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NUNAVUT WATER BOARD  
NUNAVUT IMALIRIYIN KATIMAYINGI  
OFFICE DES EAUX DU NUNAVUT

File No.: **8BC-MRY1416**

August 6, 2014

Erik Madsen, Vice President  
Sustainable Development, Health, Safety & Environment  
Suite 300 – 2275 Upper Middle Road East  
Oakville, ON L6H 0C3

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[jim.millard@baffinland.com](mailto:jim.millard@baffinland.com)

**RE: NWB Licence No. 8BC-MRY1416**

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Dear Mr. Madsen:

Please find attached Licence No. **8BC-MRY1416** issued to Baffinland Iron Mines Corporation (BIMC) by the Nunavut Water Board (NWB) pursuant to its authority under Article 13 of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada (Nunavut Land Claims Agreement or NLCA)*. The terms and conditions of the attached Licence related to water use and waste disposal are an integral part of this approval.

If the Licensee contemplates the renewal of this Licence, it is the responsibility of the Licensee to apply to the NWB for its renewal. The past performance of the Licensee, new documentation and information, and issues raised during a public hearing, if the NWB is required to hold one, will be used to determine the terms and conditions of the Licence renewal. Note that if the Licence expires before the NWB issues a new one, then water use and waste disposal must cease, or the Licensee may be in contravention of the *Nunavut Land Claims Agreement* and the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*. However, the expiry or cancellation of a licence does not relieve the holder from any obligations imposed by the licence. The NWB recommends that an application for the renewal of this Licence be filed at least three (3) months prior to the Licence expiry date.

If the Licensee contemplates or requires an amendment to this Licence, the NWB may decide, in the public's interest, to hold a public hearing. The Licensee should submit applications for amendment as soon as possible to give the NWB sufficient time to go through the amendment process. The process and timing may vary depending on the scope of the amendment; however, a minimum of sixty (60) days is required from time of acceptance by the NWB. It is the responsibility of the Licensee to ensure that all application materials have been received and are

acknowledged by the Manager of Licensing.

The NWB strongly recommends that the Licensee consult the comments received by interested persons on issues identified. This information is attached for your consideration.<sup>1</sup>

Sincerely,



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Thomas Kabloona  
Nunavut Water Board  
Chair

TK/sj/ri

Enclosure: Licence No. **8BC-MRY1416**  
Comments – AANDC, EC, and QIA

Cc: Qikiqtani Distribution List

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<sup>1</sup> Aboriginal Affairs and Northern Development Canada (AANDC), June 20, 2014; Environment Canada (EC), June 25, 2014; and the Qikiqtani Inuit Association (QIA), June 20, 2014.

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## DECISION

### LICENCE NUMBER: 8BC-MRY1416

This is the decision of the Nunavut Water Board (NWB) with respect to an Application dated May 15, 2014, for the amendment and renewal of a Water Licence made by:

#### BAFFINLAND IRON MINES CORPORATION

to allow for the following undertakings and/or activities to be carried out in support of the Mary River Site Preparation Project:

- Use of 299 m<sup>3</sup> per day of water for domestic and industrial purposes during construction activities related to the Early Revenue Phase (ERP) of the wider Mary River Project including earthworks, laydown areas, concrete production, and dust suppression along the Milne Tote Road;
- Continued operation and the Matrix Camp (Camp) erected in 2013 for construction activities and expansion of the camp to support additional manpower of up to 350 persons during site preparation work and less than 225 persons during the construction required for infrastructure at Milne Port;
- Construction and eventual operation of an additional Waste Stabilization Pond at Milne Inlet (Milne Port);
- Construction of Ore Stockpile areas and associated sedimentation ponds, permanent Ore Dock, Ship loading facilities and associated earthworks activities, ore reclaiming conveying equipment, at Milne Inlet (Milne Port); and
- Deposit of waste during construction activities.

The Mary River Site Preparation Project is located on a northern section of Baffin Island, within the Qikiqtani Region of Nunavut, at the following geographical coordinates:

Latitude: 72° 05' 00'' N	Longitude: 77° 45' 00'' W
Latitude: 72° 05' 00'' N	Longitude: 81° 00' 00'' W
Latitude: 69° 49' 00'' N	Longitude: 81° 00' 00'' W
Latitude: 69° 49' 00'' N	Longitude: 77° 45' 00'' W (Project Extents)
Latitude: 71° 19' 30'' N	Longitude: 79° 22' 40'' W (Mine Site Camp)
Latitude: 71° 53' 00'' N	Longitude: 80° 54' 15'' W (Milne Port Camp)

## DECISION

After having been satisfied that the Application, being for a Project undertaking in a location that is within the North Baffin Regional Land Use Plan area, was determined by the Nunavut Planning Commission (NPC) to conform to the Plan<sup>1</sup> and be exempt from the requirement for

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<sup>1</sup> Nunavut Planning Commission (NPC) – Conformity Review, dated July 25, 2014.

screening as described within Schedule 12-1 by the Nunavut Impact Review Board<sup>2</sup> in accordance with Article 12 of the *Nunavut Land Claim Agreement (NLCA)*, the NWB decided that the Application could proceed through the regulatory process. In accordance with s.55.1 of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act (Act)* and Article 13 of the *NLCA*, public notice of the application was given and interested persons were invited to make representations to the NWB.

After reviewing the submission of the Applicant and considering the representations made by interested persons, the NWB, having given due regard to the facts and circumstances, the merits of the submissions made to it and to the purpose, scope and intent of the *NLCA* and of the *Act*, waived the requirement to hold a public hearing, and determined that:

**Licence No. 8BC-MRY1314 be renewed as Licence No. 8BC-MRY1416 subject to the terms and conditions contained therein (Motion #: 2014-B1-020).**

Signed this 31<sup>st</sup> day of July, 2014 at Gjoa Haven, NU.



Thomas Kabloona  
Nunavut Water Board, Chair

TK/sj/ri

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<sup>2</sup>Nunavut Impact Review Board (NIRB) – Screening Exemption Decision, June 11, 2014.

