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Δ⁵Λ⊲ˤ∹⁵ Arctic Bay Dionne Filiatrault Executive Director Nunavut Water Board P.O. Box 119 Gjoa Haven, Nu

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Ms. Filiatrault,

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Re: Baffinland Iron Mines Corporation's 2012 Work Plan Application

∖ራናታ፥ Hall Beach The Qikiqtani Inuit Association (QIA) would like to thank the Nunavut Water Board (NWB) for providing the opportunity to present comments on Baffinland Iron Mines Corporation (BIMC) the New Type B Water Licence application.

∆اےر۔ Igloolik QIA submits to NWB this technical review of the application and seeks clarity from the NWB and BIMC on selected items. QIA will have a greater understanding of the regulatory administration and project activities, upon receipt and review of the requested information.

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- i. Select review comments relate to the use of engineering authorization on reports and drawings submitted to the NWB. QIA is aware of a meeting the NWB administered in Edmonton on July 21, 2011 that discussed this topic. BIMC's water licence application submission may be influenced by the discussions during the July 21, 2011 meeting, which are unknown to QIA. During the October, 2011 Technical Meeting in Iqaluit regarding BIMC's Draft Environmental Impact Statement, the NWB committed to "endeavor to provide the QIA information on the outcome of the meeting...in which issues related to Engineering Drawings and Standards for Water Licensing were discussed"¹. QIA has not received information from the NWB to date. It is requested that meeting minutes and outcomes from the Edmonton July 21, 2011 meeting be provided to QIA for consideration in this water licence application review and provided on the public record.
- ii. Index for Attachment 8 references a Waste Management Plan document. This document was not available within the water licence application package.

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¹ Commitment #265. November 4, 2011 BIMC letter to NIRB titled "Revised List of Commitments from Technical Meetings".

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iii. Section 11 of the water licence application states that applicable Supplemental Information Guidelines (SIG) must be updated and submitted with the application. BIMC indicated that the "Landfarm & On-Site Storage of Hydrocarbon Contaminated Soil", "Mineral Exploration / Remote Camp" and "Advanced Exploration" are applicable for this undertaking.

The Water Licence application does not contain any completed SIGs. As per NWB Guide 4 – Completing and Submitting a Waster Licence Application for a New Licence (Table 1), applications that do not include information that satisfies the checklist requirements outline in any SIG are incomplete. Clarification from the NWB is requested on the completeness of the application.

- iv. The Type B water licence application focus pertains to the "addition of facilities required to support ongoing exploration and geotechnical investigation activities for the Mary River Project". BIMC claims that the scope of work for the new facilities is "related to previous [NIRB] screenings" which were considered in the issuance of the existing Type B water licence (2BB-MRY-1114). BIMC requested that the additional facilities be "permitted under a separate Type B water licence so they can be rolled into the new Type A licence that will be issued for the overall Mary River Project".
 - a. Since the additional facilities are intended to support on-going exploration and geotechnical investigation activities, which is already permitted (2BB-MRY-1114), guidance from the NWB is requested on why the additional facilities should be issued as a new water licence instead of an amendment to the existing Type B water licence (2BB-MRY-1114).
 - b. There are at least two activities that are proposed for inclusion in a new water licence that interact, and potentially overlap, with the existing water licence. For example, the Steensby camp water use and sewage effluent discharge are activities proposed in the new water licence and also within the existing water licence. It is requested that the NWB provide guidance on how overlap in activities can span more than one water licence. It is requested that AANDC provide guidance on how enforcement of similar activities under two water licences will be completed.
- v. Milne Inlet Construction and use of 1 x 1.5 ML Jet fuel tank and 5 ML diesel fuel tank The NWB issued approval for modification² to the existing Type B water

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² August 12, 2011 letter from NWB to BIMC titled "2BB-MRY1114 Type "B" – Action Plan for Decommissioning of Milne Inlet Bulk Fuel Storage Facility and the Construction of New Fuel Tank Storage".

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%⊳ሥ∆ናጋ% Resolute Bay licence (2BB-MRY1114) to permit the construction and use of a new steel fuel tank storage facility at Milne Inlet. The activities under the modification were limited to the "installation of approximate 5 million Litre aboveground steel tank at the Milne Inlet Bulk Fuel Storage Facility and associated components". BIMC's modification request³ was limited to the installation and use of a 5 million Litre aboveground steel tank to replace the fuel bladders at Milne Inlet. The activities presented in the 2012 Work Plan, provided with the new Type B water licence application, note that "construction and use of 1 x 1.5 ML Jet fuel tank and 5 ML diesel fuel tank" are activities permitted under the existing water licence (2BB-MRY-1114).

