



Nunavut Impact Review Board (NIRB)
P.O. Box 1360
Cambridge Bay, NU
X0B 0C0
Attention: Ryan Barry, Executive Director

December 18, 2018

Nunavut Water Board (NWB)
P.O. Box 119
Gjoa Haven, NU
X0B 1J0
Attention: Stephanie Autut, Executive Director

Re: Baffinland Responses to Intervener Information Requests in relation to the FEIS Addendum for the Phase 2 Development Proposal

Please find enclosed a copy of Baffinland Iron Mines Corporation's ('Baffinland') Information Request Response Package in relation to the *Addendum to the Final Environmental Impact Statement, August 2018* (FEIS Addendum) for Phase 2 of the Mary River Project. This package is intended to satisfy the Information Requests (IR's) identified by the Nunavut Impact Review Board (NIRB) as requiring a response in their correspondence from November 27th and November 30th, 2018. As described in Baffinland's correspondence from November 30th, those IR's considered by the NIRB to be more technical in nature will be responded to in separate submission(s) during the technical review period.

In respect of the coordinated review process being undertaken by the NIRB and Nunavut Water Board (NWB), this submission also includes responses to IR's submitted in relation to Baffinland's Type A Water License Amendment Application. Understanding that several subjects of interest are relevant for the purposes of both reviews, it is Baffinland's intention to assist the Boards and reviewers by consolidating our responses. Baffinland trusts the responses provided will satisfy the requirements of the NWB to issue a formal Notice of Application and initiate the technical review period.

Approach to Provide Additional Supporting Information

This Information Request Response Package has been developed to provide meaningful and fulsome responses to all of the IR's it intends to satisfy. Where required, Baffinland has attempted to either attach or provide specific links to relevant information not present in the Phase 2 FEIS Addendum, including original FEIS and ERP Addendum documents, annual monitoring reports required by various existing authorizations, and other supporting information. Where additional information has been requested that is not readily available, Baffinland has described its plans to satisfy the request in the context of the review process.

Recognizing the number of requests from reviewers to provide updated management plans, Baffinland would like to reiterate its proposed approach. As described in TSD-28, Baffinland will provide 'in text' edits to its management plans following the Technical Meeting, currently scheduled for March 12-15, 2019. The intention is that reviewers will be able to comment on the implementation of their recommended edits

through final written submissions. In the interim, Baffinland will continue to track proposed edits in the Commitment Register, included as Appendix 11 to the enclosed submission, as a means of document control, and recommends reviewers provide explicit direction through their technical comments to aid in the updating process.

Intervener Engagement

During the development of the Information Request Response Package, Baffinland met with several government agencies and Inuit organizations to discuss the approach to specific responses and/or the review process in general. The ability to engage reviewers outside of the formal review process is critical to the expedient resolution of identified issues, however, Baffinland acknowledges it is important to provide the results of these interactions for the public record. As such, Baffinland has attached a copy of the meetings minutes of meetings that were held to discuss and progress specific issues, and a summary of all meetings is provided below:

Organization	Date	Purpose
Government of Canada	November 7, 2019	General
Qikiqtani Inuit Association	November 29, 2019	General
Department of Fisheries and Oceans	November 29, 2019	General
Government of Nunavut	November 30, 2019	General
Crown-Indigenous Relations and Northern Affairs Canada	November 30, 2019	Specific
Environment and Climate Change Canada	December 4, 2019	Specific

As the technical review progresses the number of meetings between Baffinland and reviewers is likely to grow, and may culminate into topic specific workshops that bring together a number of parties. If this is the case, Baffinland will make these plans clear to the Boards, and report on them fully for the public record, in a manner agreed to at such events. As for ongoing reviewer engagement, Baffinland will continue to provide updated meeting minutes with each formal written submission to the Boards.

