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QIA's comments include multiple requests for increased data collection, analysis, monitoring, refinement of management plans and detailed description of Inuit involvement and use of Inuit Qaujimajatuqangit throughout project management and



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monitoring. Many of the concerns identified by QIA have been raised during reviews of previous annual monitoring reports, though the requests have yet to be fulfilled. To QIA, these concerns are related to both the adequacy of measuring and mitigating effects as well as Baffinland's compliance with specific Project Certificate (PC) Conditions.

In summary, some of QIA's ongoing concerns (not in order of priority) include:

- Water Quality Concerns
- Inadequacies in Socio-economic Monitoring and Reporting
- Continued Exceedance of Dustfall Predictions
- Barriers to Fish Passage
- Inadequacies in Caribou Monitoring
- Inadequacies in Marine Mammal Monitoring
- Inadequate Reporting on Use of IQ
- Inadequate Datasets for Report on Effects to CRLU

Water Quality Concerns

The 2022 Annual Report outlines water quality measurements that result in or indicate a decrease in water quality due to mine operations, including:

- Seven discharge events related to freshet;
- Five exceedances of site-specific grab sample limits for Total Ammonia and Total Phosphorus;
- Measurements of specific conductance, nitrate, and sulphate concentrations that suggest a mine influence on water quality.

In 2022 Baffinland had seven discharges of non-compliant effluent at MP-05, CF, MS-06, MS-11, and MS-07. These non-compliant discharges were attributed to potential sampling errors, inadequate preventative maintenance, and issues with sudden snowmelt and freshet. As freshet occurs generally at the same time each year (mid-May to end of June, according to the 2022 Annual Report), Baffinland should be well prepared for appropriate management of sediment-laden runoff. QIA expects that Baffinland will improve actions during freshet to eliminate the instances of non-compliant effluent related to freshet in the future. QIA also expects that sampling procedures will be refined and continually improved to provide better confidence in monitoring results. Baffinland has committed to developing a Preventative Maintenance plan (PM plan) for coordinating inspection, cleaning, repair, and replacement of components throughout the Mine Site Complex and Sewage Treatment Plants. Baffinland has also committed to developing a Standard Operating Procedure (SOP) that includes calibration and equipment replacement



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schedules for monitoring equipment. QIA will look for the PM plan and the SOP to be implemented in 2023.

For the past two years QIA has requested that Baffinland take steps to prevent and mitigate the cause and extent of the groundwater contamination at the Landfill Facility. The 2022 Annual Report identifies that water downgradient from the landfill has water quality exceeding Federal Interim Groundwater Quality Guidelines for several constituents (see M&AE# 9). Dissolved sulphate measured at one monitoring location has been increasing since 2017. Baffinland has indicated that the exceedances are likely localized and not migrating to waterbodies, however, they remain a concern to QIA because they show that the groundwater is being affected by mine operations. Baffinland has not provided any indication that they are working towards preventing further groundwater contamination, they have only committed to continued groundwater monitoring. The Monitoring and Management plan required through PC Condition 23 states that the “Groundwater Monitoring and Management Plan” needs to “monitor, prevent and/or mitigate the potential effects of the Project on groundwater within the project area.” Currently, Baffinland appears to be committed to monitoring only.

The 2022 Annual Report provides evidence that the mine is influencing water quality in the Tributary of Mary River and the near-field sites in Mary River. This is evidenced by elevated concentrations of nitrate and sulphate in Mary River and levels of nitrate appear to be increasing since 2019. Additionally, concentrations of nitrate and sulphate at some monitoring stations have been consistently higher than reference site concentrations. This data should be triggering a trend analysis and a special investigation, as is required by the adaptive management plan. Baffinland has not indicated that either a trend analysis or a special investigation are moving forward.

Inadequacies in Socio-economic Monitoring and Reporting

As identified in QIA’s review of the 2021 NIRB Annual Report, Baffinland fails to report on many of the socioeconomic indicators outlined in the PC Conditions. Employee origin information required for reporting on PC Condition 134 is not provided. Baffinland provides data on Full-Time Equivalent employees and contractor employees with some community breakdowns but does not provide an annual indication of where people are being hired from. From Baffinland’s reporting, it is not possible to compare predictions of labour availability and employment opportunities with actual levels of employment from various demographic segments over different geographical areas, which is one of the objectives of the socio-economic monitoring programs. Baffinland also does not appear to have implemented measures specific to assisting with homeownership and access to affordable housing and has taken no active stance on improving awareness of



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existing supports, as is encouraged in PC Condition 151. Baffinland has not made efforts beyond the Qikiqtaaluk Socio-Economic Monitoring Committee (QSEMC) process to develop indicators for direct effects where data does not currently exist. Given that the QSEMC did not meet in 2022, QIA is concerned that efforts to measure socio-economic benefits and effects have been lacking.

QIA continues to be concerned that direct socio-economic benefits such as employment and training of the Project are either plateauing or not being delivered. When paired with continued adverse effects on the biophysical environment and Inuit Culture, Resources and Land Use (CRLU) which Inuit have raised in multiple forums, the project may be delivering diminishing returns for Inuit. It is important that Baffinland report on all indicators identified in the NIRB PC Conditions and provide an accurate accounting of benefits received by Inuit from the Project.

Continued Exceedances of Dustfall Predictions

The Project continues to contribute large amounts of dust to the environment. Dustfall has continued to exceed FEIS predictions across the landscape and in some locations, may be exhibiting an upward trend. Notably:

- Of the 26 year-round monitoring sites sampled in both 2021 and 2022, twenty (20) had higher dust accumulations in 2022 than in 2021;
- Across all 43 dustfall monitoring stations, 23 yielded annual dustfall volumes above FEIS predictions. This is an increase from the 2021 monitoring year where there were exceedances at 20 of the sites;
- Of these exceedance locations, four were at Milne Port and 19 were along the Tote Road;
- Many (12) of the 20 sampling locations that did not exceed FEIS predictions were from stations where year-round sampling was not conducted and annual dustfall values had to be extrapolated and added to the observed total.

The effects of these large amounts of dustfall are still not entirely understood. The amount of dustfall and sediments from Project activities that enters the Tote Road streams, its fate in those streams, and the effects on the biota, including Arctic Char, remain unknown. This has effects on present and future use of those streams and the health of Arctic Char into the future. It is unclear how dustfall is advancing the timing of snow melt and sea ice melt in Milne Inlet or the timing of snowmelt and runoff in other areas affected by elevated levels of dust. Without this information, Baffinland cannot fully account for the effects of mine operations on the terrestrial and aquatic environments. These uncertainties need to be addressed through appropriate study design, on which QIA has the opportunity to review and provide feedback.



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sufficiently developed in conjunction with the TEWG. Without improvements to the monitoring program, including an expanded spatial scope to test and measure Inuit observations, the programs cannot sufficiently address concerns of Inuit and may not capture serious effects to caribou caused by the Project. QIA provides several recommendations for improving monitoring programs in the Terrestrial Environment Comments Section of Appendix A.

Inadequacies in Marine Mammal Monitoring

Narwhal Monitoring

QIA continues to have concerns related to Baffinland's conclusions regarding the role of Project-shipping in Eclipse Sound narwhal declines. QIA agrees with Baffinland that external factors such as ice conditions, prey availability, and predation pressure all influence narwhal movements and distributions. QIA does not agree with Baffinland's conclusion that these are the main drivers of identified changes in narwhal declines. Baffinland states that IQ speaking to animal movement between Eclipse Sound and Admiralty Inlet confirms their understanding that large, one-way changes in Narwhal abundance occur naturally. IQ does widely recognize that narwhal will move as needed for their biological needs in response to factors such as food availability, predation pressure, and shipping traffic. The three sources Baffinland cites to support their conclusions about narwhal distribution, however, does not include IQ that identifies widespread unidirectional shifts over multi-year timeframes. Other studies referenced in respect of narwhal distribution are either missing datasets for recent time periods or are conducted in other regions.

Baffinland's monitoring results and Inuit observations and knowledge highlight the need for careful monitoring of Project-related effects on narwhal critical life history functions. Analysis of monitoring data suggest that calve rearing is down in Milne Inlet, and animals have moved elsewhere for critical aspects of their life history. An analysis of Baffinland's Passive Acoustic Monitoring Data from 2018 and 2019 concluded that there is no evidence of habituation to bulk carrier noise. It is clear that continued monitoring efforts, including increasing the Unmanned Aerial Vehicle survey component of monitoring at Bruce Head and continued acoustic monitoring, used with Inuit knowledge are necessary to advance knowledge of project effects. Additional efforts to engage with Inuit on their observations of changes to critical life history functions are required.

Ringed Seal Monitoring

QIA continues to maintain that Baffinland has not fully monitored impacts to seals and has not properly analyzed impact pathways to seals. Inuit harvesters have been raising concerns about Project-related impacts to ringed seals for many years. In



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2021, Baffinland conducted an aerial survey of ringed seals to address this concern. The aerial survey was not repeated in 2022 and there is no indication that it will occur in 2023. The Report provides no evidence that a single aerial survey has addressed concerns raised by harvesters. There is no discussion about the adverse effects observed by harvesters and how the springtime survey addressed those effects. There is also no information about what Baffinland considers to be an appropriate frequency for aerial surveys, only that Baffinland's marine mammal consultants recommended against a survey in 2022.

Inadequate Reporting on Use of IQ

QIA recognizes the support Baffinland has provided to incorporate Inuit Qaujimajatuqangit (IQ) into monitoring, analysis, and interpretation of results for both biophysical and socio-economic values. Baffinland has asserted many times during response to comments on annual reports that IQ has been an important factor in the development of monitoring programs.¹ If this is true, the Report does not reflect that fact. There continues to be a lack in details of IQ use in Baffinland's annual reports. Even when Baffinland states that IQ has been incorporated, there is no discussion on what IQ was used, how it is used, and where it was obtained. QIA has commented on this shortfall in several years of annual report comments and has identified that the gap remains unaddressed in 2022. Baffinland continues to center the Annual Report on western science integration into monitoring programs, despite Baffinland statements that IQ is a valuable component to the development of the programs. QIA would like to see a demonstration of Baffinland's use of IQ and more information on IQ use in future annual reports.

Inadequate Datasets for Report on Effects to CRLU

A continued CRLU monitoring shortfall is in Baffinland's efforts to understand the interactions between the project and food security. Baffinland continues to state that evidence provided by visitor-person days recorded in the visitors log, the amount of Wildlife Compensation Funds dispersed, and the Employee Survey provide evidence that supports the Final Environmental Impact Statement prediction that the project will not have an effect on harvesting.² Visitation and travel through an area is not indicative of harvesting effort rates and is even less indicative of harvesting success. The WCF claims provide a record of specific reports of direct harvesting issues that may arise because of the project but does not provide comprehensive information about harvesting experience changed. Baffinland's continued use of these data to

¹ Baffinland Response to Comments Received for Baffinland's Production Increase Proposal Extension 2021 Annual Monitoring Report

² Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board, Appendix G.7.1, 2022 Socio-Economic Monitoring Report, PDF p. 101.



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make determinations on indicators such as harvest per level of effort is inappropriate. It would be more accurate for Baffinland to identify that impacts on harvesting rates have yet to be adequately monitored, therefore there remains uncertainty in the accuracy of the FEIS prediction.

Conclusion

We would like to state again our appreciation to the NIRB and Baffinland for the opportunity to provide our comments on the 2022 Annual Monitoring Report and on Baffinland's compliance with the NIRB Project Certificate Conditions. We trust the NIRB will hold Baffinland to the highest standard in meeting the Terms and Conditions of the Project Certificate, including their specific and underlying objectives related to environmental protection, Inuit well-being, and Inuit access to benefits.

QIA remains fully committed to working collaboratively and in good faith with all parties in relation to the Mary River Project. We look forward to seeing our requests adopted by Baffinland in a timely and proactive fashion. Where this does not occur, we strongly recommend the NIRB adopt our requests as requirements for Proponent improvements between 2023 and 2024.

Sincerely

Conor Goddard

Attachment: Appendix A: QIA comments on Baffinland 2022 Annual Monitoring Report



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Appendix A: QIA comments on Baffinland 2022 Annual Monitoring Report

General Comments (GC)

Comment #	QIA 2022 NIRB GC # 1.
References	<p>Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board Section: 2.3 Engagement Activities PDF Page: 73 to 79 of 703</p> <p>Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board, Appendix B, 2022 Engagement Records and Community Comments and Questions Section: Appendix B.1 and B.2 Page: B.1 - 8, and Table 1; B.2 - 1-6</p> <p>Document Name: Baffinland Response to Comments Received for Baffinland's Production Increase Proposal Extension 2021 Annual Monitoring Report Section: Table A.1: Response to QIA Comments on Baffinland's 2021 Annual Report to the NIRB PDF Page: 8-9 of 131</p>
QIA Comment	<p>Baffinland provides high-level, general information about public engagements in section 2.3 of the Annual Report Main Body. Baffinland provides general information about engagement events that occurred throughout 2022 in Appendix B.1 and a summary of Comments, Questions, and Concerns received during the 2022 Shipping Season in Table B.2.2. Table B.2.2. does not identify if and how concerns were addressed.</p> <p>In comments for the 2020 and 2021 Annual Reports, QIA has requested that Baffinland provide a tracking table that summarizes key issues and feedback raised during stakeholder engagement and how these issues were addressed. Baffinland responded on comments to the 2021 report, "Baffinland requests that the QIA provide the feedback they received on Baffinland's current practices if/where additional information or gaps have been identified by Inuit substantiated with specific examples" (Baffinland Response to Comments Received for the 2021 Annual Monitoring Report PDF p. 9).</p> <p>QIA would like to clarify that this request is for the purposes of keeping a reference of key issues and how they have been resolved. QIA believes this would be of value for both Baffinland's records and for QIA's records.</p> <p>QIA recognizes that Baffinland captures comments, questions, and concerns that require specific follow-up in meeting notes and recorded minutes. Baffinland states that records from engagements are uploaded to</p>



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	<p>During the Stratos Interviews on the Climate Change Strategy, those interviewed were asked about:</p> <ul style="list-style-type: none"> • Roles and actions they may like to see Baffinland explore to manage its greenhouse gas emissions and adapt to climate change • Potential areas for collaboration related to climate change, and • Other sources of information or other groups working to research or address climate change in the North Baffin region (Climate Change Strategy p. 7 of 17). <p>These topics are helpful for planning climate change studies. However, it appears there has still been no work accomplished for the implementation of studies. Baffinland suggests that work on the topic of climate change environmental monitoring in 2023 will consist of more planning – through the development of roadmaps that “will include actions required to progress the goals of the strategy (Baffinland’s Climate Change Strategy p. 9 of 17).”</p>
QIA Request	<p>Baffinland to develop roadmaps that include:</p> <ul style="list-style-type: none"> • A description of the work they will undertake to collaborate with Inuit in the development of Inuit Qaujimajatuqangit-defined climate-related criteria to be applied in relation to the Project’s Climate Change Strategy. The description should include a timeline for criteria incorporation into the current environmental monitoring program and any future proposed environmental monitoring programs. • A description of how and where Inuit Qaujimajatuqangit (IQ) will be used to inform climate scenario development and to understand community and regional vulnerabilities. The description should include a timeline for the climate scenario development and when community and regional vulnerabilities and environmental priorities will be established. • Initiation of climate change related studies in 2023. <p>Baffinland to include discussion and analysis of trends in their climate-related monitoring under PC Condition 4 – and the results of Inuit climate change monitoring Baffinland supports - in future annual reports.</p>

Comment #	QIA 2022 NIRB M&C # 2.
References	<p>Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board Main Body</p> <p>Section: 4.6.1 Meteorology and climate (PC Condition 1)</p> <p>Page: 55 to 57 (PDF p. 111 to 113 of 703)</p> <p>Section: 4.6.10 Marine Environment (PC Condition 76)</p> <p>Page: 269 to 278 (PDF p. 325 to 334 of 703)</p>



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	<p>Document Name: Baffinland 2022 Annual Report to NIRB, Appendix G.6.9 MEEMP</p> <p>Section: Executive Summary</p> <p>Page: xi (PDF p. 13 of 565)</p>
QIA Comment	<p>The Objective of PC Condition 1 is: "<i>To provide feedback on the impacts that climate change might be having on the port facilities.</i>" (Appendix G.6.9, PDF p. 13). It requires tidal gauges to be used at the Milne and Steensby port sites to monitor sea-level changes and storm surges. However, "...<i>Baffinland proposes not moving forward with tidal gauge monitoring in 2023 in favour of exploring alternative options to meet this Condition using one or many alternative indicators other than sea level rise (SLR) such as temperature and precipitation regime, or climate response variables such as ice cover and hydrologic response.</i>" (s.4.6.1, PDF p. 113; see also 2022 Annual report s. 4.6.10, PDF p. 333). The reason presented for this change is, "...<i>the current survey equipment used to quantify relative sea level change using Milne Port tidal data is not providing the level of accuracy and precision required to meet this condition.</i>" (Appendix G.6.9, PDF p. 13)</p>
QIA Request	<p>Baffinland to identify the pros and cons of alternatives that are available for monitoring climate change effects on the port facilities, including alternative approaches that would provide sea-level data with the precision and accuracy needed for meaningful monitoring of sea-level changes. Baffinland to provide updates on what alternative climate change indicators they are pursuing.</p>

Comment #	QIA 2022 NIRB M&C # 3.
References	<p>Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board</p> <p>Section: 4.6.1, PC Condition 2</p> <p>Page: 58-63 (PDF p. 114 to 119 of 703)</p>
QIA Comment	<p>PC Condition 2 states, "The Proponent shall provide the results of any new or revised assessments and studies done to validate and update climate change impact predictions for the Project and the effects of the Project on climate change in the Local Study Area and Regional Study Area as defined in the Proponent's Final Environmental Impact Statement."</p> <p>QIA acknowledges the ongoing efforts regarding the Climate Change Strategy. Given the nature of The Strategy and commitments regarding improving energy efficiency and greenhouse gas emissions performance, Adaptive Management principles would support the successful execution of the strategy and achieving related goals.</p>
QIA Request	<p>Baffinland to incorporate Adaptive Management principles into the Climate Change Strategy and similarly incorporate the Climate Change Strategy into the Adaptive Management Plan.</p>



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Air Quality & Noise (AQ&N)

Comment #	QIA 2022 NIRB AQ&N # 1
References	Document Name: Appendix F.2 PIP Renewal Commitment Status Section: BIM ID 007 PDF Page: 5 of 16
QIA Comment	Baffinland notes <i>"Baffinland has advised that it intends to provide a formal response to the Report, outlining Baffinland's next steps with respect to the recommendations. Baffinland has provided it's preliminary response to the Dust Audit Committee and will issue a formal response to the NIRB in April 2024."</i> This timeline potentially precludes implementation of the recommendations in 2023 and conflicts with the timeline provided to QIA during their engagement meeting with Baffinland in February 2023. At that meeting, Baffinland committed to providing a formal response by April 15, 2023.
QIA Request	Baffinland to provide a formal response to the dust audit as soon as possible and commence implementation of recommendations as soon as feasible (i.e., implementation of operational changes immediately, and physical mitigations as soon as logistics allow).

