



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

Your file - Votre référence
2AM-MRY1325

May 14, 2019

Our file - Notre référence
CIDM#1250025

Ms. Ida Porter
License Administrator
Nunavut Water Board
Gjoa Haven, NU X0B 1J0

Sent via email: licensing@nwb-oen.ca

**Re: Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC)
Completeness Review for Baffinland Iron Mines Corporation (BIMC) Second
Submission of Phase 2 Amendment Application for the Mary River Project
under Type "A" Water Licence No. 2AM-MRY1325 Amendment No. 1.**

Dear Ms. Porter,

Thank you for your May 5, 2019, invitation to interested parties to submit Information Requests to the proponent as part of a completeness review for Baffinland Iron Mines (Baffinland) second submission for the application for Phase 2 of the Mary River Project (the Application), which requires an amendment to the Type "A" Water Licence No. 2AM-MRY1325 Amendment No. 1.

CIRNAC reviewed the Application. Comments and Information Requests are provided in Attachment A pursuant to CIRNAC's mandated responsibilities from the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* and the *Department of Indian Affairs and Northern Development Act*.

If you have any questions or require further information with respect to this matter, please contact me at (867) 975-4282 or email bridget.campbell@canada.ca.

Regards,

Bridget Campbell
Water Resources Coordinator, Nunavut Regional Office

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



Attachment A: Completeness Review

To: Ida Porter, License Administrator, Nunavut Water Board

From: Bridget Campbell, Water Resource Coordinator, Water Resources Division, CIRNAC

Date: May 14, 2019

**Re: Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC)
Completeness Review for Baffinland Iron Mines Corporation (BIMC) Second
Submission of Phase 2 Amendment Application for the Mary River Project
under Type "A" Water Licence No. 2AM-MRY1325 Amendment No. 1.**

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

A. BACKGROUND

Baffinland Iron Mines Corporation (Baffinland) submitted an application to the Nunavut Water Board (NWB) to amend NWB Water Licence No. 2AM-MRY1325 - Amendment No. 1 for Phase 2 on October 1, 2018. Baffinland requested a Coordinated Process between the Nunavut Impact Review Board (NIRB) and the NWB.

In response to this application, Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) submitted a set of Information Requests (IRs) on November 28, 2018 to the NWB. Of these IRs, six (6) were unique to the Water Licence Review Process and were in the following subject areas:

- CIRNAC IR #1: Incremental Mining Activities Associated with Increased Production Rate
- CIRNAC IR #2: Waste Rock Management
- CIRNAC IR #3: Closure Planning
- CIRNAC IR #4: Borrow Material and Rock Cut Characterization
- CIRNAC IR #5: Updates to Management Plans
- CIRNAC IR #6: Surface Water Monitoring

As part of the same November 28 submission, CIRNAC provided ten (10) IRs to the NWB, which were identical to the IRS submitted by CIRNAC to the NIRB as part of the Environmental Assessment process. These IRs were in the following subject areas:

- CIRNAC IR #7 – 11: Groundwater and Surface Waters (NIRB IRs #8 – 12)
- CIRNAC IR #12 – 14: Landforms, Soils, and Permafrost (NIRB IRs #13 – 15)



- CIRNAC IR #15 – 16: Waste Management (NIRB IRs #16 – 17)

Baffinland responded to IRs on December 21, 2018. On January 7, 2019, CIRNAC wrote a letter to the NWB indicating that this response did not provide enough information to satisfy CIRNAC's IRs. CIRNAC indicated that it considers the Acid Rock Drainage/Metal Leachate (ARD/ML) and closure issues to be of critical importance to the environmental management of the project. CIRNAC recommended to the NWB that the management plans be updated and reviewed before the water licence amendment is approved and Phase 2 implemented, asserting that doing so would provide CIRNAC with a higher degree of confidence that the overall environmental management strategy for the site is appropriate.

On January 18, 2019, on the request of the NWB, CIRNAC wrote a letter to the NWB indicating that enough information to proceed to the Technical Review had not been received. The NWB then determined that a Coordinated Assessment would no longer be feasible and that Baffinland was to resubmit all outstanding requested information by May 1, 2019.

Baffinland submitted a second application to the Nunavut Water Board (NWB) to amend NWB Water Licence No. 2AM-MRY1325 - Amendment No. 1 for Phase 2 on May 5, 2019. CIRNAC reviewed this submission for completeness. The results of this review are provided in Section B.

B. RESULTS OF REVIEW

The review conducted by CIRNAC is summarized in Table 1. Waste Rock Management remains to be an unresolved issue. CIRNAC appreciates that Baffinland has submitted an Interim Waste Rock Management Plan, which CIRNAC will review during the Technical Review stage. This Interim Waste Rock Management Plan is intended to further investigate the source of the ARD/ML to better inform the management strategy in the Phase 1 Waste Rock Management Plan when it gets updated in December, 2019.

CIRNAC is making two (2) requests for information. The first request is that the Blasting Management Plan and the Quarry QMR2 Management Plan, or details of their proposed edits, be submitted prior to the Technical Meeting. This IR was also made in CIRNAC's previous submissions. The second request is that the Phase 1 Waste Rock Management Plan be submitted for review when it is finalized in December, 2019.

