

Attachment A

ALS Environmental Laboratory Results





CHEMICAL ANALYSIS REPORT

Date: August 3, 2005

ALS File No. R3016(1)

Report On: Hackett River 50598

Report To: **Gartner Lee Ltd.**
2251 2nd Ave
Whitehorse, YT
Y1A 5W1

Attention: **Ms. Lesley Gomm**

Received: July 11, 2005

ALS ENVIRONMENTAL

per:

Bill Chew, B.Sc. - Manager, Client Services
Brent Whitehead, B.Sc. - Operations Supervisor

File No. R3016(1)

REMARKS



For some of the submitted water samples, the measured concentration of specific dissolved parameters is greater than the corresponding total parameters concentration. The explanation for these findings is one or a combination of the following:

- laboratory method variability;
- analytical bias introduced during sample filtration;
- analytical bias introduced during general handling, storage, transportation and/or analysis of the sample;
- sample grab bias - where separate grab samples are processed to produce total and dissolved samples;
- sample split bias - where total and dissolved parameters samples are produced from the same grab sample.

For further clarification of any of the above information, please contact your ALS representative.

File No. R3016(1)

RESULTS OF ANALYSIS - Water

Sample ID	Upper Sunken Lake	Sunken L OutFlow #1	Sunken L OutFlow #2	Mara River Do wnstream	Mara River Up stream
Sample Date	05-07-05	05-07-05	05-07-05	05-07-06	05-07-06
Sample Time	14:15	15:00	16:00	09:10	09:45
ALS ID	1	2	3	4	5

Physical Tests

Conductivity (uS/cm)	80.7	72.6	71.7	13.6	13.5
Total Dissolved Solids	37.2	36.4	37.4	6.5	6.2
Hardness CaCO ₃	24.4	24.4	24.4	4.47	4.30
pH	6.47	6.45	6.30	6.62	6.60
Total Suspended Solids	<4.0	<4.0	<4.0	<4.0	<4.0
Turbidity (NTU)	0.92	0.80	0.69	1.11	0.54

Dissolved Anions

Alkalinity-Gran Total CaCO ₃	4.8	4.0	2.7	4.4	4.4
Chloride Cl	4.78	4.66	4.51	<0.50	<0.50
Sulphate SO ₄	20.0	19.4	20.7	1.8	1.8

Nutrients

Ammonia Nitrogen N	0.0050	0.0270	<0.0050	0.0075	0.0060
Total Kjeldahl Nitrogen N	0.119	0.137	0.132	0.145	0.154
Nitrate Nitrogen N	0.0070	<0.0050	<0.0050	<0.0050	0.0060
Nitrite Nitrogen N	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Nitrite/Nitrate Nitrogen N	<0.0071	<0.0071	<0.0071	<0.0071	<0.0071
Dissolved ortho-Phosphate P	<0.0010	<0.0010	0.0027	0.0027	0.0027
Total Phosphate P	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020

Remarks regarding the analyses appear at the beginning of this report.

< = Less than the detection limit indicated.

Results are expressed as milligrams per litre except where noted.

RESULTS OF ANALYSIS - Water

Sample ID		Upper Sunken Lake	Sunken L OutFlow #1	Sunken L OutFlow #2	Mara River Do wnstream	Mara River Up stream
Sample Date		05-07-05	05-07-05	05-07-05	05-07-06	05-07-06
Sample Time		14:15	15:00	16:00	09:10	09:45
ALS ID		1	2	3	4	5
Total Metals						
Aluminum	T-Al	0.0693	0.0702	0.0962	0.0197	0.0178
Antimony	T-Sb	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic	T-As	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Barium	T-Ba	0.00813	0.00785	0.00780	0.00226	0.00206
Beryllium	T-Be	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth	T-Bi	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Boron	T-B	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium	T-Cd	0.00165	0.00163	0.00164	<0.000050	<0.000050
Calcium	T-Ca	7.17	7.07	6.91	0.997	0.920
Chromium	T-Cr	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt	T-Co	0.00070	0.00068	0.00074	<0.00010	<0.00010
Copper	T-Cu	0.0391	0.0387	0.0300	0.00079	0.00078
Iron	T-Fe	0.040	0.037	0.075	<0.030	<0.030
Lead	T-Pb	0.000414	0.000404	0.000402	<0.000050	<0.000050
Lithium	T-Li	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium	T-Mg	1.76	1.71	1.72	0.459	0.439
Manganese	T-Mn	0.0418	0.0416	0.0410	0.00211	0.00125
Mercury	T-Hg	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Molybdenum	T-Mo	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Nickel	T-Ni	0.00264	0.00255	0.00287	0.00052	<0.00050
Phosphorus	T-P	<0.30	<0.30	<0.30	<0.30	<0.30
Potassium	T-K	0.842	0.807	0.815	0.368	0.350
Selenium	T-Se	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Silicon	T-Si	0.845	0.847	0.858	0.127	0.122
Silver	T-Ag	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium	T-Na	0.627	0.597	0.604	0.462	0.449
Strontium	T-Sr	0.0356	0.0348	0.0331	0.00450	0.00430
Thallium	T-Tl	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin	T-Sn	<0.00010	<0.00010	0.00014	<0.00010	<0.00010
Titanium	T-Ti	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium	T-U	0.000013	0.000012	0.000017	0.000052	0.000049
Vanadium	T-V	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zinc	T-Zn	0.331	0.331	0.338	0.0014	0.0012

Remarks regarding the analyses appear at the beginning of this report.

