Response to Technical Review Comments on the Water License Renewal for Type A Water License 2AM-MRY1325 Mary River Project

November 12, 2024

Baffinland Iron Mines Corporation
Mary River Project
NIRB File No. 08MN053

TABLE OF CONTENTS

LIST OF ATTACHMENTS

Appendix 1 Attachments

Attachment 1. QIA TR-1. 2023 CREMP
Attachment 2. CIRNAC R-17. Baffinland Waste Rock Reconciliation
Attachment 3. CIRNAC R-24. Updated Figures 5.1 and 5.2
Attachment 4. CIRNAC R-30. Construction Summary Reports
Attachment 5. CIRNAC R-33. Hatch Civil Design Philosophy
Attachment 6. CIRNAC R-34. Phase 2 Water Withdrawal Plan

QIKIQTANI INUIT ASSOCIATION

ID#	Recommendations/Requests	Response
QIA-TR-1	a. We request Baffinland all aquatic monitoring data collected while the Project has operated to demonstrate how actual monitoring conditions have remained within or exceeded environmental assessment predictions. This analysis should include seasonally specific summaries (e.g., median values and percentiles) throughout the receiving environment akin to an annual report using all data provided in "240916 2AM-MRY1325 Attachment 1 - Water Licence Water Quality Monitoring Results 2013-2023-ILAE". Further, the analyses should include trend analyses to provide confidence for reviewers that conditions are not trending up over time (and may either exceed environmental assessment predictions in the future, or further exceed environmental assessment predictions). The results should be compared with area specific environmental predictions presented in the Environmental Assessment. b. Upon completion of this requested analysis, Baffinland should update plans that are intended to manage environmental effects pathways that have exceeded environmental assessment predictions. The provision of this analysis and updated plans that have not effectively constrained environmental effects as outlined in the environmental assessment must be accomplished during this licensing process with sufficient time for review by the parties.	a) The requested review and analysis of aquatic monitoring data is already addressed and completed through annual data collection, analysis, and reporting of component monitoring programs of the Aquatic Effects Monitoring Plan (AEMP; i.e., the Core Receiving Environment Monitoring Program [CREMP] and the Lake Sedimentation Monitoring Program [LSMP]), including temporal trend analyses (where applicable) and comparisons with area specific environmental assessment predictions. The Project's annual CREMP Program Report presents the annual results of water quality, sediment quality, phytoplankton, benthic invertebrate, and fish monitoring. While each annual report presents that year's results for all monitored parameters, key parameters of interest are also plotted temporally for comparison of results over time or results of statistical analyses are compared over time. Examples of these plots and statistical results comparisons are listed below and provided in the attached CREMP report. The most recent CREMP report was included as Appendix E.9.1 in the 2023 QIA-NWB Annual Report for Operations and is also included here as Attachment 1. • For water quality parameters: Figure C.9 Temporal Comparison of Water Chemistry at Camp Lake (JL0) Over Mine Baseline (2006 to 2013), Construction (2014), and Operations (2015 to 2023) Periods, Mary River Project CREMP (Appendix C; Minnow 2024a) • For sediment quality parameters: Figure 3.9 Temporal Comparison of Sediment Metal Concentrations at Littoral and Profundal Stations of Camp Lake (JL0) and Reference Lake 3 (REF3) for Mine Baseline (2005 to 2013), Construction (2014), and Operational (2015 to 2022) Periods, Mary River Project CREMP (Minnow 2024a) • For phytoplankton: Figure 3.11Temporal Comparison of Chlorophyll−a Concentrations Among Seasons between Camp Lake (JL0) and Reference Lake 3 (REF3) for Construction (2014) and Operational (2015 to 2023) Periods, Mary River Project CREMP (Minnow 2024a) • For benthic invertebrates: Figure F.5 Benthic Invertebrate Community Endpoints at Camp Lake (JL0) and Reference Lake 3 (REF3) Littoral Habitat Stations among Mine Baseline (2007) and Operational (2015 to 2023) Periods, Mary River Project CREMP (Appendix F; Minnow 2024a) • For fish: Table 3.12: Summary of Statistical Results for Arctic Char Population Comparisons between Camp Lake and Reference Lake 3 from 2015 to 2023, and between Camp Lake Mine Operational and Baseline Period Data, for Fish Captured by Electrofishing and Gill Netting Methods, Mary River Project 2023 CREMP (Minnow 2024a) The CREMP also includes a Response Framework for determining and initiating adaptive management responses based on monitoring results (Figure 2.7 of Minnow 2024a). Results of the annual CREMP, including consideration of temporal comparisons discussed above, are evaluated to determine if there is evidence of a change in each parameter, if that change is mine-related, and if so, what level of response action is required. This evaluation is completed for all monitored parameters, with the level of response action (i.e., low to high) partially depending on if the parameter exceeds the AEMP benchmark (if an applicable benchmark as been developed). The process for selecting parameters and substances for which AEMP benchmarks were developed is described in the Aquatic Effects Monitoring Plan (Baffinland 2015) but briefly, parameters with benchmarks generally include substances present at naturally elevated concentrations near the mine, and/or those that could be released at elevated concentrations as a result of mining activities, into the future, as well as substances regulated or potentially regulated under the Metal and Diamond Mining Effluent Regulations. Should the evaluation of CREMP results detect a change in a parameter, and if

ID#	Recommendations/Requests	Response
		that change is determined to be mine related, a management response action is required. One of the possible response actions is to conduct temporal trend analysis, an action that was completed in the 2022 and 2023 CREMP Program Reports for water and sediment quality parameters for which a potential mine-related effect was determined in the previous monitoring year. The results of these temporal trend analyses are presented in Appendix H of the 2022 and 2023 CREMP Program Reports (Minnow 2023 and 2024a) and interpreted in the sections of the reports corresponding to the specific area and parameters of interest. Finally, within the 2023 CREMP Program Report, parameters with Final Environmental Impact Statement (FEIS) predictions were also compared to the appropriate area specific predictions (for example, see Section 3.3.6 of Minnow 2024a). Overall, some mine-related changes in surface water quality have been identified in the core receiving environment near the Mine Site through the CREMP (Minnow 2024a), however, all parameter concentrations were within predicted significance ratings for magnitude of effects on water quality predicted in the FEIS and ERP FEIS Addendum (Baffinland 2012 and 2013). Given that all water quality parameter concentrations in 2023 were within applicable significance ratings for magnitude, FEIS and ERP FEIS Addendum predictions for (absence of) effects on Arctic char health and condition were also met (Minnow 2024; Baffinland 2012 and 2013). The Lake Sedimentation Monitoring Program is another component monitoring program of the AEMP. The 2023 Lake Sedimentation Monitoring 2022/2024 Report presented annual results of the program, temporal comparisons for the 2022/2023 ice cover and open water periods with results since the baseline period, and comparisons with FEIS predictions (Minnow 2024b). Temporal comparison results are presented in Section 3.1.2 of Minnow 2024b and comparisons to FEIS predictions are presented in Section 3.2.1 of Minnow 2024b. Overall, the mean sediment accumulation thickness estimated for the 2022 to 2023 Arctic char egg incubation/larval pre-emergence period at three monitoring stations in Sheardown Lake NW was approximately 8 to 15% of the threshold level of 1 mm of sediment accumulation thickness purported to affect egg incubation success which was also the FEIS and ERP FEIS Addendum threshold predicted to result in negligible effects on the direct mortality of Arctic char (Minnow 2024b; Baffinland 2012 and 2013). As demonstrated, the component monitoring programs of the AEMP comprehensively assess whether conditions in the aquatic environment have remained within or exceed environmental assessment predictions through routine annual data evaluation, temporal trend analyses where necessary according to the Response Framework, and through direct comparisons to area specific FEIS predictions. b) Baffinland has previously defined the process for updating Management Plans based on the results of monitoring or any other changing conditions at site, and assures QIA that the requested level of analysis as described above is being undertaken according to agreed to processes, and the adaptive management responses required under the Management Plans includes updating the Management Plans, where required. **References** Baffinland (Baffinland Iron Mines Corporation). 2012. Mary River Project—Final Environmental Impact Statement. Public Registry Identification numbers: Volume 1 – 283284, Volume 2 – 283313, Volume 3 – 283323, Volume 4 –283503. Volume 5 – 283515, Volume 6 – 283525, Volume 7 – 283541, Volume 8 – 283569, Volume 9 - 283577, Volume 10 – 283581. Baffinland. 2013. Mary River Project – Addendum to the Final Environmental Impact Statement for the Early Revenue Phase. June 2013. Public Registry Identification numbers: Volume 1 - 290839, Volume 2 – 290850, Volume 3 – 290856, Volume 4- 290858, Volume 5 – 290861, Volume 6 – 290862, Volume 7 – 290864, Volume 8 – 290868, Volume 9 – 290872, Volume 10 – 290845. Baffinland. 2015. Mary River Project Aquatic Effects Monitoring Plan. Document No. BAF-PH1- 830-P16-0039. Rev 1.

ID#	Recommendations/Requests	Response
		Minnow. 2023. Mary River Project 2022 Core Receiving Environment Monitoring Program Report. Prepared for Baffinland Iron Mines Corporation. March 2023. Minnow. 2024b. Mary River Project 2023 Core Receiving Environment Monitoring Program Report. Prepared for Baffinland Iron Mines Corporation. March 2024. Minnow. 2024c. Mary River Project Lake Sedimentation Monitoring 2022/2023. Prepared for Baffinland Iron Mines Corporation. March 2024.
QIA-TR-2	QIA requests that Baffinland prepare an initial TARP decision tree pertaining to decisions based on professional judgement as part of these proceedings.	Baffinland considered the development of a decision tree and found it to unduly limit the ability of professionals to make determinations within their field of expertise. Rather, Baffinland proposes to define the general intent of professions judgement and the rationale to be included when it is exercised within Baffinland's annual reports. Professional judgement generally means the combination of personal qualities with relevant knowledge, experience and professional standards to form opinions and make decisions. In the applied sciences context, this may include consideration of generally accepted scientific and engineering principles, and available relevant information, such as IQ. Where professional judgement is applied in relation to TARPs, Baffinland will be prepared to share its detailed rationale if requested. For example, if QIA requires further information for a decision based on professional judgement, a written explanation of the specific considerations applied by the professional in forming their judgement could be provided.
QIA-TR-3	QIA would like to request Environment and Climate Change Canada's judgement on whether discharges to the marine environment from the Milne Port management ponds of surface water that has come into contact with the processed ore are subject to the Metal and Diamond Mining Effluent Regulations.	As noted previously, the topic of discharge to the marine environment is outside the jurisdiction of the NWB under the NWNSRTA and its regulations and the water licencing process. Baffinland has also previously confirmed the Milne Port is seen as a separate Project from the Mine Site and does not meet the definitions for the application of the MDMER. This does not mean there are not stringent and sufficient regulatory requirements that apply to Milne Port in place under the NWNSRTA, Fisheries Act and the Arctic Waters Pollution Prevention Act.
QIA-TR-4	QIA recommends Baffinland include a WRF model update by November 1, 2024 to include all discharges and interactions with the aquatic environment, incorporating updated baseline data (relative to the existing licence and incorporating reference data),climate change predictions extending through and past the requested licence duration (using RCP 8.5) and includes model validation using project data collected over the previous water licence period (analyzed, as opposed to the raw data presented in 240916 2AM-MRY1325 Attachment 1 - Water Licence Water Quality Monitoring Results 2013- 2023-ILAE). Providing the model update by this deadline will allow QIA to review it in time for the NWB Technical Meeting. QIA emphasizes that this model update must be completed as part of these proceedings and not as a condition of the licence to provide stakeholders and the Board confidence the waste rock facility can be operated with environmental interactions consistent with the environmental assessment and will not incur long-term environmental liabilities.	Baffinland submitted the WRF thermal model to the NWB on November 1, 2024, as part of the ICRP review. This will be reviewed in parallel to the renewal application, following the NWB normal course of annual reporting. The ICRP was revised based on discussions with QIA and other interveners, and there has been extensive bilateral discussions regarding WRF modelling and research with QIA. Baffinland is of the view that the current model is sufficient, and there is no aspect of the renewal process that should be delayed relating to requested changes to the model. Appendix D3 in Revision 6 of the ICRP describes the plan to assess waste rock stockpile seepage and runoff water quality, with water quality source terms being developed by 2026 and model updates to be completed in 2027 and 2028. The thermal model is planned to be updated in 2026 as described in Appendix D4 and D7 in Rev 6 of the ICRP. Future model updates will be undertaken following additional discussions with QIA. Baffinland uses the approach that is aligned with the Paris Agreement Shared Socioeconomic Pathway 1-2.6 (SSP1-2.6). As outlined in response to CIRNAC R-11, Baffinland's decision to use SSP1-2.6 as the climate change projection scenario is based on its alignment with Canadian policy and global climate change targets established under the Paris Agreement. SSP1-2.6 represents a pathway where sustainable development is prioritized, leading to lower greenhouse gas emissions and less severe climate impacts. This scenario is consistent with Canada's commitment to reducing emissions and transitioning to a low-carbon economy.
QIA-TR-5	Acknowledging Baffinland's desire to maintain "flexibility to support optimal environmental management, specifically as it relates to dust management and control" (Baffinland's September 10, 2024 response to QIA-8), QIA recommends water	Baffinland needs to maintain flexibility with water withdrawal locations to have an effective dust control program.

