



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

Your file - Votre référence
2AM-MRY1325

June 28, 2017

Our file - Notre référence
CIDM#1156962

Licensing
Nunavut Water Board
Gjoa Haven, NU X0B 1J0

**Re: Indigenous and Northern Affairs Canada's (INAC) comments on Baffinland
Iron Mines Corporation's 2017 work plan addendum for water licence
#2AM-MRY1325 Amendment #1 – Mary River Project**

Dear Nunavut Water Board staff,

Thank-you for the email notice received from Ms. Ikkutisluk on June 6, 2017 regarding the above mentioned addendum.

INAC Water Resources Division reviewed Baffinland's workplan addendum and the results of our review are provided in the enclosed memorandum for the Board's consideration. Comments have been provided pursuant to the Department's mandated responsibilities under the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* and the *Department of Indian Affairs and Northern Development Act*.

Please do not hesitate to contact me at 867-975-3876 or sarah.forte@aandc-aadnc.gc.ca for any additional information.

Regards,

Sarah Forté
Water Management Coordinator

Technical Review Memorandum

To: Licensing Department, NWB

CC: Adam Grzegorzczuk, Approvals Manager, Baffinland Iron Mines Corporation

From: Sarah Forté, Water Management Coordinator, INAC

Date: June 28, 2017

Re: 2017 Work Plan Addendum for Water Licence #2AM-MRY1325 Amendment #1

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

A. BACKGROUND

Baffinland Iron Mines Corporation's (Baffinland) Mary River Project is an iron mine on northern Baffin Island authorized under water licence 2AM-MRY1325 amendment #1. The licence has provisions for an Annual Security Review which requires the licensee to submit a workplan for the upcoming year along with an updated reclamation cost estimate for the workplan. Baffinland submitted their 2017 Workplan on November 4, 2016, and it was discussed during a teleconference on December 9, 2016.

On June 6, 2017, the Nunavut Water Board (NWB) distributed for review the 2017 Work Plan Addendum submitted by Baffinland. The addendum includes development of lay-down pads totaling approximately 255 000 m², installation of camps for an additional 1 265 people, and installation of tanks to increase fuel capacity by 18.75 ML.

Baffinland organized a teleconference on June 22, 2016 where they presented the proposed workplan amendments. Participating parties; the NWB, the Qikiqtani Inuit Association (QIA), and ourselves, asked questions and discussed first impressions of the proposal.

The NWB asked interested parties to submit representations by June 23, 2017, which was extended to June 28, 2017 on our request.

B. RESULTS OF REVIEW

On behalf of the Water Resources Division of Indigenous and Northern Affairs Canada (INAC), the following comments and recommendations are provided:

1. Proposed modifications outside scope of licence

References:

- 2017 Work Plan Addendum, Baffinland Iron Mines Corporation, May 26, 2017
- Water Licence No. 2AM-MRY1325, Nunavut Water Board, June 10, 2013
- Water Licence No. 2AM-MRY1325 - Amendment No.1, Nunavut Water Board, July 21, 2015
- Executive Summary for Type A Water Licence Application, Baffinland Iron Mines Corporation, February 2012
- Application for amendment to the Type 'A' Water Licence 2AM-MRY1325, Baffinland Iron Mines Corporation, July 16, 2014
- Mary River Project Final Environmental Impact Statement, Baffinland Iron Mines Corporation, February 2012, Table 1.2-1
- Early Revenue Phase, Addendum to Final Environmental Impact Statement, Baffinland Iron Mines Corporation, June 2013, Table 1.2-1

Comment:

The proposed modifications in the workplan involve adding infrastructure on site including camp space for an additional 1 265 people and fuel tanks for an additional 18.75 ML.

It is relevant to compare these increases with the scope of licensed activities. Both the original and amended water licences use the water licence applications to define the scope in Part A Item 1a.

This Licence authorizes Baffinland Iron Mines Corporation ("BIMC" or "Licensee") to use Water and deposit Waste in support of a Mining and Milling Undertaking at the Mary River Project (Project) as outlined in the Type "A" Water Licence Application (Application) submitted to the Nunavut Water Board (NWB) on February 17, 2012 and as reviewed throughout the regulatory process.

This Amended Licence ("Licence No. 2AM-MRY1325 – Amendment No.1" or the "Licence") authorizes Baffinland Iron Mines Corporation (the "Licensee" or "BIMC" or the 'Applicant') to use Water and deposit Waste in support of a Mining undertaking at the Mary River Project (Project) in accordance with the relevant scope of activities and facilities included and authorized in the Original Type "A" Water Licence Application submitted to the NWB on

February 17, 2012 and Amendment No.1 Application submitted to the NWB on July 17, 2014.

