APPENDIX 2

2007 3rd Quarter

Garrow Lake Effluent Discharge Monitoring

by

Gartner Lee Limited

Gartner Lee Limited

November 15, 2007

Bruce Donald
Reclamation Manager
Teck Cominco Metals, Ltd.
601 Knighton Road
Kimberley, BC, V1A 3E1
Canada

Dear Mr. Donald

Re: Polaris Mine 2007 3rd Quarter Report

Please find attached the Polaris Mine report for the third quarter of 2007. Similar to previous years the report format follows the Environment Canada Metal Mining Effluent Regulation (MMER) report protocols.

Mining operations at Polaris ceased in 2002. Site decommissioning was completed in 2004. Effluent quality monitoring in Garrow Creek has been on-going since closure. In 2006 Teck Cominco completed a three-year MMER and Environmental Effects Monitoring (EEM) program in order to achieve "closed mine status". The closed mine status maintains no further reporting requirements to Environment Canada. Monitoring of Garrow Creek and reporting continued to be required to meet the terms and conditions of the Water License at the site. These monitoring requirements are similar to MMER requirements and therefore follow similar reporting protocols.

In 2007, effluent samples were collected by local residents flown to the site on a weekly basis and by a small field crew onsite during the week of July 23, 2007. The local residents were trained in sampling collection and handling techniques and protocols by a Gartner Lee technician before they commenced sampling on their own.

It was assumed that flow within Garrow Creek would initiate the last week of June / first week of July, similar to previous years. The first effluent sample was collected from the creek on July 8, 2007. Flow continued throughout July, August and into September. The last sample was collected on September 13, 2007. Local residents flew to the site on September 20, 2007 to collect an effluent sample, but it was not possible because Garrow Creek was frozen.

Effluent was characterized on a weekly basis for a total of eleven sampling events. Flow measurements were made during each sampling event. Samples were analyzed on a weekly

P.O. Box 98, 4912-49th Street, Yellowknife, NT, X1A 2N1 tel 867.873.5808 fax 867.873.4453
www.gartnerlee.com

basis for general chemistry, total metals, radium 226 and cyanide. However, no cyanide sample was submitted for analysis on September 6, 2007 because of the sample collector could not locate an appropriate sample container and preservative. Once a month samples were analyzed for ammonia. A chronology of the 2007 sampling season is presented in Appendix A. Tables 1a, 1b, 1c and 1d summarize the effluent concentrations. The effluent quality results are presented in Table 2 and the laboratory reports are included in Appendix B. Analytical results for all parameters were less than the water licence discharge limits.

Acute Bioassay testing was also conducted throughout the quarter. Three sets (i.e., rainbow trout and *Daphnia magna*) of acute toxicity tests were conducted on samples collected July 26, 2007, August 23, 2007 and September 6, 2007. The results are summarized in Table 3 and the acute toxicity testing reports are included in Appendix C. Attempts were made to conduct additional acute toxicity testing on samples collected July 8, 2007 and July 19, 2007. Results are not available, as the samples arrived at the laboratory days after the specified holding times due to delays incurred during shipping.

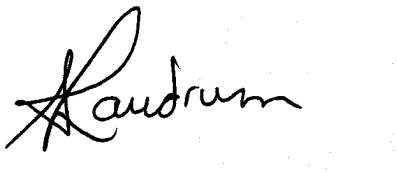
Standard Acute, 96-hour, Static and LC50 tests were administered on rainbow trout and *Daphnia magna* on July 31, 2007 resulting in no toxicity being observed (0% mortality at 100% concentration) for both rainbow trout and *Daphnia magna*.

Standard Acute, 96-hour, Static and LC50 tests administered on rainbow trout and *Daphnia magna* on August 27, 2007 resulted in one observed mortality in 100% concentration after 96hrs. Based on these results the laboratory conclusion stated that no sublethal biological effects were observed as a result of the test. Results from the test on Daphnia magna found that toxicity was observed and there was a 100% mortality rate observed in 100% concentrations (70% mortality at 75% concentration). Despite these results it is important to note that all concentrations for the associated water licence parameters were still below license limits.

Standard Acute, 96-hour, Static and LC50 tests administered on rainbow trout and Daphnia magna on September 11, 2007 resulted in no sublethal biological effects or toxicity observed at 100% concentration in rainbow trout (one observed mortality in 100% concentration after 96hrs). Results from the test on *Daphnia magna* found that toxicity was observed and there was a 100% mortality rate observed in 100% concentrations. All concentrations for the associated water licence parameters were below license limits. Sample holding time was exceeded by 6.5 hours, however the sample was analyzed due to the difficulty encountered in getting samples to the laboratory within the specified holding time.

Please contact me if you have any questions regarding the Polaris Mine 2007 3rd Quarter Report.

Yours very truly,
GARTNER LEE LIMITED



Arlene Laudrum, P.Geol.
Senior Environmental Geologist

AL:al

ATTACHMENTS

Table 1a.	2007 3rd Quarter Polaris Mine Report, Concentrations of Effluent Sampled Weekly
Table 1b.	2007 3rd Quarter Polaris Mine Report, Monthly Mean Concentrations of Effluent
Table 1c.	2007 3rd Quarter Polaris Mine Report, Mass Loading of Deleterious Substance for Each Day Sampled
Table 1d.	2007 3rd Quarter Polaris Mine Report, Mass Loading per Calendar Month for Each Deleterious Substance
Table 2.	2007 3rd Quarter Polaris Mine Effluent Characterization Results
Table 3.	2007 3rd Quarter Polaris Mine Results of Acute Lethality Tests and *Daphnia Magna* Monitoring Tests
Appendix A	2007 Polaris Mine Sampling Event Chronology
Appendix B	Effluent Quality Analytical Test Reports
Appendix C	Acute Toxicity Test Reports

2007 3rd QUARTER POLARIS MINE REPORT

LOCATION - FINAL DISCHARGE POINT FROM GARROW LAKE - GARROW LAKE FORMER DAM /SYPHONS

Table 1a. CONCENTRATIONS OF EFFLUENT SAMPLED WEEKLY

Sample Taken During The Week of	Date Sample Taken	DELETERIOUS SUBSTANCE (mg/L)[1] Arsenic	Copper	Cyanide	Lead	Nickel	Zinc	TSS	Radium 226[1]	pH[1]	Collection Method
08-Jul-07	**08-Jul-07**	*0.00020*	0.00108	*0.0050*	0.00047	0.00266	0.0119	*3.0*	0.0050	8.06	Grab
12-Jul-07	**12-Jul-07**	*0.00020*	0.00079	*0.0050*	0.00033	0.00186	0.0094	4.3	*0.0050*	7.95	Grab
19-Jul-07	**19-Jul-07**	0.00020	0.00057	*0.0050*	0.00020	0.00175	0.0129	*3.0*	*0.0050*	8.02	Grab
26-Jul-07	**26-Jul-07**	*0.00024*	0.00087	*0.0050*	0.00037	0.00323	0.0238	3.5	0.0300	7.96	Grab
01-Aug-07	**01-Aug-07**	*0.00020*	0.00074	*0.0050*	0.00051	0.00462	0.0311	*3.0*	0.0070	8.03	Grab
09-Aug-07	**09-Aug-07**	*0.00020*	0.00092	*0.0050*	0.00039	0.00500	0.0258	*3.0*	0.0070	8.05	Grab
16-Aug-07	**16-Aug-07**	0.00026	0.00089	*0.0050*	0.00040	0.00555	0.0265	8.0	0.0050	8.12	Grab
23-Aug-07	**23-Aug-07**	*0.00020*	0.00091	*0.0050*	0.00046	0.00681	0.0334	*3.0*	0.0060	8.03	Grab
30-Aug-07	**30-Aug-07**	*0.00020*	0.00112	*0.0050*	0.000742	0.00791	0.0356	3.3	0.0080	8.02	Grab
06-Sep-07	**06-Sep-07**	*0.00020*	0.00151	N/A	0.00210	0.00798	0.0366	4.1	0.006	8.06	Grab
13-Sep-07	**13-Sep-07**	*0.00020*	0.00111	*0.0050*	0.000480	0.00815	0.0344	*3.0*	*0.0050*	7.93	Grab
20-Sep-07	nd[3]	-	-	-	-	-	-	-	-	-	-

Note[1] - All concentrations are in mg/L except Radium 226 which is Bq/L and pH which is in pH units

Note [3] - "nd" refers to no effluent discharge to sample

Concentrations in italicized font are less than the detection limit shown.

N/A - Cyanide not sampled for Sept 06, 2007.

Table 1b. MONTHLY MEAN CONCENTRATIONS OF EFFLUENT

MONTH OF	MONTHLY MEAN CONCENTRATION[1] OF DELETERIOUS SUBSTANCE[2] Arsenic	Copper	Cyanide	Lead	Nickel	Zinc	TSS	Radium 226
July/07	0.0002	0.0008	0.0050	0.0003	0.0024	0.0145	3.4500	0.0113
August/07	0.0002	0.0009	0.0050	0.0005	0.0060	0.0305	4.0600	0.0066
September/07	0.0002	0.0013	0.0050	0.0013	0.0081	0.0355	3.5500	0.0055

Note[1] - All concentrations are in mg/L except Radium 226 which is Bq/L

Note[2] - Monthly Mean Concentrations - the MEAN value of the concentrations measured in all water samples collected during each month when a deleterious substance is deposited.

Note [3] - "nd" refers to no effluent discharge to sample

Table 1c. MASS LOADING OF DELETERIOUS SUBSTANCE FOR EACH DAY SAMPLED

Sample Taken During The Week of	Date Sample Taken	DAILY MASS LOADING OF DELETERIOUS SUBSTANCE (kg/day)[1]								Average Daily Flow Rate (m^3/day)[4]
		Arsenic	Copper	Cyanide	Lead	Nickel	Zinc	TSS	Radium 226[1]	
08-Jul-07	**08-Jul-07**	0.000	0.002	0.009	0.001	0.005	0.020	5.106	0.009	1,702
12-Jul-07	**12-Jul-07**	0.001	0.004	0.022	0.001	0.008	0.042	19.022	0.022	4,424
19-Jul-07	**19-Jul-07**	0.001	0.004	0.035	0.001	0.012	0.092	21.280	0.035	7,093
26-Jul-07	**26-Jul-07**	0.002	0.007	0.040	0.003	0.026	0.192	28.214	0.242	8,061
01-Aug-07	**01-Aug-07**	0.002	0.006	0.039	0.004	0.036	0.245	23.613	0.055	7,871
09-Aug-07	**09-Aug-07**	0.002	0.011	0.058	0.004	0.058	0.299	34.733	0.081	11,578
16-Aug-07	**16-Aug-07**	0.004	0.012	0.069	0.006	0.077	0.366	110.592	0.069	13,824
23-Aug-07	**23-Aug-07**	0.002	0.009	0.048	0.004	0.065	0.320	28.770	0.058	9,590
30-Aug-07	**30-Aug-07**	0.001	0.007	0.032	0.005	0.051	0.231	21.412	0.052	6,489
06-Sep-07	**06-Sep-07**	0.003	0.024	N/A	0.034	0.127	0.584	65.463	0.096	15,967
13-Sep-07	**13-Sep-07**	0.005	0.028	0.124	0.012	0.202	0.854	74.520	0.124	24,840
20-Sep-07	nd[3]	-	-	-	-	-	-	-	-	-

Note[1] - Mass Loading is in kilograms per day of the deleterious substance deposited except Radium 226 which is in Bq per day

Note [2] - it was not possible to get a trained technician to sample during the week of July 30, 2006, so a sample could not be collected.

Note [3] - "nd" refers to no effluent discharge to sample (creek was frozen)

Note [4] - Discharge for September 14 was estimated by the technician as flow was too low to measure with a probe.

N/A - Cyanide not sampled for Sept 06, 2007.

Table 1d. MASS LOADING PER CALENDAR MONTH FOR EACH DELETERIOUS SUBSTANCE

CALENDAR MONTH OF	MASS LOADING[1] FOR DELETERIOUS SUBSTANCE (kg/month)[2]								Average Weekly Flow Rate[3] (m^3/week)	Total Monthly Volume[4] (m^3/month)
	Arsenic	Copper	Cyanide	Lead	Nickel	Zinc	TSS	Radium 226[2]		
July/07	0.04	0.13	0.82	0.05	0.40	2.68	570.57	2.39	37,240	164,921
August/07	0.07	0.28	1.53	0.14	1.78	9.06	1,358.55	1.95	69,092	305,977
September/07	0.13	0.80	1.93	0.70	5.11	22.30	2,169.74	3.41	142,823	632,504

Note[1] - Total Mass Loading for Calendar month calculated by multiplying the Average Daily Mass Loading for the Month x # days in the month

Note[2] - Mass loading units are in kg per month except Radium 226, which is in Bq per month

Note[3] - Average Weekly Flow Rate calculated by multiplying Average Daily Flow Rate x 7 days per week

Note[4] - Total Monthly Volume calculated by multiplying Average Daily Flow Rate for the month x days in month

Table 2. 2007 3rd Quarter Polaris Mine Effluent Characterization Results

Effluent Characterization from Final Discharge Point - Garrow Lake Former Dam / Syphons
Northing: 75°22'32"
Easting: 96°48'37"

		Facility Name	Teck Cominco Metals Limited - Polaris Mine (Little Cornwallis Island)												
		FDP Name	Garrow Lake Syphons												
		Sample ID	G CREEK	G CREEK QA/QC	G CREEK	G CREEK	G CREEK	G CREEK	G CREEK	G CREEK	G CREEK	G CREEK QA/QC	G CREEK	G CREEK	G CREEK
		Date Sampled	08-JUL-07	08-JUL-07	12-JUL-07	19-JUL-07	26-Jul-07	01-Aug-07	09-AUG-07	16-Aug-07	23-AUG-07	23-AUG-07	30-AUG-07	06-SEP-07	13-Sep-07
		ALS Sample ID	L530175-1	L530175-2	L530749-1	L533661-1	L535976-1	L538421-1	L541667-1	L544273-1	L546420-1	L546420-2	L549398-1	L553205-1	L554645-1
		Sample Method	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab
Field Tests	**units**	**Detection Limit**													
Field pH	pH	-	8.3	-	7.27	7.34	7.21	7.21	7.19	7.17	7.6	-	7.00	7.00	-
Temperature	°C	-	10.1	-	7.9	5.4	10.5	4.7	-	-	3	-	-	-	-
Physical Tests															
Salinity (EC)	g/L	*1*	1.9	1.9	1.7	2.5	4.0	5.5	5.4	6.0	6.8	6.8	7.2	7.7	8.0
Hardness (as CaCO3)	mg/L	*1*	467	458	396	555	830	1250	1260	1220	1520	1570	1610	1700	1800
pH	pH	*0.01*	8.06	8.06	7.95	8.02	7.96	8.03	8.05	8.12	8.02	8.04	8.02	8.06	7.93
Total Suspended Solids	mg/L	*3*	<3.0	<3.0	4.3	<3.0	3.5	<3.0	<3.0	8.0	<3.0	<3.0	3.3	4.1	13500
Anions and Nutrients															
Ammonia as N	mg/L	*0.02*	<0.020	<0.020	-	-	-	-	-	-	0.030	0.033	-	-	-
Nitrate (as N)	mg/L	*0.025*	0.125	0.129	-	-	-	-	-	-			-	-	<0.10
Cyanides															
Cyanide, Total	mg/L	*0.005*	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-	<0.0050
Total Metals															
Aluminum (Al)-Total	mg/L	*0.02*	<0.020	<0.010	0.021	<0.010	0.070	<0.030	<0.60	<0.020	<0.050	<0.050	<0.050	<0.050	<0.050
Arsenic (As)-Total	mg/L	*0.0002*	<0.00020	<0.00020	<0.00020	<0.00020	0.00024	<0.00020	<0.00020	0.00026	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Cadmium (Cd)-Total	mg/L	*0.00002*	0.000073	0.000067	0.000059	0.000080	0.000168	0.000253	0.000249	0.000238	0.000292	0.000282	0.000285	0.000308	0.000299
Calcium (Ca)-Total	mg/L	*0.1*	56.9	55.3	44.5	57.1	78.8	115	117	115	134	138	124	160	165
Copper (Cu)-Total	mg/L	*0.00005*	0.00108	0.00108	0.000793	0.000568	0.000866	0.000736	0.000922	0.000888	0.000910	0.000915	0.00112	0.00151	0.00111
Iron (Fe)-Total	mg/L	*0.01*	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.013	0.012	0.011	0.017	0.031	0.021
Lead (Pb)-Total	mg/L	*0.00005*	0.000459	0.000484	0.000330	0.000198	0.000372	0.000514	0.000388	0.000399	0.000457	0.000467	0.000742	0.00210	0.000480
Magnesium (Mg)-Total	mg/L	*0.2*	78.8	77.6	69.2	100	154	234	236	227	288	298	315	315	337
Manganese (Mn)-Total	mg/L	*0.00005*	0.000991	0.000948	0.00123	0.00127	0.00236	0.00569	0.00664	0.00572	0.0108	0.0107	0.0120	0.0145	0.0141
Mercury (Hg)-Total	mg/L	*0.00001*	<0.000010	<0.000010	<0.000010	0.000011	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000011	<0.000010	0.000034
Molybdenum (Mo)-Total	mg/L	*0.001*	0.00311	0.00304	0.00290	0.00240	0.0028	0.0035	0.0031	0.0037	0.0040	0.0041	0.0047	0.0042	0.0048
Nickel (Ni)-Total	mg/L	*0.00005*	0.00270	0.00262	0.00186	0.00175	0.00323	0.00462	0.00500	0.00555	0.00685	0.00676	0.00791	0.00798	0.00815
Zinc (Zn)-Total	mg/L	*0.0005*	0.0119	0.0118	0.00944	0.0129	0.0238	0.0311	0.0258	0.0265	0.0336	0.0331	0.0356	0.0366	0.0344
Radiological Parameters															
Radium-226	Bq/L	*0.005*	0.005	<0.005	<0.005	<0.005	0.03	0.007	0.007	0.005	0.007	<0.005	0.008	0.006	<0.005

Table 3. 2007 3rd Quarter Polaris Mine Results of Acute Lethality Tests and *Daphnia Magna* Monitoring Tests

Date Sample Collected	Effluent Acutely Lethal to Rainbow trout (yes or no)	Effluent Acutely Lethal to *Daphnia magna* (yes or no)
26-Jul-07	No	No
23-Aug-07	No	Yes
6-Sept-07	No[1]	Yes[1]

[1] September 6, 2007 tests were initiated outside of holding times due to transportation delays.

Appendix A

2007 Polaris Mine Sampling Event Chronology

APPENDIX A. 2007 POLARIS MINE SAMPLING EVENT CHRONOLOGY

Date	Event Type	Observations/Comments
Sat. Jun-30-07	-	Approximate date flow initiated in Garrow Creek
Tue. Jul-05-07	-	Initial sample collection delayed as site not accessible due to fog / weather.
Sun. Jul-08-07	Monthly	Water chemistry sample collection from Garrow Creek. ALS File # 530175
	Acute toxicity	Error in the shipping of the water samples caused the samples to arrive at the lab well after their holding times had expired. Due to this error no toxicity tests were undertaken.
Thur. Jul-12-07	Weekly	Water chemistry sample collection from Garrow Creek. ALS File # 530749
Thur. Jul-19-07	Monthly	Water chemistry sample collection from Garrow Creek. ALS File # 533661
	Acute toxicity	Error in the shipping of the water samples caused the samples to arrive at the lab well after their holding times had expired. Due to this error no toxicty tests were undertaken.
Thur. Jul-26-07	Monthly	Water chemistry sample collection from Garrow Creek. ALS File # 535976
	Acute Toxicity	Not enough water collected. 20 litres was collected instead of 40 litres. Lab was still able to do a pass/fail test. That test was successful. ALS File # 538253
Wed. Aug-01-07	Weekly	Water chemistry sample collection from Garrow Creek. ALS File # 538421
Thur. Aug-09-07	Weekly	Water chemistry sample collection from Garrow Creek. ALS File # 541667
Thur. Aug-16-07	Weekly	Water chemistry sample collection from Garrow Creek. ALS File # 544273
Thur. Aug-23-07	Monthly	Water chemistry sample collection from Garrow Creek. ALS File # 546420
	Acute Toxicity	Toxicity samples arrived at the lab on Monday August 27, 2007 within holding times for all tests. The rainbow trout test was started on Monday August 27, 2007. The test was completed without incident and the results were a pass. The Daphnia test was started on Monday August 27, 2007. The test was completed without incident but there was 100% mortality at 100% concentration as well as observed toxicity. ALS File # 546622
Thur. Aug-30-07	Weekly	Water chemistry sample collection from Garrow Creek. ALS File # 549398
Thur. Sep-06-07	Weekly	Water chemistry sample collection from Garrow Creek. Ice forming at edges of creek. ALS File # 553205
	Acute Toxicity	Toxicity samples arrived at the lab on Tuesday September 11, 2007 within holding times for all tests. The rainbow trout test was started on Tuesday September 11, 2007, 6.5 hours after the holding time had expired. The test was completed without incident and the results were a pass. The Daphnia test was started on Tuesday September 11, 2007, 6.5 hours after the holding time had expired. The test was completed without incident but there was 100% mortality at 100% concentration as well as observed toxicity. ALS File # 552912
Thur. Sep-13-07	Weekly	Water chemistry sample collection from Garrow Creek. Creek is partially frozen only centre of creek still open. ALS File # 554645
	-	No samples Acute Toxicity samples taken. Containers could not be found at site.
Tues. Sep-25-07	-	No Monthly samples taken. Garrow Creek frozen solid.
	-	No samples Acute Toxicity samples taken. Garrow Creek frozen solid.

Appendix B

Effluent Quality Analytical Test Reports

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

ANALYTICAL REPORT

TECK COMINCO METALS LTD.

ATTN: BRUCE DONALD

Reported On: 08-AUG-07 12:19 PM

BAG 2000

KIMBERLEY BC V1A 3E1

Lab Work Order #: **L530175** **Date Received:** **16-JUL-07**

Project P.O. #:
Job Reference: 70402
Legal Site Desc:
CofC Numbers: A038592

Other Information:

Comments:

The detection limits for some of the metals have been increased for the samples reported in the following data tables due to sample matrix interferences.

Timothy Guy Crowther
General Manager, Vancouver

For any questions about this report please contact your Account Manager:

Heather Easton

ALS Canada Ltd.
Part of the **ALS Laboratory Group**
1988 Triumph Street, Vancouver, BC V5L 1K5
Phone: +1 604 253 4188 Fax: +1 604 253 6700 www.alsglobal.com
A Campbell Brothers Limited Company

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID	L530175-1	L530175-2			
	Description					
	Sampled Date	08-JUL-07	08-JUL-07			
	Sampled Time	12:00	12:00			
	Client ID	G CREEK	G CREEK QA/QC			
Grouping	**Analyte**					
SEAWATER						
Physical Tests	Hardness (as CaCO3) (mg/L)	467	458			
Total Metals	Aluminum (Al)-Total (mg/L)	<0.020	<0.010			
	Arsenic (As)-Total (mg/L)	<0.00020	<0.00020			
	Cadmium (Cd)-Total (mg/L)	0.000073	0.000067			
	Calcium (Ca)-Total (mg/L)	56.9	55.3			
	Copper (Cu)-Total (mg/L)	0.00108	0.00108			
	Iron (Fe)-Total (mg/L)	<0.010	<0.010			
	Lead (Pb)-Total (mg/L)	0.000459	0.000484			
	Magnesium (Mg)-Total (mg/L)	78.8	77.6			
	Manganese (Mn)-Total (mg/L)	0.000991	0.000948			
	Molybdenum (Mo)-Total (mg/L)	0.00311	0.00304			
	Nickel (Ni)-Total (mg/L)	0.00270	0.00262			
	Zinc (Zn)-Total (mg/L)	0.0119	0.0118			

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID	L530175-1	L530175-2			
	Description					
	Sampled Date	08-JUL-07	08-JUL-07			
	Sampled Time	12:00	12:00			
	Client ID	G CREEK	G CREEK QA/QC			
Grouping	**Analyte**					
WATER						
Physical Tests	Salinity (EC) (g/L)	1.9	1.9			
	pH (pH)	8.06	8.06			
	Total Suspended Solids (mg/L)	<3.0	<3.0			
Anions and Nutrients	Ammonia as N (mg/L)	<0.020	<0.020			
	Nitrate (as N) (mg/L)	0.125	0.129			
Cyanides	Cyanide, Total (mg/L)	<0.0050	<0.0050			
Total Metals	Mercury (Hg)-Total (mg/L)	<0.000010	<0.000010			
Radiological Parameters	Radium-226 (Bq/L)	0.005	<0.005			

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
ANIONS-NO3-IC-VA	Water	Nitrate by Ion Chromatography	APHA 4110 "Determination of Anions by IC

This analysis is carried out using procedures adapted from APHA Method 4110 "Determination of Anions by Ion Chromatography" and EPA Method 300.0 "Determination of Inorganic Anions by Ion Chromatography". Anions routinely determined by this method include: bromide, chloride, fluoride, nitrate, nitrite and sulphate.

