

SIGNATURE PAGE



Photo 1: Panel Members: (from left) Madeleine Qumuatuq, Kaviq (Marjorie) Kaluraq, Catherine Emrick

THIS REPORT IS SUBMITTED TO THE HONOURABLE DANIEL VANDAL, MINISTER OF NORTHERN AFFAIRS BY THE NUNAVUT IMPACT REVIEW BOARD ON THIS 13TH DAY OF MAY, 2022.

Marjorie Kaviq Kaluraq

Chairperson

Madeleine Qumuatuq

Board Member

Catherine Emrick

Board Member

the time that the May 28, 2014 version of the Project Certificate was issued, and have not, to date been subject to impact assessment by the Board.

Reflecting these considerations, the Board finds that under Article 12, Part 8, Section 12.8.2(b) of the NLCA [Nunavut Agreement] it is appropriate and advisable for the Board to reconsider the Terms and Conditions of Project Certificate No. 005 for the Mary River Project. The Board's reconsideration will determine whether the proposed Project amendments should be allowed to proceed and, if so, whether the wording of specific Terms and Conditions within the Project Certificate would require updating and/or inclusion of additional Terms and Conditions.¹

Subsequently, Baffinland proposed changes to the scope of the Phase 2 Development Proposal as submitted in 2014 to add in the component of the North Railway for the transportation of ore. This change in scope resulted in the Proposal being referred back to the Nunavut Planning Commission (NPC) for further consideration and processing against the requirements of the North Baffin Regional Land Use Plan on December 19, 2016. The Phase 2 Development Proposal, with the scope updated to include the North Railway, was formally referred back to the NIRB for assessment by the NPC on May 29, 2018.² In the NIRB's correspondence of June 11, 2018,³ the Board confirmed that the assessment of this version of the Phase 2 Development Proposal would be conducted as a reconsideration of the Terms and Conditions of existing Project Certificate No. 005 under Article 12, Section 12.8.2 of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada (Nunavut Agreement)* and s. 112 of the *Nunavut Planning and Project Assessment Act*, S.C. 2013, c. 14, s. 2 (*NuPPAA*). Consequently, the NIRB has undertaken the assessment of the Phase 2 Development Proposal as required under these provisions and as required under Section 12.8.3 of the *Nunavut Agreement* and s. 112(5) of *NuPPAA*, the NIRB is providing this Reconsideration Report and Recommendations to the Responsible Minister(s) for your consideration. As indicated in the Board's correspondence of February 4, 2022,⁴ due to various factors, including the extent and complexity of the Public Hearing Record for the file, the Board required 60 additional days beyond the prescribed 45-days following the close of the Public Hearing Record to complete their decision-making for the file and produce the attached Reconsideration Report and Recommendations.

The enclosed Reconsideration Report and Recommendations summarizes the NIRB's assessment of the potential ecosystemic and socio-economic effects of the Phase 2 Development Proposal, a

¹ (Doc ID Nos. 291267 & 291258) Correspondence from: E. Copland, NIRB Chairperson to B. Valcourt, Minister of Aboriginal Affairs and Northern Development re: The NIRB's Determination With Respect to Baffinland Iron Mines Corporation's Request to Reconsider Terms and Conditions in Project Certificate No. 005 for the "Phase 2 Development" Mary River Project Proposal, August 27, 2015 at p. 10.

² (Doc ID No. 318134).

³ (Doc ID Nos. 318378 and 318152).

⁴ (Doc ID Nos. 337857 and 337858).

proposed modification to the previously-approved Mary River Project (the Proposal). The Board's assessment was the longest in the Board's history, commencing with the technical review of the Proposal in October 2018 and concluding with a Public Hearing held in-person in Iqaluit with links to the Community Hall in Pond Inlet, Nunavut on November 1-6, 2021, and Zoom and teleconference links provided to participants unable to travel to Iqaluit or Pond Inlet. As the Minister is aware, approximately 2 years of the Board's assessment (March 2020 to May 2022) has been conducted during the COVID-19 pandemic. As detailed in the attached Reconsideration Report and Recommendations, with modifications to Board processes, the Board was able to carry out the reconsideration in a manner that preserved public health and safety but ensured the Board's objectives were met.

After due consideration of the extensive Public Hearing Record for the file, including all written and oral submissions received by the Board, the Board's duly appointed decision-making Panel for the file has concluded that the Phase 2 Development Proposal:

- has the potential to result in significant adverse ecosystemic effects on marine mammals and fish, caribou and other terrestrial wildlife, along with vegetation and freshwater, and these effects could lead to associated significant adverse socio-economic effects on Inuit harvesting, culture, land use and food security in Nunavut;
- poses the potential for transboundary effects on marine mammals and fish and the marine environment outside the Nunavut Settlement Area; and
- these potential significant adverse effects cannot be adequately prevented, mitigated, or adaptively managed under proposed mitigation, adaptive management and monitoring programs and/or with revisions to the Terms and Condition of NIRB Project Certificate No.: 005.

Consequently, the Board recommends to the Responsible Minister(s) that the Mary River Phase 2 Development Proposal should not be allowed to proceed at this time.

Translated versions of this Reconsideration Report and Recommendations are being prepared in Inuktitut and will be available as soon as possible.

Should you have questions or require clarification regarding this matter, please contact the NIRB's Executive Director, Karen Costello at (867) 983-4608 or kcostello@nirb.ca.

Sincerely,



Kaviq Kaluraq
Chairperson
Nunavut Impact Review Board

cc: The Honourable Steven Guilbeault, P.C., Minister of Environment and Climate Change
The Honourable Joyce Murray, P.C., Minister of Fisheries and Oceans and the Canadian Coast Guard
The Honourable Omar Alhabra, P.C., Minister of Transport
The Honourable Jonathan Wilkinson, Minister of Natural Resources Canada
The Honourable Lori Idlout, MP for Nunavut
The Honourable P.J. Akeagok, Premier of Nunavut
Aluki Kotierk, President, Nunavut Tunngavik Incorporated
Olayuk Akesuk, President, Qikiqtani Inuit Association
Andrew Nakashuk, Chairperson, Nunavut Planning Commission
Lootie Toomasie, Chairperson, Nunavut Water Board
Megan Lord-Hoyle, Baffinland Iron Mines Corporation
Lou Kamermans, Baffinland Iron Mines Corporation
Mary River Distribution List

CHAIRPERSON'S FOREWORD

This Report summarizes the results of the Nunavut Impact Review Board's (NIRB or Board⁵) four- (4) year assessment⁶ of Baffinland Iron Mines Corporation's (Baffinland or Proponent) "Phase 2 Development Proposal". This is a proposed modification to the approved Mary River Project (NIRB File No. 08MN053) operated by Baffinland. This assessment has been unprecedented in many ways, with more than half of the assessment being conducted during the COVID-19 pandemic. As a result, the Board was required to modify its standard timelines and practices and sought two (2) public health exemption orders to conduct proceedings that maintained the Board's objectives, while preserving the health and safety of participants and communities.

This has also been the Board's most extensive assessment, with major process steps including:

1. A community scoping tour in the seven (7) potentially affected North Baffin communities in early 2019;
2. Two 3-day Technical Meetings held in April and June of 2019;
3. A site visit to Milne Port and the Mary River Mine Site by the Board and parties in September 2019;
4. A 5-day Public Hearing held in Iqaluit in November 2019;
5. A 5-day Technical Meeting conducted by teleconference in September 2020;
6. A 4-day in-person/video and audio conference Community Roundtable/Pre-Hearing Conference hosted in Pond Inlet and linked to venues in Iqaluit, Winnipeg and Ottawa in the fall of 2020; and
7. 21 days of in-person/video and audio conference Public Hearing technical sessions and a Community Roundtable hosted in Pond Inlet and Iqaluit (with the venues linked through Zoom feed) in January-February, April and November, 2021.

Approximately two (2) dozen Registered Intervenors (representing Inuit organizations, regulators, government agencies, non-governmental organizations, and community-based organizations) participated during the Board's assessment and contributed thousands of pages of written submissions on the Public Hearing Record, and asked and answered thousands of oral

⁵ Due to public health restrictions limiting travel and the expiry of Board Member terms over the course of the Board's assessment, in 2020 it became necessary for the full Board to delegate the completion of the assessment of the Phase 2 Development Proposal to a three-Member Panel of the Board established in accordance with s. 27 of the *Nunavut Planning and Project Assessment Act*, S.C. 2013, c. 2, s. 14 (*NuPPAA*). As the Panel is the Board's delegate for the purposes of decision-making, this Report uses the terminology "the Board" to refer to all NIRB decision-making for the file, and does not distinguish between decisions made by the duly appointed Panel or decisions made by the full Board prior to delegation to the Panel.

⁶ Although a version of the Phase 2 Development Proposal that did not involve transportation via rail was originally provided to the Nunavut Planning Commission on October 29, 2014, the Phase 2 Development Proposal reflecting the scope of the assessment summarized in this Report was referred to the NIRB by the Nunavut Planning Commission on May 29, 2018.

and written questions. The Public Hearing Record for the file also includes documents filed with and by the Government of Denmark to consider potential transboundary effects in Greenland.

In addition, more than 50 people participated in the Public Hearings as Community Representatives from Pond Inlet, Igloolik, Sanirajak, Arctic Bay, Clyde River, Grise Fiord, and Resolute, and interested members of the public also attended the community scoping tour and Public Hearing sessions to share their knowledge with the Board, ask questions, and express their concerns. These individuals represented a broad demographic of participants including Elders, youth, women, Hamlets, and Hunters and Trappers Organizations. There are approximately 5,000 pages of transcripts for the Public Hearing sessions and more than 120 Exhibits were filed during the Public Hearings. For the first time, some sessions of the Board's Public Hearing proceedings were broadcast live on Nunavut Independent Television's Uvagut TV channel across Nunavut and Canada. During the pandemic, hundreds of individuals were able to view, and in some cases participate, remotely via Zoom or teleconference in the proceedings.

As a result of the unprecedented Public Hearing Record, the length and complexity of the assessment and the disruptions and challenges resulting from the changing public health measures during the COVID-19 pandemic, the Board added 60 days to the standard 45-day timeline for decision-making. This additional time was necessary to ensure the Board's decision reflects "Ingalangaittuq": i.e. allowed the Board to observe and process the extensive Public Hearing Record for the file in a mindful, holistic, and comprehensive manner.

Through the Board's assessment of potential ecosystemic effects, the Board heard that despite the experience gained with the current version of the Mary River Project since the Board's assessment of the original Mary River Project in 2012 there are still significant gaps in understanding, regional monitoring, and regulatory capacity that lead to high levels of uncertainty with respect to:

1. Baseline conditions in the terrestrial and marine environment;
2. Whether effects predicted during the Board's assessments of the original Mary River Project and modifications under the Early Revenue Phase, the Production Increase Proposal and the Extension of the Production Increase Proposal accurately reflect the effects being seen in the North Baffin Communities; and
3. Whether Baffinland's current and proposed mitigation and monitoring measures are and/or will be effective to prevent and manage the potential for significant adverse effects from the Phase 2 Development alone or in combination with the effects of Baffinland's current and future operation of the Mary River Project.

Specifically, the Board notes the extensive submissions from the Proponent and the parties, highlighted that considerable uncertainty and concern remains with respect to the potential for the Phase 2 Development Proposal to result in significant:

- Impacts on marine mammals (narwhals, seals, walrus, etc.), marine fish and the marine ecosystem due to the proposed increases to shipping during the open water season, including cumulative impacts associated with the combination of project-effects and climate change and changes to marine shipping and cruise ship traffic in the Region;
- Impacts to caribou populations and movement associated with the transportation of increased volumes of iron ore along the existing Tote Road, and the construction and operation of the North Railway;
- Future cumulative impacts to caribou when Baffin Island is bisected by both the North Railway and the South Railway (as approved in 2012 under the original Mary River Project);
- Impacts on the air, vegetation, freshwater, and ice due to dust emissions at Milne Port (from the ore stockpiles and ship loaders), along the Tote Road, along the proposed North Railway and at the Mine Site; and
- Impacts to snow and ice due to increased black carbon emissions associated with the use of heavy fuel oil by ships when travelling outside the Nunavut Settlement Area.

As was the case in the Board's previous assessments of the Mary River Project and subsequent modifications, given the importance of marine mammals, fish, and caribou to Inuit, the vulnerability and sensitivity of marine wildlife and caribou to disturbance and disruption, and uncertainty regarding the baseline conditions and potential effects of the Phase 2 Development Proposal, the Board has applied a high standard of the precautionary principle to its assessment of the potential for effects on these valued ecosystem components.

Further, the Board heard from Nunavut Tunngavik Incorporated, the Qikiqtani Inuit Association, community-based Intervenor, Community Representatives, and members of the public that, to date, the Proponent and regulators have not meaningfully considered and applied Inuit knowledge and experience to address this uncertainty and to adaptively manage the effects of the existing Mary River Project. The Board heard communities express frustration and dissatisfaction with the Proponent's response to impacts identified by communities such as the displacement of narwhal and seal populations near Pond Inlet. The Board also heard that the Proponent has failed to understand and respond to community concerns about the impacts they are seeing on snow, ice, freshwater, and vegetation resulting from dust emissions associated with the existing Project. The Board observed a gap in the Proponent's and regulators' understanding that although current project monitoring may not have identified specific ecosystemic effects, Inuit have identified that they are having to change their harvesting and land use practices due to the effects of the Project that they are already experiencing (e.g. not being able to use traditional hunting, camping, and fishing areas near the Project site because the snow, land, and wildlife has been impacted by red dust). Further, Inuit Qaujimagatuqangit shared with the Board, particularly from Pond Inlet, indicated that Inuit are experiencing changes to harvesting conditions such as the timing, location, and levels of effort required for harvesting, and that such

changes are threatening food security and creating cultural losses for which communities cannot be compensated. On this basis, Inuit organizations, community-based intervenors, numerous Community Representatives, and members of the public indicated that they did not support the Phase 2 Development Proposal moving forward until Inuit Qaujimagatunangit is more fully understood and applied to address the effects already being experienced from the existing Mary River Project.

In the summer of 2020, Baffinland and the Qikiqtani Inuit Association advised the Board they had signed the “Inuit Certainty Agreement” (ICA), parts of which introduce a new Inuit-led and Inuit-informed approach to monitoring, mitigation, and adaptive management under the Phase 2 Development Proposal. The Board determined that the articles of the ICA relating to monitoring and mitigation of the effects of the Phase 2 Development Proposal were relevant to the Board’s assessment and should be considered by the Board. As proposed, the ICA reflects a novel, made-in-Nunavut process, with the potential to ensure Inuit knowledge and experience plays a central role in project monitoring, adaptive management and mitigation going forward. Baffinland indicated that the ICA was the mechanism that would be relied upon to supplement the existing monitoring and mitigation programs for the current Mary River Project if the Phase 2 Development Proposal were to proceed.

However, during the Technical Meeting and Community Roundtable conducted in the fall of 2020, the Board heard that there was limited trust in, and support for the ICA, amongst the North Baffin communities. Important questions remained about how an independent, voluntary agreement without a clear linkage to regulatory and enforcement mechanisms would be effective. Some parties were skeptical that the new Committees proposed through the ICA could work well, noting that the Working Groups already established for the approved Project are not functioning effectively. During this assessment and the monitoring of the approved Mary River Project, the Board has noted that the existing Terrestrial Environment Working Group (TEWG) and Marine Environment Working Group (MEWG) have been unable to come to agreement about important components of adaptive management for the current Mary River Project, such as the selection of Early Warning Indicators. It appears that the important work of the TEWG and MEWG did not progress during the assessment. The Board observed that the trust necessary for effective collaboration has eroded and important working relationships between the communities, Inuit Organizations, regulators, and Proponent have been damaged in the decade after the Board approved the original Mary River Project. It is also unclear how the ICA could be implemented successfully in light of the Qikiqtani Inuit Association’s statement that they do not support the Phase 2 Development Proposal, but would honor the commitments in the ICA if the Phase 2 Development Proposal was approved to proceed. Consequently, the Board has serious concerns about the heavy reliance of the Proponent and parties on the ICA being implemented as envisioned to address uncertainty, ensure Inuit knowledge and experience occupies a central role

in the adaptive management of the Project, and supports community-led and culturally relevant monitoring.

In addition to considering the potential for ecosystemic effects on wildlife to result in socio-economic effects on Inuit harvesting, culture, land use and food security, the Board also considered the potential for the Phase 2 Development Proposal to have positive socio-economic effects. The Hamlets of Pond Inlet and Sanirajak indicated they supported the Phase 2 Development Proposal due to the potential positive socio-economic benefits for the Region in terms of employment, royalties, financial assistance with community infrastructure (e.g. daycares, health centers, and equipment), as well as compensation for project effects. The Board's assessment of socio-economic effects also considered Baffinland's confirmation that the future of the Mary River Project as a whole is dependent on the Phase 2 Development Proposal proceeding. In response, several parties challenged the nature and extent of the socio-economic benefits and questioned the extent to which Baffinland would be able to deliver all of these benefits to the North Baffin communities and particularly Pond Inlet. Parties noted that Baffinland has a track record of missed Inuit employment targets for the existing Project and questioned the long-term effect on Inuit employment when Baffinland switches from trucking the ore along the Tote Road to the North Railway. Some parties also challenged the Proponent's stated need for the Phase 2 Development Proposal and Baffinland's position that the current version of the Mary River Project is not economically viable on its own.

The Board has concluded that due to several factors, including education, training, labour market and demographics, some of which are beyond the control of the Proponent, there remains uncertainty regarding whether the full scale of the proposed benefits can be delivered, and questions remain as to the extent of Inuit contracting and Inuit employment that may be delivered by the Phase 2 Development Proposal. Despite this uncertainty, the Board recognizes that both the current Mary River Project and the Phase 2 Development Proposal represents approximately \$2.4 billion in royalties among other economic benefits, and would be significant economic drivers in both the North Baffin Region and Nunavut more generally. The Government of Nunavut (GN) acknowledged that future employment and business opportunities associated with the Mary River Project are a major component of the GN's strategy to address the significant increase in the number of young people entering Nunavut's workforce in the next decade. The Board acknowledges that the Proponent confirmed at the Public Hearing that if the Phase 2 Development Proposal is not approved the existing Mary River Project may be suspended, and the bigger Mary River Project as approved in 2012 may not proceed at all. Accordingly, the Board has considered the potential for significant and immediate adverse socio-economic impacts that would result if the current Mary River Project is placed into care and maintenance and the longer term adverse effects if further development of the original Mary River Project does not occur.

However, the potential for economic benefits that the Phase 2 Development Proposal represents must be considered in a holistic way that takes into account the potential for significant adverse ecosystemic effects and socio-economic effects. As explained in greater detail and for the reasons contained in this Report, the Board has concluded the following:

- The voluminous record filed in respect of the assessment highlighted that a high degree of uncertainty still remains in terms of the potential for the Phase 2 Development Proposal to have significant adverse effects in the marine and terrestrial environments; and
- There are significant gaps in the application and understanding of Inuit knowledge and experience by the Proponent and regulators, which have eroded the trust and confidence in the measures being developed and implemented to effectively mitigate, adaptively manage and monitor the effects of the existing Mary River Project. In the current context, the Board is not confident that these gaps can be effectively bridged under the ICA, and as a result is not confident that the potential for significant adverse effects resulting from the Phase 2 Development Proposal can be mitigated.

After careful consideration, the Board has concluded that there is potential for the Phase 2 Development Proposal to have significant and lasting adverse effects on marine mammals and fish, caribou and other terrestrial wildlife, along with vegetation and freshwater. The Board also finds that these ecosystemic effects may in turn lead to significant adverse socio-economic effects on Inuit harvesting, culture, land use and food security. The Board has decided that despite the best efforts of all involved in the development of more than 250 commitments and the ICA, the potential for these significant adverse ecosystemic and socio-economic effects cannot be adequately mitigated to allow the Phase 2 Development Proposal to proceed at this time. On this basis, the Board has concluded that the Phase 2 Development Proposal as assessed cannot proceed in a manner that will protect the ecosystemic integrity of the Nunavut Settlement Area and protect and promote the existing and future well-being of the residents and communities of the Nunavut Settlement Area, and Canada more generally.

The Board recognizes that because the Board has not recommended that the Phase 2 Development Proposal be allowed to proceed and the Extension to the Production Increase Proposal lapsed on December 31, 2021, there are implications to Baffinland's existing operation of the Mary River Project. Consequently, the Board has identified some required clarifications in respect of Terms and Conditions to the existing Project Certificate No. 005 that were previously varied by the Minister to reflect the Production Increase Proposal and its Extension. To address these issues, the Board has sought guidance from the Minister and provided observations and recommendations for the Minister's consideration in [Section 6](#) and [Section 8](#) of this Report. In [Section 3](#) and [Section 7](#) of the Report the Board has included recommendations to the Proponent, regulatory authorities, as well as land and mineral owners aimed at responding to the uncertainty

and key issues in respect of current and predicted project effects and the existing monitoring, mitigation and adaptive management programs for the current Mary River Project that were identified by the Board during the assessment.

In closing, the Board thanks the Proponent, the federal, territorial and local governments, Nunavut Tunngavik Incorporated, the Qikiqtani Inuit Association, other Registered Intervenors, and members of the potentially affected North Baffin Communities who shared their perspectives, wisdom and knowledge with the Board throughout the assessment, despite some exceptionally challenging circumstances. The Board is grateful for all their hard work, dedication and passion; their contributions have greatly assisted the Board in conducting this assessment and have provided invaluable information relied on by the Board to develop the conclusions and recommendations that follow.

Qujannamiik,

A handwritten signature in blue ink, appearing to read "M. Kaviq Kaluraq". The signature is fluid and cursive, with a large, stylized final flourish.

Marjorie Kaviq Kaluraq
Chairperson
Nunavut Impact Review Board

AVANT-PROPOS DE LA PRÉSIDENTE

Par le présent rapport, la Commission du Nunavut chargée de l'examen des répercussions (la CNER ou la Commission⁹) présente un résumé des résultats de son évaluation de quatre (4)¹⁰ ans de la proposition de mise en valeur de la phase 2 » de la Baffinland Iron Mines Corporation (la Baffinland ou le promoteur). Il s'agit d'une modification proposée au projet minier de la rivière Mary (no. de dossier 08MN053 de la CNER), exploité par la Baffinland. L'évaluation a été une évaluation sans précédent et sur plusieurs fronts. En effet, plus de la moitié des procédures ont été effectuées pendant la pandémie de la COVID-19. Ce qui a obligé la Commission à modifier ses pratiques et échéances régulières et à solliciter auprès des autorités de santé publique, deux ordonnances d'exemption l'autorisant à mener ses travaux axés sur ses objectifs tout en préservant la santé et la sécurité des participants et des collectivités des autorités de santé publique.

Cette évaluation, la plus vaste jamais effectuée par la Commission, comportait plusieurs étapes importantes, notamment:

1. Au début 2019, tournée d'établissement de la portée des incidences dans les sept (7) municipalités du Nord de l'île de Baffin, potentiellement touchées;
2. Deux réunions techniques de 3 jours en avril et en juin 2019;
3. En septembre 2019, la Commission et les parties prenantes ont visité le site du port Milne et le site minier de la rivière Mary;
4. Audience publique de 5 jours tenue à Iqaluit en novembre 2019;
5. Réunion technique de 5 jours tenue par téléconférence en septembre 2020;
6. À l'automne 2020, conférence pré-audience/table ronde communautaire de 4 jours organisée en présentiel/conférence audio et vidéo à Pond Inlet, et par liaison avec des sites connexes situés à Iqaluit, Winnipeg et Ottawa; et
7. En janvier-février, avril et novembre 2021, 21 jours de séances techniques d'audience publique et table ronde communautaire organisés en présentiel/conférence vidéo et audio à Iqaluit et à Pond Inlet (avec liaison par Zoom aux sites connexes).

⁹ En raison des restrictions de santé publique et de l'expiration des mandats des membres du Conseil au cours de l'évaluation, la Commission au complet a dû déléguer le parachèvement de l'évaluation de la proposition de mise en valeur de la phase 2 à un Groupe d'experts composé de trois membres de la CNER, conformément à l'article 27 de la *Loi sur l'aménagement du territoire et l'évaluation des projets au Nunavut*, LC 2013, ch.14, art.2 (LATEPN). Puisque le Groupe d'experts est le délégué de la Commission aux fins de prise de décision, la terminologie « la Commission » utilisée dans ce rapport se réfère à toutes les prises de décision relatives à ce dossier et n'établit aucune distinction entre celles prises par le Groupe d'experts dûment mandaté et celles prises par la Commission au complet avant la délégation au Groupe d'experts.

¹⁰ Bien qu'une version de la proposition de mise en valeur de la phase 2 n'intégrant aucun transport par chemin de fer ait été initialement transmise à la Commission d'aménagement du Nunavut le 29 octobre 2014, c'est en fait le 29 mai 2018 que la Commission d'aménagement du Nunavut a envoyé à la CNER la proposition de développement de la phase 2 traduisant l'envergure de l'évaluation résumée dans ce rapport

Environ deux (2) douzaines d'intervenants inscrits (représentant des organisations inuites, des organismes de réglementation, des organismes gouvernementaux, des organisations non gouvernementales et des organisations communautaires) ont participé à l'évaluation de la Commission, ont formulé des observations contribuant aux milliers de pages écrites du compte-rendu de l'audience publique; ils ont posé et répondu à des milliers de questions orales ou écrites. Ce compte-rendu incluait aussi des documents du gouvernement du Danemark ou déposés auprès de ce gouvernement afin d'examiner les possibles effets transfrontaliers au Groenland.

En outre, plus de 50 personnes ont participé aux audiences publiques en tant que représentants communautaires de Pond Inlet, Igloolik, Sanirajak, Arctic Bay, Clyde River, Grise Fiord et Resolute; des membres intéressés de la population ont également assisté à la tournée communautaire d'établissement de la portée et aux séances de l'audience publique, faisant profiter la Commission de leur savoir, posant des questions et exprimant leurs préoccupations. Ce groupe constituait un large éventail de la répartition démographique, incluant des Aînés, des jeunes, des femmes, des représentants de hameaux et d'organisations de chasseurs et trappeurs. Environ 5 000 pages de transcriptions des séances d'audience publique et plus de 120 pièces ont été déposées au dossier pendant les audiences publiques. Pour la première fois, les délibérations d'audience publique ont été diffusées en direct au Nunavut et au Canada sur la chaîne Uvagut TV de la Nunavut Independent Television. Pendant la pandémie, des centaines de personnes éloignées ont pu voir le déroulement des séances et quelquefois y participer par Zoom ou téléconférence.

Étant donné ce compte-rendu sans précédent des audiences publiques, la longueur et la complexité de l'évaluation et les défis et interruptions dus aux mesures sanitaires changeantes pendant la pandémie de la COVID-19, la Commission a ajouté soixante jours (60) au calendrier des 45 jours décisionnels. Cet ajout s'avérait nécessaire pour que, dans sa décision, la Commission puisse être guidée par « l'Ingalangaittuq », à savoir, examiner et traiter le vaste compte-rendu de l'audience publique du dossier dans une perspective consciencieuse, globale et intégrée.

Tout au long de son évaluation des possible effets écosystémiques, la Commission a entendu que malgré l'expérience acquise depuis l'évaluation du projet initial en 2012 dans l'exploitation la version actuelle du projet minier de la rivière Mary, d'importants écarts continuent à se manifester en ce qui a trait à la compréhension, à la surveillance régionale et à la capacité de réglementation, écarts qui provoquent de très grandes incertitudes concernant:

1. Les conditions de référence dans l'environnement terrestre et le milieu marin;
2. Est-ce que les effets pressentis pendant les évaluations du projet initial de la rivière Mary et les modifications apportées au titre de la Phase de revenu initial, de la proposition d'augmentation de la production et de l'extension de la proposition d'augmentation de

la production reflètent avec précision les effets vus par les collectivités du nord de l'île de Baffin; et

3. Est-ce que les mesures actuelles et proposées de surveillance et d'atténuation sont et/ou seront suffisamment efficaces pour prévenir et gérer les éventuels et importants effets négatifs de l'actuelle et future exploitation par la Baffinland du projet minier de la rivière Mary.

Et plus particulièrement, la Commission a constaté que dans leurs observations détaillées, le promoteur et les parties soulignaient la persistance d'une vaste incertitude et de grandes préoccupations vis-à-vis de la proposition de mise en valeur de la phase qui, par nature, pourrait:

- Se répercuter sur les mammifères marins (narvals, phoques, morses, etc.), les poissons de mer et l'écosystème marin à cause de la proposition d'augmentation du trafic maritime pendant la saison des eaux libres, incluant les effets cumulatifs associés à la combinaison des effets du projet, du changement climatique, des changements du trafic maritime et du trafic des navires de croisière dans la région;
- Se répercuter sur les populations et les déplacements des caribous en raison du volume accru de minerai de fer transporté le long de la route d'approvisionnement existante et de la construction de la voie ferrée dans le corridor nord;
- Avoir de futures incidences cumulatives sur les caribous lorsque l'île de Baffin sera traversée par les voies ferrées des corridors nord et sud (tels qu'approuvés en 2012 dans le projet initial de la rivière Mary);
- Se répercuter sur l'air, la végétation, l'eau douce et la glace à cause des émissions de poussière au port Milne (des piles de stockage du minerai et des chargeurs de navires), le long de la route d'approvisionnement et de la voie ferrée proposée dans le corridor du nord et enfin au site de la mine;
- Se répercuter sur la neige et la glace à cause de l'augmentation des émissions de carbone noir provenant des minéraliers utilisant du mazout lourd à l'extérieur du Nunavut.

Comme ce fut le cas dans les évaluations préalables de la Commission du projet de la rivière Mary et des modifications ultérieures et étant donné l'importance des mammifères marins, des poissons et des caribous pour les Inuits ainsi que la vulnérabilité et la sensibilité de la faune marine et des caribous aux dérangements et perturbations et l'incertitude concernant les conditions de référence et les effets potentiels de la proposition de mise en valeur de la phase 2, la Commission a appliqué à son évaluation des incidences potentielles sur les composantes valorisées de l'écosystème, une norme élevée du principe de précaution.

La Commission a en outre entendu la Nunavut Tunngavik Incorporated, la Qikiqtani Inuit Association, les intervenants communautaires, les représentants de la communauté et les membres du public déclarer que jusqu'à présent, le promoteur et les organismes de réglementation n'avaient pas sérieusement tenu compte du savoir et des expériences inuites et ne les avaient pas appliquées pour régler cette incertitude et assurer une gestion adaptative des

effets du projet existant de la rivière Mary. La Commission a entendu les frustrations et l'insatisfaction des collectivités devant la réponse du promoteur aux problèmes dénoncés, notamment le déplacement des populations de narvals et de phoques près de Pond Inlet. Elle a également appris que le promoteur n'avait ni compris ni réagi aux inquiétudes des communautés lorsqu'elles ont constaté les effets de émissions de poussière issues de l'actuel projet, sur la neige, la glace, l'eau douce et la végétation. La Commission a réalisé que le promoteur et les organismes de réglementation ne comprenaient pas que même si des effets écosystémiques précis n'avaient pas été identifiés lors de la surveillance du projet, les Inuits se voyaient désormais obligés de changer leurs pratiques de récoltes et d'utilisation des terres à cause des répercussions subies (ne plus être en mesure de pratiquer la chasse traditionnelle ni de camper et de pêcher près du site du projet car la poussière rouge affectait la neige, les terres et les espèces sauvages). De plus, selon le savoir inuit Qaujimajatuqangit transmis à la CNER, notamment à Pond Inlet, les Inuits endurent des changements dans les conditions de récoltes, comme la saison, l'emplacement et les efforts requis à cette fin; en outre, de tels changements menacent la sécurité alimentaire et créent des pertes dans les récoltes pour lesquelles ils ne peuvent être indemnisés. C'est pourquoi, des organisations inuites, des intervenants communautaires, de nombreux représentants de la communauté et des membres de la population ont indiqué qu'ils n'appuieraient pas la proposition de mise en valeur de la phase 2 tant que l'Inuit Qaujimajatuqangit ne serait pas pleinement intégré et appliqué pour combattre les effets déjà subis par le projet existant de la rivière Mary.

À l'été 2020, la Baffinland et la Baffinland and the Qikiqtani Inuit Association ont annoncé à la Commission qu'elles avaient ratifié "l'Inuit Certainty Agreement" (ICA) dont certains articles prévoient l'instauration d'une approche instruite et dirigée par les Inuits en matière de surveillance, d'atténuation des effets et de gestion adaptative de la proposition de mise en valeur de la phase 2. La Commission a estimé que ces articles de l'ICA visant la surveillance et l'atténuation des effets de mise en valeur de la phase 2, s'inscrivaient pertinemment dans son évaluation et qu'elle devrait en tenir compte. Tel que proposé, l'ICA prescrit un nouveau processus fabriqué au Nunavut, qui de par sa nature, positionne le savoir et les expériences des Inuits au cœur même des programmes de surveillance, de gestion adaptative et d'atténuation des effets d'un projet. La Baffinland a indiqué que si la proposition de mise en valeur de la phase 2 allait de l'avant, elle s'appuierait sur l'ICA pour compléter les programmes existants de surveillance et d'atténuation de l'actuel projet de la rivière Mary.

Toutefois, pendant la réunion technique et la table ronde communautaire de l'automne 2020, la Commission a constaté que les collectivités du nord de l'île de Baffin n'avaient qu'une confiance limitée envers l'ICA auquel elles adhéraient peu. D'importantes questions persistaient quant à l'efficacité d'une entente indépendante et volontaire sans aucun lien clair avec les mécanismes de réglementation et d'obligation. Certaines parties doutaient de la capacité de bien fonctionner

des nouveaux comités proposés dans le cadre de l'ICA, d'autant que les groupes de travail déjà établis pour le projet n'étaient pas très efficaces. Pendant cette évaluation et la surveillance du projet approuvé de la rivière Mary, la Commission a constaté que le Groupe de travail pour l'environnement Terrestre (GTET) et le Groupe de travail pour le milieu marin (GTMM) n'avaient pas réussi à s'entendre sur les essentielles composantes de la gestion adaptative de l'actuel projet de la rivière Mary, notamment sur la sélection d'indicateurs d'alerte rapide. Il semble d'ailleurs que l'important travail du GTET et du GTMM soit resté lettre morte pendant cette évaluation. La Commission a constaté que la confiance requise pour une efficace collaboration s'était érodée et qu'au cours de la décennie suivant l'approbation du projet initial de la rivière Mary, les relations de travail entre les collectivités, les organisations inuites, les organismes de réglementation et le promoteur s'étaient endommagées. Et d'ailleurs, comment la mise en vigueur de l'ICA pourrait-elle réussir puisque la Qikiqtani Inuit Association a déclaré qu'elle n'appuierait pas la proposition de mise en valeur de la phase 2, mais honorerait ses engagements pris dans le cadre de l'ICA si la proposition était autorisée à aller de l'avant. Par conséquent, la Commission s'interroge grandement sur la forte dépendance du promoteur et des parties envers l'instauration prévue de l'ICA comme mécanisme de règlement des incertitudes, défenseur du positionnement central du savoir et des expériences inuites dans la gestion adaptative du projet, et soutien d'une surveillance culturellement pertinente et dirigée par la collectivité.

De plus, en regardant attentivement si les effets écosystémiques sur les espèces sauvages pouvaient entraîner des effets socioéconomiques sur les récoltes, les cultures, l'utilisation des terres et la sécurité alimentaire, la Commission s'est également demandé si la proposition de mise en valeur de la phase 2 pourrait avoir des effets socioéconomiques positifs. Les municipalités (hameaux) de Pond Inlet et de Sanirajak ont indiqué qu'elles appuyaient la proposition de mise en valeur de la phase 2 en raison de sa potentialité d'avantages économiques pour la région, notamment en termes d'emplois, de redevances, d'aide financière pour l'infrastructure de la communauté (par ex : garderies, centres de santé et équipement) ainsi que d'indemnisation des effets du projet. Dans son évaluation des effets socioéconomiques, la Commission a également tenu compte de la déclaration de la Baffinland qui a affirmé que l'avenir du projet de la rivière Mary dans son ensemble dépendait des délibérations sur la proposition de mise en valeur de la phase 2. En réaction, plusieurs parties avaient questionné la nature et l'ampleur des avantages socioéconomiques et avaient demandé dans quelle mesure la Baffinland serait capable de livrer tous ces avantages aux collectivités du nord de l'île de Baffin, et plus particulièrement à Pond Inlet. Les parties prenantes ont souligné que pour le projet existant, la Baffinland était reconnue pour avoir raté ses cibles en matière d'emploi d'Inuits; ils ont questionné les conséquences à long terme qu'aurait sur l'emploi le virage du transport du minerai par camions sur la route Tote au transport par chemin de fer dans le corridor du nord. Certaines parties ont également contesté le besoin absolu de la proposition de mise en valeur de

la phase 2 ainsi que l'affirmation de la Baffinland selon laquelle la version actuelle du projet de la rivière Mary ne serait pas économiquement viable en tant que telle.

La Commission a conclu qu'en raison de différents facteurs, incluant l'éducation, la formation, le marché du travail et la démographie – certains d'ailleurs hors du contrôle du promoteur -, la prestation de toute la gamme des avantages décrits dans la proposition de mise en valeur de la phase 2 demeurerait incertaine et que des questions continuaient à se poser, notamment en ce qui a trait à l'envergure des marchés accordés aux Inuits et des possibilités d'emplois pour la population du Nunavut. Malgré cette incertitude, la Commission reconnaît qu'en plus des autres avantages, cette proposition rapporterait environ 2.4 milliards de dollars en redevances. Elle serait un important moteur économique pour la région nord de l'île de Baffin et le Nunavut en général. Le gouvernement du Nunavut (NU) a reconnu que les futures possibilités d'emploi et d'affaires liées au projet de la rivière Mary constitueraient l'un des principaux piliers de sa stratégie d'emploi pour faire face au nombre croissant de jeunes qui arriveront sur le marché du travail au cours de la prochaine décennie. La Commission reconnaît que lors de l'audience publique, la Baffinland a affirmé que si cette mise en valeur n'était pas approuvée, l'avenir de l'actuel projet de la rivière Mary pourrait être suspendu et le plus grand projet, tel qu'approuvé en 2012, pourrait être arrêté. Par conséquent, la Commission a tenu compte des possibles, importants et immédiats effets socioéconomiques négatifs qui découleraient du placement de l'actuel projet de la rivière Mary en phase de préservation et d'entretien et des incidences négatives à plus long terme qui surviendraient en cas de non-évolution du projet initial.

Toutefois, les possibles avantages économiques qui découleraient de la proposition de mise en valeur de la phase 2 doivent être examinés selon une approche holistique intégrant les possibles et substantiels effets écosystémiques et socioéconomiques négatifs. Tel que détaillé dans ce rapport et pour les raisons qui y sont dévoilées, la Commission a conclu que:

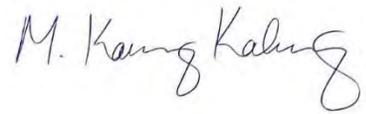
- Tel que souligné dans le volumineux compte-rendu de cette évaluation, un haut niveau d'incertitude subsiste quant à la potentialité de substantiels effets négatifs que pourrait avoir la proposition de mise en valeur de la phase 2 sur les environnements terrestre et marin; et
- Les importantes lacunes du promoteur et des organismes de réglementation quant à la compréhension et l'application du savoir et des expériences inuits ont érodé la confiance dans les mesures élaborées et mises en vigueur pour une efficace atténuation, une gestion adaptative et la surveillance des effets du projet existant de la rivière Mary. Dans le contexte actuel, la Commission ne croit pas que ces lacunes puissent être efficacement comblées par l'ICA et, par conséquent, n'est pas convaincue que les possibles et substantiels effets adverses de la proposition de mise en valeur de la phase 2 puissent être atténués.

Après un examen approfondi, la Commission a conclu que la proposition pouvait potentiellement avoir des effets négatifs durables sur les mammifères marins, les poissons, les caribous et autres espèces sauvages terrestres ainsi que sur la végétation et l'eau douce. La Commission estime en outre que ces incidences écosystémiques pourraient provoquer des effets socioéconomiques négatifs sur les récoltes des Inuites, les cultures, l'utilisation des terres et la sécurité alimentaire. La Commission a décidé qu'en dépit des efforts soutenus de toutes les parties dans l'élaboration de plus de 250 engagements et de l'ICA, la potentialité de ces négatives incidences socioéconomiques et écosystémiques ne saurait, à l'heure actuelle, être adéquatement atténuée pour permettre à la proposition de mise en valeur de la phase 2 d'aller de l'avant. Elle a également conclu que la réalisation actuelle de la proposition, telle qu'évaluée, ne saurait protéger l'intégrité écosystémique de la Région du Nunavut ni protéger et promouvoir le bien-être actuel et futur des résidents et des collectivités du Nunavut en particulier et du Canada en général.

La Commission reconnaît que son refus de recommander la réalisation de la proposition de mise en valeur de la phase 2 et l'arrêt de la prolongation de la proposition d'augmentation d'accroissement de la production le 31 décembre 2021 provoquent des répercussions sur l'exploitation actuelle du projet minier de la rivière Mary. Par conséquent, la Commission a identifié quelques points à clarifier quant aux modalités et conditions de l'actuel certificat de projet no.005, points préalablement modifiés par le ministre pour refléter la proposition d'augmentation de la production et sa prolongation. Pour régler ces questions, la Commission a sollicité les conseils du ministre et, dans les parties [6](#) et [8](#) de ce rapport, a transmis des observations et des recommandations au ministre, aux fins d'examen. Dans les parties [3](#) et [7](#) du rapport, la Commission a inclus des recommandations pour le promoteur, les autorités de réglementation ainsi que pour les propriétaires terriens et de minéraux afin de réagir à l'incertitude et aux principaux enjeux relevés par la Commission lors de son évaluation et concernant les effets actuels et prévus du projet et les programmes existants de surveillance, d'atténuation et de gestion adaptative du projet de la rivière Mary.

En terminant, la Commission remercie le promoteur, les gouvernements fédéral, territorial et locaux, Nunavut Tunngavik Incorporated, la Qikiqtani Inuit Association, d'autres intervenants inscrits et les membres des collectivités potentiellement touchées du nord de l'île de Baffin, de d'avoir partagé leurs connaissances, leur sagesse et leurs points de vue tout au long de cette évaluation malgré des circonstances exceptionnellement difficiles. Elle les remercie de leur dévouement, de leur passion et de leur travail acharné; leurs contributions ont grandement instruit la Commission tout au long de cette évaluation. Elles lui ont apporté d'inestimables informations sur lesquelles la Commission s'est fondée pour élaborer les conclusions et les recommandations qui suivent.

Merci!

A handwritten signature in black ink, appearing to read "M. Kaviq Kaluraq". The signature is written in a cursive style with a large, looping final flourish.

Marjorie Kaviq Kaluraq

Présidente

Commission du Nunavut chargée de l'examen des répercussions

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1 INTRODUCTION

1.1 Purpose of this Report

This Reconsideration Report and Recommendations (Report) have been prepared by the Nunavut Impact Review Board (NIRB or Board)¹¹ to summarize the Board's reconsideration of the terms and conditions of Project Certificate No. 005 in light of the "Phase 2 Development Proposal" proposed modification to the Mary River Project (NIRB File No. 08MN053; the Proposal) as proposed by Baffinland Iron Mines Corporation (Baffinland or Proponent).

As set out under s. 112(5) of the *Nunavut Planning and Project Assessment Act*, S.C. 2013, c. 14, s. 2 (*NuPPAA*), when the Board has conducted a reconsideration of the terms and conditions in a previously approved Project Certificate, the Board is required to report to the responsible Minister(s) as follows:

Within 45 days after the end of the Board's reconsideration under subsection (1) or (2), the Board must submit a written report to the responsible Minister that contains

- (a) an assessment of the terms and conditions in force; and*
- (b) any terms and conditions that it recommends should apply in respect of the project.*

This Report summarizes the NIRB's assessment of the potential ecosystemic and socio-economic effects of the Phase 2 Development Proposal. The Board has concluded that the Phase 2 Development Proposal as assessed cannot proceed in a manner that will protect and promote the existing and future well-being of the residents and communities of the Nunavut Settlement Area, and Canada more generally. As the Board has not recommended that the Phase 2 Development Proposal be allowed to proceed and the Extension to the Production Increase Proposal lapsed on December 31, 2021, there are implications to Baffinland's existing operation of the Mary River Project. Consequently, in [Section 6: Recommendation to the Minister](#) and in [Section 8: Recommendations Regarding Changes to Project Monitoring or Project Certificate Terms and Conditions](#) of the Report, the Board has identified some required clarifications and sought guidance from the Minister in respect of Terms and Conditions to the existing Project Certificate No. 005 that were previously varied by the Minister to reflect the Production Increase

¹¹ As noted in the Chairperson's Foreword, due to various circumstances in 2020 it became necessary for the full Board to delegate the completion of the assessment of the Proposal to a three-Member Panel of the Board established under s. 27 of the *NuPPAA*. As the Panel is the Board's delegate for the purposes of decision-making, this Report uses the terminology "the Board" to refer to all NIRB decision-making for the file, and does not distinguish between decisions made by the duly appointed Panel or decisions made by the full Board prior to delegation to the Panel.

Proposal and its Extension. The Report further describes in detail the factors taken into consideration, providing details about the Proposal, a summary of all the comments received to date for the Proposal, and outlining the ecosystemic and socio-economic factors given consideration by the NIRB during the Board's assessment of the Phase 2 Development Proposal.

To support the public's review and understanding of the Report, the Board has provided a list of commonly-used acronyms in [APPENDIX H](#). The Board has also prepared a Highlights Document in [APPENDIX I](#) that is a plain language guide for the public that highlights key aspects of the Board's Report and associated recommendations.

1.2 The Board's Assessment of Baffinland's Mary River Phase 2 Development Proposal

1.2.1 The NIRB's Approach to Assessing Modifications to Previously Approved Projects

As described in more detail in the text below, the Mary River Project, as currently operated and assessed by the NIRB from 2008-2012, is governed by the terms and conditions set out in the amended NIRB Project Certificate No. 005. The text that follows provides background regarding the original Mary River Project and subsequent modifications submitted by the Proponent for the Board's consideration. In determining the process and procedure guiding the NIRB's assessment of the Modification Proposal, the Board considered whether the Phase 2 Development Proposal should be assessed via a NIRB screening or a reconsideration of the terms and conditions of Project Certificate No. 005 under Article 12, Section 12.8.2 of the *Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada (Nunavut Agreement)* and s. 112 of the *Nunavut Planning and Project Assessment Act*, S.C. 2013, c. 14, s. 2 (*NuPPAA*). The following factors were considered by the Board to determine the appropriate assessment process:

- Was the proposed modification included within the scope of the assessment of the original project (as an alternative means of carrying out the project or even preferred alternative) as previously assessed by the NIRB?
- Was the proposed modification integrally linked to the original project and/or the Early Revenue Phase (ERP) or could the Proposal be characterized as constituting a stand-alone project proposal?
- If the proposed modification is integrally linked to the original project (or project as subsequently modified by any modification proposals that have been assessed and approved by the NIRB, such as the amendment to Project Certificate No. 005 to reflect the ERP Proposal), do the modifications proposed warrant reconsideration of the terms and conditions in Project Certificate No. 005?

The NIRB considered Baffinland's Phase 2 Development Proposal to be a significant modification of the original Mary River Project and a significant modification to the original scope of the Phase 2 Development Proposal received in 2014. Therefore, the NIRB determined that, as established under Article 12, Section 12.8.2 of the *Nunavut Agreement* and s. 112 of *NuPPAA*, a reconsideration of the Terms and Conditions of Project Certificate No. 005 would be the appropriate process to assess the Phase 2 Development Proposal. The Board further recognized that a comprehensive reconsideration process could also identify additional terms and conditions that would be warranted for inclusion in an updated Project Certificate. Having established that terms and conditions within Project Certificate No. 005 require reconsideration to reflect the changes proposed in the Proposal, the Board initiated an assessment of the Phase 2 Development Proposal, including the conduct of a Public Hearing, in accordance with the NIRB's Rules of Procedure.¹²

1.2.2 Modifications to Board Processes Required During the COVID-19 Pandemic

In between the suspension of the November 2019 Public Hearing Sessions and the commencement of the third Technical Meeting (TM), Community Roundtable (CRT), and Pre-Hearing Conference (PHC) scheduled for March 16-25, 2020, a global pandemic resulting from the spread of the novel Coronavirus (COVID-19) was declared. Consequently, on March 12, 2020, the Board cancelled the TM, CRT, and PHC in response to the global pandemic and to prevent the potential spread of COVID-19 in Nunavut. Since then, the Board's continuation of the assessment of the Phase 2 Development Proposal has been significantly impacted by the public health measures implemented in Nunavut and across Canada in response to the COVID-19 pandemic. The Board understands that the unprecedented nature of a global pandemic has had significant impacts on the existing Mary River Project, the North Baffin communities, Nunavummiut and Canadians. The COVID-19 pandemic has created uncertainty and required the NIRB to modify its existing practices and processes to continue the assessment of the Phase 2 Development Proposal. Since March 2020, the Board has balanced the concerns of communities and participants that the assessment should be suspended until there could be a return to the Board's normal practices for conducting in-person proceedings against the recognition that an indefinite suspension and continued delay of the assessment is not in keeping with the Board's obligations to deliver thorough but timely assessments. In July 2020,¹³ the Minister of Northern Affairs provided notification to the Board under s. 114 of *NuPPAA* that the resumption of the Board's proceedings in respect of the file should be a priority.

¹² NIRB *Rules of Procedure*, September 3, 2009, Part III.

¹³ (Doc ID No. 330898) Email dated July 14, 2020 from Hon. D. Vandal, Minister of Northern Affairs to K. Costello, NIRB Executive Director.

Consequently, the Board implemented modifications to its processes designed to meet the Board's objectives and support on-going engagement with communities, interested members of the public, Intervenors and the Proponent, while preserving the health and safety of all participants involved. As parties participated in the third TM teleconference and the in-person CRT and PHC in September and October 2020, they experienced firsthand, the *COVID-19 Protocols* developed specifically by the Board in consultation with public health authorities (attached as [APPENDIX A](#)) to meet changing directions from local health authorities. The Board appreciates the adaptability, flexibility, and good humour shown by participants as everyone adjusted to find ways to continue the Board's work during these unprecedented times.

The Board acknowledges that during the CRT and PHC conducted in 2020, due to the various capacity limitations in place, some community members who wished to attend the meetings in-person could not be accommodated as the maximum capacity had been reached in the venues. Although several alternative options were given to ensure community members could ask questions, provide comments, and listen to the proceedings, the Board received feedback from parties that these accommodations were not adequate, and noting that changes to the Board's processes needed to be made to increase the number of community members who could participate in-person. In subsequent meetings, the Board worked closely with the Government of Nunavut's Chief Public Health Officer (CPHO) to apply for exemptions to the limitations on in-person Public Gatherings to accommodate the attendance of greater numbers of people in person (included in [APPENDIX A](#) after the Board's *COVID-19 Protocols*). The Board sought and obtained two (2) such exemptions for some of the Public Hearing sessions. When capacity limits prevented in-person attendance, the Board ensured participation was available to all Intervenors and interested members of the Public through access to the Zoom feed and toll-free teleconference lines available in English and Inuktitut.

Overall, the Board has highlighted some of the key lessons learned in the implementation of the Board's *COVID-19 Protocols*:

- There was a learning curve for all participants as we adjusted to new practices such as doing health checks before being admitted into the venues, and wearing face masks;
- Given capacity limits in each venue, it was challenging to adapt when registered parties did not attend or wanted to switch their attendance to a different venue on short notice;
- Hard copy presentation materials needed to be located in the main hub location to facilitate ease of access;
- Clear direction needed to be given at the front entrance to venues to ensure that physical distancing is maintained at the sign-in desk;
- The Board should consider supplying hand sanitizer foot pump stations inside the meeting venues rather than only at the sign-in desk; and

- Parties noted being pleasantly surprised that the technology chosen and implemented was robust and effective, and gave the sense that the speakers in the various hubs were actually all in the same room.



Figure 1: The Mary River Panel Closing the Public Hearing Record via videoconference.

1.2.3 The Original Mary River Project

The Mary River Project (the Project) as originally approved in 2012 consisted of mining iron ore from the reserve at Deposit No. 1 at a nominal production rate of 18 Million tons per year (Mtpa). The Project included the extended exploration, construction, operation, closure, and reclamation of an open-pit mine and associated infrastructure for extraction, transportation and shipment of iron ore. The Project had three (3) main project locations – the mine site, Milne Port north of the mine site, and Steensby Port south of the mine site. Milne Port was proposed to be connected to the Mine Site by the Milne Inlet existing Tote Road (as improved for the Project), approximately 100 kilometers (km) in length. For the construction period, supplies and equipment required for construction at the Mine Site and the northern portion of the proposed South Railway would be received through Milne Port. Likewise, construction equipment and supplies for Steensby Port and the southern portion of the South Railway would be received at Steensby Port. It was expected that Steensby Port facilities and the South Railway would take up to four (4) years to construct.

During construction, supplies would be brought to both Milne Port and Steensby Port during the open water season. Once the South Railway was operational, 18 Mtpa of iron ore would be transported by the South Railway to be shipped from Steensby Port. Shipping of iron ore was proposed to occur year-round and required vessels with icebreaking capabilities. When Steensby Port was operational, Milne Port would only be used occasionally for the delivery of oversized equipment for the Mine Site.

The Board concluded its assessment of the original Mary River Project in September 2012 and recommended that the Project be allowed to proceed subject to over 180 terms and conditions.¹⁴ Since the issuance of the Mary River Project Certificate No. 005 on December 28, 2012, significant elements of the original Mary River Project have not been constructed, although these remain authorized under Project Certificate No. 005, including: the port at Steensby Inlet, the South Railway from the mine site to Steensby Inlet, and the fleet of purpose-built ice-breaking ore carriers.

¹⁴ (Doc ID No. 286425) NIRB File No. 00MN053, Final Hearing Report for the Mary River Project, Baffinland Iron Mines Corporation, September 14, 2012.

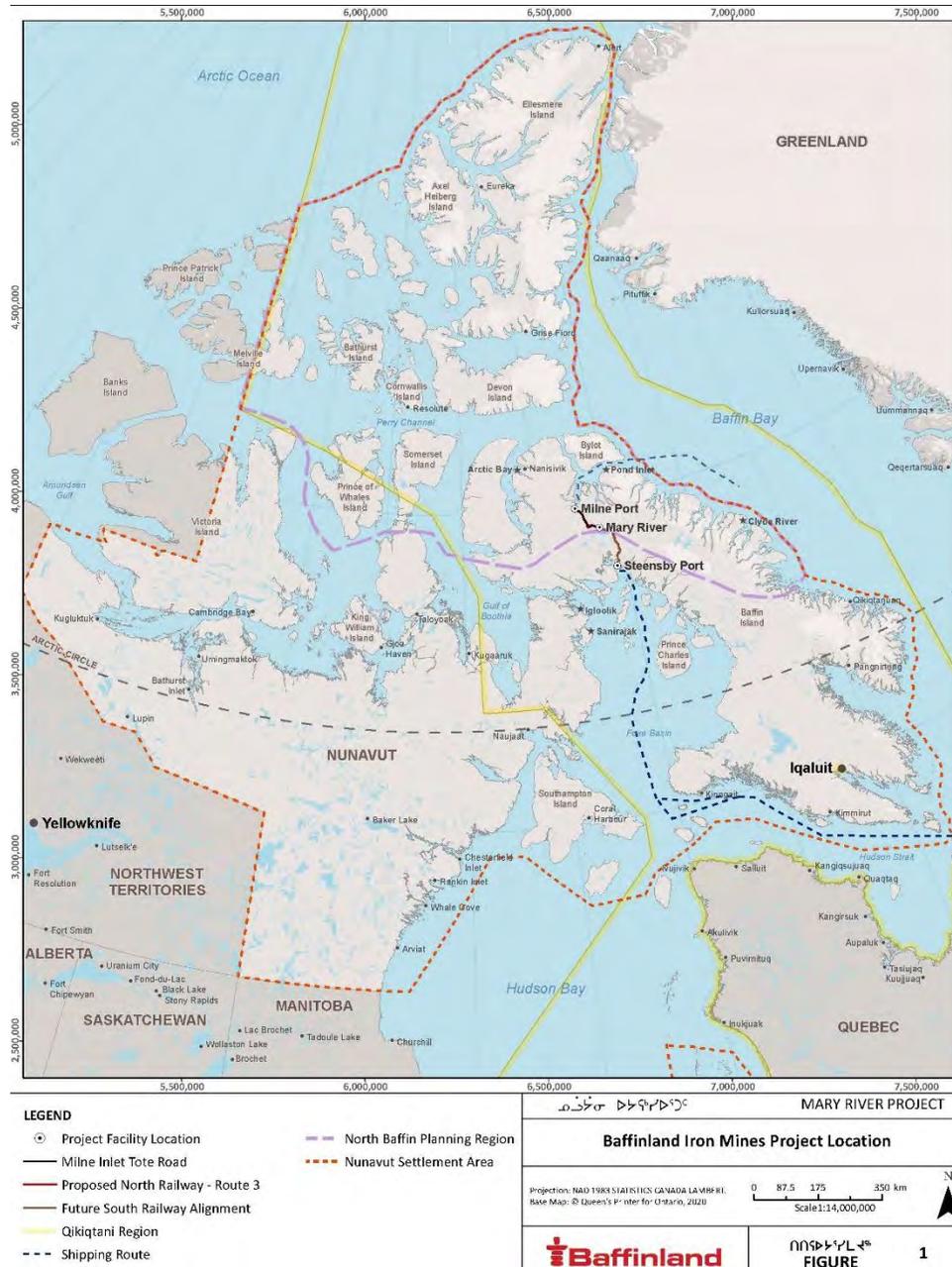


Figure 2: The Mary River Project Location

1.2.4 The Early Revenue Phase Proposal

The Mary River Early Revenue Phase (ERP) Proposal was a modification of the Mary River Project approved in 2014 that involved the extraction of up to an additional 4.2 Mtpa of iron ore from the Mary River mine site, to be transported by truck along the existing Milne Inlet Tote Road and shipped from Milne Port to European markets during the open water season only. Baffinland proposed the ERP to provide a revenue stream to support the construction of the original Mary

River Project, with the ERP proposed to continue operating as an addition to the approved Mary River Project described above.

The ERP construction phase was expected to last two (2) years, with ERP operations to continue for the duration of the mine life (i.e. 21 years), running in conjunction with the Mary River Project as originally proposed. The ERP Proposal involved the:

- Extraction of up to an additional 4.2 Mtpa iron ore from the Mary River mine site;
- Transportation of this amount of ore by truck via the Milne Inlet Tote Road to Milne Port; and
- Development of additional infrastructure at Milne Port, including:
 - o Construction of a fixed ore dock;
 - o Construction of a 4.2 Mt ore stockpile and reclaim area;
 - o Installation of 3,500 tonnes per hour ship loader facilities;
 - o Expansion of the Milne Port camp to accommodate 60 workers; and
 - o Extension and relocation of the airstrip to the west of the proposed ore stockpile.

The shipment of ore from Milne Port to markets in Europe would occur during the open water season only, using contract vessels of approximately 50,000 to 110,000 deadweight tonnage.

The ERP Project also changed the shipping route from the southern route through Foxe Basin to a northern route through Eclipse Sound. The NIRB's assessment of the ERP Proposal was concluded in 2014, and the Board recommended that the Mary River Project as modified by the ERP Project be allowed to proceed subject to several amendments, including additions to Project Certificate No. 005.¹⁵ Project Certificate No. 005 was subsequently amended and re-issued to Baffinland on May 28, 2014 for the Mary River Project, including the Early Revenue Phase Proposal. The NIRB also notes that when Baffinland proposed the ERP it was projected that up to 3.5 Mtpa would be transported and shipped from the mine site; however, during the ERP Public Hearing the NIRB gave specific consideration to Baffinland's request for operational flexibility, and subsequently imposed a tonnage limit of 4.2 Mtpa which could be transported via the Tote Road, and this limit was incorporated into the amended Project Certificate.

1.2.5 The Production Increase Proposal

The Mary River Production Increase Proposal was a subsequent modification of the Mary River Project submitted by Baffinland in 2018, that involved an increase to the maximum volume of ore that would be permitted to be trucked from the Mary River site to the Milne Port via the Tote Road from 4.2 to six (6) Mtpa (requiring up to 83 round trips by ore carriers to market during the open water season), as well as the addition of a 15 Million litre (ML) diesel fuel tank within the

¹⁵ (Doc. ID No. 319779) NIRB File No. 08MN053, Public Hearing Report for the Mary River Project: Early Revenue Phase Proposal, Baffinland Iron Mines Corporation, March 17, 2014.

existing Fuel Storage Facility at Milne Port, and installation of a new 380-person accommodation at Milne Port. To accommodate these changes, Baffinland submitted a modification proposal to the NIRB on April 30, 2018 and specifically requested that the NIRB amend Conditions 179(a)¹⁶ and 179(b)¹⁷ of the Mary River Project Certificate No. 005 to allow Baffinland to increase production and comply with the limits in the Project Certificate.

During the reconsideration process, on July 12, 2018, the Board's staff facilitated a Community Information Session in the community most directly affected by the proposal, Pond Inlet, and the comments, questions and concerns expressed during that session were conveyed to the Board for their consideration. Reflecting the scale and scope of the Production Increase Proposal and the feedback received from interested parties, the Board determined that it not necessary to conduct a Public Hearing to support its decision-making for this assessment.

On August 31, 2018 the NIRB issued its Reconsideration Report and Recommendations for the Production Increase Proposal to the Minister of Intergovernmental Affairs, Northern Affairs and Internal Trade¹⁸ (as the Minister was referred to at that time) which advised the Minister that the Board recommended that the camp upgrades and fuel storage expansion components of the Production Increase Proposal be allowed to proceed to the permitting stage. However, with respect to the requested increase to allow for six (6) Mtpa of ore to be transported by the Tote Road and shipped from Milne Port the Board, the Board cited:

...concerns about the adequacy of impact predictions and uncertainty about the effectiveness of the mitigation measures proposed by Baffinland to address the potential for adverse effects associated with the proposed increase in road traffic and marine vessel traffic.¹⁹

Consequently, the Board recommended that the increased trucking and shipping aspects of the Production Increase Proposal should not be approved to proceed as these activities could result in adverse ecosystemic effects beyond what was previously considered by the NIRB during the Board's assessments of the original Mary River Project (2012) and the Early Revenue Phase Proposal (2014).

On October 1, 2018, the Minister of Intergovernmental and Northern Affairs and Internal Trade accepted the Board's recommendation with respect to the camp upgrades and fuel storage

¹⁶ In any given calendar year, the total volume of ore shipped via Milne Inlet shall not exceed 4.2 million tonnes.

¹⁷ In any given calendar year, the total volume of ore transported by truck on the Milne Inlet Tote Road shall not exceed 4.2 million tonnes.

¹⁸ (Doc. ID No. 319640) NIRB File No. 08MN053, Reconsideration Report and Recommendations, Production Increase Proposal, Baffinland Iron Mines Corporation, August 31, 2018.

