



Water Resources Division  
Resource Management Directorate  
Nunavut Regional Office  
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Your file - Votre référence  
2AM-MRY1325  
Our file - Notre référence  
CIDM#1254070

June 21, 2019

Assol Kubeisinova  
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Nunavut Water Board  
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**Re: Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC)  
Reply to Baffinland Iron Mines Corporation Response to CIRNAC  
Comments on Modification Request No. 12 for Milne Port Ore Stockpile  
No.1 and Water Management Expansion for the Mary River Project, Water  
Licence No. 2AM-MRY1325 – Amendment No. 1.**

Dear Ms. Kubeisinova,

Thank you for your June 14, 2019 invitation for Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) to comment on Baffinland Iron Mines Corporation (Baffinland) response to CIRNAC comments regarding Modification Request No. 12 for Milne Port Ore Stockpile No.1 and Water Management Expansion for the Mary River Project, Water Licence No. 2AM-MRY1325 – Amendment No. 1.

CIRNAC has further questions regarding Baffinland's rationale for Modification No. 12. In the case that the review does not continue as part of the Phase 2 assessment, further review comments are provided pursuant to CIRNAC's mandated responsibilities under the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* and the *Department of Indian Affairs and Northern Development Act*.

## **1. Comparison to Phase 2 Amendment Application**

### References:

- Baffinland Iron Mines Corporation, Modification Request No. 12: Milne Port Ore Stockpile #1 and Water Management Expansion, Mary River Project, Water Licence 2AM-MRY1325 - Amendment No. 1, Figure 1, May 3, 2019.
- Baffinland Iron Mines Corporation, *Response to CIRNAC Review of Baffinland Iron Mines Corporation Modification Request No. 12 for Milne Port*



*Ore Stockpile No.1 and Water Management Expansion for the Mary River Project, Water Licence No. 2AM-MRY1325 – Amendment No. 1., June 14, 2019.*

- Knight Piésold Ltd. On behalf of Baffinland Iron Mines Corporation, Mary River Project Phase 2 Proposal: Updated Application for Amendment No. 2 of Type A Water Licence 2AM-MRY1325, Figure 1.3, May 2, 2019.

Comment:

CIRNAC considered Baffinland's rationale for a horizontal expansion of the ore stockpile laydown pad to separate customer-owned piles, and that having additional stockpile capacity would aid current operations. However, if CIRNAC is to accept this premise, it is unclear whether another expansion will be anticipated if Phase 2 is approved, given that ore volume will be increased and the number of buyers may also increase. CIRNAC finds that the rationale provided for Modification No. 12 contradicts the information provided in the Phase 2 application submission.

Refer to page 16 of the Main Document for the Phase 2 proposal submission, Table 1.1, Item 15, in which Baffinland states, "Water management facilities at the Mine Site and Milne Port will be upgraded to accommodate expanded ore crushing pads, stockpiling areas and rail loading and offloading facilities." Also refer to Item 30 in which Baffinland states, "Ore stockpile runoff management facilities will be expanded to accommodate larger ore stockpiles and the relocation of ore crushing and screening operations from the Mine Site to Milne Port." The drawings provided as part of the Phase 2 application submission, specifically Figure 1.3 of the Main document and Figure 3 of the Executive Summary, show no expansion beyond what is proposed in Modification No. 12. If there are no further plans to expand, this leads CIRNAC to believe that the Modification No. 12 expansion is intended for Phase 2. If there are more details of the Phase 2 expansion proposal that CIRNAC is missing, we would prefer that this information be provided to us as soon as possible to better inform our review.

Recommendation:

CIRNAC recommends that Baffinland provide more information to clarify whether further expansion is planned for the stockpile laydown area during Phase 2, and if so, to provide the intended dimensions and directions by which it will be expanded. If the stockpile is not to be further expanded during Phase 2, CIRNAC requests clarification on how the projected increase in ore stockpiling will be accommodated.

## **2. Stage 2 Stockpile Laydown Area Expansion over Water Bodies**

References:

- Baffinland Iron Mines Corporation, Modification Request No. 12: Milne Port Ore Stockpile #1 and Water Management Expansion, Mary River Project, Water Licence 2AM-MRY1325 - Amendment No. 1, May 3, 2019.
- Crown-Indigenous Relations and Northern Affairs Canada, Submission to Nunavut Water Board Re: *Crown-Indigenous Relations and Northern Affairs*



*Canada's follow up to response to comments on Baffinland Iron Mines Corporation's Modification Request No. 7 – 2018 Upgrades at the Mine Site and Milne Port (Water Licence 2AM-MRY1325 – Amendment No. 1), August 1, 2018.*

- Nunavut Water Board Licence No. 2AM-MRY1325 – Amendment No. 1 for the Mary River Project, Baffinland Iron Mines Corporation, Dated July 21, 2015.

