



NIRB File No.: 08MN053
NWB File No.: 2AM-MRY1325
QIA File No.: LUA-2008-008
DFO File No.: 2008 MR

November 27, 2018

Megan Lord-Hoyle
Director, Sustainable Development
Baffinland Iron Mines Corporation
2275 Upper Middle Road East
Oakville, ON L6H 0C3

Sent via email: megan.lord-hoyle@baffinland.com

Re: Information Requests received from Parties regarding Baffinland Iron Mines Corp.'s "Phase 2 Development" Project Proposal

Dear Megan Lord-Hoyle:

On October 12, 2018 the Nunavut Impact Review Board (NIRB or Board) initiated the public technical review of the revised Final Environmental Impact Statement (FEIS) Addendum submitted by Baffinland Iron Mines Corporation (Baffinland, or Proponent) for the "Phase 2 Development" proposal by requesting that interested parties submit Information Requests (IR) to facilitate their technical review of the FEIS Addendum.

On or before November 23, 2018¹ the NIRB received IR submissions from the following parties:

- Qikiqtani Inuit Association – 95 IRs
- Government of Nunavut – 86 IRs
- Government of Canada
 - Crown-Indigenous Relations and Northern Affairs Canada – 17 IRs
 - Environment and Climate Change Canada – 24 IRs
 - Fisheries and Oceans Canada – 6 IRs
 - Health Canada – 8 IRs
 - Natural Resources Canada – 4 IRs
 - Parks Canada Agency – 8 IRs
 - Transport Canada – 19 IRs
- Oceans North – 5 IRs
- World Wildlife Fund (WWF) – 10 IRs

¹ On November 5, 2018 the NIRB extended the deadline for submission of IRs from November 13, 2018 to November 23, 2018 at the request of the Qikiqtani Inuit Association.

All documentation associated with the Phase 2 Development proposal, including IR submissions, can be accessed via the NIRB's public registry: www.nirb.ca/project/123910.

The NIRB has completed its review of the IRs received and hereby requests that Baffinland respond to those IRs which have been determined to be relevant to the Proponent, to the current stage of the Review process, and necessary to facilitate parties' technical review of the FEIS Addendum and subsequent development of technical review comments. The NIRB also notes that certain IRs contained within parties' submissions appear to be outside the scope of information required for this phase of the Review and may therefore be more appropriately addressed through technical review comment submissions. While it is the Board's expectation that the Proponent will review all IRs, at this time the NIRB has provided a list of specific requests (see [Appendix A](#)) for which the Proponent is either expected to provide a partial response, or is expected to address within its response to IRs (IR Response Package).

The NIRB notes that several parties identified issues with lack of detail in the FEIS Addendum, and timelines of availability for additional baseline collection being delayed until the component design is considered. Where the information/models requested cannot be provided without additional baseline, the Proponent must clearly identify when this information will be forthcoming, or which alternate method the Proponent will use to address the issue or concern.

When preparing its IR Response package, the NIRB recommends that the Proponent consult with parties as necessary to ensure the information to be provided meets the expectations of reviewers moving forward. Furthermore, where multiple IRs have outlined the same or similar information requirements, the Proponent is advised to provide one response that will adequately address these requests, avoiding unnecessary duplication.

The Board respectfully requests that Baffinland review all submissions as available via the NIRB's online public registry and supply the NIRB with an indication of an anticipated date for submission of its IR Response Package, on or before **November 30, 2018**. If you have any questions regarding the NIRB's Review of the "Phase 2 Development" proposal, or the monitoring of the Mary River Project please contact Solomon Amuno, Technical Advisor II, at samuno@nirb.ca.

Sincerely,



Tara Arko
Director, Technical Services
Nunavut Impact Review Board

cc: Mary River Distribution List
Grant Goddard, Baffinland Iron Mine Corporation
Lou Kamermans, Baffinland Iron Mine Corporation
Karén Kharatyan, Nunavut Water Board
Assol Kubeisinova, Nunavut Water Board

Attachment: Appendix A: Information Requests Identified by the NIRB as Requiring a Response

APPENDIX A:
INFORMATION REQUESTS IDENTIFIED BY THE NIRB AS REQUIRING A RESPONSE

In the table below the NIRB has attempted to identify those Information Requests (IRs) which require response as part of this stage of the Review for the Phase 2 Development project proposal.

While the Proponent will not be explicitly required to address some of the following items within its IR Response Package, the NIRB strongly recommends that Baffinland thoroughly review each item and make its own determination regarding the need for or its ability to, provide an appropriate response. Where items are not addressed in the IR response package, it is expected that the issue is carried forward and addressed through the technical review period.