¹⁹ (Doc. ID No. 319640) NIRB File No. 08MN053, Reconsideration Report and Recommendations, Production Increase Proposal, Baffinland Iron Mines Corporation, August 31, 2018, at p. iv.

expansion, but varied the Board's recommendations related to increased trucking and shipping of additional ore. The Minister approved the full scope of the activities proposed under the Production Increase Proposal which resulted in Baffinland being approved to increase ore shipments out of Milne Port to six (6) Mtpa for a limited time, until December 31, 2019 in accordance with specific updated and new terms and conditions, which were included in Amendment 2 to Project Certificate No. 005 issued on October 30, 2018.

1.2.6 The Extension Request to the Production Increase Proposal

On December 6, 2019, Baffinland submitted the Extension Request to the Production Increase Proposal (the Extension Request) with a request to modify terms and conditions 179(a) and 179(b) of Project Certificate No.005 to authorization the transportation and shipment of up to six (6) Mtpa of iron ore via Milne Port, until December 31, 2020, while the Board concluded the assessment of the Phase 2 Development Proposal. On March 4, 2020, noting that it was unclear whether the Board would be able to conclude the assessment of the Phase 2 Development Proposal by the end of 2020, the Board provided its recommendation to the Minister²⁰ to grant a two (2)-year extension to the amendments to Project Certificate No. 005 to allow Baffinland to transport and ship up to six (6) Mtpa of iron ore until December 31, 2021. On May 19, 2020, the Minister of Northern Affairs wrote to the Board on behalf of the Responsible Ministers to accept the Board's recommendation regarding Term & Conditions 179 (a) and (b) of the Extension Request. The Minister also varied Term & Conditions 179 (c) and 183 in Project Certificate No. 005 (Amendment No. 3) to ensure those conditions were meeting their original intent. On June 18, 2020, the NIRB issued an amended Project Certificate for the Mary River Project to reflect the activities associated with the Extension Request to the Production Increase.

1.2.7 The Phase 2 Development Proposal

The original Phase 2 Development Proposal included the following activities, in addition to the activities associated with the original Mary River Project and the Early Revenue Phase Proposal:

- Changing marine transport of ore from year-round shipping to shipping six (6) months of the year (July 01 to December 31), with a focus on shipping ore primarily during the open water season;
- Associated changes at the Milne Port site to maximize shipping during the open water season, which would include increases to the size of the proposed second ore dock and ship loader to accommodate cape-sized vessels;

²⁰ (Doc. ID No. 328809) NIRB File No. 08MN053, Reconsideration Report and Recommendations, Extension Request to the Production Increase Proposal, Baffinland Iron Mines Corporation, March 4, 2020.

- Increase the transportation of ore from the Mine Site to Milne Port shipment of iron ore from Milne Port from the approved 4.2 -6.0 Million tonnes per annum (Mtpa) to 12 Mtpa;
- Reducing the amount of proposed fuel storage at the Milne Port site; and
- The installation of an enclosed ore crushing facility at the Milne Port site.

While the NIRB's consideration of the Phase 2 Development Proposal was underway, the scope of the application was further modified by Baffinland to add a proposed northern rail component between the existing Mary River Mine site and the existing facilities at the Milne Port site (the North Railway). This significant modification while the assessment was ongoing resulted in the proposal being referred back to the Nunavut Planning Commission (Commission) for further consideration of the additional rail component on December 19, 2016. On May 29, 2018 the Phase 2 Development Proposal, as resubmitted by Baffinland to reflect the increased scope to include the North Railway, was formally referred to the NIRB for assessment by the Commission. The following activities and works were included in the scope of this updated Phase 2 Development Proposal:

1. Increased iron ore production from 4.2 Mtpa under the Early Revenue Phase and six (6) Mtpa under the Production Increase Proposal and Extension to the Production Increase Proposal to up to 12 Mtpa, and transportation to port for shipping via the northern transportation corridor;
2. Construction and operation of a 110 km railway within the northern transportation corridor between the Mine Site and Milne Port, generally following the existing Tote Road. Once the North Railway was in place, the Tote Road would remain operational, but the road would no longer be used to transport ore and would be limited to moving personnel and key goods;
3. Expansion and improvement of the Milne Port facilities: with the addition of a second ore dock to accommodate cape-sized vessels, a second ship loader, railway unloading and maintenance facilities, and additional support infrastructure would be developed, in addition to an enclosed crushing facility;
4. Modification of the shipping season: the ore shipping season would be from July 1 to November 15 but would also be adapted annually in consultation with the Mittimatalik Hunters and Trapper Organization based on ice conditions and thickness. Baffinland also noted that the winter sealift was no longer included in the Phase 2 Development Proposal, due to concerns expressed by the communities regarding ice breaking; and
5. Expansion of the existing accommodation camp at the Mine site.

1.2.7.1 Updated Project Scope following Adjournment of the Public Hearing in November 2019

Baffinland provided additional updates and clarifications to the scope of the Phase 2 Development Proposal following the adjournment of the November 2019 Public Hearing which includes the following changes:

- The number of Tote Road level crossings of the North Railway has been reduced from 10 to 8;
- The North Railway alignment, specifically the deviation area around the km 67 hill will follow Route 3, and Route 1 has been withdrawn from consideration;
- Additional land user access features have been added to the northern transportation corridor, including:
 - o Provision of dedicated pick-up trucks and trailers to move land users between Milne Port and the Mine Site;
 - o Implementation of a controlled access program for the Tote Road once the North Railway is in operation, similar to what occurs at the Meadowbank Mine outside of Baker Lake;
 - o Provision of refuge cabins at three (3) locations;
 - o Provision of snow machine trails in five (5) areas; and
 - o The addition of up to 30 crossings (primarily for land users on snow machine or ATV, and secondarily for wildlife crossing) along the North Railway;
- The North Railway design has been modified to increase wildlife permeability, including:
 - o Flattening of railway embankment slopes;
 - o A pilot program to install some embankment slopes at a gentler slope in selected areas (location of slopes to be determined); and
 - o Smoother fill material to be used along the entire alignment.
- The temporary ore transfer area has been removed, with a maximum of six (6) Million tonnes of iron ore per year to be transported by truck during the Phase 2 construction period;
- Wind turbines have been removed;
- As a contingency, Baffinland identified that during the shipping shoulder seasons, empty ore carriers may be required to anchor at an established sheltered anchorage at Store Hellefiske Bank (an area in Baffin Bay off the west coast of Greenland). This activity may occur at the discretion of the vessel captain if drifting ice conditions make this a safer alternative to anchoring and/or drifting at the mouth of Eclipse Sound in Baffin Bay where vessels can be exposed to drifting ice; and
- Vessel deviation north or south of the northern shipping route is proposed so that vessels avoid traversing heavy ice floe areas until the vessels are escorted by the designated icebreaker at the entrance of Pond Inlet (the ore carriers will not enter areas that require icebreaking without an icebreaker escort).

Table 1: Scope of Phase 2 Development Proposal as compared to approved project and current operations

Components		Original FEIS Project Description	ERP Project Description	Current Facilities and Activities	Phase 2 Development Proposal Changes	Key Scope Adjustments through Commitments to Parties
		28-Dec-12	28-May-14			
Mine Site Construction, Facilities and Activities						
PDA	Potential Development Area (PDA)	2740 ha	No Change	2740 ha	No Change	N/A
	Railway switch yard (South Railway)	Approved	No Change	Deferred to 2021	No Change	N/A
RAIL	Railway switch yard (North Railway)	Not applicable	Not applicable	Not applicable	North Railway turning loop added	N/A
	Open Pit Mine	Mining Deposit No. 1 365 Mt at > 64% iron	No Change	Mining Deposit No. 1	No Change	N/A
ORE HANDLING	Mining Rate	18 Mtpa (through Steensby)	22.2 Mtpa (18 Mtpa through Steensby; 4.2Mtpa though Milne)	4.2 Mtpa	30 Mtpa (18 Mtpa through Steensby; 12 Mtpa though Milne)	N/A

Components		Original FEIS Project Description	ERP Project Description	Current Facilities and Activities	Phase 2 Development Proposal Changes	Key Scope Adjustments through Commitments to Parties
		28-Dec-12	28-May-14			
	Waste Rock Stockpile	Waste Rock Management Plan (2012) approved, 640 Mt waste rock estimated	No Change	Waste Rock Management Plan (2018) approved, 630 Mt waste rock estimated	No Change	N/A
	Ore Crushing Facilities	Permanent crushing/screening facilities to process 18 Mtpa for southern shipping	Mobile crushing/screening facilities to process 4.2 Mtpa for northern shipping	Semi-portable crushing/screening facilities to process 4.2 Mtpa for northern shipping	Relocation of primary crushing facilities within PDA at Mine Site. Secondary ore crushing relocated to Milne Port.	N/A
	Ore Stockpiles	Run of Mine: 0.4 Mt Crushed ore: 1.4 Mt	Truck loading stockpile: 0.2 Mt	Truck loading stockpile: 0.2 Mt	Run of Mine: 0.4 Mt Crushed ore: 1.4 Mt	N/A
POWER AND FUEL STORAGE	Power Plant	28 MW installed capacity	No Change	8.1 MW installed capacity	28 MW install capacity	N/A
	Wind turbines	Not applicable	None	None	1 turbine, up to 4.2 MW	Removed from Proposal
	Fuel storage (Arctic Diesel, Jet Fuel, Other Fuels)	15.6 ML arctic diesel 3 ML Jet A 400,000 L other fuel	No Change	2 ML arctic diesel	47.6 ML arctic diesel 3 ML Jet A fuel 400,000 L other fuel	N/A

Table 1 (cont.): Scope of Phase 2 Development Proposal as compared to approved project and current operations

Components		FEIS Project Description	ERP Project Description	Current Facilities and Activities	Phase 2 Development Proposal Changes	Key Scope Adjustments through Commitments to Parties
		28-Dec-12	28-May-14			
ACCOMMODATIONS	Accommodation complex	Construction (Peak): 1200 Beds Operations: 500 Beds	Construction (Peak): 1220 Beds Operations: 710 Beds	800 Beds	Construction (Peak): 1200 Beds Operations: 800 Beds	N/A
WATER SUPPLY	Water Supply (Domestic & Industrial)	Type A Water Licence limits (Camp Lake): Construction - 657 m ³ /day Operations - 367.5 m ³ /day	No Change	Current water usage within Type A Water Licence limits	Anticipated water usage within Type A Water Licence limits	N/A
WASTE MANAGEMENT	Sewage Treatment Plant	Described in Water Supply, Sewage and Wastewater Management Plan (2012) approved under Type A Licence 2AM-MRY1325	Described in Water Supply, Sewage and Wastewater Management Plan (2014) approved under Type A Licence 2AM-MRY1325	Described in Water Supply, Sewage and Wastewater Management Plan (2018) approved under Type A Licence 2AM-MRY1325	Water Supply, Sewage and Wastewater Management Plan updated as required and submitted to NWB for approval under Type A Licence 2AM-MRY1325	N/A

Components		FEIS Project Description	ERP Project Description	Current Facilities and Activities	Phase 2 Development Proposal Changes	Key Scope Adjustments through Commitments to Parties
		28-Dec-12	28-May-14			
	Incinerator	Incineration Management Plan (Waste Management Plan) (2013) approved under Type A Licence 2AM-MRY1325	No Change	Waste Management Plan (2018) updated and approved 1-2 T mobile incinerator	Incineration Management Plan (Waste Management Plan) to be updated with camp expansion and to be submitted under Type A Licence 2AM-MRY1325	N/A
	Landfill	Mine Site landfill - Landfill Management Plan (Waste Management Plan) approved under Type A Licence 2AM- MRY1325	No Change	Expansion of Mine Site landfill to be undertaken in 2018 under the terms and conditions of Type A Licence 2AM-MRY1325.	Extend operation of Mine Site landfill for the duration of the Project Life.	N/A

Table 1 (cont.): Scope of Phase 2 Development Proposal as compared to approved project and current operations

Components		FEIS Project Description	ERP Project Description	Current Facilities and Activities	Phase 2 Development Proposal Changes	Key Scope Adjustments through Commitments to Parties
		28-Dec-12	28-May-14			
WASTE MANAGEMENT (cont.)	Landfarm	Landfarms approved under Type A Licence 2AM-MRY1325	No Change	Landfarms approved under Type A Licence 2AM-MRY1325	No Change	N/A
	Hazardous Waste Storage	Hazardous Materials and Hazardous Waste Management Plan (2012) approved under Type A Licence 2AM-MRY1325	No Change	Hazardous Materials and Hazardous Waste Management Plan (2017) approved under Type A Licence 2AM-MRY1325	No Change	N/A

Components		FEIS Project Description	ERP Project Description	Current Facilities and Activities	Phase 2 Development Proposal Changes	Key Scope Adjustments through Commitments to Parties
		28-Dec-12	28-May-14			
WATER MANAGEMENT	Mine Site water management infrastructure (drainage, ponds and ditches)	As necessary to capture runoff from Mine Site facilities. Drainage plans and design criteria detailed in Surface Water, Aquatic Ecosystems, Fish and Fish Habitat Management Plan (2012) approved under Type A Licence 2AM-MRY1325	No Change	As necessary to capture runoff from Mine Site facilities. Drainage plans and design criteria detailed in Surface Water, Aquatic Ecosystems, Fish and Fish Habitat Management Plan (2018) approved under Type A Licence 2AM-MRY1325	Rerouting/additional drainage, ponds, and ditches as required. As necessary to capture runoff from Mine Site facilities. Drainage plans and design criteria detailed in Surface Water, Aquatic Ecosystems, Fish and Fish Habitat Management Plan (2018) approved under Type A Licence 2AM-MRY1325	N/A
	SUPPORTING FACILITIES	Quarries	Three (3) quarries identified	No Change	One quarry operating under QMR2 Quarry Management Plan (2017)	Two (2) quarries identified
Stream/river crossing		Two (2) stream crossings (bridges)	No Change	Two stream crossings	No Change	N/A

Components	FEIS Project Description	ERP Project Description	Current Facilities and Activities	Phase 2 Development Proposal Changes	Key Scope Adjustments through Commitments to Parties
	28-Dec-12	28-May-14			
			(bridges)		
Equipment Maintenance Facilities	Permanent mine maintenance facilities approved	Temporary mine maintenance facilities approved	Mine truck shop under construction	No Change	N/A
Temporary construction facilities	Multiple shelters and temporary workshops as required for construction activities	Multiple shelters and temporary workshops as required for construction activities	In operation	Multiple temporary facilities as per 2012 FEIS; NWB will be notified as necessary for any additions, modifications, or changes in locations of facilities	N/A

Table 1 (cont.): Scope of Phase 2 Development Proposal as compared to approved project and current operations

Components		FEIS Project Description	ERP Project Description	Current Facilities and Activities	Phase 2 Development Proposal Changes	Key Scope Adjustments through Commitments to Parties
		28-Dec-12	28-May-14			
SUPPORTING FACILITIES (cont.)	Communication facilities	Satellite communications systems	No Change	Existing system is being upgraded	No Change	N/A
	Explosives	Permanent Emulsion Mixing Plant; Ammonium storage pad; Multiple magazines	No Change	Permanent Emulsion Mixing Plant; Ammonium storage pad; Multiple magazines	Expansion of explosives area to accommodate increases in volume of ammonium nitrate; storage of pre-packaged explosives	N/A
AIRSTRIP	Airstrip	Airstrip (gravel) extended from 1600 m to 2000 m length	No Change	2000 m airstrip (gravel)	No Change	N/A
	Air Traffic	Construction: 550 flights/year Operations: 365 flights/year	No Change	220 flights/year	No Change	N/A
Tote Road Construction, Facilities and Activities						
PDA	Potential Development Area (PDA)	865 hectares	No change	865 ha	No Change	N/A

Components		FEIS Project Description	ERP Project Description	Current Facilities and Activities	Phase 2 Development Proposal Changes	Key Scope Adjustments through Commitments to Parties
		28-Dec-12	28-May-14			
ORE HANDLING	Transportation of ore by trucks	Not applicable	4.2 Mtpa Average 90 round trips/day	4.62 Mtpa Average 98 round trips/day	Limited use of Tote Road for increase ore movement during construction of the railway but will not exceed six (6) Mtpa	Commitment 26: The number of ore haul trucks transits should not exceed 280 during Phase 2 construction
CONSTRUCTION	Upgrade of the existing Tote Road	Improved road base Minor realignments Grade improvements	Not applicable	Tote Road in operation	Modified for Indexer at Milne Port	N/A
	Realignment of sections of Tote Road	Not applicable	Several realignments	In operation	Several realignments to facilitate railroad crossings	N/A
	Replacement of water crossings	Not applicable	114 stream crossings	In operation	Up to 13 new culverts and relocation of five (5) existing culverts	N/A

Table 1 (cont.): Scope of Phase 2 Development Proposal as compared to approved project and current operations

Components		FEIS Project Description	ERP Project Description	Current Facilities and Activities	Phase 2 Development Proposal Changes	Key Scope Adjustments through Commitments to Parties
		28-Dec-12	28-May-14			
North Railway (Mine Site to Milne Port) Construction, Facilities and Activities						
PDA	Potential Development Area (PDA)	Not applicable	Not applicable	Not applicable	1,306 ha	N/A
RAIL	Railway alignment and railway bed	Not applicable	Not applicable	Not applicable	110 km single track railway, one passing track midway in rail circuit; approximate seven (7) km deviation over a 20 km in length from Tote Road; Up to three (3) passing sidings	Commitment 129: To adopt Route 3 for the final rail alignment
	Transportation of ore by railway	Not applicable	Not applicable	Not applicable	Two (2) to three (3) trains with 60 to 90 cars completing five (5) to eight (8) loads per day, respectively	N/A

Components		FEIS Project Description	ERP Project Description	Current Facilities and Activities	Phase 2 Development Proposal Changes	Key Scope Adjustments through Commitments to Parties
		28-Dec-12	28-May-14			
CONSTRUCTION	Bridges and culvert water crossings	Not applicable	Not applicable	Not applicable	Up to 425 crossings (421 culverts and four (4) bridges)	N/A
	Staging area for railway construction	Not applicable	Not applicable	Not applicable	14 laydowns	N/A
	Quarries	Not applicable	Not applicable	Not applicable	Up to 30 quarries will be sourced for construction materials	N/A
	Construction camp	Not applicable	Not applicable	Not applicable	Four (4) locations, three (3) remote camps	N/A
Milne Port Construction, Facilities and Activities						
PDA	Potential Development Area (PDA)	245 ha	No change	245 ha	415 ha	N/A
RAIL	Railway switch yard	Not applicable	Not applicable	Not applicable	Railway switch yard	N/A
	Railway unloading station	Not applicable	Not applicable	Not applicable	Railway unloading station	N/A
	Railway maintenance	Not applicable	Not applicable	Not applicable	Railway maintenance	N/A

Components	FEIS Project Description	ERP Project Description	Current Facilities and Activities	Phase 2 Development Proposal Changes	Key Scope Adjustments through Commitments to Parties
	28-Dec-12	28-May-14			
facility				building	

Table 1 (cont.): Scope of Phase 2 Development Proposal as compared to approved project and current operations

Components		FEIS Project Description	ERP Project Description	Current Facilities and Activities	Phase 2 Development Proposal Changes	Key Scope Adjustments through Commitments to Parties
		28-Dec-12	28-May-14			
ORE HANDLING	Truck ore unloading station	Not applicable	4.2 Mtpa capacity	4.2 Mtpa capacity	No Change	N/A
	Ore crushing and sizing facilities	Not applicable	Not applicable	Not applicable	12 Mt secondary crushing capacity, housed in new building	N/A
	Ore stockpiles	Not applicable	Four (4) Mt	Four (4) Mt	7.8 Mt	N/A
	Ore loading facilities – dock #1	Not applicable	Supra-panamax capacity	4.2 Mtpa capacity	Realigned conveyor / ore reclaiming system	N/A
	Ore loading facilities - dock #2	Not applicable	Not applicable	Not applicable	Capesize capacity	N/A
	Shipping of ore	Not applicable	Ore Shipped: 4.2 Mtpa Number of Sailings: 55	Ore Shipped: 4.2 Mtpa Number of Sailings: 55	Ore Shipped: 12 Mtpa Number of Sailings: 134 - 176	Commitment 241: Reduce the maximum number of transits from 176 to 168
FREIGHT	Freight dock	Floating freight dock	No Change	Barge Landing Area	No Change	N/A
	Peak Annual Freight Deliveries	20	14	8	18	N/A
	Peak Annual Fuel Deliveries	3	2	4	12	N/A

Components		FEIS Project Description	ERP Project Description	Current Facilities and Activities	Phase 2 Development Proposal Changes	Key Scope Adjustments through Commitments to Parties
		28-Dec-12	28-May-14			
ELECTRICAL POWER	Power Plant	Temporary generators	9.45 MW installed capacity	9.45 MW installed capacity	22 MW installed capacity	N/A
	Wind turbines for power generation	Not applicable	Not applicable	Not applicable	One (1) turbine, up to 4.2 MW	N/A
FUEL STORAGE	Fuel storage (Arctic diesel, jet fuel, other)	45 ML arctic diesel storage three (3) ML Jet A storage 400,000 L other fuel storage	Additional: 1 ML arctic diesel fuel storage 200,000L marine diesel	64 ML arctic diesel fuel storage three (3) ML jet fuel storage 200,000 L marine diesel	No Change	N/A
ACCOMMODATIONS	Accommodation complex	Construction: 150 Operations: 40	Construction: 225 Operations: 60	Operations: 500 beds	Construction: 800 Operation: 710	N/A

Table 1 (cont.): Scope of Phase 2 Development Proposal as compared to approved project and current operations

Components		FEIS Project Description	ERP Project Description	Current Facilities and Activities	Phase 2 Development Proposal Changes	Key Scope Adjustments through Commitments to Parties
		28-Dec-12	28-May-14			
WATER SUPPLY	Water Supply (Domestic & Industrial)	Type A Water Licence limits: Construction - 367.5 m ³ /day Operations - 367.5 m ³ /day	No Change	Type A Water Licence limits: Construction - 367.5 m ³ /day Operations - 367.5 m ³ /day	Anticipated water usage within Type A Water Licence limits	N/A
WATER MANAGEMENT	Mine Site water management infrastructure (drainage, ponds and ditches)	As necessary to capture runoff from Milne Port facilities. Drainage plans and design criteria detailed in Surface Water, Aquatic Ecosystems, Fish and Fish Habitat Management Plan (2012) approved under Type A Licence 2AM-MRY1325	No Change	As necessary to capture runoff from Milne Port facilities. Drainage plans and design criteria detailed in Surface Water, Aquatic Ecosystems, Fish and Fish Habitat Management Plan (2018) approved under Type A Licence 2AM-MRY1325	Rerouting/additional drainage, ponds, and ditches as required. As necessary to capture runoff from Milne Port facilities. Drainage plans and design criteria detailed in Surface Water, Aquatic Ecosystems, Fish and Fish Habitat Management Plan (2018) approved under Type A Licence 2AM-MRY1325	N/A

Components		FEIS Project Description	ERP Project Description	Current Facilities and Activities	Phase 2 Development Proposal Changes	Key Scope Adjustments through Commitments to Parties
		28-Dec-12	28-May-14			
WASTE MANAGEMENT	Sewage Treatment Plant and PWSP	Described in Water Supply, Sewage and Wastewater Management Plan (2012) approved under Type A Licence 2AM-MRY1325	Described in Water Supply, Sewage and Wastewater Management Plan (2014) approved under Type A Licence 2AM-MRY1325	Described in Water Supply, Sewage and Wastewater Management Plan (2018) approved under Type A Licence 2AM-MRY1325	Water Supply, Sewage and Wastewater Management Plan updated as required and submitted to NWB for approval under Type A Licence 2AM-MRY1325	N/A
	Incinerator	Incineration Management Plan (Waste Management Plan) (2013) approved under Type A Licence 2AM-MRY1325	Incineration Management Plan (Waste Management Plan) (2013) approved under Type A Licence 2AM-MRY1325	Waste Management Plan (2018) updated and approved 1-2 T mobile incinerator	Incineration Management Plan (Waste Management Plan) to be updated with camp expansion and to be submitted under Type A Licence 2AM-MRY1325	N/A

Components		FEIS Project Description	ERP Project Description	Current Facilities and Activities	Phase 2 Development Proposal Changes	Key Scope Adjustments through Commitments to Parties
		28-Dec-12	28-May-14			
	Hazardous Waste Storage	Hazardous Materials and Hazardous Waste Management Plan (2012) approved under Type A Licence 2AM-MRY1325	No change	Hazardous Materials and Hazardous Waste Management Plan (2017) approved under Type A Licence 2AM-MRY1325	Hazardous Materials and Hazardous Waste Management Plan will be updated and submitted for approval	N/A

Table 1 (cont.): Scope of Phase 2 Development Proposal as compared to approved project and current operations

Components		FEIS Project Description	ERP Project Description	Current Facilities and Activities	Phase 2 Development Proposal Changes	Key Scope Adjustments through Commitments to Parties
		28-Dec-12	28-May-14			
SUPPORT FACILITIES	Laydown areas	Multiple laydown areas authorized	Reconfiguration of site plan to accommodate expanded laydown areas	Laydown construction ongoing	No Change	N/A
	Permanent warehouse, administrative buildings, and Emergency Response Facilities	Multiple buildings for warehouse, workshops, maintenance shops, emergency response, administration within the PDA.	Facilities added as required within the PDA as authorized under Type A Licence 2AM-MRY1325.	In operation	Existing building augmentation, Rail workshop, and Crusher work shop; NWB will be notified as necessary for any additions, modifications, or changes in locations of facilities	N/A
	Communication facilities	Satellite communications systems	No Change	Existing system is being upgraded	No Change	N/A
	Temporary construction facilities	Multiple shelters and temporary workshops as required for construction	Multiple shelters and temporary workshops as required for	In operation	Up to six (6) temporary structures will be built to support Phase 2 activities;	N/A

Components		FEIS Project Description	ERP Project Description	Current Facilities and Activities	Phase 2 Development Proposal Changes	Key Scope Adjustments through Commitments to Parties
		28-Dec-12	28-May-14			
		activities	construction activities		NWB will be notified as necessary for any additions, modifications, or changes in locations of facilities	
	Quarries	One (1) quarry identified	Seven (7) quarries identified	One quarry operating under Q1 Management Plan (2017)	Two (2) quarries identified	N/A
AIRSTRIP	Airstrip	Maintain existing airstrip	Relocated	Deferred until 2020	No Change	N/A

Table 1 (cont.): Scope of Phase 2 Development Proposal as compared to approved project and current operations

Components		FEIS Project Description	ERP Project Description	Current Facilities and Activities	Phase 2 Development Proposal Changes	Key Scope Adjustments through Commitments to Parties
		28-Dec-12	28-May-14			
Shipping General						
SHIPPING	Shipping Mtpa – Steensby Port	18 Mtpa	No Change	Deferred until 2025	No Change	N/A
	Shipping Mtpa - Milne Port	Not applicable	4.2 Mtpa	4.2 Mtpa	12 Mtpa	N/A
	Shipping Route – Steensby Port	Foxe Basin / Hudson Strait	No Change	Deferred until 2025	No Change	N/A
	Shipping Route - Milne Port	Not applicable	Milne Inlet / Eclipse Sound	Milne Inlet / Eclipse Sound	No Change	
	Shipping Season – Steensby Port	Year Round	No Change	Deferred until 2025	No Change	
	Shipping Season - Milne Port	Not applicable	Open Water (98 days) July 25 - October 30	Open Water (98 days) July 25 - October 31	Extended Season (138 days) July 1 - November 15	<p>Commitment 214: Complete shipping by October 31, on exceptional basis and approval through MHTO, Baffinland may ship until November 15.</p> <p>Commitment 239: Delay the start of the shipping season from July 1 to July 15</p>

Components		FEIS Project Description	ERP Project Description	Current Facilities and Activities	Phase 2 Development Proposal Changes	Key Scope Adjustments through Commitments to Parties
		28-Dec-12	28-May-14			
						Commitment 242: Gradual ramp-up of shipping beginning with 21 ore-carriers
	Ice Management - Steensby Port	Ice Breaking (Foxe Basin)	No Change	Deferred until 2025	No Change	N/A
	Ice Management - Milne Port	Not applicable	Not applicable	Not applicable	Limited Ice Management at Milne Port during shoulder seasons	N/A

1.3 The Board’s Amended EIS Guidelines for this Assessment

To facilitate the reconsideration process, the NIRB specifically requested that interested parties comment on the applicability of the previously issued guidelines for the original Mary River Project and subsequent Board reconsideration of the Early Revenue Phase Project respectively in order to allow the Board determine whether issuing another Addendum to the Guidelines or issuing revised Guidelines would be the most appropriate approach for providing instruction for Baffinland to develop its comprehensive addendum to the FEIS for the Phase 2 Development Proposal.

On September 22, 2015, the NIRB received comments and suggested revisions to the *EIS Guidelines* and *Addendum to the EIS Guidelines* from the following parties:

- Qikiqtani Inuit Association (QIA)
- Government of Nunavut (GN)
- Aboriginal Affairs and Northern Development Canada (AANDC as it was then) (now Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC))
- Environment Canada (EC)
- Fisheries and Oceans Canada (DFO)
- Natural Resources Canada (NRCan)
- Parks Canada (PC)
- Transport Canada (TC)

On the basis of the recommendations provided, and the NIRB’s own technical review, the Board approved revisions to the Guidelines and subsequently issued an Amended Version for the Phase 2 Development Proposal (the Amended Guidelines). The Amended Guidelines were provided to the Proponent to guide the completion of a comprehensive addendum to the Final Environmental Impact Statement (FEIS Addendum) required to support a thorough public technical review.

1.4 Inuit Qaujimaningit and Inuit Qaujimajatuqangit

As indicated in previous *Environmental Impact Statement (EIS) Guidelines*, the Board’s previous decisions and reflective of the minimum EIS requirements set out under Article 12, Section 12.5.2 of the *Nunavut Agreement* and s. 101(3) of the *NuPPAA*, in the Board’s view, Inuit Qaujimaningit, which encompasses Inuit Traditional Knowledge (and variations thereof) and Inuit principles (also referred to as “Inuit Qaujimajatuqangit”) as well as contemporary Inuit knowledge that reflects Inuit societal values and experience, contributes vital information to the NIRB’s assessment process.

The term “Inuit Qaujimaningit” is used by the Board in the *EIS Guidelines* to encompass local, community-based knowledge and ecological knowledge (both traditional and contemporary), which is rooted in the daily life of Inuit and represents experience acquired over thousands of years of direct human contact with the environment. With its emphasis on personal observation, collective experience and oral transmission over many generations, Inuit Qaujimaningit provides factual information on such matters as ecosystem function, social and economic well-being, and explanations of these facts and causal relations among them. The Board recognizes that often parties use the term “Inuit Qaujimajatuqangit” or “IQ” to refer to all forms of Inuit knowledge and experience including both current and traditional. In this Report, the Board has used both “Inuit Qaujimaningit” and “Inuit Qaujimajatuqangit” to encompass Inuit knowledge and experience in all its forms.

The Qikiqtani Inuit Association expressed this encompassing view of Inuit Qaujimajatuqangit during the Public Hearing as follows:

The Qikiqtani Inuit Association recognizes that Inuit Qaujimajatuqangit contains Inuit oral history, what has been passed down verbally over centuries of Inuit knowledge. Inuit Qaujimajatuqangit encompasses both the past and the present. It cannot be separated from within Inuit society. It is part of our Inuit identity.

Inuit Qaujimajatuqangit is Inuit knowledge that is both living and adapting and very much part of our present day and present day life. It is how Inuit live and see the world. It is distinct and specific to the Arctic environment. It cannot be duplicated anywhere else, nor can it be interpreted or represented by non-Inuit without consent from those Inuit to whom that knowledge is gained.

Inuit Qaujimajatuqangit is verified by Inuit for Inuit.²¹

The Proponent was required to incorporate and apply Inuit Qaujimaningit into its FEIS Addendum, to the extent that the Proponent had access to such information and in keeping with the expectation that the Proponent would undertake appropriate due diligence to gain access to the information and seek verification of the knowledge gained.

In this regard, Inuit Qaujimaningit has played a significant role in this assessment by contributing to the Board’s consideration of the accuracy of baseline information; comparing predictions of effects with experience; and assisting in the assessment of the magnitude of predicted effects. The Board places considerable value on the unique perspectives, knowledge and views that Inuit bring to its assessment processes and has used community scoping tours, community

²¹ R. Paton, Qikiqtani Inuit Association, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 10, February 4, 2021 at pp. 1749-1750, lines 15-26 and 1-5.

roundtables and Public Hearings to provide a venue for Inuit to share their knowledge and experience. The Board has a deep respect and understanding of Inuit Qaujimaningit and views it as a unique way of knowing and processing firsthand experiences of Inuit. In this respect, the concept of Ingalangaittuq has guided the Board's approach to this assessment. As applied by the Board Ingalangaittuq means to observe broadly with a fulsome and holistic long-term view, and the Board has used this perspective to support its consideration of Inuit Qaujimaningit and Inuit Qaujimajatuqangit in the context of this assessment. The Board has considered all of the evidence presented through this lens and has considered it vital to move slowly and carefully to weigh the potential impacts of the Proposal, in context, and with an encompassing and inclusive long-term vision beyond current conditions and challenges.

1.5 Procedural History of the Assessment

1.5.1 Jurisdiction of the Board to Conduct the Reconsideration

In conducting a reconsideration, the NIRB remains mindful that the NIRB's primary objectives apply to reconsiderations and generally dictate that the NIRB conducts an assessment of the Proposal that reflects the scale and scope of the requested modifications to previously approved Project.

In determining that the changes proposed in the Phase 2 Development Proposal should be assessed as a reconsideration of Project Certificate No. 005, the NIRB decided that the addition of the North Railway component and associated infrastructure constituted a significant modification of the previously approved Mary River Project. Therefore, any potential ecosystemic and socio-economic effects associated with these changes would be best addressed through a thorough assessment and comprehensive reconsideration of the terms and conditions of the existing Project Certificate No. 005. In addition, the Board noted that scope of the Phase 2 Development Proposal included works, undertakings and activities that had not, to date, been subject to impact assessment by the Board and also had not been subject to full technical review by interested parties, public comment, or approval by the various responsible authorities.

Having determined that Baffinland's proposed changes to the Phase 2 Development Proposal constituted a significant modification of the previously approved Mary River Project, the NIRB determined that the transition provisions of *NuPPAA* (s. 235(1) and (2)) applied, and as a result, the process prescribed under *NuPPAA* is applicable to the Board's assessment of the Phase 2 Development Proposal.

1.5.2 Key Procedural Steps in the Reconsideration

The Board's assessment of the original version of the Phase 2 Development Proposal (involving increased trucking of ore along the existing Tote Road, but not including the construction and operation of the North Railway) and associated reconsideration of the Mary River Project Certificate No. 005 commenced in October 2014. In February 2016 prior to submitting the Final Environmental Impact Statement (FEIS) Addendum, Baffinland provided notice to the NIRB that the Phase 2 Development Proposal had been modified to change the preferred ore transportation option from the increased use of trucking along the existing Tote Road to transport by a North Railway line. The Phase 2 Development Proposal that is the subject matter of this Report involves ore transport via a proposed North Railway line (the Proposal).

[APPENDIX B](#) provides an overview of the key procedural steps associated with the Board's assessment of the Proposal and associated reconsideration of the terms and conditions of the Mary River Project Certificate No. 005, commencing with the referral of the Phase 2 Development Proposal from the Nunavut Planning Commission, and concluding with the completion of the NIRB's three Public Hearing sessions in January-February, April and November 2021 followed by the submission of Final Written Statements in writing on January 24, 2021.

As described in Section [1.2.2 Modifications to Board Processes Required During the COVID-19 Pandemic](#) the Board's *COVID-19 Protocols* ([APPENDIX A](#)) were used to conduct public meetings safely throughout the COVID-19 Pandemic. In addition, in response to feedback from participants attending the Pre-Hearing Conference in October 2020, the Board worked closely with the Government of Nunavut's Chief Public Health Officer to secure two (2) proceeding-specific Public Health Orders for the January-February and April 2021 Public Hearing sessions. These Public Health Order exemptions were requested by the Board to increase the number of members of the public authorized to attend in-person venues (attached as the end of [APPENDIX A](#)).

The following appendices are attached to this Report to provide an overview of the process associated with the Board's conduct of the reconsideration, including details about the four (4) Public Hearing sessions conducted for the file:

- [APPENDIX C](#) provides the Record of Proceedings for each Public Hearing session;
- [APPENDIX D](#) provides a list of commitments made by Baffinland that had been completed by the time the Public Hearing Record for the assessment closed in January 2022;
- [APPENDIX E](#) provides the list of commitments made by Baffinland that would be completed after approval of the Phase 2 Development Proposal;
- [APPENDIX F](#) provides the lists of Exhibits presented at the Public Hearing sessions; and
- [APPENDIX G](#) provides a summary of participation during the 2021 Public Hearing sessions (including numbers of individuals participating remotely and in-person)

As this summary is not exhaustive, parties wishing to develop a more complete understanding of the activities associated with the NIRB’s assessment of the Proposal are encouraged to consult the complete listing of all documentation available from the NIRB’s online Public Registry at: www.nirb.ca/project/124701.

1.5.3 Motions and Objections Associated with the Board’s Public Hearing Process

In advance of, and during the Public Hearing sessions for the file, the Proponent and Registered Intervenors submitted numerous oral and written Motions, made oral and written objections and made oral and written requests for procedural guidance. In response, the Board issued several oral and written decisions and updated procedural guidance to address these procedural matters as they arose. [Table 2](#) below, summarizes the Motions and Objections received by the Board and (as applicable) the Board’s disposition of the matter. For written materials, the Board has provided the Document ID No. on the NIRB Public Registry, and for motions, objections and dispositions presented orally during Public Hearing, the Board has provided a reference to the relevant portion of the transcript.

Table 2: Summary of Motions and Objections Received from Parties and Dispositions by the Board during the Public Hearing²²

Date Received	Party	Description	Doc. ID No./ Transcript Reference
October 28, 2019	Oceans North	Notice of Motion to file specific information from Baffinland described as “a Preliminary Offering Circular” and to suspend the Board’s review of Phase 2 the materials have been translated, filed, and reviewed	327341, 327332, 327338, 327414, 327413, & 327415
November 3, 2019	NIRB	Oral Disposition dismissing Oceans North’s Motion to file specified documents	Transcript November 3, 2019, pp. 325-326

²² Please note, the summary provided in the table below is not exhaustive and has been provided in this format for the convenience of reviewers. The full documents and the Board’s written dispositions are available in their entirety as posted on the NIRB’s Public Registry are available by clicking on the following link: www.nirb.ca/project/124701 and searching the NIRB Document ID No. provided.

Date Received	Party	Description	Doc. ID No./ Transcript Reference
October 28 & 31, 2019	Baffinland	Notice of Motion to file, in confidence, a document entitled "Economic Summary"	327337, 327333, 327336, 327371, & 327372
November 3, 2019	NIRB	Oral Disposition of Motion deferring the Board's consideration of the motion until completion of technical session	Transcript November 3, 2019, p.326
October 30, 2021	Hamlet of Pond Inlet	Letter to NIRB requesting an addition to the Agenda for a presentation on behalf of the Hamlet by Dr. J. Loxley	337632
November 3, 2019	NIRB	Oral Disposition of Motion granting the request to add to the Agenda to permit a presentation by Dr. Loxley during the Hamlet's presentation time	Transcript November 3, 2019, p.326
November 1, 2021	Mittimatalik Hunters and Trappers Organization	Notice of Motion to amend the Final Hearing Agenda to add time for Intervenors to present during the Community Roundtable (CRT) sessions	327376
November 3, 2019	NIRB	Oral Disposition of Motion to update the Agenda to allow for 10 minute presentations by Intervenors during the CRT to be held in Pond Inlet on November 8 and 9, 2019	Transcript November 3, 2019, pp.326-328
November 6, 2019	Nunavut Tunngavik Incorporated	Oral Notice of Motion to immediately adjourn the Public Hearing for 8-12 months	Transcript, November 6, 2019, pp. 1019-1023

Date Received	Party	Description	Doc. ID No./ Transcript Reference
November 6, 2019	NIRB	Oral Disposition of Motion cancelling Pond Inlet CRT sessions on November 8 and 9, 2019 and deferring decision with respect to the period of adjournment of the Public Hearing until written submissions are provided by all parties	Transcript, November 6, 2019, pp. 1041-1043
December 16, 2019	NIRB	Record of Proceedings and Disposition of Motions Report for the November 2019 Public Hearing and Letter Re: Anticipated Process and Timelines granting an adjournment and scheduling a third Technical Meeting and Pre-Hearing Conference for March 2020	327790, 327791, 327792, 327793, & 327794
August 4, 2020	Baffinland	Notice of Motion requesting the Board reconvene the Public Hearing on October 30, 2020 for a two (2) week period (English and Inuktitut)	330945, 330971, 330944, & 331010
August 24, 2020	NIRB	Updated Procedural Guidance and Reasons for Decision dismissing Baffinland's Motion to reconvene the Public Hearing on October 30, 2020 and rescheduling the Technical Meeting and Pre-Hearing Conference September and October, 2020	331223, 331224, 331225, & 331225
October 30, 2020	NIRB	Pre-Hearing Conference Decision Report scheduling resumption of the Public Hearing starting the week of January 25, 2021 and ending on February 6, 2021	331866, 331867, 331868, 331869, 331870, & 331871
December 17, 2020	Hamlet of Clyde River	Notice of Motion to postpone Public Hearing until at least March 2021	332140

Date Received	Party	Description	Doc. ID No./ Transcript Reference
December 17, 2020	Mittimatalik Hunters and Trappers Organization	Notice of Motion to amend the Final Hearing Agenda to add in time for Intervenors to make presentations during the Community Roundtable session	332142
December 17, 2020	Mittimatalik Hunters and Trappers Organization	Notice of Motion to adjourn the proceedings due to the COVID pandemic until specified public health restrictions on travel and indoor gatherings are lifted	332141, 332143, 332144, 332145, & 332146
January 15, 2021	NIRB	Procedural Guidance and Reasons for Decision in response to the December 17, 2020 Notices of Motion filed by the Hamlet of Clyde River and Mittimatalik Hunters and Trappers Organization, dismissing the motions to adjourn and the motion to amend the Public Hearing Session	332526, 332527, 332528, & 332529
January 26, 2021	Oceans North	Notice of Motion to compel the testimony of Valerie Moulton	332734, 332735, 332736, 332737, 332791, 332843, 332844, & 332848
January 26, 2021	Qikiqtani Inuit Association	Notice of Motion for an order of the Board to keep the Public Hearing record open after the close of the Public Hearing to allow parties to file final written submissions by February 17, 2021	332738
January 26, 2021	Baffinland	Notice of Motion for the Exclusion of the "OpenOil Report" and "Financial Spreadsheet" proposed to be filed by Oceans North	332730, 332731, 332732, & 332850

Date Received	Party	Description	Doc. ID No./ Transcript Reference
January 26, 2021	Mittimatalik Hunters and Trappers Organization	Notice of Motion to remove (from the NIRB's Public Registry) the sections of the Inuit Certainty Agreement (ICA) between QIA and Baffinland previously filed or alternatively to file the ICA in its entirety	332733 & 332739
January 30, 2021	Ikajutit Arctic Bay Hunters and Trappers Organization	Written Motion of the Ikajutit Arctic Bay Hunters and Trappers Organization (also presented in oral form on February 1, 2021 to extend the final public hearing technical sessions and CRT by one (1) week to February 13, 2021 and questioning the delegation of decision-making from the full Board to a three (3)-person Panel	333302
February 1, 2021	Mittimatalik Hunters and Trappers Organization	Oral Notice of Motion to permit oral questioning on all Public Hearing topics by all Intervenors (also filed in written form)	332835
February 2, 2021	NIRB	Oral Disposition of Motions granting the motion to extend the reconvened Public Hearing to a future session with Community Representatives from the seven (7) affected North Baffin communities all together in Iqaluit with linkages to Pond Inlet and remote participants, revising the Agenda for a CRT session to take place in Pond Inlet on February 6, 2021 and to require questioning on the remaining presentations by Baffinland and all presentations by Intervenors to be conducted in writing, dismissing the motions for unlimited oral questioning of the Proponent and Intervenors and	Transcript, Vol. 8, February 2, 2021 pp. 1459-1464

Date Received	Party	Description	Doc. ID No./ Transcript Reference
		directing questions be filed in writing; explaining the Board's delegation of decision-making for the file to a three (3)-person Panel and granting Baffinland's request to file several exhibits including the financial analysis document	
February 3, 2021	Oceans North	Objection to the Board's direction requiring parties to submit technical questions in writing in respect of the Marine Environment	332896
February 11, 2021	Mittimatalik Hunters and Trappers Organization	Notice of Motion to schedule the CRT proceedings in Pond Inlet	333359
February 10, 2021	Mittimatalik Hunters and Trappers Organization	Notice of Motion to extend timelines for Written Questions	333177
February 26, 2021	NIRB	Updated Procedural Guidance dismissing the request to extend the timelines for filing written questions	333805
March 26, 2021	NIRB	Updated Procedural Guidance finalizing the Agenda for the completion of the Public Hearing technical sessions and the CRT to be conducted in Iqaluit as the primary venue with linkage to Pond Inlet and remote participants	334232, 334233, & 334234
April 6, 2021	NIRB	Updated Procedural Guidance and disposition of outstanding and new motions, objections and requests for procedural guidance received by the NIRB by March 23, 2021	334636 & 334349

Date Received	Party	Description	Doc. ID No./ Transcript Reference
February 5, 2021	Oceans North	Notice of Motion to admit the Preliminary Offering Circular (2018) as evidence	333013 & 333014
February 5, 2021	Mittimatalik Hunters and Trappers Organization	Objection to the Filing of QIA Exhibits in relation to community consultation as Exhibits 32 and 34	333166
February 9, 2021	Igloodik Working Group	Objection to the Filing of QIA Exhibits in relation to community consultation as Exhibits 32 and 34	333176
March 23, 2021	Baffinland	Waiving Previous Objections to the MHTO's request to file various articles as – Exhibits 63 – 67 and clarification	333171 & 333179
March 23, 2021	Baffinland	Objection to the February 5, 2021 Oceans North Notice of Motion to admit the Preliminary Offering Circular (2018) as evidence	334180
March 23, 2021	Baffinland	Reservation of an Objection to the late-filed presentation material of Oceans North	333173
April 6, 2021	NIRB	Updated Procedural Guidance and disposition of outstanding and new motions, objections, and requests for procedural guidance received by the NIRB by March 23, 2021	334636 & 334349
April 15, 2021	Baffinland	Objection to excerpt of transcript of the examination on Affidavit of Brian Penney proposed to be filed as Exhibit 93 by World Wildlife Fund	334998

Date Received	Party	Description	Doc. ID No./ Transcript Reference
April 15, 2021	Qikiqtani Inuit Association	Objection to filing of specified slides in Baffinland's slide deck (existing materials and new materials) proposed to be filed as Exhibits by Baffinland	334996 & 334956
April 15, 2021	Nunavut Tunngavik Inc.	Objection to filing of specified slides in Baffinland's slide deck (existing materials and new materials) proposed to be filed as Exhibits by Baffinland	335000
April 15, 2021	Hamlet of Pond Inlet	Objection to filing of specified slides in Baffinland's slide deck (existing materials and new materials) proposed to be filed as Exhibits by Baffinland	334999
April 27, 2021	Mittimatalik Hunters and Trappers Organization	Objection to filing specified slides as Exhibits and Motion for an order excluding seven (7) other documents offered for filing or filed by Baffinland on the Public Hearing Registry	335007
May 7, 2021	Hamlet of Sanirajak	Objection to filing of specified slides in Baffinland's slide deck (existing materials and new materials) proposed to be filed as Exhibits by Baffinland	335200
May 7, 2021	Ikajutit Hunters and Trappers Association	Objection to filing of specified slides in Baffinland's slide deck (existing materials and new materials) proposed to be filed as Exhibits by Baffinland and support for MHTO Motion	335201
May 7, 2021	World Wildlife Fund	Objection to filing of specified slides in Baffinland's slide deck (existing materials and new materials) proposed to be filed as Exhibits by Baffinland	335195

Date Received	Party	Description	Doc. ID No./ Transcript Reference
June 10, 2021	NIRB	<p>Disposition of Objections to the filing of various documents on the Public Hearing Record allowing for:</p> <ul style="list-style-type: none"> - the filing of the material proposed to be filed by ECCC (Exhibit 91); - PowerPoint slide deck of slides consisting of previously filed information from Baffinland (Exhibit 92); - the excerpt of the transcript of the examination of Brian Penney proposed to be filed by WWF (Exhibit 93). <p>Disposition of Objections also denied:</p> <ul style="list-style-type: none"> - the request of Baffinland to file the PowerPoint slide deck consisting of new materials; and - dismissed the order requested by the MHTO to exclude from the Public Registry seven (7) specified documents provided by Baffinland 	335654 & 335768
September 16, 2021	Nunavut Independent Television Network (NITV)	<p>Notice of Motion to permit NITV to record the audio and video feed of the Extended Public Hearing (Nov. 1-6, 2021), to permit NITV to rebroadcast, stream (live and on-demand) share and otherwise transmit the Extended Public Hearing through radio, television, and other digital platforms, and permitting NITV to provide electronic access to previous Public Hearing sessions associated with the Phase 2 Assessment by rebroadcasting the proceedings on television, streaming and on-demand viewing on the internet</p>	336801 through to 336818

Date Received	Party	Description	Doc. ID No./ Transcript Reference
211006	NIRB	Disposition of NITV Notice of Motion to grant NITV access to the NIRB's audio and video feed of the Extended Public Hearing, (November 1-6, 2021) and permission to NITV to broadcast the NIRB's audio and video feed live on UvagutTV and to deny NITV's request to make their own recording of the live feed of the Extended Public Hearing and to subsequently provide electronic public to the recording and deny NITV's request to provide unlimited access to previously recorded prior Public Hearing proceedings in relation to the Board's assessment of the Phase 2 Development Proposal in any form	336949, 336950, & 336951
October 29, 2021	Qikiqtani Inuit Association	Notice of Motion to include the addition of the Caribou Research Agreement in Principle (AIP) between Baffinland and the Government of Nunavut as an Exhibit	337214
November 4, 2021	NIRB	Oral Disposition of Motion granting the Motion to circulate and post the Caribou Research AIP	Transcript, Vol. 19, November 4, 2021 pp. 3549-3550
October 29, 2021	Crown-Indigenous Relations and Northern Affairs Canada	Correspondence proposing to file materials received from the Government of Denmark in respect of their assessment of transboundary effects as relevant to the Board's assessment of the Phase 2 Development Proposal (Espoo Materials)	337221

Date Received	Party	Description	Doc. ID No./ Transcript Reference
November 30, 2021	NIRB	Panel Direction Regarding Objections, Motions and Requests for Procedural Guidance determining that the Espoo Materials are relevant and admissible, and setting a timeline for parties to comment on the Espoo Materials	337425 & 337478
November 2, 2021	Oceans North	Objection to the Board's receipt of the International Union of Operating Engineers (IUOE), Local 793 Video of 20 Inuit employees of Baffinland (IUOE Local 793 Video)	337255 & 337256
November 2, 2021	Hamlet of Clyde River	Objection to the Filing of IUOE Local 793 Video	337257
November 5, 2021	Igloolik Working Group	Objection to the Filing of IUOE Local 793 Video	337271
November 8, 2021	Qikiqtani Inuit Association	Objection to the Filing of IUOE Local 793 Video	337303
November 8, 2021	Mittimatalik Hunters and Trappers Organization	Objection to the Filing of IUOE Local 793 Video	337317
November 8, 2021	Nunavut Tunngavik Incorporated	Objection to the Filing of IUOE Local 793 Video	331304
November 8, 2021	Nunavut Independent Television	Objection to the Filing of IUOE Local 793 Video	337301

Date Received	Party	Description	Doc. ID No./ Transcript Reference
November 15, 2021	Ikajutit Hunters and Trappers Association	Objection to the Filing of IUOE Local 793 Video	337335
November 30, 2021	NIRB	Panel Direction Regarding Objections, Motions, and Requests for Procedural Guidance determining that the statements by Inuit employees by Inuit employees on the IUOE, Local 793 Video are relevant and admissible, but that all of the narration sections of the IUOE, Local 793 video, including any images and video clips presented during the narration section will not be considered as evidence by the Panel	337425 & 337478
November 8, 2021	Mittimatalik Hunters and Trappers Organization	Objection to the proposed filing on November 6, 2021 of a written reply to a deferred question regarding the visits by Government of Canada (GoC) regulators to the community of Pond Inlet since production commenced at the Mary River Mine by the Northern Projects Management Office (on behalf of the GoC; the GoC written deferred response)	337300

Date Received	Party	Description	Doc. ID No./ Transcript Reference
November 30, 2021	NIRB	Panel Direction Regarding Objections, Motions and Requests for Procedural Guidance determining that the GoC written deferred response is relevant to the issue of regulatory capacity to meet on-going obligations and that the information is not being received, reviewed or considered by the Board to assess the requirements or adequacy of the GoC's consultation with Inuit rights holders.	337425 & 337478
November 6, 2021	Amaruq Hunters and Trappers Association (Amaruq HTA)	Notices of Motion to request Designated Inuit Organizations and Institutions of Public Government move to disseminate as per the Implementation Plan and Inuit Tradition and to extend the date for Intervenor to file written Final Closing Statements	337305 through to 337307
November 30, 2021	NIRB	Panel Direction Regarding Objections, Motions and Requests for Procedural Guidance dismissing the motions focused on implementation obligations of Designated Inuit Organization as outside the Board's jurisdiction, but granting the request to extend the deadline for Intervenor to file Final Closing Statements in writing	337425 & 337478

1.6 Evidentiary Issues

1.6.1 The Burden and Standard of Proof

During the NIRB's assessment of the Phase 2 Development Proposal, the burden of establishing that the expansion is consistent with the objectives of the *Nunavut Agreement* and the *NuPPAA*

rests with the Proponent. This means that throughout the Board’s assessment, the onus was on Baffinland to demonstrate that any predicted adverse ecosystemic or socio-economic effects of the Phase 2 Development Proposal would be prevented, mitigated, or managed if conducted under the existing Terms and Conditions of Project Certificate No. 005, and/or proposed revisions to Project Certificate No. 005 and the associated Monitoring Program.

1.6.2 The Precautionary Principle and Adaptive Management

The precautionary principle has been expressed in various forms. The most widely cited statement of the Precautionary Principle is found in Principle 15 of the United Nation’s *Rio Declaration on Environment and Development*: “Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation”.²³ This version of the Principle is cited by the NIRB in the Board’s Impact Statement Guidelines that govern the Board’s assessments. However, as noted in the Board’s previous assessment of the original Mary River Project, a more stringent/protective version of the precautionary principle may be warranted in certain circumstances, noting as follows:

The focus of the version of the principle cited by the NIRB in previous decisions prevents project proponents from using scientific uncertainty as a reason not to act, while the more rigorous version of the principle that is emerging focuses on compelling **positive** action where there is serious risk of environmental degradation and high levels of uncertainty by requiring monitoring for and mitigation of potential adverse effects before such impacts actually occur. In such cases, the precautionary approach incorporates a “safety margin” into monitoring and mitigation measures and the adaptive responses to potential adverse effects are designed to be proportional to the risk (i.e. the higher the risk of significant adverse impacts the more extensive the required monitoring and mitigation measures)

The practical effect of applying a more stringent version of the precautionary principle is that the adaptive management strategies chosen are required to be highly responsive to early warning signs that risks may materialize. Rather than waiting for impacts to be noted before mitigation measures are triggered, a more stringent approach requires that thresholds and triggers are set to require responses long before adverse impacts are likely. In order to determine the extent to which the NIRB should implement this

²³ Principle 15 of the UN (United Nations). 1972. Rio declaration on environment and development. In: Report of the United Nations Conference on the Human Environment, Stockholm.

heightened approach in this review, the Board has considered the following factors:

- (i) the seriousness or reversibility of potential adverse impacts;
- (ii) the likelihood that should the impacts occur they could be mitigated or reversed;
- (iii) the jurisdictional authority of the NIRB; and
- (iv) public concern.²⁴

Consistent with the Board's approach to the assessment of the original Mary River Project, the Board has considered these four (4) factors to determine the extent to which a more stringent version of the precautionary principle should apply to Baffinland's mitigation, adaptive management, and monitoring measures in relation to specific Values Ecosystem Components (VECs) and Valued Socioeconomic Components (VSECs) that could be impacted by activities proposed under the Phase 2 Development Proposal. As described more fully in [Section 3](#) of this Report, based on Inuit knowledge and experience shared by Community Representatives and interested members of the public and issues identified in the comment submissions of a broad range of Intervenors, the Board has identified that it is appropriate that the following potential effects must be managed by Baffinland in a more protective and pro-active manner as the most stringent version of the precautionary approach is applicable:

- Effects on marine wildlife (mammals and fish) and the marine ecosystem in general;
- Effects on terrestrial wildlife (caribou) in particular; and
- Effects on the air, vegetation, freshwater, and ice (associated with dust emissions).

As noted in the Board's previous assessments of the original Mary River Project in 2012, and the Early Revenue Phase in 2014, with little regional monitoring data available for the study area at that time there were limits and substantial gaps in the data about baseline conditions and uncertainty regarding the predicted effects and effectiveness of mitigation measures proposed by Baffinland. As a result, several of the terms and conditions in Project Certificate No. 005 were directed at addressing uncertainty and ensuring that despite the gaps and uncertainty inherent in the assessment the potential for significant adverse effects of the project could be mitigated through project monitoring and the implementation of adaptive management measures.

However, the Board notes that even with the benefit of monitoring data for some aspects of the Phase 2 Development Proposal, data gaps in the regional monitoring of baseline conditions continue to persist and make the development of thresholds and indicators triggering adaptive

²⁴ (Doc ID No. 286425) NIRB File No.: 08MN053, Final Hearing Report for the Mary River Project, Baffinland Iron Mines Corporation, September 14, 2012, at p. 13.

management actions challenging. At the Public Hearing, Baffinland described how these data gaps delayed the development of important thresholds for marine mammals:

What Baffinland's done in developing early warning indicators required us to lead the way on that subject when it comes to marine mammals. There's no other project in Canada that we could look to, and we are applying this when marine mammal species like narwhal that is incredibly data poor, the same can be said for seal in the area.

To that end, it's taken us time to establish our monitoring programs and confirm the predictions within our original environmental impact statements to build the base of knowledge that gave us the confidence to put forward an early warning indicator last year.²⁵

Consequently, the assessment of the Phase 2 Development also relies on adaptive management, in much the same fashion as the Board's prior assessment of the Early Revenue Phase Proposal:

Applying the precautionary approach to the Early Revenue Phase Proposal requires that the Board conclude that despite uncertainty, the potential for significant adverse project effects could be limited by BIMC taking appropriate precautions and by ensuring an ongoing, pro-active and robust approach to adaptive management²⁶

As a result, Baffinland indicated that they would be implementing adaptive management to prevent, mitigate and manage project-related effects that:

- were, at the time of the assessment, unknown or uncertain;
- are subsequently identified through the monitoring program to be different than the effects that were predicted during the assessment; or
- are not being prevented or reduced as predicted when the mitigations and management measures proposed during the assessment are implemented.

Applying adaptive management is a generally accepted approach to addressing uncertainty during impact assessment, but the Board is mindful that general commitments to the development of future adaptive management measures is not a substitute for providing sufficient information to effectively assess the potential for effects resulting from the Proposal and providing the detail necessary to determine whether the Proponent's proposed mitigation measures will be sufficient to prevent or reduce the significance of project-related effects. As

²⁵ L. Kamermans, Baffinland, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 13, April 12, 2021 at pp. 2518-2519, at lines 21-26 and 1-6.

²⁶ (Doc. ID No. 319779) NIRB File No.: 08MN053, Public Hearing Report for the Mary River Project: Early Revenue Phase Proposal, Baffinland Iron Mines Corporation, March 17, 2014, Executive Summary at p. xii.

established in the Board’s prior practices, it is the project proponent who bears the burden of proof to show that despite the uncertainty, the potential adverse environmental effects can be mitigated or reversed. In this assessment, Baffinland had the onus to demonstrate to the Board that the proposed actions within the scope of the Phase 2 Development Proposal could be carried out in a precautionary manner that ensures the Proposal does not cause significant adverse ecosystemic and/or socio-economic effects. To meet this onus, Baffinland was required to provide detail about any mitigation, adaptive management, and monitoring measures proposed by Baffinland to prevent such adverse effects.

In the assessment of the Phase 2 Development Proposal, Baffinland was also required to use existing monitoring data from the current Mary River Project in their assessment to evaluate, on an on-going basis, the accuracy of Baffinland’s previous predictions of project-effects provided during previous assessments, and the efficacy of mitigation and management developed and implemented to address both the actual effects of the existing Mary River Project and the predicted effects of the Phase 2 Development Proposal. Since the Early Revenue Phase Proposal was approved in 2014, Baffinland, the Board, the regulators of the Mary River Project, and the North Baffin communities all have gained greater knowledge and experience in relation to the actual effects of Baffinland’s mining and shipping activities within the scope of the existing Mary River Project (mining and shipping 4.2 million – 6.0 million tonnes of ore).

1.7 The Board’s Approach to the Assessment of Transboundary Effects

As defined by the NIRB in the *Environmental Impact Statement Guidelines (EIS Guidelines)* for the original Mary River Project (s. 7.9) “transboundary impacts” are those effects linked directly to the activities of the Proposal inside the Nunavut Settlement Area (NSA) which may occur across provincial, territorial, international boundaries or may occur outside of the NSA.

In respect of the assessment of the potential for the first type of transboundary effect, where activities within the NSA may have effects outside the NSA boundaries, similar to the approach to cumulative effects assessment, the Board has discussed the specific transboundary issues raised in the context of the assessment of particular Valued Ecosystem Components (VECs) and Valued Socio-economic Components (VSECs). In particular, the Board focused on concerns about the potential for negative residual transboundary environmental effects on:

- Marine wildlife and the marine environment;
- Ballast water and invasive species; and
- Accidents, malfunctions, and unplanned effects.

With respect to the second type of potential transboundary impacts, project activities that may occur outside the NSA, as outlined in [Section 1.2.7](#) and explained in greater detail in [Section 2.1.6](#), the scope of the Phase 2 Development Proposal includes the contingency of empty ore carriers

using an established sheltered anchorage at Store Hellefiske Bank (an area in Baffin Bay off the west coast of Greenland) as a contingency during shipping in the shoulder seasons. Although this anchorage site is not the main anchorage site, Baffinland indicated that this area may be used when the vessel captain determines anchorage at Store Hellefiske Bank is the safest alternative.

The Board's recommendations and conclusions with respect to the assessment of both types of potential transboundary effects as listed in the *EIS Guidelines* is summarized in [Section 5.3.3 Transboundary Issues](#).

