

September 25, 2008

Technical Advisor – Mining  
Nunavut Water Board  
P.O. Box 119  
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**Re: August 2008 –Monthly Monitoring Report for Water License 2BB-BOS0712**

Following is the monthly report for August 2008 as required under Water license 2BB-BOS0712.

**1. MONITORING PROGRAM**

During the month of August 2008, water samples were collected weekly at monitoring stations BOS-1, BOS-3 and BOS-4 for due diligence associated with developing a plan for improving the performance of the Boston Sewage Treatment Plant (STP). Under the current NWB Water Use Permit 2BB-BOS0712, HBML is only obligated to collect monthly samples when Boston Camp is operational. Hope Bay Mining Ltd. (HBML) is providing the additional data to the Nunavut Water Board (NWB) as a matter of transparency so that NWB and Indian and Northern Affairs Canada (INAC) are working with the same data as the company related to the performance of the STP. The analytical data for the month of August is presented in Table 2. Table 1 provides a summary of tracking information on when the samples were taken and the corresponding external laboratory analytical Certificate of Analysis (CoA).

HBML uses an external certified laboratory to carry out all the analyses for this report. Therefore, HBML uses the ALS laboratory QA/QC to determine the accuracy and precision of results in this report.

Table 1: SNP Water sampling summary, August 2008

Station Number	Sampling Date	ALS Lab Reference # (CoA)	Comment and Lat./ Long. coordinates
BOS-1	Aug 04, 13, 18, 25	L665875, L664318, L670982, L669355, L671556, L675663, L673856	Spyder Lake Water Intake
BOS-3	Aug 04, 13, 18, 25	L665875, L664318, L670982, L669355, L671556, L675663, L673856	End of Pipe
BOS-4	Aug 04, 13, 18, 25	L665875, L664318, L670982, L669355, L671556, L675663, L673856	Sewage effluent meets Spyder Lake

**2. RESULTS**

The summary for the water samples collected at sampling locations identified in the water use permit requirement for Boston Project are summarized in Table 2.

HBML was in compliance for the whole month at SNP BOS-1 for all parameters associated with the intake of potable water during the month.

HBML was not in compliance for the following parameters: biological oxygen demand (BOD<sub>5</sub>), total suspended solids (TSS), and faecal coliforms at the treated effluent discharge point at the end of pipe (SNP BOS-3). After land treatment on the tundra between BOS-3 and BOS-4 on the shore of Spyder Lake the effluent was compliant with the water licence before entering the lake.

HBML for the purposes of due diligent analyses for total coliforms and *E. coli* at all their SNP sampling locations. These parameters were also high at SNP BOS-3.

To manage the treated effluent at SNP BOS-3, HBML has made efforts throughout the 2008 season to remedy this situation. In addition to the regular maintenance program, the company in August at the suggestion of the manufacturer, Sanitherm, initiated a increased sludge removal program to try and drop the TSS which is one of the root causes RBC Units poor performance.

Several options were identified and this included: (i) reducing the camp loading to the RBC Unit to 45 from near 60, (ii) enhanced preventive maintenance plan, and (iii) operational changes to increase the capacity of the blending tank and aeration system to help improve treatment by controlling system surges and the need for more aeration. The items in (iii) are more completely described in the cover letter accompanying this report. The goal of the proposed actions is to improve the quality of the treated effluent discharged at BOS-3.

HBML is committed in complying with all its legal requirements under WUP 2BB-BOS0712. HBML will continue to look for opportunities and proven engineering solutions to continuously improve on our environmental performances to achieve compliance at the Boston Camp.

Table 2: Treated Grey water Effluent Discharge from the Windy Lake Camp WWTF, August 2008

