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November 14, 2014

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Manager of Licensing **Nunavut Water Board** P.O. Box 119 Gjoa Haven, Nunavut X0B 1J0

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Dear Nunavut Water Board,

Paglac Cape Dorset RE: APPLICATION FOR RENEWAL AND AMENDMENT TO TYPE 'A' WATER LICENCE 2AM-MRY1325 - TECHNICAL ASSESSMENT

4VJC&Jg Clyde River As requested by the Nunavut Water Board (NWB), the Qikiqtani Inuit Association (QIA) provides this letter that outlines its technical assessment of Baffinland Iron Mines Corporation's (BIMC) application² for amendment to the Type 'A' Water Licence 2AM-MRY1325. BIMC's proposed activities associated with this amendment application primarily occur on Inuit Owned Lands (IOL) that are administered through a Commercial Production Lease (No: Q13C301) between BIMC and the QIA.

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As requested by the NWB, the QIA's preference on the form of the Technical Meeting and Pre-

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hearing Conference, the QIA recommended in its September 16, 2014 letter³, as follows.

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"With regards to the type of technical meeting / pre-hearing conference to be held, the QIA recommend both written and teleconference modes of delivery. QIA does not believe a formal in-person hearing is required for this amendment application. The technical meeting could take the form of written information request from interested parties with a response by BIMC. The information requests and responses could then be discussed during a technical meeting, preferably by teleconference. QIA also suggests that a prehearing conference could be completed by teleconference. In the event the NWB feels it is important to hold either technical meetings or the pre-hearing conference in-person, QIA requests that teleconference still be made available as part of meeting agenda design and process. Furthermore, it I strongly recommended that the NWB determine if community groups, such as HTOs, plan to attend technical meetings, prehearing conference and hearings. In the event such groups plan on participating the NWB should arrange for translation services. QIA believes the aforementioned recommendations align with

¹ NWB September 29, 2014 Public Notice titled "Licence 2AM-MRY1325, Type "A" – Notice of Amendment Application and Commencement of Technical Review Period for Mary River Project".

² BIMC July 16, 2014 Type A Water Licence application titled "Application for Amendment to the Type "A" Water Licence 2AM-MRY1325".

³ QIA September 16, 2014 letter to the NWB titled "Application for Renewal and Amendment to Type A Water Licence 2AM-MRY1325".



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operating procedures of the NWB as described within Rules of Practice and Procedure for Public Hearing (May 2005)."

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The QIA acknowledges BIMC's responses to the QIA's September 16, 2014 initial information request. The QIA's initial review of the Water Licence amendment application and the BIMC responses will be used to inform the QIA's intervention submittal to the NWB. The QIA provides the following technical assessment with regards to BIMC's submittal to the NWB. The QIA provides this assessment in efforts to gain further information, and resolve or gain clarity, on items prior to the technical meeting. The responses to these items, in addition to those gathered throughout the licensing process, will be used to further inform the QIA's intervention submittal to the NWB.

1. With regards to the monitoring of contact water from the Milne Port ore stockpile, BIMC notes⁴ (response to AANDC-3.2) that "Environment Canada has advised Baffinland that the mine effluent discharge to Milne Inlet will not be subject to MMER [Metal Mining Effluent Regulations], though the Fisheries Act will still apply, including Section 36(3) regarding the prohibition of discharges of a deleterious substance in waters frequented by fish".

From MMER, "Effluent" means an effluent – hydrometallurgical facility effluent, milling facility effluent, mine water effluent, tailings impoundment area effluent, treatment pond effluent, seepage and surface drainage, treatment facility effluent other than effluent from a sewage treatment facility – that contains a deleterious substance.