ID#	Recommendations/Requests	Response
	withdrawal locations with seasonal restrictions be afforded additional protection, and that Table 2-3 of the water licence be amended to redefine “low flow” conditions as less than 75th percentile flows, a change from the “less than mean flow” currently in the body of the licence.	The QIA’s suggested definition of "low flow", if adopted by the NWB, would mean practically that any flow condition other than "high flow" (e.g. top 25% of observed flows) is not consistent with regulatory and industry guidance. This definition would have an additional impact of making dust suppression efforts less effective. The existing water licence terms and conditions are protective. Baffinland is permitted to use water from source specific and non-source specific limits for construction under Part E, Item 3 and for operations under Part E, Item 4 of the Type A Water License. Pursuant to those items, Baffinland will submit notices to the NWB as needed for additional water withdrawal sources throughout the Project.
QIA-TR-6	Rather than referring to the plans, from which mitigation measures will be implemented, it would be useful for Baffinland to incorporate measures that are applicable specifically to water taking activities, even though several measures overlap with other activities. The plans could either be updated to include the Steensby component or developed separately as specific plans.	As outlined in response to CIRNAC-01, there are no proposed changes in the water licence renewal application that triggers plan updates. Baffinland notes there is an existing NWB annual reporting and review process in place to evaluate and update plans as operations and site conditions change, which is consistent with NWB guidance in Nunavut (see Part B, Item 17 of existing licence, reproduced in response to CIRNAC-TR-1). Before Steensby proceeds, Baffinland will update the relevant management plans, in alignment with the requirements of the Water Licence and other regulatory approvals. Since 2023, Baffinland and QIA have had focused discussions on the progression of Steensby and opportunities for related collaboration and engagement. As a result of this engagement, topic-specific meetings, including meetings on monitoring and mitigation, are scheduled on an ongoing basis. Baffinland is currently working with QIA to develop a plan to review Baffinland’s Environmental Management System (EMS) and associated Environmental Management Plans (EMPs) and associated activities for the proposed construction and operation of the Steensby Component of the Project, including water taking activities. BIM plans to continue collecting and integrating additional community feedback into all management plans.
QIA-TR-7	In order to monitor changes, QIA recommends that Baffinland be required to reactivate these stations. If construction is delayed, the stations should be reactivated to continue with baseline data collection.	The requirement for monitoring within the Steensby corridor is already integrated in the Water Licence, see Schedule I, Table 15, which outlines the monitoring program locations for Steensby Inlet and the Railway Corridor. Prior to construction, Baffinland plans to reactivate the monitoring locations along the Steensby Railway to verify and supplement historical measurement data.
QIA-TR-8	In order to provide rationale for the proposed extraction, QIA recommends that this methodology be employed for any lakes without bathymetry.	Baffinland is in agreement with using the Method for Determining Available Winter Water Use Capacity for Small-Scale Projects (Land and Water Boards of the Mackenzie Valley, 2021) for under-ice water withdrawals at lakes where no bathymetric information is available.
QIA-TR-9	QIA requests the provision of a robust rationale including methodology that will justify the volume of drawdown in the Ravn Camp Lake. This rationale should include a scenario where the threshold temperature for fish movement occurs earlier in the month than at present.	The Ravn Camp Lake outflow is used by juvenile char for feeding/rearing and potentially by adults for feeding during the open-water season. Timing of Arctic Char movements into seasonal streams in spring is affected by water temperature as noted, but also by water velocities. Spring freshet - which typically occurs in June - conditions may delay movement of fish into streams or limit the use of the streams to larger size classes of fish due to higher water velocities. Baseline field surveys of this river have shown that nearshore velocities in the lefthand channel are generally <1.0 m/s but likely exceed 2.0 m/s in some areas in the thalweg, particularly during spring freshet. Although maximum depth could not be safely assessed, it is estimated to exceed 1.0 m. Stream morphology is predominantly rapids in the spring, changing to run/riffles in the fall over cobble and boulder substrate. Flow reductions in June may reduce the overall quantity of wetted stream habitat for that period but would be unlikely to limit fish movements from Ravn Camp Lake (i.e., downstream fish movements) or upstream fish movements (i.e., from Angijurjuk Lake) as flows, velocities, and water levels are generally higher in spring. No barriers to fish passage were observed in the larger left-

ID#	Recommendations/Requests	Response
		hand channel of this river in the five surveys conducted from 2021-2023 (June and August 2021, July and August 2022, and August 2023) which encompassed high and low flow conditions.
QIA-TR-10	QIA recommends conducting a spawning habitat assessment to identify suitable habitat as a baseline. This activity would be similar to and can be conducted in conjunction with the Steensby Port and Railway Freshwater Habitat Surveys (2021-2023) for the stream crossings.	Aquatic habitat surveys, including substrate characterization and bathymetry, have been completed in Cockburn Lake, Mid-Rail Camp Lake, 3 km Lake, 10 km Lake, and Camp Lake in the vicinity of proposed water intake locations. Lake-wide bathymetry and substrate surveys were completed at Cockburn Lake, Camp Lake, Ravn Camp Lake, and 3 km Lake. A bathymetry survey has also been completed at Lake ST352. This information will be used to inform water intake locations and/or design to reduce potential effects on fish.
QIA-TR-11	How do the chosen parameters of potential concern (POPC) that demonstrate elevated concentrations compare with elements that are associated with the ore body?	In support of the FEIS, over 8,000 assay results for ore were totaled to obtain 75th percentile concentrations of various metals in Baffinland's ore (refer to FEIS Volume 7, Table 7-3.32). Based on these analyses, 75th percentile concentrations of arsenic, copper, and iron in the ore were 40 mg/kg, 19 mg/kg, and 690,000 mg/kg (or 69%), respectively. No determinations of concentrations of manganese and phosphorus in the Baffinland ore were conducted. In sediment at Camp Lake, mean concentrations of arsenic and iron below approximately 5 mg/kg and 40,000 mg/kg on an annual basis since 2015 have consistently been well below the 75th percentile concentrations reported for the Baffinland ore. Although mean copper concentrations in sediment of Camp Lake as high as about 50 mg/kg have been recorded annually, the value of which is greater than the 75th percentile concentration of 19 mg/kg reported for the ore, the concentrations of copper in sediment at Camp Lake over the period of mine operation has not changed compared to baseline. In addition, copper concentrations in sediment at Camp Lake have consistently been lower than at the Reference Lake indicating a natural source of higher concentrations of copper in lake sediments unrelated to mine operations. Phosphorus concentrations in sediment at Camp Lake have been lower than at the Reference Lake, whereas manganese concentrations in sediment at Camp Lake has been similar to that at the Reference Lake, indicating no marked elevation in concentrations of these metals at Camp Lake that may be associated with a mine-related source.
QIA-TR-12	Spring freshet periods will be the driver for the majority of seasonal sediment and erosion control issues, therefore, QIA recommends developing and implementing more robust sediment and erosion control measures for these periods of high runoff and meltwater flows.	Baffinland acknowledges the comment from QIA, and we would like to clarify that all reasonable efforts are made to mitigate sediment mobilization during freshet. The majority of typical controls are not possible to deploy due to the fact that when these freshet events are happening, the roadbed and surrounding tundra are typically still fully frozen. Baffinland will continue to use available applicable mitigations during these conditions, and through adaptive management continues to implement additional preventive mitigations under other management plans prior to and over the winter to reduce sediment mobilization during freshet. Examples of additional mitigations identified through adaptive management are: • Increased usage of coir logs when frozen soil conditions prevent the use of silt fencing. • Fall deployment of robust ESC that will survive the winter and be effective to mitigate known areas of freshet sedimentation when melting starts. • Increased focus on and education of ESC facilitated by trained environmental staff.
QIA-TR-13	QIA brings it to the Board's attention that site visit observations are more representative when made during periods of snowmelt and spring freshet conditions.	This comment is directed to the NWB.
QIA-TR-14	QIA recommends a one-time collection of full-length lake sediment cores (50 cm) from lakes located close to the mining operations at Mary River Mine – Sailiivik Camp and reference lakes sites. The 50 cm sediment core will be sectioned into 1 cm or 0.5 cm intervals. Routine analysis of metal concentrations can be reported downcore to provide context to metals concentrations observed in surficial sediment. Ultimately, this will provide the most rigorous baseline (pre-mine) data possible on substances of concern to discern the relative roles of natural and anthropogenic activities. Combined	Baffinland's view is that the recommended core profiling is not necessary for the robust interpretation of sediment quality data under the CREMP, for all of the following reasons. Baseline sediment quality data, retrieved from lakes located near the mine site that currently serve as the focus for Baffinland's AEMP, were collected from as early as 2006 extending until as late as 2014, the initial dates of which were sufficiently prior to the

ID#	Recommendations/Requests	Response
	with systematic water and surficial sediment sampling, these methods provide a powerful approach to track changes at a range of temporal and spatial scales relevant to inform environmental stewardship decisions.	year of mine start-up in 2015. The methods used for sediment quality monitoring have not changed over the course of baseline and mine-operational periods. All sampling involved the sectioning of the surficial 2 cm of sediment retrieved using a gravity corer apparatus, providing temporal continuity for the sediment sampling program. As a result, concentrations of metals in sediment reported for the period prior to 2015 are deemed to adequately reflect baseline conditions for each of the waterbodies sampled. Lake sedimentation monitoring conducted at the northwest basin of Sheardown Lake has indicated annual mean and maximum sediment accumulation of about 0.13 mm and 0.19 mm, respectively, over the period from 2015 to 2023 at the profundal monitoring station (see Minnow 2024; Baffinland Annual Report Appendix E9.2). Based on these values, an accumulation of 2 cm of sediment may be expected to take from 10 years to 15 years under maximum and average conditions, respectively (not taking into account sediment compaction). Applying these accumulation rates across all study lakes, the existing baseline sediment quality data therefore reflect sediment quality from approximately 10 years to 30 years (assuming data collected in 2014 and 2006, respectively) prior to the mine becoming operational. This timeline may be considered most relevant for considering temporal changes in sediment quality at each study lake following mine start-up. Based on this rationale, the current baseline data are considered to provide a robust basis for analysis of potential changes in parameter concentrations in sediment compared to mine-operational conditions using a before-after approach as is currently applied under Baffinland's CREMP.
QIA-TR-15	QIA recommends Baffinland continue sampling surficial sediment consistently from the deepest regions or profundal zone of lakes. Additionally, grain size of the sediment should be considered when evaluating for temporal or spatial trends. A common technique used to account for varying grain size is geochemical normalization.	Baffinland is of the view that it is already incorporating the intent of this QIA comment, as reflected in AEMP Rev. 2. Under the existing AEMP Rev. 1, as well as proposed updates to aquatic monitoring within AEMP Rev2, Baffinland is committed to the sampling of surficial sediment from the deepest regions (i.e., main basin or profundal zone) of lakes as part of the CREMP. Moreover, Baffinland has maintained sediment sampling at the same key profundal stations of each study lake using the same methodologies between the existing and proposed AEMP revisions, and relative to sampling completed for baseline studies, to maintain temporal continuity in the sediment quality monitoring component of the AEMP. Under implementation of the existing AEMP Rev. 1, the consistent grouping of the same pre-established profundal stations at each lake among baseline and mine-operational studies is deemed to provide a consistent basis for which potential mine-related changes in metal concentrations in sediment can be tracked over time regardless of differences in particle size among stations. Such analysis meets the objectives of the CREMP, which include evaluating changes in parameter concentrations over time as a measure of potential mine impact. Although evaluating relationships between metal concentrations and particle size may be informative, this analysis is not a requirement to achieve AEMP Rev. 1 objectives and does not provide additional value given that sediment must be sampled at the stations stipulated within AEMP Rev. 1 regardless of the habitat features at these stations. Because sediment sampling is conducted at consistent station locations, particle size at each individual station is likely to be consistent over time. Therefore, under application of AEMP Rev. 1, no additional analysis of grain size relative to metal concentrations (based on techniques such as geochemical normalization) is necessary nor warranted to meet the AEMP objectives. Updates to the CREMP sediment quality monitoring component proposed in AEMP Rev. 2 focus sampling at key profundal stations that share similar habitat features, including particle size, to reduce variability and improve comparability that is potentially associated with differing habitat features (e.g., particle size) among profundal stations. Upon approval of AEMP Rev2, adoption of this QIA comment will thus be achieved.
QIA-TR-16	Please clarify what is measured to determine “sufficient sediment accumulation” for removal in the fall. This response appears ambiguous – is sediment cleaned out once it reaches a predetermined storage level or only done in the fall?QIA	The Construction Summary Report (CSR) for the KM 105 Pond was submitted as Appendix C.1.2 of the 2022 QIA-NWB Annual Report for Operations. Appendix V of the CSR is the KM 105 Pond Operation, Maintenance and Surveillance Manual. Section 3.4 Sediment Management in this document specifically addresses what “sufficient sediment accumulation for removal”

ID#	Recommendations/Requests	Response
	notes that in 3 years of fall site visits (2022 – 2024) there have not observed or documented any signs of pond cleanouts occurring. QIA recommends that Baffinland share records of these cleanouts for review.	means in the following statement: "Operation of the KM105 Pond is based on the temporary storage and periodic removal of sediment. Sediment will be allowed to collect within the pond basin until it reaches its maximum capacity (1 m above the lowest point in the pond). Removal of sediment shall occur prior to reaching the maximum sediment capacity of the basin. The periodic removal of sediment is required to maintain temporary water storage requirements." No cleanouts of sediment have been required in the pond to date.
QIA-TR-17	QIA recommends that a detailed investigation into the pathway of effects that are causing this change in water quality be done and remediation measures be conducted to prevent further elevation of concentrations of POPC before there is any negative effect to the aquatic biota in the receiving environment.	Baffinland confirms it has undertaken an appropriate investigation into the identified item, and no remediation measures are required at this time, for the following reasons. Following the determination of a potential mine-related effect within an aquatic system, Baffinland has adhered to the requirements stipulated under the Mary River Project AEMP Rev1 Data Assessment Approach and Management Response Framework ("the Framework"). The management response decisions implemented to date by Baffinland have been in agreement with the Framework and overall objectives of the AEMP. For all parameters of concern affecting Camp Lake Tributary 1, temporal monitoring has not shown an increasing trend in parameter concentrations over the past five years, suggesting that a step-change in parameter concentrations occurred historically but no additive influence has been shown since. Under the Framework, Baffinland will continue to apply/adhere to the Moderate Action Response that includes the consideration of potential mitigation plans and implementation if trend analysis suggests continued increase (which existing data has not shown). Biological monitoring, including phytoplankton and Baffinland's incorporation of benthic invertebrate community monitoring at additional study area to evaluate effects associated with elevated metal concentrations in water as a direct initiative stemming from application of the Framework, has indicated no adverse effects to biota and thus no toxicity related to the elevations. Accordingly, Baffinland will continue to adhere to the Framework, using the results of monitoring to detect any upward change in concentrations that would then trigger further responses, in lieu of the implementation of a further investigation into the pathway of effects for a change in water quality at this time.
QIA-TR-18	QIA recommends Baffinland consider systematic water quality sampling of Phillips Creek and Km 32 lake despite not being required under the current Licence.	Baffinland already conducts water quality sampling under the Tote Road Monitoring Program, a requirement of the Roads Management Plan, at 12 locations (24 sample sites) along Phillips Creek, including Km 32 Lake. Table D-4 and D-5 of the TRMP detail the monitoring frequency for various parameters collected according to the parameter requirements of the TRMP Table D1 and D-2.
QIA-TR-19	QIA recommends that the approach on distinguishing Project-related changes in TSS be based on pre-development to post-development water quality data to make detecting potential changes in water quality more sensitive to catch potential issues before significant effects on aquatic habitat can occur.	Baffinland previously worked directly with QIA on the development of the site-specific criteria for upstream/downstream monitoring of TSS starting in 2018, and the QIA reviewed these criteria previously as part of the Roads Management Plan and Tote Road Monitoring Plan NWB review and approval. Per commitment ECCC-#2, this will be incorporated into the SWAEMP. The screening criteria employed to determine project-related impact thresholds during freshet monitoring, stems from the fact that TSS concentrations during natural high turbidity events (e.g., freshet, or significant storm events) can result in TSS concentrations at upstream areas that are well above 250 mg/L. Therefore, these creek/river systems are naturally accustomed to high TSS concentrations such that a <50 mg/L increase in TSS at other times of the year (when TSS is naturally lower than 250 mg/L) is unlikely to negatively affect biota of these creek/river systems.

