

May 30, 2011

David Hohnstein
Director Technical Services
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU X0B 1J0
dts@nunavutwaterboard.org

INCIDENT FOLLOW-UP REPORT
2AM-DOH0712 – Discharge of Run-off Water

Dear Mr. Hohnstein;

As indicated in the May 25, 2011 incident report, this report presents the composition of the released run-off water and the upstream and downstream samples received from the laboratory.

In the meantime, please do not hesitate to contact me or Chris Hanks, Director, Environment and Social Responsibility if you have any questions about this event.

Sincerely,



Angela Holzapfel
Manager of Environmental Compliance
Hope Bay Mining Ltd.

c.c. Phyllis Beaulieu

May 30, 2011

INCIDENT FOLLOW-UP REPORT
2AM-DOH0713 – Discharge of Run-off Water

On May 23, 2011, HBML filed an initial spill report with the NT-NU Spill Line for 291 m³ of run-off water that had been intermittently discharged from the pollution control pond onto the rock apron on the south side of the Doris all-weather road between May 22 and 23, 2011. Run-off water has not been discharged since May 23, 2011.

Water samples were collected from the pollution control pond on May 22 and 24, 2011 for analysis by ALS Laboratories. Additional samples were collected on May 29, 2011, and will continue to be collected routinely as the pond fills in preparation for treatment and/or discharge upon regulatory approval.

Witnesses to the incident reported that the discharged runoff water had been contained between the road and the snow berm, which was substantially larger at the time of discharge. It was noted that the water was not observed to flow past the red dashed line marked on Photo 1, and the water was not observed to have run into Doris Lake.



Photo 1. May 24, 2011. View south from discharge location at standing water between road and snow berm. Red dashed line is approximate observed travel distance of water.

The analytical results for the May 22 and 24 pollution control pond samples, and the May 25 tundra control and downstream samples are attached. The samples have been compared to the Canadian Council of Ministers of the Environment (CCME) guidelines for protection of aquatic life and the discharge criteria specified for the sedimentation pond in the 2AM-DOH0713 Type A Water Licence, as there are no criteria set for ST-2 pollution control pond (Table 1 attached). Total iron was the only parameter that exceeded discharge criteria for the sedimentation pond, and the downstream sample collected from the drainage stream near Doris Lake. The control sample collected from an isolated pool upstream of the discharge point also had an elevated iron concentration that exceeded CCME and the maximum average concentration for ST-1. Elevated iron concentrations are not unusual for the lakes and streams in the area, Doris Outflow and Tail Outflow have often had iron concentrations reported in the range of values that were reported in the pollution control pond samples. Chloride was elevated in the ST-2 samples relative to the control. Total cyanide and ammonia results have not been received yet. Cyanide is not stored or used on-site yet, therefore, cyanide is not expected to be elevated. Ammonia may be present due to explosives usage in the underground mining operation. The ammonia and cyanide results will be forwarded when they are received from the laboratory.

In situ water quality measurements were recorded for the water within the pollution control pond, in areas of the tundra near the discharge location, and reference locations on May 24, 2011. On May 25 and 27, 2011, Water samples and in situ field measurements were collected at one additional upstream isolated location and approximately 400 m downstream near the point where the drainage enters Doris Lake. The attached diagram identifies the sampling locations, location of the pollution control pond, and discharge point in relation to Doris Lake. The in situ water quality measurements are reported in Table 2 (attached). Conductivity, total dissolved solids and salinity were elevated in the pollution control pond and some of the tundra sampling stations on May 24, 2011; however, these appeared to be close to background on the later sampling dates, with the exception of one point (B2) which was a small isolated pool that was in contact with the road.

The liner in the pollution control pond has been installed and construction of the surface crush and run-of quarry layers of the pond is ongoing. To keep the water from pooling against the inside toe of the pond, runoff water is being pumped to the mill, ore and waste rock pads, where it naturally seeps back into the pollution control pond. The water treatment system for the pollution pond is expected to be installed by June 15.



Angela Holzapfel, M.Sc., P.Biol.
Manager of Environmental Compliance
Hope Bay Mining Ltd.

