Appendix A: QIA Comments on Baffinland 2025 Annual Monitoring Report

General Comments (GC)

Comment #	QIA 2025 NIRB GC#1
Subject/Topic:	Management Plan Updates
References:	Appendix G.7 2025 Management Plan Updates Page:
QIA Comment	Appendix G.7 (2025 Management Plan Updates) of the Proponent's Annual Report submission states that "*Baffinland is currently undertaking a full review of management plan revisions and updates*", and includes a summary of the current state of plan revisions as of the date of submission of the NIRB Annual Report. There are 13 plans currently under review, across a number of subject areas (e.g., adaptive management, socio-economics, terrestrial environment, and marine environment). Some of these plans have not been updated since 2014-2016 (e.g., Spill at Sea Response Plan, Terrestrial Environment Mitigation and Monitoring Plan, Marine Monitoring Plan, Exploration Closure and Reclamation Plan).
QIA Conclusion/Request	QIA looks forward to working with the Proponent on reviewing plan updates and revisions, and recommends that Baffinland provide anticipated timelines for having the 13 plans identified as "*Under review*" in Appendix G.7 ready for intervenors.

Dustfall (DF)

Comment #	QIA 2025 NIRB DF#1
Subject / Topic	DusTreat trials
References	**Document Name:** Baffinland Iron Mines 2025 Annual Report to the Nunavut Impact Review Board **Section:** Appendix E - BIM Response to Comments on 2024 NIRB Annual Report, QIA 2024 NIRB DF#4 **Page:** p. 6
Comment	QIA previously requested that Baffinland provide information about their evaluation of the use of DusTreat at the crusher and ore stockpiles (QIA 2023 NIRB DF #6). QIA understands that the DusTreat trials are ongoing, iterative, and are not intended to be the only mitigations employed for dust management at the crusher. However, Baffinland has not provided an update on when the crusher and ore stockpile trials will be completed and when it will share the requested details of the trials for review and comment.
Conclusion/ Request	QIA requests that Baffinland: A. Share interim results of the trials for review and comment; and B. Provide an update on when the crusher and ore stockpile trials are expected to be completed and when final results will be shared with the TEWG.

Comment #	QIA 2025 NIRB DF#2
Subject/Topic:	Dustfall Mitigation Triggers

References:	Appendix G.4.4 Dust Audit Committee Section: 2.1 – Blasting; 2.4 – Dust Suppression Technology Page: 7, 12
QIA Comment	The 2025 Dust Audit describes the current dust suppression measures used along the Tote Road, which include application of calcium chloride flakes on the road surface, with periodic additions of water to re-activate the effectiveness of the calcium chloride at controlling dust. However, the audit did not clear describe the frequency of calcium chloride/water application, or the criteria used to determine when these mitigation measures are implemented. The Audit references Baffinland's Dust Control Trigger Action Response Plan (TARP) in reference to blasting operations, which specifies that blasting must be suspended during high wind conditions. However, it was unclear whether the TARP also contains quantitative (or qualitative) triggers for implementing dust suppression measures along the Tote Road. For example, it is unclear whether dust suppression activities are initiated based on dustfall monitoring results, wind speed thresholds/weather, visual observations of dust generation, or visible road surface conditions. Therefore, it was difficult to evaluate whether dust suppression measures were being applied consistently or proactively, or whether the current framework is sufficient to minimize dust generation/dustfall originating from a non-point source, which is more difficult to control once airborne.
QIA Conclusion/Request	Baffinland should provide additional details regarding dust suppression for the Tote Road, including: • the frequency that calcium chloride and supplemental water are applied to the Tote Road; • the quantitative/qualitative criteria used to determine when calcium chloride and supplemental water are applied (i.e., specific reference to where in the TARP this can be found); and, • and whether dust suppression activities are specifically tied to specific thresholds, such as dustfall monitoring results, wind speed, or visible observations of increased dust generation.

Comment #	QIA 2025 NIRB DF#3
Subject/Topic:	Dustfall Decreasing Overtime
References:	Appendix G.4.4 Dust Audit Committee Section: Figure 9 Page: 16
QIA Comment	Baffinland asserts in the Terrestrial Environment Annual Monitoring Report (2025) that "*the magnitude of annual dustfall deposition at the Mine Site sample locations continues to decrease*," in part due to DusTreat application at Crushers B and C, as well as dustfall mitigation measures along the mine haul road and airstrip. At Milne Port, dustfall was asserted to have remained constant or decreased slightly, with the highest deposition associated with ore stockpiles. Further, Baffinland stated that dustfall deposition had decreased across the Project Development area in 2025, as mine production had decreased, with a return to early revenue phase limits. Despite the efforts

	made by Baffinland to reduce dust generation, annual dustfall rates at near-field dustfall stations, as shown on Figure 9 of the Dust Audit Committee Report (P. 16), appeared to remain relatively consistent, or slightly decreasing, over the period of record. Therefore, it was unclear why dust generation did not show a marked decrease, despite enhanced dustfall mitigation measures at the Mine Site.
QIA Conclusion/Request	Baffinland should provide further analysis of trends in annual dustfall rates, total suspended particulate (TSP), and PM2.5 concentrations over the period of record, to substantiate their conclusion that annual dustfall deposition is continuing to decrease.

Comment #	QIA 2025 NIRB DF#4
Subject / Topic	Lichen-metal concentrations above lower indicator values
References	**Document Name:** Baffinland Iron Mines 2025 Annual Report to the Nunavut Impact Review Board **Section:** 4.6.6 **Page:** 146 **Section:** Appendix G 4.1 2025 Terrestrial Environment Annual Monitoring Report (TEAMR); Section 8.1.1.3 **Page:** p. 110 **Section:** Appendix G 4.1 2025 Terrestrial Environment Annual Monitoring Report (TEAMR); Section 8.1.2.2 **Page:** pp. 166 and 174 **Document Name:** Terrestrial Environment Mitigation and Monitoring Plan **Section:** Table 5.1 **Page:** pp. 48-49
Comment	QIA recognizes that while many lichen-metal concentrations in 2025 were below baseline, there were statistically significant increases in some contaminants of potential concern relative to baseline conditions, and some individual values were above lower lichen indicator values; specifically, lead was above the lower lichen indicator value at the near site for the Tote Road (p. 174), and copper was above the lower lichen indicator value at the near site for the Mine Site (p. 166). Baffinland has provided no indication of the responses they have undertaken based on the results of this monitoring. QIA understands based on the 2023 TEMMP that the moderate risk threshold is "*Exceedance of CCME soil quality guidelines and/or lichen indicator values for more than one COPC at more than one sample site in any Project area or distance class in any sampling year*" (pp. 48-49) and it is concerning that Baffinland has not provided any details of associated moderate risk responses. As well, QIA is concerned by Baffinland's summary of the lichen-metal monitoring included in the NIRB Annual Report. Specifically, Baffinland states that "*...all sample locations were below or within an acceptable range for lichen-metal concentrations.*" (p. 146). QIA understands that lichen indicator values were established to indicate when there may be "*...a potential for initial adverse effects on vegetation health.*" (p. 110). Lichen-metals concentrations being above the lower lichen indicator values at two sample sites should be

	stated clearly within the NIRB Annual Report and should not be considered an acceptable range for lichen-metal concentrations.
Conclusion/ Request	1. QIA requests that Baffinland provide details of the moderate risk responses they have undertaken based on the lichen-metal indicator values for lead at the near site for the Tote Road, and copper at the near site for the Mine Site seen in 2025. QIA expects that, if moderate or high risk thresholds are triggered in the future, details of subsequent responses will be provided in future TEAMRs. 2. QIA requests that Baffinland clearly states when lichen-metal samples show levels above the lichen indicator values in future NIRB Annual Reports.

Comment #	QIA 2025 NIRB DF#5
Subject / Topic	Dustfall monitoring reference sites
References	**Document Name:** Baffinland Iron Mines 2025 Annual Report to the Nunavut Impact Review Board **Section:** Appendix G 4.1 2025 Terrestrial Environment Annual Monitoring Report (TEAMR); Section 7.3.2.1 **Page:** p. 60 **Section:** Section 4.6.8 **Page:** p. 203 **Document Name:** Baffinland Iron Mines 2012 Volume 6 — Terrestrial Environment, Mary River Project, Final Environmental Impact Statement. **Section:** Section 5.2.1 **Page:** p. 141
Comment	Within the 2025 TEAMR, Baffinland states that dustfall deposition rates at the two reference sites (DF-RR-01 and DF-RR-02), were below the RDL (laboratory detection limit) in 2025 and in all previous years, and that these two sites should no longer be included in the monitoring program "...as no measurable concentrations have been recorded at these locations." (p. 60). QIA is concerned by this proposal as these sites provide valuable data to understand Project-related effects on caribou habitats. These two sites were established outside of the zone of influence noted by Boulanger et al. (2012). Without having data from these sites, it will not be possible to assess whether dustfall and impacts are extending beyond the zone of influence. The FEIS predicted that indirect effects on habitat would not extend beyond 14 km (p. 141). It is unclear how the removal of these locations would allow for compliance with Project certificate term and condition no. 57, which states that Baffinland will report annually on "*An explanation of the annual results relative to the scale of the natural variability of Valued Ecosystem Components in the region, as described in the baseline report*" (p. 203). Citations: Boulanger, J., K.G. Poole, A. Gunn, and J. Wierzchowski. 2012. Estimating the zone of influence of industrial developments on wildlife: a migratory caribou

	Rangifer tarandus groenlandicus and diamond mine case study. Wildlife Biology 18(2):164–179.
Conclusion/ Request	QIA requests that Baffinland continue to monitor dustfall levels at the two reference sites (DF-RR-01 and DF-RR-02).

Comment #	QIA 2025 NIRB DF#6
Subject/Topic:	Ambient Air Quality Monitoring Limitations
References:	Appendix G.1.1 2025 Air Quality Report Section: 3.3.1 – Mine Site Complex Ambient Air Quality Monitoring Station Page: 51
QIA Comment	At the MSC station, located on the roof of the main site complex and situated adjacent to the building's exhaust (and near other project infrastructure), total suspended particulate (TSP) concentrations reported in 2025 were consistently very high, with monthly values peaking at the same number (985 ug/m3) through the year. Baffinland indicated that elevated TSP measured at this station was "*primarily attributed to station siting as the station is in proximity to several localized dust sources*," suggesting that measurements may not be representative of broader ambient air quality conditions at the mine site. Baffinland installed a new Aeroqual station at the mine site and Milne Port boundary in late 2025, which reported lower particulate concentrations. While the influence of nearby dust sources may explain elevated TSP concentrations at the MSC station, the consistently high reading raises questions regarding the representativeness of data collected from this station. This issue is particularly important because, until the new Aeroqual station was installed in 2025, the MSC station was the only continuous air quality monitoring station at the mine site itself. Baffinland has acknowledged limitations associated with this station, including its age and location immediately adjacent to project infrastructure, which the new Aeroqual station at the project boundary was intended to address. However, given the size of the mine site (with several potential dust-generating locations/activities) and varying prevailing wind directions, it would be beneficial for Baffinland to install additional ambient air quality stations at other project boundaries (e.g., north and east). Furthermore, while dustfall passive monitoring stations are located at/near project boundaries, these stations do not measure TSP or $PM_{2.5}$, and these parameters do not appear to be monitored in proximity to major non-point sources of dust, such as the Tote Road and other haul roads. Non-point sources of dust associated with equipment/truck traffic can contribute substantially to particulate emissions (TSP, $PM_{2.5}$), particularly when the ground is not frozen. Fine particulate matter can remain suspended in the air for extended periods and may be transported considerable distances from source areas, making it difficult to characterize using solely dustfall monitoring, and are more challenging to control than discrete point sources. Expanding the particulate monitoring network would improve spatial coverage to include non-

	point sources, allow for better downwind monitoring, and reduce reliance on a single monitoring location in the event of equipment malfunction or data quality issues.
QIA Conclusion/Request	Given the acknowledged limitations of the MSC station, the current continuous air quality monitoring station (i.e., Aeroqual station), and the large spatial extent of the mine site, Baffinland should: • provide an evaluation of whether the current ambient air quality monitoring network is sufficient to characterize TSP and $PM_{2.5}$ at the mine site (and Tote Road/other haul roads) under varying wind directions/patterns, particularly to monitor non-point-sources of dust (i.e., equipment and truck traffic, hauling on the Tote Road). • The evaluation should consider the location of dust-generating activities (i.e., crushers, haul roads), changing prevailing wind patterns, the spatial coverage provided by the existing continuous and passive monitoring stations, and whether additional Aeroqual stations may be warranted at project boundaries and in areas influenced by non-point sources, for adequate ambient air quality characterization under varying wind directions.

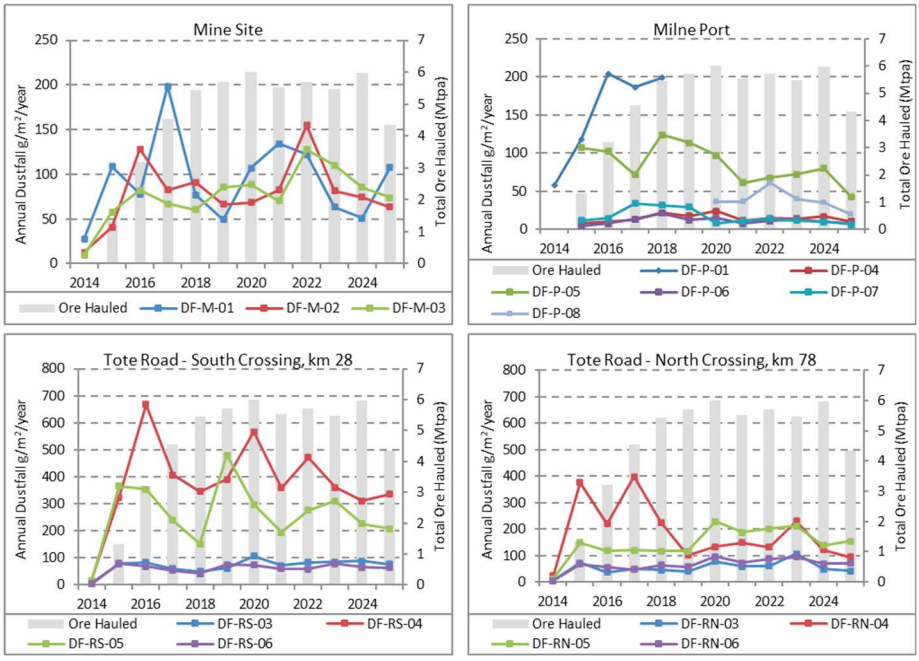
Comment #	QIA 2025 NIRB DF#7
Subject/Topic:	Dustfall Monitoring Locations – Prevailing Winds
References:	Appendix G.1.1 2025 Air Quality Report Section: 2.2.4 Wind Speed and Direction; Figure 1.3-1 Page:13, 28 (35 and 20 of 138)
QIA Comment	Figure 1.3-1 in the Air Quality Monitoring Report displays air quality sampling locations, including five dustfall monitoring locations positioned to the south and east of mine site project infrastructure (i.e., DF/PA-M-01- south of the airstrip; DF/PA-M-02 - adjacent to the landfill, landfarm and snow stockpile; and DF-M-03, -06, -07 and -08 – at/outside the PDA to the east of the project infrastructure), and several locations at and to the west of the Milne Port. However, there are no dustfall stations (or air quality monitoring stations) to the north of the active mining area (i.e., near KM 100 laydown area and associated haul roads), to the east of the Milne Port, or immediately adjacent to the Tote Road. Given that the prevailing wind direction in 2025 was stated to be from the north-northwest (in summer) and southwest (in winter) (and varies annually), it was unclear how dust generated during the winter would be effectively monitored/detected downwind of the dust-generating project infrastructure. No spatial interpretation of overall air quality in relation to prevailing winds was provided in the Air Quality Monitoring Report.
QIA Conclusion/Request	Baffinland should clarify why no air quality/dustfall monitoring stations are positioned to the north of project infrastructure (at the mine site), to intercept/monitor air quality and dustfall in the direction of varying prevailing winds patterns (i.e., predominantly from the southwest in winter 2025).

Comment #	QIA 2025 NIRB DF#8
Subject/Topic:	Mine Site Air Quality – Respirable Crystalline Silica
References:	Appendix G.1.1 2025 Air Quality Report

	Section: 1.3 Page: 12
QIA Comment	Air quality monitoring at the Mine Site infrastructure does not appear to include analysis of airborne dust for respirable crystalline silica. The Mary River Mine ore deposits consist of iron ore and banded iron formations, which contain quartz and silicate-bearing minerals, of which quartz is a source of respirable silica when disturbed through crushing, screening, and vehicle traffic on haul roads. Exposure to respirable silica is associated with serious and irreversible respiratory health effects, including (for example), silicosis and chronic obstructive pulmonary disease (COPD). It is unclear whether Baffinland has assessed the potential for respirable crystalline silica generation from mine operations or airborne particulate matter (i.e., through monitoring near significant dust-generating sources), and therefore, it was unclear whether the current air quality monitoring program adequately characterizes potential respirable silica exposure risks for workers and users of the surrounding environment.
QIA Conclusion/Request	Baffinland should clarify whether they have assessed the potential for respirable crystalline silica to be generated from mining, crushing, screening, stockpiling, or transportation activities at the mine site. Baffinland should provide any studies, risk assessments, or monitoring programs undertaken to evaluate respirable silica concentrations/risks associated with mine operations.