AS-TOT-C-HVAAS-VA	Seawater	Total Arsenic in Seawater by HVAAS	PUGET SOUND PROTOCOLS, EPA 7000 SERIES

This analysis is carried out using procedures adapted from "Recommended Guidelines for Measuring Metals in Puget Sound Marine Water, Sediment, and Tissue Samples" prepared for the United States Environmental Protection Agency and the Puget Sound Water Quality Authority, 1995. The procedures may involve preliminary sample treatment by acid digestion or filtration (EPA Method 3005A). Instrumental analysis of the seawater is by atomic absorption/emission spectrophotometry (EPA Method 7000 series).

CN-T-MID-SA-COL-VA	Water	Total Cyanide by H2SO4 Distillation	APHA 4500-CN "Cyanide"

This analysis is carried out using procedures adapted from APHA Method 4500-CN "Cyanide". Total or strong acid dissociable (SAD) cyanide are determined by sample distillation and analysis using the chloramine-T colourimetric method.

HARDNESS-CALC-VA	Seawater	Hardness	APHA 2340B

Hardness is calculated from Calcium and Magnesium concentrations, and is expressed as calcium carbonate equivalents.

HG-TOT-LOW-CVAFS-VA	Water	Total Mercury in Water by CVAFS(Low)	EPA 245.7

This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).

MET-TOT-C-ICP-VA	Seawater	Total Metals in Seawater by ICPOES	PUGET SOUND PROTOCOLS, EPA 6010B

This analysis is carried out using procedures adapted from "Recommended Guidelines for Measuring Metals in Puget Sound Marine Water, Sediment, and Tissue Samples" prepared for the United States Environmental Protection Agency and the Puget Sound Water Quality Authority, 1995. The procedures may involve preliminary sample treatment by acid digestion or filtration (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).

MET-TOT-C-LOW-MS-VA	Seawater	Total Metals in Seawater by ICPMS	PUGET SOUND PROTOCOLS, EPA 6020A

This analysis is carried out using procedures adapted from "Recommended Guidelines for Measuring Metals in Puget Sound Marine Water, Sediment, and Tissue Samples" prepared for the United States Environmental Protection Agency and the Puget Sound Water Quality Authority, 1995. The procedures may involve preliminary sample treatment by acid digestion or filtration (EPA Method 3005A). Instrumental analysis is by atomic inductively coupled plasma - mass spectrometry (EPA Method 6020A).

MET-TOT-SPE-MS-VA	Seawater	Total Metals in Seawater by SPE ICPMS	PUGET SOUND PROTOCOLS, EPA 6020A

This analysis is carried out using procedures adapted from "Recommended Guidelines for Measuring Metals in Puget Sound Marine Water, Sediment, and Tissue Samples" prepared for the United States Environmental Protection Agency and the Puget Sound Water Quality Authority, 1995, and with procedures adapted from Cetac Technologies Incorporated. A suspended particulate resin (SPR), consisting of immobilized iminodiacetate (IDA) on a divinylbenzene polymer, is used to chelate and preconcentrate metals in seawater. Instrumental analysis is by inductively coupled plasma mass spectrometry (ICPMS).

NH3-SIE-VA	Water	Ammonia by SIE	APHA 4500-NH3 "Nitrogen (Ammonia)"

This analysis is carried out, on sulphuric acid preserved samples, using procedures adapted from APHA Method 4500-NH3 "Nitrogen (Ammonia)". Ammonia is determined using an ammonia selective electrode.

PH-PCT-VA	Water	pH by Meter (Automated)	APHA 4500-H "pH Value"

This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode

RADIO-RADIUM226-SR	Water	Radium 226	CANMET 1986

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
SALINITY-EC-VA	Water	Salinity by calculation using EC	APHA 2520 B

This analysis is carried out using procedures adapted from APHA Method 2520 "Salinity". Salinity is determined using a samples conductivity and the Practical Salinity Scale.

TSS-VA	Water	Solids by Gravimetric	APHA 2540 Gravimetric

This analysis is carried out using procedures adapted from APHA Method 2540 "Solids". Solids are determined gravimetrically. Total suspended solids (TSS) are determined by filtering a sample through a glass fibre filter, TSS is determined by drying the filter at 104 degrees celsius.

** Laboratory Methods employed follow in-house procedures, which are generally based on nationally or internationally accepted methodologies.
The last two letters of the above ALS Test Code column indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
SR	Saskatchewan Research Council - Saskatoon, Saskatchewan, Can	VA	ALS LABORATORY GROUP - VANCOUVER, BC, CANADA

GLOSSARY OF REPORT TERMS
Surr - A surrogate is an organic compound that is similar to the target analyte(s) in chemical composition and behavior but not normally detected in enviromental samples. Prior to sample processing, samples are fortified with one or more surrogate compounds.
The reported surrogate recovery value provides a measure of method efficiency.
mg/kg (units) - unit of concentration based on mass, parts per million
mg/L (units) - unit of concentration based on volume, parts per million
N/A - Result not available. Refer to qualifier code and definition for explanation

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Although test results are generated under strict QA/QC protocols, any unsigned test reports, faxes, or emails are considered preliminary.

ALS Laboratory Group has an extensive QA/QC program where all analytical data reported is analyzed using approved referenced procedures followed by checks and reviews by senior managers and quality assurance personnel. However, since the results are obtained from chemical measurements and thus cannot be guaranteed, ALS Laboratory Group assumes no liability for the use or interpretation of the results.

Andre Langlais

From: SRC Analytical Laboratories [analytical@src.sk.ca]
Sent: Wednesday, August 01, 2007 10:21 AM
To: Andre Langlais
Subject: SRC Analytical Results for Group 2007-5099

2007-5099.pdf (6 KB)

ALS
Aurora Laboratory Services Ltd.
1988 Triumph Street
Vancouver, British Columbia V5L 1K5

Project Number: L530175

Date Samples Received: 07/18/2007

Results for the following SRC Analytical Groups are included in the enclosed file:

2007-5099

If you have any problems with your enclosed file, feel free to give me a call.

Mr. Loran Chrusch
Computer Operations
SRC Analytical Laboratories
422 Downey Road
Saskatoon, Saskatchewan
S7N 4N1

Phone: (306) 933-7872
Fax: (306) 933-7922
email: chrusch@src.sk.ca

SRC Group # 2007-5099

SRC ANALYTICAL

Aug 01, 2007

422 Downey Road
Saskatoon, Saskatchewan, Canada
S7N 4N1
(306) 933-6932 or 1-800-240-8808
Fax: (306) 933-7922

ALS
Aurora Laboratory Services Ltd.
1988 Triumph Street
Vancouver, British Columbia V5L 1K5

Sample # **22370**
Date Sampled: **Jul 08, 2007**
Sample Matrix: **WATER**
Description: **L530175-1 G CREEK**

Client PO #: **L530175**
Date Received: **Jul 18, 2007**

Analyte	Units	Result	DL	Date Entered
Radio Chemistry				
Radium-226	Bq/L	0.005	0.005	Jul 31, 2007

SRC ANALYTICAL

ALS, Aurora Laboratory Services Ltd.

Sample # **22371**
Date Sampled: **Jul 08, 2007**
Sample Matrix: **WATER**
Description: **L530175-2 G CREEK QA/QC**

Client PO #: **L530175**
Date Received: **Jul 18, 2007**

Analyte	Units	Result	DL	Date Entered
Radio Chemistry				
Radium-226	Bq/L	<0.005	0.005	Jul 31, 2007

"<": not detected at level stated above.

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

CHAIN OF CUSTODY / ANALYTICAL REQUEST FORM

CANADA TOLL FREE 1-800-668-9878

www.alsenviro.com

COC # A038592

Page 1 of 1

L530175

REPORT TO:	REPORT FORMAT / DISTRIBUTION	SERVICE REQUESTED
COMPANY: Teck Cominco Metals Ltd.	STANDARD ✓ OTHER ✓	✓ REGULAR SERVICE (DEFAULT)
CONTACT: Bruce Donald	PDF ✓ EXCEL ✓ CUSTOM ____ FAX ____	RUSH SERVICE (2-3 DAYS)
ADDRESS: Bag 2000 Kimberley, BC V1A 3E1	EMAIL 1: bruce.donald@teckcominco.com	PRIORITY SERVICE (1 DAY or ASAP)
	EMAIL 2: alaudrum@gartnerlee.com	EMERGENCY SERVICE (<1 DAY / WEEKEND) - CONTACT ALS
PHONE: 250-427-8405 FAX: 250-427-8451		ANALYSIS REQUEST
INVOICE TO: SAME AS REPORT ? (YES) NO	INDICATE BOTTLES: FILTERED / PRESERVED (F/P) → → →	
COMPANY:	CLIENT / PROJECT INFORMATION:	
CONTACT:	JOB #: 70402	
ADDRESS:	PO /AFE:	
	Legal Site Description:	
PHONE: FAX:	QUOTE #:	
Lab Work Order # (lab use only)	SAMPLER (Initials): CK	

Sample #	SAMPLE IDENTIFICATION (This description will appear on the report)	DATE	TIME	SAMPLE TYPE	pH, Salinity	Hardness, TSS	Total Metals	Ammonia Nitrogen	Nitrate Nitrogen	Radium 226	Total Cyanide					HAZARDOUS ?	HIGHLY CONTAMINATED ?	NUMBER OF CONTAINERS
	G Creek	2007-07-08	12:00	Seawater	X	X	X	X	X	X	X							

GUIDELINES / REGULATIONS

SPECIAL INSTRUCTIONS / HAZARDOUS DETAILS

Water is hypersaline, for TSS measurement run 1-2 L distilled through filters

Failure to complete all portions of this form may delay analysis. Please fill in this form *LEGIBLY*.

By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the reverse page of the white report copy.

RELINQUISHED BY:	DATE & TIME:	RECEIVED BY:	DATE & TIME:
CURTIS KIDD	07/07/09 5:30		11:42 16/JUL/07
RELINQUISHED BY:	DATE & TIME:	RECEIVED BY:	DATE & TIME:

SAMPLE CONDITION (lab use only)

TEMPERATURE	SAMPLES RECEIVED IN GOOD CONDITION ? YES / NO (If no provide details)
23	

REFER TO BACK PAGE FOR REGIONAL LOCATIONS AND SAMPLING INFORMATION

WHITE - REPORT COPY, PINK - FILE COPY, YELLOW - CLIENT COPY

GENF14.00

ANALYTICAL REPORT

TECK COMINCO METALS LTD.

ATTN: BRUCE DONALD

Reported On: 08-AUG-07 12:27 PM

BAG 2000

KIMBERLEY BC V1A 3E1

Lab Work Order #: **L530749** **Date Received:** **17-JUL-07**

Project P.O. #:
Job Reference: 70402
Legal Site Desc:
CofC Numbers: A038650

Other Information:

Comments:

Timothy Guy Crowther
General Manager, Vancouver

For any questions about this report please contact your Account Manager:

Heather Easton

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID	L530749-1				
	Description					
	Sampled Date	12-JUL-07				
	Sampled Time	10:00				
	Client ID	G CREEK				
Grouping	**Analyte**					
SEAWATER						
Physical Tests	Hardness (as CaCO3) (mg/L)	396				
Total Metals	Aluminum (Al)-Total (mg/L)	0.021				
	Arsenic (As)-Total (mg/L)	<0.00020				
	Cadmium (Cd)-Total (mg/L)	0.000059				
	Calcium (Ca)-Total (mg/L)	44.5				
	Copper (Cu)-Total (mg/L)	0.000793				
	Iron (Fe)-Total (mg/L)	<0.010				
	Lead (Pb)-Total (mg/L)	0.000330				
	Magnesium (Mg)-Total (mg/L)	69.2				
	Manganese (Mn)-Total (mg/L)	0.00123				
	Molybdenum (Mo)-Total (mg/L)	0.00290				
	Nickel (Ni)-Total (mg/L)	0.00186				
	Zinc (Zn)-Total (mg/L)	0.00944				

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID	L530749-1				
	Description					
	Sampled Date	12-JUL-07				
	Sampled Time	10:00				
	Client ID	G CREEK				
Grouping	**Analyte**					
WATER						
Physical Tests	Salinity (EC) (g/L)	1.7				
	pH (pH)	7.95				
	Total Suspended Solids (mg/L)	4.3				
Cyanides	Cyanide, Total (mg/L)	<0.0050				
Total Metals	Mercury (Hg)-Total (mg/L)	<0.000010				
Radiological Parameters	Radium-226 (Bq/L)	<0.005				

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
AS-TOT-C-HVAAS-VA	Seawater	Total Arsenic in Seawater by HVAAS	PUGET SOUND PROTOCOLS, EPA 7000 SERIES

This analysis is carried out using procedures adapted from "Recommended Guidelines for Measuring Metals in Puget Sound Marine Water, Sediment, and Tissue Samples" prepared for the United States Environmental Protection Agency and the Puget Sound Water Quality Authority, 1995. The procedures may involve preliminary sample treatment by acid digestion or filtration (EPA Method 3005A). Instrumental analysis of the seawater is by atomic absorption/emission spectrophotometry (EPA Method 7000 series).

CN-T-MID-SA-COL-VA	Water	Total Cyanide by H2SO4 Distillation	APHA 4500-CN "Cyanide"

This analysis is carried out using procedures adapted from APHA Method 4500-CN "Cyanide". Total or strong acid dissociable (SAD) cyanide are determined by sample distillation and analysis using the chloramine-T colourimetric method.

HARDNESS-CALC-VA	Seawater	Hardness	APHA 2340B

Hardness is calculated from Calcium and Magnesium concentrations, and is expressed as calcium carbonate equivalents.

HG-TOT-LOW-CVAFS-VA	Water	Total Mercury in Water by CVAFS(Low)	EPA 245.7

This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).

MET-TOT-C-ICP-VA	Seawater	Total Metals in Seawater by ICPOES	PUGET SOUND PROTOCOLS, EPA 6010B

This analysis is carried out using procedures adapted from "Recommended Guidelines for Measuring Metals in Puget Sound Marine Water, Sediment, and Tissue Samples" prepared for the United States Environmental Protection Agency and the Puget Sound Water Quality Authority, 1995. The procedures may involve preliminary sample treatment by acid digestion or filtration (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).

MET-TOT-C-LOW-MS-VA	Seawater	Total Metals in Seawater by ICPMS	PUGET SOUND PROTOCOLS, EPA 6020A

This analysis is carried out using procedures adapted from "Recommended Guidelines for Measuring Metals in Puget Sound Marine Water, Sediment, and Tissue Samples" prepared for the United States Environmental Protection Agency and the Puget Sound Water Quality Authority, 1995. The procedures may involve preliminary sample treatment by acid digestion or filtration (EPA Method 3005A). Instrumental analysis is by atomic inductively coupled plasma - mass spectrometry (EPA Method 6020A).

MET-TOT-SPE-MS-VA	Seawater	Total Metals in Seawater by SPE ICPMS	PUGET SOUND PROTOCOLS, EPA 6020A

This analysis is carried out using procedures adapted from "Recommended Guidelines for Measuring Metals in Puget Sound Marine Water, Sediment, and Tissue Samples" prepared for the United States Environmental Protection Agency and the Puget Sound Water Quality Authority, 1995, and with procedures adapted from Cetac Technologies Incorporated. A suspended particulate resin (SPR), consisting of immobilized iminodiacetate (IDA) on a divinylbenzene polymer, is used to chelate and preconcentrate metals in seawater. Instrumental analysis is by inductively coupled plasma mass spectrometry (ICPMS).

PH-PCT-VA	Water	pH by Meter (Automated)	APHA 4500-H "pH Value"

This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode

RADIO-RADIUM226-SR	Water	Radium 226	CANMET 1986

SALINITY-EC-VA	Water	Salinity by calculation using EC	APHA 2520 B

This analysis is carried out using procedures adapted from APHA Method 2520 "Salinity". Salinity is determined using a samples conductivity and the Practical Salinity Scale.

TSS-VA	Water	Solids by Gravimetric	APHA 2540 Gravimetric

This analysis is carried out using procedures adapted from APHA Method 2540 "Solids". Solids are determined gravimetrically. Total suspended solids (TSS) are determined by filtering a sample through a glass fibre filter, TSS is determined by drying the filter at 104 degrees celsius.

** Laboratory Methods employed follow in-house procedures, which are generally based on nationally or internationally accepted methodologies.
The last two letters of the above ALS Test Code column indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
SR	Saskatchewan Research Council - Saskatoon, Saskatchewan, Can	VA	ALS LABORATORY GROUP - VANCOUVER, BC, CANADA

GLOSSARY OF REPORT TERMS
Surr - A surrogate is an organic compound that is similar to the target analyte(s) in chemical composition and behavior but not normally detected in enviromental samples. Prior to sample processing, samples are fortified with one or more surrogate compounds.
The reported surrogate recovery value provides a measure of method efficiency.
mg/kg (units) - unit of concentration based on mass, parts per million
mg/L (units) - unit of concentration based on volume, parts per million
N/A - Result not available. Refer to qualifier code and definition for explanation

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Although test results are generated under strict QA/QC protocols, any unsigned test reports, faxes, or emails are considered preliminary.

ALS Laboratory Group has an extensive QA/QC program where all analytical data reported is analyzed using approved referenced procedures followed by checks and reviews by senior managers and quality assurance personnel. However, since the results are obtained from chemical measurements and thus cannot be guaranteed, ALS Laboratory Group assumes no liability for the use or interpretation of the results.

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

CHAIN OF CUSTODY / ANALYTICAL REQUEST FORM

COC # A038650

CANADA TOLL FREE 1-800-668-9878

www.alsenviro.com

L530749

Page 1 of 1

REPORT TO:	REPORT FORMAT / DISTRIBUTION	SERVICE REQUESTED
COMPANY: Teck Cominco Metals Ltd.	STANDARD ✓ OTHER ✓	✓ REGULAR SERVICE (DEFAULT)
CONTACT: Bruce Donald	PDF ✓ EXCEL ✓ CUSTOM ____ FAX ____	RUSH SERVICE (2-3 DAYS)
ADDRESS: Bag 2000 Kimberley, BC. V1A 3E1	EMAIL 1: bruce.donald@teckcominco.com	PRIORITY SERVICE (1 DAY or ASAP)
	EMAIL 2: alaudrum@gartnerlee.com	EMERGENCY SERVICE (<1 DAY / WEEKEND) - CONTACT ALS
PHONE: 250-427-8405 FAX: 250-427-8451		ANALYSIS REQUEST
INVOICE TO: SAME AS REPORT ? (YES) / NO	INDICATE BOTTLES: FILTERED / PRESERVED (F/P) → → →	
COMPANY:	CLIENT / PROJECT INFORMATION:	
CONTACT:	JOB #: 70402	
ADDRESS:	PO /AFE:	
	Legal Site Description:	
PHONE: FAX:	QUOTE #:	
Lab Work Order # (lab use only)	SAMPLER (Initials): RA	

Sample #	SAMPLE IDENTIFICATION (This description will appear on the report)	DATE	TIME	SAMPLE TYPE	pH, Salinity	Hardness, TSS	Total Metals	Radium 226	Total Cyanide	HAZARDOUS ?	HIGHLY CONTAMINATED ?	NUMBER OF CONTAINERS
	G Creek	07/12/07	10:00AM	Seawater	X	X	X	X	X			

GUIDELINES / REGULATIONS

SPECIAL INSTRUCTIONS / HAZARDOUS DETAILS

water is hypersaline, for TSS measurement run 1-2 L distilled through filter

Failure to complete all portions of this form may delay analysis. Please fill in this form *LEGIBLY*.

By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the reverse page of the white report copy.

RELINQUISHED BY:	DATE & TIME:	RECEIVED BY:	DATE & TIME:
[signature]	07/07/07 10AM	[signature]	11:48 17/July/07
RELINQUISHED BY:	DATE & TIME:	RECEIVED BY:	DATE & TIME:

SAMPLE CONDITION (lab use only)

TEMPERATURE	SAMPLES RECEIVED IN GOOD CONDITION ? YES / NO (If no provide details)
17°C	

ANALYTICAL REPORT

TECK COMINCO METALS LTD.

ATTN: BRUCE DONALD

Reported On: 20-AUG-07 04:03 PM

BAG 2000

KIMBERLEY BC V1A 3E1

Lab Work Order #: **L533661** **Date Received:** **24-JUL-07**

Project P.O. #:
Job Reference: 70402
Legal Site Desc:
CofC Numbers: A038649

Other Information:

Comments:

Timothy Guy Crowther
General Manager, Vancouver

For any questions about this report please contact your Account Manager:

Andre Langlais

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID	L533661-1				
	Description					
	Sampled Date	19-JUL-07				
	Sampled Time	09:00				
	Client ID	G CREEK				
Grouping	**Analyte**					
SEAWATER						
Physical Tests	Hardness (as CaCO3) (mg/L)	555				
Total Metals	Aluminum (Al)-Total (mg/L)	<0.010				
	Arsenic (As)-Total (mg/L)	<0.00020				
	Cadmium (Cd)-Total (mg/L)	0.000080				
	Calcium (Ca)-Total (mg/L)	57.1				
	Copper (Cu)-Total (mg/L)	0.000568				
	Iron (Fe)-Total (mg/L)	<0.010				
	Lead (Pb)-Total (mg/L)	0.000198				
	Magnesium (Mg)-Total (mg/L)	100				
	Manganese (Mn)-Total (mg/L)	0.00127				
	Molybdenum (Mo)-Total (mg/L)	0.00240				
	Nickel (Ni)-Total (mg/L)	0.00175				
	Zinc (Zn)-Total (mg/L)	0.0129				

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID	L533661-1				
	Description					
	Sampled Date	19-JUL-07				
	Sampled Time	09:00				
	Client ID	G CREEK				
Grouping	**Analyte**					
WATER						
Physical Tests	Salinity (EC) (g/L)	2.5				
	pH (pH)	8.02				
	Total Suspended Solids (mg/L)	<3.0				
Cyanides	Cyanide, Total (mg/L)	<0.0050				
Total Metals	Mercury (Hg)-Total (mg/L)	0.000011				
Radiological Parameters	Radium-226 (Bq/L)	<0.005				

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
AS-TOT-C-HVAAS-VA	Seawater	Total Arsenic in Seawater by HVAAS	PUGET SOUND PROTOCOLS, EPA 7000 SERIES

This analysis is carried out using procedures adapted from "Recommended Guidelines for Measuring Metals in Puget Sound Marine Water, Sediment, and Tissue Samples" prepared for the United States Environmental Protection Agency and the Puget Sound Water Quality Authority, 1995. The procedures may involve preliminary sample treatment by acid digestion or filtration (EPA Method 3005A). Instrumental analysis of the seawater is by atomic absorption/emission spectrophotometry (EPA Method 7000 series).

CN-T-MID-HH-COL-VA	Water	Total Cyanide by HH Distillation	APHA 4500-CN "Cyanide"

This analysis is carried out using procedures adapted from APHA Method 4500-CN "Cyanide". Total or strong acid dissociable (SAD) cyanide are determined by sample distillation and analysis using the chloramine-T colourimetric method.

HARDNESS-CALC-VA	Seawater	Hardness	APHA 2340B

Hardness is calculated from Calcium and Magnesium concentrations, and is expressed as calcium carbonate equivalents.

HG-TOT-LOW-CVAFS-VA	Water	Total Mercury in Water by CVAFS(Low)	EPA 245.7

This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).

MET-TOT-C-ICP-VA	Seawater	Total Metals in Seawater by ICPOES	PUGET SOUND PROTOCOLS, EPA 6010B

This analysis is carried out using procedures adapted from "Recommended Guidelines for Measuring Metals in Puget Sound Marine Water, Sediment, and Tissue Samples" prepared for the United States Environmental Protection Agency and the Puget Sound Water Quality Authority, 1995. The procedures may involve preliminary sample treatment by acid digestion or filtration (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).

MET-TOT-C-LOW-MS-VA	Seawater	Total Metals in Seawater by ICPMS	PUGET SOUND PROTOCOLS, EPA 6020A

This analysis is carried out using procedures adapted from "Recommended Guidelines for Measuring Metals in Puget Sound Marine Water, Sediment, and Tissue Samples" prepared for the United States Environmental Protection Agency and the Puget Sound Water Quality Authority, 1995. The procedures may involve preliminary sample treatment by acid digestion or filtration (EPA Method 3005A). Instrumental analysis is by atomic inductively coupled plasma - mass spectrometry (EPA Method 6020A).