- a. Based on above, it appears that the installation of the 1 x 1.5 ML Jet fuel tank has not been previously screened by NIRB. The BIMC document that requested approval from NWB to install a new 1x 1.5 ML Jet fuel tank is unknown. A reference to this document is requested from the NWB.
- b. Currently bulk jet fuel storage at Milne occurs in the fuel bladders. It is requested that upon commissioning of any new Jet fuel tank, the bladders associated with jet fuel storage no longer be in use.
- c. Two drawings are provided that relate to the expansion of the Milne Inlet fuel system (H337697-4020-10-035-0001 and H337697-4110-10-014-002). Each drawing is "issued for 2012 work" and has Engineer stamp/signature, but no Permit to Practice signature. Phrases to the effect of "issued for construction" are not provided to note final drawings. Therefore these drawings should not be considered final drawings. As per the NWB Guide 4 Completing and Submitting a Water Licence Application for a New Licence, it is recommended that approval should not proceed until "design drawings and reports requiring the application of engineering principles" are submitted. It is recommended that final drawings for construction, signed and stamped by a qualified engineer, are issued to the NWB for approval, and as-built drawings, also signed and stamped by a qualified engineer, are submitted to the NWB post construction.
- d. The new Milne Inlet fuel storage area was constructed in 2011 and is a lined facility. There currently is not an SNP or effluent discharge criteria associated with this structure. Since this is a lined facility, water will likely accumulate in a sump and require removal as required. It is recommended that the new Milne Inlet fuel storage facility have an SNP established and monitoring consistent to the Milne Inlet fuel bladder facility. It is recommended that discharge of the sump waters have a location for

³ June 21, 2011 BIMC submission to NWB titles "Action Plan for Decommissioning of Milne Inlet Bulk Fuel Storage Facility and the Construction of New Fuel Tank Storage, Notification for Water Licence Modification Type B Water licence 2BB-MRY1114, Mary River Project".

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discharge and effluent quality specified in the water licence. It is requested that effluent discharge quality for the new fuel storage facility be consistent with discharge quality applied to the Milne Inlet fuel bladder facility.

- e. Specification H337697 Aboveground Fuel Storage Tanks is general and specifies two 1.5 ML tanks. The drawings depict one tank for installation.
 Clarification is requested that only one 1.5 ML tank is proposed for installation.
- f. Specification H337697 Aboveground Fuel Storage Tanks is general and specifies hydrostatic testing; however, does provide specification in lieu of hydrostatic testing. Based on previous site experience by BIMC, clarification is requested if hydrostatic testing will be completed. If hydrostatic testing is completed, additional details, as outlined in the SIG for hydrostatic testing is requested.

Milne Inlet – Decommissioning of fuel bladders —It is uncertain if the decommissioning of the Milne Inlet fuel bladder facility is scoped into the current water licence (2BB-MRY-1114) or requested for inclusion in the new Type B water licence. Clarification from NWB of this interpretation is requested.

Milne Inlet – Landfarm –

- a. EBA December 2010 document titled "Hydrocarbon impacted soil storage and landfarm facility operations, maintenance and monitoring plan Milne Inlet, Mary River Project Nunavut" is noted as "issued for review". A final "issued for use" operations and maintenance (O&M) plan for the landfarm facility is requested as a term and condition of the new water licence. The final O&M plan is requested to be submitted to the NWB for review and approval prior to use of the landfarm facility.
- b. A final landfarm design report with construction specifications is requested for submission to the NWB for review and approval prior to construction. It is requested that the design report, and engineering drawings, be signed and stamped by a qualified engineer.
- c. BIMC provided "not for construction" drawings in the O&M plan. Forconstruction engineering drawings, signed and stamped by an engineer are requested. As-built drawings, signed and stamped by an engineer are requested.
- d. It is requested that a SNP be established at the sump of the landfarm. It is requested that an effluent quality criteria be specified in the water licence for the discharge of effluent waters from the landfarm. It is requested that effluent criteria should be consistent with discharge waters for the fuel containment facilities at Milne. The location for discharge is requested and included in the water licence.



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e. It is requested that soil quality remediation objectives utilize Federal guidelines (e.g., CCME) instead of the BIMC recommended Nunavut guidelines. The Nunavut guidelines are applicable for Commissioner's lands not Inuit Owned lands or Crown lands. As recommended by BIMC, the agricultural/wildland hydrocarbon criteria are applicable for treated soils returned to the environment. It is requested this treatment criteria be included in the water licence.

f. It is requested that soil and water monitoring results are presented in the water licence annual report. Frequency of monitoring, as recommended by BIMC, should be included in the water licence. When treated soil is returned to the environment, it is recommended that soil monitoring data be compared to criteria and presented in the annual report with soil volumes removed from the facility.