Comment #	QIA 2022 NIRB AQ&N # 2.
References	Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board Section: 4.6.2, PC Condition 10 Page: 82 to 85 (PDF p. 138 to 141)
QIA Comment	PC Condition 10 states "The Proponent shall update its Dust Management and Monitoring Plan to address and/or include the following additional items: a. Outline the specific plans for monitoring dust along the first few kilometres of the rail corridor leaving the Mary River mine site. b. Identify the specific adaptive management measures to be considered should monitoring indicate that dust deposition from trains transporting along the rail route is greater than initially predicted. c. Outline specific plans for monitoring dustfall at intervals along and in the vicinity of the Milne Inlet Tote Road to determine the amount and extent of dustfall. d. Identify the specific adaptive management measures to be considered if monitoring indicates that dust deposition from traffic on the Milne Inlet Tote Road is greater than initially predicted. e. The Proponent shall implement its Dust Management and Monitoring Plan, report all monitoring data to the NIRB annually, and take all adaptive management measures described in its Dust Management and Monitoring Plan if monitoring indicates that dust in the ambient air or dust deposition



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	<p>from the increased traffic associated with the increased volume of ore being shipped is greater than initially predicted.”</p> <p>The QIA disagrees with Baffinland’s statement of compliance. Although Baffinland outlines the current and planned efforts being executed regarding dust suppression, the specifics of adaptive management measures are not mentioned.</p>
QIA Request	Baffinland to outline specific adaptive management measures developed respecting dust management.

Comment #	QIA 2022 NIRB AQ&N # 3.
References	<p>Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board Main Body</p> <p>Section: 4.6.2 Air Quality (PC Condition 10)</p> <p>Page: 82 to 85 (PDF p. 138 to 142 of 703)</p> <p>Document Name: Baffinland 2022 Annual Report to NIRB, Appendix G.5.1 TEAMR</p> <p>Section: 8.3.4 Sampling height pilot study</p> <p>Page: 86 (PDF p. 126 of 160)</p>
QIA Comment	There is a strong 1:1 relationship between the dust collectors operating at 2.0 m and those at 0.5 m above ground level, with modest variability. Can the data collected be used to assess whether there might be seasonal or other advantages (e.g., reliability) related to using one height or another, or both?
QIA Request	Baffinland to assess whether there may be seasonal or other advantages to using dust collectors operating at 0.5 or 2.0 m above ground level, or to using both.

Comment #	QIA 2022 NIRB AQ&N # 4.
References	<p>Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board Main Body Section: 4.6.2 Air Quality (PC Condition 10) Page: 82 to 85 (PDF p. 138 to 142 of 703) Section: 4.6.8 Terrestrial Environment (PC Condition 57) Page: p. 214 to 219 (PDF p. 270 to 275 of 703)</p> <p>Document Name: Baffinland 2022 Annual Report to NIRB, Appendix G.5.1 TEAMR Section: 8.4.3 Inter-annual trends Page: 107 (PDF p. 147 of 160). Section: 8.3.2.3, Table 8-4 PDF Page: 77 and 78 (PDF pp. 117 and 118 of 160)</p>
QIA Comment	With respect to satellite imagery analysis, Baffinland states, " <i>Dustfall extents from 2022 in dustfall concentration classes >4.5 g/m² remained</i>



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	consistent with 2021 except for Milne Inlet, which indicated an increase. Milne Inlet total dustfall extent remained well above the baseline (2004 and 2013) extent since 2015". Dustfall is also elevated in the vicinity of the Mine, Tote Road and Milne Port (e.g., s.8.3.2.3, Table 8-4, pp.77 and 7 (PDF pp. 117 and 118), s.8.4.3, p.107ff (PDF p. 147ff of 160)).
QIA Request	Baffinland to assess whether dustfall is advancing the timing of snow melt and sea ice melt in Milne Inlet, and the timing of snowmelt and runoff in other areas affected by elevated dustfall.

Comment #	QIA 2022 NIRB AQ&N # 5.
References	Document Name: Appendix F.2 PIP Renewal Commitment Status Section: BIM ID 036; BIM ID 040 Page: 9, 10 of 16
QIA Comment	<p>Commitment BIM ID 036 includes the text <i>"Baffinland is also required to describe mitigation measures which could be made to operations and ore transferring/handling under a possible future expanded project (e.g., what could be accomplished in a 2023+ project)."</i> BIM ID 040 includes the text: <i>"Baffinland will define what other operational practice improvements will be made to minimize dust from Milne Port once the draft Dust Audit Report is received, and clarify how those measures will be implemented. Changes requiring additional infrastructure or materials should be implemented without delay after receiving the materials on the 2023 sealift, and within a reasonable timeframe given the final scope of required work."</i></p> <p>Baffinland has described the status as of March 31, 2023 for both as compliant – in progress due with the following general text as a qualifier: <i>"Baffinland and QIA met in-person in Ottawa, Ontario on February 16 and 17, 2023 to discuss progress towards Commitments 030 to 063..."</i> Baffinland provided status updates on each commitment, sought clarification from QIA on several items, and developed a mutual path forward on items still in progress." No further timeline for these activities is provided. QIA's understanding from the meeting in Ottawa was that BIM would be providing a list of operational mitigations by April 15, 2023 that could be implemented immediately / in 2023.</p> <p>As of this writing, Baffinland has not met that deliverable deadline. This failure to meet the agreed upon timeline introduces uncertainty as to whether mitigations will be implemented in a timely manner sufficient to curtail ongoing interactions between fugitive dust and both the terrestrial and aquatic environments. It also suggests Baffinland's stated compliance status is incorrect; adherence to these commitments are currently listed as "Compliant".</p>
QIA Request	Baffinland to change the status of PIPR commitment 036 and 040 to "Noncompliant". Baffinland to provide a list of mitigation measures which could be made to operations and ore transferring/handling as well as



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	<p>ROM Ore Stockpile Facility Pond, and the Mine Site Sewage Treatment Plants (p.165).</p> <p>A majority of the non-compliance discharges occurred due to heavy snow accumulation (during spring freshet), limiting the remaining capacity of the ponds and triggering controlled discharges, which were typically not compliant for Total Suspended Sediment (TSS) under MDMER criteria. However, the Report does not mention efforts that will be made during future spring freshets to mitigate non-compliant water (i.e., managing capacity in the ponds during spring freshet). This may be elaborated on in the appropriate management plans, but specific reference to plans for managing pond capacity (particularly during spring freshet) should be included/referenced in the NIRB submission.</p> <p>QIA notes this is an ongoing concern and additional quality control measures should be investigated and implemented.</p>
QIA Request	<p>Baffinland to include a plan for managing capacity in ponds during spring freshet in the NIRB submission, as capacity issues in several storage ponds at the Mine Site led to controlled discharges and subsequent MDMER exceedances in 2022.</p> <p>Baffinland to continue to improve their sampling procedures to provide better confidence in monitoring results.</p> <p>Baffinland to continue to improve preventative maintenance measures and develop a Standard Operating Procedure for equipment monitoring.</p> <p>Baffinland to provide a performance update for the new MS-11 Surface Water Management Pond regarding freshet 2023.</p>

Comment #	QIA 2022 NIRB M&AE# 3.
References	Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board. Section: 4.6.3 Hydrology and Hydrogeology PDF Page: 159 to 174 of 703
QIA Comment	The Annual Report states that <i>“In December 2022, there were 5 exceedances of the site specific grab sample limits stipulated in the water licence at Mary River effluent monitoring stations MS-01 and MS-01B. Three of the exceedances were above the site specific grab sample limit of 4.0 mg/L for Total Ammonia (as N) and 2 of the exceedances were above the site specific grab sample limit of 4.0 mg/L for Total Phosphorus”</i> (p.166-167). However, no explanation is given for these exceedances.
QIA Request	Baffinland to provide further information on the Total Ammonia and Total Phosphorus exceedances in December 2022, to help QIA understand the



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	cause of the exceedances and inform mitigative measures to prevent future exceedances. Baffinland to discuss what management options will be implemented to limit these types of exceedances in the future.
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Comment #	QIA 2022 NIRB M&AE# 4.
References	<p>Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board</p> <p>Section: 4.6.4, PC Condition 18</p> <p>PDF Page: 171 of 703</p>
QIA Comment	<p>PC Condition 18 states, "The Proponent shall carry out continued analyses over time to confirm and update, accordingly, the approximate fill time for the mine pit lake identified in the FEIS."</p> <p>The QIA disagrees with Baffinland's statement of compliance. Baffinland states that mining activities have not yet created a pit at Deposit No.1 and as such Tasks 1 and 2 of the reclamation research program for the Open Pit flooding timeline outlined in Appendix D.2 of the ICRP cannot commence until an Open Pit has formed and active dewatering is occurring.</p> <p>QIA notes that it witnessed dewatering of Deposit 1 during its 2020 Environmental Audit and that Baffinland confirmed verbally during the 2021 Environmental Audit that ponding occurs with pumping to the Waste Rock Facility. QIA disagrees that Deposit 1 is currently not a pit. As such, this PCC is deemed non-compliant until such time that analysis occurs.</p>
QIA Request	<p>QIA requests Baffinland treat Deposit 1 as an Open Pit or provide evidence to the contrary.</p> <p>QIA notes this is the same request as the last two years.</p>

Comment #	QIA 2022 NIRB M&AE# 5.
References	<p>Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board</p> <p>Section: 4.6.4, PC Condition 19</p> <p>Page: 116-118 (PDF p. 172 to 174 of 703)</p>
QIA Comment	<p>PC Condition 19 states, "The Proponent shall ensure that it develops and implements adequate monitoring and maintenance procedures to ensure that the culverts and other conduits that may be prone to blockage do not significantly hinder or alter the natural flow of water from areas associated with the proposed mine. In addition, the Proponent shall monitor, document and report the withdrawal rates for water removed and utilized for all domestic and industrial purposes."</p>



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Comment #	QIA 2022 NIRB M&AE# 7.
References	<p>Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board.</p> <p>Section: 4.6.5 Groundwater and Surface Water, PC Condition 28</p> <p>PDF Page: 175 to 199 of 703</p>
QIA Comment	<p>PC Condition 28 states that <i>“The proponent shall monitor the effects of the Project on the permafrost along the railway and all other Project-affected areas and must implement effective preventative measures to ensure that the integrity of the permafrost is maintained”</i> (PDF p.195). However, the Report does not provide any clear commitments from BIM regarding measures that will be taken to minimize further impacts of the Project on permafrost along the Tote Road.</p> <p>The Annual Report states that <i>“To improve historical permafrost degradation issues along the Tote Road, Baffinland will continue to develop and prioritize preventative and mitigation measures to minimize</i></p>



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	<p><i>impacts of the Project's activities and infrastructures on landforms along the Tote Road.</i>" (PDF p.196), and that past geotechnical inspections recommended that a lack of appropriate drainage ditches at 4 former borrow pit areas be rectified along the Tote Road (PDF p.189). Thaw settlement was observed on road embankments adjacent to some borrow pit locations (PDF p.190).</p> <p>Additional mitigation measures (and specific timelines for preventative measures to be implemented) are not clear in the document, and should be provided to emphasize that BIM is addressing their requirement to reduce permafrost degradation.</p>
QIA Request	QIA requests Baffinland provide more information regarding specific preventative measures that are being implemented to minimize future permafrost degradation along the Tote Road and prevent erosion.

Comment #	QIA 2022 NIRB M&AE# 8.
References	<p>Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board Main Body Section: 4.6.5 Groundwater & Surface Water (PC Conditions 21) Page: 124 to 126 (PDF p. 180 to 182 of 703) Section: 4.6.8 Terrestrial Environment (PC Condition 57) Page: p. 214 to 219 (PDF p. 270 to 275 of 703)</p> <p>Document Name: Baffinland 2022 Annual Report to NIRB, Appendix G.5.1 TEAMR Section: 8.3.2.3 2022 Annual Dustfall, Table 8-4 Page: 76 and 77 (PDF pp. 116 and 117 of 160)</p> <p>Document Name: Mary River Project, Terrestrial Environment, 2021 Annual Monitoring Report [220920-08MN053-2021 Annual Report Terrestrial Enviro-IA2E.pdf] Section: Table 7-4 Page: 71 (PDF p. 97 of 326)</p> <p>Document Name: Nunavut Impact Review Board [NIRB]. 2022. NIRB Project Certificate [No. 005] Section: Appendix B. Commitments Page: 124 (PDF p. 124 of 129)</p> <p>Document Name: Baffinland 2022 Annual Report to NIRB, Appendix G.4.2 2022 Lake Sedimentation Monitoring Report Section: 3.1.2 Temporal Comparisons for the 2021/2022 Ice-Cover and 2022 Open-Water Periods PDF Page: 14</p>
QIA Comment	PC Condition 21 relates to Groundwater/Surface Waters – Aquatic Effects Monitoring Plan (AEMP) and dustfall monitoring and PC Condition 57



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	<p>Mitigating and Monitoring for Impacts to Wildlife, including the timing of snowmelt. Dustfall has continued to exceed predictions along the Tote Road (Table 8-4, PDF p. 116 and 117 of 160). Of the 26 year-round monitoring sites sampled in both 2021 and 2022, 20 had higher dust accumulations in 2022 than in 2021 (see also 2021 TEAMR, Table 7-4, PDF p. 82 of 328). The amount of dustfall and sediment from Project activities that enters the Tote Road streams, its fate in the streams, and its effects on the biota, including Arctic Char, are unknown.</p> <p>Appendix G.4.2 states, “The pattern in sedimentation rates at all Sheardown Lake NW study areas appeared to closely reflect patterns in dustfall reported for the Mary River Project Mine Site since 2014 as part of the dustfall monitoring program. No multi-year seasonal trends in increasing dustfall were identified at the Mine Site; however, dustfall in 2022 was among the highest measured since 2016/2017” (Appendix G.4.2 PDF p. 18).</p> <p>Under the Production Increase Proposal Review (PIPR) Baffinland committed (Commitment BIM ID #065, QIA ID-24A; NIRB 2022, p. 124) to a study to address these concerns. A draft study plan that was initially to be provided to QIA on December 31, 2022 and then February 3, 2023 was received on June 23, 2023. The brief plan characterizes the study as an “<i>initial pilot (special) investigation</i>” to aid in the development of a robust study approach and methodology. It arrived when QIA reviews of Baffinland’s 2022 Annual Report to QIA and the NWB on Operations and 2022 Annual Report to NIRB were ongoing, and the freshet already well advanced, minimizing Baffinland’s opportunity to benefit from and incorporate feedback into their 2023 study design.</p>
QIA Request	<p>Baffinland to provide:</p> <ol style="list-style-type: none"> A detailed study plan and photographic record of the methods tested and sampling locations and protocols once the initial pilot investigation has been completed, in 2023, to inform future discussion on the study, and Information on other studies that are ongoing in 2023 in the creeks being considered. <p>Baffinland to:</p> <ol style="list-style-type: none"> Consider establishing an additional test site in a non-erosional stream for comparison with the erosional streams. that have been recommended as study candidates.