Comment #	QIA 2025 NIRB DF#9
Subject/Topic:	2022 Dustfall Predictions
References:	Appendix B – BIM Responses to Comments 2024. Attachment 2 – Dustfall Distance Prediction Section: Attachment 2: Dustfall Distance Prediction Page: 124 of 225
QIA Comment	In 2023, in response to QIA's Information Request 21D (requesting comparisons of seasonally monitored dustfall to FEIS predictions, to confirm that they meet their current low isopleth ranking, and determine the spatial extent and magnitude of dust dispersion), Baffinland conducted a model-based analysis, to make predictions regarding expected dustfall at distant reference areas for each of the project areas (as these stations do not have year-round data). While QIA is pleased that Baffinland has more comprehensively predicted mean daily dustfall in reference areas (>1000 m) from the project area, Baffinland has not contextualized this data by comparing dustfall rates to the low isopleth ranking, as previously requested in IR 21D (2022). Therefore, it is unclear if the reported daily dustfall predictions at reference locations fall within acceptable/previously-predicted concentrations.
QIA Conclusion/ Request	Please contextualize the predicted daily dustfall concentrations at the reference stations by comparing predicted dustfall concentrations to previous modelled predictions (i.e., the previously-reported high and low isopleth rankings), to ensure that predicted dustfall farther away from the project area based on 2022 data is not exceeding previous predictions.

Comment #	QIA 2025 NIRB DF#10

References	**Document Name:** Baffinland Iron Mines 2025 Annual Report to the Nunavut Impact Review Board, Main Document [260529-08MN053-2025 Annual Report-IR2E.pdf] **Section:** 4.6.8 Terrestrial Environment, PC Term and Condition No. 58, Figure 4.10 **Page:** 209 (pdf p. 211 of 560)
QIA Comment	Figure 4.10 depicts annual dustfall and ore shipping trends from 2014 to 2025. The top panels of this figure, Mine Site and Milne Port, have an Annual Dustfall y-axis that extends from 0 to 250 g/m^2/year but differ in height. In the lower panels, Tote Road South Crossing, km 28 and Tote Road – North Crossing, km 78, the y-axis extends from 0 to 800 g/m^2/year. Each panel is the same size, so a peak on the lower panel represents over 3x the dustfall as a peak of similar height on the upper panel. This obscures direct comparison and thereby relative magnitude. A better, more transparent approach to illustrating these data would be to use the same y-axis range and height on all four panels, keeping all panels the same dimensions as one another but extending them vertically to ensure separation of the lines with lower dustfall.  Figure 4:10: Annual Dustfall and Ore Shipping Trends from 2014 to 2025
QIA Request	QIA recommends Baffinland ensure figures that are intended to facilitate comparison are designed to enable direct comparisons. The Y-axis should be maintained to facilitate those comparisons whenever possible.

Terrestrial Environment (TE)

Comment #	QIA 2025 NIRB TE#1
Subject / Topic	Updated baseline data for waterfowl

References	**Document Name:** Baffinland Iron Mines 2025 Annual Report to the Nunavut Impact Review Board **Section:** Appendix E - BIM Response to Comments on 2024 NIRB Annual Report, QIA 2024 NIRB TE#5 **Page:** p. 33
Comment	QIA previously requested (QIA 2024 NIRB TE#5) that Baffinland undertake roadside and railside waterfowl surveys around the Mine site, southern railway route, and Steensby Port to help understand current conditions and potential Project effects once construction and operations of the southern railway and Steensby Port commence. However, Baffinland states that bird occurrence along the rail route was sufficiently addressed in the FEIS project baseline conditions (EDI 2011) and that there is nothing to suggest that bird distributions have changed since that time. The baseline data in the FEIS are now 15 years old. QIA does not agree with Baffinland's assertion that there is no evidence to suggest that bird distributions have changed since that time. For example, snow goose staging areas on Baffin Island have experienced strong warming and an increase in primary productivity (Berner et al., 2020). During the period when snow geese are present in spring, these Arctic stopovers have warmed by at least 1 to 2°C, enough to potentially advance snowmelt and improve feeding conditions for geese. As well, the midcontinent population of snow geese, which includes snow geese on Baffin Island, has seen declines since the peak population levels in 2013 (US Fish and Wildlife 2019). These population declines and the dynamic nature of this environment warrants updated baseline studies to understand current conditions. This is important to help to ensure potential adverse effects are monitored and appropriately mitigated. Citations: Berner, L.T., Massey, R., Jantz, P., Forbes, B.C., Macias-Fauria, M., Myers-Smith, I., Kumpula, T., Gauthier, G., Andreu-Hayles, L., Gaglioti, B.V. and Burns, P. 2020. Summer warming explains widespread but not uniform greening in the Arctic tundra biome. Nature communications. 11(1): 4621. EDI Environmental Dynamics Inc. 2011. Bird Baseline Report: Appendix 6E, Volume 6 — Terrestrial Environment, Mary River Project, Final Environmental Impact Statement. Prepared for Baffinland Iron Mines Corporation, Toronto, Ontario. 99 pp. U.S. Fish and Wildlife Service. 2025. Waterfowl population status, 2025. U.S. Department of the Interior, Washington, DC, USA. 69 pp. Accessed from: https://www.fws.gov/media/waterfowl-population-status-2025
Conclusion/ Request	QIA again requests that Baffinland undertake roadside and railside waterfowl surveys around the Mine site, southern railway route, and Steensby Port to help understand current conditions and potential Project effects once construction and operations of the southern railway and Steensby Port commence. This will help to ensure potential adverse effects are monitored and appropriately mitigated.

Comment #	QIA 2025 NIRB TE#2
Subject / Topic	Inconsistencies in wildlife mortality data

References	**Document Name:** Baffinland Iron Mines 2025 Annual Report to the Nunavut Impact Review Board **Section:** Appendix E - BIM Response to Comments on 2024 NIRB Annual Report, QIA 2024 NIRB TE#15, QIA 2024 NIRB TE#16 **Page:** p. 38 **Section:** Table 4:22 **Page:** p. 230-231 **Section:** Section 4.7.4 **Page:** p. 434 **Section:** Appendix G 4.1 2025 Terrestrial Environment Annual Monitoring Report (TEAMR); Section 11 **Page:** p. 236 **Document Name:** Baffinland Iron Mines 2012 Mary River Project Final Environmental Impact Statement Volume 6 Terrestrial Environment **Section:** Section 4.8 **Page:** pp. 108-111
Comment	QIA is concerned by the loon mortality in 2025 (see table 4:22), where an individual was tangled in a net intended for other aquatic surveys. A similar loon mortality also occurred in 2024 (QIA 2024 NIRB TE#15). Regarding the 2025 mortality, Baffinland noted "...*the effect is within FEIS predictions*." (p. 231). This contradicts the FEIS which notes that "*direct mortality of any individual loons due to Project activities is not expected*…" (p. 110). QIA is once again concerned by Baffinland's inaccurate reporting of FEIS predictions. As well, QIA is concerned by the lack of detail regarding the mortalities, as both the ptarmigan and loon mortalities were not identified to the species level and no explanation was provided as to why species level identification was not possible. Also, no map was provided showing the locations of these mortalities. Having information on the species that are impacted will provide a better understanding of Project effects (Red-throated loons were more common than yellow-billed loons in the baseline surveys), and location information can assist in understanding if there are consistent locations where mortalities occur and where further mitigations maybe useful. Similarly to the 2024 reporting (QIA 2024 NIRB TE#16), there appears to be inconsistencies in the number of mortalities reported in the TEAMR and the NIRB report. Specifically, the TEAMR states that 14 mortalities occurred (p. 236), while the NIRB Annual Report states that 11 mortalities occurred between April 2024 and March 2025, including one arctic char mortality, which was not mentioned in the TEAMR (p. 434). Based on the information provided by Baffinland it remains unclear currently how many mortalities occurred during 2025.
Conclusion/ Request	QIA requests that Baffinland: 1) Update the statement in Table 4:22 to state that the bird mortalities were not within FEIS predictions.. QIA expects that future TEAMRs and NIRB Annual Reports will not continue to include similar misrepresentations of FEIS predictions.

	2) Provide mapping of the location of wildlife mortalities from Project activities (e.g., aquatic surveys) and Project related effects (e.g., building collisions). 3) Provide further details of the species identification of the loon and ptarmigan mortalities or provide rationale as to why species level identification was not possible. QIA requests that species level identification or rationale as to why species level identification was not possible will be provided as part of future TEAMRs should mortalities occur. 4) Provide details of the actual number of wildlife mortalities that occurred in 2025 and provide rationale for the differences presented in the TEAMR and NIRB Annual Report.

Comment #	QIA 2025 NIRB TE#3
Subject / Topic	Regional caribou population levels
References	**Document Name:** Baffinland Iron Mines 2025 Annual Report to the Nunavut Impact Review Board **Section:** Table 4:18 **Page:** p. 180
Comment	Within Table 4:18 Baffinland states that "*The regional caribou population is currently too low to assess potential effects with confidence; confidence will increase as the population grows.*" (p. 180). This statement does not align with the recent findings in Government of Nunavut's recent caribou survey on Baffinland Island (Campbell et al. 2025), and does not align with the findings of the 2023 late winter aerial survey (EDI 2023) or the associated monitoring triggers (i.e., >350 caribou; EDI 2022). QIA is concerned these statements in the NIRB Annual Report misrepresent Baffinland's current ability to evaluate impacts of the Project on caribou. Citations: Campbell, M., J Boulanger, J Ringrose, K Shoftstall, J Waldinger, M. Fredlund, and E. Greene. 2025. Aerial Abundance Estimates and Trends of the Barren Ground Caribou (Rangifer tarandus groenlandicus) of Baffin Island Nunavut – March 2024 and 2025. pp. 131. EDI. 2022. Baffinland Iron Mines 2021 Annual Report to the Nunavut Impact Review Board Appendix G.23: Caribou Monitoring Triggers and Recommendations Report. pp. 28 + app. EDI. 2023. 2023 Late-Winter Aerial Caribou Survey [PRELIMINARY] Summary Report. pp. 18 + app.
Conclusion/ Request	QIA requests that Baffinland update the language provided in table 4:18 to clearly state that the regional caribou population has grown and that population effects can now be monitored and eventually evaluated.

Comment #	QIA 2025 NIRB TE#4
Subject / Topic	Inconsistencies in wildlife mortality reporting
References	**Document Name:** Baffinland Iron Mines 2025 Annual Report to the Nunavut Impact Review Board **Section:** Appendix E - BIM Response to Comments on 2024 NIRB Annual Report, QIA 2024 NIRB 2024 TE#16 **Page:** pp. 38-39 **Section:** Appendix G 4.1 2025 Terrestrial Environment Annual Monitoring Report (TEAMR); Figure 11-2 **Page:** p. 248
Comment	QIA previously commented (QIA 2024 NIRB TE#16; QIA 2023 NIRB TE#9) that the number of mortalities attributed to collisions with building / infrastructure in 2023 appears to be erroneous. Baffinland responded to say the figure was incorrect. It appears that Baffinland has still not resolved this issue in the 2025 TEAMR.
Conclusion/ Request	QIA requests that Baffinland provide in their response to this comment an updated version of Figure 11-1 that accurately shows the number of mortalities associated with collisions with buildings in 2023, and that this updated version is used in future TEAMRs.

Comment #	QIA 2025 NIRB TE#5
Subject / Topic	Limited details provided for the 2025 reconnaissance surveys
References	**Document Name:** Baffinland Iron Mines 2025 Annual Report to the Nunavut Impact Review Board; Appendix G 8.2 2025 Steensby Rail Terrestrial Reconnaissance Summary Report **Section:** Section 1; Section 2.1; Section 2.2, Map 2; Section 3.3.1; Section 3.3.2 **Page:** pp. 1, 3, 4, 16, 20, and 21 **Document Name:** Baffinland Iron Mines 2012 Volume 6 — Terrestrial Environment, Mary River Project, Final Environmental Impact Statement' Appendix 6C Vegetation Baseline Report **Section:** Section 3.2; Figure 5; Figure 6 **Page:** p. 6
Comment	Baffinland states the following about the 2025 terrestrial reconnaissance surveys:"*The 2025 reconnaissance survey locations were informed by the 2006 to 2011 baseline surveys; field data capture was used to confirm the existing conditions and, if/where required, update the Project's environmental inventory for terrain, soil, vegetation, and wildlife along the Steensby Railway.*" (p. 1). Based on the content provided in the report, it remains unclear how comparable the survey results are to those completed as part of the FEIS. Baffinland notes that 32 sites were surveyed as part of the terrain soil and vegetation survey, but provides no details of the locations of those 32 survey sites (Map 2; p. 16) compared to sites surveyed as part of the FEIS (i.e., Figure 5 and Figure 6). As well, Baffinland notes that three 1 m x 1 m vegetation plots were used as part of these surveys (p. 3), and provides no rationale for how these results will be comparable to the FEIS, which used 5 m x 5 m plots (p. 6).

	Baffinland also notes that bones, droppings, antler sheds, tracks, and seven sightings of caribou occurred during the surveys, but did not provide any maps showing the locations of these caribou signs or observations (p. 20 These spatial data would be helpful in understanding areas of potential use by caribou in addition to the caribou trails map. Baffinland also notes that multiple bird species were observed during the reconnaissance surveys, but provides no maps of these observations. These data could be useful for understanding potential current use of the railway corridor by these bird species. As well, Baffinland provides no indication of how the results of these surveys will be used in anticipation of the Steensby railway corridor being constructed (e.g., for identifying additional caribou trails where crossings should be established during construction).
Conclusion/ Request	QIA requests that Baffinland: 1. Provide a map showing the locations and overlap between the 2025 reconnaissance vegetation survey sites and the FEIS vegetation survey sites; 2. Provide rationale for the change in survey plot sizes between the 2025 reconnaissance vegetation survey sites and the FEIS vegetation survey sites; 3. Provide a map showing the locations of the bones, droppings, antler sheds, tracks, and seven sightings of caribou observed during the 2025 reconnaissance wildlife surveys; 4. Provide a map showing the locations of incidental observations of bird species observed during the 2025 reconnaissance wildlife surveys; and 5. Provide details of how Baffinland will use these collected data to inform mitigations during the construction and operations of the Steensby railway corridor.

Water and Sediment Quality (WSQ)

Comment #	QIA 2025 NIRB WQS #1
Subject/Topic:	Data Presentation
References:	**Document Name:** Appendix G.1.6 Tote Road Fish Habitat Monitoring 2025 Annual Report **Section**: Section 3.2 Water Quality Monitoring of Baseline Fisheries Culverts and Tables and Figures **Pages:** 14 and 31-114
QIA Comment	Section 3.2 states that water quality monitoring data are presented in Table 2. Table 2 presents nearly 100 pages of raw data. The data are difficult to review because of the amount and the presentation. Also, no statistical analysis has been completed therefore no differences can be identified. Graphing the data and using statistical analysis to identify differences between sites, over years would be useful. Also, numerous cells in the table are missing values with no explanation given. Reasons for missing data should be given.
QIA Conclusion/ Request	Water quality data should be presented in graph format, supported by appropriate statistical analysis, to evaluate differences over time and across

	locations. This approach should be implemented as a standard component of all future annual reports to improve data interpretation and transparency. In addition, future reporting should consistently include clear explanations for any missing data (e.g., sampling errors, access limitations, or environmental conditions), to ensure completeness of the dataset and to support accurate assessment of monitoring results.

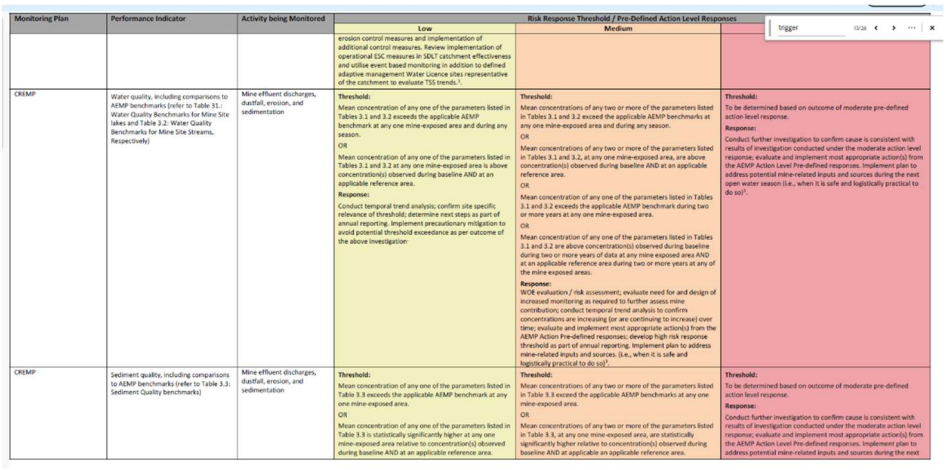
Comment #	QIA 2025 NIRB WQS #2
Subject/Topic:	Consistency of TARP Framework Implementation
References:	**Document Name:** Appendix G.3.1 Mary River Project 2025 Core Receiving Environmental Monitoring Program Report Part 1 **Section:** 2.3.3.2 Special Investigations **Page:** 51-53 and 206 of 503
QIA Comment	Concentrations of iron in the sediment of Sheardown Lake Northwest trigger an action response in 2023, 2024 and 2025 (Table 2.7). In 2025, observations included concentrations exceeding the AEMP benchmark. Further, similar to the trend analyses conducted for Sheardown Lake NW in 2024, the trend analyses completed for 2025 identified significant increasing trends in mean iron concentrations in sediments since baseline (2007 to 2025) and over the mine operation period (2015 to 2025). Repeated exceedances of the AEMP benchmarks or above concentration(s) observed during baseline AND at an applicable reference area during two or more years at a single mine-exposed area meet the Trigger Action Response Plan (TARP) criteria for a Medium Action level. Notwithstanding this, the CREMP classifies the response for sediment iron as a Low Risk Response, with recommended actions generally limited to continued monitoring, trend analysis, and source investigation. The actions outlined in the CREMP are broadly consistent with components of a weight-of-evidence evaluation; however, they do not fully align with the prescribed Medium Action response requirements in the current TARP framework (Version 3, 2026). Specifically, the CREMP does not clearly commit to: • evaluation and implementation of predefined AEMP management actions; • development of a high-risk response threshold for sediment iron; and • implementation of measures to address mine-related inputs and sources within defined operational timeframes. The apparent discrepancy between the observed exceedance pattern and the assigned action level introduces uncertainty regarding the consistent application of the TARP framework. While the report attributes elevated iron concentrations largely to natural geologic background conditions and characterizes effects as localized, statistically significant increases and repeated exceedances suggest that potential mine contributions cannot be conclusively ruled out without application of the full Medium Action response.

