



ᖃᖃᖃᖃᖃᖃᖃ  
ᖃᖃᖃᖃᖃᖃᖃᖃᖃ

Serving the  
communities of

ᖃᖃᖃᖃᖃᖃᖃ  
Arctic Bay

ᖃᖃᖃᖃᖃᖃᖃ  
Cape Dorset

ᖃᖃᖃᖃᖃᖃᖃᖃ  
Clyde River

ᖃᖃᖃᖃᖃᖃᖃᖃ  
Grise Fiord

ᖃᖃᖃᖃᖃᖃᖃ  
Hall Beach

ᖃᖃᖃᖃᖃᖃᖃ  
Igloolik

ᖃᖃᖃᖃᖃᖃᖃ  
Iqaluit

ᖃᖃᖃᖃᖃᖃᖃ  
Kimmirut

ᖃᖃᖃᖃᖃᖃᖃᖃ  
Pangnirtung

ᖃᖃᖃᖃᖃᖃᖃᖃ  
Pond Inlet

ᖃᖃᖃᖃᖃᖃᖃᖃᖃ  
Qikiqtarjuaq

ᖃᖃᖃᖃᖃᖃᖃᖃᖃ  
Resolute Bay

ᖃᖃᖃᖃᖃᖃᖃᖃᖃ  
Sanikiluaq

March 1, 2021

Kaviq Kaluraq  
Nunavut Impact Review Board (NIRB)  
29 Mitik Street  
P.O. Box 1360  
Cambridge Bay, NU  
X0B 0C0  
Canada

**Re: THE QIKIQTANI INUIT ASSOCIATION'S OUTSTANDING QUESTIONS FROM THE PUBLIC HEARING**

Ms. Kaluraq,

Per the Nunavut Impact Review Board's direction received during the January 25 to February 6, 2021 Public Hearings in respect of Baffinland Iron Mines Corporation's (BIMC) proposed "Phase 2 Development Proposal" (NIRB File No. 08MN053), the Qikiqtani Inuit Association (QIA) is submitting its comments and questions for BIMC and other intervenors that it did not have the opportunity to ask during the hearing. QIA appreciates NIRB giving us the opportunity to submit these outstanding questions and has taken efforts to ensure its questions are not duplicative of any which were asked during the hearing.

In total, QIA has submitted 49 questions for BIMC and intervenors to answer.

Should you have any questions about the attached for the QIA, please do not hesitate to contact me.

Sincerely,

Jared Ottenhof  
Director  
Qikiqtani Nunilirijikkut



ᑲᓴᐅᑦᑐᒃ ᕿᓄᑦ P.O. Box 1340  
ᕿᓄᑦ Iqaluit, Nunavut  
X0A 0H0

<b>QIA ID</b>
ID 1
<b>Related Agenda Topic/Presentation</b>
<b>Marine Environment – Fish Tissue Metals</b>
<b>Directed to (e.g., BIMC, ECCC, MHTO, etc.)</b>
BIMC
<b>Relevant Technical Comment (optional)</b>
<p><b>Brief Rationale/Preamble</b></p> <p>Figure 4-3 of Golder (2021: pg. 15), which was provided on January 23, 2021, depicts tissue iron concentrations of Arctic char from Milne Inlet between 2010 and 2019. Concentrations in 2018 and 2019 appear to be lower than those in previous years but it is not clear whether this is an artefact of the iron detection limits.</p> <p>Golder. 2021. Nunavut Impact Review Board Recommendation #2: population and health status of fish and marine mammals. Technical Memorandum Reference NO. 1663724-255-TM-Rev0-38000. 30 pp. [210123-08MN053-BIMC Tech Memo Re Pop and Health Status of Fish and Marine Mammals-IMTE.pdf]</p>
<b>Question</b>
Please provide a copy of this figure that shows the lower detection limits for iron in each year.
<b>Proposed Related Commitment or Term/Condition Language (optional)</b>
Relevant to PCC 113



<b>QIA ID</b>
ID 2
<b>Related Agenda Topic/Presentation</b>
Marine Environment – Ship Noise
<b>Directed to (e.g., BIMC, ECCC, MHTO, etc.)</b>
BIMC
<b>Relevant Technical Comment (optional)</b>
<b>Brief Rationale/Preamble</b>
Ship noise disturbance to marine mammals will vary with the frequency of vessel transits and the noise generated by each vessel, with larger vessels tending to make more noise than smaller vessels of the same type (e.g., ore carriers). Concerns have been expressed regarding the number of vessel transits and the noise disturbance associated with each transit.
<b>Question</b>
Has Baffinland conducted a sensitivity analysis to assess the trade-offs, in terms of noise disturbance, between using a smaller number of large vessels or a larger number of small vessels to transport the proposed ore tonnage and, if so, what were the results?
<b>Proposed Related Commitment or Term/Condition Language (optional)</b>
BIMC to commit to providing the results of the described sensitivity analysis immediately. If this analysis has not been performed, BIMC commits to performing the analysis and providing results at least 60 days prior to the Minister’s decision for this project proposal.



<b>QIA ID</b>
ID 3
<b>Related Agenda Topic/Presentation</b>
<b>Marine environment</b>
<b>Directed to (e.g., BIMC, ECCC, MHTO, etc.)</b>
BIMC
<b>Relevant Technical Comment (optional)</b>
51
<b>Brief Rationale/Preamble</b>
Project Certificate 005 requires that the Proponent develop Early Warning Indicators for noise impacts on marine mammals. To date the Proponent has only chosen the proportion of juvenile narwhals as an Early Warning Indicator.
<b>Question</b>
How, specifically, will the Proponent link underwater noise to changes in the proportion of juvenile narwhals? In other words, how does excessive underwater noise lead to changes in the proportion, what are the mechanisms in play, and how will these linkages be monitored and assessed? How will the Proponent conclusively determine that changes in the proportion of juvenile narwhal are (or are not) a result of vessel noise?
<b>Proposed Related Commitment or Term/Condition Language (optional)</b>
<b>Possible Follow-up Questions Depending on Response (optional)</b>
The Proponent indicated that they will be tracking changes to the reproductive output of narwhal. How does monitoring the Proportion of juvenile narwhal in the sampled population provide direct information on reproductive output? How are other explanatory factors, for example increased predation, assessed and eliminated as causal factors?



<b>QIA ID</b>
ID 4
<b>Related Agenda Topic/Presentation</b>
<b>Marine environment</b>
<b>Directed to (e.g., BIMC, ECCC, MHTO, etc.)</b>
BIMC
<b>Relevant Technical Comment (optional)</b>
51
<b>Brief Rationale/Preamble</b>
<p>A recent study conducted by Fisheries and Oceans Canada (Watt et al. 2021) indicated the use of cortisol concentration monitoring as an effective indicator of narwhal stress.</p> <p>The Proponent suggested that there are better indicators for tracking Project changes, and that it would be hard to separate Project effects from other drivers that could be impacting narwhal. The Proponent also indicated that the Watt et al. (2021) paper had issues such as a general lack of detail with respect to methodology and study design and the statistical analyses used. The Qikiqtani Inuit Association review of this study found the methods to be well-described and in a manner that would allow others to replicate the research.</p>
<b>Question</b>
<p>How is monitoring changes in the proportion of juvenile narwhals in the sample population a better indicator? How will the Proponent determine if population effects are caused by Project shipping and not other factors? Proponent should provide fulsome discussion to substantiate the statement that there are better indicators for identifying and tracking project changes and the general lack of detail, and to the responses provided to the above two questions.</p> <p>What issues has the Proponent identified in the methodology and study design, and the statistical analyses, in the Watt et al. (2021) study of cortisol concentrations?</p>
<b>Proposed Related Commitment or Term/Condition Language (optional)</b>



<b>QIA ID</b>
ID 5
<b>Related Agenda Topic/Presentation</b>
<b>Marine environment</b>
<b>Directed to (e.g., BIMC, ECCC, MHTO, etc.)</b>
BIMC
<b>Relevant Technical Comment (optional)</b>
51
<b>Brief Rationale/Preamble</b>
Project Certificate 005 requires that the Proponent develop Early Warning Indicators for noise impacts on marine mammals. To date, the Proponent has chosen one indicator, the proportion of juvenile narwhals, as an Early Warning Indicator
<b>Question</b>
How is the selection of the proportion of juvenile narwhal as an Early Warning Indicator supported by <i>Inuit Qaujimajatuqangit</i> (IQ) and the observations of Inuit in the impacted communities? Have Inuit suggested other Early Warning Indicators that they consider important? How has IQ been integrated into the Early Warning Indicators development process, and does the Proponent have evidence that this integrated has been effective for Inuit?
<b>Proposed Related Commitment or Term/Condition Language (optional)</b>



