Bruce J. Donald
Reclamation Manager

August 8, 2005

Prairie & Northern Region
Environment Canada
Room 200, 4999 98th Ave.
Edmonton, AB T6B 2X3

Attention: Peter Blackall, Regional Director of Environmental Protection

Dear Sir;

Re: Polaris Mine – 2005 2nd Quarter Metal Mining Effluent Regulations Report

Please find attached the Metal Mining Effluent Report for the Polaris Mine for the 2nd Quarter of 2005. Flow initiated at the end of June (approximately June 25th, 2005), thus only one sample was collected during the 2nd quarter. This first MMER routine monitoring sample was collected on Wednesday June 29, 2005. All MMER routine parameters, plus additional EEM water quality parameters were analyzed on this sample. However, only the final discharge point (i.e., Garrow Creek station) was accessible at this time due to ice conditions in Garrow Bay precluding sample collection from the receiving and reference stations. An oversight by the ALS lab resulted in mercury, nitrate, and alkalinity analysis being conducted slightly after the holding times. A written explanation of this oversight is attached as APPENDIX E. Concentrations of all deleterious substances were well within Schedule 4 limits.

While a toxicity program (acute and sublethal) was considered for this event, EVS and Stantec laboratories were not able to accommodate sample receiving or testing at this time, due to the statutory holiday (i.e., Friday July 1, 2005). Toxicity sample shipment to meet holding times would also have been problematic due to the holiday. Thus, toxicity testing was attempted at the earliest possible timing, which was in July, and will be discussed in the 3rd quarter report.

2005 2nd quarter MMER regulatory data has been submitted electronically through the online RISS system, on August 8, 2005. I will forward a paper copy of this report by mail. Please contact me if there are any questions related to enclosed information.

Yours truly,
Original signed by B Donald

Bruce Donald

Attachments: 2nd Quarterly Monitoring Report

cc:

Walter Kuit (Teck Cominco Limited)
Randy Baker (Azimuth Consulting Group)
Cheryl Mackintosh (Azimuth Consulting Group)

POLARIS MINE – MMER MONITORING REPORT

2nd QUARTER 2005

APPENDIX A (96-hour Rainbow Trout Toxicity Test)

i. Information specified by Section 8.1 of Reference Method EPS 1/Rm/13: 96 hr acute rainbow trout test

APPENDIX B (72-hour Daphnia Magna Toxicity Test)

i. Information specified by Section 8.1 of Reference Method EPS 1/Rm/14: 72 hr acute *Daphnia magna* test

APPENDIX C (Mass Loadings)

i. Concentration & monthly mean concentrations of each deleterious substance of Schedule 4
ii. pH of the effluents samples as required by subsection 12(1)
iii. Description of sample collection method
iv. Total volume of effluent deposited during each month of the quarter as per section 19
v. Mass loading of the deleterious substances set out in Schedule 4 and as per section 20

APPENDIX D (Effluent Characterization Results)

i. Results of the effluent characterization as per paragraph 4(1) of Schedule 5

APPENDIX E (Letter regarding monthly parameter holding times)

i. Letter from ALS Environmental

APPENDIX A

96-h Acute Rainbow Trout Toxicity Test

Reporting Requirements for Reference Method EPS 1/RM/13

Section 8.1.1 Effluent

i. Name & location of operation generating the effluent
   - Polaris Mine, Little Cornwallis Island, Nunavut
   - Final Discharge Point for Garrow Lake is geo referenced as 75° 22' 32" N, 97° 48' 37" W.

ii. Date & time of sampling
   - No sampling conducted as effluent discharge began in the final days of June, and the EVS laboratory could not accommodate testing due to the July 1 statutory holiday. The statutory holiday also precluded sample shipment within toxicity testing holding times. Testing was conducted at the next possible time, which was July and will be discussed in the 3rd quarter report.

iii. Type of sample
   - No toxicity sampling conducted, see ii.

iv. Brief description of sampling point
   - Discharge point of siphon at Garrow Lake dam

v. Sampling method
   - No toxicity sampling conducted, see ii.

vi. Name of person submitting samples
   - No toxicity sampling conducted, see ii.