Table 1. Water quality results for paramaters with discharge criteria (for ST-1) or CCME guidelines

Parameter	Units	ST-1 Discharge Criteria (maximum average)	ST-1 Discharge Criteria (maximum grab)	CCME*	Station			
					ST-2	ST-2	PPCON	PPDS
					22-May	24-May	25-May	25-May
pH	units	6.0 to 9.0	9	6.5 to 9.0	7.50	7.62	7.83	7.96
TSS	mg/L	15	30	25	11	27	<3.0	<3.0
Total Hardness	mg/L	-	-	-	TBD	TBD	TBD	TBD
Oil and Grease	mg/L	5	10	-	<1.0	1.1	3.2	4.0
Oil and Grease	-	no visible sheen			no	no	no	no
Ammonia	mg/L	2.0	4.0	table	TBD	TBD	TBD	TBD
Chloride	mg/L	-	-	-	1330	795	38.0	56.3
Aluminum	mg/L	1.0	2.0	0.005 or 0.1 ^a	0.421	0.642	0.248	0.146
Arsenic	mg/L	0.05	0.10	0.005	0.00073	<0.00040	<0.00040	<0.00040
Boron	mg/L	-	-	1.5	0.210	0.194	<0.050	<0.050
Cadmium	mg/L	-	-	0.018 ^c	<0.000050	<0.000050	<0.000050	<0.000050
Copper	mg/L	0.02	0.3	0.002 ^b	0.0170	0.0056	0.0030	0.0016
Cyanide	mg/L	1.0	2.0	0.005 (free CN)	TBD	TBD	TBD	TBD
Iron	mg/L	0.3	0.6	0.3	0.674	1.45	0.719	0.309
Lead	mg/L	0.01	0.02	1.0 ^b	0.00033	0.00022	0.00029	0.00023
Mercury	mg/L	-	-	0.000026	<0.00010	<0.00010	<0.00010	<0.00010
Molybdenum	mg/L	-	-	0.073	<0.0050	<0.0050	<0.0050	<0.0050
Nickel	mg/L	0.05	0.1	0.025 ^b	0.0062	0.0105	0.0045	0.0038
Selenium	mg/L	-	-	0.001	0.00075	0.00182	<0.00040	0.00045
Thallium	mg/L	-	-	0.0008	<0.00010	<0.00010	<0.00010	<0.00010
Uranium	mg/L	-	-	0.015	0.00046	0.00036	<0.00010	0.00014
Zinc	mg/L	0.01	0.02	0.03	0.0071	0.0068	0.0090	0.0067

^a 0.005 if pH < 6.5; 0.1 if pH ≥ 6.5

^b equation based on hardness, value shown is minimum until hardness values are received to enable calculation of sample specific guideline value

^c equation calculated with harness of 48.5 mg/L until hardness values are received and enable calculation of sample specific guideline value

Table 2. Field water quality results from the pollution control pond and tundra locations

Date	Station ID	pH	Conductivity (us/cm)	TDS (ppm)	Salinity (ppm)	Temp (deg C)
24-May-11	ST-2	8.1	2660	1920	1300	6.0
24-May-11	C1	7.6	323	230	142	3.1
24-May-11	C2	8.0	389	277	181	3.8
24-May-11	C3	8.2	273	194	123	2.8
25-May-11	PPCONT	8.1	457	318	195	1.4
24-May-11	S1	8.2	1143	806	462	1.9
24-May-11	S2	8.3	1104	784	509	4.8
24-May-11	B1	8.3	2160	1540	825	3.5
24-May-11	B2	7.7	2740	1800	1320	4.2
24-May-11	B3	8.1	819	554	394	4.6
24-May-11	B4	8.8	375	264	165	4.0
24-May-11	D1	8.0	991	428	575	4.0
25-May-11	PPDS	8.5	470	332	282	1.6
26-May-11	PPCONT	7.6	401	286	185	8.5
26-May-11	PPRDS	7.5	646	451	287	2.4
26-May-11	S1	7.6	406	289	180	3.8
26-May-11	S2	7.6	451	320	199	3.8
26-May-11	B1	Dry	-	-	-	-
26-May-11	B2	7.4	2446	1640	1080	4.5
26-May-11	B3	7.9	351	249	159	6.5
26-May-11	B4	8.0	311	221	133	2.5
26-May-11	D1	Dry	-	-	-	-
26-May-11	C4	7.9	298	211	128	2.8
26-May-11	C2	7.5	446	315	200	5.3
27-May-11	PPCONT	7.4	360	258	153	1.3
27-May-11	PPDS	7.7	565	401	239	0.5
28-May-11	PPCONT	7.7	392	278	171	14.3
28-May-11	PPDS	7.8	1070	694	445	3.3
29-May-11	PPCONT	7.9	423	300	185	14.3
29-May-11	PPDS	7.9	512	363	218	8.5
30-May-11	PPDS	8.0	519	369	223	9.8
30-May-11	PPCONT	7.9	391	277	168	13.7
30-May-11	ST-2 (north)	8.2	448	318	193	0.0
30-May-11	ST-2 (south)	7.9	474	338	219	5.6