<b>QIA ID</b>
ID 6
<b>Related Agenda Topic/Presentation</b>
<b>Marine environment (and IQ integration)</b>
<b>Directed to (e.g., BIMC, ECCC, MHTO, etc.)</b>
BIMC
<b>Relevant Technical Comment (optional)</b>
51
<b>Brief Rationale/Preamble</b>
Throughout the Public Hearing, the Proponent identified ways in which <i>Inuit Qaujimajatuqangit</i> (IQ) was used in the assessment. For example, it was noted that IQ was used to inform the marine baseline assessment, help focus baseline data collection program, identify key Valued Ecosystem Components, and provide key information on marine mammal distribution in the Regional Study Area, timing of movements migratory patterns, and important life stages. This also included integrating IQ into potential effects characterization.
<b>Question</b>
How exactly was IQ integrated into the effects assessment? We request that the Proponent work through an example of how IQ was applied to effects characterization of shipping impacts to marine mammals, specifically narwhal and ringed seals? How did IQ inform the characterization of effects as Non-significant?
<b>Proposed Related Commitment or Term/Condition Language (optional)</b>



<b>QIA ID</b>
ID 7
<b>Related Agenda Topic/Presentation</b>
<b>Marine environment</b>
<b>Directed to (e.g., BIMC, ECCC, MHTO, etc.)</b>
BIMC
<b>Relevant Technical Comment (optional)</b>
51
<b>Brief Rationale/Preamble</b>
The Proponent indicated that they do not expect acoustic disturbance to affect narwhal fitness at either the individual or stock level.
<b>Question</b>
How is the Proponent monitoring narwhal fitness at the individual level? What evidence does the Proponent have to support this expectation?
<b>Proposed Related Commitment or Term/Condition Language (optional)</b>





<b>QIA ID</b>
ID 8
<b>Related Agenda Topic/Presentation</b>
<b>Marine environment</b>
<b>Directed to (e.g., BIMC, ECCC, MHTO, etc.)</b>
BIMC
<b>Relevant Technical Comment (optional)</b>
51
<b>Brief Rationale/Preamble</b>
Several times during the Public Hearing, the Proponent stated that there is evidence that narwhal are able to habituate to underwater noise, and furthermore that there are numerous examples in the literature of Arctic marine mammals habituating to industrial disturbance.
<b>Question</b>
What evidence (i.e., sources) are there in the peer-reviewed scientific literature that provide empirical support for habituation of Arctic marine mammals, including narwhals and ringed seals, to underwater noise from industrial disturbance?
<b>Proposed Related Commitment or Term/Condition Language (optional)</b>



<b>QIA ID</b>
ID 9
<b>Related Agenda Topic/Presentation</b>
<b>Marine environment</b>
<b>Directed to (e.g., BIMC, ECCC, MHTO, etc.)</b>
BIMC
<b>Relevant Technical Comment (optional)</b>
51
<b>Brief Rationale/Preamble</b>
The Proponent indicated that they are not shipping during periods where seals are vulnerable, and that while there is some overlap with moulting it is a period when seals are mobile and can avoid vessels.
<b>Question</b>
What consideration has the Proponent given to the potential health impacts of moult interruption? What scientific knowledge and IQ been used to reach the conclusion that it is not a critical period for ringed seals and that moult interruptions due to vessel disturbance will not cause impacts?
<b>Proposed Related Commitment or Term/Condition Language (optional)</b>



ᐱᐱᓴᑲᑯᑦᑳ P.O. Box 1340  
ᑕᓴᑲᑐᑕ, ᑭᑭᑭᑕ Iqaluit, Nunavut  
X0A 0H0

<b>QIA ID</b>
ID 10
<b>Related Agenda Topic/Presentation</b>
Marine environment
<b>Directed to (e.g., BIMC, ECCC, MHTO, etc.)</b>
BIMC
<b>Relevant Technical Comment (optional)</b>
51
<b>Brief Rationale/Preamble</b>
Several times during the Public Hearing, the Proponent indicated that project monitoring to date has confirmed the accuracy of impact predictions for the current operations. Additional information is sought.
<b>Question</b>
What are the impact predictions for Project shipping on ringed seals, and what monitoring has been conducted to confirm the accuracy of these impact predictions?
<b>Proposed Related Commitment or Term/Condition Language (optional)</b>



QIA ID
ID 11
Related Agenda Topic/Presentation
<b>Marine environment</b>
Directed to (e.g., BIMC, ECCC, MHTO, etc.)
BIMC
Relevant Technical Comment (optional)
51
Brief Rationale/Preamble
The Passive Acoustic Monitoring (PAM) technical report from Oceans North and Scripps Institute of Oceanography provides important information on the noise signatures from the icebreaker <i>IMV Botnica</i> . Specifically, it notes that this vessel has a higher potential for biologically relevant impacts because of acoustic characteristics "that may result from design or operational parameters". The report recommended that the acoustic characteristics of this ship be further investigated for potential mitigation or noise abatement measures. At the Public Hearing, the Proponent committed to investigating the icebreaker <i>IMV Botnica</i> in greater detail to identify potential mitigation or noise abatement measures.
Question
What options for mitigation or noise abatement measures are be available?
Proposed Related Commitment or Term/Condition Language (optional)
New PC Term or Condition requiring the Proponent to implement mitigation and noise abatement measures for icebreaking vessels resulting from the acoustic signature investigation.



QIA ID
ID 12
Related Agenda Topic/Presentation
Icebreaking impacts on Inuit travel and land use
Directed to (e.g., BIMC, ECCC, MHTO, etc.)
BIMC
Relevant Technical Comment (optional)
47, 48
Brief Rationale/Preamble
<p>The Qikiqtani Inuit Association has been seeking additional clarity on ice conditions and shipping triggers throughout the Phase 2 review process, as this information is critical to minimizing impacts on Inuit use of sea ice for travel and harvesting activities. Responses to questions at the Public Hearing have resulted in reduced clarity.</p> <p>The Proponent has stated that they will not ship until landfast ice has broken, and this will avoid interaction with on-ice activities. In one response, it was noted that Baffinland would not ship when there is “not shore to shore ice”. Landfast ice is sea ice attached to shore. It does not have to be attached to both shores, for example, of both Baffin and Bylot islands. As such, this appears to be a suggestion that it has to be attached to both shores for the Proponent to consider it “landfast”.</p> <p>The Proponent also noted that they understand that they could be in a condition to ship when ice conditions in front of Pond Inlet are still in use by the community. A slide shown during the Public Hearing showed ice of 9/10 concentration. This sea ice represents important narwhal and ringed seal habitat and harvesting area.</p>
Question
<p>Does waiting until the floe edge has closed eliminate any potential impacts to Inuit use of sea ice, or is additional work required to clarify how the start and end of the shipping seasons could interact with harvesting and travel?</p> <p>The Proponent also stated that it would ensure that shipping does not disrupt critical harvest periods. How were the critical periods for harvesting activities determined by the Proponent? How was the IQ collected through the Proponent’s workshops considered here? TSD-03 clearly indicates how sea ice is used after the floe edge harvesting period has ended.</p>
Proposed Related Commitment or Term/Condition Language (optional)
New term/condition to commit to working with the MHTO and community of Pond Inlet to determine when shipping may commence each year of ore shipping operations.



<b>QIA ID</b>
ID 13
<b>Related Agenda Topic/Presentation</b>
Freshwater Environment
<b>Directed to (e.g., BIMC, ECCC, MHTO, etc.)</b>
BIMC
<b>Relevant Technical Comment (optional)</b>
<b>Brief Rationale/Preamble</b>
<p>QIA notes that while Inuit have raised concerns about water quality, there is no current PC term or condition that requires IQ or Inuit to be meaningfully integrated into freshwater quality data collection and analysis. QIA has previously recommended a new Project Certificate Commitment, should Phase 2 proceed, which would require:</p> <p>“Proponent to work with QIA, and the impacted Inuit Communities to develop an Inuit-based water quality monitoring program including strong consideration and inclusion of Inuit use and IQ. Program to include baseline data collection for program and identification of IQ based Indicators and thresholds of acceptable change including adaptive management strategies and implementation processes”.</p> <p>Baffinland has referred to developing an Inuit-based water quality monitoring program in prior draft commitments, but it remains unclear whether this would be in a Project Certificate Condition or Commitment and how Baffinland envisions it being structured.</p>
<b>Question</b>
Is Baffinland in support of a PC Commitment that covers this topic as proposed by QIA above, and if so, is Baffinland committed to funding it for the life of the Project and how would it be tied into the Project management system?
<b>Proposed Related Commitment or Term/Condition Language (optional)</b>
QIA Proposed PC Commitment: “Proponent to work with QIA, and the impacted Inuit Communities to develop an Inuit-based water quality monitoring program including strong consideration and inclusion of Inuit use and IQ. Program to include baseline data collection for program and identification of IQ based Indicators and thresholds of acceptable change including adaptive management strategies and implementation processes”.



