

**APPENDIX 14-C
LAKE WATER QUALITY DATA, KSM PROJECT, 2012**

Annex 13-C. Lake Water Quality, KSM Project, 2012

				Physical Parameter						
				Colour, True (colour unit)	Conductivity (µS/cm)	Hardness (as CaCO ₃) (mg/L)	pH (pH unit)	Total Suspended Solids (mg/L)	Total Dissolved Solids (mg/L)	Turbidity (NTU)
Site Name	Depth	Date	ALS Sample No.							
SUL	2m	28-Jun-12	L1171583-11	<5.0	131	59.3	7.80	34.7	96	63.1
	2m	1-Aug-12	L1190018-20	<5.0	69.8	32.1	8.39	95.1	59	121
	2m	5-Oct-12	L1221662-3	<5.0	146	66.4	8.08	10.8	94	20.8
	14m	28-Jun-12	L1171583-10	<5.0	138	62.6	7.75	34.0	109	61.5
	14m	1-Aug-12	L1190018-10	<5.0	78.6	35.3	7.99	61.8	60	87.2
	14m	5-Oct-12	L1221662-1	<5.0	143	63.8	8.02	10.0	102	24.0

				Anions and Nutrients											
				Acidity (as CaCO ₃) (mg/L)	Alkalinity, Bicarbonate (as CaCO ₃) (mg/L)	Alkalinity, Carbonate (as CaCO ₃) (mg/L)	Alkalinity, Hydroxide (as CaCO ₃) (mg/L)	Alkalinity, Total (as CaCO ₃) (mg/L)	Ammonia (as N) (mg/L)	Bromide (Br) (mg/L)	Chloride (Cl) (mg/L)	Fluoride (F) (mg/L)	Nitrate (as N) (mg/L)	Nitrite (as N) (mg/L)	Total Kjeldahl Nitrogen (mg/L)
Site Name	Depth	Date	ALS Sample No.												
SUL	2m	28-Jun-12	L1171583-11	1.7	29.1	<2.0	<2.0	29.1	0.0057	<0.050	<0.50	0.034	0.0286	<0.0010	<0.050
	2m	1-Aug-12	L1190018-20	<1.0	26.0	<1.0	<1.0	26.0	<0.0050	<0.050	<0.50	<0.020	0.0228	<0.0010	<0.050
	2m	5-Oct-12	L1221662-3	2.9	27.0	<2.0	<2.0	27.0	0.0093	<0.050	<0.50	0.034	0.0279	<0.0010	<0.050
	14m	28-Jun-12	L1171583-10	1.8	30.6	<2.0	<2.0	30.6	0.0052	<0.050	<0.50	0.037	0.0274	<0.0010	<0.050
	14m	1-Aug-12	L1190018-10	2.5	18.8	<2.0	<2.0	18.8	<0.0050	<0.050	<0.50	<0.020	0.0220	<0.0010	<0.050
	14m	5-Oct-12	L1221662-1	3.4	29.2	<2.0	<2.0	29.2	0.0051	<0.050	<0.50	0.035	0.0282	<0.0010	<0.050

Notes:

< indicates that the value is below the analytical detection limit

- indicates parameter was not analyzed

Annex 13-C. Lake Water Quality, KSM Project, 2012

Site Name	Depth	Date	ALS Sample No.	Anions and Nutrients				Cyanides			Carbon
				Total Nitrogen (mg/L)	Ortho Phosphate (as P) (mg/L)	Total Phosphate (as P) (mg/L)	Sulphate (SO ₄) (mg/L)	Cyanide, Weak Acid Dissociable (mg/L)	Cyanide, Total (mg/L)	Thiocyanate (mg/L)	Total Organic Carbon (mg/L)
SUL	2m	28-Jun-12	L1171583-11	<0.050	<0.0010	0.0382	33.0	-	<0.0010	-	<0.50
	2m	1-Aug-12	L1190018-20	<0.050	0.0012	0.106	13.1	-	<0.0010	-	0.63
	2m	5-Oct-12	L1221662-3	<0.050	<0.0010	0.0114	40.3	-	<0.0010	-	<0.50
	14m	28-Jun-12	L1171583-10	<0.050	0.0011	0.0457	36.5	-	<0.0010	-	<0.50
	14m	1-Aug-12	L1190018-10	0.050	0.0012	0.0674	16.5	-	<0.0010	-	0.62
	14m	5-Oct-12	L1221662-1	<0.050	<0.0010	0.0155	39.2	-	<0.0010	-	<0.50