< = Less than the detection limit indicated.

Results are expressed as milligrams per litre except where noted.

RESULTS OF ANALYSIS - Water

Sample ID	Upper Sunken Lake	Sunken L OutFlow #1	Sunken L OutFlow #2	Mara River Do wnstream	Mara River Up stream
Sample Date	05-07-05	05-07-05	05-07-05	05-07-06	05-07-06
Sample Time	14:15	15:00	16:00	09:10	09:45
ALS ID	1	2	3	4	5

Dissolved Metals

Aluminum	D-Al	0.0346	0.0285	0.0426	0.0222	0.0152
Antimony	D-Sb	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic	D-As	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Barium	D-Ba	0.00786	0.00771	0.00771	0.00254	0.00210
Beryllium	D-Be	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth	D-Bi	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Boron	D-B	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium	D-Cd	0.00153	0.00159	0.00163	<0.000050	<0.000050
Calcium	D-Ca	6.97	7.01	6.95	1.06	0.975
Chromium	D-Cr	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt	D-Co	0.00064	0.00066	0.00073	<0.00010	<0.00010
Copper	D-Cu	0.0301	0.0308	0.0232	0.00141	0.00077
Iron	D-Fe	<0.030	<0.030	0.033	<0.030	<0.030
Lead	D-Pb	0.000116	0.000117	0.000113	0.00160	<0.000050
Lithium	D-Li	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium	D-Mg	1.70	1.68	1.70	0.440	0.452
Manganese	D-Mn	0.0401	0.0412	0.0406	0.00140	0.000783
Mercury	D-Hg	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Molybdenum	D-Mo	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Nickel	D-Ni	0.00250	0.00251	0.00294	0.00056	0.00052
Phosphorus	D-P	<0.30	<0.30	<0.30	<0.30	<0.30
Potassium	D-K	0.806	0.810	0.818	0.377	0.371
Selenium	D-Se	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Silicon	D-Si	0.853	0.843	0.872	0.140	0.114
Silver	D-Ag	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium	D-Na	0.746	0.711	0.737	0.632	0.467
Strontium	D-Sr	0.0344	0.0344	0.0330	0.00443	0.00443
Thallium	D-Tl	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin	D-Sn	<0.00010	<0.00010	<0.00010	<0.00010	0.00014
Titanium	D-Ti	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium	D-U	<0.000010	<0.000010	<0.000010	0.000046	0.000042
Vanadium	D-V	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zinc	D-Zn	0.324	0.329	0.345	0.0089	0.0018

Organic Parameters

Dissolved Organic Carbon C	0.59	1.56	1.40	1.90	1.92
Total Organic Carbon C	1.72	1.69	1.55	2.11	2.09

Remarks regarding the analyses appear at the beginning of this report.

< = Less than the detection limit indicated.

Results are expressed as milligrams per litre except where noted.

File No. R3016(1)

RESULTS OF ANALYSIS - Water



Sample ID	Mara Inflow #1	Mara Inflow #2	Turtle Outflow	Anne Lake	Clearer Lake
Sample Date	05-07-06	05-07-06	05-07-06	05-07-06	05-07-06
Sample Time	10:15	11:00	11:25	11:49	12:15
ALS ID	6	7	8	9	10

Physical Tests

Conductivity (uS/cm)	55.4	87.8	120	159	165
Total Dissolved Solids	22.0	40.6	57.4	82.4	83.9
Hardness CaCO3	21.7	35.2	48.7	65.6	62.8
pH	6.92	6.93	6.93	6.88	6.58
Total Suspended Solids	<4.0	<4.0	<4.0	<4.0	<4.0
Turbidity (NTU)	0.36	0.50	0.36	0.24	0.49

Dissolved Anions

Alkalinity-Gran Total CaCO3	16.3	17.3	19.8	18.2	9.6
Chloride Cl	0.73	0.68	1.13	1.06	13.2
Sulphate SO4	10.1	23.3	35.1	53.3	43.0

Nutrients

Ammonia Nitrogen N	0.0077	0.0050	0.0057	<0.0050	<0.0050
Total Kjeldahl Nitrogen N	0.128	0.159	0.138	0.188	0.112
Nitrate Nitrogen N	0.0100	<0.0050	0.0080	<0.0050	<0.0050
Nitrite Nitrogen N	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Nitrite/Nitrate Nitrogen N	0.0100	<0.0071	0.0080	<0.0071	<0.0071
Dissolved ortho-Phosphate P	0.0027	0.0027	<0.0010	<0.0010	<0.0010
Total Phosphate P	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020

Remarks regarding the analyses appear at the beginning of this report.

< = Less than the detection limit indicated.

Results are expressed as milligrams per litre except where noted.