ID#	Recommendations/Requests	Response
QIA-TR-20	Locations of drainage ditches and runoff conveyance infrastructure are not clear on this figure, as only overland flow paths are marked with small arrows. QIA recommends revising to show drainage ditch and flow directions to help contextualize the placement of water sample/monitoring locations.	Water sampling and monitoring locations are detailed within provided site mapping. To provide additional clarity to interveners and reviewers, Baffinland will provide updated figures within the next version of the SWAEMP as requested. This update will include updated water monitoring locations and flow directions.
QIA-TR-21	QIA requests that Baffinland clarify if data from monitoring locations are compared to the long-term averages from a reference location (watercourse).	Yes, water quality monitored at aquatic environments that receive effluent discharge (i.e., effluent-exposed areas) is compared to water quality assessed at one or more reference locations as part of MDMER water quality studies. Under the MDMER, effluent characterization and receiver water quality studies includes the assessment of deleterious substance parameters, as well as the additional parameters listed in the QIA-TR-21 comment, based on prescribed frequencies that are dictated according to effluent discharge conditions. For the water quality studies, sampling of aquatic environments is required at a location which has received an effluent discharge (i.e., an effluent-exposed station) as well as at a reference waterbody/station that is located outside of (e.g., upstream), and thus is not exposed to, the identified effluent discharge. As part of the analysis of potential effects, water quality comparisons are made between the effluent-exposed and reference areas/stations which may include, but not limited to, analysis of seasonal, annual, and/or long-term averages.
QIA-TR-22	a. Please clearly describe how long it is anticipated to take for the permafrost layer to become established over the PAG storage area to prevent acid-generation. b. Will this result in the PAG being separated from potential groundwater contact? What are the specifics surrounding prevention of acid generation? c. How does this option compare with sub-aqueous deposition of PAG material (potentially in the filled in-pit lake) in terms of long-term potential for acid generation?	a) Current site information shows that freezing below 0 degrees C occurs within a single season and is maintained. Rock material maintained below 0^0C cannot form acid generation. Encapsulation of waste is a proven waste disposal method across Nunavut and used extensively by the Federal government as a closure method. b) c) Sub-aqueous deposition of PAG material has not been proposed, assessed or approved as part of the current project, and community stakeholders and interveners have expressed an interest for permanent closure methods that require minimal ongoing maintenance.
QIA-TR-23	QIA recommends that Baffinland commit to sharing the findings of the research activities for QIA and NWB comment and review, before eventually publishing the results in a publicly accessible manner.	Baffinland shares research and information directly with QIA through several different mechanisms (Commercial Lease Terms and Conditions, IIBA, ICRP commitments). Submissions to NWB are readily available to the public via its public registry, and steps taken by the NWB in relation to distributing submissions to the NWB is a decision for the NWB, not Baffinland. Baffinland can confirm research findings will continue to be shared with the QIA and NWB prior to public release. Baffinland relies on the publicly accessible NWB registry to share information related to the water licence.
QIA-TR-24	Comment: In its completeness check Information Request WL Renewal #16, QIA requested:… a detailed record of Baffinland's recent engagement with Inuit about freshwater use (e.g., from 2015 to present), including a list of Inuit concerns related to water and Baffinland's plans to address those concerns, for both the Steensby component and current operations. QIA requires more information on the form of the meeting; how long the meeting lasted; what was presented at the meeting; how feedback was sought; what feedback was received; and how this feedback has been acted on. Baffinland provided its response on September 10, 2024 stating: Regarding QIA's comment on Baffinland's "adherence to requirements set by non-Inuit agencies and organizations that do not consider Inuit use, objectives, or measures," Baffinland would like to clarify that this pertains specifically to compliance with the Fisheries Act, as administered by the Department of Fisheries and Oceans (DFO). It is important to note that the Government of Canada has implemented the Inuit Nunangat Policy, which mandates that all federal departments and agencies, including DFO, incorporate Inuit perspectives and needs into the development of policies and programs.	In response to QIA's Information Request #16, Baffinland filed an updated table that includes management responses, such as mitigation measures, which were implemented in response to stakeholder comments (September 16, 2024, Attachment 3. Freshwater Environment Engagement Comments). Baffinland's engagement activities in the communities have been carried out by an Inuit-led team, and communication about the Mary River Project is shared by Inuit team members including Elders fluent in Inuktitut and English, following and respecting Inuit oral traditions. Engagement opportunities are publicized in a manner that is culturally relevant to Inuit, including Facebook postings, radio shows, and invitations by letter to key groups such as hunter and trappers organizations. While details of these engagements are reflected in Baffinland's stakeholder engagement database, oral tradition means that the types of details requested, including detailed minutes, are not always available. Should the QIA require further details on any engagement, including responses on these topics provided during engagements, Baffinland is making an individual that led the meetings available at the Technical Meeting to provide a verbal summary as needed. Baffinland does not limit discussion on topics of interest to meeting attendees – if freshwater use arose as a topic of interest, that topic was explored further.

ID#	Recommendations/Requests	Response
	QIA would like to re-iterate its request to Fisheries and Oceans Canada (DFO) to clarify whether it agrees with the Applicant's September 10, 2024 response to this comment regarding the consideration of the Fisheries Act of Inuit use, objectives and measures in relation to this Project.	As previously mentioned, Baffinland will continue to adhere to applicable federal and territorial requirements, in addition to continuing to work with QIA and engage with Inuit to have opportunities to gather and integrate Inuit views. It is also noted that this comment appears to relate, at least in part, to the FAA process, not the water licence renewal process.
QIA-TR-25	QIA requests that Baffinland confirm the entirety of the future use of the railway.	This question appears to be outside the scope of the NWB's jurisdiction under the NWNSRTA. However, as background, while the rail traffic on the Steensby Railway will be predominantly comprised of loaded and empty iron ore rail cars, it may also be used to transport some general dry freight traffic between the Steensby Port and the Mary River Mine. The Steensby Railway is not intended to transport passengers at this point in time. Further, explosives will not be transported during the construction period along the rail line, however, general dry freight traffic for the mining operation once the construction period is complete could possibly in future include commodities identified as dangerous goods (i.e. ammonium nitrate). If this were to occur, what substances will be carried through operations may be subject to an amendment to the Certificate of Fitness and a Railway Operators Certificate, and subject to other applicable regulations, including the Transportation of Dangerous Goods Act.
QIA-TR-26	QIA requests Baffinland provide details on the rail cars that are intended to be used to transport ore, with consideration as to how activities like spraying for dust control will be done in colder months.	Baffinland notes that Steensby is already included in the scope of the existing Water Licence and air emissions are addressed under the Project Certificate. As background, Baffinland's rail car specification is based on industry standards and Association of American Railroads (AAR) requirements. As a bulk commodity, iron ore is typically transported in an open top gondola-type car due to iron ore's ability to withstand weather and wind erosion during transport. In the FEIS Volume 5, the potential for dust blow-off was considered by review of a historical study of wind losses from rail shipment of iron ore (Davies, 1974). *"In the present case, over 99 % of the ore will consist of particles larger than 74 µm in diameter. The most similar types of ore in the historic study had only 96 % of the material larger than 63 µm; in other words, they contained more fines than the ore in the present case. These ore types exhibited very low wind losses in laboratory experiments, and no measurable losses in full-scale field trials. The wind losses were deemed insignificant. Based on these findings, dust generation from rail operations is expected to be limited to attrition of particles during loading of rail cars and is expected to be minimal. No significant windblown emissions are expected during transportation"* (Baffinland, 2012, Volume 5). The amount of blow-off of ore that may occur from the rail cars is a function of product density, particle size and speed (or wind velocity). With regards to product density, the Davies 1974 study evaluated several different iron ore products. A couple of the products generated meaningful blow-off, but not the Cerro Bolivar ore. The iron content of the Cerro Bolivar ore closely matches that of Mary River ore (mostly 64-69%). As such, the specific gravity of the Mary River iron ore, which is a measure of relative density compared to water, can be expected to be very similar to the Cerro Bolivar ore. The ore particle size will be aligned with the sizes assessed in the FEIS, which is fewer fines than the fines contained in the Davies 1974 study. Finally, regarding train speed, the Cerro Bolivar ore had negligible blow-off at 100 km/h, and the maximum speed the trains used on the Steensby Railway will operate at a comparatively much lower speed of 60 km/h. To date, the Mary River Project has run as a trucking operation along the Tote Road to its northern port (Milne Port). As part of the ongoing effort to reduce Project dust, some community members have asked Baffinland to investigate covering the ore loaded on its trucks. Investigations by Baffinland carried out in response to this question have revealed that minimal dust comes from the ore loaded on the trucks and much of the dust experienced in relation to Tote Road ore haulage comes from the ore truck tires coming in contact with the gravel road surface. A railway, which operates on smooth metal rail surfaces instead of an unpaved

ID#	Recommendations/Requests	Response
		road surface, will generate less dust along the Steensby railway corridor as compared to the same ore haulage activity along the Northern transportation corridor using ore trucks. Based on the current rail car specifications and available information, dust-off from the rail cars is expected to be negligible. The Mary River iron ore is dense relative to other iron ore products, there will be low proportion of fines transported on the railway, and the railway will be operating at a speed where even the fines of lower specific gravity ores incur minimal blow-off. For these reasons, Baffinland does not plan to spray the ore cars. Baffinland will monitor dust as operations begin on the railway, and implement adaptive management measures, as needed.
QIA-TR-27	QIA re-iterates its recommendation to the Nunavut Water Board that, should this water licence application be approved, the NWB provide a mechanism for the future integration of the results of the forthcoming and NIRB-overseen cumulative effects assessment, when those results are available.	Should there be an outcome of the NIRB-led Cumulative Effects Framework process that triggers a related outcome for the Type A Water Licence, that should be determined at the time the Cumulative Effects Framework is complete. The water licence should not include any specific mechanism related to the Cumulative Effects Framework, as that step is premature.
QIA-TR-28	QIA recommends, in the event that the Board grants the Application, the NWB include a licence condition the requirement that, contingent upon QIA's development of Inuit Objectives, Indicators, Thresholds and Responses (OITRs), Baffinland integrate the Inuit OITRs into the Project's water monitoring and adaptive management mechanisms, including the Adaptive Management Plan (AMP) itself, in a way that accurately reflects and accounts for Inuit perspectives on water quality, use, and rights.	The topic of OITRs is a matter that Baffinland and QIA have agreed will be addressed by the Inuit Impact Benefit Agreement between Baffinland and QIA, per the relevant commitments under Appendix B of the Project Certificate, including how OITRs will be integrated in the AMP and the water monitoring programs. Additional requirements under the Water Licence are not necessary or appropriate.
QIA-TR-29	1. QIA requests Baffinland fully provide information on impact pathways from the Project on freshwater, fish, fish habitat and fishing. 2. QIA recommends, if the Board grants the Application, the NWB include a licence condition requiring the Applicant to integrate the information on Inuit Qaujimajatuqangit and Inuit Qaujimaningit detailing the full range of waterbodies of importance and project-related impacts to Inuit water rights and CRLU, into project works, mitigation measures, monitoring plans, and adaptive management plans.	1. The information QIA requests was already provided and previously assessed as part of the original project FEIS and ERP Addendum, which was considered by the NIRB and resulted in the issuance of the Project Certificate. The NWB relied on this assessment in issuing the Type A Water Licence and subsequent amendments. As the renewal application is not proposing any changes to the project as approved under the Type A Water Licence, there is no trigger to re-assess or otherwise update the assessments. 2. The topic of waterbodies of importance, water rights and CRLU is a matter that Baffinland and QIA have agreed will be addressed by the Inuit Impact Benefit Agreement as well as the Water Compensation Agreement between Baffinland and QIA, per the relevant commitments under Appendix B of the Project Certificate, including how OITRs will be integrated into project works, mitigation measures, monitoring plans and adaptive management plans. Additional requirements under the Water Licence are not necessary.
QIA-TR-30	1. QIA echoes its Information Request WL Renewal IR #2 and recommends, if the Board grants the Application, the NWB include a licence condition requiring the Applicant to complete the following: a. updating the aquatic monitoring plans, such as the AEMP, as requested to demonstrate how the existing freshwater baseline characterization of the Steensby Component along the rail corridor and at the port site will be validated and updated as soon as feasible such that collection of baseline data does not provide a barrier to progressing with construction activities; b. providing the freshwater baseline information associated with the Steensby Component, including Inuit use, Inuit Qaujimajatuqangit, and Inuit Qaujimaningit 180 days prior to the commencement of construction of the Steensby Component for Board review, and c. updating the relevant management plans to reflect this freshwater baseline information associated with the Steensby Component and providing these updated management plans for Board approval 90 days prior to the commencement of	1 a) and b) Baffinland confirms it has and will continue to collect freshwater baseline information associated with the Steensby Component prior to the commencement of construction of the Steensby Component. However, Baffinland must highlight the logistical challenges associated with committing to provide all baseline data 180 days prior to the commencement of construction. The Arctic environment imposes significant constraints on both the field and construction seasons, limiting the periods during which data collection can occur. The short window for fieldwork, coupled with unpredictable weather conditions, makes it impractical to guarantee the availability of all necessary baseline data within the specified timeframe. Nevertheless, Baffinland is dedicated to transparency and timely communication. We will publish any supplemental baseline data within our annual report and share this information with the Qikiqtani Inuit Association (QIA) as it becomes available. This approach ensures compliance with the Water Licence Schedule B, items e and g. Baffinland remains committed to working closely with all stakeholders to ensure that the collection and dissemination of baseline data are conducted in a thorough and timely manner, reflecting both scientific rigor and respect for Inuit traditional knowledge. However, Baffinland does not agree this information should be included in aquatic monitoring plans such as the AEMP, as the scope of the railway and Steensby Port are outside the scope as per the below. The railway will be monitoring with a similar SNP