Comment:

If this modification request is determined to be unrelated to the proposed Phase 2 amendment, CIRNAC has concerns with the proposed Stage 2 Milne Port Ore Stockpile Laydown Area being expanded over a water body. A similar concern was raised through CIRNAC's review of Modification Request No. 7 for Upgrades at the Mine Site and Milne Port, and our February 12, 2018 letter to the NWB during the Annual Security Review, regarding the in-filling of water bodies. The licence terms and conditions regarding activities within 31m of water-bodies are applicable to any water-body. Licence 2AM-MRY1325 - Amendment No. 1, Part D, Item 25 states:

The Licensee shall prevent the deposition of debris or sediment from entering into or onto any Water body, with respect to the construction of access roads, site laydown pads and areas or other earthworks. These materials shall be disposed of at a distance of at least thirty one (31) metres from the ordinary High Water Mark in such a manner that they do not enter the Water.

CIRNAC notes that Baffinland has also indicated in the Modification Request No. 12 (page 1) that the Stage 2 spatial area within this request "... is also subject to a Request for Review by Fisheries and Oceans Canada (DFO) as the footprint of the Stage 2 area extends across a pond and portion of a stream that may comprise fish habitat." CIRNAC's interpretation of Part D, Item 25, is that building over top of these water bodies would directly contravene the licence.

CIRNAC is aware of Part G, Item 2 in the licence that allows the proponent to make modifications in contravention to the licence conditions with written approval from the NWB, and is aware that the NWB has approved the in-filling of surrounding water bodies as part of Modification No. 7, deemed to be depressions with standing water. However, as the stream and pond in question support fish habitat, CIRNAC does not support the Ore Stockpile Laydown Area should being extended over this water body.

Recommendation:

CIRNAC considers Stage 2 of this modification request to be prohibited under the Water Licence and therefore recommends that Baffinland seek an alternate storage arrangement for the Stage 2 portion of the ore stockpile laydown.



### **3. Best Practices Design Criteria for Ponds**

#### References:

- Baffinland Iron Mines Corporation, Modification Request No. 12: Milne Port Ore Stockpile #1 and Water Management Expansion, Mary River Project, Water Licence 2AM-MRY1325 - Amendment No. 1, May 3, 2019.

#### Comment:

Runoff coefficients (represented in equations by the letter  $c$ ) are unit-less coefficients which range from 1.0 to 0.0. They represent the tendency of water to flow along a surface material or be absorbed into it. Runoff coefficients closer to 1.0 are used for impermeable surfaces with high tendency for overland flow while runoff coefficients closer to 0.0 are used for highly permeable surfaces with high tendency for water to be absorbed into the surface.

The rationale upon which the selection of the runoff coefficient has been determined for the Milne Port Ore Stockpile and associated water management structures is unclear. Under section 6.6 of the submission, Baffinland states that the Civil Design Criteria will be followed for sedimentation ponds with the exception of the runoff coefficient, which will be  $c = 0.9$ . Further, under Section 7.4 of the submission pertaining to sedimentation ponds, Baffinland states the following: "Runoff coefficient to estimate runoff shall be 0.9 for all drainage areas except the Milne Port Ore Stockpile footprint, for which the runoff coefficient shall be 0.0 as per BIM's instructions."

Clarification of the design rationale will help CIRNAC to better understand this inconsistency, and to ensure that the design criteria chosen for the proposed infrastructure will reflect best practices.

#### Recommendation:

CIRNAC requests that Baffinland clarify the design criteria with respect to ponds construction.

### **4. Details on Construction Drawings**

The engineering drawings require some details regarding transfer towers and conveyor berms ends, and the placement of rip raps. Further, CIRNAC reminds Baffinland that non-potentially acid generating (NPAG) material must not be used as rip rap.

#### Recommendation:

CIRNAC request that Baffinland update the drawings to provide the following details: transfer towers and conveyor berms ends, placement of rip raps, and a clear statement indicating that NPAG material will not be used as rip rap.



If there are any questions or concerns surrounding the above comment, please contact me at (867) 975-4282 or [bridget.campbell@canada.ca](mailto:bridget.campbell@canada.ca), or the Manager of Water Resources, Godwin Okonkwo, at (867) 975-4550 or email [godwin.okonkwo@canada.ca](mailto:godwin.okonkwo@canada.ca).

Sincerely,

Bridget Campbell,  
Water Resources Coordinator

CC: Lou Kamermans, Baffinland Iron Mines Corporation  
Assol Kubeisinova, Nunavut Water Board