RESULTS OF ANALYSIS - Water

Sample ID	Mara Inflow #1	Mara Inflow #2	Turtle Outflow	Anne Lake	Clearer Lake
Sample Date	05-07-06	05-07-06	05-07-06	05-07-06	05-07-06
Sample Time	10:15	11:00	11:25	11:49	12:15
ALS ID	6	7	8	9	10

Total Metals

Aluminum	T-Al	0.0136	0.0157	0.0036	0.0103	0.0261
Antimony	T-Sb	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic	T-As	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Barium	T-Ba	0.00352	0.00429	0.00470	0.00819	0.0118
Beryllium	T-Be	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth	T-Bi	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Boron	T-B	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium	T-Cd	<0.000050	<0.000050	0.000119	0.00100	0.00699
Calcium	T-Ca	6.40	10.9	15.2	19.8	19.6
Chromium	T-Cr	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt	T-Co	<0.00010	<0.00010	<0.00010	<0.00010	0.00031
Copper	T-Cu	0.00125	0.00180	0.00503	0.0189	0.0177
Iron	T-Fe	<0.030	79.6	<0.030	<0.030	<0.030
Lead	T-Pb	<0.000050	<0.000050	<0.000050	0.000068	0.00118
Lithium	T-Li	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium	T-Mg	1.49	2.11	2.75	3.80	3.25
Manganese	T-Mn	0.00546	0.000999	0.00122	0.0225	0.00891
Mercury	T-Hg	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Molybdenum	T-Mo	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Nickel	T-Ni	<0.00050	<0.00050	0.00067	0.00269	0.00457
Phosphorus	T-P	<0.30	<0.30	<0.30	<0.30	<0.30
Potassium	T-K	0.660	0.695	0.881	1.10	1.15
Selenium	T-Se	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Silicon	T-Si	0.560	0.543	0.618	1.19	1.59
Silver	T-Ag	<0.000010	<0.000010	<0.000010	<0.000010	0.000020
Sodium	T-Na	0.558	0.487	0.497	0.589	0.878
Strontium	T-Sr	0.00795	0.00939	0.0125	0.0165	0.0849
Thallium	T-Tl	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin	T-Sn	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium	T-Ti	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium	T-U	0.000018	0.000039	0.000140	0.000028	0.000018
Vanadium	T-V	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zinc	T-Zn	0.0017	0.0058	0.0356	0.203	1.10

Remarks regarding the analyses appear at the beginning of this report.

< = Less than the detection limit indicated.

Results are expressed as milligrams per litre except where noted.

File No. R3016(1)

RESULTS OF ANALYSIS - Water

Sample ID	Mara Inflow #1	Mara Inflow #2	Turtle Outflow	Anne Lake	Clearer Lake
Sample Date	05-07-06	05-07-06	05-07-06	05-07-06	05-07-06
Sample Time	10:15	11:00	11:25	11:49	12:15
ALS ID	6	7	8	9	10

Dissolved Metals

Aluminum	D-Al	0.0098	0.0140	0.0038	0.0092	0.0121
Antimony	D-Sb	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic	D-As	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Barium	D-Ba	0.00331	0.00422	0.00464	0.00807	0.0119
Beryllium	D-Be	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth	D-Bi	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Boron	D-B	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium	D-Cd	<0.000050	<0.000050	0.000099	0.000989	0.00694
Calcium	D-Ca	6.31	10.7	15.1	19.9	19.7
Chromium	D-Cr	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt	D-Co	<0.00010	<0.00010	<0.00010	<0.00010	0.00032
Copper	D-Cu	0.00108	0.00185	0.00443	0.0165	0.0131
Iron	D-Fe	<0.030	<0.030	<0.030	<0.030	<0.030
Lead	D-Pb	<0.000050	<0.000050	<0.000050	<0.000050	0.000352
Lithium	D-Li	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium	D-Mg	1.45	2.08	2.69	3.88	3.29
Manganese	D-Mn	0.000487	0.000580	0.000612	0.0214	0.00867
Mercury	D-Hg	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Molybdenum	D-Mo	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Nickel	D-Ni	<0.00050	0.00052	0.00065	0.00260	0.00464
Phosphorus	D-P	<0.30	<0.30	<0.30	<0.30	<0.30
Potassium	D-K	0.655	0.696	0.883	1.11	1.15
Selenium	D-Se	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Silicon	D-Si	0.570	0.509	0.633	1.21	1.69
Silver	D-Ag	<0.000010	<0.000010	<0.000010	<0.000010	0.000014
Sodium	D-Na	0.681	0.615	0.624	0.730	1.01
Strontium	D-Sr	0.00776	0.00928	0.0126	0.0168	0.0834
Thallium	D-Tl	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin	D-Sn	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium	D-Ti	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium	D-U	0.000014	0.000030	0.000084	0.000018	<0.000010
Vanadium	D-V	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zinc	D-Zn	0.0043	0.0081	0.0375	0.202	1.14

Organic Parameters

Dissolved Organic Carbon C	1.87	2.32	1.64	1.91	1.12
Total Organic Carbon	1.98	2.44	1.80	2.15	1.42

Remarks regarding the analyses appear at the beginning of this report.

< = Less than the detection limit indicated.

Results are expressed as milligrams per litre except where noted.

