



Water Resources Division  
Resource Management Directorate  
Nunavut Regional Office  
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Your file - Votre référence  
2AM-MRY1325  
Our file - Notre référence  
CIDM# 1286926

July 15, 2020

Robin Ikkutisluk  
Licensing Administrator  
Nunavut Water Board  
P.O. Box 119  
Gjoa Haven, NU, X0B 1J0  
E-mail: [licensing@nwb-oen.ca](mailto:licensing@nwb-oen.ca)

**Re: Crown-Indigenous Relations and Northern Affairs Canada Satisfaction with Proponent Response to Review Comments for the Construction Summary Reports for the Mine Site Waste Rock Facility Pond Expansion and Drainage System for the Mary River Project, Water Licence No. 2AM-MRY1325 – Amendment No. 1**

Dear Ms. Ikkutisluk,

Thank you for your July 8, 2020 invitation to review the proponent response to Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) review comments regarding the referenced Construction Summary Reports for the Mine Site Waste Rock Facility Pond Expansion and Drainage System for the Mary River Project, Water Licence No. 2AM-MRY1325 – Amendment No. 1, submitted by Baffinland Iron Mines Corporation (BIMC) on July 7, 2020.

CIRNAC examined the responses pursuant to CIRNAC's mandated responsibilities under the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* and the *Department of Crown-Indigenous Relations and Northern Affairs Act*. Comments have been provided in the attached Technical Memorandum.

If there are any questions or concerns, please contact me at (867) 975-4282 or [bridget.campbell@canada.ca](mailto:bridget.campbell@canada.ca).

Sincerely,

Bridget Campbell,  
Water Resources Coordinator



## **Technical Review Memorandum**

**Date:** July 15, 2020

**To:** Robin Ikkutisluk – Licensing Administrator, Nunavut Water Board

**From:** Bridget Campbell – Water Management Coordinator, CIRNAC

**Subject: Crown-Indigenous Relations and Northern Affairs Canada Satisfaction with Proponent Response to Review Comments for the Construction Summary Reports for the Mine Site Waste Rock Facility Pond Expansion and Drainage System for the Mary River Project, Water Licence No. 2AM-MRY1325 – Amendment No. 1**

Region: ☐ Kitikmeot ☐ Kivalliq ☒ Qikiqtani

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### **A. BACKGROUND**

Baffinland Iron Mines Corporation (BIMC) currently operates the Mary River iron ore mine in Nunavut, Canada. The current approved project allows a total iron ore production rate of 22.2 million tonnes per annum (Mtpa). Waste rock is stored at the Waste Rock Storage Facility, which encompasses a rock pile containing potentially acid generating (PAG) rock, a surface water drainage system, contact water holding pond, and a contact water treatment plant.

BIMC submitted two Construction Summary Reports on May 21, 2020, for the Mine Site Waste Rock Facility Pond Expansion and Drainage System and for the Waste Rock Water Treatment Plant. Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) provided comments on June 22, 2020. BIMC responded to intervener comments on July 7, 2020. CIRNAC reviewed these responses.

A summary of the subjects of CIRNAC recommendations and their resolution status can be found in Table 1. A summary of the documents reviewed can be found in Table 2 of Section B. Detailed review comments are provided in Section C. References are listed in Section D.

**Table 1: Summary of Recommendations**

<b>Recommendation</b>	<b>Subject</b>	<b>Resolution Status</b>
<b>R-01</b>	As-Built Drawings for the Waste Rock Facility Pond	Resolved
<b>R-02</b>	Geotextile Performance at the Waste Rock Facility Pond	Not Resolved
<b>R-03</b>		Resolved
<b>R-04</b>	Construction Quality Control at the Waste Rock Water Treatment Plant	Not Resolved



## B. DOCUMENTS REVIEWED

The following table (Table 1) provides a summary of the documents reviewed.

**Table 2: Documents Reviewed**

Document Title	Author, File No., Date
<b>Construction Summary Report for the Mine Site Waste Rock Facility Pond Expansion and Drainage System</b>	<b>Baffinland Iron Mines Corporation, Revision 0, 2020-05-01</b>
Appendix A:	Location of Construction Relative to Lease Boundaries
Appendix B:	Concordance Tables
Appendix C:	As-Built Documentation
Appendix D:	Golder Construction Quality Control Report & Layfield QA/QC
Appendix E:	Daily Construction Reports
Appendix F:	Design Specifications
<b>Construction Summary Report for the Waste Rock Water Treatment Plant</b>	<b>Baffinland Iron Mines Corporation, Revision 0, 2020-05-21</b>
Appendix A:	Map of WRF Expansion and Drainage System
Appendix B:	Design Basis Memorandum Waste Rock Pile Water Treatment Facility
Appendix C:	Engineering Drawings
Appendix D:	Waste Rock Management Plan
Appendix E:	WTP Operations and Maintenance Manual
Appendix F:	As-Built Documentation
Appendix G:	Concordance Tables
<b>Letter to the Nunavut Water Board Re: Response to Comments on the Mine Site Waste Rock Facility Pond Expansion and Drainage System Construction Summary Report, and the Waste Rock Water Treatment Plant Construction Summary Report</b>	<b>Baffinland Iron Mines Corporation, 2020-07-07</b>
Attachment 1: Baffinland Response to Comments	Baffinland Iron Mines Corporation, 2020-07-07



## **C. REVIEW COMMENTS**

### **1. As-Built Drawings for the Waste Rock Facility Pond**

(R-01) This recommendation has been resolved.

### **2. Geotextile Performance at the Waste Rock Facility Pond**

(R-02) CIRNAC recommended that BIMC clarify whether all tests on membrane seams have been completed and reported. BIMC responded that Layfield continued to perform these tests after Golder departed site on November 27, 2019, and that test results are in Appendix F.2 and Appendix D of the Construction Summary Report.

CIRNAC found no test results in either of these appendices which were dated after November 27, 2019. CIRNAC recommends that BIMC clarify the dates that these tests were performed by Layfield, and provide the results obtained by Layfield.

(R-03) This recommendation has been resolved.

### **3. Construction Quality Control at the Waste Rock Water Treatment Plant**

(R-04) CIRNAC recommended that BIMC clarify how the granular base material was determined to be suitable for construction, and whether a third party geotechnical firm was involved in the onsite quality control. BIMC responded that granular material was reviewed for construction suitability and inspected by the on site Engineer and Geologist visually.

According to Appendix B of the Borrow Pits and Quarry Management Plan (pg. 30), “*Once quarries are under development, confirmation geochemical and visual testing will be undertaken by means of collection of a set frequency of samples, based on quantity to be quarried and available site specific characterization information.*” Given that the classification of Potentially Acid-Generating (PAG) rock is currently undergoing review on the Mary River Project site, CIRNAC recommends that BIMC confirm whether operational geochemical testing has also been undertaken at the source of the granular material to verify suitability for construction.



## D. REFERENCES

### Works Cited

Nunavut Water Board. Type “A” Water Licence No. 2AM-MRY1325 – Mary River Iron Mine Project; Amendment No. 1. Signed by Thomas Kabloona, Nunavut Water Board, for Baffinland Iron Mines Corporation. Gjoa Haven, NU: July 31, 2015.

Baffinland Iron Mines Corporation. *Borrow Pits and Quarry Management Plan*. Revision 0 – Revision 1 undergoing review as part of the Phase 2 Amendment Application. Mary River Project. 2014.