



NIRB File No.: 08MN053

NWB File No.: 2AM-MRY1325 - Amendment No. 1/G1

September 22, 2017

Todd Burlingame
VP, Sustainable Development
Baffinland Iron Mines Corporation
2275 Upper Middle Road East, Suite 300
Oakville, ON L6H 0C3

Sent via email: todd.burlingame@baffinland.com

Re: Modification Request – Milne Port Accommodations Camp Upgrade

Dear Todd Burlingame:

On July 19, 2017, Baffinland Iron Mines Corporation (Baffinland or the Proponent) submitted the enclosed Modification Request for its “Milne Port Accommodations Camp Upgrade” project proposal to the Nunavut Water Board (NWB). The project proposal described how Baffinland is currently experiencing high turnover rates with its site workforce due to the poor accommodation conditions at the Mary River Project, and included justification to commission a new accommodations camp facility and associated water treatment systems, camp pad, and drainage diversion system at the Milne Port Site. Baffinland also noted that this Modification Request superseded the previous Modification request submitted to the NWB on June 23, 2017 related to the Milne Port Accommodations Camp Pad and Proposed Surface Water Diversion System. In submitting its June 23rd Modification request to the NWB, Baffinland clarified that it was not seeking approval for the camp infrastructure intended for the camp pad and that a subsequent Modification Request would be submitted for the camp infrastructure at a later date. As a result of the NWB determining that the original June 23rd Modification request was inextricably linked to the proposed Modification Request for the new accommodations camp facility and associated water treatment facility, on June 28, 2017 the NWB requested that Baffinland combine both modifications requests for the NWB’s consideration.

Subsequent to Baffinland submitting its July 19, 2017 modification request to the NWB, on August 25, 2017 the Proponent specifically requested that the Surface Water Diversion System component of the Modification Request be given a separate consideration to enable it to proceed with the construction of the drainage diversion system in order to minimize potential future impacts from the unauthorized construction of a lay-down pad over a stream, and to allow Baffinland to comply with the enforcement direction received from Indigenous and Northern

Affairs Canada (INAC) on June 9, 2017 to stop work on the Milne Port site lay-down pad pursuant to section 87 (1) the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*.¹ On September 1, 2017 the NWB notified the NIRB that before it could issue its determination for the Surface Water Diversion System component of the Modification Request, it required input from the Nunavut Impact Review Board (NIRB or Board) regarding whether the proposed activity is consistent with the scope of the NIRB amended Project Certificate No. 005 issued for the Mary River Project by the NIRB. On September 1, 2017 the NIRB provided its determination to the NWB that the proposed modification to the Milne Port Water Diversion System for the approved Mary River Project did not appear to be in conflict with the existing terms and conditions of the amended Project Certificate No. 005 as issued by the NIRB, nor appear to be beyond the scope of the project as assessed and approved by the NIRB.

All materials related to this Modification Request, including the previously assessed modification request for the Milne Port Water Diversion System component, can be obtained from the NIRB's online public registry at www.nirb.ca by using any of the following search criteria:

- Project Name: Mary River Project
- NIRB File No.: 08MN053
- Application No.: 123910

SUMMARY OF THE MODIFICATION REQUEST

In its request to the NWB, Baffinland proposed to commission a new accommodations camp facility in order to upgrade the existing Milne Port Weatherhaven softwall camp (Matrix). The proposed new camp facility would feature 380 softwall single rooms connected to a hardwall core configuration consisting of the camp dining area, kitchen and food preparation areas. The construction of the new accommodations facility and associated infrastructure is anticipated to increase the available capacity at the Milne Port Camps from 327 beds to 707 beds of which 554 beds would be utilized during peak summer activities. It is anticipated that the daily water usage at Milne Port site would be approximately 111 cubic metres per day (m³/day), which would be below the Water License permitted volume of 300m³/day for domestic use.