File No. R3016(1)

RESULTS OF ANALYSIS - Water



Sample ID	Boot Lake	Hood Lake Outlet	Joe Lake Outlet	Cigar Lake	H-River Downstre am
Sample Date	05-07-06	05-07-06	05-07-06	05-07-06	05-07-06
Sample Time	13:30	14:00	14:35	15:05	16:00
ALS ID	11	12	13	14	15

Physical Tests

Conductivity (uS/cm)	163	43.4	12.1	26.6	31.7
Total Dissolved Solids	72.5	20.0	5.4	13.2	15.3
Hardness CaCO3	58.5	15.1	3.63	9.67	10.6
pH	6.48	6.68	6.62	6.75	6.59
Total Suspended Solids	<4.0	<4.0	<4.0	<4.0	<4.0
Turbidity (NTU)	0.24	0.28	0.34	0.40	0.53

Dissolved Anions

Alkalinity-Gran Total	CaCO3	4.2	6.8	4.6	7.4	5.1
Chloride	Cl	34.5	<0.50	<0.50	<0.50	0.58
Sulphate	SO4	11.6	12.1	1.2	4.8	8.1

Nutrients

Ammonia Nitrogen	N	<0.0050	<0.0050	<0.0050	0.0061	0.0051
Total Kjeldahl Nitrogen	N	0.134	0.125	0.160	0.247	0.119
Nitrate Nitrogen	N	<0.0050	<0.0050	<0.0050	<0.0050	0.0070
Nitrite Nitrogen	N	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Nitrite/Nitrate Nitrogen	N	<0.0071	<0.0071	<0.0071	<0.0071	<0.0071
Dissolved ortho-Phosphate	P	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Phosphate	P	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020

Remarks regarding the analyses appear at the beginning of this report.
 < = Less than the detection limit indicated.
 Results are expressed as milligrams per litre except where noted.

File No. R3016(1)

RESULTS OF ANALYSIS - Water

Sample ID	Boot Lake	Hood Lake Outlet	Joe Lake Outlet	Cigar Lake	H-River Downstre am
Sample Date	05-07-06	05-07-06	05-07-06	05-07-06	05-07-06
Sample Time	13:30	14:00	14:35	15:05	16:00
ALS ID	11	12	13	14	15

Total Metals

Aluminum	T-Al	0.0206	0.0129	0.0094	0.0212	0.0225
Antimony	T-Sb	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic	T-As	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Barium	T-Ba	0.0181	0.00472	0.00191	0.00295	0.00451
Beryllium	T-Be	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth	T-Bi	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Boron	T-B	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium	T-Cd	0.000133	<0.000050	<0.000050	<0.000050	0.000061
Calcium	T-Ca	20.8	3.73	0.782	2.60	2.66
Chromium	T-Cr	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt	T-Co	0.00025	0.00012	<0.00010	<0.00010	<0.00010
Copper	T-Cu	0.00124	0.00149	0.00053	0.00141	0.00219
Iron	T-Fe	0.035	<0.030	<0.030	0.038	<0.030
Lead	T-Pb	0.000133	<0.000050	<0.000050	0.000069	<0.000050
Lithium	T-Li	0.0063	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium	T-Mg	1.81	1.54	0.468	0.887	1.11
Manganese	T-Mn	0.0181	0.00273	0.00616	0.00194	0.00113
Mercury	T-Hg	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Molybdenum	T-Mo	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Nickel	T-Ni	0.00536	0.00751	<0.00050	0.00342	0.00307
Phosphorus	T-P	<0.30	<0.30	<0.30	<0.30	<0.30
Potassium	T-K	1.07	0.459	0.363	0.430	0.514
Selenium	T-Se	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Silicon	T-Si	0.417	0.451	0.136	0.142	0.312
Silver	T-Ag	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium	T-Na	0.948	0.506	0.403	0.484	0.506
Strontium	T-Sr	0.149	0.00902	0.00332	0.00552	0.00771
Thallium	T-Tl	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin	T-Sn	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium	T-Ti	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium	T-U	<0.000010	0.000012	0.000018	0.000015	0.000028
Vanadium	T-V	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zinc	T-Zn	0.0309	0.0036	<0.0010	0.0023	0.0223

Remarks regarding the analyses appear at the beginning of this report.

< = Less than the detection limit indicated.

Results are expressed as milligrams per litre except where noted.

RESULTS OF ANALYSIS - Water

Sample ID	Boot Lake	Hood Lake Outlet	Joe Lake Outlet	Cigar Lake	H-River Downstre am
Sample Date	05-07-06	05-07-06	05-07-06	05-07-06	05-07-06
Sample Time	13:30	14:00	14:35	15:05	16:00
ALS ID	11	12	13	14	15