MET-TOT-SPE-MS-VA	Seawater	Total Metals in Seawater by SPE ICPMS	PUGET SOUND PROTOCOLS, EPA 6020A

This analysis is carried out using procedures adapted from "Recommended Guidelines for Measuring Metals in Puget Sound Marine Water, Sediment, and Tissue Samples" prepared for the United States Environmental Protection Agency and the Puget Sound Water Quality Authority, 1995, and with procedures adapted from Cetac Technologies Incorporated. A suspended particulate resin (SPR), consisting of immobilized iminodiacetate (IDA) on a divinylbenzene polymer, is used to chelate and preconcentrate metals in seawater. Instrumental analysis is by inductively coupled plasma mass spectrometry (ICPMS).

PH-PCT-VA	Water	pH by Meter (Automated)	APHA 4500-H "pH Value"

This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode

RADIO-RADIUM226-SR	Water	Radium 226	CANMET 1986

SALINITY-EC-VA	Water	Salinity by calculation using EC	APHA 2520 B

This analysis is carried out using procedures adapted from APHA Method 2520 "Salinity". Salinity is determined using a samples conductivity and the Practical Salinity Scale.

TSS-VA	Water	Solids by Gravimetric	APHA 2540 Gravimetric

This analysis is carried out using procedures adapted from APHA Method 2540 "Solids". Solids are determined gravimetrically. Total suspended solids (TSS) are determined by filtering a sample through a glass fibre filter, TSS is determined by drying the filter at 104 degrees celsius.

** Laboratory Methods employed follow in-house procedures, which are generally based on nationally or internationally accepted methodologies.
The last two letters of the above ALS Test Code column indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
SR	Saskatchewan Research Council - Saskatoon, Saskatchewan, Can	VA	ALS LABORATORY GROUP - VANCOUVER, BC, CANADA

GLOSSARY OF REPORT TERMS
Surr - A surrogate is an organic compound that is similar to the target analyte(s) in chemical composition and behavior but not normally detected in enviromental samples. Prior to sample processing, samples are fortified with one or more surrogate compounds.
The reported surrogate recovery value provides a measure of method efficiency.
mg/kg (units) - unit of concentration based on mass, parts per million
mg/L (units) - unit of concentration based on volume, parts per million
N/A - Result not available. Refer to qualifier code and definition for explanation

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Although test results are generated under strict QA/QC protocols, any unsigned test reports, faxes, or emails are considered preliminary.

ALS Laboratory Group has an extensive QA/QC program where all analytical data reported is analyzed using approved referenced procedures followed by checks and reviews by senior managers and quality assurance personnel. However, since the results are obtained from chemical measurements and thus cannot be guaranteed, ALS Laboratory Group assumes no liability for the use or interpretation of the results.

SRC Group # 2007-5393

SRC ANALYTICAL

Aug 13, 2007

422 Downey Road
Saskatoon, Saskatchewan, Canada
S7N 4N1
(306) 933-6932 or 1-800-240-8808
Fax: (306) 933-7922

ALS
Aurora Laboratory Services Ltd.
1988 Triumph Street
Vancouver, British Columbia V5L 1K5

Sample # **23669**
Date Sampled: **Jul 19, 2007 09:00**
Sample Matrix: **WATER**
Description: **L533661-1 G CREEK**

Client PO #: **LW11539**
Date Received: **Jul 27, 2007**

Analyte	Units	Result	DL	Date Entered
Radio Chemistry				
Radium-226	Bq/L	<0.005	0.005	Aug 09, 2007

"<": not detected at level stated above.

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

CHAIN OF CUSTODY / ANALYTICAL REQUEST FORM

CANADA TOLL FREE 1-800-668-9878

www.alsenviro.com

COC # A038649

L533661

Page 1 of 1

REPORT TO:	REPORT FORMAT / DISTRIBUTION	SERVICE REQUESTED
COMPANY: Teck Cominco Metals Ltd.	STANDARD ✓ OTHER ✓	✓ REGULAR SERVICE (DEFAULT)
CONTACT: Bruce Donald	PDF ✓ EXCEL ✓ CUSTOM ____ FAX ____	RUSH SERVICE (2-3 DAYS)
ADDRESS: Bag 2000 Kimberley, BC V1A 3E1	EMAIL 1: bruce.donald@teckcominco.com	PRIORITY SERVICE (1 DAY or ASAP)
	EMAIL 2: glaudrum@gartnerlee.com	EMERGENCY SERVICE (<1 DAY / WEEKEND) - CONTACT ALS
PHONE: 250-427-8405 FAX: 250-427-8451		ANALYSIS REQUEST
INVOICE TO: SAME AS REPORT ? (YES) NO	INDICATE BOTTLES: FILTERED / PRESERVED (F/P) → → →	
COMPANY:	CLIENT / PROJECT INFORMATION:	
CONTACT:	JOB #: 70402	
ADDRESS:	PO /AFE:	
	Legal Site Description:	
PHONE: FAX:	QUOTE #:	
Lab Work Order # (lab use only)	SAMPLER (Initials):	

Sample #	SAMPLE IDENTIFICATION (This description will appear on the report)	DATE	TIME	SAMPLE TYPE	pH, Salinity	Hardness, TSS	Total Metals	Radium 226	Total Cyanide							HAZARDOUS ?	HIGHLY CONTAMINATED ?	NUMBER OF CONTAINERS
	G Creek	JUN 19/07	9AM	Seawater	X	X	X	X	X									

GUIDELINES / REGULATIONS

SPECIAL INSTRUCTIONS / HAZARDOUS DETAILS

water is hypersaline, for TSS measurement run 1-2L distilled through filter

Failure to complete all portions of this form may delay analysis. Please fill in this form *LEGIBLY*.

By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the reverse page of the white report copy.

RELINQUISHED BY:	DATE & TIME:	RECEIVED BY:	DATE & TIME:
[signature]	07/06/07 9AM	R. Fournier	July 24/07 1040
RELINQUISHED BY: R. Fournier	DATE & TIME: July 24/07	RECEIVED BY:	DATE & TIME:

SAMPLE CONDITION (lab use only)

TEMPERATURE: 13.6

SAMPLES RECEIVED IN GOOD CONDITION? YES / NO (If no provide details)

REFER TO BACK PAGE FOR REGIONAL LOCATIONS AND SAMPLING INFORMATION

WHITE - REPORT COPY, PINK - FILE COPY, YELLOW - CLIENT COPY

GENF14.00

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

ANALYTICAL REPORT

TECK COMINCO METALS LTD.

ATTN: BRUCE DONALD

Reported On: 20-AUG-07 04:23 PM

BAG 2000

KIMBERLEY BC V1A 3E1

Lab Work Order #: **L535976** **Date Received:** **30-JUL-07**

Project P.O. #:
Job Reference: 70402
Legal Site Desc:
CofC Numbers: A038628

Other Information:

Comments:

Timothy Guy Crowther
General Manager, Vancouver

For any questions about this report please contact your Account Manager:

Heather Easton

ALS Canada Ltd.
Part of the **ALS Laboratory Group**
1988 Triumph Street, Vancouver, BC V5L 1K5
Phone: +1 604 253 4188 Fax: +1 604 253 6700 www.alsglobal.com
A Campbell Brothers Limited Company

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID	L535976-1				
	Description					
	Sampled Date					
	Sampled Time					
	Client ID	G CREEK				
Grouping	**Analyte**					
SEAWATER						
Physical Tests	Hardness (as CaCO3) (mg/L)	830				
Total Metals	Aluminum (Al)-Total (mg/L)	0.070				
	Arsenic (As)-Total (mg/L)	0.00024				
	Cadmium (Cd)-Total (mg/L)	0.000168				
	Calcium (Ca)-Total (mg/L)	78.8				
	Copper (Cu)-Total (mg/L)	0.000866				
	Iron (Fe)-Total (mg/L)	<0.010				
	Lead (Pb)-Total (mg/L)	0.000372				
	Magnesium (Mg)-Total (mg/L)	154				
	Manganese (Mn)-Total (mg/L)	0.00236				
	Molybdenum (Mo)-Total (mg/L)	0.0028				
	Nickel (Ni)-Total (mg/L)	0.00323				
	Zinc (Zn)-Total (mg/L)	0.0238				

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID	L535976-1				
	Description					
	Sampled Date					
	Sampled Time					
	Client ID	G CREEK				
Grouping	**Analyte**					
WATER						
Physical Tests	Salinity (EC) (g/L)	4.0				
	pH (pH)	7.96				
	Total Suspended Solids (mg/L)	3.5				
Cyanides	Cyanide, Total (mg/L)	<0.0050				
Total Metals	Mercury (Hg)-Total (mg/L)	<0.000010				
Radiological Parameters	Radium-226 (Bq/L)	0.03				

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
AS-TOT-C-HVAAS-VA	Seawater	Total Arsenic in Seawater by HVAAS	PUGET SOUND PROTOCOLS, EPA 7000 SERIES

This analysis is carried out using procedures adapted from "Recommended Guidelines for Measuring Metals in Puget Sound Marine Water, Sediment, and Tissue Samples" prepared for the United States Environmental Protection Agency and the Puget Sound Water Quality Authority, 1995. The procedures may involve preliminary sample treatment by acid digestion or filtration (EPA Method 3005A). Instrumental analysis of the seawater is by atomic absorption/emission spectrophotometry (EPA Method 7000 series).

CN-T-MID-HH-COL-VA	Water	Total Cyanide by HH Distillation	APHA 4500-CN "Cyanide"

This analysis is carried out using procedures adapted from APHA Method 4500-CN "Cyanide". Total or strong acid dissociable (SAD) cyanide are determined by sample distillation and analysis using the chloramine-T colourimetric method.

HARDNESS-CALC-VA	Seawater	Hardness	APHA 2340B

Hardness is calculated from Calcium and Magnesium concentrations, and is expressed as calcium carbonate equivalents.

HG-TOT-LOW-CVAFS-VA	Water	Total Mercury in Water by CVAFS(Low)	EPA 245.7

This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).

MET-TOT-C-ICP-VA	Seawater	Total Metals in Seawater by ICPOES	PUGET SOUND PROTOCOLS, EPA 6010B

This analysis is carried out using procedures adapted from "Recommended Guidelines for Measuring Metals in Puget Sound Marine Water, Sediment, and Tissue Samples" prepared for the United States Environmental Protection Agency and the Puget Sound Water Quality Authority, 1995. The procedures may involve preliminary sample treatment by acid digestion or filtration (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).

MET-TOT-C-LOW-MS-VA	Seawater	Total Metals in Seawater by ICPMS	PUGET SOUND PROTOCOLS, EPA 6020A

This analysis is carried out using procedures adapted from "Recommended Guidelines for Measuring Metals in Puget Sound Marine Water, Sediment, and Tissue Samples" prepared for the United States Environmental Protection Agency and the Puget Sound Water Quality Authority, 1995. The procedures may involve preliminary sample treatment by acid digestion or filtration (EPA Method 3005A). Instrumental analysis is by atomic inductively coupled plasma - mass spectrometry (EPA Method 6020A).

MET-TOT-SPE-MS-VA	Seawater	Total Metals in Seawater by SPE ICPMS	PUGET SOUND PROTOCOLS, EPA 6020A

This analysis is carried out using procedures adapted from "Recommended Guidelines for Measuring Metals in Puget Sound Marine Water, Sediment, and Tissue Samples" prepared for the United States Environmental Protection Agency and the Puget Sound Water Quality Authority, 1995, and with procedures adapted from Cetac Technologies Incorporated. A suspended particulate resin (SPR), consisting of immobilized iminodiacetate (IDA) on a divinylbenzene polymer, is used to chelate and preconcentrate metals in seawater. Instrumental analysis is by inductively coupled plasma mass spectrometry (ICPMS).

PH-PCT-VA	Water	pH by Meter (Automated)	APHA 4500-H "pH Value"

This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode

RADIO-RADIUM226-SR	Water	Radium 226	CANMET 1986

SALINITY-EC-VA	Water	Salinity by calculation using EC	APHA 2520 B

This analysis is carried out using procedures adapted from APHA Method 2520 "Salinity". Salinity is determined using a samples conductivity and the Practical Salinity Scale.

TSS-VA	Water	Solids by Gravimetric	APHA 2540 Gravimetric

This analysis is carried out using procedures adapted from APHA Method 2540 "Solids". Solids are determined gravimetrically. Total suspended solids (TSS) are determined by filtering a sample through a glass fibre filter, TSS is determined by drying the filter at 104 degrees celsius.

** Laboratory Methods employed follow in-house procedures, which are generally based on nationally or internationally accepted methodologies.
The last two letters of the above ALS Test Code column indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
SR	Saskatchewan Research Council - Saskatoon, Saskatchewan, Can	VA	ALS LABORATORY GROUP - VANCOUVER, BC, CANADA

GLOSSARY OF REPORT TERMS
Surr - A surrogate is an organic compound that is similar to the target analyte(s) in chemical composition and behavior but not normally detected in enviromental samples. Prior to sample processing, samples are fortified with one or more surrogate compounds.
The reported surrogate recovery value provides a measure of method efficiency.
mg/kg (units) - unit of concentration based on mass, parts per million
mg/L (units) - unit of concentration based on volume, parts per million
N/A - Result not available. Refer to qualifier code and definition for explanation

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Although test results are generated under strict QA/QC protocols, any unsigned test reports, faxes, or emails are considered preliminary.

ALS Laboratory Group has an extensive QA/QC program where all analytical data reported is analyzed using approved referenced procedures followed by checks and reviews by senior managers and quality assurance personnel. However, since the results are obtained from chemical measurements and thus cannot be guaranteed, ALS Laboratory Group assumes no liability for the use or interpretation of the results.

SRC Group # 2007-5578

SRC ANALYTICAL

Aug 13, 2007

422 Downey Road
Saskatoon, Saskatchewan, Canada
S7N 4N1
(306) 933-6932 or 1-800-240-8808
Fax: (306) 933-7922

ALS
Aurora Laboratory Services Ltd.
1988 Triumph Street
Vancouver, British Columbia V5L 1K5
Attn: Can Dang

Sample # **24551**
Date Sampled:
Sample Matrix: **WATER**
Description: **L535976-1 G CREEK**

Client PO #: **LW11616**
Date Received: **Aug 02, 2007**

Analyte	Units	Result	DL	Date Entered
Radio Chemistry				
Radium-226	Bq/L	0.03	0.01	Aug 13, 2007

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

CHAIN OF CUSTODY / ANALYTICAL REQUEST FORM

CANADA TOLL FREE 1-800-668-9878

www.alsenviro.com

COC # A030628

REPORT TO:	REPORT FORMAT / DISTRIBUTION	SERVICE REQUESTED
COMPANY: Teck Cominco Metals Ltd	STANDARD ___ OTHER ___	REGULAR SERVICE (DEFAULT)
CONTACT:	PDF ___ EXCEL ___ CUSTOM ___ FAX ___	RUSH SERVICE (2-3 DAYS)
ADDRESS: Kimberley, BC	EMAIL 1: ...uce.d...@teckcominco.com	PRIORITY SERVICE (1 DAY or ASAP)
1A 3E1	EMAIL 2 audru...artnericc.com	EMERGENCY SERVICE (<1 DAY / WEEKEND) - CONTACT ALS
PHONE ___ FAX ___		ANALYSIS REQUEST
INVOICE TO: SAME AS REPORT ? YES / NO	INDICATE BOTTLES: FILTERED / PRESERVED (F/P) →	
COMPANY:	CLIENT / PROJECT INFORMATION:	
CONTACT:	JOB #	
ADDRESS:	PO /AFE:	
	Legal Site Description:	
PHONE: FAX:	QUOTE #.	
Lab Work Order # (lab use only)	SAMPLER (Initials):	

Sample #	SAMPLE IDENTIFICATION (This description will appear on the report)	DATE	TIME	SAMPLE TYPE	pH, Salin	Hardness	Total	Rad								HAZARDOUS ?	HIGHLY CONTAMINATED ?	NUMBER OF CONTAINERS
					✓	✓	✓	✓	✓									

GUIDELINES / REGULATIONS	SPECIAL INSTRUCTIONS / HAZARDOUS DETAILS
	saline ... n 1:2 distil ... fillers

Failure to complete all portions of this form may delay analysis. Please fill in this form *LEGIBLY*.

By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the reverse page of the white report copy.

RELINQUISHED BY:	DATE & TIME:	RECEIVED BY:	DATE & TIME:	SAMPLE CONDITION (lab use only)
				TEMPERATURE / SAMPLES RECEIVED IN GOOD CONDITION ? YES / NO (If no provide details)
RELINQUISHED BY:	DATE & TIME:	RECEIVED BY:	DATE & TIME:	

ANALYTICAL REPORT

TECK COMINCO METALS LTD.

ATTN: BRUCE DONALD

Reported On: 05-SEP-07 12:36 PM

BAG 2000

KIMBERLEY BC V1A 3E1

Lab Work Order #: **L538421** **Date Received:** **04-AUG-07**

Project P.O. #:
Job Reference: 70402
Legal Site Desc:
CofC Numbers: A038630, A038637

Other Information:

Comments:

Timothy Guy Crowther
General Manager, Vancouver

For any questions about this report please contact your Account Manager:

Andre Langlais

ALS Canada Ltd.
Part of the **ALS Laboratory Group**
1988 Triumph Street, Vancouver, BC V5L 1K5
Phone: +1 604 253 4188 Fax: +1 604 253 6700 www.alsglobal.com
A Campbell Brothers Limited Company

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID	L538421-1				
	Description					
	Sampled Date					
	Sampled Time					
	Client ID	G CREEK				
Grouping	**Analyte**					
SEAWATER						
Physical Tests	Hardness (as CaCO3) (mg/L)	1250				
Total Metals	Aluminum (Al)-Total (mg/L)	<0.030				
	Arsenic (As)-Total (mg/L)	<0.00020				
	Cadmium (Cd)-Total (mg/L)	0.000253				
	Calcium (Ca)-Total (mg/L)	115				
	Copper (Cu)-Total (mg/L)	0.000736				
	Iron (Fe)-Total (mg/L)	<0.010				
	Lead (Pb)-Total (mg/L)	0.000514				
	Magnesium (Mg)-Total (mg/L)	234				
	Manganese (Mn)-Total (mg/L)	0.00569				
	Molybdenum (Mo)-Total (mg/L)	0.0035				
	Nickel (Ni)-Total (mg/L)	0.00462				
	Zinc (Zn)-Total (mg/L)	0.0311				

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID	L538421-2	L538421-3	L538421-4		
	Description					
	Sampled Date	30-JUL-07	30-JUL-07	30-JUL-07		
	Sampled Time					
	Client ID	CSHED-N	CSHED-C	CSHED-S		
Grouping	**Analyte**					
SOIL						
Physical Tests	pH (pH)	8.32	8.54	8.04		
Metals	Lead (Pb) (mg/kg)	103	<60	84		
	Zinc (Zn) (mg/kg)	312	184	279		

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID	L538421-1	L538421-5	L538421-6		
	Description					
	Sampled Date		30-JUL-07	30-JUL-07		
	Sampled Time					
	Client ID	G CREEK	LRD	FRUSTRATION LAKE		
Grouping	**Analyte**					
WATER						
Physical Tests	Salinity (EC) (g/L)	5.5				
	pH (pH)	8.03				
	Total Suspended Solids (mg/L)	<3.0		3.6		
Cyanides	Cyanide, Total (mg/L)	<0.0050				
Total Metals	Lead (Pb)-Total (mg/L)		<0.0050			
	Mercury (Hg)-Total (mg/L)	<0.000010				
	Zinc (Zn)-Total (mg/L)		0.0413			
Radiological Parameters	Radium-226 (Bq/L)	0.007				

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
AS-TOT-C-HVAAS-VA	Seawater	Total Arsenic in Seawater by HVAAS	PUGET SOUND PROTOCOLS, EPA 7000 SERIES

This analysis is carried out using procedures adapted from "Recommended Guidelines for Measuring Metals in Puget Sound Marine Water, Sediment, and Tissue Samples" prepared for the United States Environmental Protection Agency and the Puget Sound Water Quality Authority, 1995. The procedures may involve preliminary sample treatment by acid digestion or filtration (EPA Method 3005A). Instrumental analysis of the seawater is by atomic absorption/emission spectrophotometry (EPA Method 7000 series).

CN-T-MID-HH-COL-VA	Water	Total Cyanide by HH Distillation	APHA 4500-CN "Cyanide"

This analysis is carried out using procedures adapted from APHA Method 4500-CN "Cyanide". Total or strong acid dissociable (SAD) cyanide are determined by sample distillation and analysis using the chloramine-T colourimetric method.

HARDNESS-CALC-VA	Seawater	Hardness	APHA 2340B

Hardness is calculated from Calcium and Magnesium concentrations, and is expressed as calcium carbonate equivalents.

HG-TOT-LOW-CVAFS-VA	Water	Total Mercury in Water by CVAFS(Low)	EPA 245.7

This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).

MET-TOT-C-ICP-VA	Seawater	Total Metals in Seawater by ICPOES	PUGET SOUND PROTOCOLS, EPA 6010B

This analysis is carried out using procedures adapted from "Recommended Guidelines for Measuring Metals in Puget Sound Marine Water, Sediment, and Tissue Samples" prepared for the United States Environmental Protection Agency and the Puget Sound Water Quality Authority, 1995. The procedures may involve preliminary sample treatment by acid digestion or filtration (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).

MET-TOT-C-LOW-MS-VA	Seawater	Total Metals in Seawater by ICPMS	PUGET SOUND PROTOCOLS, EPA 6020A

This analysis is carried out using procedures adapted from "Recommended Guidelines for Measuring Metals in Puget Sound Marine Water, Sediment, and Tissue Samples" prepared for the United States Environmental Protection Agency and the Puget Sound Water Quality Authority, 1995. The procedures may involve preliminary sample treatment by acid digestion or filtration (EPA Method 3005A). Instrumental analysis is by atomic inductively coupled plasma - mass spectrometry (EPA Method 6020A).

MET-TOT-CSR-ICP-VA	Water	Total Metals in Water by ICPOES (CSR)	EPA SW-846 3005A/6010B

This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by acid digestion, using either hotblock or microwave oven, or filtration (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).

MET-TOT-CSR-MS-VA	Water	Total Metals in Water by ICPMS (CSR)	EPA SW-846 3005A/6020A

This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by acid digestion, using either hotblock or microwave oven, or filtration (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020A).

MET-TOT-SPE-MS-VA	Seawater	Total Metals in Seawater by SPE ICPMS	PUGET SOUND PROTOCOLS, EPA 6020A

This analysis is carried out using procedures adapted from "Recommended Guidelines for Measuring Metals in Puget Sound Marine Water, Sediment, and Tissue Samples" prepared for the United States Environmental Protection Agency and the Puget Sound Water Quality Authority, 1995, and with procedures adapted from Cetac Technologies Incorporated. A suspended particulate resin (SPR), consisting of immobilized iminodiacetate (IDA) on a divinylbenzene polymer, is used to chelate and preconcentrate metals in seawater. Instrumental analysis is by inductively coupled plasma mass spectrometry (ICPMS).

PB-CSR-ICP-VA	Soil	Pb in Soils by ICPOES (CSR SALM)	BCMELP CSR SALM Method 8

This analysis is carried out using procedures from CSR Analytical Method 8 "Strong Acid Leachable Metals (SALM) in Soil", BC Ministry of Environment, Lands and Parks, 26 June 2001, and procedures adapted from "Test Methods for Evaluating Solid Waste", SW-846 Method 3050B United States Environmental Protection Agency (EPA). The sample is manually homogenized, dried at 60 degrees Celsius, sieved through a 2 mm (10 mesh) sieve, and a representative subsample of the dry material is weighed. The sample is then digested at 90 degrees Celsius for 2 hours by block digester using a 1:1 ratio of concentrated nitric and hydrochloric acids. Instrumental analysis is by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).

Method Limitation: This method is not a total digestion technique. It is a very strong acid digestion that is intended to dissolve those metals that may

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)

be environmentally available. By design, elements bound in silicate structures are not normally dissolved by this procedure as they are not usually mobile in the environment.

PH-1:2-VA Soil CSR pH by 1:2 Water Leach BC WLAP METHOD: PH, ELECTROMETRIC, SOIL

This analysis is carried out in accordance with procedures described in the BC WLAP method: pH, Electrometric, Soil and Sediment. The procedure involves mixing the dried (at <60°C) and seived (10 mesh/2mm) sample with deionized/distilled water at a 1:2 ratio of sediment to water. The pH of the solution is then measured using a standard pH probe.