Comment #	QIA 2022 NIRB M&AE# 9.
References	<p>Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board Main Body</p> <p>Section: 4.6.5, PC Condition 23</p> <p>Page: 128-130 (PDF p. 184)</p>



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	<p>Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board Appendix G.3.1 Groundwater Monitoring Reports</p> <p>Section: Executive Summary</p> <p>PDF Pages: 4-5</p>
QIA Comment	<p>PC Condition 23 states, "The Proponent shall develop and implement a Groundwater Monitoring and Management Plan to monitor, prevent and/or mitigate the potential effects of the Project on groundwater within the Project area."</p> <p>QIA disagrees with Baffinland's assessment of compliance. The following was found during 2022 monitoring activities:</p> <p>"At the Landfill Facility; Groundwater sampled from monitoring location MS-LF-GW1, situated approximately 10 m downgradient and southwest of the Landfill Facility, had water quality above the comparative guidelines for dissolved chloride, dissolved sulphate, dissolved boron, dissolved cadmium, dissolved copper, dissolved manganese, dissolved nickel, dissolved uranium and dissolved zinc (relative to Federal Interim Groundwater Quality Guidelines or FIGQ guidelines). The dissolved sulphate concentration measured at MS-LF-GW1 has exhibited an increasing trend since 2017. At monitoring location MS-LF-GW3, situated approximately 10 m downgradient and southeast of the Landfill Facility and approximately 150 m south of MS-LF-GW1, had concentrations of dissolved sulphate and dissolved boron above the FIGQ" (Appendix G.3.1 PDF pp.4-5).</p> <p>As requested in the comments for the 2020 Annual Monitoring Report, Baffinland does include commentary on the direction of flow and indicates it is probable that the guideline exceedances are localized and do not migrate to waterbodies. However, additional monitoring data is now available that exceeds guidelines yet no prevention or mitigative actions related to those exceedances are discussed.</p>
QIA Request	<p>Baffinland to confirm steps being taken to prevent and mitigate the cause and extent of the groundwater contamination around the landfill. QIA notes that the same request was made the last 2 years.</p>

Comment #	QIA 2022 NIRB M&AE# 10.
References	<p>Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board</p> <p>Section: 4.6.5, PC Condition 24</p> <p>Page: 131 (PDF p. 187)</p>



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QIA Comment	PC Condition 24 states, "The Proponent shall monitor as required the relevant parameters of the effluent generated from Project activities and facilities and shall carry out treatment if necessary to ensure that discharge conditions are met at all times." The QIA disagrees with Baffinland's statement of compliance. Baffinland had five discharges of non-compliant effluent at the Mine Site Sewage Plants MS-01 and MS-01B. A number of these non-compliance were attributed to potential sampling errors. Due to these exceedances, this PCC is considered non-compliant. QIA notes this is an ongoing concern and that additional quality control measures should be investigated and implemented.
QIA Request	Baffinland to provide QIA its measures to reduce exceedances, above and beyond improved sampling methods and internal training.

Comment #	QIA 2022 NIRB M&AE# 11.
References	Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board Section: 4.6.5, PC Condition 25 Page: 132-134 (PDF pp. 188 - 190) Document Name: 2019 Inspection of the Milne Inlet Tote Road and Associated Borrow Sources [NIRB Registry: 200521-08MN053-App G15-Tetra Tech 2019 Report Pt 1-IA1E.pdf, 200521-08MN053-App G15-Tetra Tech 2019 Report Pt 2-IA1E.pdf, 200521-08MN053-App G15-Tetra Tech 2019 Report Pt 3-IA1E.pdf, and 200521-08MN053-App G15-Tetra Tech 2019 Report Pt 4-IA1E.pdf]
QIA Comment	PC Condition 25 states, "The Proponent shall undertake additional geotechnical investigations to identify sensitive landforms, modify engineering design for Project infrastructure, develop and implement preventative and/or mitigation and monitoring measures to minimize the impacts of the Project's activities and infrastructure on sensitive landforms." QIA disagrees with Baffinland's assessment of compliance, as the Tote Road has not been built to design and concerns on the state of the Tote Road are ongoing. The 2019 Tetra Tech Report confirms most concerns along the Tote Road from the 2014 Tetra Tech Report were not addressed. QIA understands Baffinland has a multi-year Execution Plan for addressing recommendations made by Tetra Tech regarding permafrost degradation. QIA will continue monitoring these mitigative actions, the status of the Tote Road and settling of water retention



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	structures and will consider assessment within the context of the 2022 Environmental Audit.
QIA Request	<p>Baffinland to build the Tote Road as designed or provide a satisfactory effects assessment of operating the road in its current state. PC Condition 25 should be considered non-compliant until this occurs.</p> <p>This PC Condition will not be re-assessed by QIA until completion of the multi-year Execution Plan to address the priority areas identified in the Tetra Tech Report.</p> <p>QIA notes this is the same request as the last two years.</p>

Comment #	QIA 2022 NIRB M&AE# 12.
References	<p>Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board</p> <p>Section: 4.6.5, PC Condition 27</p> <p>Page: 137-138 (PDF p.193 -194)</p>
QIA Comment	<p>PC Condition 27 states "The Proponent shall include within its public consultation report information related to the sentiments expressed by affected communities about the impacts that changes to the topography and landscape have had on the aesthetic value of the Project area."</p> <p>While Baffinland reports on discussions respecting aesthetic value held with communities throughout 2022, Baffinland has not provided information on the effectiveness of consultation efforts related to this PC Condition. The IIBA requires a detailed engagement plan, which should be shared with QIA so that consultation efforts can be assessed by QIA.</p> <p>QIA notes this is the same comment as provided for the 2020 and 2021 Annual Monitoring Report Reviews.</p>
QIA Request	Baffinland to provide, as required by the IIBA, a detailed engagement plan so the 2022 consultation efforts can be assessed, commented on and revised accordingly.

Comment #	QIA 2022 NIRB M&AE# 13.
References	<p>Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board Main Body</p> <p>Section: 4.6.5, PC Condition 28</p> <p>Page: 139-140 (PDF p. 195 -196)</p>
QIA Comment	The Proponent shall monitor the effects of the Project on the permafrost along the railway and all other Project affected areas and must implement effective preventative measures to ensure that the integrity of the permafrost is maintained.



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	QIA agrees with Baffinland's assessment of compliance.
QIA Request	Baffinland to provide a discussion on how they measure effects to permafrost.

Comment #	QIA 2022 NIRB M&AE# 14.
References	Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board Main Body Section: 4.6.5, PC Condition 29 Page: 141-142 (PDF p. 197 -198)
QIA Comment	PC Condition 29 state, "The Proponent shall provide to the respective regulatory authorities, for review and acceptance, for-construction engineering design and drawings, specifications, and engineering analysis to support design in advance for constructing those facilities. Once project facilities are constructed, the Proponent shall provide copies of the as-built drawings and design to the appropriate regulatory authorities." QIA agrees with Baffinland's assessment of compliance. However, commentary on as-builts submitted in the 2022 QIA & NWB Annual Report for Operations was submitted under that cover. The QIA will continue to assess as-built documentation as received.
QIA Request	None.

Comment #	QIA 2022 NIRB M&AE# 15.
References	Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board Main Body Section: 4.6.7 Freshwater Environment (PC Condition 45) Page: 177 to 179 (PDF p. 232 to 234 of 703) Section: 4.6.7 Freshwater Environment (PC Condition 47) Page: 181 (PDF p. 237 of 703) Document Name: Baffinland Iron Mines 2021 Annual Report to the Nunavut Impact Review Board, Appendix G.17 DFO Tote Road Report Section: 1.2 Authorization for Works; 2.1 Construction work Page: 3 (PDF p. 8 of 70) Section: Table 8, 1.2 Authorization for Works; 2.1 Construction work Page: n/a (PDF p. 9 of 51) Document Name: Baffinland Iron Mines 2021 Annual Report to the Nunavut Impact Review Board, Appendix G.17 DFO Tote Road Report Document Name: Baffinland Iron Mines 2022 QIA – NWB Annual Report for Operations Section: 2.4 Other construction activities



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	<p>Page: 7 (PDF p. 36 of 91)</p> <p>Document Name: Qikiqtani Inuit Association comments on Baffinland Iron Mines Annual Report to the Nunavut Impact Review Board [NIRB registry: 220630 - QIA Comments Submission - 2021 MRP NIRB Annual Report [220630 - QIA Comments Submission - 2021 MRP NIRB Annual Report.pdf]</p> <p>Section: Appendix 1, Comment # QIA 2021 AMR M&AE #11</p> <p>Page: 61 (PDF p. 61 of 98)</p>
QIA Comment	<p>Despite identifying eleven fish passage issues at Tote Road stream crossings in 2021, including six culverts that were perched in spring and remained perched in the fall, there was <i>"no construction work at fish-bearing stream crossings along the Tote Road in 2021."</i> (2021 Annual Report to NIRB, Appendix G.17, s. 2.1, PDF p. 8 of 70). Most of these crossings have required remediation on multiple occasions since 2011 (Table 9, PDF p. 51 of 70).</p> <p>In the 2022 Annual Report Baffinland states, <i>"There was no construction work at fish-bearing stream crossings along the Tote Road in 2022."</i> (2022 Annual Report QIA – NWB for Ops., p. 36 of 91). These fish passage issues can delay or prevent access by small fish to summering habitats upstream of the Tote Road. In the case of these culverts, the delay may have obstructed fish passage by at least 2 years—longer if they were not remediated in the spring of 2023.</p> <p>In 2021, the DFO Tote Road Report provided monitoring data on these culverts including, updates on their status, remediation required and completed, and fish passage (2021 Annual Report to NIRB, Appendix G.17, parts 1 and 2). In 2022, the DFO Tote Road Report was not prepared, so this information is no longer readily accessible. However, DFO inspected the fish-bearing crossings and a plan is being developed by Baffinland to address the fish passage issues (2022 Annual Report QIA - NWB for Ops, s.10.1.4, PDF p. 86 of 91).</p> <p>As in 2021, QIA remains concerned by the number of culverts each year that are perched, obstructed, or damaged and by the delays between identifying and correcting passage issues (see 2021 comment QIA 2021 AMR M&AE #11). Monitoring conducted for the annual DFO Tote Road Report should be continued and reported annually to ensure the culverts are operating properly and not obstructing fish passage.</p>
QIA Request	<p>Baffinland to:</p> <ol style="list-style-type: none"> Provide updates on the status of the culvert stream crossings and their ability to provide unobstructed fish passage for juvenile Arctic char in 2022, and remediation planned for 2023; Clarify what monitoring of these crossings will be continued over the long term; and



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	<p>shed many of their freshwater parasites when they go to sea, and their marine parasites when they return to freshwater.</p> <p><i>"The Inuit project partners have expressed interest in the development of an approach to effectively distinguish resident versus anadromous individuals.</i></p> <p><i>A combination of both western science (e.g., otolith chemistry) and traditional knowledge (e.g., colour, smell, size or other attributes identified) should be implemented"</i> (2022 Milne Inlet Arctic char Health, PDF p. 67 of 291). In some areas Inuit can distinguish fish from different rivers by their morphology. DFO has done a lot of genetic work and has expressed interest in the past in getting samples from the lakes on northern Baffin Island to see if the stocks are genetically different. If so, it would be possible to tell where fish caught in a particular area originate from. This has important management implications for mixed or single stock fisheries, and impact assessment. Bone strontium in the otoliths also works well in most areas for differentiating between lake dwelling or anadromous fish.</p> <p>Interpretation of the figures and tables would be made easier if the sample sizes were presented in each case.</p>
QIA Request	<p>QIA recommends that the Milne Inlet Arctic Char Health Study:</p> <ol style="list-style-type: none"> Consider conducting parasite autopsies of fish that Inuit consider unhealthy Explore the application of Inuit traditional knowledge and western science (e.g., bone strontium, genetics) as means to differentiate anadromous fish from different stocks and anadromous fish from those that are lake-dwelling, and Include sample sizes on report figures and in tables with summary statistics.

Comment #	QIA 2022 NIRB M&AE# 17.
References	<p>Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board Main Body</p> <p>Section: 4.6.10 Marine Environment (PC Condition 76)</p> <p>Page: 269 to 278 (PDF p. 325 to 334 of 703)</p> <p>Document Name: Baffinland 2022 Annual Report to NIRB, Appendix G.6.9 MEEMP</p> <p>Section: Executive Summary</p> <p>Page: x (PDF p. 12 of 565)</p> <p>Küpper, F.C., Peters, A.F., Shewring, D.M., Sayer, M.D.J., Mystikou, A., Brown, H., Azzopardi, E., Dargent, O., Strittmatter, M., Brennan, D., Asensi, A.O., van West, P. and Wilce, R.T. 2016. Arctic marine</p>



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Comment #	QIA 2022 NIRB M&AE# 19.
References	<p>Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board Main Body Section: 4.6.10 Marine Environment (PC Condition 76) Page: 269 to 278 (PDF p. 325 to 334 of 703)</p> <p>Document Name: Baffinland 2022 Annual Report to NIRB, Appendix G.6.9 MEEMP Section: 1.6 Conclusions and Recommendations Page: 21 (PDF p. 52 of 565)</p> <p>Dhifallah, F., Rochon, A., Simard, N., McKindsey, C.W., Gosselin, M., Howland, K.L., 2022. Dinoflagellate communities in high-risk Canadian Arctic ports, Estuarine, Coastal and Shelf Science 266 107731, https://doi.org/10.1016/j.ecss.2021.107731.</p> <p>Pucko, M, Rourke, W., Hussherr, R, Archambault, P., Eert, J., Majewski, A.R., Niemi, A, Reist, J, and Michel, C. 2023. Phytotoxins in bivalves from the western Canadian Arctic: the first evidence of toxigenicity. Harmful Algae 127, doi: https://doi.org/10.1016/j.hal.2023.102474</p>
QIA Comment	WSP Canada Inc. recommends Baffinland “ <i>continue to monitor opportunistically for observations of deceased bivalves and that a sample should be collected, when possible, for toxicological analyses.</i> ” In 2023 phytotoxins were reported for the first time from bivalves in the Beaufort Sea (Pucko et al. 2023). Blooms of phytotoxic algae are unlikely to occur in cold Arctic waters, but the species that cause them can be introduced with ballast water discharges (Dhifallah et al. 2022). Their toxins can harm species that eat the bivalves. QIA supports the WSP recommendation and recommends that Baffinland also collect shellfish samples and have them analyzed for phytotoxins at 3-year intervals in conjunction with its full benthic infauna monitoring program to monitor for the presence of phytotoxins and thereby the phytoplankton species that produce these toxins.
QIA Request	Baffinland to test shellfish for the presence of phytotoxins at 3-year intervals to monitor for the presence of harmful algae.

Comment #	QIA 2022 NIRB M&AE# 20.
References	<p>Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board Main Body</p> <p>Section: 4.6.10 Marine Environment (PC Condition 76)</p> <p>Page: 269 to 278 (PDF p. 325 -334 of 703)</p> <p>Document Name: Baffinland 2022 Annual Report to NIRB, Appendix G.6.9 MEEMP</p> <p>Section: 1.6 Conclusions and Recommendations</p>



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	for the 2021 Annual Monitoring Report PDF 67). This kind of information should be included in Baffinland's Annual Reports going forward because it provides evidence that consultation with Inuit is being considered in project planning. It is not enough to say that communities were consulted. Baffinland should be required to provide examinable evidence – details to support assertions that consultation results are being utilized in project decisions, planning, and operations.
QIA Request	Baffinland to include in annual reports results of consultation, and how Baffinland actions utilized those results, in their Annual Reports. QIA considers this important information necessary for determining compliance with the PC Conditions that require consultation with local communities.

Comment #	QIA 2022 NIBB M&AE# 23.
References	<p>Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board</p> <p>Section: 4.6.11, PC Condition 113</p> <p>Page: 403 to 415 (PDF p. 459)</p>
QIA Comment	<p>PC Condition 113 states, “The Proponent shall conduct monitoring of marine fish and fish habitat, which includes but is not limited to, monitoring for Arctic char stock size and health condition in Steensby Inlet and Milne Inlet, as recommended by the Marine Environment Working Group.”</p> <p>QIA disagrees with Baffinland’s assessment of compliance. While BIMC has provided an explanation as to why Arctic char stock size is not being monitored, it is nonetheless part of this PC Condition.</p>
QIA Request	Baffinland to identify by what authority they have determined that Arctic char stock does not need to be monitored. The PC Condition requires Baffinland to monitor Arctic char stock and health conditions.

Comment #	QIA 2022 NIRB M&AE# 24.
References	<p>Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board Main Body</p> <p>Section: 4.4 (Performance on General Terms and Conditions)</p> <p>Page: 46 (PDF p. 102 of 703)</p> <p>Section: 4.6.11 Marine Wildlife (PC Terms and Conditions 99 through 128)</p> <p>Page: 351 (PDF p. 407 of 703)</p>
QIA Comment	Project Certificate Condition (PC Condition) 10 (s. 4.4, pg. 46) requires that the Proponent keep and maintain all records of Project-related monitoring data for the life of the Project. Baffinland notes that it “keeps



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	and maintains all Project-related monitoring data and will continue to do so". Does Baffinland now have the raw data from the 2014/2015 aerial surveys that were flown by LGL Ltd? In the past we were told that these data were not available to Baffinland. Furthermore, regarding the Early Warning Indicator (EWI), the Annual Report states (e.g., s.4.6.11, pg. 351, pdf pg. 407 of 703) that " <i>a statistical analysis was not possible since the raw data from 2014/2015 aerial surveys were not available</i> ".
QIA Request	Baffinland to clarify whether it has access to all the raw data from the 2014 and 2015 aerial surveys flown by LGL Ltd on its behalf. If so, QIA recommends that EWI calculations using aerial survey results include a full statistical analysis.