CIRNAC is ready to move to the Technical Review Stage with the understanding that the information requested in this submission will be received as requested. CIRNAC would prefer an in-person Technical Meeting and defaults to the decision made by the NWB.



Table 1: Results of CIRNAC Review

	Relevant IRs	Topic
1	IR 1, 2, 8, and 16	Waste Rock Management
<p>Monitoring data provides evidence that waste rock produced by the Mary River Project has the potential to result in ARD/ML impacts that are worse than previously assumed. CIRNAC recommended that the revised Waste Rock Management Plan undergo a comprehensive review and approval process prior to approving the licence and initiating any Phase 2 waste rock production.</p> <p>The Phase 1 Waste Rock Management Plan (Attachment 31) and Life-of-Mine Waste Rock Management Plan (Attachment 32) remain unchanged. The Phase 1 Waste Rock Management Plan is expected to be submitted December 31, 2019, which is five months after the Technical Meeting is anticipated to occur.</p> <p>An Interim Waste Rock Management Plan (IWRMP) was submitted with the 2018 Annual Report. The IWRMP is a short term plan intended to inform the management strategies in the next version of the Phase 1 Waste Rock Management Plan and intended to remain in effect until the Phase 1 Waste Rock Management Plan is issued in December 2019. The IWRMP includes Baffinland's intentions for further study but no changes to the overall management strategy in the interim. Section 2.3 of the IWRMP outlines a planned 2019 Thermal and Geochemistry Program. These results, as well as an updated rock production schedule, are intended to be included in the December 2019 version of the Phase 1 Waste Rock Management Plan.</p> <p>Information Request:</p> <p>CIRNAC understands that the Phase 1 Waste Rock Management Plan cannot be effectively updated without better understanding the cause of the ARD/ML issue and will evaluate the sufficiency of the IWRMP in the Technical Review. However, CIRNAC requests that the revised Phase 1 Waste Rock Management Plan undergo a review and approval process once it is updated, prior to approval of the licence and initiating any Phase 2 waste rock production, before the Public Hearing planned for January, 2020.</p>		
2	IR 3, 13, and 14	Closure Planning
<p>CIRNAC recommended that a revised ICRP be provided for review during the current water licence amendment process.</p> <p>A new Draft Interim Closure and Reclamation Plan (Attachment 29) is provided (Dated May 1, 2019). This new draft plan seems to be a revision of a previous interim closure and reclamation plan dated October 30, 2018. CIRNAC will assess the adequacy of these</p>		



updates during the Technical Review phase.

3

IR 4, 7, and 9

Borrow and Rock Cut Characterization

Given the potential environmental risks associated with ARD/ML from quarried rock and cut/fill excavations, CIRNAC recommended that BIMC present an in-depth description justifying their conclusion that additional geochemical characterization is not warranted.

New information is provided in Attachment 9 (i.e., geochemical characterization) and Attachment 26 (i.e., Borrow Pit and Quarry Management Plan). CIRNAC will assess the adequacy of this new information during the Technical Review phase.

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IR 5, 6, 10, and 11

Updates to Management Plans

The following updated (draft) Management Plans have been submitted for review and their adequacy will be evaluated during the Technical Review:

- Emergency Response Plan
- Spill Contingency Plan
- Surface Water, Aquatic Ecosystem Management Plan
- Freshwater Supply, Sewage, and Wastewater Management Plan
- Waste Management Plan
- Hazardous Materials and Hazardous Waste Management Plan
- Borrow Pits and Quarry Management Plan
- Environmental Protection Plan
- Interim Waste Rock Management Plan

Quarry Specific Management Plans are to be submitted with the development of each quarry. The Snow Management Plan, containing the snow stockpile area information, is anticipated to be submitted on May 13, 2019. CIRNAC expects to evaluate Snow Management Plan during the Technical Review.

In addition, Baffinland has submitted maps which indicate where new SNP stations will be located in relation to watercourses and new facilities, with the exception of the Ore Staging Area Stormwater Pond (SNP Site OS-01) along the Northern Transportation Corridor (at km 57). Adequacy of the locations and the effectiveness of the SNP and other monitoring programs in monitoring for environmental impacts from the mining activities will be evaluated during the Technical Review.

However, the Blasting Management Plan and the Quarry QMR2 Management Plan were not submitted.



Information Request:

CIRNAC requests that the Blasting Management Plan and the Quarry QMR2 Management Plan be submitted prior to the Technical Meeting.

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IR 12

Risk of Excessive Settlement of Railway Embankments

CIRNAC requested that Baffinland provide additional detail on geological conditions and embankment designs within the railway corridor. Further information was provided in Baffinland's response and the adequacy of that information will be assessed during the Technical Review phase.

6

IR 15

Comparison of the Approved Project and Phase 2 Proposal

Tables 4.1 and 4.2 of the Main Report outline expected changes in waste facilities and quantities. The Hazardous Waste Management Plan outlines expected management for fuel and explosives. The adequacy of these changes and these management strategies will be evaluated in the Technical Review.