Dissolved Metals

Aluminum	D-Al	0.0116	0.0088	0.0115	0.0168	0.0181
Antimony	D-Sb	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic	D-As	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Barium	D-Ba	0.0176	0.00456	0.00171	0.00286	0.00424
Beryllium	D-Be	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth	D-Bi	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Boron	D-B	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium	D-Cd	0.000129	<0.000050	<0.000050	<0.000050	0.000070
Calcium	D-Ca	20.5	3.58	0.739	2.46	2.50
Chromium	D-Cr	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt	D-Co	0.00026	<0.00010	<0.00010	<0.00010	<0.00010
Copper	D-Cu	0.00111	0.00138	0.00051	0.00113	0.00208
Iron	D-Fe	<0.030	<0.030	<0.030	<0.030	<0.030
Lead	D-Pb	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Lithium	D-Li	0.0065	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium	D-Mg	1.78	1.51	0.435	0.856	1.05
Manganese	D-Mn	0.0174	0.00217	0.00387	0.00105	0.000970
Mercury	D-Hg	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Molybdenum	D-Mo	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Nickel	D-Ni	0.00522	0.00718	<0.00050	0.00308	0.00288
Phosphorus	D-P	<0.30	<0.30	<0.30	<0.30	<0.30
Potassium	D-K	1.06	0.456	0.361	0.394	0.506
Selenium	D-Se	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Silicon	D-Si	0.423	0.452	0.144	0.151	0.307
Silver	D-Ag	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium	D-Na	1.10	0.624	0.534	0.584	0.624
Strontium	D-Sr	0.144	0.00868	0.00306	0.00539	0.00737
Thallium	D-Tl	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin	D-Sn	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium	D-Ti	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium	D-U	<0.000010	<0.000010	0.000014	0.000013	0.000023
Vanadium	D-V	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zinc	D-Zn	0.0323	0.0064	0.0038	0.0046	0.0240

Organic Parameters

Dissolved Organic Carbon C	1.56	1.48	1.86	3.06	1.65
Total Organic Carbon C	1.84	1.76	2.11	4.11	1.85

Remarks regarding the analyses appear at the beginning of this report.

< = Less than the detection limit indicated.

Results are expressed as milligrams per litre except where noted.

File No. R3016(1)

RESULTS OF ANALYSIS - Water



Sample ID	Camp Creek	H-River Upstream	Boot Lake Outlet	Banana Lake	Banana Replicate
Sample Date	05-07-06	05-07-06	05-07-07	05-07-07	05-07-07
Sample Time	16:20	17:00	08:30	08:45	08:55
ALS ID	16	17	18	19	20

Physical Tests

Conductivity (uS/cm)	39.0	20.5	76.9	56.1	56.8
Total Dissolved Solids	19.0	9.6	35.3	25.5	25.2
Hardness CaCO3	13.2	6.61	27.5	20.8	20.3
pH	6.57	6.63	6.61	6.83	6.83
Total Suspended Solids	<4.0	<4.0	<4.0	<4.0	<4.0
Turbidity (NTU)	0.29	0.28	0.27	0.34	0.60

Dissolved Anions

Alkalinity-Gran Total CaCO3	4.7	4.7	6.1	11.4	11.2
Chloride Cl	0.80	<0.50	10.2	<0.50	<0.50
Sulphate SO4	10.7	4.3	11.6	14.3	14.5

Nutrients

Ammonia Nitrogen N	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Total Kjeldahl Nitrogen N	0.126	0.155	0.145	0.183	0.175
Nitrate Nitrogen N	0.0060	<0.0050	0.0050	<0.0050	0.0050
Nitrite Nitrogen N	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Nitrite/Nitrate Nitrogen N	<0.0071	<0.0071	<0.0071	<0.0071	<0.0071
Dissolved ortho-Phosphate P	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Phosphate P	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020

Remarks regarding the analyses appear at the beginning of this report.

< = Less than the detection limit indicated.

Results are expressed as milligrams per litre except where noted.

RESULTS OF ANALYSIS - Water

Sample ID	Camp Creek	H-River Upstream	Boot Lake Outlet	Banana Lake	Banana Replicate
Sample Date	05-07-06	05-07-06	05-07-07	05-07-07	05-07-07
Sample Time	16:20	17:00	08:30	08:45	08:55
ALS ID	16	17	18	19	20

Total Metals

Aluminum	T-Al	0.0214	0.0192	0.0138	0.0272	0.0219
Antimony	T-Sb	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic	T-As	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Barium	T-Ba	0.00522	0.00324	0.00819	0.00460	0.00442
Beryllium	T-Be	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth	T-Bi	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Boron	T-B	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium	T-Cd	0.000115	<0.000050	0.000090	0.000076	0.000086
Calcium	T-Ca	3.22	1.59	8.64	5.67	5.55
Chromium	T-Cr	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt	T-Co	<0.00010	<0.00010	<0.00010	0.00020	0.00018
Copper	T-Cu	0.00284	0.00132	0.00280	0.0327	0.0318
Iron	T-Fe	0.036	<0.030	<0.030	0.031	<0.030
Lead	T-Pb	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Lithium	T-Li	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium	T-Mg	1.32	0.717	1.54	1.70	1.64
Manganese	T-Mn	0.00135	0.000763	0.00150	0.00493	0.00479
Mercury	T-Hg	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Molybdenum	T-Mo	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Nickel	T-Ni	0.00426	0.00119	0.00149	0.00063	0.00065
Phosphorus	T-P	<0.30	<0.30	<0.30	<0.30	<0.30
Potassium	T-K	0.525	0.481	0.822	0.854	0.818
Selenium	T-Se	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Silicon	T-Si	0.367	0.146	0.401	0.474	0.471
Silver	T-Ag	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium	T-Na	0.517	0.448	0.642	0.569	0.563
Strontium	T-Sr	0.00944	0.00497	0.0423	0.00858	0.00821
Thallium	T-Tl	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin	T-Sn	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium	T-Ti	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium	T-U	0.000038	0.000011	0.000010	0.000014	0.000014
Vanadium	T-V	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zinc	T-Zn	0.0356	0.0020	0.0207	0.0139	0.0142

Remarks regarding the analyses appear at the beginning of this report.