## **BACKGROUND**

The Nunavut Water Board issued a one-year Licence, 8BC-MRY1314, to Baffinland Iron Mines Corporation (BIMC, or Proponent, or Licensee) for the Mary River Site Preparation Project (Project), located approximately 160 kilometres south of Pond Inlet within the Qikiqtani Region of Nunavut. The Project, which is classified under *Schedule 1* of the Regulations as “Other”, involved construction of some basic site infrastructure at the Milne Port Site and Mary River Mine Site, in advance of mobilizing equipment and supplies that would eventually be required for developing the much larger Mary River Project site.

Information provided by the Proponent indicates that the Licensee generally accomplished the undertakings and/or activities proposed under the expired licence; however, the Licensee states that unexpected requirements associated with execution of the overall Mary River Project, which now includes an Early Revenue Phase (ERP), created rationale for the proposed renewal and amendment of licence 8BC-MRY1314. The ERP is expected to annually generate approximately 3.5 million tonnes of iron ore that will be trucked from the Mine Site to the Milne Port for shipment to market in Europe.

## **FILE HISTORY**

The original licence for the Project was issued on May 24, 2013 and expired on May 23, 2014. The licence allowed for the following activities and/or undertakings to be carried under its scope:

- Begin development of Quarry Q1 1+100 at Milne Port to generate crushed and screened aggregate for the development of the Milne Port site, and Quarry QMR2 located at the Mary River Mine Site;
- Construct camp facility pads at both the Mary River Mine Site and at the Milne Port site, as well as begin installation of construction camps and associated camp facilities;
- Begin development of two laydown areas (Laydowns A and B) at Milne Port for the storage of equipment and supplies being delivered via the summer sealifts;
- Expand existing camp sewage facilities (additional PWSP pond) at Milne Port that will provide additional capacity with respect to the sewage treatment system;
- Expand existing fuel tank secondary containment area at Milne Port; and
- Construct one additional 5ML diesel fuel storage tank at Milne Port within the existing secondary containment constructed in 2011 (same construction as the existing 5 ML tank).

The activities and/or undertakings outlined above were included as part of the scope of activities under Type “A” Licence 2AM-MRY1325 issued on June 10, 2013 to the wider Mary River Project, and have therefore been removed from the scope of this renewal-amendment Licence.

It should be noted that prior to the expiry of Licence 8BC-MRY1314, the proponent had officially requested<sup>4</sup> that the Board cancel the licence; however, that request was later rescinded<sup>5</sup> in a follow-up correspondence from the Proponent to the Board.

## **PROCEDURAL HISTORY**

The NWB received, from BIMC, on April 24, 2014, an initial application and supporting information (Application) to renew and amend licence 8BC-MRY1314. Following an internal preliminary review of the application and discussions with the Proponent, the Application was withdrawn<sup>6</sup> by the Proponent and a revised one, to address changes requested by the NWB, submitted on May 15, 2014. This Application included the following documents:

- **Appendix 1:** Type “B” Water Licence Renewal and Amendment Application;
- **Appendix 2:** NPC correspondence to Aboriginal Affairs and Northern Development Canada (“AANDC”) Minister, Re: Recommendation to Amend the North Baffin Regional Land Use Plan to include a New Transportation Corridor for the Baffinland Iron Mine Corporation’s Early Revenue Phase Proposal, April 14, 2014;
- **Appendix 3:** Project Description and Scope of the Amended Type “B” Water Licence;
- **Appendix 4:** Knight Piésold, Hydrological Assessment of Phillips Creek and km 32 Lake Watersheds;
- **Appendix 5:** Drawings showing the ERP Layout and details of the Polishing Waste Stabilization Pond;
- **Appendix 6:** Box 22 – Financial Information; and
- **Appendix 7:** Hatch, Abandonment and Reclamation of Proposed Type B Water Licence Activities.

Pursuant to section 55(1) of the Nunavut Waters and Nunavut Surface Rights Tribunal Act (“Act”), the NWB gave notice of BIMC’s Application and invited interested parties, on May 20, 2014, to make representations to the Board on or before June 20, 2014. Prior to the deadline for comments, the Board received submissions from two intervening parties, Aboriginal Affairs and Northern Development Canada (AANDC) and the Qikiqtani Inuit Association (QIA). Five (5) days following the deadline for comments, the Board received a submission from Environment Canada. The comments, concerns and recommendations expressed by interveners have been appropriately highlighted in the General Considerations section of this document or are reflected in relevant terms and conditions included in this Licence.

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<sup>4</sup> Letter from E. Madsen, BIMC, to D. Côté, NWB, Re: Cancellation of Type B Water Licence (8BC-MRY1314), October 10, 2013.

<sup>5</sup> Letter from E. Madsen, BIMC, to P. Beaulieu and D. Hohnstein, NWB, Re: Application for Renewal and Amendment to Type “B” Water Licence 8BCMRY1314, April 28, 2014.

<sup>6</sup> Email from J. St. Paul Butler, BIMC, to P. Beaulieu and D. Hohnstein, NWB, Re: Type B Water Licence Renewal Application - 8BC-MRY1314, May 14, 2014.

## **GENERAL CONSIDERATIONS**

### **ISSUES**

The following sections provide background relevant to the inclusion of terms and conditions in this Licence in the context of submissions received and/or the NWB's overall review of the Project's Application.

#### ***General***

The Application is for the renewal and amendment of Type "B" Licence, 8BC-MRY1314, to allow for the use of water and deposit waste in support of the Mary River Site Preparation Project, which now includes activities related to the ERP.

#### ***Scope of the Application***

The Application to renew 8BC-MRY1314 was received approximately one-year after the issuance of Licence 2AM-MRY1325 to the wider Mary River Project and within months following the NIRB's decision to amend the original Project Certificate to allow for the ERP and the NPC's amendment to the North Baffin Regional Land Use Plan to allow for a Transpiration Corridor to support aspects of the ERP.