PH-PCT-VA Water pH by Meter (Automated) APHA 4500-H "pH Value"

This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode

RADIO-RADIUM226-SR Water Radium 226 CANMET 1986

SALINITY-EC-VA Water Salinity by calculation using EC APHA 2520 B

This analysis is carried out using procedures adapted from APHA Method 2520 "Salinity". Salinity is determined using a samples conductivity and the Practical Salinity Scale.

TSS-VA Water Solids by Gravimetric APHA 2540 Gravimetric

This analysis is carried out using procedures adapted from APHA Method 2540 "Solids". Solids are determined gravimetrically. Total suspended solids (TSS) are determined by filtering a sample through a glass fibre filter, TSS is determined by drying the filter at 104 degrees celsius.

ZN-CSR-ICP-VA Soil Zn in Soil by ICPOES (CSR SALM) BCMELP CSR SALM METHOD 8

This analysis is carried out using procedures from CSR Analytical Method 8 "Strong Acid Leachable Metals (SALM) in Soil", BC Ministry of Environment, Lands and Parks, 26 June 2001, and procedures adapted from "Test Methods for Evaluating Solid Waste", SW-846 Method 3050B United States Environmental Protection Agency (EPA). The sample is manually homogenized, dried at 60 degrees Celsius, sieved through a 2 mm (10 mesh) sieve, and a representative subsample of the dry material is weighed. The sample is then digested at 90 degrees Celsius for 2 hours by block digester using a 1:1 ratio of concentrated nitric and hydrochloric acids. Instrumental analysis is by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).

Method Limitation: This method is not a total digestion technique. It is a very strong acid digestion that is intended to dissolve those metals that may be environmentally available. By design, elements bound in silicate structures are not normally dissolved by this procedure as they are not usually mobile in the environment.

** Laboratory Methods employed follow in-house procedures, which are generally based on nationally or internationally accepted methodologies.
The last two letters of the above ALS Test Code column indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
SR	Saskatchewan Research Council - Saskatoon, Saskatchewan, Can	VA	ALS LABORATORY GROUP - VANCOUVER, BC, CANADA

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)

GLOSSARY OF REPORT TERMS
Surr - A surrogate is an organic compound that is similar to the target analyte(s) in chemical composition and behavior but not normally detected in enviromental samples. Prior to sample processing, samples are fortified with one or more surrogate compounds.
The reported surrogate recovery value provides a measure of method efficiency.
mg/kg (units) - unit of concentration based on mass, parts per million
mg/L (units) - unit of concentration based on volume, parts per million
N/A - Result not available. Refer to qualifier code and definition for explanation

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Although test results are generated under strict QA/QC protocols, any unsigned test reports, faxes, or emails are considered preliminary.

ALS Laboratory Group has an extensive QA/QC program where all analytical data reported is analyzed using approved referenced procedures followed by checks and reviews by senior managers and quality assurance personnel. However, since the results are obtained from chemical measurements and thus cannot be guaranteed, ALS Laboratory Group assumes no liability for the use or interpretation of the results.

SRC Group # 2007-5711

SRC ANALYTICAL

Aug 20, 2007

422 Downey Road
Saskatoon, Saskatchewan, Canada
S7N 4N1
(306) 933-6932 or 1-800-240-8808
Fax: (306) 933-7922

ALS
Aurora Laboratory Services Ltd.
1988 Triumph Street
Vancouver, British Columbia V5L 1K5

Sample # **25075**
Date Sampled:
Sample Matrix: **WATER**
Description: **L538421-1 G CREEK**

Client PO #: **LW11759**
Date Received: **Aug 08, 2007**

Analyte	Units	Result	DL	Date Entered
Radio Chemistry				
Radium-226	Bq/L	0.007	0.005	Aug 20, 2007

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

CHAIN OF CUSTODY / ANALYTICAL REQUEST FORM

CANADA TOLL FREE 1-800-668-9878

www.alsenviro.com

COC # A038630

L538421

Page 1 of 1

REPORT TO:	REPORT FORMAT / DISTRIBUTION	SERVICE REQUESTED
COMPANY: Teck Cominco Metals Ltd.	STANDARD ✓ OTHER ✓	✓ REGULAR SERVICE (DEFAULT)
CONTACT: Bruce Donald	PDF ✓ EXCEL ✓ CUSTOM ___ FAX ___	RUSH SERVICE (2-3 DAYS)
ADDRESS: Bag 2000 Kimberley, BC V1A 3E1	EMAIL 1: bruce.donald@teckcominco.com	PRIORITY SERVICE (1 DAY or ASAP)
	EMAIL 2: alaudrum@gartherlee.com	EMERGENCY SERVICE (<1 DAY / WEEKEND) - CONTACT ALS
PHONE: 250-427-8405 FAX: 250-427-8451		ANALYSIS REQUEST
INVOICE TO: SAME AS REPORT ? (YES) NO	INDICATE BOTTLES: FILTERED / PRESERVED (F/P) → → →	
COMPANY:	CLIENT / PROJECT INFORMATION:	
CONTACT:	JOB #: 70402	
ADDRESS:	PO /AFE:	
	Legal Site Description:	
PHONE: FAX:	QUOTE #:	
Lab Work Order # (lab use only)	SAMPLER (Initials):	

Sample #	SAMPLE IDENTIFICATION (This description will appear on the report)	DATE	TIME	SAMPLE TYPE	Pth, Salinity	Hardness, TSS	Total Metals	Radium 226	Total Cyanide						HAZARDOUS ?	HIGHLY CONTAMINATED ?	NUMBER OF CONTAINERS
1	G Creek			Seawater	X	X	X	X	X								

GUIDELINES / REGULATIONS

SPECIAL INSTRUCTIONS / HAZARDOUS DETAILS

Water is ~~supersaline~~ hypersaline for TSS measurement run 1-2L distilled Through filters

Failure to complete all portions of this form may delay analysis. Please fill in this form *LEGIBLY*.

By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the reverse page of the white report copy.

RELINQUISHED BY:	DATE & TIME:	RECEIVED BY:	DATE & TIME:
Bruce Donald	Aug 1/07	R. Fournier	Aug 4/07 1000h
R. Fournier	Aug 4/07 1500h	HD 07/07/08	10:55

SAMPLE CONDITION (lab use only)

TEMPERATURE	SAMPLES RECEIVED IN GOOD CONDITION ? YES / NO (If no provide details)
18	

REFER TO BACK PAGE FOR REGIONAL LOCATIONS AND SAMPLING INFORMATION

WHITE - REPORT COPY, PINK - FILE COPY, YELLOW - CLIENT COPY

GENF14.00

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

CHAIN OF CUSTODY / ANALYTICAL REQUEST FORM

CANADA TOLL FREE 1-800-668-9878

www.alsenviro.com

COC # A038637

L538421

Page 1 of 1

REPORT TO: BRUCE Donald
COMPANY: TECK Cominco Metal Ltd
CONTACT: BRUCE Donald
ADDRESS: BAG 2000 KIMBERLEY BC V1A 3E1
PHONE: 250 427-8405 FAX: 427-8451

INVOICE TO: SAME AS REPORT ? (YES) / NO
COMPANY:
CONTACT:
ADDRESS:
PHONE: FAX:

Lab Work Order # (lab use only)

REPORT FORMAT / DISTRIBUTION
STANDARD ✓ OTHER ___
PDF ✓ EXCEL ✓ CUSTOM ___ FAX ___
EMAIL 1: bruce.donald@
EMAIL 2: TeckCominco.COM

INDICATE BOTTLES: FILTERED / PRESERVED (F/P) → → →

CLIENT / PROJECT INFORMATION:
JOB #: POLARIS Mine
PO /AFE:
Legal Site Description:
QUOTE #:
SAMPLER (Initials):

SERVICE REQUESTED
REGULAR SERVICE (DEFAULT) ✓
RUSH SERVICE (2-3 DAYS)
PRIORITY SERVICE (1 DAY or ASAP)
EMERGENCY SERVICE (<1 DAY / WEEKEND) - CONTACT ALS

ANALYSIS REQUEST

Sample #	SAMPLE IDENTIFICATION (This description will appear on the report)	DATE	TIME	SAMPLE TYPE	SOIL PH	TOTAL METALS Pb ZN ← ICPMS	TSS	HAZARDOUS ?	HIGHLY CONTAMINATED ?	NUMBER OF CONTAINERS
2	CSHED - N	July 30/07		SOIL	X	X				
3	CSHED - C	" "		SOIL	X	X				
4	CSHED - S	" "		SOIL	X	X				
5	LRD	" "		Fresh Surf water		X				
6	FRUSTRATION LAKE	" "		Surf water			X			

GUIDELINES / REGULATIONS

SPECIAL INSTRUCTIONS / HAZARDOUS DETAILS
For SurFACE water use same detection Limits and a but analyze only for Pb and ZN, Expect Soil results to be between 50-2000 mg/kg dry

Failure to complete all portions of this form may delay analysis. Please fill in this form *LEGIBLY*.

By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the reverse page of the white report copy.

RELINQUISHED BY:	DATE & TIME:	RECEIVED BY:	DATE & TIME:
		R. Fourner	Aug 4/07 1000h
R. Fourner	Aug 4/07 1500h	HD 07/07/08	1655

SAMPLE CONDITION (lab use only)
TEMPERATURE: 18
SAMPLES RECEIVED IN GOOD CONDITION ? (YES) / NO (If no provide details)

ANALYTICAL REPORT

TECK COMINCO METALS LTD.

ATTN: BRUCE DONALD

Reported On: 05-SEP-07 12:34 PM

BAG 2000

KIMBERLEY BC V1A 3E1

Lab Work Order #: **L541667** **Date Received:** **14-AUG-07**

Project P.O. #:
Job Reference: 70402
Legal Site Desc:
CofC Numbers: A038629

Other Information:

Comments:

Timothy Guy Crowther
General Manager, Vancouver

For any questions about this report please contact your Account Manager:

Andre Langlais

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID	L541667-1				
	Description	SEAWATER				
	Sampled Date	09-AUG-07				
	Sampled Time					
	Client ID	G CREEK				
Grouping	**Analyte**					
SEAWATER						
Physical Tests	Hardness (as CaCO3) (mg/L)	1260				
Total Metals	Aluminum (Al)-Total (mg/L)	<0.60				
	Arsenic (As)-Total (mg/L)	<0.00020				
	Cadmium (Cd)-Total (mg/L)	0.000249				
	Calcium (Ca)-Total (mg/L)	117				
	Copper (Cu)-Total (mg/L)	0.000922				
	Iron (Fe)-Total (mg/L)	<0.010				
	Lead (Pb)-Total (mg/L)	0.000388				
	Magnesium (Mg)-Total (mg/L)	236				
	Manganese (Mn)-Total (mg/L)	0.00664				
	Molybdenum (Mo)-Total (mg/L)	0.0031				
	Nickel (Ni)-Total (mg/L)	0.00500				
	Zinc (Zn)-Total (mg/L)	0.0258				

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID	L541667-1				
	Description	SEAWATER				
	Sampled Date	09-AUG-07				
	Sampled Time					
	Client ID	G CREEK				
Grouping	**Analyte**					
WATER						
Physical Tests	Salinity (EC) (g/L)	5.4				
	pH (pH)	8.05				
	Total Suspended Solids (mg/L)	<3.0				
Cyanides	Cyanide, Total (mg/L)	<0.0050				
Total Metals	Mercury (Hg)-Total (mg/L)	<0.000010				
Radiological Parameters	Radium-226 (Bq/L)	0.007				

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
AS-TOT-C-HVAAS-VA	Seawater	Total Arsenic in Seawater by HVAAS	PUGET SOUND PROTOCOLS, EPA 7000 SERIES

This analysis is carried out using procedures adapted from "Recommended Guidelines for Measuring Metals in Puget Sound Marine Water, Sediment, and Tissue Samples" prepared for the United States Environmental Protection Agency and the Puget Sound Water Quality Authority, 1995. The procedures may involve preliminary sample treatment by acid digestion or filtration (EPA Method 3005A). Instrumental analysis of the seawater is by atomic absorption/emission spectrophotometry (EPA Method 7000 series).

CN-T-MID-HH-COL-VA	Water	Total Cyanide by HH Distillation	APHA 4500-CN "Cyanide"

This analysis is carried out using procedures adapted from APHA Method 4500-CN "Cyanide". Total or strong acid dissociable (SAD) cyanide are determined by sample distillation and analysis using the chloramine-T colourimetric method.

HARDNESS-CALC-VA	Seawater	Hardness	APHA 2340B

Hardness is calculated from Calcium and Magnesium concentrations, and is expressed as calcium carbonate equivalents.

HG-TOT-LOW-CVAFS-VA	Water	Total Mercury in Water by CVAFS(Low)	EPA 245.7

This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).

MET-TOT-C-ICP-VA	Seawater	Total Metals in Seawater by ICPOES	PUGET SOUND PROTOCOLS, EPA 6010B

This analysis is carried out using procedures adapted from "Recommended Guidelines for Measuring Metals in Puget Sound Marine Water, Sediment, and Tissue Samples" prepared for the United States Environmental Protection Agency and the Puget Sound Water Quality Authority, 1995. The procedures may involve preliminary sample treatment by acid digestion or filtration (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).

MET-TOT-C-LOW-MS-VA	Seawater	Total Metals in Seawater by ICPMS	PUGET SOUND PROTOCOLS, EPA 6020A

This analysis is carried out using procedures adapted from "Recommended Guidelines for Measuring Metals in Puget Sound Marine Water, Sediment, and Tissue Samples" prepared for the United States Environmental Protection Agency and the Puget Sound Water Quality Authority, 1995. The procedures may involve preliminary sample treatment by acid digestion or filtration (EPA Method 3005A). Instrumental analysis is by atomic inductively coupled plasma - mass spectrometry (EPA Method 6020A).

MET-TOT-SPE-MS-VA	Seawater	Total Metals in Seawater by SPE ICPMS	PUGET SOUND PROTOCOLS, EPA 6020A

This analysis is carried out using procedures adapted from "Recommended Guidelines for Measuring Metals in Puget Sound Marine Water, Sediment, and Tissue Samples" prepared for the United States Environmental Protection Agency and the Puget Sound Water Quality Authority, 1995, and with procedures adapted from Cetac Technologies Incorporated. A suspended particulate resin (SPR), consisting of immobilized iminodiacetate (IDA) on a divinylbenzene polymer, is used to chelate and preconcentrate metals in seawater. Instrumental analysis is by inductively coupled plasma mass spectrometry (ICPMS).

PH-PCT-VA	Water	pH by Meter (Automated)	APHA 4500-H "pH Value"

This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode

RADIO-RADIUM226-SR	Water	Radium 226	CANMET 1986

SALINITY-EC-VA	Water	Salinity by calculation using EC	APHA 2520 B

This analysis is carried out using procedures adapted from APHA Method 2520 "Salinity". Salinity is determined using a samples conductivity and the Practical Salinity Scale.

TSS-VA	Water	Solids by Gravimetric	APHA 2540 Gravimetric

This analysis is carried out using procedures adapted from APHA Method 2540 "Solids". Solids are determined gravimetrically. Total suspended solids (TSS) are determined by filtering a sample through a glass fibre filter, TSS is determined by drying the filter at 104 degrees celsius.

** Laboratory Methods employed follow in-house procedures, which are generally based on nationally or internationally accepted methodologies.
The last two letters of the above ALS Test Code column indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
SR	Saskatchewan Research Council - Saskatoon, Saskatchewan, Can	VA	ALS LABORATORY GROUP - VANCOUVER, BC, CANADA

GLOSSARY OF REPORT TERMS
Surr - A surrogate is an organic compound that is similar to the target analyte(s) in chemical composition and behavior but not normally detected in enviromental samples. Prior to sample processing, samples are fortified with one or more surrogate compounds.
The reported surrogate recovery value provides a measure of method efficiency.
mg/kg (units) - unit of concentration based on mass, parts per million
mg/L (units) - unit of concentration based on volume, parts per million
N/A - Result not available. Refer to qualifier code and definition for explanation

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Although test results are generated under strict QA/QC protocols, any unsigned test reports, faxes, or emails are considered preliminary.

ALS Laboratory Group has an extensive QA/QC program where all analytical data reported is analyzed using approved referenced procedures followed by checks and reviews by senior managers and quality assurance personnel. However, since the results are obtained from chemical measurements and thus cannot be guaranteed, ALS Laboratory Group assumes no liability for the use or interpretation of the results.

SRC Group # 2007-6029

SRC ANALYTICAL

Aug 28, 2007

422 Downey Road
Saskatoon, Saskatchewan, Canada
S7N 4N1
(306) 933-6932 or 1-800-240-8808
Fax: (306) 933-7922

ALS
Aurora Laboratory Services Ltd.
1988 Triumph Street
Vancouver, British Columbia V5L 1K5

Sample # **26498**
Date Sampled:
Sample Matrix: **WATER**
Description: **L541667-1 G CREEK**

Client PO #: **LW11957**
Date Received: **Aug 17, 2007**

Analyte	Units	Result	DL	Date Entered
Radio Chemistry				
Radium-226	Bq/L	0.007	0.005	Aug 27, 2007

...oratory Group
...ISTRY & TESTING SERVICES

...ironmental Division

ALS

CHAIN OF CUSTODY / ANALYTICAL REQUEST FORM

CANADA TOLL FREE 1-800-668-9878

www.alsenviro.com

COC # A038629

L541667

Page 1 of 1

REPORT TO:	REPORT FORMAT / DISTRIBUTION	SERVICE REQUESTED
COMPANY: Teck Cominco Metals Ltd.	STANDARD ✓ OTHER ✓	✓ REGULAR SERVICE (DEFAULT)
CONTACT: Bruce Donald	PDF ✓ EXCEL ✓ CUSTOM ___ FAX ___	RUSH SERVICE (2-3 DAYS)
ADDRESS: Bag 2000 Kimberley, BC V1A 3E1	EMAIL 1: bruce.donald@teckcominco.com	PRIORITY SERVICE (1 DAY or ASAP)
	EMAIL 2: aloudrum@gartnerlee.com	EMERGENCY SERVICE (<1 DAY / WEEKEND) - CONTACT ALS
PHONE: 250-427-8405 FAX: 250-427-8451		ANALYSIS REQUEST
INVOICE TO: SAME AS REPORT ? (YES) NO	INDICATE BOTTLES: FILTERED / PRESERVED (F/P) → → →	
COMPANY:	CLIENT / PROJECT INFORMATION:	
CONTACT:	JOB #: 70402	
ADDRESS:	PO /AFE:	
	Legal Site Description:	
PHONE: FAX:	QUOTE #:	
Lab Work Order # (lab use only)	SAMPLER (Initials):	

Sample #	SAMPLE IDENTIFICATION (This description will appear on the report)	DATE	TIME	SAMPLE TYPE	pH, Salinity	Hardness, TSS	Total Metals	Radium 226	Total Cyanide	HAZARDOUS ?	HIGHLY CONTAMINATED ?	NUMBER OF CONTAINERS
	G Creek			Seawater	X	X	X	X	X			

GUIDELINES / REGULATIONS	SPECIAL INSTRUCTIONS / HAZARDOUS DETAILS
	Water is hypersaline, for TSS measurement run 1-2 L distilled through filters

Failure to complete all portions of this form may delay analysis. Please fill in this form *LEGIBLY*.

By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the reverse page of the white report copy.

RELINQUISHED BY:	DATE & TIME:	RECEIVED BY:	DATE & TIME:
N. McPhee	Aug 09/07 12pm	R. Fournier	Aug 14/07 1200 L
R. Fournier	Aug 14/07 1400	HD 07108116	12:34

SAMPLE CONDITION (lab use only)	
TEMPERATURE 13	SAMPLES RECEIVED IN GOOD CONDITION? YES / NO (If no provide details)

ANALYTICAL REPORT

TECK COMINCO METALS LTD.

ATTN: BRUCE DONALD

Reported On: 11-SEP-07 07:35 PM

BAG 2000

KIMBERLEY BC V1A 3E1

Lab Work Order #: **L544273** **Date Received:** **20-AUG-07**

Project P.O. #:
Job Reference: 70402
Legal Site Desc:
CofC Numbers: A038627

Other Information:

Comments:

Timothy Guy Crowther
General Manager, Vancouver

For any questions about this report please contact your Account Manager:

Andre Langlais

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID	L544273-1				
	Description					
	Sampled Date					
	Sampled Time					
	Client ID	G CREEK				
Grouping	**Analyte**					
SEAWATER						
Physical Tests	Hardness (as CaCO3) (mg/L)	1220				
Total Metals	Aluminum (Al)-Total (mg/L)	<0.020				
	Arsenic (As)-Total (mg/L)	0.00026				
	Cadmium (Cd)-Total (mg/L)	0.000238				
	Calcium (Ca)-Total (mg/L)	115				
	Copper (Cu)-Total (mg/L)	0.000888				
	Iron (Fe)-Total (mg/L)	0.013				
	Lead (Pb)-Total (mg/L)	0.000399				
	Magnesium (Mg)-Total (mg/L)	227				
	Manganese (Mn)-Total (mg/L)	0.00572				
	Molybdenum (Mo)-Total (mg/L)	0.0037				
	Nickel (Ni)-Total (mg/L)	0.00555				
	Zinc (Zn)-Total (mg/L)	0.0265				

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID	L544273-1				
	Description					
	Sampled Date					
	Sampled Time					
	Client ID	G CREEK				
Grouping	**Analyte**					
WATER						
Physical Tests	Salinity (EC) (g/L)	6.0				
	pH (pH)	8.12				
	Total Suspended Solids (mg/L)	8.0				
Cyanides	Cyanide, Total (mg/L)	<0.0050				
Total Metals	Mercury (Hg)-Total (mg/L)	<0.000010				
Radiological Parameters	Radium-226 (Bq/L)	0.005				

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
AS-TOT-C-HVAAS-VA	Seawater	Total Arsenic in Seawater by HVAAS	PUGET SOUND PROTOCOLS, EPA 7000 SERIES

This analysis is carried out using procedures adapted from "Recommended Guidelines for Measuring Metals in Puget Sound Marine Water, Sediment, and Tissue Samples" prepared for the United States Environmental Protection Agency and the Puget Sound Water Quality Authority, 1995. The procedures may involve preliminary sample treatment by acid digestion or filtration (EPA Method 3005A). Instrumental analysis of the seawater is by atomic absorption/emission spectrophotometry (EPA Method 7000 series).

CN-T-MID-HH-COL-VA	Water	Total Cyanide by HH Distillation	APHA 4500-CN "Cyanide"

This analysis is carried out using procedures adapted from APHA Method 4500-CN "Cyanide". Total or strong acid dissociable (SAD) cyanide are determined by sample distillation and analysis using the chloramine-T colourimetric method.

HARDNESS-CALC-VA	Seawater	Hardness	APHA 2340B

Hardness is calculated from Calcium and Magnesium concentrations, and is expressed as calcium carbonate equivalents.

HG-TOT-LOW-CVAFS-VA	Water	Total Mercury in Water by CVAFS(Low)	EPA 245.7

This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).

MET-TOT-C-ICP-VA	Seawater	Total Metals in Seawater by ICPOES	PUGET SOUND PROTOCOLS, EPA 6010B

This analysis is carried out using procedures adapted from "Recommended Guidelines for Measuring Metals in Puget Sound Marine Water, Sediment, and Tissue Samples" prepared for the United States Environmental Protection Agency and the Puget Sound Water Quality Authority, 1995. The procedures may involve preliminary sample treatment by acid digestion or filtration (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).

MET-TOT-C-LOW-MS-VA	Seawater	Total Metals in Seawater by ICPMS	PUGET SOUND PROTOCOLS, EPA 6020A

This analysis is carried out using procedures adapted from "Recommended Guidelines for Measuring Metals in Puget Sound Marine Water, Sediment, and Tissue Samples" prepared for the United States Environmental Protection Agency and the Puget Sound Water Quality Authority, 1995. The procedures may involve preliminary sample treatment by acid digestion or filtration (EPA Method 3005A). Instrumental analysis is by atomic inductively coupled plasma - mass spectrometry (EPA Method 6020A).

MET-TOT-SPE-MS-VA	Seawater	Total Metals in Seawater by SPE ICPMS	PUGET SOUND PROTOCOLS, EPA 6020A

This analysis is carried out using procedures adapted from "Recommended Guidelines for Measuring Metals in Puget Sound Marine Water, Sediment, and Tissue Samples" prepared for the United States Environmental Protection Agency and the Puget Sound Water Quality Authority, 1995, and with procedures adapted from Cetac Technologies Incorporated. A suspended particulate resin (SPR), consisting of immobilized iminodiacetate (IDA) on a divinylbenzene polymer, is used to chelate and preconcentrate metals in seawater. Instrumental analysis is by inductively coupled plasma mass spectrometry (ICPMS).