ID#	Recommendations/Requests	Response
	construction of the Steensby Component.In addition, the Applicant should be required to provide the trend-over-time monitoring along Steensby railway and Port prior to construction such that updated information on Inuit use and Inuit Qaujimajatuqangit is meaningfully considered. QIA notes that its technical review comment QIA-TR-30 relates to this recommendation in regard to the use of Inuit OITRs in baseline data collection alongside Western scientific measures, conditional upon QIA's development of those OITRs. 2. QIA also requests that the Board include a licence condition requiring Baffinland provide a Steensby Component construction timeline that is adequate to allow more information to be collected about IQ and impacts to Inuit water rights and CRLU related to water no less than 90 days prior to construction.	level program and the Steensby Port with a marine monitoring component. The current AEMP is designed to characterize potential changes associated with the Project at the Mine Site where there are multiple stressors that have potential for impacts to the freshwater receiving environment. The 2019 MVLWB/GNWT Guidelines for Aquatic Effects Monitoring Program (March 2019) provides guidance for how monitoring is incorporated into a water license. There are three broad options identified: management Plans, survellance network programs (SNP), and aquatic effects monitoring programs. As the guideline outlines, these methods of monitoring (ascending in complexity) correspond to the project impacts. Specifically, when there are multiple stressors, more conservative methods of monitoring are required (such as an AEMP). Currently, there is an AEMP in place at the Mine site, with surveillance network program level monitoring along the Tote Road, with Milne also having Marine Environmental Effects Monitoring as a result of port activities. In line with these guidelines, Baffinland believes that surveillance network program monitoring along the rail is appropriate (a transportation corridor similar to the Tote Road), and surveillance network program monitoring combined with the Marine Environmental Effects Monitoring program (in compliance with Project Certificate conditions and Fisheries Act authorization requirements). c) Baseline data has already been collected and assessed as part of the FEIS. However, Baffinland confirms it will update relevant management plans to reflect this freshwater baseline information associated with the Steensby Component, where relevant. The available supplemental baseline data will be integrated in relevant management plans and submitted to QIA (and NWB, as relevant for plans within the scope of the Water Licence) for review, as referenced in process described response to QIA TR-6. 2) The construction timeline of the Steensby Component is uncertain, as it is based on timing of financing, a construction decision by Baffinland leadership, and the logistics uncertainties that are unique to Arctic major construction projects. Further, the Water Licence already includes a condition which requires Baffinland to provide updates on the Project status (Water Licence Part B, Item 10) and the requested condition is not necessary. As outlined in response to QIA-TR-6, Baffinland is currently working with QIA to develop a plan to review Baffinland's EMS and associated EMPs for the proposed construction and operation of the Steensby Component of the Project. Furthermore, per commitments by QIA and BIM under Appendix B of the Project Certificate, collection of IQ and impacts to Inuit water rights and CRLU are to be enabled through the IIBA and the Water Compensation Agreement. As impacts to Inuit water rights are addressed and compensated through bilateral agreements, no additional information on this topic is necessary as part of this renewal.
QIA-TR-31	QIA recommends that, should the Board grant this Application, a licence condition requiring the Applicant to incorporate the findings of the Pond Inlet Freshwater Study into its management plans and submit the plans for Board approval.	The Pond Inlet Freshwater Study is a matter that Baffinland and QIA have agreed will be addressed by the Inuit Impact Benefit Agreement between Baffinland and QIA, per the relevant commitments under Appendix B of the Project Certificate, including how and whether outcomes of that study will be integrated into management plans.
QIA-TR-32	QIA recommends that, should the Board grant this Application, a licence condition requiring the Applicant to jointly review and revise the AEMP with QIA to meaningfully integrate Inuit OITRs, including specific monitoring plans for locations identified by Inuit as waterbodies of heightened importance, when available from QIA, and submit the revised AEMP to the NWB for Board approval with evidence of advance QIA engagement on proposed revisions to the AEMP. QIA recommends that the condition require this work to be done within six months of provision of Inuit OITRs by QIA. The condition should include clear mechanisms, through which Inuit-led monitoring results and responses are integrated into adaptive management practices and decisions.	The topic of waterbodies of importance, water rights and CRLU is a matter that is to be addressed by the Inuit Impact Benefit Agreement as well as the Water Compensation Agreement between Baffinland and QIA, per the relevant commitments under Appendix B of the Project Certificate, including how OITRs will be integrated into project works, mitigation measures, monitoring plans and adaptive management plans. Additional requirements under the Water Licence are not necessary.
QIA-TR-33	QIA recommends that, should the Board grant this Application, the NWB include a licence condition requiring the Applicant to review and modify the monitoring program annually in line with the findings of applicable scientific studies and Inuit-led monitoring.	See Response to CIRNAC-IR-1, existing Water Licence terms and conditions already fully address this topic. Specific to the topic of dust monitoring, dust monitoring programs are already being reviewed annually through the existing Dust Audit Committee. These reviews are required under the Project Certificate, and additional requirements under the Water Licence are not appropriate.

ID#	Recommendations/Requests	Response
QIA-TR-34	Similarly to QIA-TR-32, QIA recommends that, should the Board grant this Application, a licence condition requiring the Applicant to incorporate the QIA studies' findings about Project-related impacts to Inuit CRLU related to freshwater into all relevant management plans and submit them for Board approval on the earliest of within 120 days of QIA releasing the studies or December 31, 2025.	The referenced CRLU study is a matter that Baffinland and QIA have agreed will be addressed by the Inuit Impact Benefit Agreement between Baffinland and QIA, per the relevant commitments under Appendix B of the Project Certificate, including how and whether outcomes of that study will be integrated into management plans. Additional requirements under the Water Licence are not necessary.
QIA-TR-35	1. QIA requests that Baffinland identify when it plans to bring forward additional total cumulative effects analysis of the entire reasonably foreseeable Mary River Project, along with other cumulative effects-causing agents and activities, as per the guidance to be received from the Nunavut Impact Review Board. 2. QIA requests, if this NWB licensing process cannot be synchronized with the required comprehensive cumulative effects assessment that considers the full range of past, present, and likely future impacts to Inuit water rights and CRLU, that Baffinland be required by a water licence condition to report results of its cumulative effects assessment work within the within 6 months of the completion of the cumulative effects assessment currently prescribed from the NIRB process, and that the licence, if issued by the NWB, allows the Board to incorporate the findings of the CEA into the licence.	1. Cumulative effects of the Mary River Project have been assessed by NIRB via the 2012 FEIS and the ERP FEIS, resulting in the issuance of Project Certificate No. 005 and Amendment No. 1, and this work was taken into account by the NWB prior to issuing the Type A Water Licence and Amendment No. 1. Per commitments made by Baffinland at the Cumulative Effects workshop hosted by NIRB in February 2024, additional cumulative effects analysis in the context of 6 mtpa Northern transportation was provided to the NIRB in the SOP2 FEIS Addendum submitted in June 2024 (NIRB reconsideration process suspended in October 2024). Baffinland's understanding is that the NIRB is considering next steps related to the Cumulative Effects Framework and Baffinland is prepared to participate in that initiative as it proceeds. Project expansions relating to mining in deposits other than Deposit 1 (for example, Deposits 2 and 3) will be subject to future applications to NIRB and the NWB, which will consider cumulative effects in accordance with applicable regulatory guidance. 2. Should there be an outcome of the NIRB-led Cumulative Effects Framework process that triggers a specific related outcome for the Type A Water Licence, that should be determined at the time the Cumulative Effects Framework is complete. The water licence should not include any specific mechanism related to the Cumulative Effects Framework, as that step is premature. The referenced CRLU study is a matter that Baffinland and QIA have agreed will be addressed by the Inuit Impact Benefit Agreement between Baffinland and QIA, per the relevant commitments under Appendix B of the Project Certificate, including how and whether outcomes of that study will be integrated into management plans. Additional requirements under the Water Licence are not necessary.
QIA-TR-36	1. QIA requests that upon submission of its freshwater IQ study, the NWB duly consider these impacts in its decisions. The NWB should take into serious consideration that the CRLU effects observed and felt by Inuit have exceeded Baffinland's original predictions and have not been captured by Baffinland's existing monitoring system and should allow adequate time for the consideration of existing and forthcoming Inuit data on impacts. 2. Given that the Tusaqtavut studies describe impacts related to freshwater that Inuit have actually experienced, QIA recommends that the NWB consider the findings in the Tusaqtavut studies as evidence of the potential deficiencies of Baffinland's current mitigation measures related to freshwater and of the fact that effects experienced by Inuit have surpassed those predicted by Baffinland in their previous assessments. 3. QIA reiterates its recommendation to the NWB in QIA-TR-34.: "QIA recommends that, should the Board grant this Application, a licence condition requiring the Applicant to incorporate the QIA studies' findings about Project-related impacts to Inuit CRLU related to freshwater into all relevant management plans and submit them for Board approval on the earliest of within 120 days of QIA releasing the studies or December 31, 2025."	1. The Pond Inlet Freshwater Study is a matter that Baffinland and QIA have agreed will be addressed by the Inuit Impact Benefit Agreement between Baffinland and QIA, per the relevant commitments under Appendix B of the Project Certificate, including how and whether outcomes of that study will be integrated into management plans. Additional requirements under the Water Licence are not necessary. 2. Baffinland incorporates Inuit feedback into its existing monitoring plans and will continue to do so as it is received, whether from QIA studies or through community engagement. All feedback is considered and respected. Mandatory adoption of any particular finding by a third party, however, should not be required as a water licence term and condition as that would be an improper delegation of NWB decision making powers and would fetter the independent decision making powers of the NWB. Since the Tusaqtuvut Studies were released between 2019 and 2021, Baffinland has taken the following steps in response and integrated this information in management plans and community programs as follows: • Inuit Stewardship Plan (ISP): Funding of ISP per Appendix B Project Certificate commitments to support QIA to develop Inuit-led monitoring programs, assessments and studies related to adaptive management. Example programs as part of the ISP include the Pond Inlet Country Food Baseline, Culture, Resource Land Use (CRLU) Assessment, IQ-based study of North Baffin caribou, Inuit-led monitoring program on dustfall. • Ilagiiktunut Nunalinnullu Pivalliajutisait Kiinaujat (INPK) Fund: Community wellness fund to help address the anticipated social and cultural impacts of the Mary River Project for the five point of hire communities.

ID#	Recommendations/Requests	Response
		• Wildlife Compensation Fund: Funded through the IIBA, Baffinland provides compensation for Inuit hunters and harvesters impacted by the Mary River Project. • Training: Introduction of Inuit Cultural Engagement (ICE) Workshop for all Baffinland contractors and employees working at the Mary River Mine Site. • Food Security Funding: Implementation of programs to support enhanced food security in the LSA point of hire communities, including School Lunch program, food bank donations, on-site country foods kitchens, Pond Inlet Harvesters Enabling Program, Counsellors Program, and other community donations and contributions made annually. 3. The referenced CRLU study is a matter that Baffinland and QIA have agreed will be addressed by the Inuit Impact Benefit Agreement between Baffinland and QIA, per the relevant commitments under Appendix B of the Project Certificate, including how and whether outcomes of that study will be integrated into management plans. Additional requirements under the Water Licence are not necessary.
QIA-TR-37	Further engagement, research, and analysis are required to ensure blasting plans account for Inuit concerns, thresholds, and objectives in relation to freshwater and fish habitat. This engagement must seek consensus between affected Inuit communities, Baffinland, DFO, and the NWB.	Baffinland strives to seek consensus whenever possible. It is anticipated QIA would participate fully in engagements in its role under the Nunavut Agreement as designated representative of Qikiqtani Inuit. The topic of OITRs is a matter that Baffinland and QIA have agreed will be addressed by the Inuit Impact Benefit Agreement between Baffinland and QIA, per the relevant commitments under Appendix B of the Project Certificate, including how OITRs will be integrated in the AMP and the water monitoring programs. Additional requirements under the Water Licence and/or the FAA are not necessary.
QIA-TR-38	Further engagement, research, and analysis are required to ensure offsetting measures for fish habitat account for Inuit concerns, thresholds, and objectives. This engagement must seek consensus between affected Inuit communities, Baffinland, the DFO, and the NWB. QIA requests a condition of this licence requiring the Proponent to commit to further consent-based engagement on fish habitat offsetting.	The topic of fish habitat offsetting is outside the water licencing process as it is part of the *Fisheries Act* Authorization (FAA) process and is within the jurisdiction of the DFO, per the Fisheries Act. DFO policies require engagement with communities as part of the FAA process, and Baffinland is committed to following that guidance. Baffinland strives to seek consensus whenever possible. It is anticipated QIA would participate fully in such engagements in its role under the Nunavut Agreement as designated 14representative of Qikiqtani Inuit. Note the topic of OITRs is a matter that Baffinland and QIA have agreed will be addressed by the Inuit Impact Benefit Agreement between Baffinland and QIA, per the relevant commitments under Appendix B of the Project Certificate. Additional requirements under the Water Licence and/or FAA are not necessary.

CROWN-INDIGENOUS RELATIONS AND NORTHERN AFFAIRS

ID#	Recommendations/Requests	Response
CIRNAC R-01	CIRNAC recommends and/or requests the following: a) Can the Proponent explain why updates to management and monitoring plans were not undertaken to support the renewal application in relation to the context of the current status of operations and the 2024 annual security review commitments? b) The management plans provided by BIMC in the current WL renewal application be updated where appropriate (as identified in the subsequent comments) to support sustainable water use, deposit of waste to water and financial security as relevant based on the current state of operations at BIMC. c) That management plan updates are submitted for acceptance during the WL renewal process, and not deferred conditionally following decision. d) That WL conditions indicate a frequency for plan re-evaluation (e.g., 3 years), which will bring added clarity in expectations related to the review of plans in future iterations of the WL.	a) The current suite of management and monitoring plans included in the Type A Water LIcence are applicable to the current operations, and there are no changes proposed by Baffinland in the renewal application that would trigger any specific plan updates. Per Table 7.1 in the renewal application, since the Type A Water Licence was issued and amended, Baffinland has updated various plans as needed through the annual report process. This has been done and will continue to be done in accordance with Part B, Item 17 of the Type A Water Licence, which requires Baffinland to: "*17. The Licensee shall review the Plans or Manuals referred to in this Licence as required by changes in operation and/or technology and modify the Plans or Manuals accordingly. Revisions to the Plans or Manuals are to be submitted in the form of Addenda to be included with the Annual Report required by Part B, Item 4, complete with a revisions list detailing where significant content changes are made*." b) Per (a) above, the current approved management and monitoring plans are up to date for current operations. c) Per (a) above, the current approved management and monitoring plans are up to date for current operations. While Baffinland has not identified any required plan updates, should the NWB do so as part of the renewal decision, updates can be submitted as directed by the NWB following issuance of the licence (which is a standard NWB practice, followed for other Type A Water Licences across Nunavut). d) Baffinland already considers whether plans require updates annually, in accordance with standard NWB process and Part B, Condition 17 of the Type A Water Licence. In accordance with this requirement, operations and site conditions change, the plans are amended as needed and circulated with the Annual Report. Adding an additional formal three year review process would add significant administrative burden to the licence without benefit to management of waste and water.
CIRNAC R-02	The following recommendations are intended to clarify WL responsibilities related to dustfall monitoring, and complement the existing AQNAMP, as well as other regulators or groups such as the GN, ECCC and the BIMC Dust Audit Committee. CIRNAC recommends that: a) The annual reporting requirements for waste (Part B, Item 4 and Schedule B, Item b.) be updated in the WL as appropriate, and include reporting of all relevant waste types in recognition of dust emission waste deposits that interact with water. b) The annual reporting requirements of the WL define dustfall parameters as a source load deposit input to water to understand dust deposition rates. CIRNAC also recommends that data reporting related to dustfall, suspended particulates and snow core sample data be included in reporting. c) WL conditions related to waste (Part F) be updated to include provisions that acknowledge dust emissions as a waste source deposit to water. Dustfall sampling (including snow core) data should be tested for the analytes identified in WL Schedule I. Conditions Applying to General and Aquatics Effects Monitoring Table 12: Monitoring Group Parameters. Please also see related recommendations under comment #3.CIRNAC requests that BIMC:	a-c) Dust is not a "waste" under the NWNSRTA and its regulations, and is not regulated as a waste under Water Licences issued by the NWB. Instead, dust associated with the Project is an air emission addressed under the Project Certificate terms and conditions. Accordingly, Baffinland reports on dust emissions in its NIRB Annual Report, and has been reporting biannually to NIRB since April 2023 on the implementation status of Baffinland and QIA's commitments relating to dust mitigations under Appendix B of the Project Certificate. Dust is also regulated at mine sites under the Mine Health and Safety Regulations, and generally by the Government of Nunavut under the Environmental Protection Act (NU). The Environmental Guideline for Ambient Air Quality has been adopted by the Minister of Environment under s. 2(2) of the EPA (NU). Monitoring Group Parameters a) As noted above in response to CIRNAC R-02, air emissions are not regulated under Type A Water Licences issued by the NWB and are addressed via other regulatory instruments, including the Project Certificate and other Nunavut legislation.