	Failure to apply the appropriate action level response reduces confidence that the assessment framework is adequately bounding potential mine-related effects and may delay implementation of proactive mitigation or management measures.
QIA Conclusion/Request	**TARP Alignment:** Demonstrate alignment between observed conditions and the assigned action level by: • clearly documenting the rationale for classifying sediment iron exceedances as Low Risk where Medium Action criteria are met; or • revising the action level classification to be consistent with the TARP triggers. **Implementation of Medium Action Requirements:** Incorporate, at a program level, the full suite of Medium Action responses for parameters exhibiting repeated benchmark exceedances, including: • formal weight-of-evidence (WOE) / risk assessment focused on sediment iron; • evaluation and implementation of appropriate AEMP predefined management actions; • development of high-risk response thresholds for sediment parameters within annual reporting; and • development of a structured plan to identify and address mine-related sources (e.g., tributary inputs such as SDLT1, runoff, and dust deposition), with defined timelines for implementation during operational periods.

Comment #	QIA 2025 NIRB WQS #3
Subject/Topic:	Consistency of TARP Framework Implementation
References:	**Document Name:** Appendix G.3.1 Mary River Project 2025 Core Receiving Environmental Monitoring Program Report Part 1 **Section:** 3 Camp Lake System; Sheardown Lake System; Mary River and Mary Lake System; **Page:** 74 – 300 of 503
QIA Comment	The application of Trigger Action Response Plan (TARP) classifications in the 2025 CREMP is not consistent with Version 3 of the TARP (Baffinland, 2026). The CREMP continues to use the term “Moderate Action Response” rather than the current terminology “Medium Action Response,” creating uncertainty regarding whether the latest approved framework has been applied. In addition, the assignment of Medium Action Responses does not appear to be based on a systematic evaluation of all applicable trigger criteria. The TARP defines a Medium Action Response to include conditions such as: • exceedance of AEMP benchmarks by two or more parameters within a mine-exposed area; or • mean concentrations of any two or more parameters exceeding both baseline and reference conditions at any one mine-exposed area; or

	• repeated exceedances of AEMP benchmarks by a single parameter across multiple years; or • mean concentration of any one parameter above concentration(s) observed during baseline and applicable reference area during two or more years at any of the mine exposed areas. Several examples identified in the CREMP (e.g., uranium in CLT1 Upper Main Stem; copper, nitrate, and uranium in SDLT1; and dissolved copper in Sheardown Lake NW) appear to meet one or more of these criteria. However, the report does not clearly demonstrate that all relevant triggers (e.g., multi-parameter or multi-year exceedances) were evaluated and documented when assigning action levels. The CREMP recommendations also do not consistently incorporate the full suite of required responses outlined in the TARP: • For Low Risk Responses, the required action to "implement precautionary mitigation to avoid potential threshold exceedance" is not included. • For Medium Action Responses, recommendations do not consistently include evaluation and implementation of predefined AEMP actions, development of high-risk response thresholds, or implementation of plans to address mine-related sources. The lack of consistent alignment with the current TARP framework reduces confidence that action levels are being correctly identified and that the corresponding management responses are being fully implemented. This may result in under-classification of action levels and delays in applying appropriate mitigation measures.
QIA Conclusion/Request	• Update CREMP reporting to align fully with TARP Version 3, including consistent terminology and clear linkage between observed conditions and trigger criteria. • Implement a standardized approach to identify and document all trigger conditions (including multi-parameter and multi-year exceedances) at each mine-exposed area. • Ensure that all recommendations explicitly incorporate the complete set of required TARP responses for each action level, including precautionary mitigation for Low Risk and predefined management actions and source control for Medium Action responses. Strengthen transparency by including a summary table that links monitoring results, triggered action levels, and required versus implemented management actions.

Comment #	QIA 2025 NIRB WQS #4
Subject/Topic:	Incomplete Application of AEMP Response Requirements
References:	**Document Name:** Appendix G.3.1 Mary River Project 2025 Core Receiving Environmental Monitoring Program Report Part 1

	Section: 3 Camp Lake System; Sheardown Lake System; Mary River and Mary Lake System; **Page:** 74 – 300 of 503
QIA Comment	In Section 3.1.4.1.1 (Effects Assessment), a Low Risk Response is identified for multiple parameters in CLT1 North Branch. The recommendations provided in Section 3.1.4.1.2 appropriately focus on monitoring, temporal trend analysis, source investigation, and weight-of-evidence evaluation; however, they do not include the full set of required management responses defined under Version 3 of the Trigger Action Response Plan (TARP). Specifically, the prescribed Low Risk Response includes implementation of precautionary mitigation to avoid potential threshold exceedance, in addition to investigation and monitoring. This component is not reflected in the CLT1 North Branch recommendations. This omission is not isolated. Across multiple study areas where Low Risk Responses are triggered (e.g., CLT2, Camp Lake, Camp Lake Outlet, SDLT1, Sheardown Lake NW and SE, MRTF, and Mary Lake), recommendations consistently focus on monitoring and assessment, but do not identify or propose precautionary mitigation measures. Similarly, where Medium Risk Responses (referred to as Moderate in the CREMP) are triggered (e.g., nitrate and uranium at SDLT1; total aluminum at Sheardown Lake SE), recommendations do not incorporate all required TARP actions. These include: • evaluation and implementation of AEMP pre-defined management actions; • development of High Risk response thresholds; and • implementation of plans to address mine-related inputs and sources. Table 5-1 of the TARP distinguishes between investigative requirements and response actions for each threshold.  For Low Risk thresholds, this includes implementation of mitigation measures to prevent escalation. For Medium Risk thresholds, escalation to defined

	management actions and source control is required. These elements are not consistently reflected in the CREMP recommendations. The CREMP does not clearly demonstrate that all required response elements under the current TARP framework are being implemented. The absence of precautionary mitigation for Low Risk responses and incomplete implementation of required actions for Medium Risk responses reduces confidence that the AEMP Data Assessment and Response Framework is being applied as intended. This may limit the effectiveness of the program in proactively managing mine-related effects and preventing escalation.
QIA Conclusion/ Request	• Revise the CREMP reporting approach to ensure that all recommendations explicitly address the full set of required actions for each TARP response level, including investigation, mitigation, and management components. • For **Low Risk Responses**, identify and document precautionary or adaptive mitigation measures implemented or proposed, informed by ongoing investigations, to prevent further exceedances and avoid escalation of conditions. • For **Medium Risk Responses**, include evaluation and implementation of AEMP pre-defined responses, development of higher-tier (High Risk) response thresholds, and clear plans to address mine-related sources and pathways. • Incorporate a standardized framework within the CREMP that explicitly links each triggered parameter and location to the corresponding TARP response level and all required actions. Include a standardized summary table demonstrating, for each triggered parameter and location, that all required TARP response components have been addressed, to improve completeness, transparency, and traceability of the response framework.

Comment #	QIA 2025 NIRB WQS #5
Subject/Topic:	Uncertainty in Source Attribution for Mine-Related Effects at SDLT1
References:	**Document Name:** Appendix G.3.1 Mary River Project 2025 Core Receiving Environmental Monitoring Program Report Part 1 **Section:** 4.1.1.2 Water Quality **Page:**167 of 503
QIA Comment	The CREMP indicates that water quality downstream of the KM 105 Pond has consistently met Water Licence limits and applicable water quality guidelines, while also acknowledging that conditions in SDLT1 reflect mine-related influences based on the AEMP data assessment approach and response framework. However, the report does not clearly delineate the extent to which the KM 105 Pond (including seepage and treated effluent) contributes to the observed exceedances and mine-related signals at SDLT1. While potential sources such as runoff, dust deposition, and water management inputs are referenced, the

	relative contribution of the KM 105 Pond is not explicitly quantified or distinguished from other potential sources. The absence of a clear and transparent attribution of sources introduces uncertainty in the interpretation of mine-related effects at SDLT1. Without explicitly identifying whether the KM 105 Pond is a primary driver of observed exceedances, or one of several contributing sources, it is difficult to evaluate the effectiveness of current water management measures and to determine whether additional mitigation or controls are warranted. This limits the ability of the CREMP to support targeted, source-specific management responses and reduces confidence in conclusions regarding compliance and environmental performance.
QIA Conclusion/Request	• Provide a clear assessment of the relative contribution of the KM 105 Pond to observed changes in water quality at SDLT1, including differentiation from other potential mine-related sources (e.g., runoff, dust deposition, and other water management infrastructure). • Incorporate source apportionment or lines of evidence (e.g., spatial gradients, temporal trends, geochemical signatures, or mass loading estimates) to support attribution of observed exceedances. • Strengthen linkage between identified sources and management actions by explicitly identifying which infrastructure or pathways are responsible for observed effects and how these will be addressed. Ensure future CREMP reporting clearly differentiates between compliance with discharge criteria and downstream environmental response, and identifies how mine-related influences persist despite compliance.

Comment #	QIA 2025 NIRB WQS #6
Subject/Topic:	Internal Inconsistencies in Monitoring Coverage Documentation
References:	**Document Name:** Appendix G.3.1 Mary River Project 2025 Core Receiving Environmental Monitoring Program Report Part 1 **Section**: 4.2.1.2 Water Chemistry; 4.2.1.1 *In Situ* Water Quality **Page:** 176 and 175 of 503
QIA Comment	The CREMP indicates that no water chemistry samples were collected from SDLT12 in 2025 due to low water levels during the spring, summer, and fall monitoring events. However, Section 4.2.1.1 indicates that *in situ* water quality measurements were collected in the spring, with insufficient water only identified for the summer and fall periods. The reporting of sampling conditions and data availability for SDLT12 is therefore not internally consistent. It is unclear whether the limitation applies to all water quality parameters (including *in situ* measurements and water chemistry) or is specific to certain sampling components or seasons. Inconsistent description of sampling conditions and data availability reduces transparency and limits confidence in the interpretation of results. Clear documentation of when and where data were collected (or not collected), and the reasons for any deviations, is critical to understanding monitoring coverage and interpreting temporal trends within the CREMP.

QIA Conclusion/Request	• Ensure consistent and clearly reconciled descriptions of sampling conditions, data availability, and limitations across all sections of the CREMP. • Clearly differentiate between *in situ* measurements and water chemistry sampling when describing data gaps. Provide a standardized summary of data completeness by station, parameter type, and season to improve transparency and support interpretation of results.

Comment #	QIA 2025 NIRB WQS #7
Subject/Topic:	Data Availability Limitations and Interpretation of SDLT12 Results
References:	**Document Name:** Appendix G.3.1 Mary River Project 2025 Core Receiving Environmental Monitoring Program Report Part 1 **Section:** 4.2.3.1 Effects Assessment **Page:** 181-182 of 503
QIA Comment	The CREMP indicates that low water levels at SDLT12 (Station LDFG-OUT/D12-1) precluded collection of water chemistry samples during the 2025 monitoring period, while also stating that *in situ* water quality data were collected in the spring and used to support the conclusion that no action level responses were triggered. Across sections of the report, the description of sampling conditions and data limitations for SDLT12 is not internally consistent. It is unclear why conditions were sufficient to collect *in situ* measurements (at least in spring), but insufficient to collect water chemistry samples. The report does not provide sufficient detail on hydrologic conditions (e.g., flow presence, water depth, or degree of stagnation) to support this distinction. The lack of clarity and consistency in describing data availability at SDLT12 introduces uncertainty in the interpretation of monitoring results and the conclusion that no action level responses were triggered. Without clear documentation of sampling constraints and field conditions, it is difficult to assess whether the dataset is representative and sufficient to support effects assessment. This reduces confidence in the completeness and transparency of the CREMP and limits the ability to evaluate temporal trends and potential mine-related influences at this location.
QIA Conclusion/Request	• Provide a clear and consistent description of sampling conditions and data limitations across all sections of the CREMP, including reconciliation of any discrepancies between *in situ* measurements and water chemistry sampling. • Clearly differentiate between sampling types (e.g., *in situ* versus water chemistry) and specify the conditions under which each can or cannot be collected. • Document supporting field conditions (e.g., flow presence, water depth, pooling versus flowing conditions) where sampling is not completed, to substantiate data gaps. Include a standardized summary of data completeness by station, season, and parameter type to improve transparency and support interpretation of results.

Comment #	QIA 2025 NIRB WQS #8
Subject/Topic:	Changes in Sediment Characteristics of Sheardown Lake NW
References:	**Document Name:** Appendix G.3.2 Mary River Project 2025 Core Receiving Environmental Monitoring Program Report Part 1 Appendix E.9.3 Lake Sedimentation Monitoring Program Report **Section:** 4.4.2 Sediment Quality; 3.2.2 Temporal Comparisons for the 2024 to 2025 Ice Cover and Open Water Periods; 3.3.2 Sediment Trap Chemistry **Page:** 196 – 206 of 503; 41 of 231; 39 of 231
QIA Comment	The CREMP identifies changes in sediment characteristics in Sheardown Lake NW, including a shift toward finer-grained material (increased silt, decreased sand) and lower TOC relative to reference conditions, as well as statistically significant increases in sediment iron concentrations relative to both baseline and over the operational period. These observations indicate a change in sediment depositional regime relative to baseline; however, the potential causes of these changes are not fully evaluated in the report. In particular, the potential influence of mine-related dust deposition, which could reasonably contribute to finer sediment inputs and associated geochemical changes, is not discussed in this section. The report further concludes that iron concentrations in Sheardown Lake NW are consistent with natural conditions based, in part, on comparison to Reference Lake 3. However, reported mean concentrations in Sheardown Lake NW exceed baseline concentrations and AEMP benchmarks, and exhibit statistically significant increasing trends over time, which are not observed at the reference site. This suggests that the interpretation of iron as primarily geogenic is not sufficiently supported without additional analysis of potential mine-related contributions. BIM has not incorporated findings from the Lake Sedimentation Monitoring Program (LSMP) within a weight-of-evidence framework. The LSMP identifies increasing sedimentation rates and accumulation thickness over the operational period, with statistically significant positive trends, most pronounced during the open water season, and consistent increases across monitoring areas, indicating a system-wide shift in sediment deposition. While natural drivers (e.g., rainfall, runoff, and backflow events) are identified, the LSMP also acknowledges a potential mine influence associated with these long-term trends. In addition, LSMP results identify elevated metal concentrations (including iron) in sediment trap material and ongoing deposition of fine particulate material, consistent with continued particulate inputs. While BIM attributes elevated iron concentrations primarily to geogenic sources, this interpretation does not adequately account for increasing sedimentation trends coincident with mine operations, observed shifts toward

	finer sediment, and the potential for cumulative contributions from mine-related pathways, including dust deposition and site runoff. The combined evidence of increasing sedimentation rates, changes in particle size distribution, and elevated metals indicates that a mine-related contribution cannot be ruled out and is not sufficiently evaluated in the CREMP or LSMP interpretation. Overall, the CREMP and LSMP do not provide a robust or integrated assessment that reconciles sediment quality trends with sedimentation dynamics. Conclusions that conditions are primarily reflective of natural background are not clearly supported when considering the full monitoring dataset.
QIA Conclusion/Request	• Expand source attribution analyses for sediment quality in Sheardown Lake NW using a weight-of-evidence approach that integrates CREMP and LSMP results, including sediment characteristics, sedimentation rates, accumulation trends, and sediment chemistry. • Explicitly evaluate potential mine-related pathways (e.g., dust deposition, runoff, and watercourse inputs) in the context of observed long-term increases in sedimentation and changes in particle size distribution. • Reconcile interpretations of natural background conditions with increasing temporal trends, benchmark exceedances, and differences from reference conditions, including consideration of cumulative and interacting drivers. Strengthen linkage between observed sediment changes and potential management responses within the AEMP/TARP framework, particularly where systematic increases in sedimentation are identified over the operational period.

Comment #	QIA 2025 NIRB WQS #9
Subject/Topic:	Increasing Water Quality Trends and Integration with the TARP Framework
References:	**Document Name:** Appendix G.3.1 Mary River Project 2025 Core Receiving Environmental Monitoring Program Report Part 1 **Section:** 4.5.1.2 Water Chemistry **Page:** 228-229 of 503
QIA Comment	The CREMP identifies statistically significant increasing trends in aqueous concentrations of nitrate, sulphate, molybdenum, and uranium in Sheardown Lake SE over both the baseline and operational periods, with generally stable conditions at reference locations. These patterns indicate potential mine-related influence; however, concentrations remain below applicable AEMP benchmarks and water quality guidelines in 2025. While the CREMP appropriately identifies and evaluates these trends, the implications of these results are not clearly linked to the TARP (Version 3, 2026). As outlined in Table 5-1, the TARP framework is intended to support adaptive management through not only threshold exceedances, but also

	through investigation outcomes that inform mitigation and management actions. The TARP Low Risk response includes evaluation of trends and implementation of measures to mitigate potential threshold exceedance where warranted. Increasing trends, even where benchmarks are not exceeded, represent an early indication of changing conditions and should inform precautionary or adaptive management consistent with the intent of the framework. Although increasing trends and differences from reference conditions are identified, the CREMP does not clearly demonstrate how these findings are carried forward into the TARP response framework. There is no explicit evaluation of potential sources or pathways, nor identification of precautionary mitigation or management options in response to these trends. This limits the ability of the CREMP to function as an adaptive management tool and reduces confidence that emerging mine-related influences are being proactively managed prior to threshold exceedance.
QIA Conclusion/Request	• Explicitly link the results of temporal trend analyses to the TARP response framework, consistent with Table 5-1, including identification of appropriate response actions where increasing trends are observed. • Where trends indicate potential mine-related influence, include evaluation of potential sources and pathways and document lines of evidence supporting source attribution. • Identify precautionary or adaptive management measures that could be implemented if trends persist, consistent with Low Risk response requirements to mitigate potential threshold exceedance. Establish clear criteria or decision points within the CREMP for escalation of management actions in advance of AEMP benchmark exceedance, in alignment with the intent of the TARP.