To address to the extent possible the wider scope of activities proposed under the renewal-amendment application for the Mary River Site Preparation Project, the NWB has included conditions in this Licence that allows for the construction of facilities or infrastructure, such as the Milne Port ore dock, ore stockpile areas, ship-loading facilities, sedimentation ponds, and ore reclaiming and conveying facilities. Further, conditions have been included under this Licence to allow for the construction and operation of a proposed Polishing Waste Stabilization Pond (PWSP No. 2); however, because treated effluent associated with the PWSP No.2 is expected to be transferred to facilities under Licence 2AM-MRY1325 prior to being released into the receiving environment, no terms and conditions have been included in this Licence for the discharge of effluent from the PWSP No. 2.

#### ***Licence Term***

The Proponent requested a two (2) year term for this Type "B" renewal-amendment Licence, which the Proponent believes will provide the opportunity and time required to undertake the potential amendment process for Type "A" Licence, 2AM-MRY1325. The potential amendment to Type "A" Licence 2AM-MRY1325 is expected to incorporate the entire scope of the undertakings associated with this Type "B" renewal-amendment Licence.

No written objections were received from interveners in relation to the licence term requested by the Proponent. Aboriginal Affairs and Northern Development Canada (AANDC), in its submission indicated that a two-year term for the Licence may be appropriate to allow for eventual transitioning of the undertakings and activities under this Licence to a potentially amended Type "A" Licence; however, the scope of the renewal-amendment Licence does not allow for mining activities specific to the ERP, as an amendment to the Type "A" Licence is still

required for ERP activities. EC and the QIA did not comment on the term requested by the proponent.

The NWB has given consideration to the overall magnitude and scope of activities proposed under the renewal and amendment application for the Project and the relevant comment(s) received from intervener(s) on this subject, and has set the term of the Licence to two (2) years. The term granted is expected to provide the anticipated time required to complete the regulatory process for a potential amendment to the Type “A” Water Licence for which the Proponent has already submitted an Application to the Board.

### ***Security***

In accordance with s. 76(1) of the NWNSRTA, the Board may require a licensee to furnish and maintain security with the Minister, in a form determined by the Regulations or satisfactory to the Minister.<sup>7</sup> Further, in a matter related to the posting of security, the Board may not issue a licence unless the Board is satisfied that the financial responsibility of the applicant, taking into account the applicant’s past performance, is adequate for the mitigation measures and any costs associated with the closing or abandonment of the undertaking.<sup>8</sup>

To date the Applicant has posted financial security in the amount of \$122,019.26 with the Minister of Aboriginal Affairs and Northern Development Canada for potential abandonment and reclamation cost that may have been associated with expired Licence, 8BC-MRY1314. Based on the undertakings and/or activities proposed in the renewal and amendment application, the Proponent has offered to post an additional amount of \$24,806.84, toward potential abandonment and reclamation cost for activities and/or undertakings related to the ERP, including an additional polishing waste stabilization pond proposed to support construction activities associated with the ERP. The additional amount brings the proposed for reclamation cost for the scope of activities and/or undertakings associated with the renewal-amendment Licence to \$146,826.10.

Apart from additional financial security amount proposed above for the Type “B” licence, the Proponent has indicated that it understands that it will be required to post financial security with the Department of Fisheries and Ocean (DFO) Canada, through a separate process, for the ore dock facility, and it suggests that the security amount required by DFO as well as for this Licence be considered during the annual security review required for the Type “A” Licence, 2AM-MRY1325.

The Qikiqtani Inuit Association (QIA), in its comments recommended that any security posted for this Type “B” Licence be held with the QIA and that all required financial security be posted prior to the occurrence of any liability. The QIA also noted in its submission that it believes that

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<sup>7</sup> Subsection 76(1) of the NWNSRTA states: 76(1) The Board may require an applicant, a licensee or a prospective assignee to furnish and maintain security with the Minister in the form, of the nature, subject to such terms and conditions in an amount prescribed by, or determined in accordance with, the regulations or that is satisfactory to the Minister.

<sup>8</sup> See subsection 57(b) of the NWNSRTA.

there is some uncertainty in BIMC's security estimate, and that it disagrees with the cost attributed to some of the reclamation activities and therefore the total security amount proposed. The QIA mentioned that its views on the financial security amount proposed may be addressed prior to, or during the Annual Security Review for the wider Mary River Project.

AANDC in its comments indicated that it supports the ERP-Related construction activities proposed in the renewal-amended Application, provided that potential environmental liabilities are included. Further, AANDC mentioned that more details are required to confirm that all reclamation activities specifically associated with the Type "B" Licence are included in the cost estimate, as it is unclear whether buildings, on-land ore stockpiling and loading facilities, etc., are included in the 2014 marginal cost estimate.

AANDC recommends including conditions in the Licence that security for the ore dock be held with the Minister and that consideration be given to including all water licences in the Annual Security Review for the wider Mary River Project while, however, keeping the reclamation security posted for each licence separate.

BIMC in its response<sup>9</sup> to interveners' comments indicated that the security amount proposed for the scope of activities under any renewal amendment licence is based on information that was available at the time of submission and that the information is subject to change based on the results of continued consultations and other variables. BIMC agrees that the scope of activities under any renewal-amended licence could be included in the Annual Security Review for the much wider Mary River Project.

The Board has reviewed the original activities and undertakings associated with the expired Licence as well as the new activities proposed under the Application in the context of the financial security proposed. Intervener's comments were also given due consideration during the Board's review. At this point in time, the Board accepts the security amount proposed subject to changes that may be required during the next Annual Security Review scheduled for the Type "A" for the much wider Mary River Project. In doing so, the Board will be able to take into consideration the relevant factors related to the global security amount for the Mary River Project.

The Board has included conditions under Part B, Item 1 in the Licence, requiring the Licensee to furnish and maintain financial security in the amount of \$146,826.10, in the form that is satisfactory to the Minister, within sixty (60) days from the date of issuance of this Licence. Additional terms and conditions have been included in the licence to allow for the financial security posted in Part B, Item 4 of this Licence, to be considered during the Annual Security Review for the much wider Mary River Project.