PH-PCT-VA	Water	pH by Meter (Automated)	APHA 4500-H "pH Value"

This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode

RADIO-RADIUM226-SR	Water	Radium 226	CANMET 1986

SALINITY-EC-VA	Water	Salinity by calculation using EC	APHA 2520 B

This analysis is carried out using procedures adapted from APHA Method 2520 "Salinity". Salinity is determined using a samples conductivity and the Practical Salinity Scale.

TSS-VA	Water	Solids by Gravimetric	APHA 2540 Gravimetric

This analysis is carried out using procedures adapted from APHA Method 2540 "Solids". Solids are determined gravimetrically. Total suspended solids (TSS) are determined by filtering a sample through a glass fibre filter, TSS is determined by drying the filter at 104 degrees celsius.

** Laboratory Methods employed follow in-house procedures, which are generally based on nationally or internationally accepted methodologies.
The last two letters of the above ALS Test Code column indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
SR	Saskatchewan Research Council - Saskatoon, Saskatchewan, Can	VA	ALS LABORATORY GROUP - VANCOUVER, BC, CANADA

GLOSSARY OF REPORT TERMS
Surr - A surrogate is an organic compound that is similar to the target analyte(s) in chemical composition and behavior but not normally detected in enviromental samples. Prior to sample processing, samples are fortified with one or more surrogate compounds.
The reported surrogate recovery value provides a measure of method efficiency.
mg/kg (units) - unit of concentration based on mass, parts per million
mg/L (units) - unit of concentration based on volume, parts per million
N/A - Result not available. Refer to qualifier code and definition for explanation

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Although test results are generated under strict QA/QC protocols, any unsigned test reports, faxes, or emails are considered preliminary.

ALS Laboratory Group has an extensive QA/QC program where all analytical data reported is analyzed using approved referenced procedures followed by checks and reviews by senior managers and quality assurance personnel. However, since the results are obtained from chemical measurements and thus cannot be guaranteed, ALS Laboratory Group assumes no liability for the use or interpretation of the results.

SRC Group # 2007-6239

SRC ANALYTICAL

Sep 06, 2007

422 Downey Road
Saskatoon, Saskatchewan, Canada
S7N 4N1
(306) 933-6932 or 1-800-240-8808
Fax: (306) 933-7922

ALS
Aurora Laboratory Services Ltd.
1988 Triumph Street
Vancouver, British Columbia V5L 1K5

Sample # **27395**
Date Sampled:
Sample Matrix: **WATER**
Description: **L544273-1 G CREEK**

Client PO #: **LW12055**
Date Received: **Aug 24, 2007**

Analyte	Units	Result	DL	Date Entered
Radio Chemistry				
Radium-226	Bq/L	0.005	0.005	Sep 06, 2007

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

CHAIN OF CUSTODY / ANALYTICAL REQUEST FORM

CANADA TOLL FREE 1-800-668-9878

www.alsenviro.com

COC # A038627

L544273

Page 1 of 1

REPORT TO:	REPORT FORMAT / DISTRIBUTION	SERVICE REQUESTED
COMPANY: Teck Cominco Metals Ltd.	STANDARD ✓ OTHER ✓	✓ REGULAR SERVICE (DEFAULT)
CONTACT: Bruce Donald	PDF ✓ EXCEL ✓ CUSTOM ____ FAX ____	RUSH SERVICE (2-3 DAYS)
ADDRESS: Bag 2000 Kimberley, BC V1A 3E1	EMAIL 1: bruce.donald@teckcominco.com	PRIORITY SERVICE (1 DAY or ASAP)
	EMAIL 2: alaudrum@gartnerlee.com	EMERGENCY SERVICE (<1 DAY / WEEKEND) - CONTACT ALS
PHONE: 250-427-8405 FAX: 250-427-8451		ANALYSIS REQUEST
INVOICE TO: SAME AS REPORT ? (YES) NO	INDICATE BOTTLES: FILTERED / PRESERVED (F/P) → → →	
COMPANY:	CLIENT / PROJECT INFORMATION:	
CONTACT:	JOB #: 70402	
ADDRESS:	PO /AFE:	
	Legal Site Description:	
PHONE: FAX:	QUOTE #:	
Lab Work Order # (lab use only)	SAMPLER (Initials):	

Sample #	SAMPLE IDENTIFICATION (This description will appear on the report)	DATE	TIME	SAMPLE TYPE	pH, Salinity	Hardness, TSS	Total Metals	Radium 226	Total Cyanide							HAZARDOUS ?	HIGHLY CONTAMINATED ?	NUMBER OF CONTAINERS
1	G Creek			Seawater	X	X	X	X	X									

GUIDELINES / REGULATIONS

SPECIAL INSTRUCTIONS / HAZARDOUS DETAILS

Water is hypersaline, for TSS measurement run 1-2 L Distilled through filters

Failure to complete all portions of this form may delay analysis. Please fill in this form *LEGIBLY*.

By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the reverse page of the white report copy.

RELINQUISHED BY:	DATE & TIME:	RECEIVED BY:	DATE & TIME:
N. McPhee	Aug 16/07 4PM	R. Fournier	Aug 20/07
R. Fournier	Aug 21/07 10002	[illegible]	AUG 23/07 11:40

SAMPLE CONDITION (lab use only)

TEMPERATURE	SAMPLES RECEIVED IN GOOD CONDITION ? (YES) NO (If no provide details)
7°C	

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

ANALYTICAL REPORT

TECK COMINCO METALS LTD.

ATTN: BRUCE DONALD

Reported On: 15-NOV-07 04:59 PM

BAG 2000

KIMBERLEY BC V1A 3E1

Lab Work Order #: L546420 **Date Received:** 26-AUG-07

Project P.O. #:
Job Reference: 70402
Legal Site Desc:
CofC Numbers: A038636

Other Information:

Comments:

Joyce Chow
General Manager, Vancouver

For any questions about this report please contact your Account Manager:

Andre Langlais

ALS Canada Ltd.
Part of the **ALS Laboratory Group**
1988 Triumph Street, Vancouver, BC V5L 1K5
Phone: +1 604 253 4188 Fax: +1 604 253 6700 www.alsglobal.com
A Campbell Brothers Limited Company

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID	L546420-1	L546420-2			
	Description					
	Sampled Date	23-AUG-07				
	Sampled Time	13:00				
	Client ID	G CREEK	G CREEK QA/QC			
Grouping	**Analyte**					
SEAWATER						
Physical Tests	Hardness (as CaCO3) (mg/L)	1520	1570			
Total Metals	Aluminum (Al)-Total (mg/L)	<0.050	<0.050			
	Arsenic (As)-Total (mg/L)	<0.00020	<0.00020			
	Cadmium (Cd)-Total (mg/L)	0.000292	0.000282			
	Calcium (Ca)-Total (mg/L)	134	138			
	Copper (Cu)-Total (mg/L)	0.000910	0.000915			
	Iron (Fe)-Total (mg/L)	0.012	0.011			
	Lead (Pb)-Total (mg/L)	0.000457	0.000467			
	Magnesium (Mg)-Total (mg/L)	288	298			
	Manganese (Mn)-Total (mg/L)	0.0108	0.0107			
	Molybdenum (Mo)-Total (mg/L)	0.0040	0.0041			
	Nickel (Ni)-Total (mg/L)	0.00685	0.00676			
	Zinc (Zn)-Total (mg/L)	0.0336	0.0331			

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID	L546420-1	L546420-2			
	Description					
	Sampled Date	23-AUG-07				
	Sampled Time	13:00				
	Client ID	G CREEK	G CREEK QA/QC			
Grouping	**Analyte**					
WATER						
Physical Tests	Salinity (EC) (g/L)	6.8	6.8			
	pH (pH)	8.02	8.04			
	Total Suspended Solids (mg/L)	<3.0	<3.0			
Anions and Nutrients	Ammonia as N (mg/L)	0.030	0.033			
Cyanides	Cyanide, Total (mg/L)	<0.0050	<0.0050			
Total Metals	Mercury (Hg)-Total (mg/L)	<0.000010	<0.000010			
Radiological Parameters	Radium-226 (Bq/L)	0.007	<0.005			

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
AS-TOT-C-HVAAS-VA	Seawater	Total Arsenic in Seawater by HVAAS	PUGET SOUND PROTOCOLS, EPA 7000 SERIES

This analysis is carried out using procedures adapted from "Recommended Guidelines for Measuring Metals in Puget Sound Marine Water, Sediment, and Tissue Samples" prepared for the United States Environmental Protection Agency and the Puget Sound Water Quality Authority, 1995. The procedures may involve preliminary sample treatment by acid digestion or filtration (EPA Method 3005A). Instrumental analysis of the seawater is by atomic absorption/emission spectrophotometry (EPA Method 7000 series).

CN-T-MID-HH-COL-VA	Water	Total Cyanide by HH Distillation	APHA 4500-CN "Cyanide"

This analysis is carried out using procedures adapted from APHA Method 4500-CN "Cyanide". Total or strong acid dissociable (SAD) cyanide are determined by sample distillation and analysis using the chloramine-T colourimetric method.

HARDNESS-CALC-VA	Seawater	Hardness	APHA 2340B

Hardness is calculated from Calcium and Magnesium concentrations, and is expressed as calcium carbonate equivalents.

HG-TOT-LOW-CVAFS-VA	Water	Total Mercury in Water by CVAFS(Low)	EPA 245.7

This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).

MET-TOT-C-ICP-VA	Seawater	Total Metals in Seawater by ICPOES	PUGET SOUND PROTOCOLS, EPA 6010B

This analysis is carried out using procedures adapted from "Recommended Guidelines for Measuring Metals in Puget Sound Marine Water, Sediment, and Tissue Samples" prepared for the United States Environmental Protection Agency and the Puget Sound Water Quality Authority, 1995. The procedures may involve preliminary sample treatment by acid digestion or filtration (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).

MET-TOT-C-LOW-MS-VA	Seawater	Total Metals in Seawater by ICPMS	PUGET SOUND PROTOCOLS, EPA 6020A

This analysis is carried out using procedures adapted from "Recommended Guidelines for Measuring Metals in Puget Sound Marine Water, Sediment, and Tissue Samples" prepared for the United States Environmental Protection Agency and the Puget Sound Water Quality Authority, 1995. The procedures may involve preliminary sample treatment by acid digestion or filtration (EPA Method 3005A). Instrumental analysis is by atomic inductively coupled plasma - mass spectrometry (EPA Method 6020A).

MET-TOT-SPE-MS-VA	Seawater	Total Metals in Seawater by SPE ICPMS	PUGET SOUND PROTOCOLS, EPA 6020A

This analysis is carried out using procedures adapted from "Recommended Guidelines for Measuring Metals in Puget Sound Marine Water, Sediment, and Tissue Samples" prepared for the United States Environmental Protection Agency and the Puget Sound Water Quality Authority, 1995, and with procedures adapted from Cetac Technologies Incorporated. A suspended particulate resin (SPR), consisting of immobilized iminodiacetate (IDA) on a divinylbenzene polymer, is used to chelate and preconcentrate metals in seawater. Instrumental analysis is by inductively coupled plasma mass spectrometry (ICPMS).

NH3-SIE-VA	Water	Ammonia by SIE	APHA 4500-NH3 "Nitrogen (Ammonia)"

This analysis is carried out, on sulphuric acid preserved samples, using procedures adapted from APHA Method 4500-NH3 "Nitrogen (Ammonia)". Ammonia is determined using an ammonia selective electrode.

PH-PCT-VA	Water	pH by Meter (Automated)	APHA 4500-H "pH Value"

This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode

RADIO-RADIUM226-SR	Water	Radium 226	CANMET 1986

SALINITY-EC-VA	Water	Salinity by calculation using EC	APHA 2520 B

This analysis is carried out using procedures adapted from APHA Method 2520 "Salinity". Salinity is determined using a samples conductivity and the Practical Salinity Scale.

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
TSS-VA	Water	Solids by Gravimetric	APHA 2540 Gravimetric

This analysis is carried out using procedures adapted from APHA Method 2540 "Solids". Solids are determined gravimetrically. Total suspended solids (TSS) are determined by filtering a sample through a glass fibre filter, TSS is determined by drying the filter at 104 degrees celsius.

** Laboratory Methods employed follow in-house procedures, which are generally based on nationally or internationally accepted methodologies.
The last two letters of the above ALS Test Code column indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
SR	Saskatchewan Research Council - Saskatoon, Saskatchewan, Can	VA	ALS LABORATORY GROUP - VANCOUVER, BC, CANADA

GLOSSARY OF REPORT TERMS
Surr - A surrogate is an organic compound that is similar to the target analyte(s) in chemical composition and behavior but not normally detected in enviromental samples. Prior to sample processing, samples are fortified with one or more surrogate compounds.
The reported surrogate recovery value provides a measure of method efficiency.
mg/kg (units) - unit of concentration based on mass, parts per million
mg/L (units) - unit of concentration based on volume, parts per million
N/A - Result not available. Refer to qualifier code and definition for explanation

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Although test results are generated under strict QA/QC protocols, any unsigned test reports, faxes, or emails are considered preliminary.

ALS Laboratory Group has an extensive QA/QC program where all analytical data reported is analyzed using approved referenced procedures followed by checks and reviews by senior managers and quality assurance personnel. However, since the results are obtained from chemical measurements and thus cannot be guaranteed, ALS Laboratory Group assumes no liability for the use or interpretation of the results.

SRC Group # 2007-6360

SRC ANALYTICAL

Sep 12, 2007

422 Downey Road
Saskatoon, Saskatchewan, Canada
S7N 4N1
(306) 933-6932 or 1-800-240-8808
Fax: (306) 933-7922

ALS
Aurora Laboratory Services Ltd.
1988 Triumph Street
Vancouver, British Columbia V5L 1K5

Sample # **27932**
Date Sampled: **Aug 23, 2007 13:00**
Sample Matrix: **WATER**
Description: **L546420-1 G CREEK**

Client PO #: **LW12104**
Date Received: **Aug 29, 2007**

Analyte	Units	Result	DL	Date Entered
Radio Chemistry				
Radium-226	Bq/L	0.007	0.005	Sep 12, 2007

SRC ANALYTICAL

ALS, Aurora Laboratory Services Ltd.

Sample # **27933**
Date Sampled: **Aug 23, 2007 13:00**
Sample Matrix: **WATER**
Description: **L546420-2 G CREEK QA/QC**

Client PO #: **LW12104**
Date Received: **Aug 29, 2007**

Analyte	Units	Result	DL	Date Entered
Radio Chemistry				
Radium-226	Bq/L	<0.005	0.005	Sep 12, 2007

"<": not detected at level stated above.

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

CHAIN OF CUSTODY / ANALYTICAL REQUEST FORM

CANADA TOLL FREE 1-800-668-9878

www.alsenviro.com

COC # A038636
L546420

Page 1 of 1

REPORT TO:	REPORT FORMAT / DISTRIBUTION	SERVICE REQUESTED
COMPANY: Teck Cominco Metals Ltd.	STANDARD ✓ OTHER ✓	✓ REGULAR SERVICE (DEFAULT)
CONTACT: Bruce Donald	PDF ✓ EXCEL ✓ CUSTOM ___ FAX ___	RUSH SERVICE (2-3 DAYS)
ADDRESS: Box 2000 Kimberley, BC V1A 3E1	EMAIL 1: bruce.donald@teckcominco.com	PRIORITY SERVICE (1 DAY or ASAP)
	EMAIL 2: alaudrum@gartnerlee.com	EMERGENCY SERVICE (<1 DAY / WEEKEND) - CONTACT ALS
PHONE: 250-427-8405 FAX: 250-427-8451		ANALYSIS REQUEST
INVOICE TO: SAME AS REPORT ? (YES) / NO	INDICATE BOTTLES: FILTERED / PRESERVED (F/P)	
COMPANY.	CLIENT / PROJECT INFORMATION:	
CONTACT:	JOB #: 70402	
ADDRESS:	PO /AFE:	
	Legal Site Description:	
PHONE: FAX:	QUOTE #:	
Lab Work Order # (lab use only):	SAMPLER (Initials): CK	

Sample #	SAMPLE IDENTIFICATION (This description will appear on the report)	DATE	TIME	SAMPLE TYPE	pH, Salinity	Hardness, TSS	Total Metals	Radium 226	Total Cyanide	Ammonia						HAZARDOUS ?	HIGHLY CONTAMINATED ?	NUMBER OF CONTAINERS
1	G Creek	Aug 23/07	1:pm	Seawater	X	X	X	X	X	X								

GUIDELINES / REGULATIONS

SPECIAL INSTRUCTIONS / HAZARDOUS DETAILS

Water is hypersaline, for TSS measurement run 1-2 L distilled through filters

Failure to complete all portions of this form may delay analysis. Please fill in this form *LEGIBLY*.

By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the reverse page of the white report copy.

RELINQUISHED BY:	DATE & TIME:	RECEIVED BY:	DATE & TIME:
Curtis Kidd	Aug 24/07 9AM	R. Fougere	Aug 25/07
R. Fougere	Aug 26/07		Aug 28/07 10:19

SAMPLE CONDITION (lab use only)

TEMPERATURE	SAMPLES RECEIVED IN GOOD CONDITION (YES / NO) (If no provide details)
10 °C	

REFER TO BACK PAGE FOR REGIONAL LOCATIONS AND SAMPLING INFORMATION

WHITE - REPORT COPY, PINK - FILE COPY, YELLOW - CLIENT COPY

GENF14.00

ANALYTICAL REPORT

TECK COMINCO METALS LTD.

ATTN: BRUCE DONALD

Reported On: 01-OCT-07 04:46 PM

BAG 2000

KIMBERLEY BC V1A 3E1

Lab Work Order #: **L549398** **Date Received:** **04-SEP-07**

Project P.O. #:
Job Reference: 70402
Legal Site Desc:
CofC Numbers: A038639

Other Information:

Comments:

Timothy Guy Crowther
General Manager, Vancouver

For any questions about this report please contact your Account Manager:

Andre Langlais

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID	L549398-1				
	Description					
	Sampled Date	30-AUG-07				
	Sampled Time					
	Client ID	G CREEK				
Grouping	**Analyte**					
SEAWATER						
Physical Tests	Hardness (as CaCO3) (mg/L)	1610				
Total Metals	Aluminum (Al)-Total (mg/L)	<0.050				
	Arsenic (As)-Total (mg/L)	<0.00020				
	Cadmium (Cd)-Total (mg/L)	0.000285				
	Calcium (Ca)-Total (mg/L)	124				
	Copper (Cu)-Total (mg/L)	0.00112				
	Iron (Fe)-Total (mg/L)	0.017				
	Lead (Pb)-Total (mg/L)	0.000742				
	Magnesium (Mg)-Total (mg/L)	315				
	Manganese (Mn)-Total (mg/L)	0.0120				
	Molybdenum (Mo)-Total (mg/L)	0.0047				
	Nickel (Ni)-Total (mg/L)	0.00791				
	Zinc (Zn)-Total (mg/L)	0.0356				

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID	L549398-1				
	Description					
	Sampled Date	30-AUG-07				
	Sampled Time					
	Client ID	G CREEK				
Grouping	**Analyte**					
WATER						
Physical Tests	Salinity (EC) (g/L)	7.2				
	pH (pH)	8.02				
	Total Suspended Solids (mg/L)	3.3				
Cyanides	Cyanide, Total (mg/L)	<0.0050				
Total Metals	Mercury (Hg)-Total (mg/L)	0.000011				
Radiological Parameters	Radium-226 (Bq/L)	0.008				

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
AS-TOT-C-HVAAS-VA	Seawater	Total Arsenic in Seawater by HVAAS	PUGET SOUND PROTOCOLS, EPA 7000 SERIES

This analysis is carried out using procedures adapted from "Recommended Guidelines for Measuring Metals in Puget Sound Marine Water, Sediment, and Tissue Samples" prepared for the United States Environmental Protection Agency and the Puget Sound Water Quality Authority, 1995. The procedures may involve preliminary sample treatment by acid digestion or filtration (EPA Method 3005A). Instrumental analysis of the seawater is by atomic absorption/emission spectrophotometry (EPA Method 7000 series).

CN-T-MID-HH-COL-VA	Water	Total Cyanide by HH Distillation	APHA 4500-CN "Cyanide"

This analysis is carried out using procedures adapted from APHA Method 4500-CN "Cyanide". Total or strong acid dissociable (SAD) cyanide are determined by sample distillation and analysis using the chloramine-T colourimetric method.

HARDNESS-CALC-VA	Seawater	Hardness	APHA 2340B

Hardness is calculated from Calcium and Magnesium concentrations, and is expressed as calcium carbonate equivalents.

HG-TOT-LOW-CVAFS-VA	Water	Total Mercury in Water by CVAFS(Low)	EPA 245.7

This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).

MET-TOT-C-ICP-VA	Seawater	Total Metals in Seawater by ICPOES	PUGET SOUND PROTOCOLS, EPA 6010B

This analysis is carried out using procedures adapted from "Recommended Guidelines for Measuring Metals in Puget Sound Marine Water, Sediment, and Tissue Samples" prepared for the United States Environmental Protection Agency and the Puget Sound Water Quality Authority, 1995. The procedures may involve preliminary sample treatment by acid digestion or filtration (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).

MET-TOT-C-LOW-MS-VA	Seawater	Total Metals in Seawater by ICPMS	PUGET SOUND PROTOCOLS, EPA 6020A

This analysis is carried out using procedures adapted from "Recommended Guidelines for Measuring Metals in Puget Sound Marine Water, Sediment, and Tissue Samples" prepared for the United States Environmental Protection Agency and the Puget Sound Water Quality Authority, 1995. The procedures may involve preliminary sample treatment by acid digestion or filtration (EPA Method 3005A). Instrumental analysis is by atomic inductively coupled plasma - mass spectrometry (EPA Method 6020A).

MET-TOT-SPE-MS-VA	Seawater	Total Metals in Seawater by SPE ICPMS	PUGET SOUND PROTOCOLS, EPA 6020A

This analysis is carried out using procedures adapted from "Recommended Guidelines for Measuring Metals in Puget Sound Marine Water, Sediment, and Tissue Samples" prepared for the United States Environmental Protection Agency and the Puget Sound Water Quality Authority, 1995, and with procedures adapted from Cetac Technologies Incorporated. A suspended particulate resin (SPR), consisting of immobilized iminodiacetate (IDA) on a divinylbenzene polymer, is used to chelate and preconcentrate metals in seawater. Instrumental analysis is by inductively coupled plasma mass spectrometry (ICPMS).

PH-PCT-VA	Water	pH by Meter (Automated)	APHA 4500-H "pH Value"

This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode

RADIO-RADIUM226-SR	Water	Radium 226	CANMET 1986

SALINITY-EC-VA	Water	Salinity by calculation using EC	APHA 2520 B

This analysis is carried out using procedures adapted from APHA Method 2520 "Salinity". Salinity is determined using a samples conductivity and the Practical Salinity Scale.

TSS-VA	Water	Solids by Gravimetric	APHA 2540 Gravimetric

This analysis is carried out using procedures adapted from APHA Method 2540 "Solids". Solids are determined gravimetrically. Total suspended solids (TSS) are determined by filtering a sample through a glass fibre filter, TSS is determined by drying the filter at 104 degrees celsius.

** Laboratory Methods employed follow in-house procedures, which are generally based on nationally or internationally accepted methodologies.
The last two letters of the above ALS Test Code column indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
SR	Saskatchewan Research Council - Saskatoon, Saskatchewan, Can	VA	ALS LABORATORY GROUP - VANCOUVER, BC, CANADA

GLOSSARY OF REPORT TERMS
Surr - A surrogate is an organic compound that is similar to the target analyte(s) in chemical composition and behavior but not normally detected in enviromental samples. Prior to sample processing, samples are fortified with one or more surrogate compounds.
The reported surrogate recovery value provides a measure of method efficiency.
mg/kg (units) - unit of concentration based on mass, parts per million
mg/L (units) - unit of concentration based on volume, parts per million
N/A - Result not available. Refer to qualifier code and definition for explanation

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Although test results are generated under strict QA/QC protocols, any unsigned test reports, faxes, or emails are considered preliminary.

ALS Laboratory Group has an extensive QA/QC program where all analytical data reported is analyzed using approved referenced procedures followed by checks and reviews by senior managers and quality assurance personnel. However, since the results are obtained from chemical measurements and thus cannot be guaranteed, ALS Laboratory Group assumes no liability for the use or interpretation of the results.

