

June 13, 2007

Phyllis Beaulieu Manager of Licensing Nunavut Water Board PO Box 119 Gjoa Haven, Nunavut X0B 1J0

**Re:** Mary River Project - Bulk Sampling Program

Class "B" Water License Amendment Application

File 2BE-MRY

Ms. Phyllis Beaulieu:

Baffinland Iron Mines Corporation (Baffinland) is in receipt of three (3) submissions made to the Nunavut Water Board in response to a request for comments on the above noted application. Submissions were received from the Government of Nunavut, Department of Environment, the Water Resources Division of Indian and Northern Affairs Canada, and the Environment Canada. Baffinland understands that this is the extent of submissions received during the review period provided by the Board.

Baffinland offers the following in response to the questions and comments posed by reviewers of this application.

## Government of Nunavut, Department of Environment (GN)

Acid Rock Drainage (ARD) and Metal Leaching (ML). Baffinland attaches to this letter a report from our consultant, Knight Piésold that provides the latest results from geochemical analysis. The risk for ARD and ML, specifically as it relates to the Bulk Sample Program is low. However, should poor quality run-off develop, Baffinland will provide the detailed plans the GN suggests and implement appropriate contingency measures to mitigate potential risk to the receiving environment. The approach and costs to implement contingency measures have been identified in the Abandonment and Restoration Plan which is also attached to this letter. With respect to the effectiveness of calcareous materials to neutralize any acid generation, this is a standard approach in the mining industry with proven effectiveness.

*Drill Site Run-Off.* GN requests that Baffinland implement improved exploration drilling practices to reduce the potential for poor quality water from entering nearby water sources. Although not relevant to the scope of the current application in front of the Board, Baffinland directs GN to the *Site Water Management Plan* developed under for the exploration and geotechnical program.

Ammonia Run-Off. Baffinland commits to continue to monitor for ammonia.

Surface Water Quality Monitoring. Baffinland has committed to a lower detection limit for Cadmium.

*Sewage Management.* The GN requests that Baffinland collect Sheardown Lake baseline water quality prior to the discharge of treated sewage and to submit a Sewage Management Plan in support of the



facility design and operation. As stated by the GN, Baffinland upgraded the design basis for the sewage facility to a tertiary level facility that includes the removal of nutrients. Baffinland commits to the submission of a Sewage Management Plan to the Board prior to discharge to the receiving environment.

Spill Contingency Plan. Baffinland appreciates the suggestions made by the GN with respect to the Spill Contingency Plan. Baffinland will consider these suggestions in its update of its current Spill Contingency Plan to include the scope and activities of the Bulk Sample Program. This update is currently underway.

*Waste Incineration*. Baffinland is currently commissioning the installation of this new incinerator for use at existing camp operations. Confirmatory stack testing will be conducted as committed.

Abandonment and Restoration. As stated above, the risk for ARD or ML associated with the Bulk Sample Program is low. However, costs to address the unlikely situation of poor quality run-off developing that may have an impact on the receiving environment have been included in the Abandonment and Restoration Plan as a contingency.

## Indian and Northern Affairs Canada, Water Resources Divisions (INAC)

*Geochemical Analysis*. Baffinland attaches to this letter a report from our consultant, Knight Piésold that provides the latest results from geochemical analysis for the 25 waste rock and ore samples requested by INAC.

Sewage Management. The "Weatherhaven" accommodations complex and the sewage treatment plant required to support the Bulk Sample Program will both arrive on-site with the August sea-lift; and the construction schedule reflects a priority on commissioning the sewage treatment facility as soon as possible after delivery. In the meantime, Baffinland has submitted its Sewage Management Plan to the Board for the commissioning of a package treatment facility at the existing, 100 people capacity Mary River Camp. The near-term commissioning of this facility will remove the need for the continued use of latrines. Baffinland commits to the submission of a Sewage Management Plan to the Board for the facility accompanying the "Weatherhaven" prior to its discharge to the receiving environment. While the term "pit latrines" has been used to describe the current sewage disposal arrangement, this is somewhat misleading. Sewage from the latrines is collected in drums and is incinerated; there are no "pits" excavated in the ground and therefore no potential for runoff to arise from the latrines.