- a. It is unclear to the QIA how contact water from the ore stockpile is not considered an "effluent" under the MMER. The QIA request BIMC to provide any written advisement from Environment Canada that states that the contact water from the ore stockpile is not subject to MMER.
- b. The QIA requests BIMC to provide proposed effluent quality criteria for the discharge of the Milne Inlet ore stockpile runoff waters to Milne Inlet with supporting discussion on how the proposed criteria are protective of the receiving environment.
- c. It is requested that Environment Canada provide clarification on the applicability of MMER to the discharge of contact water from the Milne Port ore stockpile to Milne Inlet.
- d. The QIA requests Environment Canada to provide clarification on the responsible authority and applicable regulation(s) associated with the discharge of the contact water from the Milne Port ore stockpile to Milne Inlet. It is further requested that

⁴ BIMC October 28, 2014 letter to the NWB titled "Baffinland Responses to Agency Comments on the Amendment to the Type 'A" Water Licence 2AM-MRY1325".



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the required monitoring in the receiving waters under said regulations be summarized.

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2. BIMC references⁴ (response to AANDC-3.2) their June 27, 2014 Aquatic Effects Monitoring Program⁵ (AEMP) to address monitoring associated with the ore stockpile contact water and the receiving environment.

The QIA notes that the June 27, 2014 AEMP was submitted to the NWB in accordance with Part I, Item 2 of the Type 'A' Water Licence 2AM-MRY1325. The AEMP is currently undergoing review by Interested Parties for the NWB's consideration in rendering their decision on approval⁶. It is the QIA's understanding that the scope of the Type 'A' Water Licence does not include the Early Revenue Phase (ERP) activities. BIMC's Water Licence amendment application² was submitted to the NWB to include the construction and operation of infrastructure and facilities associated with the proposed ERP components into their Type 'A' Water Licence.

Upon cursory review of the July 27, 2014 AEMP, the QIA notes the following:

- Section 2.1 Problem Formulation, introduces the subject of runoff from the ore stockpile area at Milne Port and notes that it will be discharged to Milne Inlet.
- Section 2.1 Problem Formulation, notes "Monitoring of effects to the marine environment is beyond the scope of this AEMP."
- Section 2.4 Potential Issues and Concerns by Project Components, is silent on the topic of monitoring associated with the contact water from the ore stockpile.
- Figure 3.3 Milne Port Surveillance Network Program (SNP) does not include a SNP monitoring station for the ore stockpile runoff ponds. Table 3.3 presents proposed SNP monitoring stations associated with the ERP; however, it is unclear if any of these monitoring stations are associated with Milne Port ore stockpile.

Based on this the QIA has the following comments and requests for clarification.

a. The QIA's review of the July 27, 2014 AEMP is not to be considered a detailed technical assessment. The QIA's review of the July 27, 2014 AEMP will be issued to the NWB under a separate cover. That review will be restricted to the scope of the Type 'A' Water Licence and therefore does not address the ERP activities, since these activities are the subject of the current Water Licensing amendment process. The QIA seeks clarification from the NWB on how the July 27, 2014 AEMP submittal relates to

⁵ BIMC June 27, 2014. Aquatic Effects Monitoring Plan. BAF-PH1-830-P16-0039 Rev 0.

⁶ NWB October 20, 2014 Public Notes e-mail titled "141014 2AM-MRY1325 Submission of Aquatic Effects Monitoring Plan".



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this Water Licence amendment process. After clarification, the QIA will evaluate the necessity to complete a detailed technical assessment relative to ERP activities (not yet captured in the scope of 2AM-MRY1325).