SRC Group # 2007-6671

SRC ANALYTICAL

Sep 24, 2007

422 Downey Road
Saskatoon, Saskatchewan, Canada
S7N 4N1
(306) 933-6932 or 1-800-240-8808
Fax: (306) 933-7922

ALS
Aurora Laboratory Services Ltd.
1988 Triumph Street
Vancouver, British Columbia V5L 1K5

Sample # **29672**
Date Sampled: **Aug 30, 2007**
Sample Matrix: **WATER**
Description: **L549398-1 G CREEK**

Client PO #: **LW12254**
Date Received: **Sep 10, 2007**

Analyte	Units	Result	DL	Date Entered
Radio Chemistry				
Radium-226	Bq/L	0.008	0.005	Sep 24, 2007

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

CHAIN OF CUSTODY / ANALYTICAL REQUEST FORM

CANADA TOLL FREE 1-800-668-9878

www.alsenviro.com

COC # A038639

L549398

Page 1 of 1

REPORT TO:	REPORT FORMAT / DISTRIBUTION	SERVICE REQUESTED
COMPANY: Teck Cominco Metals Ltd.	STANDARD ✓ OTHER ✓	✓ REGULAR SERVICE (DEFAULT)
CONTACT: Bruce Donald	PDF ✓ EXCEL ✓ CUSTOM ____ FAX ____	RUSH SERVICE (2-3 DAYS)
ADDRESS: Bag 2000 Kimberley, BC V1A 3E1	EMAIL 1: bruce.donald@teckcominco.com	PRIORITY SERVICE (1 DAY or ASAP)
	EMAIL 2: alaudrum@gartnerlee.com	EMERGENCY SERVICE (<1 DAY / WEEKEND) - CONTACT ALS
PHONE: 250-427-8405 FAX: 250-427-8451		ANALYSIS REQUEST

INVOICE TO: SAME AS REPORT ? (YES) NO	INDICATE BOTTLES: FILTERED / PRESERVED (F/P) → → →
COMPANY:	CLIENT / PROJECT INFORMATION:
CONTACT:	JOB #: 70402
ADDRESS:	PO /AFE:
	Legal Site Description:
PHONE: FAX:	QUOTE #:
Lab Work Order # (lab use only):	SAMPLER (Initials):

Sample #	SAMPLE IDENTIFICATION (This description will appear on the report)	DATE	TIME	SAMPLE TYPE	pH, Salinity	Hardness, TSS	Total Metals	Radium 226	Total Cyanide							HAZARDOUS ?	HIGHLY CONTAMINATED ?	NUMBER OF CONTAINERS
1	G Creek	Aug 30, 2007		Seawater	X	X	X	X	X									

GUIDELINES / REGULATIONS	SPECIAL INSTRUCTIONS / HAZARDOUS DETAILS
	Water is hypersaline, for TSS measurement run 1-2L distilled through filters

Failure to complete all portions of this form may delay analysis. Please fill in this form *LEGIBLY*.
By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the reverse page of the white report copy.

RELINQUISHED BY:	DATE & TIME:	RECEIVED BY:	DATE & TIME:
M McPhee	Aug 31/07 1PM	R. Fournier	Sept 4/07 1000L
R. Fournier	Sept 4/07 1330L	HD 07/09/06	13:31

SAMPLE CONDITION (lab use only)	
TEMPERATURE 16 °C	SAMPLES RECEIVED IN GOOD CONDITION ? (YES) NO (If no provide details)

REFER TO BACK PAGE FOR REGIONAL LOCATIONS AND SAMPLING INFORMATION

WHITE - REPORT COPY, PINK - FILE COPY, YELLOW - CLIENT COPY

GENF14.00

ANALYTICAL REPORT

TECK COMINCO METALS LTD.

ATTN: BRUCE DONALD

Reported On: 04-OCT-07 03:46 PM

BAG 2000

KIMBERLEY BC V1A 3E1

Lab Work Order #: **L553205** **Date Received:** **13-SEP-07**

Project P.O. #:
Job Reference: 70402
Legal Site Desc:
CofC Numbers: A067522

Other Information:

Comments:

Timothy Guy Crowther
General Manager, Vancouver

For any questions about this report please contact your Account Manager:

Andre Langlais

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID	L553205-1				
	Description					
	Sampled Date	06-SEP-07				
	Sampled Time					
	Client ID	G CREEK				
Grouping	**Analyte**					
SEAWATER						
Physical Tests	Hardness (as CaCO3) (mg/L)	1700				
Total Metals	Aluminum (Al)-Total (mg/L)	<0.050				
	Arsenic (As)-Total (mg/L)	<0.00020				
	Cadmium (Cd)-Total (mg/L)	0.000308				
	Calcium (Ca)-Total (mg/L)	160				
	Copper (Cu)-Total (mg/L)	0.00151				
	Iron (Fe)-Total (mg/L)	0.031				
	Lead (Pb)-Total (mg/L)	0.00210				
	Magnesium (Mg)-Total (mg/L)	315				
	Manganese (Mn)-Total (mg/L)	0.0145				
	Molybdenum (Mo)-Total (mg/L)	0.0042				
	Nickel (Ni)-Total (mg/L)	0.00798				
	Zinc (Zn)-Total (mg/L)	0.0366				

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID	L553205-1				
	Description					
	Sampled Date	06-SEP-07				
	Sampled Time					
	Client ID	G CREEK				
Grouping	**Analyte**					
WATER						
Physical Tests	Salinity (EC) (g/L)	7.7				
	pH (pH)	8.06				
	Total Suspended Solids (mg/L)	4.1				
Total Metals	Mercury (Hg)-Total (mg/L)	<0.000010				
Radiological Parameters	Radium-226 (Bq/L)	0.006				

Reference Information

Qualifiers for Sample Submission Listed:

Qualifier	Description
SR:COC	Sample Received, Not Listed on Submitted Chain of Custody / Analytical Request Form - Sample label does not match COC.

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
AS-TOT-C-HVAAS-VA	Seawater	Total Arsenic in Seawater by HVAAS	PUGET SOUND PROTOCOLS, EPA 7000 SERIES

This analysis is carried out using procedures adapted from "Recommended Guidelines for Measuring Metals in Puget Sound Marine Water, Sediment, and Tissue Samples" prepared for the United States Environmental Protection Agency and the Puget Sound Water Quality Authority, 1995. The procedures may involve preliminary sample treatment by acid digestion or filtration (EPA Method 3005A). Instrumental analysis of the seawater is by atomic absorption/emission spectrophotometry (EPA Method 7000 series).

HARDNESS-CALC-VA	Seawater	Hardness	APHA 2340B

Hardness is calculated from Calcium and Magnesium concentrations, and is expressed as calcium carbonate equivalents.

HG-TOT-LOW-CVAFS-VA	Water	Total Mercury in Water by CVAFS(Low)	EPA 245.7

This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).

MET-TOT-C-ICP-VA	Seawater	Total Metals in Seawater by ICPOES	PUGET SOUND PROTOCOLS, EPA 6010B

This analysis is carried out using procedures adapted from "Recommended Guidelines for Measuring Metals in Puget Sound Marine Water, Sediment, and Tissue Samples" prepared for the United States Environmental Protection Agency and the Puget Sound Water Quality Authority, 1995. The procedures may involve preliminary sample treatment by acid digestion or filtration (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).

MET-TOT-C-LOW-MS-VA	Seawater	Total Metals in Seawater by ICPMS	PUGET SOUND PROTOCOLS, EPA 6020A

This analysis is carried out using procedures adapted from "Recommended Guidelines for Measuring Metals in Puget Sound Marine Water, Sediment, and Tissue Samples" prepared for the United States Environmental Protection Agency and the Puget Sound Water Quality Authority, 1995. The procedures may involve preliminary sample treatment by acid digestion or filtration (EPA Method 3005A). Instrumental analysis is by atomic inductively coupled plasma - mass spectrometry (EPA Method 6020A).

MET-TOT-SPE-MS-VA	Seawater	Total Metals in Seawater by SPE ICPMS	PUGET SOUND PROTOCOLS, EPA 6020A

This analysis is carried out using procedures adapted from "Recommended Guidelines for Measuring Metals in Puget Sound Marine Water, Sediment, and Tissue Samples" prepared for the United States Environmental Protection Agency and the Puget Sound Water Quality Authority, 1995, and with procedures adapted from Cetac Technologies Incorporated. A suspended particulate resin (SPR), consisting of immobilized iminodiacetate (IDA) on a divinylbenzene polymer, is used to chelate and preconcentrate metals in seawater. Instrumental analysis is by inductively coupled plasma mass spectrometry (ICPMS).

PH-PCT-VA	Water	pH by Meter (Automated)	APHA 4500-H "pH Value"

This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode

RADIO-RADIUM226-SR	Water	Radium 226	CANMET 1986

SALINITY-EC-VA	Water	Salinity by calculation using EC	APHA 2520 B

This analysis is carried out using procedures adapted from APHA Method 2520 "Salinity". Salinity is determined using a samples conductivity and the Practical Salinity Scale.

TSS-VA	Water	Solids by Gravimetric	APHA 2540 Gravimetric

This analysis is carried out using procedures adapted from APHA Method 2540 "Solids". Solids are determined gravimetrically. Total suspended solids (TSS) are determined by filtering a sample through a glass fibre filter, TSS is determined by drying the filter at 104 degrees celsius.

** Laboratory Methods employed follow in-house procedures, which are generally based on nationally or internationally accepted methodologies.
The last two letters of the above ALS Test Code column indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
SR	Saskatchewan Research Council - Saskatoon, Saskatchewan, Can	VA	ALS LABORATORY GROUP - VANCOUVER, BC, CANADA

GLOSSARY OF REPORT TERMS
Surr - A surrogate is an organic compound that is similar to the target analyte(s) in chemical composition and behavior but not normally detected in enviromental samples. Prior to sample processing, samples are fortified with one or more surrogate compounds.
The reported surrogate recovery value provides a measure of method efficiency.
mg/kg (units) - unit of concentration based on mass, parts per million
mg/L (units) - unit of concentration based on volume, parts per million
N/A - Result not available. Refer to qualifier code and definition for explanation

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Although test results are generated under strict QA/QC protocols, any unsigned test reports, faxes, or emails are considered preliminary.

ALS Laboratory Group has an extensive QA/QC program where all analytical data reported is analyzed using approved referenced procedures followed by checks and reviews by senior managers and quality assurance personnel. However, since the results are obtained from chemical measurements and thus cannot be guaranteed, ALS Laboratory Group assumes no liability for the use or interpretation of the results.

SRC Group # 2007-6919

SRC ANALYTICAL

Oct 03, 2007

422 Downey Road
Saskatoon, Saskatchewan, Canada
S7N 4N1
(306) 933-6932 or 1-800-240-8808
Fax: (306) 933-7922

ALS
Aurora Laboratory Services Ltd.
1988 Triumph Street
Vancouver, British Columbia V5L 1K5

Sample # **31227**
Date Sampled: **Sep 06, 2007**
Sample Matrix: **WATER**
Description: **L553205-1 G-CREEK SEP 6/07**

Client PO #: **LW12397**
Date Received: **Sep 17, 2007**

Analyte	Units	Result	DL	Date Entered
Radio Chemistry				
Radium-226	Bq/L	0.006	0.005	Oct 02, 2007

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

CHAIN OF CUSTODY / ANALYTICAL REQUEST FORM

CANADA TOLL FREE 1-800-668-9878

www.alsenviro.com

COC # A067522

L563205

Page 1 of 1

REPORT TO:	REPORT FORMAT / DISTRIBUTION	SERVICE REQUESTED
COMPANY: Teck Cominco Metals Ltd	STANDARD ✓ OTHER ✓	✓ REGULAR SERVICE (DEFAULT)
CONTACT: Bruce Donald	PDF ✓ EXCEL ✓ CUSTOM ___ FAX ___	RUSH SERVICE (2-3 DAYS)
ADDRESS: Box 2000 Kimberley BC. V1A 3E1	EMAIL 1: bruce.donald@teckcominco.com	PRIORITY SERVICE (1 DAY or ASAP)
PHONE: 250-427-8405 FAX:	EMAIL 2: alandrum@gartnerlee.com	EMERGENCY SERVICE (<1 DAY / WEEKEND) - CONTACT ALS
INVOICE TO: SAME AS REPORT? YES / NO	INDICATE BOTTLES: FILTERED / PRESERVED (F/P)	ANALYSIS REQUEST
COMPANY:	CLIENT / PROJECT INFORMATION:	
CONTACT:	JOB #: 70402	
ADDRESS:	PO /AFE:	
	Legal Site Description:	
PHONE: FAX:	QUOTE #:	
Lab Work Order # (lab use only):	SAMPLER (Initials):	

Sample #	SAMPLE IDENTIFICATION (This description will appear on the report)	DATE	TIME	SAMPLE TYPE	pH, Salinity	TSS	Hardness, Total, Metals	Radium 226	HAZARDOUS ?	HIGHLY CONTAMINATED ?	NUMBER OF CONTAINERS
1	E Creek	Sept 6/07		Seawater	✓	✓	✓	✓			

GUIDELINES / REGULATIONS

SPECIAL INSTRUCTIONS / HAZARDOUS DETAILS

WATER is Hypersaline, for TSS measurement run 1-2 L distill through filters

Failure to complete all portions of this form may delay analysis. Please fill in this form *LEGIBLY*.

By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the reverse page of the white report c

RELINQUISHED BY:	DATE & TIME:	RECEIVED BY:	DATE & TIME:
Norm M.	Sept 7/07 pm	R	Sept 11/07 500L
RELINQUISHED BY:	DATE & TIME:	RECEIVED BY:	DATE & TIME:
L Fowler	Sept 12/07 1200L		Sept 13-14

SAMPLE CONDITION (lab use only)	
TEMPERATURE	SAMPLES RECEIVED IN GOOD CONDITION (If no provide details)
14 °C	

REFER TO BACK PAGE FOR REGIONAL LOCATIONS AND SAMPLING INFORMATION

WHITE - REPORT COPY, PINK - FILE COPY, YELLOW - CLIENT COPY

ANALYTICAL REPORT

TECK COMINCO METALS LTD.

ATTN: BRUCE DONALD

Reported On: 19-OCT-07 01:52 PM

BAG 2000

KIMBERLEY BC V1A 3E1

Lab Work Order #: **L554645** **Date Received:** **17-SEP-07**

Project P.O. #:
Job Reference: POLARIS
Legal Site Desc:
CofC Numbers: 61192

Other Information:

Comments:

Joyce Chow
General Manager, Vancouver

For any questions about this report please contact your Account Manager:

Andre Langlais

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID	L554645-1				
	Description					
	Sampled Date					
	Sampled Time					
	Client ID	GARROW CREEK				
Grouping	**Analyte**					
SEAWATER						
Physical Tests	Hardness (as CaCO3) (mg/L)	1800				
Total Metals	Aluminum (Al)-Total (mg/L)	<0.050				
	Arsenic (As)-Total (mg/L)	<0.00020				
	Cadmium (Cd)-Total (mg/L)	0.000299				
	Calcium (Ca)-Total (mg/L)	165				
	Copper (Cu)-Total (mg/L)	0.00111				
	Iron (Fe)-Total (mg/L)	0.021				
	Lead (Pb)-Total (mg/L)	0.000480				
	Magnesium (Mg)-Total (mg/L)	337				
	Manganese (Mn)-Total (mg/L)	0.0141				
	Molybdenum (Mo)-Total (mg/L)	0.0048				
	Nickel (Ni)-Total (mg/L)	0.00815				
	Zinc (Zn)-Total (mg/L)	0.0344				

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID	L554645-1				
	Description					
	Sampled Date					
	Sampled Time					
	Client ID	GARROW CREEK				
Grouping	**Analyte**					
WATER						
Physical Tests	Salinity (EC) (g/L)	8.0				
	Conductivity (uS/cm)	13500				
	pH (pH)	7.93				
	Total Suspended Solids (mg/L)	<3.0				
Anions and Nutrients	Alkalinity, Total (as CaCO3) (mg/L)	146				
	Nitrate (as N) (mg/L)	<0.10				
Cyanides	Cyanide, Total (mg/L)	<0.0050				
Total Metals	Mercury (Hg)-Total (mg/L)	0.000034				
Radiological Parameters	Radium-226 (Bq/L)	<0.005				

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
ALK-COL-VA	Water	Alkalinity by Colourimetric (Automated)	APHA 310.2

This analysis is carried out using procedures adapted from EPA Method 310.2 "Alkalinity". Total Alkalinity is determined using the methyl orange colourimetric method.

ANIONS-NO3-IC-VA	Water	Nitrate by Ion Chromatography	APHA 4110 "Determination of Anions by IC

This analysis is carried out using procedures adapted from APHA Method 4110 "Determination of Anions by Ion Chromatography" and EPA Method 300.0 "Determination of Inorganic Anions by Ion Chromatography". Anions routinely determined by this method include: bromide, chloride, fluoride, nitrate, nitrite and sulphate.

AS-TOT-C-HVAAS-VA	Seawater	Total Arsenic in Seawater by HVAAS	PUGET SOUND PROTOCOLS, EPA 7000 SERIES

This analysis is carried out using procedures adapted from "Recommended Guidelines for Measuring Metals in Puget Sound Marine Water, Sediment, and Tissue Samples" prepared for the United States Environmental Protection Agency and the Puget Sound Water Quality Authority, 1995. The procedures may involve preliminary sample treatment by acid digestion or filtration (EPA Method 3005A). Instrumental analysis of the seawater is by atomic absorption/emission spectrophotometry (EPA Method 7000 series).

CN-T-MID-HH-COL-VA	Water	Total Cyanide by HH Distillation	APHA 4500-CN "Cyanide"

This analysis is carried out using procedures adapted from APHA Method 4500-CN "Cyanide". Total or strong acid dissociable (SAD) cyanide are determined by sample distillation and analysis using the chloramine-T colourimetric method.

EC-PCT-VA	Water	Conductivity (Automated)	APHA 2510 Auto. Conduc.

This analysis is carried out using procedures adapted from APHA Method 2510 "Conductivity". Conductivity is determined using a conductivity electrode.

HARDNESS-CALC-VA	Seawater	Hardness	APHA 2340B

Hardness is calculated from Calcium and Magnesium concentrations, and is expressed as calcium carbonate equivalents.

HG-TOT-LOW-CVAFS-VA	Water	Total Mercury in Water by CVAFS(Low)	EPA 245.7

This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).

MET-TOT-C-ICP-VA	Seawater	Total Metals in Seawater by ICPOES	PUGET SOUND PROTOCOLS, EPA 6010B

This analysis is carried out using procedures adapted from "Recommended Guidelines for Measuring Metals in Puget Sound Marine Water, Sediment, and Tissue Samples" prepared for the United States Environmental Protection Agency and the Puget Sound Water Quality Authority, 1995. The procedures may involve preliminary sample treatment by acid digestion or filtration (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).

MET-TOT-C-LOW-MS-VA	Seawater	Total Metals in Seawater by ICPMS	PUGET SOUND PROTOCOLS, EPA 6020A

This analysis is carried out using procedures adapted from "Recommended Guidelines for Measuring Metals in Puget Sound Marine Water, Sediment, and Tissue Samples" prepared for the United States Environmental Protection Agency and the Puget Sound Water Quality Authority, 1995. The procedures may involve preliminary sample treatment by acid digestion or filtration (EPA Method 3005A). Instrumental analysis is by atomic inductively coupled plasma - mass spectrometry (EPA Method 6020A).

MET-TOT-SPE-MS-VA	Seawater	Total Metals in Seawater by SPE ICPMS	PUGET SOUND PROTOCOLS, EPA 6020A

This analysis is carried out using procedures adapted from "Recommended Guidelines for Measuring Metals in Puget Sound Marine Water, Sediment, and Tissue Samples" prepared for the United States Environmental Protection Agency and the Puget Sound Water Quality Authority, 1995, and with procedures adapted from Cetac Technologies Incorporated. A suspended particulate resin (SPR), consisting of immobilized iminodiacetate (IDA) on a divinylbenzene polymer, is used to chelate and preconcentrate metals in seawater. Instrumental analysis is by inductively coupled plasma mass spectrometry (ICPMS).

PH-PCT-VA	Water	pH by Meter (Automated)	APHA 4500-H "pH Value"

This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
RADIO-RADIUM226-SR	Water	Radium 226	CANMET 1986
SALINITY-EC-VA	Water	Salinity by calculation using EC	APHA 2520 B

This analysis is carried out using procedures adapted from APHA Method 2520 "Salinity". Salinity is determined using a samples conductivity and the Practical Salinity Scale.

TSS-VA	Water	Solids by Gravimetric	APHA 2540 Gravimetric

This analysis is carried out using procedures adapted from APHA Method 2540 "Solids". Solids are determined gravimetrically. Total suspended solids (TSS) are determined by filtering a sample through a glass fibre filter, TSS is determined by drying the filter at 104 degrees celsius.

** Laboratory Methods employed follow in-house procedures, which are generally based on nationally or internationally accepted methodologies.
The last two letters of the above ALS Test Code column indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
SR	Saskatchewan Research Council - Saskatoon, Saskatchewan, Can	VA	ALS LABORATORY GROUP - VANCOUVER, BC, CANADA

GLOSSARY OF REPORT TERMS
Surr - A surrogate is an organic compound that is similar to the target analyte(s) in chemical composition and behavior but not normally detected in enviromental samples. Prior to sample processing, samples are fortified with one or more surrogate compounds.
The reported surrogate recovery value provides a measure of method efficiency.
mg/kg (units) - unit of concentration based on mass, parts per million
mg/L (units) - unit of concentration based on volume, parts per million
N/A - Result not available. Refer to qualifier code and definition for explanation

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Although test results are generated under strict QA/QC protocols, any unsigned test reports, faxes, or emails are considered preliminary.

ALS Laboratory Group has an extensive QA/QC program where all analytical data reported is analyzed using approved referenced procedures followed by checks and reviews by senior managers and quality assurance personnel. However, since the results are obtained from chemical measurements and thus cannot be guaranteed, ALS Laboratory Group assumes no liability for the use or interpretation of the results.

SRC Group # 2007-7086

SRC ANALYTICAL

Oct 04, 2007

422 Downey Road
Saskatoon, Saskatchewan, Canada
S7N 4N1
(306) 933-6932 or 1-800-240-8808
Fax: (306) 933-7922

ALS
Aurora Laboratory Services Ltd.
1988 Triumph Street
Vancouver, British Columbia V5L 1K5

Sample # **32756**
Date Sampled:
Sample Matrix: **WATER**
Description: **L554645-1 GARROW CREEK**

Client PO #: **LW12503**
Date Received: **Sep 20, 2007**

Analyte	Units	Result	DL	Date Entered
Radio Chemistry				
Radium-226	Bq/L	<0.005	0.005	Oct 04, 2007

"<": not detected at level stated above.