Comment #	QIA 2022 NIRB M&AE# 25.
References	<p>Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board Main Body Section: 4.6.10 Marine Environment (PC Condition 76) Page: 269 to 278 (PDF p. 325 to 334 of 703)</p> <p>Document Name: Baffinland 2022 Annual Report to NIRB, Appendix G.6.9 MEEMP Section: 1.6 Conclusions and Recommendations Page: 21 (PDF p. 52 of 565)</p>
QIA Comment	WSP Canada Inc. is considering replacing Fukui traps with hoop nets on the basis that the latter capture more fish per sampling event (PDF p. 9). What other factors, such as the number of different species captured, are being considered in this decision as to whether to keep one or both sampling methods (i.e., might they be complementary)?
QIA Request	Baffinland to clarify what factors are being considered in its assessment of whether to continue using Fukui Traps.

Comment #	QIA 2022 NIRB M&AE# 26.
References	<p>Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board Main Body Section: 4.6.10 Marine Environment (PC Condition 88) Page: 310 to 314 (PDF p. 366 to 370 of 703)</p> <p>Document Name: Baffinland Iron Mines Corporation (Baffinland). 2023. Mary River Project – Sustaining Operations Proposal. [NIRB Registry: 08MN053_SOP_20230413 - 1_of_4_main_app1-3.pdf] Section: 6.5.3.3 NIRB Phase 2 Recommendation Report Findings Page: 188 (PDF p. 201 of 319)</p>



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	WSP Canada Inc. (WSP). 2023. Mary River Project – Sustaining Operations Proposal: Risk Assessment for Introduction of Aquatic Invasive Species from Ballast Water. Report No. 1663724-427-R-Rev1-77000. 17 April 2023. 19 p.
QIA Comment	<p>The updated “<i>Risk Assessment for Introduction of Aquatic Invasive Species [AIS] from Ballast Water</i>” ranked the relative level of AIS invasion risk posed by ballast water as intermediate, with a moderate to high level of uncertainty (WSP 2023, s.4.0, p. 16, PDF p. 22 of 25). This assessment factors in the use of both exchange and treatment of ballast water to reduce AIS risk, which is an important advance. However, it has had to rely on several correction factors and is not based on biological data from the ballast water of Project vessels.</p> <p>As part of its Sustaining Operations Proposal (SOP), Baffinland proposes to carry forward the following Phase 2 commitments related to AIS monitoring:</p> <ul style="list-style-type: none"> • “<i>Follow the most updated version of DFO’s AIS Rapid Response Framework in the event that a nonindigenous species is introduced and/or becomes established.</i> • <i>Work with the MEWG and DFO to establish species-specific Rapid Response Plans. Rapid Response Plans will be developed for species identified as high risk and placed on the Trigger List.</i> • <i>Implement a ballast water compliance sampling plan based on a risk-based targeting methodology to be developed in consultation with DFO and TC.</i>” (Baffinland 2023, s.6.5.3.3, PDF p. 201 of 319) <p>Referring to the AIS risk assessment, Baffinland has noted that “<i>Identifying and quantifying the actual proportions of harmful AIS present in the ballast water per each vessel would provide a more accurate estimate.</i>” (WSP 2023, s.4.0, p. 16, PDF p. 22 of 25).</p> <p>Biological and shipping data from the risk-based study involving DFO could provide these data and, together with the scientific literature, be used in the future to reduce uncertainty in the WSP (2023) risk assessment and thereby improve AIS risk mitigation. The updated risk assessment should incorporate information on:</p> <ul style="list-style-type: none"> • species presence and abundance in the ballast water, • proportion of number of invasive species identified in source ports, and • interannual variability in the source ports used by Project vessels <p>This material can reduce uncertainty and lead to better understanding of the sensitivity of the AIS risk assessment to these factors. Correction factors for exchange efficiency and treatment reduction of species entrained with ballast water should also be updated.</p>
QIA Request	Baffinland to:



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	<ul style="list-style-type: none"> a) Confirm its proposed commitment to carrying forward into the SOP the Phase 2 commitments listed above related to AIS monitoring. b) Commit to phase out use of Project vessels that are shown by risk-based biological studies of ballast water or hull fouling to pose the highest risk of introducing potentially invasive species into Project ports. c) Update the WSP (2023) risk assessment when results are available from the DFO risk-based biological study of Project vessel ballast water.
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Comment #	QIA 2022 NIRB M&AE# 27.
References	<p>Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board Main Body</p> <p>Section: 4.6.10, PC Condition 76</p> <p>Page: 269 to 278 (PDF p. 325 to 334 of 703)</p>
QIA Comment	<p>PC Condition 76 states, “The Proponent shall develop a comprehensive Environmental Effects Monitoring Program to address concerns and identify potential impacts of the Project on the marine environment.”</p> <p>QIA believes the information provided to be insufficient. Baffinland states, “Baffinland proposes not moving forward with tidal gauge monitoring in 2023 in favour of exploring alternative options to meet this Term and Condition using an indicator(s) other than Sea Level Rise (SLR).”</p>
QIA Request	Baffinland to provide updates regarding alternative options to monitor physical oceanography.

Comment #	QIA 2022 NIRB M&AE# 28.
References	<p>Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board Main Body</p> <p>Section: 4.6.10, PC Condition 77</p> <p>Page: 279 to 285 (PDF p. 335 to 341 of 703)</p>
QIA Comment	<p>PC Condition 77 states, “A Marine Environment Working Group (MEWG) shall be established as an advisory oversight body providing advice, guidance and enforceable recommendations to fulfill the intended objectives. The operation of the MEWG shall not duplicate or impede the exercise of regulatory authority of authorizing agencies or government. The MEWG shall have the following permanent members: The Proponent, the Qikiqtani Inuit Association, the Government of Nunavut, the Government of Canada, the Mittimatalik HTO, and the Hunters and Trappers Organizations of the other Impacted Communities (Arctic Bay, Clyde River, Sanirajak, Igloodik), should they wish to participate. Makivik Corporation shall also be entitled to membership on the MEWG at its</p>



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	<p>election. A Terms of Reference shall be established that guides the participation of observers. The MEWG shall be chaired by an independent third party as chosen by the permanent members. A revised Terms of Reference shall be presented to NIRB no later than December 15th, 2022, or at another date on consent of the Proponent, Canada, and the Qikiqtani Inuit Association."</p> <p>Baffinland states, "In its most recent draft Terms of Reference (ToR) for the Working Groups Baffinland presented a reasonable path forward that would result in meaningful changes to the Groups current structure, operational schedule, and ability to influence the Project. It is expected that this should improve Members' expectations, communication within the Group and outcomes. Baffinland will continue to engage with the Working Groups on the development of a revised Terms of Reference throughout 2023 in hopes of resolving any outstanding concerns raised by members to date."</p> <p>QIA agrees with Baffinland's assessment of compliance.</p>
QIA Request	Baffinland to utilize Adaptive Management and/or Monitoring, Learning, and Evaluation to implement changes to the Terms of Reference as well as expectations, communication, and outcomes.

Comment #	QIA 2022 NIRB M&AE# 29.
References	<p>Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board</p> <p>Section: 4.6.10, PC Condition 83</p> <p>Page: 293 to 295 (PDF p. 349 to 351 of 703)</p>
QIA Comment	<p>PC Condition 83 states, "The Proponent shall install tidal gauges at Steensby and Milne Port to monitor sea levels and storm surges."</p> <p>QIA believes the information provided to be insufficient. Baffinland states, "Baffinland recommends discontinuing tidal gauge monitoring in 2023 in favour of exploring alternative options to better meet the objective of this Term and Condition using an alternative climate change indicator other than Sea Level Rise (SLR) such as temperature and precipitation regime, or climate response variables such as ice cover and hydrologic response."</p>
QIA Request	Baffinland to provide updates regarding alternative options to monitor physical oceanography.

Comment #	QIA 2022 NIRB M&AE# 30.
References	<p>Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board</p>



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	Section: 4.6.10 , PC Condition 91 Page: 322-324 (PDF p. 378 to 380 of 703)
QIA Comment	PC Condition 91 states, "The Proponent shall develop a detailed monitoring plan for Steensby Inlet and Milne Inlet for fouling that complies with all applicable regulatory requirements and guidelines as issued by Transport Canada, and includes sampling areas on ships where antifouling treatment is not applied such as the areas where non-native species are most likely to occur." Baffinland states, "Ship hull surveys were not conducted during the 2022 open water season as an options analysis for hull fouling monitoring is in progress, following the conclusion that results from the three-year ROV-based ship hull biofouling program demonstrated that the ROV-based video surveys do not allow for adequate taxonomic resolution (to species-level) to achieve the program objective of identifying NIS/AIS due to the difficulty of identification of encrusting or small bodied taxa without collecting a specimen. Diver-based sample collection from hulls is also not possible due to health and safety concerns associated with diving on a berthed ship. As an alternative however, the settlement substrates deployed through Milne Port served to monitor for recruitment of encrusting species, similar to what may be present on ship hull biofouling." QIA agrees with Baffinland's assessment of compliance.
QIA Request	Baffinland to provide updates regarding new sample methodology for ship hull biofouling monitoring that improves taxonomic resolution and/or proven performance for settlement substrates as a proxy monitoring tool.

Comment #	QIA 2022 NIRB M&AE# 31.
References	Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board Main Body Section: 4.6.11 Marine Wildlife (PC Terms and Conditions 99 through 128) Page: 357 to 362, 365 to 372, 427 to 430 (PDF p. 413 to 418, 421 to 428, 483 to 486 of 703)
QIA Comment	The Nunavut Impact Review Board (NIRB) hosted a Marine Monitoring and Marine Mitigation Workshop in Pond Inlet on May 24 and 25, 2023. During Baffinland's presentation of material, it noted that, of 35 route deviations in total, two were vessels using the old shipping route near Bruce Head. In the Annual Report, Baffinland summarizes 2022 route deviations (e.g., PC Condition 102, 103, 105, 120, s. 4.6.11, pp. 357-362, 365-372, 427-430, PDF pp. 413-418, 421-428, 483-486 of 703), and highlights that there are established "no-go" zones to avoid key sensitive areas and



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	<p>hunting camp areas, including the western shoreline of Milne Inlet (e.g., PC Condition 105, 120). The Annual Report does not appear to describe the two route deviations that Baffinland highlighted at the 2023 Marine Monitoring and Marine Mitigation Workshop in Pond Inlet.</p> <p>What happened for these two deviations into established “no-go” zones to occur? Are any new procedures going into place to address this in the future and help ensure it does not occur again?</p>
QIA Request	Baffinland to provide additional information on the factors that led to two vessel deviations into “no-go” zones in 2022 and on any new procedures that have been or will be implemented to ensure it does not happen in the future.

Comment #	QIA 2022 NIRB M&AE# 32.
References	<p>Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board Main Body</p> <p>Section: 4.6.11 Marine Wildlife (PC Terms and Conditions 99 through 128)</p> <p>Page: 357 to 362, 365 to 372, 427 to 430 (PDF p. 413 to 418, 421 to 428, 483 to 486 of 703)</p> <p>Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board Appendix G.6.4 - 2022 Incidental Marine Mammal Sightings</p> <p>Section: N/A</p> <p>Page: N/A (one map page)</p>
QIA Comment	<p>Baffinland collaborates with the Marine Mammal Observation Network (MMON) to run a marine mammal incidental sightings program. Participating vessels include the MSV <i>Botnica</i>, Nordic Bulk Carriers and Oldendorff Carriers (see PC Condition 103, 106, 121, 122, 123). In 2022, 14 vessels (1 icebreaker and 13 ore carriers) participated in the MMON program and recorded marine mammal sightings in August and September. Half of the incidental sightings (50%) were made by the MSV <i>Botnica</i> in the Regional Study Area, and most sightings (67%) consisted of ringed seal (see Tables 4.28 and 4.29, also Appendix G.6.4 for a map of sightings). Overall, there were six reported sightings, of 12 individual marine mammals.</p> <p>This program has the potential to provide useful monitoring data, especially in years when the SBO program does not run, but uptake by shipping companies appears limited to date. The data summarized include numbers and locations only, and it is uncertain as to whether any</p>



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	conditions and trends in the north Baffin has been conducted. The cited sources, all published in 2012 and 2013, are also all missing the most recent decade of sea ice characteristics. Baffinland cites a number of studies related to shifts in species distributions for Arctic marine mammals and their prey. These studies are from research conducted in other Arctic regions, or global-scale assessments. All provide useful context for any assessment of environmental conditions as a factor in narwhal distribution changes, but do not provide information relevant to understanding how any recent environmental changes in Eclipse Sound and/or Admiralty Inlet might have affected narwhal distribution. Baffinland cites Chambault et al. (2022), who modeled changes in narwhal distribution in 2100 under several climate change scenarios, and states that the changes they predicted " <i>may already be underway in the Eastern Canadian Arctic and may affect Eclipse Sound and Admiralty Inlet differently</i> " (pp. 356 and 372, PDF pp. 412 and 428 of 703). While this may be true, no evidence is presented.
QIA Request	<p>Baffinland to provide an assessment of available information on external factors that it considers to be important drivers of narwhal abundance and distribution in Eclipse Sound and Admiralty Inlet (sea ice trends, sea surface temperature trends, etc.).</p> <p>Baffinland to highlight the specific passages in the IQ source transcripts it has cited that support significant unidirectional shifts as being part of a natural distribution process for narwhal in Eclipse Sound and Admiralty Inlet.</p>

Comment #	QIA 2022 NIRB M&AE# 35.
References	<p>Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board Main Body Section: 4.6.11 Marine Wildlife (PC Conditions 99 through 128) Page: 345 to 356 and 382-402 (PDF p. 401 to 412 and 438 to 458 of 703)</p> <p>Qikiqtaaluk Wildlife Board (QWB). 2022. Submission to the Nunavut Wildlife Management Board (NWBM). Regular Meeting No. RM 001-2022. 01 February 2022.</p> <p>Radtke, C.L., J. M. Terhune, H. Frouin-Mouy, and P.A. Rouget. 2023. Vocal count responses of narwhals to bulk carrier noise in Milne Inlet, Nunavut, Canada. Marine Mammal Science, online early. Accepted: 17 April 2023, First published: 24 May 2023. https://doi.org/10.1111/mms.13028</p> <p>WSP. 2023a. 2022 Bruce Head Shore-based Monitoring Program – Final Report. Ref No. 1663724-438-R-Rev0-63000. April 27, 2023.</p>



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	WSP. 2023b. Proportion of immature narwhal (early warning indicator) in Eclipse Sound and Admiralty Inlet from 2022 aerial survey imagery. Reference No. 1663724-432-TM-Rev0-59000. 27 April 2023. 15 p.
QIA Comment	<p>Unmanned Aerial Vehicles (UAVs) have been used for three years (2020-2022) of focal follow monitoring at Bruce Head (PC Condition 101, pp. 345-356, PDF pp. 401-412 of 703; PC Condition 109, pp.382-389, PDF pp 438-445 of 703). Findings from the 3-year dataset provide some evidence that narwhal groups with immature animals spend less time engaging in critical activities such as social behaviours. Specifically, the amount of time immature narwhal engaged in nursing behaviour declined when in the presence of a vessel (with 5 km of focal group) (WSP 2023a). The effect was not significant, likely due to low sample size and high variability. WSP (2023a) recommended that additional focal follow monitoring be conducted to increase sample size and statistical robustness. Baffinland echoes these recommendations (e.g., p. 356, PDF p. 412 of 703) in the Annual Report. Baffinland also notes that it plans to consult with the MEWG on increasing emphasis on the UAV survey component of the Bruce Head Project (p. 356, PDF p. 412 of 703). QIA notes that this consultation must occur soon if Baffinland hopes to increase UAV survey effort in 2023.</p> <p>Baffinland uses the proportion of immature narwhal as an Early Warning Indicator (EWI) (see PC Condition Nos. 109-112, pp. 382-402, PDF pp. 438-458 of 703; also WSP 2023b). During 2022, the proportion of immature animals in the 1,523 narwhal groups observed in the Bruce Head Behavioural Study Area (BSA) was significantly lower than the baseline condition (as it was in 2021). Analysis of larger-scale EWI data from photographic aerial surveys did not find the same pattern (although low sample sizes added to uncertainty) (WSP 2023b). When coupled with the results of the UAV-based focal follows (decrease in critical behaviours in groups with immature animals), these results suggest that calve rearing is down in Milne Inlet, and animals have moved elsewhere for critical aspects of their life history. IQ widely recognizes that narwhal will move as needed for their biological needs such as birthing, in response in factors such as food availability, predation pressure, and shipping traffic (QWB 2022). Baffinland's monitoring results (e.g., WSB 2023a, b) and Inuit observations and knowledge highlight the need for careful monitoring of Project-related effects on narwhal critical life history functions.</p> <p>A key question with respect to understanding Project shipping impacts on narwhal is whether animals will habituate to vessel noise, and PC Condition 109 (pp. 382-389, PDF pp. 438-445 of 703) requires that marine mammal noise disturbance monitoring be conducted for "a sufficiently lengthy period to determine the extent to which habituation occurs" for marine mammals including narwhal. A new peer-reviewed</p>