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<sup>9</sup> Letter from O. Curran, BIMC, to P. Beaulieu, NWB, Re: Baffinland Response to Interveners' Submission on Renewal and Amendment Application for 8BC-MRY1314

### ***Water Use***

Under the expired Type “B” water licence, use of water was not authorized. The Proponent has requested a total of 299 m<sup>3</sup>/day of water in support of domestic and construction/industrial activities related to the ERP: 50 m<sup>3</sup>/day for domestic purposes and 249 m<sup>3</sup>/day for construction/industrial purposes. Water for all purposes under this Licence will be obtained from Phillips Creek during the summer months or open-water season and from Km 32 Lake during the winter months or freeze-up period. The Proponent mentioned that hydrological assessments were conducted for both water sources and that information related to the assessment is included in the Appendix 4 of the Application. The assessment has determined that the sources are capable of supporting the proposed water withdrawal rates.

AANDC in its submission requested that further details on field verification method(s) used to confirm hydrological modelling completed for monthly discharge at Phillips creek be provided. BIMC in its response to interveners’ comments indicated that information on hydrological assessment methods has been included in the Final Environmental Impact Statement (FEIS) and FEIS addendum, Appendix 7A of the FEIS.

The Board has included conditions related to water use for the Project under Part C, Item 1 in the Licence.

### ***Waste Disposal***

The Licensee indicated in its Application that greywater, sewage and sludge are expected to be generated during Project activities and that all waste generated under the licence will be managed in accordance with the Type “A” Licence, 2AM-MRY1325.

### **Sewage Disposal Facilities**

Information contained in the Application indicates that the proponent is planning to operate an existing and a re-commissioned RBC sewage treatment facility to support the Project. These facilities will operate in accordance with the terms and conditions in the Type “A” water licence. AANDC stated in its submissions that it agrees with the Proponent, that waste generated by this Licence could be managed in accordance with the Type “A” licence. The NWB notes that while the same general principles used to manage waste under the Type “A” licence could generally be applied to this Licence, the scope of the Type “A” Licence does not include the activities and undertakings proposed under this renewal-amendment Licence. As a result, some of the potential monitoring requirements associated with the Type “A” licence may be unenforceable under either licence. The monitoring requirements for the existing sewage and re-commissioned sewage treatment facilities are already governed by the Type “A” licence; however, the new PWSP (No.2) and runoff from ore dock and related areas are covered under the Type “A” licence. Because the operations of the ore dock are not part of the scope of this Licence, no monitoring conditions have been included in this Licence.

### Surface Runoff

The proponent has stated in its application that Surface Runoff associated with the construction of ERP-Related facilities will be managed in accordance with terms and conditions in the Type “A” Licence. Although all undertakings associated with this Type “B” Licence are expected to be eventually covered by the Type “A” licence once amended, any additional monitoring requirement for the Type “B” Licence will have to be conducted in accordance with terms and conditions under this Licence until the Type “A” licence is amended to include the scope of this Licence. The Board has therefore included, under Part E, Item 6, conditions to govern the quality of site runoff water associated with the Project.

### Polishing Waste Stabilization Pond

The Licensee has proposed, as part of its renewal and amendment application, to construct an additional Polishing Waste Stabilization Pond (PWSP) (No.2) at the Milne Port Site as contingency for storage of off-spec sewage effluent.

The NWB has included terms and conditions for the construction and operation of the PWSP under Part E. However, because the discharge from the operation of the facility is governed by Type “A” Licence 2AM-MRY1325, no discharge criteria has been included in this Licence for the PWSP No.2.

### Dredge Material

Construction activities related to ore dock at Milne Inlet is expected to generate an unspecified quantity of dredged material. Information provided in the Application indicates that dredged material will not be disposed of on any land, in accordance with Department of Fisheries and Transport Canada Authorizations. Conditions have, therefore, been included in the Licence, under Part D, Item 10, that prohibits the disposal of any dredged materials on-land, into or onto any Water body unless approved by the Board in writing.

### Design Drawings

The expired licence 8BC-MRY1314 included terms requiring the submission, to the Board for review, for-construction and as-built drawing for the facilities included under the scope of the licence. The Licensee has submitted for-construction and as-built drawings for the PWSP, Milne Port Ore Dock and Matrix Camp expansion.

As part of the renewal and amendment application, preliminary design drawings were submitted for the proposed Polishing Waste Stabilization Pond (PWSP); however, no design drawings were submitted for the following facilities included in the scope of this Licence:

- the Milne Port Ore Dock; and
- the Matrix Camp expansion.

The NWB has therefore, included under Part E, Item 1 of the terms and conditions in the

Licence, the requirement for submission of for-construction drawings for the following facilities:

- the Milne Port Ore Dock and the Matrix camp expansion; and
- all other facilities associated with the Mary River Site Preparation Project.

### ***Management Plans Related to the Expired Licence***

Under the expired Licence, the Board had approved the following management plans in support of the Application:

- *Baffinland Iron Mines Corporation Mary River Project Quarry Management Plan Milne Inlet Quarry (Q1)*, dated March 2013;
- *Baffinland Iron Mines Corporation Borrow Pit and Quarry Management Plan*, dated March 2013;
- *Operations and Management Plan Mary River Mine Site Quarry (QMR2)*, dated January 2012;
- *Baffinland Iron Mines Corporation Mary River Project Emergency Response and Spill Contingency Plan*”, dated March 2013;
- *Baffinland Iron Mines Corporation Mary River Project Abandonment and Reclamation of the Proposed Type B Water Licence Activities*, dated April 22, 2013; and
- *Baffinland Iron Mines Corporation Surface Water and Aquatic Ecosystem Management Plan*, dated March 2013.

With the issuance of the Type “A” licence 2AM-MRY1325 that incorporated the scope of Type “B” Licence 8BC-MRY1314, most of the plans mentioned above now apply to and are contained within the Type “A” Licence 2AM-MRY1325.