The scope of the projects can therefore be better defined by looking at Baffinland's water licence applications.

The water licence also has a condition tying modifications to the Nunavut Impact Review Board (NIRB) certificate in Part G, Item 1c.

The Licensee may, without written consent from the Board, carry out Modifications provided that such Modifications are consistent with the terms of this Licence and the following requirements are met:

- a. The Licensee has notified the Board in writing of such proposed Modifications at least sixty (60) days prior to beginning the Modifications;*
- b. Such Modifications do not place the Licensee in contravention of the Licence or the Act;*
- c. Such Modifications are consistent with the NIRB Project Certificate;*

It is therefore also necessary to look at the Nunavut Impact Review Board (NIRB) certificate No. 5 and its amendment.

The project characteristics in the table on the following page are compiled from the project descriptions submitted by Baffinland to the NIRB and NWB. They were identical for the original application. In the amendment application, more detail was provided in the amended Final Environmental Impact Statement than we found in the water licence amendment application.

In the original application the Construction Phase was to last from Year 1 to Year 4 and Operations from Year 5 to Year 25. In the amendment application the Early Revenue Phase (ERP) production period was defined as lasting from 2014-2018.

		Original project		Amended project ERP		Proposed workplan	Current	Current + proposed
		Construction	Operation	Construction	Operation			
camp capacity (# people)	Milne Port	150	40	170	170	additional 425	120 hard-wall 153 soft-wall (260 + 49 ²) ¹	698-734
	Mine site	1200	500	1200	1200	additional 835	210 hard-wall 140 soft-wall (380) ¹	1085 -1115
water demand (m ³ /day)	Milne Port	70	30	66	66	no addition	0 - 87 ³	367.5 ⁴
	Mine site	655	352	658	658	no addition	33 - 333 ³	355.4 ⁴
treated sewage effluent (m ³ /day)	Milne Port	55	14	55	55	not specified	0 - 87 ³	
	Mine site	560	200	341	341	not specified	31 – 107 ³	
fuel storage (ML)	Milne Port	8	0	49.2	49.2	additional 18.75		67.95
	Mine site	18.6	18.6	18	18	no addition		18

¹ Camp capacity provided by Baffinland during June 22, 2017 teleconference

² Old Steensby camp

³ Ranges taken from 2016 QIA and NWB Annual Report for Operations

⁴ Authorized daily & domestic water volumes in 2AM-MRY1325 amendment#1 for project operations

Camp capacity is an indirect measure of water use and sewage generation which makes it an easy reference to use when assessing potential impacts. The capacity at Milne Port is presently 61-82% over the highest capacity in the original and amended project descriptions. The proposed modification would make it 311-332% over. At the mine site, the total current and proposed capacity would remain below the original construction and ERP production capacity. These comparisons of maximum capacity have been made to numbers for the construction stage. The project descriptions had these numbers dropping off significantly during operations. Information shared by Baffinland on June 22, 2017 suggests that during operations, camp capacity numbers will remain well above what was described and evaluated.

INAC is cognizant that a certain operational flexibility is needed for the operation of the mine. This was discussed at the NIRB hearings for the Early Revenue Phase and

resulted in a certificate to ship up to 4.2 million tonnes per year (Mtpa) of ore though the application was for 3.5 Mtpa. This represents a 20% increase in ore shipment, and might be expected to necessitate re-sizing of some of the infrastructure. The proposed re-sizing of camp and fuel capacity at Milne Port are well above 20% and the potential impacts have not been assessed.

Recommendation:

INAC is of the opinion that the proposed modifications, such as tripling the camp capacity at Milne, are of such a magnitude that they constitute amendments to the project and we recommend the licensee submit amendment applications to the NIRB and NWB to seek authorization for these changes.

2. Reclamation estimate

References:

- 2017 Work Plan Addendum, Baffinland Iron Mines Corporation, May 26, 2017

Comment:

Baffinland's amended workplan submission did not include an updated reclamation cost estimate. During the June 22, 2017 teleconference, they informed us they were working with the QIA in order to present a joint submission for the cost. QIA confirmed they had received the information and were analyzing it, but did not know how long it might take for them to complete the work. Before Baffinland can bring material not included in the November 2016 version workplan to site or execute any work not described in the plan, the NWB must set the amount of security to be held for the project's reclamation. INAC will want time to review and comment on the updated reclamation cost.

3. Quarry Management plan for proposed quarry

References:

- 2017 Work Plan Addendum, Baffinland Iron Mines Corporation, May 26, 2017

Comment:

The workplan amendment proposes the development of Quarry Q13. We note that Table 9-1 does not include a Quarry Management Plan for Q13.

Recommendation:

INAC recommends Baffinland submit a management plan for the quarry they plan to develop before undertaking work in the area.