ID#	Recommendations/Requests	Response
	a) Provide a full dataset (excel format) of all available dustfall and snow core sampling data (from Project inception to present) to support assessment of dust interactions with water.	
CIRNAC R-03	To prioritize coordinated efficiency for the benefit of the Proponent and regulators and further support regulatory monitoring / reporting under the WL in relation to dust deposition as a pathway of potential effect on water quality, , CIRNAC provides the following recommendations: SWAEMP and AEMP Updates: a) Under the WL via the SWAEMP and the AEMP, update both plans to directly state the monitoring, mitigation and reporting requirements for dustfall. This may simply be copied in alignment with the existing AQNAMP dustfall program. Under the WL via the SWAEMP and the AEMP, update both plans' annual reporting requirements to ensure more comprehensive reporting of dustfall deposition rates and comparison to baseline for assessment of pathways of potential effect. This will ensure that the data will be available to regulators under future NWB review processes. OR, alternatively: b) Consider whether a Dustfall Management Plan under the WL is the most efficient means of clarifying dustfall monitoring and mitigation reporting under the authorities of the WL. SWAEMP and AEMP Sample Testing: a) Ensure that dustfall samples are tested for the analytes identified in WL Schedule I. Conditions Applying to General and Aquatics Effects Monitoring Table 12: Monitoring Group Parameters. Dustfall Monitoring Improvement (additional requirements): a) Improve dustfall monitoring under the SWAEMP and AEMP by implementing the following: • continuous monitoring for dust around the Project Area, including at Deposit No. 1. • Installation of additional passive monitors at a greater distance from the mine to capture the broader regional impacts of dust, including up and down wind of prevailing winds. • Inclusion of snowcore sampling to support dustfall monitoring and chemical characterization data.• Ensuring that snow is tested for the analytes identified in WL Schedule I. Conditions Applying to General and Aquatics Effects Monitoring Table 12: Monitoring Group Parameters. • Ensuring detailed provisions for reporting dustfall under the WL, and integration with the reporting requirements of the AEMP and SWAEMP.	As noted above in response to CIRNAC R-02, air emissions are not regulated under Type A Water Licences issued by the NWB and are addressed via other regulatory instruments, including the Project Certificate and other Nunavut legislation.
CIRNAC R-04	CIRNAC recommends a comprehensive review of dustfall monitoring relative to the scope and authority of the WL, relative to water quality, and to consider the following: a) Review of dustfall data (requested in comment #2) and the model used to support the monitoring program (including sample design, assumptions etc.) to determine if dustfall data collection is sufficient, relative to the current state of development. b) Provide recommendations (if required) for improvement to the dustfall monitoring process to further enhance the improvements suggested in comment #3, recommendation #5.	As noted above in response to CIRNAC R-02, air emissions are not regulated under Type A Water Licences issued by the NWB and are addressed via other regulatory instruments including the Project Certificate and other Nunavut legislation. a) As background information for the reviewer given their interest expressed in the topic of dust management at Mary River, Baffinland confirms that monitoring of dustfall at the Project is industry leading and dustfall mitigations and management methods are based on scientific measurements available at this time. Baffinland notes that while dust does not appear to be having any significant negative effect on environmental receptors monitored across the Project, Inuit have identified the presence of dust as an effect in itself. Inuit feedback has been the primary driver of improvements in dust management. This includes the covering of material handling transfer points, minimizing of drop distances, spraying of stockpiles at Milne Port, trails of applications the crushers, and establishing an Inuit-led Dust Audit Committee. Further details can be found in the 2023 NIRB Annual Report (NIRB Registry Number 350984).

ID#	Recommendations/Requests	Response
		Data is reviewed as part of BIMs ongoing environmental management system and the recommendations of the Dust Audit Committee. b) The dustfall monitoring program was developed as part of Project Certificate requirements and continues to be refined based on feedback from interveners on the Air Quality and Noise Abatement Management Plan. Baffinland has received direct feedback from community members of Pond Inlet on locations for the passive dustfall monitors and updated the program accordingly. Baffinland is also working with Natural Resources Canada on a novel project to test new technology at the Project site working closely with the community of Pond Inlet and has installed these new monitors at the Project which are actively collecting data.
CIRNAC R-05	CIRNAC requests that: a) The Proponent revise Application Section #26 template outline by creating a concordance table that identifies under what report section it will present the required datasets for future annual reports, per the requirements of Part B, Item 4 and Schedule B of the Water Licence.	CIRNAC requested that Baffinland revise the Annual Report template to include the following information: dust emission waste deposit to water; results and interpretation related to impact predictions; and groundwater monitoring data. Below is Baffinland's view related to each item: • **Dust emission waste deposit to water**: As noted above in response to CIRNAC R-02, air emissions are not regulated under Type A Water Licences issued by the NWB and are addressed via other regulatory instruments, including the Project Certificate and other Nunavut legislation. • **Results and interpretation related to impact predictions**: This is currently covered in the NIRB Annual Report. For example, Tables 4.12 and 4.13 of the 2023 NIRB Annual provide an evaluation of the Project's impacts on hydrology, hydrogeology, groundwater, and surface water quality based on monitoring activities completed in 2023, relative to the predictions presented in the FEIS. Furthermore, under the Adaptive Management Plan, Baffinland monitors against the specific thresholds that feed into the relevant Management Plan's TARP tables to drive adaptive management. It should be noted that in many cases, Baffinland uses updated regulatory guidance or research to use as a comparison against monitoring results. For example, the Core Receiving Environment Monitoring Program (CREMP) compares to established water quality guidelines in addition to the FEIS predictions. This is recorded in management plans, which are approved by the NWB. Further to these predictions and guidelines, Inuit input also drives adaptive management. As outlined in response to CIRNAC R-05, Inuit feedback was considered to implement a suite of rigorous dust mitigations at the Project to limit emissions, including the establishment of an Inuit-led Dust Audit Committee. • **Groundwater monitoring data:** Groundwater monitoring is governed under the Surface Water and Aquatic Ecosystem Management Plan and monitoring results are reported in the QIA-NWB Annual Report for Operations (see Section 7.7 Groundwater Monitoring Program, and Appendix E.11 Groundwater Monitoring Reports). The current requirements of Part B, Item 4, and Schedule B of the Water Licence do not need to be modified as this topic is already addressed.
CIRNAC R-06	CIRNAC recommends that: a) BIMC provide a drawing showing the location of all routine and permitted water monitoring and sampling locations. b) BIMC add new water sampling location(s) downgradient (southeast) of the mine workings (pit) to ensure effluent water satisfies all discharge criteria before reaching the receiving waters of the Mary River.	(a) Baffinland will provide updated figures to reflect the most up to date information for all routine and permitted sampling locations on November 18, 2024 to the NWB and interveners. (b) Figure 4.1, referenced by CIRNAC in their response, shows Mary River Catchment Proposed Water Management Measures. It is noted in a box beside the culverts along the Mine Haul Road that one water management measure was to "block existing culverts to prevent runoff from flowing to the downstream side of MHR". These culverts were blocked in prior to freshet 2022. As a result, no additional monitoring locations are required southeast of the mine workings.
CIRNAC R-07	CIRNAC recommends that BIMC:	a) The Construction Summary Report (CSR) for the KM 105 Pond has been provided previously to CIRNAC as Appendix C.1.2 of the 2022 QIA-NWB Annual Report for Operations. Appendix V of this document is the KM 105 Pond Operation,

ID#	Recommendations/Requests	Response
	a) Provide details of the finding of containment failure and remedial measures, including as-built details, as per Term and Condition No. 29 (Landforms, Geology and Geomorphology – Design Plans). This should include evidence that the Engineer of Record of the MS-11/KM105 pond revisit the design to ensure it meets the design intent of containing of the surface runoff, and specifying the party assigned with responsibility of the facility post seepage remedial works. b) Develop an Operation, Maintenance and Surveillance (OMS) manual to provide all the information and instruction needed to allow an individual to perform all the actions necessary to provide safe operation, routine maintenance and regular inspection of the dam. Further to the above, CIRNAC also recommends that the following specific conditions be added to support management obligations related to dams in Part I, Item 12-14 of the WL: The Geotechnical Engineer's Report shall be prepared in accordance with the Dam Safety Guidelines and shall include: a) a conformity table, indicating how each of the applicable requirements in the Dam Safety Guidelines have been met; b) a statement from the Professional Engineer on the safety of the Dam; c) a summary list of findings with prioritized recommendations, prepared by the Professional Engineer; d) a covering letter from the Licensee outlining an implementation plan to respond to any recommendations made by the Professional Engineer, including rationale for any decisions that deviate from the Professional Engineer's recommendations; and e) the status of and rationale for any outstanding recommendations from the previous Dam Safety Review	Maintenance and Surveillance Manual. Section 1.3 of this Manual provides details on roles and responsibilities of personnel involved with the KM 105 Dam, including the Engineer of Record (EOR). It is noted that one responsibility of the EOR is that this person "Verifies that the facility is performing, throughout the life cycle, in accordance with the design intent, performance objectives and indicators, applicable guidelines, standards, and legal requirements." b) The existing OMS manual was provided as Appendix V of the KM 105 Pond Construction Summary Report (provided as Appendix C.1.2 of the 2022 QIA-NWB Annual Report for Operations). It is noted that this OMS Manual is currently being updated. Part I, Item 12 of the Water Licence requires geotechnical inspections to be carried out by a geotechnical engineer, and already indicates they shall be conducted in accordance with the Canadian Dam Safety Guidelines. It is not necessary for additional prescriptive reporting requirements to be included as conditions in the Water Licence as the current requirements already ensure any concerns identified for a dam structure will be identified within the Geotechnical Inspection report.
CIRNAC R-08	CIRNAC recommends that: a) BIMC update the waste management plan to include mineral waste and directives for: collection, containment, data / records, and disposal.	The Interim Closure and Reclamation Plan, which was submitted to the NWB on November 1, 2024, has undergone a significant revision. The review and finalization of the ICRP will occur following the NWB normal course of annual reporting, which occurs in parallel with the renewal process, Within that plan a new research Appendix (D6) has been presented which details upcoming work to areas of potential environmental concern on site and develop site-specific risk based criteria as required to support closure. As part of this research plan, plans will be developed for management of impacted soils, such as metal-contaminated soils, if found to be present on site. This may include completion of a human health and ecological risk assessment and the development of site-specific risk-based criteria. The findings of this research program will be integrated into future revisions of the ICRP, and will be used to update other management plans such as the Waste Management Plan, if required.
CIRNAC R-09	CIRNAC recommends that: a) BIMC develop a comprehensive Water Balance model of the entire Mine Site	Baffinland disagrees with CIRNAC's assertion that the effluent flow at the Mine Site is not adequately characterized. Baffinland's annual reporting, speficically the 2023 QIA-NWB Annual Report for Operations, provides comprehensive data on effluent flow, as detailed in Table 5.1, 5.2, 5.3 and 5.4. Existing management plans, monitoring programs and reporting also provide thorough and detailed information on site water management and effluent discharges. The Blockflow diagrams referenced by CIRNAC in Appendix L4 accurately represents site, with the exception of routine additions to the overall water management system, such as the KM106 stockpile pond, KM105 dam and Milne Water Management Pond 3. These updates will be incorporated in the next revision of the Fresh Water, Supply, Sewage and Wastewater Management Plan, scheduled for submission on March 31st, 2025. Additionally, precipitation runoff is accounted for in these Blockflow diagrams through the mean annual unit runoff, shown in the top of the diagrams. This approach is aligned with Part E, item 10 of the Water Licence: "*The Licensee shall update or revise annually following the commencement of the Operations Phase and/or the Early*

ID#	Recommendations/Requests	Response
		Revenue Phase, the Project Block-flow Diagram Water Supply Balance information for the various Project sites provided with the Application, and submit the revisions, for review by the Board, with the Annual Report under Part B, Item 4." Given the extensive and detailed nature of our current documentation, including the annual review of the water balance as outlined in the existing Water Licence, Baffinland believes that an additional water balance model is unnecessary as part of this Water Licence Renewal.
CIRNAC R-10	CIRNAC recommends that BIMC: a) Continue collecting thermistor data from the WRP b) Update its thermal model c) Install additional monitoring locations to evaluate the thermal stability of the waste rock pile and permafrost.	a) The 2023 annual report contains information regarding the status of thermistor functionality at the time of issue, and this information will continue to be updated within the 2024 QIA-NWB Annual Report for Operations. b) The thermal model was submitted on November 1, 2024. The review and finalization of the ICRP will occur through the NWB normal course of annual reporting, which occurs in parallel with the renewal process, per Water Licence Schedule C, Item 2a: "*Unless otherwise directed by the Board, on the first Thursday of November, the Licensee, the Minister and/or the Qikiqtani Inuit Association shall file with the Board any information they intend to rely upon for the ASR, including but not limited to: a. an updated Preliminary, Interim or Final Mine Closure and Reclamation Plan*". As outlined in the ICRP (Rev 6, Nov 1, 2024), Baffinland plans to update the thermal model in 2026, using the latest thermistor data (ICRP Rev 6, Appendix D4 and D7). c) Baffinland has installed five new thermistor monitoring sites in the WRF in 2024, in excess of what was initially planned, and this information will be provided in the 2024 QIA-NWB Annual Report for Operations as per previous commitments to CIRNAC.
CIRNAC R-11	CIRNAC recommends that: a) BIMC revisit its climate change predictions and evaluate the long-term thermal stability of the permafrost in the WRP. This evaluation also needs to be updated once additional monitoring and modelling data from the WRP are available (TRC 10).	Appendix D4 within the newly revised ICRP has been provided to CIRNAC and outlines the ongoing thermal modelling and climate change assessment being completed for the WRP. The review and finalization of the ICRP will occur following the NWB normal course of annual reporting, which occurs in parallel with the renewal process. New thermal modelling of the WRF including climate change predictions has been provided to CIRNAC, QIA and the NWB on November 1st, 2024. Baffinland's decision to use the Shared Socioeconomic Pathway 1-2.6 (SSP1-2.6) as the climate change projection scenario is based on its alignment with Canadian policy and global climate change targets established under the Paris Agreement. SSP1-2.6 represents a pathway where sustainable development is prioritized, leading to lower greenhouse gas emissions and less severe climate impacts. This scenario is consistent with Canada's commitment to reducing emissions and transitioning to a low-carbon economy. As outlined in the ICRP Rev 6 submitted on November 1, 2024, Baffinland plans to update the thermal model in 2026, and related ICRP updates will continue to apply climate change predictions based on relevant policy and applicable laws. This reassessment ensures that our projections remain relevant and scientifically robust, reflecting any advancements in climate science and policy changes, ensuring that our ICRP and associated models remain adaptive and responsive to evolving climate conditions.
CIRNAC R-12	CIRNAC recommends that BIMC: a) Submit an updated ICRP with relevant content and information based on the current state of operations, including, but not limited to: the progress of waste rock percentage cover; aerial photos; research status; financial security including a table of costs; mine plan schedule; sequencing of progressive and final closure activities relative to the mine plan (as available today); KM105 Pond and Dam closure activities / implications.	a) Revision 6 of the ICRP containing the requested information has been submitted for review (November 1st, 2024) and the draft was reviewed by CIRNAC in advance of this technical comment period. The review and finalization of the ICRP will occur following the NWB normal course of annual reporting, which occurs in parallel with the renewal process, b) The progressive reclamation schedule for operations has been updated to reflect the current Project description and mine plan in Section 6 of the ICRP (Rev. 6).