Community Engagement

Baffinland has extensive community engagement plans for 2019 in relation to the Phase 2 review process, which include:

- Information Tours – Intended to clarify project description, identify potential environmental effects and proposed management measures, and understand and address community concerns.
- Mitigation Workshops – A series of workshops is being planned with local knowledge holders, primarily from Pond Inlet and Arctic Bay, to understand the perceived risks associated with the railway and increased shipping components of Phase 2, with the overall intent to generate practical management measures that satisfy community concerns.
- Risk Workshops (dust) – A series of workshops is being held to discuss the real and perceived risks associated with Project generated dust. These workshops are not specific to Phase 2 but will apply.
- Hamlet/HTO Meetings – Baffinland always visits Hamlets and HTO's while in a community, and additional dedicated sessions will likely be required to progress proposed mitigation measures involving community involvement.

- Distribution of Notifications – Notifications will be circulated as necessary through our Baffinland Community Liaison Officers

The results of the proposed engagements will be submitted for the public record as they occur. A summary of events, dates, and locations is provided here:

Engagement	Date	Community
Information Tour	January 7-11, 2019 TBD	North Baffin Communities Resolute and Grise Fiord
Mitigation Workshops (3) -terrestrial and marine	January – March, 2019	Mary River Mine Site
Risk Workshops (3) -dust	January – March, 2019	North Baffin Communities
Information Tour - Update	April 2019	North Baffin Communities
Hamlet/HTO Meetings	As required	North Baffin Communities
Distribution of Notifications	As required	North Baffin Communities

Closing

Baffinland appreciates the opportunity to provide the enclosed Information Request Response Package for the Phase 2 Proposal. We believe the Response Package addresses the IRs and looks forward to further communication during the technical review process. The Phase 2 Proposal represents a significant opportunity for Baffinland and Nunavut. We are committed to working collaboratively such that the benefits of the Phase 2 Proposal can be fully realized.

Sincerely,

Megan Lord-Hoyle

Megan Lord-Hoyle
Director, Sustainable Development

CC Solomon Amuno, Nunavut Impact Review Board
Tara Arko, Nunavut Impact Review Board
Assol Kubeisinova, Nunavut Water Board
Grant Goddard, Baffinland Iron Mine Corporation
Lou Kamermans, Baffinland Iron Mine Corporation

Meeting with Crown-Indigenous Relations and Northern Affairs and Baffinland to discuss the review process for the Mary River Phase 2 Proposal 08MN053 Submitted to the Nunavut Impact Review Board.

November 30, 2018

Attendees:

Crown-Indigenous Relations and Northern Affairs (CIRNAC):

Rachel Theoret-Gosselin, Bridget Campbell, Julia Prokopick, Christianne Lafferty, and Ian Parsons

Baffinland (BIM):

Megan Lord-Hoyle, Lou Kamermans

Meeting started at 11:00 am EST

Baffinland noted that the intent of the meeting was to discuss the ongoing review process at a broad level, and to provide some strategic priorities to consider.

Notes:
Baffinland provided an update on IR/TC designation, response approach, road map for issue resolution, submission of proposed PC T&C's, management plans, integration of community workshops, timeline to update management plans, importance of timeline, election.
Baffinland notified CIRNAC that the anticipated response for CIRNAC's requests around the waste rock management plans will be limited in scope since Phase 2 does not propose a change to the mining of Deposit No. 1 or the waste rock facility. CIRNAC indicated that Baffinland still needs to explain its approach, process, and how increased mining frequency will be considered by the plan in light of the recent issues encountered.
CIRNAC stated it wants to know if Baffinland can supply a response to CIRNAC-IR#: 1, even though it is considered a technical comment by the NIRB. Baffinland indicated the latest CIRNAC will receive responses to technical comments is January 21, 2019, although Baffinland noted it may be possible to supply some information sooner through responses to related TC's from other Interveners. The 2017 socio-economic monitoring report would also give additional understanding of updated data and methodology.
CIRNAC stated it is concerned about the NIRB review timeline, specifically the amount of time between the technical meeting and public hearing. CIRNAC noted they may request more time be added to the schedule pending the outcome of the technical meeting. Baffinland reiterated that keeping the proposed timeline is critical with election period anticipated for the late Summer/Fall of 2019, and that following the additional time requested by the QIA for IR's had removed any contingency. The ultimate impact of a delay to the review schedule would have cascading effects and could delay construction by up to a year with the limited shipping window.
BIM inquired about the availability of participant funding and its potential in delaying NIRB timelines. CIRNAC stated that funds should be available and that the process should not delay NIRB timelines.
BIM committed to supply a regulator engagement schedule to better coordinate meetings and resolve issues moving forward. CIRNAC and BIM concurred on the importance of proper note-taking during Proponent-Regulator engagement meetings and providing jointly-approved meeting notes to the NIRB in a timely manner for transparency.