1.7.1 The Espoo Convention

In March 2020, the NIRB received correspondence from the Governments of Denmark/Greenland advising the Board that due to concerns about the potential for the Phase 2 Development to have impacts on marine mammals, fish, and the marine environment in Greenland, the Governments of Denmark/Greenland expressed interest in the Board's assessment under the reciprocal obligations for assessment of transboundary effects of the Governments of Canada and Denmark under the *Espoo Convention*.²⁷

On April 20, 2020, having sought Baffinland's clarification about the shipping route and contingency anchorage location for the Phase 2 Development Proposal, the NIRB advised the Impact Assessment Agency of Canada (primarily responsible for coordination with the Governments of Denmark/Greenland to fulfill the Government of Canada's reciprocal responsibilities under the Espoo Convention) of the following:

Specifically, we now understand that Baffinland is requesting that at season's beginning that project vessels hold around the Hellefiske Bank area which is in Greenland waters as this area is generally ice free at that time while upper reaches of Baffin Bay may still have ice. Baffinland has indicated that Hellefiske is more than 12 miles from shoreline and outside Territorial waters for Greenland, also providing its view that any arrangements for vessels requiring interface with Greenland government officials are vessel/vessel owners responsibility and would not involve Baffinland.²⁸

As detailed in the Board's Pre-Hearing Conference Decision Report for the file,²⁹ after working with the Governments of Canada and Government of Denmark, the Government of

²⁷ The *United Nations Economic Commission for Europe (UNECE) Convention on Environmental Impact Assessment in a Transboundary Context (Espoo Convention)*.

²⁸ (Doc ID: 329678).

²⁹ (Doc ID: 331868) NIRB File No.: 08MN053, Pre-Hearing Conference Decision Report for Baffinland Iron Mines Corporation's Phase 2 Development Proposal Related to the Mary River Project, October 30, 2020.at p. 7.

Denmark/Greenland indicated they preferred to be an observer, but not an active participant in the NIRB's assessment process.

1.7.1.1 The Espoo Materials

On October 29, 2021, the Government of Canada (GoC) provided correspondence and eight (8) attachments consisting of written materials received by the Government of Denmark/Greenland when the Government of Greenland conducted written public hearings in Greenland in respect of the Phase 2 Development Proposal that concluded on June 14, 2021 and provided by the following parties (the Espoo Materials):

- Government of Greenland - Agriculture, Self-Sufficiency, Energy and Environment;
- Greenland Institute of Natural Resources;
- Greenland Government Ministry for Fisheries and Hunting;
- Fisheries and Hunting Association of Fishers and Hunters in Greenland;
- Greenland Chamber of Commerce;
- Qeqqata Municipality;
- Oceans North - Canada and Denmark; and
- World Wildlife Fund – Denmark.

Recognizing that the Espoo Materials had not previously been reviewed by the participants in the NIRB's assessment, and that the final session of the Public Hearings for the file commenced on November 1, 2021 the Board invited parties to submit comments on the relevance of the Espoo Materials on or before November 15, 2021. Following the Board's review of the parties' submissions on relevance, on November 30, 2021 the Board issued updated procedural guidance to indicate that the Board had concluded that the Espoo Materials were relevant and invited parties to comment on the Espoo Materials in mid-December.³⁰

For the convenience of reviewers, the Board has prepared [Table 3](#) that follows to provide a high-level summary of the comments provided in the Espoo Materials filed by the Government of Canada. It should be noted that the summary in [Table 3](#) is not exhaustive and parties wishing to gain a full understanding of these submissions are encouraged to review the documents in their entirety from the NIRB's Public Registry using the applicable Doc ID No. referenced in the table. The Board also highlights that the Board's decision-making was based on their consideration of all relevant content in the parties' submissions, not just those aspects included in the summary that follows.

By December 17, 2021 the following parties provided comments and responses to content of the Espoo Materials.

³⁰ (Doc ID Nos: 337425 & 337478).

- Qikiqtani Inuit Association (QIA) (Doc ID No: 337480);
- World Wildlife Fund (WWF) (Doc ID No: 337481);
- Oceans North (ON) (Doc ID No: 337479)³¹, and
- Baffinland Iron Mines Corporation (Baffinland) (Doc ID Nos: 337553 and 337554).

A summary of Baffinland’s assessment of the potential transboundary effects of the Proposal, including their responses to the content of the Espoo Materials, is provided in [Section 2.4.7 Transboundary Effects](#). A summary of the comments of Intervenor with respect to the potential transboundary effects of the Phase 2 Development Proposal, including their comments in respect of the Espoo Materials, is provided in [Section 3.1.7 Transboundary Issues](#).

For the clarity of all parties, it should be noted that the Board has placed limited reliance on the Espoo Materials, because the parties making the submissions (with the exception of Oceans North Canada) have not participated directly in the Board’s assessment of the Phase 2 Development Proposal and have not been subject to questioning or testing of the technical information cited in their submissions. The Board also recognizes that the international shipping component of the Phase 2 Development Proposal does not turn the Proposal into a “transboundary project” as that term is described under the applicable provisions of the *NuPPAA*,³² nor does it extend the Board’s jurisdiction to issue terms and conditions to activities outside the Nunavut Settlement Area (NSA; and Outer Land Fast Ice Zone).

Although the Board has not considered the Espoo Materials to meet the standard of technical evidence provided during the Board’s assessment of the Proposal, the Board has considered the Espoo Materials as comments and statements of concern to be viewed within the scope of the Board’s consideration of potential transboundary effects as set out in [Section 1.7](#) above. Further, the Board notes that the concerns and issues identified in the Espoo Materials largely mirror the issues already raised by various Intervenor, Community Representatives, and members of the public during the NIRB’s assessment related to the potential for the Phase 2 Development Proposal to have significant negative effects on marine wildlife and the marine environment due to project shipping and ice management, and concerns about the potential for effects in the marine environment associated with ballast water discharge and invasive species. The Board recognizes that depending on the magnitude of such effects, effects within the NSA could extend to areas outside the NSA.

Consequently, the Board has considered the Espoo Materials as comment submissions only and has not accepted as technical evidence assertion of facts contained in the Espoo Materials that are not already filed with the Board as evidence by the participants in the Board’ assessment and

³¹ Oceans North also attached the submission by Oceans North Denmark that was included in the Espoo Materials (Doc ID No. 337226).

³² See ss. 158 and 159.

filed with the Board on the Board's Public Hearing Record. The Board's conclusions and recommendations in respect of transboundary effects is provided in [Section 5.3.3. Transboundary Issues](#).

Table 3: Summary of Espoo Materials Filed with the Board³³

Party	Comments in Summary Form	NIRB Doc ID No.
<p>Government of Greenland - Agriculture, Self-Sufficiency, Energy and Environment</p>	<ul style="list-style-type: none"> - The Government of Greenland (Greenland) noted concerns that the assessment and approval of the original Mary River Project did not involve prior consultation with Greenland about the Project’s transboundary impacts and indicated that when the Phase 2 Development Proposal was received in 2018 that the Government of Canada (GoC) did not initially consult with Greenland as required by the Espoo Convention. - With respect to the scope of the Espoo Report provided to Greenland by the GoC, commented that the assessment is focused on the local study area within Canada only and <i>“does not include an assessment of the consequences of shipping iron ore with large cargo ships through Baffin Bay and along the west coast of Greenland in periods and areas where there have not previously been disturbances from ship traffic”</i>. - In this context, Greenland indicated concern about the potential transboundary impacts from the Proposal on: <ul style="list-style-type: none"> o Narwhals and belugas, noting that estimates suggest 15% of the world’s narwhals stay in Eclipse Sound during the summer and narwhals from this population comprise 50% of whales harvested in West Greenland in the winter, indicating Baffinland’s assessment was incomplete because it did not address whether the ship traffic in the waters between Canada and Greenland coincides with the narwhals’ migration routes between Canada and Greenland; 	<p>337225</p>

³³ Please note, the summary provided in the table below is not exhaustive and has been provided in this format for the convenience of reviewers. The full documents and the Board’s written dispositions are available in their entirety as posted on the NIRB’s Public Registry are available by clicking on the following link: www.nirb.ca/project/124701 and searching the NIRB Document ID No. provided.

Party	Comments in Summary Form	NIRB Doc ID No.
<p>Government of Greenland - Agriculture, Self-Sufficiency, Energy and Environment (cont'd)</p>	<ul style="list-style-type: none"> ○ Bowhead whales, noting that over 30% of the stock form Baffin Bay are in West Greenland and these species may be susceptible to ship noise and ship strikes. Indicated that Baffinland’s assessment is incomplete because it was limited to the limited study area within Canada; ○ Walruses, noting that the banks and drift ice off West Greenland are a vital foraging and breeding area for walruses, who are susceptible to disturbances. As Baffinland’s assessment relates exclusively to the prevalence of walrus within the Canadian Marine Regional Study Area (MRSA), the assessment’s conclusion that the Proposal will not affect the walrus population was made on incomplete information; and ○ Store Hellefiske Bank and potential oil spills, noting that the area surrounding this site is a sensitive area that provides vital habitat and foraging area for many species of marine mammals, seabirds and benthic animals. <ul style="list-style-type: none"> – Identified that there was a lack of risk assessments in respect of marine mammal strikes, grounding, interaction between ice and vessels, collisions with other ships, larger oil spills occurring along the shipping route and spillage of heavy fuel oil (HFO), low sulphur oil (LSFO), and Marine gas oil (MGO). – Baffinland also did not propose mitigation measures to reduce potential negative impacts of shipping through Greenlandic waters. 	<p>337225</p>
<p>Greenland Institute of Natural Resources</p>	<ul style="list-style-type: none"> – Agrees that the Espoo Report (the assessment) prepared by Baffinland does not adequately address potential transboundary environmental effects of the Proposal because the project area considered did not include the shipping routes in Davis Strait, Hudson Bay and Hudson Strait as well as the anchorage at Store Hellefiske Bank, noting that all these areas must be included to assess the transboundary impacts such as noise disturbances for marine mammals and the risk of oil spills. 	<p>337224</p>

Party	Comments in Summary Form	NIRB Doc ID No.
	<ul style="list-style-type: none"> - Noted that disturbances such as noise can affect the individual behaviour of marine mammals such as narwhals and belugas (e.g. fleeing the area or reducing feeding) or interrupting feeding and losing energy, which leads to poorer physical health of individual whales including calves and pregnant females. - Identified concerns about the potential for negative environmental impacts on narwhals, walruses, belugas, Greenland whales (bowhead whales), and walruses that stay in West Greenland during the winter and cited the high concentration of the world’s narwhals that summer in the Eclipse Sound/Milne Inlet/Koluktoo Bay area. Indicated that narwhals react to shipping noise up to 35 km away, Greenland Whales (bowhead whales) react to noise from up to 40 km away and white whales react to noise at up to 80 km away (and perhaps even longer depending on the noise). Increased shipping may result in impacts on these species including <i>“increased stress, less food intake, a change in the timing and route of their migration to and from their summer habitat, and an increased risk of being trapped in ice and potentially poor timing of arrival at their summer habitat”</i>. Concluded that a change in population size, migration routes, and occurrence of these species due to project disturbances in Canada could affect the prevalence and catch in West Greenland. 	
Greenland Institute of Natural Resources (cont’d)	<ul style="list-style-type: none"> - Identified a large number of other marine mammal species depend on Baffin Bay during the winter and that their sensitivity to disturbances is not known (polar bears, ringed seals, bearded seals, and hooded seals) and in the summer (Greenland seals, dolphins, humpback whales, four (4) species of baleen whales, and sperm whales, and several other toothed whales). - Noted that Store Hellefiske Bank and the surrounding Disko Bay meets the criterial for Particularly Sensitive Sea Areas criteria in terms of <i>“unique, critical habitat, dependence, representativeness, diversity, productivity, breeding area, naturalness, integrity, fragility and biogeographical”</i> and the area is classified as having a “high” sensitivity to oil spills due to the presence of a large number of marine birds (eider 	337224

Party	Comments in Summary Form	NIRB Doc ID No.
	<p>ducks, ivory gulls, Ross’s gulls, arctic terns, etc.), walrus, seals, polar bears, Greenland whales, belugas, narwhals.</p> <ul style="list-style-type: none"> - Concluded that <i>“Due to the area's biological significance and its sensitivity to ship-related environmental impacts, Store Hellefiske Bank has been identified as an area where there is a basis for increased attention to the management and regulation of shipping in the future.”</i> 	
<p>Greenland Government Ministry for Fisheries and Hunting (APN)</p>	<ul style="list-style-type: none"> - APN supports the Greenland Institute of Natural Resources' assessment that: <ul style="list-style-type: none"> o <i>the environmental impacts in both international and Canadian waters could potentially have major consequences for Greenland, as they will greatly affect the populations of narwhals, belugas, Greenland whales and walruses, who normally stay in and are normally exploited during the winter in West Greenland.</i> - Noted that although none of these populations are present in large numbers in the waters of West Greenland between July and November, when the Baffinland’s shipping is planned, “the populations could potentially be vulnerable to impact along the shipping route at the beginning and end of the period”. 	<p>337222</p>
<p>Fisheries and Hunting Association of Fishers and Hunters in Greenland (KNAPK)</p>	<ul style="list-style-type: none"> - Identified that KNAPK shared concerns with respect to the adequacy of the assessment of environment impacts in areas affected by shipping on narwhal migration routes and walrus wintering grounds at Store Hellefiske Bank. - Highlighted the importance of Narwhals and walruses are to the meat supply and earning opportunities of KNAPK, noting that harvesting of these species is subject to strict restrictions based on the precautionary principle, and urging that the 	<p>337229</p>

Party	Comments in Summary Form	NIRB Doc ID No.
	precautionary principle should also apply to the Proposal if knowledge of the impacts is insufficient.	
Greenland Chamber of Commerce	<ul style="list-style-type: none"> - Noted that it is important to focus on ensuring minimal impact on “<i>living resources</i>”. - Identified that “<i>there is a potential pitfall in Greenland's opposition to the shipping of ore from a Canadian mining project when we ourselves have identified the raw materials industry as one of the sectors that must help lift our economy in the future and who, moreover, has several active mining projects in our country</i>”. 	337227
Qeqqata Municipality	<ul style="list-style-type: none"> - Expressed concerned about oil pollution and other environmental pollution from ships in the waters outside the municipality. - Identified that Store Hellefiske Bank is very important to wildlife and the ecosystem and should be protected as a sensitive area, noting that shrimp, cod, and halibut are purchased from these areas. - Identified that many bird species forage in the Store Hellefiske Bank area and this area is important for supply of food to residents of the Municipality. - Indicated that the Municipality requires that the Governments of Greenland and Canada must ensure the risk of environmental pollution and noise be minimized or mitigated. 	337223
Oceans North - Canada and Denmark (ON)	<ul style="list-style-type: none"> - Indicated that ON agrees with Greenland’s conclusion that the Espoo Report provided by Baffinland was not adequate to address the potential transboundary environmental impacts of the Proposal. - Encouraged Greenland and Canada to ensure that there is greater knowledge about the impact of noise pollution on marine mammals in general and narwhals in 	337226

Party	Comments in Summary Form	NIRB Doc ID No.
	particular before large-scale industrial increases in shipping through Arctic Waters (a vulnerable ecosystem) be approved.	
Oceans North - Canada and Denmark (ON) (cont'd)	<ul style="list-style-type: none"> - Indicated that countries should prepare a “best practices” within shipping, shipping routes and emergency preparedness in the event of pollution (such as spills or emissions) prior to approval of large industrial projects. - Cited a recent (2021) Arctic Council Working Group study that shows that <i>“shipping is altering the ambient underwater soundscape of the Arctic Ocean...Underwater noise in some parts of the Arctic is already at levels that are likely interfering with the abilities of whales, seals and walrus to communicate and use sound, and could be affecting other marine life”</i>. - Highlighted the concern raised by the Greenland Institute of Natural Resources about Store Hellefiske Bank being a Particularly Sensitive Area. - Identified that Fisheries and Oceans Canada (DFO) has also proposed commitments from Baffinland with respect to aquatic invasive species and that the assessment of potential impacts to Store Hellefiske Bank should include the risks from ballast water exchange. - Listed the following points regarding the Baffin Bay population of narwhal and the impacts of shipping that should be considered: <ul style="list-style-type: none"> o Narwhals from Baffin Bay are harvested in Nunavut and West Greenland and overlap during migration and on wintering grounds; o Narwhal that summer near the Mine Site are part of the Eclipse Sound stock (estimated population of 12,039 animals, with a decline in the population noted in 2020 of 5,018 animals, for which ON identified project-related ice breaking as a potential source of the decline); 	337226

Party	Comments in Summary Form	NIRB Doc ID No.
	<ul style="list-style-type: none"> ○ 1/6 of narwhal tagged in Eclipse Sound wintered in Disko Bay, West Greenland and approximately 60 % of the whales harvested in Disko Bay are assumed to come from the Eclipse Sound stock; and 	
Oceans North - Canada and Denmark (ON) (cont'd)	<ul style="list-style-type: none"> ○ Narwhals have low or no behavioural adaptability and are vulnerable to changes in their environment. - Through research ON Canada has conducted in the area over the past six (6) years, ON does not agree that proposed project-related activities would have no adverse effects on marine mammals, and indicates this research has <i>“shown that disturbance to narwhal in the area is not short term in daily duration and the overall long-term consequences of this disturbance to marine mammals, and narwhal in particular, are unknown”</i>. - ON cited the statements of concern regarding gaps in knowledge about the potential for project effects on marine wildlife and the marine environment raised in the NIRB proceedings from DFO, the QIA, the MHTO. - ON identified that the potential for effects from black carbon emissions outside Nunavut was not considered in Baffinland’s assessment. - ON raised concerns about the transparency of Baffinland’s future plans to increase shipping beyond the 12 Mtpa proposed in the Phase 2 Development Proposal (as raised by ON Canada in the NIRB’s Proceedings). - ON concluded that the information provided by Baffinland in the Espoo Report is insufficient for Greenland to make a full assessment of the potential risks of the Proposal to Greenlandic species and communities as the information provided is incomplete. 	337226

Party	Comments in Summary Form	NIRB Doc ID No.
World Wildlife Fund (WWF)– Denmark	<ul style="list-style-type: none"> – WWF cited the same recent study as ON, and indicated that “Based on data from 2013 and 2019, our analysis revealed hotspots of underwater noise in multiple regions, including the western section of Baffin Bay” noting that “The change in underwater noise is dramatic: some parts of the Arctic are twice as loud today as they were in 2013” and noting the concern that given the long lifespans of many species of Arctic marine mammals, individual mammals may be unable to adapt to these significant changes. – WWF indicated that they commissioned a report to synthesize available information about the impacts of shipping on narwhal, beluga, bowhead whales, walrus, ringed seal, and bearded seal, which identified that beluga detect sounds up to 20 km away in open water and 43 km in ice-covered water, and that the detection range for walrus and ringed seal is 31 km in open water and 75 km in ice-covered water. – Noted that there is a significant overlap between the hearing range and communication signals of marine mammals and the frequencies of sound produced by container ships and icebreakers; this increases the likelihood of potential impacts of noise, such as changes to behaviour, stress hormone levels, and masking of communication signals, although there are huge gaps in knowledge about acoustic effects on marine mammals. – Emphasized the particular sensitive status and vulnerability of Central Baffin, Disko Bay, and Store Hellefiske Bank and marine wildlife in the area. – With respect to the Espoo Report prepared by Baffinland, WWF indicated the narrow scope of the Report did not provide an adequate assessment of the potential transboundary impacts of the Proposal and the Report did not assess the impacts of shipping in Greenlandic waters of the impacts of anchorage in Store Hellefiske Bank. 	337228
World Wildlife Fund (WWF)– Denmark	<ul style="list-style-type: none"> – WWF identified concerns that the increased shipping will have detrimental and irreversible impacts for species of marine mammals that are important to the marine ecosystem and to the well-being of communities in both Greenland and Nunavut, 	337228

Party	Comments in Summary Form	NIRB Doc ID No.
(cont'd)	<p>citing support for the statements and conclusions of the Greenland Institute for Natural Resources.</p> <ul style="list-style-type: none"> - WWF indicated that noise sensitivity studies on narwhals have indicated narwhal feeding may be interrupted by persistent noise pollution and narwhal may abandon the area permanently and that..." <i>There is nothing to suggest that narwhal can get used to regular noise pollution...</i>" - WWF expressed concern about the effects of black carbon emissions due to the use of Heavy Fuel Oil (HFO) through to 2029. - WWF criticized the consultation process noting the Greenland Government's late involvement in respect of the original Mary River Project and concluding that because the Proposal "...includes intensive shipping and even anchorage in Greenland waters a comprehensive study of the cross-border impacts should have been part of the initial impact assessment requirements". 	

2 SUMMARY OF THE PROPONENT'S ASSESSMENT OF THE PHASE 2 DEVELOPMENT PROPOSAL

2.1 Project Description³⁴

As outlined in greater detail in [Section 1.2.7](#) of this Reconsideration Report and Recommendations, Baffinland submitted modifications to the project description which confirmed the components of the Phase 2 Development Proposal description that have been modified since 2018 in response to Intervenor and community feedback during the NIRB's reconsideration process. The following Phase 2 Development Proposal Project Description outlines the incremental differences between the previously approved Mary River Project with the addition of the activities, works and undertakings proposed within the Phase 2 Development Proposal across project locations:

2.1.1 Mine Site

Changes at the Mine Site would consist of the following:

- Changes to crushing and transport of ore;
- Construction of the Mine Site North Railway Terminal;
- Expansion of permanent fuel storage;
- Expansion of the mine maintenance facilities and support administration buildings/facilities (warehouses, shops, etc.); and
- Increased total production rate of up to 30 million tonnes per year (Mtpa).

³⁴ (Doc ID Nos. 320586-320592) Baffinland's Project Description.

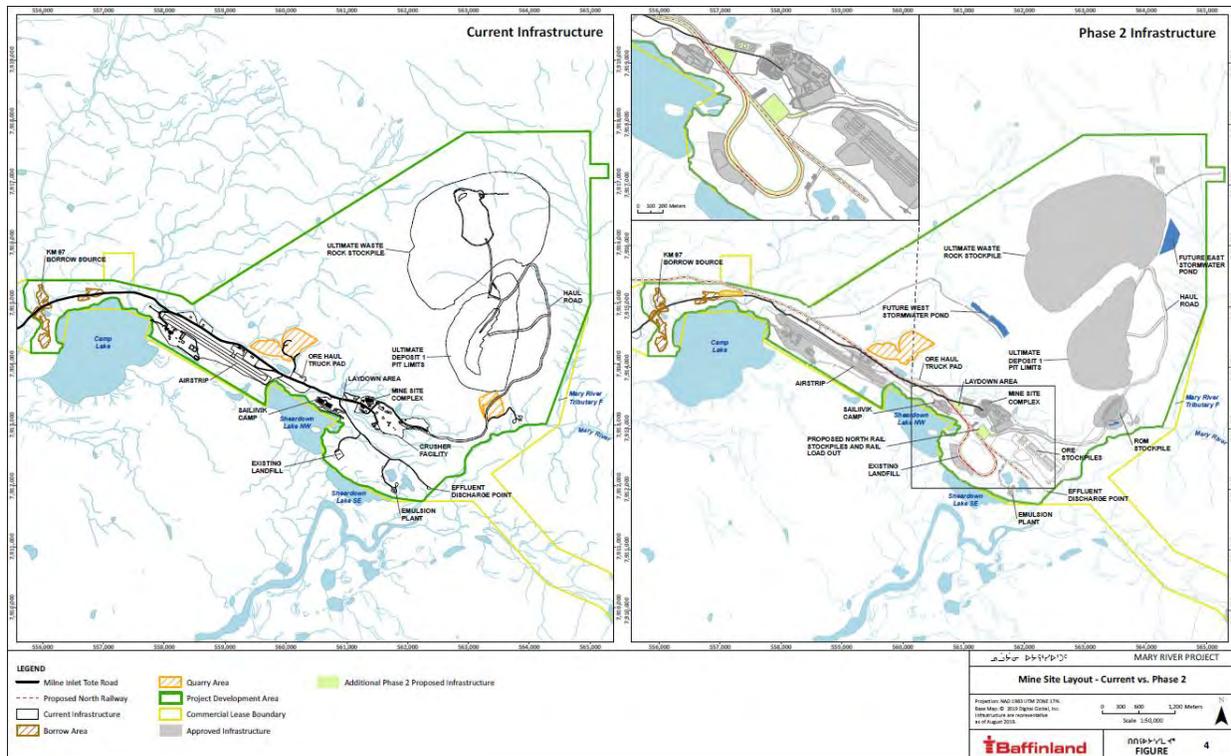


Figure 3: Map showing additional Phase 2 Development infrastructure at the Mine site

2.1.2 Ore Transportation and Railway

- 12 Million tonnes per annua (Mtpa) of ore transported from the Mine Site via the North Railway to Milne Port;
 - o Increase of 7.8 Mtpa from current permanent approved rate of 4.2 Mtpa under the Early Revenue Phase; and
- 18 Mtpa to be shipped from the Mine via the South Railway to Steensby Port under the previously approved Mary River Project.

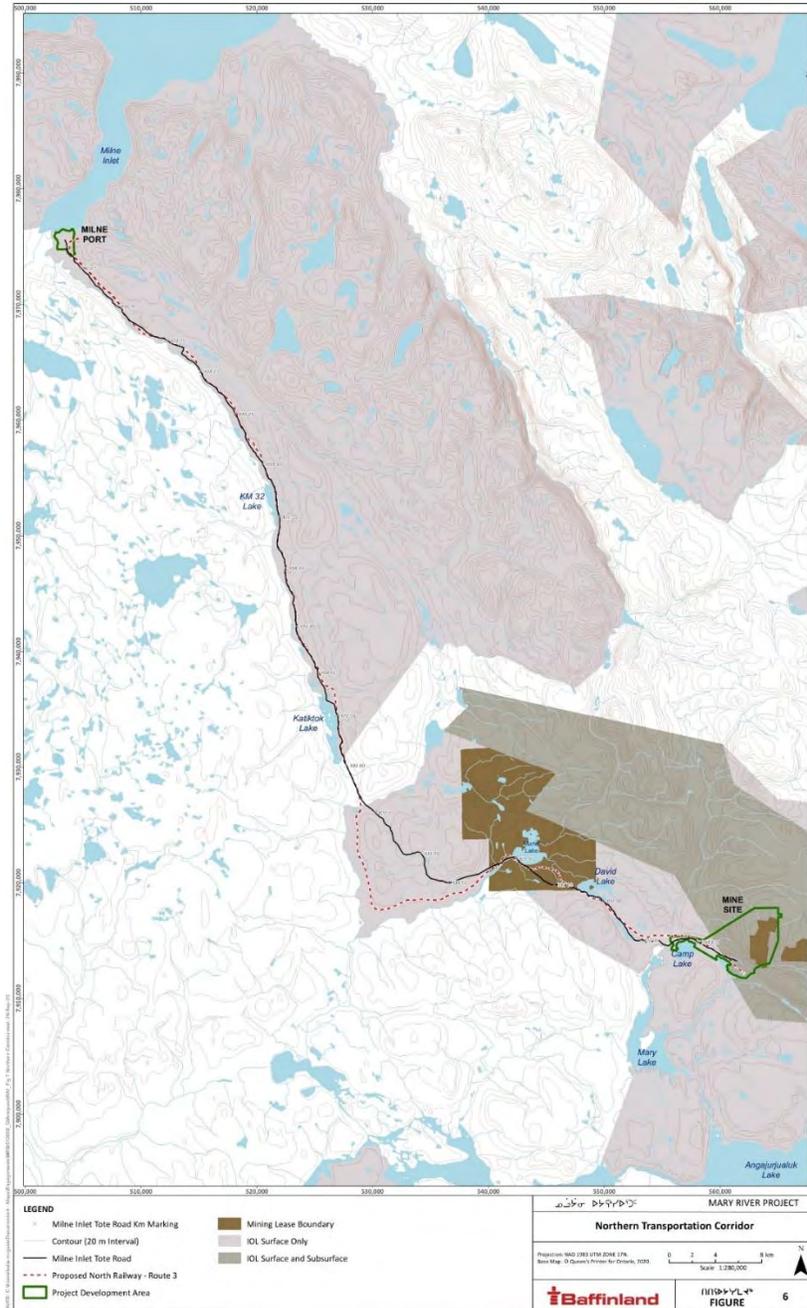


Figure 4: Map showing Existing Tote Road and Proposed North Railway Route

2.1.3 Milne Port:

- Expansion of the Milne Port Project Development Area (PDA) (from 245 hectare to 415 hectare);
- Construction and operation of a second ore dock capable of berthing capesize ore carriers;

- Modifications/expansion of ore stockpiling, new ore crushing/screening facility, and ore handling systems;
- Construction and operation of railway maintenance facilities;
- Expansion of the Port Site Complex, potable water treatment plant and associated sewage treatment plant;
- Expansion of the existing power plant;
- Expansion and re-purposing of laydown areas and ancillary facilities; and
- Construction and operation of a landfill site.

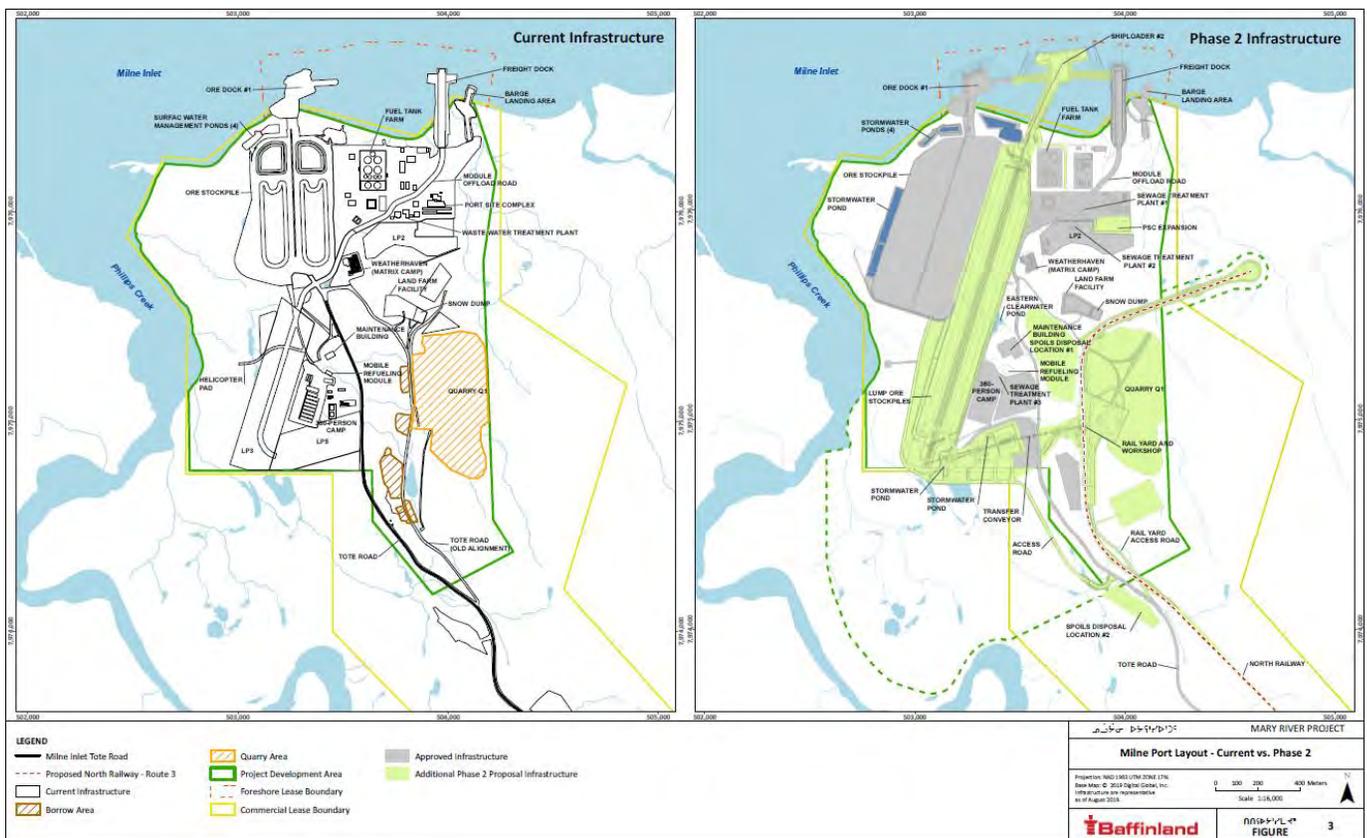


Figure 5: Map showing additional Phase 2 Development infrastructure at Milne Inlet

2.1.4 Shipping

- Expanded shipping season based on ice conditions and Inuit use of the floe edge; shipping would not occur any earlier than July 1 or later than November 15;
- Addition of larger, capesize ore carriers to fleet of vessels calling on Milne Port;
- Increased shipping frequency during the shipping season (maximum of 176 ore carrier voyages per year);
- No changes to Northern Shipping Route including anchorage locations; and

- No shipping through Navy Board Inlet or the Northwest Passage.

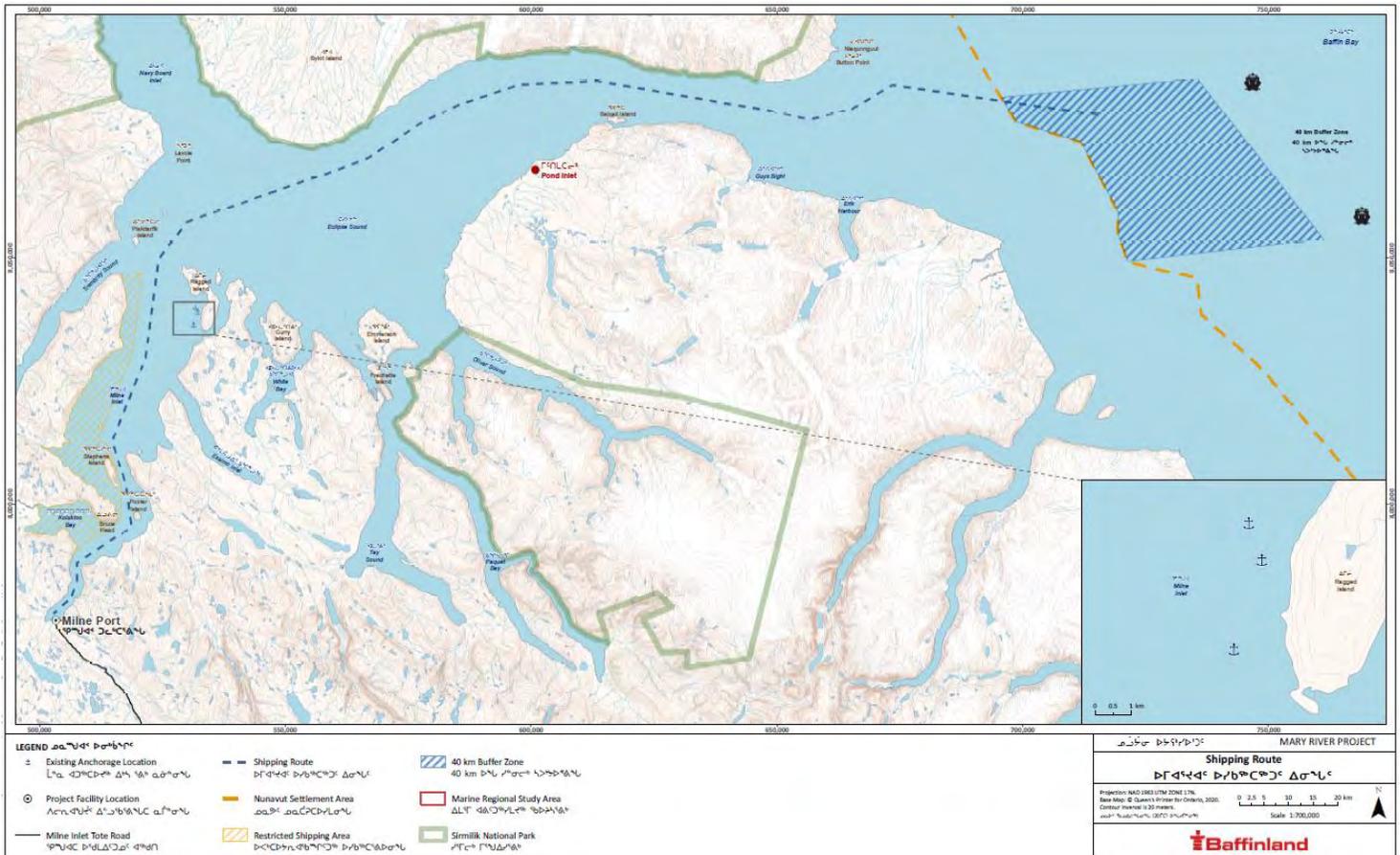


Figure 6: Map showing the Marine Shipping Corridor for the Phase 2 Development

Baffinland indicated that throughout all the phases of the Project, the Proponent would conduct operations in a manner designed to return the Project sites to a safe and environmentally stable condition after completion of operations. The Proponent also indicated it would undertake ongoing reclamation activities throughout the mine life, and that all temporary facilities required for the construction camps would be decommissioned and removed at the end of their useful life. Borrow areas, quarries, temporary roads, and other disturbed sites would be stabilized to limit erosion of ground surfaces and rehabilitated once they are no longer required and that environmental and safety monitoring would continue as long as necessary.

2.1.5 Operational Flexibility

Baffinland indicated to the Board that the Proponent required “operational flexibility” for the Phase 2 Development Proposal in order to allow Baffinland the flexibility to make up shortfalls in the amount of ore transported in a given year. In years where less than 12 Mtpa of ore is shipped

2.1.6 Vessel Anchorage at Store Hellefiske Bank (Greenland)

In Baffinland's *Assessment of Icebreaking Operations during the Shoulder Season*,³⁵ Baffinland described a process for Project vessels to use a recognized anchorage location off the west coast of Greenland, known as Store Hellefiske Bank, as an alternative to anchoring and/or drifting in Baffin Bay at the mouth of Eclipse Sound at the start of the shipping season. Baffinland provided additional information regarding the potential use of the Bank as a temporary refuge area for vessels prior to entering Baffinland's Regional Study Area (RSA). Store Hellefiske Bank extends approximately 100 nautical miles (nm) off the west coast of Greenland into Baffin Bay (between 66-68°N) with depths ranging from approximately 50-100 metres (m). As described in the *Sailing Directions for West Greenland* produced by the Danish Geodata Agency, Store Hellefiske Bank is identified as an area suitable for anchoring as it is generally ice free during the Shoulder Seasons. [Figure 8: Location of Area for Anchoring at Store Hellefiske Bank](#) shows the general area where vessels may anchor along the bank. As depicted, the area that may be used for anchoring is outside of Greenland's Territorial Seas (>12 nautical miles (nm) from shore) but within the Exclusive Economic Zone (<200nm from shore). It should be noted that the potential anchoring area is larger than both Eclipse Sound and Milne Inlet combined.

³⁵ (Doc ID Nos. 325033-325047) Baffinland's Assessment of Icebreaking Operations during Shipping Shoulder Seasons on Marine Biophysical Valued Ecosystem Components (VECs).

Milne Port is limited, and some vessels would be required to hold outside the RSA, awaiting instruction to enter from the Port Captain. A less likely scenario could also occur at other points throughout the shipping season (i.e. even when vessel transit restrictions do not apply) if there are unanticipated interruptions of loading activities at Milne Port, delays due to weather, or a vessel arrives earlier than expected. Baffinland noted that if the Port Captain identifies that vessels cannot yet enter the RSA, it is at the Vessel Captain's discretion to choose a safe area to await further instructions. Store Hellefiske Bank is typically ice free at the time when the shipping season is expected to start, has suitable depths for anchoring and offers a safer alternative to waiting in the middle of Baffin Bay where the vessel is more exposed to weather conditions. Accordingly, some vessels may choose to use that area. While there, it is expected vessels would anchor rather than drift in order to save fuel, although this decision ultimately rests with the Vessel Captain.

Baffinland further clarified this is a common and incidental activity to shipping through Baffin Bay and is consistent with the shipping route described in the Early Revenue Phase (ERP), which remains unchanged for the Phase 2 Development Proposal. The Proponent also noted that the activity would occur at a Vessel Captain's discretion for the purposes of safety and consistent with international maritime law, and that anchorage at Store Hellefiske Bank is not expected to happen with any regular occurrence outside of the Spring shoulder season. Further, Baffinland predicted that even during the Spring shoulder season the use of this alternate anchorage is likely to be limited (<10 occurrences/season).

Baffinland noted that with respect to international waters, the United Nations Conventions on the Law of the Sea (UNCLOS) applies, and that both Canada and Denmark are parties to UNCLOS. Under UNCLOS, vessels passing through a country's territorial waters, as well as its Exclusive Economic Zone (EEZ), have a "right of innocent passage". This right to innocent passage includes stopping and anchoring at any point along a route, where such anchoring is incidental to ordinary navigation, force majeure or a state of distress.

2.1.7 Vessel Types

Baffinland clarified that the suite of ore carriers used for each shipping season would be a function of commercial availability and ice conditions, and that it would seek to procure a mix of the following vessel types:

- Supramax vessels (50,000 - 60,000 deadweight tonnage (DWT));
- Panamax vessels (65,000 - 80,000 DWT);
- Kamsarmax (Post Panamax) vessels (80,000 DWT); and
- Capesize vessels (150,000 - 250,000 DWT).

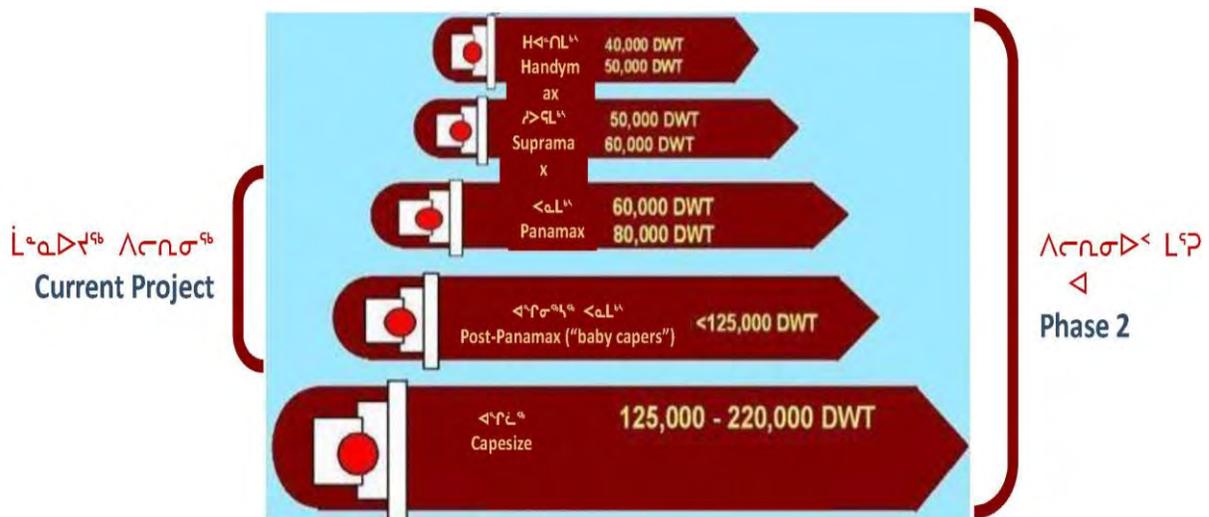


Figure 9: Visual Representation of Various Ore Carrier Sizes Used in the Current Project and Proposed for the Phase 2 Development Proposal

Other vessels that would be procured by Baffinland to support the Project include wet/dry resupply vessels, ice breakers and tugs. An estimate of 24 voyages for other vessels (e.g. wet/dry re-supply) has been considered in the assessment of the Phase 2 Development Proposal. Depending on the timing of their arrival in Baffin Bay, any of these vessels might anchor near Store Hellefiske Bank while waiting to be called to Milne Port. Many of these vessels would have different anchors (i.e. made by a variety of manufacturers) with unique specifications, but at a minimum, anchors would have a weight adequate to hold the vessel to the seabed and have a chain length capable of dropping to a depth in the locations they have identified for safe anchorage.

2.1.8 Ballast Water Discharge

In accordance with the federal *Ballast Water Control and Management Regulations*,³⁶ Project vessels are required to conduct a mid-ocean ballast water exchange that occurs 200 nautical miles (nm) from shore, in waters that are at least 2,000 metres (m) deep, prior to entering Canada's Exclusive Economic Zone (EEZ). Vessels would then retain ballast (primarily for safety reasons), until reaching Milne Port, at which point they would discharge ballast in accordance with the protocols outlined in Baffinland's Ballast Water Management Plan. As such, no discharge of ballast water would occur at Store Hellefiske Bank. Vessels may release grey water or treated sewage while anchored at Store Hellefiske Bank. Any discharges from the vessel would be conducted under the *International Convention for the Prevention of Pollution from Ships*

³⁶ SOR-2011-237.

(MARPOL, Annex IV), and the International Maritime Organization's *International Code for Ships Operating in Polar Waters* (Polar Code).

Based on the above list, the modifications to the approved Mary River Project, as proposed in the Phase 2 Development Proposal, are limited to the addition of the North Railway and additional shipping within the existing north marine shipping corridor. Further, the modifications have generally been proposed to resolve issues raised by Intervenor and/or community members. The Proponent has indicated that this is a reasonable approach to impact assessment and clearly demonstrates Baffinland's commitment to building and operating the Phase 2 Development Proposal in a manner that is both environmentally sustainable and respects community priorities.

2.2 Need for the Project

Baffinland indicated that the Phase 2 Development Proposal is a desirable project and economically feasible option to generate the capital required for the development of the Steensby component of the approved Mary River Project (including the South Railway and shipping through Foxe Basin) as it would use several components of existing infrastructure, notably a fully constructed Port at Milne Inlet and the established north transportation corridor to support construction and maintenance of the North Railway. In its assessment, Baffinland indicated that increasing the production and shipment of ore to 12 Million tonnes per annum by 2021 would enable Baffinland to enlarge its customer base and provide a reasonable return on investment to Baffinland's investors. In addition, the revenues generated from the increase in shipments would be used by Baffinland to facilitate the financing of the South Railway and Steensby Port components of the approved Mary River Project. The Proponent also noted that the efficiencies granted by the North Railway would result in an operational workforce of 1,010 staff, which would remain in place until the mine closes in 2035. Baffinland also stated that the construction and operation of the North Railway has the potential to significantly extend the life of the Mary River Mine by facilitating the future development of additional, known deposits and this would contribute to the long-term success of the North Baffin Region.

Baffinland also indicated that the Phase 2 Development Proposal is necessary to allow it to continue to operate the current Mary River Project, as Baffinland indicated that the current production levels are not sufficient for the Project to be economically sustainable into the future. Consequently, Baffinland stated that the Phase 2 Development Proposal is required for the Mary River Project to continue to provide benefits to Inuit and bring benefits to local communities by providing an economic base and diverse range of employment options to support the traditional lifestyles of Inuit. Baffinland also indicated that the Project would also contribute to strengthening Canada's sovereignty in the North, protecting the country's environmental

heritage, promoting economic and social development in the region, and improving Northern governance.

2.3 Map of Project Activities



Figure 10: Location of Key Infrastructure for the Phase 2 Development Proposal

2.4 Summary of Potential Ecosystemic Effects

As described in the FEIS Addendum³⁷, Baffinland assessed the potential environmental, residual, and cumulative effects of the components and activities associated with the proposed Phase 2 Development Proposal in respect of several valued ecosystemic components (VECs). It was noted that as the Phase 2 Development Proposal is within previously assessed areas, many of the predicted effects within the FEIS for the Mary River Project remain unchanged, and Baffinland indicated that the mitigation measures described in the FEIS would continue to be applied as appropriate. Baffinland concluded that the Phase 2 Development Proposal would not have residual effects on air quality, noise and vibration, or permafrost, terrain, and soil. The Proponent also concluded that the Proposal would not result in cumulative effects on VECs.

[Table 4](#) that follows provides the summary of impact predictions and significance determinations as presented by Baffinland in the FEIS Addendum for the applicable VECs for the convenience of reviewers. More detailed summaries of Baffinland's assessment conclusions in respect of particular VECs are provided in Sections [2.4.1](#) to [2.4.7](#) that follow [Table 4](#).

The Board has prepared these summaries to highlight key points in Baffinland's assessment of the potential ecosystemic effects associated with the Phase 2 Development Proposal. Reviewers should be aware, however, that the summaries are provided for reviewers' convenience only and not exhaustive. Parties wishing to gain a full understanding of Baffinland's submissions are encouraged to review the materials provided in their entirety from the NIRB's Public Registry using the applicable Doc ID Nos. referenced throughout. All of Baffinland's submissions can be accessed through NIRB's Public Registry at www.nirb.ca/project/124701. The Board emphasizes that the Board's decision-making was based on their consideration of all relevant content in the Baffinland's submissions and was not confined to only key points listed in the summaries that follow.

³⁷ (Doc ID Nos. 320552-320633) Baffinland's Final Environmental Impact Statement for the Phase 2 Development Proposal

Table 4: Summary of Ecosystemic Changes in Project Interactions and Factors Relating to Significance

VEC and Change ³⁸	Discussion of Change	Applicable Mitigation and Monitoring
<p>Air Quality -</p> <p><i>No change; not significant</i></p>	<p>Air quality could be affected by:</p> <ul style="list-style-type: none"> ▪ Increased traffic along the Tote Road, which could generate combustion emissions and road dust; ▪ Dust emissions due to construction of the railroad, building of the second ore dock, and the expansions of ore stockpiles and ore handling and crushing facilities; ▪ Emissions from ore transport carriers, sea lift deliveries, and tug and line vessels including drilling and blasting of ore, the transfer of ore via stacking conveyors and loading the rail cars; and ▪ Mining operations at the mine pit site, which could potentially produce combustion emissions and dust. 	<p>Relative monitoring would take place in accordance with the Project Certificate Terms and Conditions and the Air Quality and Noise Abatement Management Plan. Implementation of:</p> <ul style="list-style-type: none"> ▪ Dust suppression along the Northern Transportation Corridor; and ▪ Dust fall monitoring program outlined in the Terrestrial Environment Mitigation and Monitoring Plan.
<p>Noise and Vibration -</p> <p><i>No change; not significant</i></p>	<p>Ambient noise levels could be increased by:</p> <ul style="list-style-type: none"> ▪ Preparation of laydown areas or work areas; ▪ Installation of the ore stockpiles and loading facilities associated with the North Railway, followed by decommissioning of the trucking operation ore loading facilities and stockpiles. ▪ Construction of Project facilities: access roads, railway, and associated infrastructure from the Mine ▪ Site to Milne Port, secondary crushing and screening facilities, and additional loading dock; and 	<p>Application of follow up monitoring as presented in the FEIS Addendum and adherence to Project Certificate Terms and Conditions and the Air Quality and Noise Abatement Management. Implement key mitigation measures such as:</p> <ul style="list-style-type: none"> a) Fitting internal combustion engines with appropriate muffler systems; b) Using acoustical screening from existing on-site buildings, where appropriate, to shield dwellings from construction equipment noise;

³⁸ Changes to ecosystemic effects as previously assessed by the NIRB.

VEC and Change ³⁸	Discussion of Change	Applicable Mitigation and Monitoring
	<ul style="list-style-type: none"> ▪ Development of existing aggregate sources for rock, sand, and gravel. 	<p>c) Taking advantage of local topography to screen noise emissions, where possible; and</p> <p>d) Enclosing Milne Port crushing/screening plant in a building.</p>
<p>Landforms, Soils, and Permafrost -</p> <p><i>No change; not significant</i></p>	<p>Activities associated with the Phase 2 Development Proposal have the potential to cause effects on unique or valuable landforms through:</p> <ul style="list-style-type: none"> ▪ Increase in geohazard risks; ▪ Increase in geochemical risks; ▪ Effects on paleontological resources; and ▪ Excessive settlement of the rail embankment may occur where ice-rich soils are present along the rail alignment. 	<p>Adherence to Project Certificate Terms and Conditions. Permafrost conditions would be continuously monitored and inspected during all phases of the Phase 2 Development to verify impact predictions and ensure the effectiveness of the design criteria. Where required, adaptive management strategies would be implemented. Thermal insulation may be used for the proposed Milne Port buildings, and freeze piles may be used for deep foundations. The following management plans would be implemented:</p> <ul style="list-style-type: none"> ▪ Borrow Pit and Quarry Management Plan; ▪ Borrow Pit and Quarry Management Plan; Railway Management Plan; ▪ Railway Emergency Plan; and ▪ Spill Contingency and Emergency Response Plan.
<p>Vegetation -</p> <p><i>No change; not significant</i></p>	<p>Potential changes to:</p> <ul style="list-style-type: none"> ▪ Quantity of vegetation habitat from direct loss and fragmentation of vegetation habitat from new 	<p>Application of mitigation measures as presented in the FEIS and adherence to the Project Certificate Terms and Conditions and the Environmental Protection Plan and</p>

VEC and Change ³⁸	Discussion of Change	Applicable Mitigation and Monitoring
	<p>disturbance associated with the Phase 2 Development Proposal;</p> <ul style="list-style-type: none"> ▪ Vegetation health due to dust inhibiting plant function or due to uptake of metals found in dust directly on plant tissue or through absorption of metals from the soil via plant root; and ▪ Potential for construction, operation, and closure of the Phase 2 Development activities to affect culturally valued vegetation within the RSA that are currently valued and harvested by Inuit. 	<p>the Terrestrial Environment Mitigation and Monitoring Plan</p>
<p>Terrestrial Wildlife and Wildlife Habitat (including Birds)</p> <p><i>No change; not significant</i></p>	<p>Potential changes to:</p> <ul style="list-style-type: none"> ▪ Habitat, movement, mortality, and health. Effects on those measurable parameters have the potential to affect caribou and wolves including birds, potentially resulting in changes in behavior and/or in population abundance and distribution; ▪ Localized direct habitat loss and chronic disturbance; however, overall effects are not likely to have serious implications for the regional populations of any species; and ▪ Species abundance and habitat use would almost certainly be altered within the Project Development Area (PDA), and to some extent within a certain zone of influence, and some individuals may relocate to less-disturbed neighboring areas. 	<p>Application of mitigation measures as presented in the FEIS and adherence to the Project Certificate Terms and Conditions and implementation of the following:</p> <ul style="list-style-type: none"> ▪ Environmental Protection Plan; ▪ Terrestrial Environment Mitigation and Monitoring Plan; ▪ Roads Management Plan; ▪ Railway Management Plan; ▪ Railway Emergency Plan; ▪ Implement the Caribou Protection Measures developed collaboratively with the QIA; and ▪ Continue engagement with stakeholders and the Terrestrial Environment Working Group.

VEC and Change ³⁸	Discussion of Change	Applicable Mitigation and Monitoring
		<ul style="list-style-type: none"> ▪ Make raptor nest sites temporarily inaccessible to breeding birds during the nesting seasons potentially affected by construction.
<p>Freshwater Biota and Habitat</p> <p>-</p> <p><i>No change; not significant</i></p>	<ul style="list-style-type: none"> ▪ The Phase 2 Development Proposal is anticipated to have effects on Arctic char health and condition, habitat, and direct mortality. The Phase 2 Development Proposal would require an increase in water withdrawals for dust suppression and may affect water and sediment quality at the Mine Site through changes in dust deposition; ▪ The North Railway would cross, divert, or encroach/infill at a total of 465 sites in waterbodies along the Corridor. Bridges may impede fish passage where in-stream structures result in channel constriction and increases in velocities. Additional effects are anticipated from the following; ▪ Installation of infrastructure within watercourses and waterbodies (e.g. bridges, culverts, and lake/pond encroachments/infilling) would result in destruction and/or alteration of char habitat. ▪ Water diversions due to rock cuts made to maintain a relatively constant grade along the railway may result in the loss and/or alteration of Arctic char habitat upstream and/or downstream of the cuts; ▪ Arctic char habitat in waterways receiving diverted flow may be altered due to increased flows; and ▪ Watercourse crossings (i.e. bridges and culvert installations) may block or impede fish passage (e.g. due to increased velocities). 	<p>Application of mitigation measures as presented in the FEIS Addendum and adherence to the Project Certificate and DFO Authorization and Offsetting Plans</p>

VEC and Change ³⁸	Discussion of Change	Applicable Mitigation and Monitoring
<p>Freshwater Quantity and Quality</p> <p>-</p> <p><i>No change; not significant</i></p>	<p>Potential direct effects to freshwater quantity and quality are predicted from:</p> <ul style="list-style-type: none"> ▪ Extraction and consumption, stream diversion at the North Railway, ore dust deposition and transport, and water-rock interactions at quarries and rock cuts along the North Railway; and ▪ Construction of the North Railway, would cause streams to be permanently diverted to adjacent streams that would cross the railway, causing flow received in culverts along the Tote Road to change. <p>It was noted that the Phase 2 Development Proposal was not expected to influence the quantity and quality of freshwater at the watershed level due to planned mitigation and the small footprint relative to the available freshwater in the region.</p>	<p>Application of mitigation measures as presented in the FEIS Addendum and adherence to the Project Certificate Terms and Conditions including implementation of: Surface Water, Aquatic Ecosystems, and Fish and Fish Habitat Management Plan; Fresh Water Supply, Sewage, and Wastewater Management Plan; and Plans required under the Type A Water Licence.</p>
<p>Marine Environment</p> <ul style="list-style-type: none"> • Sea Ice • Marine Water and Sediment Quality <p>-</p> <p><i>No change, not significant</i></p>	<p>The Phase 2 Development Proposal was expected to have effects on marine ice, marine water quality, and marine sediment quality. FEIS Addendum concluded that no detectable environmental changes or residual effects were anticipated as a result of the Phase 2 Development Proposal.</p>	<p>Application of mitigation measures as presented in the FEIS Addendum and adherence to the Project Certificate Terms and Conditions and multiple monitoring and management plans, such as:</p> <ul style="list-style-type: none"> ▪ Shipping and Wildlife Management Plan; ▪ Emergency Response and Spill Contingency Plan Environmental Protection and Monitoring Plans, and ▪ Surface Water and Aquatic Ecosystem Management Plan.

2.4.1 Air quality, Dust Emissions and Deposition, Greenhouse Gas Emissions and Black Carbon Emissions³⁹

Baffinland's assessment of air quality effects concluded that emissions from Project activities have the potential to alter existing air quality in the vicinity of the Project, but that these effects would be temporary and were fully reversible. The residual air quality effects for the Phase 2 Development Proposal were predicted to be not significant. The FEIS Addendum concluded that the use of additional dust suppressants, together with placement of crushers and screens indoors and use of the North Railway for ore transport rather than trucking along the Tote Road, would substantially reduce dust and gaseous emissions from the project area.

Baffinland predicted that compared to the current Mary River Project, greenhouse gas emissions would also be reduced when Baffinland switches from the current truck transport of ore to the use of the North Railway. Overall, Baffinland concluded that greenhouse gas releases associated with the Mary River Project as modified by the Phase 2 Development Proposal would not have a measurable effect on global climate change. Specifically, the Proponent predicted that the releases of greenhouse gases from the Project are anticipated to be small in comparison to Nunavut and Canadian totals.

2.4.2 The Marine Environment⁴⁰ and Marine Wildlife⁴¹

Components of the Phase 2 Development Proposal that have potential to result in adverse effects on marine water and sediment quality but that were not previously assessed as part of the original Mary River Project included the following:

- Sediment resuspension due to construction activities associated with the proposed port expansion;
- Disruption and erosion of sediment due to increased shipping traffic (propeller wash);
- Increase in ballast water discharges;
- Changes in water quality due to increased wastewater discharge and site drainage;
- Changes in water and sediment quality due to increases in dust emission from the secondary ore crusher and stockpile; and
- Increase in sediment disturbance due to removal of additional infrastructure during Project closure.

³⁹ (Doc ID No. 320582) TSD 7 Baffinland's Atmospheric Assessment for the Phase 2 Development Proposal.

⁴⁰ (Doc ID No. 320554) TSD 17 Baffinland's Marine Environment Effects Assessment for the Phase 2 Development Proposal.

⁴¹ (Doc ID No. 320584) TSD 24 Baffinland's Marine Mammal's Assessment for the Phase 2 Development Proposal.

The assessment presented within the FEIS Addendum concluded that the effects of the Phase 2 Development Proposal on marine water and sediment quality would not be significant.

Potential effects from the Phase 2 Development Proposal on marine mammals were predicted to primarily result from construction of a second ore dock and associated marine infrastructure in Milne Port; an increase in the number of ship transits on the Northern Shipping Route during the open-water season; the addition of a larger size class vessel (i.e. Cape size carrier) to the present shipping fleet; and an extension of the shipping season into early ice conditions (mid-November). Predicted effects included:

- Loss of habitat due to port expansion;
- Disturbance, hearing impairment, and auditory masking from underwater noise generated by shipping and port construction (i.e. pile driving); and
- Potential injury or mortality to marine mammals from ship strikes along the shipping corridor.

The FEIS Addendum indicated that mitigation measures would be incorporated into dock design to reduce loss and/or alteration of marine mammal habitat, including reducing the overall subtidal footprint of the dock. Baffinland proposed to reduce disturbance effects from ship noise through reductions in ship speed, which reduces the overall noise output generated by ship propulsion. Noise would also be reduced by requiring vessels to maintain a constant course and speed when in transit and reduce idling when docked at Milne Port. The FEIS Addendum concluded that with planned mitigation, Project activities proposed as part of the Phase 2 Development Proposal are not predicted to result in significant adverse residual effects on marine mammals, birds, fish, and the marine environment.

2.4.2.1 Ballast water⁴² and Invasive Species⁴³

The FEIS Addendum concluded that no significant residual effects on water quality resulting from ballast water discharges are predicted. Exceedance of temperature or salinity thresholds might occur due to ballast water discharge, but the FEIS Addendum determined that these instances of exceedance are expected to be of moderate magnitude and fully reversible. Baffinland's FEIS addendum indicated that there would be minimal risk of introduction of aquatic invasive species due to their monitoring program for ballast water discharge. Baffinland further noted that the vessels calling on Milne Port exceed the transport Canada regulations for ballast water discharge.

⁴² (Doc ID No. 320568) TSD 21 Baffinland's Risk Assessment for Aquatic Invasive Species for the Phase 2 Development Proposal.

⁴³ (Doc ID No. 320583) TSD 18 Baffinland's Ballast Water Dispersion Modelling for the Phase 2 Development Proposal.

2.4.3 The Freshwater Environment, Water Quality/Quantity, Fish and Fish Habitat⁴⁴

Baffinland indicated that the Phase 2 Development Proposal would result in minor increases to water withdrawal volumes due to changing camp occupancies and additional discharge of mine effluent from the expanded ore stockpile at Milne Port and changes in the volume of treated sewage effluent discharged to receiving waters at the mine site during construction and operation.

Baffinland predicted that activities associated with the Phase 2 Development Proposal are not expected to influence the quantity and quality of freshwater at the watershed level due to planned mitigation and the small footprint of the activities relative to the available freshwater in the region. Based on the present assessment and planned mitigation, Project activities proposed as part of the Phase 2 Development Proposal are not predicted to result in significant adverse residual effects on surface water.