IR#	Issue	NIRB direction
Qikiqtani Inuit Association (QIA)		
QIA-IR#1, 2, &3	<p>-Baffinland is requested to provide further detail on anticipated monitoring to be undertaken and mitigation measures to be implemented for the three-year combined Railway construction and Tote Road operations period.</p> <p>-Baffinland is requested to provide further detail on anticipated monitoring to be undertaken and mitigation measures to be implemented for the three-year combined North Railway construction/Tote Road operations period to protect caribou calving if occurring in the Project area.</p> <p>-Baffinland is requested to provide further detail on anticipated monitoring to be undertaken and mitigation measures to be implemented for the first 5 years of combined North Railway and Tote Road operations.</p>	IR limited to Baffinland providing additional clarification on monitoring and mitigation measures to be implemented for North Railway. Discussion on the adequacy of the assessment would be further investigated during the technical review period.
QIA-IR#5	Baffinland to provide an assessment of the potential impacts to avian species, particularly species at risk, resulting from the proposed wind turbines. This is to include measures that will be taken to avoid or lessen potential effects and monitoring measures.	IR is limited to Baffinland providing additional clarification on the topic particularly with reference to impacts from wind turbines.

QIA IR#8	<p>It is requested that the Proponent:</p> <ul style="list-style-type: none"> a. Confirm whether all ancillary facilities and activities locations are finalized and located within the PDA and if so provide further details on their location and required physical works and activities at these locations. b. Provide a detailed assessment of potential impacts to Cultural Heritage resources and Inuit land and resource use from all ancillary facilities and activities associated with the project. c. Identify all commitments to engaging Inuit in final siting and management planning and monitoring at any yet to be determined ancillary facilities and activity locations, and how IQ will be used to inform final siting decisions. 	<ul style="list-style-type: none"> a. IR limited to Baffinland providing additional clarification on the topic b. Defer to technical review period c. Defer to technical review period
QIA-IR#9	<p>It is requested that the Proponent work with QIA and the affected Inuit communities to address gaps in the assessment of Culture, Resources, and Land Use by:</p> <ul style="list-style-type: none"> a. Include consideration of the potential for psycho-social and stigma impacts alienating Inuit use within the PDA and Local Study Area b. Providing more information on return per unit of harvesting effort by Inuit and how this has changed over time since major development activities started on Mary River Mine c. Re-assessment of effects on Inuit land and resource use to include identification of preferred Inuit future use and potential long-term effects of the Project on those uses 	<ul style="list-style-type: none"> a. IR limited to Baffinland providing additional clarification on the topic b. Defer to technical review c. Defer to technical review
QIA-IR#10	<p>It is requested that the Proponent provide more information on the assessment of effects on vegetation, including:</p> <ul style="list-style-type: none"> a. Identification of IQ based monitoring indicators and thresholds b. Identification of culturally valued plant species and communities of importance c. Provision of any data the Proponent has gathered related to willingness of Inuit to use vegetation in the PDA/LSA d. Provision of evidence of the integration of IQ in the selection of sampling locations e. Results of any TEK/IQ field studies f. Collection and meaningful consideration of IQ related to natural revegetation/regeneration 	<p>Baffinland is requested to provide the data currently available on the subject, but the determination of adequacy of data will be further assessed during the technical review process. Direction for further baseline collection and field studies would be determined at the end of the technical review process.</p>

QIA-IR#11	It is requested that the Proponent provide more detail on how IQ was integrated in every step of the assessment conducted in the development of the FEIS Addendum. This should include some form of tabular description of how, specifically, IQ informed each step of the assessment methodology outlined in Section 9 of the FEIS Addendum.	Baffinland is requested to provide additional clarification on the subject, but the determination of IQ adequacy will be further assessed during the technical review process.
QIA-IR#12	Baffinland acknowledges additional community engagement will be necessary to fully satisfy public consultation requirements on the Phase 2 project proposal. When is this consultation scheduled to occur, and how will the results of this and additional data collection (e.g., on Inuit land and marine use) be integrated into a reassessment of effects from what is currently described in the FEIS Addendum?	IR limited to Baffinland providing additional clarification on its public consultation strategy for Phase 2.
QIA-IR#21	Please provide more information on what caribou crossings will look like, where they will be located, and provide supporting evidence for assertions that the railway will not prove a substantial barrier to caribou movement.	Baffinland is requested to provide additional clarification on the topic but the adequacy of the current information as presented in the FEIS Addendum is expected to be assessed through the technical review period.
QIA-IR#23	Are the wind turbines discussed at several places in the FEIS Addendum part of the scope of the proposed Project or outside of it? If they are part of the scope of the Project, provide further information on how IQ has been integrated into the siting process for the wind turbines.	IR limited to providing additional clarification on the topic.
QIA-IR#24	What does IQ have to say about the relative abundance of carnivore populations?	IR limited to Baffinland providing additional clarification on the topic
QIA-IR#25	How was IQ integrated or used to determine VEC's?	IR limited to Baffinland providing additional clarification on the topic
QIA-IR#26	How was IQ used to inform ice conditions assessment including open water timing?	IR limited to Baffinland providing additional clarification on the topic
QIA-IR#27	How was IQ used to assess the impacts of noise (from shipping and aircraft overflights) and traffic on marine mammals?	IR limited to Baffinland providing additional clarification on the topic