Meeting ended at 12:00 pm EST

Meeting with Environment Climate Change Canada and Baffinland to discuss Information Requests related to Baffinland Mary River Phase 2 Proposal 08MN053 Submitted to the Nunavut Impact Review Board.

December 4, 2018

Attendees:

Environment Climate Change Canada (ECCC):

Katelyn Wells (Senior Air Quality Analyst), Brian Asher (Senior Air Quality Analyst), Meagan Tobin (Water Quality Project Officer), Gabriel Bernard-Lacaille (Senior Environmental Assessment Coordinator), Eva Walker (Environmental Assessment Coordinator), Richard Bingley (Environmental Assessment Coordinator).

Baffinland:

Lou Kamermans (Baffinland), Alain Carrière (RWDI), Richard Cook (KP), Sarah Wallace (Stantec)

Meeting started at 9:00 am MST

ECCC noted that the intent of the meeting was to answer any questions and clarify any of the ECCC's information requests (IRs) related to air quality. ECCC also noted that a member of the water quality review team was on the call and was able to answer some questions.

IR's 3 to 8 were identified as the specific items for discussion, additional IR's were covered at the end of the call..

Information Request number	Discussion
IR 3 – Climate Change Assessment	ECCC stated that Baffinland may need to direct the reader to the location of the data or that the data should be presented in a different format for the diesel generator sets (gensets). ECCC noted that the data was aggregated and ECCC's air quality reviewers said that they would like to see the specific information related to the Gen Sets presented (e.g., not aggregated). This will allow ECCC to assess whether there the equipment used is employing the best available technology for reducing emissions.
IR 4 – Locomotive Emissions	Emissions for trains in transit were not considered in the air quality model, as Baffinland felt that the emissions would be minor/inconsequential. ECCC would like to see quantification of all sources of emissions for the project included and accounted for as they may prove to be consequential under certain circumstances such as cumulative impact interactions. ECCC asked that Baffinland to calculate the emissions to show how they would contribute to the project. Additionally, Baffinland said that GHG emissions were accounted for through fuel use and consumption. ECCC asked if Baffinland could still quantify CAC emissions for the trains transiting between the mine site and the port. This separation of the various emission sources allows for the determination of mitigation effectiveness, and the selection of best available technology. ECCC requested that, should emissions be deemed to not be negligible, that they be included in the model.