ID#	Recommendations/Requests	Response
	b) Develop a progressive reclamation schedule for operations based on the current Project description and mine plan schedule. c) Describe the current status of progressive reclamation activities per Section 6.3 of the ICRP.	c) Table 6.2 of the ICRP Rev 6 provides a detailed account of annual progressive reclamation conducted between 2014 and 2024. This information is also provided to QIA, NWB and CIRNAC as part of the annual reporting under the Type A Water Licence and is currently being reviewed by CIRNAC and QIA.
CIRNAC R-13	CIRNAC recommends that BIMC a) Update information in the WL renewal Application as related to Financial Security b) Update the Application's supporting documents, including the ICRP under section 10, with the current 2024 financial security figures. CIRNAC requests feedback from the Proponent and Board regarding support to: a) Revise WL conditions to remove the need for annual security reviews, and increase the frequency of financial security review. b) Provide input and justification for a financial security review period frequency (e.g., 3 years). c) Revise WL conditions to include an annual security update in years when a security review is not required.	a) b) The latest financial security estimates have been included in the renewal application and Revision 6 of the ICRP. Following the process established under the Water Licence, those numbers will be updated when new information becomes available, as part of ongoing operations, the annual reporting process and management plan updates. In response to CIRNAC's comments a) – c), Baffinland confirms it would support a change in the financial security review frequency for the Mary River Project. Baffinland commits to engage with CIRNAC and QIA on this specific item prior to the technical meeting, and will provide the NWB with an update at the technical meeting which addresses frequency and potential revised WL conditions, should the NWB agree.
CIRNAC R-14	CIRNAC recommends that BIMC: a) Confirm if the application details are correct b) Confirm its intent of timelines for operation, closure and post-closure under the current WL renewal process.	a) Baffinland confirms that the proposed time schedule presented in Section 24 'Proposed Time Schedule' of the Water Licence (WL) renewal application is correct. b) Baffinland notes that the expected closure period in the FEIS Addendum for the Early Revenue Phase was 2040 to 2042, as described in Volume 1, Section 6.1.1 Temporal Boundaries. This section also notes that this closure period was based on an Approved Project Construction Phase taking up to five years, beginning in 2015, and Approved Project Operations for 21 years beginning in 2019. c) As construction of the Approved Project is not yet complete (i.e. the Steensby Components are not yet constructed), it is to be expected that the closure period will occur later than originally presented in the ERP FEIS Addendum. The timeline for closure to occur is based on annual ore production rates leading to the exhaustion of the resource present within Deposit 1. Baffinland will communicate any changes in the projected mine life as part of its annual report under the Type A Water Licence, and any updates to relevant management plans, such as the ICRP.
CIRNAC R-15	CIRNAC recommends that BIMC provide the information on: a) Its updates to its on-going Waste Rock Characterization Program (including the further refinement of acid rock drainage and metal leaching aspects of the foot wall and hanging wall; b) Any additional details on the segregation of potentially acid generating waste rock; c) Results of ongoing humidity cell kinetic test work; d) The incorporation of on-site test pile program results with respect to ARD/ML and impacts to modeling results	a) to (c): Information regarding approaches and updates to the ongoing waste rock characterization program, segregation of potentially acid-generating waste rock and humidity cell kinetic testing are available in Appendix L12 (Phase 1 Waste Rock Management Plan) and Appendix L13 (Life of Mine Waste Rock Management Plan) within the Type A Water Licence Application. Baffinland will continue to include information from ongoing Waste Rock Facility monitoring programs (Geochemistry, Water quality, thermal monitoring etc.) in the QIA NWB Annual Report for Operations. d) As outlined in the Phase 1 Waste Rock Management Plan (Appendix L12 within the Type A Water Licence Application), and thoroughly in Revision 6 of the ICRP (Appendix D3), in lieu of developing field test pads it was determined that detailed study of the existing WRF would provide substantial additional field-scale information better than what could be determined through test pads. Using this site-specific data, an updated water quality model for 2023 through 2026 was developed and reported on in the Phase 1 Waste Rock Management Plan. As outlined in Appendix D3 in Revision 6 of the

ID#	Recommendations/Requests	Response
		ICRP, a WRF water quality model for a near term (or unexpected) closure scenario is planned to be developed in 2027, and a life of mine model will be developed in 2028.
CIRNAC R-16	CIRNAC recommends that BIMC: a) Provide a comparison between predicted and measured water quality data and evaluate if additional mitigation measures are required. b) Provide update on geochemical modeling and pit water quality predictions.	a) Appendix D3 in Revision 6 of the ICRP describes the plan to assess waste rock stockpile seepage and runoff water quality, with water quality source terms being developed by 2026 and model (Appendix H of the ICRP) updates to be completed in 2027 and 2028, inclusive of updated measured water quality since 2018. The review and finalization of the ICRP will occur following the NWB normal course of annual reporting, which occurs in parallel with the renewal process, and should not delay issuance of the renewed licence. b) Appendix D1 in Revision 6 of the ICRP describes the plan to assess pit runoff water quality, with source terms being updated in 2025 and modelling for near term closure being completed in 2027, and life of mine closure being completed in 2028. The review and finalization of the ICRP will occur following the NWB normal course of annual reporting, which occurs in parallel with the renewal process.
CIRNAC R-17	CIRNAC recommends that BIMC: a) Update the PAG volume predictions with recent data and evaluate impacts on chemical stability and leachate water quality.	An analysis of cumulative waste rock mined between 2014 and 2023 indicates the percent of PAG rock mined to date is in-line with the levels presented and accounted for in the Life of Mine Waste Rock Management Plan (July 10 2024 Memo, "Baffinland Waste Rock Reconciliation") which was previously provided to CIRNAC on August 6, 2024 (Attachment 2).
CIRNAC R-18	CIRNAC recommends that BIMC: a) Provide clarification on its use of the term “Geologic Structure Change” to permit further evaluation.	Geologic Structure Change is a term used by the NWB in their Supplementary Information Guideline Form. To Baffinland's knowledge, it is not explicitly defined in other NWB documentation. Volume 6 (Terrestrial Environment), Section 2.0; (Landforms, Soils and Permafrost) in the FEIS and Early Revenue Phase FEIS Addendum provides information on geologic structures and the effects assessment for landforms, soils and permafrost, and is part of the information that the NWB based its decision on to issue the water licence and subsequent amendments. To be clear, Baffinland’s application to renew its type A Water License does not propose to modify, nor does it predict the Project to be modified by any previously described geologic structures.
CIRNAC R-19	CIRNAC recommends that BIMC: a) Clarify the application details related to Section 24 – Proposed Time Schedule	The proposed time schedule presented in Section 24 ‘Proposed Time Schedule’ of the Water Licence (WL) renewal application is correct. It is noted that the expected closure period in the FEIS Addendum for the Early Revenue Phase was 2040 to 2042, as described in Volume 1, Section 6.1.1 Temporal Boundaries. This section also notes that this closure period was originally based on an Approved Project Construction Phase taking up to five years, beginning in 2015, and Approved Project Operations for 21 years beginning in 2019. As construction of the Approved Project is not yet complete (i.e. the Steensby Components are not yet constructed), it is to be expected that the closure period will occur later than presented in the ERP FEIS Addendum. The timeline for closure to occur is based on annual ore production rates leading to the exhaustion of the resource present within Deposit 1. These updated timelines are available in the new version of the ICRP (Revision 6) which CIRNAC has and has reviewed. The review and finalization of the ICRP will occur following the NWB normal course of annual reporting, which occurs in parallel with the renewal process.
CIRNAC R-20	CIRNAC recommends that BIMC: a) provide temporal information on water and sediment quality data.	Water and sediment quality data from monitoring stations located on Camp Lake are assessed annually as part of CREMP reporting. Within CREMP reports, these data are compared to Water Quality Guidelines and Sediment Quality Guidelines for the protection of aquatic life (e.g., to CCME) as well as to Baffinland's AEMP benchmarks, the latter of which were developed considering a combination of site-specific baseline data and relevant CCME guidelines. In addition, temporal analyses of the data are completed to examine the potential for upward trends in parameter concentrations. This temporal analysis has indicated no increasing trends in concentrations of metals in Camp Lake sediments over the mine operation period (2015 to 2023) in

ID#	Recommendations/Requests	Response
		comparison to the baseline period, including concentrations of arsenic, copper, iron, manganese, and phosphorus concentrations that were shown to have concentrations above AEMP sediment quality benchmarks at some individual stations in Camp Lake in some years. Based on these analyses, no mine related influences on sediment quality in Camp Lake have been concluded in the CREMP reports. Assessment of water quality data collected at Camp Lake has not indicated any increasing trends in concentrations of arsenic, copper, iron, manganese, and phosphorus over time and relative to baseline, and concentrations up to and including in 2023 remained well below applicable CCME Water Quality Guidelines. Concentrations of parameters including chloride, molybdenum, sulphate, and uranium in water at Camp Lake have increased from 2015 to 2020 compared to concentrations during baseline, but since 2020 have not increased further and have remained at concentrations below applicable CCME Water Quality Guidelines by at least one order of magnitude. Please refer to the latest CREMP report produced by Minnow (2024; Baffinland Annual Report Appendix E9.1) for the results of spatial and temporal analysis of water and sediment quality data collected up to and including 2023 for Camp Lake.
CIRNAC R-21	CIRNAC recommends that BIMC: a) Provide information on its plans to renew these licenses. In addition CIRNAC requests an update on the status of that work	The Type 'B' Water Licence 2BE-MRY2131 (which will be renewed prior to expiry in April 2031) is within NWB jurisdiction. Surface and subsurface tenures are not regulated under the NWNSRTA. As background information, Baffinland has been working closely with CIRNAC to renew/extend all required surface and subsurface tenures as required for the Project. Below is the latest update on the status of that work: • Mineral Leases #2483, 2484 and 2485: Baffinland will renew mineral leases prior to expiry in August 2034. • Foreshore Lease 47H/16-1-2 and Lease Amendment 47H/16-1-5: Baffinland will renew these leases prior to expiry in June 2035. • Tote Road and Borrow Area Land Use Permit (LUP) N2019Q0011: CIRNAC has extended the expiry of this LUP to June 29, 2026. Baffinland will renew this LUP prior to expiry. • Bruce Head Land Use Permit N2019J0010: CIRNAC has extended the expiry of this LUP to June 29, 2026. Baffinland will renew this LUP prior to expiry. • Steensby Land Use Permit N2019C0009: CIRNAC has extended the expiry of this LUP to June 29, 2026. Baffinland has applied for a land lease that will replace this LUP. It is anticipated this lease will be issued before the expiry of this LUP.
CIRNAC R-22	CIRNAC recommends that BIMC: a) Provide a Groundwater Management Plan. This plan should use the definition of waste provided in the license and Nunavut Waters and Nunavut Surface Rights Tribunal Act. The plan should provide a description of what current measures are in place to prevent waste from coming into contact with groundwater. These measures should be provided for any area within the project with substances that are considered waste as per the Act (e.g., maintenance shops, ore storage areas, mine area, waste rock facility, etc.). It should also include measures for managing groundwater that does come into contact with waste. Finally, It should include a description of	Baffinland notes that the design basis for the landfill is not to prevent groundwater from coming in contact with the facility but rather operate the landfill as an inert waste only disposal facility. Baffinland continues to monitor water quality both upgradient and downgradient of the landfill to characterize potential impacts to shallow subsurface “groundwater” in the vicinity of the landfill. The data analysis and learnings to date will be included in the 2024 Annual Groundwater Monitoring Report, as part of the 2024 NWB QIA Annual Report for Operations. The synthesis of this refined understanding of the groundwater activity on site, combined with the groundwater quality analysis and interpretation, will inform the next update to the SWAEMP, which includes all that would otherwise be present in a stand alone Groundwater Management Plan. It is anticipated the update will include; frequency of upgradient and downgradient monitoring at selected shallow groundwater

ID#	Recommendations/Requests	Response
	how groundwater is being monitored around areas with waste to determine if groundwater is coming into contact with waste sources.	monitoring locations at the landfill and identify potential areas and triggers associated with implementation of monitoring at the Project for water quality analytes and the associated monitoring frequencies. This is not an item that is necessary for the renewal application as it is being addressed through the NWB normal course of annual reporting, which occurs in parallel with the renewal process.
CIRNAC R-23	CIRNAC requests that BIMC: a) Correct its application submission related to flood control, and all other applicable plans, as necessary. b) Ensure that flood control structures (e.g., KM105 Pond) are considered as a key update for management plans, updates relevant to the Interim Closure and Reclamation Plan (ICRP), financial security and project description.	Flood control was erroneously checked in Section 6.0 of the SIG. No flood control structures are currently present or being considered at the Mary River Project. Flood control is not referenced in the Mine Site Water Management Plan (Knight Piesold, 2021). The word flood is used in this document in the context of the Inflow Design Flood (IDF) and design flood event. These terms are standard nomenclature in hydrologic design and should not suggest that structures are being built for the purpose of flood control.
CIRNAC R-24	CIRNAC recommends that BIMC: a) Add labels to all water source locations in Figure 5.1 and Figure 5.2, and be consistent with naming convention in Table 5.1 and 5.2.	The updated figures with the water source locations labels are included in Attachment 3 to this Technical Comment response.
CIRNAC R-25	CIRNAC recommends that BIMC: a) Provide the type of each water source in Table 5.2. Additionally, BIMC should provide a more detailed description of the sources (i.e., Photos, plan views, drainage areas, etc.).	The scope of the current Type A Water Licence includes construction and operation of the Steensby Components. Similar to the information available at the time the Water Licence was originally issued, the requested details are not yet available, but will be provided consistent with the relevant terms of the existing Type A Water license. The requested information including locations and IFC drawings will be provided at least 60 days prior to construction in accordance with Part D, Item 2 of the Type A Water Licence, at which time the final locations and IFC drawings will be submitted to the NWB.
CIRNAC R-26	CIRNAC recommends that BIMC: a) Provide the % reductions for Mean Monthly Discharge and Low Flow Conditions for all water sources.	The assessment methodology for water withdrawals from lakes uses estimated reductions in lake outflow volumes. The assessment methodology for water withdrawals from streams uses estimated reductions in instantaneous flow. For reductions in instantaneous flow in streams, thresholds were identified and applied for fish-bearing and non-fish bearing waters. For fish-bearing streams, the removal of 20% of the 10-year low flow estimate was identified as an environmentally protective threshold. Streams confirmed not to be fish habitat typically feed a downstream reach or collecting stream that is fish habitat. In these instances, the subject stream is only one contributor to the flow in the downstream fish habitat stream. Therefore, a higher threshold of 40% of the 10-year low flow was used. Specific percentage reductions in instantaneous flow are not provided in this document for each stream. For the five streams identified in Table 6 (Phillips Creek, CV128, BG50, CV217, CV223), the percentage reductions were below the aforementioned thresholds at any flow condition. For the five streams identified in Table 7 (CV099, CV087, CV078, BG32, BG17), the percentage reductions met these thresholds under mean flow conditions, but not under low flow conditions. For these streams, additional temporal restrictions are in place such that water withdrawals do not take place in August/September during low flow periods.
CIRNAC R-27	CIRNAC recommends that BIMC:	One water intake facility is currently present on site, the Camp Lake Jetty at the Mary River Mine Site. Details on the construction of the Camp Lake Jetty and the associated water treatment and distribution system, including photos, are provided in the Mine Site Water System Construction Summary Report, submitted to the NWB on February 3, 2015.