QIA-IR#32	QIA requests that the Proponent clarify how many wind turbines it proposes to install.	IR limited to Baffinland providing additional clarification on the topic.
QIA-IR#34	When and where will the airstrip at Milne be constructed? A map that shows the proposed airstrip location at Milne should be provided.	This IR limited to Baffinland providing additional clarification on the topic and providing a map showing airstrip location at Milne Inlet.
QIA-IR#35	Provide a description of the closure and reclamation approach for the northern rail components as well as, any adjustments completed to the Tote Road that are Phase 2 specific. Additionally, for each component, identify the residual landform and aesthetic condition that will remain at closure.	IR limited to Baffinland providing additional clarification on the topic.
QIA-IR#39	Provide the exact time for updates to management, mitigation and management plan, as this is currently uncertain.	Baffinland requested to provide additional clarification on this topic noting timing and schedules to update mitigation and management plans.
QIA-IR#42	a. When will the final design of the rail embankment and associated geotechnical/thermal analysis be completed? b. Will thermal modelling be completed for each bridge abutment and major water crossing?	IR limited to Baffinland providing additional clarification around timing to finalize design and complete modeling.
QIA-IR#43	Describe the adaptive management program that will be applied to the northern rail to address settlement concerns for the northern rail.	This part of the requests is limited to Baffinland providing additional clarification on the topic.
QIA-IR#44	Provide on a map of the locations of the borrows identified in Table 2.3.	IR limited to Baffinland providing mapping information.
QIA-IR#48	Describe why pit water quality and waste rock drainage are not considered in the effects assessment for water quality.	This point is limited to Baffinland providing additional clarification on the topic.
QIA-IR#52	Provide a summary of proposed SNP locations associated with Phase 2 infrastructure.	IR limited to Baffinland providing additional clarification on the topic.
QIA-IR#53	What is the maximum quantity of ore that would be trucked along the Tote Road in a given year?	IR limited to Baffinland providing additional clarification on the topic.

QIA-IR#54	Clarify the number and location of landfill and landfarms that are currently approved and sought as part of the Phase 2 Proposal.	IR limited to Baffinland providing additional clarification on the topic.
QIA-IR#55	If an access road or haul road is not constructed to the design criteria presented in Appendix D and/or G, will the road be used in operation?	IR limited to Baffinland providing additional clarification on the topic.
QIA-IR#56	QIA requests that the Proponent clarify terminology used to describe flights and trips.	IR limited to Baffinland providing additional clarification on the terminology.
QIA-IR#57	QIA request that the Proponent clarify where the Tote Road Earthworks Execution Plan (TREEP; Golder 2017) is available.	IR limited to Baffinland providing additional clarification on where to locate the referenced plan.
QIA-IR#58	QIA requests that the Proponent clarify whether modelling dust inputs to Phillips Creek from the Milne Port area considered dust inputs from the tote road and railway construction upstream and, if so, where in the EIS?	This part of the IR is limited to Baffinland providing additional clarification on the topic and where to locate modeling results.
QIA-IR#64	QIA requests clarification as to whether all Project vessels are required to reduce speed to a maximum of 9 knots beginning at the entrance to Pond Inlet through Eclipse Sound and Milne Inlet.	IR limited to Baffinland providing additional clarification on the topic.
QIA-IR#65	QIA requests clarification on autumn shoulder season shipping dates and mitigation of impacts on Inuit travel.	IR limited to Baffinland providing additional clarification on the topic.
QIA-IR#66	QIA seeks information on the relative availability of ore carriers of different sizes and ice classes for charter.	IR limited to Baffinland providing additional clarification on the topic.
QIA-IR#67	QIA requests clarification as to the status of the freight dock that was to be constructed in 2018.	IR limited to Baffinland providing additional clarification on the topic.
QIA-IR#69	QIA requests that the Proponent clarify where fish salvage operations related to construction of Ore Dock 2 are described or provide details on how these operations will be conducted.	IR limited to Baffinland providing additional clarification on the topic.
QIA-IR#77	QIA requests clarification as to why shipping interactions with seabirds are scored as a Subject of Note and not a Key Interaction.	IR limited to Baffinland providing additional clarification on the topic.
QIA-IR#78	QIA requests clarification as to why marine mammals were not included in the sustainability analysis of the Phase 2 Proposal.	IR is limited to Baffinland providing additional clarification on the topic.

QIA-IR#80	QIA requests that the Proponent clarify where bearded seal, one of the Key Indicators for the Marine Mammal VEC, has been assessed, or if it has not, provide information to support exclusion.	IR limited to Baffinland providing additional clarification on the topic.
QIA-IR#81	QIA requests additional information and clarity on the marine mammal effects assessment for Atlantic walrus.	IR limited to Baffinland providing additional clarification on the topic.
QIA-IR#86	<p>a. Breakdown of Mandatory vs On-the-job (advancement) training delivered to Inuit and Non-Inuit in hours by year.</p> <p>b. New Inuit hires by year, age and educational attainment. This helps understand the number of Inuit who are accepting the opportunity cost of not finishing secondary school.</p> <p>c. The number of apprenticeships offered to Inuit and Non-Inuit; number of successful vs attempted Trades Entrance Exams; instances of level advancement within an apprenticeship; number of Red Seals earned.</p> <p>d. Additional Inuit employment hours that Baffinland expects to generate from its current Apprenticeship Program and HEO Training (Q-STEP).</p> <p>e. Explanation of how Baffinland confirms “Inuit Ethnicity” if not through NTI number.</p> <p>f. How exactly Baffinland will adapt training programs to account for the “small shift in employee level skill requirements”</p> <p>g. Identify the precise training programs that will upgrade employees’ skill levels from D to C to B Positions.</p> <p>h. Additional details on Inuit promotions, such as lateral vs skill level advancement.</p> <p>i. Additional details on Inuit departures, including rehires and those ineligible for rehire.</p> <p>j. Provide career paths for each department that operates in Nunavut, and example career path development plans.</p>	IR limited to Baffinland providing additional clarification on the topic.