Parameter	BOS-1	BOS-3	BOS-4	Boston Camp: 2BB-BOS0712
ALS Lab Reference #	L665875-8/L664318-4	L665875-9/ L664318-5	L665875-10/ L664318-6	Compliance Values
Field Sample Details	BOS-1	BOS-2	BOS-3	Part D: Item 10
Sample Date/Time	Aug 04/08 @ 11:15 am	Aug 04/08 07:00 am	Aug 04/08 07:15 am	Part J: Item 2
Biochemical Oxygen Demand (BOD <sub>5</sub> )	<2	284	<2	80 mg/L
Total Suspended Solids (mg/L)	<3	226	<3	100 mg/L
Fecal Coliform	<1	>2,419.6	1	10,000 mL CFU/100 mL
Total Coliform	28	>2,419.6	36	-
<i>Escherichia coli</i> ( <i>E. coli</i> )	<1	>2,419.6	3	-
pH (pH unit)	7.2	7.5	7.2	Between 6 and 9
Oil & Grease (Visibility)	NVS	NVS	NVS	No visible sheen (NVS)
ALS Lab Reference #	L670982-5/L669355-1	L670982-6/ L669355-2	L670982-7/ L669355-3	Compliance Values
Field Sample Details	BOS-1	BOS-3	BOS-4	Part D: Item 10
Sample Date/Time	Aug 13/08 09:15 am	Aug 13/08 09:30 am	Aug 13/08 09:00 am	Part J: Item 2
Biochemical Oxygen Demand (BOD <sub>5</sub> )	<2	190	<2	80 mg/L
Total Suspended Solids (mg/L)	<3	104	3	100 mg/L
Fecal Coliform	<1	>2,000	<1	10,000 mL CFU/100 mL
Total Coliform	98.8	>2,419.6	91.1	-
<i>Escherichia coli</i> ( <i>E. coli</i> )	<1	>2,419.6	<1	-
pH (pH unit)	7.1	7.5	7.1	Between 6 and 9
Oil & Grease (Visibility)	NVS	NVS	NVS	No visible sheen (NVS)
ALS Lab Reference #	L671556-1	L671556-2	L671556-3	Compliance Values
Field Sample Details	BOS-1	BOS-3	BOS-5	Part D: Item 10
Sample Date/Time	Aug 18/08 08:30 am	Aug 18/08 08:45 am	Aug 18/08 07:00 am	Part J: Item 2
Biochemical Oxygen Demand (BOD <sub>5</sub> )	<2	314	<2	80 mg/L
Total Suspended Solids (mg/L)	3	136	3	100 mg/L
Fecal Coliform	-	-	-	10,000 mL CFU/100 mL
Total Coliform	-	-	-	-
<i>Escherichia coli</i> ( <i>E. coli</i> )	-	-	-	-
pH (pH unit)	7.1	7.4	7.0	Between 6 and 9
Oil & Grease (Visibility)	NVS	NVS	NVS	No visible sheen (NVS)

Table 2: Continue: Treated Grey water Effluent Discharge from the Windy Lake Camp WWTF, August 2008

Parameter	BOS-1	BOS-2	BOS-3	Boston Camp: 2BB-BOS0712
ALS Lab Reference #	L675663-22/L673856-4	L675663-26/L673856-5	L675663-27/L673856-6	Compliance Values
Field Sample Details	BOS-1	BOS-3	BOS-4	Part D: Item 10
Sample Date/Time	Aug 25/08 08:30 am	Aug 25/08 09:00 am	Aug 25/08 08:45 am	Part J: Item 2
Biochemical Oxygen Demand (BOD <sub>5</sub> )	<2	<b>560</b>	<2	80 mg/L
Total Suspended Solids (mg/L)	<3	<b>372</b>	3	100 mg/L
Fecal Coliform	<1	<b>&gt;2,000</b>	<1	10,000 mL CFU/100 mL
Total Coliform	52	<b>&gt;2,419.6</b>	120	-
<i>Escherichia coli</i> ( <i>E. coli</i> )	<1	<b>&gt;2,419.6</b>	<1	-
pH (pH unit)	7.2	7.6	7.1	Between 6 and 9
Oil & Grease (Visibility)	NVS	NVS	NVS	No visible sheen (NVS)

### **3. CAMP WATER USAGE – BOS-1**

During the month of August 2008, Windy camp was in operation for the whole month. The water abstraction pump is located at Spyder Lake (BOS-1). Table 3 provides the water volume usage as required under Part J, Item 6 of the WUP number 2BB-BOS0712. Water consumptions rate are within compliance values.

Table 3: Water usage in cubic meters (m<sup>3</sup>) for Boston Camp (BOS-1), August 2008

<b>Parameters</b>	<b>BOS-1</b>	<b>Remarks</b>	<b>2BB-BOS0712</b>
Water Source	Boston Camp	Part J: Item 6	Compliance Values
Monthly Cumulative	132.36	3,100	3,100 m <sup>3</sup> monthly
Volume Average (Daily)	4.27	100	100 m <sup>3</sup> daily
Median	4.00	100	100 m <sup>3</sup> daily
Maximum	9.78	100	100 m <sup>3</sup> daily
Minimum	2.00	100	100 m <sup>3</sup> daily

### **4. TREATED GREY WATER EFFLUENT – BOS-3**

Boston Camp treated grey water effluent flow meter is yet to be installed on the discharge line. The installation is expected to be completed by the end of September 2008.