QIA ID
ID 14
Related Agenda Topic/Presentation
Terrestrial
Directed to (e.g., BIMC, ECCC, MHTO, etc.)
BIMC
Relevant Technical Comment (optional)
TC-01: Caribou Assessment based on IQ and Science
Brief Rationale/Preamble
<p>Throughout the public hearings held in January 2021, Baffinland consistently pointed to the benefits of rail in terms of reducing impacts to North Baffin caribou compared to the current use of the Tote Road. Baffinland has stated that Inuit Qaujimajatuqangit had been used in the development of the habitat coefficients used in the significance determination for habitat loss around the Mary River Project, Baffinland consistently states that, while the assessment shows that the Phase 2 proposal will affect caribou, it will not have a population-level effect.</p> <p>We respectfully disagree—and/or find high levels of uncertainty—with these statements. While the rail has fewer transits than the road, the combined transportation corridor still relies on the road for many daily transits. The full effects of the train (in terms of the buffer of avoidance on either side of the train) is unknown but likely higher than the current assessment. The smells, noise, and vibration associated with the train will have unknown effects on caribou behaviour. The embankment itself has a high risk of posing a barrier, and the assumptions made about permeability are best guesses, with no real data or knowledge behind them. Changes to the potential effects pathways on caribou will likely differ at lower population numbers compared to higher population levels, and we do not see how these differences in potential effects have been accounted for in the current assessment. Caribou are low population numbers are more likely to avoid the transportation corridor, while caribou at higher population numbers and larger group sizes are more likely to be at risk of mortality. Potential effects of snowdrifts and snowbanks on caribou entrapment has not been adequately assessed. The potential for combined railway and road, as well as blasting and ore dust, to have a population-level impact to caribou is a very real concern for Inuit. As we have pointed out previously, while Baffinland has documented IQ in both TSD 3 and TSD 10, we see no evidence that it has been integrated into the significance determinations.</p>
Question
<p>Given the concerns we have outlined above, will Baffinland agree to an approach that estimates the zone of influence and disturbance coefficients exerted by the Project on caribou, taking into account differences in caribou behaviour at lower and higher population levels, using an appropriate method (such as a Bayesian belief network) that allows for an equal consideration of both Inuit Qaujimajatuqangit and science and that is agreed to and supported by both the TEWG and the Inuit Committee?</p>
Proposed Related Commitment or Term/Condition Language (optional)
<p><i>Proposed addition to commitment ID 65:</i> BIMC will update the Terrestrial Environment Mitigation and Monitoring Plan to reflect that it will undertake research to estimate the Zone(s)-of-Influence (ZOI)</p>



ᖃᖃᖃᖃᖃ ᖃᖃᖃᖃ ᖃᖃᖃᖃᖃᖃᖃᖃᖃ  
Qikiqtani Inuit Association

ᖃᖃᖃᖃᖃᖃᖃᖃᖃ P.O. Box 1340  
ᖃᖃᖃᖃᖃᖃᖃᖃᖃᖃᖃ Iqaluit, Nunavut  
X0A 0H0

and disturbance coefficients (DC) exerted by the Project on caribou **using a method that allows for equal consideration of both Inuit Qaujimajatuqangit and science, and that is agreed to and supported by the TEWG and the Inuit Committee.** Baffnland will provide to NIRB updated estimates of cumulative habitat losses for caribou, at least every 5 years.





<b>QIA ID</b>
ID 15
<b>Related Agenda Topic/Presentation</b>
Terrestrial
<b>Directed to (e.g., BIMC, ECCC, MHTO, etc.)</b>
BIMC
<b>Relevant Technical Comment (optional)</b>
TC01 and TC02
<b>Brief Rationale/Preamble</b>
<p>QIA has previously stated that one of the key mitigations that can be implemented now, in the face of high uncertainty about potential impacts to caribou from the combined effects of the railway and road, involves the construction of the railway and the engineering of the embankments. We would like to reiterate our concern that the assumptions about permeability (i.e., those laid out on slide 19 of Baffinland's terrestrial presentation during the January hearings) are based on very little information, and therefore we really don't know how much of the railway will be easy to cross. Furthermore, we have no real mechanism for evaluating the pilot project that has been suggested under commitment 67. Under these circumstances the precautionary principle must be invoked to ensure that we are doing everything possible to facilitate movement of caribou across the railway. We do know that most roads in Canada's arctic are built at a 1:3 ratio (sometimes 1:4) to facilitate wildlife crossings (e.g., the Tłıchǫ All Season Road in the Northwest Territories uses 1:3 embankment slopes to facilitate boreal caribou crossings).</p>
<b>Question</b>
<p>Considering our inability to assess the proposed pilot project, will Baffinland consider an approach that calculates the total amount of fill required under the design currently being contemplated (i.e., 1:2 slopes for all areas 4 m and under in height), and redistributes this total fill to ensure that as much of the railway as possible will be constructed using the 1:3 embankment slopes?</p> <p>Would Baffinland consider using more fill if needed to increase the amount of embankment at the 1:3 slope, assuming harm to freshwater within the project area can be avoided?</p>
<b>Proposed Related Commitment or Term/Condition Language (optional)</b>
If agreed to, commitment 67 would need to be reworded accordingly.



<b>QIA ID</b>
ID 16
<b>Related Agenda Topic/Presentation</b>
Terrestrial
<b>Directed to (e.g., BIMC, ECCC, MHTO, etc.)</b>
BIMC
<b>Relevant Technical Comment (optional)</b>
<b>Brief Rationale/Preamble</b>
During the January hearings, a lot of uncertainty was expressed about whether measures to detect caribou in close proximity to the railway will be effective. We know that high cars are contemplated on some railway transits, that Baffinland is relying partially on truck and train operators to report on caribou sightings, and that monitors will be deployed along the railway to detect caribou. However, during periods of darkness and blowing snow, it may be impossible to detect caribou in close proximity to the railway. Furthermore, topography may make it impossible to see caribou along some areas of the railway, even if they are in close proximity. There seems to be a fairly high risk that caribou will not be detected until they are attempting to cross the railway, which puts them at higher risk of being hit by the train.
<b>Question</b>
Given these concerns, how much confidence does Baffinland have in the monitoring programs being contemplated to detect caribou in close proximity to the northern railway? What other options are being considered to reduce uncertainty?
<b>Proposed Related Commitment or Term/Condition Language (optional)</b>



QIA ID
ID 17
Related Agenda Topic/Presentation
Terrestrial
Directed to (e.g., BIMC, ECCC, MHTO, etc.)
BIMC
Relevant Technical Comment (optional)
TC-01 and TC-02
Brief Rationale/Preamble
Within Section 3.3.4.2 of the TEMMP, Baffinland states in relation to stoppage of the train for migratory caribou, “the train is expected to operate 300 days per year, so seasonal stoppages are possible if large groups of migratory caribou move through the area.” No effort has been made to identify what the appropriate group size is for the northern rail, an important gap given that caribou in this area are currently non-migratory, and travelling in smaller groups. Though these movements are not migratory in nature (at least, as defined by western science), they may be critically important to facilitate at lower population levels, when caribou are more easily disturbed based on what we know from Inuit Qaujimajatuqangit and western scientific information.
Question
Given the circumstances outlined above, in the absence of a clearly defined trigger for stopping operation of the train on the northern railway, will Baffinland commit to adhering to input from the Inuit Committee and the TEWG regarding the number of caribou required to stop the railway, acknowledging that this trigger may need to be revisited annually based on caribou population status?
Proposed Related Commitment or Term/Condition Language (optional)
Potential addition to commitments 161 and 162 to be integrated into an appropriate term and condition.