QIA-IR# 87	<p>Provide additional details on employment opportunities planned for Phase 2.</p> <p>a. Additional details on Inuit departures, including rehires and those ineligible for rehire.</p> <p>b. Provide career paths for each department that operates in Nunavut, and example career path development plans.</p> <p>c. A list of current and anticipated position titles in all phases by Skill level and educational requirements should be added to Appendix D.</p> <p>d. An analysis or at least discussion about how Baffinland will consider skill equivalencies for Inuit who do not meet education requirements.</p> <p>e. Adjust Figure 4.4 to include Inuit who are 18-24.</p> <p>f. Expand analysis of the labour market to consider movement of Inuit into the labour force over the course of Phase 2.</p> <p>g. Provide a list of positions for which English fluency is not required.</p>	IR limited to Baffinland providing additional clarification on the topic.
QIA-IR# 88	How and to what extent did alternative options either positively or negatively (adversely) impact the opportunities available to Inuit and Inuit Firms?	IR limited to Baffinland providing additional clarification on the topic.
QIA-IR# 89	Can Baffinland expand upon its engagement efforts with Inuit Firms regarding the opportunities of Phase 2?	IR limited to Baffinland providing additional clarification on the topic.
QIA-IR# 90	Can Baffinland expand upon how it intends to improve its engagement efforts with Inuit and Inuit Firms regarding the opportunities of Phase 2?	IR limited to Baffinland providing additional clarification on the topic.
QIA-IR# 91	How many new Phase 2 contracts have already been awarded, and to whom?	IR limited to Baffinland providing additional clarification on the topic
QIA-IR# 92	What is the value of new Phase 2 contracts that have already been awarded?	IR limited to Baffinland providing additional clarification on the topic
Government of Nunavut (GN)		
GN-IR#20	The GN requests the Proponent provide the rational for the use of non-default settings for IKINE and IOBR parameters.	
GN-IR#28	The GN requests the Proponent confirm that the noise effects listed in Section 3.1.2.2 refer to the Milne Port and not the Mine Site.	

GN-IR#29	The GN requests the Proponent provide revised Figures 3 and 4 to present the 3 insets described in Section 3.1.3.2.	
GN-IR#33	The GN requests the Proponent provide the following information: 1. Indicate whether the noise contours presented in Figures 5 to 8 include an assumed ambient noise level. 2. If the noise contours presented in Figures 5 to 8 do include an assumed ambient noise level, indicate what that assumed noise level is on each Figure. 3. Revise Figures 10 and 11 to present the operations phase of the northern transportation corridor.	
GN-IR#35	The GN requests the Proponent provide the following information: 1. Provide the assumptions used for the train noise modeling. Are train horns included? 2. Confirm the assumptions represent a worst-case scenario (i.e. the construction and/or production period at which the highest frequency of locomotives are travelling between the Mine Site to Milne Port).	
GN-IR#38	The GN requests the Proponent provide the following information: 1. Provide the sound source level used for the mine haul trucks in the Milne Port noise model. 2. Revise Figures 7 and 8 to include the effects of mine haul trucks and revise Section 3.2.2.4.	
GN-IR#64	The GN requests the Proponent clarify if this is a typographical error or provide an explanation as to why additional water taking is required beyond that of the approved Water License.	
GN-IR#75	The GN requests the proponent clarify training partners include both the GN Department of Family Services and the Department of Education.	
GN-IR#78	The GN requests the Proponent provide the following information: 1. Whether the Rules of the Road (or some variation) in Attachment B are shared with community residents. 2. How often and through what methods are these rules shared?	
GN-IR#80	The GN requests the Proponent clarify the following information:	IR limited to Baffinland providing confirmation if

	<ol style="list-style-type: none"> 1. "No Expiry" should instead indicate "December 31st or annually". 2. "No Amendment to Permit likely required" should instead indicate that "Yearly Permits are likely required". 	the suggested updates are what was intended for informational purposes. Updates to documents handed in tech review.
GN-IR#81	The GN requests that the Proponent provide a copy of the palaeontological desktop study to the Territorial Archaeology Office in order to assist in providing adequate recommendations for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources.	
GN-IR#82	<p>The GN requests that the Proponent provide clarification and additional information concerning:</p> <ol style="list-style-type: none"> 1. Detail of the criteria used to assess site significance; 2. Reconciliation of the inconsistency between Section 9.1 ("An expanded terrestrial footprint with the addition of the North Railway, which will affect archaeological sites of low cultural significance... [TSD 25, Section 9.1]) with Table 9.3 (TSD 25, Section 9.7.1), where 4 of 12 sites listed in the table are rated a high level of significance. 	
World Wildlife Foundation (WWF)		
WWF-IR #1	<ol style="list-style-type: none"> 1. Provide an assessment of the acoustic disturbance for Project vessels (tugs and ore carriers) on marine mammals that are expected to be present during various scenarios (berthing, transit, and mooring), particularly considering ice conditions expected to be present during the extended shipping window (November 1-15). 2. Request that the Proponent review and update all sections of its FEIS Addendum and supporting documents, as well as relevant assessments, to include the proposed extended shipping window July 1 - November 15. 	IR limited to providing any additional clarification on data used in the explanation of current conclusions. Adequacy of the assessment of acoustic disturbance on marine mammals would be determined through the technical review process. Required updates to all sections of the FEIS Addendum and supporting documents, as well as relevant assessment will be determined through the technical review process.
WWF-IR #3	<p>Requests that the Proponent provide the following additional information:</p> <ol style="list-style-type: none"> (a) Definition of ice management/ice breaking activity (b) Details regarding the ice management vessels to be used 	IR limited to Baffinland providing additional clarification on definition of ice management/ice breaking activities and associated activities