Section 8.1.2 Test Facilities and Conditions

i. Test type & method
   - No testing conducted during the quarter

ii. Indications of deviations from requirements in Sections 2 to 7 of Method EPS 1/RM/13
   - No deviations to report as there was no testing conducted during the quarter

iii. Name and city of testing laboratory
   - No laboratory used during the quarter

iv. Percent mortality of fish in stock tank(s)
   - None to report. There were no tests conducted during the period

v. Species of test organism
   - None to report as there were no tests conducted during the period

vi. Date and time for start of definitive test
   - None to report as there were no tests conducted during the period

vii. Person(s) performing the test and verifying the results
   - No tests performed during the quarter

viii. pH, temperature, dissolved oxygen, and conductivity of unadjusted, undiluted effluent
   - No data to report as there were no tests conducted during the period

ix. Confirmation that no adjustment of sample or solution pH occurred
   - No adjustment to report as there were no tests conducted during the period

x. Indication of aeration of test solutions before introduction of fish
   - None to report as there were no tests conducted during the period

xi. Concentrations and volumes tested
   - No data to report as there were no tests conducted during the period

xii. Measurements of dissolved oxygen, pH and temperature
   - No data to report as there were no tests conducted during the period

xiii. Number of fish added to each test vessel
   - No fish added as there were no tests conducted during the period

xiv. Mean and range of fork length of control fish at end of test
   - No data to report as there were no tests conducted during the period

xv. Mean wet weight of individual control fish at end of the test
   - No data to report as there were no tests conducted during the period

Reporting Requirements for Reference Method EPS 1/RM/13

xvi. Estimated loading density of fish in test solutions
- No data to report as there were no tests conducted during the period

Section 8.1.3 Results

i. Number of mortalities of fish in each test solution
- None to report. No tests conducted during the period

ii. Number of control fish showing atypical/stressed behaviour
- None to report. No tests conducted.

iii. Mean mortality rate in solutions of effluent and control water
- None to report. No tests conducted

iv. Estimate of 96-h LC50 in multi-concentration tests
- No data to report. No tests conducted

v. Most recent 96-h LC50 for reference toxicity test(s)
- No data to report. No tests conducted

APPENDIX B

72-h Acute *Daphnia magna* Toxicity Test

Reporting Requirements for Reference Method EPA/600/4-91/003 Method 1009.0

Section 8.1.1 Effluent

i. Name & location of operation generating the effluent
   - Polaris Mine, Little Cornwallis Island, Nunavut
   - Final Discharge Point for Garrow Lake is geo referenced as 75° 22' 32" N, 97° 48' 37" W.

ii. Date & time of sampling
   - No sampling conducted as effluent discharge began in the final days of June, and the EVS laboratory could not accommodate testing due to the July 1 statutory holiday. The statutory holiday also precluded sample shipment within toxicity testing holding times. Testing was conducted at the next possible time, which was July and will be discussed in the 3rd quarter report.

iii. Type of sample
   - No toxicity sampling conducted, see ii.

iv. Brief description of sampling point
   - Discharge point of siphon at Garrow Lake dam

v. Sampling method
   - No toxicity sampling conducted, see ii.

vi. Name of person submitting samples
   - No toxicity sampling conducted, see ii.

