

Keith Morrison
Manager, Project Monitoring
Nunavut Impact Review Board
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Sent via email: kmorrison@nirb.ca

May 7, 2025

RE: Baffinland Response to NIRB Monitoring Staff's 2023 Mary River Project NIRB Annual Monitoring Report Recommendations

Dear Keith,

Baffinland Iron Mines Corporation (Baffinland) has reviewed the recommendations and findings provided by the Nunavut Impact Review Board (NIRB) in its 2023 Annual Monitoring Report (the NIRB Report) for Baffinland's Mary River Project (the Project).

Baffinland's responses to the two recommendations and eight findings issued by the NIRB Monitoring Staff are available in Attachment 1.

Baffinland appreciates the effort of the NIRB and its staff in monitoring the Project and providing meaningful recommendations to ensure ongoing compliance with Terms and Conditions of Project Certificate No. 005.

Should you have any follow up questions on this submission, please do not hesitate to contact the undersigned.

Regards,

A handwritten signature in black ink, appearing to read "Cortney Oliver".

Cortney Oliver
Senior Manager, Environment, Social & Governance
Baffinland Iron Mines Corporation

Cc: Kelli Gillard (NIRB)
Megan Lord-Hoyle, Lou Kamermans, William Bowden (Baffinland)

Attachments

Attachment 1 – Baffinland Response to NIRB Monitoring Staff Recommendations

AREAS REQUIRING FURTHER STUDY OR CHANGES TO THE MONITORING PROGRAM—MONITORING OFFICERS RECOMENDATIONS			
Topic	Finding/Recommendation	Action	BIM Response
Annual Reporting	Board staff noted that as part of Baffinland's response to parties' comments on the 2023 Annual Report, Baffinland would be providing follow-up analysis and updates to specific inquiries.	Board staff expect these commitments to be tracked by Baffinland and suggests a summary table be provided within the 2024 Annual Report to the Board.	Baffinland maintains a commitment tracker that can be included in the 2024 Annual Report.
Caribou Aerial Survey Results	In the 2022-2023 Monitoring Report, the NIRB requested the results of the caribou aerial surveys be provided as soon as practicable. In the 2023 Annual Report, Baffinland highlighted the considerable efforts made to expand caribou monitoring in 2023, including completion of a caribou aerial survey; however, no results were reported Section 9.5 of the Aerial Caribou Survey of Appendix G.5.1 of the 2023 Annual Report. NIRB staff look forward to hearing the results of these surveys as part of the 2024 Annual Report.	Provide results of 2023 Aerial Survey	Baffinland will include this in the submission with the 2024 Terrestrial Environment Annual Monitoring Report.
Shipboard Observers (TC 106)	T&C 106 states that Baffinland shall ensure that shipboard observers are employed during seasons where shipping occurs and provided with the means to effectively carry out the duties. Baffinland noted that for the 2023 shipping season, shipboard observers were only hired for a 10-day period during the fall program using the Icebreaking vessels and that Baffinland continues to partner with the Marine Mammal Observation Network (MMON) to meet the intent of this term and condition. NIRB understands that during COVID-19 it was not possible to hire shipboard observers; however, now that the same barriers do not exist, Baffinland should aim to employ shipboard observers during all seasons and conditions. NIRB staff requests Baffinland provide an update on how it intends to expand this program and meet intent of T&C 106.	Describe expansion to Ship-based Observer Program	Baffinland will provide a more fulsome response in the 2024 NIRB annual report.
Dust Audit Committee (Tc187)	Term and Condition 187 requires the Proponent to complete an annual audit of dust impacts and mitigations associated with project activities by a third party and to provide a report to the NIRB no later than January 31st of each year. The dust audit was completed by Nunami Stantec with the involvement of the five (5) North Baffin communities and an update was submitted	Submit completed Dust Audit Committees annual audit of dust impacts and mitigations by January 31 st 2025	Baffinland is working with Nunami Stantec to ensure that reports are completed and submitted on time. Delays were largely due to committee availability for the site visit. Baffinland submitted the Dust Audit Committee report to the NIRB on March 10, 2025 and uploaded it to the NIRB registry on March 24, 2025.