Site Name	Depth	Date	ALS Sample No.	Total Metals											
				Aluminum (Al) (mg/L)	Antimony (Sb) (mg/L)	Arsenic (As) (mg/L)	Barium (Ba) (mg/L)	Beryllium (Be) (mg/L)	Bismuth (Bi) (mg/L)	Boron (B) (mg/L)	Cadmium (Cd) (mg/L)	Calcium (Ca) (mg/L)	Chromium (Cr) (mg/L)	Cobalt (Co) (mg/L)	Copper (Cu) (mg/L)
SUL	2m	28-Jun-12	L1171583-11	1.95	0.00162	0.00360	0.0780	<0.00010	<0.00050	<0.010	0.000086	22.8	0.00149	0.00113	0.0135
	2m	1-Aug-12	L1190018-20	3.75	0.00195	0.00789	0.115	0.00013	<0.00050	<0.010	0.000141	11.9	0.00247	0.00194	0.0132
	2m	5-Oct-12	L1221662-3	1.22	0.00117	0.00194	0.0569	<0.00010	<0.00050	<0.010	0.000059	22.1	0.00084	0.00075	0.0130
	14m	28-Jun-12	L1171583-10	3.03	0.00175	0.00442	0.0967	<0.00010	<0.00050	<0.010	0.000097	24.3	0.00184	0.00134	0.0203
	14m	1-Aug-12	L1190018-10	3.07	0.00160	0.00532	0.0936	<0.00010	<0.00050	<0.010	0.000090	12.2	0.00198	0.00144	0.0196
	14m	5-Oct-12	L1221662-1	1.04	0.00113	0.00176	0.0531	<0.00010	<0.00050	<0.010	0.000056	22.2	0.00070	0.00068	0.0130

Notes:

< indicates that the value is below the analytical detection limit

- indicates parameter was not analyzed

Annex 13-C. Lake Water Quality, KSM Project, 2012

Site Name	Depth	Date	ALS Sample No.	Total Metals										
				Iron (Fe) (mg/L)	Lead (Pb) (mg/L)	Lithium (Li) (mg/L)	Magnesium (Mg) (mg/L)	Manganese (Mn) (mg/L)	Mercury (Hg) (mg/L)	Molybdenum (Mo) (mg/L)	Nickel (Ni) (mg/L)	Phosphorus (P) (mg/L)	Potassium (K) (mg/L)	Selenium (Se) (mg/L)
SUL	2m	28-Jun-12	L1171583-11	1.94	0.00273	0.00159	2.21	0.0909	0.000016	0.00101	0.00186	<0.30	1.01	0.00032
	2m	1-Aug-12	L1190018-20	4.95	0.00584	0.00258	2.23	0.165	0.000027	0.000691	0.00200	<0.30	1.50	0.00017
	2m	5-Oct-12	L1221662-3	1.01	0.00105	0.00125	1.98	0.0768	<0.000010	0.000992	0.00082	<0.30	0.692	0.00027
	14m	28-Jun-12	L1171583-10	2.80	0.00303	0.00208	2.43	0.119	0.000025	0.00110	0.00154	<0.30	1.27	0.00037
	14m	1-Aug-12	L1190018-10	3.55	0.00390	0.00203	1.82	0.119	0.000024	0.000666	0.00156	<0.30	1.21	0.00024
	14m	5-Oct-12	L1221662-1	0.874	0.00104	0.00128	1.93	0.0716	<0.000010	0.000979	0.00078	<0.30	0.624	0.00028

Site Name	Depth	Date	ALS Sample No.	Total Metals									
				Silicon (Si) (mg/L)	Silver (Ag) (mg/L)	Sodium (Na) (mg/L)	Strontium (Sr) (mg/L)	Thallium (Tl) (mg/L)	Tin (Sn) (mg/L)	Titanium (Ti) (mg/L)	Uranium (U) (mg/L)	Vanadium (V) (mg/L)	Zinc (Zn) (mg/L)
SUL	2m	28-Jun-12	L1171583-11	4.75	0.000043	<2.0	0.125	0.000036	<0.00010	0.056	0.000079	0.0053	0.0130
	2m	1-Aug-12	L1190018-20	9.17	0.000133	<2.0	0.0718	0.000062	<0.00010	0.120	0.000106	0.0104	0.0226
	2m	5-Oct-12	L1221662-3	2.98	0.000029	<2.0	0.130	0.000019	<0.00010	0.028	0.000061	0.0030	0.0091
	14m	28-Jun-12	L1171583-10	6.14	0.000064	<2.0	0.132	0.000048	<0.00010	0.065	0.000085	0.0078	0.0149
	14m	1-Aug-12	L1190018-10	7.93	0.000082	<2.0	0.0789	0.000052	<0.00010	0.106	0.000069	0.0087	0.0163
	14m	5-Oct-12	L1221662-1	2.59	0.000027	<2.0	0.128	0.000017	<0.00010	0.023	0.000059	0.0026	0.0091

Notes:

