



Water Resources Division  
Nunavut Regional Office  
Iqaluit, NU X0A 0H0

Your File: 2BE-HOP0712  
Our File/CIDM's #294214

December 22, 2008

Phyllis Beaulieu  
Manager of Licensing  
Nunavut Water Board  
P.O. Box 119  
Gjoa Haven, NU, X0A 1J0

**Re: Water License 2BE-HOP0712 / Miramar Hope Bay Ltd. / Hope Bay Regional Exploration Project / September 2008 Monthly Monitoring Report**

Please be advised that I have completed a review of the above-referenced September 2008 Monthly Monitoring Report as submitted by Miramar Hope Bay Ltd. to the Nunavut Water Board on November 10, 2008. Please see the attached Technical Memorandum for your consideration.

Should you have any questions or comments, please do not hesitate to contact me at (867) 975-4282 or by email at [KaradagD@ainc-ianc.gc.ca](mailto:KaradagD@ainc-ianc.gc.ca)

Yours truly,

*Original Signed By*

Dee Karadag  
Water Resources Technician

Cc. Kevin Buck, Manager of Water Resources

David W. Abernethy, Regional Coordinator of Water Resources



## Technical Review Memorandum

**TO**            Phyllis Beaulieu, Manager of Licensing, Nunavut Water Board  
  
Bernie MacIsaac, Manager Field Operations, Indian and Northern Affairs Canada

**FROM**        Dee Karadag  
Water Resources Technician, Water Resources Division, Indian and Northern Affairs Canada - Nunavut Regional Office

**Re:**            **Water License 2BE-HOP0712 / Miramar Hope Bay Ltd. / Hope Bay Regional Exploration Project – September 2008 Monthly Monitoring Report**

As a requirement of Part J, Items# 2-8 inclusive of Water License #2BE-HOP0712, Miramar Hope Bay Ltd. submitted a September 2008 Monthly Monitoring Report to the Nunavut Water Board (NWB) on November 10, 2008.

The following documents were reviewed,

- September 2008 Monthly Monitoring Report
- Nunavut Water Board (NWB) Water Licence 2BE-HOP0712

### Comments

1. Effluent discharge at monitoring station HOP-2 (WWTF effluent discharge at the surge tank prior to being pumped over the ridge east of the Windy Camp facilities) exceeded water license criteria (Part D, Item#10) for TSS, Faecal Coliform and BOD. See table below;

<b>Parameter</b>	<b>HOP-2 Sept03/08 07:00 am</b>	<b>HOP-2 Sept08/08 06:45am</b>	<b>HOP-2 Sept15/08 10:15am</b>	<b>HOP-2 Sept29/08 07:45am</b>	<b>Maximum Average Concentration</b>
BOD <sub>5</sub>	52	65	<b>240</b>	<b>122</b>	80 mg/L
Total Suspended Solids	58	72	<b>286</b>	78	100 mg/L
Faecal Coliform	<b>&gt;200</b>	<b>2,000,000</b>	<b>18,000,000</b>	<b>11,000,000</b>	10x10 <sup>4</sup> CFU/100 mL
Oil and Grease	NVS	NVS	13	5	no visible sheen
pH	7.9	7.9	7.5	7.8	between 6.0 - 9.5

Miramar Hop Bay explains;

“Sludge removal has been a critical component of bringing this plant into compliance and insufficient sludge removal during the period is likely the cause of the most recent non-compliance at the end of September. The sludge removal schedule and transfer to the new Doris Camp membrane plant has been authorized and we expect an accelerated schedule of sludge removal will bring this plant into back into compliance shortly.”

2. The water license criteria for lead, as described in Part D, Item #17 of the license, is in exceedence at sample station HOP-5. See table below.

Parameters	HOP-5 Bulk Fuel Stroge Windy Camp	Maximum AverageConcentration (ug/L)
Oil & Grease	NVS	15,000 and with no visible sheen
Benzene	<0.5	370
Toluene	<0.5	2.0
Ethylbenzene	<0.5	90
Lead	<b>2.0</b>	1.0

3. As required by Part J Item #7 of the Water Licence, the Licensee did not include the daily quantities of effluent discharged at Monitoring Station HOP-3 as well as volumes pumped Stations HOP-5, and HOP-6.
4. During the month of September, 79 drums of sludge were removed from the Windy Camp WWTF and transferred to the Doris membrane camp for treatment.

## RECOMMENDATIONS

- 1) INAC recommends that Miramar Hope Bay Ltd indicate in their next months monitoring report whether the accelerated sludge removal schedule, as quoted under comment 1, was successful in resolving the exceedences reported in the 2008 October Monthly Monitoring Report.
- 2) The Licensee should investigate and report in next months monitoring report the cause of the elevated levels of lead.
- 3) As required in Part J Item #7 of the license, in future monitoring reports the Licensee should include the daily quantities of effluent discharged at Monitoring Station HOP-3, HOP-5 (Effluent pumped from HOP-5), and HOP-6 (Effluent discharged from HOP-6)



- 4) Miramar Hope Bay Ltd should record the quantities in cubic meters of sludge removed from the WWTF. (Part J Item #8)

This information has been forwarded to INAC's Field Operations Division.

Should you have any questions or comments, please do not hesitate to contact me at (867) 975-4282 or by email at [KaradagD@ainc-ianc.gc.ca](mailto:KaradagD@ainc-ianc.gc.ca)

Regards,

Dee Karadag  
Water Resources Technician