Table 4: Treated Grey Water Effluent release in cubic meters (m<sup>3</sup>) for Boston Camp (BOS-3), August 2008

<b>Parameters</b>	<b>BOS-3</b>
Water Source	Boston Camp
Monthly Cumulative	No reading
Volume Average (Daily)	No reading
Median	No reading
Maximum	No reading
Minimum	No reading

### **5. DRILLING ACTIVITIES WATER USAGE**

Drill rig 1480 was drilling southwest of Boston for 18 drill rig days. Water for the rig was drawn from southeast portion of Spyder Lake. Table 5 provides the recorded water volume (in cumes) as required under Part J, Item 6 for the Boston Camp water license number 2BB-BOS0712. Water usages at Rig 1480 were in compliance with the daily consumption rate.

Table 5: Regional Drill rigs water usage (in cumes) for August 2008

<b>Parameters</b>	<b>Rig 1480</b>	<b>Daily Compliance</b>	<b>2BB-BOS0712</b>
Water Source	Spyder Lake	Part J: Item 6	Compliance Values
Drilling Days	18	-	-
Monthly Cumulative	88.30	3,100	3,100 m <sup>3</sup> monthly
Vol. Average (Daily)	4.41	100	100 m <sup>3</sup> daily
Median	4.77	100	100 m <sup>3</sup> daily
Maximum	8.60	100	100 m <sup>3</sup> daily
Minimum	2.65	100	100 m <sup>3</sup> daily

### **6. HAZARDOUS WASTE MANAGEMENT**

A total of 900 empty Jet B were crushed at Boston Camp during the month. The crushed drums are now packed on pallets ready for shipment to Roberts Bay during the winter of 2009. The drum crusher was then relocated to Windy at the end of the month.

Work also continued with resorting the waste timbers, plywood and other burnable materials around Boston Camp. A wood chipper was purchased and flown into Boston to help with chipping of the timbers. Cuttings generated by the chipper will be used for abandon drill site reclamation, sedimentation & erosion control along treated grey water effluent outfalls, and reclamation of routing along winter roads.

About 80 drums of sludge/black-water was removed from the RBC Unit at Boston Camp and flown to Doris Camp to run through the new STP plant. The sludge/black-water was required to increase number the grey water density to 12,000-18,000 mg/L in the plant. This was undertaken after notification of INAC and the NWB by letter on September 3, 2008 and subsequent phone calls on this operational decision.

## 7. ENVIRONMENTAL INCIDENTS

There were two environmental incident reported at Boston Camp in August 2008. The severity of the incidences at tabulated in Table 6. A brief on each incident is summarized below.

1. A number of sludge/blackwater drums flown from Boston Camp RBC plant to Doris Membrane Plant were found to be contaminated with residual Jet B fuel. This material could not be treated in the membrane unit. The contaminated drums were re-labelled in accordance with TDG requirements and flown onto the NTCL barge for transportation to a facility appropriate for remediation offsite outside Nunavut.
2. Weekly sampling at SNP BOS-3 showed elevated concentrations of TSS, faecal coliform and BOD<sub>5</sub> in the treated grey water effluent. The samples were collected on August 4, 13, 18 & 25 2008. HBML is obligated to collect an effluent sample once a month during camp operation at SNP BOS-3.

Table 6: Number of and severity ratings for all environmental reported incidents for August 2008

Water Use Permit	Spill Category							Site	Month
Boston Camp (2BB-BOS0712)	Compliance Issues	Near Miss	Level 1 (Insignificant)	Level 2 (Minor)	Level 3 (Moderate)	Level 4 (Major)	Level 5 (Catastrophic)	Sub Total	August 08
Boston Camp	1	0	2	0	0	0	0	2	2
External Reportable	1	0	0	0	0	0	0	1	1
Grand Totals (All Levels)	1	0	0	0	0	0	0	2	2

Note: External Reportable Incidences (though monthly reporting):

Should there be any questions regarding the monthly report for August 2008, **please** contact Matt Kawei, Senior Environmental Coordinator, Hope Bay Mining Limited on phone number: 1-604-759-2292 or email: [Matthew.Kawei@Newmont.com](mailto:Matthew.Kawei@Newmont.com). Or Jill Turk, Environmental Technician, HBML on phone number 1-607-759-2292 or e:mail <Jill.Turk@Newmont.com>

Yours sincerely,



**Matt Kawei**

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