< indicates that the value is below the analytical detection limit

- indicates parameter was not analyzed

Annex 13-C. Lake Water Quality, KSM Project, 2012

				Dissolved Metals										
Site Name	Depth	Date	ALS Sample No.	Aluminum (Al) (mg/L)	Antimony (Sb) (mg/L)	Arsenic (As) (mg/L)	Barium (Ba) (mg/L)	Beryllium (Be) (mg/L)	Bismuth (Bi) (mg/L)	Boron (B) (mg/L)	Cadmium (Cd) (mg/L)	Calcium (Ca) (mg/L)	Chromium (Cr) (mg/L)	Cobalt (Co) (mg/L)
SUL	2m	28-Jun-12	L1171583-11	0.0830	0.00100	0.00053	0.0305	<0.00010	<0.00050	<0.010	0.000025	21.1	<0.00010	<0.00010
	2m	1-Aug-12	L1190018-20	0.276	0.00074	0.00117	0.0320	<0.00010	<0.00050	<0.010	<0.000010	11.5	0.00022	<0.00010
	2m	5-Oct-12	L1221662-3	0.0586	0.00095	0.00027	0.0312	<0.00010	<0.00050	<0.010	0.000036	23.7	<0.00010	0.00023
	14m	28-Jun-12	L1171583-10	0.0624	0.00091	0.00042	0.0305	<0.00010	<0.00050	<0.010	0.000030	22.4	<0.00010	0.00012
	14m	1-Aug-12	L1190018-10	0.0983	0.00064	0.00061	0.0265	<0.00010	<0.00050	<0.010	0.000014	12.7	0.00010	<0.00010
	14m	5-Oct-12	L1221662-1	0.0583	0.00093	0.00025	0.0303	<0.00010	<0.00050	<0.010	0.000035	22.7	<0.00010	0.00022

				Dissolved Metals									
Site Name	Depth	Date	ALS Sample No.	Copper (Cu) (mg/L)	Iron (Fe) (mg/L)	Lead (Pb) (mg/L)	Lithium (Li) (mg/L)	Magnesium (Mg) (mg/L)	Manganese (Mn) (mg/L)	Mercury (Hg) (mg/L)	Molybdenum (Mo) (mg/L)	Nickel (Ni) (mg/L)	
SUL	2m	28-Jun-12	L1171583-11	<0.00050	<0.030	<0.000050	0.00054	1.61	0.0175	<0.000010	0.00101	<0.00050	
	2m	1-Aug-12	L1190018-20	0.00059	0.202	0.000241	<0.00050	0.838	0.00591	<0.000010	0.000588	<0.00050	
	2m	5-Oct-12	L1221662-3	0.00053	<0.030	<0.000050	0.00071	1.74	0.0508	<0.000010	0.00102	<0.00050	
	14m	28-Jun-12	L1171583-10	<0.00050	<0.030	<0.000050	<0.00050	1.62	0.0341	<0.000010	0.000971	<0.00050	
	14m	1-Aug-12	L1190018-10	<0.00050	<0.030	<0.000050	<0.00050	0.862	0.00185	<0.000010	0.000571	<0.00050	
	14m	5-Oct-12	L1221662-1	0.00063	<0.030	<0.000050	0.00068	1.71	0.0502	<0.000010	0.000997	<0.00050	

Notes:

< indicates that the value is below the analytical detection limit

- indicates parameter was not analyzed

Annex 13-C. Lake Water Quality, KSM Project, 2012

Site Name	Depth	Date	ALS Sample No.	Dissolved Metals												
				Phosphorus (P) (mg/L)	Potassium (K) (mg/L)	Selenium (Se) (mg/L)	Silicon (Si) (mg/L)	Silver (Ag) (mg/L)	Sodium (Na) (mg/L)	Strontium (Sr) (mg/L)	Thallium (Tl) (mg/L)	Tin (Sn) (mg/L)	Titanium (Ti) (mg/L)	Uranium (U) (mg/L)	Vanadium (V) (mg/L)	Zinc (Zn) (mg/L)
SUL	2m	28-Jun-12	L1171583-11	<0.30	0.337	0.00028	0.951	<0.000010	<2.0	0.119	<0.000010	<0.00010	<0.010	0.000047	<0.0010	<0.0030
	2m	1-Aug-12	L1190018-20	<0.30	0.259	0.00013	1.01	<0.000010	<2.0	0.062	<0.000010	<0.00010	<0.010	0.000035	<0.0010	<0.0030
	2m	5-Oct-12	L1221662-3	<0.30	0.286	0.00027	0.875	<0.000010	<2.0	0.137	<0.000010	<0.00010	<0.010	0.000040	<0.0010	<0.0030
	14m	28-Jun-12	L1171583-10	<0.30	0.328	0.00030	0.956	<0.000010	<2.0	0.125	<0.000010	<0.00010	<0.010	0.000042	<0.0010	<0.0030
	14m	1-Aug-12	L1190018-10	<0.30	0.178	0.00017	0.537	<0.000010	<2.0	0.0785	<0.000010	<0.00010	<0.010	0.000022	<0.0010	<0.0030
	14m	5-Oct-12	L1221662-1	<0.30	0.291	0.00026	0.852	<0.000010	<2.0	0.137	<0.000010	<0.00010	<0.010	0.000041	<0.0010	<0.0030

Notes:

< indicates that the value is below the analytical detection limit

- indicates parameter was not analyzed