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Results are expressed as milligrams per litre except where noted.

RESULTS OF ANALYSIS - Water

Sample ID	Camp Creek	H-River Upstream	Boot Lake Outlet	Banana Lake	Banana Replicat e
Sample Date	05-07-06	05-07-06	05-07-07	05-07-07	05-07-07
Sample Time	16:20	17:00	08:30	08:45	08:55
ALS ID	16	17	18	19	20

Dissolved Metals

Aluminum	D-Al	0.0156	0.0166	0.0105	0.0175	0.0143
Antimony	D-Sb	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic	D-As	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Barium	D-Ba	0.00499	0.00304	0.00793	0.00479	0.00439
Beryllium	D-Be	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth	D-Bi	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Boron	D-B	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium	D-Cd	0.000106	<0.000050	0.000073	0.000079	0.000073
Calcium	D-Ca	3.15	1.51	8.50	5.62	5.48
Chromium	D-Cr	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt	D-Co	<0.00010	<0.00010	<0.00010	0.00021	0.00019
Copper	D-Cu	0.00247	0.00130	0.00264	0.0289	0.0264
Iron	D-Fe	<0.030	<0.030	<0.030	<0.030	<0.030
Lead	D-Pb	<0.000050	<0.000050	<0.000050	0.000189	<0.000050
Lithium	D-Li	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium	D-Mg	1.30	0.689	1.51	1.65	1.61
Manganese	D-Mn	0.00124	0.000603	0.00105	0.00470	0.00447
Mercury	D-Hg	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Molybdenum	D-Mo	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Nickel	D-Ni	0.00426	0.00117	0.00145	0.00073	0.00065
Phosphorus	D-P	<0.30	<0.30	<0.30	<0.30	<0.30
Potassium	D-K	0.521	0.487	0.812	0.863	0.818
Selenium	D-Se	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Silicon	D-Si	0.381	0.149	0.413	0.495	0.447
Silver	D-Ag	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium	D-Na	0.652	0.592	0.759	0.755	0.566
Strontium	D-Sr	0.00912	0.00477	0.0410	0.00842	0.00816
Thallium	D-Tl	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin	D-Sn	<0.00010	<0.00010	<0.00010	<0.00010	0.00012
Titanium	D-Ti	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium	D-U	0.000030	0.000010	<0.000010	<0.000010	0.000011
Vanadium	D-V	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zinc	D-Zn	0.0378	0.0054	0.0239	0.0201	0.0137

Organic Parameters

Dissolved Organic Carbon C	1.67	1.81	1.72	1.99	1.99
Total Organic Carbon C	1.75	1.98	1.81	2.25	2.23

Remarks regarding the analyses appear at the beginning of this report.

< = Less than the detection limit indicated.

Results are expressed as milligrams per litre except where noted.

File No. R3016(1)

RESULTS OF ANALYSIS - Water



Sample ID	Camp Lake	Camp Lake Rep licate
Sample Date	05-07-07	05-07-07
Sample Time	13:30	13:45
ALS ID	21	22

Physical Tests

Conductivity	(uS/cm)	85.2	85.7
Total Dissolved Solids		42.7	42.3
Hardness	CaCO3	28.6	27.4
pH		6.44	6.41
Total Suspended Solids		<4.0	<4.0
Turbidity	(NTU)	0.86	1.01

Dissolved Anions

Alkalinity-Gran Total	CaCO3	3.7	3.7
Chloride	Cl	6.48	6.48
Sulphate	SO4	22.0	21.9

Nutrients

Ammonia Nitrogen	N	<0.0050	0.0057
Total Kjeldahl Nitrogen	N	0.155	0.188
Nitrate Nitrogen	N	<0.0050	0.0080
Nitrite Nitrogen	N	<0.0050	<0.0050
Nitrite/Nitrate Nitrogen	N	<0.0071	0.0080
Dissolved ortho-Phosphate	P	<0.0010	<0.0010
Total Phosphate	P	<0.0020	<0.0020

Remarks regarding the analyses appear at the beginning of this report.
 < = Less than the detection limit indicated.
 Results are expressed as milligrams per litre except where noted.