IR 5 – Canadian Ambient Air Quality Standards (CAAQS)	<p>IR point 1 - ECCC asked that Baffinland provide the model results compared to the CAAQS for NO₂, SO₂, and PM_{2.5} including spatial distribution (maps).</p> <p>IR point 2 – Using the data from point 1 ECCC asked Baffinland to assess the concentrations of NO₂, SO₂, and PM_{2.5}.</p>
IR 6 – Particulate concentrations and deposition predictions (dust)	<p>ECCC noted that dust and all of its sources should be included e.g., TSD7, stockpile erosion, other vehicles, and cumulative effects of these sources. ECCC noted that there were not emission calculations to justify not considering multiple sources in the model. ECCC is asking Baffinland to remodel the dust predictions and include all sources. ECCC noted that dust is a particular concern for the community. ECCC also noted that dust modeling should be a comparative exercise not meeting above or below a certain threshold or objective. ECCC stated that there were too many sources of dust that were not included in the modeling to be able to consider whether or not there was no significance or significance. The model may impact dust management and dust management may not be the same mitigation used from area to area.</p> <p>ECCC also asked if Baffinland would be able to consolidate all the air quality information into a single report (with reference to the dustfall monitoring program being reported in the Terrestrial Environment Monitoring Report) or to develop a way to indicate clearly, where all the information is located within other Valued Components.</p>
IR 7 – Dust Metal Speciation	<p>Baffinland noted that information for the dust metal speciation was included in the country foods assessment. ECCC noted that this data would also be useful in the assessment of potential impacts to water quality.</p> <p>Baffinland stated that for water quality they relied on on-the-ground monitoring. Baffinland also noted that the number of metals that would be identified in the ore/dust off the ore piles are low.</p> <p>ECCC asked for the inclusion of all potential sources of dust and noted that sources that may seem to be insignificant such as stockpiles but may still have an adverse impact if they are located next to a waterbody.</p>
IR 8 - Incineration	<p>ECCC requested that Baffinland provide more information on incinerator use and management. Baffinland indicated that it proposes to not change the incinerator type but operate the incinerator more frequently. ECCC's concern is that the increased use of the incinerator may mean that there may be exceedances to of the CCME guidance and that therefore there may be a need for increased frequency of stack testing.</p> <p>ECCC noted that there have been cases at other mine sites where increased use of incinerators has resulted in decreased efficiency and the release of dioxins and furans above the Canada Wide Standards. ECCC recommended that Baffinland follow recommended practices and if required increase stack testing frequency to confirm that dioxins and furans are not being released and/ or CCME guidance not being met due to inefficient incinerator use.</p>
General Comment on water quality IRs – Calcium Chloride (CaCl)	<p>ECCC water quality noted that information on CaCl and potential environmental effects to water quality are spread throughout various reports and it was unclear how and where Baffinland is managing CaCl. Baffinland said they are using CaCl according to standard practice. ECCC water quality noted that they could not find this information in any of the reports reviewed. ECCC air quality noted that they had seen this information</p>

	in the Terrestrial Environment Report and that the values reported seemed high.
IR 10 – Management and Monitoring of Dust deposition to water bodies.	Baffinland stated that dustfall does not seem to be a main contributor to surface water. Baffinland noted that they have required monitoring and mitigation outline under their enforcement directive. ECCC requested that Baffinland provide the details of successful mitigation for dustfall and how dustfall will be further monitored with the increase in traffic and production.
IR 11 – Effluent for dust suppression	ECCC asked for clarification on effluent criteria for storm water management ponds along the road. Baffinland stated that they have committed to meet the criteria in the water licence and that the water licence may require testing at these sites. Baffinland noted that Table 10 of the water licence required that effluent be not acutely toxic. Baffinland also noted that the water pond used for dust suppression is drained once a year and therefore there would be yearly testing at a minimum. ECCC requested that Baffinland clarify the required testing and locations
IR 12 Impacts to Phillips Creek	In the IR ECCC asked for Baffinland to provide the predicted impacts of TSS and dustfall on Philips Creek. Baffinland stated they could do this.
IR 17 Monitoring for dust and impacts to water quality along the transportation corridor	Baffinland noted that there is a freshet monitoring program underway that monitors impact to water quality along the transportation corridor and that reporting is twice yearly. ECCC requested that Baffinland provide the details of the freshets monitoring program so that potential impacts and mitigation to waterbodies along the road have been captured.
IR 20 Total petroleum hydrocarbons	ECCC clarified that this IR is clarifying which test is most appropriate. Baffinland noted that TPH's are captured under the requirements of the water licence.
IR 22 Table 1 – (List of Management, Mitigation and Monitoring Plans Applicable to the Phase 2 Proposal)	Baffinland stated that there intention is to construct a landfill during Phase 2 and will use the exhausted quarry 1 prior to the construction of the landfill. Baffinland will provide details on the Landfill construction at a later date through the water licence process. ECCC requested that Baffinland provide detail in writing on when they intend to provide the information in the Water Licence process on the landfill.

Meeting ended at 10:00 am