Baffinland noted that the Potential effects from the Phase 2 Development Proposal on fish and fish habitat were predicted to primarily result from in-water construction activities; effluent discharges; changes in total suspended solids and sedimentation rates; and changes in habitat availability and connectivity. The installation of bridge and culvert infrastructure within watercourses would result in the permanent destruction and/or alteration of char habitat and may impede fish passage (e.g. due to increased velocities). The Proponent noted that the rivers that would be crossed by bridges may provide some summer feeding habitat and serve as a migration corridor for adult char; however, no spawning or overwintering char habitat was expected to be affected along the planned North Railway route. The FEIS Addendum concluded that activities proposed as part of the Phase 2 Development Proposal are not predicted to result in significant adverse residual effects on freshwater fish, other biota, and freshwater habitat.

2.4.4 The Terrestrial Environment Including Terrestrial Wildlife⁴⁵ (Caribou), Land, Vegetation⁴⁶, Permafrost and Landforms⁴⁷

Baffinland indicated that the Phase 2 Development Proposal is not expected to influence terrestrial wildlife and habitat at the population level due to planned mitigation and the small

⁴⁴ (Doc ID No. 320556) TSD 14 Baffinland's Freshwater Assessment for the Phase 2 Development Proposal.

⁴⁵ (Doc ID No. 320562) TSD 10 Baffinland's Wildlife Baseline and Impact Assessment for the Phase 2 Development Proposal.

⁴⁶ (Doc ID No. 320561) TSD 9 Baffinland's Vegetation Baseline and Impact Assessment for the Phase 2 Development Proposal.

⁴⁷ (Doc ID No. 322553) TSD 8 Baffinland's Landforms, Soil and Permafrost Assessment for the Phase 2 Development Proposal.

footprint affected relative to available habitat in the region. Given the existing wildlife management limits (i.e. total allowable harvest), increased hunter access is not expected to result in harvesting activities with the potential to cause population-level effects on caribou. The Proponent noted that several measures are in place to avoid collisions with caribou. Specifically, strict speed limits would be in place for trucks and trains, thus decreasing the probability of collision. In addition, trucks would be required to stop if wildlife is observed on or next to the road.

The FEIS Addendum concluded that only a small amount of habitat loss for migratory birds is expected to result from Phase 2 Development Proposal activities. These are not expected to lead to effects on populations of key species such as peregrine falcons, snow geese, eiders, and loons. The Proponent committed to ensuring that prior to initiating the Phase 2 Development activities, nests and nesting areas would be identified and mitigation would be implemented to avoid direct effects to birds and bird habitat.

Baffinland indicated the Phase 2 Development Proposal has the potential to alter landforms, soils, and permafrost due to alterations to ecologically sensitive land, and changes to the thermal regime of permafrost. The Proponent indicated that construction of the North Railway would involve substantial disturbance of potential fossil-bearing rock, however, the creation of rock cuts along the railway would provide new exposures allowing for further paleontological exploration. Proposed mitigation would focus on the engineering and designing of infrastructure to reduce effects on soil and permafrost. The FEIS Addendum concluded that the Project activities proposed as part of the Phase 2 Development Proposal are not predicted to result in significant adverse residual effects on landforms, soils, and permafrost.

2.4.4.1 Noise and Vibration

Baffinland indicated that the Phase 2 Development Proposal is not expected to increase noise and vibration to levels that would interact substantially with human receptors due to planned mitigation and the small temporal and spatial footprint of auditory disturbance. Predicted sound levels from movement of the train along the rail corridor are expected to be minor and localized due to the intermittent and temporary nature of this source (i.e. several passes per day). Anticipated noise levels are expected to be below guidelines; however, modelling results suggest noise generated at Milne Port would be noticeable at the Hunters and Trappers Organization Cabin east of Milne Port. The Proponent indicated that the use of mufflers and regular maintenance of engines and equipment would prevent significant noise levels. The FEIS Addendum effects assessment for noise and vibration concluded that the potential effects of noise and vibration from the Phase 2 Development Proposal would not be significant.

2.4.5 Accidents, Malfunctions and Unplanned Events

Through its FEIS addendum, Baffinland indicated that the Phase 2 Development Proposal has been designed and proposed to reduce the potential risk of accidents or malfunctions. The Proponent has also included management plans as part of both the approved Project and the Proposal to mitigate the potential risk of an accident with respect to both terrestrial and marine components of the Project. These management plans include the Roads Management Plan, Spill Contingency Plan, and Spill at Sea Response Plan, along with other options for operating in a safe manner to reduce the risk of accidents. Should accidents or malfunctions occur, Baffinland indicated they are confident that through their management plans they would be able to act quickly and effectively in order to reduce any potential environmental effects. The FEIS Addendum effects assessment concluded that the potential for accidents and malfunctions from the Phase 2 Development Proposal is low and mitigable and would be not significant.

2.4.6 Adaptive Management, Management Plans and Monitoring Programs

In the FEIS Addendum, Baffinland indicated that it has a variety of management plans in place to facilitate project operations in a manner that reduces potential adverse ecosystemic effects. Baffinland indicated that these management plans have been created following consultation with communities in order to incorporate Inuit Qaujimagatuqangit into Project operations. These management plans are updated regularly to reflect any necessary changes from lessons learned during operations. In addition to management plans, Baffinland indicated that it would expand the current monitoring programs to accommodate differences to the current Project and modifications associated with the Phase 2 Development Proposal. Specifically, Baffinland has proposed to monitor for potential effects to both terrestrial and marine wildlife from the use of a railway to transport ore from the Mine Site to Milne Port as well as from additional shipping transits. In the FEIS Addendum, Baffinland extensively discussed its expectation to adaptively manage the Project to prevent and mitigate ecosystemic effects. Baffinland acknowledged the significant challenges of monitoring a Project of this scale and advised that Baffinland has developed a robust monitoring programs to identify the potential for project-effects. Baffinland also indicated that should unpredicted effects occur, it would be able to implement their adaptive management plan to respond. The FEIS Addendum concluded that activities proposed as part of the Phase 2 Development Proposal, after monitoring and mitigations are applied, would not result in adverse effects; however, Baffinland expected that should unpredicted effects occur, it would be able to respond by implementing adaptive management.

2.4.7 Transboundary Effects

The following summarizes Baffinland's assessment of transboundary effects,⁴⁸ including Baffinland's⁴⁹ response to the parties filing the Espoo Materials. See [Table 3](#) for a summary of the contents of the Espoo Materials and see also [Section 1.7.1.1](#) for the Board's explanation of the limitations on the Board's consideration of Espoo Materials.

With respect to ecosystemic effects, Baffinland assessed the potential for the Phase 2 Development Proposal to have transboundary effects to the following VECs:

- Climate Change
- Migratory Birds and Habitat
- Marine Habitat and Biota
- Marine Mammals

In terms of socio-economic effects, Baffinland assessed the potential for the Phase 2 Development Proposal to have transboundary effects on the following VSECs:

- Education and Training
- Livelihood and Employment
- Economic Development and Self-reliance
- Human Health and Well-being
- Contracting and Business Opportunities
- Benefits, Taxes, and Royalties

Overall, the conclusion of Baffinland's transboundary effects assessment conducted under the NIRB's *Amended EIS Guidelines* concluded that:

Transboundary effects of the Phase 2 Proposal are predicted to be not significant. No meaningful adverse socio-economic effects are expected to occur outside of Nunavut, though positive transboundary effects are anticipated. The Project will employ workers based in southern Canada and will present business opportunities to businesses in southern Canada. The Project will also pay federal royalties (aggregate) and tax revenues will accrue to the federal and provincial governments through personal income taxes (including Nunavut's payroll tax), corporate taxes, fuel taxes and sales taxes.⁵⁰

⁴⁸ (Doc ID No. 320607) Baffinland TSD-27: Cumulative Transboundary Effects Assessment, August 2018, Summary Statement.

⁴⁹ (Doc ID Nos: 337553 and 337554) Baffinland's cover letter and Written Comment Submission to Information Contained in the Espoo Materials, December 17, 2021.

⁵⁰ (Doc ID No. 320607) TSD-27: Cumulative Transboundary Effects Assessment, Summary Statement.

As reiterated by Baffinland in the response to the parties filing Espoo Materials, having found “...there were no significant effects within the Nunavut Settlement Area, [Baffinland concluded there were] no significant transboundary effects.”⁵¹

In response to the comments on the extent to which Baffinland’s assessment of transboundary effects was inadequate, Baffinland indicated that the transboundary effects as provided in Baffinland’s “Espoo Report” complied with international precedent by assessing the potential for impacts of project activities occurring within Canada to cause adverse effects in Greenland.

In addition, Baffinland indicated that several background comments by parties in the Espoo Materials were incorrect. Baffinland provided corrections about background conditions, including the following:

- Baffinland indicated that project shipping would not be taking place in areas that have not previously experienced ship traffic;
- Baffinland indicated (referencing a map depicting daily vessel traffic near Store Hellefiske Bank in July 2020) that the coastal area is well used, established, and potential impacts would not be isolated to Baffinland’s project vessels;
- Baffinland indicated that they estimated that anchoring at Store Hellefiske Bank would be necessary fewer than 10 times per year; and
- Baffinland clarified there would be no ballast water released from project vessels in the Store Hellefiske Bank area.

Baffinland concluded:

*As described further in the responses below, Baffinland carried out a robust and thorough environmental assessment. This approach aligns with NIRB requirements as well as the Espoo Convention – the Espoo Report materials are correctly linked to the jurisdictional activities that engage the Espoo Convention. The materials provided by Baffinland confirm there will be no significant impacts on species shared with Greenland from activities originating in Canadian jurisdiction, and there is no reasonable basis to conclude that there will be significant impacts on those species experienced outside the activities in Canadian jurisdiction. The Espoo Materials do not provide any evidence that would support the conclusion that Greenland could experience significant environmental effects from the Phase 2 Proposal.*⁵²

⁵¹ (Doc ID No. 337554) Written Comment Submission to Information Contained in the Espoo Materials, December 17, 2021.

⁵² (Doc ID No. 337554) Written Comment Submission to Information Contained in the Espoo Materials, December 17, 2021 at p. 4.

As the Board has concluded that the technical information in the Espoo Materials would not be relied upon by the NIRB as meeting the standard of technical evidence, the Board has not required Baffinland to refute technical information provided only in the Espoo Materials, but the Board acknowledges that Baffinland's December 17, 2021 submission contained detailed responses to several parties' assertions in the Espoo Materials, with reference to documentation on the Board's extensive Public Hearing Record.

Baffinland addressed the potential for transboundary effects in the:

- FEIS Addendum (TSD 27);
- response to Intervenor's questions, comments and information requests with respect to transboundary effects during the assessment; and
- response to comment in the Espoo Materials.

At its core, Baffinland indicated that because the results of their assessment of VECs and VSECs had concluded there will be no significant adverse effects within the Nunavut Settlement Area there would be therefore be no significant adverse transboundary effects. This conclusion of no significant adverse transboundary effects is based on the general assessment of specific VECs and VSECs and should be considered in the context of Baffinland's analysis of VECs, VSECs, mitigation and monitoring measures and other issues as summarized in Sections [2.4](#), [2.5](#), [2.6](#) and [2.7](#) of this Report.

2.4.8 Cumulative Effects⁵³

Baffinland's cumulative effects assessment provides an assessment of cumulative effects related to the Phase 2 Development Proposal. Baffinland reviewed the cumulative effects assessment presented in the FEIS for the original Project and determined that there were no major changes required to the assessment as a result of the amendment proposal. The Proponent noted that the majority of the cumulative effects identified with the original Project are associated with the potential future development scenario and are not due to past, present, or reasonably foreseeable projects or activities. It was further predicted that any potential cumulative socio-economic effects would be largely positive such as increased employment and direct community benefits. Through its assessment, Baffinland also indicated that the Project would pay federal royalties and tax revenues to the federal and provincial governments through personal income taxes, corporate taxes, fuel taxes, and sales taxes.

⁵³ (Doc ID No. 320607) TSD 27, Baffinland's Cumulative and Transboundary Effects Assessment for the Phase 2 Development Proposal

2.5 Summary of Potential Socio-Economic Effects

Baffinland predicted that the Phase 2 Development Proposal would have both positive and adverse effects on Local Study Area (LSA) communities with respect to the socio-economic environment. Positive residual effects on labour force capacity and adverse residual effect on competition for skilled workers are anticipated to arise from Project employment opportunities. Adverse effects were also predicted for human health and well-being, particularly on community social stability due to workers absence from the community when working at the Mine, challenges fly-in/fly-out employment can present and the effects that having additional income may cause. Activities associated with the Phase 2 Development Proposal have the potential to adversely interact with culture, resources, and land use, including Inuit access to and availability of resources and land. Specifically, the road, railway, and port infrastructure built by the Phase 2 Development Proposal would provide opportunities to access further mineral deposits in the North Baffin region and could improve access for Inuit harvesting and tourism. The two (2) ports would provide opportunities for additional commercial uses. Further, the bathymetry information collected and assembled as a result of the Project and Phase 2 Development Proposal would provide important information for shipping lanes through Foxe Basin and to Milne Port.

[Table 5](#) below provides the summary of impact predictions and significance determinations as presented by Baffinland in the FEIS Addendum for the applicable socio-economic valued components. [Table 6](#) below provides an updated summary of specific economic benefits Baffinland committed to deliver to the potentially affected communities. There was an initial set of economic benefits provided in the FEIS Addendum; however, several modifications were made to these benefits throughout the Board's assessment and the Board felt it would be valuable to provide a concise summary of the benefits as updated to reflect Baffinland's commitments at the close of the Public Hearing Record for the file.

It should be noted that the Board has prepared these two (2) summaries to highlight key points in Baffinland's assessment of the potential socio-economic effects associated with the Phase 2 Development Proposal. Reviewers should be aware, however, that the summaries are provided for reviewers' convenience only and are not exhaustive. Parties wishing to gain a full understanding of Baffinland's submissions are encouraged to review the materials provided in their entirety from the NIRB's Public Registry using the applicable Doc ID Nos. referenced throughout. All of Baffinland's submissions can be accessed through NIRB's Public Registry at www.nirb.ca/project/124701. The Board emphasizes that the Board's decision-making was based on their consideration of all relevant content in the Baffinland's submissions and was not confined to only key points listed in the summaries that follow.

Table 5: Summary of Socio-Economic Changes in Project Interactions and Factors Relating to Significance⁵⁴

Valued Socio-Economic Component and Change ⁵⁵	Discussion of Change	Applicable Mitigation and Monitoring
Economic Development, Contracting and Self-reliance <i>No change; not significant</i>	<ul style="list-style-type: none"> - No new effects would result from the Phase 2 Development Proposal, as no new impact pathways for economic development and self-reliance would be created; and - Direct and indirect economic expansion associated with the Project would create new opportunities for employment and businesses across the RSA. 	Application of mitigation measures as presented in the FEIS and adherence to the Project Certificate Terms and Conditions, including implementation of Human Resources Plan; Inuit Impact Benefit Agreement (IIBA) initiatives, and the Q-STEP training program.
Contracting and Business Opportunities - <i>Change; not significant</i>	The Phase 2 Development Proposal is expected to lead to: <ul style="list-style-type: none"> - Expansion of market for business services to the Project; and - Expansion of market for consumer goods and services. 	Application of mitigation measures presented in the FEIS and adherence to the existing Project Certificate conditions. There is a recommendation to monitor the value of procurement with Inuit-owned businesses and joint ventures, Local Study Area (LSA) employee payroll amounts, and the number of registered Inuit firms in the LSA.
Livelihood and Employment - <i>No change; significant (positive)</i>	The Phase 2 Development Proposal is anticipated to result in improved livelihood and increased employment opportunities: <ul style="list-style-type: none"> - The construction phase is expected to provide some diversity of opportunities for unskilled and 	Application of mitigation measures presented in the FEIS and adherence to the existing Project Certificate conditions including implementation of Human Resources Plan; IIBA initiatives, and the Q-STEP training program.

⁵⁴Doc ID No. 320585) TSD 25, Baffinland's Socio Economic Assessment for the Phase 2 Development Proposal.

⁵⁵ Changes to socio-economic effects as previously assessed by the NIRB.

Valued Socio-Economic Component and Change ⁵⁵	Discussion of Change	Applicable Mitigation and Monitoring
	<p>semi-skilled work and would provide opportunities for learning skills on the job.</p> <ul style="list-style-type: none"> - Additional positive effects could result from the new types of employment opportunities created, which may encourage youth to continue their education to pursue careers in these areas. - Small, decrease in total person-years of employment is projected for the Phase 2 Development Proposal when compared to the Approved Project. Negative effects on Inuit employment levels are not anticipated to result from this change. 	
<p>Education and Training-</p> <p><i>No change; significant (positive)</i></p>	<p>The Phase 2 Development Proposal is anticipated to result in:</p> <ul style="list-style-type: none"> - Improvement of life skills among LSA residents; - Change in incentives related to school attendance and success; - Change in opportunities to gain skills; and <p>FEIS Addendum predicted that no new residual effects would result from the Phase 2 Development Proposal, as no new impact pathways for education and training would be created.</p>	<p>Application of mitigation measures as presented in the FEIS and adherence to the Project Certificate Terms and Conditions, including implementation of Human Resources Plan; IIBA initiatives, and the Q-STEP training program.</p>
<p>Population Demographics-</p> <p><i>Change; not significant</i></p>	<p>Phase 2 Development activities are predicted to cause some changes to population demographics, including:</p>	<p>Application of mitigation measures as presented in the FEIS and adherence to the Project Certificate Terms and Conditions, including implementation of</p>

Valued Socio-Economic Component and Change ⁵⁵	Discussion of Change	Applicable Mitigation and Monitoring
	<ul style="list-style-type: none"> - Some non-Inuit in-migration effects could arise, but they would be low in magnitude and reversible once the Project is complete; - Some Inuit out-migration effects may continue under the Phase 2 Development Proposal but would remain moderate in magnitude and reversible once the Project is complete; and - Non-Inuit Project employees would continue to be able to live outside the North Baffin LSA because of Baffinland's Iqaluit and southern points-of-hire. 	Human Resources Plan; IIBA initiatives, and the Q-STEP training program.
Cultural, Archaeological and Paleontological Resources - <i>Change; not significant</i>	Phase 2 Development activities are predicted to cause: <ul style="list-style-type: none"> - Effects related to ground disturbance, alteration of paleontological resources and caribou harvesting; - Effects on marine mammal harvesting and sea ice which may impact safe travel within Pond Inlet, Eclipse Sound, and Milne Inlet during winter; and - Sensory disturbance and effects on safety along the Milne Inlet Tote Road including difficulty and safety relating to railway crossing. 	Application of mitigation measures as presented in the FEIS and adherence to the Project Certificate Terms and Conditions, including Review, update, and implementation of the Cultural Heritage Resource Protection Plan.
Human Health and Well-being <i>Change; not significant</i>	Phase 2 Development activities are predicted to cause: <ul style="list-style-type: none"> - Changes in parenting due to absence from the community during work rotation which may impact household income and food security; 	Application of mitigation measures as presented in the FEIS and adherence to the Project Certificate Terms and Conditions, including the implementation of a no drugs/no alcohol policy on site with

Valued Socio-Economic Component and Change ⁵⁵	Discussion of Change	Applicable Mitigation and Monitoring
	<ul style="list-style-type: none"> - Change in transportation of illegal/controlled substances through Project sites, including changes in attitudes toward substances and addictions; and - Effects of absence from the community during work rotation. 	<p>baggage searches for all employees and contractors arriving at site.</p>

Table 6: Summary of Specific Economic Benefits Baffinland Proposed to Provide through the Phase 2 Development Proposal

Subject	Commitment	Beneficiary	Source
Childcare	All Nunavummiut employees with children to receive fixed allowance of no less than \$19/day per child under the age of 14, indexed by Nunavut Consumer Price Index. Baffinland and Qikiqtani Inuit Association (QIA) to develop calculation to determine subsidy for Inuit employees. Baffinland and QIA to work to seek matching funding from Government of Nunavut (GN) and Government of Canada (GoC).	All Nunavut-based employees, All Inuit employees	<i>Inuit Certainty Agreement</i> ⁵⁶ (ICA), ID 15 Commitment 154 ⁵⁷
Childcare	Baffinland to contribute up to \$3 million per each of the five (5) impacted communities for construction of daycare facilities (total of \$15 million). Baffinland also assumes all costs for facility design.	Pond Inlet, Igloolik, Arctic Bay, Clyde River, Sanirajak	ICA, ID 16 Commitment 153
Childcare	If construction begins at Steensby Inlet, Baffinland would contribute an additional \$3 million to each of Kimmirut and Kinngait (total \$6 million) for construction of daycare facilities. Baffinland also assumes all costs for facility design.	Kimmirut, Kinngait	ICA, ID 16 Commitment 153
Childcare	Baffinland to contribute funding and in-kind support to training and development of staff for the childcare facilities.	Pond Inlet, Igloolik, Arctic Bay, Clyde River, Sanirajak, Kimmirut, Kinngait	ICA, ID 16 Commitment 153

⁵⁶Doc ID Nos. 332864 & 333015) The Inuit Certainty Agreement.

⁵⁷ [APPENDIX E List of Commitments Made By Baffinland \(to be completed following Approval of Phase 2\).](#)

Subject	Commitment	Beneficiary	Source
Contracting	Revised Article 6 of the Inuit Impact Benefit Agreement (IIBA) would define Preferred Inuit Firm status and contract tailoring. The IIBA would encourage Preferred Inuit Firm participation through tailored contracting and subcontracting opportunities. IIBA 6.9.6 to be amended for reporting on amounts spent on Inuit and non-Inuit contractors.	Qikiqtani-based wholly Inuit-owned and -operated companies	<i>ICA, ID 18, ID 19</i>
Contracting	Contractor Inuit Content Plan template to be developed and included in the IIBA.	QIA	<i>ICA, ID 20</i>
Contracting	Monthly reporting on Inuit Content Requirements for contractors and spot check audits	QIA	<i>ICA, ID 21, 23</i>
Employment, Training	Amend IIBA to include Inuit Career Mobility Strategy to enhance training with a focus on unskilled workers.	Inuit employees	<i>ICA, ID 25</i>
Employment, Training	\$1.5 million per year for Inuit training programs	Inuit workers	<i>ICA, ID 29</i>
Employment, Training	Baffinland to provide \$10 million for construction of a training facility in Pond Inlet	Inuit Workers, Pond Inlet	<i>ICA, ID 30</i>

Subject	Commitment	Beneficiary	Source
Employment, Training	<p>Creation of 20 positions for community-based training programs plus seven (7) additional positions (Baffinland Community Liaison Officer (BCLO), Inuit Qaujimagatuqangit Advisor, Community Resource Coordinator, Inuit Success Team Advisor, Community Counselor, Trainer and Office Manager) per impacted community;</p> <p>Pond Inlet to also have a Community Monitoring Coordinator and additional BLCO; and</p> <p>(Total 137 positions).</p>	Pond Inlet, Igloolik, Arctic Bay, Clyde River and Sanirajak	<i>Baffinland Final Written Statement</i> ⁵⁸ (FWS) 6.3.3 Commitment 245
Employment, Training	<p>If Inuit employment and training objectives not met, Baffinland would pay \$500,000 per year for three (3) years (total \$1.5 million) plus funding to QIA for two (2) staff positions; and</p> <p>If Inuit employment and training objectives are not met for two (2) consecutive years, Baffinland would pay \$750,000 per year for five (5) years (total \$3.75 million).</p>	Inuit workers, QIA	ICA, ID 29
Employment, Training	Creation of a community garage for vehicle maintenance pilot project in Sanirajak to provide opportunities for apprentice mechanics and high school co-op students, followed by similar projects in other impacted communities.	Pond Inlet, Igloolik, Arctic Bay, Clyde River and Sanirajak	Commitment 244

⁵⁸ Doc ID No. 337780-337788) Baffinland’s Final Closing Statement for the Phase 2 Development Proposal.

Subject	Commitment	Beneficiary	Source
Employment, Training	Baffinland to promote access to employment for Inuit women, including more senior level positions.	Inuit workers	Commitment 56, 64
Royalty/Rents /Taxes	Federal Mining Royalty (FRM), transferred to NTI, is estimated to begin payment in 2030, with a life of mine estimate of \$1.4 billion; and QIA receives a 1.19% net sales revenue (NSR), estimated at \$396 million for life of mine.	NTI, QIA	<i>TSD 25⁵⁹</i>
Royalty/Rents /Taxes	On Effective Date of the Phase 2 Development Proposal, NSR royalty paid to QIA increases from 1.19% to 1.50%; 36 months after Effective Date, NSR royalty increases to 1.75%; 54 months after Effective Date, NSR royalty increases to 2.25%; 72 months after Effective Date, NSR royalty increases to 3.00%; and “Upside sharing” (depending on ore price) adds additional 0.75% to NSR royalty.	QIA	<i>ICA, ID 28</i>

⁵⁹Doc ID No. 320585) TSD 25, Baffinland’s Socio Economic Assessment for the Phase 2 Development Proposal.

Subject	Commitment	Beneficiary	Source
Royalty/Rents /Taxes	Payment of \$5 million on Phase 2 Effective Date + \$1.25 million for the next eight (8) quarters; 54 months after Effective Date, payment of \$15 million; and 72 months after Effective Date, payment of \$15 million.	QIA	ICA, ID 28
Royalty/Rents /Taxes	Payment to Tasiuqtiit Working Group of \$16.67 per loaded ore car delivered to Milne Inlet (maximum of \$2 million per year).	Pond Inlet	Commitment 252
Royalty/Rents /Taxes	Payment to Tasiuqtiit Working Group of \$10,000 per ore carrier (under the Phase 2 Development could reach up to \$1.68 million per year).	Pond Inlet	Commitment 246
Royalty/Rents /Taxes	Aggregate royalty payment of \$2.50 per cubic meter and landfill tipping of \$50/cubic meter for quantities over 5,000 cubic meters, estimated total aggregate royalty of \$27.6 million over life of mine.	QIA	TSD 25
Royalty/Rents /Taxes	Estimated Inuit Owned Land (IOL) commercial lease rent \$73.1 million for life of mine.	QIA	TSD 25
Royalty/Rents /Taxes	Revenue to GoC estimated at \$679.9 million for life of mine.	Government of Canada	TSD 25
Royalty/Rents /Taxes	Revenue to GN estimated at \$1.6 billion for life of mine.	Government of Nunavut	TSD 25

Subject	Commitment	Beneficiary	Source
IIBA Costs	\$2,250,000 per quarter for three (3) years plus two (2) quarters (14 quarters), starting on the Phase 2 Effective Date, and \$2,000,000 per quarter thereafter. To be increased upon construction of Steensby Inlet part of project and if operational flexibility is exercised.	QIA	ICA, ID 28
Funding	Ilagiiktunnut Fund - \$1,100,000 per year to impacted communities.	Pond Inlet, Igloolik, Arctic Bay, Clyde River and Sanirajak	ICA, ID 29
Funding	Business Capacity Startup Fund - \$275,000 per year.	Inuit forms	ICA, ID 29
Funding	Mary River Inuit Training Project - \$1,500,000 per year.	Inuit workers	ICA, ID 29
Funding	Wildlife Monitoring Program - \$200,000 per year.	Pond Inlet	ICA, ID 29
Funding	IIBA implementation funding of \$2.25 million per quarter for the first 14 quarters after the Phase 2 Effective Date, and \$2 million per quarter thereafter.	QIA	ICA, ID 31
Hunter Support	Regional Harvesters Enabling Program - \$750,000 per year.	HTOs	ICA, ID 5
Hunter Support	One-time payment of \$1.3 million to MHTO for changes in hunting experience.	MHTO	ICA, ID 5

Subject	Commitment	Beneficiary	Source
Hunter Support	Funding of up to \$500,000 for purchase of a hunting vessel.	Pond Inlet	<i>FWS 2.8.10.6</i>
Hunter Support	Continuation of existing \$750,000 Wildlife Compensation Fund.	HTOs	<i>FWS 2.8.10.6</i>
Hunter Support	Expand Harvesters Enabling Fund - \$400,000 per Year.	Pond Inlet, Igloolik, Arctic Bay, Clyde River and Sanirajak	<i>FWS 2.8.10.6</i>
Infrastructure	Construction and operation of Baffinland office centers in potentially impacted communities. Each will have office space, training room, medical exam room, country food kitchen, and Elder's room.	Pond Inlet, Igloolik, Arctic Bay, Clyde River and Sanirajak	Commitment 243
Infrastructure	Support use of dust suppressant on roads in Pond Inlet.	Pond Inlet	Commitment 256
Infrastructure	Assistance (including financial) to improve road infrastructure in Pond Inlet.	Pond Inlet	Commitment 255
Infrastructure	Donation of up to \$5 million for upgrade or construction of a new Health Centre.	Pond Inlet	Commitment 254
Infrastructure	Donate funds necessary for the construction of a new Fire Hall.	Pond Inlet	Commitment 253

Subject	Commitment	Beneficiary	Source
Infrastructure	Creation of a community garage for vehicle maintenance pilot project in Sanirajak, followed by similar projects in other impacted communities.	Pond Inlet, Igloolik, Arctic Bay, Clyde River and Sanirajak	Commitment 244
Other	Baffinland to support the development and fund an Inuit Social Oversight Committee (ISOC) to be overseen and administered by QIA with nominated members from the impacted communities.	Pond Inlet, Igloolik, Arctic Bay, Clyde River, Sanirajak and QIA	Commitment 130
Other	Baffinland to support the development and fund an Inuit Committee to be overseen and administered by QIA with nominated members from the impacted communities.	Pond Inlet, Igloolik, Arctic Bay, Clyde River, Sanirajak and QIA	Commitment 134
Other	Creation of the Inuit Stewardship Program (ISP) to be authored by QIA, with input from the Inuit Committee and the ISOC for the Mary River Project, impacted communities, and Baffinland, and implemented by Inuit. The ISP would be presented to Baffinland for feedback prior to QIA's finalization and approval. Baffinland would be responsible to fund the ISP for the life of the Mary River Project.	Pond Inlet, Igloolik, Arctic Bay, Clyde River, Sanirajak and QIA	ICA, ID 1 Commitment 131
Other	Baffinland would fund and work with QIA and the impacted Inuit communities to develop an enhanced and Inuit-driven social monitoring program related to the Project.	Pond Inlet, Igloolik, Arctic Bay, Clyde River, Sanirajak and QIA	ICA, ID 1
Other	Baffinland to fund a country food baseline study.	Pond Inlet	ICA, ID 7

Subject	Commitment	Beneficiary	Source
Other	Pond Inlet would be prioritized when surplus equipment and machinery is available.	Pond Inlet	Commitment 258
Other	Baffinland to work with Mittimatalik Hunters and Trappers Organization (MHTO) on policy for use of Tote Road by recreational vehicles as it would not be required for ore haulage.	MHTO, Community members	Commitment 42
Other	Baffinland commits to funding QIA and the communities development of a social monitoring program to greater insight into the mitigation of negative social impacts and the promotion of positive benefits.	Pond Inlet, Igloolik, Arctic Bay, Clyde River, Sanirajak and QIA	Commitment 151
Other	Baffinland will work with QIA and the impacted communities to develop a final IQ Management Framework, subject to co-approval of QIA and the impacted communities. If the communities agree, their approval could be facilitated through the Inuit Committee for the Mary River Project.	Pond Inlet, Igloolik, Arctic Bay, Clyde River, Sanirajak and QIA	Commitment 229

2.6 Proposed Mitigation and Monitoring Measures

Within the FEIS Addendum, Baffinland proposed specific mitigation measures to reduce the potential effects of the environment on the Project and further identified measures for preventing impacts due to accidents, malfunctions, and unplanned events. Baffinland noted that environmental risks or potential concerns from geo-hazards, extreme weather events, and global climate change could be mitigated through the adoption of appropriate engineering design. For accidents, malfunctions, and unplanned events, Baffinland indicated that a risk register would be developed for the Phase 2 Development Proposal to identify the potential risks and likelihood of the accidental event occurring, level of consequence associated with each accidental event, and applicable emergency response plans.

2.7 Other Issues Considered by the Board

The Proponent's assessment considered community consultation, Human Health and Ecological Risk Assessment (HHERA), accidents and malfunctions, including effects of the environment on the Project as well as alternative analysis and cumulative effects as potential pathways for effects to both ecosystemic and socio-economic valued components. The FEIS Addendum predicted no changes from the approved Mary River Project for the Phase 2 Development Proposal. The HHERA identified risks to human health due to potential exposure to cadmium, methylmercury, and inorganic mercury from consumption of caribou organs, and narwhals, and/or seal liver. However, an updated HHERA has concluded that impacts from the Phase 2 Development would be minimal.

The Proponent's alternatives assessment considered aspects that shaped the entire Project including the southern transportation corridor including technical feasibility, cost-effectiveness, environmental acceptability, and community acceptability; these criteria were applied to for identifying its shipping window alternatives, shipping route, mode of transportation of ore to Milne Port, railway route, and location of second dock. Alternatives were assessed to improve project economics, minimize the Expansion Proposal footprint, reduce impacts to the environment, and reduce infrastructure requiring reclamation.

Baffinland conducted a cumulative effects assessment of the significance of potential cumulative effects on key components of the ecosystemic and socio-economic environment, accounting for all past, present, and reasonably foreseeable future developments within each component study area. The FEIS Addendum concluded that while there is a possibility for cumulative effects to marine mammals, terrestrial wildlife and habitat (caribou), including wilderness tourism in the region, these remain hypothetical and were generally not supportable as a meaningful or valid assessment of effects.

[Table 7](#) below provides the summary of impact predictions and significance determinations as presented by Baffinland in the FEIS Addendum related to other issues considered. Baffinland considered the effects of other factors such as environment, accidents, malfunctions, and unplanned events on the Project.

Table 7: Summary of Conclusions in Respect of Other Issues Considered by the Board

Other Issues Considered by the Board	Changes ⁶⁰	Discussion of Change	Applicable Mitigation and Monitoring
Accidents and Malfunctions, and Unplanned Events	No change	Overall, consequence and likelihood ratings for the proposal has not changed from the Approved Project and the environmental effects of a spill in ice conditions would be no greater than, and often less than, those described in the Approved Project. The conclusions presented in the Approved Project remain unchanged for Phase 2 Development Proposal.	
Effects of the Environment on the Project	Change; not significant	The following environmental conditions could potentially affect the project: <ul style="list-style-type: none"> •Ground stability; •Slope stability; •Seismic events; •Extreme temperatures; •Extreme precipitation and flooding; •High winds and waves; •Storm surges; •Severe fog or white-outs; 	Appropriate engineering design

⁶⁰ Changes to ecosystemic effects as previously assessed by the NIRB.

Other Issues Considered by the Board	Changes ⁶⁰	Discussion of Change	Applicable Mitigation and Monitoring
		<ul style="list-style-type: none"> •Increasing temperatures; •Reduced sea ice; •Sea level changes; •Increasing precipitation; and •Increasing active layer thickness. 	

3 SUMMARY OF INTERVENOR SUBMISSIONS

Throughout the technical review stage of the assessment, the NIRB provided interested parties and Intervenor status with several opportunities to submit technical comments at different stages of the process and also provided the Proponent with opportunities to respond to the comments submitted. Consistent with the *Nunavut Agreement*, the Board's practice and Rule 22 of the Board's *Rules of Procedure* (2009), the NIRB recognized Nunavut Tunngavik Incorporated, the Qikiqtani Inuit Association, the Government of Nunavut and Government of Canada regulatory agencies as Intervenor status. Several community-based and non-governmental organizations applied to the Board for, and were granted Intervenor status, in 2019. Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) provided participant funding to various Intervenor status at particular stages of the NIRB's assessment of the Phase 2 Development Proposal. The following Intervenor status were awarded participant funding prior to the November 2019 Public Hearing:

- Qikiqtani Inuit Association;
- Hamlet of Pond Inlet;
- Mittimatalik Hunters and Trappers Organization;
- Hamlet of Igloolik;⁶¹
- Hall Beach Hunters and Trappers Organization; and
- Nunavut Independent Television Network.

Following the adjournment of the November 2019 Public Hearing, CIRNAC worked with the Intervenor status to update participant funding agreements and provided funding to five (5) additional parties below:

- Hamlet of Arctic Bay;
- Ikajutit Hunters and Trappers Association;
- Hamlet of Hall Beach (Sanirajak);
- Igloolik Hunters and Trappers Association;
- Hamlet of Clyde River; and
- Clyde River Hunters and Trappers Association.

The following sections summarize technical comments filed by Intervenor status involved in the ongoing assessment of the Phase 2 Development Proposal. [Table 8](#) below lists the timing and NIRB Doc. ID numbers of key technical submissions provided to the NIRB and the Proponent responses.

For the convenience of reviewers, the Board has prepared this table to provide a high-level summary of the submissions from Parties in respect of the assessment of the Phase 2

⁶¹ Later during the Technical Meeting the representatives of this group requested that they be referred to as the Igloolik Working Group as they didn't expressly represent the Hamlet or views of counsel.

Development Proposal. Reviewers should be aware, however, that this table is provided for reviewers' convenience only and is not exhaustive. Parties wishing to gain a full understanding of technical submissions are encouraged to review the materials provided in their entirety from the NIRB's Public Registry at www.nirb.ca/project/124701. The Board emphasizes that the Board's decision-making was based on their consideration of all relevant content in the parties' submissions and was not confined to the summary table that follows.

Table 8: Key Technical Submissions for the Phase 2 Development Proposal

Dates	Key documents	Doc ID numbers
March 7, 2019	Receipt of Technical Review Comment Submissions	323436, 323459, 323464, 323469 through 323472, and 323474 through 323480
September 27, 2019	Final Written submissions from intervenors	326940 through 326967
October 16, 2019	Baffinland's response to parties Final Written Submissions	327139-327149 and 327155
January 6, 2020	Updated project scope with clarification and additional submissions	327956 and 327957
February 6, 2020	Updated Technical Comments submissions from CIRNAC, ECCC, DFO, PC, NRCan, WWF, ON	328460, 328461, 328464, and 328465
February 24, 2020	Baffinland's response to parties Updated Technical Comments submission	328634 and 328635
March 5 & 10, 2020	Additional Technical Submission from Fisheries and Oceans Canada	328839
July 7, 2020	QIA Update Regarding Ongoing Resolution of Technical Issues in	331073

Dates	Key documents	Doc ID numbers
	Preparation for Resumed Hearings for Baffinland Iron Mines Corporation's Phase 2 Development Proposal	
August 25, 2020	North Baffin Community Concerns with Inuit Certainty Agreement and QIA Community Engagement	331263
January 15, 2021	Updated Final Written Submissions from DFO	332523, 332524, & 332754
January 18, 2021	Updated Final Written Submissions from ECCC	332572 & 332573
January 25-February 6, 2021	Intervenors Presentations	332585, 333413, 333414, 333417-333420, 333422-333429, 333430, 333433-333436, 333438, 332702, 333000-333003, 333005, 333007, 333009, & 333018
March 1, 2021	Parties Submitted Outstanding Written Questions	333678-333682 & 333692-333707
March 22, 2021	Parties Responses to Outstanding Written Questions	334146-334162, 334174-334176, 334235, & 334236
April 7, 2021	Baffinland's Technical Memo Regarding Preliminary Summary of 2020 Narwhal Monitoring Program	334437 & 334440
September 13, 2021	Baffinland Written Response to Intervenor Submissions	336778-336785, 336788, 336789, & 336932-336935

Dates	Key documents	Doc ID numbers
October 18, 2021	Intervenor Responses to Baffinland's Response Package	337076-337079 & 337149
November 1, 2021	Submission of the Espoo Materials by the Government of Canada	337221-337229
December 10, 2021	Intervenor Comments on ESPOO materials (QIA, WWF and ON)	337226 & 337479-337480
December 18, 2021	Baffinland's Response to Intervenor Comments on the ESPOO Materials	337553 & 337554
January 10, 2022	Intervenors Final Closing Statements	337621, 337622, 337703, 337607-337614, 337617-337619, 337623-337634, 337699, 337778, & 337779
January 21, 2022	QIA's Letter to NIRB Clarifying status of Technical Comments	337721
January 24, 2022	Baffinland's Final Closing Statement, Final Disposition Table and Commitment List	337780-337788

3.1 Summary of Submissions in Respect of Ecosystemic Effects

For the convenience of reviewers, the Board has prepared the summary Tables that follow to provide a high-level summary of the comments/issues/concerns contained in the Intervenors' submissions in respect of the assessment of the potential ecosystemic effects associated with the Phase 2 Development Proposal. Reviewers should be aware, however, that the summaries are provided for reviewers' convenience only and are not exhaustive. Parties wishing to gain a full understanding of Intervenors' submissions are encouraged to review the materials provided in their entirety from the NIRB's Public Registry using the applicable Doc ID Nos. referenced above. All Intervenor submissions can be accessed through NIRB's Public Registry at

www.nirb.ca/project/124701. The Board emphasizes that the Board’s decision-making was based on their consideration of all relevant content in the parties’ submissions, and was not confined to only the comments/issues/concerns listed in the summary tables that follow.

3.1.1 Air Quality, Dust Emissions and Deposition, Greenhouse Gas Emissions and Black Carbon Emissions

[Table 9](#) that follows summarizes Intervenor submissions in respect of the Air Quality VEC, which included submissions in respect of dust emissions and deposition, greenhouse gas (GHG) emissions and black carbon emissions from Heavy Fuel Oil (HFO).

Table 9: Summary of Intervenor Submissions on Air Quality

Party	Comments in Summary Form
ECCC, WWF & HC	<ul style="list-style-type: none"> - These parties expressed concerns over the increase of NO₂ (nitrogen dioxide) emissions and potential for effects on human health and the environment. - Recommended that the Proponent should use the tier 4 standard on all mobile equipment to reduce NO₂ emissions.
ECCC & WWF	<ul style="list-style-type: none"> - Express concern about the increase of black carbon emissions due to the use of Heavy Fuel Oil (HFO) during marine shipping, and the resulting effects on snow, ice, and the local environment associated with increased black carbon emissions.
ECCC	<ul style="list-style-type: none"> - Recommended Baffinland require the use of distillate fuel for their contract shippers when entering the Canadian Exclusive Economic Zone (EEZ). - Requested the Proponent present its air quality monitoring with the Nunavut and Canadian Ambient Air Quality Standards for comparison. - Recommended an update on the Air Quality and Noise Abatement Plan to address air quality and dust monitoring. - Recommended further investigations to reduce NO₂ emissions from generators.
WWF	<ul style="list-style-type: none"> - Expressed concern that the increase in shipping would contribute to the global climate crisis. - Recommended Baffinland monitor greenhouse gas (GHG) emissions and demonstrate efforts annually to reduce their GHG emissions. - Expressed concern that Baffinland is proposing to enclose the ore crushing facility at Milne Port only if the Phase 2 Development Proposal

Party	Comments in Summary Form
	is approved to proceed; questioned why that mitigation measure is not being implemented now to reduce the iron ore dust emissions at Milne Port from the current Mary River Project.
QIA	<ul style="list-style-type: none"> - Recommended the Proponent expand its monitoring program on dust fall in consultation with the Marine Environment Working Group (MEWG). - Concerned the Proponent does not have data regarding the presence of trace metals in harvested species as seals and narwhals.
HC	<ul style="list-style-type: none"> - Recommended further monitoring on NO₂ and especially at key locations used by communities.
MHTO	<ul style="list-style-type: none"> - Identified that dust from the current Mary River Project is already being seen near Milne Port, along the Tote Road, near the Mine and in the community. - Questioned the effectiveness of current dust mitigation programs and Baffinland's slow response to community concerns identified in the monitoring of the approved Mary River Project. - Expressed concern that current and future emissions of iron dust could affect the terrestrial, freshwater, and marine food chains and the health of communities who are at the end of the food chain. - Identified that dust emissions are affecting the snow and formation and integrity of ice in the area.
IWG	<ul style="list-style-type: none"> - Concerned with the spread of dust generated from blasting and port operations throughout the region. - Requested the Proponent to implement more effective and additional dust mitigation.

3.1.2 The Marine Environment and Marine Wildlife

[Table 10](#) that follows summarizes Intervenor submissions in respect of the potential for shipping and ice management associated with the Phase 2 Development Proposal to have effects on marine wildlife (including marine mammals, birds and fish) and the marine environment.

Table 10: Summary of Intervenor Submissions on Marine Wildlife and the Marine Environment

Party	Comments in Summary Form
DFO	<ul style="list-style-type: none"> - Requested clarification over the number of vessels transit along the shipping corridor to properly assess associated impacts. - Requested further assessment including Inuit Qaujimagatuqangit and collaborative work with DFO to develop mitigation measures to reduce the risk of vessel strikes. - Recommended Baffinland provide a summary report on monitoring activities during opening and closing shipping season. As part of the summary report, DFO suggested Baffinland consider mammals' behavior and other ecological factors. - Due to related shipping risks on marine mammals during shoulder seasons, DFO suggested that the Proponent's monitoring plan be developed with an adequate survey methodology. - Noted that due to uncertainty, Baffinland should avoid shipping during the shoulder season and implement conservative mitigation measures.
DFO (cont'd)	<ul style="list-style-type: none"> - Recommended Baffinland monitor and plan for possible ice entrapment in order to respond appropriately. - On acoustic modelling and marine disturbance, DFO recommended a long-term monitoring plan with further collection of data. Indicated that these data should be shared with the Marine Environment Working Group (MEWG) prior to the increase to shipping proposed in the Phase 2 Development Proposal.
WWF	<ul style="list-style-type: none"> - For further understanding of industrial shipping impacts on the marine environment, WWF recommended the development a Marine Spatial Plan by the Proponent. - Identified concerns that the project would change migration route of narwhals.
MHTO	<ul style="list-style-type: none"> - Concerned Baffinland would use the shipping corridor before the natural melt of the ice. Emphasized that the MHTO does not support any ice-breaking activity after October 15th. Requested to be consulted on the shipping plan prior to commencement of shipping. - Recommended ice bridges and signs for assuring that project shipping in the shoulder seasons does not compromise the safe use of ice for community travel purposes. - Requested clarification on the number of transit and vessels' size. - Recommended Baffinland assess more fully the potential for project-related effects on marine wildlife that could impact Inuit rights, such as harvesting, including the implications for Inuit culture and food security.

Party	Comments in Summary Form
	<ul style="list-style-type: none"> - Indicated that Inuit Qaujimajatuqangit from Inuit harvesters and other residents of Pond Inlet is not being applied to Baffinland’s monitoring of current project effects and has not been adequately considered in Baffinland’s assessment of the Proposal. - Identified that Inuit harvesters have already seen displacement and disruption in terms of narwhal and seal abundance and distribution near Pond Inlet and questioned Baffinland’s conclusions that the effects on marine wildlife (particularly whales and seals) would not be significant. - Concerned shipping could impact the reproduction cycle of seals and result in their displacement.
ON	<ul style="list-style-type: none"> - Concerned with the long-term displacement of marine mammals and the ability of Baffinland’s monitoring to measure shipping impacts. - Concerned that there is uncertainty regarding sound disturbance thresholds and effects on narwhals from the marine shipping. - Identified that there is considerable uncertainty about behavioral effects in marine mammals in response to underwater sound, presented analysis that differed from Baffinland’s assumptions, and proposed different impact levels based on research conducted on behalf of ON (J. Jones).
QIA	<ul style="list-style-type: none"> - Shared the concerns of the MHTO and other Intervenors that the incorporation of community observations and feedback in respect of project-shipping is deficient. - Recommended Baffinland provide more information to communities on their shoulder season shipping planning. - Concerned Baffinland has not adequately defined the ice conditions considered by Baffinland to determine when/if project shipping can commence, and recommended the use of consistent definitions with, if available, Inuktitut descriptions and terminology. - Expressed concern about the inconsistency of the marine environment thresholds compared to thresholds in the terrestrial environment, and questioned Baffinland’s exclusion of cortisol level and blubber thickness as indicators. - Concerned about underwater sound impacts on marine mammals and recommended further assessment on disturbance related to ice-breaking activities, ice management, surveys on narwhals, and clarification over the 135 decibel (db) avoidance threshold chosen by the Proponent.
NTI	<ul style="list-style-type: none"> - Supported the submissions of the QIA and the communities about this Valued Ecosystem Component (VEC).

Party	Comments in Summary Form
	<ul style="list-style-type: none"> - Noted specific concerns about the reductions to the narwhal stock in Eclipse Sound and the potential for the Phase 2 Development Proposal to further increase stress on this important stock.
PC	<ul style="list-style-type: none"> - Noted there is uncertainty about the current and potential impacts on narwhals and the consequences of these impacts, such as whether narwhal would abandon the area or if the population would be reduced. - Noted the cultural importance of narwhal for Inuit and the region.
Hamlet of Sanirajak	<ul style="list-style-type: none"> - Shared concerns that residents of Pond Inlet are already seeing impacts with a production of six (6) million tons per year (Mtpa) and shared the concerns of Pond Inlet that the doubling of marine shipping under the Phase 2 Development Proposal would amplify these impacts before the impacts associated with current shipping levels are fully understood.
Clyde River Hamlet	<ul style="list-style-type: none"> - Supported the issues and concerns raised by the MHTO. - Opposed to icebreaking activities.

3.1.2.1 Ballast water and Invasive Species

[Table 11](#) that follows summarizes Intervenor submissions in respect of the potential for ballast water releases and invasive species associated with the Phase 2 Development Proposal to have effects on marine wildlife (including marine mammals, birds, and fish) and the marine environment.

Table 11: Summary of Intervenor Submissions on Ballast Water and Invasive Species

Party	Comments in Summary Form
MHTO, DFO, TC & QIA	<ul style="list-style-type: none"> - Shared concerns that with the increased discharge of ballast water, the risk associated with the introduction of invasive species is also increased.
DFO & MHTO	<ul style="list-style-type: none"> - Recommended Baffinland increase the number of samples taken to detect invasive species in ballast water.

Party	Comments in Summary Form
TC	<ul style="list-style-type: none"> - Recommended the Proponent's Ballast Water Sampling Program be revised to add samples, depending on the intake locations.
DFO	<ul style="list-style-type: none"> - Recommended Baffinland tracks ballast water discharge locations. - Recommended that exchange be carried out prior to treatment for all vessels conducting exchange, plus treatment procedures and required clarification of triggers that would discontinue this treatment. - Clarification regarding how Baffinland would comply with D-2 standards for ballast water discharge. - Prior to the increase shipping associated with the Phase 2 Development Proposal, recommended that a biofouling sampling program be developed. - Recommended that the Proponent update their marine monitoring plan to improve invasive species monitoring and response. - Suggested Baffinland assesses potential biological and ecological effects on the environment associated with potential release of invasive species to develop an early response plan.
QIA	<ul style="list-style-type: none"> - Recommended Baffinland conduct a physical and chemical assessment of the ballast water to inform Baffinland's risk assessment and adaptive management plan. - Recommended the Proponent conduct trials to demonstrate the efficacy of the exchange plus treatment prior to the Phase 2 Development Proposal being authorized to increase shipping. - Recommended Baffinland work with other involved parties to develop an adequate monitoring program and more responsive adaptive management plan. - Requested the Proponent to improve its ballast water management program, to include past and future actions taken if a vessel is found to be out of compliance with federal regulations.
PC	<ul style="list-style-type: none"> - Recommended that all vessels be required to undertake ballast water exchange plus treatment to limit potential for impacts on marine water quality and/or release of invasive species. - Recommended that the Proponent develop early indicators and a rapid response plan. - Recommended that the dispersion model and analysis on ballast water be completed prior to Baffinland increasing shipping under the Phase 2 Development Proposal.

3.1.3 The Freshwater Environment, Water Quality/Quantity, Fish and Fish Habitat

[Table 12](#) that follows summarizes Intervenor submissions in respect of the potential for the Phase 2 Development Proposal to have effects on the freshwater environment, water quality/quantity, fish, and fish habitat.

Table 12: Summary of Intervenor Submissions on the Freshwater Environment

Party	Comments in Summary Form
QIA	<ul style="list-style-type: none"> - Raised concerns that dust emissions are having impacts on the surrounding freshwater, and requested Baffinland adopt an adequate threshold for Arctic char egg survival and a long-term monitoring plan along the Tote Road/North Railway route, near Phillips Creek and Sheardown Lake. - Requested further assessments and surveys of effects on Arctic char due to the fragmentation of their environment and to further collect data on the freshwater habitat of Arctic char. - Expressed concerns about the predicted impacts on water quality, and requested mitigation measures and to define triggers for compensation. - Recommended Baffinland update their Road Management Plan and mitigation measures prior to the Nunavut Water Board’s approval of amendments to the Water Licence for the Phase 2 Project Proposal. - Asked for clarifications on future culverts location and instalments. - Recommended that due to concerns about the effects of the current Mary River Project on the freshwater environment, combined with the Phase 2 Development Proposal, that a new Freshwater Environmental Working Group is required.
MHTO	<ul style="list-style-type: none"> - Identified community concern with respect to impacts to freshwater and ice due to deposition of dust. - Indicated that community members have identified concerns about impacts from the existing Mary River Project on freshwater fish abundance and health.
DFO	<ul style="list-style-type: none"> - Requested Baffinland provide decision criteria for selection of water crossings along the North Railway Route. - To assure suitable fish passage, DFO recommended the Proponent update their hydrological assessment with lessons learned from the current monitoring on the Tote Road.

Party	Comments in Summary Form
	<ul style="list-style-type: none"> – Recommended Baffinland provide more detail in their water withdrawal plan to demonstrate how Baffinland will avoid potential impacts on fish habitat.

3.1.4 The Terrestrial Environment Including Terrestrial Wildlife (Caribou), Land, Vegetation, Permafrost and Landforms

[Table 13](#) that follows summarizes Intervenor submissions in respect of the potential for the Phase 2 Development Proposal to have effects on the terrestrial environment, including terrestrial wildlife, (with a focus on caribou), land, vegetation, permafrost, and landforms.

Table 13: Summary of Intervenor Submissions on the Terrestrial Environment

Party	Comments in Summary Form
ECCC & QIA	<ul style="list-style-type: none"> – Identified concerns about the management of acid rock drainage and metal leaching, and recommended adding more sampling of rock to determine acid generation and metal leaching potential.
NRCan	<ul style="list-style-type: none"> – Due to the presence of permafrost under the railway corridor, NRCan made multiple recommendations to the Proponent to ensure the stability of the railway infrastructure. These recommendations included further mapping, assessment through geotechnical sampling/drilling, instalment of thermistors, and thermal modelling.
CIRNAC	<ul style="list-style-type: none"> – Made recommendations to Baffinland about obtaining additional seismic data, conducting geotechnical investigations along the preferred route of the North Railway, revisions to the <i>Railway Management Plan</i> and thaw assessment risk for the proposed railway infrastructure. – To mitigate potential impacts from Acid Rock Drainage and Metal Leaching, (ARD/ML) CIRNAC recommended monitoring at key locations where concentrations might exceed limits, to develop reliable criteria to identify potentially acid generating rock and requested revisions to the <i>Mine Closure Plan</i>.
WWF	<ul style="list-style-type: none"> – Identified concerns about the North Railway alone, or in combination with the Tote Road, to create a potential barrier to caribou movement and distributions, and recommended further monitoring as well as the development of adequate adaptive management thresholds prior to expansion of the Project as proposed in the Phase 2 Development Proposal.

Party	Comments in Summary Form
GN	<ul style="list-style-type: none"> - Noted concerns about the potential traffic impacts on caribou from the increased trucking of ore along the Tote Road to support the increased production rates while Baffinland constructs the North Railway. - Disagreed with Baffinland’s predictions of the Project’s effect on caribou due to the lack of data and methodology used. - Commented about the GN’s concerns in respect to the embankment design which would prevent permeability of caribou, recommended a gentler slope, the use of finer material, and a regional survey of caribou movement.
MHTO	<ul style="list-style-type: none"> - Indicated that the MHTO remains opposed to the construction and operation of a railway for the transportation of ore. - Indicated that the MHTO is opposed to Baffinland’s preferred routing of the North Railway and noted that the community had identified an alternative routing as a more preferable route, which was rejected by Baffinland. - Recommended additional monitoring with MHTO collaboration on caribou to support greater understanding of the risks to caribou associated with the railway and potential collisions.
QIA	<ul style="list-style-type: none"> - Shared its concerns of the potential effects on caribou from the North Railway. - Provided multiple recommendations to the Proponent including requesting Baffinland conduct a full assessment of alternatives to the current “dogleg” (detour), to develop a regional monitoring program for caribou, to identify crossing locations, and to develop (in consultation with Inuit and other parties on the Terrestrial Environment Working Group) triggers and mitigation measures that apply when caribou are present in the area. - Noted the high degree of uncertainty surrounding impacts on caribou from the railway. - Recommended the involvement of Inuit for the assessment of alternatives to the “dogleg” in Baffinland’s preferred route for the North Railway. - Requested clarification on how land and water use by Inuit was taken into consideration in Baffinland’s selection of the railway routing and selection and design of railway crossings. - Expressed concerns that the Tote Road has not been properly designed and assessed.

Party	Comments in Summary Form
Hamlet of Pond Inlet	<ul style="list-style-type: none"> – Indicated opposition to the railway route chosen by Baffinland as the preferred alternative and suggested that Baffinland consider alternatives.
IWG	<ul style="list-style-type: none"> – Noted that Baffinland’s preferred routing of the North Railway has still not been approved by communities.

3.1.5 Accidents, Malfunctions, and Unplanned Events

[Table 14](#) that follows summarizes Intervenor submissions in respect of the risks of effects resulting from accidents, malfunctions, or unplanned events associated with the Phase 2 Development Proposal.

Table 14: Summary of Intervenor Submissions on Accidents, Malfunctions, and Unplanned Events

Party	Comments in Summary form
WWF	<ul style="list-style-type: none"> – Identified concerns arising from a major heavy fuel oil spill (HFO), noting challenges of containing and remediating such a spill. – Recommended that contracted vessels use lighter distillate fuel. – On the basis of its own study, WWF indicated that it did not agree with Baffinland’s classification of the risks of a potential spill and recommended that the Board should consider the WWF’s classifications of the risks.
ECCC	<ul style="list-style-type: none"> – Recommended that Baffinland conduct oil spill modelling for all scenarios.
TC	<ul style="list-style-type: none"> – Requested updates on the Baffinland’s <i>Spill at Sea Response Plan</i> as a consistent definition of open water, period of fuel shipment, and to demonstrate their ability to respond to an oil spill during fuel transfer.
CIRNAC	<ul style="list-style-type: none"> – Requested updates to the <i>Waste Management Plan, Hazardous Materials Management Plan, Spill Control Plan, and Snow Management Plan</i> by the Proponent. – Requested clarification on the predicted amount of waste and hazardous materials that would be produced and stored on-site.

3.1.6 Adaptive Management, Management Plans and Monitoring Programs

[Table 15](#) that follows summarizes Intervenor submissions in respect of Baffinland’s proposed approach to adaptive management and proposed and existing management plans and monitoring programs.

Table 15: Summary of Intervenor Submissions on Adaptive Management, Management Plans and Monitoring Programs

Party	Comments in Summary Form
NTI, IWG, Arctic Bay Hamlet & Sanirajak HTO	<ul style="list-style-type: none"> - Identified concerns Inuit Qaujimagatunangit has not been sought and applied by Baffinland in: <ul style="list-style-type: none"> o The assessment of the Phase 2 Development Proposal; o The development of thresholds, triggers, and early warning indicators, which are a key component of Baffinland’s adaptive management plans; and o The development and implementation of mitigation and monitoring plans for the current Mary River Project and the Phase 2 Development Proposal.
WWF	<ul style="list-style-type: none"> - Shared concern about the efficacy, transparency, and function of the Working Groups established under the current Project Certificate. - Commented on concerns about deficiencies in the whole monitoring framework, lack of thresholds and data interpretation. - Recommended no increase to current production, transportation, and shipping levels be permitted before a completed monitoring framework for the current Mary River Project is in place. - Expressed concerns about the proposed <i>Adaptive Management Plan</i> which relies in part on the monitoring framework.
ON	<ul style="list-style-type: none"> - Noted disagreement with Baffinland’ choice of the early warning indicators for marine mammals for adaptive management. - ON noted that it did not consider long-term displacement of mammals to be an appropriate indicator.
NITV	<ul style="list-style-type: none"> - Made recommendations to: <ul style="list-style-type: none"> o Enhance community engagement by the Proponent; o Ensure women participate in the community engagement process;

Party	Comments in Summary Form
	<ul style="list-style-type: none"> ○ Facilitate community engagement with multimedia access; and ○ Clarify the participation and purpose of the Working Groups. <ul style="list-style-type: none"> - Suggested Baffinland follow the framework for community engagement of the Mining Association of Canada, as set out in the MAC's publication <i>Towards Sustainable Mining</i>.
QIA	<ul style="list-style-type: none"> - Shared multiple concerns regarding the consultation, interpretation, and integration of Inuit Qaujimajatuqangit into project design, impact assessments, management plans, and monitoring program. - Identified that Baffinland's monitoring data set on the marine environment was not aligned with Inuit Qaujimajatuqangit and required commitments by Baffinland to develop detailed requirements for incorporation of Inuit Qaujimajatuqangit into marine environmental management plans. - Requested update on the Climate Change Strategy Plan and demonstration of how Inuit Qaujimajatuqangit was incorporated into this plan. - Recommended that early warning indicators, and thresholds for critical VECs should be established prior to the Phase 2 Development Proposal proceeding. - Considered the Regional Study Area to not be adequate for assessing impacts on marine mammals and requested the proponent to reassess VECs on marine mammals. - Identified concerns that Baffinland had not yet provided a specific monitoring plan or methodology on monitoring during the railway construction.
DFO	<ul style="list-style-type: none"> - Recommended Baffinland develop a plan for Marine Wildlife Observers to remain on board vessels during shipping season. - Suggested adding narwhal health as an Early Warning Indicator (EWI) and advised that the EWI chosen should be the result of consensus in the Marine Environmental Working Group.
CIRNAC	<ul style="list-style-type: none"> - Noted the importance of incorporating Inuit Qaujimajatuqangit into the assessment and adaptive management process, including providing direction in respect of the adequacy of general baseline data.
Hamlet of Pond Inlet	<ul style="list-style-type: none"> - Indicated Baffinland did not properly engage with communities on the design and management plans for the Phase 2 Development and did not

Party	Comments in Summary Form
	<p>follow the four (4) relevant principles of the Arctic Council and its Sustainable Development Working Group.</p>
MHTO	<ul style="list-style-type: none"> - Disagreed with Baffinland’s findings of “not significant” impacts on narwhals and caribou, and noted that there is a significant gap between how Inuit and Baffinland interpret “significance”. - Recommended Inuit involvement and consideration of Inuit Qaujimagatuqangit in Baffinland’s determination of “significance” in the development of thresholds and indicators, in the development of effective mitigation plans, and in the development and implementation of monitoring programs. - Noted that the MHTO does not have sufficient funding to participate fully in working groups and monitoring programs.
PC	<ul style="list-style-type: none"> - Recommended that monitoring plans be reviewed by DFO prior to submission to the Marine Environment Working Group (MEWG).
IWG	<ul style="list-style-type: none"> - Identified concerns that early warning indicators and baseline data are inadequate to properly mitigate and monitor environmental impacts. - Also indicated the IWG shared concerns that the adaptive management plan for the current Mary River Project has still not been developed.
Arctic Bay Hamlet	<ul style="list-style-type: none"> - Shared wildlife observations that differ from Baffinland’s monitoring results. - Recommended using the precautionary principle to protect livelihoods and Inuit rights.
Clyde River	<ul style="list-style-type: none"> - Shared that there is a discrepancy between Inuit observation and Baffinland’s conclusions on environmental changes associated with the current Mary River Project. - Expressed doubt that the proposed Adaptive Management Plan will resolve the uncertainties in the assessment of effects for the Phase 2 Development Proposal. - Noted concerns that the monitoring plan would not be adequate to capture the regional effects of the Proposal. - Recommended that monitoring of cortisol levels in narwhal be integrated into the monitoring plan.