	<p>to the NIRB in February 2023. In May 2024, Baffinland submitted correspondence providing a table with the status of the recommendations as outlined in the Recommendations Report from 2023; however, the Board has not received a finalized report outlining the committee's work for 2023. This was discussed with the Board through 2024, however a final report was unable to be provided and it was acknowledged that the update would serve as information for the 2023 year with a report being submitted for the following year. NIRB Staff are expecting a completed annual audit of dust impacts and mitigations associated with project activities by January 31st 2025.</p>		
Culvert Repairs	<p>Baffinland noted that perching culverts and blockages have been recurring at some culverts and in 2023 fish passage issues were reported at 17 of the 49 fish-bearing crossings assessed with some of the issues been ongoing and without remediation since at least 2020. The culverts have been addressed on an annual basis; however, there has not yet been a long-term solution in place. In 2022, DFO ordered Baffinland to take corrective action on several culverts along the Tote Road. During the September 2024 Site Visit, NIRB staff were notified that several of these repaired culverts had failed and needed to be repaired again. As this work is ongoing, NIRB staff are requesting a fulsome update in the 2024 Annual Report discussing the progress of these culvert repairs, lessons learned and a clear timeline for completing the work.</p>	<p>Include update of culvert repairs in the 2024 annual report</p>	<p>Fisheries and Oceans Canada (DFO) identified 20 culverts located on fish bearing streams along the Milne Inlet Tote Road as high priority for remediation due to one or more issues including perched culverts that impede fish passage, culverts that have inadequate flow capacity, and/or erosion and sedimentation issues within the February 5 2024 Corrective Measures Order. Baffinland retained Knight Piésold Ltd. (KP) to design permanent replacements for the 20 high priority water crossings, Engineering designs and Issued for Construction Drawings (IFC) were submitted within the Permanent Crossing Plan - Round CSP Culverts (KP, 2024a). On February 26, 2024, DFO indicated to the Nunavut Water Board (NWB) that their concerns with an earlier version of the previous Permanent Crossing Plan had been addressed. Baffinland performed a culvert remediation program from February to May 2024 which included the construction of 7 of the 10 round CSP culverts before the start of freshet. The construction experienced several challenges with implementing designs and permafrost and ice lens complications at select crossings.</p> <p>Following construction significant settlement of select culvert crossings was observed along the</p>

			culvert crossing alignments as result of suspected permafrost thaw. The discovery of these design challenges has warranted additional engineering work and collaboration with DFO, in order to ensure the unique North Baffin Island environment is well understood based on lessons learned in the field, and to ensure future functionality of culvert crossings. Further engineering work is currently being conducted with Stantec and an updated schedule that will incorporate lessons learned from historical failure modes within the timeline is planned to be submitted end of Q2 to DFO.
Baseline Year	<p>Currently, Baffinland is using DFO's 2013 data as the baseline data for narwhal abundance estimates when it has been recommended to Baffinland to use the 2004 data for the Eclipse Sound narwhal stock and use this data as the pre-project related impact baseline data. DFO has questioned Baffinland's use of 2013 as the baseline year for narwhal abundance, and QIA, along with other parties in the MEWG, also questioned the use of the 2013 narwhal abundance data as baseline. The Board notes that project related shipping in Eclipse Sound has been ongoing since 2006 and construction of the project started in 2013; with a significant increase in regional vessel traffic due to Baffinland shipping starting at that time. The NIRB further notes that baseline conditions for Project assessments are preproject activities; ongoing monitoring data that is collected is useful data to help determine trends, potential project effects and efficacy of mitigation measures as the Project evolves, however, the results of further monitoring should be considered in the context of the original baseline data as well.</p>	<p>Requesting that results of further monitoring should be considered in the context of the original baseline data.</p>	<p>Baffinland provided the MEWG with a detailed technical memo in November 2023 explaining the rationale for using 2013 as the baseline and not the data collected in 2004. The range of the confidence intervals for the narwhal population estimate in 2004 makes statistical comparisons with any future estimates extremely difficult. For instance, there is no statistically significant difference in the estimated narwhal abundance in Eclipse Sound between 2023 and 2004. The range in 2004 is between 9,471 narwhal and 37,096 narwhal. However, this is never presented as such. It is presented by most MEWG participants as a factual 20,225 narwhal – see Table 1 of Ocean North's response. Presenting it as such is misleading to community members. It insinuates that the population abundance has dropped in half when there's no clear way to determine if this is true.</p> <p>In addition, there's no way to determine the potential impact that shipping might have had on the abundance of narwhal in Eclipse Sound. Between 2005 and 2012, only 20 project-related vessels entered the RSA. During this same period, 231 non-Project vessels entered the RSA. To tell community members that Baffinland activity resulted in the narwhal abundance in Eclipse Sound to drop in half because of 20 vessels coming through</p>