- b. The QIA requested³ (response to QIA-2) BIMC to provide the proposed SNP associated with the ERP (location of sampling, frequency of sampling, and parameters to analyze) for review and further comment. BIMC referred the QIA to the July 27, 2014 AEMP. SNP monitoring associated with the ore stockpile runoff ponds, waters along the Tote Road and quarries/borrows has not been addressed or no new SNP monitoring stations were proposed by BIMC within the July 27, 2014 AEMP. The QIA seeks clarification from BIMC regarding the SNP monitoring associated with the Milne Inlet ore stockpile runoff ponds, waters along the upgraded Tote Road and quarries/borrows that support the ERP activities.
- c. Table 3.2 and Figure 3.3 summarized established SNP monitoring stations associated with the ERP. The QIA notes that monitoring stations associated with "Surface discharge downstream of construction area at Milne Port" and "Surface Runoff and or Discharge Quarries" as listed in Table 3.2 are not depicted in Figure 3.3 or elsewhere. Additionally, the location of the Milne Port- Off-Spec Effluent Pond is unknown and the associated SNP for this location is also unknown. The QIA requests BIMC provide additional, or updated, map(s) to depict these SNP monitoring locations associated with the ERP.
- d. The QIA seeks clarification from the NWB if ore stockpile runoff waters discharged to Milne Inlet are to be considered as part of the scope of the Water Licence amendment. Note, BIMC's July 27, 2014 AEMP stated that all site drainage, treated sewage and treated oily water will be relocated to a point approximately 200 m from the Milne Inlet shoreline. Attachment 1 to the Water Licence amendment application², states the proposed outfall is located north of the existing fuel farm facility and discharges to an existing drainage system approximately 100 m from the Milne Inlet shoreline. Without further information, the QIA assumes that contact water from the ore stockpile would be discharged to the same location.
- e. Related to item 2.d., the QIA requests clarification from BIMC on the relocation point for the discharge of site drainage, treated sewage and treated oil water. Further, the QIA requests clarification from BIMC on the location of discharge of the ore stockpile runoff waters.
- f. The QIA seeks clarification from the NWB if the effects monitoring in the Marine Environment associated with discharge of effluent waters to Milne Inlet is to be considered as part of the scope of the Water Licence. If effects monitoring within



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Milne Inlet is within the jurisdiction of the NWB, the QIA recommends the AEMP

The QIA seeks clarification from BIMC which monitoring plan(s) address monitoring of the effects to the marine environment that are associated with the discharge of effluent waters to Milne Inlet. QIA notes that this information may be related to the NIRB Project Certificate⁷ Term and Condition #76 which states

"The Proponent shall develop a comprehensive Environmental Effects Monitoring Program to address concerns and identify potential impacts of the Project on the marine environment".

- 3. The QIA requested³ (response to QIA-3) BIMC to provide the locations, within the Final Environmental Impact Statement (FEIS), where potential impacts on the receiving environment are associated with water withdrawal from along the Tote Road. BIMC's response pertains to the Nunavut Impact Review Board's (NIRB) screening assessment; however, does not address the QIA's initial request to understand the potential impacts on the receiving environment, thus waters on Inuit Owned Lands, from this ERP activity. The QIA requests BIMC provide a response to the QIA's September 16, 2014 information request. If the FEIS did not assess this activity for potential impacts to the receiving environment, it is requested that BIMC inform if this information is available in a different report.
- 4. Further to the QIA's September 16, 2014 letter³ (QIA-3) regarding the Water Compensation Agreement, the QIA informs the NWB that this topic remains to be discussed between the QIA and BIMC.
- 5. The QIA's September 16, 2014 letter³ (QIA-7) notes that BIMC is seeking a 25 year licence term for this Water Licence amendment. BIMC provided no additional information to support an extended licence term. The QIA requests BIMC to provide the basis for a change in the licence term to support the proposed licence expiry date of 2040. Until further evidence is presented for review QIA cannot comment on the need for this amendment. QIA further refers the NWB to consider the reasons for decision associated with 2AM-MRY1325 on this topic.
- 6. The QIA's September 16, 2014 letter3 (QIA-5) informs the NWB that the QIA and BIMC have engaged throughout 2014 on the topic of financial security for the Mary River Project, inclusive of the ERP activities. The global financial security for the Mary River Project will be the subject of further discussion as part of the Annual Security Review⁸.

address this monitoring component.

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⁷ NIRB May 28, 2014 document titled "NIRB Project Certificate [NO.:005]".

⁸ NWB November 6, 2014 Public Notice titled "2AM-MRY1325, Type "A" - Guidance for the Annual Security Review Process under Part C and Schedule C of the Licence for the Mary River Project".