ALS Environmental
www.alsenviro.com
excellence in analytical testing

Vancouver, BC 1988 Triumph Street V5L 1K5 Tel: 604-253-4188 Toll Free: 1-800-665-0243 Fax: 604-253-6700
Fort St. John, BC #2 - 8820 100th Street V1J 3W9 Tel: 250-785-8281 Fax: 250-785-8286
Calgary, AB #2 - 21 Highfield Circle SE T2G 5N6 Tel: 403-214-5431 Toll Free: 1-866-722-6231 Fax: 403-214-5430
Burlington, ON 5420 Mainway Drive, Unit 5 L7L 6A4 Tel: 905-331-3111 Toll Free: 1-888-257-3684 Fax: 905-331-4567

L 5549645

61192

CHAIN OF CUSTODY FORM

PAGE 1 OF 1

SEND REPORT TO:

CLIENT: Teck Cominco ATTN: Bruce Donald
ADDRESS: Bag 2000
CITY: Kimberly PROV.: BC POSTAL CODE: V1A 3E1
TELEPHONE: 250-427-8405 FAX: 250-427-8451 SAMPLER: Norm McPhee
PROJECT NAME & NO.: Polaris QUOTE NO.:
PO NO.: ALS CONTACT:
REPORT FORMAT: ☒ HARDCOPY ☒ EMAIL - ADDRESS: brucedonald@teckcominco.com
☐ FAX ☒ EXCEL ☒ PDF ☐ OTHER:

ANALYSIS REQUESTED:

	SAMPLE IDENTIFICATION	DATE / TIME COLLECTED YYYY-MM-DD	TIME	MATRIX	TSS, pH, Saturity, alkalinity, hardness, nitrates	Total metals	Radium 226	Cyanide	NOTES (sample specific comments, due dates, etc.)
FOR LAB USE ONLY	Gatrow Creek Gen			Sea water	X				
	" " metals					X			
	" " Rad						X		
	" " Cyan			↓				X	

TURN AROUND REQUIRED: ☒ ROUTINE ☐ RUSH - SPECIFY DATE: (surcharge may apply)

SEND INVOICE TO: ☒ SAME AS REPORT INVOICE FORMAT: ☐ HARDCOPY ☐ PDF ☐ FAX
☐ DIFFERENT FROM REPORT (provide details below)

SPECIAL INSTRUCTIONS:

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
Norm McPhee	Sept 13/07	11 AM	R Fournier	Sept 17/07	0900h
R. Fournier	Sept 19/07	11 00h	AG	Sept 19/07	9:40

FOR LAB USE ONLY

COOLER SEAL INTACT? ☐ YES ☒ NO ☐ N/A
SAMPLE TEMPERATURE: 9 °C FROZEN? ☐ YES ☒ NO
COOLING METHOD? ☒ ICEPACKS ☐ ICE ☐ NONE

SEE WHITEPAPER FOR SOURCE VERSIONR 08

ALS COPY

Appendix C

Acute Toxicity Test Reports

ANALYTICAL REPORT

CASH CLIENTS - WINNIPEG

ATTN: BRUCE DONALD

Reported On: 15-AUG-07 05:27 PM

TECK COMINCO METALS LTD
BAG 2000
KIMBERLY BC V1A 3E1

Lab Work Order #: L538253 **Date Received:** 02-AUG-07

Project P.O. #:
Job Reference: RESOLUTE - NUNAVUT
Legal Site Desc:
CofC Numbers:

Other Information:

Comments:

APPROVED BY: B. Glowacka

BOZENA GLOWACKA
Project Manager

Manitoba Technology Centre Ltd.
Part of the **ALS Laboratory Group**
1329 Niakwa Road East, Unit 12, Winnipeg, MB R2J 3T4
Phone: +1 204 255 9720 Fax: +1 204 255 9721 www.alsglobal.com
A Campbell Brothers Limited Company

ALS LABORATORY GROUP ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	By	Batch
L538253-1 G CREEK (TROUT P/F) Sampled By: not specified on 26-JUL-07 @ 13:00 Matrix: SEA WATER								
Trout Bioassay - Pass/Fail	See Attached				31-JUL-07	02-AUG-07	NAV	R560644
L538253-2 G CREEK (DAPHNIA P/F) Sampled By: not specified on 26-JUL-07 @ 13:00 Matrix: SEA WATER								
Daphnia Magna - Pass/Fail	See Attached				01-AUG-07	03-AUG-07	NAV	R560534

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Preparation Method Reference(Based On)	Analytical Method Reference(Based On)
TROUT-P/F-WP	Water	Trout Bioassay Pass/Fail		EPS/1/RM/9+13

** Laboratory Methods employed follow in-house procedures, which are generally based on nationally or internationally accepted methodologies.

Chain of Custody numbers:

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
WP	ALS LABORATORY GROUP - WINNIPEG, MANITOBA, CANADA		

GLOSSARY OF REPORT TERMS
Surr - A surrogate is an organic compound that is similar to the target analyte(s) in chemical composition and behavior but not normally detected in environmental samples. Prior to sample processing, samples are fortified with one or more surrogate compounds.
The reported surrogate recovery value provides a measure of method efficiency. The Laboratory control limits are determined under column heading D.L.
mg/kg (units) - unit of concentration based on mass, parts per million.
mg/L (units) - unit of concentration based on volume, parts per million.
< - Less than.
D.L. - The reporting limit.
N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
UNLESS OTHERWISE STATED, SAMPLES ARE NOT CORRECTED FOR CLIENT FIELD BLANKS.
Although test results are generated under strict QA/QC protocols, any unsigned test reports, faxes, or emails are considered preliminary.

ALS Laboratory Group has an extensive QA/QC program where all analytical data reported is analyzed using approved referenced procedures followed by checks and reviews by senior managers and quality assurance personnel. However, since the results are obtained from chemical measurements and thus cannot be guaranteed, ALS Laboratory Group assumes no liability for the use or interpretation of the results.

ALS Laboratory Group

CHAIN OF CUSTODY / ANALYTICAL REQUEST FORM

Environmental Division

L533253

REPORT TO:	REPORT FORMAT / DISTRIBUTION		SERVICE REQUESTED
COMPANY: [illegible]	STANDARD	OTHER	✓ REGULAR SERVICE (DEFAULT)
CONTACT: [illegible]	PDF	EXCEL / CUSTOM	FAX	RUSH SERVICE (2-3 DAYS)
ADDRESS: [illegible]	EMAIL 1:		PRIORITY SERVICE (1 DAY or ASAP)
[illegible]	EMAIL 2:		EMERGENCY SERVICE (<1 DAY / WEEKEND) - CONTACT ALS
PHONE: [illegible] FAX: [illegible]	[illegible]		ANALYSIS REQUEST
INVOICE TO: SAME AS REPORT ? (YES) NO	INDICATE BOTTLES: FILTERED / PRESERVED (F/P)		
COMPANY:	CLIENT / PROJECT INFORMATION:		
CONTACT:	JOB #:		
ADDRESS:	PO / AFE:		
	Legal Site Description:		
PHONE: FAX:	QUOTE #:		

SAMPLE IDENTIFICATION (This description will appear on the report)	DATE	TIME	SAMPLE TYPE	Acute Toxicity	[illegible]	L538843	HAZARDOUS ?	HIGHLY CONTAMINATED ?	NUMBER OF CONTAINERS
Creek	[illegible]/07	[illegible]	[illegible]						
shipping charge	$177.04								
Samples picked up									
[illegible] @ 11:00									
[illegible]									
[illegible]									

GUIDELINES / REGULATIONS

SPECIAL INSTRUCTIONS / HAZARDOUS DETAILS

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.

By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

RELINQUISHED BY:	DATE & TIME:	RECEIVED BY:	DATE & TIME:	TEMPERATURE	SAMPLE CONDITION
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
RELINQUISHED BY:	DATE & TIME:	RECEIVED BY:	DATE & TIME:		

REFER TO BACK PAGE FOR REGIONAL LOCATIONS AND SAMPLING INFORMATION   WHITE - REPORT COPY. PINK - FILE COPY. YELLOW - CLIENT COPY

Rainbow Trout Bioassay Test Report – Pass/Fail

Sample Number: L538253-1

Summary Results

96-hour Pass/Fail:	PASS

Sample Information

Sample Origin:	Teck Cominco Metals Ltd.
Sample Description:	G Creek
Sampling Date and Time:	26-Jul-07 13:00
Sampling Method:	Grab
Sampled By:	N/A
Container(s) Description:	3 x 10 L Plastic Carbouys
Sample Volume (L):	20 (Not full)
Date and Time Received:	31-Jul-07 19:00
Transit Irregularities:	None
Storage Temperature (°C):	14

Test Information

Test Organism:	Oncorhynchus mykiss
Test Description:	Acute, 96-hour, Static, LC50
Reference Method:	EPS1/RM/13, 2nd Ed. Dec. 2000, Environment Canada
Performed By:	JA/AG
Starting Date & Time:	31-Jul-07 22:15
Deviations from Reference Method:	The final parameters for dissolved oxygen and pH were not performed.

ALS Environmental
1329 Niakwa Road East
Winnipeg, MB R2J 3T4
(204) 255-9720

Condition of Sample Upon Arrival

Observations:

Colour:	None
Odour:	None
Turbidity:	None
Solids:	None
Hardness (mg/L):	1.2 mL titration solution/ 10 mL sample x 1000 = 1200
Alkalinity (mg/L):	3.9 mL titration solution/ 10 mL sample x 1000 = 390
Temperature (°C):	13.8
Dissolved Oxygen (mg/L):	10.41
Conductivity at 25°C (umhos/cm):	6600
pH:	7.67
pH adjustment:	Not Adjusted
pH adjustment procedure:	N/A

Pre-Aeration

Aeration Rate (5.5 - 7.5 mL/min/L):	6.4 $\pm$ 0.6	
Aeration time (min):	30	
Sample Test Concentration (v/v):	100%	0%
Before Pre-Aeration Dissolved Oxygen (%):	108.1	89.1
After Pre-Aeration Dissolved Oxygen (%):	93.0	99.8

Test Organism Data

Lot Number:	5-Jul-07 T7
Weekly Mortality Preceding Test (%):	0
Sample Size:	10

Conditions Common to all Concentrations During Test

Source of Holding/Dilution Water:	Dechlorinated UV treated city of Winnipeg tap water
Container Description:	20L polyethylene pail with liner
Aeration Method:	Compressed air bubbled through silica-glass air diffuser
Aeration Rate (5.5 - 7.5 mL/min/L):	6.4 $\pm$ 0.6
Test Solution Volume (L):	20
Test Solution Depth (cm):	34
Number of Test Organisms/Container:	10
Loading Density (g/L):	0.21

Conditions During Test

Concentration (% v/v)	Temperature (°C)					Dissolved Oxygen (mg/L)					pH				
	0h	**24h**	**48h**	**72h**	**96h**	**0h**	**24h**	**48h**	**72h**	**96h**	**0h**	**24h**	**48h**	**72h**	**96h**
0	16	N/A	N/A	N/A	14	8.61	N/A	N/A	N/A	N/A	7.17	N/A	N/A	N/A	N/A
100	15	N/A	N/A	N/A	14	10.32	N/A	N/A	N/A	N/A	7.67	N/A	N/A	N/A	N/A

Concentration (% v/v)	Conductivity (umhos/cm)	Number of fish Dead				Number of fish Stressed			
	0h	**24h**	**48h**	**72h**	**96h**	**24h**	**48h**	**72h**	**96h**
0	171.8	0	N/A	N/A	0	0	N/A	N/A	0
100	6270	0	N/A	N/A	0	0	N/A	N/A	0

Control Fish Information at End of Test

Mean Fork Length (mm):	37.7
Lower Range Fork Length (mm):	34.9
Upper Range Fork Length (mm):	40.5
Mean Wet Weight (g):	0.43

Mortality and Stressed Behaviour Information

Concentration (% v/v)	Mean Number of fish at end of Test		Mean Rate of fish at end of Test (%)	
	Dead	**Stressed**	**Dead**	**Stressed**
0	0	0	0	0
100	0	0	0	0

Reference Toxicant

Toxicant:	Zinc Sulphate
Test Starting Date:	06-Jul-07
96-hour LC50 (mg/L Zinc):	0.43
95% Lower Confidence Interval (mg/L Zinc):	0.30
95% Upper Confidence Interval (mg/L Zinc):	0.56
Historic Geometric Mean LC50 (mg/L Zinc):	0.70
95% Lower Confidence Interval (mg/L Zinc):	0.03
95% Upper Confidence Interval (mg/L Zinc):	1.37
Method of Calculation:	Stephan LC50 Program, Probit
Confirmed by Graph:	Yes

Sublethal Biological Effects

No sublethal biological effects observed.

Observations/Comments

No toxicity observed.

Daphnia Magna Bioassay Test Report – Pass/Fail

Sample Number: L538253-2

Summary Results

48-hour Pass/Fail:	PASS

Sample Information

Sample Origin:	Teck Cominco Metals Ltd.
Sample Description:	G Creek
Sampling Date and Time:	26-Jul-07 13:00
Sampling Method:	Grab
Sampled By:	N/A
Container(s) Description:	3 x 10L Plastic Carbouys
Sample Volume (L):	20L (not full)
Date and Time Received:	31-Jul-07 19:00
Transit Irregularities:	None
Storage Temperature (°C):	N/A

Test Information

Test Organism:	Daphnia magna
Test Description:	Acute, 48-hour, Static, Pass/Fail
Reference Method:	EPS1/RM/14, 2nd Ed. Dec. 2000, Environment Canada
Performed By:	AG/JA
Starting Date & Time:	31-Jul-07 21:30
Deviations from Reference Method:	None

ALS Environmental
1329 Niakwa Road East
Winnipeg, MB R2J 3T4
(204) 255-9720

Condition of Effluent at 100% v/v Before Preparing Dilutions

Observations:

Colour:	None
Odour:	None
Turbidity:	None
Solids:	none
Temperature (°C):	13.8
Dissolved Oxygen (mg/L):	10.41
Conductivity (umhos/cm):	5600
pH:	7.67
pH Adjustment:	Not Adjusted
pH adjustment procedure:	N/A
Hardness (mg/L) Before Adjustment:	1.2 mL Titration solution/ 10 mL of Sample x 1000 = 1200
Hardness (mg/L) After Adjustment:	N/A mL Titration solution/ N/A of Sample x 1000 = N/A
Alkalinity (mg/L):	3.9 mL Titration solution/ 10 mL of Sample x 1000 = 390

Pre-Aeration

Aeration Rate (25-50 mL/min/L):	33.5 $\pm$ 0.2	
Aeration time (min):	30	
Sample Test Concentration (v/v):	100%	0%
Before Pre-Aeration Dissolved Oxygen (%):	108.1	93.2
AVERAGE After Pre-Aeration D.O. (%):	98.7	95.8

Test Organism Data

Average age of daphnia at first brood (days):	10
Average number of neonates per brood:	21
Weekly Mortality Preceding Test (%):	00
Date parents born:	27-Jun-07
Loading Density (organisms/20mL):	1
Age of Test organisms at beginning of test (hrs):	< 24

Conditions Common to All Concentrations During Test

Volume Tested:	200 mL (for control and 100%)
Duplicate solutions for control & 100%:	Yes
Neonates/Vessel:	10
Volume per Neonate:	20 mL
Test Solution Depth:	70 mm
Container Description:	Plastic Cups
Source of Holding/Dilution Water:	Reconstituted water

Conditions During Test

Concentration (% v/v)	Temperature (°C)			Dissolved Oxygen (mg/L)		pH		Conductivity (umhos/cm)	Hardness (mg/L)	Immobility (# of daphnids)		Mortality (# of daphnids)
	0h	24h	48h	0h	48h	0h	48h	0h	0h	24h	48h	48h
0	20	20	20	8.41	8.81	7.45	7.57	302	90	0	0	0
0	20	20	20	8.5	8.68	7.45	7.58	298	90	0	0	0
0	20	20	20	8.52	8.65	7.48	7.59	300	90	0	0	0
100	20	20	20	9.97	8.55	7.67	7.63	6470	1200	0	0	0
100	20	20	20	10.69	8.47	7.74	7.70	6490	1200	0	0	0
100	20	20	20	10.77	8.49	7.76	7.72	6540	1200	0	0	0

Mortality and Immobility Information

Concentration (% v/v)	Mean Number of Daphnids at end of Test		Mean Rate of Daphnids at end of Test (%)	
	Dead	Immobile	Dead	Immobile
0	0	0	0	0
100	0	0	0	0

Reference Toxicant Test Results

Reference Toxicant:	Sodium Chloride
Date ReferenceToxicant Test Initiated:	24-JUL-07
Recent 48-hr Reference Test LC50 (mg/L NaCl):	5941
Lower 95%Confidence Limit (mg/L NaCl):	5763
Upper 95% Confidence Limit (mg/L NaCl):	6135
Historic Geometric Mean LC50 (mg/L NaCl):	5317
Lower Warning Limit (- 2 values of S.D.):	4585
Upper Warning Limit (+ 2 values of S.D.):	6048
Method of Calculation:	Stephan LC50 Program, Probit
Confirmed by Graph:	Yes

Observations/Comments

No toxicity observed.

ALS Environmental
1329 Niakwa Road East
Winnipeg, MB R2J 3T4
(204) 255-9720

ANALYTICAL REPORT

TECK COMINCO METALS LTD.

ATTN: BRUCE DONALD

Reported On: 06-SEP-07 04:13 PM

BAG 2000

KIMBERLY BC V1A 3E1

Lab Work Order #: L546622 **Date Received:** 27-AUG-07

Project P.O. #:
Job Reference: TECK COMINCO - RESOLUTE BAY - NUNAVUT.
Legal Site Desc:
CofC Numbers:

Other Information:

Comments:

APPROVED BY:

BARB BAYER
Project Manager

Manitoba Technology Centre Ltd.
Part of the **ALS Laboratory Group**
1329 Niakwa Road East, Unit 12, Winnipeg, MB R2J 3T4
Phone: +1 204 255 9720 Fax: +1 204 255 9721 www.alsglobal.com
A Campbell Brothers Limited Company

ALS LABORATORY GROUP ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	By	Batch
L546622-1 G CREEK (TROUT LC50) Sampled By: NOT SPECIFIED on 23-AUG-07 @ 13:00 Matrix: SEAWATER								
Trout Bioassay LC50	See Attached				27-AUG-07	06-SEP-07	JCA	R570493
L546622-2 G CREEK (DAPHNIA LC50) Sampled By: NOT SPECIFIED on 23-AUG-07 @ 13:00 Matrix: SEAWATER								
Daphnia Magna - LC50	See Attached				27-AUG-07	06-SEP-07	JCA	R570496

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Preparation Method Reference(Based On)	Analytical Method Reference(Based On)
TROUT-LC50-WP	Water	Trout Bioassay LC50		EPS/1/RM/9+13

** Laboratory Methods employed follow in-house procedures, which are generally based on nationally or internationally accepted methodologies.

Chain of Custody numbers:

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
WP	ALS LABORATORY GROUP - WINNIPEG, MANITOBA, CANADA		

GLOSSARY OF REPORT TERMS
Surr - A surrogate is an organic compound that is similar to the target analyte(s) in chemical composition and behavior but not normally detected in environmental samples. Prior to sample processing, samples are fortified with one or more surrogate compounds.
The reported surrogate recovery value provides a measure of method efficiency. The Laboratory control limits are determined under column heading D.L.
mg/kg (units) - unit of concentration based on mass, parts per million.
mg/L (units) - unit of concentration based on volume, parts per million.
< - Less than.
D.L. - The reporting limit.
N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
UNLESS OTHERWISE STATED, SAMPLES ARE NOT CORRECTED FOR CLIENT FIELD BLANKS.
Although test results are generated under strict QA/QC protocols, any unsigned test reports, faxes, or emails are considered preliminary.

ALS Laboratory Group has an extensive QA/QC program where all analytical data reported is analyzed using approved referenced procedures followed by checks and reviews by senior managers and quality assurance personnel. However, since the results are obtained from chemical measurements and thus cannot be guaranteed, ALS Laboratory Group assumes no liability for the use or interpretation of the results.

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

CHAIN OF CUSTODY / ANALYTICAL REQUEST FORM

CANADA TOLL FREE 1-800-668-9878

www.alsenviro.com

COC # A038635

L546622

Page ___ of ___

REPORT TO:	
COMPANY:	Teck Cominco Metals Ltd
CONTACT:	Bruce Donald
ADDRESS:	Bag 2000 Kimberley BC V1A 3E1
PHONE: 250-427-8405	FAX: 250-427-8451

REPORT FORMAT / DISTRIBUTION	
STANDARD ✓	OTHER ✓
PDF ✓ EXCEL ✓ CUSTOM ___ FAX ___	
EMAIL 1:	bruce.donald@teckcominco.com
EMAIL 2:	alaudrum@gartnerlee.com

SERVICE REQUESTED	
✓	REGULAR SERVICE (DEFAULT)
	RUSH SERVICE (2-3 DAYS)
	PRIORITY SERVICE (1 DAY or ASAP)
	EMERGENCY SERVICE (<1 DAY / WEEKEND) - CONTACT ALS

INVOICE TO:	SAME AS REPORT ? (YES) / NO
COMPANY:	
CONTACT:	
ADDRESS:	
PHONE:	FAX:
Lab Work Order # (lab use only)	

INDICATE BOTTLES: FILTERED / PRESERVED (F/P) → → →

CLIENT / PROJECT INFORMATION:	
JOB #:	
PO /AFE:	
Legal Site Description:	
QUOTE #:	
SAMPLER (Initials):	

ANALYSIS REQUEST

Sample #	SAMPLE IDENTIFICATION (This description will appear on the report)	DATE	TIME	SAMPLE TYPE	Acute Toxicity	Trout - LC50	DAPHNIA LC50	40? [illegible]									HAZARDOUS ?	HIGHLY CONTAMINATED ?	NUMBER OF CONTAINERS
	G Creek	Aug 23/07	1:00pm	Seawater	X														

GUIDELINES / REGULATIONS

SPECIAL INSTRUCTIONS / HAZARDOUS DETAILS

Failure to complete all portions of this form may delay analysis. Please fill in this form *LEGIBLY*.

By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the reverse page of the white report copy.

RELINQUISHED BY:	DATE & TIME:	RECEIVED BY:	DATE & TIME:
Curtis Kidd	Aug 23/07 10am	[signature]	Aug 27/07
RELINQUISHED BY:	DATE & TIME:	RECEIVED BY:	DATE & TIME: 12:55

SAMPLE CONDITION (lab use only)	
TEMPERATURE	SAMPLES RECEIVED IN GOOD CONDITION ? YES / NO (If no provide details)

Rainbow Trout Bioassay Test Report – LC50

Sample Number: L546622-1

Summary Results

96-hour LC50 v/v (%):	>100
95% Lower Confidence Interval v/v (%):	N/A
95% Upper Confidence Interval v/v (%):	N/A
Method of Calculation:	N/A
Confirmed by Graph:	N/A

Sample Information

Sample Origin:	Teck Cominco Metals Ltd.
Sample Description:	G Creek
Sampling Date and Time:	23-Aug-07 13:00
Sampling Method:	Grab
Sampled By:	Not Provided
Container(s) Description:	2 x 20 L Plastic carbouys
Sample Volume (L):	40 L
Date and Time Received:	27-Aug-07 12:55
Transit Irregularities:	None
Storage Temperature (°C):	N/A

Test Information

Test Organism:	Oncorhynchus mykiss
Test Description:	Acute, 96-hour, Static, LC50
Reference Method:	EPS1/RM/13, 2nd Ed. Dec. 2000, Environment Canada
Performed By:	JA
Starting Date & Time:	27-Aug-07 17:30
Deviations from Reference Method:	None

ALS Environmental
1329 Niakwa Road East
Winnipeg, MB R2J 3T4
(204) 255-9720

Condition of Sample Upon Arrival

Observations:

Colour:	None
Odour:	None
Turbidity:	None
Solids:	None
Hardness (mg/L):	1.9 mL titration solution/ 1.0 mL sample x 1000 = 1900
Alkalinity (mg/L):	1.2 mL titration solution/ 10 mL sample x 1000 = 120
Temperature (°C):	7.0
Dissolved Oxygen (mg/L):	12.19
Conductivity at 25°C (umhos/cm):	11550
pH (6.0-8.5):	7.77
pH adjustment:	Not Adjusted
pH adjustment procedure:	N/A

Pre-Aeration

Aeration Rate (5.5-7.5 mL/min/L):	6.40 ± 0.6	
Aeration time (min):	90	
Sample Test Concentration (v/v):	100%	0%
Before Pre-Aeration Dissolved Oxygen (%):	111.7	N/A
After Pre-Aeration Dissolved Oxygen (70-100%):	104.7	95.3

Test Organism Data

Lot Number:	05-July-07 – T4
Weekly Mortality Preceding Test (%):	0
Sample size:	10

Conditions Common to all Concentrations During Test

Source of Holding/Dilution Water:	Dechlorinated UV treated city of Winnipeg tap water
Container Description:	20 L Polyethylene pail with liner
Aeration Method:	Compressed air bubbled through silica-glass air diffuser
Aeration Rate (5.5-7.5 mL/min/L):	6.40 ± 0.6
Test Solution Volume (L):	20 L
Test Solution Depth (cm):	34 cm
Number of Test Organisms/Container:	10
Loading Density (g/L):	0.35

Conditions During Test

Concentration (% v/v)	Temperature (°C) (15ºC ± 1ºC)					Dissolved Oxygen (mg/L)					pH				
	0h	**24h**	**48h**	**72h**	**96h**	**0h**	**24h**	**48h**	**72h**	**96h**	**0h**	**24h**	**48h**	**72h**	**96h**
0	16	N/A	N/A	N/A	14	9.22	N/A	N/A	N/A	8.49	7.22	N/A	N/A	N/A	7.19
6.25	16	N/A	N/A	N/A	14	9.54	N/A	N/A	N/A	9.16	7.36	N/A	N/A	N/A	7.43
12.5	16	N/A	N/A	N/A	14	9.67	N/A	N/A	N/A	9.07	7.41	N/A	N/A	N/A	7.44
25	16	N/A	N/A	N/A	14	9.98	N/A	N/A	N/A	9.38	7.54	N/A	N/A	N/A	7.57
50	16	N/A	N/A	N/A	14	10.16	N/A	N/A	N/A	8.99	7.64	N/A	N/A	N/A	7.58
100	16	N/A	N/A	N/A	14	10.20	N/A	N/A	N/A	9.34	7.77	N/A	N/A	N/A	7.71

Concentration (% v/v)	Conductivity (umhos/cm)	Number of fish Dead				Number of fish Stressed			
	0h	**24h**	**48h**	**72h**	**96h**	**24h**	**48h**	**72h**	**96h**
0	177.5	0	N/A	N/A	0	0	N/A	N/A	0
6.25	927	0	N/A	N/A	0	0	N/A	N/A	0
12.5	1843	0	N/A	N/A	0	0	N/A	N/A	0
25	3400	0	N/A	N/A	0	0	N/A	N/A	0
50	6370	0	N/A	N/A	0	0	N/A	N/A	0
100	11520	0	N/A	N/A	1	0	N/A	N/A	0

Control Fish Information at End of Test

Mean Fork Length (mm):	44
Lower Range Fork Length (mm):	41
Upper Range Fork Length (mm):	47
Mean Wet Weight (g):	0.70

Mortality and Stressed Behaviour Information

Concentration (% v/v)	Mean Number of fish at end of Test		Mean Rate of fish at end of Test (%)	
	Dead	**Stressed**	**Dead**	**Stressed**
0	0	0	0	0
6.25	0	0	0	0
12.5	0	0	0	0
25	0	0	0	0
50	0	0	0	0
100	1	0	10	0

Median Lethal Concentration Results for Multi-Concentration Tests

LC_{50}: >100%
LC_{50} Lower 95% Confidence Limit: N/A
LC_{50} Upper 95% Confidence Limit: N/A
Statistical Method: N/A

Note:
>100% =1 mortality
Non Lethal = 0 mortality

Reference Toxicant

Toxicant:	Zinc Sulphate
Test Starting Date:	24-Aug-07
96-hour LC50 (mg/L Zinc):	0.56
95% Lower Confidence Interval (mg/L Zinc):	0.43
95% Upper Confidence Interval (mg/L Zinc):	0.72
Historic Geometric Mean LC50 (mg/L Zinc):	0.70
95% Lower Confidence Interval (mg/L Zinc):	0.03
95% Upper Confidence Interval (mg/L Zinc):	1.37
Method of Calculation:	Stephan LC50 Program, Probit
Confirmed by Graph:	Yes

Sublethal Biological Effects

No sublethal biological effects observed.