Comment #	QIA 2025 NIRB WQS #10
Subject/Topic:	Source Attribution for Observed Changes in Sediment Characteristics
References:	**Document Name:** Appendix G.3.1 Mary River Project 2025 Core Receiving Environmental Monitoring Program Report Part 1 **Section:** 4.5.2 Sediment Quality **Page:**229 of 503
QIA Comment	The CREMP identifies a shift toward finer-grained sediment in Sheardown Lake SE, including increased silt and decreased sand relative to both baseline and Reference Lake 3, as well as lower TOC content in 2025. The report attributes this change primarily to deposition of naturally suspended fine material associated with Mary River backflow during high flow conditions. While this is a plausible contributing mechanism, the evaluation does not consider or discuss other potential mine-related pathways that could influence sediment composition. The observed shift toward finer sediments relative to both baseline and reference conditions represents a change in depositional regime that warrants a broader assessment of potential contributing factors. In

	particular, potential contributions from mine-related dust deposition or other operational inputs are not evaluated, despite similar patterns being observed in Sheardown Lake NW. The CREMP does not provide a sufficiently comprehensive evaluation of potential sources contributing to observed changes in sediment grain size and composition. Attribution of finer sediment deposition primarily to natural backflow processes is not clearly reconciled with: • consistent differences from reference conditions; and • shifts relative to baseline conditions during the operational period. The absence of consideration of alternative pathways, including mine-related inputs, limits confidence in the interpretation and may result in incomplete characterization of potential mine-related effects.
QIA Conclusion/Request	• Expand source attribution for sediment quality in Sheardown Lake SE to evaluate both natural and mine-related pathways (e.g., backflow processes, dust deposition, and runoff). • Apply a weight-of-evidence approach to distinguish between natural variability and potential mine-related influences, supported by spatial and temporal analyses. • Ensure that interpretations of sediment changes are explicitly reconciled with baseline and reference comparisons. Link sediment trend observations to the TARP framework to determine whether additional investigation or management actions are warranted where sustained shifts are observed.

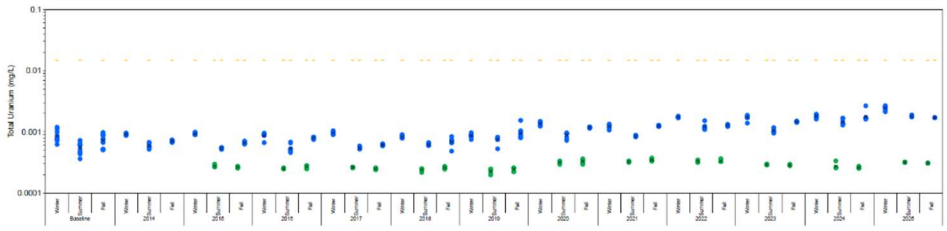
Comment #	QIA 2025 NIRB WQS #11
Subject/Topic:	Proactive Management of Emerging Water Quality Trends Below Benchmarks
References:	**Document Name:** Appendix G.3.1 Mary River Project 2025 Core Receiving Environmental Monitoring Program Report Part 1 **Section:** 5.2.3.1 Effects Assessment **Page:** 264 of 503
QIA Comment	The CREMP concludes that effluent from the MS-08 Final Discharge Point (FDP) is a source of nitrate and sulphate to MRTF, and identifies increasing trends in these parameters over time relative to baseline, while noting that concentrations remain below AEMP benchmarks through 2025. While this finding appropriately identifies a mine-related source, the interpretation is not fully developed. It is unclear whether MS-08 FDP is considered the sole source of nitrate and sulphate to MRTF, or one of several contributing pathways. The report does not clearly evaluate other potential mine-related or natural sources, nor does it reconcile source attribution with the observed long-term increasing trends. In addition, although increasing trends have been identified and a source has been partially attributed, the CREMP does not clearly demonstrate how these findings are incorporated into the TARP (Version 3, 2026). As outlined in Table

	5-1, the TARP framework requires that outcomes of investigations inform management responses, including evaluation of mitigation and implementation planning where mine-related influences are identified. The CREMP does not clearly demonstrate how identified mine-related sources and increasing trends in MRTF are translated into management actions under the TARP. The absence of: • clear confirmation of whether MS-08 FDP is the primary or sole source; • evaluation of other potential contributing pathways; and • identification of potential mitigation or management options limits confidence that the AEMP/TARP framework is being applied proactively. Reliance on the fact that concentrations remain below AEMP benchmarks, without consideration of increasing trends and identified sources, may delay implementation of appropriate management actions and does not align with the adaptive management intent of the TARP.
QIA Conclusion/Request	• Clearly define and document the relative contribution of MS-08 FDP to nitrate and sulphate concentrations in MRTF, and evaluate other potential mine-related and natural sources. • Explicitly link investigation findings (including source attribution and increasing trends) to the TARP framework (Table 5-1), including identification of appropriate response actions. • Identify and evaluate potential mitigation or management options that could be implemented if trends continue or thresholds are approached, consistent with proactive management expectations. Establish clear decision points or contingency measures within the CREMP to enable timely implementation of management actions in advance of AEMP benchmark exceedance.

Comment #	QIA 2025 NIRB WQS #12
Subject/Topic:	Implications of Variable Detection Limits for Trend Analysis
References:	**Document Name:** Appendix G.3.1 Mary River Project 2025 Core Receiving Environmental Monitoring Program Report Part 1 and Part 2 **Section:** Appendix B **Page:** 369-503 of 503 1 - 23 of 474
QIA Comment	Review of temporal comparison figures for multiple parameters (including nitrate-N, nitrate at Sheardown Lake SE, nitrite, total chromium, total iron, total thallium at Sheardown Lake SE, and dissolved zinc) indicates inconsistent and, in several cases, increasing analytical detection limits (LRLs) between baseline and recent monitoring periods. Detection limits for several parameters (e.g., nitrite beginning ~2023, nitrate-N, and nitrate at Sheardown Lake SE) appear to increase in recent years relative to baseline conditions. Similarly, total chromium detection limits are higher during operations compared to baseline, and comparable concerns are evident

	for total iron. For total thallium at Sheardown Lake SE, detection limits appear variable and elevated relative to earlier data, while dissolved zinc detection limits are not clearly comparable between baseline and recent datasets. Detection limits would typically be expected to remain consistent or decrease over time with improvements in analytical methods. The observed increase in detection limits reduces analytical sensitivity in recent years and limits the ability to evaluate trends. In particular, where detection limits are higher than baseline, it is not possible to reliably determine whether concentrations of parameters such as nitrate-N, nitrate (Sheardown Lake SE), total chromium, total iron, and total thallium have increased over time, as low-level changes may not be detectable. The variability and apparent increase in detection limits across monitoring periods reduces confidence in the comparability of datasets and the interpretation of long-term trends. Specifically: • comparisons to baseline are biased where baseline detection limits are lower than recent data; • increasing detection limits may mask subtle but meaningful changes in concentration over time; and • the ability to assess trends for several parameters (including nitrate-N, nitrate at Sheardown Lake SE, total chromium, total iron, and total thallium) is limited where detection limits exceed measured concentrations. The CREMP does not provide sufficient explanation for these changes in detection limits, nor does it evaluate the implications for trend analysis and effects assessment.
QIA Conclusion/Request	• Provide a clear explanation for changes in detection limits across monitoring periods, including any changes in analytical methods, laboratories, or reporting protocols. • Standardize detection limits across the dataset to the extent practicable, or apply consistent data treatment approaches to ensure comparability with baseline conditions. • Evaluate and document the implications of varying detection limits on temporal trend analyses and interpretation, particularly for parameters where trends cannot be reliably assessed due to analytical constraints. • Ensure future monitoring maintains detection limits that are consistent with or lower than baseline conditions to support defensible long-term comparisons. Where detection limits constrain interpretation (e.g., nitrate-N, total chromium, total iron, total thallium), identify and implement analytical improvements or targeted methods to increase sensitivity and enable robust trend assessment.

Comment #	QIA 2025 NIRB WQS #13
Subject/Topic:	Use of Trend Analysis to Support Proactive TARP Implementation

References:	**Document Name:** Appendix G.3.1 Mary River Project 2025 Core Receiving Environmental Monitoring Program Report Part 2 **Section:** Appendix B **Page:** 15 of 474
QIA Comment	Visual inspection of total uranium concentrations in Sheardown Lake SE indicates an increasing trend over the monitoring period, with concentrations rising relative to baseline and reference conditions, although remaining below the applicable AEMP benchmark. While the CREMP identifies and discusses trends qualitatively, it does not extend this analysis to evaluate the rate of increase or the potential timeframe over which concentrations may approach applicable benchmarks. The TARP framework (Table 5-1) is intended to support adaptive management by using monitoring results and trend analyses to inform proactive responses, not solely reactive measures following threshold exceedance. The CREMP does not fully utilize trend information to inform forward-looking  management. The absence of quantitative trend evaluation (e.g., rate of change or projection toward benchmarks) limits the ability to: • assess the urgency of potential future exceedances; and • plan and implement mitigation measures in advance of threshold exceedance. Reliance on current compliance with AEMP benchmarks, without consideration of increasing trajectories, reduces confidence that the program is functioning proactively in accordance with the intent of the TARP.
QIA Conclusion/ Request	• Incorporate quantitative trend analyses for key parameters (e.g., total uranium) to estimate rates of change and project potential timelines to AEMP benchmark exceedance, where appropriate. • Use trend projections to inform proactive management planning, including identification of mitigation options and triggers for early intervention under the TARP framework. Integrate trend-based evaluation into the CREMP reporting to support adaptive management decisions, consistent with the intent of Table 5-1.

Comment #	QIA 2025 NIRB WQS #14
Subject/Topic:	Fish Health Responses and Water Quality Trends in Sheardown Lake NW
References:	**Document Name:** Appendix G.3.1 Mary River Project 2025 Core Receiving Environmental Monitoring Program Report Part 1 **Section:** 4.4.5 Fish Population **Page:** 212-219 of 503

QIA Comment	Sheardown Lake NW has significant increasing trends in multiple water quality parameters attributed to mine influence; however, these trends are not clearly evaluated against observed changes in fish size structure and condition. Nearshore fish condition has declined relative to baseline at an ecologically meaningful level, while littoral/profundal fish condition is higher relative to reference, indicating potential habitat-specific responses that are not fully assessed. As a result, conclusions of no adverse effect are not fully reconciled with repeated fish health TARP triggers and persistent operational period differences from baseline.
QIA Conclusion/Request	The relationship between fish endpoints and increasing water quality trends over the operational period is not clearly evaluated, limiting the ability to assess potential exposure/response relationships. It is also unclear whether nearshore and littoral/profundal habitats have been considered separately to determine if observed fish responses are spatially structured or associated with habitat-specific exposure pathways. In addition, linkages between condition and growth metrics and supporting lines of evidence, such as water quality, sedimentation, productivity, and BIC results, are not well developed, making it difficult to interpret the basis for observed changes.

Comment #	QIA 2025 NIRB WQS #15
Subject/Topic:	Integration of Water Quality Trends and Fish Health Responses in Sheardown Lake SE
References:	**Document Name:** Appendix G.3.1 Mary River Project 2025 Core Receiving Environmental Monitoring Program Report Part 1 **Section: 4.5.6.1 Effects Assessment (DL0-02)** **Page:** 247-249 of 503
QIA Comment	The monitoring report identifies multiple Low Risk Responses in Sheardown Lake SE for water quality parameters that were elevated relative to both reference and baseline normal ranges, including major ions, metals, nutrients, and dissolved aluminum. Increasing trends over the mine operations period were also noted for nitrate, sulphate, molybdenum, and uranium, although concentrations remained below applicable benchmarks in 2025. While the report attributes observed fish health differences primarily to natural variability (e.g., size structure and recruitment), the specific patterns warrant clearer integration with these water quality trends. In 2025, fish health results were characterized by (i) a high proportion of YOY Arctic charr that were larger than those in the reference lake, (ii) generally larger, heavier, and higher-condition fish relative to reference in gill net samples, and (iii) lower condition relative to baseline and a broader size distribution reflecting more small- and mid-sized fish. Longer-term results also show variable differences in size, weight, and condition relative to both reference and baseline, without a consistent directional trend. Despite these observations, the assessment does not clearly evaluate how this variability, particularly shifts in size structure and condition relative to baseline,

	relates to increases in multiple water quality parameters. In addition, although benthic invertebrates are identified as a potential driver of fish productivity, supporting evidence is limited. The report notes higher benthic invertebrate density in 2025 relative to reference, but also indicates no consistent temporal trends in benthic invertebrate endpoints that would explain interannual variability in fish metrics. This weakens the linkage between lower trophic levels and observed fish population patterns. Overall, the basis for excluding potential mine-related influence is not fully understood. Where multiple water quality parameters show increasing trends over the operational period, a more integrated weight-of-evidence discussion explicitly linking water quality, benthic invertebrate results, and fish health endpoints would strengthen the interpretation and improve confidence in the conclusion.
QIA Conclusion/Request	The proponent should integrate water quality trends and associated Low Risk Responses into the weight-of-evidence assessment for Sheardown Lake SE. In particular, the assessment should consider whether increasing trends in parameters such as nitrate, sulphate, molybdenum, uranium, and other elevated constituents have any plausible relationship to observed patterns in benthic invertebrate communities or fish health endpoints. Even where concentrations remain below applicable benchmarks, evaluating these temporal trends alongside biological responses would strengthen the rationale for determining whether observed differences reflect natural variability, habitat conditions, or potential mine-related influences.

Comment #	QIA 2025 NIRB WQS #16
Subject/Topic:	Groundwater Monitoring Network Deficiencies, Downgradient Monitoring
References:	**Document Name:** Appendix G.2 – 2025 Groundwater Monitoring Report (Part 1) **Section:** 3.1 **–** New Standpipe Well Install **Page:** 8-9 (P. 17 & 18 of 54)
QIA Comment	In April 2025, 5 new standpipes were installed, to replace wells that were damaged (due to frost jacking) or incorrectly installed (i.e., no bentonite seal) in the monitoring well network. Two wells were installed at the Landfill Facility (LF), and three at the Hazardous Waste Berm (HWB) Facility. However, of the five new wells, only two were able to be successfully monitored, as three wells were dry/frozen during the August sampling event. Both of the new wells installed at the LF were dry/frozen. WSP noted that this was likely due to one of the following: (1) the well screen being installed above the water table, (2) the screen being installed too deep in the permafrost, or (3) the wells being sampled too late in the season (i.e., after the shallow groundwater had already frozen). As ice was observed in the bottom of new standpipe well MS-LF-25-01, it was determined that groundwater would have likely been present in the well if sampling had occurred earlier in the season (P. 9). Given that both new LF wells were dry/frozen, and there is limited monitoring downgradient of the HWB Facility, the newly-installed wells provided limited value in successfully

	tracking downgradient migration of contaminants of potential concern (CoPC) exceedances in source areas, and replacing compromised wells in the monitoring network. Additionally, only one well is located downgradient of the HWB facility (MS-HWB-25-01), which was newly installed in 2025. It was unclear why no other wells were installed downgradient of the facility (i.e., between the HWB and Camp Lake), especially given that source area CoPC exceedances had been documented that had not been attributed to background conditions (nitrate, nitrite, naphthalene, fluoride, copper). There is also no monitoring downgradient of well HWB-KP22-04, where high nitrate concentrations were detected in 2025.

QIA Conclusion/Request	• Future Annual Reports should clearly identify how the subsequent year's monitoring program incorporates lessons learned from the previous monitoring year, including adjustments made to optimize data collection and program effectiveness. The integrity of the well monitoring network is an interannual concern that needs to be addressed.
	• Reevaluate the groundwater monitoring schedule to determine whether additional or earlier seasonal monitoring events are warranted, to improve sampling success at newly installed wells, particularly where wells were frozen or dry during the 2025 monitoring program.
	• Strengthen the groundwater monitoring network downgradient of the HWB facility to ensure effective detection and tracking of contaminants of potential concern (CoPCs). This should include:
	  ○ An assessment of whether the current well network provides sufficient downgradient spatial coverage between the HWB facility and Camp Lake, to reliably track downgradient migration;
	  ○ An evaluation of the need for additional downgradient wells between the facility and Camp Lake; and
	  ○ Implementing targeted monitoring to track plume migration from identified areas of elevated concentrations (e.g., vicinity of HWB-KP22-04, where high nitrate concentrations were observed).
	Where additional downgradient monitoring wells are not installed/proposed, Baffinland should provide clear rationale. This justification should be supported by plume delineation, hydrogeological characterization, and monitoring objectives.

