

September 10, 2008

Technical Advisor – Mining  
Nunavut Water Board  
P.O. Box 119  
Gjoa Haven, NU X0B 1J0

**Re: August 2008 –Monthly Monitoring Report for Water License 2BE-HOP0712**

Following is the monthly report for August 2008 as required under Water license 2BE-HOP0712.

**1. MONITORING PROGRAM**

During the month of August 2008, water samples were collected weekly at monitoring stations HOP-1, HOP-2 and HOP-3 for due diligent purposes associated with attempting to improve the performance of the Windy STP. As a matter of transparency, Hope Bay Mining Ltd. (HBML) is providing the NWB with a full suite of results so that the regulators are working with the same data available to HBML. Under the current NWB Water Use Permit 2BE-HOP0712, HBML is only obligated to collect monthly samples when Windy is operational. 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 Assurance numbers (CoA).

HBML uses an external certified laboratory to carryout all the analyses for this report. Therefore, HBML uses the QAQC data produced by the ALS laboratory 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
HOP-1	Aug 04, 13, 18, 25	L665875, L664318, L670982, L669355, L671556, L675663, L673856	Windy Lake Water Intake
HOP-2	Aug 04, 13, 18, 25	L665875, L664318, L670982, L669355, L671556, L675663, L673856	RBC surge Tank (Lift Station)
HOP-3	Aug 04, 13, 18, 25	L665875, L664318, L670982, L669355, L671556, L675663, L673856	RBC effluent meets Windy Lake
HOP-4	No discharge	-	LTA effluent prior to release
HOP-5	No discharge	-	Effluent from Bulk fuel farm prior to release
HOP-6	No discharge	-	Patch Lake Fuel Farm Effluent

**2. RESULTS**

The summary for the water samples collected at sampling locations identified in the water use permit requirement for regional exploration is summarized in Table 2.

HBML was in compliance for the whole month at SNP # HOP-1 and HOP-3 for all parameters. At HOP-2, HBML was not in compliance for parameters; BOD<sub>5</sub>, TTS, and faecal coliforms. HBML for due diligent purposes analyses for total coliforms and E. coli at all these sampling locations. These parameters were high at HOP-2. Looking at the developing trends for HOP-2 treated effluent, the concentrations of BOD<sub>5</sub> and

TSS are gradually declining as a result of continuously removing sludge from the Clementine Unit. This will aid in the ability of the Unit to produce effluent that will meet the compliance criteria over time. HBML has enclosed a copy of a letter from Sanitherm and Lakeside Environmental the firms, which manufactured and have conducted the start up of the new STP at Windy. The letter is appended to the end of this report. This letter is being included at the request of the INAC inspector who has asked what steps have been taken to bring the Windy STP into compliance.