Section 8.1.2 Test Facilities and Conditions

i. Test type & method
   - No testing conducted during the quarter

ii. Indications of deviations from requirements in Sections 2 to 7 of Method EPS 1/RM/13
   - No deviations to report as there was no testing conducted during the quarter

iii. Name and city of testing laboratory
   - No laboratory used during the quarter

iv. Species of test organism
   - None to report as there were no tests conducted during the period

v. Date and time for start of definitive test
   - None to report as there were no tests conducted during the period

vi. Person(s) performing the test and verifying the results
   - No tests performed during the quarter

vii. pH, temperature, dissolved oxygen, and conductivity of unadjusted, undiluted effluent
   - No data to report as there were no tests conducted during the period

viii. Confirmation that no adjustment of sample or solution pH occurred
   - No adjustment to report as there were no tests conducted during the period

ix. Indication of any adjustment of hardness of effluent sample
   - No adjustment to report as there were no tests conducted during the period

x. Indication of any aeration of sample
   - No indication to report as there were no tests conducted during the period

xi. Concentrations and volumes tested
   - No data to report as there were no tests conducted during the period

xii. Measurements of dissolved oxygen, pH and temperature
   - No data to report as there were no tests conducted during the period

xiii. Estimates of time to first brood, average number of neonates per brood, and percent mortality during the seven-day period prior to the test
   - No data to report as there were no tests conducted during the period

xiv. Number of neonates per test vessel and milliliters of solution per daphnid
   - No data to report as there were no tests conducted during the period

Reporting Requirements for Reference Method EPA/600/4-91/003 Method 1009.0

Section 8.1.3 Results

i. Number of dead and/or immobile daphnids in each test solution including controls
   - No data to report. No tests conducted during the period.

ii. For single-concentration test the number of daphnids dead in each of three replicate effluent solutions and in each of three replicate control solutions at end of test. Also report the mean value.
   - No data to report. No tests conducted during the period.

iii. Estimate of 48-h LC50 and 95% confidence limits in multi-concentration tests, 48-h EC50 for immobilization and 95% confidence limits, indication of statistical method on which results are based.
   - No data to report. No tests conducted during the period

iv. Most recent 48-h LC50 for reference toxicant test(s), reference chemical(s), date test initiated, historic geometric mean LC50 and warning limits.
   - No data to report. No tests conducted during the period.

APPENDIX C

Effluent Metals Concentrations and Loadings

APPENDIX D

Results of Effluent Characterization

RESULTS OF EFFLUENT CHARACTERIZATION

AS PER PARAGRAPH 4(1) in Schedule 5

The final discharge point on Garrow creek began to thaw and flow on approximately June 25, 2005. An MMER routine monitoring sample was collected at the first opportunity, which was on Wednesday June 29, 2005. For this sample, the suite of routine weekly parameters plus additional quarterly EEM parameters were analyzed. EEM effluent characterization parameters for this sample are presented in Table 1. Due to an oversight by ALS, mercury, nitrate and alkalinity were analyzed slightly after the holding times (see attached letter in Appendix E). At this time, only the effluent station (i.e., Garrow Creek) was accessible due to unsafe ice conditions in Garrow Bay, which precluded collection of receiving (exposure) or reference water samples.

While a toxicity program (both sublethal and acute) was considered for this event, the labs were not able to accommodate sample receiving and testing at this time, due to the statutory holiday (i.e., Friday July 1, 2005). Shipment during the holiday would also have been problematic and would have resulted in missed holding times for the samples. Thus, a toxicity program (acute and sublethal) was attempted at the first suitable time, which was in July. This program and the results will be discussed in the 3rd quarter report.

Concentrations of deleterious substances in effluent water from the June 29, 2005 sample were all below Schedule 4 limits. Zinc is the primary contaminant of potential concern (COPC) identified in mine effluent and was only slightly above BC Ambient Water Quality Guidelines (BC AWQG) of 10µg/L in the effluent sample collected on June 29, 2005 (i.e., concentration was 13.7µg/L), and well below the MMER effluent limit of 500µg/L.