Comment #	QIA 2025 NIRB WQS #17
Subject/Topic:	Replacement Wells
References:	**Document Name:** Appendix G.2 – 2025 Groundwater Monitoring Report (Part 1) **Section: 3.1 –** New Standpipe Well Install **Page:** 8-9 (P. 17 & 18 of 54)

QIA Comment	It was unclear which damaged or compromised wells in the existing monitoring well network each of the 5 new wells installed in 2025 were intended to replace. Although the purpose of a new well was noted in the text of the report in some instances (e.g., MS-HWB-03 was noted to compare to well HWB-KP22-06, which did not have a bentonite seal), it would be useful if this information could be summarized in a table (or added to Table 2), for reviewer clarity. Additionally, Baffinland should specify whether any future work is planned to fill the gaps that the 3 dry/frozen wells were unable to address.
QIA Conclusion/Request	Baffinland should clarify which damaged or compromised well from the existing monitoring network each of the 5 new wells installed in 2025 was intended to replace, for reviewer clarity. Additionally, Baffinland should specify how/when additional work will be completed to fill the gaps that the 3 dry/frozen wells were unable to address. This information should also be incorporated into future annual reports to provide greater clarity as to how the groundwater monitoring network is evolving.

Comment #	QIA 2025 NIRB WQS #18
Subject/Topic:	Conceptual Site Model
References:	**Document Name:** Appendix G.2 – 2025 Groundwater Monitoring Report (Part 1) **Section:** Figure 1 **Page:** 31
QIA Comment	WSP provided a conceptual site model (CSM) in cross section, illustrating seasonal variation in groundwater migration and drainage to Sheardown Lake SE from the Landfill Facility, and active layer thickness and depth to permafrost (Figure 1 – P. 31). It was unclear why a similar figure illustrating a conceptual model of groundwater migration/drainage from the Hazardous Waste Berm (HWB) Facility to Camp Lake was not prepared/provided or discussed, particularly given that several CoPC exceedances were detected in source wells associated with the HWB. Further, it was unclear why drainage from the LF Facility to Sheardown Lake NW was not conceptually modelled/illustrated, given that Figure D (P. 50) estimated that groundwater from the LF Facility is primarily directed to the west to Sheardown Lake NW.
QIA Conclusion/Request	BIM should provide a conceptual site model (i.e., cross sections) illustrating groundwater migration/drainage and active layer thickness/depth to permafrost table from the Hazardous Waste Berm Facility to Camp Lake, similar to the CSM provided for the LF Facility to Sheardown Lake SE in Figure 1. Similarly, a CSM illustrating these characteristics should also be provided to illustrate the hydrogeological regime and groundwater migration from the LF Facility to Sheardown Lake NW.

Comment #	QIA 2025 NIRB WQS #19
Subject/Topic:	Well LF-KP22-05
References:	**Document Name:** Appendix G.2 – 2025 Groundwater Monitoring Report (Part 1) **Section:** Appendix A **Page:** A-2 (P. 54 of 54)

QIA Comment	Photo A-4 (Appendix A) indicates that groundwater sampled from well LF-KP22-05 (reference station upgradient and adjacent to the LF) was yellow and slightly opaque, and that brown sediment with an apparent “oil slick” was noticed at the bottom of the Low-Density Polyethylene (LDPE) tubing used for well purging. However, this observation was not discussed in the groundwater monitoring report.
QIA Conclusion/Request	BIM should clarify why observations at LF-KP22-05 were not discussed in the report, and indicate whether further investigation will be undertaken to identify the source of the oily substance in this well.

Comment #	QIA 2025 NIRB WQS #20
Subject/Topic:	Talik Formation Investigations
References:	**Document Name:** Appendix G.2 – 2025 Groundwater Monitoring Report (Part 1) **Section:** 6.1 – Site Characteristics **Page:** 28
QIA Comment	Potential evidence of open talik formation was noted beneath Murial Lake (along the Tote Road), which WSP states is of a similar size to Sheardown Lake. WSP noted that an open talik could connect the subpermafrost groundwater to suprapermafrost groundwater. It was unclear if or how BIM proposed to evaluate whether a talik had formed beneath Sheardown (or Camp) Lakes, and discussion of the potential effects of talik formation beneath these lakes on the hydrogeological characterization of the site was limited (e.g., discussion of changes in vertical hydraulic gradients, conceptual pathway from shallow groundwater regime to deeper groundwater).
QIA Conclusion/Request	BIM should clarify whether any additional investigations will be conducted to determine if a talik has formed beneath Sheardown Lake or Camp Lake, for example, whether any additional thermistor beads will be installed near these lakes to track active layer thaw.

Comment #	QIA 2025 NIRB WQS #21
Subject/Topic:	Groundwater Migration Rate
References:	**Document Name:** Appendix G.2 – 2025 Groundwater Monitoring Report (Part 1) **Section:** 4.3 – Single Well Response Testing Results **Page:** 19
QIA Comment	The 2025 Groundwater Monitoring Report provides hydraulic conductivity values (in m/s) for the aquifer at the LF and the HWB, with values corresponding to fine/coarse sand, indicating that the media has relatively high permeability. However, an estimation of how long it may take for impacted groundwater from the facility’s source areas to migrate to Camp/Sheardown Lakes (NW and SE) was not evaluated or discussed. This would be helpful for understanding plume migration timelines, and the risks associated with these facilities, particularly given that there are CoPC exceedances in source areas of these facilities. Given that the hydraulic conductivity of groundwater at the HWB facility was estimated to be as high as 2×10^{-4} m/s, groundwater from the source area could conceptually reach Camp Lake (which is ~450 m from the source area) in as little as 26 days, under flowing (summer) conditions.

	This information should be discussed and provided in the annual groundwater monitoring report, for risk evaluation completeness.
QIA Conclusion/Request	BIM should discuss and evaluate timelines for groundwater to migrate from the source areas of LF and HWB facilities to Sheardown Lake (NW and SE) and Camp Lake, respectively, to evaluate the risk that source area CoPC exceedances pose to downgradient surface waters.

Comment #	QIA 2025 NIRB WQS #22
Subject/Topic:	Seepage Management
References:	**Document Name:** Appendix G.2 – 2025 Groundwater Monitoring Report (Part 1) **Section:** Section 5.2; Figure 1 **Page:** 25, 31
QIA Comment	The conceptual model shown in Figure 1 (P. 31) indicates that seeps may occur downgradient of the LF, toward Sheardown Lake NW. Seep locations downgradient of the LF have historically exhibited elevated dissolved copper concentrations (below the FIGQ AW-F guideline), suggesting a potential pathway for contaminant migration. However, the report does not clearly describe what control or mitigation options BIM has available should concentrations increase, exceed guidelines, or if additional seepage develops.
QIA Conclusion/Request	BIM should describe the control and mitigation measures available to manage seepage downgradient of the LF and HWB facilities, including contingency actions if CoPC exceedances are identified or if new seepage pathways develop. This should include how seep monitoring results are linked to management decisions within the existing framework.

Comment #	QIA 2025 NIRB WQS #23
Subject/Topic:	Groundwater Well Network, Trend Analyses
References:	**Document Name:** Appendix G.2 – 2025 Groundwater Monitoring Report (Part 1) **Section:** Figure D and E **Page:** 50, 51
QIA Comment	Figure D and E provide site plans of the LF and HWB facilities, indicating groundwater elevations and inferred flow direction (P. 50, 51), however, the site plans did not indicate that upgradient reference well MS-HWB-GW-REF2 was dry in 2025. Further to this, based on the report text and attached figures, it was difficult to determine (and keep track of) which wells were in good condition and which were successfully sampled (i.e., without data quality concerns) in 2025, and what the period of record is for each well. Concentrations over time were not summarized in a table, and no CoPC trend analysis was provided (although a limited discussion of comparisons with historical results was provided in Sections 5.2 and 5.3). For clarity and ease of review, it would be useful if BIM prepared and presented a table summarizing the status of each well, including the year it was installed, whether it was sampled in 2025 (and any data quality issues/flags), and what wells could not be sampled (and for what reason). While Table 7 (P. 18) indicates which groundwater samples had CoPC

	exceedances, it does not give an indication of how many downgradient wells were actually able to be sampled. A clearer display of which wells were usable and in good repair in 2025 would help to more clearly evaluate whether the existing well network is temporally sufficient.
QIA Conclusion/Request	In future iterations of the annual groundwater report, BIM should provide a table summarizing the status of each well on site, including what the year each well was installed, whether it was sampled in 2025 (and any data quality issues/flags), and what wells could not be sampled (and for what reason). An indication of the period of record for each well should also be provided. BIM should also clarify why no trend analysis (or discussion of trends) for key CoPCs (particularly CoPCs exceeding guidelines in facility source areas in 2025) was conducted as part of their groundwater monitoring report. This should be included in future iterations of annual groundwater reporting.

Comment #	QIA 2025 NIRB WQS #24
Subject/Topic:	HWB Liner Leak
References:	**Document Name:** Appendix G.2 – 2025 Groundwater Monitoring Report (Part 1) **Section:** Background **Page:** 12
QIA Comment	Appendix E.11 stated that “concerns have been previously raised about a potential liner leak in the northwest section of the HWB; as a result, this section is currently not being used to contain hazardous waste.” (P. 12). It was unclear if BIM had a plan to repair this section of the HWB.
QIA Conclusion/Request	Baffinland should provide details on when and how the HWB liner leak will be repaired.

Comment #	QIA 2025 NIRB WQS #25
Subject/Topic:	Milne Port Landfarm - Groundwater Monitoring
References:	**Document Name:** Appendix G.2 – 2025 Groundwater Monitoring Report (Part 1) **Section:** Figure D **Page:** 50
QIA Comment	Figure D of Appendix E.11 presents the locations of groundwater monitoring wells at/around the Landfill Facility. The Mine Site Landfarm, located on the north side of the LF, is used for managing hydrocarbon-impacted soils. However, there do not appear to be any groundwater monitoring wells installed immediately downgradient (i.e., west) of the landfarm’s footprint or its associated management pond, to track potential seepage migration towards Sheardown Lake NW. It was unclear why Baffinland had not installed any monitoring wells in this area. Further, Baffinland has indicated that the Milne Port Landfarm, which has been used to manage hydrocarbon-impacted soils, is currently at-capacity (as of 2019). It was unclear whether any groundwater monitoring has been conducted at this facility or in downgradient areas.

QIA Conclusion/Request	Baffinland should clarify why there are no groundwater monitoring wells located downgradient (west) of the Mine Site Landfarm, where hydrocarbon-impacted soils are managed/stored. Additionally, Baffinland should clarify why there are no groundwater monitoring wells at or downgradient of the Milne Port Landfarm, where hydrocarbon-impacted soils have been managed, to monitor subsurface migration from the facility. Pending BIM's response, we recommend the addition of groundwater monitoring wells downgradient of the Mine Site and Milne Port Landfarms.

Comment #	QIA 2025 NIRB WSQ #26
Subject/Topic:	Groundwater Monitoring – HWB Facility
References:	Appendix E – BIM Responses to Comments 2024. Section: Comment 24 (QIA 2024 NIRB WQ#5) and 25 (QIA 2024 NIRB WQ#6) Page: 14
QIA Comment	Baffinland stated in their response to QIA comment 24 (QIA 2024 – NIRB WQ#5) that conclusions drawn from groundwater data collected since 2017 were deemed to be unreliable, and were thus excluded from their historical groundwater data quality review. Baffinland further stated that groundwater is "not a constituent of concern in high arctic permafrost environments," that no pre-2017 baseline groundwater data exists for the site, and that it was unclear whether conventional industry standard definitions of groundwater apply to the shallow subsurface active layer flow (~3 m below ground's surface) currently monitored, given that the groundwater table is beneath thick permafrost. In addition, Baffinland stated that the confined aquifer is isolated from all potential mining activities by ~600-700 m of permafrost, and that there is "no groundwater use or potential for impacts other than surface water," which is monitored through existing surface water programs (SNP/CREMP). QIA acknowledges that impacts to the aquifer confined by thick, continuous permafrost are likely to be negligible. However, this does not preclude the potential importance of shallow subsurface water movement within the seasonally thawed active layer. In permafrost environments, suprapermafrost groundwater and active layer flow/migration can be a contaminant transport pathway during the thaw season. Active layer migration pathways may represent the earliest stages of contaminant migration from mine-related sources. Monitoring this pathway effectively can provide information on contaminant presence, transport pathways, and source characterization before CoPCs reach runoff or downgradient receiving waters. Although many of the same CoPCs can be detected through existing surface water monitoring programs, the shallow groundwater monitoring program provides a complementary line of evidence that can help improve understanding of contaminant pathways and allow for earlier identification and mitigation of potential CoPCs.

	Furthermore, the documented open talik beneath Murial Lake indicates that permafrost conditions are not uniform across the Project area and that localized zones of thawed ground may exist. This illustrates the hydrogeological complexity of the site, and the limitations of assuming complete subsurface isolation. Therefore, QIA's previous concerns regarding the groundwater monitoring program remain unresolved, including its ability to monitor contaminant migration pathways, the absence of representative baseline conditions, and the resulting limitations on evaluating long-term trends and potential changes in shallow subsurface water quality associated with project activities.
QIA Conclusion/ Request	Given the concerns with previous groundwater monitoring, in addition to other groundwater monitoring program recommendations in QIA-HESL-NIRB-32 and -33, Baffinland should: • Develop a plan for establishing baseline data, for detecting project-related effects over time, and for evaluating long-term trends (e.g., establishing a regional reference dataset); • Discuss/evaluate trends over time for data deemed usable/reliable by Baffinland; • Continue to implement the additional wells downgradient of the HWB and Mine Site Landfarm (see QIA-HESL-NIRB-41) to properly intercept potential contaminant migration pathways.

Marine and Aquatic Environment (MAE)

Comment #	QIA 2025 NIRB MAE #1
Subject/Topic:	Missing documentation for marine monitoring activities
References:	Appendix G.5
QIA Comment	When the 2025 Annual Report to the NIRB was made available for review, the following supporting documentation for marine environmental monitoring was not provided: • Appendix G.5.1 2025 Daily Ship Tracks with Ice Imagery • Appendix G.5.1.1 2025 Daily Ship Tracks with Ice Imagery – Project vessels • Appendix G.5.1.2 2025 Daily Ship Tracks with Ice Imagery – Non-project vessels • Appendix G.5.2 2025 Bruce Head Shore-based Monitoring Program Report • Appendix G.5.3 2025 Marine Environment Effects Monitoring Program Report At the completion of QIA's Subject Matter Expert review of the NIRB Annual Report, these supporting appendices were still not available (and at the July MEWG the Proponent indicated that finalization and submission timelines remain unknown). This means that QIA was unable to comprehensively review and assess the Proponent's performance against Project Certificate Terms

	and Conditions for the Marine Environment (main report s. 4.6.10, PC Terms and Conditions 76 through 98) (due to missing App. G.5.3) and Marine Wildlife (main report s. 4.6.11, PC Terms and Conditions 99 through 128) (due to missing App. G.5.1.1, G.5.1.2, and especially G.5.2). Project Certificate Term and Condition No. 183 and 184 both require that the Proponent report "*all data it generates from the implementation of monitoring of marine impacts it is required to implement pursuant to the Terms and Conditions of the Project Certificate*". Appendix G.5.3, which is referred to in text as the "*2025 MEEMP and NIS/AIS Monitoring Report*", covers a broad range of marine environmental monitoring, including water quality, sediment quality, benthic infauna, macroflora and epibenthic communities, fish community, fish health and tissue chemistry, and non-indigenous species /aquatic invasive species (NIS/AIS). Despite its absence, readers of the Main Document are referred to this report for detailed information on study design, sampling methodology, detailed results, and in some cases recommendations. Its absence weakens assessments of information provided in PC 005 Terms and Conditions No. 76, 83(a), 85, 87, 88, 91, and 113 of the NIRB Annual Report. Its absence also limits access to recommendations on potential modifications to the 2026 monitoring program. Appendix G.5.2 is particularly important with respect to marine mammal monitoring and mitigation, since the Bruce Head narwhal monitoring program was the only focused marine mammal program run in 2025. Lack of the Bruce Head results means that intervenors are unable to assess the 2025 monitoring results for a number of Terms and Conditions, including 101, 108, 110, and 119. QIA notes that Appendix G.5.1 (2025 Daily Ship Tracks with Ice Imagery, sub-appendices G.5.1.1 2025 Daily Ship Tracks with Ice Imagery – Project vessels and G.5.1.2 2025 Daily Ship Tracks with Ice Imagery – Non-project vessels) are of reduced importance for Project monitoring with a shorter shipping season during the open-water season only. In years with no vessel interactions with sea ice, information on vessel transits could possibly be summarized in a manner that is less time- and cost-intensive for the Proponent. Alternative data reporting options, potentially including digital vessel track data, could be discussed with intervenors via the MEWG.
QIA Conclusion/Request	QIA is unable to comment on Baffinland's performance against project certificate terms and conditions for the marine environment due to missing critical information.