3.1.7 Transboundary Effects

[Table 16](#) that follows summarizes Intervenor submissions in respect of the potential for the Phase 2 Development Proposal to have transboundary effects on marine wildlife (including marine mammals, birds, and fish) and the marine environment, and includes the comment summaries provided by the Qikiqtani Inuit Association, Oceans North, and the World Wildlife Fund in response to the Espoo Materials⁶² discussed in [Section 1.7.1.1](#).

Table 16: Summary of Intervenor Submissions on Transboundary Effects

Party	Comments in Summary Form
QIA	<ul style="list-style-type: none"> - Indicated that questions and concerns about transboundary effects expressed in the Espoo Materials align with concerns expressed by the QIA and impacted Inuit Communities during the NIRB’s assessment. - Identified gaps in the assessment of cumulative and transboundary effects for the Proposal to date. - Questioned the adequacy of baseline studies. - Indicated concern with the efficacy of proposed monitoring programs. - Indicated questions and concerns remain with respect to: <ul style="list-style-type: none"> o Project impacts on migratory marine wildlife, including noise impacts specifically; o Spill prevention; o Black carbon impacts; and o Impacts on Inuit harvesting and cultural rights. - Highlighted the need for the NIRB and the Minister to consider any assessment gaps in determining transboundary effects when making decisions about the Phase 2 Development Proposal.
WWF	<ul style="list-style-type: none"> - Concerns about transboundary effects raised by WWF’s counterpart in Greenland and communities and agencies in Greenland are wide-ranging and substantive. - Noted that Baffinland’s assessment is deficient and does not properly address transboundary impacts from the Phase 2 Development Proposal. - Recommended that if the Phase 2 Proposal is approved to proceed, additional work and review is required to study and determine transboundary impacts in order to fulfill the NIRB’s obligations to consider

⁶² See the Qikiqtani Inuit Association (QIA) (Doc ID No : 337480), World Wildlife Fund (WWF) (Doc ID No. 337481) and Oceans North (ON) (Doc ID No. 337479).

Party	Comments in Summary Form
	transboundary effects as set out under Article 12, Part 6 of the <i>Nunavut Agreement</i> .
ON	<ul style="list-style-type: none"> - Reiterated that ON shares the concerns in the Oceans North (Greenland) submission in the Espoo Materials ⁶³ - Expressed the view that the Proponent's lack of transparency regarding known and anticipated impacts, and in particular regarding the full scale of the project, contemplated by the Proponent has presented an incomplete picture as to the potential impacts which makes it impossible for regulators and citizens in Canada and Greenland to properly assess the cumulative effects of the Proposal.

3.1.8 Cumulative Effects

[Table 17](#) that follows summarizes Intervenor submissions in respect of the potential for the Phase 2 Development Proposal to have cumulative effects.

Table 17: Summary of Intervenor Submissions on Cumulative Effects

Party	Comments in Summary Form
QIA & Clyde River Hamlet	<ul style="list-style-type: none"> - Identified the concern that the North Railway, when combined with the South Railway, will create a barrier to caribou movement because the railways will transect Baffin Island.
DFO	<ul style="list-style-type: none"> - To understand combined impacts on marine mammals, DFO recommended a thorough analysis and assessment on project activities inside and outside of the Regional Study Area.
GN	<ul style="list-style-type: none"> - Concerned about the Cumulative Effect Assessment done by Baffinland on caribou. Requested further research and monitoring on the zone of influence, disturbance coefficients, and resource selection probability function.
ON	<ul style="list-style-type: none"> - Shared concerns that the cumulative effects of shipping will result in the potential abandonment of the area by narwhals.

⁶³ (Doc ID No. 337226) and see the summary of these submissions prepared by the Board for the convenience of reviewers in [Table 3: Summary of Espoo Materials Filed with the Board](#).

Party	Comments in Summary Form
QIA	<ul style="list-style-type: none"> - Concerned with the cumulative effects assessment made by the Proponent and the absence of consideration of climate change as a factor in the analysis of cumulative effects. - Requested that prior to Phase 2 shipping, Baffinland identify and implement mitigation and adaptive management measures to avoid impacts on marine mammals outside the Regional Study Area.

3.1.9 Proponent's Response

Prior to the Reconvened Public Hearing, Baffinland provided an updated commitment list noting the status of resolved and outstanding issues in respect of the ecosystemic effects as of January 2022:

- 170 technical issues resolved (78% of the technical comments received);
- Five (5) determined as partially resolved; and
- 20 of parties' technical concerns remain outstanding and may require NIRB involvement in determining resolution.

Baffinland's Final list of commitments includes 258 commitments (see [APPENDIX C](#) and [APPENDIX D](#)) to parties to address outstanding issues, comments, and questions raised by interested parties including the affected communities regarding the proposed Project.

Table 18: Summary of Baffinland's Responses to Comments about Ecosystemic Effects

Party	Baffinland Response Summary
Air quality	
ECCC, WWF & HC	<ul style="list-style-type: none"> - To review options to reduce nitrogen dioxide (NO₂) emissions and to be included in the first air quality report. - New equipment procurement will meet Tier 4 standard or better.
ECCC & WWF	<ul style="list-style-type: none"> - Will continue to work with reputable operators and to comply with emissions regulations.
ECCC	<ul style="list-style-type: none"> - Baffinland is a member of the Mining Association of Canada which has been working on heavy fuel oil (HFO) ban in Arctic waters. - Further air quality monitoring data will be compared to relevant data set. - To update the Air Quality and Noise Abatement Plan with all items.

Party	Baffinland Response Summary
WWF	<ul style="list-style-type: none"> – Committed to develop a Climate Change Strategy including effort in reducing greenhouse gas.
QIA	<ul style="list-style-type: none"> – Committed to extend the dust monitoring program.
HC	<ul style="list-style-type: none"> – Mitigation measures for air pollutants are addressed in the Air Quality and Noise Abatement Management Plan.
MHTO	<ul style="list-style-type: none"> – The iron concentration in the environment is under the acceptable limit.
Marine Wildlife and the Marine Environment	
DFO & PC	<ul style="list-style-type: none"> – The number of vessels transits and assessment are included in the FEIS, plus no vessel strikes with marine mammals have been reported since operations began. – Baffinland is committed to opening an end-of-season aerial survey, a method to monitor ice entrapment. – Assessment of shoulder season shipping is presented in the FEIS with multiple mitigations measures to minimize impacts. – Acoustic modeling is assessed in the Marine Monitoring Technical Memo⁶⁴ and discussed with the MEWG.
WWF	<ul style="list-style-type: none"> – A Marine Spatial Plan is associated with land use planning and outside of impact assessment practices.
MHTO	<ul style="list-style-type: none"> – Baffinland communicates its shipping plan to MHTO prior to the start of the shipping season and committed to not break landfast ice. – Assessment of vessels’ size and number is part of the FEIS.
ON	<ul style="list-style-type: none"> – Early Warning Indicator are being developed with the MEWG and abundance is under consideration. – Baffinland monitors underwater sound and assessed that no population-level effects are anticipated.
QIA	<ul style="list-style-type: none"> – Communication to communities is detailed in the Communication Protocol part of the Phase 2 submission and other channels are in place to engage other parties. – Baffinland will assure key terminology is translated into Inuktitut. – Marine thresholds and EWI will be addressed in the Inuit Advisory Panel as part of the Phase 2 Proposal.

⁶⁴ (Doc. ID No. 327144) Attachment 4: 2019 Marine Monitoring Update Memo.

Party	Baffinland Response Summary
	<ul style="list-style-type: none"> - The origin of the 135 decibel (db) is based on noise level tolerated from bowhead whales.
Ballast water and invasive species	
MHTO, DFO, TC & QIA	<ul style="list-style-type: none"> - Requirement will be in place for all vessels to treat their ballast water under the D-2 standard and perform exchange prior to treatment. Baffinland is confident that this requirement will reduce risk of invasive species introduction.
DFO MHTO	<ul style="list-style-type: none"> - Baffinland committed to update the Marine Monitoring Plan, which will include increased sampling effort.
TC	<ul style="list-style-type: none"> - Current ballast water sampling already exceeds federal guidelines.
DFO & PC	<ul style="list-style-type: none"> - Baffinland will track discharge locations at the anchorage locations. - The exchange plus treatment could be discontinued if benefits are negligible, if discontinued Baffinland will update the ballast water dispersion modelling. - Baffinland will monitor ballast water discharges for compliance with D-2 regulations in accordance with the TC guidelines. - Committed to conduct ship hull biofouling monitoring surveys. - A draft Rapid Response Plan was shared with DFO for review.
QIA	<ul style="list-style-type: none"> - Baffinland will continue to randomly sample one (1) tank of each vessel for temperature and salinity. Biological sampling is conducted in the receiving environment. Its management plan is reviewed by the MEWG. - A pilot program on open water exchange will be conducted. - A vessel ballast water non-compliance will be communicated to TC.
The Freshwater Environment	
QIA	<ul style="list-style-type: none"> - Baffinland monitors water quality at select fisheries crossing, and if an effect is monitored the program will be expanded to Philips Creek. No meaningful sedimentation threshold base on Arctic char egg survival is established. - The Aquatic Effects Monitoring Program measures Arctic char's health. - Discussion on the Water Compensation Agreement have been engaged. - The water license will be adjusted to align the evaluation outlined in the Roads Management Plan.

Party	Baffinland Response Summary
	<ul style="list-style-type: none"> – Baffinland has conducted habitat assessment to determine fish presence/absence along the rail in relation to associated infrastructure.
DFO	<ul style="list-style-type: none"> – A decision criteria and matrix will be provided for the selection of water crossings. – Committed to analyze monitoring reports related to the Tote Road existing watercourses and list lessons learned. – A water withdrawal plan will include a risk analysis.
The Terrestrial Environment	
ECCC & QIA	<ul style="list-style-type: none"> – To update the Waste Rock Management Plan
NRCan	<ul style="list-style-type: none"> – Baffinland has committed to implement NRCan’s recommendations.
CIRNAC	<ul style="list-style-type: none"> – A supplemental thaw assessment risk was submitted. – Responses related to waste rock and/or acid rock drainage and/or metal leaching will be provided the Nunavut Water Board.
WWF	<ul style="list-style-type: none"> – Current available data on caribou is inadequate to define impacts on caribou and Inuit Qaujimagatunqangit represents the primary source of data. A memorandum of understanding is being developed with the GN to support caribou research.
GN	<ul style="list-style-type: none"> – The project description for Phase 2 described the short-term duration of trucking over six (6) Mtpa. – Collaborative work with the GN is ongoing to develop a caribou research monitoring program. – The embankment was designed with best available information including Inuit input.
MHTO, Hamlet of Pond Inlet & QIA	<ul style="list-style-type: none"> – Baffinland is committed to the railway to facilitate bulk transportation and the route selection was selected based on feasibility and community consultations. – Further caribou research will take place in collaboration with the GN.
QIA	<ul style="list-style-type: none"> – Assessment on caribou and mitigation measures are explained in Baffinland report EDI, 2019⁶⁵.

⁶⁵ (Doc. ID No. 327140) Baffinland FWS response Appendix C, The Qikiqtani Inuit Association.

Party	Baffinland Response Summary
	<ul style="list-style-type: none"> - The Rail Alignment Summary Report contents information about Inuit land and water usage along the rail route. - The Tote Road is continually managed and monitored.
Accidents, Malfunctions, and Unplanned Events	
WWF, ECCC & TC	<ul style="list-style-type: none"> - Baffinland is committed to conduct additional Arctic diesel fuel spill modelling and will update its <i>Spill at Sea Respond Plan</i> with recommended changes.
CIRNAC	<ul style="list-style-type: none"> - Updates were made on specific management plan requested by CIRNAC. - Information related to hazardous waste is included in the <i>Hazardous Materials and Hazardous Waste Management Plan</i>.
Adaptive Management, Management Plans and Monitoring Programs	
NTI, IWG, Arctic Bay Hamlet & Sanirajak HTO	<ul style="list-style-type: none"> - Concerned with the used and incorporation of Inuit Qaujimagatuqangit into the project assessment.
WWF	<ul style="list-style-type: none"> - Terms of References of the working groups are drafted and being reviewed. - Indicators for all VECs and VSECs are part of Baffinland’s monitoring program and were identified in consultation with Project Stakeholders. - Baffinland’s approach to monitoring is outline in its Management and Monitoring Plans for the project.
ON, QIA & DFO	<ul style="list-style-type: none"> - Early Warning Indicators are actively developed with the MEWG.
QIA	<ul style="list-style-type: none"> - Baffinland has considered the Tusaqtuvut Report by QIA into the design of the Phase 2 Development Proposal. - Marine Environmental Management Plan is discussed with the MEWG which includes the MHTO, a source of knowledge for planning and interpreting results. - Baffinland will update its Climate Change Strategy Plan.

Party	Baffinland Response Summary
	<ul style="list-style-type: none"> – Baffinland considers the creation of the Inuit Advisory Panel as part of Phase 2 critical to address concerns about the integration of Inuit Qaujimajatuqangit and development of monitoring and management plans. – A geotechnical monitoring program will be in place for the railway construction.
DFO	<ul style="list-style-type: none"> – Marine Wildlife Observers will be present during shoulder season, and Baffinland will submit literature for marine mammal remote monitoring system.
CIRNAC	<ul style="list-style-type: none"> – The adequacy of baseline data was presented in Technical Supporting Document as part of Baffinland FEIS.⁶⁶
Hamlet of Pond Inlet	<ul style="list-style-type: none"> – Baffinland consulted communities at multiple times and a list of consultations is available in its Final Written Response Appendix A.⁶⁷
MHTO	<ul style="list-style-type: none"> – The new Inuit Advisory Panel and Inuit Qaujimajatuqangit Framework will help integrate information and interpret what consist of “significant”. This Panel will also advise the development of monitoring programs. – Baffinland committed to providing additional funding for community based monitoring.
PC	<ul style="list-style-type: none"> – The functionality of the Working Groups and updates of Terms of Reference have been ongoing since 2019.
Cumulative Effects	
QIA, Clyde River Hamlet & GN	<ul style="list-style-type: none"> – Multiple scenarios were assessed by Baffinland to predict cumulative effects on caribou and a memorandum of understanding related to regional caribou will be developed in collaboration with the GN.
DFO	<ul style="list-style-type: none"> – A detailed environmental assessment of potential impacts on marine environment and marine mammal VECs in the RSA has been undertaken by Baffinland.

⁶⁶ (Doc. ID No. 320585) Baffinland TSD 25 Socio-Economic Assessment.

⁶⁷ (Doc. ID No. 327140) Baffinland, Part 1 Response to FWS.

Party	Baffinland Response Summary
ON	<ul style="list-style-type: none"> – Key mitigation measures to minimize effects on narwhals from shipping operation have been developed.
QIA	<ul style="list-style-type: none"> – Climate change has been considered into the cumulative impact assessment for Phase 2. – Technical Supporting Document 27⁶⁸ part of the FEIS presented the assessment on cumulative impacts.

3.2 Summary of Intervenor Submissions in Respect of Socio-Economic Effects

For the convenience of reviewers, the Board has prepared the summary Tables that follow to provide a high-level summary of the comments/issues/concerns contained in the Intervenor’s submissions in respect of the assessment of the potential socio-economic effects associated with the Phase 2 Development Proposal. Reviewers should be aware, however, that the summaries are provided for reviewers’ convenience only and are not exhaustive. Parties wishing to gain a full understanding of Intervenor’s submissions are encouraged to review the materials provided in their entirety from the NIRB’s Public Registry using the applicable Doc ID Nos. referenced in [Table 8: Key Technical Submissions for the Phase 2 Development Proposal](#). All Intervenor submissions can be accessed through NIRB’s Public Registry at www.nirb.ca/project/124701. The Board emphasizes that the Board’s decision-making was based on their consideration of all relevant content in the parties’ submissions, and was not confined to only the comments/issues/concerns listed in the summary tables that follow.

3.2.1 Livelihood & Employment

Table 19: Summary of Intervenor Submissions in respect to Livelihood and Employment Concerns

Party	Comments in Summary Form
Hamlet of Pond Inlet, Clyde River	<ul style="list-style-type: none"> – Shared concerns that Baffinland can deliver on the predicted levels of Inuit employment. – Concerns about employment security for Inuit employees, noting particular concerns about the impact on Inuit truckers related to the road-to-rail transition.

⁶⁸ (Doc. ID No. 320607) Baffinland TSD 25 Socio-Economic Assessment.

Party	Comments in Summary Form
Hamlet & ON	<ul style="list-style-type: none"> - Concerns were expressed that potential employees have to leave their communities to obtain work or to train outside of the communities to maintain employment.
Hamlet of Pond Inlet	<ul style="list-style-type: none"> - Noticed the benefits described by the Proponent are based on Qallunaat culture. - Noted the lack of employment readiness does not explain the low number of Inuit employment, and Baffinland did not consult with youth to address barriers to their employment. - Disagreed with the Phase 2 Development Proposal proposed employment benefits. - Noted there was a lack of Baffinland on how Inuit money is not held by the person but dispersed among family. - Noticed limited insights on residual effects from fly-in fly-out jobs on communities. - Noted that Inuit on average are paid lower wages.
ON	<ul style="list-style-type: none"> - Concerned about the future opportunity losses with the expansion due to the absent Inuit labor force.
NITV	<ul style="list-style-type: none"> - Recommended the Socio-Economic Monitoring Working Group be considered on the same level as the other working groups. - Concerns about the Inuit working conditions, and that a rise of salary will increase rent and result in a reduced income.
Clyde River Hamlet	<ul style="list-style-type: none"> - Unconvinced that Baffinland's predictions that Inuit employment would increase under the Phase 2 Development Proposal are accurate.
Sanirajak HTO	<ul style="list-style-type: none"> - Concerned with the lack of employment and possible opportunities in Sanirajak with Phase 2 Development.
Hamlet of Igloolik	<ul style="list-style-type: none"> - Request GN and Baffinland collaboration to find a solution to Nunavut Housing Corporation's practice of increasing rent to reflect employee salaries.

3.2.2 Inuit Harvesting and Traditional Land Use

Table 20: Summary of Intervenor Submissions In Respect of Inuit Harvesting and Traditional Land-Use Concerns

Party	Comments in Summary Form
NTI, MHTO & Clyde River HTO	<ul style="list-style-type: none"> - Worried that project impacts on wildlife could negatively affect harvest activities which Inuit rely on, originating from production increases and how it related to operational flexibility.
Hamlet of Pond Inlet	<ul style="list-style-type: none"> - Supported the Tusaqtuvut report conclusion by the QIA where impacts on Culture, Resources, and Land Use are “significant”. - Concerned the project impacts would alter the Inuit lifestyle and livelihood that are land-based.
QIA	<ul style="list-style-type: none"> - Requested commitments relating to the following: - The lack of data collection and Inuit Qaujimajatuqangit to support the effects of culture, resources, and land use. Recommended further assessment with a broader demography and the implementation of an Inuit committee to look after this process. - Questioned the validity of Baffinland’s study on cultural plants and requested it be reassessed with communities, - Considered a lack of assessment done on sensory and physical factor on the proposed project, QIA recommended expanding IQ assessment to include smell, visual, and noise factors, plus funding a Cultural Resource and Land Use monitoring program. - Noted the inadequacy of risk assessment on the Inuit Culture and Land Use as resulting from possible accidents. - Requested an ongoing monitoring on Culture, Resource and Land Use for the life of the Project. - Shared concern with the railway fracturing essential travel route and camping location. - Described the iron dust deposit on the land as another factor of stress for harvesters. - Requested terms of reference for all working groups and a commitment to support (pending community support) a regional Inuit Qaujimajatuqangit-based approach for monitoring North Baffin caribou, and local monitoring for caribou interactions.
Clyde River Hamlet	<ul style="list-style-type: none"> - Concerned that the compensation measures for harvesters would not balance negative impacts from the current Project and the Phase 2 Development Proposal.

3.2.3 Food Security

Table 21: Summary of Intervenor Submissions in Respect of Food Security

Party	Comments in Summary Form
QIA	<ul style="list-style-type: none"> - Disagreed with the Proponent’s conclusion on what level of income would increase food security and considered the long-term effect assessment of food sources lacking. - Recommended further collaborative work with impacted communities to track food security. - Requested Baffinland to develop and fund a Cultural Resource and Land Use Risk Communication Strategy/Program with Inuit.
Hamlet of Pond Inlet	<ul style="list-style-type: none"> - Concerned that income increase would not necessarily mean an increase in food security, and that it could be spent on other goods and could increase family tension.

3.2.4 Railway and Safety of Community Members

Table 22: Summary of Intervenor in Respect of Railway and Safety of Community Member Concerns

Party	Comments in Summary Form
GN	<p>Proposed commitments specifying:</p> <ul style="list-style-type: none"> - Recommendation to develop a clear Safety Protocol and Communication Plan and to include updates to the Hunter and Visitor Site Access Procedures as part of the Road Management Plan and Rail Management Plan to ensure public safety.
TC	<ul style="list-style-type: none"> - Due to the lack of explicit provisions in the <i>Railway Act</i> on protection of wildlife, TC shared concern about potential risks to caribou and suggested considering effects of train whistling and wildlife crossing in the review process.

3.2.5 Training, Business Opportunities, and Contracts

Table 23: Summary of Intervenor Submissions in Respect of Training, Business Opportunities, and Contracting Concerns

Party	Comments in Summary Form
Hamlet of Pond Inlet	<ul style="list-style-type: none"> - Concerned about Baffinland’s level of understanding of youth reality, challenges, and career interests, to support their employment objectives. - Noted the difficulty of Inuit to take part in training programs due to life challenges and obstacles. - Mentioned the low percentage of Inuit working for Baffinland getting a promotion. - Shared concerns with the work-ready and apprenticeship programs.
Hamlet of Igloolik	<ul style="list-style-type: none"> - Information request asking Baffinland to explain how contracting benefits Inuit and how benefits are seen by communities.
QIA	<p>Noted concerns and data gaps while committing to address concerns collaboratively through a revised Inuit Impact and Benefits Agreement (IIBA) detailing the following:</p> <ul style="list-style-type: none"> - Concerns about the socio-economic assessment and how Inuit would benefit from the project. - Recommended collaborative work to develop an Inuit Training Plan that covers proposed construction and the first three (3) years of operations. - Disagreed with the assessment of positive effects from previous amendments to the Mary River Project under the Phase 2 Development Proposal, and noted that the Phase 2 Development Proposal should be considered as a distinct project. - Concerned that the adaptive management triggers on socio-economic are not defined.

3.2.6 Proponent's Response

Throughout the NIRB’s assessment of the Phase 2 Development Proposal, Baffinland provided written response to intervenor’s submissions. In response to the Inuit Certainty Agreement (ICA) concerns, the Proponent explained that the agreement was designed to ensure that there was Inuit control and oversight over project monitoring, mitigation and adaptive management, direct community benefits, and new or expanded programs for Inuit in impacted communities. The ICA contains formal accountability employment goals and how Inuit would benefit directly through a

Community Direct Benefits Fund in response to the expressed hesitancy from communities. Baffinland further indicated the commitment to support the development and operation of an Inuit Stewardship Plan, to be led by the QIA and would include input from the proposed Inuit Committee, which would help form the framework for Inuit-led monitoring and community acceptability thresholds. Baffinland further clarified that the Culture, Resource, and Land-Use Monitoring Program, previously proposed as Baffinland-led, would be led by the QIA and the Inuit Committee. [Table 23](#) describes the formal responses to concerns collected throughout the process. However, due to comments revolving around accountability and expressed mistrust to commitments, many concerns were considered within the development of the ICA for formal documentation. There were concerns expressing doubt of the enforceability of the ICA, where the QIA confirmed responsibility of enforcement, however indicated the significance of community acceptability in decision-making.

Table 24: Summary of Baffinland’s Responses to Intervenors’ Comments on Socio-Economic Effects

Party	Baffinland Response Summary
Livelihood and Employment	
Hamlet of Pond Inlet and Clyde River, and ON	<ul style="list-style-type: none"> - In response to concerns, Baffinland committed to 27 new positions for all impacted communities; all 27 positions would be community-based, and would include the following additional positions: a Baffinland Community Liaison Officer (BCLO), Inuit Qaujimagatuqangit Advisor, Community Resource, Coordinator, Inuit Success Team Advisor, Community Counselor, Trainer, and Office Manager.
* Sanirajak HTO, Hamlet of Clyde River, and ON	<ul style="list-style-type: none"> - Baffinland committed that Pond Inlet would have an additional BCLO and a Community Monitoring Coordinator as the most impacted community (APPENDIX E, Commitment 245). - Other concerns were addressed within ICA Commitments.
GN	<ul style="list-style-type: none"> - Baffinland supports concepts and intentions in principle; proposed commitments rather than terms and conditions relating to all concerns and proposed modified commitment wording for opportunities. - Baffinland noted how issues related to employee safety are taken seriously by describing a no tolerance policy that extends to contractors. Explained existing processes in addition to commitments to address sexual harassment, and the development of the Arnait Action Plan with the QIA that includes measurable goals and

Party	Baffinland Response Summary
Food Security	
HC	<ul style="list-style-type: none"> – Agreed, and noted that specific wording can be agreed upon with HC.
QIA	<ul style="list-style-type: none"> – Submitted updates to food security on the public record while indicating existing terms and conditions that address concerns, other related work that addresses concerns, and committed to developing a Risk Communication Strategy.
*Hamlet of Pond Inlet	<p>Description of Commitment 246 (APPENDIX E) within the Disposition Table and Commitment List and related to Inuit Harvesting and Traditional Land-Use concerns:</p> <ul style="list-style-type: none"> – Additional annual funding per ore carrier to the Tasluqtilt Working Group, indexed against consumer price that will not change seasonally, to harvest and supply country food to residents as agreed by the MHTO and Hamlet of Pond Inlet.
Railway and Safety of Community Members	
GN	Proposed modified commitment wording to include information obtained from the caribou crossing workshop, that had representatives from communities, the GN, and the QIA, into the recommended plans.
TC	In response to TC comments, Baffinland restated a response regarding train whistles as it relates to conflicts between trains and caribou, indicating that Rule 14 of the Canadian Rail Operating Rules can potentially reduce impact on wildlife from noise and provided a reference to the complete list of Baffinland’s caribou protection measures.
Training, Business Opportunities, and Contracts	
Hamlet of Pond Inlet	Baffinland committed to a community garage pilot project in Sanirajak for apprentice mechanics and high school co-op student opportunities to further skill development and address service gaps in the community; garage or equivalent projects would be constructed in the other impacted communities to address community specific needs after the pilot project is completed.
QIA	Clarified the submission of relevant documents into the reconsideration process to demonstrate positive benefits for Inuit, how adverse effects would

Party	Baffinland Response Summary
	<p>be addressed, and reiterated that the Socio-Economic Assessment (TSD 25) indicating details are sufficient for NIRB review. Other clarifications included:</p> <ul style="list-style-type: none"> - Indicated how the IIBA acts as the guiding document for operations; agrees to collaborative through a revised IIBA to include listed concerns. - Notes positive effects from approved project is applicable for consideration as they are expected to continue with greater certainty; Phase 2-based benefits would also occur with greater certainty due to greater economic stability for the project. - Commitment to develop socio-economic monitoring thresholds and actions in consultation with the Mary River Socio-Economic Monitoring Working Group and would be reflective in an updated Socio-Economic Monitoring Plan.

Note. * Indicates where Proponent responses are written to address concerns from multiple parties.

3.3 Other Issues Considered by the Board

Throughout the NIRB’s assessment of the Phase 2 Development Proposal, other issues were considered and collected and were often elaborated verbally by community members and representatives. Other issues related to the establishment of the Conservation Area, working relationships, and economics of the project were considered overarching and had an influence upon both ecosystem and socio-economic valued components.

3.3.1 Establishment of Conservation Area

The establishment of the Tallurutiup Imanga National Marine Conservation Area (Conservation Area) was a collaborative effort between Inuit, Parks Canada (PC), Fisheries and Oceans Canada (DFO), Transport Canada (TC), and the Government of Nunavut. To address uncertainties, PC recommended the following to ensure protection and conservation:

- Baffinland work closely with DFO and incorporate Inuit Qaujimajatuqangit to review uncertainties related to the increased level of shipping from the proposed number of project vessels.
- Shipping season should only occur during open water. The Proponent should define ‘open water’ as the Polar Code definition where sea ice is present in a concentration of 1/10.
- If icebreaking and shipping would happen outside of a defined non-open water season, the Proponent should work with DFO and incorporate Inuit Qaujimajatuqangit to identify conditions in which it could occur.

- Baffinland consider alternative options for shipping through Steensby Inlet.

Community Representatives and members of the public expressed pride in the recognition of the area, and concerns revolved around requested assurances to PC and other authorizing agencies to maintain founding principles, such as the precautionary principle. There were also several clarifications requested regarding the management of the Conservation Area, how it related to Baffinland’s operations, and how it was considered a separate project. Considerations of the Conservation Area in context to the Phase 2 proposal were directed to the working relations within the Marine Environmental Working Group, discussed within [Section 5.1.1.7](#).

3.3.2 Working Relationships

Table 25: Summary of Intervenor Submissions with Respect to Working Relationships

Party	Comments in Summary Form
Hamlet of Pond Inlet	<ul style="list-style-type: none"> - Concerned about the communities’ engagement methodology regarding ethical practices and perceived dismissal of concerns. - Noted that the Proponent’s approach to consultation was limited and that Inuit did not feel comfortable and confident that their participation would be incorporated.
ON	<ul style="list-style-type: none"> - Lack of transparency on future development. - Low confidence with proposed monitoring plans presented. - Lack of trust in the assessment process for the Phase 2 Development Proposal, noting that Baffinland’s previous modification under the Production Increase Proposal went forward despite the NIRB’s recommendation that the Production Increase Proposal not proceed; - Criticized the NIRB’S intervenor submission and review timeline; indicating that the timelines did not allow Intervenors to have adequate time to fully review and respond to Baffinland’s submissions. - Lack of trust in the projected transit number presented by Baffinland to ship the desired volume of iron ore.
IWG	<ul style="list-style-type: none"> - Shared their discontent over the NIRB process on the Steensby Inlet approval and ongoing procedure for the Phase 2 Development Proposal.
Arctic Bay	<ul style="list-style-type: none"> - Criticized the NIRB that its process did not fully hear Inuit concerns.

Party	Comments in Summary Form
Hamlet of Sanirajak	<ul style="list-style-type: none"> – Unconvinced that the QIA and Baffinland have reached an agreement which reflects resolution of technical issues.
Clyde River Hamlet	<ul style="list-style-type: none"> – Worried about the Working Groups’ lack of transparency and management of the groups by Baffinland.
Sanirajak HTO	<ul style="list-style-type: none"> – Shared feeling that Inuit are neglected in decision-making processes and during the consultation by the QIA for the ICA.
NITV	<ul style="list-style-type: none"> – Doubt regarding financial benefits as it remains difficult to validate this information; worried Inuit are not being told the truth.

3.3.3 Economics of the Phase 2 Development Proposal

Table 26: Summary of Intervenor Submissions in Respect of Economics of Phase 2

Party	Comments in Summary Form
Hamlet of Pond Inlet & ON	<ul style="list-style-type: none"> – Shared concerns over declining Inuit benefits per ton and expect the decrease to continue with Phase 2 Development.
ON	<ul style="list-style-type: none"> – Questioned Baffinland’s claim that the expansion is needed to sustain the Project, and noted the lack of evidence to back up its conclusion. – Based on the OpenOil report, ON noted the level of production of the current Mary River Project is profitable.
Hamlet of Pond Inlet & MHTO	<ul style="list-style-type: none"> – Concerned the Phase 2 Development Proposal would not bring self-reliance to communities and noted Baffinland has not provided information towards this objective. – Noted their review of publicly available information indicates the Mine is viable at the production and shipping rates under the current Mary River Project. – Mentioned the reduction of employment and fuel tax associated with the Phase 2 Development Proposal might affect the GN’s revenue.

Party	Comments in Summary Form
	<ul style="list-style-type: none"> - Demonstrated the value of narwhals could represent around \$2.3 million a year compared to the earned wage by Mittimatalingmiut for Baffinland of around \$2.9 million a year.
NTI	<ul style="list-style-type: none"> - Concerned this economic development does not align with objectives of Inuit-owned land to provide rights and promote economic self-sufficiency.

3.3.4 Proponent's Response

Table 27: Summary of Baffinland's Responses to Intervenors' Comments on Working Relationships and Economics of the Phase 2 Development Proposal

Party	Baffinland Response Summary
Working Relationships	
Hamlet of Pond Inlet & MHTO	<ul style="list-style-type: none"> - The Hamlet of Pond Inlet has requested the development of community specific engagement guidelines to better improve consultation with each community. This is Considered unresolved by the Proponent; however, the Proposed has committed to further development of these guidelines under the Phase 2 Development Proposal. The full response is available in within APPENDIX E (MHTO-2b).
Economics of the Phase 2 Development Proposal	
Hamlet of Pond Inlet & ON	Additional annual funding per ore carrier to the Tasluqtilt Working Group, indexed against consumer price that would not change seasonally, to harvest and supply country food to residents as agreed by the MHTO and Hamlet of Pond Inlet.
ON	The full response is available in APPENDIX E (MHTO-4b and 4c).

4 CONSULTATION OPPORTUNITIES

4.1 Public Consultation

As set out in s. 112(4) of the *NuPPAA*, the Board has the discretion to develop the appropriate process and procedure when conducting a reconsideration of Project Certificate terms and conditions. The Board's process for conducting the reconsideration included soliciting and

receiving written comments from interested members of the public, in addition to hosting a Community Information Session in the communities of Pond Inlet, Igloolik, Hall Beach, Resolute Bay, Arctic Bay, Grise Fiord, and Clyde River between January 15 and 29, 2019. In addition, a Community Roundtable was held in Iqaluit in September 2020 and several Public Hearings were held in Iqaluit and Pond Inlet that included remote participation options through toll-free telephone and video. These Public Hearing sessions included technical sessions and focused Community Roundtable sessions with representation from community members from Pond Inlet, Igloolik, Hall Beach, Resolute Bay, Arctic Bay, Grise Fiord, and Clyde River. In addition to Community Roundtables, Elders frequently requested to speak and were granted permission throughout the technical sessions.

Summaries of Public comments received during the Community Tour in January 2019 can be found in the Board’s Community Information Sessions Summary Report (Doc ID: 324849). Further summaries of Public comments from the Board’s Community Roundtable in September 2020 can be found in the Board’s Pre-Hearing Conference Decision Report (Doc ID: 331868).

[Table 28](#) below gives a summary of some of the key issues raised by members of the public and Community Representatives. Anyone wishing to review the comments in full is invited to consult the Public Hearing Transcript.⁶⁹

Table 28: Summary of Key Issues Raised by Community Representatives and Members of the Public During the Community Roundtable Sessions of the Public Hearing

Subject	Issues/Concerns/Comments
ECOSYSTEMIC EFFECTS	
Acoustic Effects	Inuit know that the weather tends to dictate how the sounds travel. We have seen that sound may travel farther underwater when the ice is first breaking up, which may be at the start of the shipping season; has Baffinland considered this when considering the potential effects of shipping noise underwater?
Adaptive Management	If Baffinland takes a long time to respond to the effects that have already been identified by hunters, how can hunters believe that adaptive management of the effects of the Phase 2 Proposal is going to happen in a timely way and be effective?
Adaptive Management	Although I appreciate the idea of the adaptive management, but unless we're all on the same page with Inuit Qaujimajatuqangit, it will just be 15 more years of frustration with Baffinland trying to do their best to do adaptive management and the communities not feeling heard.

⁶⁹ NIRB’s Public Hearing Transcript for Baffinland’s Phase 2 Development Proposal: www.nirb.ca/application/124701

Subject	Issues/Concerns/Comments
Ballast Water	How do the ships that carry ballast water discharge it; how does Baffinland ensure that the water being released is clean and not just dumped into our ocean?
Ballast Water	We are very concerned in Clyde River about who monitors where and how ballast water is being discharged close to our community from ships that come from foreign waters.
Caribou	Do the Qikiqtani Inuit Association and Nunavut Tunngavik Incorporated agree with the conclusions of the experts cited by Baffinland that the Phase 2 Proposal will be safe for caribou?
Caribou	What are the cumulative effects on caribou recognizing that there are caribou calving grounds near to the mine (Deposit 1), and that caribou are forced to move away from the existing mine site and roads and will be forced to move away from the new rail line?
Caribou	Do not want to see caribou collared because traditional knowledge says that people should not touch animals while they are still alive.
Caribou	I despair because there are not many caribou anymore and I do not want to make anything anymore when skins are hard to come by. If caribou eat vegetation that has iron ore dust on it, their health will be affected and you will be able to see it in the contents of their stomachs and in their health; experienced hunters are very familiar with the anatomy of the caribou and the effects on their health from eating contaminated vegetation
Caribou Crossings	In relation to the embankments on the railway and crossings for caribou, I wonder whether there are going to be more meetings to consider how to incorporate Inuit Qaujimagatuqangit?
Caribou Crossings	The traditional caribou trails are the only ways that caribou know how to travel across the island. If Baffinland's infrastructure prevents caribou from following their trails how will Baffinland monitor and ensure that the caribou crossings along the railroad are being used to cross the railroad as Baffinland had planned?
Caribou Crossings	The area where the railroad and Tote Road is located in between the migration ground and the calving ground; if Baffinland proposes to make crossings for humans and caribou—the caribou won't use the crossings because the caribou have very sensitive senses of smell and the female caribou especially will not cross where there is the scent of humans.
Climate Change	We are noticing that the ice is taking longer to form and is leaving earlier; we are already seeing these effects of climate change. How has Baffinland taken this into account?

Subject	Issues/Concerns/Comments
Climate Change	Has Baffinland considered the impacts of climate change in their assessment?
Climate Change	Has Baffinland considered the extreme weather conditions (such as high winds) that seem to be happening more as a result of climate change into the design of the Project?
Country Food	The fish that we eat; can Health Canada confirm that the fish is safe to eat, not contaminated? This is one of our main concerns because we consume what we catch. We rely on our terrestrial wildlife for country food, we do not want you to contaminate our food.
Country Food	What would Baffinland do to provide compensation for our losses and impacts on our food security and lack of country food. Baffinland needs to know, it isn't just the lost value of the food, but also our small businesses and our health because we are healthier if we eat country food.
Country Food	We are concerned that the shrimp, fish, seal, walrus and whales we eat have been impacted by the Mary River Project already.
Cumulative Effects	When there is an increase to shipping there will be cumulative effects on our marine mammals (whales and seals); which would impact our access to country food and impact our food security.
Cumulative effects	Has the potential for effects associated with Phase 2 been considered in context along with the cumulative effects of other developments in the area and the future development of the South Railway?
Cumulative Effects	There seems to be a lot of pollution over the years and Baffinland did not consider the combination of these impacts and climate change effects on our caribou, fishing and marine mammal hunting areas.
Cumulative Effects	In 2015-2019, Pond Inlet has seen 15-20 cruise ships and 10-15 private vessels passing through Eclipse Sound and Milne Inlet area on an annual basis. Cumulative effects must be brought into the picture for the consideration when it comes to the environmental concerns and marine life.
Dust	We are noticing the effects of dust on the landscape near Milne Port.
Dust	How far does the dust disperse beyond the road and the mine site? Community Members have seen red dust far beyond the mine.
Dust	We are noticing dust spreading farther and farther from the mine and the Port and getting closer to the community of Clyde River and our water sources. Is Baffinland monitoring the nearby communities to see whether there are effects on the communities?

Subject	Issues/Concerns/Comments
Dust	Could the dust from the Mary River Project end up in Resolute?
Dust	Dust is spreading throughout the area, and this looks very bad and isn't good for Inuit, wildlife, the fish, the lakes, river systems and the marine environment. Something should be done to prevent spreading dust from being a significant issue because if no actions are taken it will continue to have impacts in the long term. The red dust that the community is seeing along the road and near the mine and Milne Port disperses a long way away (as far as Hall Beach). The hunters and Pond Inlet residents will be the most affected; will Baffinland be responding to the community concerns or acting like you don't know?
Dust	The dust from the mine blows far away and is very red and visible; we have concerns that the fine particles of dust will land on the snow and it will affect the water and surrounding vegetation, and the animals that drink the water and eat the vegetation.
Dust	The pelts of animals and the feathers of ptarmigan harvested near the mine have been observed to have red dust on them. Has the iron ore impacted these animals?
Dust	We have noticed dust on the sea ice near the Port.
Dust (Mitigation)	With respect to the ore loaded into the railcars, will there be tarps to cover the rail cars when it is being transported to Milne Inlet?
Dust (Mitigation)	Why doesn't Baffinland cover the haul trucks when transporting ore to prevent dust from being released?
Dust (Mitigation)	Want to see that the ore crushing at the Port be enclosed or covered so that the dust is not spreading from the crusher facilities.
Ecosystemic Effects (General)	Our forefathers hunted in that area near Mary River and if they hadn't, then we wouldn't be here. It is unfortunate that things continue to change. Now our world is deteriorating, it is us humans that are degrading the world and affecting the natural environment.
Ecosystemic Effects (General)	My heart breaks when I think about how damaging this Project is to our land, the environment and the earth that feeds us is being broken and we hardly have any wildlife left to harvest. When we go through hardship and hard times in our lives the only thing that sustains us is our environment, our land and our wildlife. Nothing else.

Subject	Issues/Concerns/Comments
Fish	We used to be able to net fish in the area near Milne Inlet by just putting our net into the water and it would be filled with fish but now the fish are far fewer, and we are noticing that we are not seeing healthy fish now.
Fish	The numbers of char in the area near Milne Inlet have declined. The char were once abundant there but not now. We don't want to see this.
Ice	Baffinland needs to know the ice is always moving, especially the landfast or multi-year ice.
Ice-breaking	In 2017 there was an HTO motion in Pond Inlet that was opposed to the railway and ice breaking because of the impacts on harvesting. I believe that the HTO resolution opposing the railway and icebreaking continues in force and the motion should be considered by the NIRB.
Invasive Species Ice	We are concerned about the potential for the ships to introduce invasive species (like we have seen down south with zebra mussels)
Marine Mammals	Pond Inlet saw no whales this year and Arctic Bay had lots of whales; Pond Inlet is already seeing impacts on our whales and terrestrial animals
Marine Mammals	Have noticed that the behaviour of sea mammals has changed, harp seals, narwhals, other whales and walrus, and we have noticed that the bearded seals used to be present in between Sanirajak and Igloolik and we have not seen them there recently.
Marine Mammals	At Button Point the situation in the winter is different now, there are very few seals; we have noticed this change.
Marine Mammals	Hunters in the area are having to travel further and further from the community when we go hunting sea mammals; seals and walrus used to be abundant in our area, but that is not the case anymore. The narwhal used to be so numerous near Ragged Island that they could be seen in waves. But the last three years when people go the same sites where we used, we seen no whales, and no waves of them because there are too many ships. The ships have scared them all away, just like polar bears.
Marine Mammals	Narwhals are no longer seen around Pond Inlet; and if we are unable to hunt them elsewhere, we will be left with nothing.
Marine Mammals	Do the Qikiqtani Inuit Association and Nunavut Tunngavik Incorporated agree with the conclusions of the experts cited by Baffinland that the Phase 2 Proposal will be safe for narwhal? We know here are many

Subject	Issues/Concerns/Comments
	things that can disappear in a short time, and we want our children to have a future.
Marine Mammals	Walrus are important to us; has Baffinland updated their assessment data about effects on marine mammals to reflect the additional shipping and the potential for additional effects?
Marine Mammals	Whales have very sensitive hearing and the transportation of iron ore through the shipping corridor will result in the whales moving away, especially if there is ice-breaking associated with the Project. This will result in changes to the whale migration routes. Hunters will not be happy about these changes if whales are no longer available to them in their community (especially Pond Inlet, but even as far as Kugaaruk).
Marine Mammals	Walruses do not have the same level of hearing as whales so the effects may be different on them than on whales.
Marine Mammals	Have recently harvested a seal but found small worms in the blubber and so we didn't eat it. I had never seen these worms before and it looked like a worm that was projected on the screen in the Public Hearing—does anyone know if it is the same kind of worm?
Marine Mammals	We have been hearing that there are two different stocks of whales, but I have seen the whales that migrate through Admiralty Inlet past Pond Inlet one of them had a float attached to it and it came from a very long way. There were a lot of whales in that area, and it looks as though both stocks may be traveling in the same area.
Marine Mammal Harvesting Limits	Have all the tags for narwhal on all the populations near Pond Inlet been used?
Marine Mammal Monitoring	Grise Fiord has noticed that seals and whales are no longer in abundance. How will monitoring of effects on the sea mammals be conducted to identify these effects?
Marine Mammal Monitoring	The ships could strike marine mammals and scare them away. How are these things being monitored?
Marine Mammal Monitoring	Does Fisheries and Oceans Canada have acoustic monitoring devices in the water in Igloodik and Sanirajak? Men from Pond Inlet have often said that after they have been out hunting, and they often say that they see devices in the water.
Marine Mammal Monitoring	Have seen these devices around Admiralty Inlet; but have not been consulted about these devices being put into the water. The communities may not be opposed to these recorders going into the water if the researchers would ask the communities, but we want to hear from the researchers regarding their results. When we first started

Subject	Issues/Concerns/Comments
	monitoring for narwhals and seal from Bruce Head near Milne Inlet, we used to be able to see lots of narwhals and seals, sometimes so much that we couldn't count them, and sometimes in the spring now, we see lots of narwhal, but then once the shipping starts, the narwhal leave the area.
Marine Mammal Monitoring	How long do acoustic recorders stay on the seabed? The communities don't like having these things in the ocean near our communities. Before there were lots of bearded seals and the seals are in decline. As it is our understanding that some of these devices are used for ship navigation, and we would like to have them removed. The monitoring efforts of Baffinland to date have not considered the input of Pond Inlet residents when they see impacts; will Phase 2 be more of the same, the status quo?
Marine Mammal Monitoring	What are the noise monitors/recorders in the water doing? (i.e. what noise does it emit, is there sonar, and what is being monitored, and are there impacts on the wildlife)?
Mining	The Phase 2 Proposal will involve removing a lot more ore than Baffinland has been doing already and will involve removing a huge amount of earth from the land, and of course it's affecting our wildlife, and the land, the land that we use. It's too much earth being removed. And when the mine is depleted, Baffinland is going to leave because the company won't be able to make any more money off of it.
Monitoring/ Mitigation/Adaptive Management Plans	Inuit organizations and Baffinland are speaking about developing better plans to limit effects, but I ask why these plans are not already in place for the existing Mary River Project? The existing monitoring is not very effective if Baffinland's efforts are not identifying the effects that the hunters are already seeing such as effects while they are harvesting the narwhal. Even when the ships are not present, the narwhal are seen by Inuit; and Inuit are seeing unhealthy animals and animals behaving abnormally. Baffinland will not know about these changes because Baffinland is only monitoring while they are shipping.
Monitoring/ Mitigation/Adaptive Management Plans	Has the Mittimatilik Hunters and Trapper Association considered the "red button" that Baffinland is proposing to implement that would trigger changes to Baffinland's operations if the impacts are too great? Will it really be activated/ "pushed" by the community?
Monitoring	Why is Baffinland waiting to monitor effectively for potential effects of the Phase 2 Proposal, rather than monitoring effectively now to identify the effects of the current Mary River Project?
Monitoring	If the Phase 2 Development Proposal were approved to proceed, how would Baffinland's activities be monitored by regulators to ensure compliance?

Subject	Issues/Concerns/Comments
Monitoring	It appears that Baffinland aren't done with research and monitoring of the existing Mary River project. We have heard that fish and narwhal have been impacted already by the existing project, and this should be addressed before Phase 2 goes ahead.
Noise and Vibration	Sometimes when there is blasting at the mine, we feel the vibrations on the lands nearby.
Noise and Vibration	How would impacts to caribou associated with the railway noises be mitigated (they can hear things that people cannot)?
Railway	In 2017 there was an HTO motion in Pond Inlet that was opposed to the railway and ice breaking because of the impacts on harvesting. I believe that the HTO resolution opposing the railway and icebreaking continues in force and the motion should be considered by the NIRB.
Railway	What are the potential impacts noise and vibration effects from the railway, and does that change depending on the cold (because this would be the first railway in the Canadian Arctic).
Railway	Where will the railway be sounding its horn/whistles along the route?
Railway	Will the rail cars be covered when they are transporting ore? We think that they should be covered to prevent ore dust from being released.
Railway	Will the new route for the railway affect the trail that used to be used for dog team races between Pond Inlet and Igloolik?
Reclamation	How long will it be after the mine closes down before wildlife will come back into the area?
Reclamation	How will the land be reclaimed once mining is finished? Will the shoreline be reclaimed, because the shoreline needs to be restored.
Reclamation	How fast can the land be reclaimed or restored after it has been damaged?
Shipping	In Pond Inlet we were happy that the port would be in Steensby Inlet. But it seems that Steensby Inlet has been scrapped completely and now Baffinland is going to rely on shipping out of Milne Port exclusively. Has Steensby Inlet has been completely scrapped as the shipping route now that iron ore prices have dropped?

Subject	Issues/Concerns/Comments
Shipping	The shipping route is through our community in Sanirajak; when I can, I go hunting anywhere I want to in Steensby area; there used to be an abundance of wildlife, bearded seals, walrus but their numbers have been depleted. Materials have been deposited under the water in Igloolik and Sanirajak we were not advised. And this is just the beginning stages, without the Phase 2 Development Proposal. There should be an agreement with our communities to compensate us for potential impacts. We are seeing effects already, but this is going to only get worse. If Baffinland's shipping for the Project will be like the shipping for the Nanisivik Mine (which took place in the past) the communities can expect to see effects on the whales and whale migration routes.
Shipping	Ever since the ships have been coming into Milne Port, our marine wildlife (seals and narwhals) has been avoiding the area and going somewhere else, and so Pond Inlet is opposed to the project...we often see three or four ships anchored at Ragged Island waiting and if Phase 2 is to go ahead, the community is very concerned about the effects of more ships anchoring and coming and going in the Port.
Shipping	Is Fisheries and Oceans Canada/Transport Canada aware of all the ships coming through our waters?
Shipping	We are being affected by the shipping, with the whales and fish all avoiding the area and we do not know if they will return.
Shipping	Does Baffinland have a chart that shows the shipping route for the Project?
Shipping	Pond Inlet would like to see the anchorage location at Imiliit (Ragged Island) moved and not having ships anchor in this area.
Shipping	If there are impacts identified on narwhal and seals, would Baffinland be willing to use alternative shipping routes?
Shipping	Communities have seen ships dumping wastes and wastewater into the ocean near our communities; who keeps track of who is discharging what into our waters from the ships?
Shipping	To my mind, even though Baffinland says the environment is not impacted, that does not seem to be true. I want everyone to know that since the ships started coming up the abundance of fish and marine mammals has been reduced.
Shipping	Is Baffinland aware that project shipping via "Big Lift" ships is occurring in the Northwest Passage (we saw this shipping in Resolute)?

Subject	Issues/Concerns/Comments
Terrestrial Mammals	Our terrestrial wildlife has been depleted and there is very little wildlife we can hunt anymore.
Terrestrial Mammals	There are rabbits, foxes and geese near Milne Inlet that show signs of red dust being on them. In Resolute we have not seen these signs, but we feel for the people of Pond Inlet who are so affected by this.
Terrestrial Mammals	The pelts of animals and the feathers of ptarmigan harvested near the mine have been observed to have red dust on them. Has the iron ore impacted these animals?
Uncertainty	Inuit of Pond Inlet do not wish to be the “test site” in terms of experiencing unknown and unpredicted effects associated with the mine. It seems that Baffinland is learning as they go, at the potential expense of our health and our environment affected by the project.
Water	Our drinking water has been destroyed by iron ore dust.
Water	Near the Mary River mine site there is a big lake that used to have lots of fish, but now the snow surrounding the lake has brown dust on the snow from the mine and the water is impacted and does not taste good
Wildlife	We are worried that the wildlife is lost, and Inuit cannot be compensated.
Wildlife Deterrents	What kind of deterrents does the mine site use to scare away caribou, foxes, geese and rabbits?
SOCIO-ECONOMIC EFFECTS	
Archaeological sites	Are the archaeological sites in the area affected by the deposition of dust?
Benefits, Royalties and Taxation	There were originally big concerns about the potential for the Project to bring alcohol and social problems to Pond Inlet, but we supported the Project because of the economic benefits, but Pond Inlet has not seen the full range of benefits.
Benefits, Royalties and Taxation	With the original Mary River Project not being constructed, other communities are no longer affected by the Project as much as Pond Inlet. When will Pond Inlet directly benefit from the Project because we are being impacted?
Benefits, Royalties and Taxation	When will the communities benefit from the mine as much as Baffinland has?

Subject	Issues/Concerns/Comments
Benefits, Royalties and Taxation	Benefits being provided to the Qikiqtani Inuit Association are not making their way to Pond Inlet (or only a very little bit).
Benefits, Royalties and Taxation	How can the Qikiqtani Inuit Association make processes for applications for benefits and compensation easier? There are often many hoops to jump through, and people get frustrated and give up.
Benefits, Royalties and Taxation	We are seeing many benefits promised, but we are not seeing those benefits delivered directly to the communities.
Benefits, Royalties and Taxation	It feels as though only if we approve Phase 2 will our communities be given what we want in terms of benefits. It feels like what communities are requesting should have been given to us a long time ago. The offer to work collaboratively needs to be seized so that everyone can benefit. The lives of hundreds, if not thousands of Inuit in the region will be affected by the potential development of the Project.
Benefits, Royalties and Taxation	Pond Inlet used to think that our community would really benefit from this mine; we want to see employment and training opportunities grow. We have been pushing to open up the mine; we have been asking to have many benefits available to our community. We don't just have potential employees, we have hunters, elders, women who sew and youth who would like to work together to benefit from the mining. But we have not seen the benefits go to these groups.
Benefits, Royalties and Taxation	Communities are being told that if we say no to Phase 2, the benefits of the existing Mary River Project will be taken away, but if we say yes, communities will have a glorious new life with Baffinland in it. This appears to be an ultimatum and rush to get Phase 2 approved without proper consideration of the detrimental and irreversible effects on Pond Inlet from Phase 2, which will be devastating.
Benefits, Royalties and Taxation	As a hunter in the community of Pond Inlet, we are the most impacted in the community; and we do not see the benefits directly in our community and the hunters whose environment has been impacted greatly have also not seen the benefits. I don't want to say yes to Phase 2 as a result, but if it should be approved to go ahead, I don't want to see only the bad side of mining and impacts to the environment.
Communication	Some information may not be relevant, but it is still good for communities to be able to hear everything about the types of development that are taking place up North. We are very proud of our land and we have to be given an opportunity to exchange knowledge and express our views about it.
Communication	Sometimes Iqaluit does not get much information about what's going on at the mine and we don't get much information that is translated in

Subject	Issues/Concerns/Comments
	Iqaluit, should we expect more information to be available if Phase 2 goes ahead?
Communication	It is important for all communities, including Arctic Bay and Clyde River (and other potentially affected North Baffin communities) to receive information regarding the Project and Project effects.
Communication	Communication should be increased, we don't just want to hear things on computer, but also radios. Baffinland should increase their communication in the community on the radio and in the past, Baffinland used to have a person in the community or Committees who could ensure that the residents in our community (Pond Inlet) could know about changes to the Project and Project-effects.
Community Infrastructure and Public Services	We would like to see more community infrastructure investments from both levels of government and Baffinland so that the communities can take advantage of the business opportunities available to us all.
Community Infrastructure and Public Services	Would Baffinland consider helping Igloodik out with a library as opposed a daycare (there are currently two in Igloodik)?
Compensation	It is currently very difficult to make a compensation claim; how can this be streamlined to make it easier to access funds?
Compensation	What about compensation? How will we compensate people for the value of narwhal and the value of their lives?
Compensation	If effects are identified, how will communities, and especially our Elders be compensated? We do not just mean money.
Compensation	Expect to see a bigger effect in terms of effects on wildlife, but if we lose more access to wildlife how would Baffinland compensate the communities?
Contracting and Business Opportunities	Local contractors are providing logistical and construction support to Baffinland and we are looking forward to being able to supply additional hospitality and maintenance staff if Phase 2 were to go ahead.
Contracting and Business Opportunities	We are happy that you want to grow the economy, but we also want to see our communities grow as well. We would like to see more contracting opportunities available to smaller local contractors.
Culture, Resources and Land Use	We know our land is rich in minerals and rich in culture. When it comes to mining, we know we won't go back to all the old ways again, and I'm all for economic wealth. However, it has to be within our wants and needs because we are the ones that are going to live in these communities far longer than the existence of the mines

Subject	Issues/Concerns/Comments
Culture, Resources and Land Use	We are in conflict between two conflicting worlds—do we have to choose between feeding our family and sacrificing our way of life?
Culture, Resources and Land Use	Our community feels abused by Baffinland for the past three years (loss of wildlife, impacts on drinking water, depleting marine mammals); we are not being assisted, only very few community members are receiving benefits and we are being impacted greatly by the existing project.
Culture, Resources and Land Use	A lack of animals to harvest will result in a loss of our cultural skills such as cleaning caribou skins, and sealskin and sewing the clothes for our hunters.
Culture, Resources and Land Use	In our tradition it says that if you fight over wildlife they will go away because they can hear you. We do not want to be fighting about wildlife, but we are concerned...if our wildlife goes away, how can we possibly be compensated? I don't just mean being compensated with money.
Culture Resources and Land Use	Our past ancestors survived, and they were very good at what they did. Our ancestors were survivors without any mining. I cannot do that now. Today we are here because of the strength of ancestors, but for how much longer if the effects of the mine continue or get worse.
Culture Resources and Land Use	When Baffinland talks about benefits, it sounds like you are trying to buy us. Our cultures and traditions are not for sale.
Education and Training	How does Baffinland propose to do training? Is it all at once, in a rush and a push to be employed, or is there a gradual approach to training?
Education and Training	There should be a financial management program to help Baffinland's employees to learn how to manage their money.
Education and Training	Anybody who is going to work on the Project should learn about how to respect our environment before they start working at the mine and cause damage to the environment and we can't restore it.
Education and Training	Current Baffinland employees are getting opportunities at the mine site to get training and certifications that they could use elsewhere. This training is not available elsewhere.
Employment Opportunities	If Phase 2 is not approved, will Baffinland be shutting down and laying off the staff?
Employment Opportunities	It is important to our young people to get the opportunity to pursue employment opportunities with Baffinland
Employment Opportunities	If Baffinland must lay staff off, if Phase 2 is not approved would Inuit from Pond Inlet be laid off first?

Subject	Issues/Concerns/Comments
Employment Opportunities	Although Baffinland has indicated that there will be 1000 new jobs available if Phase 2 goes ahead, right now there are only about 300 Inuit working for Baffinland? How would those 1000 jobs become reality for Inuit?
Employment Opportunities	If Phase 2 doesn't go ahead, what will the Nunavut Government do to ensure that there are other job opportunities for Inuit so they can work in the future? What are the Government's plans?
Employment Opportunities	Can the Government of Nunavut indicate what proportion of youth in the communities who have expressed a desire to pursue careers with Baffinland or in the mining industry generally?
Employment Opportunities	The Government of Nunavut has said that 10,000 youth will be looking for work in the community. What other sectors does the Government of Nunavut predict will employ them, and where are those numbers?
Employment Opportunities	Will Inuit employees be limited to getting only the most dangerous jobs at the site? (This was the experience of many of the Inuit employed by mines in the past—they were given the jobs that southern employees thought were too dangerous).
Employment Opportunities	Will there be jobs--employment opportunities for youth? What local Inuit are targets are being given for youth employment; are there any specific targets?
Employment Opportunities	It is important that youth be given an opportunity to work at the mine. But we are concerned that our young people are having to leave their communities to live in the south in order to work at the mine, and are not being able to stay in their communities if they want to work there.
Employment Opportunities	How many Inuit are employed by the project? It was supposed to be 85% but now it seems to be less than 20%. Baffinland has got to find a way to increase the employment opportunities for Inuit at the mine.
Employment Opportunities	For people who are earning wages, Phase 2 represents significant job opportunities and people will be better able to buy groceries and provide for their families if Phase 2 goes ahead.
Employment Opportunities	Will the truck drivers (who are most of the Inuit workforce) be laid off when transportation of iron ore by railway starts up? What will happen to the Inuit ore truck drivers when the railroad gets constructed?
Employment Opportunities	What kind of jobs will Inuit get if Phase 2 were to go ahead?
Employment Opportunities	The work force under Phase 2 looks to be smaller than employment for the existing operations—has Baffinland advised the current employees that once Phase 2 begins operations it will significantly reduce the workforce?

Subject	Issues/Concerns/Comments
Food Security	With reduced country foods being available and groceries from stores being very expensive, it feels like my community (Pond Inlet) will be facing food insecurity if Phase 2 were to go ahead.
Food Security	Who is making the guidelines for accessing the foodbank in the communities? They should make sure that people in our communities are not going to be going hungry even though COVID-19 has made things worse.
Harvesting	Harvesting within 1 kilometer of the mine is not permitted, and this limit should not be imposed on hunters because it is not consistent with the rights granted to Inuit harvesters under Article 5 of the <i>Nunavut Agreement</i> . How do the Inuit Organizations and Government Regulators intend to protect the hunters' rights to harvest anywhere they choose to?
Harvesting	What support mechanisms are provided to Inuit harvesters who are impacted by the Mary River Project (and Phase 2) with reduced harvests?
Harvesting	If the area is going to be used more as a transportation corridor (with both a roadway and a railway) is there going to still be hunting permitted in the area?
Harvesting	The quota system for the sea mammals (narwhals) is not working; Pond Inlet has asked for extra tags or the ability to hunt elsewhere where the narwhals are (Arctic Bay)
Harvesting	Our hunters have been unable to access wildlife, and this is very difficult for the hunters to have to tell their families that they have not been successful.
Harvesting	I am trying to teach my son how to hunt, but I think we may lose all our wildlife and they will not be able to hunt. The nine- and ten-year-old children in our community are saying that Baffinland should shut down so that we can hunt again.
Harvesting	When Pond Inlet did not see any narwhals this year (2021) the hunters tried to give their tags to the community members in Arctic Bay, but this was not permitted.
Housing	Could Baffinland consider building housing around the mine site like in Nanisivik?
Housing	Has Baffinland considered building housing units for employees in the community of Pond Inlet? There are Inuit not currently living in the community who might be interested in working for the mine, but they would have no place to live if they chose to return here.
Human Health and Well-Being	The potential for increased drug and alcohol use is very troubling associated with increased employment.