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	<p>study, one that uses Baffinland's Passive Acoustic Monitoring (PAM) data from 2018 and 2019 deployments and co-authored by Baffinland consultants, concluded that there was no evidence of habituation to bulk carrier noise (Radke et al. 2023). The study recommended that acoustic monitoring continue, which QIA supports. Additional efforts to engage with Inuit on their observations of changes to critical life history functions such as birthing or calf rearing are also required.</p> <p>QIA supports efforts to increase UAV-based focal follow effort as part of the Bruce Head program.</p>
QIA Request	<p>Baffinland to provide the MEWG with details on the increased UAV-based focal follow effort in the Bruce Head program in a timely fashion.</p> <p>Baffinland to continue acoustic monitoring and work with Inuit to advance understanding of the methodology.</p> <p>Baffinland to make additional efforts to solicit IQ on narwhal life history functions such as birthing or calf rearing, including Inuit observations of change.</p> <p>Baffinland to provide MEWG members with advance notice of impending scientific publications and report on their findings in annual reporting to NIRB once publication acceptance is known.</p>

Comment #	QIA 2022 NIRB M&AE# 36.
References	Document Name: Appendix G.4.1 2022 CREMP Report Section: 2.2.2.1 Sample Collection and Laboratory Analysis PDF Page: 32 of 229 and p. 7 of the document
QIA Comment	<p>Baffinland states, <i>"In situ measurements of water temperature, dissolved oxygen, pH, specific conductance (i.e., temperature standardized conductivity), and turbidity were taken mid-column at all lotic (i.e., stream) stations and as a vertical profile at one metre (m) intervals at each lentic (i.e., lake) water quality monitoring station during routine monitoring conducted by Baffinland personnel. These in situ measurements were also collected at the surface and bottom (i.e., approximately 30 centimetres [cm] above the water-sediment interface) at all lake benthic invertebrate community (benthic) stations during biological sampling conducted in August by Minnow personnel, except for turbidity."</i></p> <p>Turbidity measurements close to lake bottom would be of great importance to indicate if the probe and potentially water chemistry samples were influenced by unintentional sediment disturbances. Please reconsider the</p>



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	decision to not measure turbidity as part of in situ measurements for lake samples collected at benthic invertebrate community stations.
QIA Request	Baffinland to include turbidity measurements 30 cm above the water-sediment interface as part of the in-situ measurements for the benthic invertebrate program to assess if the probe or Kemmerer unintentionally disturbed the sediment during water quality collection.

Comment #	QIA 2022 NIRB M&AE# 37.
References	Document Name: Appendix G.4.1 2022 CREMP Report Section: 3.2.1 Camp Lake Tributary 2 (CLT2) Water Quality PDF Page: 82 of 222 or p. 57 of the document
QIA Comment	<p>Baffinland notes, “<i>In situ specific conductance was consistently higher at CLT2 compared to the reference creeks during spring, summer, and fall monitoring events (Appendix Figure C.1; Appendix Tables C.1 to C.3), and similarly was significantly higher at the CLT2 downstream area compared to the Unnamed Reference Creek during biological studies in August 2022 (Figure 3.4; Appendix Tables C.12 and C.19).</i>”</p> <p>Baffinland does not indicate if the significant difference in specific conductivity between the reference creeks and CLT2 suggests a mine related influence. While specific conductivity is not a parameter with an AEMP benchmark, the significant differences between reference and exposed area suggest a mine impact and should be discussed as such.</p>
QIA Request	Baffinland to provide a discussion on the significance of differences in specific conductivity between reference sites, impact sites and baseline data to determine potential mine effects.

Comment #:	QIA 2022 NIRB M&AE # 42.
References	Document Name: Appendix G.4.1 2022 CREMP Report Section: 5.1.1 Mary River and Mary River Tributary-F Page: 181 through 185 of the pdf Section: Appendix C Water Quality Data Pdf Page: 120 of 278 Figure C.23
QIA Comment	With regards to Mary River water quality Baffinland concludes, “Overall, no marked influences on water quality of Mary River were indicated in 2022 as a result of mine operations except for slight enrichment of nitrate and sulphate concentrations near the mine, albeit to levels that remained well below AEMP benchmarks.” However, in the same paragraph just above the conclusions Baffinland states, “Elevated concentrations of nitrate and sulphate in Mary River appeared to be associated with mine deposits to MRTF (e.g., MS-08 effluent), as indicated by elevated concentrations at station F0-01 (Appendix Tables C.58 and C.59). In addition to elevated concentrations of nitrate and sulphate at MRTF, of the parameters with



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	<p>established AEMP benchmarks, concentrations of total ammonia and cobalt were also slightly elevated (i.e., 3- to 4-times higher) compared to the G0-09 reference area in spring and summer, respectively (Appendix Table C.59; Appendix Figure C.23)."</p> <p>Based on Figure C.23 concentrations of nitrate at the near-field site appear to be on an increasing trend since 2019 suggesting a potential mine influence. In addition, average concentrations of nitrate at the F0-01 station were consistently higher than concentrations at the reference site by 4.2 to 122 times while sulphate concentrations were between 15 and 82 times higher at F0-01 than the reference site.</p> <p>These data suggest there is a mine influence on the Tributary of Mary River and the near-field sites in Mary River meeting the low action requirements. It is recommended that trend analysis be completed on the near field site data and a special investigation be undertaken for Mary River Tributary.</p>
QIA Request	<p>The available data on the Mary River Tributary and near-field sites in Mary River suggest there is a mine related impact in these areas. According to the adaptive management plan, this meets the requirements for low action trigger. A trend analysis and a special investigation should take place for these locations.</p>

Comment #	QIA 2022 NIRB M&AE# 38.
References	<p>Document Name: Appendix G.4.2 – 2022 Lake Sedimentation Monitoring Report</p> <p>Section: Appendix A - Table A.4: Statistical Comparison of Sedimentation Rate (mg/cm²/yr) among Sheardown Lake NW Stations for Ice-Cover 2021/2022 and Open-Water 2022 Periods, Lake Sedimentation Monitoring Study</p> <p>PDF Page: 29 of 38</p>
QIA Comment	<p>Baffinland refers to the Magnitude of Difference in Table A.4 while comparing sedimentation rates, based on the footnote this is not the magnitude of the difference (as stated) but rather the relative difference (as a percentage).</p>
QIA Request	<p>Baffinland to use appropriate units in tables. The units in the caption (mg/cm²/yr) do not apply here, instead they should be presented as (%) – this comment also applies to several subsequent tables.</p>



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Comment #	QIA 2022 NIRB M&AE # 44.
References	<p>Document Name: Appendix G.4.2 – 2022 Lake Sedimentation Monitoring Report</p> <p>Section: Section 3.1.2 Temporal Comparisons for the 2021/2022 Ice-Cover and 2022 Open-Water Periods</p> <p>PDF Page: 18 of 38</p>
QIA Comment	Baffinland notes <i>“The pattern in sedimentation rates at all Sheardown Lake NW study areas appeared to closely reflect patterns in dustfall reported for the Mary River Project Mine Site since 2014 as part of the dustfall monitoring program.”</i> No quantitative assessment was provided as the basis of this statement.
QIA Request	Baffinland to provide a quantitative comparison between the sedimentation rates observed at the Sheardown Lake NW study areas during the 2022 monitoring period and historical patterns to support statements made in the Lake Sedimentation Monitoring Report. A correlation analysis should be considered.

Comment #	QIA 2022 NIRB M&AE# 39.
References	Document Name: Appendix G.4.2 – 2022 Lake Sedimentation Monitoring Report Section: Section 2 - Methods PDF Page: 10 of 38
QIA Comment	Baffinland states “ <i>At SRC, the analysis of DBD was conducted using the pycnometer method.</i> ”
QIA Request	Baffinland to provide a reference and description for “the pycnometer method”.

Comment #	QIA 2022 NIRB M&AE# 40.
References	Document Name: Appendix G.4.2 – 2022 Lake Sedimentation Monitoring Report Section: Section 2 - Methods PDF Page: 10 of 38
QIA Comment	In Table 2.1, Station Depth (m) was recorded as “nc” – indicates data not collected. This is valuable information when conducting a lake sedimentation study.
QIA Request	Baffinland to provide a reason why station depths were not measured and reported? Please ensure that this information is recorded during future studies.

Comment #	QIA 2022 NIRB M&AE# 41.
References	Document Name: Appendix G.4.2 – 2022 Lake Sedimentation Monitoring Report



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	Section: Section 3 - Results PDF Page: 16 of 38
QIA Comment	Baffinland states “ <i>factors contributing to the occurrence of significantly similar sedimentation rate between the profundal area and one or both littoral areas was uncertain...sedimentation rates were significantly higher during open-water period than the ice-cover period...potentially caused by deposition of more allochthonous sediment from surface runoff/dust deposition or increased deposition of autochthonous organic material due to higher within-lake productivity.</i> ”
QIA Request	Baffinland to provide answers to the following questions: High (gross) sedimentation rates can occur because of wind-driven sediment resuspension; how was this controlled/corrected for? Is 1.5 m above the lakebed assumed to be sufficient to avoid this?

Comment #	QIA 2022 NIRB M&AE# 42.
References	Document Name: Appendix G.4.2 – 2022 Lake Sedimentation Monitoring Report Section: Section 3 - Results PDF Page: 16 to 21 of 38
QIA Comment	The results of statistical comparisons are described as significant or not-significant throughout the results section – it is not stated in the results or method sections what significant and not-significant means.
QIA Request	Baffinland to add a sentence to Section 2.4 that states the p value below which results are considered significant.
Comment #	QIA 2022 NIRB M&AE# 43.
References	Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board Main Body Section: 4.6.9 Birds (PC Terms and Conditions 65 through 75) Page: 256 to 261 (PDF p. 312 to 317 of 703) Section: 4.6.11 Marine Wildlife (PC Terms and Conditions 99 through 128) Page: 376 to 381 (PDF p. 432 to 437 of 703)
QIA Comment	PC Condition 74 (s.4.6.9, pg. 256, pdf page 312 of 703) requires that Baffinland conduct follow-up monitoring of multiple bird species including common and king eider (also see PC Condition 108, s. 4.6.11, pp. 379-381, PDF pp. 435-437 re: seaduck monitoring). What monitoring of eiders is being conducted along the Northern Shipping Route? Shoreline surveys have not been conducted since 2013, and the ECCC-supported work in East Bay is along the southern route. The Shipboard Observer (SBO) program has not run since 2019 (Covid-related in 2020 and 2021, heavy ice in 2022). What alternative methods for Common Eider and King Eider monitoring are being considered or conducted? Elsewhere in the Annual Report (e.g., PC Condition 107, s. 4.6.11, pp. 376-378, PDF pp. 432-434), Baffinland notes that they are supporting research by ECCC-CWS and various universities on a newly-funded



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	<p>exceedance locations, 4 were at Milne Port and 19 were along the Tote Road. Notably many (12) of the 20 sampling locations that did not exceed FEIS predictions were from stations where year-round sampling was not conducted and so annual dustfall values had to be extrapolated and added to the observed total. Despite these alarming results, Baffinland continues to downplay the results of dustfall monitoring, emphasizing that, in general total annual dustfall across the Project area in 2022 was within ranges observed in previous years (which also showed concerned dustfall results). In addition, Baffinland suggests that these results show that mitigation measures are working since production levels increased since last year, yet general annual dustfall in the project area is within the same range as previous years. Baffinland has not substantiated this hypothesis with data on the correlation between production activity and dustfall across the RSA. These results and conclusions are significantly concerning, as QIA and Inuit have repeatedly raised concerns about dustfall and urged the need to improve mitigation measures.</p> <p>PC Condition 10 states that the Proponent must update its Dust Management and Monitoring Plan, including (but not limited to) outlining plans for monitoring and identifying adaptive management measures when dust deposition is greater than predicted. While Baffinland has certainly made changes to this plan over the years in responses to exceedances and concerns raised (e.g., pilot of 0.5m dustfall monitors, implementing a dust audit, improving dustfall imagery analysis, etc.), QIA notes that the issue has not be fully addressed.</p>
QIA Request	<p>In response to continued exceedances of FEIS predictions at dustfall monitoring locations, Baffinland must prioritize additional measures to mitigate dustfall, including those previously committed to through other avenues of discussion with QIA (e.g., PIPR, SOP). These measures include commitments 18A through 22K made during the February 2023 meeting on dustfall as outlined in the updated commitments table transmitted by QIA in April 2023. In sum, these include (but are not limited to):</p> <ul style="list-style-type: none"> Establishing site specific thresholds for conditions that may increase dust dispersion, implementing corresponding mitigation (e.g., dust suppression, staged decrease in dust-generating site activities) and integrate these thresholds and response actions into the Air Quality and Noise Abatement Management Plan. This is to be done in collaboration with the TEWG (PIPR Commitments 18A, 18B) Refining application rates of Dustblokr in accordance with manufacturer instructions, continue ongoing communications with the manufacturer to verify application procedures, researching the viability of applying water to supplement Dustblokr, and providing QIA with a summary of modifications and outcomes (PIPR Commitment 19A)



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- Providing updates on blends of Dustblokr that will be used to help QIA determine potential toxicity concerns (PIPR Commitment 19B)
- Reporting on the effectiveness of the Dustblokr products for summer months, including information on quantity and frequency of dust suppressants used (PIPR Commitment 19C)
- Continually exploring and describing to QIA mitigations related to ore handling and drop distances in relation to Milne Port and the Mine Site (PIPR Commitment 20A, B)
- Progressing and providing QIA with updates regarding the feasibility studies on the installation of wind fencing, or alternative measures (e.g. applying spray product to ore to reduce dust emissions) at Milne Port (PIPR Commitment 20 C, D)
- Defining what operational practice improvements will be made to minimize dust from Milne Port based on the Dust Audit Report, clarifying with QIA how these will be implemented, and ensuring this is done without delay after receiving the necessary materials (PIPR Commitment 20E,F)
- Completing updated, seasonal dustfall isopleth modelling with consideration for local topography and wind patterns, reviewing alignment of modelling results with monitoring data, considering the use of active air quality monitoring, and providing QIA with updates on changes to monitoring (PIPR Commitment 21A)
- Resourcing annual snowpack sampling and monitoring through the Inuit-led dust monitoring program (PIPR Commitment 21B)
- Expanding dustfall monitoring sites to include areas of community concern, based on guidance from QIA and HTOs (PIPR Commitment 21C)
- Comparing monitored dustfall sites with FEIS predictions to confirm they meet their current low isopleth zone rankings and determining the spatial extent and magnitude of dust dispersion beyond the project area (PIPR Commitment 21D)
- Adding dustfall monitoring locations, determined based on the results of updated isopleth modelling to help evaluate long-distance dust dispersion (PIPR Commitment 21E)
- Developing a snow quality metric, integrating IQ as part of the development of Inuit OITRs (PIPR Commitment 21F)
- Adding dustfall monitoring sites along Milne Inlet to investigate increasing dust extent documented by satellite imagery from 20124 – 2020 (PIPR Commitment 21G)
- Expanding satellite imagery analysis beyond 20km (PIPR Commitment 21H)
- Completing a desktop study on dust duration on the land to identify locations that may experience longer term dustfall effects (PIPR Commitment 21J)



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	<p>Table 1-1 of the 2022 TEAMR notes that the next scheduled exotic invasive vegetation monitoring will occur in 2023, which will be four years since the last routine monitoring program covering a wide variety of locations occurred. While QIA notes that this is within Baffinland's specified 3–5-year interval, it would have been more prudent to monitor more frequently (every 3 years, therefore again in 2022) considering the most recent routine efforts detected an exotic invasive plant species, and due to the importance of swift detection and mitigation in successfully eradicating them. QIA also recognizes that no exotic invasive species were incidentally detected during 2022, but it is possible species were missed since targeted monitoring did not occur. It is QIA's perspective that routine exotic invasive species monitoring should occur every 3 years.</p> <p>In Section 4.6.6, Baffinland concludes, "given that year-over-year vegetation trends have shown that invasive plants do not appear to be a significant potential effect of concern, no targeted exotic invasive plant monitoring was conducted in 2022" (p. 201). QIA notes that this is an arbitrary conclusion since Baffinland has not specified a significance threshold for the potential effects of exotic invasive species.</p>
QIA Request	<p>Baffinland to determine a significance threshold for potential effects of exotic invasive species. Until this has been done, and the results of previous years monitoring have been determined to be under this threshold, Baffinland should commit to conservatively conducting exotic invasive vegetation species monitoring every 3 (rather than every 4-5 years) moving forward (e.g., in 2023, 2026, 2029, etc.).</p>

Comment #	QIA 2022 NIRB TE# 4.
References	<p>Document Name: Baffinland Iron Mines Corporation Mary River Project 2022 Annual Report to the Nunavut Impact Review Board</p> <p>Section: Section 4.6.6 – Vegetation Conditions (PC Condition 35)</p> <p>PDF Page: 212 of 703</p>
QIA Comment	<p>Respecting recommendations and lessons learned for PC Condition 35, in Section 4.6.6. Baffinland states that an HTO representative suggested increasing the payment that the Government of Nunavut (GN) provides to hunters for each samples to further encourage caribou organ tissue sample collection, namely from communities closest to the Project (e.g., Pond Inlet). The QIA notes that no samples from Pond Inlet were obtained in the 2021/2022 harvest season. QIA recognizes that it has been recommended that Baffinland defer to data from the GN's caribou health monitoring program to meet the requirements of PC Condition 35. From QIA's perspective, it is still within Baffinland's scope of responsibility to support GN with this program, including ensuring a sufficient supply of samples is provided.</p>
QIA Request	<p>Baffinland to make additional efforts to help increase uptake in the voluntary harvester sample program. This could include contributing</p>



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	funding to the GN's health monitoring program for caribou on Baffin Island to increase the sample payment amount from \$60 to \$120 for four (4) samples, as recommended by HTO representatives, or other measures deemed sufficient based on discussions with Inuit.
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Comment #	QIA 2022 NIRB TE# 5.
References	Document Name: Baffinland Iron Mines Corporation Mary River Project 2022 Annual Report to the Nunavut Impact Review Board; Appendix G.5.2 – Revegetation Survey and Preliminary Reclamation Trial – 2022 Project Update Section: Section 4.6.6 – Vegetation Conditions (PC Condition 39, 40) PDF Page: 218 to 219 and 220 to 221 of 703
QIA Comment	PC Condition 39 and 40 relate to measures that Baffinland should take to develop progressive revegetation of disturbed areas that are no longer required for project operations (e.g., use of test plots, reseeded, replanting, erosion control considerations). While it is not an explicit requirement of PC Conditions 39 or 40, QIA has previously requested that Baffinland involve Inuit and use IQ to inform reclamation pilot research, including defining reclamation goals, end land uses, reclamation techniques, and criteria/measurements to determine success. However, in Baffinland's reports on compliance with PC Conditions 39 and 40, there is no indication that they made any effort to involve Inuit or consider IQ in the 2022 revegetation surveying and reclamation pilot work. Appendix G.5.2. provides more detailed reporting on revegetation survey and preliminary reclamation trial activities completed in 2022, but again, does not include any indication that Inuit involvement or IQ was considered. Within the recommendations / lessons learned sections for these reports, there is no indication that Baffinland intends to do so in the future.
QIA Request	Baffinland to consider IQ and Inuit involvement in progressive and end of life reclamation planning activities. Baffinland is requested to identify whether and how Inuit will be involved in this work in subsequent years.

