



Water Resources Division  
Nunavut Regional Office  
P.O. Box 100  
Iqaluit, NU, X0A 0H0

July 11, 2018

Ida Porter  
Licence Administrator  
Nunavut Water Board  
P.O. Box 119  
Gjoa Haven, NU, X0B 1J0

sent via email: [licensing@nwb-oen.ca](mailto:licensing@nwb-oen.ca)

Your file - Votre référence  
2AM-MRY1325

Our file - Notre référence  
CIDM#1222907

**Re: Crown-Indigenous Relations and Northern Affairs Canada's comments on Baffinland Iron Mines Corporation's modification request #5 for the Mine Site Crusher Pad Sedimentation Pond Expansion under water licence #2AM-MRY1325 Amendment #1 – Mary River Project**

Dear Ms. Porter,

Thank you for your June 28, 2018 invitation for technical review comments on the above referenced modification request.

The Water Resources Division of Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) examined the request and the results of our review are provided in the enclosed memorandum for the Nunavut Water Board's consideration. Comments have been provided pursuant to INAC's mandated responsibilities under the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* and the *Department of Indian Affairs and Northern Development Act*.

CIRNAC appreciates the opportunity to participate in this review. If there are any questions or concerns, please contact Wajid Daouda at (867) 975-4657 or [wajid.daouda@canada.ca](mailto:wajid.daouda@canada.ca).

Sincerely,

Sarah Forté  
Water Management Specialist

## **Technical Review Memorandum**

To: Ida Porter, Licence Administrator, Nunavut Water Board

From: Sarah Forté, Water Management Specialist, Water Resources Division, CIRNAC

Date: July 10, 2018

Re: Modification Request #5 for Water Licence 2AM-MRY1325 Amendment #1 –  
Mine Site Crusher Pad Sedimentation Pond Expansion

Applicant: Baffinland Iron Mines Corporation  
Project: Mary River  
Region: Qikiqtani

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### **A. BACKGROUND**

The 2018 Work Plan for the Mary River iron mine includes the expansion of the Mine Site Crusher Pad Sedimentation Pond, to increase its capacity in order to meet the requirements of an expanded crusher pad.

The Nunavut Water Board (Board) circulated Baffinland Iron Mines Corporation's (Baffinland) submission "Mary River Project – Mine Site Crusher Pad Expansion, Modification Request No. 1, Water Licence 2AM-MRY1325" for review for the crusher pad expansion. Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) submitted comments for this request on June 13, 2018. A further request for comments regarding the crusher pad pond expansion was circulated by the Board with the same document. CIRNAC wrote an email with a concern on July 3, 2018, and this memo offers some precision on the comment.

### **B. RESULTS OF REVIEW**

On behalf of CIRNAC Water Resources, the following comments and recommendations are provided for the Board's consideration.

#### **1. Issued-for-construction and as-built plans**

##### **Reference:**

- Crusher Pond Sedimentation Pond Expansion Detailed Design Brief, Mary River Project, Nunavut, Golder Associates Ltd., August 29, 2017
- Crusher Pad Expansion Detailed Design Brief, Mary River Project, Nunavut, Golder Associates Ltd., April 17, 2017

Comment:

The August 29, 2017 Brief includes plans of the sedimentation pond, but not of the pad expansion. The pad expansion plan we were able to find is the first figure in the April 17, 2017 brief. The issued-for-construction plan includes a red outline of the limit of stockpile, provided by Baffinland. The stockpile on site appears to cover a greater area than what is drawn. Additionally, the north eastern end of the ditch was extended northward to capture runoff from the extended stockpile.

It is not possible to evaluate the adequacy of pond capacity without updated plans.

Recommendation:

As requested in our June 13 letter and July 3 email, Baffinland should provide as-built drawing for the crusher pad.

## **2. Pond capacity**

Reference:

- Response to INAC's letter dated November 10, 2017 regarding Baffinland's proposed crusher pad sedimentation pond expansion, Mary River Project, Golder Associates Ltd., May 9, 2018, Attachment A

Comment:

Section 1 on sedimentation pond capacity includes Table 1, which contrasts dimensions from two Design Briefs on the pond expansion. The last row of the table is labelled "Pond capacity necessary for 10% pad expansion", however the crusher pad expansion proposed in the August 29 Brief, 18 500 m<sup>2</sup>, is equivalent to a 21% increase in area.

Recommendation:

Baffinland should confirm the pond capacity will be sufficient for the proposed pad size, which is unclear at this time.

## **3. Second crusher pad expansion**

Reference:

- Crusher Pad Expansion Detailed Design Brief, Mary River Project, Nunavut, Golder Associates Ltd., April 17, 2017
- 2017 Work Plan, Baffinland, November 4, 2016

Comment:

The issued-for construction pad expansion plan in the April 17 Brief is for an extension to the south east of the existing pad. Appendix C2 of the 2017 Work Plan is a mine site crusher pad extension sketch, where the south eastern extension is labelled phase 1, 8 200 m<sup>2</sup>, and there is a 17 500 m<sup>2</sup> phase 2 area to the north west. No plans have been provided for the second extension.

The cover letter for the April 17 Brief specified that the modification request was only for phase 1, and that extra pond capacity was being built in for future expansion.

Recommendation:

Baffinland should confirm the second pad expansion is not being considered in this 2018 modification request.

#### **4. Rainfall and freshet design criteria**

Reference:

- Response to INAC's letter dated November 10, 2017 regarding Baffinland's proposed crusher pad sedimentation pond expansion, Mary River Project, Golder Associates Ltd., May 9, 2018, Attachment A

Comment:

CIRNAC appreciates the effort taken to review the design criteria for rainfall and freshet flows. We agree with the conclusion that, at present, the data does not warrant changing the criteria.

The discussion notes that for four out of the six years of streamflow records at the gauge H11, the time series begins after freshet. We encourage Baffinland to install loggers sufficiently early to measure freshet flows, when it is safe to do so.