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NUNAVUT WATER BOARD  
NUNAVUT IMALIRIYIN KATIMAYINGI  
OFFICE DES EAUX DU NUNAVUT

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File: 2BB-MRY0710/D13

August 10, 2009

Jim Millard, M.Sc., P.Geo.  
Senior Environmental Superintendent  
Baffinland Iron Mines Corporation  
Suite 1016 120 Adelaide Street West  
Toronto, ON  
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By email: [jim.millard@baffinland.com](mailto:jim.millard@baffinland.com)

**Subject: Submission of the Waste Water Management Plan – Revision 1, under Water Licence 2BB-MRY0710, Part D, Item 13**

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Dear Mr. Millard,

The Nunavut Water Board (NWB) received the above-cited revised Waste Water Management Plan (WWMP), submitted in accordance with Part D, Item 13 of Licence 2BB-MRY0710, on April 20, 2009. The document was distributed for review with a comment deadline of July 16, 2009. Comments were received from the Government of Nunavut Department of Environment (GN-DoE) and Environment Canada (EC). The NWB also appreciates the response to these comments as provided by the Licensee on July 24, 2009. These submissions are made available at the Nunavut Water Board's FTP site at the following address:

<ftp://nunavutwaterboard.org/2BB%20-%20BULK%20SAMPLING/2BB-MRY/J%20Modifications/2008/>

The NWB has reviewed the submissions and after taking into consideration the recommendations made by both parties, hereby approves the revised WWMP, including the technical strategy for the Polishing Wastewater Stabilization Pond (PWSP) discharge during 2009 under **Motion 2009-09-L05**, dated **August 10, 2009**. However, in doing so, the NWB notes the following for the Licensee's attention.

In the Board's view, an important issue is that the Rotating Biological Contactors (RBC) at Mary River and Milne Inlet have not functioned as intended resulting in an accumulation of effluent in the Polishing Wastewater Stabilization Ponds (PWSP).

The PWSPs were constructed at Mary River and Milne Camps to temporarily store noncompliant effluent generated from the Mary River and Milne Camps' rotary biological contactor (RBC) sewage treatment plants (STPs). In 2007, one PWSP facility was constructed in each of our Mary River and Milne Inlet camps. Due to start-up issues related to our RBC at the Mary River Camp, a modification request was submitted to the Nunavut Water Board (NWB) in April 2008. The purpose of the requested modification

was to construct additional PWSP facilities that would provide added storage capacity for non-compliant sewage effluent<sup>1</sup>.

The NWB understands that the PWSPs were implemented as a primary contingency measure during RBC upset conditions. In its approval letter of May 7, 2008, the NWB authorized the construction of additional PWSPs to increase contingency pond capacity. A condition of the approval was that:

Once the Waste Water Treatment Facilities are operational and treated effluent has met licensing criteria for discharge to the environment, the holding ponds are to be reduced in volume by further treatment and release to provide maximum holding capacity in the event of system upsets or malfunctions. The Operations and Maintenance Manual should provide direction on the optimal operation of the facilities to ensure the above<sup>2</sup>.

The intent of the condition was to direct the Licensee to re-circulate the partially treated effluent through the RBCs once the facilities were operational. However, the Board realizes that given the operational issues with the RBCs and their limited capacity to treat the currently stored volumes, the newly proposed in situ treatment will be required, at this time, in order to prevent the release of non-compliant effluent.

In addition to Part J, Items 3 and 4, the NWB has imposed monitoring requirements to ensure that discharge from the PWSPs, during the short 2009 season, meets the discharge limits set out in Part D, Items 10, 11, and 12 of the Licence. The additional requirements are as follows:

1. For the 2009 PWSP discharge season, the Licensee shall monitor effluent from each PWSP for compliance verification purposes, once prior to discharge, once during discharge and once prior to terminating discharge;
2. The volume of effluent discharged from each PWSP shall be recorded; and
3. The results of the 2009 PWSP discharge monitoring shall be presented in the 2009 Annual Report.

The Licensee is also reminded of conditions of Part D, Item 1, 7 and 14 which relate to waste disposal operations applicable to the PWSPs.

In the event PWSP in situ effluent treatment is required beyond the 2009 discharge season, the Licensee is advised to submit an application to amend the Licence. The Board also anticipates that the Licensee will work towards achieving reliable operation of the RBCs.

Finally, the revised WWMP has been approved by the Board subject to a second revision to be provided with the 2009 Annual Report. The second revision to the WWMP should include the following:

1. An executive summary of the WWMP in English with Inuktitut translation in accordance with Part B, Item 14;
2. An update to the sludge management plan, following sludge characterization during the 2009 open water season;
3. A schedule/frequency of RBC inspections; and
4. Where appropriate, the integration of information provided in response to comments received during the review of WWMP revision 1.

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<sup>1</sup> Letter from Jim Millard, Baffinland Iron Mines, to Phyllis Beaulieu, NWB dated June 9, 2009. Pg 1.

<sup>2</sup> Letter from David Hohnstein, NWB, to Derek Chubb, Baffinland Iron Mines Corporation, dated May 7, 2008. Pg 2, condition ii.

The NWB supports the continued efforts of interested parties and the Licensee in working cooperatively to address issues that arise during the development and review of management plans. Should you have any questions regarding the above, please do not hesitate to contact me.

Yours truly,

*Original signed by :*

David Hohnstein, C.E.T.  
A/Director Technical Services

DH/sl

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