Subject	Issues/Concerns/Comments
Human Health and Well-Being	Mental health supports and a venue for employees to get help and support for maintaining mental health needs to be made available.
Human Health and Well-Being	Better social programs are required in our areas.
Inuit Harvesting	Hunting in the area of the mine has been limited and prevented and we, Inuit are not able to hunt near the area
Inuit Harvesting	As a hunter in the community of Pond Inlet, we are the most impacted in the community; and we do not see the benefits directly in our community and the hunters whose environment has been impacted greatly. I don't want to say yes to Phase 2 as a result, but if it should be approved to go ahead, I don't want to see only the bad side of mining and impacts to the environment. To my mind, even though Baffinland says the environment is not impacted, that does not seem to be true. I want everyone to know that since the ships started coming up the abundance has been reduced.
Phased Development	Has Baffinland made additional agreements to continue the production increase proposal under the Project Certificate 005?
Research	Would like to see the research facilities in Pond Inlet to become available to Inuit high school students to provide education and experience to allow them to be trained to look for and collect fossils. There are a number of southern people who come and remove fossils from the area and who are not helping to train other researchers in the area.
Project Feasibility	Why does Baffinland need to build the North Railway in order to build the South Railway?
OTHER ISSUES	
Accidents and Malfunctions	Pond Inlet is being pressured to take on all the risks of a possible spill, water dumping (ballast water) and constant ships going through the delicate waters of Pond Inlet. We have seen small spills but can imagine a devastating spill here and want Baffinland to take that into consideration.
Enforcement	How is the NIRB's Project Certificate enforced? What happens if the project is approved and Baffinland does not comply with the terms and conditions of its approvals and licences?
Enforcement	To date, have there been any enforcement actions against companies for non-compliance?

Subject	Issues/Concerns/Comments
Inuit Certainty Agreement	This just seems to be like a promise that will have no effect. The ICA appears to already have a Board and Committees, and this suggests that the Phase 2 Development Proposal will be going ahead.
Inuit Certainty Agreement	Would really like the Qikiqtani Inuit Association to explain the ICA because the communities do not understand it and we should be familiar with it.
Inuit Certainty Agreement	How would the “red button” Baffinland has described under the ICA work?
Inuit Certainty Agreement	Have any thresholds been set to date under the ICA?
Inuit Organizations	Initially the Qikiqtani Inuit Association supported Baffinland’s Phase 2 Project, and then they withdrew their support in 2021, so will the QIA change their minds again? Who would they listen to in order to decide?
Inuit Qaujimajatuqangit	I think the connection to Inuit Qaujimajatuqangit has been lost because we’re all focusing on impacts. I understand from the regulatory side that's what you've been trained to do. But so much of this could be smoothed out and improved if we allowed communities such as Pond Inlet to be the ones to tell you how they interpret the use of IQ and what it means to them in determining not only impacts but their significance.
Inuit Qaujimajatuqangit	There are tensions in Pond Inlet from people taking sides and people believing one thing another, and it's wearing this community down. Following Inuit Qaujimajatuqangit would help to smooth all of this out, but Baffinland and regulators need to let Inuit decide what using Inuit Qaujimajatuqangit means.
Inuit Qaujimajatuqangit	It would be wise for Baffinland to re-evaluate socio-economic indicators from the perspective of the people who live here, allowing Inuit to decide what the important indicators are, whether it's eating country food or wearing traditional clothing or as many people here pointed out, being able to have caribou skin clothing so that you can go seal hunting at this time of year
Inuit Qaujimajatuqangit	Sharing information and knowledge is part of Inuit Qaujimajatuqangit and if Baffinland is only sharing the knowledge they hear in reports on their website, not being able to share Inuit Qaujimajatuqangit more broadly is not using IQ.
Inuit Qaujimajatuqangit	When the Nunavut Agreement was signed, we were very happy that Inuit have rights, and that Inuit Qaujimajatuqangit will now be recognized. But Nunavut will be spoiled, and we do not see much discussion, and as community members we’re not really involved.

Subject	Issues/Concerns/Comments
Inuit Qaujimagatuqangit	We just don't want Baffinland to be learning from the residents of Mittimatalik. Are we just going to be a puppet for learning while our hunting is being affected badly?
Inuit Qaujimagatuqangit	If it is demonstrated that Baffinland's assessment has a lack of Inuit Qaujimagatuqangit evidence or scientific evidence what will happen?
Inuit Qaujimagatuqangit	Nunavut Tunngavik Inc. and the Qikiqtani Inuit Association should have Inuit Qaujimagatuqangit advisors in place to advise these organizations.
Inuit Qaujimagatuqangit	Baffinland should be asking for advice and information from the experienced hunters who can tell you how the caribou move
Inuit Qaujimagatuqangit	Pond Inlet is not necessarily opposed to the Project, but we all need to do more study about the potential effects in a northern environment. We don't want to rush into anything and, just like with hunting, we need to be well prepared long before this project proceeds.
Regulatory Capacity	When the residents of Pond Inlet identify effects and tell Baffinland and the Government regulators about those effects, what happens? Will the residents get support and help in the protection of their environment by government regulators? Or are they being ignored? We are not seeing how this information is being respected and considered.
Temporary/ Permanent Shutdown	If the Mary River started to shut down, what plans would be required, and would the communities be compensated?
Working Relationships	Many years ago, before the original mine was approved Inuit participated in the planning process, and then things stopped mid-way through, why was this process not continued? For example, there was a plan in place to reduce dust by covering the trucks along the haul road, but it doesn't seem to have been followed through. If Baffinland had implemented the plans and past recommendations for the original project, perhaps communities would support Phase 2 now.
Working Relationships	But for our future generations and the generations that will come after us, we need to have a good plan for them, that they would be able to support and collaborate with each other because good agreements are the best to go by.
Working Relationships	Baffinland and your employees need to really understand nature before they start working there.
Working Relationships	We need to figure out ways to work together on plans for a better way to carry things out. We need to improve the communication so that we can all get what we want. We must not rush into things because when we rush into something we don't plan properly. This is not my culture

Subject	Issues/Concerns/Comments
	when we rush into things. We need to incorporate Inuit Qaujimajatuqangit into our plans together. Let's get some understanding on what we are all trying to achieve. For our children and grandchildren are we trying to achieve attainable goals?
Working Relationships	There is a lot of division, and this has been a very difficult thing. But I still believe there are things that we can work on together, and we need to build a foundation. But if we cannot really come together and keep changing things here and there. This assessment has been very difficult because it has affected everyone and every community a little bit differently.
Working Relationships	Even families have been separated from one another about this project. Some people want to continue to work at the mine or get work at the mine. Some people are the hunters and want to protect the environment and the traditional way of life. The community feels like we have to choose.
Working Relationships	Regardless of how the NIRB decides, we need to all be at peace afterward.

5 SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS OF THE BOARD

5.1 Ecosystemic Effects

5.1.1 Views of the Board

5.1.1.1 Air Quality, Dust Emissions and Deposition, Greenhouse Gas Emissions and Black Carbon Emissions

Throughout the Board's assessment, the Board routinely heard community members comment on the amount of dust produced through the current operations as well as their concern for the management of dust emissions should the Phase 2 Development Proposal be approved. Through the Public Hearing sessions, it became increasingly clear that the dust concerns noted from parties were being expressed through two (2) separate but related topics. The first of these is the iron ore dust created through the mining, crushing, movement, storage, and loading of mined iron ore at the Project. The second is the production of gravel dust created when the tires of the ore haul trucks transporting ore along the Tote Road interact with the gravel along the Tote Road. For clarity of its assessment and due to the differing potential effects of dust depending on the source, the Board has broken these two (2) subjects into the following two (2) sub-headings.

Iron Ore Dust Emissions from Project Components

Through their FEIS and FEIS Addendum, Baffinland concluded that no significant adverse effects with respect to air quality and dust emissions would occur as a result of the Phase 2 Development Proposal. Baffinland further expressed confidence that if there were effects that differed in scale or scope from its predictions, it was confident that such effects could be effectively mitigated with the implementation of adaptive management strategies. However, throughout both the Board's monitoring of the current Mary River Project and the assessment process for the Phase 2 Development Proposal, the Board heard consistent and repeated concerns from community members about the current amount of iron ore dust emissions at the Milne Port site, along the Tote Road and at the mine.

I'm going to speak to dust and how it spreads. And it doesn't seem like it's going to stop if there's no mitigating measures put in place. It hasn't stopped as of today. The dust is still spreading across the land and into the environment, both marine and land. I also want to speak to wildlife. Animals don't usually go to areas where there's a disturbance to their grazing grounds. If we want, we can ask for a compensation. We can also ask for mitigative measures to be put

in place so that dust is not spreading into the surrounding environment. As Inuit, we all know that the dust is spreading into a large area of land. The dust doesn't look like it belongs there at all. Yes. And as a matter of fact, fish also don't swim around areas where there's sediment and dust going into fresh water or the marine environment and into the river systems and lakes as well. When we come to these hearings, we have been emphasizing that the dust is not good for both Inuit and to animals. Yes. We can all keep repeating, and we can keep complaining. I'm pretty sure that something can be done about this if we keep it up.⁷⁰

...today, marine management and rivers and lakes, hunters are hesitant to drink water because there is too much iron dust accumulating, and according to their instruments -- you probably have seen them in part of their slides -- the dust is accumulating from the air, not from the ground. The dust from Tookaya [phonetic] to Pingumaya [phonetic] along the Mary River, the drinking water is becoming worrisome. How is it going to be like in Phase 2? It's going to be even worse.⁷¹

The Board understands that the main sources of iron ore dust produced at site currently arise from the mining and crushing of ore at the Mine Site, the movement of ore within the Mine Site, the storage of ore at the Milne Port stockpiles and the loading of ore into ore carrier vessels. Through monitoring efforts of the approved Project, Baffinland has demonstrated their willingness to hear community concerns and implement adaptive management to address these concerns. For example, Baffinland has installed hoods, shrouds, and bellows on their crusher equipment at the Mine Site to help contain the dust created during crushing activities. Board staff have been able to see the results of these mitigation measures through annual site visits and through the Board's Monitoring and Site Visit reports.

As noted by the Board however, not all of Baffinland's adaptive management measures have successfully reduced the dust emissions. During some site visits, Board staff noted a significant reduction of dust produced at the Crusher⁷². However, in subsequent site visits⁷³ NIRB staff observed the removal of these mitigations for maintenance purposes while the crushing equipment remained in operation. As part of the Phase 2 Development Proposal, Baffinland has proposed to move their crushing equipment at Milne Port to an indoor facility, and on this basis,

⁷⁰O. Audlakiak, Pond Inlet, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 18, November 3, 2021, at pp. 3457-3458, lines 18-26 and 1-15.

⁷¹C. Sangoya, Pond Inlet, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 12, February 6, 2021, at p. 2268, lines 4-14.

⁷²(Doc. ID Nos. 326537 & 327502) NIRB's Winter 2019 Site Visit Report for Baffinland's Mary River Project.

⁷³(Doc. ID Nos. 329904, 330376, & 330337) NIRB's Winter 2020 Site Visit Report for Baffinland's Mary River Project.

Baffinland has indicated that there would be a significant reduction in dust emissions from the crusher facility, which would significantly reduce the dust emissions at Milne Port.

However, the ore stockpile is another significant contributor to dust emissions at Milne Port, and these emissions would be unaffected by the enclosure of the crusher facility. The MHTO shared pictures during the Public Hearing of red dust that has accumulated along the sea ice in Milne Inlet throughout the winter. Community Representatives and community members from Pond Inlet have further noted the vast distance that this dust travels from the Project site that they have observed when out on the land.

...I took these pictures⁷⁴ in May 28 and 29. The pictures shows a picture on ice up in Milne Inlet and near Mary River. The cabin you see here, hunters' cabin, you see two snowmobiles, and that is near the Mary River. The red pigmentation you see, when we pass through the area, it shows how much we find the colouration where we would find good freshwater, and the aglu you see or seal hole is 11 kilometres away from Milne Inlet. In Milne Inlet, the pictures show a lake in a place called Koluktoo Bay. That is also -- we see iron pigmentation of -- from iron dust, and near the Mary River freshwater area, the iron dust spreads to an area up to 30 kilometres, and sometimes it goes beyond 30 kilometres. If you could imagine, Mittimatalik here to Bylot Island, it's about 22 kilometres.⁷⁵



Figure 11: MHTO Photo Submission of a hunter's cabin near Mary River mine, taken May 29, 2020, at 1:35pm.

⁷⁴ Exhibit 61, MHTO Presentation Doc ID No. 333436.

⁷⁵ E. Inuarak, Mittimatalik Hunters and Trappers Organization, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 11. February 5, 2021, at p. 1941, lines 10-25.



Figure 12: MHTO Photo Submission of seal holes in Milne Inlet, taken May 28, 2020, at 6:05pm 71°58'39.60"N 80°46'15.42"W

...the pictures show a lake in a place called Koluktoo Bay. That is also -- we see iron pigmentation of -- from iron dust, and near the Mary River freshwater area, the iron dust spreads to an area up to 30 kilometres, and sometimes it goes beyond 30 kilometres⁷⁶

⁷⁶ C. Inuarak. Pond Inlet, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 11, February 5, 2021, at p. 1941, lines 19-23.



**Figure 13: MHTO Photo Submission of ice in Milne Inlet, taken May 30, 2020, at 9:43pm
71°54'24.92"N 80°56'03.91"W.**

Community members from Igloolik and Sanirajak also noted concerns related to dust and indicated they have seen the red dust travel as far as their communities. Through their ongoing dust monitoring program, Baffinland has routinely said that their data indicates that the iron levels in the vegetation and soil return to natural levels within one (1) kilometre (km) from project facilities, and characterized community observations of dust as identifying aesthetic/visual concerns rather than indications of project impacts: *“we've not found that dust is -- is having a*

*measurable effect of concern or any environmental effects in the freshwater bodies or in the marine area.*⁷⁷

Several Hunters and Trappers organizations along with community members expressed concerns that the presence of red dust in the project area is affecting their use of the land in the area around Milne Port and the mine, with effects on their traditional travel routes and camping sites being covered in red dust, making people hesitant to use these areas, and making it difficult find drinking water that has not been impacted along their journeys: *“when we're travelling to the -- near the mine site by Ski-Doo, the traditional route that we use is all covered in red dust, and it's totally different now how we get there. It's already being affected”*⁷⁸

In response to these community comments and the Board's annual monitoring recommendations, Baffinland has employed the use of a product called *DustTreat* which can be applied to the stockpile. This dust suppressant product is intended to form a crust on the stockpile to reduce the amount of dust that can be blown onto the sea ice. Through their monitoring programs, Baffinland has recognized that ore dust emissions from the Project have had unintended impacts to the land; however, their monitoring indicates that this dust has no adverse impacts on the human and animal health. Through the Public Hearings, Health Canada has supported this statement indicating that although it may be unsightly to drink the red snow or harvest animals from these areas, there are no adverse health impacts from doing so. Despite Health Canada's clarification that there are no health concerns around the use of the land showing red dust deposition, through the Community Roundtables, the Board heard community members speak about the negative effects that seeing the land turn red has had on their experiences on the land and how these effects may trickle down to their youth who will not be able to share the same experiences of using the land and hunting and fishing in the area without worrying about whether it is safe and healthy to do so.

Non-Iron Ore Dust Emissions from Project Components

The Board understands non-iron ore dust to be gravel dust generated by ore haul trucks travelling along the Tote Road and resulting from truck tires on the gravel of the Tote Road. This source of dust associated with the current Mary River Project has been an active discussion topic for several years with communities, with communities often asking why Baffinland does not mitigate this source by covering the ore haul trucks. During the November 2021 Public Hearing session, Baffinland provided clarification that it had concluded that the cause of dust emissions along the Tote Road is from the contact with the haul truck tires and gravel. It was further noted that the

⁷⁷ L. Kamermans, Baffinland, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 18, November 3, 2021, at p. 3454, lines 1-3.

⁷⁸ J. Pitseolak. Pond Inlet, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 17, November 2, 2021 at p 3303, lines 4-7.

switch from ore transport by truck to the North Railway as proposed under the Phase 2 Development Proposal is expected to significantly reduce dust generation along the Tote Road.

Throughout the discussion of dust along the Tote Road, community members frequently requested that Baffinland consider covering the rail cars as part of the Phase 2 Development Proposal in order to prevent ore dust from leaving the rail cars during transit. This remained a point of disagreement between Baffinland and parties, as Baffinland noted that it has investigated this issue over the years and found there would be no need for coverings as the source of the dust along the Tote Road currently is from the truck tires on the road surface.

we found that the dust that was coming from the trucks was actually from the wheels and the contact with the road, and it would kick up all the dust, and that you -- just visually looking at the trucks going by, you could see there's no dust coming out of the top of the cars. It was always between the tires and the road. We expect that the railway solves that issue by having the railway, which is steel on steel, and you no longer have the kick-up of dust.⁷⁹

The NIRB has a long-documented history of discussing concerns of dust generated from the Tote Road through many of its annual Monitoring Reports. These concerns and recommendations are brought forward through both noted observations from community members, NIRB staff observations during site-visits, as well as other parties commenting through various monitoring processes. In response to the Board's recommendations and concerns of the community, Baffinland has spent several years proposing and assessing options to mitigate these effects. As is expected, when attempting to problem solve on site there were some unsuccessful attempts, including the application of various products onto the road surface that did not reduce the emissions as planned. In 2020, Baffinland was able to successfully test and implement a new dust suppression product known as *DustStop* along their entire Tote Road. although there have been successful mitigation measures applied to this source of dust for the current Project, through the Public Hearings, as noted above, Baffinland noted that one (1) of the benefits of moving from a trucking to a rail operation would be a long-term solution to dust suppression along the Tote Road corridor. However, the Board also heard from communities that they have concerns with how long it has taken for Baffinland to adopt effective dust mitigations. Communities further expressed frustration that it appears the resolution of their concerns about dust with the existing Mary River Project is now dependent on the Phase 2 Development Proposal going ahead and with the significant increase in ore production and construction and operation of the North Railway.

⁷⁹ L. Kamermans. Baffinland, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 20, November 5, 2021 at pp. 3769-3770, lines 18-26 and line 1.



Figure 14: Dust plume from a Haul Truck along the Haul Road between the existing pit and crusher facility.⁸⁰

Green House Gas Emissions from the Project

In development of its FEIS addendum for the Phase 2 Development Proposal, Baffinland has predicted that the Proposal would result in an overall decrease in greenhouse gas emissions per ton of iron ore produced. This would largely be possible due to the proposed shift from a trucking operation to a rail operation which would eliminate the use of ore haul trucks and reduce the amount of light vehicle traffic on the road.

Phase 2 incorporates several design mitigations by moving from a truck to a train operation. There will be less dust generated along the transportation corridor, less greenhouse gas emissions per tonne of iron moved, and there is less interactions between vehicles and wildlife. Ten daily round trips by train will replace up to 140 daily round trips by ore haul truck.⁸¹

⁸⁰ (Doc ID Nos. 327052, 327624, and 327625) NIRB's August 2019 Site Visit Report for Baffinland's Mary River Project.

⁸¹ M. Lord-Hoyle, Baffinland, NIRB Public Hearing File No.: 08MN053 Transcript Vol 1, January 25, 2021 at p 100, lines 1-8.

Baffinland noted that using trucks to move the ore from the Mine Site to Milne Port is functional but inefficient in the long term due to the limited volume of ore that each truck can carry, the length of time required to move that ore, and the maintenance required on the vehicles. The Board understands these factors all mean that the current operations have a higher greenhouse gas “intensity” (more greenhouse gases emitted per tonne of ore produced) than would be the case if the Phase 2 Development Proposal were to proceed. Additional measures Baffinland has taken to reduce greenhouse gas emissions at the Project include company policies around limited idling times for vehicles and use of low emission vehicles wherever possible. Through the review process for the Phase 2 Development Proposal, Baffinland further committed to procuring new equipment at the Tier 4 emissions standards which reduces the amount of Nitrogen Oxide, Hydrocarbons, and particulate matter released into the atmosphere.

As for Tier 4, that is a United States environmental protection agency emission standard that equipment engines must meet, and it affects the emissions they produce, so what goes into the atmosphere. So we've committed for all new equipment purchased to support Phase 2, that it would meet that high standard.⁸²

Through the Public Hearing, Baffinland committed to providing a Climate Change Strategy within 30 days of the Phase 2 Development Proposal being recommended to proceed (Commitment 221, [APPENDIX E](#)). In continued discussion through the assessment, WWF worked closely with the Proponent to develop commitments to reduce greenhouse gas production at the Mary River Project and noted in their final closing statement that although there had been progress, Baffinland needed to further prioritize the reduction of greenhouse gas emissions:

Limiting emissions must become a priority given the climate crisis, currently Baffinland has no emissions reduction plan in place... for a Project so heavily dependant on transportation infrastructure, Baffinland should be required to look at ways to decrease its emissions⁸³

Black Carbon Production from the Project

Throughout the Board’s assessment, several parties including ECCC and WWF expressed their ongoing concern with the potential increase in black carbon emissions that would result if the Phase 2 Development Proposal be approved. In their Final Written submissions provided to the Board in January 2021⁸⁴, ECCC recommended that Baffinland’s vessels use lighter distillate fuels (0.1% Sulphur Marine Gas Oil or equivalent) within the Canadian Economic Exclusion Zone to

⁸² L. Kamermans, Baffinland, NIRB Public Hearing File No.: 08MN053 Transcript Vol 3, January 27, 2021 at p. 502, lines 12-18.

⁸³ World Wildlife Fund’s Final Closing Statement (Doc ID: 337632).

⁸⁴ ECCC Updated Final Written Submission, January 18,2021 (Doc ID: 332573).

minimize the amount of black carbon produced by Project vessels. Through the November 2021 Public Hearing Sessions, ECCC further requested to file Exhibit 90, a proposed Term and Condition with the Board clarifying the geographic application of ECCC's request requiring Baffinland's vessels traveling through the geographic area described as Shipping Safety Control Zones 9, 10, 13, and 15 in the *Shipping Safety Control Zones Order*, C.R.C., c. 356 to use distillate Fuels⁸⁵. Throughout the assessment, Baffinland indicated they disagreed with this proposed term and condition and the burden it places on the operator to dictate vessel operations outside of their project area. In an effort to compromise, under Commitment 235, in [APPENDIX E](#) of this Report, Baffinland committed to requiring all ore carriers to use lighter distillate fuels within the Northern Marine Regional Study Area.

This alternative option proposed by Baffinland represents a willingness to reduce black carbon emissions from the Project; however, it should be noted that the Northern Marine Regional Study Area represents a significantly smaller portion of the Northern Transportation Corridor and ECCC noted that this commitment would reduce black carbon emissions at the Project by 1.4 tonnes per year between 2025 and 2029 compared to ECCC's proposed term and condition which would reduce black carbon emissions by 4 tonnes per year⁸⁶.

The Board understands the role black carbon plays in contributing to global warming; however, considering that ore carrier vessels are not owned or operated directly by Baffinland, and that this requirement would exceed the applicable regulatory requirements for all other Arctic shipping it would impose an exceptional burden on Baffinland to dictate their fuel usage outside of the Northern Marine Regional Study Area for the Project. In addition, adopting this type of Term and Condition would affect contracting opportunities for Baffinland and may make it onerous to procure ore carrier vessels, which could have significant detrimental operational impacts on the Project.

5.1.1.2 The Marine Environment and Marine Wildlife

Throughout the assessment of the Phase 2 Development Proposal, concerns and uncertainties regarding potential impacts to marine wildlife were shared by many Intervenors and community members. Participants noted that the proposed increase in vessel traffic through Milne Inlet, increasing from 58 ore carrier transits under the Production Increase Proposal to a maximum of 176 ore carrier transits (later reduced to 168) each season would have significant consequences on marine wildlife. The discussions during the Public Hearing focused on the potential for this significant increase to shipping to have effects on marine wildlife and their habitats, including predictions about the level of disturbance, disruption, and the stress responses of key species

⁸⁵ Exhibit 90 of the Public Hearing Record (Doc ID: 334634).

⁸⁶ Environment and Climate Change Canada's Final Written Submissions, January 2021 (Doc ID. 332573).

such as narwhal. Further, these discussions questioned the effectiveness of the Proponent's current monitoring and mitigation strategies, particularly noting that Baffinland's existing approaches do not appear to reflect the observed changes linked to the existing levels of shipping as identified by communities.

Potential Effects on Marine Mammals

The Board heard concerns from parties about the increased shipping out of the proposed expansion at Milne Port, with the significantly increased vessel traffic during the shipping season, consisting of ore vessels, tugboats, icebreakers during the shoulder season, and resupply vessels that would support the Phase 2 Development Proposal. Due to current operations, several Intervenors, Community Representatives, and members of the public identified that they are already seeing declines in the numbers of narwhals and seals in the area and expect that impacts will worsen with the additional numbers of vessels proposed under the Phase 2 Development Proposal. Participants also shared their knowledge with the Board that spring and fall are key life stage periods for seals in the area and indicated that icebreaking negatively impacts their habitat during these critical times. Community members have observed fewer seals in the region and reported seeing fewer breathing holes in the area surrounding Pond Inlet, and Milne Port particularly, consequences they associate with marine traffic.

we used to go seal hunting near Bylot Island, and we were able to harvest seals all along the adjacent area when I was a young man, and my uncle used to go carry me. Like, I was very small and he used to carry me, and I helped him catch seals. And when he told me to follow the lead, and when I find a breathing hole, I think I sat at the breathing hole for a long time. That was our lifestyle... When I was living here during the summertime, we used to go hunting on Eclipse Sound area, and we all -- you were always able to see some seal. That is not the case nowadays, and there's been narwhals all the time during summer and now all that is not the case⁸⁷

In response, Baffinland affirmed that its operations do not overlap with important life stage for seals. The Proponent noted that no quantitative population data is available to understand the historical population dynamics of seals in the area. With respect to narwhal, in March 2021, Baffinland's 2020 Narwhal aerial survey data became available. This data indicated that there had been a statistically significant decline in narwhal stocks in Milne Inlet through 2020. Several possibilities were provided by Baffinland to potentially explain the decline, including climate

⁸⁷ P. Idlout, Pond Inlet, NIRB Public Hearing File No.: 08MN053 Transcript Vol 12, February 6, 2021 at pp. 2223-2225, lines 1, 1-7 & 1-5.

change, killer whale (predator) presence, Baffinland's activities, and also in-water construction activities in Pond Inlet.

Although all parties acknowledged the decline identified in the survey, the Board heard there is considerable disagreement regarding the reasons for the decrease in narwhals and the extent to which Baffinland's current shipping activities were the cause/contributor to the decline. Many intervenors and community members claimed that the reduction is a direct consequence of Baffinland's shipping activities in the area, and that the 2020 results are consistent with the effects observed by communities since Baffinland started shipping ore from Milne Port. In contrast, the Proponent noted that its acoustic monitoring program detected high pitch sounds from the pile driving of the harbour construction at Pond Inlet. Baffinland identified this sound disturbance to be a reason for the reduction in narwhals present in the region. Throughout the Board's proceedings, Intervenor and the Proponent could not agree on the cause of the decline and the relative contribution of Baffinland's operations to the decline. This issue speaks to the complexity associated with predicting, monitoring, and managing effects that may have numerous causes and contributing factors and are highly variable over time. It also emphasizes that there is a lack of regional monitoring that is not related to the Mary River Project to help establish regional baselines and provide data that would address critical gaps about the current context that is essential to the predictions of future project-related effects alone and cumulatively.

This disagreement and apparent gaps in understanding and mutual acknowledgement by parties of the positions of others is concerning for the Board. Quite simply, if each party views the monitoring data only through their own lens it is difficult to see how they can collaboratively and collectively come up with mitigations that will work. When each party perceives the cause of the problem to be different, it is little wonder that they cannot agree on solutions. This is a fundamental problem when there is high degree of uncertainty and complexity associated with the effect being assessed, as is the case here, because mitigation of these kinds of effects must rely heavily on adaptive management. In this respect, the development of effective mitigations and adaptive management of these effects under the Phase 2 Development Proposal relies almost entirely on collaboration between the Qikiqtani Inuit Association, regulators, community-based Intervenor such as the Mittimatalik Hunters and Trappers Organization, Elders, and other community members to develop and implement the Adaptive Management Plan for the Project. The Board has significant concerns that given the parties' respective positions and a seeming lack of mutual trust and understanding regarding the fundamental causes of the observed decline, relying so heavily on adaptive management to prevent significant adverse effects on this sensitive and vulnerable population that has such importance to Inuit is risky and inconsistent with the precautionary principle.

In addition, the decline in the narwhal population raised further concerns regarding the early warning indicator (calf ratio) chosen by Baffinland to monitor for project effects, as that indicator did not predict the decreasing population. As the early warning indicator did not detect the change in the population identified in the survey, it raises questions regarding whether this indicator is effective to provide the expected early warning of project-effects.

The Board acknowledges that in response to the 2020 data, Baffinland quickly moved to implement mitigation efforts during the 2021 shipping season, including reducing ice breaking activity despite this resulting in a shorter shipping season. The Board views these measures as important but necessary to apply the precautionary principle while further evaluating the potential cause of the decline and identifying longer term solutions. Ultimately, gaps in the availability of regional monitoring data to inform baseline and Baffinland's inability to use the data from their existing monitoring program to infer causes for the decline creates uncertainty as to the effectiveness of the existing programs to identify, prevent, and adaptively manage effects that differ from the Proponent's predictions.

Observations from the Proponent's monitoring of the current Project conclude that narwhals have demonstrated a localized, temporary, and low stress response to vessel transits. Baffinland notes that these responses suggest an interaction between narwhal and vessels; however, it was observed that the animals would return to the area after a vessel passed, ultimately not resulting in large scale displacement of animals. Through the Public Hearing, the Board heard community members indicate, based on photos and their direct observations, that narwhals have changed their behaviours in the area, and show poorer body condition upon harvest (thinner blubber). Hunters from Pond Inlet further shared Inuit Qaujimagatuqangit that thinner blubber in whales is a sign of stress through the animal's life.

As I mentioned earlier, like, it's totally different -- the physical appearance of the narwhal are totally different now. Narwhals, we noticed the narwhals observed last year, like, the blubber was very thin. It's about -- less than 4 inches thick. The narwhal's blubber was less than 4 inches thick, and one can assume that they are 2 hungry and also sick in the waters. Baffinland always says they have no significant impact on narwhal, but it's apparent that narwhals are impacted in our waters. And if the thickness of the blubber is 3 inches, then you include the skin, so the thickness was about 3-and-a-half inches.⁸⁸

⁸⁸ M. Koonark, Pond Inlet, NIRB Public Hearing File No.: 08MN053 Transcript Vol 5, January 30, 2021, at pp. 1007-1008, lines.18-26 and lines 1-4.

The Board has considered evidence provided at the Public Hearing that these effects on narwhals' behaviour and body condition may be the result of higher stress endured by the animal. Additionally, several participants referred to a published study (Watt et al. 2021) noting an increase level of cortisol in narwhals due to stress: "*On the same slide, based on Courtenay et al., 2021, which was just published, in which cortisol levels indicated increased stress of narwhal in Eclipse Sound*".⁸⁹

Several Intervenors expressed the view that both the blubber thickness and cortisol levels should be adopted as an early warning indicator of effects on narwhal. Baffinland did not agree with this recommendation, as they indicated that there could be multiple causes of changes to blubber thickness and cortisol levels that are not related to Baffinland's activities.

Potential Acoustic Disturbance along the Northern Shipping Route

Underwater acoustic sound effects on narwhals were extensively discussed during the Public Hearing sessions, particularly with DFO, Oceans North, the MHTO, and Baffinland. To assess acoustic disturbance from vessel traffic in Milne Inlet, the Proponent used a fixed threshold of 120 decibels (db) based on other marine mammal studies. Since narwhal specific research is a very small and limited field, when discussing most acoustic and behavioural responses of narwhal, it is common practice for parties to rely on data from other whale species to predict effects. All parties indicate that this is less than ideal; however, it is imperative when analyzing novel research to use the best available comparisons if true comparisons are not available. This threshold was specifically questioned by the MHTO, Oceans North, and community members. Communities shared Inuit Qaujimaqatungit indicating that narwhals are very sensitive animals, particularly to acoustic disturbance. It was noted that due to their use of sound for communication and movement there is a need for caution when assessing the potential effects of underwater noise. Oceans North demonstrated through their own research that it is possible for narwhal to respond to noises lower than the 120 db threshold used by the Proponent and this information combined with the community perspectives highlight the need for a precautionary approach with respects to noise created through vessel traffic and ice-breaking. The MHTO and DFO noted that acoustic research in narwhal is limited, and their hearing range is not well understood or documented at this time, leading to both uncertainties in Baffinland's assessment and the need for caution. The NIRB asked DFO for clarification and to address whether conflicting information could be reconciled, DFO replied:

we agree that there is a lot of gaps in the information for which you wish to resolve or find a solution to conflicting opinions. There is no

⁸⁹ D. Lee, Nunavut Tunngavik Inc, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 5, January 30, 2021, at p. 985, lines 8-11.

established threshold for the amount of quiet times that narwhal need, so whether the estimates or the opinions of Oceans North or Baffinland are accurate is difficult to say, and what is important is what would be the potential impacts of the noise itself. We know that narwhals need quiet time to engage in their daily activities, such as feeding and socializing, and that's why we've recommended additional monitoring, including early warning indicators to better understand whether Baffinland's predictions are accurate in that enough quiet time occurs. Also, the two noise thresholds presented by Baffinland are based on data from several whale species, and even though they might be used as surrogates, they are not specific to narwhals. At the moment, this is the data that we have, but it is not specific to narwhals. So given this uncertainty, it would be helpful to evaluate a range of thresholds and revisit when we have more data. So to summarize, what I'm trying to say is that there is data gaps and uncertainty, and without more information, Fisheries and Oceans cannot give you the clarification that you seek at this time, but we are definitely agreeable to review any new information or any new monitoring plans that would help answer this question.⁹⁰

Throughout the entire assessment, these differences of opinion between the Proponent and parties remained clear and the Board found them to be unreconciled at the close of the Public Hearing Record. In the Board's view, the inability to reach agreement on the relevant thresholds and indicators does not bode well for the parties' ability to move forward to then develop mitigations and assess the effectiveness of such mitigations. A key component of effective adaptive management is the receipt of monitoring data that reduces uncertainty in terms of actual effects. Where there is no agreement regarding whether the monitoring data is sufficient and is identifying potential project effects, the foundation for all Parties to candidly discuss issues and work on potential mitigations and solutions is not established and the essential connection between monitoring and adaptive management is lacking, seriously limiting the effectiveness of adaptive management. The Board further shares concerns about the lack of application of Inuit Qaujimagatuqangit to Baffinland's monitoring measuring narwhals' reaction to underwater sound, with parties observing two (2) different levels of response. During the discussions at the Public Hearing some Intervenors, Community Representatives, and members of the public expressed the view that the Proponent demonstrated a limited understanding of community perspectives in the mitigations developed and implemented in respect of the current Mary River

⁹⁰ G. Bernard-Lacaille, Fisheries and Oceans Canada, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 16, November 1, 2021 at pp. 3052-3053, lines 22-26 and lines 1-25.

Project, despite these parties having shared their knowledge and experience and making recommendations regarding thresholds, indicators, and mitigation measures.

Ballast Water and Invasive Species

The potential for increased ballast water discharge into the marine environment was discussed extensively during the Public Hearing sessions from 2019 through 2021. Baffinland indicated through its FEIS that the aquatic environment at Milne Port would receive a significant amount of additional ballast water due to the increased number of vessels needed for shipping up to 12 Million tonnes of iron ore per annum/year (Mtpa). Baffinland further noted that the salinity and temperature of the water in the receiving environment would not be affected even with the increases, since the volume of ballast water being introduced was marginal when compared to the total volume of water in Milne Inlet. In January 2021, through their Marine Environment Presentation (Exhibit No. 9), Baffinland described the volume of ballast water being introduced to Milne Inlet as follows:

This graphic represents an analogy to explain why ballast water released from ships would be undetectable within a few metres of their discharge point. This is because the total amount of ship ballast water released into Milne Port in a given year is equivalent, relatively speaking, to a raindrop in a bathtub based on existing shipping levels. Under a Phase 2 scenario, this would be equivalent to about three raindrops in a bathtub. This is not enough to influence salinity and temperature levels in the receiving environment. For comparison, the total amount of local freshwater from rivers and runoff would be equivalent to a coffee cup in this analogy. For these reasons, the effect of ballast water discharges on marine water quality were predicted to be not significant.⁹¹

Through the Public Hearing sessions, several community members and Intervenors expressed concerns about the increased risk that invasive species will be introduced into the area surrounding Milne Port due to the increase in ballast water discharge from foreign vessels. Specifically, DFO and the MHTO differed in their opinions from Baffinland concerning the identification of invasive species, invasive behaviours, and the monitoring program already in place for the current Mary River Project. During the January-February 2021 Public Hearing, the MHTO had questions regarding whether a possible invasive species was identified at Milne Port by Baffinland in 2019. The species of aquatic worm that was flagged as potentially an invasive

⁹¹ L. Kamermans. Baffinland, NIRB Public Hearing File No. 08MN053 Transcript, Vol 5, January 29, 2021 at pp 893-894, lines 14-26 and 1-2.

species “*Marenzelleria Viridis*” (*M. Viridis*) was ultimately determined by Baffinland to not meet the criteria of an invasive species because:

- the species did not exhibit invasive behaviours; and
- there were indications that the species had previously been identified in the region historically and prior to the commencement of the Mary River Project.

However, DFO brought forward evidence to suggest *M. Viridis* does possess invasive characteristics and indicated that it was listed as invasive in Eastern Europe where many of Baffinland’s vessels originate. DFO further noted that it is unlikely that *M. Viridis* was present in Milne Port before the project but was unable to conclusively confirm this as a fact due to a limited amount of sampling in the region prior to the Project. In the September Response Package⁹², the Proponent reported an independent verification of the species by The Russian National Scientific Center of Marine Biology in Russia where, based on DNA analysis, the worm was identified as a different species *M. Arctia* which is not considered to be invasive.

Noting how much time elapsed between the initial identification of the organism and the confirmation that it was not in fact an invasive species has raised concern for the Board, in respect of the ability of both the Proponent and DFO to work together in an effective and timely way to identify and classify an organism as invasive or non-invasive. This disagreement did not reassure the NIRB that the current identification methodology is robust and effective, nor did it instill confidence that it would be improved prior to increasing the number of vessels travelling to Milne Port and the risk of introduction of an invasive species. The time lapse between the original identification of the species in 2019 to the most recent identification in 2021 raised further concerns by the Board of the ability of the Proponent of adequately respond to invasive species.

The NIRB acknowledges Parties’ concerns regarding the possible risk of invasive species. The Board also notes that Transport Canada’s ballast water exchange and treatment requirements were updated in the *Ballast Water Regulations*, SOR/2021-120 that came into force on June 23, 2021. Baffinland also indicated that treatment and water quality standards applicable to ballast water discharged within Canada will be coming into effect in 2024.⁹³ This “*D-2 Regulation*” would require vessels exchanging their ballast water outside of 200 nautical miles to treat the ballast water prior to its release at Milne Port. The Board recognizes that the requirement for treatment prior to release under the proposed *Regulation* would help reduce the risk that the increased release of ballast water would introduce invasive species. However, the recent experience of communities with conflicting views expressed by DFO and Baffinland and the length of time taken to identify and categorize an unknown specimen collected during the monitoring program

⁹² Baffinland Written Comments, September 10, 2021 (Doc ID: 336778-336785 and 336788-336789).

⁹³ These standards are a component of the International Convention for the Control and Management of Ships’ Ballast Water and Sediments, 2004 (the BWM Convention) and are referenced as the D-2 Standard.

creates uncertainty and reduces confidence in communities that if an invasive species were to be released, the existing program would lead to a rapid precautionary response that prevents the potential spread of an invasive species beyond Milne Inlet.

5.1.1.3 The Freshwater Environment, Water Quality/Quantity, Fish and Fish Habitat

During the Public Hearing sessions, the Board heard about the importance of freshwater bodies to the communities, and particularly those water bodies where Arctic char are present. During the November 2019 Public Hearing, DFO identified concerns surrounding the selection of railway crossings and how cumulative effects of both rail and road crossings may impede fish passage. This issue was noted by the Board, as the Board is aware of the ongoing challenges the Proponent has had with maintaining fish passage in rivers along the Tote Road for the current project⁹⁴. Within its FEIS, Baffinland identified 124 rail crossings which may present barriers to fish passage, of which both the DFO and QIA required further information to assess this potential impact. In their Final Written Submissions provided in September 2019, multiple parties requested rationale for fish passage selection, increased hydrological data for the rail crossings, and a commitment to address and learn from current issues with the Tote Road fish passages. The Proponent has agreed to provide this additional information during the permitting process for water crossings authorization under the *Fisheries Act*. Further, under commitment 19 in [APPENDIX E](#), Baffinland has committed to continue to address existing fish passage issues on the Tote Road and to continue this work when it applies to the North Railway.

Another concern expressed by Intervenor during the assessment has been the adequacy of monitoring water quality in freshwater bodies. If the Phase 2 Development Proposal were to proceed, there would be an increased number of transits along the Tote Road during the construction phase which would lead to increased sedimentation within the affected waterways from vehicle traffic. Within its Final Written Submission, the QIA specifically recommended increased dust management measures be implemented over freshwater crossings and improved water quality monitoring where sedimentation may impact important life stages of Arctic char. In response (Commitment 20, [APPENDIX E](#)), Baffinland specified that the Tote Road Monitoring Program would be expanded to include the future North Railway development both in proximity to the existing Tote Road Monitoring Program locations and along the rail route deviation. Baffinland further noted that should the Aquatic Environmental Effects Monitoring Program determine there are impacts to Arctic char populations, the sources of all potential effects would be evaluated, including sedimentation.

⁹⁴ (Doc ID Nos. 327239, 328090, 328092, 333155, 333156, 332232, 337185 and 338508) NIRB's 2018-2019, 2019-2020, 2020-2021 Annual Monitoring Reports for the Mary River Project.

Through the Board's assessment process, Intervenors including the QIA, MHTO, DFO, and community members through the Community Roundtables were concerned about the potential for the Phase 2 Development Proposal to have indirect adverse effects on Arctic char through the deposition of dust into waterways.

Iron dust is blown away onto the sea ice, in particular in the near areas where loading take place in the ports... the red copepods will also be affected by the dust in the Milne Inlet area especially, and they're at the top of the food chain that wildlife depend on Char, seals, narwhals eat them⁹⁵

In response, Baffinland clarified through their FEIS that the construction and operation of the Phase 2 Development Proposal would pose no significant adverse effects to Arctic char habitat and would result in no adverse impacts to Arctic char spawning or overwintering. In its responses, Baffinland also indicated that should any unpredicted impacts arise through operations, it was confident that its Adaptive Management Plan would allow it to mitigate any adverse impacts.

Through various Public Hearing sessions, the MHTO, Arctic Bay's HTO, and community members identified concern with respect to Baffinland's conclusions in the FEIS assessment about the potential for effects on Arctic char, indicating they felt the assessment was incomplete as it had not included specific waterbodies of cultural importance to Inuit such as Phillips Creek and Koluktoo Lake. In response to written questions from the Board, Baffinland expressed that its freshwater effects assessment for the Phase 2 Development Proposal was sufficient, and highlighted its ongoing commitment to conducting Arctic char monitoring in the surrounding areas of Milne Port through consultation with the MTHO. During the Public Hearings, Baffinland also described its ongoing work with the MHTO to help identify waterbodies of interest and develop monitoring programs for these waterbodies. However, at the close of the Public Hearing, the Board had not yet received confirmation of the status of this work, such as confirmation as to whether it has been completed, despite efforts from Baffinland and the MHTO to engage in discussion. As a result, many community members who traditionally used the land near the Project site remained concerned regarding potential adverse health effects of consuming water in proximity to the Mine or Milne Port or harvesting fish from those waters.

Caribou migration patterns started to change immediately, and today, marine management and rivers and lakes, hunters are hesitant to drink water because there is too much iron dust accumulating ... The dust from Tookaya [phonetic] to Pingumaya

⁹⁵ J. Simonee. Pond Inlet, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 11, February 5, 2021 at p. 1912, lines 9-19.

[phonetic] along the Mary River, the drinking water is becoming worrisome. How is it going to be like in Phase 2?⁹⁶

The Board acknowledges that Baffinland has committed to the QIA and other Intervenors to create a Freshwater Working Group to advise Baffinland's monitoring program (commitment 202 in [APPENDIX E](#)). Working groups and other similar mechanisms can be essential tools for effective adaptive management (further discussed in [Section 1.6.2](#) and [Section 5.1.1.6](#)). However, despite the commitment of Baffinland and other parties, the Board has reservations about deferring important monitoring program components to be completed by an as yet, unestablished group. The Board also notes that several members of the existing working groups established for the Mary River Project (Marine Environment and Terrestrial Environment Working Groups) have indicated that there are serious concerns with the functionality of the existing Working Groups and have expressed frustration that Baffinland has yet to demonstrate they have considered advice received and made changes to project monitoring, mitigation, and adaptive management practices to reflect the advice of other members of the Group.

5.1.1.4 The Terrestrial Environment Including Terrestrial Wildlife (Caribou), Land, Vegetation, Permafrost and Landforms

Over the course of the NIRB's reconsideration process, the Board heard detailed discussions about the potential impacts that the North Railway may have on the terrestrial environment and terrestrial wildlife. These included:

- potential permafrost degradation;
- potential effects on vegetation;
- potential effects on the abundance, migratory patterns and movement of terrestrial wildlife;
- potential changes to predator and prey behaviour along the railway;
- potential changes to terrestrial wildlife behaviour and health in response to noise associated with the railway; and
- potential injury or mortality of terrestrial wildlife due to contact with the train.

The focus of the discussions about effects on terrestrial wildlife centered around caribou, a species with holistic and spiritual connections to Inuit culture with a population that has declined significantly in the last decade and is currently estimated to be very low in number.

⁹⁶ C. Sangoya. Pond Inlet, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 12, February 6, 2021 at p. 2268, lines 3-7 & 11-14.

Terrestrial Environment

Throughout both the FEIS submission and the Public Hearing sessions, Baffinland acknowledged that the construction of the North Railway would directly increase the Footprint and Project Development Area of the Mary River Project and would result in the removal of habitat. However, Baffinland also noted that through the application of their mitigation and monitoring programs, there would be no significant adverse effects on the terrestrial environment, including terrestrial wildlife such as caribou. The Board heard that monitoring plans were continuously updated using feedback from Intervenor, community members and interested parties during proponent-led public engagement, special interest working groups, and the NIRB's processes. In response, community members, and community level organizations (e.g. Hunters and Trappers Organizations) consistently described that they are already experiencing impacts from the existing Mary River Project and fear that the Phase 2 Development Proposal will have lasting impacts. The MHTO summarized these concerns, stating:

Ever since mining started, the caribou have steadily declined and sometimes are completely absent, and Kanajjuk doesn't form ice anymore, and it is frequented by caribou. The caribou calve there. The proposed route, we go hunting caribou in May, and there are always caribou there in May. During the spring, during the early spring, caribou always go there. It is like their traditional area. After they give birth, they then begin to leave. We want that area to be protected, as it is our caribou-hunting area.⁹⁷

The Board heard that the Proponent and community members routinely struggled to agree on the impacts to the terrestrial environment. Although Baffinland acknowledges the concerns of community members, but as noted in the discussion in [Section 5.1.1.1](#) with respect to dust emissions, there is no agreement in relation to whether observed effects are being caused or contributed to by the Project. Accordingly, the Proponent has been unsuccessful in developing mitigation measures that are acceptable to communities. Further discontent from communities became evident when discussing whether the mitigations Baffinland has in place for the existing Mary River Project are effective, because several Intervenor, Community Representatives and community member indicated the monitoring results from the Proponent did not reflect Inuit knowledge and experience and the observed effects of the affected communities, and Pond Inlet in particular. During the November 2019 Hearing, the MHTO, Hamlet of Pond Inlet, Hall Beach HTO, and Resolute Bay HTO submitted letters to the Board highlighting their opposition to the

⁹⁷ A. Hanson-Main, Mittimatalik Hunters and Trappers Organization, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 3, November 4, 2019, at pp. 448-449, line 26 and lines 1-12; Exhibit 8, p. 3, Doc ID No. 327479.

construction of the North Railway.⁹⁸ Although the positions and expectations of each Intervenor may have changed over the course of the assessment as additional discussions took place, several members of the MHTO reminded the Board of their continued opposition to the North Railway due to the potential for effects on caribou.

The North Railway Design

The Board notes that throughout the assessment of the Phase 2 Development Proposal, many concerns shared by parties were related to the proposed routing of the North Railway. The major concerns brought forward by individual community members were the potential for the railway to intersect traditional travel routes between communities and to impact harvesting in the area. In particular, community members indicated that they have long used traditional routes to travel between Pond Inlet, Arctic Bay and Igloolik to visit family and harvesting and they expressed concerns that the proposed North Railway would limit these activities. Through the proceedings the Board further heard community members express comment on the potential for this development to disrupt routes used for annual for dog sledding events between Arctic Bay and Pond Inlet.

Early on in the Board's assessment of the Phase 2 Development Proposal and during substantial discussions in the November 2019 Public Hearing session, the Board was advised that community members were opposed to the North Railway alignment as proposed by Baffinland in the initial FEIS. In the FEIS, the Proponent provided three railway alignment options, all largely immediately adjacent to the current Tote Road except for small deviations. Through the FEIS, the Proponent indicated their intentions to move forward with Route 1, noting that it was the most economically feasible and stable from a geotechnical perspective. Through the technical meetings in 2019, Baffinland's route selection was discussed extensively with community organizations such as HTOs and Hamlets, who expressed their concerns that the Route 1 route choice was very likely to interact with caribou calving grounds around an area known as "Kanatjuk". During the November 2019 Hearing, it became clear that Route 2 was the preferred route by the communities due to it having a greater distance from caribou calving grounds and it was the routing option that least impacted traditional travel routes. In response, Baffinland indicated that Route 2 would not be a feasible option due to the terrain it covered as it would create safety concerns for both construction and operation in those conditions and the amount of fill required to make those options safe was not readily available at the Project. In an attempted compromise,

⁹⁸ (Doc. ID Nos. 327478-327481) Exhibits 7-10, NIRB Public Hearing File No.: 08MN053, November 2019, filed by the Mittimatalik Hunters and Trappers Organization (MHTO), on November 3, 2019 consisting of submissions from the Hamlet of Pond Inlet, the MHTO, the Resolute Hunters and Trappers Organization and Hall Beach Hunters and Trappers Organization, and the Pond Inlet Mary River Phase 2 Review Committee submissions to the Nunavut Planning Commission in respect of Amendment No. #3 to the North Baffin Regional Land Use Plan (NBRLUP).

the Proponent committed to Route 3 (Commitment 129, [APPENDIX E](#)), the Board notes that this was not the ultimate preference of communities but demonstrates the Proponents willingness to modify the Proposal following feedback from Parties.

Intervenors also questioned how Inuit Qaujimajatuqangit was used to inform the selection of Route 3 and the impact predictions of the routes. Throughout the proceedings several Intervenors and community members remained unhappy with Baffinland's commitment to Route 3 as the preferred alternative, with the MHTO stating that no consensus had been provided on whether Route 3 was preferred or even whether a northern route was necessary considering that Baffinland already had a South Railway approved during the assessment of the original Mary River Project route.

... in the maps, questions -- it says Kanatjuk where the railway line is, although the Hunters and Trappers Organization and Hamlet of Pond Inlet has not agreed to -- we have not agreed to this route. Why is it still as a presentation to this Phase 2 proposal with the Kanatjuk route, and we heard this particular area is the calving area for the caribou. We are not in agreement because we know that we have yet to agree to this route.⁹⁹

Further, the MHTO and Hamlet of Pond Inlet had recommended that the Proponent undertake specific consultation with the communities to determine public acceptability prior to selecting the final railway alignment. The Board heard the views of all parties and agrees that further consultation with the potentially affected communities would provide valuable Inuit Qaujimajatuqangit to apply to the selection of the routing of the North Railway.

Another topic of discussion through the Board's assessment was the slope and size of material used to build the railway embankment. Communities expressed concerns about the initial design presented by Baffinland and were unsure that caribou would be able to safely cross the railway. Through discussions, Baffinland committed to completing a pilot project comparing the different slopes to see potential differences, this was accompanied by a railway alignment workshop and mock embankment. Both the Board and Intervenors were able to view the mock embankment resulting in a commitment from Baffinland (Commitment 67, [APPENDIX E](#)) to use finer material for the embankments to make the railway easier for caribou to cross.

With respect to discussions around permeability of the railway for land-users, Baffinland indicated that several bridges would be constructed with level crossings. Baffinland further explained that while the design was intended for people to cross the railway, wildlife would also benefit from the crossings. Based on Inuit Qaujimajatuqangit they collected, Baffinland predicted

⁹⁹ M. Koonark, Hamlet of Pond Inlet, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 4, January 28, 2021, at pp. 616-617, lines 25-26 and lines 1-8.

that caribou would likely be able to cross the railway embankment and road structures; however, there was ongoing uncertainty around how terrestrial wildlife (including caribou) would respond to the trains themselves. In response, community members and HTOs expressed that they thought caribou would likely avoid the area all together due to potential vibrations, the noise, and the visual and physical disturbance. As an example, the Board heard community members shared Inuit Qaujimagatuqangit detailing the effects that excessive noise can have on caribou and how the wildlife learn to avoid areas with excessive sound disturbances.

When discussing the potential for the railway to result in caribou disturbances, Parties, particularly the QIA and the GN elaborated on the uncertainty about the North Railway's overall zone of influence and whether potential disturbances were adequately covered within the FEIS. This discussion brought forward suggestions to expand the zone of influence in order to capture data from wildlife that may be further away from the Project as a result of the ongoing disturbance in the area. As a result, the Proponent committed to re-evaluating the zone of influence while utilizing the ICA specifications (Commitment 65, [APPENDIX E](#)). A further point of concern for community members was the lack of Nunavut-based or relevant Northern research to better predict the potential impacts that a railway could have specifically on Northern wildlife. During the discussions of this topic the GN provided advice that since the North Baffin caribou herd is considered in recovery, is non-migratory, dispersed, and small, comparisons to the behavior of other herds (E.g. Qamanirjuaq Herd) would be limited. The discussion of this topic emphasized the importance of regional monitoring more generally which is discussed in [Section 5.3.1](#).

Potential for Caribou and Railway Interactions

A key theme the Board discussed by parties under this topic was the potential for cumulative impacts on caribou from having two (2) pieces of linear infrastructure alongside one another (i.e. the Tote Road and the North Railway). It remains unclear how the combination of the Tote Road and North Railway may impact harvesting and wildlife movement. In response to these questions and comments from communities, the Proponent acknowledged that the Project would have impacts to the area; however, these impacts could be adaptively managed using tools such as the Terrestrial Environment Working Group (TEWG) and the Inuit Committee (to be developed under the Inuit Certainty Agreement (ICA) to reduce the overall impact to wildlife. This response from the Proponent was a common theme heard throughout the assessment. Several Intervenors, Community Representatives and members of the public expressed discomfort and mistrust with respect to relying so extensively on adaptive management to address uncertainty and develop future mitigation measures. As explained in greater detail [Section 5.1.1.6](#) the Board remains uncomfortable with Baffinland's reliance on future adaptive management measures that have yet to be developed to address the potential for adverse effects on caribou.

The Board accepts that there is very little information to predict the behavioral responses from caribou when encountering the linear infrastructure of the North Railway. This lack of data and limited information about caribou interactions with the Tote Road from current monitoring means that communities have little confidence and trust in Baffinland's impact predictions. In the face of this uncertainty, several Intervenors, Community Representatives, and members of the public emphasized the need for the railway to avoid caribou calving areas and migratory routes to ensure caribou are preserved and Inuit harvesting rights are not adversely affected.

In response to general community concerns about the potential for direct interaction of caribou with the North Railway, Baffinland identified several operational mitigations including areas for speed restrictions, the potential use of road vehicles to monitor for caribou, and the implementation of a Caribou Decision Framework for animals located near the North Railway. While parties expressed support for safety-related mitigations such as the Caribou Decision Framework, several concerns remained about the general effectiveness of proposed caribou mitigation and monitoring measures. Through the proceedings Board heard confusion expressed by the communities regarding potential shutdown times for the railway in the event of a caribou interaction. Baffinland followed up through the development of the ICA indicating that a five (5) day shutdown would occur when a high-risk threshold was reached in Baffinland's monitoring or Inuit-led monitoring, emphasizing in the event of a disagreement on the threshold reached, a five (5) day shutdown would occur as a precaution. Baffinland further articulated that Inuit-led contributions would to be used in conjunction with Baffinland's established thresholds to ensure compliance with the requirements of Project Certificate No. 005. However, despite Baffinland's reassurances, Intervenors and community members remained concerned that these plans for railway shutdowns were not yet finalized, and these parties urged Baffinland to provide final details prior to the Board making a recommendation in respect of the Phase 2 Development Proposal. Through the Public Hearing sessions, the Proponent indicated that there is still uncertainty around caribou interactions with the Project as the caribou herd in the area remains small and this creates challenges in obtaining monitoring data. With further discussion around the Proponent's caribou monitoring, the Board notes that Baffinland and the GN have signed an Agreement in Principle in order to establish collaborative research and data sharing around caribou data and monitoring in the area. This Agreement between the parties is intended to help both the GN and Baffinland collaboratively work on caribou monitoring objectives; however, the Board notes that this agreement touches on but does not describe a meaningful solution to the larger concerns outlined in [Section 5.3.1](#) with respect to regional monitoring and regulatory capacity.

5.1.1.5 Accidents and Malfunctions, and Unplanned Events

The North Railway

Information received during the assessment indicated that the topography and permafrost in an arctic environment may increase the potential risk of accidents or malfunctions associated with the operation of a railway. During the Public Hearing, Baffinland discussed various safety considerations that would be implemented during the construction planning for the North Railway. These measures included identifying hazardous areas along the proposed railway alignment along with identifying areas with the potential for wildlife interaction (mainly with caribou). In general, Intervenor were satisfied with Baffinland's incorporation of safety considerations into the design and construction planning for the North Railway, including the inclusion of topography and geotechnical assessments of the railway alignments. The Proponent also proposed operation-based mitigation measures such as speed restrictions in specific areas and a Caribou Decision Framework to be implemented when caribou observed in proximity to the rail line.

Community member raised concerns relating to compensation in the event of a train derailment or collisions with wildlife to ensure harvesting rights are protected. Baffinland detailed their Caribou Decision Framework indicating that this framework is already being implemented for the Tote Road with a 250-meter zone on either side of the road/rail. If caribou are within that distance, a decision tree is implemented in which specific actions are taken based on the direction the caribou are moving and their direct proximity to the railway track. In the January 2021 Public Hearing, the Intervenor questioned whether a 250-meter zone was appropriate given that other mines in Nunavut use a 1.5km zone to trigger adaptive management measures in proximity to project roads. In response, Baffinland indicated that the distance used for their framework was directly related to the distance a train operator could see with its headlights and that it was intended specifically for the railway operators and was not intended to be a site-wide caribou protection measure. Although there remained some disagreement amongst Parties about which distance should be used to trigger the framework, Intervenor and Baffinland understood the limitations of being able to trigger a framework at distances beyond what would be visible at certain times of the year. Baffinland indicated that there would be on-going consultation to determine the best way to communicate the risks associated with rail operations to community members. Baffinland responded by committing to the development of a safety protocol and communication plan prior to beginning construction of the North Railway (Commitment 61, [APPENDIX E](#)).

Shipping and Effects on the Marine Environment

The assessment of potential effects in the marine environment predicted that there could be effects from infrequent severe and frequent small-scale marine spills, that would be mitigated by the ability of Baffinland and Federal departments to respond in a timely manner and adequate funding to cover remediation and damages. Differing views and modelling regarding the potential for the marine environment to be impacted by a fuel spill was discussed at length through the Public Hearing. It was also recognized that the assessment must also taking into account the cultural importance of Milne Inlet for both harvesting and camping activities. As this area is heavily used by Inuit from surrounding communities, several Community Representatives expressed concern about the potential impacts to their activities in this area should a spill occur. Intervenors and community members identified that the Phase 2 Development Proposal presents an increased risk of a spill due to the increased number of ship transits. The discussion heard by the Board about the regional capacity of Parties to respond to a large-scale fuel spill did not provide the Board with reassurance that sufficient spill response capacity could be mobilized in the event of a larger scale spill. Further detail regarding the Board's concerns with regional monitoring and regulatory capacity can be found in [Section 5.3.1](#).

During the Public Hearing, Baffinland detailed their annual training exercise where staff are trained to respond to fuel spills, and emphasized that should a spill occur, there is equipment at Milne Port to begin clean-up activities. The Board appreciates the Proponent clarifying that their training and equipment is intended to enable on-site personnel to respond to smaller spills. However, the Board notes that with a limited amount of training and equipment located in the communities, the Board remains concerned with the regional capacity to respond to a larger scale spill.

The Arctic Heavy Fuel Oil (HFO) ban relates to a policy strategy that addresses the dual risks of ambient air quality and adverse effects from black carbon ([Section 5.1.1.1](#)), and the risks associated with fuel oil spills from ships in the Arctic. One of the concerns related to HFO-use in the Arctic is an expected high persistence and difficult recovery during spill events. WWF described a HFO spill as almost impossible to clean-up and very expensive to do so. When spilled, HFO may float and potentially get trapped within ice, suspend within the water column, and/or sink into marine sediments depending upon marine water density and composition. There was support amongst Intervenors for Baffinland to eliminate the use of HFO in all vessels coming into Milne Port. This HFO ban would exceed the current regulatory phase out of HFO, as a complete HFO ban does not come into effect until 2025. In response, to the requests of WWF and ECCC to eliminate the use of HFOs in project vessels, Baffinland clarified that there is difficulty in imposing these requirements on vessel operators as it exceeds currently regulatory requirements and banning vessels fueled by HFO would directly affect Baffinland's ability to source vessels.

However, although not adopting an HFO ban, Baffinland committed to ensure its vessel operators use lighter distillate fuels within the regional study area (Commitment 235, [APPENDIX E](#)).

The Board acknowledges that with respect to fuel spills, there are two primary options for mitigation of potential effects:

- reduction in the number of vessels to reduce the risk of spills from individual vessels; or
- reducing the potential damage from a spill through controlling the type of fuel spilled.

The Board recognizes that the number of vessel transits proposed by Baffinland is integral to the Phase 2 Development Proposal and understands that Baffinland has limited flexibility to reduce the number of transits. Consequently, the Board appreciates the commitment from Baffinland to require lighter distillate fuel be used by its operators within the regional study area. However, the Board notes that although these vessels may switch to using lighter distillate fuel, vessels may continue to carry HFO through the regional study area for use outside the area. As a result, depending on the nature of the spill, the HFO in storage on the vessel could still pose a risk of being spilled into the marine environment. With this in mind, Baffinland is expected to conduct spill response planning that recognizes that the challenges of conducting clean up in the event of an HFO spill.