### ***Management Plans Related to Renewal-Amended Licence***

#### **Spill Contingency Plan**

The Proponent indicated in its Application, that the updated Spill Contingency Plan submitted under its 2013 Annual Report will be used to manage environmental spills and emergencies. The Board has accepted the plan, under Part H, Item 1, with the issuance of the Licence as the previous version of the Plan received initial approval under the expired licence.

#### **Abandonment and Restoration Plan**

To supersede the previous abandonment and restoration document, the Proponent has submitted as part of its Application, a document entitled *Amended Type “B” Water Licence Abandonment and Reclamation (A&R) Strategy and Security Estimate*, dated May 2014, which the Board has approved under Part I, Item 1 of the Licence. The Licensee is required to update the plan as required to reflect operational conditions.

AANDC stated in its submission the management plans are not specific to the Type “B” licence given that the some of the management plans apply to both Type “A” and Type “B” activities, the activities proposed under the renewal amendment Licence could be managed in accordance with the Type “A” Licence.

The NWB agrees that some overlap exists among management plans due to the significant

interdependence in the scope of activities and undertakings for Type “A” and the expired Type “B” licence 8BC-MRY1314 as the project was transitioning to the mine development phase. However, the scope of licence 8BC-MRY1314 has since been included in that of the Type “A” licence and therefore most of the management plans would no longer apply to the renewal and amended Type “B” Licence

### ***Monitoring***

To minimize any potential undesirable effects that the Project may have on the receiving environment, the Board has included conditions under Part J in the Licence requiring the Licensee to submit to the Board for approval, a Monitoring Plan for the activities specifically associated with the Licence. This Plan is to build upon monitoring requirements of the previously approved plan, “*Baffinland Iron Mines Corporation Surface Water and Aquatic Ecosystem Management Plan*”, dated March 2013, submitted with the 2013 original application and to include and update with monitoring locations not contemplated under the previous licence as well as excluding monitoring currently taking place through obligations of the Type A Water licence, as well as frequencies and parameters associated with the new construction covered under the scope of this Licence.



## NUNAVUT WATER BOARD WATER LICENCE

Licence No. 8BC-MRY1416

Pursuant to the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* and the *Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada*, the Nunavut Water Board, hereinafter referred to as the Board, hereby grants to

**BAFFINLAND IRON MINES CORPORATION**

(Licensee)

**SUITE 1016 120 ADELAIDE STREET WEST, TORONTO, ON M5H 1T1**

(Mailing Address)

hereinafter called the Licensee, the right to alter, divert or otherwise use water or dispose of waste for a period subject to restrictions and conditions contained within this Licence renewal:

Licence Number/Type: **8BC-MRY1416 TYPE "B"**

Water Management Area: **GIFFORD SOUND (21) and ECLIPSE SOUND (48)  
WATERSHEDS**

Location: **MARY RIVER SITE PREPARATION PROJECT  
QIKIQTANI REGION, NUNAVUT**

Classification: **MISCELLANEOUS UNDERTAKING**

Purpose: **DEPOSIT OF WASTE**

Quantity of Water use not  
to Exceed: **WATER USE AUTHORIZED**

Date of Licence Issuance: **August 6, 2014**

Expiry of Licence: **August 5, 2016**

This Licence, issued and recorded at Gjoa Haven, Nunavut, includes and is subject to the annexed conditions.

**Thomas Kabloona,  
Nunavut Water Board, Chair**

## **PART A: SCOPE, DEFINITIONS AND ENFORCEMENT**

### **1. Scope**

This Licence allows for the use of Water and the deposit of Waste in support of an Undertaking classified as Other, as per Schedule 1 of the *Regulations*, with respect to the Mary River Site Preparation Project, located 160 kilometres south of Pond Inlet, within the Qikiqtani Region of Nunavut.

- a. This Licence is issued subject to the conditions contained herein with respect to the taking of water and the depositing of waste of any type in any waters or in any place under any conditions where such waste or any other waste that results from the deposits of such waste may enter any waters. Whenever new regulations are made or existing *Regulations* are amended by the Governor in Council under the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*, or other statutes imposing more stringent conditions relating to the quantity or type of waste that may be so deposited or under which any such waste may be so deposited, this Licence shall be deemed, upon promulgation of such regulations, to be subject to such requirements; and
- b. Compliance with the terms and conditions of this Licence does not absolve the Licensee from responsibility for compliance with the requirements of all applicable Federal, Territorial and Municipal legislation.

### **2. Definitions**

“**Act**” means the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*;

“**Addendum**” means the supplemental text that is added to a full plan or report usually included at the end of the document and is not intended to require a full resubmission of the revised report.

“**Amendment**” means a change to original terms and conditions of this Licence requiring correction, addition or deletion of specific terms and conditions of the Licence; modifications inconsistent with the terms of the set terms and conditions of the Licence;

“**Appurtenant Undertaking**” means an undertaking in relation to which a use of water or a deposit of waste is permitted by a licence issued by the Board;

“**Board**” means the Nunavut Water Board established under the *Nunavut Land Claims Agreement* and the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*;

“**Effluent**” means treated or untreated liquid waste material that is discharged into the environment from a structure such as a settling pond, landfarm or a treatment plant;

“**Engineer**” means a professional engineer registered to practice in Nunavut in

accordance with the *Consolidation of Engineers and Geoscientists Act S. Nu 2008, c.2* and the *Engineering and Geoscience Professions Act S.N.W.T. 2006, c.16 Amended by S.N.W.T. 2009, c.12*;

“**Greywater**” means all liquid wastes from showers, baths, sinks, kitchens and domestic washing facilities, but does not include toilet wastes;

“**High Water Mark**” means the usual or average level to which a body of water rises at its highest point and remains for sufficient time so as to change the characteristics of the land (ref. Department of Fisheries and Oceans Canada, Operational Statement: Mineral Exploration Activities);

“**Inspector**” means an Inspector designated by the Minister under Section 85 (1) of the *Act*;

“**Licensee**” means the holder of this Licence;

“**Modification**” means an alteration to a physical work that introduces a new structure or eliminates an existing structure and does not alter the purpose or function of the work, but does not include an expansion;

“**Monitoring Program**” refers to the conditions and document considered under Part J, of this Licence;

“**Nunavut Land Claims Agreement (NLCA)**” means the “*Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada*”, including its preamble and schedules, and any amendments to that agreement made pursuant to it;

“**Polishing Waste Stabilization Pond (PWSP) No.2**” means the containment structure or ponds designed and proposed to be constructed as contingency for the storage of “off-spec” treated sewage from Milne Port Sewage Treatment Facilities.