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

Parameter	HOP-1	HOP-2	HOP-3	Hope Bay: 2BE-HOP0712
ALS Lab Reference #	L665875-11/L664318-1	L665875-12/ L664318-2	L665875-13/ L664318-3	Compliance Values
Field Sample Details	HOP-1	HOP-2	HOP-3	Part D: Item 10
Sample Date/Time	Aug 04/08 @ 06:45 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	328	<2	80 mg/L
Total Suspended Solids (mg/L)	<3	176	<3	100 mg/L
Fecal Coliform	<1	>2,419.6	<1	10 x 10 <sup>4</sup> CFU/100 mL (100,000 mL)
Total Coliform	3	>2,419.6	4	-
<i>Escherichia coli</i> ( <i>E. coli</i> )	<1	>2,419.6	<1	-
pH (pH unit)	8.0	7.6	8.0	Between 6 and 9
Oil & Grease (Visibility)	NVS	NVS	NVS	No visible sheen (NVS)
ALS Lab Reference #	L670982-1/L669355-4	L670982-2/ L669355-5	L670982-3/ L669355-6	Compliance Values
Field Sample Details	HOP-1	HOP-2	HOP-3	Part D: Item 10
Sample Date/Time	Aug 13/08 09:00 am	Aug 13/08 09:00 am	Aug 13/08 09:00 am	Part J: Item 2
Biochemical Oxygen Demand (BOD <sub>5</sub> )	<2	173	2	80 mg/L
Total Suspended Solids (mg/L)	3	200	<3	100 mg/L
Fecal Coliform	<1	>2,000	<1	10 x 10 <sup>4</sup> CFU/100 mL (100,000 mL)
Total Coliform	12	>2,419.6	3.1	-
<i>Escherichia coli</i> ( <i>E. coli</i> )	1	>2,419.6	<1	-
pH (pH unit)	7.9	7.6	8.0	Between 6 and 9
Oil & Grease (Visibility)	NVS	NVS	NVS	No visible sheen (NVS)
ALS Lab Reference #	L671556-4	L671556-5	L671556-6	Compliance Values
Field Sample Details	HOP-1	HOP-2	HOP-3	Part D: Item 10
Sample Date/Time	Aug 18/08 11:00 am	Aug 18/08 10:45 am	Aug 18/08 10:30 am	Part J: Item 2
Biochemical Oxygen Demand (BOD <sub>5</sub> )	<2	109	<2	80 mg/L
Total Suspended Solids (mg/L)	<3	168	3	100 mg/L
Fecal Coliform	-	-	-	10 x 10 <sup>4</sup> CFU/100 mL (100,000 mL)
Total Coliform	-	-	-	-
<i>Escherichia coli</i> ( <i>E. coli</i> )	-	-	-	-
pH (pH unit)	7.9	7.7	7.9	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	HOP-1	HOP-2	HOP-3	Hope Bay: 2BE-HOP0712
ALS Lab Reference #	L675663-25/L673856-1	L675663-26/L673856-2	L675663-27/L673856-3	Compliance Values
Field Sample Details	HOP-1	HOP-2	HOP-3	Part D: Item 10
Sample Date/Time	Aug 25/08 06:15 am	Aug 25/08 07:00 am	Aug 25/08 06:30 am	Part J: Item 2
Biochemical Oxygen Demand (BOD <sub>5</sub> )	<2	97	<2	80 mg/L
Total Suspended Solids (mg/L)	<3	120	<3	100 mg/L
Fecal Coliform	<1	>2,000	<1	10 x 10 <sup>4</sup> CFU/100 mL (100,000 mL)
Total Coliform	<1	>2,419.6	<1	-
<i>Escherichia coli</i> ( <i>E. coli</i> )	<1	>2,419.6	<1	-
pH (pH unit)	8.0	7.8	8.0	Between 6 and 9
Oil & Grease (Visibility)	NVS	NVS	NVS	No visible sheen (NVS)

### 3. CAMP WATER USAGE – HOP-1

During the month of August 2008, Windy camp was in operation for the whole month. The water abstraction pump is located at Windy Lake (HOP-1). Table 3 provides the water volume usage as required under Part J, Item 6 of the water licenses (2BE-HOP0712).

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

Parameters	HOP-1	Remarks	2BE-HOP0712
Water Source	Windy Lake	Part J: Item 6	Compliance Values
Monthly Cumulative	441.2	620	3,100 m <sup>3</sup> monthly
Volume Average (Daily)	14.2	20	100 m <sup>3</sup> daily
Median	14.4	20	100 m <sup>3</sup> daily
Maximum	<b>20.8</b>	20	100 m <sup>3</sup> daily
Minimum	10.4	20	100 m <sup>3</sup> daily

Table 4: Treated Grey Water Effluent release in cubic meters (m<sup>3</sup>) for Windy Lake Camp (HOP-2), August 2008

Parameters	HOP-2
Water Source	Windy Lake
Monthly Cumulative	490.7
Volume Average (Daily)	15.8
Median	16.1
Maximum	28.4
Minimum	9.3

### 4. DRILLING ACTIVITIES WATER USAGE

Drill rigs 1480 and 1481 were drilling at mid Belt for 21 rigs days. Water sources were drawn from Spyder Lake. Table 5 provides the recorded water volume (in cumes) as required under Part J, Item 6 for the Hope Bay water license number 2BE-HOP0712. Water usages at each rig were in compliance with the daily consumption rate.