Comment #	QIA 2022 NIRB TE# 6.
References	Document Name: Baffinland Iron Mines Corporation Mary River Project 2022 Annual Report to the Nunavut Impact Review Board Section: 4.6.8 Terrestrial Environment (PC Condition 53, 54) PDF Page: 258 to 266 of 703
QIA Comment	PC Condition 53 b. requires Baffinland to implement monitoring and mitigation measures at points where the railway, roads, trails, and flight paths pass through caribou calving areas, particularly during caribou calving times, and that these measures should be developed in conjunction with the TEWG.



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	<ul style="list-style-type: none"> orientation of each remote camera deployed (e.g., north, east south, west); if relevant, proximity of each remote camera / HOL station to project components, including distance and type of component. QIA notes that project components within at least 500m should be reported; <p>This information should be used to quantify a maximum total viewshed for each camera and HOL station (a map of each remote camera viewshed, relative to the HOL viewshed would be also ideal) to assist with interpreting the findings of remote camera monitoring, including its spatial limitations.</p>
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Comment #	QIA 2022 NIRB TE# 9.
References	<p>Document Name: Baffinland Iron Mines Corporation Mary River Project 2022 Annual Report to the Nunavut Impact Review Board, Appendix G.5.1 – 2022 Final Terrestrial Environment Annual Monitoring Report</p> <p>Section: Section 4.6.8 – Terrestrial Environment (PC Condition 53); Section 10.4 – Remote Cameras</p> <p>PDF Page: 258 to 263 of 703; 106-112</p>
QIA Comment	<p>QIA has previously recommended that Baffinland take reasonable measures to prevent field of view obstructions due to blowing snow, ice, or fog. Examples provided to Baffinland in response to the 2021 TEAMR included installing a cover or shelf, using silica gel packs to prevent moisture build-up in cases, and applying anti-fogging products. There is no indication in Section 10.4 of the 2022 TEAMR that Baffinland attempted any of these measures and no rationale as to why they would be ineffective in the context of the Project has been provided in Baffinland's responses to QIA's 2021 TEAMR comments. As shown in Table 10-2 (p. 109) there are still a high number of days where the camera field of view is obstructed per remote camera and as such this is still a limitation on the method.</p> <p>While QIA acknowledges that weather events are beyond Baffinland's control, Baffinland should at least attempt to implement easy potential solutions or provide rationale and evidence that the proposed solution has not worked in the past in similar contexts. If the measures do not work, then this can be reported on in the following year's TEAMR. In addition, in Section 10.4.1, it is generally stated that cameras are to be periodically checked (2-4 times annually), but there is not reporting on how frequently each remote camera was checked in Section 10.4.2 or in Table 10-2, making it difficult to assess the level of reasonable effort to minimize non-active days.</p> <p>QIA notes that these issues contribute to the integrity Baffinland's overall program to monitor the potential effects of the project on caribou,</p>



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	including their avoidance of project components and calving areas. Until this, and other deficiencies related to the caribou monitoring program are addressed, QIA does not consider Baffinland to be in compliance with PC Condition 53
QIA Request	<p>To maximize remote camera monitoring data to provide insight on caribou avoidance of the project area and improve compliance with PC Condition 53, Baffinland to implement measures to minimize field of view obstructions due to snow, ice, or fog, including:</p> <ul style="list-style-type: none"> installing a protective case and shade on each deployed camera using silica gel packs to prevent moisture build-up within cases applying anti-fog products to camera lenses <p>QIA also requests Baffinland report on the number of times (and date) when each remote camera was checked (on a per camera basis), whether servicing was required, and if so, what type (e.g. removal of obstruction, battery replacement, SD card collection, etc.).</p>

Comment #	QIA 2022 NIRB TE# 10.
References	<p>Document Name: Baffinland Iron Mines Corporation Mary River Project 2022 Annual Report to the Nunavut Impact Review Board, Appendix G.5.1 – 2022 Final Terrestrial Environment Annual Monitoring Report</p> <p>Section: Section 4.6.8 – Terrestrial Environment (PC Condition 53); Section 10.4 – Remote Cameras</p> <p>PDF Page: 258 to 263 of 703; 106-112</p>
QIA Comment	<p>In response to the 2021 TEAMR, QIA requested that Baffinland deploy remote cameras at all 24 HOL stations (vs. a sample of only 6), or if this was not possible, to select locations based on the best available IQ and western science. Since the purpose of the remote camera monitoring is to capture supplemental data on caribou movement in relation to the Project, locations should be selected based on maximizing the potential for detecting caribou. Baffinland responded that it was not feasible to deploy cameras at all 24 HOL stations due to accessibility considerations, mainly with ongoing maintenance requirements in mind. However, Baffinland has not provided a rationale for why HOL stations 1, 3, 4, 6, 10, and 16, specifically, were selected. Was this based primarily on feasibility/accessibility or maximizing the potential for caribou detections? Did Baffinland explicitly verify these locations with MHTO prior to deploying cameras? In addition, are these six HOL stations the only ones that can be accessed as required for maintenance (per Baffinland, 2-4 times per year)? QIA notes that HOL stations 1 – 16 are generally accessed on foot (Section 10.3.1). Has Baffinland considered deploying remote cameras at HOL stations subject to access constraints in an effort to capture at least some data (e.g., during seasons when caribou are known to be calving or migrating). QIA notes that all HOL stations are at least accessible during some portions of the year (i.e., when HOL monitoring typically occurs in June) and that remote cameras</p>



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	<p>could be deployed at this time with the intention of collecting at least some data.</p> <p>QIA notes that these study design questions regarding remote camera locations contribute to QIA's overarching concerns regarding the effectiveness of Baffinland's overall program to monitor the potential effects of the project on caribou, including their avoidance of project components and calving areas. Until this, and other deficiencies related to the caribou monitoring program are addressed, QIA does not consider Baffinland to be in compliance with PC Condition 53</p>
QIA Request	<p>To respond to study design concerns regarding remote camera monitoring and improve compliance with PC Condition 53, Baffinland to provide the following:</p> <ul style="list-style-type: none"> a rationale for why HOL stations 1, 3, 4, 6, 10, and 16 were selected for remote camera monitoring. Please also confirm whether or not MHTO was asked to comment on the use of these HOL stations prior to remote camera program initiation. clarify whether HOL stations 1, 3, 4, 6, 10 and 16 are the only ones that can be accessed 2-4 times a year, as needed for remote camera maintenance. <p>Baffinland to make additional effort to deploy remote cameras at as many HOL stations as possible, even if this means only collecting data for limited periods of the year (due to maintenance inaccessibility).</p>

Comment #	QIA 2022 NIRB TE# 11.
References	<p>Document Name: Baffinland Iron Mines Corporation Mary River Project 2022 Annual Report to the Nunavut Impact Review Board, Appendix G.5.1 – 2022 Final Terrestrial Environment Annual Monitoring Report</p> <p>Section: Section 4.6.8 – Terrestrial Environment (PC Condition 53); Section 10.3 – Height of Land Surveys</p> <p>PDF Page: 258 to 263 of 703; 105</p>
QIA Comment	<p>QIA notes that Map 10-2 shows that Height of Land surveyors have a viewshed from the Tote Road, including in areas where there are gaps in the Height of Land station viewsheds. In Section 10.3.1, Baffinland states that, according to the viewshed model, a total of 227km² is surveyed, but it's not clear whether this includes the viewshed from both the Height of Land sites and from the Tote Road. There is no information in Section 10.3.1 on the amount of time spent surveying along the Tote Road, or what approach was taken in this portion of the total viewshed. QIA presumes these areas are surveyed by vehicle, in transit between HOL stations, with observers looking on either side of the road, not using equipment, etc. However, this isn't clear and needs to be confirmed. To confuse matters, QIA notes that in 2022, HOL stations were accessed</p>



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	<p>exclusively by helicopter due to weather, logistics, and safety considerations.</p> <p>QIA notes that these questions regarding HOL survey spatial scope contribute to QIA's overarching concerns regarding the effectiveness of Baffinland's overall program to monitor the potential effects of the project on caribou, including their avoidance of project components and calving areas. Until this, and other deficiencies related to the caribou monitoring program are addressed, QIA does not consider Baffinland to be in compliance with PC Condition 53.</p>
QIA Request	<p>To respond to concerns regarding HOL survey spatial scope and improve compliance with PC Condition 53, Baffinland to provide the following information regarding Height of Land survey effort:</p> <ul style="list-style-type: none"> • Confirmation that the 227km² viewshed includes viewshed from the Tote Road (not overlapped by HOL station viewshed) • An overview of the approach used to survey for caribou from the Tote Road (e.g., travel method, speed, number of surveyors, equipment used, etc.) • A summary of survey effort and results from the 2022 monitoring season specific to the Tote Road portion of HOL monitoring (e.g., number of caribou observed, number of transits completed, total observation time, etc.)

Comment #	QIA 2022 NIRB TE# 12.
References	<p>Document Name: Baffinland Iron Mines Corporation Mary River Project 2022 Annual Report to the Nunavut Impact Review Board, Appendix G.5.1 – 2022 Final Terrestrial Environment Annual Monitoring Report</p> <p>Section: Section 4.6.8 – Terrestrial Environment (PC Condition 53); Section 10.3 – Height of Land Surveys</p> <p>PDF Page: 258 to 263 of 703; 105</p>
QIA Comment	<p>In Section 10.3.2, Baffinland notes that two caribou were observed incidentally by Baffinland Environment Staff on June 11, while they were conducting other Project-related activities. It is also noted that these crew members did not have binoculars or a spotting scope but still documented caribou behaviour while within an observable. Baffinland makes a concluding statement that “the caribou did not show any obvious response or distress from vehicle traffic on the Tote Road”.</p> <p>QIA is concerned that the crew members who documented this incidental observation are not sufficiently qualified to understand and interpret caribou behaviour. Considering this and the fact that this was an incidental (not systematic) observation, the conclusion that caribou did not show any obvious distress should be interpreted within the appropriate context. QIA notes that Baffinland has used incidental data in the past to broadly conclude that the Tote Road does not affect caribou. While we acknowledge that systematic caribou surveys (e.g., remote</p>



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Comment #	QIA 2022 NIRB TE# 13.
References	<p>Document Name: Baffinland Iron Mines Corporation Mary River Project 2022 Annual Report to the Nunavut Impact Review Board, Appendix G.5.1 – 2022 Final Terrestrial Environment Annual Monitoring Report</p> <p>Section: Section 4.6.8 – Terrestrial Environment (PC Condition 53); Section 10.1 – Snow Track Surveys</p> <p>PDF Page: 258 to 263 of 703; 91-96</p>
QIA Comment	<p>As expressed in the past, QIA remains concerned that snow track surveys are insufficient for several reasons. This is a good example of a broader pattern where Baffinland has been dismissive of, or unwilling to implement, reasonable and relatively minor adjustments proposed by QIA. We reiterate the following concerns (and reasonable, minor recommendations), which were not effectively addressed by Baffinland in response to the 2021 TEAMR.</p> <p>First, QIA remains concerned about the study design of snow track surveys. QIA previously requested that Baffinland test the efficacy of these surveys by completing two simultaneously and comparing the results. Baffinland's response to this related to the need to complete surveys around the deposit of fresh snow. However, from QIA's perspective, instructions can be provided to surveyors to ensure they do not disrupt snowfall to the point that tracks are not identifiable. QIA maintains that efficacy testing should be done to assuage concern related</p>



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	<p>presence of wildlife sightings, but no such log has been provided or summarized. This makes QIA concerned that it is possible these effects are occurring and Baffinland is simply unaware of it due to monitoring program constraints.</p> <p>QIA has repeatedly requested the Baffinland provide evidence that wildlife are not harmed by blasting and to work with the MHTO and TEWG to evaluate concerns about the impacts of explosives on caribou and identify periods when explosive use is not permitted. Similarly to Baffinland's responses to many other concerns raised by QIA, there's no indication that Baffinland has made any targeted effort (e.g., outside of limited TEWG meetings with full agendas) to have these discussions in order to ensure compliance with PC Condition 60.</p>
QIA Request	<p>Baffinland must provide data logs to substantiate their claims that project personnel scan for and report wildlife presence (prior to blasting proceeding).</p> <p>Baffinland must also commit to undertaking targeted engagements with MHTO to evaluate concerns about the impacts of explosive use of caribou and identify periods when explosives may not be used.</p>

Comment #	QIA 2022 NIRB TE# 15.
References	<p>Document Name: Baffinland Iron Mines Corporation Mary River Project 2022 Annual Report to the Nunavut Impact Review Board; Appendix G.5.1 – 2022 Final Terrestrial Environment Annual Monitoring Report</p> <p>Section: Section 4.6.8 (PC Condition 59)</p> <p>PDF Page: 281 to 286 of 703</p>
QIA Comment	<p>Baffinland states that "Out of 2,691 transits flown from May to September, 112 (4%) intersected the Snow Geese area during the moulting season, and only 22 hours (1%) of a total flight time of 1,694 hours were flown within the Snow Geese area during the moulting season." (p. 284). This approach to reporting is highly misleading as it compares the amount of "rule breaking" (i.e., times when pilots flew over the Snow Geese area) to flight transits and hours that occurred during periods when this "rule" did not apply (i.e., May, June, September). Presenting results this way creates a significant underestimate of the proportion of time when Baffinland's helicopters were not in compliance with the 1,500m horizontal buffer portion of PC Condition 59. Baffinland should not be claiming credit for not breaking the rules during times when they were not applicable.</p>
QIA Request	<p>For subsequent TEAMR and NIRB AMR reporting, Baffinland should only express periods (transits and flight hours) of non-compliance with the 1,500m horizontal buffer around the Snow Geese area portion of PC Condition 59 relative to the periods when this rule was applicable. This will avoid significantly under-estimating non-compliance in year-end reporting to NIRB.</p>



