.0	55.1	67.8	80.6	94.0	86.4
Boron (B),Total (mg/L)	<0.020	<0.020	<0.020	0.046	0.020	<0.020	0.020
Carbonate (mg/L)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chloride (Cl-) (mg/L)	138	140	53.8	46.3	45.0	39.2	48.2
Cyanide, Free (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cyanide, Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cyanide, WAD (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Fluoride (mg/L)	0.225	0.254	0.317	0.418	0.401	0.305	0.288
Nitrogen, Ammonia (NH3) (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050

D-63

Table D-45. SS-20 Water Quality 2010 (Page 3 of 3)

Parameter	1/21/2010	3/16/2010	4/27/2010	5/19/2010	6/17/2010	7/28/2010	10/29/2010
Nitrogen, Nitrate (NO3) (mg/L)	1.26	1.55	0.679	0.569	0.537	0.521	1.01
Nitrogen, Nitrite (NO2) (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Potassium (K),Dissolved (mg/L)	2.45	2.07	1.74	1.89	1.97	1.87	2.01
Selenium (Se),Total (mg/L)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Silicon (Si),Total (mg/L)	5.69	7.85	11.6	7.96	9.8	7.71	8.67
Sodium (Na),Dissolved (mg/L)	44.6	57.1	30.0	24.1	26.4	30.6	33.7
Sulfate (SO4) (mg/L)	10.6	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Alkalinity (mg/L)	56.4	45.1	45.1	55.6	66.1	77.1	70.8
Anion - Cation Balance (%)	–4.34	1.46	2.35	4.68	4.51	5.58	2.24
Anions (meq/L)	5.34	4.97	2.49	2.48	2.65	2.70	2.86
Cations (meq/L)	4.90	5.12	2.61	2.72	2.90	3.02	2.99
Electrical Conductivity (µmhos/cm)	533	575	290	288	300	305	344
Hardness (mg/L)	145	129	62.9	81.4	85.2	82.1	74.0
pH (SU)	7.54	7.48	7.02	7.42	7.13	7.04	6.99
Total Dissolved Solids (mg/L)	286	341	178	176	170	170	180
Total Suspended Solids (mg/L)	99.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Turbidity (NTU)	50	2.8	12	7.8	9.6	2.4	2.8

Note: Site SS-20 was visited on the following dates and determined to be dry: February 9, 2010; August 25, 2010; September 24, 2010; and November 17, 2010.

D-64

Table D-46. SS-20 Water Quality 2011

Parameter	4/20/2011	5/12/2011	7/19/2011
Field Conductivity (µmhos/cm)	212	104	300
Field ORP (mV)	26.0	41.0	50.0
Field Oxygen (O2) (mg/L)	9.53	11.0	16.6
Field pH (SU)	7.05	8.17	7.34
Field Temperature (°C)	4.00	2.00	13.2
Field Flow Rate (gal/min)	16.0	3.50	–
Arsenic (As),Dissolved (mg/L)	0.013	–	0.017
Cadmium (Cd),Dissolved (mg/L)	<0.001	–	<0.001
Copper (Cu),Dissolved (mg/L)	<0.005	–	<0.005
Gold (Au), Dissolved (mg/L)	<0.001	–	0.009
Silver (Ag), Dissolved (mg/L)	<0.001	–	<0.001
Mercury (Hg),Total (mg/L)	<0.0002	–	<0.0002
Arsenic (As),Total Recoverable (mg/L)	0.014	–	0.018
Bicarbonate (mg/L)	63.4	44.6	87.7
Cyanide, Total (mg/L)	<0.010	<0.010	<0.010
Cyanide, WAD (mg/L)	<0.010	<0.010	<0.010
Fluoride (mg/L)	0.313	0.290	0.338
Nitrogen, Ammonia (NH3) (mg/L)	<0.50	<0.050	<0.050
Nitrogen, Nitrate (NO3) (mg/L)	0.701	0.131	0.465
Nitrogen, Nitrite (NO2) (mg/L)	<0.050	<0.050	<0.050
Selenium (Se),dissolved (mg/L)	<0.005	–	<0.005
Selenium (Se),Total recoverable (mg/L)	<0.005	–	<0.005
Sodium (Na),Dissolved (mg/L)	29.8	–	31.2
Sulfate (SO4) (mg/L)	<10.0	<10.0	<10.0
Electrical Conductivity (µmhos/cm)	344	190	302
pH (SU)	7.60	7.65	7.34
Total Dissolved Solids (mg/L)	202	161	174
Total Suspended Solids (mg/L)	<10.0	351	<10.0