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

Parameters	Rig 1480	Rig 1481	Daily Compliance	2BE-HOP0712
Water Source	Spyder Lake	Spyder Lake	Part J: Item 6	Compliance Values
Drilling Days	18	3	-	-
Monthly Cumulative	88.30	5.72	2,480	1550 m <sup>3</sup> monthly
Vol. Average (Daily)	4.41	2.86	80	80 m <sup>3</sup> daily
Median	4.77	2.86	80	80 m <sup>3</sup> daily
Maximum	8.60	3.00	80	80 m <sup>3</sup> daily
Minimum	2.65	2.72	80	80 m <sup>3</sup> daily

### 5. HAZARDOUS WASTE MANAGEMENT

A total of 120 bags (120 cubic meters) of hydrocarbon contaminated soil removed from Windy land treatment area were flown to a barge anchored at Roberts Bay for removal offsite during the barge season. It is being taken to an approved facility either in Alberta or the NWT that is equipped to handle the material. Shipment is being handled in compliance with relevant regulations governing the transportation of dangerous goods. The trans-boundary ship has been discussed with Environment Canada to insure Newmont Mining Corporation understood all of the necessary requirements.

About 100 bags of dried drill cutting bags were flown from Wolverine hill lay-down area to be used as fill materials at the old Windy Camp RBC release point onto the tundra. Over the years of releasing treated grey water effluent at this site, a channel was developing due to heat generated from the treated effluent, which caused a slow deterioration of the permafrost at the end of the pipe. The drill cuttings are being used to stabilize the ground.

The dried cuttings were placed in such a manner to force water in the channel to flow down the channel and onto the tundra. This was done to match the natural contour of the landscape. More cuttings will be added, after settlement has occurred.

About 120 drums of STP sludge/black-water were removed from the Clementine Unit at Windy Lake Camp and flown to Doris Camp to run through the new STP plant. A more aggressive sludge management program is necessary to bring the high levels of TSS under control at the Windy STP. The sludge/black-water from Windy was required to inoculate the new Doris North STP with bacteria and to increase 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.

No drums were crushed at Windy Lake Camp during the month.

## 6. ENVIRONMENTAL INCIDENTS

There were three environmental incident reported in August 2008. The severity of the incidences at tabulated in Table 6.

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

Water Use Permit	Spill Category							Site	Month
Hope Bay Regional (2BE-HOP0712)	Compliance Issues	Near Miss	Level 1 (Insignificant)	Level 2 (Minor)	Level 3 (Moderate)	Level 4 (Major)	Level 5 (Catastrophic)	Sub Total	August 08
Regional Drilling	1	0	0	1	0	0	0	1	1
Patch Lake	-	0	0	0	0	0	0	0	0
Madrid/Naartok	-	0	0	0	0	0	0	0	0
Windy Camp	2	0	0	2	0	0	0	2	2
External Reportable	3	0	0	3	0	0	0	3	3
Grand Totals (All Levels)	3	0	0	0	0	0	0	3	3

Note: External Reportable Incidences (though monthly reporting):

1. Drill # 1481 operating in the mid-belt south of Windy potentially over used water down from a source pond. HBML is currently evaluating this issue.
2. Portable water consumption exceeded daily withdrawal limit at Windy Camp for a day in August. Average daily water consumption was 14.3 cumes.
3. Elevated concentrations of TSS, faecal coliform and BOD<sub>5</sub> in the treated grey water effluent at HOP-2 collected on August 4, 13, 18 & 25 2008.