Marine Spill Response Capacity

Through the Public Hearing, the Board asked for clarifications from various parties regarding the capacity in the region to address oil or fuel spills into the marine environment. The Canadian Coast Guard was considered as a main response to a spill via the Oceans Protection Program and Baffinland has committed to coordinating with the GN for the mobilization of wildlife teams in the event of a spill (Commitment 210, [APPENDIX E](#)) During the Public Hearing TC noted improvements in preparedness and prevention measures implemented by the Government of Canada, including international partners through the International Marine Organization and Arctic Councils. Through the discussions around capacity to respond to spills, the Board questioned whether the resources available would be sufficient to address the risks associated with a severe spill event for the Phase 2 Development Proposal. In response, the Proponent explained the Spill-at-Sea Response Plan which requires incident reporting and uses a tiered approach based upon spill severity:

- Tier 1 has vessel specific plans using mandated equipment onboard;
- Tier 2 is when Baffinland would provide additional capacity and equipment from Milne Port; and
- Tier 3 involves additional capacity from a third-party contractor where an annual fee is provided to ensure services are available for spill events.

When evaluating marine spill capacity, the Board considered limitations from regional and local expertise to respond. Community members voiced concern over the scope of the remediation efforts, questioning whether spill responders would be able to successfully contain a spill. The Proponent noted that if a spill occurs there is a requirement for long-term monitoring to evaluate the degree of spread and how it changes, and to detect potential impacts which may trigger a response and the implementation of specific mitigation measures, depending upon the severity of the impact. Although the Board acknowledges that there have been improvements in regional spill response capacity since the original Mary River Project was assessed, concerns remain that adverse effects can result if the required expertise is not available or delayed due to extenuating factors such as weather. This leads to considerable anxiety for communities who feel they do not have the training, equipment and support to effectively marshal their own spill response. As described by a community member from Pond Inlet,

Pond Inlet is being pressured to take on all the risks of a possible spill, water dumping and constant ships going through the delicate waters of Pond Inlet. Now, I know in Iqaluit, you guys have damage to the water right now, so I'm sure you guys can relate to this. And please remember that's just a small spill, so you can imagine a devastating spill here. Take that into consideration, please, at this moment¹⁰⁰

5.1.1.6 Adaptive Management, Management Plans and Monitoring Programs

Project Monitoring and Management Plans

As the Phase 2 Development Proposal is a reconsideration of an already approved Project operating under Project Certificate No. 005, the Board's assessment must consider the monitoring results from the ongoing Project as part of its assessment of the proposed development. From Baffinland's existing Project, there is an extensive monitoring program which the Board can draw on to examine Baffinland's ability to manage potential project-effects, respond to community concerns, and incorporate and apply Inuit knowledge and experience and western science in the design of mitigation and adaptive management measures. As noted in the discussion of the Board's approach to the precautionary principle and adaptive management in [Section 1.6.2](#) effective project monitoring plays a key role in the development of responsive, effective and timely adaptive management.

The monitoring program for the approved project includes monitoring of all VECs identified during the FEIS for the original Mary River Project (as modified by the Early Revenue Phase,

¹⁰⁰A. Uuttuvak, Pond Inlet, NIRB Public Hearing File No.: 08MN053: Transcript, Vol 18, November 3, 2021 at p 3410, lines 11-18.

Production Increase Proposal and Extension to the Production Increase Proposal). The results of these programs are provided in Annual Reports to the Board, which are then subject to review by interested parties, with the Board subsequently producing a monitoring report and recommendations to the Proponent each year. This monitoring data and feedback from the Board and interested Parties is then collectively used by the Proponent to implement a form of adaptive management for the Project. Throughout the Public Hearing sessions, the Board heard community members and Intervenors provide their perspectives on the current monitoring programs established by Baffinland including their design, implementation, and ultimate effectiveness in identifying and mitigating impacts of the Project.

However, during the Public Hearing it was noted that there is an apparent disconnect between Baffinland's view of what the monitoring of the existing Mary River Project is indicating and what the community of Pond Inlet is experiencing. Several Registered Intervenors raised this issue in their written and oral submissions to the Board. At the Public Hearing the Mittimatalik Hunters and Trappers Organization noted how this key difference in understanding the results of monitoring of the existing Mary River Project may limit the effective adaptive management of potential project-effects:

I don't know how we -- Inuit and western science can reach an agreement which is parallel when Inuit are listening about wildlife being impacted based on their observations and the fact that narwhal are no longer in the area, even though they say about -- they talk about this thing, and yet, you [Baffinland] say, there's no significant changes observed. How can we work together when you're still saying this thing.

The dust from the ore and when hunters are complaining about -- that the dust is dispersed everywhere and that based on your monitoring, you always say it has not changed significantly. So how can we proceed because your monitoring programs and what the hunters say are usually different.¹⁰¹.

As a result, despite the availability of some monitoring data in respect of the existing Mary River Project, the Board heard from Intervenors and Community Members that considerable uncertainty remains regarding the following:

- the magnitude and extent of potential impacts such as displacement, disruption and health effects on marine mammals, fish and the marine ecosystem due to the increased shipping activities;

¹⁰¹ E. Inuarak, Mittimatalik Hunters and Trappers Organization, NIRB Public Hearing File No.: 08MN053 Transcript, Vol. 2, January 26, 2021 at p. 295-296, at lines 16-26 and 1-3.

- the extent to which the North Railway system may impede or disrupt caribou movement either alone or in combination with the parallel infrastructure of the Tote Road and in combination with the future South Railway system that was previously-approved by the Board during the assessment of the original Mary River Project;
- Impacts on the air, vegetation, freshwater and ice due to dust emissions at Milne Port (from the ore stockpiles and ship loaders), along the Tote Road, along the proposed North Railway and at the Mine Site; and
- Impacts to snow and ice due to increased black carbon emissions associated with the use of heavy fuel oil by ships when travelling outside the Nunavut Settlement Area.
- the effects on Inuit culture, harvesting, land use, and food security that may be result if there are project-related ecosystemic effects as identified above.

Through the Community Roundtables and community information sessions undertaken by the Board, they often heard communities expressing confusion about the monitoring of the current Mary River Project. Communities claimed that they frequently brought forward their comments and concerns about the Project during Baffinland’s Public Meetings but were left in the dark regarding how their knowledge and experience was considered by Baffinland and how decisions were made address these concerns, including whether this information was applied to develop mitigation measures. Baffinland identified that in response to community concerns, potential mitigations were often discussed with the Marine Environment Working Group (MEWG) or with the Terrestrial Environment Working Group (TEWG).

While the Board understands the challenges in developing, testing and implementing mitigations to address concerns such as dust emissions or marine mammal impacts; the Board also notes that it is vital that these decisions be communicated back to community members. This step in the adaptive management process allows community members to see the actual changes to the project that have taken place as a result of their comments. This communication is essential to building trust and strong working relationships with the communities most affected by the Project.

Several parties also identified that the details of Baffinland’s plans for adaptive management of potential effects on marine mammals and the marine environment were insufficient because Baffinland provided information on the future development of those measures and confirmed that important indicators and thresholds have yet to be adopted for both the current Mary River Project and the Phase 2 Development Proposal:

...how does Baffinland plan to include adaptive management into [managing effects to the] marine environment? The answer to that is through a series of indicators, thresholds, and response actions that are developed specifically for both marine mammals and the marine environment.

These include early warning indicators but also indicators at the sort of moderate and higher level to basically provide early detection of project effects and allow Baffinland adequate time to implement additional mitigation, investigation, and adaptive management measures to address when a threshold is exceeded.

Those indicators and thresholds are both based on western science as well as IQ and Inuit input. Those currently for Phase 2 are -- are still in development, but they include species-specific indicators and thresholds, and those will be shared with the communities and the environmental working group for further refinement.¹⁰²

Further, as noted in the Final Written Submissions of the Hamlet of Clyde River and the Clyde River Hunters and Trappers Association and during the Public Hearing, adaptive management is a process, and where thresholds that trigger an adaptive management response have not been developed or accepted by all stakeholders, there can be a significant gap between when a potential impact is identified and effective mitigation is implemented, and there is a risk that significant adverse effects could occur while parties are trying to “get it right”.

So sometimes it might take some years before an impact is detected by monitoring, and then it might take more time for mitigation to be implemented and more monitoring to be done to see if it's working to deal with the impact, and sometimes adaptive management can take many of these cycles before it kind of gets it right...

it's possible that due to these adaptive management timelines, the project could have some significant negative impacts on the marine environment, even with...the adaptive management system in place and working well¹⁰³

The Board recognizes that management plans intended to address the potential for project effects associated with the existing operation of the Mary River Project are already in place and that updates to these plans would be implemented to manage the potential for effects of the Phase 2 Development Proposal, but the details of these updates remain to be provided. During the Public Hearing, some parties also expressed concerns that not all the commitments made by Baffinland during the NIRB's previous assessments of the original Mary River Project and Early Revenue Phase have been implemented fully to date.

¹⁰² P. Rouget. Baffinland, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 13, April 12, 2021 at p. 2415, lines 3-21.

¹⁰³ G. Hostetler, Clyde River Hunters and Trappers Organization and Hamlet of Clyde River, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 13, April 12, 2021 at pp. 2443-2444, lines 2-8 and 1-3.

To be clear, the Board views the commitments made by Baffinland to parties during the Board's assessment as an important aspect of the mitigation required to successfully undertake the approved Mary River Project and the Phase 2 Development Proposal if it were to proceed.

The Inuit Certainty Agreement (ICA)

The Board also understands that some of the measures proposed in the Inuit Certainty Agreement (ICA) signed by Baffinland and the Qikiqtani Inuit Association in the summer of 2020 were designed to improve mitigation/adaptive management of project-related effects if the Phase 2 Development Proposal were to proceed.

However as identified in questioning by the Qikiqtani Inuit Association to Baffinland during the Public Hearing, questions remain as to whether the novel adaptive management mechanisms proposed in the ICA can be implemented when the QIA and several communities and community-based organizations do not support the Phase 2 Development Proposal:

Many of Baffinland's responses about adaptive management highlight the Qikiqtani Inuit Association would administer the Inuit committee and the Inuit stewardship plan. Baffinland's responses also rely on Qikiqtani Inuit Association to integrate Inuit priorities and knowledge into the objectives, indicators, thresholds, and responses for adaptive management. The commitments made in the Inuit Certainty Agreement to mechanisms such as the Inuit committee and Inuit stewardship plan were required because both the current project and the new Phase 2 proposal lack mechanisms... for Inuit input. This is a serious problem, which the Inuit Certainty Agreement was attempting to address, but the impacted communities have not accepted the Inuit Certainty Agreement solutions as currently framed.

... With Baffinland placing such a heavy reliance on Inuit to provide adaptive management information to Baffinland, assuming that this project is approved to proceed without Inuit support, how does Baffinland plan to carry out a project without Inuit consensus for support [,] with no consent from Qikiqtani Inuit Association and if Inuit are not willing to provide this input to a project that they do not want?¹⁰⁴

¹⁰⁴ J.Ottenhof, Qikiqtani Inuit Association, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 13, April 12, 2021 at pp. 2459-2460, lines 15-26, 1-5 and 15-22.

Working Groups

Throughout the Public Hearing sessions and the annual Monitoring of the approved Project, the Board has consistently heard from Intervenors including the QIA, Nangmoutaq HTA, the Hamlet of Clyde River, the MHTO, the Government of Nunavut, along with several participating members of the Government of Canada that the Working Groups are not functioning as planned and are struggling to build consensus around key issues such as thresholds and indicators, what monitoring data is telling us about project-effects and the extent to which Inuit Qaujimagatuqangit is being considered and applied in a meaningful way. These challenges have resulted in the Working Group structures failing to fulfil their role in identifying when the need for adaptive management of effects has been triggered and, in the development, and implementation of mitigation measures based on consensus and collaboration.

To be clear, the Board is not saying that these challenges are the result of a lack of participation from members, as both the Proponent and members consistently attend and actively participate in the Working Group meetings. Current Working Group Members have expressed frustration that because the Working Group has been unable to achieve consensus on important matters, Baffinland often proceeds without further consultation with the Working Group. In developing mitigation and adaptive management outside the Working Group, Baffinland is perceived to be ignoring the advice from Working Group Members. While it may be the case that Baffinland is considering this advice, it appears that Baffinland has not effectively communicated how Working Group Members' advice has been incorporated into their development of mitigation measures and their approach to adaptive management. The current situation, was summarized by the QIA during the Public Hearing as follows:

How will working groups with members who do not believe their voices are being heard or that the groups are effective to be able to accommodate all of the things related to Phase 2 when they don't work for the current project? How can working group members who are charged with the responsibility to provide refutable [sic] input for change can be assured that change will be made at the project when the meetings are chaired by the same body that is creating the impacts? A major change to the working groups is clearly needed.¹⁰⁵

During the Public Hearing Sessions in November 2021, the Board asked DFO to share their views on the functioning of the Marine Environment Working Group, and DFO indicated:

DFO's opinion on the marine environmental working group, we have mentioned multiple times that we do not believe that the

¹⁰⁵ R. Paton, Qikiqtani Inuit Association, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 10, February 4, 2021 at p 1743, lines 15-25.

*marine environmental working group is always functioning as intended...However, the marine environmental working group is an advisory body only, and we do have some concerns related to the effectiveness and appropriateness of the working group and its effectiveness and its functioning... However, we do recognize that Baffinland and other new members have agreed to review the terms of reference for these working groups, and we hope that this review and the adequate implementation of this review will allow the marine environmental working group to fulfill the role that it is intended to fill as a project certificate term and condition.*¹⁰⁶

As a regulator to the Project, DFO indicating their concern that the Working Group is not fulfilling its function creates concern for the Board that the vital role of the Working Groups in achieving consensus around important issues such as establishing thresholds to trigger adaptive management responses and the development of important effects mitigation strategies will seriously limit the effectiveness of the Proponent's identification, monitoring and adaptive management of project effects.

While ECCC expressed their support for the platform that the Working Groups provide, they also conveyed their dissatisfaction with Baffinland's failure to adopt advice provided by Working Group Members:

*In general, Environment and Climate Change Canada's view is that the marine environment and terrestrial environment working groups provide useful forums for participants to share their input both with the proponent and with other working group members. Environment and Climate Change Canada values the information we receive from both working groups; however, we would like to see more done with the advice provided in these working groups as the recommendations are not required to be considered or adapted by the proponent.*¹⁰⁷

In response to questions from the Board, Parks Canada indicated their respect for the Working Groups as a mechanism for monitoring; however, they voiced similar concerns as other Intervenor with respect to Baffinland's lack of implementation in respect of the advice of Working Groups in practice through the approved project.

In light of limited regulatory authority related to the marine environment and the emphasis placed on the MEWG, the marine environment working group, which is an advisory body only, Parks

¹⁰⁶ G. Bernard-Lacaille, Fisheries and Oceans Canada, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 16, November 1, 2021 at pp 3072-3073, lines 16-20 and 1-12.

¹⁰⁷ M. Pinto, Environment and Climate Change Canada, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 16, November 1, 2021 at pp 3074-3075, lines 25-26 and 1-9.

Canada has ongoing concerns related to the effectiveness and appropriateness of this working group to address mitigation and monitoring related to both the approved and proposed project. Parks Canada recognizes that much work has been undertaken to revise the terms of reference and improve functioning of the marine environment working group and thanks all parties, including the proponent, for their hard work to date on this¹⁰⁸

In their response, PC identified key modifications they would recommend be built into future terms of references for the groups, including mechanisms for the rendering of advice and requirements for the Proponent to consider MEWG recommendations, along with adequate time for review of materials prior to meetings to facilitate effective discussions. PC also indicated that the current structure of the Working Groups has resulted in inadequate consideration of Inuit Qaujimagatuqangit and scientific knowledge into the project. PC expressed concern with the Proponent being the ultimate decision maker and noted the limitations that this creates on implementation of monitoring advice.

Many Working Group members commented on key changes that would need to be implemented through the ongoing Terms of Reference for the groups to improve their function as a monitoring mechanism. However, there appears to be a continued lack of consensus regarding the acceptance of these changes to the current Working Group structure, and the Board is doubtful that the necessary changes can be agreed upon and implemented in time to produce the key components of the monitoring, mitigation and adaptive management programs that should be in place before for the Phase 2 Development Proposal could advance.

Role of NIRB in the Working Groups

Over the course of both the Monitoring of the approved Project and the ongoing assessment of the Phase 2 Development Proposal, several Parties, including the QIA and Hunters and Trappers Organizations have requested that the NIRB become involved in the Working Groups to act as a mediator or Chair. In some cases, parties have suggested that the Board could act as an arbitrator and make decisions when a Working Group is unable to come to consensus. The Board has also heard some parties reference the Working Groups as a structure created by the Board under the original Mary River Project Certificate No. 005.

The Board wishes to provide the following clarifications:

- the NIRB did not propose, structure or otherwise create the Working Groups;

¹⁰⁸ A. Stoddart. Parks Canada, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 16, November 1, 2021 at pp 3075-3076, lines 18-26 and 1-4.

- the Working Groups were proposed by several parties, including the Proponent and project regulators during the assessment of the original Mary River Project in 2012 as a mechanism to deal with uncertainty and adaptive management of potential effects;
- the Board adopted the recommendations of parties as put forward in the Public Hearing for the original Mary River Project and included terms and condition in the Project Certificate to describe the Working Groups and provide some details regarding their role and function with respect to Project monitoring and mitigation; and
- the NIRB was not expected to be a member or participant in the Working Groups, and does not have any decision-making authority or oversight functions in respect of the Working Groups, their processes, or the administration of the Working Groups.

The Board's role is to receive from the Proponent, as part of Baffinland's annual reporting to the NIRB under the Project Certificate, the outputs produced by the Working Groups, such a thresholds, indicators, mitigation and adaptive management plans and measures reflecting the input of Working Group Members. In some cases, the Board may also be required to integrate these outputs into the monitoring of approved projects.

It is the Board's understanding from the previous assessments of the original Mary River Project and the Early Revenue Proposal that parties expected that the Working Groups would make important contributions to ensuring that Project monitoring and mitigation measures were accepted by Working Group Members and were effective and adapted as needed. Unfortunately, however, as the Board has heard consistently throughout this assessment, the original vision of these working groups has not been realized. Despite the significant challenges to fulfilling the envisioned roles and functions of the Working Groups, the Board remains hopeful that the finalizing of the Draft Terms of Reference will be a step in the right direction and will guide the Groups to improve functionality by clarifying membership status and roles, implementing consensus-based decision making. Establishing clearer requirements governing the consideration of and implementation of advice from members and improving the tracking and resolution of disagreements between parties in respect of specific monitoring and mitigation actions brought forward.

Involvement of Non- Government Organizations in Monitoring

During the assessment for Baffinland's Phase 2 Development Proposal, the Board heard from Intervenor representing non-government organization (NGOs) such as the World Wildlife Fund (WWF), Oceans North (ON) and the Nunavut Independent Television Network that they envisioned a role for NGOs in respect of the monitoring of the Project. The Board asked ON and WWF regarding how they envisioned their roles and contributions to the Marine Environment Working Group (MEWG) specifically and monitoring in general in respect of the current and future Mary River Project.

In response, both ON and WWF indicated that their organizations are aware of the limitations on the role they would occupy, as they do not have regulatory authority or oversight in respect of the Proponent or Project. Accordingly, both organizations indicated they wish to actively participate in monitoring to provide advice and expertise in respect of topics within the scope of their mandates:

What we envision is our role working with communities that live next to productive marine environments when there's an interest in working with us, and our vision and our role is to support communities in their protection of renewable resources, harvesting rights, and their enjoyment culturally and economically of a productive marine environment. And so, in that capacity, we are happy to participate in any working group in which we feel there's a role and we can make a positive contribution.”¹⁰⁹

ON characterized their area of expertise to be marine science and they noted that they currently provide support to the communities through various programs, including research programs in the Milne Inlet and Eclipse sound area which work directly in collaboration with the community to establish baseline community monitoring of acoustic information in the marine environment. In further response to the Board’s question, ON notes that because they are a not for profit, they are unable to confirm they will have the funding necessary to participate fully at all times, but they indicated they will endeavor to continue their work if they are welcomed by the communities and have the funding to do so.

In response to the same question, WWF indicated their organizational interest and expertise in marine transportation and the sustainable development of industry. Through other organizations such as *Arctic Connection*, WWF works to provide funding for fisheries research as well as helping to implement Inuit Qaujimajatuqangit into research

We were able to provide funding for fisheries, and we are always available to try and help communities who request our help. Inuit Qaujimajatuqangit -- we encourage – we incorporate Inuit Qaujimajatuqangit, how it can be implemented to any level of research or study¹¹⁰

¹⁰⁹ C. Debicki, Oceans North, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 16, November 1, 2021 at p. 3124, lines 8-17.

¹¹⁰ P. Okalik, World Wildlife Fund, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 16, November 1, 2021 at pp 3125-3126, lines 24-26 and 1-4.

5.1.1.7 Establishment of Conservation Area

The establishment of the Tallurutiup Imanga National Marine Conservation Area (Marine Conservation Area) was considered by the Board in respect of:

- the potential for project-shipping to have adverse impacts in the Marine Conservation Area;
- the extent to which the Phase 2 Development Proposal is consistent/inconsistent with the founding objectives of the Marine Conservation Area; and
- the extent to which Baffinland’s management plans must be altered to reflect the establishment of the Marine Conservation Area.

At the outset, the Board notes that the Marine Conservation Area has been formally recognized as culturally and ecologically significant, requiring special consideration with respect to the marine environment. In the Board’s view, this means that a high standard of the precautionary principle should apply to the aspects of the Phase 2 Development Proposal that will could cause or contribute to effects in the marine environment.

The Board noted that the changes to Baffinland’s management plans to account for the Conservation Area included changes to ballast water treatment, monitoring, and release protocols, committing to not use the Navy Board Inlet NW Passage route to avoid the Conservation Area, and altering shipping/icebreaking times. Finalized shipping and icebreaking was proposed to occur at the discretion of the MHTO. During the PHC, Communities and HTO groups questioned whether additive and cumulative potential impacts associated with increased shipping could affect the Conservation Area within the context of the proposed management changes. In addition, there was about whether authorizing agencies should exercise their authority to make changes to protect the Marine Conservation Area outside the Marine Environment Working Group (reflecting doubts about whether the MEWG can function effectively to take such measures). DFO explained ongoing collaboration would continue with Baffinland to identify alternative mitigations and monitoring programs to appropriately manage the risks while respecting the project’s viability.

The Board heard skepticism from community members and intervenors regarding whether the Conservation Area’s founding objectives of protecting the natural and cultural values of the area as an intact and interrelated ecosystem could be maintained if the Phase 2 Development Proposal were authorized to proceed. In fulfillment of its founding objectives, conservative and precautionary principles are applied within the Marine Conservation Area, and this raised questions for parties regarding whether the application of these high standards of protection would be applicable to Baffinland’s current and future operations. The Hamlet of Clyde River outlined the significant work that all involved parties contributed to establish the Marine Conservation Area and posed questions regarding whether the Phase 2 Development Proposal

could result in harm to the ecological values that the Marine Conservation Area was designed to protect.

QIA and PC confirmed that the objectives of the Guardianship Program for the Marine Conservation Area would remain unaffected by the Phase 2 Development Proposal. TC, DFO, and PC made it clear that these agencies would continue to work with Inuit to ensure ecological conservation and the protection of Inuit rights within the Marine Conservation Area, including preserving guaranteed harvesting rights in the area. PC also confirmed that they participate in the Marine Environment Working Group (MEWG) to provide advice and comment on Baffinland's project monitoring, mitigation and adaptive management to ensure these plans and measures are consistent with the objectives of the Marine Conservation Area. As noted above, although PC has expressed support for the Working Group platform, PC also expressed doubt regarding the extent to which the current structure is functioning and effective.

5.1.2 Conclusions and Recommendations of the Board

Through the ongoing monitoring and adaptive management of dust emissions associated with the existing Mary River Project, the Board has noted that although the Proponent has demonstrated an ability to acknowledge concerns and propose solutions, the successful longer-term implementation of effective adaptive management and mitigation strategies has remained difficult for the Proponent. While the Board understands that dust emissions are a concern for communities in respect of industrial development in general, the highly visible nature of iron ore dust emissions has heightened concern and focus on this issue. Baffinland is aware of the concerns around dust and has worked over several years to design mitigations to alleviate community concerns; however, community members frequently expressed discontent with the lack of progress on the reduction of dust emissions as well as their unease regarding Baffinland's insistence on linking some dust mitigation solutions such as enclosing the crusher at Milne Port to the approval of the Phase 2 Development Proposal.

With respect to dust emissions along the Tote Road, the Board is aware that community members are frustrated with the length of time it has taken for Baffinland to respond to their concerns. Baffinland's resistance to covering the haul trucks on the Tote Road has been perceived by the communities as dismissive and unresponsive. Although Baffinland maintained that the source of dust emissions is not dust blowing off the ore loaded in the haul trucks, given that dust emissions continue to be an issue of concern, community members continue to request that every measure that could result in reductions be tried, including covering the haul trucks. The Board also heard concern that it now appears that the resolution of their concerns about dust with the existing Mary River Project is now contingent on the Phase 2 Development Proposal going ahead with the construction and operation of the North Railway.

As noted in [Section 1.5.2](#), the Board has identified that dust emissions warrant the application of a higher level of the precautionary principle and this recognition means the Board requires the Proponent to demonstrate a full understanding of the effects that these emissions are already having on community members' willingness to engage in their normal use of land, water and ice to harvest fish, wildlife and vegetation when dust is visibly impacting the land, water, vegetation and wildlife. Accordingly, the Board recommends that Baffinland develop and communicate their understanding of the current Mary River Project and implement tangible adaptive management strategies not contingent on scaling up operations.

With respect to the issue of greenhouse gas emissions, the Board agrees with WWF that there is a pressing need for Baffinland to develop a climate change strategy and emissions reduction strategy with clear targets and thresholds in respect of the existing Mary River Project. In considering the evidence provided throughout the assessment, the Board understands that Baffinland has made an effort to reduce greenhouse gas emissions on site; however, given that all aspects of the Proponent's current and proposed operations have a strong reliance on fossil fuels, the Board strongly encourages Baffinland to work on a more comprehensive approach to developing a climate change strategy that includes clear emission targets and is not entirely dependent on the approval of the Phase 2 Project Proposal to deliver reductions.

With respect to black carbon emissions, while the Board would not have incorporated the full term and condition recommended by ECCC, entered as Exhibit 90, if the Phase 2 Development Proposal were to be approved to proceed, the Board would have been satisfied with the adoption of Commitment 235 from the Proponent as a mitigation offered to reduce black carbon emissions from the Phase 2 Development Proposal.

The Board is thankful for the meaningful Inuit Qaujimagatuqangit and western science shared by all parties in respect of the monitoring for effects on narwhal. The gaps between Baffinland's monitoring results and the observed effects and experience of the communities in respect of declining narwhal and seal populations increases uncertainty around Baffinland's effects predictions for the Phase 2 Development Proposal. While the Board recognizes the challenges encountered by the Proponent in monitoring potential impacts across a dynamic environment and the challenges in being able to trace the source of impacts in any definitive way, concerns about the effectiveness of the monitoring and mitigation programs associated with the existing Mary River Project also reduce the Board's confidence in the effectiveness of Baffinland's programs proposed to address uncertainty and adaptively manage unpredicted effects under the Phase 2 Development Proposal.

As a vulnerable and valued species, the Board understands the position of Intervenors and community members that blubber thickness in narwhal is a valuable health indicator, and notes that it is unfortunate that there is no baseline information or larger scale research on body

condition that could be drawn upon to reduce the uncertainty about what indicators may provide the most meaningful indicators of stress levels in the current stock. However, the Board heard during the assessment that blubber thickness is of particular importance to Inuit and has been emphasized by Inuit harvesters to be a culturally relevant indicator of animal health. Although, the Board recognizes Baffinland's assertions that there may be other factors (such as climate change, variability in the availability of prey or killer whale predation) that could cause or contribute to changes in blubber thickness, recognizing the stated importance of blubber thickness to Inuit harvesters, the Board encourages Baffinland to collaborate with Inuit harvesters to consider how this culturally-relevant indicator may be incorporated into existing monitoring programs even on a pilot scale or trial basis.

The Board has little confidence that the potential project effects from acoustical disturbance to narwhal can be effectively managed via adaptive management unless and until there is agreement amongst all parties upon thresholds and indicators, gaps in baseline understanding of acoustic effects on narwhal and gaps in the understanding and application of Inuit knowledge and experience are addressed.

With respect to ballast water and the potential introduction of invasive species, the Board acknowledges that future regulation requiring treatment of all ballast water prior to discharge at Milne Inlet may reduce the potential for ballast water discharge to introduce invasive species. However, in the interim, the length of time it took (2019-2021) to categorize whether an unknown organism collected during Baffinland's monitoring program is an invasive species creates concern for the Board that if an invasive species were to be introduced that Baffinland and the applicable regulators would be able to respond in a timely fashion to prevent the spread of the invasive species. For community members, this creates concerns about how the release of an invasive species could impact the marine environment and their harvesting activities in the marine environment near the project. The Board shares this concern and lacks confidence in the effectiveness of the current Non-Indigenous Species and Aquatic Invasive Species Monitoring Program as it is being implemented by Baffinland and overseen by regulators such as DFO and Transport Canada. The Board recommends that these parties work together to improve the timeliness and responsiveness of the Program to reflect the precautionary principle more fully.

With respect to the potential for the Phase 2 Development Proposal to have effects on the freshwater environment, the Board recognizes the importance of Baffinland working with the MHTO to identify waterbodies of interest and to develop monitoring programs for these waterbodies, as well as conducting Arctic char monitoring in the areas surrounding Milne Port. However, although the Proponent, the QIA and some of the Intervenors appear committed to establishing a new Freshwater Working Group, the Board lacks confidence that the creation of an additional Working Group would effectively resolve the outstanding concerns or successfully

implement adaptive management for any issues that may subsequently arise in relation to the impacts of the Phase 2 Development Proposal on the freshwater environment. With respect to the North Railway design, if the Phase 2 Development Proposal were to proceed, the Board agrees that further consultation with the potentially affected communities would be necessary to ensure that Inuit Qaujimajatuqangit is considered and applied to the selection of the final routing of the North Railway.

In respect of the potential for effects associated with potential for caribou and railway interactions, the Board notes that there is a high degree of uncertainty regarding how caribou will respond to the presence of the North Railway next to the Tote Road and the associated noise and dust. Consequently, Baffinland indicated a heavy reliance on adaptive management to address potential effects. However, as explained [Section 5.1.1.6](#), the Board lacks confidence that the adaptive management mechanisms described by the Proponent in the Inuit Certainty Agreement (ICA) can be successfully implemented to mitigate these potential effects on caribou.

The Board recognizes that there are no railway operations in Nunavut and very limited examples of Railways operated in the Arctic more generally. As such, it is immensely challenging to make accurate predictions about the potential impacts this type of development may have on the local environment. It would be equally challenging to have high degrees of confidence in the proposed mitigations, but the Board remains concerned with the reliance on adaptive management to account for this uncertainty. The Board notes that the current health of the North Baffin caribou herd indicates a need for the application of the most stringent iteration of the precautionary principal to minimize any potential impacts that could hinder the herd's recovery. Accordingly, the Board agrees with the positions of the GN and QIA regarding the need for robust mitigation measures to be in place before effects are identified and which are designed not just to mitigate potential effects but to the extent possible prevent disturbance or other effects to caribou populations, movement, migration, health and distribution.

With respect to the assessment of accidents and malfunctions associated with the North Railway, the Board understand the concerns some parties identified with respect to the potential for railway-caribou collisions; however, with both Baffinland's implementation of the Caribou Decision Framework and the Proponent's commitment to establish a clear communication plan for communities, the Board is satisfied with the Proponents efforts on this topic.

As discussed extensively in [Section 5.1.1.6](#), the Board has concluded that there are important limits on the extent to which the ICA can function as the primary adaptive management mechanism relied upon to address the uncertainty that exists regarding the effects the Phase 2 Development Proposal may have on marine wildlife and the marine environment, air quality and water quality and associated impacts to vegetation and terrestrial wildlife, linked to the significant increases to marine shipping and the installation and operation of the additional linear

infrastructure of the North Railway. Based on the Inuit knowledge and experience shared with the Board during the assessment, the Board also recognizes that if the Phase 2 Development Proposal were to cause any of these ecosystemic effects it is likely that there would be short-term and long-term impacts on harvesting, cultural practices, land use and food security in the affected North Baffin communities, and Pond Inlet in particular that could not be effectively mitigated under Baffinland's current and proposed mitigation, adaptive management and monitoring plans.

The Board understands and appreciates the platform and intention of the Working Groups and appreciates the commitment and contributions of current members; however, the Board remains acutely aware that in general the current Working Group Members indicate that the current Working Groups are ill-equipped to render the advice required and deliver the results expected. The Board remains apprehensive about the ability to improve the functionality of these groups and apply their intended function to the Phase 2 Development in the absence of all parties committing to concrete steps and specific timelines. As a result, the Board is not confident that these Groups would be able to provide critical inputs into Baffinland's adaptive management system for the Phase 2 Development Proposal. Through the Public Hearings, the Board heard that these Working Groups, in combination with proposed mechanisms under the ICA are expected to be a large component of the Proponent's adaptive management process. If the Phase 2 Development Proposal were to be approved, the Working Group would be expected to be a key voice in monitoring and mitigation suggestions. The Board views the ongoing challenges to the proper functioning of the Working Groups to be a critical gap in the monitoring and mitigation of project effects for the current Mary River Project and urges all parties to work together to address these issues.

5.2 Socio-Economic Effects

5.2.1 Views of the Board

5.2.1.1 Livelihood & Employment

In submissions and comments to the Board, Intervenors raised several concerns regarding current employment at the Baffinland mine and questioned Baffinland's conclusions regarding the predictions of socio-economic benefits associated with employment and livelihood resulting from the Phase 2 Development Proposal. These concerns can generally be divided into the following categories:

- Current Inuit employment numbers, salaries, and benefits;
- Future employment opportunities;

- Potential reduction in workforce numbers if the Phase 2 Development Proposal proceeds; and
- Potential job losses if the Phase 2 Development Proposal does not proceed.

Several of the specific comments and issues raised by Intervenors in relation to training, business opportunities, and contracting are discussed in [Section 5.2.1.5](#) of this Report.

Current Inuit Employment Numbers, Salaries, and Benefits

Community Representatives and Intervenors noted that under the current Mary River Project, Baffinland has historically been unable to meet Inuit employment targets established under the Inuit Impact and Benefits Agreement (IIBA) between the Qikiqtani Inuit Association (QIA) and Baffinland, and that the percentage of the Inuit workforce has actually declined. The Hamlet of Pond Inlet also indicated that according to the Hamlet's survey, the average salary of Inuit employees was significantly lower than claimed by Baffinland, and that Inuit employees were paid lower salaries than southern workers. As a consequence of having lower salaries, the Hamlet indicated that there appeared to be little difference in personal income between Inuit working at the mine and Inuit receiving social assistance.

Baffinland noted that the data used in its calculations of income took into account both salary paid and length of time worked. Employees who had not worked for at least one (1) year were excluded from the calculations as they would cause the calculation for full time equivalent wages to misrepresent the annual salary. Employees who did not work full-time for the year, either because their work was seasonal or because they did not work continuously for the year, would also cause the average to decrease. Baffinland stated that a full-time employment wage was significantly greater than social assistance. Baffinland further noted that salary was based on position and not ethnicity, and existing and future training programs would be made available for Inuit employees to support them in advancing to positions with higher salaries. Baffinland committed, as part of the Phase 2 Development Proposal, to increase funding for training.

The Board noted the issue of employees in public housing facing higher rents as their income increases has not been fully resolved. The Board heard from some Intervenors and Community Representatives that this situation reduces available income and may act as a deterrent to Inuit seeking employment with Baffinland.

The Board noted the concerns raised by Intervenors regarding the Inuit employment levels, as this has been an ongoing issue in Baffinland's current Mary River Project and is also observed by the Board at other mines in Nunavut.

Future Employment Opportunities

At the Public Hearing, the Government of Nunavut (GN) indicated that the continuation of the Mary River Project and the Phase 2 Development Proposal were central to the GN's strategy for youth employment. When asked about the employment picture in the Region, the GN stated:

If it [the Phase 2 Development Proposal] doesn't proceed, then we have a real hard question about if not this, then what? What are the other opportunities that will replace this for the 1,800 new entrants? Never mind the people who are currently there.¹¹¹

The Board acknowledges the significance of the conclusions of the GN that existing employment opportunities in the North Qikiqtani Region are, and will be, limited, and are currently insufficient to meet the employment opportunities required to accommodate the influx of young Nunavummiut who will be coming of age in the next several years. The GN's analysis concluded that even assuming 100% Inuit employment in all existing government positions and filling of all vacant positions, as well as Inuit employment in all reasonably foreseeable jobs in other industries such as tourism and fisheries, the number of positions available would be a fraction of the jobs required to provide employment to the Territory's youth. As a result, other sources of employment, including mining, will be necessary, and Baffinland's operations have been considered by the GN to provide a needed source of employment.

Several community members also cited the opportunities currently available as a result of the current Mary River Project as well as potential future opportunities through the Phase 2 Development Proposal.

All Nunavummiut will reap the benefits in royalties, employment, training in businesses like mine. This is what we've been asking for and not to mention the five impacted communities taking precedence of the benefits. This will likely reduce the oppression and poverty in health inequities we face as a marginalized population in Canada.¹¹²

As noted previously, Baffinland stated its commitment to increased training which would allow for more positions to be opened for Inuit employees, and also noted that there would be indirect employment in communities resulting from employment of residents at the mine. The GN concurred with Baffinland regarding the indirect benefits of more wages being available in the

¹¹¹ J. Onalik, Government of Nunavut, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 15, April 14 2021 at pp. 2918 lines 5-9.

¹¹² J. Merkosak, Pond Inlet, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 12, February 6 2021 at pp. 2315-2316 lines 21-26 and 1.

community and indicated these benefits could support more diversification of the employment and business base.

Several community members and Intervenors cited the ongoing issue of low Inuit employment numbers and called into question the long-term availability of more jobs to Inuit, the extent to which actual employment benefits would be delivered to Inuit and the North Baffin communities, and Baffinland's effectiveness in encouraging youth and others to apply and receive training. Baffinland reiterated its increased efforts toward training and recruitment of an Inuit workforce.

Potential Reduction in Workforce as a Result of the Phase 2 Development Proposal

Concern was noted by several Intervenors that the switch from the current trucking of ore to the use of a railway instead will, following construction of the North Railway, result in a net loss of jobs as a result of the number of drivers being significantly reduced.

Your own documents show that Baffinland will cut jobs if Phase 2 is approved. Section 2.1 of TSD 26 shows an average 1,239 jobs per year in early revenue phase for right now, but Section 2.3 shows that there will be 1,010 jobs per year in Phase 2. You say that jobs will be cut if Phase 2 is not approved, but Baffinland's own documents show you will cut approximately 20 percent of workforce from present levels if Phase 2 is approved.

Your employees seem to think that their jobs are secure if Phase 2 is approved. Have you told your employees about your intended reduction of jobs on Phase 2?¹¹³

The Board notes that Baffinland identified this in the FEIS Addendum. The Board further notes that in Baffinland's analysis, Baffinland indicated that this would result in no net job losses for Inuit, as the number of Inuit drivers involved in ore transport is currently very small, and any Inuit employees affected would have priority for training and opportunities for other jobs with the project. Baffinland committed to no Inuit workers losing employment because of the Phase 2 Development Proposal.

I started off by saying that some people may think that Phase 2 would mean less jobs, and we don't believe that to be the case. Also, the concern was raised about Inuit who are driving -- or who are in positions now, whether or not they may lose their position as a result of Phase 2, and that's not the case either. I would just like to use the ore haul truck drivers as an example, Inuit who are driving

¹¹³ E. Inuarak, Mittimatalik Hunters and Trappers Organization, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 21, November 6, 2021at p. 3872 lines 5-17.

B-trains on the Tote Road, they can either drive the B-trains at the mine site, or they could be trained for other positions¹¹⁴

Baffinland also indicated that if the Phase 2 Development Proposal does not go forward, the economic viability of the current Mary River Project would be re-evaluated which may result in a reduction or suspension of operations, and potential layoffs:

At this time, if Phase 2 is not approved -- and we have not and do not intend at this time to apply for a production and extension to the production increase proposal -- we will be looking at moving into a care and maintenance scenario for the approved project should the current economic climate persist, and we will not have the financing to proceed with the Steensby project [the version of the Mary River Project approved in 2012]. As always, financing for Steensby has been top of mind and an endeavour we've been trying to pursue, but we have been unsuccessful in raising the capital and security to move forward with that project, and it's been indicated that the Phase 2 proposal would help unlock the capital and investment that would be required to proceed with Steensby.¹¹⁵

However, Baffinland also stated that as a matter of its policies, Inuit employees would be the last to be laid off and the first to be offered other available positions during any temporary closure and/or care and maintenance period.

The Board recognizes that some parties objected to Baffinland's statements that the future feasibility of the approved Mary River Project is premised on the Phase 2 Development Proposal being approved to proceed, with some characterizing these statements as intended to coerce communities into providing support for the Phase 2 Development Proposal in order to ensure that the benefits of the current Mary River Project continue. However, the Board did not see evidence that these statements were offered as anything other than an expression of Baffinland's own views on the scale of operations at the Mary River Project Baffinland has concluded are required to be economically viable in the long-term. The Board understands that Baffinland's stated position is that if the Phase 2 Development Proposal does not proceed there will be potential losses to employment, wages and other economic benefits associated not only with the Phase 2 Development Proposal, but also likely with scaled back operations at the current Mary River Project.

The Board recognizes that to date, the Mary River Project has had significant positive benefits in terms of providing employment and training opportunities in the Region, and that Baffinland has

¹¹⁴ U. Hanson, Baffinland, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 20, November 5, 2021 at pg.3779, lines 12-22.

¹¹⁵ M. Lord-Hoyle, Baffinland, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 16, November 1, 2021 at pp. 3044-3045, lines 23-26 and 1-11.

made commitments separately and as part of their Phase 2 Development Proposal to increase training opportunities which could result in increased employment for Inuit and other Nunavummiut. The Board also recognizes that a reduction in operations would have significant negative socio-economic impacts on the Region due to a loss of employment.

5.2.1.2 Inuit Harvesting and Traditional Land Use

The Board acknowledges the importance of harvesting activities and traditional land use to traditional Inuit culture and the value it holds in allowing Inuit to pass on skills and knowledge through Inuit Qaujimajatuqangit. Together these activities form part of the Inuit way of life and transmit identity and cultural knowledge that have allowed Inuit to survive in these challenging environments for generations. Throughout the Public Hearing, Baffinland reiterated its belief that both the current and future Mary River Project would be able to coexist with Inuit harvesting and traditional land use activities. Baffinland's message was that the Phase 2 Development Proposal is not a choice between development or tradition, and that through mutual respect and meaningful discussion, the Project could result in the enhancement of these activities.

When we talk about -- when there's comments made about harvesting and hunting and that not being able to happen anymore, that's why I used that reference that we're not going to be allowed to operate as a mine should there be any harm to animals and their populations. It's not one or the other. It's not harvest -- harvesting/hunting or mining.¹¹⁶

In contrast, the Board heard from some Intervenors, Community Representatives, and members of the public that the current Mary River Project is already adversely affecting harvesting and traditional land use activities. There was considerable disagreement over the nature and extent of these effects and the extent to which these effects can be attributed, in whole or in part, to the current Mary River Project. In the Board's opinion, these differences in understanding of the nature and extent of existing effects is at least partially related to the damage and mistrust in the ongoing working relationships amongst the parties as discussed in [Section 5.3.5](#). Some of these challenges are related to differing understandings of what is meant by "significant effect"; Inuit often described significant effects as impacts on their use of the land both physical and psychological, while the Proponent tends to envision these through a western science lens of statistical significance.

Although the use of the same word superficially indicated the topic of conversation, it became apparent to the Board that Parties were referring to two (2) very different descriptions. These differences were noted by the Board during the discussion of a variety of valued ecosystem

¹¹⁶ U. Hanson, Baffinland, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 18, November 3, 2021 at pp. 3418-3419, lines 22-26 and line 1-2.

components including: dust visual impacts, behavioral changes of land users and animals, decrease in wildlife observations, displacement or disruption to the movement of wildlife which increased harvesting efforts, and disagreements over the adequacy and validity of Baffinland's effects assessment and monitoring results.

For example, dust emissions from the Project have been a recurring issue for communities as discussed in [Section 5.1.1.1](#). However, during the Public Hearings it became apparent that the focus of land users is not solely on the direct ecosystemic effects of dust but also on how the presence of red dust affects Inuit land use and harvesting of vegetation and wildlife in the affected areas. Through its monitoring results, Baffinland stated that the concentration of iron ore dust in the environment from current operations is not significant and poses no adverse impacts to the vegetation, water quality, and wildlife. Further, Baffinland predicted through its FEIS Addendum that the Phase 2 Development Proposal would reduce the overall amount of dust emissions on site and further reduce the potential for impacts. Health Canada supported this conclusion and noted that wildlife and humans naturally eliminate iron from their system if consumed.

But to specifically address the question does iron -- does the dust bioaccumulate or build up in country foods? The answer is no. Iron found in the dust is not expected to contaminate the flesh or the meat of country foods. If the animals consume plants or water affected by dust fall, the iron would be excreted or removed from the body through natural processes. I've also heard the question that are the caribous, the seals, fish, narwhal, traditional or country foods, are they safe to eat? Based on Health Canada's evaluation of the Mary River Phase 2 project, consumption of country foods does not need to change.¹¹⁷

During the Public Hearing sessions, the Board heard numerous concerns from community members and land users that a dust covered environment adversely affects their cultural practices involving the use of the land and harvesting wildlife and vegetation in the affected area. Despite western science indicating that consumption of the animals and water is safe, it does not eliminate communities' worries about continuing their normal harvesting and land use practices on land that is seen to be impacted by accumulations of dust. Although Baffinland has an extensive monitoring program to measure the potential accumulation and impacts of ore dust on the environment, the Board feels the issue of dust is a strong example of how the Proponent and community members are looking at potential effects through two (2) very different lenses and with two (2) different knowledge systems. This gap in understanding is further discussed in [Section 5.3.5](#) where the Board discusses the challenges in communication between the

¹¹⁷ M. Gale, Health Canada, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 20, November 5, 2021, at p. 3699, lines 11-23.

communities and Baffinland. Further, the Board notes that although the Proponent reviewed the potential health impacts of ore dust on the environment, it failed to incorporate indirect ways in which dust emissions may impact the behavior of land users and negatively impact the experiences of land users as described above.

As outlined in [Section 3.1.1](#) and [Section 5.1.1.1](#), an additional concern brought forward by Intervenor was the indirect impact of dust on the snow and ice. The deposition of dust on snow and ice surrounding the Project may lead to accelerated melting and consequently may impact travel routes, causing traditional hunting areas to be inaccessible at important times of the year due to a lack of snow. Despite the high potential impact on communities from dust emissions, the Board saw very limited attention paid to these effects in Baffinland's assessment.

Intervenor also expressed concerns that the combination of the proposed the North Railway and already approved but unconstructed South Railway would result in sectioning Baffin Island, and that this would impact traditional transportation corridors. The Board heard that these changes are concerning for land users because the Inuit Qaujimajatuqangit being passed down would not apply the same way it did before. Inuit would be required to relearn how to travel through these areas and would have to adjust when they see how these changes impact the movement of wildlife. As a result, Inuit are concerned that they will have to increase their harvesting efforts, traveling further, and all with less certainty of successful harvests. Having to travel further also increases the risk of mechanical breakdowns or being caught in inclement weather. Several Community Representatives and members of the public indicated that they do not see that the economic benefits of the Phase 2 Development Proposal are worth these impacts on harvesting rights and land use.

Some parties specifically noted that the caribou populations in the North Baffin are extremely low and this is a sensitive time for the herd recovery. Communities were concerned that construction of the North Railway could affect the caribou recovery given the limited knowledge of how caribou interact with a railway. Inuit have explained that the railway route proposed by Baffinland (Route 3) would directly impact caribou calving grounds near the deviation from the Tote Road and would limit land users access to this area. The Board heard from Hunters, land users, and community organizations that there was a lack of Inuit Qaujimajatuqangit integrated into Baffinland's assessment of the railway and selection of the preferred Route 3.

Baffinland indicated that according to its research, Inuit employees are more likely to participate in harvesting activities than unemployed Inuit. However, the Board has routinely heard from communities about the difficulty of harvesting declining wildlife in the region. The Board notes that Baffinland has indicated land users still use the area but there is insufficient data to draw any inferences between harvester effort and successful harvests.

With respect to potential effects on harvesting, the NIRB recognizes participants' concerns about observing less wildlife in the environment, particularly narwhals and seals. Baffinland noted that the Project is not negatively impacting narwhals as harvesting data has been generally increasing over the past years. These two (2) opposing conclusions are concerning to the Board as the Proponent seems to have focused its conclusions on harvesting data alone and has not appeared to acknowledge and apply the firsthand accounts and experiences shared by community members during the monitoring of the current Mary River Project and during the assessment of the Phase 2 Development Proposal. Additionally, Intervenor noted that harvesting data does not capture information regarding the level of effort, days on the land, and distance travelled by harvesters, which community members indicated have all have been increasing since the Mary River Project began operations. This type of information has not been sought or considered in the Proponent's assessment. The NIRB recognizes the value of harvesting data but recognizes that this information does not represent the actual wildlife abundance, distribution, and the effort required from individual harvesters to be successful, nor does it capture the times when harvesters are unsuccessful.

With respect to mitigation of effects on harvesters, the Board acknowledges the efforts made by Baffinland to adapt its operations to limiting icebreaking to 3/10 ice concentrations in the 2021 Shipping season in response to the 2020 monitoring results that showed a decline in narwhal populations. However, as the Board heard during the Public Hearing, Inuit are consistently indicating that they are observing and experiencing impacts from the current Project on the marine environment and have also conveyed to the Board that these ecosystemic effects are directly affecting their cultural practices and harvesting activities. The Proponent's reliance on its adaptive management practices to date have been unable to address these issues as brought forward by community members.

The Board acknowledges the work of Baffinland to support traditional activities through different programs such as Hunter Compensation funds, fuel payments, and other programs. However, the disconnection between community members' experiences on the land and Baffinland's assessment is concerning for the Board. In a holistic view, impacts on harvesting through loss of cultural activities, required increases in harvesting efforts, obstruction to travel routes among other things have the potential for much greater effects on Inuit life and culture than. A reduction in the number of animals harvested has direct implications on the amount of material available for clothing, food security, the teaching of valuable skills which are the core of Inuit tradition or even events as simple as visiting family to share a traditional meal and hear stories from Elders. These activities, along with many others are all part of rich, complex, and interrelated traditions which shape Inuit culture and the Inuit way of life from both the past and future.

Communities have indicated that they feel as if the pace of expansion of the Mary River Project as proposed under the Phase 2 Development Proposal is a rush that is forcing them to choose

between their harvesting rights and culture or the economic opportunities of the Project, and this is a choice few Inuit are willing to make. As noted during the Community Roundtable session in Pond Inlet on February 6, 2021:

The people of Pond Inlet and affected North Baffin communities are now clearly asking the Nunavut Impact Review Board and the federal Government of Canada to listen to the Elders and people of the community. They are not asking Baffinland to close down completely as they realize that jobs are an economic benefit to the communities and provide some training opportunities for young people.

They are, however, asking Baffinland to slow down and the federal government not to approve the Phase 2 expansion at this time as this may result in yet another major mistake. If Phase 2 is approved, Inuit will once again end up suffering from the resulting damage to their land, the terrestrial animals, and marine life that provide the food and clothing and their traditional culture and way of life for future generations.¹¹⁸

The Proponent has indicated its confidence and willingness to rely on its adaptive management strategies to mitigate potential impacts on harvesting and traditional activities, but to date these strategies demonstrate a lack of understanding of the community knowledge and experience of Inuit that indicates the current Project is adversely affecting these activities. There was also little recognition in Baffinland's assessment of the important consequences that impacts on harvesting and traditional activities may have on Inuit culture. As noted in [Section 5.1.1.6](#), the Proponent has shown to have mixed success in adaptively managing the possible effects of the existing Mary River Project, which leaves the Board with a lack of confidence in their ability to be able to mitigate the largely unassessed effects on Inuit culture and land use.

5.2.1.3 Food Security

For this Valued Socio-Economic Component, the Board heard multiple statements from participants about the importance of country food and the Board understands the linkage between access to country food and food security. Concerns were raised regarding impacts on food sources from the Project's operations. Baffinland claimed that the Phase 2 Development Proposal would increase food security in the region by providing income to purchase food from the store along with equipment that enables participation in harvesting activities. The Proponent

¹¹⁸ P. Ootoowak, Pond Inlet, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 12, February 6, 2021, at pp. 2332-2333, lines 4-26 and 1-2.

listed current food support programs and noted that the Phase 2 Development Proposal would allow Baffinland to contribute to other support programs to improve food security in the region.

The Hamlet of Pond Inlet questioned Baffinland's argument that increased income would help food security. The Hamlet noted that employees' salaries are not publicly available; therefore, it is difficult to validate Baffinland's assertion or to compare earnings with other employment in the region. The Hamlet of Pond Inlet indicated the prediction that increased household income would benefit food security was simplified by Baffinland, noting that:

Household income in Inuit culture is often not household income. It most often goes to support a wide network of extended family members in need. In other words, it's related in very much the same way as caribou meat or seal meat or narwhal.

This has implications for the impact of employment on an individual family's food security and other things... Baffinland does not seem to be aware of this cultural reality.¹¹⁹

The Board recognizes that this lack of cultural understanding regarding money distribution or usage within an Inuit family raises questions about the basis for Baffinland's assertion that employment income will increase food security within a family. The Board has not seen evidence that would support this assertion, and accordingly, has not accepted the assertion as stated.

The Project's impacts on wildlife cannot be separated from the direct consequences on food security when harvesting becomes more difficult, more expensive, and less likely to be successful. The Board heard multiple statements from hunters in the vicinity of the Project, identifying that they are experiencing difficulties in harvesting wildlife and are worried about and/or no longer consuming country food due to dust pollution, which has a significant and detrimental effect on their food security. Furthermore, traditional food for Inuit represents more than a source of subsistence, it has cultural value and represents a gathering moment, an occasion to share and to go on the land. In this respect, the effects of declining access to country food must be considered holistically. As stated in Pond Inlet during the Public Hearing:

The families, they go out. They go fishing or caribou hunting, narwhal. Not just today.·So sometimes they would be aging the meat because it would-be saved for the winter. We think it's good to have that kind of meat, and we like it.·But people are not able to have aged narwhal anymore. People don't give away that meat

¹¹⁹ F. Tester, Hamlet of pond Inlet, NIRB Public Hearing File No.: 08MN053 Transcripts, Vol 4, November 5, 2019 at p. 808, lines 4-15.

*anymore because they don't have the ability to share because every day, every day the ships are moving.*¹²⁰.

The Board heard that the tradition of sharing country food is not something that is replicated when financial compensation is provided in the form of income or financial subsidies that go to individual hunters. The impact on food security directly affects cultural loss between generations, and this connection was not considered and assessed in a meaningful way. A decrease in harvesting could increase dependency of communities on grocery food, which is expensive. To help communities, Baffinland is offering compensations, but the Board heard that these were not enough. The Board recognizes that compensation, while it may pay (often in part) for an individual to buy food from the grocery store, uncertainty regarding negative effects on wildlife and concerns of losing the ability to access and harvest country food also represents the potential for significant adverse effects on Inuit culture and well-being.

5.2.1.4 Railway and Safety of Community Members

The Board notes that the primary concerns raised in reference to the North railway and safety were regarding the safety and potential for effects on terrestrial wildlife, primarily caribou, as noted in Sections [5.1.1.5](#), [5.1.1.7](#) and [5.2.1.2](#) of the Report. Community members noted that changes in wildlife availability also effect hunter safety as displacement of wildlife because of project operations may result in increased distances and travel times for local hunters. This would increase the risk to hunters in being further from assistance in the event of an accident, especially in storm conditions.

The GN has recommended that Baffinland develop a Risk Communication Plan in order to clearly communicate with communities to ensure their safety when they are in proximity to the railroad. Concerns were expressed by community members regarding potential damage to snowmobiles and sleds caused by crossing the tracks, however Baffinland stated this would be mitigated by designated crossings, which would be selected by Inuit and designed for safe crossing.

Community members, Transport Canada (TC), and the GN expressed concern that the use of train whistles/horns that could create additional noise disturbances for caribou. TC noted there are no explicit provisions in the *Railway Act* designed for the protection of wildlife. Baffinland noted that due to TC safety regulations, train whistles/horns would have to be sounded at every crossing for safety reasons. Baffinland committed to working with communities to submit a request for exemptions or modifications of these requirements in the legislation; however, Baffinland also suggested it would be better to experience and observe the use of train whistles/horns before making a submission for modifications or exemptions.

¹²⁰ N. Kautaq, Pond Inlet, NIRB Public Hearing File No.: 08MN053 Transcripts, Vol 12, Feb. 6, 2021 at p. 2283, lines 9-17.

Baffinland further stated that it is possible that the use of the train whistle/horns could be useful to serve as a warning to caribou to reduce the possibility of collisions between trains and caribou. While the operational plans for the use of train whistles/ horns as a deterrent are currently incomplete, Baffinland committed to providing these plans to the Board in the Railway Operations and Maintenance Plan.

Baffinland stated its prediction that caribou would adapt to the noise of the train and that auditory disturbance to caribou would lessen over time. The Board notes that if this is the case, then the use of train noise, including whistles/horns, as a deterrent may also lessen over time and as a result would become less effective in preventing collisions between the train and caribou. The Board further notes that comprehensive monitoring and adaptive management would be required to identify both the initial disruptions to caribou movement, migration, and behaviour due to the train, and any adaptation to train operations caribou may later exhibit.

As noted in [Section 5.1.1.6](#), if Baffinland begins construction of the South Railway immediately following construction of the North Railway, there would be little to no opportunity for adverse effects of the North Railway to inform potential design or operational changes in the construction of the South Railway. The Board notes that this could result in unforeseen and immitigable effects due to the lack of knowledge and experience with the operation of a railway in conditions analogous to Baffin Island being incorporated into the design and operational plans for the railroad.

5.2.1.5 Economic Benefits to Municipalities and Community Members

Training – Inuit Representation in the Workforce

During the reconsideration process, the Board noted the Proponent’s continued challenges with ensuring Inuit representation is present in its workforce. While the Board recognizes that the COVID-19 pandemic beginning in 2020 and multiple COVID-19 outbreaks at the Mary River mine had direct effects on Inuit and Nunavummiut employment numbers, parties, including Baffinland, noted the difficulties in meeting existing employment goals predated the pandemic. This issue has previously been identified by the Board through its monitoring of the current Mary River Project and has also been observed by the Board at other mining projects in Nunavut (see, for example, the annual Socioeconomic Monitoring reports for 03MN107, 05MN047, and 08MN053).

As noted by the GN and other parties, Inuit employment levels may be improved by providing and encouraging Inuit to participate in both pre-employment training programs that are designed to prepare workers for the experience of working at a mine, and training offered by Baffinland to support advancement of Inuit workers.

In its submissions and presentations Baffinland noted the resources currently allocated to training Inuit employees. Baffinland also identified the additional resources and support it has committed to provide associated with the Phase 2 Development Proposal, including the construction of a dedicated training facility in Pond Inlet; providing infrastructure and staffing for community-based training in Pond Inlet, Igloodik, Arctic Bay, Clyde River, and Sanirajak; support for community garages for apprentice mechanics and high school co-op students; and direct funding in support of training programs (see [Table 6](#) in [Section 2.5](#) for further details).

Community members and Intervenors emphasized the need for effective training to obtain long-term employment, requesting clarification on the mechanisms in place to ensure Baffinland was held accountable to meet the Inuit employment commitments included within the IIBA and inquiring as to who is responsible to ensure Baffinland meets these targets. Community members also sought assurances of Baffinland's commitment to equal and fair treatment of Inuit workers in providing training for higher-level and higher paid positions.

The QIA and Baffinland noted that proposed changes to the IIBA as indicated in the ICA would identify categories of employment, reporting the number of Inuit hired per skill-level instead of reporting the total number of Inuit employees. The QIA and the Proponent indicated the intention behind this change to reporting is to promote Inuit representation in higher-level positions through training programs and to comprehensively report on the success of these efforts. Baffinland also noted that the ICA and commitments made during the Public Hearing included financial penalties to be paid to QIA if Baffinland fails to meet specific Inuit employment and training objectives.

the Inuit employment goals that we will set with the Qikiqtani Inuit Association will mean that if we don't meet our obligations, if we don't meet our -- what we say we're going to do, we will have to pay penalties, and those penalties will go directly to the communities as per the Inuit Certainty¹²¹

Several community members expressed skepticism about Baffinland's commitments to training and hiring, noting that in the past completion of training has not always resulted in employment or advancement. Community members also expressed the perception that Inuit employees were limited to unskilled work at the mine site and had few opportunities to advance to more skilled jobs and questioned whether being unilingual (Inuktitut-only) or the ability to graduate from high school limited future employment opportunities and the associated training and benefits.

¹²¹ U. Hanson, Baffinland, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 20, November 5, 2021, at pp. 3781-3782, lines 25-26 and lines 1-4.

Baffinland noted that graduating high school was not a requirement for employment. It further noted that there are site safety considerations that limited employment of unilingual Inuktitut speakers.

In response to questions regarding opportunities for youth, Baffinland noted that youth forums were conducted to promote open conversations with individual students to identify what type of opportunities each individual applicant is looking for and to determine how to pursue such opportunities. Baffinland further stated that if formal education is required, it would assist in planning for the individual to receive additional support whether it be administrative or within trades or apprenticeships. Baffinland also noted that if the Phase 2 Development Proposal were to proceed, the ICA provisions would be implemented and the IIBA would be amended to increase youth engagement to increase employment and career advancement.

Community Representatives requested assurances that Baffinland would provide cultural training to non-Inuit employees to educate them about Inuit, their culture, recent history, and values. In response, Baffinland noted that it has cultural advisors on staff, and that cultural awareness training is developed and presented by Inuit as part of the onboarding training for new employees. Baffinland stated it was currently in the process of revising the programs to ensure all non-Inuit employees understand Inuit culture, Inuit Qaujimagatut, and how Inuit knowledge is incorporated to guide company operations.

Community members also acknowledged there has been visible improvement in Baffinland's efforts toward employment and training.

Business Opportunities and Contracting

The Board notes that throughout the assessment there were several comments and concerns shared by Intervenor regarding the potential business and contracting opportunities that Phase 2 could create. The importance of building local capacity to take advantage of these opportunities was expressed by Dr. R. Loxley on behalf of the Hamlet of Pond Inlet:

...the idea of maximizing linkages in local communities is a very important concept. It's a problem that is common in northern Canada not to have those linkages, and if you hire outside contractors and outside workers... the linkages don't develop. So, I would agree in principle with what was being advocated.¹²²

¹²² Dr. Loxley, Hamlet of Pond Inlet, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 4, November 5, 2019, at p. 832, lines 19-25.