ID#	Recommendations/Requests	Response
	a) Provide a description of the current water intake facilities and distribution system, including a statement of condition, photos, and rate the condition as satisfactory or unsatisfactory, and explain the rating as per SIG Section 6.0, No. 2a.	No permanent water intake facility currently exists to service Milne Port. Water is supplied for Milne Port from KM 32 Lake where it is withdrawn by water truck. Details on the water treatment and distribution system at Milne Port are provided in the Milne Port Water System Construction Summary Report, submitted to the NWB on February 23, 2015.The condition of these facilities is satisfactory.
CIRNAC R-28	CIRNAC recommends that: a) The Board include ice roads within the scope of BIMC's WL. b) If ice roads are included in the WL scope, CIRNAC recommends that BIMC provide the water quantity used for ice road construction and provide a description its methods for constructing its ice roads.	a) The use of winter ice roads to support the early construction stages of the Steensby Railway and other operations requirements was described in the original FEIS and will draw from the source specific limits and non-source specific limits set out in Part E of the current Type A Water license. b) Baffinland is permitted to use water from source specific and non-source specific limits for construction under Part E, Item 3 and for operations under Part E, Item 4 of the Type A Water License. When the final location of winter ice roads are known, Baffinland will submit notices regarding any additional sources required for their construction, and seek approval from the NWB as required and consistent with Part E, Items 8 and 9 of the Type A Water License.
CIRNAC R-29	CIRNAC recommends that BIMC: a) Provide clarification on what/where flow rates are being used to estimate water usage.	There are water meters on all water withdrawal locations within the project, and water usage rates are reported in annual reporting and used to estimate water usage.
CIRNAC R-30	In Section 6.0 Water Use of the Supplemental Information Guideline (SIG) Form (row 33, column D), it states that there is no reservoir storage, so the items in Row 33 through 37 are N/A. However, in the Fresh Water Supply, Sewage, and Wastewater Management Plan, it is mentioned that freshwater tanks are used to store raw water at Milne Port and Mine Site. CIRNAC recommends that BIMC: a) Provide the necessary information for Water Storage Tanks as described in Rows 33 and 37 of the SIG, including: i. Description (type, location, design, volume)ii. Description of general condition.	The requested information regarding freshwater storage tanks is contained within the relevant Construction Summary Reports, which are provided in Attachment 4: For freshwater storage tanks associated with the water system at the Mine Site, refer to: • Mine Site Water System Construction Summary Report, submitted to the NWB on February 3, 2015. • Sailivik Camp Construction Summary Report, submitted to the NWB on April 30, 2020. For freshwater storage tanks associated with the water system at Milne Port, refer to: • Milne Port Water System Construction Summary Report, submitted to the NWB on February 23, 2015. • Milne Port 380 Person Camp Construction Summary Report, submitted to the NWB on April 30, 2020.
CIRNAC R-31	CIRNAC recommends that BIMC: a) Clarify Section 6.0 Water Use in the SIG (row 33, column D) and within the WL renewal application package to include Water Storage for reservoirs, referencing KM105 Pond Design document for information.	At this time, the KM105 Pond is not used as a reservoir to store water, but rather it is a retention pond designed to manage total suspended solids (TSS) prior to discharge of runoff to the environment. The KM105 Sedimentation Pond Design Brief and Issued for Construction Drawings are presented in Appendix A of the KM 105 Pond Construction Summary Report, included as Appendix C.1.2 in the 2022 QIA-NWB Annual Report for Operations, and included in Attachment 4 herein.
CIRNAC R-32	CIRNAC recommends that BIMC: a) Consider piers in-line with flow to prevent excess scour and blockage of flow area.	The drawing set '06 Bridge General Arrangements.pdf' was provided in the 2012 FEIS. Final bridge designs for the Steensby Railway are currently being advanced. Issued-for-Construction (IFC) bridge drawings will be provided in advance of construction as required under Part D, Item 2 of the Licence.

ID#	Recommendations/Requests	Response
		Bridges for the Steensby Railway are designed by professional engineers. Limiting scouring and blockage of flow are important considerations in the design of these bridges.
CIRNAC R-33	CIRNAC recommends that BIMC: a) Indicate if the stormwater management ponds have been assessed for meeting the dam criteria, and if so, have the dams been classified?	Prior to construction, all sedimentation ponds on site are assessed to determine whether they are classified as dams under the Canadian Dam Association's Dam Safety Guidelines. Per the Hatch Civil Design Philosophy (Attachment 5. Document Number H353004-00000-200-210-0001), "Ponds with storage volumes greater than 30,000 m3 and heights exceeding 2.5 m shall be classified as dams and shall meet the dam safety requirements as per the Canadian Dam Association's Dam Safety Guidelines". Two sedimentation ponds on site are classified as dams under the CDA Dam Safety Guidelines: • KM 105 Pond • KM 110 Waste Rock Facility Pond The KM 105 Pond dams are classified as "high" consequence structures under the CDA guidelines. The KM 110 Waste Rock Facility Pond is classified as a "low" consequence structure. Specific discussion on dam classification for these structures is presented in their respective design specification documents, referenced below. The CDA guidelines specify that design floods are to be determined on a site-specific basis, though return periods of 1:50 to 1:200 years are identified as typical. Specific discussion on the selection of design floods for these structures are presented in their respective design specification documents, referenced below. The KM105 Sedimentation Pond Design Brief and Issued for Construction Drawings are presented in Appendix A of the KM 105 Pond Construction Summary Report, included as Appendix C.1.2 in the 2022 QIA-NWB Annual Report for Operations. The designs specifications for the expansion of the KM 110 Waste Rock Facility Pond were provided as Appendix F of the Construction Summary Report for the Mine Site Waste Rock Facility Pond Expansion and Drainage System, submitted to the Nunavut Water Board on May 25, 2020.
CIRNAC R-34	CIRNAC recommends that BIMC: a) Provide the type of each water source in Table 5.2. Additionally, provide a more detailed description of the sources (i.e., Photos, plan views, drainage areas, etc.).	Table 5.2 of the Application lists the water sources for dust suppression water use. Five of the listed sources are lakes (Km 32 Lake, Katiktok Lake, Muriel Lake, David Lake, Camp Lake). The remainder of the sources are streams. Detailed descriptions of these sources including photographs, plan views and catchment areas are provided in the Detailed Water Withdrawal Plan (Knight Piesold, 2021), see Section 4.0 (Attachment 6).
CIRNAC R-35	CIRNAC recommends that BIMC: a) Provide the effects assessment for amended water sources. If not available, complete effects assessment for amended water sources.	As there are no proposed changes to water sources at this time, there is no trigger to revisit the Board's previous decision making in relation to this topic, or issue a new assessment for already approved items. Further, Part E, Item 14 of the existing Type A water license outlines the information required to support any new or amended water sources proposed through the course of normal operations.
CIRNAC R-36	CIRNAC recommends that BIMC provide additional information on KM105 Pond Design, including: a) How/when it will be removed; b) Abandonment and restoration plans; c) Additional construction information.	The KM105 Sedimentation Pond was completed between July 5, 2021 and June 8, 2022. A Construction Summary Report for the work was included as Appendix C.1.2 in the 2022 QIA-NWB Annual Report for Operations (See Attachment 4 of this Response). a) b) The KM 105 sedimentation pond will be removed once it is no longer required as part of water management infrastructure

ID#	Recommendations/Requests	Response
		for the Project. Details on the removal of this pond were provided in the project memorandum KM 105 Dam and Sedimentation Pond - Closure Concept and Reclamation Security, which was provided previously within Appendix A of the 2024 Work Plan on December 1, 2023. c) Construction information is provided in the Construction Summary Report, included as Appendix C.1.2 in the 2022 QIA-NWB Annual Report for Operations.
CIRNAC R-37	CIRNAC recommends that BIMC provide additional information on the Camp Lake Area Water Management Designs, including: a) If they are temporary or permanent structures, b) How/when the structures will be removed; c) Abandonment and restoration plans; d) Design flow of each structure, and e) Additional construction information.	The Camp Lake Area Water Management works were completed between August 6 and October 26, 2022. A Construction Summary Report for the work was included as Appendix C.1.3 in the 2022 QIA-NWB Annual Report for Operations (also provided in Attachment 4 of this submission). As described in the CSR, these structures comprise ditches, swales, sediment traps, berms, and erosion/sediment control measures. a) These structures are permanent. b) c) Abandonment and reclamation of these structures will be per the Interim Closure and Reclamation Plan for the Project. As described in the ICRP, a Final Grading Plan will be developed that will detail specific measures to be undertaken at closure. At this time it is anticipated that these structures will remain in place and will be integrated into the Final Grading Plan as post-closure drainage pathways. If these structures are to be removed, this would occur during closure and would be completed using typical earthmoving equipment. d) The design flow for ditches is provided in Table 1 of the design brief: Berms and ditches will be sized to convey flows resulting from the 1 in 100-year flood event (64.2 mm for 24-hour duration). e) Construction information is provided in the Construction Summary Report, included as Appendix C.1.3 in the 2022 QIA-NWB Annual Report for Operations (see Attachment 4 enclosed).

ENVIRONMENT AND CLIMATE CHANGE CANADA

ID#	Recommendations/Requests	Response
ECCC #1	ECCC recommends the Proponent: a) provide an update on the execution of the Mine Site Water Management Plan, including updates on the five points requested above; and b) provide an updated Plan to address continued challenges controlling erosion and sedimentation on the Mine Site that integrates lessons learned including which measures have proven to be effective or not and how the Proponent has adapted.	**1. Condition of the KM 105 Surface Water Management Infrastructure** – In 2024, a remedial action plan was implemented to address seepage observed at the dam structure, and included an attempt to install a "grout curtain" to eliminate the seepage. The grout curtain was unsuccessful in controlling the seepage however, and further actions taken to mitigate water quality concerns included: • Installation of a pre-dosing system for the injection of Ferric Sulfate, Lime and Polymer at the inflow to the KM 105 Sedimentation Pond • Construction of a seepage collection infrastructure at the toe of the dam to pump seepage back into the pond for additional settling and potential treatment • Ongoing installation of a Water Treatment Plant (two stage filtration) to polish water within the facility and reduce TSS. An initial update on the status of the pond following the 2023 open water season was shared with ECCC in March of 2024. Several spill reports and follow-up reports were sent following the initial discovery of seepage in May –June 2024. The installed mitigations listed above were successful in reducing influent TSS, although at times seepage was elevated above the licence criteria for TSS for brief periods. It is important to note that the water quality at the first monitoring location within the fish-bearing reach of Sheardown Lake Tributary 1 (Station D1-05) remained below all applicable MDMER effluent criteria for the second year in a row. A comprehensive follow up report for water quality monitoring at the seep location as well as downstream receiving environment station D1-05 will be provided to ECCC, CIRNAC and QIA in Q4 2024. **2. Advancement of SDLT-1 sedimentation pond** - A geotechnical drilling program was completed in June 2024 within the proposed SDLT-1 sedimentation pond footprint. The results of this program are under review to determine whether further geotechnical investigations are required to support design work. It is estimated that construction of this water management measure will occur in 2026. **3. Advancement of QMR2 Water Management Infrastructure** – Implementation of this erosion and sediment control measure will be in place before Freshet 2025. During freshet, the below erosion and sediment control mitigations as per the SWAEMP were implemented downstream of QMR2: • Removal of melting snow on access road • Constructing an aggregate berm to prevent run-off from entering culvert inlet and watercourse, at the road entrance • Excavating a series of diversion swales across the upper section of the access road to divert run-off towards an established roadside ditch • Constructing a series of aggregate check dams to manage run-off from a steeper upper section of the road **4. Advancement of weatherhaven camp sedimentation pond** - The Weatherhaven Camp Sedimentation Pond feature was not required in the water management infrastructure that was installed in this area. Further details of works undertaken in this area in 2022 are provided in the Camp Lake Area Water Management Construction Summary Report, provided as Appendix C.1.3 in the 2022 QIA-NWB Annual Report for Operations. **5. Proposed remedial measures for the Mary River, Sheardown Lake, and Camp Lake catchments** **Mary River Catchment** - Culverts have been plugged on the Mine Haul Road and water is conveyed to the uphill ditch and towards KM 105 Surface Water Management Infrastructure. **Sheardown Lake Catchment** - The primary element of water management works for the Sheardown Lake catchment is the SDLT-1 sedimentation pond. Geotechnical drilling was completed in June 2024 for that work and options analysis is ongoing. **Camp Lake Catchment -** Water management works for the Camp Lake catchment were completed in 2022 and are reported in the Camp Lake Area Water Management Construction Summary Report, provided as Appendix C.1.3 in the 2022 QIA-NWB Annual Report for Operations.

<table>
<tr><th>ID#</th><th>Recommendations/Requests</th><th>Response</th></tr>
<tr><td></td><td></td><td>Baffinland is updating plans for this infrastructure taking into account lessons learned from current remedial measures and will continue to provide updates including effectiveness review on water management infrastructure in the QIA-NWB Annual Report for Operations.</td></tr>
<tr><td>ECCC #2</td><td>ECCC recommends incorporating the Snow Management Plan and the Tote Road Monitoring Program into a renewed water licence. These could be as stand-alone plans or annexes to existing plans.</td><td>Baffinland agrees and will incorporate applicable features subject to the WL from the SMP and TRMP into the next revision of the SWAEMP, following the NWB normal course of annual reporting, which occurs in parallel with the renewal process.

Applicable features to be included into the SWAEMP will include:
WQ Site monitoring stations and schedules
Monitoring group parameters</td></tr>
<tr><td>ECCC #3</td><td>ECCC recommends considering the CCME guidelines, including the two-pronged approach, to develop updated criteria for TSS measured in watercourses along the Tote Road in order to reduce potential effects to the aquatic environment.</td><td>Baffinland previously worked directly with the QIA on the development of the site-specific criteria for upstream/downstream monitoring starting in 2018, and incorperated this criteria into the Roads Management Plan and Tote Road Monitoring Plan. Per commitment ECCC-#2, this will be incorporated into the SWAEMP.