*Landfill Design*. Baffinland intends on submitting details on the design of its inert waste landfill to the Board, prior to its commissioning.

*Explosives Management*. Baffinland will be using pre-packaged explosives for the bulk sample program. The use of this type of explosives delivery reduces the potential for ammonia spillage and inefficient blasting; both of which can result in higher than needed residual ammonia release. Efficient use of explosives has positive environmental and economic benefits.

*Construction Environmental Monitoring Plan*. Baffinland has committed to the submission of an Environmental Monitoring Plan in support of the Bulk Sampling Program.



Site Drainage and Stormwater Management. Water will be discharged to the land adjacent to fuel containment areas only if there is no visible hydrocarbon sheen. Should a hydrocarbon sheen be present, collected precipitation will be discharged after being processed using an oil-water separator.

## **Environment Canada**

*Regulatory*. Baffinland will add the referenced act and regulation to the list of applicable legislation in the CEMP.

Fuel Storage. Baffinland appreciates this input.

Landfill. Baffinland appreciates EC identification of an apparent discrepancy in the approach to the disposal of fuel storage facility liner. The Abandonment and Restoration Plan attached to this letter has been updated to reflect disposal of this liner to a licensed off-site facility. Landfill operating standards will follow applicable guidelines and form part of a site-wide waste management plan which is an element of the Construction Environmental Monitoring Plan (CEMP).

*Incineration*. Incineration practices are one element of the broader site-wide waste management plan and is an element of the CEMP referenced above. Baffinland will discuss the details of this plan with EC and adapt it as warranted.

Quarry. Baffinland submits that 30 metres is a common regulatory standard imposed for work adjacent to water. Operational controls further reduce the risk of potential impacts to nearby water bodies. Potential problematic rock for ARD has not been identified with any of the quarry materials to be used in support of this program.

*Water Quality*. EC requests that Baffinland implement improved exploration drilling practices to reduce the potential for poor quality water from entering nearby water sources. Although not relevant to the scope of the current application in front of the Board, Baffinland directs EC to the *Water Management Plan* developed under for the exploration and geotechnical program.

Acid Rock Drainage (ARD) and Metal Leaching (ML). Baffinland attaches to this letter a report from our consultant, Knight Piésold that provides the latest results from geochemical analysis. The risk for ARD and ML, specifically as it relates to the Bulk Sampling Program is low, as is the potential for the ammonia to be present at concentrations above CCME Guideline levels. As such, material handling for the weathered ore stockpile or the shallow open pits beyond that proposed is not required. Static and kinetic test work will continue for use in planning for a full-scale mining operation. However, in the remote case in which poor quality run-off develops, Baffinland will implement appropriate contingency measures to mitigate potential risk to the receiving environment. Costs to implement appropriate contingency measures have been incorporated into the Abandonment and Restoration Plan which is also attached to this letter.

Waste Management. Baffinland re-iterates its commitment made as part of supplemental information requests during the environmental screening of this project by the Nunavut Impact Review Board (NIRB), to upgrade the originally proposed facility for the Bulk Sampling Program to include the treatment of both nitrogen and phosphorus. It would appear that the concerns posed by Environment Canada are related to the design presented in the Environmental Screening Document, and not as revised through the screening



process. Baffinland further highlights that the facility will be treating to levels exceeding currently accepted practice in similar installations throughout the Northwest Territories and Nunavut.

Migratory Birds/ Species At Risk. Baffinland appreciates and will consider the input provided by Environment Canada as it relates to Migratory Birds, Species at Risk and related concerns. Much of this input is outside of the scope of a Water License. That being said, Baffinland agrees with Environment Canada in their emphasis on waste management practices to reduce potential interactions with wildlife.

Should you have any questions, please do not hesitate to contact the undersigned at 416-814-3171 or Derek.chubb@baffinland.com.

Best Regards,

**Baffinland Iron Mines Corporation** 

Derek Chubb

VP, Sustainable Development