	<p>(c) Description of ice management/breaking support activities that will be employed, and</p> <p>(d) outline plans and schedule for ship transits during shoulder seasons including what class and/or type of ore transit vessels are being proposed for use with the Phase 2 Proposal.</p>	including details of vessel types and general schedule for ship transits for the phase 2 proposal.
WWF-IR #4	<p>Requests that the Proponent:</p> <p>(a) confirm that its accident scenarios and likelihood ratings (low) of ship-related accident ratings in Table 10-2 were updated to reflect the proposed level of ship transits (>200/season)</p> <p>(b) Provide criteria considered in risk assessments, including whether the probability of oil/fuel spills is increased with increased number of ship transits, and whether and how probability of a spill influences the calculations for the risk register</p>	IR to Baffinland to provide confirmation of the criteria used to construct models
WWF-IR #5	<p>Requests that the Proponent:</p> <p>1) Clarify that the spill trajectory modelling conducted for the Phase 2 proposal included considerations for only intermediate fuel oil, and not diesel fuel or other distillates? If so, clarify that section 10.2.3.1 Diesel Spill Along a Shipping Route is inappropriately titled. If diesel spill modelling was also conducted, BIMC is asked to provide the results of that model.</p> <p>2) BIMC confirm why TSD 19 was not updated to reflect the proposed shipping window (July 1- November 15)?</p> <p>3) BIMC clarify how it determined that a mid-October spill scenario, and not an early- to mid-November scenario, was the appropriate timing for the modelling exercise to support the Phase 2 proposal.</p> <p>4) BIMC provide new modelling output, or extrapolate on existing model results, showing spill behaviour closer to freeze up (i.e. within the November 1-15 window).</p> <p>5) BIMC clarify whether information provided in TSD 19 is explicitly related to IFO, or whether general statements about “fuel” pertain also (or explicitly) to properties of lighter distillates (i.e. diesel).</p>	<p>IR limited to Baffinland providing additional clarification on the type of fuel used in the spill trajectory modeling and the availability of the modeling results. The Proponent is expected to confirm and clarify whether the section 10.2.3.1 is appropriately titled .</p> <p>-IR limited to Baffinland providing additional clarification around the proposed shipping window.</p> <p>-Does not meet criteria for IRs. Defer to technical review period.</p> <p>-Does not meet criteria for IRs. Defer to technical review period</p> <p>-IR limited to Baffinland providing additional clarification on the type of fuel referenced in TSD 19</p>

WWF-IR #6	<p>Requests that the Proponent:</p> <ol style="list-style-type: none"> 1) Confirm whether its consideration and assessment of emissions from shipping activities was based on current levels of sulphur in fuel? What is the current level of sulphur in fuels utilized by project ships 2) Provide further detail on SOx emissions predictions following the 2020 implementation of the MARPOL cap on sulphur in fuels? 3) Confirm whether it considered the use of lighter (non-IFO/HFO) fuels for use by Phase 2 project shipping? 4) Provide details regarding the feasibility assessment of contracting shippers that use non-IFO/HFO fuels for project shipping. 	<p>-IR limited to Baffinland providing additional clarification around the limits on sulphur in marine fuels utilized by project ships.</p> <p>-Does not meet criteria for IRs.</p> <p>-Defer to technical review period.</p> <p>-Defer to technical review period</p>
WWF-IR #9	<ol style="list-style-type: none"> a) Provide updated versions of all management and response plans pertaining to the North Railway. Specifically, this must include proposed mitigation and response for accidents related to fuel transportation by rail b) Provide a clear proposal with regard to the implementation of the transportation of fuel via rail, including the volumes, frequency, and schedule for this transport (i.e. seasonal restrictions/coordination with truck transport, etc.), as well as fuel transfer loading and unloading procedures/activities at rail facilities. c) Provide specific impact assessment, mitigation, and monitoring details with regard to this project activity. 	<p>IR limited to Baffinland providing additional clarification on transportation of fuel by railway. Required updates to all management plans and response plans pertaining to the North Railway and the adequacy of impact assessment, mitigation and monitoring will be determined through the technical review period.</p>
Crown-Indigenous and Northern Affairs Canada (CIRNAC)		
CIRNAC-IR#2	<p>CIRNAC requests that the Proponent provide the following additional information:</p> <ol style="list-style-type: none"> a) Whether a North Railway alternative capable of transporting 30 Mtpa was ever considered; b) If so, why a North Railway alternative capable of transporting 30 Mtpa was ultimately discounted as not being viable; and c) Include the analysis of no-go alternative for building a North Railway capable of transporting 12 Mtpa to Milne Port. 	