File No. R3016(1)

RESULTS OF ANALYSIS - Water

Sample ID	Camp Lake	Camp Lake Rep licate
Sample Date	05-07-07	05-07-07
Sample Time	13:30	13:45
ALS ID	21	22

Total Metals

Aluminum	T-Al	0.0928	0.0742
Antimony	T-Sb	<0.00010	<0.00010
Arsenic	T-As	<0.00010	<0.00010
Barium	T-Ba	0.00941	0.00918
Beryllium	T-Be	<0.00050	<0.00050
Bismuth	T-Bi	<0.00050	<0.00050
Boron	T-B	<0.010	<0.010
Cadmium	T-Cd	0.00198	0.00193
Calcium	T-Ca	8.31	8.10
Chromium	T-Cr	<0.00050	<0.00050
Cobalt	T-Co	0.00091	0.00087
Copper	T-Cu	0.0442	0.0418
Iron	T-Fe	0.122	0.104
Lead	T-Pb	0.000816	0.000484
Lithium	T-Li	<0.0050	<0.0050
Magnesium	T-Mg	1.89	1.84
Manganese	T-Mn	0.0585	0.0574
Mercury	T-Hg	<0.000050	<0.000050
Molybdenum	T-Mo	<0.000050	<0.000050
Nickel	T-Ni	0.00331	0.00312
Phosphorus	T-P	<0.30	<0.30
Potassium	T-K	0.883	0.848
Selenium	T-Se	<0.0010	<0.0010
Silicon	T-Si	0.950	0.955
Silver	T-Ag	<0.000010	<0.000010
Sodium	T-Na	0.676	0.658
Strontium	T-Sr	0.0456	0.0447
Thallium	T-Tl	<0.00010	<0.00010
Tin	T-Sn	<0.00010	<0.00010
Titanium	T-Ti	<0.010	<0.010
Uranium	T-U	0.000013	0.000011
Vanadium	T-V	<0.0010	<0.0010
Zinc	T-Zn	0.383	0.375

Remarks regarding the analyses appear at the beginning of this report.

< = Less than the detection limit indicated.

Results are expressed as milligrams per litre except where noted.

File No. R3016(1)

RESULTS OF ANALYSIS - Water

Sample ID	Camp Lake	Camp Lake Rep licate
Sample Date	05-07-07	05-07-07
Sample Time	13:30	13:45
ALS ID	21	22

Dissolved Metals

Aluminum	D-Al	0.0160	0.0203
Antimony	D-Sb	<0.00010	<0.00010
Arsenic	D-As	<0.00010	<0.00010
Barium	D-Ba	0.00919	0.00888
Beryllium	D-Be	<0.00050	<0.00050
Bismuth	D-Bi	<0.00050	<0.00050
Boron	D-B	<0.010	<0.010
Cadmium	D-Cd	0.00185	0.00183
Calcium	D-Ca	8.35	8.03
Chromium	D-Cr	<0.00050	<0.00050
Cobalt	D-Co	0.00089	0.00088
Copper	D-Cu	0.0353	0.0317
Iron	D-Fe	<0.030	0.038
Lead	D-Pb	0.000153	0.000098
Lithium	D-Li	<0.0050	<0.0050
Magnesium	D-Mg	1.89	1.78
Manganese	D-Mn	0.0574	0.0558
Mercury	D-Hg	<0.000050	<0.000050
Molybdenum	D-Mo	<0.000050	<0.000050
Nickel	D-Ni	0.00343	0.00311
Phosphorus	D-P	<0.30	<0.30
Potassium	D-K	0.892	0.834
Selenium	D-Se	<0.0010	<0.0010
Silicon	D-Si	0.918	0.942
Silver	D-Ag	<0.000010	<0.000010
Sodium	D-Na	0.706	0.756
Strontium	D-Sr	0.0449	0.0441
Thallium	D-Tl	<0.00010	<0.00010
Tin	D-Sn	<0.00010	<0.00010
Titanium	D-Ti	<0.010	<0.010
Uranium	D-U	<0.000010	<0.000010
Vanadium	D-V	<0.0010	<0.0010
Zinc	D-Zn	0.378	0.381

Organic Parameters

Dissolved Organic Carbon C	1.59	1.56
Total Organic Carbon C	1.96	1.93

Remarks regarding the analyses appear at the beginning of this report.
 < = Less than the detection limit indicated.
 Results are expressed as milligrams per litre except where noted.

Appendix 1 - QUALITY CONTROL - Replicates

Water	Clearer Lake	Clearer Lake	Clearer Lake	Clearer Lake
	05-07-06 12:15	QC # 20770	QC # 21627	QC # 21650

Physical Tests

Conductivity (uS/cm)	165	166	-	-
Total Dissolved Solids	83.9	<1.0	-	-
pH	6.58	6.58	-	-
Total Suspended Solids	<4.0	<4.0	-	-
Turbidity (NTU)	0.49	0.45	-	-

Dissolved Anions

Alkalinity-Gran Total	CaCO ₃	9.6	9.8	-	-
Chloride	Cl	13.2	13.2	-	-
Sulphate	SO ₄	43.0	43.2	-	-

Nutrients

Ammonia Nitrogen	N	<0.0050	<0.0050	-	-
Total Kjeldahl Nitrogen	N	0.112	-	0.104	0.104
Nitrate Nitrogen	N	<0.0050	<0.0050	-	-
Nitrite Nitrogen	N	<0.0050	<0.0050	-	-
Nitrite/Nitrate Nitrogen	N	<0.0071	<0.0071	-	-
Dissolved ortho-Phosphate	P	<0.0010	<0.0010	-	-
Total Phosphate	P	<0.0020	<0.0020	-	-

Remarks regarding the analyses appear at the beginning of this report.
 < = Less than the detection limit indicated.
 Results are expressed as milligrams per litre except where noted.