<b>QIA ID</b>
ID 18
<b>Related Agenda Topic/Presentation</b>
Terrestrial
<b>Directed to (e.g., BIMC, ECCC, MHTO, etc.)</b>
BIMC
<b>Relevant Technical Comment (optional)</b>
<b>Brief Rationale/Preamble</b>
Throughout the January 2021 public hearing, Baffinland made several references to implementing special management zones for caribou along the railway.
<b>Question</b>
How will these special management zones be identified? What is the link between identifying these special management zones and the caribou protection measures? How will Inuit Qaujimajatuqangit be used in identifying these special management zones? What types of rules or mitigations would apply within these zones, beyond lower speed limits for trains?
<b>Proposed Related Commitment or Term/Condition Language (optional)</b>



<b>QIA ID</b>
ID 19
<b>Related Agenda Topic/Presentation</b>
Terrestrial
<b>Directed to (e.g., BIMC, ECCC, MHTO, etc.)</b>
BIMC
<b>Relevant Technical Comment (optional)</b>
TC01 and TC02
<b>Brief Rationale/Preamble</b>
Assuming caribou eventually return in large numbers to the project area, several intervenors have expressed concerns about the high likelihood of caribou mortality associated with the railway. We understand that Baffinland has committed to investigating all instances of caribou mortality associated with the railway.
<b>Question</b>
How will instances of caribou mortality be investigated? What specific steps will be taken? What assurances can Baffinland provide that there will be no circumstances under which instances of caribou mortality are considered acceptable? Wildlife mortality associated with railway use is notoriously difficult to detect, particularly along stretches of rail with steep terrain. How will wildlife mortality be monitored by Baffinland? Will Baffinland commit to using cameras to record all instances of mortality associated with the railway, and provide this footage to QIA and the Inuit Committee for analysis and consideration? Will Baffinland commit to reporting on all instances of caribou mortality associated with the railway annually to the NIRB?
<b>Proposed Related Commitment or Term/Condition Language (optional)</b>



<b>QIA ID</b>
ID 20
<b>Related Agenda Topic/Presentation</b>
Adaptive Management
<b>Directed to (e.g., BIMC, ECCC, MHTO, etc.)</b>
BIMC
<b>Relevant Technical Comment (optional)</b>
<b>Brief Rationale/Preamble</b>
We clearly heard during the public hearings in January that there is a need for a more accurate understanding of how operation of the rail in relation to caribou will be responsive to, and inclusive of, Inuit input. It is QIA's understanding that the Inuit Committee will have the ability to develop clear and specific thresholds that will require all train movement to stop completely -- i.e., no use of trains on the railway -- for a period of time that would be determined by the Inuit Committee based on Inuit values, and Inuit Qaujimajatuqangit and on caribou migration, movement and behaviour.
<b>Question</b>
Can you confirm that this would fit within your understanding of the Inuit Committee's mandate? Are there any operational constraints that would limit your response? Are you willing to have the train run less than 300 working days / year if the number of caribou crossings require the train to be stopped for longer than 65 days? If yes, are you willing to accept that less than the total permitted amount of ore may be hauled on the northern railway over that year? What is the maximum capacity of the rail system, and does the system have the capacity to handle more than 10 train trips / day for the two train / 90 rail car system? Will Baffinland agree to set a maximum amount of ore to be transported by train each day to ensure that your assessment of potential impacts to caribou is adhered to?
<b>Proposed Related Commitment or Term/Condition Language (optional)</b>
Addition of PC condition that requires stopping the train to allow caribou to pass based on IQ and immediate input from Inuit knowledge holders, with the timing of restarting ore haulage on the transportation corridor to be determined by IQ through the Inuit Committee.
Addition of PC condition that defines a maximum amount of ore to be transported by train each day.



**P.O. Box 1340**  
**Iqaluit, Nunavut**  
**X0A 0H0**

<b>QIA ID</b>
ID 21
<b>Related Agenda Topic/Presentation</b>
Socioeconomic/Food Security
<b>Directed to (e.g., BIMC, ECCC, MHTO, etc.)</b>
BIMC
<b>Relevant Technical Comment (optional)</b>
QIA TC#3
<b>Brief Rationale/Preamble</b>
At multiple times in the public hearing and review process, Baffinland has indicated for its community workshops that QIA "signed off" on topics like methodology and verification of the results.
<b>Question</b>
BIMC is requested to clarify if it is more correct to state that QIA had "observer" status at these community workshops only, and that QIA raised concerns with the adequacy of the structure of the community workshops and role of Inuit in verification in Technical Comment #3?
<b>Proposed Related Commitment or Term/Condition Language (optional)</b>
<b>Possible Follow-up Questions Depending on Response (optional)</b>
If so, please Baffinland clarify why it continues to rely on the suggestion that QIA (likely represented by individual QIA staff) had a role in developing methodologies and verifying the results of BIMC workshops? Does Baffinland also acknowledge that given the passage of time and lessons learned through experience, that resting or relying on a long-past statement or decision is not adequate and that there is a need to adapt and improve based on feedback and knowledge gained?



<b>QIA ID</b>
ID 22
<b>Related Agenda Topic/Presentation</b>
Socioeconomic/Food Security
<b>Directed to (e.g., BIMC, ECCC, MHTO, etc.)</b>
BIMC
<b>Relevant Technical Comment (optional)</b>
<b>Brief Rationale/Preamble</b>
Slide 53 in the Baffinland Presentation on Socio-economics and Food Security refers to Baffinland's findings that Phase 2 is likely to have non-significant and overall positive effects on country foods.
<b>Question</b>
What role did Inuit have in developing and verifying these findings? What community-specific data was relied on regarding trends in harvest? What data, if any, did Baffinland have on Inuit harvest per unit of effort and cost and how and why this may have changed over time in the impacted communities? What is Baffinland's understanding of what factors are influencing Inuit not harvesting to the narwhal tag allocation level in recent years?
<b>Proposed Related Commitment or Term/Condition Language (optional)</b>
<b>Possible Follow-up Questions Depending on Response (optional)</b>
The Qikiqtani Inuit Association has supported the Hamlet of Pond Inlet in its desire for a Pond Inlet Country Food Baseline and toxicological study to be completed, to assist with verifying current food security issues and examine in a deeper way how the Mary River Project may be contributing to effects on food security. This work is now in the planning stages with Pond Inlet. How will Baffinland integrate the results of the Pond Inlet Country Food Baseline into Project Monitoring and Adaptive Management systems, and what role does Baffinland commit to have Inuit play in that process?





ᑎᑎᓃᑲᑯᑦᐅᑆᑲ P.O. Box 1340  
ᐃᓃᑲᑐᐃᑕ, ᑯᑭᑳᑕ Iqaluit, Nunavut  
X0A 0H0

<b>QIA ID</b>	ID 23
<b>Related Agenda Topic/Presentation</b>	Socioeconomic/Food Security
<b>Directed to (e.g., BIMC, ECCC, MHTO, etc.)</b>	BIMC
<b>Relevant Technical Comment (optional)</b>	
<b>Brief Rationale/Preamble</b>	The Qikiqtani Inuit Association has supported the Hamlet of Pond Inlet in its desire for a Pond Inlet Country Food Baseline and toxicological study to be completed, to assist with verifying current food security issues and examine in a deeper way how the Mary River Project may be contributing to effects on food security. This work is now in the planning stages with Pond Inlet.
<b>Question</b>	How will Baffinland integrate the results of the Pond Inlet Country Food Baseline into Project Monitoring and Adaptive Management systems, and what role does Baffinland commit to have Inuit play in that process?
<b>Proposed Related Commitment or Term/Condition Language (optional)</b>	The Proponent to work with QIA and the impacted communities to build Inuit Objectives, Indicators, Thresholds and Responses, into the Project's Adaptive Management Plan, integrating the findings of Inuit studies into Culture, Resources and Land Use and Country Food Security, and inputs from the Inuit Committee and Inuit Social Oversight Committee.