Mine Site – Construction and use of a new 5 ML diesel fuel tank and installation of two new 1.5 ML jet A fuel tanks –

- a. It is requested that the existing bladders at the Mine Site cease to be used upon use of the new 5 ML diesel fuel tank and the jet A fuel tanks.
- b. Drawings associated with the new fuel tank facility at the Mine Site are "issued for 2012 work" and has Engineer stamp/signature, but no Permit to Practice signature. Phrases to the effect of "issued for construction" are not provided to note final drawings. Therefore these drawings should not be considered final drawings. As per the NWB Guide 4 Completing and Submitting a Water Licence Application for a New Licence, it is recommended that approval should not proceed until "design drawings and reports requiring the application of engineering principles" are submitted. It is recommended that final drawings for construction, signed and stamped by a qualified engineer, are issued to the NWB for approval, and as-built drawings, also signed and stamped by a qualified engineer, are submitted to the NWB post construction.
- c. The 2012 Work Plan states installation of two 1.5 ML jet A fuel tanks; however the cover letter states construction and use of 1 x 1.5 ML jet fuel tank. The drawings suggest one tank to be installed, not two. Clarification is requested in the number of jet A fuel tanks to be installed and used at the Mine Site.
- Mine Site Advance the waste rock characterization program There is limited information presented in the water licence application on the context of the waste rock characterization program. A reference to the discussion at the Iqaluit Technical Meetings is provided. This reference alone without additional details of the program with submission with the water licence application is insufficient to assess potential impacts, water use, and waste disposal. It is unclear if the waste rock characterization program will require on-site activities, or primarily off-site activities



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(such as laboratory testing and desktop evaluation). Additional detailed information regarding the proposed waste rock characterization program is requested to understand if there are water use and deposit of waste onto water related activities.

- x. Steensby Site Camps The existing 40 person camps (under 2BB-MRY1114) will be used, and a new 46 person camp permitted under a new water licence is requested. If permitted, both camps could be in use at Steensby under different water licences. Each camp will require water use and waste disposal facilities that will likely utilize a common set of infrastructure. The new drinking water and sewage treatment facilities is proposed by BIMC as an additional activity, and therefore requested to be permitted under a new water licence. Clarification is requested, by NWB, how infrastructure (in this case potable water use and sewage treatment/discharge) that is used to support two separate water licences will be administratively managed within the water licence terms. Clarification is requested from AANDC how permitting in this manner will interact with inspection and enforcement. Note that the potable water use and sewage generation of about 30 m³/day is based on a 90 person camp (40 person camp from existing water licence and 46 person camp for proposed new water licence).
- xi. **Steensby Site Treated effluent outfall** Treated sewage is proposed to be discharged through an outfall into Steensby Inlet. Steensby Inlet is not a freshwater body and therefore may not be under the jurisdiction of the NWB.
 - a. Clarification is requested on who the regulatory authority is for sewage discharge to non-freshwater bodies. If this responsibility is not the NWB, what regulatory authorization is required for this practice? With respect to regulatory authority and enforcement of sewage discharge to nonfreshwater bodies along Nunavut's coastline, the role of Aboriginal Affairs and Northern Development Canada, Environment Canada, and Department of Fisheries and Oceans is requested.
 - b. BIMC proposes to incinerate sludge generated from the sewage treatment plant. Even dewatered sludge has a substantial water content and weight that may interfere with typical incinerator performance. Clarification is requested if the incinerator can manage sludge incineration and achieve emissions requirements. Supporting information of this activity from the manufacturer's operations manual of the incinerator is requested.
 - c. Specifications Design Basis Sewage Treatment Plant states that sludge may be disposed of by incineration or by local landfill. Clarification is requested on how sludge will be managed and disposed.
 - d. If disposal by landfill, the specifications state that pathogen reduction and vector attraction reduction requirements are needed. Additional details regarding this process are requested. Further, the on site landfill accepts



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- e. Sewage treatment effluent criteria that are suitable to the receiving environment are requested to be included as a water licence term and condition if the practice of sewage discharge to non-freshwater is the responsibility of the NWB.
- f. SNP monitoring and annual reporting of treated sewage effluent is requested as a water licence term and condition.
- g. A sewage treatment operations and maintenance plan is requested for review and approval by the NWB as a term in the water licence.

Steensby Site – Potable water treatment – Drawing H337697-4610-05-030-0001 depicts two source lakes for drinking water (Lake ST347 and 3km Lake). The location of Lake ST347 is unknown; however the 2012 work plan states water will be obtained from 3km Lake. Clarification is requested if Lake ST347 will be used as a water source, and if so, the location depicted on a map.

Steensby Site – Oily water treatment – Collection of oily water from fuel dispensing and containment areas may occur. Treatment of this waste will likely be required prior to discharge. It is unclear if this activity is accounted for in the existing water licence (2BB-MRY1114) or required in the new water licence. Clarification is requested on the discharge effluent criteria, discharge location, and monitoring requirements and reporting. If this activity is scoped under the existing water licence, clarification is requested from the NWB if any water licence reporting and effluent treatment criteria are currently implemented; if not, why not.

QIA has provided various administrative and technical comments pertaining to the water licence application and project activities. It is understood that the Nunavut Impact Review Board (NIRB) is receiving comments from Interested Parties regarding this screening of this project. QIA may have additional comments to the NWB upon review of NIRBs decision.

Sincerely,

Navarana Beveridge Executive Director

cc - Ryan Barry, Executive Director, Nunavut Impact Review Board

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