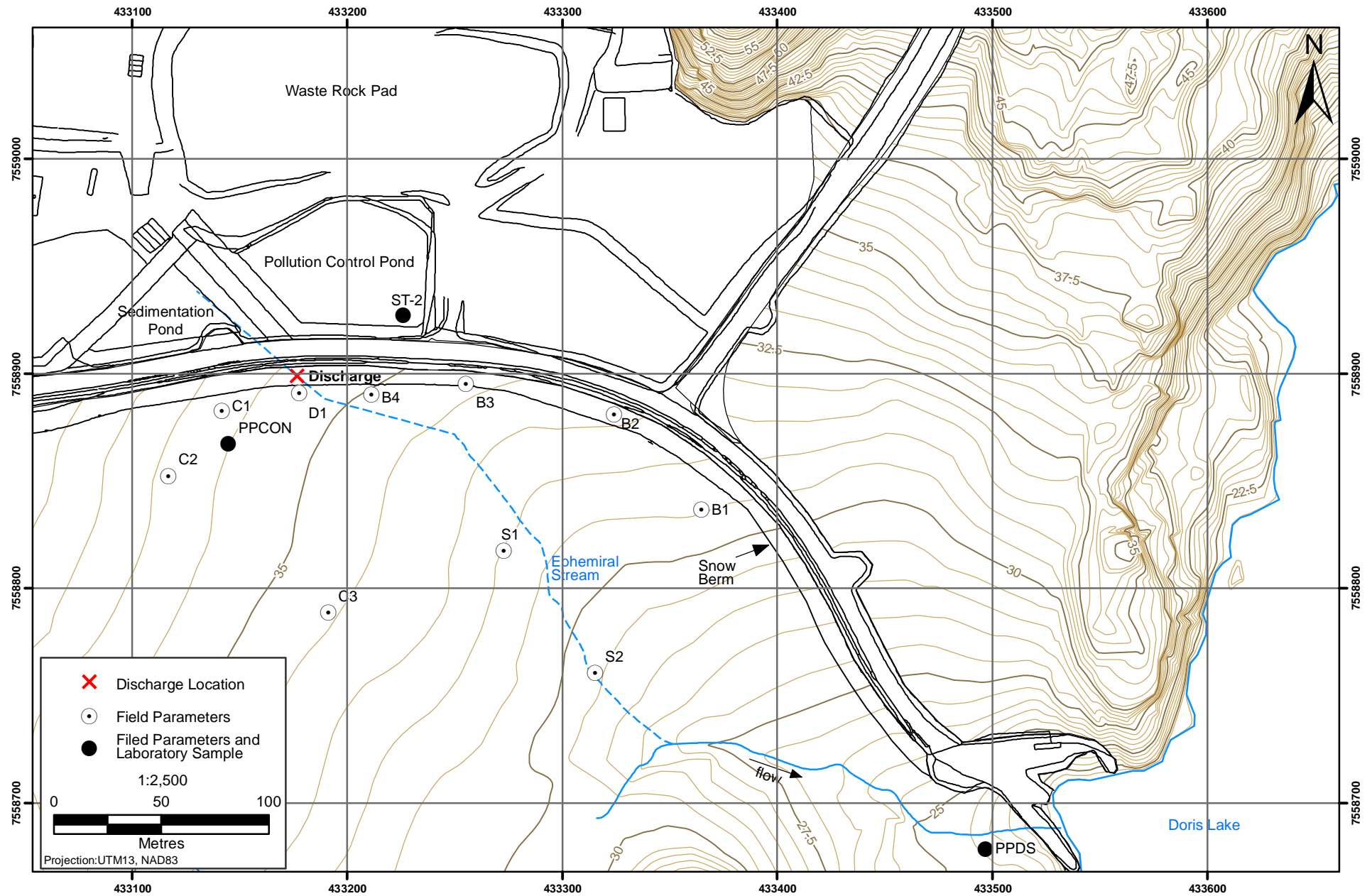


Figure 1



HOPE BAY MINING LTD
ATTN: SR.ENV CO-ORDINATOR
300 - 889 Harbourside Drive
North Vancouver BC V7P 3S1

Date Received: 27-MAY-11
Report Date: 30-MAY-11 09:34 (MT)
Version: DRAFT REV. 2

Client Phone: 604-985-2572

Certificate of Analysis

Lab Work Order #: L1009793
Project P.O. #: H00288
Job Reference: COMPLIANCE WATER SAMPLES
Legal Site Desc:
C of C Numbers:

Jessica Spira
Senior Account Manager

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ADDRESS: 9936-67 Avenue, Edmonton, AB T6E 0P5 Canada | Phone: +1 780 413 5227 | Fax: +1 780 437 2311
ALS CANADA LTD Part of the ALS Group A Campbell Brothers Limited Company

0.210	0.050
<0.000050	0.000050
0.0062	0.0050
0.0037	0.0020
0.0170	0.0010
0.00033	0.00010
0.229	0.010
<0.0050	0.0050
0.0062	0.0020
0.00075	0.00040
<0.00010	0.00010
<0.00010	0.00010
<0.050	0.050
0.0207	0.0010
0.00046	0.00010
0.0018	0.0010
0.0071	0.0040
524	DLM
	2.5

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

0.00022		0.00010
0.158		0.010
<0.0050		0.0050
0.0105		0.0020
0.00182		0.00040
<0.00010		0.00010
<0.00010		0.00010
<0.050		0.050
0.0230		0.0010
0.00036		0.00010
0.0066		0.0010
0.0068		0.0040
334	DLM	2.5
1.45	DLM	0.050
20.1	DLM	0.50
0.801	DLM	0.010
10.8	DLM	0.50
83.2	DLM	5.0

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

Reference Information