<b>QIA ID</b>
ID 24
<b>Related Agenda Topic/Presentation</b>
Socioeconomic/Food Security
<b>Directed to (e.g., BIMC, ECCC, MHTO, etc.)</b>
BIMC
<b>Relevant Technical Comment (optional)</b>
<b>Brief Rationale/Preamble</b>
We have heard concerns through this process about several different types of uncertainty related to impacts on culture, resources and land use: uncertainty in accuracy of Baffinland's predictions, and uncertainty that impacts, should they occur, will be identified and acted on appropriately. Baffinland has made a series of commitments related to both types of uncertainty.
<b>Question</b>
Should the Project proceed, what specific new Project Certificate Conditions does the Proponent support to deal with these two types of uncertainty for impacts on culture, resources and land use?
<b>Proposed Related Commitment or Term/Condition Language (optional)</b>



<b>QIA ID</b>
ID 25
<b>Related Agenda Topic/Presentation</b>
Socioeconomics/Food Security
<b>Directed to (e.g., BIMC, ECCC, MHTO, etc.)</b>
BIMC
<b>Relevant Technical Comment (optional)</b>
<b>Brief Rationale/Preamble</b>
In its FEIS Addendum, Baffinland predicts no significant adverse effects on CRLU from Phase 2. A number of parties, including QIA, raised past questions to clarify the validity of this estimation. This led directly to the ongoing Inuit-led Culture, Resources and Land Use Assessment. We are seeking further clarity regarding whether the CRLU is indeed a resolved issue at this time. We note that section 6.1.20 of the Inuit Certainty Agreement states "given the timeline for the Joint Phase 2 Assessment Work Plan, the existing evidence on the public record regarding Inuit concerns with the Proponent's CRLU Assessment in the FEIS will likely stand at the time of the issuance of the Board's Report on the Phase 2 Project." Despite this, in its document "210122 - BIMC DRAFT Phase 2 Disposition Table" dated January 21, 2021, Baffinland refers to QIA Technical Comments related to Culture, resources and land use as "resolved".
<b>Question</b>
Does Baffinland agree that the resolution status for QIA Technical Comments related to impacts on CRLU should be considered resolved only upon completion of the updated CRLU Assessment? If not, please provide a supporting rationale.
<b>Proposed Related Commitment or Term/Condition Language (optional)</b>
<b>Possible Follow-up Questions Depending on Response (optional)</b>
If the ongoing CRLU Assessment identifies additional types and different magnitudes of impacts on culture, resources and land use not captured in the Final Environmental Impact Statement, how will the Project's Monitoring and Management systems be adjusted, and what role does Baffinland envision Inuit playing in that process?



<b>QIA ID</b>
ID 26
<b>Related Agenda Topic/Presentation</b>
Adaptive Management
<b>Directed to (e.g., BIMC, ECCC, MHTO, etc.)</b>
BIMC
<b>Relevant Technical Comment (optional)</b>
<b>Brief Rationale/Preamble</b>
Dustfall has exceeded predicted levels within the Mary River Project area, both in terms of the amount of dust that has been generated from the road, and the extent of dust, the source of which is unknown. Inuit observations and concerns suggest a threshold has already been exceeded. Baffinland has proposed satellite monitoring for dustfall extent as a possible next step. Satellite monitoring of dustfall might confirm this and provide more information on the extent, but it seems that we already have the Inuit observations needed to enact mitigations.
<b>Question</b>
What other adaptive management responses is Baffinland contemplating, beyond the changes outlined to ore crushing (i.e., larger pieces of ore will be transported to the port and crushed under covered facilities)? Given the current situation (i.e., ore dust levels that clearly exceed acceptable levels for Inuit), will Baffinland commit to using covers on all railcars until ore dust within the environment has been reduced to acceptable levels? Will Baffinland consider also performing primary crushing at the mine site in a new enclosed facility prior to being placed in train ore cars?
<b>Proposed Related Commitment or Term/Condition Language (optional)</b>



<b>QIA ID</b>
ID 27
<b>Related Agenda Topic/Presentation</b>
Adaptive Management, Management Plans and Monitoring Programs
<b>Directed to (e.g., BIMC, ECCC, MHTO, etc.)</b>
BIMC
<b>Relevant Technical Comment (optional)</b>
<b>Brief Rationale/Preamble</b>
<p>We have heard concerns in this process about the Technical Working Groups' role of only being able to provide refusable advice, and Baffinland not acting on advice of the existing Working Groups when given and limiting the integration of Inuit knowledge into the Working Groups' recommendation. Baffinland's presentations and answers to questions spoke of a potential role for the Working Groups in combination with the Inuit Committee as more of a decision-making body as concerns arise in the adaptive management process. We have also heard that there is significant concern that Baffinland chairs the very Working Groups which are intended to assess impacts of their own project.</p> <p>QIA presented its vision for how the Working Groups can work with the Inuit Committee(s), in its hearing presentation. This would seek the Inuit Committee appointing the chairperson for the marine and terresotrial environment working groups form within their own committee, and Working Group advice being filtered through an Inuit lens and into the Project's adaptive management system.</p>
<b>Question</b>
<p>Will Baffinland commit to having the Inuit Committee designate specific members of the Inuit Committee to chair each of the Working Groups, and to have the Inuit Committee play a role in building recommendations from the Working Groups into the Adaptive Management system for the Project? If so, is Baffinland in favour of a revised Term or Condition enshrining this structure? If not, what rationale does Baffinland have for not adopting QIA's proposed structure, and how does Baffinland envision issues reaching resolution where the working groups and Inuit Committee may not be in alignment on a decision or topic?</p>
<b>Proposed Related Commitment or Term/Condition Language (optional)</b>
<i>Specific language for PC term or condition to be developed prior to the closing of the public record.</i>



<b>QIA ID</b>
ID 28
<b>Related Agenda Topic/Presentation</b>
Adaptive Management, Management Plans and Monitoring Program
<b>Directed to (e.g., BIMC, ECCC, MHTO, etc.)</b>
BIMC
<b>Relevant Technical Comment (optional)</b>
<b>Brief Rationale/Preamble</b>
Slide 21 in Baffinland's Adaptive Management Presentation showed a process where "adjustments" to predetermined responses to changes, can occur over time in a feedback loop.
<b>Question</b>
Can Baffinland clarify if adjustments to the Adaptive Management Plan would be subject to joint Qikiqtani Inuit Association-Baffinland approvals like the original Adaptive Management Plan; and if so - In what forum is Baffinland proposing that those adjustments would be made; and - Will the Inuit Committee be able to trigger this process of re-evaluation of existing thresholds and responses at any time during the Project's life span?
<b>Proposed Related Commitment or Term/Condition Language (optional)</b>



<b>QIA ID</b>
ID 29
<b>Related Agenda Topic/Presentation</b>
Adaptive Management, Management Plans and Monitoring Programs
<b>Directed to (e.g., BIMC, ECCC, MHTO, etc.)</b>
BIMC
<b>Relevant Technical Comment (optional)</b>
<b>Brief Rationale/Preamble</b>
<p>Baffinland committed to integrate Inuit thresholds and responses to impacts into their project management system.</p> <p>It is important for Inuit to understand the possible breadth of those protections, and how far Baffinland is willing to go to protect Inuit values. For example, if Inuit bring forward a high level response (for example due to reduced narwhal), and that requires a reduction in shipping for an extended period of time, how would Baffinland react?</p>
<b>Question</b>
<p>Using that example, about reduced narwhal requiring a reduction in shipping, or using another example of Baffinland's choice, can you describe how substantial project alterations would be required, and how that would work, if project effects exceed Inuit-determined thresholds of acceptable change?</p>
<b>Proposed Related Commitment or Term/Condition Language (optional)</b>
<b>Possible Follow-up Questions Depending on Response (optional)</b>
<p>Should Inuit indicate a reduction in shipping is a required response at a <u>lower</u> impact threshold than Baffinland proposes, how will these differences be dealt with in the updated project management system?</p>



<b>QIA ID</b>
ID 30
<b>Related Agenda Topic/Presentation</b>
Inuit Qaujimaningit
<b>Directed to (e.g., BIMC, ECCC, MHTO, etc.)</b>
BIMC
<b>Relevant Technical Comment (optional)</b>
<b>Brief Rationale/Preamble</b>
We heard concerns in the public hearing about whether Baffinland can be responsible for “managing” Inuit knowledge. This includes in the finalization of the Baffinland – proposed IQ Management Framework.
<b>Question</b>
Is the Proponent in support of a Project Certificate Condition which requires Baffinland to work with QIA and the impacted communities to develop a final IQ Management Framework, subject to co-approval by the Inuit Committee for the Mary River Project (or similar Inuit Institution).
<b>Proposed Related Commitment or Term/Condition Language (optional)</b>
The proponent will work with the Qikiqtani Inuit Association, and impacted communities, through the Inuit Committee, on a co-approval process for the Inuit Qaujimajatuqangit Management Framework. <i>(further specific information to be provided prior to the closing of the public record)</i>