Should there be any questions regarding the monthly report for August 2008, **please** contact Matt Kawei , Senior Environmental Coordinator, or Jill Turk, Environmental Technician 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@Newmont.com](mailto:Jill.Turk@Newmont.com)

Yours sincerely,



**Matt Kawei**

Senior Environmental Coordinator  
Hope Bay Mining Limited

**Memo**

**From: Sanitherm and Lakeside Environmental Services**

**To: SNC and HBML**

**October 20, 2008-10-20**

**Re: Sequence of events related to upgrading of the Windy Camp Sewage Treatment Plant (STP)**

Please find enclosed the time line of events associated with the replacement and commissioning of the new STP at the Windy Camp in the Hope Bay Belt, Nunavut.

May 2007.....Errol Smyth visited Windy to review operation of the existing STP. The existing Windy plant was found to be grossly overloaded. The operation of the plant was reviewed with the site operators. Methods of improving the effluent quality were discussed.

May.....Recommendation to operate Windy RBC's in parallel not in series, with a primary tank and flow equalization in front.  
A sludge wasting program was begun.

May.....A meeting was held at the SNC Vancouver office to discuss options for upgrading the Windy STP.

June.....A quoted was given to SNC for a new MBR for Doris.

June.....PO issued for Doris MBR.

July.....Drawings were sent to SNC for a new clarifier design for the Windy Camp .

July.....New Doris MBR shipped on the barge.

August.....Pumps were ordered for the Windy STP. Standby pumps are on site for effluent discharge to the tundra.

August.....Dave Botwright visit to site to discuss Windy & Boston STP with Fred Penner. Design sketches and recommendations left onsite. Process instructions and modifications were suggested for the operation of the 2 RBC's

October.....Design, Supply, and Execution minutes from the meeting with Miramar and SNC were sent to the client. Additional aeration and holding capacity was suggested to improve the effluent quality.

November.....Drawing of recommendations for Windy STP up grade were sent to Scott Stringer at HBML. The new plant was to be moved to a pad above the Windy Camp well outside the allowable 30meters from high water mark.

May 2008.....PO issued for Pumps and Blowers for Windy and Boston. Pumps and blowers were to be added to the existing plant when it is moved to the new location. A Conditioning tank, Equalization Tank and Clarifier were to be added at the new plant site.

May.....Received drawing from Ryfan of proposed modifications. Some modifications were made to the Sanitherm design.

May.....FSC Engineering Review received.

May.....Sanitherm provided a response to SNC on FSC system review report.

Tankage and pumps were delivered to site.  
Construction began on the new plant site.

June.....Errol Smyth from Lakeside was onsite to assist in Windy STP commissioning. Installation of the Conditioning Tank, Equalization Tank, Blowers and Clarifier was completed. High volumes of sludge produced caused a measurable deterioration in the effluent quality. A sludge wasting program was suggested.

June.....Sanitherm representative was onsite to assist with the Doris plant setup. Installation and commissioning of the Matrix plants and the Doris plant was begun. A ticketed water and wastewater treatment specialist was brought to site to oversee the plants. Operational advice was provide on the Windy system.

August.....Recommendation regarding sludge management at Windy were given to HBML by Sanitherm. Due to the high volume of sludge produced a sludge digester is suggested for sludge processing.

August.....Further recommendations given regarding operation. The treatment process was improved by extensive flow control devices. Operator training has been ongoing. The operators were instructed by phone and email on the process control required to operate the plants within compliance.

September.....Sanitherm representative was onsite to assist in implementing operational recommendations. Ticketed operators were retained to oversee the plants. A dedicated operator was hired to oversee the Doris Membrane plant. Effluent quality began to show an improvement in the Windy camp.

October.....Sanitherm representative was onsite to assist in implementing operation recommendations. The monitoring and adjustments of Windy Camp STP have resulted in improved performance of the plant. Some improvements are being implemented at Boston Plant to bring the plant into compliance. Aeration will be added to the RBC wheel and a sludge containment tank will be attached to the plant. The Membrane plant at Doris Camp is functioning well within the permit limits.

Errol Smyth  
Lakeside Environmental Services Ltd.

For Sanitherm a division of PEAK