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7. The QIA submitted⁹ to the NWB on September 15, 2014 a review of the Interim Closure and Reclamation Plan for the Mary River Project (as referenced in Attachment 4 of the Water Licence amendment application²). As noted in BIMC's October 3, 2014 response¹⁰, the QIA and BIMC have agreement on an approach forward to fulfill the requirements of the closure and reclamation plan under the Commercial Lease. ERP activities in relation to the Interim Closure and Reclamation Plan will be addressed through said approach.

8. Part A, Item 1 of Water Licence 2AM-MRY1325 outlines the scope of the approved Mary River Project. Specific to the Tote Road, the Water Licence scope is defined as follows

"Tote Road (approximately 100 km all-weather road), which extend from the Mine Site to Milne Port site in its current form except for routine maintenance and minor upgrades for the transportation of equipment during the Construction Phase of the project".

The QIA understands that this scope does not permit an alteration to the Tote Road, except for routine maintenance and minor upgrades, from its form as of license issuance (June 10, 2013).

Part D, Item 2 of the Water Licence requires final design and for-construction drawings for the applicable infrastructure, water crossings and roads that are listed. The QIA understands that the reference to roads in Part D, Item 2 is in reference to the railway water crossings and the associated road access corridor for the railway as presented in the Water Licence application¹¹ (Section 2.6 Executive Summary, Attachment 7 – Water Crossings, and Attachment 9 – Water Crossing Drawings). To assume that Part D, Item 2 applies to the Tote Road would contradict the scope of the project as defined in Part A, Item 1.

Within the original Water Licence application¹¹, water crossings associated with the rail and the associated access road were provided, but no drawings associated with newly constructed water crossings for the Tote Road. Within the Executive Summary of the Water Licence application (Section 2.2) it is stated

"Sections of the road will be upgraded to reduce hazards and risks. Some of the upgrade activities will consist of:

- Improvement to the road base
- Realignment of the road where necessary to facilitate passage of large loads and fuel tanker trucks

⁹ QIA September 15, 2014 letter to the NWB titled "Baffinland Iron Mines Corporation's Interim Mine Closure and Reclamation Plan – Qikiqtani Inuit Association Review".

¹⁰ BIMC October 3, 2014 letter to the NWB titled "Next Update for the Interim Closure and Reclamation Plan".

¹¹ BIMC February 15, 2012 submittal to the NWB titled "Mary River Project Application for Type A Water License".



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- Improvement to the grade in certain areas
- On-going efforts to reduce risk at stream crossings through the implementation of the freshet management plan

No work other than routine maintenance and some improvements to stream crossings are envisaged. Therefore, there is no requirement for an additional HADD authorization or NWB authorization for water crossings.

Large heavy loads will be transported during the winter months and over ice at stream crossings that do not have sufficient load bearing capacity."

Since no NWB authorization was requested by BIMC, the QIA interprets this to be the reason why the Type 'A' Water Licence scope for the Tote Road is restricted to the "current form except for routine maintenance and minor upgrades for the transportation of equipment during the Construction Phase of the project". Within the Water Licence application there are no specifics regarding any new (i.e., not a replacement of an existing culvert in the same location, such as a culvert repair) water crossings or bridge replacements.

The Type 'A' Water Licence scope is to be based on the original Water Licence application¹¹ and is to conform to the NIRB's assessed project as defined in the FEIS¹². Volume 1 of the FEIS (Section 2.3.1 Milne Inlet Tote Road), the scope of the Tote Road is defined as follows.

"The Milne Inlet Tote Road was upgraded in 2008 from a winter road to an all-season road adequate for transporting equipment and ore using 45-t trucks. Figure 1-2.4 presents the alignment of the Milne Inlet Tote Road. The road will be maintained through the construction phase with some improvements to the road base and reductions of steep grades at certain locations. No major improvements or bridge replacements are proposed, and large oversized equipment will be brought over the road during winter".

The QIA notes that the scope of the Tote Road as detailed in the 2012 Water Licence application¹¹ is similar to that presented in the 2012 FEIS¹². The current Water Licence is to align with the NIRB decision from the FEIS and the Water Licence application.