“**Regulations**” means the *Nunavut Waters Regulations* SOR/2013-69 18th April, 2013;

“**Sewage**” means all toilet wastes and greywater;

“**Spill Contingency Plan**” means a Plan developed to deal with unforeseen petroleum and hazardous materials events that may occur during the operations conducted under the Licence;

“**Sump or Sumps**” means a structure or depression that collects, controls, and filters liquid waste before it is released to the environment. This structure should be designed to prevent erosion while allowing percolation of liquid waste;

“**Toilet Wastes**” means all human excreta and associated products, but does not include

greywater;

**“Waste”** means, as defined in s.4 of the *Act*, any substance that, by itself or in combination with other substances found in water, would have the effect of altering the quality of any water to which the substance is added to an extent that is detrimental to its use by people or by any animal, fish or plant, or any water that would have that effect because of the quantity or concentration of the substances contained in it or because it has been treated or changed, by heat or other means.

**“Water” or “Waters”** means waters as defined in section 4 of the *Act*.

### 3. **Enforcement**

- a. Failure to comply with this Licence will be a violation of the *Act*, subjecting the Licensee to the enforcement measures and the penalties provided for in the *Act*;
- b. All inspection and enforcement services regarding this Licence will be provided by Inspectors appointed under the *Act*; and
- c. For the purpose of enforcing this Licence and with respect to the use of water and deposit or discharge of waste by the Licensee, Inspectors appointed under the *Act*, hold all powers, privileges and protections that are conferred upon them by the *Act* or by other applicable law.

## **PART B: GENERAL CONDITIONS**

1. The Licensee shall, within Sixty (60) days of issuance of this Licence, furnish and maintain security with the Minister in the form that is satisfactory to the Minister in amount of \$146,826.10.
2. The Licensee shall furnish and maintain such further or other amounts as may be required by the Board based on annual estimates of current restoration liability.
3. The Licensee shall maintain the security deposit until such time as the Minister is satisfied that the Licensee has complied with all provisions of the approved Abandonment and Restoration Plan or as otherwise indicated by the Board in writing. This clause shall survive the expiry of the Licence.
4. The Licensee may consider adjustments to the financial security amount posted under Part B, Item 1 in this Licence during the Annual Security Review for the Type “A” Licence 2AM-MRY1325.
5. The Licensee shall file an Annual Report on the Appurtenant Undertaking with the Board, no later than March 31<sup>st</sup> of the year following the calendar year being reported, containing the following information:

- a. Summaries for all data and information generated under the Monitoring Program;
  - b. A review and analysis of data collected during the Monitoring Program and a brief description of any future studies planned by the Licensee;
  - c. a summary of materials stored or backhauled for future disposal as required by Part D, Item 8;
  - d. The results of any review conducted and any recommendations regarding any changes to the Monitoring Program and/or remediation requirements;
  - e. A summary of any abandonment and restoration work undertaken during the year and an outline of any work anticipated for the next year;
  - f. A list of unauthorized discharges and summary of follow-up actions taken;
  - g. If applicable, a description of any trenches and sumps excavated, including the following: GPS coordinates, dimensions, depth below active layer, and secondary containment features;
  - h. A description of all progressive and or final reclamation work undertaken, presented with photographic records of site conditions before, during and after completion of operations;
  - i. A brief summary of work done to address concerns or deficiencies listed in any inspection reports and/or compliance reports prepared by an Inspector;
  - j. A public consultation/participation report describing consultation with local organizations and the residents of the nearby communities;
  - k. An executive summary in English and Inuktitut of all plans, reports, or studies conducted under this Licence;
  - l. Any updates to management Plans approved under this Licence are to be submitted as an addendum together with the annual report; and
  - m. Any other details on water use or waste disposal requested by the Board by November 1 of the year being reported.
6. Licensee shall notify the NWB of any changes in operating plans or conditions associated with this Project at least thirty (30) days prior to any such change.
  7. The Licensee shall, for all Plans submitted under this Licence, include a proposed timetable for implementation. Plans submitted, cannot be undertaken without subsequent written Board approval and direction. The Board may alter or modify a Plan if necessary to achieve the legislative objectives and will notify the Licensee in writing of acceptance, rejection or alteration of the Plan.
  8. The Licensee shall, for all Plans submitted under this Licence, implement the Plan as approved by the Board in writing.
  9. The Licensee shall review the Plans referred to in this Licence, as required by changes in operation and/or technology, and modify the Plan accordingly. Revisions to the Plans shall be submitted in the form of an Addendum to be included with the Annual Report.
  10. Every Plan to be carried out pursuant to the terms and conditions of this Licence shall become a part of this Licence, and any additional terms and conditions imposed upon

approval of a Plan by the Board become part of this Licence. All terms and conditions of the Licence should be contemplated in the development of a Plan where appropriate.