APPENDIX E

Letter from ALS Regarding Monthly Parameter Holding Times

2005 2nd QUARTER MMER REPORT

LOCATION - FINAL DISCHARGE POINT FROM GARROW LAKE (GARROW LAKE DAM SIPHONS)

CONCENTRATIONS OF EFFLUENT FOR MMER SCHEDULE 4 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
3-Apr-05	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]
10-Apr-05	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]
17-Apr-05	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]
24-Apr-05	nd[3]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]
1-May-05	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]
8-May-05	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]
15-May-05	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]
22-May-05	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]
29-May-05	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]
5-Jun-05	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]
12-Jun-05	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]
19-Jun-05	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]
26-Jun-05	29-Jun-05	*0.00020*	*0.00050*	*0.0050*	0.00037	0.00075	0.0137	*3.0*	*0.0050*	7.98	Grab

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

Note [2] - "nd" refers to no effluent discharge to sample

MONTHLY MEAN CONCENTRATIONS OF EFFLUENT FOR MMER SCHEDULE 4

MONTH OF	MONTHLY MEAN CONCENTRATION[1] OF DELETERIOUS SUBSTANCE[3] Arsenic	Copper	Cyanide	Lead	Nickel	Zinc	TSS	Radium 226
April/05	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]
May/05	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]	nd[2]
June/05	0.0002	0.0005	0.005	0.000368	0.000754	0.0137	3	0.005

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

Note [2] - "nd" refers to no effluent discharge to sample

Note[3] - Monthly Mean Concentrations - the MEAN value of the concentrations measured in all water samples collected during each month when a deleterious substance is deposited.

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)
		Arsenic	Copper	Cyanide	Lead	Nickel	Zinc	TSS	Radium 226[1]	
3-Apr-05	nd[2]	0	0	0	0	0	0	0	0	0
10-Apr-05	nd[2]	0	0	0	0	0	0	0	0	0
17-Apr-05	nd[2]	0	0	0	0	0	0	0	0	0
24-Apr-05	nd[2]	0	0	0	0	0	0	0	0	0
1-May-05	nd[2]	0	0	0	0	0	0	0	0	0
8-May-05	nd[2]	0	0	0	0	0	0	0	0	0
15-May-05	nd[2]	0	0	0	0	0	0	0	0	0
22-May-05	nd[2]	0	0	0	0	0	0	0	0	0
29-May-05	nd[2]	0	0	0	0	0	0	0	0	0
5-Jun-05	nd[2]	0	0	0	0	0	0	0	0	0
12-Jun-05	nd[2]	0	0	0	0	0	0	0	0	0
19-Jun-05	nd[2]	0	0	0	0	0	0	0	0	0
26-Jun-05	29-Jun-05	0.002	0.005	0.048	0.004	0.007	0.133	29.030	0.048	9,677

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] - "nd" refers to no effluent discharge to sample

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]		
April/05	-	-	-	-	-	-	-	-	-	-
May/05	-	-	-	-	-	-	-	-	-	-
June/05	0.015	0.036	0.363	0.027	0.055	0.994	217.728	0.363	16,934	58,061

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 permonth

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 week of June 26, 2005 x 6 days of flow

Appendix D - Table 1. Effluent Characterization Results - June 29, 2005.

Facility Name	FDP Name	Effluent Characterization Date	Sample Method	Hardness	Alkalinity	Aluminum	Cadmium	Iron	Mercury	Molybdenum	Ammonia	Nitrate
Teck Cominco Metals Limited - Polaris Mine (Little Cornwallis Island)	Garrow Lake Syphons	6/29/2005	Grab	132	30.7	< 0.1	0.000035	0.024	< 0.00001	< 0.005	0.089	0.0382

Notes:
Only the effluent sample was collected during this event, as the receiving (exposure) and reference stations were frozen. No toxicity samples were collected as the labs (EVS and Stantec) could not receive samples and accommodate testing at this time due to the July 1 holiday, followed by the weekend. Holding times for Hg, alkalinity and nitrate were slightly exceeded due to an oversight by the lab (ALS). A letter explaining this oversight is presented in Appendix E.