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Comment #	QIA 2022 NIRB TE# 16.
References	<p>Document Name: Baffinland Iron Mines Corporation Mary River Project 2022 Annual Report to the Nunavut Impact Review Board; Appendix G.5.1 – 2022 Final Terrestrial Environment Annual Monitoring Report</p> <p>Section: Section 4.6.8 (PC Condition 59); Section 5 – Helicopter Overflights</p> <p>PDF Page: 281 to 286 of 703; 59-76</p>
QIA Comment	<p>QIA continues to disagree with Baffinland's approach to reporting on compliance with PC Condition 59, specifically that flights not adhering to vertical (650 or 1100 magl) and horizontal (1500m) restrictions are ultimately counted as compliant when accompanied by a rationale ("compliant with rationale"). QIA recognizes that the language of PC Condition 59 allows exceptions to account for unavoidable operational needs and pilot discretion regarding safety. However, these outcomes have consistently been closer to the rule than the exception, representing anywhere from 51.97 to 79.03 percent of all flights subject to 1100 magl cruising altitude requirements between 2017 and 2021, and anywhere from 40.94 to 68.73 percent of all flights subject to 650 magl cruising altitude requirements in the same period. Ultimately, the intent of PC Condition 59 is to minimize disturbance to breeding migratory birds and Snow Geese during their moulting period and, contrary to Baffinland's conclusions regarding compliance, this is not being met most of the time.</p> <p>QIA recognizes that health and safety is paramount and that there may not be feasible alternative measures to key project operations (such as slinging), but additional efforts must be made to investigate the impact this is having on breeding migratory birds and moulting Snow Geese. As shown on pg. 285, Baffinland has no plans to study migratory bird and snow goose response to helicopter disturbance.</p>
QIA Request	<p>When making conclusions regarding compliance with PC Condition 59, Baffinland may continue to count "compliance with rationale" as compliant but only when accompanied by clear qualifying statements that the exceptions in PC Condition 59 needed to be exercised and conservatively convey that this results in disturbance to migratory birds and snow geese.</p> <p>Baffinland to conduct research on the effect of non-compliance and compliance with rationale flights on migratory bird breeding and snow goose moulting. This should be captured in the "Recommendations / Lessons Learned" section of Section 4.6.8, PC Condition 59, Until this research has been conducted and findings demonstrate no significant impact of low-level flying, Baffinland must continue to conservatively assume and disclose that its operations are harmful to breeding migratory birds and snow goose moulting.</p>



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Comment #	QIA 2022 NIRB TE# 17.
References	<p>Document Name: Baffinland Iron Mines Corporation Mary River Project 2022 Annual Report to the Nunavut Impact Review Board, Appendix G.5.1 – 2022 Final Terrestrial Environment Annual Monitoring Report</p> <p>Section: Section 4.6.8 – Terrestrial Environment (PC Condition 63); Section 10.3 – Height of Land Surveys</p> <p>PDF Page: 290 to 291 of 703; 103</p>
QIA Comment	<p>QIA notes that 2022 represented the third consecutive year where Baffinland has not been able to confirm alternate locations for the HOL stations with the MHTO (the concern was first brought up in June 2019). Baffinland has never paired this note in the annual TEAMR with a summary of its efforts to work with MHTO to solve this specific issue, nor is there an indication that this occurred in 2022, per Appendix B.1 or C.2. Given the limited number of meetings, time constraints, and high number of items that often need to be discussed during TEWG meetings, this may not be the best avenue for obtaining guidance from MHTO on potential alternative HOL locations; additional engagement effort may be necessary.</p> <p>Until this known issue is actively addressed, QIA considers Baffinland to be out of compliance with PC Condition 63.</p>
QIA Request	<p>Prior to the commencement of the next HOL surveying period (presumably will be the 2024 program due to the timing of these responses), Baffinland must engage in specific and targeted efforts to review the HOL stations and consider alternative locations, as well as make reasonable efforts to address any barriers to having these discussions (e.g., funding, logistics, scheduling, acquiring / reviewing data sources, identifying candidate locations through desktop review/modelling, etc.). If this still cannot be done prior to the initiation of 2024 HOL surveys, Baffinland must provide a record of its attempts to mitigate the issue in order to demonstrate that it has attempted to maintain compliance with PC Condition 63.</p>

Comment #	QIA 2022 NIRB TE# 18.
References	<p>Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board Main Body</p> <p>Section: 4.6.8 Terrestrial Environment (PC Condition 57)</p> <p>Page: 214 to 219 (PDF p. 270 to 275 of 703)</p> <p>Document Name: Baffinland 2022 Annual Report to NIRB, Appendix G.5.1 TEAMR</p> <p>Section: 4 Climate</p> <p>Page: 7 (PDF p. 47 of 160)</p> <p>Section: 4.1.2 Milne Inlet</p> <p>Page: 11 (PDF p. 51 of 160)</p> <p>Section: 4.2.1 Mine Site, Figs. 4-5 and 4-6</p>



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	<p>Page: 14 and 15 (PDF p. 54 and 55 of 160)</p> <p>Section: 4.2.2 Milne Inlet</p> <p>Page: 15 (PDF 56 of 160)</p> <p>Section 4.2.2 Milne Inlet, Figs. 4-7 and 4-8</p> <p>Page: 17 (PDF p. 57 of 160)</p>
QIA Comment	<p>PC Condition 57 requires annual reporting of “<i>An assessment and presentation of annual environmental conditions including timing of snowmelt, green-up, as well as standard weather summaries</i>” (s.4.6.8, PDF p. 270 of 703).</p> <p>In 2022 winds at the Mine site were similar in strength and direction to those of the 2013-2021 means (s.4.2.1, Figs. 4-5 and 4-6, PDF p. 54 and 55 of 160). In contrast winds, at Milne Port were quite different in strength and direction than the 2013-2021 means (s.4.2.2, Figs. 4-7 and 4-8, PDF p. 57 of 160). Precipitation patterns at Milne Port were also different than the means, with July substantially drier and September “<i>most unusually rainy</i>” (both in depth and frequency) (s.4.1.2, p. 11, PDF p. 51). Baffinland considered the temperature and precipitation data to be accurate and reliable in 2022 (s.4, PDF p. 47 of 160) and the wind records were complete (s.4.2.2, PDF p. 56 of 160). These weather changes could have implications for the interpretation of other monitoring data.</p>
QIA Request	<p>Baffinland to clarify whether it considers changes to be natural or Project-related (e.g., changes in instrument reliability, location, etc), what factors may be driving these changes, and how the changes may alter the interpretation of other 2022 monitoring data.</p>

Comment #	QIA 2022 NIRB TE# 19.
References	<p>Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board Main Body</p> <p>Section: 4.6.8 Terrestrial Environment (PC Condition 57)</p> <p>Page: 214 to 219 (PDF p. 270 to 275 of 703)</p> <p>Section: 4.6.8 Terrestrial Environment (PC Condition 58)</p> <p>Page: 220 to 224 (PDF p. 276 to 280 of 703)</p> <p>Document Name: Baffinland 2022 Annual Report to NIRB, Appendix G.5.1 TEAMR</p> <p>Section: 6 Tote Road Traffic, Fig 6.1</p> <p>Page: 38 (PDF p. 78 of 160)</p> <p>Section: 8.3.3.2 Total Annual Dustfall, Figure 8-13</p> <p>Page: 85 (PDF p. 125 of 160)</p>
QIA Comment	Are the total annual ore shipment data presented in the 2022 Annual Report (Figure 4.7, PDF p. 273) and the 2022 TEAMR (Figure 6.1, PDF p. 78 of 160) figures the totals for marine shipping - as the ca. 4.7 Mtpa shipped in 2022 suggests, or are they the amounts transported by truck, which would be more informative for assessing the terrestrial impacts?



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	<p>The same uncertainty affects Figure 4.10 (PDF p.278) of the 2022 Annual Report, and Figure 8-13 (s.8.3.3.2, PDF p. 125 of 160) of the 2022 TEAMR which describes the "total ore shipped" axis in the caption as "total ore mined and hauled to Milne Port".</p> <p>Also in Figure 6.1, replacing the single box and whisker points for each year (i.e. total truck transits) with three box and whisker points in for each year (i.e., ore haul, no-ore haul, and total truck transits) would be much more useful for interpreting related impact data elsewhere in this report.</p>
QIA Request	<p>Baffinland to:</p> <ul style="list-style-type: none"> clarify whether the "ore shipped" in these figures is referring to truck transport or marine transport, provide a revised version of Figure 6-1 that includes annual box and whisker points for ore haul, no-ore haul, and total truck transits, and data on the amount of ore trucked to Milne Port during each calendar year, and provide a revised version of Figure 8-13 that includes data on the amount of ore trucked to Milne Port during each calendar year

Comment #	QIA 2022 NIRB TE# 20.
References	<p>Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board</p> <p>Section: 4.6.8, PC Condition 50</p> <p>Page: 193-197 (PDF p. 249 to 253 of 703)</p>
QIA Comment	<p>PC Condition 50 states, "The Proponent shall continue to develop and implement Project-specific monitoring for the terrestrial environment, and will demonstrate appropriate refinements to design, incorporation of analytical methods and elaboration of methodologies. The monitoring plan shall contain clear thresholds to allow for the assessment of long-term trends and cumulative effects where Project interactions are identified. Coordination and cooperation will be required where data collection, analysis and interpretation, or responsibility for mitigation and management requires the efforts of multiple parties (e.g., government, Qikiqtani Inuit Association, communities)."</p> <p>QIA believes the information provided to be insufficient. The objective of this PC Condition is "To ensure appropriate and responsive adaptive management." The report includes a detailed summary of the Terrestrial Environment Annual Monitoring Report (TEAMR), but only includes two mentions of indicators and thresholds and does not identify mitigation and management measures in the case that indicators or thresholds are triggered.</p>
QIA Request	<p>Baffinland to develop a more robust adaptive management program for project-specific monitoring of effects on the terrestrial environment. Adaptive management requires indicators, thresholds, and management</p>



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	<p>Document Name: Baffinland 2022 Annual Report to NIRB, Appendix G.5.1 TEAMR</p> <p>Section: 8.3.2.2 Seasonal Comparisons of 2022 Dustfall, Fig. 8-4</p> <p>Page: 74 (PDF p. 114 of 160)</p>
QIA Comment	<p>The y-axes are different on each panel of Figure 8-4, which illustrates the 2022 mean daily dustfall by site and month. This prevents direct comparisons and makes it unnecessarily difficult to compare the sites. The purpose of these figures should be to communicate the information clearly, not to have matching panels that obscure the fact that dustfall is much higher at the South Crossing and much lower at Milne Port than it is at the North Crossing or Mine Site. The same problem exists with the panels of Figures 8-5 and 8-6 (PDF p. 115).</p>
QIA Request	<p>Baffinland to provide figures that are directly comparable. QIA has requested this many times through NIRB Annual Report reviews and TEAMR reviews.</p>

Comment #	QIA 2022 NIRB TE# 23.
References	<p>Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board</p> <p>Section: 4.6.8, PC Condition 49</p> <p>Page: 188 to 192 (PDF p. 244 to 248 of 703)</p>
QIA Comment	<p>PC Condition 49 states, "The Terrestrial Environmental Working Group (TEWG) will provide advice, guidance and enforceable recommendations regarding: adding to and improving baseline information, mitigation measures for the protection of the terrestrial environment, monitoring of effects on the terrestrial environment, assessing the accuracy of impact predictions, the development and implementation of adaptive management plans, sharing of relevant Inuit Qaujimajatuqangit, scientific and/or technical knowledge and industry best practice, and, consideration of project changes that may be required to make sure the management of negative impacts is effective and that lasting damage to the terrestrial environment is prevented. The role of the TEWG is not intended to either duplicate or to affect the exercise of regulatory authority by appropriate government agencies and departments."</p> <p>Baffinland states, "In its most recent draft Terms of Reference (ToR) for the Working Groups Baffinland presented a reasonable path forward that would result in meaningful changes to the Groups' current structure, operational schedule, and ability to influence the Project. It is expected that this should improve Members' expectations, communication within the Group and outcomes. Baffinland will continue to engage with the Working Groups on the development of a revised Terms of Reference throughout 2023 in hopes of resolving any outstanding concerns raised by members to date."</p>



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Comment #	QIA 2022 NIRB SE# 2.
References	<p>Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board</p> <p>Section: 4.7.1, PC Condition 132</p> <p>Page: 459 to 460 (PDF p. 515 to 516 of 703)</p>
QIA Comment	PC Condition 132 states, “The Proponent is encouraged to partner with other agencies such as Hamlet organizations in the North Baffin region, the Municipal Training Organization, and the Government of Nunavut in order to adapt preexisting, or to develop new programs which encourage Inuit to continue living in their home communities while seeking ongoing



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	and progressive training and development. Programs may include driver training programs offered within Hamlets, providing upgraded equipment to communities for use in municipal works, providing incentives for small businesses to remain operating out of their community of origin, or supplementing existing recreational facilities and programming in North Baffin communities.”
	QIA agrees with Baffinland's assessment of compliance.
QIA Request	Baffinland to continue to expand upon the suite of programs which encourage Inuit to continue living in their home communities while seeking ongoing and progressive training and development.

Comment #	QIA 2022 NIRB SE# 3.
References	Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board Section: 4.7.1, PC Condition 133 Page: 461 to 464 (PDF p. 517 to 520 of 703)
QIA Comment	PC Condition 133 states, “The Proponent is encouraged to work with the Qikiqtaaluk Socio-Economic Monitoring Committee and in collaboration with the Government of Nunavut’s Department of Health and Social Services, the Nunavut Housing Corporation and other relevant stakeholders, design and implement a voluntary survey to be completed by its employees on an annual basis in order to identify changes of address, housing status (i.e. public/social, privately owned/rented, government, etc.), and migration intentions while respecting confidentiality of all persons involved. The survey should be designed in collaboration with the Government of Nunavut’s Department of Health and Social Services, the Nunavut Housing Corporation and other relevant stakeholders. Non-confidential results of the survey are to be reported to the Government of Nunavut and the NIRB.” Baffinland states, “In total, 55 surveys were completed. Applying the same methodology as used in the 2020 Inuit Employee Survey Report, based on the number of Inuit Project employees on staff in Q3 2022, the survey response rate was 18%. This compares to the 32.5% response rate achieved in 2020.” QIA agrees with Baffinland's assessment of compliance.
QIA Request	Baffinland to provide a nominal incentive to improve survey response rate.

Comment #	QIA 2022 NIRB SE# 4.
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	Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board Section: 4.7.1, PC Condition 134 Page: 465 to 468 (PDF p. 521 to 524 of 703)
QIA Comment	PC Condition 134 states, "The Proponent shall include with its annual reporting to the NIRB a summation of employee origin information as follows: a. The number of Inuit and non-Inuit employees hired from each of the North Baffin communities, specifying the number from each; b. The number of Inuit and non-Inuit employees hired from each of the Kitikmeot and Kivalliq regions, specifying the number from each; c. The number of Inuit and non-Inuit employees hired from a southern location or other province/territory outside of Nunavut, specifying the locations and the number from each; and d. The number of non-Canadian foreign employees hired, specifying the locations and number from each foreign point of hire." QIA disagrees with Baffinland's assessment of compliance. Baffinland does not provide the information required by this PCC. Specifically, Baffinland provides Full-Time Equivalents (FTE) for its employees and contractor employees with some community breakdowns but does not provide an annual indication of where people are being hired from. No information is provided for the Kitikmeot, or for non-Canadian foreign employees. It is not possible to compare predictions of labour availability and employment opportunities with actual levels of employment from various demographic segments over different geographical areas, per the objective of the PCC.
QIA Request	Baffinland to provide all required information identified in PC Condition 134. Baffinland to include all required information in future Annual Reports. QIA notes that this is the same request as last year.

Comment #	QIA 2022 NIRB SE# 5.
References	Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board Section: 4.7.2, PC Condition 135 Page: 470 to 471 (PDF p. 526 to 527 of 703)
QIA Comment	PC Condition 135 states, "The Proponent is encouraged to consider offering additional options for work/study programs available to Project employees (in addition to study programs at project sites that would be offered to employees when off shift)." QIA believes the information provided to be insufficient. Baffinland does not provide the information required by this PCC. Specifically, Baffinland



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	describes certain training offerings, including site-based, online and in communities, but does not describe any “work/study programs” for Project employees. It appears Baffinland considers this PC Condition met by virtue of the suite of training offered, but there is little evidence offered that the objective of the condition is being satisfied. Participation and outcomes for the training initiatives described are not provided.
	QIA notes this is the same comments as provided in the review of the 2020 and 2021 Annual Monitoring Report Reviews.
QIA Request	Baffinland to bring reporting into compliance with the PC Condition, by indicating where additional opportunities for work/study programs have been considered (if at all) and/or request how Baffinland is interpreting this condition, rather than repeating descriptions of its general suite of training and/or those trainings required under other agreements like the IIBA. QIA notes this is the same request as provided in the 2020 and 2021 Annual Monitoring Report Reviews.

Comment #	QIA 2022 NIRB SE# 6.
References	Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board Section: 4.7.2, PC Condition 137 Page: 475 to 476 (PDF p. 531 to 532 of 703)
QIA Comment	PC Condition 137 states, “Prior to construction, the Proponent shall develop an easily referenced listing of formal certificates and licences that may be acquired via on-site training or training during employment at Mary River, such listing to indicate which of these certifications and licences would be transferable to a similar job site within Nunavut. This listing should be updated on an annual basis and is to be provided to the NIRB upon completion and whenever it is revised.” The list provided by Baffinland does not indicate which certifications would be transferable to other employment. Baffinland states that training it provides is job-specific, which runs counter to the objective of this PC Condition; the objective being encouraging efforts to strengthen long-term employability beyond the Project. This is a legacy benefit that is important to Inuit and not being pursued adequately by Baffinland. QIA notes this is the same comments as provided in the review of the 2020 and 2021 Annual Monitoring Report Reviews.
QIA Request	Baffinland to provide a list of which training certifications and licences would be transferable to a similar job site within Nunavut.