Comment #	QIA 2025 NIRB MAE #2
Subject/Topic:	Ship-board Observer (SBO) Program
References:	**Document Name:** Baffinland Iron Mines 2025 Annual Report to the Nunavut Impact Review Board **PCCs:** 103, 106, 107, 108, 123, 73, and 74

QIA Comment	A Ship-board Observer (SBO) program is a key requirement under Project Certificate 005 for monitoring Project interactions with marine mammals and seabirds. The lack of a SBO program, or reasonable alternative, leads to monitoring deficiencies for marine birds (e.g., Project Certificate Term and Condition Nos. 73 and 74, main document s.4.6.9, pp. 243-245; Project Certificate Term and Condition Nos. 107 and 108, main document s.4.6.11, pp. 329-332) and marine mammals (e.g., Project Certificate Term and Condition Nos. 103, 106, 107, 108, 123, main document s.4.6.11, pp. 319-321, 327-332, 362-364). All the issues previously raised by QIA (e.g., in 2025 Annual Report review comments) related to the current lack of a SBO program are still relevant, and the Proponent has yet to establish an alternative. The much larger shipping operation planned along the southern route (compared to the Milne port operation) will increase both the need for SBOs and the value of data collected on vessel interactions with wildlife. The Proponent's support of ECCC seabird research programs is an important contribution to regional research activities, but this work does not support real time monitoring and timely adaptive management, if required. The voluntary Marine Mammal Observation Network (MMON) program provides some data but is not a replacement for trained observers in dedicated monitoring roles. Ten ore carriers participated in the MMON program in 2025 (Appendix G.5.4 - MMON Season Summary), but only two sightings (of 20 individuals) were recorded in the RSA between August and September. One of these observations was reported as a group of 18 North Atlantic right whales (*Eubalaena glacialis*), which makes three consecutive shipping seasons where MMON vessels have reported species that are not known to occur in north Baffin waters. QIA considers this to most likely be a misidentification of bowhead whales (*Balaena mysticetus*), but also notes that the North Atlantic right whale is listed as Endangered on Schedule 1 of Canada's *Species at Risk Act* (SARA). The presence of North Atlantic right whales in the RSA would require significant additional mitigation to ensure shipping operations do not cause harm, so having trained SBOs capable of differentiating the wildlife species present is in the Proponent's best interest. Some degree of training is provided to participating MMON vessels, but it does not appear to be sufficient. Ship-board marine mammal monitoring (visual and acoustic) was conducted during the 2025 multibeam bathymetric survey in Foxe Basin (see Project Certificate Term and Condition No. 123, s.4.6.11, pp. 362-364; Appendix G.8.3 - Bathymetry Survey Operations and MMO Report). Five marine mammal observations (all seals) were reported. This mitigation-based monitoring by SBOs informs the need for shutdowns (etc.), which is necessary, but does not address monitoring requirements for the active Project. With respect to program alternatives, the Proponent indicated (Project Certificate Term and Condition No. 106, main document s.4.6.11, p. 328) that it was "*currently exploring all reasonable measures and will provide an update to the Board before the 2026 shipping season*" (and discuss in the next Annual

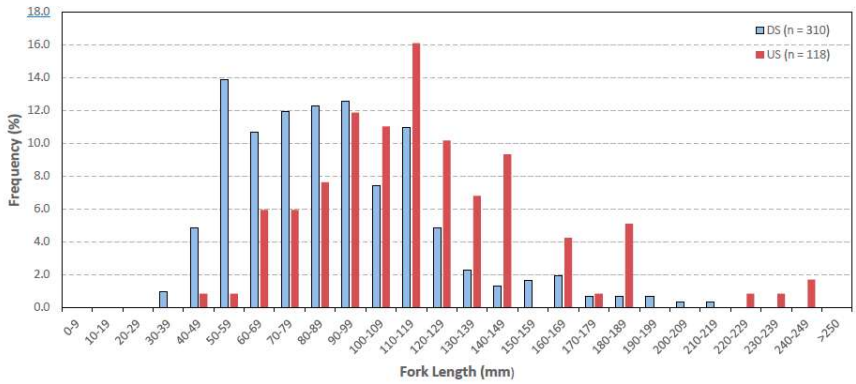
	Report) (also see Project Certificate Term and Condition No. 123). Has this update been provided to the Board and posted on the Public Registry? In addition, Baffinland previously committed to providing a summary of Eider species observations since the beginning of the SBO program in future reports (in response to 2023 Annual Report comments – Appendix E.1). Since there is no SBO program, QIA subsequently requested that a standalone summary report of this information be provided instead. In response, Baffinland referred to work being done by ECCC on sea ducks and shorebirds in the arctic.
QIA Conclusion/Request	QIA requests that the Proponent: 1) prioritize submitting the update to the Board that was to be provided in advance of the 2026 shipping season, including possible alternatives to having SBOs on vessels such as, but not limited to, the use of drones (also see Project Certificate Term and Condition No. 107, main document s.4.6.11, pp. 329-330), vessel-mounted cameras, or community-based programs involving harvester observations of marine mammal and seabird responses to vessel transits, and, 2) provide details on the MMON training that is provided to participating vessel operators. 3) we reiterate our request that Baffinland establish its own targeted marine bird monitoring program which includes determination of habitat use, areas and timing of interaction with Project activities, as well as behavioural responses to vessels, during both migration and breeding periods. Additionally, Baffinland should provide a standalone summary of Eider species observations collected for the Project

Comment #	QIA 2025 NIRB MAE #3
Subject/Topic:	Tote Road Fish Habitat Monitoring – Monitoring Frequency
References:	**Document Name:** Appendix G.1.6 Tote Road Fish Habitat Monitoring 2025 Annual Report **Section:** 2.2 Fish Habitat Assessment **Page:** 12
QIA Comment	The report states that the sites confirmed as fish habitat have been monitored annually for the last 15 years whereas fishless sites have been monitored periodically, with the most recent monitoring having been conducted in 2019 and 2020, to confirm the continued presence of natural barriers to fish passage. The term “periodic monitoring” is not clearly defined, creating uncertainty in the frequency and consistency of inspections at fishless sites. Without a regular schedule, there is an increased risk that changes to natural barriers may go undetected; implementing a fixed monitoring interval would provide a more reliable and efficient approach to confirm continued fish exclusion.
QIA Conclusion/Request	Rather than monitor the fishless sites periodically to ensure the presence of natural barriers to fish passage, the proponent should set up monitoring at regular 5-year intervals. A regular monitoring program ensures that conditions at the sites are consistent and continue to prevent fish passage but also

	ensures that the sites are not overlooked and that extra resources are not being used for unnecessary monitoring.

Comment #	QIA 2025 NIRB MAE #4
Subject/Topic:	Subjectivity of Catch Totals
References:	**Document Name:** Appendix G.1.6 Tote Road Fish Habitat Monitoring 2025 Annual Report **Section:** 3.3 Fish Use Assessments **Page:** 15
QIA Comment	Catch totals of juvenile Arctic char were described as "similar to previous years at many crossings per previous annual reports." In the absence of supporting statistical analysis, this statement is subjective and does not allow for determination of whether year-over-year differences are statistically significant or within the range of expected variability. From a scientific and monitoring perspective, qualitative statements of similarity are insufficient to support robust interpretation of results. Without quantitative analysis, it is not possible to distinguish between natural variability, potential trends, or project-related effects. This limits the transparency and defensibility of conclusions presented in the report.
QIA Conclusion/Request	Statistical analyses should be conducted to evaluate temporal differences in fish catch data, and results should be presented in a manner that clearly demonstrates whether observed similarities or differences are statistically significant. This approach should be incorporated as a standard component of all future annual reporting for the Tote Road Fish Habitat Monitoring Program. The consistent application of statistical analysis will improve rigor, transparency, and comparability of results across years, and better support conclusions regarding potential Project-related effects.

Comment #	QIA 2025 NIRB MAE #5
References	**Document Name:** Baffinland Iron Mines 2025 Annual Report to the Nunavut Impact Review Board, Appendix G.1.6 Tote Road Fish Habitat Monitoring Report 2025 Part 1) [NIRB registry: 260529-08MN053-2025 Annual Report App G.1.6 Tote Road Fish Habitat Monitoring Pt1-IR2E.pdf] **Section:** 3.3 Fish Use Assessment **Page**: 11 (pdf. p. 16 of 218) **Section:** Tables and Figures, Figure 3 **Page:** pdf p. 142 of 218
QIA Comment	Using percentage frequency in Figure 3 to compare Arctic char catches downstream and upstream of the Tote Road stream crossings obscures the fact that over 72% of the fish were caught downstream (Figure 3, pdf p. 142). It does this by making the total height of the upstream and downstream bars the same—both adding up to 100%. Graphing the number of fish in each length class would show the larger downstream (n = 310) and smaller upstream (n = 118) catches in proper proportion relative to one another. This is a more transparent, informative approach.

	 Figure 3. Fork length-frequency for all Arctic charr captured downstream and upstream of Tote Road crossings during July 2025. At three culvert crossing sites sampled in both July and August 2025, the average size of char captured in August was smaller than in July (App. G.1.6, Sec. 3.3, p. 11). This was attributed to a possible "i*nflux of smaller juveniles and young-of-the-year that had not yet left overwintering lakes when the July surveys were conducted*." What evidence is there to suggest these smaller fish were late leaving their wintering lakes rather than delayed in their upstream passage through the culverts?
QIA Request	QIA requests Baffinland provide a revised version of Figure 3 that depicts the number of fish in each upstream and downstream age class, and explain why it attributes the upstream influxes of smaller juvenile and young-of-the-year Arctic char to late departure from their wintering lakes not delayed passage at the stream crossings.

Comment #	QIA 2025 NIRB MAE #6
Subject/Topic:	Timing of Remediation Measures
References:	**Document Name:** Appendix G.1.5 Tote Road Priority Actions **Pages:** 3 and 4
QIA Comment	Several actions rated A++++ (top priority) are scheduled for completion in 2027. At some sites (32 and 33) culverts are dysfunctional and water ponding and ground settlement are occurring due to permafrost degradation. Remediation is recommended to start asap to prevent further permafrost degrading but is not scheduled for completion in 2027 and 2028, respectively. Site 79 is also rated A++++ with the water level appearing close to the roadway surface and the possibility of affecting embankment stability and undermining the roadway structure. While seemingly urgent, this work is not scheduled until 2029.

QIA Conclusion/Request	According to the priority rating system, the sites rated as top priority require remediation the soonest, yet some of the works that are rated A++++ are not scheduled to be undertaken until 1-3 years in the future. Provide rationale for the schedule.

Comment #	QIA 2025 NIRB MAE #7
Subject/Topic:	Inconsistent Interpretation of Biological Responses
References:	**Document Name:** Appendix G.3.1 Mary River Project 2025 Core Receiving Environmental Monitoring Program Report Part 1 **Section:** Examples 3.1.3.1 and 4.1.3 **Page:** 86 and 169 of 503
QIA Comment	Across multiple sites in the CREMP, the report alternates between identifying statistically significant and/or ecologically meaningful differences and concluding that effects are not present due to lack of consistent temporal trends or because of natural/habitat variability. The interpretation appears inconsistent throughout the CREMP. The focus on the absence of clear directional trends is used to discount observed differences (e.g., density declines, FFG shifts, community dissimilarity), regardless of evidence of: • persistent differences (e.g., density lower since ~2016), • multiple Low/Moderate Risk responses, and • ecologically meaningful endpoint deviations. This approach may overlook cumulative or non-linear ecosystem responses and miss early signals of change. Some examples of this include: 1. Section 3.1.3.1 North Branch (CLT1-US) – “In 2025, total invertebrate densities and the relative proportions of *Nematoda*, *Oligochaeta*, *Chironomidae*, shredders, and burrowers were significantly higher at the CLT1 Upper Main Stem (CLT1-L2) compared to the reference area. In contrast, Simpson’s Evenness and the relative proportions of *Ostracoda*, *Simuliidae*, and sprawlers were significantly lower at the CLT1 Upper Main Stem relative to the Reference Creek. Of these endpoints, only density and the relative proportions of shredders, sprawlers, and burrowers were outside the CESBIC ±2 SDREF, indicating ecologically meaningful differences. Bray–Curtis similarity analysis also identified significant differences in community structure between CLT1-L2 and the reference area; the results of the dbRDA analysis in particular indicated strong environmental controls on community dissimilarity. These patterns likely reflect localized habitat differences between the Upper Main Stem and Reference Creek, rather than mine influence.” 2. Section 4.1.3 SDLT1 – “In 2025, most BIC endpoints at SDLT1 were comparable to those observed at Reference Creek (Station REF-CRK), except the relative proportions of *Nematoda*, *Ostracoda*, *Oligochaeta*, *Simuliidae*, collector-gatherers, filterers, and burrowers. None of these differences were considered ecologically meaningful (i.e., all MODs were within the CESBIC of ±2 SDREF; Table 4.2;

	Appendix Figure E.7). However, despite the absence of ecologically meaningful endpoint-level differences, Bray–Curtis similarity analysis results were indicative of relatively large (i.e., R2 = 0.74 and adjusted R2 = 0.57 for the Mantel Test and dbRDA, respectively) difference in overall community structure between SDLT1 and the reference area. These subtle compositional differences are likely attributable to natural variation in habitat conditions between areas, particularly the presence of bryophytes and algae at SDLT1 but not REF-CRK."
QIA Conclusion/ Request	The existing weight-of-evidence framework places too much emphasis on threshold exceedances, giving limited consideration to consistent below-threshold information that is evident across many sites over several years. These patterns are repeatedly dismissed as not mine-related. Consistency in direction and magnitude across sites and biological communities represents meaningful evidence of effect and must be explicitly considered, even when individual metrics do not trigger project thresholds.

Comment #	QIA 2025 NIRB MAE #8
Subject/Topic:	Reliance on Habitat Variability in Effects Interpretation
References:	**Document Name:** Appendix G.3.1 Mary River Project 2025 Core Receiving Environmental Monitoring Program Report Part 1 **Section:** 3.1.3.1 - North Branch (CLT1-US), 3.1.3.3 - Lower Main Stem (CLT1-DS), 4.1.3 - Benthic Invertebrate Community, 4.2.2 - Benthic Invertebrate Community and 4.3.3 - Benthic Invertebrate Community **Page:** 86 - 189 of 503
QIA Comment	Observed differences in biological endpoints (e.g., benthic community composition, functional feeding groups, and density) are frequently attributed to natural interannual variability or habitat-related factors (e.g., substrate conditions, organic matter availability, vegetation, bryophyte presence, flow) without quantitative evaluation of these drivers or comparison to alternative explanations. The repeated use of habitat variability as a default explanatory mechanism, without supporting analysis, reduces confidence in the interpretation of results. This is particularly relevant where: • statistically significant and/or ecologically meaningful differences are observed, • mine-related stressors (e.g., changes in water quality, sedimentation, or chemistry) are also present, and • similar patterns occur across multiple endpoints or years. Relying on assumed habitat differences in the absence of demonstrated relationships may influence the weight of evidence toward natural explanations and reduce the ability to identify mine-related or cumulative effects. For example, the report notes that bryophytes were present at CLT1-US but absent from the reference creek in 2025, and that bryophytes provide habitat complexity that can trap coarse and fine particulate matter, thereby increasing retention of food resources for benthic invertebrates. This is a plausible habitat-based explanation; however, it is unclear whether bryophyte presence

	was documented during baseline conditions at CLT1-US/DS or in the Sheardown Lake tributaries, or whether changes in bryophyte presence over time have been evaluated.
QIA Conclusion/Request	The proponent should clarify how habitat variability has been accounted for in the interpretation of biological responses to ensure that conclusions regarding potential mine-related effects are well supported. This should include confirming whether bryophytes were noted during baseline conditions at CLT1-US/DS and in Sheardown Lake tributaries, and whether temporal changes in bryophyte presence or abundance have been considered when interpreting benthic invertebrate responses.

Comment #	QIA 2025 NIRB MAE #9
Subject/Topic:	Long-Term Decline in Benthic Invertebrate Density
References:	**Document Name:** Appendix G.3.1 Mary River Project 2025 Core Receiving Environmental Monitoring Program Report Part 1 **Section:** 3.1.3.2 CLT1 Upper Main Stem **Page:** 89-90 of 503
QIA Comment	Although most endpoints do not show consistent trends, organism density has been significantly lower than baseline since 2016, suggesting a persistent change that is not fully explained by interannual variability. Relying on the lack of clear trends and functional feeding group based explanations may downplay a persistent change in the benthic community. Additionally, increased nematodes and collector-gatherers with reduced filterers suggests a shift toward fine organic matter dominance and altered habitat function, which may reflect chronic influence.
QIA Conclusion/Request	It may be helpful to further consider the long-term decline in organism density and its relevance. Strengthening the connection between shifts in feeding groups and potential sediment or organic changes could also improve interpretation. Revisiting the overall weight of evidence may help clarify whether effects are ongoing or temporary.

Comment #	QIA 2025 NIRB MAE #10
Subject/Topic:	Potential Early Biological Response in Camp Lake
References:	**Document Name:** Appendix G.3.1 Mary River Project 2025 Core Receiving Environmental Monitoring Program Report Part 1 **Section:** 3.3.4 Benthic Invertebrate Community (JLO) **Page:** 133-136 of 503
QIA Comment	Three consecutive years (2023–2025) of reduced benthic invertebrate density at Camp Lake (JL0), with MODs exceeding the CESBIC, suggest a persistent and potentially ecologically meaningful pattern rather than normal variability. Although richness and community composition remain stable, sustained declines in density may indicate reduced productivity or emerging stress that is not fully reflected in structural metrics. Attributing this pattern primarily to interannual variability or habitat fluctuations may minimize its significance, as the consistency and magnitude of the deviation exceed expected natural variation. Moreover, stable richness and

	composition do not preclude early stage impacts, as changes in density can precede detectable shifts in community structure. As such, the conclusion that structural integrity is maintained may overlook a developing effect that requires further consideration. "*Ecologically meaningful differences for density suggested a more recent and consistent decrease relative to baseline, with MODs outside the CESBIC of ±2 SDBASELINE for the last three consecutive years (2023 to 2025). Conversely, MODs outside the CESBIC for Simpson's Evenness were infrequent). The lower invertebrate densities in 2023 to 2025 relative to baseline may reflect variability in littoral productivity or water level fluctuations (e.g., habitats that are wetted one year may be dry the next, reducing the available habitat area for benthic invertebrates). Importantly, observed changes in organism densities relative to baseline were not accompanied by declines in taxonomic richness or major shifts in community composition, indicating that overall structural integrity of the BIC was maintained*."
QIA Conclusion/Request	The repeated instances of reduced density should be viewed as a potential early signal of change and their persistence and implications within the overall interpretation should be evaluated further.