CIRNAC-IR#3	CIRNAC requests that the Proponent provide, as per the EIS Guidelines, a detailed description of the geology and geomorphology aspects in the project area and consideration of their effects on the major project components including but not limited to: dock facilities, railway embankments, bridges, major watercourse crossings, open pit, and equipment pads.	
CIRNAC-IR#4	<p>CIRNAC requests that the Proponent provide the following information, as per the EIS Guidelines:</p> <ul style="list-style-type: none"> a) Geology and mineralogy of the ore deposit; b) Deposit locations; c) Detailed structural geology map; d) Lithology and mineralogy in the Project area; e) Presence of ice lenses and implications to the Project; f) The nature, depth and thickness of the ore deposit to be mined; g) Estimated volumes and characteristics of waste rock; h) ARD and metal leaching characteristics; i) Ore body delineation; j) Permeability of the open pit; and k) General characterization of the pit water. 	IR limited to Baffinland confirming if the development of any further deposits are part of the Phase 2 scope, and this information would be required for additional deposits. Duplication on descriptions related to the previously approved Mary River deposit not required.
CIRNAC-IR#5	<p>CIRNAC requests that the Proponent provide the following information with respect to the WRF:</p> <ul style="list-style-type: none"> a) Physical characteristics of processed ore, including size and quantities of fines; b) Details of the water drainage, diversion and discharge; c) Chemical stability analysis of the waste rock; and d) Measures to prevent ARD and ML. 	IR limited to noting where these activities would be changing as a result of the Phase 2 proposal, and further details on how these components would change.
CIRNAC-IR#6	<p>CIRNAC requests that the Proponent provide:</p> <ul style="list-style-type: none"> a) An updated version of the EPP and Environmental Management Plans, applicable to Mary River Project Phase 2 considering the North Railway and the expansion of Milne Port; b) A Follow-up and Adaptive Management Plan that indicates the criteria and thresholds to trigger mitigation measures for the evaluation of the efficiency of mitigation measures; c) Quality Assurance and Quality Control measures to be applied to the monitoring program; and 	The plans were provided in the most recent FEIS Addendum, specific requirements of these plans should be discussed by parties through the technical review period.

	d) Updated Management, Mitigation and Monitoring Plans as proposed in TSD-28 for the technical review period.	
CIRNAC-IR#7	CIRNAC requests that the Proponent provide the following information: a) Calculations of de-watering volumes to be pumped based on meteorological baseline and other relevant analysis; b) A description of mine de-watering methods; c) Proposed geotechnical works, sediments disposal and disposal methods; and d) Develop contingency strategies should monitored mine water volumes differ from predictions.	IR limited to Baffinland providing additional information if these components are changing through the Phase 2 application, or confirmation if the previous assessment remains applicable.
CIRNAC-IR#8	CIRNAC requests that the Proponent provide: a) Geochemical testing of rock cut areas in the North Railway area; and b) Information available on the risk of encountering ARD/ML material in the North Railway construction materials and how this can be mitigated effectively to avoid unexpected problems in the long term.	IR limited to discussion of criteria, expectations for contingency planning to be discussed by parties through tech review.
CIRNAC-IR#9	CIRNAC requests the Proponent provide the following: a) Summary of mine site water quality monitoring data; and b) Updated water quality predictions of seepage and run-off incorporating monitoring data.	
CIRNAC-IR#10	CIRNAC requests the Proponent provide the following: a) Interim ML/ARD Assessment of Railway Quarry Rock Samples (Baffinland Mary River Project, December 2010); and b) Additional geochemistry reports and data sets that may be relevant to the quarry areas.	
CIRNAC-IR#11	CIRNAC requests that the Proponent provide the following: a) The proposed areas of snow stockpiles at Milne Port and along the Tote Road; b) Details on the physical delineation of 31 m boundary from water body in the Snow Management Plan; and c) Description of methods used in the field to delineate these areas.	
CIRNAC-IR#12	CIRNAC requests that the Proponent provide the following:	

	<ul style="list-style-type: none"> a) Details on contaminated snow and ice collected volumes from previous and current operations at site; and b) Details on projected volumes and requirements. 	
CIRNAC-IR#13	<p>CIRNAC requests that the Proponent provide the following:</p> <ul style="list-style-type: none"> a) A summary of the investigation reports describing the geological conditions and geotechnical investigations along the Railway alignment; and b) A summary of the feasibility study regarding the North Railway embankment designs (Hatch 2017c). 	
CIRNAC-IR#14	<p>CIRNAC requests that the Proponent provide the following:</p> <ul style="list-style-type: none"> a) Thermal modelling or analysis and monitoring plans for the entire service life of the infrastructure and related facilities such as the North Railway, docks, railway embankments, bridges, and other relevant components, as well as for the WRF; b) Incorporate the site-specific meteorological information in its climate change assessment and update the relevant modelling accordingly; c) Clarification as to when the Proponent expects suitable data to become available for updating thermal modelling; and d) Thaw consolidation data or thaw strain predictions for various infrastructures, namely North Railway, docks, railway embankments, bridges, and other relevant components. 	IR limited to (c) as the requirement for additional studies would be determined through the technical review process.
CIRNAC-IR#16	<p>CIRNAC requests that the Proponent provide an updated Table 1-1 including:</p> <ul style="list-style-type: none"> a) Clear description of expected changes in quantities and types of waste (including sewage) that would be required to be managed under Phase 2; b) Locations and capacities of key management infrastructure such as landfills, incinerators and sewage treatment plants; and c) Details related to expected changes in quantities and type of hazardous materials associated with Phase 2 and their expected management, particularly those associated with fuel and explosive agents. 	