Observations/Comments

No toxicity observed.

Daphnia Magna Bioassay Test Report – LC50

Sample Number: L546622-2

Summary Results

48-hour LC50:	67.43
95% Lower Confidence Interval v/v (%):	59.73
95% Upper Confidence Interval v/v (%):	76.13
Method of Calculation:	Spearman-Karber
Confirmed by Graph:	Yes

Sample Information

Sample Origin:	Teck Cominco Metals Ltd.
Sample Description:	G Creek
Sampling Date and Time:	23-Aug-07 13:00
Sampling Method:	Grab
Sampled By:	Not Provided
Container(s) Description:	2 x 20 L Plastic carbouys
Sample Volume:	40 L
Date and Time Received:	27-Aug-07 12:55
Transit Irregularities:	None
Storage Temperature (°C):	N/A

Test Information

Test Organism:	Daphnia magna
Test Description:	Acute, 48-hours, Static, LC50
Reference Method:	EPS1/RM/14, 2nd Ed. Dec. 2000, Environment Canada
Performed By:	JA
Starting Date & Time:	27-Aug-07 16:45
Deviations from Reference Method:	None

Condition of Effluent at 100% v/v Before Preparing Dilutions

Observations:

Colour:	None
Odour:	None
Turbidity:	None
Solids:	None
Temperature (°C):	7.0
Dissolved Oxygen (mg/L):	12.19
Conductivity (umhos/cm):	11550
pH:	7.77
pH Adjustment:	Not Adjusted
pH adjustment procedure:	N/A
Hardness (mg/L) Before Adjustment:	1.9 mL Titration solution/ 1.0 mL of Sample x 1000 = 1900
Hardness (mg/L) After Adjustment:	N/A mL Titration solution/ N/A mL of Sample x 1000 = N/A
Alkalinity (mg/L):	1.2 mL Titration solution/ 10 mL of Sample x 1000 = 120

Pre-Aeration

Aeration Rate (25-50 mL/min/L):	33.5 $\pm$ 0.2	
Aeration time (min):	30	
Sample Test Concentration (v/v):	100%	0%
Before Pre-Aeration Dissolved Oxygen (%):	111.7	N/A
AVERAGE After Pre-Aeration D.O. (%):	112.9	98.6

Test Organism Data

Average age of daphnia at first brood (days):	10
Average number of neonates per brood:	18
Weekly Mortality Preceding Test (%):	0
Date parents born:	27-Jun-07
Loading Density (organisms/20mL):	1
Age of Test organisms at beginning of test (hrs):	< 24

Conditions Common to All Concentrations During Test

Volume Tested:	200 mL (for control and 100%)
Duplicate solutions for control & 100%:	Yes
Neonates/Vessel:	10
Volume per Neonate:	20 mL
Test Solution Depth:	70 mm
Container Description:	Plastic cups
Source of Holding/Dilution Water:	Reconstituted water

Conditions During Test

Concentration (% v/v)	Temperature (°C)			Dissolved Oxygen (mg/L)		pH		Conductivity (umhos/cm)	Hardness (mg/L)	Immobility (# of daphnids)		Mortality (# of daphnids)
	0h	**24h**	**48h**	**0h**	**48h**	**0h**	**48h**	**0h**	**0h**	**24h**	**48h**	**48h**
0	20	20	20	8.85	8.62	7.70	7.57	291	82	0	1	0
0	20	20	20	8.90	8.65	7.72	7.66	291	82	0	0	0
12.5	20	20	20	8.98	8.67	7.78	7.73	1786	----	0	0	0
25	20	20	20	9.06	8.72	7.82	7.80	3310	----	0	0	0
50	20	20	20	9.31	8.72	7.83	7.83	6130	----	0	0	0
75	20	20	20	9.52	8.76	7.86	7.85	8880	----	0	8	7
100	20	20	20	10.16	8.75	7.81	7.88	11420	1900	5	10	10
100	20	20	20	10.22	8.74	7.84	7.91	11410	1900	3	10	10

Mortality and Immobility Information

Concentration (% v/v)	Mean Number of Daphnids at end of Test		Mean Rate of Daphnids at end of Test (%)	
	Dead	**Immobile**	**Dead**	**Immobile**
0	0	1	0	10
12.5	0	0	0	0
25	0	0	0	0
50	0	0	0	0
75	7	8	70	80
100	10	10	100	100

Median Lethal Concentration Results for Multi-Concentration Tests

LC_{50}:	67.43
LC_{50} Lower 95% Confidence Limit:	59.73
LC_{50} Upper 95% Confidence Limit:	76.13
EC_{50}:	64.80
EC_{50} Lower 95% Confidence Limit:	58.68
EC_{50} Upper 95% Confidence Limit:	71.56
Statistical Method:	Spearman-Karber

Note:
>100% =1 mortality
Non Lethal = 0 mortality

Reference Toxicant Test Results

Reference Toxicant:	Sodium Chloride
Date ReferenceToxicant Test Initiated:	23-Aug-07
Recent 48-hr Reference Test LC50 (mg/L NaCl):	5477
Lower 95%Confidence Limit (mg/L NaCl):	5319
Upper 95% Confidence Limit (mg/L NaCl):	5640
Historic Geometric Mean LC50 (mg/L NaCl):	5317
Lower Warning Limit (- 2 values of S.D.):	4585
Upper Warning Limit (+ 2 values of S.D.):	6048
Method of Calculation:	Stephan LC50 Program,Spearman-Karber
Confirmed by Graph:	Yes

Observations/Comments

Toxicity observed. There was 80% immobility and 70% mortality in the 75% concentration. There was 100% mortality observed in the 100% concentrations.

ALS Environmental
1329 Niakwa Road East
Winnipeg, MB R2J 3T4
(204) 255-9720

ANALYTICAL REPORT

TECK COMINCO METALS LTD.

ATTN: BRUCE DONALD

Reported On: 21-SEP-07 04:30 PM

BAG 2000

KIMBERLY BC V1A 3E1

Lab Work Order #: **L552912** **Date Received:** **11-SEP-07**

Project P.O. #:
Job Reference: TECK COMINCO - RESOLUTE BAY - NUNAVUT
Legal Site Desc:
CofC Numbers:

Other Information:

Comments:

APPROVED BY: Barb Bayer

BARB BAYER
Project Manager

Manitoba Technology Centre Ltd.
Part of the **ALS Laboratory Group**
1329 Niakwa Road East, Unit 12, Winnipeg, MB R2J 3T4
Phone: +1 204 255 9720 Fax: +1 204 255 9721 www.alsglobal.com
A Campbell Brothers Limited Company

ALS LABORATORY GROUP ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	By	Batch
L552912-1 G CREEK (TROUT LC50) Sampled By: CLIENT on 06-SEP-07 @ 10:00 Matrix: SEAWATER								
Trout Bioassay LC50	See Attached				11-SEP-07	21-SEP-07	JCA	R577338
L552912-2 G CREEK (DAPHNIA LC50) Sampled By: CLIENT on 06-SEP-07 @ 10:00 Matrix: SEAWATER								
Daphnia Magna - LC50	See Attached				11-SEP-07	21-SEP-07	JCA	R577480

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Preparation Method Reference(Based On)	Analytical Method Reference(Based On)
TROUT-LC50-WP	Water	Trout Bioassay LC50		EPS/1/RM/9+13

** Laboratory Methods employed follow in-house procedures, which are generally based on nationally or internationally accepted methodologies.

Chain of Custody numbers:

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
WP	ALS LABORATORY GROUP - WINNIPEG, MANITOBA, CANADA		

GLOSSARY OF REPORT TERMS
Surr - A surrogate is an organic compound that is similar to the target analyte(s) in chemical composition and behavior but not normally detected in environmental samples. Prior to sample processing, samples are fortified with one or more surrogate compounds.
The reported surrogate recovery value provides a measure of method efficiency. The Laboratory control limits are determined under column heading D.L.
mg/kg (units) - unit of concentration based on mass, parts per million.
mg/L (units) - unit of concentration based on volume, parts per million.
< - Less than.
D.L. - The reporting limit.
N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
UNLESS OTHERWISE STATED, SAMPLES ARE NOT CORRECTED FOR CLIENT FIELD BLANKS.
Although test results are generated under strict QA/QC protocols, any unsigned test reports, faxes, or emails are considered preliminary.

ALS Laboratory Group has an extensive QA/QC program where all analytical data reported is analyzed using approved referenced procedures followed by checks and reviews by senior managers and quality assurance personnel. However, since the results are obtained from chemical measurements and thus cannot be guaranteed, ALS Laboratory Group assumes no liability for the use or interpretation of the results.

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

12 - 1329 Niakwa Road East
Winnipeg, Manitoba, Canada R2J 3T4
Tel: (204) 255-9720
Fax (204) 255-9721
Toll Free: 1-800-607-7555

CHAIN OF CUSTODY ANALYTICAL REQUEST FORM

DATE SUBMITTED: _____ DATE REQUIRED: _____

SERVICE REQUESTED:
☐ REGULAR ☐ PRIORITY (50% SURCHARGE) ☐ EMERGENCY (100% SURCHARGE)

PRICING (CHECK ONE):
AS PER QUOTE #: _____ ☐
AS PER LIST PRICE: ☐

ANALYSIS REQUESTED:

LAB USE ONLY

SAMPLE ID	SAMPLED BY	DATE / TIME SAMPLED	SAMPLE TYPE	Mount LC50	Daphnia LC50	SAMPLE RECEIVED (Y OR N)	SAMPLE BROKEN (Y OR N)	LAB SAMPLE NO.
GC Creek (Mount LC50)		Sept 6/07 @ 10:00	Sea water	✓				1
GC Creek (Daphnia LC50)					✓			2
			PRESERVED / FILTERED					

L552912

NOTES & CONDITIONS:
1. Quote number must be provided to ensure proper pricing. W7010 1
2. All hazardous samples submitted must be labeled to comply with WHMIS regulations. This must include the nature of the hazard, as well as a contact name and phone number that the lab can contact for further information.
3. ALS's liability limited to cost of analysis.

NOTE: Failure to properly complete all portions of this form may delay analysis.

***NOTE:* Shaded areas MUST be completed in full by client for sample processing to occur.**

CLIENT: TECK COMINCO metals LTD
CONTACT: Bruce Donald
REPORT ADDRESS: BAG 2000
Kimberly BC V1A 3E1
BILLING ADDRESS:

NO. SAMPLES SUBMITTED: _____
NO. BOTTLES/SAMPLES: _____
PHONE: 250-427-8405
FAX: 250-427-8451
E-MAIL: YES ☐ NO ☐
E-MAIL ADDRESS: bruce.donald@teckcominco.com @laudrum@gartnerlee.com
P.O. NO.: _____
JOB NO.: TECK Comico - Resolute Bay Nunavut

RELINQUISHED BY:	DATE	RECEIVED BY:	DATE
	TIME	Jill Armand ALS LAB:	Sept 11/07 TIME 17:30
RELINQUISHED BY:	DATE	RECEIVED BY:	DATE
	TIME	ALS LAB:	TIME

SAMPLE CONDITION UPON RECEIPT: ☐ ACCEPTABLE ☐ NON ACCEPTABLE

FROZEN: _____ COLD: _____ AMBIENT: _____
OTHER (*BREAKAGE, LEAKAGE, ETC.*): _____

WHITE - File Copy
GREEN - Final Report
PINK - Invoicing
BLUE - Client Support
YELLOW - Customer

REV. OCT. / 2006

Rainbow Trout Bioassay Test Report – LC50

Sample Number: L552912-1

Summary Results

96-hour LC50 v/v (%):	>100
95% Lower Confidence Interval v/v (%):	N/A
95% Upper Confidence Interval v/v (%):	N/A
Method of Calculation:	N/A
Confirmed by Graph:	N/A

Sample Information

Sample Origin:	Teck Cominco Metals Ltd.
Sample Description:	G Creek
Sampling Date and Time:	06-Sept-07 10:00
Sampling Method:	Grab
Sampled By:	Not Provided
Container(s) Description:	2 x 20 L Carbouys
Sample Volume (L):	38 L
Date and Time Received:	11-Sept-07 17:30
Transit Irregularities:	None
Storage Temperature (°C):	N/A

Test Information

Test Organism:	Oncorhynchus mykiss
Test Description:	Acute, 96-hour, Static, LC50
Reference Method:	EPS1/RM/13, 2nd Ed. Dec. 2000, Environment Canada
Performed By:	JA
Starting Date & Time:	11-Sept-07 21:15
Deviations from Reference Method:	None

ALS Environmental
1329 Niakwa Road East
Winnipeg, MB R2J 3T4
(204) 255-9720

Condition of Sample Upon Arrival

Observations:

Colour:	None
Odour:	Low
Turbidity:	None
Solids:	None
Hardness (mg/L):	2.7 mL titration solution/ 1.0 mL sample x 1000 = 2700
Alkalinity (mg/L):	1.5 mL titration solution/ 10 mL sample x 1000 = 150
Temperature (°C):	7.8
Dissolved Oxygen (mg/L):	11.29
Conductivity at 25°C (umhos/cm):	12670
pH (6.0-8.5):	7.77
pH adjustment:	Not Adjusted
pH adjustment procedure:	N/A

Pre-Aeration

Aeration Rate (5.5-7.5 mL/min/L):	6.40 ± 0.6	
Aeration time (min):	120	
Sample Test Concentration (v/v):	100%	0%
Before Pre-Aeration Dissolved Oxygen (%):	125.8	94.4
After Pre-Aeration Dissolved Oxygen (70-100%):	105.7	91.7

Test Organism Data

Lot Number:	05-July-07 – T7
Weekly Mortality Preceding Test (%):	0
Sample size:	10

Conditions Common to all Concentrations During Test

Source of Holding/Dilution Water:	Dechlorinated UV treated city of Winnipeg tap water
Container Description:	20 L Polyethylene pail with liner
Aeration Method:	Compressed air bubbled through silica-glass air diffuser
Aeration Rate (5.5-7.5 mL/min/L):	6.40 ± 0.6
Test Solution Volume (L):	20 L
Test Solution Depth (cm):	34 cm
Number of Test Organisms/Container:	10
Loading Density (g/L):	0.48

Conditions During Test

Concentration (% v/v)	Temperature (°C) (15ºC ± 1ºC)					Dissolved Oxygen (mg/L)					pH				
	0h	**24h**	**48h**	**72h**	**96h**	**0h**	**24h**	**48h**	**72h**	**96h**	**0h**	**24h**	**48h**	**72h**	**96h**
0	15	N/A	N/A	N/A	14	8.89	N/A	N/A	N/A	8.82	7.19	N/A	N/A	N/A	7.54
6.25	15	N/A	N/A	N/A	14	9.59	N/A	N/A	N/A	9.32	7.43	N/A	N/A	N/A	7.70
12.5	15	N/A	N/A	N/A	14	9.39	N/A	N/A	N/A	9.25	7.35	N/A	N/A	N/A	7.51
25	15	N/A	N/A	N/A	14	9.58	N/A	N/A	N/A	9.09	7.41	N/A	N/A	N/A	7.59
50	15	N/A	N/A	N/A	14	9.92	N/A	N/A	N/A	9.24	7.60	N/A	N/A	N/A	7.74
100	15	N/A	N/A	N/A	14	10.56	N/A	N/A	N/A	9.09	7.76	N/A	N/A	N/A	7.78

Concentration (% v/v)	Conductivity (umhos/cm)	Number of fish Dead				Number of fish Stressed			
	0h	**24h**	**48h**	**72h**	**96h**	**24h**	**48h**	**72h**	**96h**
0	165.6	0	N/A	N/A	0	0	N/A	N/A	0
6.25	1059	0	N/A	N/A	1	0	N/A	N/A	0
12.5	1960	0	N/A	N/A	0	0	N/A	N/A	0
25	3730	0	N/A	N/A	0	0	N/A	N/A	0
50	7020	0	N/A	N/A	0	0	N/A	N/A	0
100	12320	0	N/A	N/A	0	0	N/A	N/A	0

Control Fish Information at End of Test

Mean Fork Length (mm):	47
Lower Range Fork Length (mm):	41
Upper Range Fork Length (mm):	54
Mean Wet Weight (g):	0.96

Mortality and Stressed Behaviour Information

Concentration (% v/v)	Mean Number of fish at end of Test		Mean Rate of fish at end of Test (%)	
	Dead	**Stressed**	**Dead**	**Stressed**
0	0	0	0	0
6.25	1	0	10	0
12.5	0	0	0	0
25	0	0	0	0
50	0	0	0	0
100	0	0	0	0

Median Lethal Concentration Results for Multi-Concentration Tests

LC_{50}: Non Lethal
LC_{50} Lower 95% Confidence Limit: N/A
LC_{50} Upper 95% Confidence Limit: N/A
Statistical Method: N/A

Note:
>100% =1 mortality
Non Lethal = 0 mortality

Reference Toxicant

Toxicant:	Zinc Sulphate
Test Starting Date:	24-Aug-07
96-hour LC50 (mg/L Zinc):	0.56
95% Lower Confidence Interval (mg/L Zinc):	0.43
95% Upper Confidence Interval (mg/L Zinc):	0.72
Historic Geometric Mean LC50 (mg/L Zinc):	0.70
95% Lower Confidence Interval (mg/L Zinc):	0.03
95% Upper Confidence Interval (mg/L Zinc):	1.37
Method of Calculation:	Stephan LC50 Program, Probit
Confirmed by Graph:	Yes

Sublethal Biological Effects

No sublethal biological effects observed.

Observations/Comments

No toxicity observed.

Daphnia Magna Bioassay Test Report – LC50

Sample Number: L552912-2

Summary Results

48-hour LC50:	86.6%
95% Lower Confidence Interval v/v (%):	N/A
95% Upper Confidence Interval v/v (%):	N/A
Method of Calculation:	Spearman-Karber
Confirmed by Graph:	Yes

Sample Information

Sample Origin:	Teck Cominco Metals Ltd.
Sample Description:	G Creek
Sampling Date and Time:	06-Sept-07 10:00
Sampling Method:	Grab
Sampled By:	Not Provided
Container(s) Description:	2 x 20 L Carbouys
Sample Volume:	40 L
Date and Time Received:	11-Sept-07 17:30
Transit Irregularities:	None
Storage Temperature (°C):	N/A

Test Information

Test Organism:	Daphnia magna
Test Description:	Acute, 48-hours, Static, LC50
Reference Method:	EPS1/RM/14, 2nd Ed. Dec. 2000, Environment Canada
Performed By:	JA
Starting Date & Time:	11-Sept-07 20:00
Deviations from Reference Method:	None

Condition of Effluent at 100% v/v Before Preparing Dilutions

Observations:

Colour:	None
Odour:	Low
Turbidity:	None
Solids:	None
Temperature (°C):	7.8
Dissolved Oxygen (mg/L):	11.29
Conductivity (umhos/cm):	12670
pH:	7.71
pH Adjustment:	Not Adjusted
pH adjustment procedure:	N/A
Hardness (mg/L) Before Adjustment:	2.7 mL Titration solution/ 1.0 mL of Sample x 1000 = 2700
Hardness (mg/L) After Adjustment:	N/A mL Titration solution/ N/A mL of Sample x 1000 = N/A
Alkalinity (mg/L):	1.5 mL Titration solution/ 10 mL of Sample x 1000 = 150

Pre-Aeration

Aeration Rate (25-50 mL/min/L):	33.5 $\pm$ 0.2	
Aeration time (min):	30	
Sample Test Concentration (v/v):	100%	0%
Before Pre-Aeration Dissolved Oxygen (%):	125.8	94.4
AVERAGE After Pre-Aeration D.O. (%):	117.5	96.0

Test Organism Data

Average age of daphnia at first brood (days):	12
Average number of neonates per brood:	15
Weekly Mortality Preceding Test (%):	0
Date parents born:	18-July-07
Loading Density (organisms/20mL):	1
Age of Test organisms at beginning of test (hrs):	< 24

Conditions Common to All Concentrations During Test

Volume Tested:	200 mL (for control and 100%)
Duplicate solutions for control & 100%:	Yes
Neonates/Vessel:	10
Volume per Neonate:	20 mL
Test Solution Depth:	70 mm
Container Description:	Plastic cups
Source of Holding/Dilution Water:	Reconstituted water

Conditions During Test

Concentration (% v/v)	Temperature (°C)			Dissolved Oxygen (mg/L)		pH		Conductivity (umhos/cm)	Hardness (mg/L)	Immobility (# of daphnids)		Mortality (# of daphnids)
	0h	**24h**	**48h**	**0h**	**48h**	**0h**	**48h**	**0h**	**0h**	**24h**	**48h**	**48h**
0	20	20	20	8.69	8.74	7.63	7.87	303	84	0	0	0
0	20	20	20	8.76	8.83	7.65	7.85	304	84	0	0	0
12.5	20	20	20	8.93	8.86	7.77	7.86	1940	----	0	0	0
25	20	20	20	9.07	8.91	7.80	7.90	3650	----	0	0	0
50	20	20	20	9.38	8.93	7.81	7.93	6780	----	0	0	0
75	20	20	20	9.58	8.95	7.79	7.91	9830	----	7	8	0
100	20	20	20	10.67	9.02	7.75	7.93	12580	54	9	10	10
100	20	20	20	10.69	9.05	7.78	7.93	12630	54	10	10	10

Mortality and Immobility Information

Concentration (% v/v)	Mean Number of Daphnids at end of Test		Mean Rate of Daphnids at end of Test (%)	
	Dead	**Immobile**	**Dead**	**Immobile**
0	0	0	0	0
12.5	0	0	0	0
25	0	0	0	0
50	0	0	0	0
75	0	8	0	80
100	10	10	100	100

ALS Environmental
1329 Niakwa Road East
Winnipeg, MB R2J 3T4
(204) 255-9720

Median Lethal Concentration Results for Multi-Concentration Tests

LC_{50}:	86.6%
LC_{50} Lower 95% Confidence Limit:	N/A
LC_{50} Upper 95% Confidence Limit:	N/A
EC_{50}:	N/A
EC_{50} Lower 95% Confidence Limit:	N/A
EC_{50} Upper 95% Confidence Limit:	N/A
Statistical Method:	Spearman-Karber

Note:
>100% =1 mortality
Non Lethal = 0 mortality

Reference Toxicant Test Results

Reference Toxicant:	Sodium Chloride
Date ReferenceToxicant Test Initiated:	13-Sept-07
Recent 48-hr Reference Test LC50 (mg/L NaCl):	5681
Lower 95%Confidence Limit (mg/L NaCl):	5262
Upper 95% Confidence Limit (mg/L NaCl):	6201
Historic Geometric Mean LC50 (mg/L NaCl):	5317
Lower Warning Limit (- 2 values of S.D.):	4585
Upper Warning Limit (+ 2 values of S.D.):	6048
Method of Calculation:	Stephan LC50 Program, Probit
Confirmed by Graph:	Yes

Observations/Comments

Toxicity observed. 100% mortality in 100% concentrations.

ALS Environmental
1329 Niakwa Road East
Winnipeg, MB R2J 3T4
(204) 255-9720