Appendix 1 - QUALITY CONTROL - Replicates



Water		Clearer Lake	Clearer Lake	Clearer Lake	Clearer Lake
		05-07-06 12:15	QC # 20770	QC # 21627	QC # 21650
Total Metals					
Aluminum	T-Al	0.0261	-	0.0241	0.0241
Antimony	T-Sb	<0.00010	-	<0.00010	<0.00010
Arsenic	T-As	<0.00010	-	<0.00010	<0.00010
Barium	T-Ba	0.0118	-	0.0119	0.0119
Beryllium	T-Be	<0.00050	-	<0.00050	<0.00050
Bismuth	T-Bi	<0.00050	-	<0.00050	<0.00050
Boron	T-B	<0.010	-	<0.010	<0.010
Cadmium	T-Cd	0.00699	-	0.00696	0.00696
Calcium	T-Ca	19.6	-	19.5	19.5
Chromium	T-Cr	<0.00050	-	<0.00050	<0.00050
Cobalt	T-Co	0.00031	-	0.00031	0.00031
Copper	T-Cu	0.0177	-	0.0176	0.0176
Lead	T-Pb	0.00118	-	0.00118	0.00118
Lithium	T-Li	<0.0050	-	<0.0050	<0.0050
Magnesium	T-Mg	3.25	-	3.25	3.25
Manganese	T-Mn	0.00891	-	0.00879	0.00879
Molybdenum	T-Mo	<0.000050	-	<0.000050	<0.000050
Nickel	T-Ni	0.00457	-	0.00453	0.00453
Potassium	T-K	1.15	-	1.14	1.14
Selenium	T-Se	<0.0010	-	<0.0010	<0.0010
Silver	T-Ag	0.000020	-	0.000020	0.000020
Sodium	T-Na	0.878	-	0.874	0.874
Strontium	T-Sr	0.0849	-	0.0845	0.0845
Thallium	T-Tl	<0.00010	-	<0.00010	<0.00010
Tin	T-Sn	<0.00010	-	<0.00010	<0.00010
Uranium	T-U	0.000018	-	0.000017	0.000017
Vanadium	T-V	<0.0010	-	<0.0010	<0.0010
Zinc	T-Zn	1.10	-	1.09	1.09

Remarks regarding the analyses appear at the beginning of this report.

< = Less than the detection limit indicated.

Results are expressed as milligrams per litre except where noted.

Appendix 1 - QUALITY CONTROL - Replicates

Water		Clearer Lake		Clearer Lake		Clearer Lake		Clearer Lake
		05-07-06 12:15		QC # 20770		QC # 21627		QC # 21650
<u>Dissolved Metals</u>								
Aluminum	D-Al	0.0121	-			0.0120		0.0120
Antimony	D-Sb	<0.00010	-			<0.00010		<0.00010
Arsenic	D-As	<0.00010	-			<0.00010		<0.00010
Barium	D-Ba	0.0119	-			0.0120		0.0120
Beryllium	D-Be	<0.00050	-			<0.00050		<0.00050
Bismuth	D-Bi	<0.00050	-			<0.00050		<0.00050
Boron	D-B	<0.010	-			<0.010		<0.010
Cadmium	D-Cd	0.00694	-			0.00701		0.00701
Calcium	D-Ca	19.7	-			19.9		19.9
Chromium	D-Cr	<0.00050	-			<0.00050		<0.00050
Cobalt	D-Co	0.00032	-			0.00031		0.00031
Copper	D-Cu	0.0131	-			0.0130		0.0130
Lead	D-Pb	0.000352	-			0.000351		0.000351
Lithium	D-Li	<0.0050	-			<0.0050		<0.0050
Magnesium	D-Mg	3.29	-			3.33		3.33
Manganese	D-Mn	0.00867	-			0.00889		0.00889
Molybdenum	D-Mo	<0.000050	-			<0.000050		<0.000050
Nickel	D-Ni	0.00464	-			0.00463		0.00463
Potassium	D-K	1.15	-			1.18		1.18
Selenium	D-Se	<0.0010	-			<0.0010		<0.0010
Silver	D-Ag	0.000014	-			0.000013		0.000013
Sodium	D-Na	1.01	-			1.04		1.04
Strontium	D-Sr	0.0834	-			0.0859		0.0859
Thallium	D-Tl	<0.00010	-			<0.00010		<0.00010
Tin	D-Sn	<0.00010	-			<0.00010		<0.00010
Uranium	D-U	<0.000010	-			<0.000010		<0.000010
Vanadium	D-V	<0.0010	-			<0.0010		<0.0010
Zinc	D-Zn	1.14	-			1.14		1.14
<u>Organic Parameters</u>								
Dissolved Organic Carbon C		1.12	-			1.15		1.15
Total Organic Carbon	C	1.42	-			1.32		1.32

Remarks regarding the analyses appear at the beginning of this report.

< = Less than the detection limit indicated.

Results are expressed as milligrams per litre except where noted.