CIRNAC-IR#17	<p>CIRNAC requests that the Proponent provide the following:</p> <ul style="list-style-type: none"> a) The 2014 version of Mine Rock ML/ARD Characterization Report Deposit 1, Mary River Project, as appended to the Life-of-Mine Waste Rock Management Plan; b) Detailed results from the blast hole data completed in 2017, referred to in the Interim Waste Rock Management Plan; c) Detailed results from 2018 Geochemical Evaluation, referred to in the Interim Waste Rock Management Plan; and d) Geochemical reports or data sets from mine sites in comparable climatic conditions. 	IR limited to providing data that is accessible to produce, or outlining when the data would be available for parties to consider
Natural Resources Canada (NRCan)		
NRCan-IR#1	Please indicate if detailed terrain mapping at a larger scale providing additional information on terrain sensitivity has been conducted. If this mapping has been conducted, please provide the maps. If this mapping has not been done, please indicate if there are plans to complete this mapping to support infrastructure design.	
NRCan-IR#2	Please clarify if any ground thermal data have been collected for the Northern Railway Corridor and provide details on these data if they have been collected. If such data have not yet been acquired, please describe any plans to collect these data in the future to support infrastructure design.	
NRCan-IR#3	Please clarify if any thermal analysis/modelling has been conducted to support estimates of settlement to inform embankment design for the Northern Railway and provide details on any analysis completed. If such analysis has not yet been conducted, please describe any future plans for detailed thermal/analysis to support embankment design.	
NRCan-IR#4	Please provide, to the extent currently possible, confirmation that there will not be any significant changes in the proposed explosives plant or storage facilities as described in a 2012 Explosives Management Plan and other Mary River Project documents. Also, please confirm that the construction and operation of new rail infrastructure will not require changes in the location of explosives manufacturing and storage	

	components with respect to Quantity-Distance requirements.	
Environment and Climate Change Canada (ECCC)		
ECCC-IR#1	<p>1. Describe the migratory bird and species at risk surveys that were collected to specifically inform the site sensitivity for the wind energy project.</p> <p>2. Provide details on what specific pre-construction phase surveys for migratory birds and species at risk are planned and when these surveys will be conducted. These surveys should be consistent with ECCC guidance (EC 2007a, 2007b) including the level of effort required given predicted site sensitivity.</p> <p>3. Describe how mitigation or monitoring requirements identified as a result of construction phase surveys will be incorporated in the project design.</p>	
ECCC-IR#7	<p>1. Characterize all dust and total suspended particulate sources broken down into each metal associated with each source (e.g. metal speciation of the dust and total suspended particulate sources).</p> <p>2. Provide predicted metal depositions associated with Total Suspended Particulate and dust deposition from all dust sources</p>	
ECCC-IR#8	ECCC requests that the Proponent clarify if the amount of waste being incinerated will increase due to increased workers onsite. If the amount of waste incineration is increasing, ECCC recommends the frequency of incineration stack testing be increased from 5 years to every 3 years.	
ECCC-IR#10	<p>1. Provide information on how mitigation has reduced dustfall deposition and sedimentation in waterbodies since the previously documented dust exceedances, and how these methods will be sufficient to mitigate the expected further increases in dust due to the Phase 2 Project.</p> <p>2. Provide information on how dust deposition and subsequent impacts to water quality will be monitored and mitigated along the transportation corridor and at Milne Port.</p>	
ECCC-IR#11	ECCC requests that the Proponent identify criteria that would be used to determine whether runoff from the ore transfer area stockpiles is suitable for dust suppression along the North Transportation Corridor.	