<b>QIA ID</b>
ID 31
<b>Related Agenda Topic/Presentation</b>
Adaptive Management, Management Plans and Monitoring Programs
<b>Directed to (e.g., BIMC, ECCC, MHTO, etc.)</b>
CIRNAC
<b>Relevant Technical Comment (optional)</b>
<b>Brief Rationale/Preamble</b>
Given concerns about the lack of consideration of IQ and of the “refusable advice” nature of the technical Working groups, QIA presented its vision for how the Working Groups can work with the Inuit Committee(s), in its hearing presentation. This would seek the Inuit Committee taking a chair person role on each Working Group, and Working Group advice being filtered through an Inuit lens and into the Project’s adaptive management system.
<b>Question</b>
Does Canada support QIA's proposal for the Inuit Committee to chair the technical Working Groups?
<b>Proposed Related Commitment or Term/Condition Language (optional)</b>
<i>Specific language for PC term or condition to be developed prior to the closing of the public record.</i>



<b>QIA ID</b>
ID 32
<b>Related Agenda Topic/Presentation</b>
<b>Freshwater Environment – Aquatic effects of dustfall and sediment</b>
<b>Directed to (e.g., BIMC, ECCC, MHTO, etc.)</b>
DFO
<b>Relevant Technical Comment (optional)</b>
41
<b>Brief Rationale/Preamble</b>
<p>We do not know how much Project-related sediment is entering tote road streams as dustfall (directly or in runoff) or sediment (from erosion), where it goes, or how it affects stream ecology and Arctic char health. Many of these streams provide important summer habitat for juvenile Arctic char. Dustfall in the tote road watersheds remains elevated relative to predictions in the Early Revenue Plan FEIS. These additions will continue for at least 3 more years, perhaps longer if railway construction or operation presents challenges. Railway crossings proposed for these streams may alter dust and sediment inputs. Baffinland has not conducted a study to assess the potential effects of project-related dustfall and sediment on the ecology of tote road streams, despite NIRB recommendations (NIRB 2018 Monitoring Recommendations, p. 2 of 11; delivery 2018 Annu. Rep.). Potential effects of dust suppressants used on the tote road also have not been assessed, nor have those of chemical residues from truck tires that can harm fish (Tian et al. 2021).</p> <p>Tian, Z., Zhao, H., Peter, K.T., and 24 others. 2021. A ubiquitous tire rubber-derived chemical induces acute mortality in coho salmon. Science 371: 185-189.</p>
<b>Question</b>
Is a study of the impacts on aquatic systems along the tote road of dustfall and sediment inputs, including dust suppressants and tire residues, something that DFO could incorporate into any future authorizations as a monitoring measure or as a complimentary study for the proposed railway?
<b>Proposed Related Commitment or Term/Condition Language (optional)</b>
Related to NIRB PCCs 21. 48a, and 83a



QIA ID
ID 33
Related Agenda Topic/Presentation
<b>Marine Environment – Invasive Species in Ballast Water</b>
Directed to (e.g., BIMC, ECCC, MHTO, etc.)
DFO
Relevant Technical Comment (optional)
45
Brief Rationale/Preamble
Baffinland's commitment to DFO Technical Comment 3.6.5 NEW is potentially an important step towards understanding and mitigating risk posed by non-indigenous species transported to Milne Port in ship's ballast water. But it is short on details. Under this commitment, DFO will take the lead on designing and implementing a risk-based approach to biological assessment of ballast water. The findings of this study will then be implemented as a monitoring program by Baffinland. QIA has requested, at the last Technical Meeting and in the Public Hearing, that further information on the study design be provided prior to the Public Hearings to inform its decision on resolution of QIA TC 45, in particular whether concerns regarding the adequacy of biological testing will be met.
Question
Will DFO provide a summary of the study design (e.g., basic approach, level of sampling effort, duration) prior to the next community roundtable to enable QIA and other hearing parties to better assess whether, and to what extent, their concerns regarding lack of biological testing of ballast water will be met?
Proposed Related Commitment or Term/Condition Language (optional)
Relevant to: NIRB PCCs 86-89, which need a complete reworking based on the technical comments provided by DFO and QIA, and Baffinland's related commitments.



ᑎᑎᓴᑲᑲᑯᑯᐅᑯᑯ P.O. Box 1340  
ᑯᓴᑲᑐᑯᑯᑯᑯᑯᑯᑯ Iqaluit, Nunavut  
X0A 0H0

QIA ID
ID 34
Related Agenda Topic/Presentation
Marine environment
Directed to (e.g., BIMC, ECCC, MHTO, etc.)
DFO
Relevant Technical Comment (optional)
51
Brief Rationale/Preamble
<p>The Proponent has suggested that the proportion of juvenile narwhals in the sampled population will be an effective Early Warning Indicator (EWI), as required under the Project Certificate for vessel noise impacts to marine mammals. The proponent also disagrees that alternate EWIs, such as blubber condition or cortisol concentrations, would be better suited as indicators that provide early warning. In their intervention, Fisheries and Oceans Canada (DFO) stated that they strongly encourage an additional EWI that links to narwhal health and body condition be monitored.</p>
Question
<p>Does DFO consider monitoring the proportion of juvenile narwhal to be an effective indicator for early warning of vessel noise impacts to marine mammals, as required under Project certificate 005? Why or why not?</p> <p>Does DFO consider the use of blubber condition measures and/or cortisol concentrations to be better suited as indicators for early warning of vessel noise impacts?</p> <p>How will DFO work with Inuit in impacted communities to ensure that adequate indicators are in place?</p> <p>What steps will DFO take at the various levels of impact for narwhal and marine mammals? (e.g., decline in population in the study area by 10%? 20%?)</p>
Proposed Related Commitment or Term/Condition Language (optional)



<b>QIA ID</b>
ID 35
<b>Related Agenda Topic/Presentation</b>
Marine environment
<b>Directed to (e.g., BIMC, ECCC, MHTO, etc.)</b>
DFO
<b>Relevant Technical Comment (optional)</b>
47, 48, 51
<b>Brief Rationale/Preamble</b>
Fisheries and Oceans Canada (DFO) recommended that no shoulder season shipping and no icebreaking occur, which the Proponent considers to be essential to operations. The Proponent committed to additional mitigation and monitoring measures, and DFO considers this to be resolved as a result.
<b>Question</b>
What scientific evidence does DFO have to indicate that the proposed monitoring and mitigation will be sufficient to reduce impacts to ringed seals during the shoulder seasons? In particular, how will the proposed monitoring and mitigation reduce impacts to ringed seal health and physiology during the moulting period in the spring shoulder season, and potential impacts of stress on embryo implantation for pregnant females during the fall shoulder season? How has adult male ringed seal territory formation been considered when assessing the suitability of the proposed monitoring and mitigation?
<b>Proposed Related Commitment or Term/Condition Language (optional)</b>



<b>QIA ID</b>
ID 36
<b>Related Agenda Topic/Presentation</b>
<b>Marine Environment – Cumulative and Transboundary Effects</b>
<b>Directed to (e.g., BIMC, ECCC, MHTO, etc.)</b>
DFO
<b>Relevant Technical Comment (optional)</b>
53
<b>Brief Rationale/Preamble</b>
The Phase 2 cumulative effects assessment (CEA) did not consider Project shipping that was approved in Phase 1, or activity outside the regional study area. These are important gaps for both the FEIS and Phase 2 Addendum FEIS assessments, particularly for migratory marine mammals, and should be filled prior to ore shipments via Steensby Port. In its commitment to DFO 3.7 NEW, Baffinland notes that it has made several commitments related to strengthening of monitoring programs to account for uncertainty in the effects assessment. The need for a more comprehensive cumulative assessment remains. In its commitment related to QIA technical comment 53, Baffinland recognizes that there may be interactions between its vessels and other activity outside the Regional Study Area, and has agreed to participate as a key stakeholder in regional federal government initiatives and programs including federal initiatives aimed at evaluating regional cumulative effects in the Eastern Canadian Arctic. Timing of such an initiative is unknown so uncertainty remains regarding possible impacts, particularly those related to shipping.
<b>Question</b>
Will the Government of Canada provide information on the timing of a more comprehensive cumulative effects assessment of shipping in the eastern Canadian Arctic?
<b>Proposed Related Commitment or Term/Condition Language (optional)</b>
<b>Possible Follow-up Questions Depending on Response (optional)</b>
QIA recommends that the Government of Canada lead a comprehensive regional cumulative effects assessment for shipping in the eastern Canadian Arctic prior to the onset of Baffinland shipping via the southern route.