11. The Licensee shall maintain a copy of this Licence at the site of operations at all times. Any communication with respect to this Licence shall be made in writing to the attention of:
  - (a) **Manager of Licensing:**  
Nunavut Water Board  
P.O. Box 119  
Gjoa Haven, NU X0B 1J0  
Telephone: (867) 360-6338  
Fax: (867) 360-6369  
Email: [licensing@nwb-oen.ca](mailto:licensing@nwb-oen.ca)
  - (b) **Inspector Contact:**  
Manager of Field Operations, AANDC  
Nunavut District, Nunavut Region  
P.O. Box 100  
Iqaluit, NU X0A 0H0  
Telephone: (867) 975-4295  
Fax: (867) 979-6445
12. The Licensee shall submit one paper copy and one electronic copy of all reports, studies, and plans to the Board. Reports or studies submitted to the Board by the Licensee shall include a detailed executive summary in Inuktitut.
13. The Licensee shall ensure that any document(s) or correspondence submitted by the Licensee to the NWB is received and acknowledged by the Manager of Licensing.
14. This Licence is assignable as provided for in Section 44 of the *Act*.

#### **PART C: CONDITIONS APPLYING TO WATER USE AND PROTECTION**

1. The Licensee shall withdraw Water for domestic camp use, not exceeding fifty (50) cubic metres *per* day, from Phillips Creek during the summer or open-water period and Km-32 Lake during the winter months or freeze-up period. Water for construction or industrial purposes, not exceeding two hundred and forty-nine (249) cubic metres *per* day, shall be withdrawn from Phillips Creek during the summer months or open water period or and Km-32 Lake during the winter months freeze-up period. The volume of water for all purposes under this Licence shall not exceed two hundred and ninety-nine (299) cubic metres per day.
2. The Licensee shall only use fill material that is from an approved source and shall be free of contaminants.

3. The Licensee shall not remove any material from below the ordinary High Water Mark of any water body unless otherwise authorized by the Board in writing.
4. The Licensee shall undertake appropriate corrective measures to prevent and/or mitigate impacts to surface water resulting from the Licensee's operations.
5. The Licensee shall designate an area for the deposition of excavated and stockpiled materials that is at least thirty-one (31) metres above the ordinary High Water Mark of any water body.
6. The Licensee shall locate all collection ponds at a minimum of thirty-one (31) metres above the ordinary High Water Mark of any adjacent water body and inspected on a regular basis.
7. The Licensee shall not conduct activities that will cause erosion to the banks of any body of water and shall provide necessary controls to prevent such erosion.
8. The Licensee shall implement sediment and erosion control measures prior to and maintain such measures during activities to prevent and/or minimize the deposition of dust and/or sediment into water, arising from activities or on-site vehicular traffic.

**PART D: CONDITIONS APPLYING TO WASTE DISPOSAL**

1. The Licensee shall locate areas designated for waste disposal at a minimum distance of thirty-one (31) metres from the ordinary High Water Mark of any water body such that the quality, quantity or flow of water is not impaired, unless otherwise approved by the Board in writing.
2. The Licensee shall not practice on-site land filling of domestic waste, unless otherwise approved by the Board in writing.
3. The Licensee is authorized to dispose of all acceptable food waste, paper waste and untreated wood products in an incinerator.
4. The Licensee shall conduct appropriate analyses, to determine the chemical properties or constituents of ash generated from incineration, prior to disposal at an appropriate facility.
5. The Licensee shall not open burn plastics, wood treated with preservatives, electric wire, styrofoam, asbestos or painted wood to prevent the deposition of waste materials of incomplete combustion and/or leachate from contaminated ash residual, from impacting any surrounding waters, unless otherwise approved by the Board in writing.
6. The Licensee shall provide to the Board, documented authorization from all communities

in Nunavut receiving wastes from the Mary River Site Preparation Project, prior to any backhauling and disposal of wastes to those communities.

7. The Licensee shall backhaul and dispose of all hazardous wastes, waste oil and non-combustible waste generated through the course of the operation at a licensed waste disposal site.
8. The Licensee shall maintain records of all waste backhauled and records of confirmation of proper disposal of backhauled waste. These records shall be made available to an Inspector upon request.
9. The Licensee shall notify the Inspector and the Board of any contaminated soils, water or waste that is generated under this Licence and stored at any facility constructed under this Licence or by means that is regulated under Licence 2AM-MRY1325 for future disposal. This information shall be reported within the annual report required by Part B, Item 4.
10. The Licensee shall not dispose of or store any dredged material associated with the Mary River Site Preparation Project, on land, into or onto any Water body unless approved by the Board in writing.

#### **PART E: CONDITIONS APPLYING TO CONSTRUCTION AND OPERATIONS**

1. The Licensee shall submit to the Board for review, at least thirty (30) days prior to construction, for-construction drawings, stamped by an Engineer, for the following facilities: the Milne Port Ore Dock and supporting infrastructure, the Polishing Waste Stabilization Pond, sedimentation ponds, the Matrix camp expansion, and any other engineered infrastructure allowed under the scope of this Licence.
2. The Licensee shall submit to the Board for review, within ninety (90) days of completion of construction of any structure designed to contain, divert, and retain waters and/or wastes, or at least thirty (30) days prior to the expiry of the Licence, whichever date comes first, a Construction Summary Report prepared by an Engineer that includes as-built plans and drawings, documentation of field decisions that deviated from original plans and any data used to support these decisions.
3. The Licensee shall not directly discharge effluent associated with the operations of the Milne Inlet PWSP (No. 2) and the Milne Port Ore Dock Facility referred to in Part E, Item 1 unless otherwise approved by the Board in writing.
4. The Licensee shall not deposit debris or sediment into or onto any water body with respect to access road, pad construction or other earthworks associated with the Project. These materials shall be disposed a distance of at least thirty-one (31) metres above the ordinary High Water Mark of any water body, in such a fashion that they do not enter the water.

5. The Licensee shall only use aggregate for construction of infrastructure or facilities that is demonstrated to be non-acid generating and non-metal leaching by carrying out appropriate analyses and retaining the results and reports for reference and submission on request by the NWB or Inspector, or have the results submitted with the annual report.
6. All surface runoff and/or discharge from the site during the construction of any facilities or infrastructure associated with this Project, where flow may directly or indirectly enter a Water body, shall not exceed the following Effluent quality limits:

Parameter	Maximum Average Concentration (mg/L)	Maximum Concentration of Any Grab Sample (mg/L)
Total Suspended Solids	50	100
Oil and Grease	No Visible Sheen	No Visible Sheen
pH	Between 6.0 and 9.5	Between 6.0 and 9.5

7. The Licensee shall supervise and field check through an appropriately qualified and experienced Engineer, all construction of engineered structures in such a manner that the Project specification can be enforced and where required, the quality control measures are followed. The Licensee shall maintain and make available at the request of the Board and/or an Inspector, all construction records of all engineered structures.