Comment #	QIA 2025 NIRB MAE #11
Subject/Topic:	Weight-of-Evidence Interpretation of Fish Population Effects
References:	**Document Name:** Appendix G.3.1 Mary River Project 2025 Core Receiving Environmental Monitoring Program Report Part 1 **Section:** 3.3.5 - Camp Lake, 4.4.5 - Sheardown Lake NW, 4.5.5 - Sheardown Lake SE, 5.4.5 - Mary Lake **Page:** 137-297 of 503
QIA Comment	Across mine-exposed lakes, repeated differences in fish endpoints, including length-frequency distributions (LFDs), size structure, and condition, have triggered Low or Moderate Risk Responses; however, these findings are generally interpreted as natural variability in the absence of a clearly integrated weight-of-evidence assessment. Fish results are not consistently evaluated alongside supporting exposure and response lines of evidence, such as water quality trends, productivity, and benthic invertebrate community (BIC) results, which limits confidence in conclusions that adverse mine-related effects are absent. The assessment also relies heavily on critical effect size (CES) thresholds to discount statistically significant changes, even though repeated or directional trends over multiple years may signal longer-term ecological change that warrants further investigation.
QIA Conclusion/Request	An integrated, lake-specific weight-of-evidence approach is not clearly articulated, with limited linkage between fish endpoints and supporting lines of evidence such as water quality, productivity, sediment, and BIC trends, making it difficult to evaluate potential causal pathways. Clarification is requested on the rationale for not incorporating or reconciling multiple metrics that show consistent or repeated changes across years within the overall interpretation.

	Similarly, it is not clear how fish endpoints have been evaluated within a long-term context (e.g., relative to baseline or reference conditions) to determine whether observed differences are stable, directional, or increasing over time. Repeated exceedances of critical effect size (CES) thresholds and statistically significant changes continue to be interpreted largely on an annual basis, despite long-term data indicating potential patterns that warrant greater consideration of their cumulative and temporal significance.

Comment #	QIA 2025 NIRB MAE #12
Subject/Topic:	Integration of Fish and Benthic Responses at Camp Lake
References:	**Document Name:** Appendix G.3.1 Mary River Project 2025 Core Receiving Environmental Monitoring Program Report Part 1 **Section:** 3.3.5 Fish Population **Page:** 137-149 of 503
QIA Comment	Camp Lake shows persistent biological responses, including Moderate Risk Responses for Length Frequency Distributions (LFDs), a Low Risk Response for condition, and a Moderate Risk Response for Benthic Invertebrate Community (BIC) density; however, the fish effects interpretation does not clearly integrate these related endpoints. Post-2020 gill-net Catch Per Unit Effort (CPUE) remains elevated relative to earlier years, while productivity and BIC results do not provide a clear explanation for the increase. Nearshore fish were smaller, had a narrower size distribution, and had lower condition relative to baseline, which may indicate unresolved food-web or competition-related changes.
QIA Conclusion/Request	Integrate BIC density, nutrient and productivity patterns, and fish size and condition results to determine whether food limitation, competition, or other trophic mechanisms are contributing to the observed fish responses in Camp Lake. Assess whether elevated post-2020 CPUE reflects a sustained change in fish abundance, distribution, behaviour, habitat use, or sampling catchability. Use long-term trend and before and after analysis for Camp Lake BIC and fish endpoints to determine whether recent changes represent a persistent shift from baseline conditions.

Comment #	QIA 2025 NIRB MAE #13
Subject/Topic:	Interpretation of Fish Health Responses in Mary Lake
References:	**Document Name:** Appendix G.3.1 Mary River Project 2025 Core Receiving Environmental Monitoring Program Report Part 1 **Section:** 5.4.5 Fish Population and 5.4.6 Effects Assessment and Recommendations **Page:** 290-297 and 298-299 of 503
QIA Comment	Mary Lake triggered a Moderate Risk Response for fish LFDs and condition; however, the conclusion that these differences reflect natural productivity is not supported by a clear assessment. In addition, the Moderate Risk Response for total aluminum in the south basin is not evaluated in relation to fish health endpoints.

QIA Conclusion/Request	It is recommended that productivity, habitat, and food availability be evaluated to determine whether these factors are sufficient to explain fish size and condition differences relative to reference conditions. Potential relationships between elevated aluminum in the south basin and fish health metrics should also be assessed using a weight-of-evidence approach.

Comment #	QIA 2025 NIRB MAE #14
Subject/Topic:	Interpretation of Fish Size and Condition Responses in Sheardown Lake NW
References:	**Document Name:** Appendix G.3.1 Mary River Project 2025 Core Receiving Environmental Monitoring Program Report Part 1 **Section:** 4.4.5.2.1 Nearshore Arctic Charr (DL0-01) **Page:** 215-218 of 503
QIA Comment	Comparisons of fish size and condition at Sheardown Lake NW relative to both reference conditions and baseline present conflicting signals that are not fully resolved in the current assessment. Specifically, fish are consistently larger and heavier than those in the reference lake, suggesting a potentially positive effect; however, relative to baseline conditions, fish are smaller, lighter, and in poorer condition, indicating a negative response. On page 216 of 977, the report states, "*Longer-term comparisons between Sheardown Lake NW and Reference Lake 3 show that LFD and body size (fork length and body weight) for non-YOY arctic charr have been almost consistently significantly different throughout mine operations (2015 to 2025; Table 4.7).* ***These differences have generally reflected larger and heavier fish in Sheardown Lake NW relative to reference***." The following paragraph states, "*Relative to the baseline period, LFD for nearshore fish from Sheardown Lake NW have shown consistent significant differences across all operational years, and fish condition was significantly lower throughout the mine-operational period relative to baseline, except in 2023 (Table 4.7)*." While the report acknowledges both patterns, the interpretation emphasizes differences from the reference lake without adequately addressing the decline in condition and size relative to baseline, which represents the most direct pre-development benchmark. This creates uncertainty in the overall conclusion, as the observed patterns may reflect declining fish performance over time despite differences between lakes, rather than simply natural variability. The lack of integration between these two comparison frameworks limits the ability to determine whether observed changes are indicative of mine-related adverse effects, natural differences between systems, or a combination of both. As a result, the ecological significance of the observed trends in fish size, weight, and condition remains unclear.
QIA Conclusion/Request	It is recommended that comparisons to reference and baseline conditions be more explicitly integrated within a weight-of-evidence framework to reconcile conflicting signals in fish size and condition. In particular, the assessment

	should prioritize evaluation of temporal changes relative to baseline to determine whether declines in fish condition and body size have occurred over the mine-operational period. The analysis should examine whether the apparent positive differences relative to the reference lake may reflect inherent differences between systems (e.g., productivity or habitat), rather than improved fish performance, and should assess whether the consistent reductions in condition and size relative to baseline indicate a potential mine-related adverse effect.

Comment #	QIA 2025 NIRB MAE #15
Subject/Topic:	Role of YOY Arctic Charr in Fish Population Responses
References:	**Document Name:** Appendix G.3.1 Mary River Project 2025 Core Receiving Environmental Monitoring Program Report Part 1 **Section:** 4.4.5.2.1 Nearshore Arctic Charr (DL0-01) **Page:** 243-245 of 503
QIA Comment	The 2025 results for Sheardown Lake SE indicate a notably high proportion of YOY Arctic charr (44%), along with significantly larger YOY fish relative to the reference lake. This indicates strong recruitment, with the high number and relatively large size of YOY fish influencing the overall size structure and LFDs. While the report notes that inclusion of YOY did not change statistical significance, the substantial shift in magnitude of difference (MOD) indicates that recruitment dynamics are a key driver of observed patterns. However, the implications of increased YOY abundance and growth are not fully considered, especially for comparisons to reference conditions and long-term trends. In addition, the discussion of fish health is limited. While YOY and non-YOY condition factors were comparable to reference in 2025, longer-term results indicate variability in size, condition, and LFDs among years. These interannual differences should be more explicitly evaluated to determine whether they reflect natural variability or potential environmental influences affecting growth or energy allocation. Finally, the concluding linkage to benthic invertebrates is not well supported in the preceding discussion. If benthic invertebrate availability is being invoked as a mechanism influencing fish growth or recruitment, relevant observations (e.g., trends in density, biomass, or community composition) should be clearly presented and integrated.
QIA Conclusion/Request	The proponent should consider how YOY recruitment may be affecting fish population results and interpretation of mine related effects. In particular, examining how the high proportion and larger size of YOY contribute to observed size structure patterns could help distinguish recruitment driven variability from changes affecting older fish (e.g., growth or condition). Accounting for these dynamics within the weight-of-evidence framework may improve the ability to determine whether observed patterns reflect natural variability or are potentially associated with mine-related influences.

Comment #	QIA 2025 NIRB MAE #16

Subject/Topic:	Elevated Sedimentation at Sensitive Arctic Charr Spawning Habitat
References:	**Document Name:** Appendix G.3.2 Lake Sedimentation Monitoring Program Report **Section:** 3.1.1 Spatial Comparisons for the 2024 to 2025 Ice Cover and Open Water Periods and 3.1.2 Temporal Comparisons for the 2024 to 2025 Ice Cover and Open Water Periods **Page:** 29 of 231, 34-36 of 321
QIA Comment	Sedimentation rates at SHAL-2 (which is identified as a potential Arctic charr spawning and egg incubation habitat) were significantly higher than SHAL-1 and comparable to the profundal depositional zone during the 2025 open water period. This indicates that a sensitive littoral spawning habitat is experiencing sedimentation conditions similar to the deep profundal area of the lake. The report attributes this to a backflow of turbid water during heavy rainfall events, with visible plumes concentrated near SHAL-2. Elevated sedimentation, combined with finer and more organic material, can fill interstitial spaces, impact oxygen supply to eggs, and smother spawning habitat, especially when deposition occurs repeatedly. Section 3.1.2 further states that average sedimentation rates at all littoral areas including SHAL-2 were significantly higher in 2025 relative to 2014. Although sediment accumulation thickness remains below established thresholds, the evidence presented indicates increasing sedimentation during the open water period and exposure of the most sensitive receptor in the study area. These factors are not fully captured by threshold based assessments and represent a potential emerging risk to arctic charr spawning habitat.
QIA Conclusion/Request	Provide a habitat specific, trend based assessment of sedimentation risk at SHAL-2 that includes: • A detailed assessment of the ecological implications of elevated sedimentation rates at SHAL-2, specifically for Arctic charr spawning and egg incubation. • Consideration of cumulative and repeated deposition events, rather than single-threshold exceedances. • Proposed site-specific mitigation measures to reduce sediment transport and deposition at SHAL-2. • Development of adaptive management triggers that go beyond sediment thickness thresholds and incorporate rate, frequency, and habitat sensitivity. Recommendations for more robust monitoring approaches (e.g. targeted event-based sampling, or in-situ turbidity monitoring).

Comment #	QIA 2025 NIRB MAE #17
Subject/Topic:	Reliance on Regional Comparisons to Interpret Sedimentation Effects
References:	**Document Name:** Appendix G.3.2 Lake Sedimentation Monitoring Program Report **Section:** 3.1.1 Spatial Comparisons for the 2024 to 2025 Ice Cover and Open Water Periods **Page:** 34 of 231

QIA Comment	The report concludes that sedimentation rates at Sheardown Lake NW fall within the range observed in other Arctic lakes; however, this comparison alone does not establish whether these conditions are influenced by mining or industrial activities, particularly in the absence of a local reference lake (e.g., Reference Lake 3 used elsewhere in the CREMP framework). While reported sedimentation rates fall within published Arctic ranges, this comparison may not fully reflect site-specific conditions. Lakes referenced in the literature may not be subject to the same combination of potential influences present at Sheardown Lake NW, including mine related disturbance and episodic turbidity events (e.g., rainfall driven backflow). The report presents multiple lines of evidence, including elevated sedimentation at sensitive spawning habitat (SHAL2), increasing long-term trends during the open water period, and early benthic community responses, that together suggest increasing sedimentation pressure. Reliance on comparisons to regional ranges minimize these site specific and temporal indicators of change. Similarity to Arctic lake ranges does not necessarily demonstrate absence of impact, particularly where sedimentation rates are increasing and affecting sensitive receptors.
QIA Conclusion/Request	The proponent should provide a clear, weight-of-evidence determination of whether the observed increases in sedimentation at SHAL-2 represent a project-related effect, including consideration of spatial patterns (e.g., contrast with SHAL-1), temporal trends (2014 vs. 2025), and observed plume behaviour. The current reliance on regional comparisons does not adequately address site-specific causation. Please also refer to comment 37 above. Given the reliance on regional comparisons, the proponent should clarify whether establishing sedimentation reference conditions at Reference Lake 3 was considered.

Comment #	QIA 2025 NIRB MAE #18
Subject/Topic:	Early Biological Responses to Sedimentation in Sheardown Lake NW
References:	**Document Name:** Appendix G.3.2 Lake Sedimentation Monitoring Program Report **Section:** 3.4 Benthic Invertebrate Community Relationships with Sedimentation Rate and Thickness and the Potential Effects to Arctic Charr **Page:** 43-45 of 231
QIA Comment	The report identifies statistically significant relationships between benthic community composition and sedimentation, including a strong negative correlation between Chironomidae and sedimentation (rate and accumulation), and a positive correlation with Ostracoda. Despite these findings, the report concludes that there are no meaningful ecological effects based primarily on the absence of relationships with density, richness, or evenness metrics. Shifts in benthic community composition are early indicators of habitat stress and may precede detectable changes in aggregate diversity indices. The observed trend (decreasing Chironomidae and increasing Ostracoda with increasing sedimentation), combined with elevated sedimentation at SHAL-2 and increasing trends over time, suggests a potential early biological response

	to sedimentation rates and accumulation. Focusing solely on broad community metrics (e.g., richness, evenness) may hide important changes in habitat quality and food availability for Arctic charr. Overall, the system may currently meet compliance thresholds; however, multiple lines of evidence, including sedimentation trends, exposure of sensitive littoral habitat, and taxa-specific benthic responses, indicate a developing pressure that could become biologically significant if it persists.
QIA Conclusion/Request	To ensure impacts are adequately understood, the proponent should: • Re-evaluate the ecological interpretation of benthic results to explicitly consider taxa-specific responses (particularly Chironomidae and Ostracoda) as potential indicators of sedimentation-related habitat change, rather than relying primarily on community-level indices. Identify thresholds, triggers, or early warning indicators based on benthic composition (e.g., declines in Chironomidae dominance), to support proactive management before effects are reflected in broad diversity metrics.

Comment #	QIA 2025 NIRB MAE #19
Subject/Topic:	Steensby Inlet Bathymetric Survey Coverage, Validation, and Completion of Remaining Corridor Survey Requirements
References:	**Document Name:** Appendix G.8.3 – Bathymetry Survey Operations and MMO Report **Section:** 1 Introduction; 2 Scope of Work; 4.4 Survey Methodology; 5.2 Data QC; 7 Results; 8 Deliverables **Page:** 4–5 of 37; 10–12 of 37; 14–16 of 37.
QIA Comment	The Bathymetry Survey Operations Report indicates that approximately 2,800 km of survey effort and approximately 350 km² of bathymetric coverage were completed during the 2025 field season. The survey was conducted as part of a multi-year program, with full corridor coverage completed for a portion of the route and additional corridor mapping planned for the 2026 field season. The report states that survey acquisition was designed to meet IHO S-44 Order 1A standards and achieve a minimum of 20% overlap between adjacent multibeam swaths. Figures provided in the report demonstrate that substantial multibeam coverage was acquired during the 2025 survey and that a continuous bathymetric surface was produced for the surveyed corridor. The survey area figures show integration of 2023 survey data, existing Canadian Hydrographic Service (CHS) coverage, and newly acquired 2025 data, while the final bathymetric surface confirms that the 1 NM corridor section was mapped using overlapping multibeam coverage rather than isolated trackline measurements. Additional information provided in the Marine Mammal Monitoring Report indicates that the survey design consisted of two distinct components: (1) a full 1 NM-wide corridor surveyed between approximately KP198 and KP360 through multiple overlapping multibeam swaths and (2) a dual-pass transit section between approximately KP360 and KP850 where a single survey line was collected during entry and departure from the survey area. The project

	figure illustrates that full corridor coverage was achieved only along part of the route, while the southern portion of the corridor currently consists of dual-pass coverage pending future survey work. While the figures demonstrate substantial completed coverage, the report does not provide a quantitative assessment of remaining survey requirements or clearly identify the extent of corridor sections that remain dependent on the dual-pass survey approach. The report further notes that the transit-line data will be fully processed and delivered following completion of the remaining corridor coverage in 2026, indicating that portions of the route survey remain incomplete. The report includes comparison of collected bathymetric data against CHS Non-Navigational Networked (NONNA) bathymetry as part of the quality control program; however, limited information is provided regarding independent validation of the newly collected dataset, including whether crosslines, check lines, or similar survey verification methods were collected and evaluated to confirm achievement of survey accuracy objectives throughout the corridor. Given that bathymetric characterization of the marine route is intended to support navigation, environmental understanding, and future project planning, additional information is required to demonstrate that the remaining 2026 survey program will adequately address outstanding coverage requirements and provide a complete characterization of the corridor. In particular, the report would benefit from a clear description of remaining data gaps, the basis for determining that the completed coverage is sufficient to date, and the quality assurance measures that will be used to confirm completion of the final survey objectives.
QIA Conclusion/Request	• Provide a quantitative summary of corridor coverage completed to date, including the percentage of the route for which full 1 NM corridor coverage has been achieved versus areas currently represented by dual-pass transit surveys only. • Provide maps identifying completed coverage, remaining coverage gaps, and the planned extent of the 2026 survey program. • Describe the survey verification and quality assurance procedures used to confirm achievement of IHO S-44 Order 1A requirements, including any crossline analyses, check lines, or independent validation methods. • Clarify the limitations associated with the currently available dual-pass survey sections and how these limitations will be addressed through the planned 2026 survey program. • Demonstrate that the planned 2026 survey scope is sufficient to complete corridor characterization and meet the stated objectives of the multi-year bathymetric survey program.