<b>QIA ID</b>
ID 37
<b>Related Agenda Topic/Presentation</b>
Atmospheric environment
<b>Directed to (e.g., BIMC, ECCC, MHTO, etc.)</b>
ECCC
<b>Relevant Technical Comment (optional)</b>
<b>Brief Rationale/Preamble</b>
Environment and Climate Change Canada (ECCC) indicated that it disagrees with the Proponent's statements regarding the use of distillate fuel. Black carbon from Heavy Fuel Oil (HFO) has significant climate change implications, both in the atmosphere and through deposition on snow and ice. ECCC further noted that these impacts have to be mitigated, and low-sulphur distillate fuel in Canadian waters would reduce black carbon emissions by 80%. The Government of Canada believes in the polluter pays principle, and therefore considers it appropriate for the Proponent to bear some of the costs associated with reducing pollution in the Arctic.
<b>Question</b>
Should Phase 2 be approved, will the Government of Canada require the Proponent to burn low-sulphur distillate fuel in Canadian waters?
<b>Proposed Related Commitment or Term/Condition Language (optional)</b>



ᑎᑎᓴᑲᑯᑳᑲ P.O. Box 1340  
ᐃᓴᑲᑐᐃᑦ, ᓄᓇᑭᑦ Iqaluit, Nunavut  
X0A 0H0

QIA ID
ID 38
Related Agenda Topic/Presentation
Terrestrial Environment
Directed to (e.g., BIMC, ECCC, MHTO, etc.)
Government of Nunavut
Relevant Technical Comment (optional)
TC-02
Brief Rationale/Preamble
<p>Baffinland has an obligation to monitor project impacts to caribou, as outlined in the Terrestrial Ecosystem Monitoring and Mitigation Plan (TEMMP) and as stated in the Government of Nunavut's presentation. We understand that the GN has a separate obligation to monitor Baffin Island caribou regionally. In letters sent from the Government of Nunavut to the Mayors of the Municipality of Pond Inlet and Clyde River on December 9, 2020, the GN states in reference to caribou that "Because of the low population level around the Project, it is difficult to collect meaningful data. To address this information gap, the GN and Baffinland are working towards a Research Contribution Agreement intended to be signed prior to the Final Public Hearing" and furthermore, "this Research Contribution represents a collaborative approach to understanding project-induced impacts to caribou."</p> <p>We need to understand whether Baffinland's contribution to regional monitoring will meet Baffinland's obligations. We are concerned that the regional monitoring program funded under this Research Contribution Agreement will not currently provide any information about project specific effects to caribou – i.e., changes in movement patterns or avoidance of areas (i.e., indirect habitat loss) around the mine and the transportation corridor.</p>
Question
<p>Regarding the Contribution Agreement between the GN and Baffinland: What is the agreement with Baffinland and when will the MOU be made available for everyone to review? Will the GN provide a summary of what is being proposed within this MOU, including confirming how much Baffinland will contribute to the program on a yearly basis, how long the agreement is in place, what the primary methods are for monitoring, and whether the approach will help determine indirect habitat loss and movement deflections in North Baffin caribou?</p> <p>Regarding determining project-specific effects to caribou: In your opinion, what is the best way to monitor project specific effects to caribou at the current low population levels? Will the current regional caribou monitoring program (15 collars on North Baffin caribou) allow project specific effects to be determined? At the current population levels, how would you set up a research program to</p>





ensure that both your requirements to monitor caribou at a regional scale, and Baffinland's requirements to monitor project-specific impacts to North Baffin caribou, can be achieved? Please provide specific details as to the number of collars that would be needed, the number of caribou that need to be within the project area, and the type of analysis that would be used. Will you be collecting hair samples to monitor cortisol levels in caribou? If yes, how can this information be used to assess whether the project is having effects on the behaviour of North Baffin caribou?

How will GN make the data available to other parties if requested? How will the GN determine the impact that the railway is having on caribou should it return in larger numbers/groups as anticipated by IQ? If radio collars are the primary way of collecting data, what will the GN do instead if communities no longer support using radio collars to track caribou?

**Proposed Related Commitment or Term/Condition Language (optional)**

N/A

**Possible Follow-up Questions Depending on Response (optional)**

Follow up: we would also like to request a specific data-sharing agreement to allow QIA to independent analyses of the data.



<b>QIA ID</b>
ID 39
<b>Related Agenda Topic/Presentation</b>
Terrestrial
<b>Directed to (e.g., BIMC, ECCC, MHTO, etc.)</b>
Government of Nunavut
<b>Relevant Technical Comment (optional)</b>
TC01 and 02
<b>Brief Rationale/Preamble</b>
<b>Question</b>
What actions can the GN take if caribou numbers do not come back on North Baffin? Is the only action available to the GN to limit harvesting numbers? Can the GN comment on whether this mitigation should be contemplated if the impacts are clearly linked to the Mary River Project?
<b>Proposed Related Commitment or Term/Condition Language (optional)</b>



<b>QIA ID</b>
ID 40
<b>Related Agenda Topic/Presentation</b>
Terrestrial
<b>Directed to (e.g., BIMC, ECCC, MHTO, etc.)</b>
Government of Nunavut
<b>Relevant Technical Comment (optional)</b>
<b>Brief Rationale/Preamble</b>
Concerns were raised during the January public hearings that, with the number of level crossings being implemented along the northern railway, train whistles could be required to be used up to a maximum of 700 times over a 24 hour period.
<b>Question</b>
During the questions about Baffinland's presentation, the Government of Nunavut mentioned that there were some noise mitigations they could discuss, but that this mitigation would be "beyond the scope of this assessment". Can GN tell us more about this mitigation and how it could be applied in this instance? How can it be integrated within the project terms and conditions?
<b>Proposed Related Commitment or Term/Condition Language (optional)</b>



<b>QIA ID</b>
ID 41
<b>Related Agenda Topic/Presentation</b>
Terrestrial Environment
<b>Directed to (e.g., BIMC, ECCC, MHTO, etc.)</b>
Government of Nunavut
<b>Relevant Technical Comment (optional)</b>
<b>Brief Rationale/Preamble</b>
Within Section 3.3.4.2 of the TEMMP, Baffinland states in relation to stoppage of the train for migratory caribou, “the train is expected to operate 300 days per year, so seasonal stoppages are possible if large groups of migratory caribou move through the area.” No effort has been made to identify what the appropriate group size is for the northern rail, an important gap given that caribou in this area are currently non-migratory and travelling in small groups. Though these movements are not migratory in nature (at least, as defined by western science), they may be critically important to facilitate at lower population levels, when caribou are more easily disturbed based on what we know from Inuit Qaujimajatuqangit and scientific information.
<b>Question</b>
Based on the available science (e.g., average group sizes for North Baffin caribou at current population levels), what group size would be appropriate as a trigger to stop operation of the railway during low caribou numbers?
<b>Proposed Related Commitment or Term/Condition Language (optional)</b>



ᐱᐱᓐᓐᓐᓐᓐ P.O. Box 1340  
ᐱᓐᓐᓐᓐᓐ, ᓐᓐᓐᓐᓐ Iqaluit, Nunavut  
X0A 0H0

<b>QIA ID</b>
ID 42
<b>Related Agenda Topic/Presentation</b>
Marine environment
<b>Directed to (e.g., BIMC, ECCC, MHTO, etc.)</b>
GN
<b>Relevant Technical Comment (optional)</b>
<b>Brief Rationale/Preamble</b>
Inuit have reported numerous observations about declining ringed seal abundance, as well as declines in seal health and sealskin quality. The Government of Nunavut has a seal pelt collection program, which could offer important information on seal health as measured by pelt quality.
<b>Question</b>
Are skin sales to the GN program declining? If so, does the GN have data on whether total harvests are declining, or if the proportion sold is? If the latter, is it due to decreases in pelt quality? Does the GN grade pelts, and if so how can that data be used in monitoring?
<b>Proposed Related Commitment or Term/Condition Language (optional)</b>



<b>QIA ID</b>
ID 43
<b>Related Agenda Topic/Presentation</b>
Human Health and Exposure Potential
<b>Directed to (e.g., BIMC, ECCC, MHTO, etc.)</b>
Health Canada
<b>Relevant Technical Comment (optional)</b>
<b>Brief Rationale/Preamble</b>
Health Canada's intervention focused on contaminant risks and human health risk assessment.
<b>Question</b>
<p>1. Were the effects of risk perception by harvesters, including both risks to harvesters and contaminant risks, included in Health Canada's consideration of the adequacy of the Proponent's effects assessment on country food harvest and consumption?</p> <p>2. Did Health Canada apply a social determinants of health lens when looking at health impacts that may be associated with the Project, or was it solely focused on human health risk assessment?</p> <p>3. Slide 15 of Health Canada's presentation refers to additional assessment being required if additional culturally relevant or important water bodies for drinking water are identified other than Camp Lake. Baffinland has not identified any waterbodies of heightened importance, but Inuit studies are identifying them now. By what mechanisms does Health Canada feel additional assessment requirements should be enforced in relation to waterbodies important for Inuit drinking water? For example, is a Project Certificate Condition required to enforce this requirement and if so, what wording does Health Canada recommend for any such PC Term or Condition?</p>
<b>Proposed Related Commitment or Term/Condition Language (optional)</b>