In 2013, BIMC applied to the NIRB to complete the ERP, which resulted in addendum to the FEIS¹³. The FEIS addendum (Table 1-2.1) summarizes the key project facts for the ERP and Approved Project. Specific to the Tote Road the stream crossings associated with the Tote Road were summarized as follows:

"Total of 115 stream crossing

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¹² BIMC February, 2012 submittal to NIRB titled "Mary River Project Final Environmental Impact Statement".

¹³ BIMC June 2013 submittal to NIRB titled "Early Revenue Phase Addendum to Final Environmental Impact Statement".



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- 4 bridges
- 75 culvert replacements
- 40 culvert extensions

Design as per 2008 Tote Road upgrade report [Knight Piésold: Document NB102-00181/10-1, Rev O, Bulk Sampling Program – Road Upgrade Design Summary]"

The Knight Piésold report is presumed to be the upgrade design report for the Tote Road in 2008 to improve the Tote Road from a winter road to an all-weather road to support the bulk sampling program. This source document is unavailable to the QIA to confirm, but is likely a key source that depicts design intent and alignment of the Tote Road in 2008.

The ERP activities utilize the Tote Road to haul ore by trucks to the Milne Port. The FEIS addendum (Section 2.2.1 Scope of the ERP) states

"the upgrade to the tote Road (limited realignment, replacement of culverts, addition of bridges) are an integral part of the Approved Project as well as the ERP and were included in the scope of the Final Environmental Impact Assessment (FEIS) submitted for Project Certificate No. 005"

The QIA notes the contrast in the 2012 FEIS addendum scope for the Tote Road compared to the 2012 Water Licence application, which generally defines the scope of the Tote Road to be limited to routine maintenance and minor upgrades.

The addendum to the FEIS contains a new appendix associated with the Tote Road Drawings (Appendix 3C). BIMC states that

"Project Certificate condition No. 29 requires that Baffinland "provide the respective regulatory authorizes with construction engineering design and drawings". In accordance with this requirement, Appendix 3C contains design drawings for the Tote Road upgrades. These drawings are provided in the ERP submission for information purposes".

Further, BIMC claims the Tote Road upgrades are approved under the Project Certificate No. 005 and that subsequent Department of Fisheries and Oceans (DFO) authorizations allow BIMC to undertake this work. The QIA notes that the upgrades to the Tote Road, as presented in Appendix 3C of the FEIS addendum, pertain to alignment changes and do not present culverts or bridges.

a. To aid in the development recommendation for items to include in an amended Water Licence that includes the ERP activities, the QIA seeks to further understand the scope of the existing Water Licence. The QIA seek clarification from the NWB as to the scope of the Tote Road upgrades permitted under the Water Licence in order to further understand the following phrases and terms used in Part A, Item 1 of the Water Licence.

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- "current form" of the Tote Road
- Routine maintenance
- Minor upgrades

With respect to road realignment, road expansion (widening or thickness), culvert construction and bridge construction associated with the Tote Road, clarification is sought if any of these activities are within the scope of the Water Licence, and if so, the extent of the activity permitted.

- b. The QIA requests BIMC provide the following reference document to further understand the 2008 designed road and culvert characteristics since they are the basis for the design of the replacement culverts. Knight Piésold: Document NB102-00181/10-1, Rev 0, Bulk Sampling Program – Road Upgrade Design Summary.
- c. The QIA requests the hydrology and hydraulic characteristics of the 75 replacement culverts that are referenced in the addendum to the FEIS¹³ and planned for replacement.
- d. Watercourse crossings (i.e., culvert and bridge construction and operation) have potential to impact fisheries resources and alter water quality and flow from natural conditions. Short- and long-term effects can arise as a result of erosion of ditches and slopes, sediments can be released due to construction activities and erosion processes. Specific to the Tote Road, the QIA requests BIMC to provide the locations within management plans or reports where the specifics regarding monitoring of water quality, quantity and/or flow are detailed for:
 - The construction phase for the culvert and bridge locations.
 - The post-construction and pre-reclamation phase for the culvert and bridge locations.

Please do not hesitate to contact the undersigned should you require any further information.

Sincerely,

Stephen Williamson Bathory Director, Major Projects

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