In addition, Baffinland has also indicated the following additional project components/activities:

- Construction and assembly of a new permanent 380 person camp facility with installation of its associated infrastructure, including a dedicated potable water treatment plant, sewage treatment plant, and a 2,400 square foot garage;
- Construction of diversion ditches to divert and direct flows into the natural drainage west of the existing constructed accommodations camp pad;
 - Create a sump upstream of the diversion system which would consist of an excavated hole armored with rip raps to prevent erosion;
 - Setup of a pump with an intake in the sump to discharge effluent to a determined discharge location west of the pad;

¹ Baffinland was directed by INAC to stop work on the site lay-down pad at Milne Port as the partially constructed camp pad was constructed over a stream with rock fills placed in the stream prior to the submission of the modification request to the NWB.

- Installation of a dam which does not allow water to travel downstream of the sump to the proposed construction area and downstream drainages;
- Placement of geotextile and rip raps on all areas of the new diversion system to mitigate erosion and scouring from flow; and
- Removal of the upstream sump, including dam and pumping setup upon completion of all ditching and placement of geotextile and rip raps.
- Sourcing the rock fill materials (bulk fill and crusher produced aggregates) from the Milne Port Q1 Quarry to facilitate construction of the 280 metre by 120 metre accommodation camp pad and a surface water diversion ditch;
- Extension and widening of the Milne Port utility berm to accommodate the additional electrical cables required to service the new camp and associated infrastructure;
- Discontinuation of the temporary electrical feed tied into power generators with plans to transition to a dedicated e-house connected to Milne Port's power generators;
- Transportation of treated sewage from the new camp facility to the existing sewage outflow by vacuum truck; and
- Decommissioning and reclamation of the existing softwall Weatherhaven camp.

Baffinland also indicated that the proposed accommodations camp facility would be located within the Milne Port Project Development Area, south of the existing Milne Port Ore Stockpile Pad.

CONTEXT OF THE NIRB'S ASSESSMENT OF THE MODIFICATION REQUEST

As you are aware, on September 1, 2017 the NIRB provided its determination to the NWB that the proposed modifications to the Milne Port Water Diversion System under the Type "A" Water Licence (2AM-MRY1325) for the Mary River Project did not appear to be in conflict with the existing terms and conditions of the amended Project Certificate No. 005 as issued by the NIRB. Although the NIRB acknowledged that the proposed Milne Port Water Diversion System did not appear to be beyond the scope of the project as assessed and approved by the Board, the NIRB reminds the Proponent to notify all responsible authorities, including the NIRB, of any potential changes in operating plans or conditions. This notification would include phase advancement or modifications associated with the approved Mary River Project prior to any such change.

While the Board appreciates the opportunity to provide its input on the Modification Request and has noted that the NWB only solicited its input for the Milne Port Water Diversion System component of the proposal, the NIRB would like to clarify that the other components of the Modification Request (specifically the new camp facility, associated water treatment systems, and camp pad) have yet to be fully assessed for their consistencies with the existing terms and conditions of the amended Project Certificate No. 005 as issued by the NIRB. As set out in Sections 12.7.1 and 12.7.2 of Article 12 of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada*, the NIRB is responsible for the post environmental assessment of a project and also has the jurisdiction to determine whether, and to what extent, the land or resource use in question is being carried out within predetermined terms and conditions of the NIRB Project Certificate No. 005 issued for the Mary River Project.

INFORMATION REQUEST

As a result of the project description not containing sufficient information to allow the Board fully assess the scope of the proposed new accommodations camp facility and associated infrastructure and activities, the NIRB has determined that **additional** information is required in order to determine if the proposed Milne Port Accommodations Camp Upgrade remain consistent with the NIRB Project Certificate. The following supplemental information is requested from the proponent:

- Discussion of the extent to which the proposed upgrades, including the new camp facility and associated water treatment systems, camp pad, and drainage diversion system, are consistent with those proposed in the FEIS and FEIS Addendum in terms of type, location, and scope. Additional information must include the following items:
 - Discussion of how the Proponent intends to develop and implement adequate monitoring and maintenance procedures to ensure that the proposed camp pad and associated camp structure do not significantly hinder or alter the natural flow of water in the vicinity of the proposed site;
 - Description of how the Proponent intends to monitor the relevant parameters of the effluent generated from the proposed facilities and carry out treatment if necessary to ensure that discharge conditions are met at all times;
 - Information regarding the proximity of the proposed facilities to the nearest fish bearing streams with details on how the Proponent intends to monitor, document, and report project-related effects on the local hydrology and fish habitats, including wildlife as result of the proposed activity;
 - Discussion of the extent to which Baffinland's Environmental Management Plans, including the Sediment and Erosion Management Plan, would be updated or revised to ensure that additional sediment loading into surface water is prevented and/or mitigated, or minimized to prevent the effects of destabilization and erosion within the proposed site;
 - Description of how additional sewage and solid wastes materials generated from the proposed new facility would be disposed and managed with detailed notes on how effluents would be treated and managed. Information should also be provided on the type of trucks to be used for sewage haulage, frequency of sewage collection from the proposed facility, total numbers of sewage trucks to be commissioned, location of the sewage management facility, and use of the landfill.
- The Proponent should discuss how it would consider the specific environmental sensitivity of the proposed site and clarify whether it intends to undertake additional geotechnical investigations to identify sensitive landforms, modify engineering design for Project infrastructure, develop and implement preventative and/or mitigation and monitoring measures to minimize the impacts of the Project's activities, and infrastructure on sensitive landforms near the vicinity of the proposed site;
- Discussion of the timelines to provide respective regulatory authorities with engineering design and drawings, specifications and engineering analysis to support the design of new accommodation camp facility and associated infrastructure in advance of constructing facilities;

- Information regarding whether the associated infrastructure or facilities that are designed and to be constructed are consistent with those proposed in the FEIS and FEIS Addendum in terms of type, location, and scope;
- Discussion of the environmental implication of sourcing granular resource materials from Q1, with specific notes regarding:
 - Information on the quantity and quality estimates of granular resources from Q1 with detailed notes on how acid drainage and metal leaching potential of the granular materials have been taken into considerations to avoid any potential ecological risk; and
 - Information on how activities within quarry Q1 would be managed to avoid or minimize the creation of pits and depressions to the degree practicable to reduce the potential for standing water.
- Information on how the Proponent intends to manage seasonal water flow through the second stream covered by the new accommodation pad at the Milne Port Site; and
- Submission of Decommissioning and Reclamation Plan for the proposed new camp facility.

The NIRB would like to provide Baffinland with an opportunity to provide additional information prior to the Board rendering its determination on whether the proposed Milne Port Accommodations Camp Upgrades and associated infrastructure are consistent with the Project Certificate. The NIRB respectfully requests that a response be provided directly to the NIRB by **October 20, 2017**.

In requesting additional information at this point, the NIRB notes that if it establishes that the proposed modification request as described in the materials provided to the NWB appear to be inconsistent with the NIRB Project Certificate or beyond the scope of the project as assessed and approved by the NIRB, the Proponent will be advised that the *Nunavut Planning and Project Assessment Act* requires such proposals to be submitted directly to the Nunavut Planning Commission for a determination of conformity with any applicable land use plans and/or verification of whether the project is exempt from the requirement for screening by the NIRB.

Should you have any questions or require clarification related to the NIRB's monitoring program for the Mary River Project, please contact Solomon Amuno, Technical Advisor II and Monitoring Officer, at (867) 983-4603 or samuno@nirb.ca.

Sincerely,



Solomon Amuno, PhD
 Technical Advisor II
 Nunavut Impact Review Board

cc: Wayne McPhee, Baffinland Iron Mine Corporation

Adam Grzegorzczuk, Baffinland Iron Mine Corporation
David Hohnstein, Nunavut Water Board
Sean Joseph, Nunavut Water Board
Karén Kharatyan, Nunavut Water Board
Mary River Distribution List

Enclosures (6): Modification Request – Milne Port Accommodations Camp Upgrade (August 25, 2017)
Supplementary Information – Milne Port Accommodations Camp Upgrade (August 10, 2017)
Modification Request- Milne Port Accommodations Camp Upgrade (July 19, 2017)
Milne Port- Camp Pad Natural Stream Diversion-Hydrology and Hydraulic Calculations
(September 1, 2017)
NWB Letter to NIRB Re Modification Request for Proposed New Camp and Surface Water
Diversion System (September 1, 2017)
NIRB Letter to NWB–Modification Request Re Milne Inlet Port Water Diversion System
(September 1, 2017)