The screening criteria employed to determine project-related impact thresholds during freshet monitoring, stems from the fact that TSS concentrations during natural high turbidity events (e.g., freshet, or significant storm events) can result in TSS concentrations at upstream areas that are well above 250 mg/L. Therefore these creek/river systems are naturally accustomed to high TSS concentrations such that a <50 mg/L increase in TSS at other times of the year (when TSS is naturally lower than 250 mg/L) is unlikely to negatively affect biota of these creek/river systems.</td></tr>
<tr><td>ECCC #4</td><td>ECCC recommends the Proponent update the Tote Road Monitoring Program to specify which total and dissolved metals will be analyzed for collected water samples</td><td>Under the Tote Road Monitoring Program, the following metals will be analyzed for both total and dissolved metals for the following parameters as per the frequency outlined in the plan. This is in alignment with MDMER requirements for deleterious substances and effluent characterization.

These include both total and dissolved fractions of the following: Aluminum, Arsenic, Cadmium, Chromium, Cobalt, Copper, Iron, Lead, Manganese, (Mercury), Molybdenum, Nickel, Phosphorous, (Radium), Thallium, Uranium, Zinc</td></tr>
<tr><td>ECCC #5</td><td>ECCC recommends the Proponent update the Fresh Water Supply, Sewage, and Wastewater Management Plan to clarify where 4,4',4''-(Benzene-1,3,5-triyltri-2,1-ethynediyl) tribenzoic acid is referenced and to use the common BTEX acronym for benzene, toluene, ethylbenzene and xylenes.</td><td>The abbreviation BTE was incorrectly defined in Section 3.1 as 4,4',4''-(Benzene-1,3,5-triyltri-2,1-ethynediyl) tribenzoic acid. This will be corrected in the next revision of the Fresh Water Supply, Sewage, and Wastewater Management Plan, which will be issued with the NWB QIA Annual Report for Operations in 2025.</td></tr>
<tr><td>ECCC #6</td><td>ECCC recommends that the Proponent considers the more recent FEQGs in developing their discharge criteria for benzene, ethylbenzene, toluene and xylene for the Project.</td><td>Baffinland agrees with this recommendation to adopt the below FEQGs as the discharge criteria for benzene, ethylbenzene, toluene and xylene at the Project.

<table><tr><th>Parameter</th><th>Federal water quality longterm guidelines (mg/L)</th></tr><tr><td>Benzene</td><td>0.59</td></tr><tr><td>Toluene</td><td>0.03</td></tr><tr><td>Ethylbenzene</td><td>0.07</td></tr><tr><td>Xylene</td><td>0.07</td></tr></table>
Baffinland also requests that the renewed Water Licence, once issued, should reflect the following discharge criteria:
a site-wide Total lead criteria of 0.2 mg/L which would align with Table 2, Schedule 4 of the MDMER; and
controlled discharge fresh water TSS limit of 15 mg/L monthly average and 30 mg/l Maximum grab sample for all final regulated discharges at the Project.
Baffinland will provide updated discharge water quality tables reflecting the items above in the update to be submitted to the NWB on November 18, 2024</td></tr>
</table>

ID#	Recommendations/Requests	Response
ECCC #7	ECCC recommends that both the water licence and the Fresh Water Supply, Sewage, and Wastewater Management Plan be updated to explicitly specify discharge criteria for all PWSPs on site, including MS- MRY-04B and MS-MRY-04C.	Acknowledged. Baffinland will issue a draft Schedule I with the requested information added on November 18th, 2024 to the NWB for consideration as part of these proceedings. Table 5 in the Fresh Water Supply, Sewage, and Wastewater Management Plan Rev. 10 already contains the specific discharge criteria for monitoring locations MS-MRY-04A, MS- MRY-04B and MS-MRY-04C.
ECCC #8	ECCC recommends that a renewed licence include the KM105 Pond as a monitoring location and that the Proponent update the Surface Water and Aquatic Ecosystem Management Plan to integrate the KM105 Pond in the text, tables and figures.	The KM105 Pond is included as a monitoring location in the Water Licence. The August 16, 2021 letter from the Nunavut Water Board providing approval for Modification Request 13 also includes a revision of Schedule I, which includes MS-11 as a new monitoring location for the KM105 pond. Baffinland notes that a more recent letter from the Board, issued on January 7, 2022, provides further revisions to Schedule I, but does not include MS-11 as a monitoring location. Baffinland will issue a draft Schedule I with this information added on November 18th, 2024 to the NWB for review as part of these proceedings. The most recent revision of the SWAEMP was issued prior to the KM105 Pond being constructed. Water Licence monitoring locations will be updated in the next revision of the SWAEMP.
ECCC #9	ECCC recommends that the Proponent update the Aquatic Effects Monitoring Plan to clarify the water quality benchmark for aluminum and include a water quality benchmark for selenium.	Under AEMP Rev. 1, water quality data are compared to applicable Water Quality Guidelines for the protection of aquatic life (e.g., to CCME) as well as to Baffinland's AEMP Benchmarks, the latter of which were developed considering a combination of site-specific baseline data and relevant CCME guidelines as a basis for evaluating temporal changes in water quality for a specific waterbody/watercourse while also considering toxicological response to aquatic biota. Under the Rev1 document, derivation of AEMP Benchmarks for aluminum were based on total concentrations determined during baseline studies, resulting in variable benchmarks among the CREMP waterbodies. In future revisions/updates of the AEMP, clarification that the AEMP Benchmark for aluminum is based on total concentrations will be made clear/highlighted. No AEMP Benchmarks for selenium were developed historically as this parameter was not identified as a Potential Parameter of Concern during development of the Final Environmental Impact Statement (FEIS) and the AEMP itself. Per AEMP Rev1, Baffinland must currently compare water quality data to the AEMP Benchmarks presented in the AEMP Rev1 document. Because the development of AEMP Benchmarks is based on parameter concentrations at specific aquatic environments assessed under baseline conditions, the data set for the development of benchmarks is 'fixed' and thus development of any new benchmarks would require an alternative method of derivation to that which was applied originally. During baseline, selenium concentrations in water at the various CREMP waterbodies were typically less than laboratory method detection limits. In addition to comparisons to AEMP Benchmarks, the analysis of water quality data for the CREMP component of the Mary River Project AEMP has consistently included comparisons to CCME Water Quality Guidelines for all applicable parameters (i.e., those for which guidelines have been developed), including comparisons to the total aluminum guideline (i.e., 0.1 mg/L for pH >6.5) and total selenium (0.001 mg/L) guideline. Total selenium concentrations have typically been below or near the laboratory Method Detection Limit (0.00005 mg/L) at all CREMP water quality monitoring stations in baseline studies and over the course of mine operations from 2015 to 2023, supporting the exclusion of selenium as a PPOC for the Mary River Project. A recent update proposed for the AEMP (i.e., AEMP Rev. 2) has incorporated Federal Environmental Quality Guidelines (FEQG) for total cobalt, dissolved lead, and dissolved zinc moving forward. Baffinland would also consider including the FEQG for total aluminum to replace the existing (1987) CCME guideline for this parameter as part of the AEMP Rev. 2 updates. As mentioned in the paragraph above, total selenium concentrations from all CREMP water quality monitoring stations are currently compared to the CCME guideline of 0.001 mg/L, and upon acceptance of AEMP Rev. 2, total selenium concentrations would continue to be compared to this guideline in all future monitoring.
ECCC #10	ECCC recommends the Proponent clarify the term “substantially free” when referring to glue and other chemicals in untreated wood waste.	The description of “substantially free” when referring to glue and other chemicals is more specifically defined with in the referenced Standard Operating Procedure (SOP) “BIM-5200-SOP-0020 Open Burning of Untreated Wood Cardboard and Paper”. In section 5.2.2 of the referenced SOP, acceptable clean wood waste is defined as: Acceptable clean wood waste permitted for open burning includes the following products which are not suitable for re-use or recycling:

ID#	Recommendations/Requests	Response
		• Untreated, clean wood waste products including lumber, timber, and pallets; and • Paper products and cardboard packaging. Non-clean wood wastes are not permitted for open burning. This includes the following wood products: • Treated and/or painted wood products, including plywood or particle board; • Petroleum-based materials or materials contaminated with petroleum or petroleum derivatives; • Petroleum products used as accelerants; and • Hazardous wastes, non-combustible materials, food waste, plastics, electrical wire, Styrofoam (polystyrene foam) or asbestos.
ECCC #11	ECCC recommends that the Proponent update the Tote Road Monitoring Program; PWSP Effluent Discharge Plan; Surface Water and Aquatic Ecosystem Management Plan; and Life-of-Mine Waste Rock Management Plan to correct noted inconsistencies at the next opportunity.	Acknowledged. The requested administrative updates for minor corrections will be made in the next revisions to the referenced plans and management plans, to be submitted on March 31, 2025, following the NWB normal course of annual reporting, which occurs in parallel with the renewal process.

FISHERIES AND OCEANS CANADA

ID#	Recommendations/Requests	Response
DFO-TRC-01	DFO suggests BIM provide a summary table of all proposed watercourse crossings (i.e., road and rail culverts and bridges) to be presented at the Water Licence Technical Meeting, and to be added to the updated Surface Water and Aquatic Ecosystem Management Plan. This summary table is likely to be used by regulators to ensure that impacts to the aquatic environment are minimized. The information should include, but not be limited to: • locations where road infrastructure interacts with waterbodies and watercourses including seasonally wet drainages; • type of crossing - existing or proposed (bridges and culverts); • channel and wetted width; • fish species present (confirmed and suspected), and life stage; • Rationale on why crossings were considered unlikely to be non-fish bearing (i.e., downstream barrier to fish passage); and • whether there are fish bearing waterbodies downstream and/or upstream of the crossing and known important habitat. The seasonal channels between fish bearing waterbodies should be considered fish habitat. Additionally, BIM should include in the updated plan a description of measures to protect fish and fish habitat to preserve fish passage and to protect downstream fish habitat from impacts.	A summary table with the requested information can be provided in the next update to the SWAEMP for crossing locations along the Tote Road. The review of the SWAEMP will occur by March 31, 2025, following the NWB normal course of annual reporting, which occurs in parallel with the renewal process. With regards to Steensby, the information identified in the Recommendation has been provided in the detailed baseline survey reports as part of Baffinland's application for a Fisheries Act Authorization for the Steensby Component (NSC 2024a,b). These reports present detailed field survey information including but not limited to locations where rail infrastructure interacts with waterbodies and watercourses including seasonally wet drainages, type of crossing (bridge or culvert), channel and wetted width, fish species present (or absence of fish), description, locations, and photographs of barriers to fish movement, and rationale (where applicable) for identification of a site as non-fish bearing (e.g., permanent barrier to fish identified). Habitat was considered to be potential fish habitat where no fish were captured or observed but no permanent barriers to fish movements were identified between the site and upstream or downstream fish habitat (known or potential). North/South Consultants Inc. (NSC). 2024a. Baffinland Iron Mines Corporation Mary River Project Steensby railway freshwater habitat surveys: 2021-2023. Prepared for Baffinland Iron Mines Corporation, January 2024. NSC. 2024b. Baffinland Iron Mines Corporation Mary River Project Steensby railway freshwater habitat surveys: Non-fish bearing sites 2021-2023. Prepared for Baffinland Iron Mines Corporation, February 2024.
DFO-TRC-02	DFO requests the Surface Water and Aquatic Ecosystem Management Plan be supplemented with a section that identifies areas of potential sediment and erosion concerns along the Tote Road, and provides site or condition specific measures that can be implemented along Roads/Rails to reduce the risk of erosion and control sedimentation and respond to sediment releases. These site and condition specific measures should take into account road bed slopes, types of fill materials, snow and ice movement, ditch gradient, and location of fish bearing waters. The section should also include: • examples of materials and techniques that BIM will employ to control sedimentation and erosion; • required training/certifications to be acquired by individuals and/or teams responsible for developing and implementing the erosion and sediment control plans; and	As described in the SWAEMP, influences from climate, topography and permafrost ground conditions combine to create conditions of continuous, natural weathering and erosion and sedimentation throughout the region. These environmental conditions have a similar influence on site infrastructure, making erosion challenging to proactively control or even predict. Baffinland has observed natural sedimentation events since the outset of the Project. Typical Erosion and Sediment Control (ESC) Best Management Practices (BMPs) that are implemented in more southern regions tend not to perform as well at site due to these regional conditions. For example, installing an ESC BMP such as Insta-turf may be an effective hillside erosion solution in southern regions. The mat can be secured in consolidated soil capable of water infiltration and vegetation establishment is relatively quick. The same matting installed at site would be ineffective, as it cannot be sufficiently secured in the unconsolidated active layer, re-vegetation is slow and saturated conditions of the active layer during freshet or rain events is likely to dislodge the matting. A greater level of understanding of the unique site conditions that influence the selection of appropriate ESC measures has been achieved through the ongoing construction and operation of the Project. The ESC BMP inventory and implementation requires flexibility to assess the ever-changing ground conditions at site and respond accordingly such that a new adverse condition is not introduced. For example, an In-Ground Sump is an ESC BMP listed in Table 6.1 of the Surface Water and Aquatic Ecosystem Management Plan. While a sump would collect/ contain water and prevent erosion, it would not be a good choice in locations where excavating a sump could expose permafrost or result in permafrost degradation.

	• details on how this plan will proactively be put in place along proposed developments, including the rail.	It is recognized that erosion and sediment control training is required for personnel involved with the planning, installation, and maintenance of ESC measures. The addition of CAN-CISEC personnel has been valuable in drawing awareness to and understanding of ESC requirements, supporting construction activities and daily operations. In-house Erosion and Sediment Control Awareness training is being developed for personnel involved in ESC activities and will be rolled-out during winter 2024-25. Topics covered will include: • Legislation that governs erosion and sediment • Types of erosion • Factors that influence erosion • Erosion and Sediment control BMPs • Installation of BMPs BIM is encouraged by the receptiveness of various departments to the guidance provided by the CAN-CISEC's and will continue to build on this teamwork. The SWAEMP, along with additional Environmental Management Plans, is incorporated into the planning of proposed developments, including the rail, and their execution. Adaptive Management will be imperative during all stages of proposed developments including the construction phase. Environmental site inspections will provide real-time feedback on how work plans are executed and challenges encountered, for an effective response.

APPENDIX 1
ATTACHMENTS

ATTACHMENT 1. QIA TR-1. 2023 CREMP

ATTACHMENT 2. CIRNAC R-17. BAFFINLAND WASTE ROCK RECONCILIATION

ATTACHMENT 3. CIRNAC R-24. UPDATED FIGURES 5.1 AND 5.2

ATTACHMENT 4. CIRNAC R-30. CONSTRUCTION SUMMARY REPORTS

ATTACHMENT 5. CIRNAC R-33. HATCH CIVIL DESIGN PHILOSOPHY

ATTACHMENT 6. CIRNAC R-34. PHASE 2 WATER WITHDRAWAL PLAN