ᑕᑕᓐᓴᓄᓂᓃᓇᓁ P.O. Box 1340  
ᓃᓐᓴᓂᓃᓇᓁ, ᓄᓇᓈᓁᓁᓁ Iqaluit, Nunavut  
X0A 0H0

QIA ID
ID 44
Related Agenda Topic/Presentation
<b>Marine Environment - Fish</b>
Directed to (e.g., BIMC, ECCC, MHTO, etc.)
Mittimatalik Hunters and Trappers Organization (MHTO)
Relevant Technical Comment (optional)
<b>Brief Rationale/Preamble</b>
Inuit have expressed concerns regarding the occurrence of unexplained fish kills in Milne Inlet (e.g., Koluktoo Bay), and declining catches of searun Arctic char.
<b>Question</b>
Will the MHTO provide a brief summary of these mortality events (location, date, species, numbers, etc.) and declining char catches (where, when and how much the catches declined) to clarify the scope, locations, and magnitudes of these changes?
<b>Proposed Related Commitment or Term/Condition Language (optional)</b>
PCC 48a



<b>QIA ID</b>
ID 45
<b>Related Agenda Topic/Presentation</b>
Terrestrial
<b>Directed to (e.g., BIMC, ECCC, MHTO, etc.)</b>
Parks Canada
<b>Relevant Technical Comment (optional)</b>
TC-01 and TC-02
<b>Brief Rationale/Preamble</b>
Parks Canada has concrete experience with monitoring and mitigating wildlife mortality associated with trains in Banff National Park. In that context, research has identified specific risk factors associated with wildlife mortality: among them, train speed, track curvature, areas with limitations to animal movement, topographic complexity, proximity to sidings (St. Clair, Whittington, Forshner, Gangadharan, and Laskin 2020; url: <a href="https://www.nature.com/articles/s41598-020-77321-6">https://www.nature.com/articles/s41598-020-77321-6</a> ).
<b>Question</b>
Is Parks Canada willing to share their expertise in this area with the TEWG and the Inuit Committee, in order to ensure that learnings from this study are integrated into mitigations for the northern railway?
<b>Proposed Related Commitment or Term/Condition Language (optional)</b>





<b>QIA ID</b>
ID 46
<b>Related Agenda Topic/Presentation</b>
<b>Marine Environment – Invasive Species in Ballast Water</b>
<b>Directed to (e.g., BIMC, ECCC, MHTO, etc.)</b>
Transport Canada (TC)
<b>Relevant Technical Comment (optional)</b>
44, 45
<b>Brief Rationale/Preamble</b>
Under current Canadian ballast water regulations Project vessels travelling in domestic waters from Canadian ports to Milne Port are not required to exchange or treat their ballast water. This regulatory gap increases the risk of introducing non-indigenous species into the port, where they might establish and alter the marine ecology.
<b>Question</b>
When will Transport Canada be amending the ballast water regulations to close this regulatory gap?
<b>Proposed Related Commitment or Term/Condition Language (optional)</b>
Related to NIRB PCCs 86-90
<b>Possible Follow-up Questions Depending on Response (optional)</b>
Baffinland has committed (Commitment ID # 205) to having all vessels calling on Milne Port exchange their ballast water and, by 2024, to have them conduct both exchange and treatment to reduce the risk of introducing invasive species. These are positive commitments that go beyond current regulatory requirements. Considering the volume of ongoing Project shipping, QIA recommends that these commitments be included in the Project certificate as a new condition regardless of the outcome of this hearing.



<b>QIA ID</b>
ID 47
<b>Related Agenda Topic/Presentation</b>
Adaptive Management, Project Alternatives
<b>Directed to (e.g., BIMC, ECCC, MHTO, etc.)</b>
BIMC
<b>Relevant Technical Comment (optional)</b>
<b>Brief Rationale/Preamble</b>
<p>The original Mary River Project was approved at a much higher mining rate with the ore being transported using a South bound transportation system. For financial reasons, Baffinland introduced the Early Revenue Phase Proposal as a means of advancing the development of the Mary River Project. Following the approval of the Early Revenue Phase, Baffinland submitted the Phase 2 Proposal. Since that time the Phase 2 Proposal was first presented Baffinland has also modified the Early Revenue Phase increase production to 6Mt/yr, and, to extend the number of years the project can operate at 6Mt/yr.</p> <p>Representatives from Mittimatalik have been consistent seeking a better understanding of the implications of the current project prior to expanding to a larger project. Baffinland remains fixed upon expanding the Mary River Project in the immediate future. This creates obvious tension and casts doubt over whether this proposal should move forward at this time.</p> <p>Baffinland has made a commitment to integrate Inuit thresholds and responses into their management decisions through the draft Adaptive Management Plan. Many parties have expressed discomfort with a project permitting approach based upon seeking approval to expand an existing mine with only a draft Adaptive Management Plan. Many parties have also raised concern that deferring this work until after the project is approved shifts the burden of risk associated with impacts to Inuit and specifically to Mittimatalik.</p>
<b>Question</b>
<p>Recognizing that Inuit, not Baffinland, stand to directly bear considerable risk associated with the Phase 2 proposal is Baffinland willing to modify the Adaptive Management Plan in a manner that will restructure the way in which decisions to increase shipping are made. Specifically, is Baffinland willing to agree to a commitment to not increase shipping activities and/or intensity beyond current project shipping level until QIA, working with the Inuit Committee, and the Marine Environmental Working group have each confirmed confidence that the project monitoring and mitigation measure and implementation of the Adaptive Management Plan</p>
<b>Proposed Related Commitment or Term/Condition Language (optional)</b>



<b>QIA ID</b>
ID 48
<b>Related Agenda Topic/Presentation</b>
Adaptive Management, Project Alternatives
<b>Directed to (e.g., BIMC, ECCC, MHTO, etc.)</b>
BIMC
<b>Relevant Technical Comment (optional)</b>
<b>Brief Rationale/Preamble</b>
Based on Baffinland's statements and submissions to date, generally Baffinland indicates that Adaptive Management thresholds and responses will inform decisions to increase iron ore production and transportation taking other mitigation strategies into consideration. Baffinland is less clear on whether it is committed to also use thresholds and responses to reduce iron ore production and transportation. Baffinland notes they may consider reductions or slow downs. QIA finds this to run counter to the Precautionary Principle included in the draft Adaptive Management Plan.
<b>Question</b>
Is Baffinland prepared to revise its position on how decisions related to reductions in iron ore production and transportation levels will be made? Specifically, is Baffinland willing to commit to maintaining a lower rate or decreasing ore production and transportation in responses to monitoring conducted through the Adaptive Management Plan, Inuit Stewardship plan or the Marine Environmental Working Group?
<b>Proposed Related Commitment or Term/Condition Language (optional)</b>



ᑭᑭᑭᑭᑭᑭ ᐃᐃᑦ ᑲᑭᑭᑭᑭᑭᑭᑭᑭ  
Qikiqtani Inuit Association

ᑭᑭᑭᑭᑭᑭᑭᑭ P.O. Box 1340  
ᐃᑭᑭᑭᑭᑭᑭᑭ Iqaluit, Nunavut  
X0A 0H0

<b>QIA ID</b>
ID 49
<b>Related Agenda Topic/Presentation</b>
Adaptive Management, Project Alternatives
<b>Directed to (e.g., BIMC, ECCC, MHTO, etc.)</b>
BIMC
<b>Relevant Technical Comment (optional)</b>
<b>Brief Rationale/Preamble</b>
On February 23, 2021, the Hamlet of Pond Inlet provided correspondence to NIRB in response to BIMC's progressive shipping proposal submitted January 26, 2021.
<b>Question</b>
Can Baffinland please confirm what their understanding is as to why the Hamlet of Pond Inlet has not accepted Baffinland's proposal?
<b>Proposed Related Commitment or Term/Condition Language (optional)</b>