**PART F: CONDITIONS APPLYING TO DRILLING OPERATIONS**

1. The Licensee is not authorized to conduct any exploration drilling under the provisions of this Licence.

**PART G: CONDITIONS APPLYING TO MODIFICATIONS**

1. The Licensee may, without written consent from the Board, carry out Modifications to the Water Supply Facilities and Waste Disposal Facilities 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 Screening Decision;
  - d. the Board has not, during the sixty (60) days following notification of the proposed Modifications, informed the Licensee that review of the proposal will

- e. require more than sixty (60) days; and  
the Board has not rejected the proposed Modifications.
- 2. Modifications for which all of the conditions referred to in Part G, Item 1 have not been met can be carried out only with written approval from the Board.
- 3. The Licensee shall provide as-built plans and drawings of the Modifications referred to in this Licence within ninety (90) days of completion of the Modification. These plans and drawings shall be stamped by an Engineer.

**PART H: CONDITIONS APPLYING TO SPILL CONTINGENCY PLANNING**

- 1. The Board has accepted the 2014 update to the approved Plan entitled “*Baffinland Iron Mines Corporation Mary River Project Emergency Response and Spill Contingency Plan*”, dated March 2013.
- 2. The Licensee shall implement measures to prevent or minimize any chemicals, petroleum products or wastes associated with the Project from entering Water. All sumps and fuel caches shall be located at a distance of at least thirty-one (31) metres above the ordinary High Water Mark of any adjacent Water body and inspected at a frequency that is consistent with operational requirements of the facility
- 3. The Licensee shall conduct all equipment maintenance and servicing in designated areas and shall implement special procedures (such as the use of drip pans) to manage motor fluids and other waste and contain potential spills.
- 4. If during the term of this Licence, an unauthorized discharge of waste occurs, or if such a discharge is foreseeable, the Licensee shall:
  - a. Employ the approved Spill Contingency Plan;
  - b. Report the spill immediately to the 24-Hour Spill Line at (867) 920-8130 and to the Inspector at (867) 975-4295; and
  - c. For each spill occurrence, submit to the Inspector, no later than thirty (30) days after initially reporting the event, a detailed report that will include the amount and type of spilled product, the GPS location of the spill, and the measures taken to contain and clean up the spill site.
- 5. The Licensee shall, in addition to Part H, Item 4, regardless of the quantity of releases of harmful substances, report to the NWT/NU Spill Line if the release is near or into a Water body.

**PART I: CONDITIONS APPLYING TO ABANDONMENT AND RESTORATION OR TEMPORARY CLOSING**

1. The Board has approved with the issuance of this Licence, the document entitled *Amended Type “B” Water Licence Abandonment and Reclamation (A&R) Strategy and Security Estimate*, dated May 2014, submitted as additional information with the Application.
2. The Licensee shall complete all restoration work prior to the expiry of this Licence.
3. The Licensee shall carry out progressive reclamation of any components of the Project no longer required for the Licensee’s operations.
4. The Licensee shall backfill and restore all sumps to the pre-existing natural contours of the land.
5. The Licensee shall remove from the site, all infrastructure and site materials, including all fuel caches, drums, barrels, buildings and contents, temporary docks, water pumps and lines, material and equipment prior to the expiry of this Licence.
6. In order to promote growth of vegetation and the needed microclimate for seed deposition, all disturbed surfaces shall be prepared by ripping, grading, or scarifying the surface to conform to the natural topography.
7. Areas that have been contaminated by hydrocarbons from normal fuel transfer procedures shall be reclaimed to meet objectives as outlined in the Government of Nunavut’s Environmental Guideline for Site Remediation, 2010. The use of reclaimed soils for the purpose of back fill or general site grading may be carried out only upon consultation and approval by the Government of Nunavut, Department of Environment and an Inspector.
8. The Licensee shall contour and stabilize all disturbed areas to a pre-disturbed state upon completion of work.

**PART J: CONDITIONS APPLYING TO THE MONITORING PROGRAM**

1. The Licensee shall submit to the Board for approval in writing, within sixty (60) days of Licence issuance, a Monitoring Plan for the construction and/or operation of the facilities and/or undertakings associated with the Mary River Site Preparation Project and the requirements of the amended/renewed Licence.
2. The Licensee shall, at a minimum, maintain Monitoring Stations within the above Plan, at the following locations: the Milne Port ore dock, ore stockpile areas, ship-loading facilities, sedimentation ponds, and ore reclaiming and conveying facilities, proposed Polishing Waste Stabilization Pond (PWSP No. 2), and Matrix Camp expansion.
3. The License shall install additional Monitoring Stations, as may be required, to effectively and adequately monitor surface runoff from the Project site(s) or discharge from water management systems associated with the Project. Within thirty (30) days of

establishment of additional Monitoring Stations, the Licensee shall inform the Board and the Inspector.

4. Additional monitoring requirements may be requested by the Inspector.
5. The Licensee shall conduct all sampling, sample preservation and analyses in accordance with methods prescribed in the current edition of *Standard Methods for the Examination of Water and Wastewater*, or by such other methods approved by the Board.
6. All analyses shall be performed in a laboratory accredited according to ISO/IEC Standard 17025. The accreditation shall be current and in good standing.
7. The Licensee shall, during periods of flow or following a major precipitation event, conduct monitoring on a monthly basis, prior to, during and following construction of water crossings, immediately upstream and downstream for criteria listed under Part E, Item 6.
8. The Licensee shall include in the Annual Report, required under Part B, Item 5, all monitoring results and information required by this Part.