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	QIA notes this is the same request as provided in the 2020 and 2021 Annual Monitoring Report Reviews.
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Comment #	QIA 2022 NIRB SE# 7.
References	<p>Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board Main Body</p> <p>Section: 4.7.2, PC Condition 141</p> <p>Page: 489 to 490 (PDF p. 545 to 546 of 703)</p>
QIA Comment	<p>PC Condition 141 states, "The Proponent is encouraged to work with the Qikiqtani Inuit Association prior to construction in order to prioritize the provision of training of Inuit to serve as employees in monitoring or other such capacities."</p> <p>QIA believes the information provided to be insufficient. Baffinland reporting does not specifically address what is being sought by NIRB through this PC Condition. Inuit being hired to serve as employees in monitoring or other such capacity is not addressed.</p> <p>QIA notes this is the same comment as provided in the 2020 and 2021 Annual Monitoring Report Reviews.</p>
QIA Request	<p>Baffinland to identify initiatives to provide training to Inuit to serve as employees for monitoring programs.</p> <p>QIA notes this is the same request as provided in the 2020 and 2021 Annual Monitoring Report Reviews.</p>

Comment #	QIA 2022 NIRB SE# 8.
References	<p>Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board Main Body</p> <p>Section: 4.7.3, PC Condition 142</p> <p>Page: 493-495 (PDF p. 549 to 551 of 703)</p>
QIA Comment	<p>PC Condition 142 states, "The Proponent is encouraged to address the potential direct and indirect effects that may result from Project employees' on-site use of various Inuktitut dialects as well as other spoken languages, specifically paying attention to the potential alienation of some employees that may occur as a result of language or other cultural barriers."</p> <p>QIA believes the information provided to be insufficient. Baffinland does not address the requirements in the PC Condition. While there is a policy and certain practices in place, they do not justify a claim that language barriers or alienation is proactively addressed. Baffinland relies on historical IIBA Workplace Conditions Review information as a source of</p>



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Comment #	QIA 2022 NIRB SE# 10.
References	<p>Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board</p> <p>Section: 4.7.3, PC Condition 145</p> <p>Page: 498-501 (PDF p. 554 to 557 of 703)</p>



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QIA Comment	PC Condition 145 states, "The Proponent is encouraged to work with the Government of Nunavut and the Qikiqtaaluk Socio-Economic Monitoring Committee to monitor the barriers to employment for women, specifically with respect to childcare availability and costs." QIA disagrees with Baffinland's assessment of compliance. Baffinland notes its Inuit Women Advisory Committee, including some actions and activities, that provides advice and suggestions on effective methods of reducing barriers for Inuit and female employees. However, the activities of the Inuit Women Advisory Committee are presumed to be based on a historical Arnait Action Plan, developed through the IIBA, that requires review and implementation through an Inuit Women-specific lens and not Inuit generally. Further, Baffinland notes that the QSEMC did not meet in 2021 or 2022.
QIA Request	Baffinland to provide details on activities of the QSEMC as it relates to a relative action plan for Inuit Women and childcare barriers as well as its relationship with Government of Nunavut and Baffinland's Inuit Women Advisory Committee.

Comment #	QIA 2022 NIRB SE# 11.
References	Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board Section: 4.7.3, PC Condition 147 Page: 503-504 (PDF p. 559 to 557 of 560)
QIA Comment	PC Condition 147 states, "The Proponent is encouraged to work with the Government of Nunavut and the Nunavut Housing Corporation to investigate options and incentives which might enable and provide incentive for employees living in social housing to maintain employment as well as to negotiate for and obtain manageable rental rates." QIA agrees with Baffinland's assessment of compliance.
QIA Request	NIRB to request that more details be shared with respect to the Memorandum of Understanding between Baffinland and the Government of Nunavut.

Comment #	QIA 2022 NIRB SE# 12.
References	Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board Main Body Section: 4.7.4, PC Condition 148 Page: 507-511 (PDF p. 563 to 567 of 703)
QIA Comment	The Proponent is encouraged to undertake collaborative monitoring in conjunction with the Qikiqtaaluk Socio-Economic Monitoring Committee's monitoring program which addresses Project harvesting interactions and



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References	<p>Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board</p> <p>Section: 4.7.5, PC Condition 154</p> <p>Page: 526-528 (PDF p. 582 to 584 of 703)</p>
QIA Comment	<p>PC Condition 154 states, “The Proponent shall work with the Government of Nunavut and the Qikiqtaaluk Socio-Economic Monitoring Committee to monitor potential indirect effects of the Project, including indicators such as the prevalence of substance abuse, gambling issues, family violence, marital problems, rates of sexually transmitted infections and other communicable diseases, rates of teenage pregnancy, high school completion rates, and others as deemed appropriate.”</p> <p>QIA believes the information provided to be insufficient. Baffinland presents information where available but does not describe efforts beyond the QSEMC process to develop indicators for the indirect effects where data does not currently exist. For example, no information is presented on gambling, marital problems, teenage pregnancy, or family violence. Understanding the QSEMC was unable to meet in 2021 or 2022, if the QSEMC process is not capable of producing community level data to advance discussion and solutions to these critical topics, this emphasizes the importance of advancing an Inuit-led social monitoring program. Further, if Baffinland is capable of using evidence to make VSEC predictions in an EIS, NIRB should ensure that the data is generated to monitor and assess Project impacts against these predictions. This speaks to a clear need for Inuit-led monitoring with direct links to adaptive management responses.</p> <p>QIA notes this is the same comment as provided in the 2020 and 2021 Annual Monitoring Report Reviews.</p> <p>In 2019, the National Inquiry into Missing and Murdered Indigenous Women and Girls released its Final Report, Reclaiming Power and Place, with 231 Calls for Justice, including Inuit, Métis and 2SLGBTQQIA+ specific Calls for Justice. It states, “In particular, the increasing rates of violence that ensue within the context of transient and temporary workforces are an issue that witnesses talked about as engaging many of the pathways to maintaining colonial violence documented so far in this Final Report,” and, “Moreover, extractive development can pose additional threats to Inuit women’s security, as the high number of transient workers at mining camps can create working and living</p>



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	environments where sexual harassment and abuse of Inuit women take place.” ³
QIA Request	Baffinland to consider Inuit-led monitoring programs to track potential indirect effects of the Project, filling in gaps the QSEMC process is not achieving. QIA notes this is the same request as provided in the 2020 and 2021 Annual Monitoring Report Reviews.

Comment #	QIA 2022 NIRB SE# 15.
References	Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board Section: 4.7.5, PC Condition 155 Page: 529-531 (PDF p. 585 to 587 of 703)
QIA Comment	PC Condition 155 states, “The Proponent is strongly encouraged to provide the NIRB with an updated report on its development of mitigation measures and plans to deal with potential cultural conflicts which may occur at site as these may become needed.” QIA believes the information provided to be insufficient. Baffinland does not provide NIRB with an updated report as strongly encouraged in the PC Condition. The initiatives that Baffinland describes are affirmative in that they seek to create conditions where conflict is less likely. However, Baffinland does not readily acknowledge that conflict is possible and describe actions that can be taken if conflict does arise. QIA notes this is the same comment as provided in the 2020 and 2021 Annual Monitoring Report Reviews.
QIA Request	Baffinland to bring reporting into compliance with the PC Condition by providing an updated report that includes a description of actions that can be taken if conflict arises. QIA notes this is the same request as provided in the 2020 and 2021 Annual Monitoring Report Reviews.

³ Crown-Indigenous Relations and Northern Affairs Canada, Reclaiming power and place: The final report of the national inquiry into missing and murdered indigenous women and girls, 589–599 (2019).



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Comment #	QIA 2022 NIRB SE# 16.
References	<p>Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board</p> <p>Section: 4.7.5, PC Condition 157</p> <p>Page: 534-535 (PDF p. 590 to 591 of 703)</p>
QIA Comment	<p>PC Condition 157 states, "The Proponent should consider providing counseling and access to treatment programs for substance and gambling addictions as well as which address domestic, parenting, and marital issues that affect employees and/or their families."</p> <p>QIA agrees with Baffinland's assessment of compliance. However, in the 2020 and 2021 NIRB Annual Reports, Baffinland indicated it would investigate the establishment of alcohol and narcotic anonymous programs at Project sites.</p>
QIA Request	<p>Baffinland to report on the status of alcohol and narcotic anonymous programs at Project sites in 2023 NIRB Annual Monitoring Report.</p> <p>QIA notes that this is the same request as last year.</p>

Comment #	QIA 2022 NIRB SE# 17.
References	<p>Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board Main Body</p> <p>Section: 4.7.6, PC Condition 159</p> <p>Page: 541-542 (PDF p. 597 to 598 of 703)</p>
QIA Comment	<p>PC Condition 159 states, "The Proponent is encouraged to work with the Government of Nunavut to develop an effects monitoring program that captures increased Project-related pressures to community infrastructure in the Local Study Area communities, and to airport infrastructure in all point-of-hire communities and in Iqaluit."</p> <p>QIA believes the information provided to be insufficient. There is no indication that an effects monitoring program is in place for community infrastructure and airport infrastructure. Rather this is covered through the work of the QSEMC and QSEMWG. Baffinland does provide data on the number of aircraft movements in point of hire communities and acknowledges that the Project puts "incremental pressure" on airport infrastructures but concludes that it is not significant given it represented only 8.4% of total movements in 2018. In the three years prior to 2020, when the pandemic significantly reduced airport traffic, traffic had been steadily increasing. This would have associated increases in direct and indirect impacts to the airports (and travelers), but this is not examined.</p>



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	QIA notes this is the same comment as provided in the 2020 and 2021 Annual Monitoring Report Reviews.
QIA Request	Baffinland to monitor and report on Project-related effects to community infrastructure and airport infrastructure. QIA notes this is the same request as provided in the 2020 and 2021 Annual Monitoring Report Reviews.

Comment#	QIA 2022 NIRB SE# 18.
References	<p>Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board Section: 4.7.7 Culture, Resources & Land Use (PC Condition 162 through 166) PDF Page: 602 to 616 of 703</p> <p>Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board, Appendix G.7.1, 2022 Socio-Economic Monitoring Report Section: 8, Resource and Land Use; Appendix B Socio-Economic Monitoring Indicators (related to PC Condition 148) Page: 82 (p. 102 of 210); PDF p. 568 to 569 of 703</p> <p>Document Name: Nunavut Impact Review Board Reconsideration Report and Recommendations for Baffinland's Phase 2 Development Proposal, May 2022. Section: 5.2.1.3 Food Security Page: 222</p>
QIA Comment	<p>Baffinland provides a summary of valued components, effects, observations made through monitoring programs, and a statement on whether impact predictions made in the FEIS are consistent with these observations (2022 AMR, Table 4.56, pp. 602 of 703). It is not clear how Baffinland has concluded the observed effects are consistent with the FEIS predictions for the following values:</p> <ul style="list-style-type: none"> • Inuit Harvesting of Wildlife • Travel and Camps <p>For example, Baffinland concludes that impacts to Inuit harvesting, and travel and camps are within the FEIS predictions because land user visits were recorded. As QIA has stated many times, land user visits do not adequately provide a proxy indication of total or even a small proportion of impacts on culture, resources and land use, especially if one considers the reasons visitors provided for the reason of their visit, e.g., hunting, collecting fuel, having a meal, repairing/picking up snowmobiles, etc. (Appendix G.7.1, p. 102 of 210). QIA continues to advance the studies that will help Baffinland and QIA better understand the effects to Inuit</p>



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	<p>harvesting and camps, but those studies are not complete so that information is not yet available.</p> <p>Inuit have observed in multiple forums that impacts have been greater than expected re: ability/willingness to drink water from the land, dust distribution, willingness to harvest, sense of enjoyment out on the land, amount of narwhal and seal and changing body condition, among other considerations.</p> <p>We know as well that the NIRB Phase 2 Recommendations Report has found that impacts on Inuit Harvesting of Wildlife are being reported by Inuit and these impacts are of a potentially significant nature. This is direct contradiction with the Proponent's statement that Inuit harvesting of wildlife has stayed within predictions made in the FEIS, which were of insignificant adverse effects on Inuit harvesting of wildlife.</p>
QIA Request	Baffinland to revisit its conclusions on FEIS predictions, considering the quality and type of data available as well as what Inuit are saying and observing re: changes to culture, resources and land use in multiple fora.

Comment #	QIA 2022 NIRB SE# 19.
References	<p>Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board Main Body</p> <p>Section: 4.7.7, PC Condition 162</p> <p>Page: 549-551 (PDF p. 605 to 607 of 703)</p>
QIA Comment	<p>PC Condition 162 states, "The Proponent should make all reasonable efforts to engage Elders and community members of the North Baffin communities in order to have community level input into its monitoring programs and mitigative measures, to ensure that these programs and measures have been informed by traditional activities, cultural resources, and land use as such may be implicated or impacted by ongoing Project activities."</p> <p>QIA agrees with Baffinland's assessment of compliance. However, efforts to obtain and include Inuit Elder and community member input into Project decision making is still a primary contributor to Inuit dissatisfaction with the Project. QIA acknowledges the improvements that have been made, and maintains that Inuit-led monitoring should be the primary focus. QIA acknowledges that advancement of Inuit Certainty Agreement implementation may help to rectify concerns.</p>
QIA Request	Baffinland to continue to advance Inuit-led monitoring programs that include a framework for tracking and integrating Elder and community



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	engagement, so community level input can be demonstrably integrated into Baffinland monitoring programs and mitigative measures.
	QIA notes that this is the same request as last year.

Comment #	QIA 2022 NIRB SE# 20.
References	<p>Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board Main Body</p> <p>Section: 4.7.7, PC Condition 163</p> <p>Page: 552-553 (PDF p. 608 to 609 of 703)</p>
QIA Comment	<p>PC Condition 163 states, "The Proponent shall continue to engage and consult with the communities of the North Baffin region in order to ensure that Nunavummiut are kept informed about the Project activities, and more importantly, in order that the Proponent's management and monitoring plans continue to evolve in an informed manner."</p> <p>QIA believes the information provided to be insufficient. Baffinland's ineffective efforts to provide Inuit with input into Project decision making is a primary contributor to Inuit dissatisfaction with the Project. It is QIA's hope that this is addressed through the Inuit Certainty Agreement.</p> <p>QIA acknowledges that Baffinland hired Inuit Knowledge Holders and Community Relations Guides toward the end of 2022.</p>
QIA Request	<p>Baffinland to Include in the report demonstrable evidence that Inuit Knowledge Holders and Community Relations Guides are informing the Project's management and monitoring plans as well as the public.</p> <p>Baffinland to advance Inuit-led monitoring programs</p>

Comment #	QIA 2022 NIRB SE# 21.
References	<p>Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board Main Body</p> <p>Section: 4.7.7, PC Condition 165</p> <p>Page: 557-558 (PDF p. 613 to 614 of 703)</p>
QIA Comment	<p>PC Condition 165 states, "The Proponent is strongly encouraged to provide buildings along the rail line and Milne Inlet Tote Road for emergency shelter purposes and shall make these available for all employees and any land users travelling through the Project area. In the event that these buildings cannot, for safety or other reasons be open to the public, the Proponent is encouraged to set up another form of emergency shelters (e.g. seacans outfitted for survival purposes) every 1 kilometre along the rail line and Milne Inlet Tote Road. These shelters must be placed along Tote Road and rail routing prior to operation of</p>



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	<p>either piece of infrastructure, and must be maintained for the duration of project activities, including the closure phase.”</p> <p>QIA believes the information provided to be insufficient. Baffinland has 4 refuge stations, and 11 sea can structures, which is far less than what is recommended in this PC Condition. No usage data or analysis is offered to suggest that what is in place is adequate aside from reporting that no Project related health and safety incidents with hunters and visitors occurred in 2022</p>
QIA Request	<p>QIA requests Baffinland provide usage data on existing emergency shelter purposes and an analysis on whether the number and location of shelters is adequate.</p> <p>QIA notes that the same request was made last year.</p>

Comment #	QIA 2022 NIRB SE# 22.
References	<p>Document Name: Baffinland Iron Mines 2022 Annual Report to the Nunavut Impact Review Board Main Body</p> <p>Section: 4.7.9, PC Condition 168</p> <p>Page: 565-567 (PDF p. 621 to 623 of 703)</p>
QIA Comment	<p>PC Condition 168 states, “The specific socioeconomic variables as set out in Section 8 of the Board’s Report, including data regarding population movement into and out of the North Baffin Communities and Nunavut as a whole, barriers to employment for women, Project harvesting interactions and food security, and indirect Project effects such as substance abuse, gambling, rates of domestic violence, and education rates that are relevant to the Project, be included in the monitoring program adopted by the Qikiqtani Socio-Economic Monitoring Committee.”</p> <p>QIA believes the information provided to be insufficient. Baffinland presents information where available but does not describe efforts beyond the QSEMC process to develop indicators for the indirect effects where data does not currently exist. For example, no information is presented on gambling, marital problems, teenage pregnancy, or family violence. Understanding the QSEMC was not able to meet in 2021 or 2022, if the QSEMC process is not capable of producing community level data to advance discussion and solutions to these critical topics, this emphasizes the importance of advancing an Inuit-led social monitoring program. Further, if Baffinland is capable of using evidence to make VSEC predictions in an EIS, NIRB should ensure that the data is generated to monitor and assess Project impacts against these predictions. This speaks to a clear need for Inuit-led monitoring with direct links to adaptive management responses.</p>