			<p>the RSA over the course of 8 years is misleading on many levels.</p> <p>Baffinland has and will continue to include previous aerial survey results, including the 2004 results, in its discussions of more contemporary programs. However, the 2004 results will not be used as the pre-construction basis from which to compare current results for the purpose of determining potential project effects and the integrity of impact predictions.</p>
Ship Hull Surveys	<p>The NIRB notes that ship hull surveys of vessels coming into Milne Port have not been conducted since 2020 which is a requirement under Term and Condition 91. Baffinland noted that all vessels procured for the Project comply with the IMO International Convention on the Control of Harmful Anti-fouling Systems on Ships and the iron ore carriers commissioned for operations will be undertaking international voyages which will also require an International Anti-fouling System Certificate. The NIRB understands Non-Invasive Species (NIS)/Aquatic Invasive Species (AIS) surveys were conducted for Milne Inlet and that monitoring for NIS/AIS at Milne Inlet is one component to prevent impacts to marine quality; however, monitoring of ships prior to entry to Steensby Inlet and Milne Inlet is important to prevent introduction of aquatic invasive species especially in areas where the anti-fouling might be failing or where biofouling growth. NIRB staff note that the Proponent provide a discussion on how it will meet the requirements of T&C 91 including conducting underwater surveys of the hulls of the ore carriers every shipping season (for both Milne Inlet and Steensby Inlet).</p>	<p>Requesting BIM provide a discussion on how it will meet the requirements of TC 91 including conducting underwater surveys of hulls every shipping season for both Milne and Steensby.</p>	<p>Baffinland will provide a fulsome response in the 2024 NIRB annual report.</p>
Aerial Surveys	<p>It is noted that Baffinland did not conduct aerial narwhal abundance surveys in 2024 and have suggested reducing the surveys from annual to a 3-year schedule rather. Baffinland asserted that based on the 2023 aerial surveys, vessel traffic has not affected narwhal abundance and distribution. The Monitoring Officer notes that aerial surveys have been a key monitoring</p>	<p>No action recorded.</p>	<p>Baffinland provided rationale to the MEWG for why aerial surveys are not being done annually. Some of the key points are listed below.</p> <ul style="list-style-type: none"> 2023 Eclipse Sound narwhal abundance estimate was similar to the 2013, 2016 and 2019 abundance estimates. COSEWIC

	<p>tool that tracks changes in narwhal abundance and provides information to inform adaptive management and mitigation. The NIRB does not yet seen enough evidence to modify the status quo of annual aerial surveys that has been established in recent years.</p>		<p>designated the global population to be <i>Not at Risk</i> in May 2024.</p> <ul style="list-style-type: none"> This is not a modification in the rate of MMASP being conducted. This is a return to the original scheduling of every 3 years – 2013, 2016, 2019. The previous rate was modified because of results observed during a survey, along with a proposed change in operations. Past surveys results, as well as engagement with local hunters, have helped inform current mitigation measures. Conducting annual surveys for shipping operations at a reduced level, that being a return to the ERP number of vessels, will not further inform program mitigation measures. <p>The next planned aerial survey is 2026.</p>
FINDINGS—BOARD RECOMMENDATIONS			
<p>Recommendation 1: Dust Mitigations</p>	<p>Baffinland continues to apply mitigation measures to the dust generated at site through the application of liquid dust suppressant at the crusher facility. This is currently only being trialed at one (1) of the three (3) crushers; however, Baffinland has indicated positive results.</p>	<p>Recommendation 1: Baffinland provide a plan and timeline for using the liquid dust suppressant across all three (3) crushers at site with the 2024 Annual Report. The plan should also include a projected timeline for when monitoring would allow for better understanding of dustfall at site and when it is anticipated to fall within FEIS Addendum estimates.</p>	<p>Baffinland would like to note that it has already outfitted Crusher B with dust suppressant identical to the system at Crusher C. Ongoing operational improvements are being implemented to increase application consistency. Implementation at Crusher A has not been prioritized due to the fact that the increased moisture content of lump vs fines results in greatly reduced dust generation from lump production. Additionally, the different size of fracturing when crushed results in less dust produced from Crusher A, because the more the ore fractures, the more dust it potentially generates. Baffinland currently conducts a comprehensive dust fall monitoring program and conducts monitoring associated with the Air Quality Management Plan,</p>

			<p>which quantifies dust and air quality metrics from multiple monitoring programs onsite. FEIS predictions were generally in alignment with monitoring program data in 2024. It should be noted that FEIS predictions for the Project are based on monitoring data being generated from the Project boundary. Currently Baffinland monitors within the Project boundary and is researching methods and novel technologies to monitor further afield closer to the Project boundary as originally predicted.</p>
<p>Recommendation 2: Terms of Reference for Environment Working Groups</p>	<p>As noted in the previous NIRB monitoring report, considering the commitments made by Baffinland, their response to the NIRB's request from the 2022-2023 monitoring period noted that the last <i>draft</i> TOR for the MEWG was circulated to the working group in April 2023 with comments received on May 5, 2023. The most recent revised draft is still under internal review and will be finalized following final comments from the working group members and provided to the NIRB by early Q2 of 2024.</p>	<p>Recommendation 2: The Board expects the Proponent to complete the Terms of Reference for the MEWG and TEWG as well as the implementation of the third-party chairperson along with the submission of the 2024 Annual Report.</p>	<p>Baffinland submitted the Terms of Reference to the NIRB on February 3, 2025. Baffinland will provide both the English and Inuktitut Terms of Reference with the 2024 Annual Report.</p>