Sample Parameter Qualifier Key:

Qualifier	Description
DLM	Detection Limit Adjusted For Sample Matrix Effects

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ALK-TOT-ED	Water	Alkalinity, Total	APHA 2320 B-Auto-Pot. Titration
CL-IC-ED	Water	Chloride by IC	APHA 4110 B-ION CHROMATOGRAPHY
HG-T-CVAA-ED	Water	Mercury (Hg) - Total	EPA 245.7 / EPA 245.1
MET-T-L-ICP-ED	Water	Total Metals in Water by ICPOES (Low)	APHA 3120 B-ICP-OES
MET-T-L-MS-ED	Water	Total Metals in Water by ICPMS (Low)	SW 846 - 6020-ICPMS
OGG-ED	Water	Oil and Grease-Gravimetric	APHA 5520 G HEXANE MTBE EXT. GRAVIME
OGG-VISIBLE-SHEEN-ED	Water	Oil and Grease - Visible Sheen	Alberta Environment Regs. (Ind. Runoff)
PH-ED	Water	pH	APHA 4500 H-Electrode
SO4-IC-ED	Water	Sulfate by IC	APHA 4110 B-ION CHROMATOGRAPHY
SOLIDS-TOTSUS-ED	Water	Total Suspended Solids	APHA 2540 D-Gravimetric

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

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
ED	ALS ENVIRONMENTAL - EDMONTON, ALBERTA, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

mg/kg - milligrams per kilogram based on dry weight of sample

mg/kg wwt - milligrams per kilogram based on wet weight of sample

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight

mg/L - 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.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.