	• Explain how interim bathymetric data are being incorporated into project planning and environmental assessment activities prior to completion of the full corridor survey.

Comment #	QIA 2025 NIRB MAE #20
Subject/Topic:	Buffers from Highwater Mark
References:	NIRB Annual Report 2025 Section 4.6.7 Freshwater Environment Page 164
QIA Comment	Project Certificate Term and Condition No. 41 addresses setbacks for the Freshwater Aquatic Environment. In order to mitigate impacts of runoff into freshwater aquatic habitat, Baffinland is required to maintain a minimum 100-metre naturally vegetated buffer between the high-water mark of any fish-bearing waterbodies and any permanent quarries with potential for acid rock drainage or metal leaching. This requirement does not consider reaches of watercourses upstream of fish bearing reaches that discharge into or are part of the flow regime. These reaches do not provide direct habitat but contribute flow that may be contaminated. If buffers are not being maintained in these areas, the possibility of acid rock drainage or metal leaching entering the watercourses is a risk and could cause impacts.
QIA Conclusion/Request	In order to reduce the possibility of impacts to fish bearing watercourses, consideration should be given to implementing a naturally vegetated buffer to reaches upstream of fish bearing reaches. These reaches contribute substantial flow to these watercourses and should be considered accordingly.

Comment #	QIA 2025 NIRB MAE #21
Subject/Topic:	Fish Collection Component of the Program in Providing Information on the Arctic Char Population
References:	Milne Inlet Freshwater Health 2024 Report Pages 43-58.
QIA Comment	A number of variables are being considered in the assessment of Arctic char health through the sampling program. The non-randomized design focuses primarily on achieving the requisite number of fish for the sample. This design is understandable but is unlikely to provide an unbiased sample. The differences between resident and anadromous populations that are co-existing in the study lakes also cause discrepancies in the results. The ratio of females to males in the sample is another difference that cannot be controlled. Differences in spawning/migration timing relative to sampling introduces yet another variable. With all of these variables to be considered in addition to the small sample size, brings the question of validity of results that state for example that "*two distinct clusters are apparent in Ikaluit Lake gonad weight relative to body weight suggesting a mix of spawning and non-spawning individuals, while only a single cluster was apparent in Qurluktuk Lake.*"

	The report is correct in stating that the health endpoints may be due to sample bias. But the report also attributes differences in health endpoints to methodological changes such as gill net size and sampling location. Furthermore, in 2024, slow-growing individuals were separated from the rest of the sample to provide a good fit for the length at age regression. But since individuals from previous years cold not be definitively categorized as either resident or anadromous, both life history strategies were included in the analysis. The report cautions the interpretation of temporal trends as the proportions of sampled fish exhibiting each life history strategy appear to vary annually.
QIA Conclusion/Request	Given these anomalies, we question the validity of the data, particularly the temporal health trends but also energy use endpoints such as weight-at-age and relative gonad weight and liver weight. These results should not be relied upon for population assessment. With this much variability, it seems unlikely that any effects from the mining activity would not be detected. We agree with the recommendation to reduce the sampling to triennial but also believe that more collection of information from Inuit IQ members would be beneficial.

Comment #	QIA 2025 NIRB MAE #22
Subject/Topic:	Ratio of ^{66}Zn to Calcium along a Core to Edge Transect of an Arctic Char Otolith
References:	Milne Inlet Freshwater Health 2024 Report P. 41 & 42 Figure 2.3
QIA Comment	The figure caption and text indicate the ^{66}Zn peaks indicate fish age but the reasoning is not clear as the concentration of ^{66}Zn in year 4 is the lowest. Also, years 11, 12 and 13 indicate lower concentrations of ^{66}Zn in the otolith as the fish ages.
QIA Conclusion/Request	Provide greater clarification on the concentrations of ^{66}Zn associated with fish age.

Comment #	QIA 2025 NIRB MAE #23
Subject/Topic:	Exceedances of Cadmium, Copper and Selenium in fish tissue
References:	Milne Inlet Freshwater Health 2024 Report P. 41 & 42 Figure 2.3
QIA Comment	Exceedances of arsenic, cadmium, copper and selenium were observed in both muscle and liver tissue of Arctic charr. Exceedances were also observed for chromium in muscle tissue and manganese, silver and zinc in liver tissue. The exceedances are attributed to various conditions such as reflecting natural conditions (cadmium, copper and selenium) and being commonly associated with arsenobetaine (arsenic). No evidence is provided for any of these situations being applicable to the exceedances observed in the various types of fish tissue.
QIA Conclusion/Request	Provide evidence that the exceedances are in fact from the hypothesized conditions rather than a mine related influence.

Comment #	QIA 2025 NIRB MAE #24
Subject/Topic:	Investigation of Dyno facility
References:	2025 Annual Report Appendix E Baffinland Responses to Comments 2024 AR-IR2E, Comment #44, QIA Comment # QIA 2024 NIRB WQ#5
QIA Comment	QIA previously requested that Baffinland clarify how the planned increase in ore production might affect the transportation, storage, and handling of ammonium nitrate in relation to aquatic receiving environments. As part of its response, Baffinland stated that an activity audit is being completed to investigate the Dyno facility as a likely source of the observed elevated nitrogen compounds in Sheardown Lake tributary 9 (SDLT9), and that mitigation measures will be recommended and implemented based on these findings. It is not clear when the activity audit will be completed and whether the findings and recommendations will be circulated for review.
QIA Conclusion/Request	Baffinland should clarify when the Dyno facility activity audit will be completed and share the results and recommendations with QIA.

Comment #	QIA 2025 NIRB MAE #25
Subject/Topic:	Ballast water treatment effectiveness
References:	2025 Annual Report Appendix E Baffinland Responses to Comments 2024 AR-IR2E, Comment #68, QIA Comment # QIA 2024 NIRB MAE #5 and #6
QIA Comment	QIA previously requested that Baffinland clarify what biological testing will be conducted to verify that the ballast water treatment systems used by Project shipping are reliably meeting the D2 standards. In its response, Baffinland did not directly indicate how its treatment systems are reliably meeting the D2 standards. Instead, it stated that “Baffinland requires that vessels arriving from international waters conduct ballast water exchange followed by ballast water treatment, a protocol which exceeds both the IMO and Transport Canada requirements” and stated that it was working with Fisheries and Oceans Canada on developing a risk-based approach to ballast water sampling. It is not clear how the risk-based approach will be used to test the effectiveness of ballast water treatment systems.
QIA Conclusion/Request	Baffinland should clarify how the ongoing research study conducted in collaboration with DFO will address the question of whether current ballast water treatment systems used by Project shipping are reliably meeting the D2 standards.

Comment #	QIA 2025 NIRB MAE #26
References	**Document Name:** Baffinland Iron Mines 2025 Annual Report to the Nunavut Impact Review Board, Main Document [260529-08MN053-2025 Annual Report-IR2E.pdf] **Section:** 4.6.10 Marine Environment, Table 4:23: Marine Environment Impact Evaluation **Page:** 253 (pdf p. 255 of 560) **Section:** 4.6.10 Marine Environment, PC Term and Condition No. 76 **Page:** 259 (pdf p. 261 of 560)

	Section: 4.6.10 Marine Environment, PC Term and Condition No. 83(a) **Page:** 275 (pdf p. 277 of 560) MEWG (Marine Environment Working Group) meeting July 7, 2026
QIA Comment	Baffinland has cancelled its 2026 Marine Environmental Effects Monitoring Program (p. 259), except for water quality sampling (7 July 2026 MEWG meeting). It is not clear whether this includes the suite of 8 stations that were established near the Milne Port ore dock to monitor potential impacts of larger (Capesize and BabyCape) ore carriers on the sediment quality and benthic infauna community (p. 275). In 2025, stations near "*the Ore Dock (SW-1 and SW-2) fluctuated in density and richness over time, showing patterns that are consistent with documented scouring in this area.*" (p. 253)
QIA Request	QIA requests Baffinland clarify whether it will sample sediment quality and benthic infauna at the suite of 8 stations near Milne Port ore dock in 2026, and recommends this program be continued.

Comment #	QIA 2025 NIRB MAE #27
References	**Document Name:** Baffinland Iron Mines 2025 Annual Report to The Nunavut Impact Review, Appendix G.3.2 Mary River - Lake Sedimentation Monitoring Program Report - 2024/2025 [NIRB Registry: 260529-08MN053-2025 Annual Report App G.3.2 Lake Sedimentation Monitoring Pt1-IR2E.pdf]. **Section:** 4 Conclusions **Page:** 37 (pdf p. 46 of 58)
QIA Comment	In the Lake Sedimentation Monitoring Report Conclusions Baffinland states, "[a]*nnual sediment accumulation thickness estimates for Sheardown Lake NW, based on the combined ice cover and open water conditions during 2024/2025, were within the range reported for Arctic lakes of comparable size and/or depth and were below the FEIS prediction of 1 mm/year associated with negligible effects on direct mortality of arctic charr and arctic charr eggs*." (p. 37) This wording may imply that a sediment accumulation rate of 1 mm/year has been shown to have negligible effects on Arctic char egg survival. However, this High Action response threshold is not based on data from Arctic char eggs or project-generated sediment. Rather, it reflects professional judgment extrapolated from studies on other species and different sediment types (Morgan et al. 1983; Fudge and Bodaly 1984; Berry et al. 2011). The Low (0.15 mm/year), Moderate (0.54 mm/year), and High (1 mm/year) response thresholds have not been validated for Arctic char. Placing undue reliance on these thresholds risks either underestimating or overestimating the effects of changes in sediment deposition. Given this uncertainty, effects on Arctic char and their eggs should not be characterized as "*associated with negligible effects on direct mortality of Arctic char and Arctic char eggs*" unless the basis for that characterization is clearly qualified. Otherwise, readers, including regulators, may give the thresholds more weight than is warranted. This is important given the increasing trend in sediment deposition at Sheardown Lake NW and Baffinland's plans to increase ore

	production, which may increase dust and sediment mobilization sufficiently to test these thresholds. References: Berry, W.J., N.I Rubinstein, E.K. Hinchey, G. Klein-MacPhee, and D.G. Clarke. 2011. Assessment of dredging-induced sedimentation effects on winter flounder (*Pseudopleuronectes americanus*) hatching success: results of laboratory investigations. Proceedings of the Western Dredging Association Technical Conference and Texas A&M Dredging Seminar, Nashville, Tennessee, June 5-8, 2011. pp. 47 – 57. Fudge, R.J.P., and R.A. Bodaly. 1984. Post-impoundment winter sedimentation and survival of lake whitefish (*Coregonus clupeaformis*) eggs in Southern Indian Lake, Manitoba. Canadian Journal of Fisheries and Aquatic Sciences 41: 118 – 125. Morgan, R.P, V.J. Rasin and L.A. Noe. 1983. Sediment effects on eggs and larvae of striped bass and white perch. Transactions of the American Fisheries Society 112: 220 – 224.
QIA Request	QIA recommends Baffinland take a precautionary approach to sediment deposition, ensure readers are aware that the sediment thresholds for Arctic char have not been validated, and complete studies to validate sediment thresholds for Arctic char egg survival prior to the planned production increase.

Geotechnical (GT)

Comment #	**QIA 2025 NIRB GT #1**
References	**Document Name: 2025 WRF Geotechnical Inspection Report**
Comment	The 2025 WRF geotechnical inspection report was not included with the 2025 NIRB submission.
Request	QIA looks forward to reviewing the Geotechnical Inspection Report and recommends that Baffinland provide anticipated timelines for having this report ready for intervenors.

Comment #	**QIA 2025 NIRB GT #2**
References	**Document Name:** Response to Intervenor Comments on the 2024 Annual Report **Section**: Attachment 1, Table A.1 **Comment #:** 3
QIA Comment	QIA acknowledges the discrepancy between the angle of repose reported by WSP during inspection and BIM's statement that an angle of repose of 35 to 37 degrees is typically observed within the WRF. QIA also noted BIM's statement that results derived from small scale laboratory analyses, such as direct shear testing, may not necessarily be representative of the WRF material as a whole. However, best practice for WRF slope stability assessment and design is to develop design parameters using available sources of information including field

Comment #	QIA 2025 NIRB GT #2
	investigations, laboratory testing, visual observations and engineering judgement. A range of sensitivity analyses can be carried out to understand the range of variability in materials or foundation conditions and what the impact on performance would be. Based on the information reviewed by QIA, it is not clear that laboratory testing has been undertaken to characterization the full range of materials within the WRF, nor is it evident that sensitivity analyses have been conducted to evaluate the potential effect of lower internal friction angles may have on the factor of safety of the WRF facility. Given that the selected design strengths appear to be higher than those observed in the field, additional laboratory testing would provide further support for the selected design parameters. Given the well-graded nature of the WRF material and the expected variability in material properties, additional characterization would help establish whether the assumed strength parameters are typical or represent an upper or lower bound strength. Consideration could then be given to evaluating the sensitivity of slope stability outcomes to the expected range of material properties to support effective risk management.
QIA Request	QIA requests Baffinland implement a laboratory testing program to characterize the range of materials present within the WRF and to evaluate the corresponding shear strength parameters. In addition, undertake a sensitivity analysis to assess varying internal friction angles and the impact on the factor of safety of the WRF.

Comment #	QIA 2025 NIRB GT #3
References	**Document Name:** Response to Intervenor Comments on the 2024 Annual Report **Section**: Attachment 1, Table A.1 **Comment #: 5**
QIA Comment	QIA acknowledges BIM's response and understands that conventional groundwater monitoring methods may not be practical within the thin active layer surrounding the WRF. However, the absence of groundwater or shallow seepage observed in test pits does not, in itself, demonstrate the absence of subsurface flow pathways. In permafrost environments, shallow active layer flow and preferential flow pathways may still occur and could represent potential seepage migration mechanisms. QIA notes that, based on the information reviewed, a facility wide water balance assessment has not been conducted for the WRF and surrounding area to evaluate what percentage of WRF seepage water is captured within seepage collection pond MS-08. It is also understood that seepage continues to be observed within the secondary containment area north of MS-08. As a result, there remains uncertainty related to the quantity and quality of unrecoverable seepage originating from the WRF and the present risk to the surrounding environment. Additional assessment of seepage pathways and capture mechanisms would assist in reducing this uncertainty and in evaluating potential environmental risks associated with seepage migration, irrespective of whether the flow mechanism is characterized as groundwater flow under industry-standard definitions.
QIA Request	QIA requests further investigation and assessment to understand the source of seepage that is currently unaccounted for within the existing conceptual model. Additional assessment of potential seepage pathways in the vicinity of the WRF.

	Completion of a WRF water balance model to evaluate seepage generation, recoverable seepage, unrecoverable seepage and discharge pathways.

Comment #	**QIA 2025 NIRB GT #4**
References	**Document Name:** Response to Intervenor Comments on the 2024 Annual Report **Section**: Attachment 1, Table A.1 **Comment:** #4
QIA Comment	QIA acknowledges that developing a detailed schedule with specific implementation dates may be challenging to produce within a 60-day time period. However, the preparation of a high level schedule and implementation plan is common practice in regulatory submissions and can provide evidence that the required repairs have been identified and appropriately prioritized. Such planning would also assist in demonstrating the proposed approach, anticipated sequencing, and estimated timing for completion of the required repairs.
QIA Request	QIA requests a high level schedule and implementation plan for required repairs to be provided with Geotechnical monitoring report and recommendations.

Socioeconomic Environment (SE)

Comment #	**QIA 2025 NIRB SE #1**
References	**Document Name: Socio-economic Monitoring Report**
Comment	The 2025 Socio-economic Monitoring Report was not included with the 2025 NIRB submission.
Request	QIA looks forward to working with the Proponent on reviewing the Socio-economic Monitoring Report and revisions, and recommends that Baffinland provide anticipated timelines for having the Socio-economic Monitoring Report ready for intervenors.

Inuit Knowledge, Culture, Land and Resource Use and Inuit Qaujimajatuqangit (CLRU/IQ)

Comment #	QIA 2025 NIRB CLRU/IQ #1
Subject / Topic	Understanding how IQ has been used in developing and implementing monitoring programs
References	**Document Name:** Baffinland Iron Mines 2025 Annual Report to the Nunavut Impact Review Board, Performance on PC Terms and Conditions. **Section:** Section 4.6.8 Terrestrial Environment **Page:** pp. 179-229
Comment	In the comments on the 2024 Annual Monitoring Report Review (QIA 2024 NIRB CRLU/IQ#1). QIA requested that Baffinland to provide more detail as to how IQ was used to design terrestrial, marine, and freshwater monitoring programs and used for their analysis and interpretation of results (as well as how Baffinland meets Inuit expectations re: OCAP)). While Baffinland states that it is working with QIA and HTOs to identify recommendations and guidance for terrestrial monitoring programs, it does not

	describe whether and how IQ has been incorporated into the development or implementation of the program. Ultimately, while Baffinland provides examples of engagement activities, they do not address QIA's original request.
Conclusion/ Request	QIA requests that Baffinland develop a clear explanation of whether and how IQ informed the design, implementation, analysis, and interpretation of monitoring programs.