ECCC-IR#13	ECCC requests that both missing references be provided and included in further revisions to the Ice Study Updates (TSD 16).	
ECCC-IR#14	ECCC requests that the Proponent update the reference to the physical and chemical properties of IFO-180 fuel oil.	
ECCC-IR#16	ECCC requests that the Proponent provide the results on their shoreline classification data surveys so that this data can inform the effects assessment of potential spills of fuel/oil on water.	
ECCC-IR#18	ECCC requests that the Proponent identify how additional camp wastewater treatment needs will be met, and if there will be any potential changes to receiving environments due to increased discharges as well as if additional mitigation measures will be required.	
ECCC-IR#21	ECCC requests that the Proponent update references of the MMER to MDMER.	IR limited to confirming where references would be updated, but not require re-submitting actual documents
ECCC-IR#22	1. Revise Table 1 to include the updates that are required for the Landfill Maintenance and Operations Manual. These updates are identified in Table 11. 2. Update the Landfill Maintenance and Operations Manual accordingly.	IR limited to confirmation on if these items would be updated, not the revision and resubmission of the actual document.
ECCC-IR#24	ECCC requests that the Proponent provide a description of the changes to the Interim Closure and Reclamation Plan that will be required as part of the changes at Milne Port during the Phase 2 Project.	
Health Canada (HC)		
HC-IR#8	1) Further discussion if the added tonnage would increase the height of the fine ore stockpile and therefore increase the potential for wind erosion. 2) The most recent dust monitoring and management plan inclusive of all sources of dust including those newly identified but not limited to all vehicle traffic, ore dust from locomotive loading and transport, and wind erosion of all stockpiles using winds at the height of stockpile not at ground level was not included and if required update the effects assessment	
Fisheries and Oceans Canada (DFO)		
DFO-IR#2	Provide an updated/consolidated table which contains all information related to shipping. The table should include information from 2019-2035 regarding:	

	<p>a) Numbers of ships (totals for types and overall total for all vessels);</p> <p>b) Types of ships (e.g. Panamax/Cape Sized);</p> <p>c) Number of round trips for all types of vessels;</p> <p>d) Shipping season schedules in relation to a, b, and c; and,</p> <p>e) Support vessels (number and type) in relation to all the above, this includes tugs and icebreaking vessels.</p>	
DFO-IR#4	Provide a memorandum to summarize and discuss the results from 2014 and 2015 marine mammal surveillance monitoring program conducted onboard the Project ore carriers in 2014 and 2015.	
DFO-IR#5	Provide clarification on how acoustic modelling incorporated potential impacts of ice (e.g. ice cover, movement of vessels through ice-covered waters).	
DFO-IR#8	<p>Provide an updated/consolidated table which contains all information related to shipping. The table should include information from 2019-2035 regarding:</p> <p>a) Numbers of ships (totals for types and overall total for all vessels);</p> <p>b) Types of ships (e.g. Panamax/Cape Sized);</p> <p>c) Number of round trips for all types of vessels;</p> <p>d) Shipping season schedules in relation to a, b, and c; and,</p> <p>e) Support vessels (number and type) in relation to all the above, this includes tugs and icebreaking vessels.</p>	
DFO-IR#9	<p>Provide additional information on:</p> <p>a) Areas that will be impacted by noise that may extend shoreline to shoreline and the potential impacts to mammals that are not expected to display displacement/abandonment;</p> <p>b) Information on proposed anchorage areas including routing, duration of vessels in anchored areas, and maximum number of vessels expected;</p> <p>c) The approaches that will be used to mitigate the cumulative effects of strikes and sound on habitats used by marine mammals in areas where avoidance behaviour may not occur;</p> <p>d) The approaches that will be used to mitigate the cumulative effects of strikes and sound on habitats used by marine mammals for nursery,</p>	

	rearing, and foraging, especially in areas where avoidance behaviour may not occur; and, e) The monitoring approaches that will be used to assess impacts of all activities to marine mammals during shoulder seasons.	
DFO-IR#11	Provide clarification on how acoustic modelling incorporated potential impacts of ice (e.g. ice cover, movement of vessels through ice-covered waters).	
Parks Canada (PC)		
PC-IR#4	<p>a) Please define the dates for the proposed Phase 2 shipping season (for all vessel types: ore, freight, and fuel) and identify if these dates include the window for operational flexibility.</p> <p>b) Please provide the criteria that will be used to adjust the shipping season to weather and ice conditions.</p> <p>Please provide the approval process that will take place each year in deciding when to open and close the shipping season, including the format of community input.</p>	
Oceans North (OC)		
OC-IR#1-3	<p>Information is requested regarding comprehensive Inuit and non-Inuit employment statistics over the course of the Early Revenue Phase, on a per annum basis. Specifically, the following data:</p> <p>I) Employment, Hours, and Wages</p> <p>II) Training, Employment Duration, and Promotions</p> <p>III) Contracting</p>	IR limited to Baffinland providing a summary of the issues related to its hiring practices for the various phases, indicating barriers to meeting hiring targets. The more detailed statistical analysis and informing of the benefits of the phases would be discussed further as part of the technical review, especially to inform the board of broader benefits of the phases to offset the impacts identified
OC-IR#4	<p>Information is requested in terms of a comprehensive financial forecast for the Mary River Project. The following data and rationale are requested for projections incorporating current output levels, as well as a second forecast for Phase 2. *Each projection should accommodate for a range of ore prices and exchange rates.</p> <ul style="list-style-type: none"> Capital costs 	

	<ul style="list-style-type: none"> • Operating costs/tonne • Internal rate of return • Payback period • Cumulative net cash flow 	
OC-IR#5	<p>BIMC notes that “There was no significant change in overall narwhal abundance and distribution observed in the area from 2014-2017.” Information is requested surrounding the following:</p> <ol style="list-style-type: none"> I. Results that show statistical evidence to back up statement II. LGL final report from 2016. Note that we are aware this document exists, and we have asked for this multiple times. 	