A Community Representative from Pond Inlet also noted that the Phase 2 Development Proposal is not the only way for the community to establish self-reliance, and the community should be able to develop more diverse opportunities for education and employment.

*Inuit are amazing people, and they have been self-sufficient, creative, and extremely resourceful. We have so many inventions. Inuit have survived for years before Baffinland existed. Baffinland is not the only way to get an education.*¹²³.

Baffinland noted the spin-off and indirect benefits from activities within the communities the company is present in includes revenue for service-related industries such as restaurants, hotels, and purchasing local crafting products. The Proponent stated that as the Phase 2 Development Proposal would provide more employment opportunities the spin-off indirect benefits would also likely increase from employee spending within the communities.

A community member who works at the local Co-op further described the indirect benefit for the communities in the form of annual dividends that go to Co-op members due to increased purchases.

The Igloolik Working Group (IWG) expressed concern about the current capacity of the communities and the lack of support for communities to engage in these contracting opportunities, stating as follows:

*Do you understand that if this construction starts, most of the people in the communities that could benefit from jobs or businesses that could benefit from contracting are going to be out of luck because they don't have the capacity needed to be able to submit or to get these contracts or this work? This is very concerning for the communities.*¹²⁴

Other representatives and community members shared similar concerns regarding infrastructure limitations to establish the businesses and the capacity to bid on contracts as they are written. As a potential solution, Community Representatives asked whether contracts could be broken up into smaller segments in the short-term to allow for small businesses to participate in the bidding process and potentially access these economic opportunities.

Baffinland noted it had established a Business Start-Up Fund to assist local business establishment by offsetting the initial high costs and to coordinate with the QIA to ensure the funds are available. QIA also stated that the impacted communities would continue to have the

¹²³ A. Uuttuvak, Pond Inlet, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 18, November 3, 2021, at p. 3414, lines 2-6.

¹²⁴ M. Recinos, Igloolik Working Group, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 1, November 2, 2019, at p. 240, lines 3-9.

highest priority when asking for a formal request regarding the proposal to ensure the request is considered in a timely fashion. However, community members indicated there are difficulties associated with obtaining the necessary funds, stating that the funds were both seemingly inaccessible and that the funds being made available are insufficient in assisting small businesses due to capacity issues associated with communities in Nunavut. The QIA stated that it was working towards making all programs and funds easier to access for eligible community members.

Baffinland stated that to date \$1.48 billion in contracting has been awarded to Inuit firms and that Inuit firms have priority for contracting opportunities, including direct negotiations to determine if they would be interested in obtaining the contract. Baffinland also indicated that an annual survey is sent out to collect information about existing Inuit-owned firms to allow Baffinland to maintain an awareness regarding which firms are currently active and to identify the services they can provide.

Baffinland stated its commitment, as stated under the ICA signed with QIA, that the Mary River IIBA would be revised to define Preferred Inuit Firms and to encourage participation through the creation of tailored contracting and subcontracting opportunities, which would expand the existing preferential contracting currently in place. Baffinland also noted that major contractors had individual IIBAs with Inuit employment targets and plans to achieve said targets. Baffinland further stated that the proposed amendments to the IIBA would allow for more comprehensive reporting and regular spot-check audits to QIA on Inuit Content Requirements for contractors.

The Board notes that community concern has been raised regarding the reliability of the socio-economic modelling and reporting which would impact the analysis of benefits that would be delivered to the communities as a result of the Phase 2 Development Proposal. As an example, while Baffinland's annual report indicated an increase in overall firm establishment within the impacted communities since operations began at the Mary River Project, a representative from the Hamlet of Pond Inlet identified that it may not be accurate to characterize this a project-related effect because Baffinland was not the only factor that could drive the creation of new firms.

The Board also notes community concern that Baffinland's emphasis on documenting and predicting positive socio-economic effects has been mostly focused on the analysis of financial indicators such as salaries, contracts, revenue, and funding, while overlooking non-monetary impacts to culture and well-being that community members may feel are equally important. This has resulted in a situation where community members expressed that they felt they are being asked to choose between benefits, as defined by Baffinland, or no benefits at all. In combination with the expressed difficulty in accessing contract opportunities and funding, and the belief that that Baffinland and QIA were unresponsive to these issues and imposing terms rather than

promoting open discussion with the potentially impacted communities, a sense of distrust between the impacted communities, Baffinland, and QIA was expressed by community members.

The Board believes this perceived lack of trust and open communication invites an “us versus them” situation where parties are more focused on advocating their position rather than coming to mutual agreement through respect, inclusivity, and consensus.

General Economic Benefits Proposed by Baffinland

As noted by Baffinland, intervenors, and members of the public, and as recognized by the Board, the Mary River Project has the potential to provide substantial economic benefits through taxes, royalties, direct funding, and other means to the people of Nunavut, the Qikiqtani Region, and the people of the affected communities. Aside from the economic opportunities provided by employment, training, and contracting, as well as the associated economic spin-off effects (discussed in this report), the additional benefits committed to by Baffinland could provide a substantial improvement to both infrastructure and quality of life.

As shown on [Table 6](#) in [Section 2.5](#), Baffinland’s current and proposed benefits include benefits to individuals, such as the child care allowance for employees; funding for communities and the development of community infrastructure; hunter support and the purchase of equipment; funding support of organizations; direct payments to the QIA; and rent, royalties, and similar payments made to federal and territorial governments, NTI, QIA, and to the Tasiuqtiit Working Group.

Given the limited potential for jobs and economic development in the region, as identified by the GN, the Mary River Project could provide a basis for significant improvement in socioeconomic and infrastructure levels in the affected communities. The project lifetime offers the opportunity for long-term improvements and investment in communities, and projects such as the construction of community daycares would provide benefits and opportunities to people in those communities even if they have no direct connection to the Mary River Project.

The Board also commends the efforts Baffinland has made to directly reach out to the community of Pond Inlet to offer direct support for community infrastructure such as roads, a new fire hall, and upgraded health center which would provide direct benefit to the people of Pond Inlet regardless of their connection to the Project.

The Board, however, notes that while benefits directly provided to communities would provide a positive impact, nothing has been proposed as to how the provision of some of these direct benefits, provided outside of established agreements, would be enforced. Typically, these types of benefits are provided through the mechanisms of land and mineral leases, an IIBA, or other types of contracts with the Regional Inuit Organization, or a Project Development Agreement with the GN, are enforced through the provisions of those agreements. Benefits agreed to

directly between a proponent and communities are somewhat novel in Nunavut, and the lack of an established framework for how those benefits would be managed is an issue that should be addressed.

As stated, the Board acknowledges the significance of the proposed benefits associated with the Phase 2 proposal, and the positive impacts such benefits could represent. This was carefully considered by the Board in its decision.

5.2.2 Conclusions and Recommendations of the Board

At the outset, the Board notes that the potential for economic benefits associated with the Phase 2 Development Proposal are considerable and have been (under the current Mary River Project) and would be (under the Phase 2 Development Proposal) a significant economic driver in the North Baffin Region and Nunavut in general. However, the Board's assessment of socio-economic effects must also consider the potential for both significant positive and negative socio-economic effects.

As outlined in [Section 5.1](#) there is considerable uncertainty regarding the potential for the marine shipping and rail transport of ore to have long-term adverse ecosystemic effects on narwhal, seals, walrus, caribou, and Arctic char and their habitats. The Board heard these species are critically important to Inuit in the North Baffin Region and activities that impact the distribution, abundance, or health of these animals or reduce their habitat will in turn have significant adverse socio-economic effects on Inuit harvesting, culture, land use, and food security. During the Community Roundtables the Board heard high levels of concern from communities that Baffinland's current monitoring and mitigation efforts are not receptive and responsive to communities when they have identified negative effects in terms of displacement and disruption of wildlife and experienced adverse effects on their abilities to harvest and consume country food. The residents of Pond Inlet in particular expressed frustration with Baffinland's ability to manage these effects under the current Mary River Project and lack confidence that Baffinland will be successful managing the additional effects that could result under the Phase 2 Development Proposal. The gap between the conclusions drawn by Baffinland under the monitoring program for the current project and the communities' observations and lived experience is wide and remained largely unaddressed during the assessment of the Proposal.

With respect to the delivery of significant positive benefits to the Region, the Board notes that there are several factors that may limit Baffinland's ability to deliver on the full scope of the benefits proposed, including:

- Monitoring of the current Mary River Project has indicated that meeting Inuit employment targets has been a persistent problem and that measures taken by Baffinland to date have not addressed this issue;

- There is uncertainty regarding the long-term effect on Inuit employment when Baffinland switches from trucking the ore along the Tote Road to the North Railway;
- Due to several factors, including education, training, labour market, and demographics, some of which are beyond the control of the Proponent, there remains uncertainty regarding whether the full scale of Inuit employment benefits and Inuit contracting and Inuit employment will be delivered by the Phase 2 Development Proposal; and
- A lack of clarity as to how economic benefits negotiated with individual communities or community organizations outside the context of an IIBA or Project Development Agreement would be delivered and enforced.

To be clear, while the Board does not question Baffinland's intention to deliver on the economic benefits promised under various commitments in the ICA and IIBA, the Board has no experience with the administration of benefits negotiated directly with individual communities and community organizations and has identified this as an issue that may impact the delivery of the full scope of economic benefits over the life of the Phase 2 Development Proposal.

Throughout the assessment many community members indicated that they felt the Phase 2 Development Proposal required the potentially affected North Baffin communities to make a choice between economic opportunity and cultural survival. The Board accepts that Baffinland does not accept this either/or characterization of the Phase 2 Development Proposal, with Baffinland's position clearly being that the Proposal is intended to minimize the potential for such negative effects, while maximizing the positive economic benefits.

Similarly, in the Board's view, one of the central outcomes of impact assessment is to ensure that all potential effects are assessed and considered and that significant adverse effects are prevented or reduced in severity and positive effects are maximized. Although compromise and accommodation of rights and interests may be necessary, particularly in the face of uncertainty about predicted benefits and impacts, if the Board has identified that significant adverse effects are likely to be associated with a project, and such effects cannot be limited or managed through the terms and conditions of the Project Certificate, it is inconsistent with the Board's objectives to recommend that the project proceed. The significance of potential positive economic benefits is one factor considered by the Board, but it is not determinative.

In the case of the Phase 2 Development Proposal, the Board acknowledges the significant positive economic effects that Baffinland's current Mary River Project has had in the North Baffin Region and Nunavut in general in terms of employment, benefits, royalties and taxes, and business opportunities and contracting. The Board also understands that Baffinland has determined that the future fate of the Mary River Project is dependent on the Phase 2 Development Proposal being approved to proceed and that the current Mary River Project may be suspended and go into care and maintenance if the Phase 2 Development Proposal is not approved. The Board

acknowledges that this will be a significant blow to Nunavut's economy in the short and long term.

However, through Inuit Qaujimajatuqangit and experience shared with the Board and the submissions of Intervenors provided during the assessment, the Board heard that the pace and scope of changes proposed to the current Mary River Project under the Phase 2 Development Proposal are considered to be unacceptable to community members and Inuit rights holders in the face of observations and lived experience with negative effects associated with the current Mary River Project. The Board heard that Inuit are experiencing adverse effects on harvesting, land use, culture, and food security from the current Mary River Project. In the Board's view, Baffinland's assessment did not adequately address the potential for these effects to have significant and lasting impacts if the Phase 2 Development Proposal were to proceed. The Board is also not confident that Baffinland's proposed mitigation, adaptive management, and monitoring programs would be sufficient to prevent or limit these negative effects. The Board has also concluded that proposed revisions to the terms and conditions of Project Certificate No. 005 would also be insufficient to address the potential for significant adverse socio-economic effects on harvesting, land use, culture and food security associated with the Phase 2 Development Proposal.

5.3 Others Issues Considered by the Board

5.3.1 Regional Monitoring and Regulatory Capacity

During the Board's assessment of the original Mary River Project in 2012, the Board highlighted that limited regulatory capacity and the ability of regulators to contribute to required monitoring could pose serious risks to the monitoring, mitigation, and adaptive management of project-effects. As stated in the Board's Public Hearing Report:

Given the critical emphasis on the contributions of regulatory agencies to the various working groups supporting the development of effective monitoring and measurement elements required for adaptive management, limitations on regulators to participate fully in these activities could impose serious limitations on the effectiveness of these mechanisms to limit [sic and/or] mitigate project effects.¹²⁵

During the Final Hearings in 2012, the Qikiqtani Inuit Association (QIA) conveyed their concerns about the potential risks posed by limited regulatory capacity as follows:

¹²⁵ (Doc ID No. 286425), NIRB File No.: 08MN053, Final Hearing Report for the Mary River Project, Baffinland Iron Mines Corporation, September 14, 2012, at p. 227.

...in the event government participation is either inconsistent or unavailable, it is highly likely that QIA's involvement will be required to expand to accomplish the same level of project monitoring. QIA, therefore, strongly requests that NIRB, in its final hearing report, clearly identify government capacity as a known and predictable risk to project monitoring. It is QIA's position that inadequacies in the ability to monitor project interactions will result in additional issues, particularly in the areas of cumulative effects investigations, as well as project expansion, review, and approvals.¹²⁶

Recognizing the overall risks to the monitoring, identification, and mitigation of project effects posed by limits on regulatory capacity and regional monitoring to supplement project-specific monitoring, the Board has continued to consider whether sufficient regulatory capacity and support for regional monitoring is in place during the Board's subsequent assessments of modifications to the Mary River Project. In respect of the Board's assessment of the Phase 2 Development Proposal, the Board submitted written questions to regulators about regulatory capacity and monitoring and followed up with questions during the Public Hearing session.

You talked about Fisheries and Oceans willing to be part of discussions and review information -- monitoring data as it comes in, and this kind of brings me back to the hearings of the original project where the Government of Canada overall was questioned about its capacity to monitor and manage the impacts of the project.

So starting with Crown-Indigenous Relations and Northern Affairs and then moving to Fisheries and Oceans, NIRB staff would like to understand how successful was the Government of Canada in building capacity since approval of the original project, and is it sufficient to meet the regional monitoring and regulatory needs should the Phase 2 development be recommended by the Board to proceed?¹²⁷

CIRNAC provided the following response:

So under that Act, if NIRB is to issue a project certificate, we would have inspectors that would go to site to inspect certain terms -- would be responsible for enforcing compliance to those terms and conditions as outlined. Our inspectors go to the Baffinland site on a

¹²⁶ Excerpt of full quotation as cited in (Doc ID No. 286425), NIRB File No.: 08MN053, Final Hearing Report for the Mary River Project, Baffinland Iron Mines Corporation, September 14, 2012, at p. 227, S. Williamson Bathory, QIA, NIRB Final Hearing File No.: 08MN053 Transcript, July 18, 2012, pp. 502-503, lines 14-26 and 1-6.

¹²⁷ K. Costello, Nunavut Impact Review Board, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 16, November 1, 2021 at p. 3054, lines 4-18.

quarterly basis, so that's our on the ground -- boots-on-the-ground inspections. Other than that, we also do administrative compliance by reviewing all the monitoring data that's provided by Baffinland through the annual report, and we review that to ensure that the project certificate's terms and conditions are effective and they're working as intended.¹²⁸

DFO indicated the following:

Since the first hearing for the initial Baffinland project, Fisheries and Oceans Canada has introduced an entire new region devoted to managing and researching Arctic issues. We have expanded our habitat program, and the department in general is always working on improving all of its programs, including fish and fish habitat protection, science, research to ensure that we have better capacity, and we are in a better position to inform Canadians of how better to protect our aquatic resources.

A bit more concretely, DFO science is deploying research effort in the area, but it's also important to acknowledge that -- the scope of research that could be undertaken associated with this project alone but also for the whole Arctic. So when we make decisions regarding research programs, we do consider ongoing projects but also the needs of the Arctic as a whole. This includes the need associated with baseline monitoring for marine-protected areas, sustainability of key fisheries, and future projects that may be undertaken within Nunavut.¹²⁹

A similar question by the NIRB to the GN was answered as follows:

Similar to the answers from our colleagues from the federal government, the Government of Nunavut has an extensive mandate when it comes to employment and goals. We are currently working on -- working on some of the key areas when it comes to employment and also when it comes to monitoring.

One of the key components, again, are well-known when it comes to -- within the territories, housing and training.¹³⁰

While the Board greatly appreciates the considerable additions to regulatory capacity noted by DFO, the Board also notes that there continue to be significant gaps in terms of general research

¹²⁸ S. Dewar, Crown Indigenous Relations and Northern Affairs Canada, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 16, November 1, 2021 at p. 3055, lines 5-16.

¹²⁹ G. Bernard-Lacaille, Fisheries and Oceans Canada, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 16, November 1, 2021 at pp. 3055-3056, lines 25-26 and 1-19.

¹³⁰ G. Karlik, Government of Nunavut, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 16, November 1, 2021 at pp. 3057-3058, lines 26 and 1-8.

or monitoring that would address critical baseline research in respect of marine species such as narwhal and seal that are essential to Inuit in the Region. As noted in the Board's questioning of DFO regarding whether the acoustic thresholds for narwhal disturbance used by Baffinland in their assessment are reasonable:

Also, the two noise thresholds presented by Baffinland are based on data from several whale species, and even though they might be used as surrogates, they are not specific to narwhals. At the moment, this is the data that we have, but it is not specific to narwhals. So given this uncertainty, it would be helpful to evaluate a range of thresholds and revisit when we have more data.

So to summarize, what I'm trying to say is that there is data gaps and uncertainty, and without more information, Fisheries and Oceans cannot give you the clarification that you seek at this time, but we are definitely agreeable to review any new information or any new monitoring plans that would help answer this question.¹³¹

In addition, the Board notes that notwithstanding the commitment of the Government of Nunavut, and noted importance of socio-economic monitoring, it is the Board's understanding that the members of the Socio-Economic Monitoring Program for the Region have not met since November 2020 and have not been able to determine the expected schedule for resuming these regular meetings. This lack of monitoring information means that the Board lacked data regarding the monitoring of socio-economic indicators in the Region, which is necessary to gain a better understanding of the socio-economic effects of the current Mary River Project in the current context of the socio-economic conditions in the Region, the potential for effects associated with the Phase 2 Development Proposal and the overall cumulative effects of the Phase 2 Development Proposal. Without this baseline, it was difficult for the Board to have confidence that the prediction of socio-economic effects provided by Baffinland and the challenges to Baffinland's predictions raised by the Hamlet of Pond Inlet, the Qikiqtani Inuit Association, and Oceans North reflect an accurate picture of the socio-economic effects associated with the Mary River Project to date.

The Board also heard from several regulators that the existing Working Groups for the Terrestrial and Marine Environments established for the original Mary River Project under Project Certificate No. 005 are encountering difficulty in functioning as envisioned and in delivering important adaptive management components such as thresholds, indicators, and mitigation strategies. As specifically discussed under the subheading Working Groups in [Section 5.1.1.7](#) and [Section 5.3.5 Working Relationships](#), it may be that the erosion of working relationships and trust is a

¹³¹ G. Bernard-Lacaille, Fisheries and Oceans Canada, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 16, November 1, 2021 at p. 3053, lines 11-25.

significant contributing factor to the failure of the Working Groups to deliver the results expected. However, recognizing the importance of regulatory capacity and commitment to the success of the Working Groups the Board also recognizes that the on-going commitment of the regulators occupying central roles in these Groups will continue to be vitally important in respect of the existing Mary River Project.

5.3.2 Uncertainties Arising from Changes to Project Development Timelines and Phased Development

The Board notes concerns raised by Intervenors and members of the public regarding the lack of development of the original Mary River Project as approved by the Board in 2012, specifically the South Railway and port at Steensby Inlet. During the assessment of the Phase 2 Development Proposal, parties also raised concerns that the scale and scope of the effects of the Mary River Project as it currently operates under the Early Revenue Phase Proposal (ERP)¹³², and as further modified under the Production Increase Proposal¹³³ and the Extension to the Production Increase Proposal,¹³⁴ are not yet fully understood, but Baffinland is now proposing a doubling of the current shipping under the Phase 2 Development Proposal and a new Northern Railway. When taken together, these modifications represent a significant difference from the original Mary River Project as initially proposed, assessed, and eventually approved in 2012.

I was part of the planning process for Steensby Inlet, and we went through all the documents for -- and I was part of the process, and the working group did a very good job at putting all the framework together, and all of a sudden we stopped, and I don't know what happened to that planning process we had.¹³⁵

When they were getting ready for Steensby Inlet, that it was going to be open, they were going to transport their goods up to Milne Inlet and then transport the iron ore through Steensby Inlet...We were really happy that Milne Inlet was not going to be the transportation corridor anymore. We were happy with that, and now they want to do Phase 2.¹³⁶

¹³² Which modified the original Mary River Project to allow for ore transport along the Tote Road via haul truck and shipments of up to 4.2 million tonnes per year (Mtpa) through Milne Inlet.

¹³³ This modification authorized Baffinland to increase the amount of ore transported on the Tote Road and shipped via Milne Port from 4.2 Mtpa to 6 Mtpa while the Board completed the assessment of the Phase 2 Development Proposal.

¹³⁴ This modification extended the increase of transport and shipping of ore to 6Mtpa for a period of two years until December 31, 2021.

¹³⁵ C. Nutarak, Pond Inlet, NIRB Public Hearing No.: 08MN053 Transcript Vol 17, November 2, 2021 at p. 3274 lines 5-11.

¹³⁶ M. Koonoo, Arctic Bay Hunters and Trappers Association, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 19, November 4, 2021 at p. 3657, lines 10-13 and 19-22.

*This company started, and the hearing was commenced regarding Steensby. There was a hearing, and Steensby was approved, and since they came back, they said they don't have enough money. They have to do this project now. They kept saying, We don't have any more money. We have to do this again.' So it was approved, and people wanted to continue to have jobs. Once they got approved, then they wanted to expand some more.*¹³⁷

While the Board notes that most major mining projects are now developed in a step-wise or “phased” approach, because the original Mary River Project has yet to be constructed, Baffinland’s proposed modifications do not build upon the experiences of all parties with the construction, operation, monitoring, and mitigation of the Mary River Project as originally proposed. Further, it has sometimes been difficult for the Board to reconcile the various assessments of the Project and modifications to get an understanding of what the future of the Mary River Project truly holds. As noted by the Board in November 2019:

*During the assessment of the original Mary River Project and the review of the Early Revenue Phase proposal, Baffinland described technical constraints that limited how it could develop the ore body at Mary River. These constraints were said to prevent development of a railway to the north, would prevent year-round shipping, and use of large ore carriers in Milne Inlet, and would limit the amount of ore that could be trucked on the tote road, for example.*¹³⁸

The significant modifications to the original Mary River Project, represented by the ERP and the proposed Phase 2 Development Proposal, are taking place before construction of the approved Project, which represents a challenge to the assessment of effects, particularly in respect of the prediction of cumulative effects from the proposed modifications in combination with the approved Mary River Project. As noted by the QIA, with modifications and varied versions of the Mary River Project almost constantly under assessment by the Board, there are almost constant pressure placed on communities to evaluate differing versions of the Mary River Project before the effects of the approved Project can be observed.

*The impacted Inuit communities have been, within the space of five years, reviewing and responding to multiple changes to the existing approval, and reviewing and responding to the new expansion proposal.*¹³⁹

¹³⁷ E. Inuarak, Mittimatalik Hunters and Trappers Organization, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 21, November 6, 2021 at pp 3937-3938, lines 26 and 1-8.

¹³⁸ R. Barry, Nunavut Impact Review Board, NIRB Public Hearing No.: 08MN053 Transcript Vol 2, November 3, 2019 at p. 308, lines 9-17.

¹³⁹ (Doc ID No. 326967) Qikiqtani Inuit Association, Final Written Submission.

It is also unclear whether the approved project will be developed in the future, as Baffinland acknowledged that the construction of the South Railway and port facilities at Steensby Inlet is not assured. This uncertainty raises the possibility that the development of the South Railway and the approved southern shipping route may never occur.

The plan remains to build Phase 2 over a two-year period following approval, if it should be received, and that the construction crews and equipment used to build Phase 2 would then transition to build the southern railway in Steensby Port. I have to also stress that that is very aspirational at this point in time. We do not have the funding in place that is required to move forward with Steensby. We are hopeful that it could be acquired with investors knowing we have Phase 2 in place and the opportunity that that opens up, and, of course, we have to consider that additional environmental permits are still required to move forward with Steensby that we do not have at this point in time.¹⁴⁰

This creates significant complexity around the Board's attempted assessment of predicted cumulative effects, as noted in [Section 5.2.2.4](#) of this report. As Baffinland has the regulatory approvals to proceed with the construction of the South Railway, the Board's assessment of cumulative effects must be premised on the assumption that the timing of Baffinland's construction of the South Railway make take place before the effects of the North Railway are fully identified and understood.

This lack of knowledge and continued uncertainty concerning the effects of the original project that would be associated with the construction and operation of the South Railway or Steensby Port as proposed in the approved Project, leave the Board with little confidence that the cumulative effects predictions for the Phase 2 Development Proposal truly reflect the potential for cumulative effects if all components of both the approved Mary River Project and the Phase 2 Development Proposal were to be constructed and operated by Baffinland. In this assessment, Baffinland relied on the conclusions of no significant impact and reliance on the mitigation and adaptive management measures put forward during the Board's assessment of the original Mary River Project. The Board points out, however, that the original Mary River Project was not assessed taking into account the infrastructure and operations of the ERP and Phase 2 Development Proposal and was not updated to reflect the effects of the current Mary River Project that have been identified by communities. Accordingly, the Board cannot verify the accuracy of the predictions of effects and the effectiveness of the planned monitoring and mitigation proposed in the assessment of the original Mary River Project. Without this

¹⁴⁰ L. Kamermans, Baffinland, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 16, November 1, 2021 at p. 3043, lines 1-14.

understanding of the original Mary River Project predictions, considerably uncertainty remains as to the cumulative effects predictions for the Phase 2 Development Proposal.

The Board further notes that Baffinland's on-going and major changes to the approved Mary River Project since 2012 may contribute to a level of distrust between Baffinland, Intervenors, and the North Baffin communities, leaving the impression that Baffinland is not fully sharing its vision and eventual plans for the Mary River Project. This level of distrust hampers communication between the involved parties and makes it difficult to complete the important and collaborative work of the existing and proposed Working Groups and Committees.

In reviewing the submissions of the parties and hearing the knowledge shared during the Public Hearing, the Board heard a very clear message from the communities: that it is the pace of development proceeding without having gained a true picture of the effects of the existing Mary River Project that communities, particularly Pond Inlet, find objectionable. As stated by Nina Kautaq during the Community Roundtable in Pond Inlet

I want to be able to say to Baffinland, we want you to slow down. This proposal that you have, we're not -- we're not agreeing with it now. Can you wait a little bit? Your operations are okay, and the impact that we have and the impacts that we're going to have are being commented by the Elders here, and even by the youth I hear.

... Can you wait? When we are ready, if we are able to say that, yes, you can submit your proposal again¹⁴¹

In this respect the Board notes that Baffinland has proposed three (3) major changes to the operation of the Mary River Project in the decade since the Board approved the original Mary River Project, and the Board notes this does little to dispel the concern of communities that the Project has been almost constantly in the regulatory process.

5.3.3 Transboundary Issues

As discussed in [Section 1.7](#), the Board recognizes that there is potential for negative effects from the Phase 2 Development Proposal activities on specific Valued Ecosystemic Components (VECS) within the Nunavut Settlement Area (NSA) to impact areas outside the NSA. Baffinland's assessment did not identify negative residual transboundary effects within its transboundary effects assessment of the Phase 2 Development Proposal. Baffinland indicated its transboundary effects assessment was robust and in accordance with the Board's *Amended EIS Guideline*. However, several parties criticized the transboundary assessment, indicating that Baffinland

¹⁴¹ N. Kautaq, Pond Inlet, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 12, February 6, 2021 at p. 2281, lines 8-14 and 18-20.

narrowed the scope of the assessment and provided very limited analysis beyond the Regional Study Area.

In terms of specific issues, Intervenors raised concerns about how the Phase 2 Development Proposal would interact over time and space with human activities and the changing environment due to climate change. Parties also identified that the potential for possible irreversible impacts on whales could impact Greenlandic communities and harvesters as well as Inuit harvesters within the NSA. As outlined in detail, some Intervenors also identified that additional transboundary assessment to understand the overall effects of shipping was required to meet the Government of Canada's responsibilities under the *Espoo Convention*.¹⁴²

As discussed in the Board's Views in [Section 5.1.2](#), uncertainties remain in terms of the predicted effects of the Phase 2 Development Proposal on marine wildlife (mammals, fish, and birds) and the marine environment and the effectiveness of mitigation strategies proposed by Baffinland to limit such effects. Recognizing this uncertainty and applying a high standard of the precautionary principle, the Board has concluded that if the Phase 2 Development Proposal were to have significant adverse effects on marine wildlife and the marine environment, significant residual negative transboundary effects could also occur, as clearly marine wildlife may travel outside the NSA. The Board also accepts that if marine species such as whales and seals that are harvested in Greenland are impacted, that there could also be negative effects on culture, harvesting, and food security in communities outside of Nunavut.

Also as identified in [Section 1.7.1](#), because the Phase 2 Development Proposal includes the contingency of empty ore carriers using an established sheltered anchorage at Store Hellefiske Bank (an area in Baffin Bay off the west coast of Greenland) as a contingency during shipping in the shoulder seasons, the Board has considered the potential for this activity to result in transboundary effects as well. In particular, the analysis in the Boards' Views and Conclusions and Recommendations under Sections [5.1.1.2](#), [5.1.1.5](#), [5.1.1.6](#), and [5.1.2](#) apply to the Board's consideration of the potential for transboundary effects associated with project vessels transiting in Greenlandic waters if the alternative anchorage site at Store Hellefiske Bank is used.

5.3.4 Cumulative Effects

The Board acknowledges that throughout the assessment of the Phase 2 Development Proposal, several Intervenors identified concerns regarding the adequacy of the cumulative effects assessment performed by the Proponent. Parties particularly highlighted deficiencies with respect to the analysis of cumulative effects on caribou and in the marine environment.

¹⁴² For a more in-depth summary of the comment submissions received by the Board under the Espoo Convention, refer to [Section 1.7.1](#) of this Decision.

Multiple parties, including the QIA, the Hamlet of Clyde River, the MHTO, and the GN questioned whether Baffinland had conducted a sufficient analysis regarding the potential disruption of caribou migration when both the North Railway and South Railway have been constructed and in operation, as this infrastructure would completely bisect/cut across Baffin Island. Inuit Qaujimagatuqangit shared with the Board by a community member indicated that caribou are very sensitive to disturbance and will not cross a snowmobile track sometimes due to scents, indicating concerns for wildlife's ability to cross a larger structure like a railway or road.

According to IQ, caribou are very sensitive to objects, trails, and movements. For example, caribou can stop when they come across snowmobile tracks. It's like they hit a wall, so it's not surprising that there's hardly any evidence of caribou crossing the tote road, so if you build a railroad, that's two barriers for caribou to cross.¹⁴³

Based on this knowledge, it is possible that the Railways could represent an impassable barrier preventing herd movement. The QIA also noted that the proximity of the road and railroad may cumulatively represent a barrier that would also restrict caribou movement.

There will also be a combined or a cumulative effect of having the existing tote road near the railway, and that this may be seen as wildlife -- or by wildlife as one large road to pass. There are also the effects of actually operating the train to be protective of caribou that may be on or near the tracks.¹⁴⁴

Baffinland has stated that providing sufficient caribou crossings and operational plans would minimize the disturbance to caribou and noted that that its estimate of cumulative effects was conservative. With respect to the potential for the switch from ore transport by truck to the North Railway, Baffinland indicated that there was not enough information to accurately determine whether there would be changes to the effects on habitat from ore haul by truck versus rail. Baffinland also stated that lessons learned from the interaction of wildlife with the North Railway would be applied to the South Railway for construction and operation. Baffinland also committed to re-evaluate the zone of influence study area in future, in consultation with the GN.

As noted in [Section 5.3.2](#), Baffinland stated that, provided sufficient funding was available and required permits were in place, construction of the South Railway could commence upon completion of the north railway.

¹⁴³ D. Irngaut, Igloodik Hunters and Trappers Association, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 4, November 5, 2019, at p. 852, lines 17-23.

¹⁴⁴ R Paton, Qikiqtani Inuit Association, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 10, February 4, 2021, at p 1737 lines 15-21.

*The plan remains to build Phase 2 over a two-year period following approval, if it should be received, and that the construction crews and equipment used to build Phase 2 would then transition to build the southern railway in Steensby Port. I have to also stress that that is very aspirational at this point in time. We do not have the funding in place that is required to move forward with Steensby.*¹⁴⁵

Assuming Baffinland maintains the proposed schedule, the Board questions how lessons learned from the construction and operation of the North Railway could be applied to the South Railway as there could be no time to observe and evaluate the interactions between wildlife and the North Railway before construction of the South Railway commences. Given this timing, it is difficult to see how Baffinland could implement lessons learned in improvements to the design and operational plans for the South Railway.

Further concerns were raised by the MHTO and community members regarding the long-term effects on caribou from the noise and vibration associated with the railway. Baffinland concluded that there would be minimal effects; however, the MHTO and community members did not agree with this statement. Baffinland committed to updating their Terrestrial Environment Mitigation and Monitoring Plan to reflect research performed by Baffinland to estimate zones of influence and disturbance, with updated estimates of cumulative habitat losses for caribou to be provided to the Board at least every five (5) years. However, as noted in [Section 3](#) and the Board's discussions in [Section 5](#), Intervenor have expressed concerns regarding the effectiveness of existing monitoring programs. Further, as outlined in [Section 5.1.1.7](#) in the Board's discussion of Adaptive Management, several Intervenor have expressed dissatisfaction with the functioning of existing Working Groups and the ability of these Groups to produce important components of the adaptive management system for the Project such as thresholds, indicators, and mitigation measures. The Board shares the concerns about whether the existing Working Groups or the structures proposed under the ICA would be able to fulfil their critical roles in relation to the monitoring and adaptive management of potential cumulative effects when gaps and uncertainty remain in the prediction of cumulative effects on caribou.

Baffinland has stated that its current cumulative effects assessment measures caribou response to rail, road, mining, helicopter overflights, and communities. The Board notes that Baffinland performed this analysis by grouping general sensory disturbances rather than performing a separate analysis for each. Baffinland noted that caribou are identified in the ICA as a priority for monitoring and study requirements.

With respect to the potential for cumulative effects on marine mammals, DFO, QIA, and other parties stated they believed the study areas for the effects on marine mammals should be larger

¹⁴⁵ L. Kamermans, Baffinland, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 16, November 1, 2021, at p 3043 lines 1-8.

due to the migratory nature of animals such as narwhal. These parties indicated that the smaller area selected by Baffinland would not be sufficient to capture the project effects due to increased shipping and reiterated their previously stated concerns with respect to the effectiveness of current project monitoring and the dysfunction of the relevant Working Groups. A community member also stated that local knowledge indicates the whale population consists of a single stock that migrates around the entire North Baffin region.

...we know for a fact as Inuit, Pond Inlet and Clyde River and to Arctic Bay, we have one stock. It's the same group of beluga that migrate through these communities to Kuganajuk [phonetic] and right over to Kugaaruk. They migrate through our communities all the way over to Kugaaruk, the same stock, and on their way back, the same stock goes through Pond Inlet.¹⁴⁶

Noting concern about the potential for cumulative and transboundary effects on marine wildlife, the QIA further requested that Baffinland identify and implement mitigation and adaptive management measures to avoid impacts on marine mammals outside of the Regional Study Area. The QIA and Oceans North expressed dissatisfaction with Baffinland's cumulative effects assessment, with QIA identifying a lack of data regarding climate change and its potential cumulative effects on the Phase 2 Development Proposal. Oceans North stated that Baffinland's cumulative effects assessment should predict all possible impacts and determine how to monitor all impacts with multiple indicators.

So even though it is difficult to estimate impacts from the past, present, and future projects, it is still necessary, and we are required to try. The cumulative effects assessment should predict if there will be possible overall impacts and should determine how to monitor for these impacts using multiple indicators. However, if a prediction about what cumulative effects will happen is not made, we cannot monitor for it. And as of yet, Baffinland has made no clear proposal for cumulative effects monitoring. A couple of days ago, Baffinland stated that they don't know exactly what is causing the changes to animal populations and that their Phase 2 monitoring programs will separate out the cause of those impacts. However, the problems being seen now in this current phase are showing us that the current monitoring programs are not able to separate project impacts from other issues.¹⁴⁷

¹⁴⁶ C. Inuarak. Pond Inlet, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 19, November 4, 2021 at pp. 3346-3347 lines 22-26 and lines 1-2.

¹⁴⁷ A. Joynt. Oceans North, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 19, November 4, 2021 at pp. 3505-3506 lines 20-26 and 1-12.

The Board notes that while a cumulative effects assessment must be comprehensive, the Board does not require every possible impact to be identified.

However, the Board notes that effective prediction of cumulative effects requires an understanding of the effects of existing projects. This understanding requires monitoring data that, combined with local observations and knowledge, provides a reasonable basis for making decisions about predicted effects and can be relied on to establish agreed-upon triggers and thresholds to identify if effects exceed predicted levels. However, as observed several times throughout this assessment and as indicated above, parties do not agree on what existing monitoring data and Inuit knowledge and experience is telling us about the effects of the existing Mary River Project. There is also disagreement about the method of collection and the role and responsibilities for evaluating and responding to monitoring data, and in relation to how to incorporate and apply Inuit knowledge and experience. Without agreement on the existing information and impacts, the validity of predictions of cumulative effects remain uncertain and cannot be relied upon.

The Board, therefore, is not confident that the predictions provided by Baffinland are sufficient to reliably assess the cumulative effects of the Phase 2 Development Proposal in combination with the approved Mary River Project.

5.3.5 Working Relationships

Throughout the Board's assessment of the Phase 2 Development Proposal, the Board heard extensive comments from both members of the Public as well as Intervenors regarding a lack of trust between the Proponent and parties. The Board notes that a functional, mutually beneficial relationship between the Proponent, Intervenors and community members is essential for the long-term success of development Projects in Nunavut. These working relationships are the backbone of development; they can create a strong foundation for establishing mutual respect, understanding of each other's goals and are key to accomplishing those goals. The Board further notes the challenges of repairing these relationships if they become damaged. Indigenous communities across the world have a long history with development projects, and experience indicates that if trust amongst parties is not established early, or if it is broken, this creates a challenging dynamic that may be very difficult to repair. Early on in the Board's assessment of the Phase 2 Development Proposal, it became clear to the Board that there were underlying trust issues between the Proponent and the North Baffin communities most likely to be affected, particularly Pond Inlet, Igloolik, Sanirajak, Clyde River and Arctic Bay. However, as the assessment progressed, it further became clear that the working relationships between communities, regulators and the QIA had also been strained. The Board has addressed the erosion of trust between communities and Baffinland and the erosion of trust between communities, regulators and the QIA under separate subheadings below. The Board has concluded this section with a

short discussion of how these challenges affected the assessment, noting the importance of repairing and rebuilding these relationships to the on-going mitigation, adaptive management and monitoring efforts for the current Mary River Project and any future proposed modifications to the Project.

Trust Between the Communities and Baffinland

Through the Public Hearing sessions, communities repeatedly indicated they felt there was a lack of transparency with respect to the Proponent's decision-making and ultimate vision for the Mary River Project in its entirety. They cited situations where Baffinland had come to the community to share monitoring information, but when individuals provided their feedback and identified concerns on key topics such as dust emissions, marine mammal impacts and railway construction they did not feel heard. Communities indicated they were frequently unaware of what decisions were made towards mitigations and were concerned that their concerns were not being considered in Baffinland's actions and were remaining largely unaddressed. During the Public Hearing, Baffinland provided an extensive record of consultation undertaken with the communities and provided examples of what they felt were clear modifications to the Project based on community feedback such as railway routing, speed limitations for vessels, restricted shipping season length and limited use of ice breakers depending on community use of the ice. However, communities indicated that Baffinland had not clearly communicated how the feedback generated during community consultations had been considered and applied to modify existing monitoring and mitigation programs, the current Mary River Project or the Phase 2 Development Proposal.

During the assessment, the Board heard that there has been a great deal of confusion for communities about the scope of the Phase 2 Development Proposal and how it fits within Baffinland's larger plans. As cited by the Board in the disposition of the motion to suspend the November 2019 Public Hearing, a lack of trust and understanding about the Phase 2 Development Proposal were central reasons to suspend the November 2019 Public Hearing, and modify the process to add a third Technical Meeting and Pre-Hearing Conference before the scheduling of the continuation of the Public Hearing sessions. Specifically, the Board recognized:

...that parties have identified that uncertainty and significant information gaps exist in relation to the assessment of the Proposal; that Intervenor have been challenged to have adequate time to review and translate information; and that, overall, there is a lack of understanding and trust in the process¹⁴⁸

¹⁴⁸ (Doc ID. 327790) NIRB File No.: 08MN053, Record of Proceedings and Disposition of Motions Report for the November 2019 Public Hearing in respect of Baffinland Iron Mines Corporation's Phase 2 Development Proposal of the Mary River Project, December 16, 2019 at p. 46.

However, despite the gap between the November 2019 Public Hearing sessions and the Board's reconvened Public Hearing sessions in 2021, the Board continued to see a disconnect between the information provided by Baffinland about the Phase 2 Development Proposal, and the communities' understanding of the activities and effects associated with the existing Mary River Project and the proposed activities and predicted effects associated with the Phase 2 Development Proposal. Although the Board acknowledges that the Proponent has demonstrated considerable efforts to engage with communities outside the NIRB's proceedings, a shared understanding about fundamental issues such as the scope of the Phase 2 Development Proposal, and the nature and extent of predicted project effects was evident.

Through the Public Hearings, the Board also heard a consistent theme from the communities that they felt Inuit knowledge and experience (both Inuit Qaujimajatuqangit and Inuit Qaujimaningit) was not being heard, understood in the context of the knowledge holders providing it and adequately applied to the monitoring of both the approved Project and the Phase 2 Development Proposal. It was also noted that communities perceived that Baffinland would discuss their use of Inuit Qaujimajatuqangit, but then would ultimately make decisions without regard for the knowledge shared, basing important decisions solely on operational needs or their own western science. A specific example of this issue arose with respect to Baffinland's consultations with the communities of Igloolik and Pond Inlet in respect of the routing of the North Railway. As summarized by Baffinland during the November 2019 Public Hearing:

As was planned, Baffinland held a workshop at the mine site to discuss the rail alignment and crossings for both land users and wildlife. At this workshop, two subsequent routes were put forward for Baffinland to consider [referred to as Routes #2 and Route #3]. Baffinland was asked to consider both options and return to the communities of Pond Inlet and Igloolik with a determination on the feasibility of either alignment. Baffinland undertook further engineering studies in August and returned to the communities several times in September and October to discuss the outcomes. As an alternative to Route 1, the two other rail alignments were proposed by workshop participants.

...Route 2 was, in fact, shown on this map in yellow, and this was the preferred route of Pond Inlet at the time of the workshop. However, following further investigation, it was determined that Route 2 presents unacceptable risks for the safe operation and maintenance of the railway. Deep cuts and high embankments also pose risks to land users and wildlife that we found to be unacceptable.

... Unlike Route 2, Route 3 does not present any immediate concerns for the safe operation and maintenance of the railway... Today, Baffinland is pleased to confirm that it will build Route 3.¹⁴⁹

The Board recognizes that the information shared by communities, including their views with respect to preferred alternatives are not determinative, and that many other factors may be considered by Baffinland to assess and make decisions about preferred alternatives. However, it appeared to the Board that there were gaps in Baffinland's follow up communications with Workshop participants and the community to explain the additional factors considered by Baffinland until Baffinland presented that a different routing (identified as Route 3) had been chosen at the November 2019 Public Hearing. This resulted in community members suggesting that there is a significant disconnect between what the communities are saying and Baffinland's actions. Inuit organizations, community-based Intervenors and members of the North Baffin communities also indicated that there appeared to be a gap between the knowledge and experience being shared with Baffinland and what Baffinland's monitoring data indicates, resulting in Baffinland appearing to rely solely on their monitoring data for decision making regardless of the knowledge and experience shared with Baffinland.

During the assessment, Baffinland demonstrated their ability to modify the plans for the Phase 2 Development Proposal to reflect community feedback; however, many community members continued to articulate that the modifications undertaken by Baffinland did not fully resolve the concerns of the communities. Communities noted their appreciation for the mitigations proposed by Baffinland but indicated that they did not trust Baffinland to fully resolve concerns if the mitigations would have financial or operational consequences. In November 2021, several community representatives and members of the Public indicated to the Board that they felt Baffinland provided them with an ultimatum, where they were being forced to choose between their culture and potential employment or economic benefits for the Region. The Board cites these views in this Report, not as an indication of the Board's acceptance of the statements as a fair reflection of Baffinland's conduct, but rather as a strong demonstration of the atmosphere created by the erosion of trust between the communities and the Proponent.

Trust Between the Communities, Regulators, and the Qikiqtani Inuit Association

During the Community Roundtable associated with the assessment, the Board heard the communities question the extent to which both Baffinland and regulators considered Inuit` Qaujimagatuqangit in their technical review and comment submissions in respect of the Phase 2 Development Proposal:

¹⁴⁹ L. Kamermans, Baffinland, NIRB Public Hearing File No.: 08MN053 Transcripts, Vol 3, November 4, 2019, at pp 552-553, lines 20-26, 7-9 and 18-21.

I think the connection to IQ has been lost because we're all focusing on impacts. I understand from the regulatory side that's what you've been trained to do. But so much of this could be smoothed out and improved if we allowed communities such as Pond Inlet to be the ones to tell you how they interpret the use of IQ and what it means to them in determining not only impacts but their significance.¹⁵⁰

Inuit know their own environment, their own land. It's intertwined with their lives and their livelihood, and it has been part of the food chain. Why do you not consider their needs and their wishes?¹⁵¹

The Board also heard that Pond Inlet, as the most directly affected community felt that since the original Mary River Mine Project was approved, regulators have generally not come back into the community regularly to exchange information with communities about observed project effects and the regulators' involvement in the inspection, monitoring, and adaptive management of the current Mary River Project:

We are here to talk about the impacts, the great impacts that we are feeling and witnessing. When the NIRB holds these hearings, we finally see other organizations. When the NIRB -- when they hold meetings, intervenors that are here, we find -- we don't even see them in our communities.

... If Phase 2 goes ahead, I think these -- are these organizations going to continue to ignore us, including CIRNAC. They don't come to our communities. DFO also does not come to our communities.¹⁵²

In response to questioning by the Panel regarding the Government of Canada's interactions with the community of Pond Inlet, the Government of Canada (GoC) filed a written summary¹⁵³ and provided the following verbal summary during the Public Hearing:

So what we were able to provide in the time that we had is the interactions of the Government of Canada in or with members of Pond Inlet since 2014. We pulled together the information from

¹⁵⁰ S. Elverum, Pond Inlet, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 12, February 6, 2021 at p. 2291, lines 4-11.

¹⁵¹ D. Irgaut, Igloodik Hunters and Trappers Association, NIRB Public Hearing File No.: 08MN053 Transcripts, Vol 2, November 1, 2019, at p 950, lines 4-7.

¹⁵² E. Inuarak, Mittimatalik Hunters and Trappers Organization, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 18, November 3, 2021 at p. 3395, lines 6-10 and 13-16.

¹⁵³ (Doc ID No. 337398) Exhibit 98, NIRB Public Hearing File No.: 08MN053, November 2021 filed by the Government of Canada, on November 6, 2021, Table entitled "Government of Canada Engagements with the Community of Pond Inlet Production Phase of Mary River Project" (offered in writing as a deferred response to Panel question regarding GoC visits to Pond Inlet from the beginning of production at the Mary River Mine) (English).

seven different departments. Of course, each department would have their own method of tracking these interactions, so we did our best to pull it together. I think we've identified over 130 meetings.¹⁵⁴

The Board notes that although 130 meetings were identified by the GoC, for some regulators, these community engagement activities consisted, for the most part of engagement associated with the NIRB's assessment and monitoring processes. Further, the Board notes that, understandably, meetings in the community have largely been suspended during the COVID-19 pandemic. The Board observes that these circumstances may create the perception in Pond Inlet and other potentially affected communities that the regulators are only interested in sharing knowledge and hearing about the concerns and experiences of communities when there is a regulatory application on the table, and that community knowledge and experience is not being considered outside the NIRB's assessment process. While this may not reflect the stated views of the regulators and their demonstrated commitments to project monitoring, compliance inspections, and active participation on the Working Groups for the current Mary River Project, the Board identifies these perceptions as damaging to the trust of communities in regulators. These perceptions also cause communities to question the willingness and ability of project regulators to hold Baffinland accountable to comply with regulatory requirements and adaptively manage the potential for project effects.

Communities also expressed concern and mistrust that the Qikiqtani Inuit Association was not adequately protecting the interests of the most affected communities in the North Baffin:

We just don't want you to learn from the resident of Mittimatalik. Are we just going to be a puppet for learning while our hunting is being affected badly? NTI and QIA is not there giving us support. Yes, there's some bit of support. Few, few dollars. And community of Mittimatalik being affected negatively, and other communities will be the ones benefitting and feel happy. So those of us who are affected in Mittimatalik, well, we need to voice our -- we need to voice more and have more say. We don't seem to have anyone protecting us as Inuit. We need someone to protect us here in Mittimatalik.¹⁵⁵

These concerns were also expressed in respect of the Inuit Certainty Agreement (ICA):

There is a lack of transparency in communication in some parties. When the ICA was announced, it was a huge surprise to many Nunavummiut. It bypassed one of the IQ principles, Aajiiqatigiinniq;

¹⁵⁴ S. Dewar, Crown-Indigenous Relations and Northern Affairs Canada, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 21, November 6, 2021 at p.3942, lines 18-25.

¹⁵⁵K. Komangapik, Pond Inlet, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 12, February 6, 2021, at p.2338, lines 1-12.

however, I understand that the affected communities may not have -- may not have always been Tunnganarniq, another IQ principle, which may have affected the process of the signing of the ICA.¹⁵⁶

The Board recognizes, and clearly stated during several points in the Board's assessment that it is outside the scope of the Board's assessment to comment on the specifics of the negotiation and consultation surrounding the ICA. Consequently, the Board simply flags for all parties that the issues of transparency, communication, and understanding in respect of the ICA may have also damaged the important working relationships between the communities and the QIA that would be, in the Board's view, essential to the successful implementation of the ICA as envisioned.

How these Issues Affected the Board's Assessment

As outlined above, the erosion of trust amongst the Proponent, the parties and potentially affected communities is not attributable to any individual issue, participant or proceeding. The Board does not question that all parties worked in good faith to ensure that the Board heard, understood and benefitted from the knowledge, experience and perspective shared with the Board during this assessment. However, the deterioration of important working relationship amongst the parties has played a role in the Board's assessment of the Phase 2 Development Proposal. As observed by the Board in relation to the original Mary River Project, when there is considerable uncertainty in relation to the predictions of effects and significant reliance on adaptive management mechanisms to prevent and mitigate adverse effects, the commitment of all parties is necessary for effective monitoring, mitigation and adaptive management:

From a practical perspective, the precautionary approach also requires the NIRB, Baffinland Iron Mines Corporation and all parties with regulatory and monitoring responsibilities for the Project to commit to an ongoing role for the life of the Project in relation to monitoring, assessing the effectiveness of measures designed to maximize positive effects and prevent or limit adverse effects and ensuring that these measures are reviewed and adapted where necessary to reflect the actual project effects being observed.¹⁵⁷

In the Board's experience, carrying out these tasks in an atmosphere of mistrust characterized by conflict and contradiction makes this important work very difficult. Concerns about the status of the working relationships amongst the parties played a central role in Board's discussion of the functioning of the Working Groups and the implementation of the Inuit Certainty Agreement in

¹⁵⁶ J. Merkosak, Pond Inlet, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 12, February 6, 2021 at p. 2315, lines 11-18.

¹⁵⁷ (Doc ID No. 286425), NIRB File No. 08MN053, Final Hearing Report for the Mary River Project, Baffinland Iron Mines Corporation, September 14, 2012, Executive Summary at pp. xi and xii.

[Section 5.1.1.6 Adaptive Management](#). Pervasive questions about the working relationships amongst the parties has led the Board to question whether in the current context structures such as the Working Groups, and the ICA Committees which are based on consensus-building and collaboration will be able to repair working relationships sufficiently to function as envisioned.

The Board observed that this issue also shaped the discussions around potential effects of the Project in nearly all the VECs and VSECs considered by the Board. This was especially the case in respect of the following sections of the Report:

- [2.4.1 Air quality, Dust Emissions and Deposition, Greenhouse Gas Emissions and Black Carbon Emissions](#);
- [2.4.2 The Marine Environment and Marine Wildlife](#);
- [2.4.2.1 Ballast water and Invasive Species](#); and
- [5.1.1.4 The Terrestrial Environment Including Terrestrial Wildlife \(Caribou\), Land, Vegetation, Permafrost and Landforms](#).

The Board noted that, at times, the lack of trust prevented the parties from developing a shared understanding of the issues and canvassing potential solutions. As noted by residents in Pond Inlet, in the highly charged atmosphere that was sometimes present during the Board's proceedings, the community, and sometimes even families have been split apart.

Up to today, it [support or opposition to the Phase 2 Development Proposal] has separated. Even families have been separated because of disagreements and with fights and big headaches...some are all truthful. Some people want to work, and hunters also with the wildlife and the environment and the traditional way of life, they want to protect that as well...¹⁵⁸

In addition, this charged atmosphere meant that some participants in NIRB proceedings felt unsafe to share their views with the Board. As noted by Baffinland:

It's really hard to put your heart out there and try and be as passionate... very brave, very courageous, but it's also very hard and courageous for people to say why they think the mine should exist and why they think it can co-exist with hunting and harvesting. It's very difficult.

I mean, words that are being passed around like "coercion" and "demands", and we've been accused of being liars, and then we're asked, Where are our employees? Why aren't they speaking

¹⁵⁸ E. Inuarak, Mittimatalik Hunters and Trappers Organization, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 21, November 6, 2021 at p. 3937, lines 15-20.

*out? Because they're scared. This is what happens to us. We get attacked, personally in some cases.*¹⁵⁹

The Board is very concerned by these developments because division, intimidation and fear can impact the Board's ability to create an effective forum for the respectful sharing of knowledge and experience. In this context, it is difficult to foster the cooperation and collaboration central to on-going monitoring, mitigation and adaptive management of effects. The Board is very concerned by these developments and hopes that, as urged by our Elders that with the conclusion of the assessment all parties, regardless of their views on the Phase 2 Development Proposal, will remain open and willing to commit to working together, rebuilding trust and repairing the working relationships that are essential to the monitoring and adaptive management of the current Mary River Project and any future modifications to the Project.

As stated by Joe Krimmerdjuar, a community member from Pond Inlet during the Community Roundtable on February 6, 2021:

I hope we have an understanding between each of us. I don't want negative -- like, those who win, those who lose. That's something that I don't want to see.

That's not the way. Inform these people, and they should have an open dialogue and fix something so they can work together.

*So we can resolve this. It is achievable, but, like, if they're not asking for too much. So right now, yes, you are already mining at a great level and also keeping up with your tonnage. I hope, if it's possible, you should have a closer dialogue.*¹⁶⁰

*...Let's work well together. Not feeling like I'm a loser, and someone walking away, I'm the winner. Let's get that out of our heads. Let's say we have negotiated. We have worked together.*¹⁶¹

6 RECOMMENDATION TO THE MINISTER

As confirmed by the Board in the summer of 2018¹⁶² when the Phase 2 Development Proposal was referred to the NIRB for assessment by the Nunavut Planning Commission, because the NIRB considers the Phase 2 Development Proposal to be integrally-linked to the previously approved Mary River Project (as modified under the Early Revenue Phase), the Board directed that the

¹⁵⁹ U. Hanson, Baffinland, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 18, November 6, 2021 at pp. 3419-3420, lines 19-26 and 1-5.

¹⁶⁰ J. Krimmerdjuar, Pond Inlet, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 12, February 6, 2021 at p. 2321, lines 4-9 and 13-17.

¹⁶¹ J. Krimmerdjuar, Pond Inlet, NIRB Public Hearing File No.: 08MN053 Transcript, Vol 12, February 6, 2021 at p. 2323, lines 8-13.

¹⁶² (Doc ID Nos.: 318378 & 318152) NIRB Correspondence Re: NIRB Process Guidance to Baffinland, June 11, 2018.

assessment of the Phase 2 Development Proposal would be conducted as a reconsideration of the terms and conditions of existing Project Certificate No. 005 under Article 12, Section 12.8.2 of the *Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada (Nunavut Agreement)* and s. 112 of the *Nunavut Planning and Project Assessment Act*, S.C. 2013, c. 14, s. 2 (*NuPPAA*). As required under Part 8 of Article 12 of the *Nunavut Agreement* and s. 112 of the *NuPPAA*, having completed the NIRB's assessment of the potential ecosystemic and socio-economic effects of Baffinland's Phase 2 Development Proposal and the Board's reconsideration of terms and conditions of NIRB Project Certificate No. 005, the Board provides the following conclusions and recommendations to the Responsible Minister(s):

- The Board has concluded that the Phase 2 Development Proposal has the potential to result in significant adverse ecosystemic and socio-economic effects in Nunavut and the potential for transboundary effects on marine mammals and fish and the marine environment outside the Nunavut Settlement Area;
- These potential significant adverse effects cannot be adequately prevented, mitigated, or adaptively managed under proposed mitigation, adaptive management, and monitoring programs and/or with revisions to the Terms and Condition of NIRB Project Certificate No.: 005; and
- Consequently, the Board recommends to the Responsible Minister(s) that the Mary River Phase 2 Development Proposal should not be allowed to proceed at this time.

7 RECOMMENDATIONS TO REGULATORY AUTHORITIES, LAND AND MINERAL OWNERS

The Board recognizes that it is within the discretion of regulatory agencies and the land and mineral owners as to whether they choose to adopt or implement any of the recommendations the Board has provided in the text that follows. While it remains within the discretion of each party as to how they choose to address the recommendations, the Board offers the following recommendations to suggest mechanisms that may:

- Address issues of mistrust and damage to working relationships that have been noted by the Board during this assessment;¹⁶³
- Provide opportunities for regulatory authorities to enhance their approach to consideration and application of Inuit knowledge and experience in fulfilling their roles in relation to the current Mary River Project; and
- Provide opportunities for improving communications with communities recognizing the central role that regulatory agencies and the land and mineral owners play in respect of

¹⁶³ As identified for example in the discussions under [Section 5.3.5](#).

the effective monitoring, mitigation, adaptive management, and reporting of project-specific effects of the current Mary River Project.

Although the Board understands that many of these parties may already be working on these mechanisms, and/or may have mechanisms under existing structures, the Board heard suggestions from participants and has recent experience about the adoption of technology to support community engagement that may be useful to parties in support of those efforts. Accordingly, the Board recommends regulatory authorities and land and mineral owners consider the following:

- Building on the presentation materials provided by Intervenors during the assessment, develop plain language and translated materials that explain a parties’ role in respect of monitoring, mitigation, and adaptive management of the current Mary River Project—for parties with an enforcement mandate, ensure these materials provide the contact information for the individuals within the organization that can follow up if a member of the public has questions or concerns;
- Building community engagement and knowledge sharing opportunities into all stages of research being conducted, supported, or received by parties when the research is related to issues of concern identified by community members during the assessment (see for example the issues summarized in [Table 28](#) or knowledge gaps identified during the assessment);
- Taking advantage of opportunities to participate in meetings in the communities conducted by the NIRB or other parties (such as the NIRB’s Project Monitoring Workshops) to hear Inuit knowledge and experience, and to answer community questions; and
- Consulting with Inuit in the affected communities to identify existing and new mechanisms (e.g. radio phone in shows, zoom meetings, Facebook Live events, podcasts, etc.) that can be used to communicate with traditional and contemporary Inuit Qaujimajatuqangit holders and to seek their guidance about how to apply Inuit knowledge in each parties’ approach to fulfilling their role in monitoring, mitigation, and adaptive management plans for the current Mary River Project.

8 RECOMMENDATIONS REGARDING CHANGES TO PROJECT MONITORING OR PROJECT CERTIFICATE TERMS AND CONDITIONS

In the Responsible Minister’s decisions related to modifications of the Mary River Project as proposed under the Production Increase Project and the Request to Extend the Production Increase Project, specific terms and conditions of Project Certificate No. 005 have been varied by the Minister under s. 112(6)(b)(i) of the *NuPPAA*. The Minister also provided direction to the NIRB

on activities that must occur associated with monitoring the approved Mary River Project. The Board recognizes that because the Board has recommended that the Phase 2 Development Proposal not be permitted to proceed at this time, that the Minister may wish to revisit the varied terms and conditions in Project Certificate No. 005. The Board is requesting clarification from the Responsible Minister(s) about the varied terms and conditions as well as additional monitoring activities related to these shorter-term approvals of the Production Increase and Extension Request to the Production Increase projects.

Production Increase Proposal

In the September 30, 2018 decision letter for the Production Increase Proposal¹⁶⁴ signed by then-Minister of Intergovernmental and Northern Affairs and Internal Trade, The Honourable Dominic LeBlanc, and then-Minister of Northern Affairs, The Honourable Carolyn Bennett, term and condition 179c of Project Certificate No. 005 was varied as followed (underlined sections varied):

*The Proponent shall be required to resource and support a third party to conduct **bi-annual** performance audits of commitments made by the proponent in relation to both the IIBA and every proponent commitment and every term or condition of the Project Certificate relating to environmental management of the tote road component or environmental management related to shipping. **The Proponent shall file Performance Audit Reports with the NIRB on or before March 31 and September 30 of each calendar year.***

The NIRB was also provided direction to hold an annual audit workshop “in light of “project stabilization approach”.

Clarification is being sought on the following items:

1. Is it the Minister(s)’ expectation that the requirement for Performance Audit Reports continue?
2. The term bi-annual and two (a) submission dates provided in the last sentence indicate that the audit process should occur twice a year, but the term bi-annual could also refer to the frequency being every two (2) years; the Board has interpreted this term as requiring two (2) performance audits per year but request the Responsible Minister(s) clarification of the expected frequency.
3. The audit is expected to cover commitments by the Proponent in relation to the Inuit Impact Benefit Agreement and every commitment and every term and condition of the Project Certificate relating to environmental management of the Tote Road component or environmental management related to shipping. The NIRB’s jurisdiction to provide advice in relation to compliance with the IIBA is limited to considering whether a provision

¹⁶⁴(Doc ID No. 320546) Ministers’ Correspondence Re: Approval of the Production Increase Proposal.

of the IIBA offsets or manages the predicted impacts associated with the transportation of ore along the Tote Road or ore shipping. In light of the Board’s recommendations in respect of the Phase 2 Development Proposal, it is unclear whether the recommended timing for reporting or holding the annual workshop would be warranted at this frequency. Further, the Board notes that although this varied term and condition is not expressly limited to shipping from Milne Inlet the Responsible Minister(s) may wish to revisit whether this audit reporting may be considered if Steensby Port is developed.

4. It appears to the Board that the audit workshop was premised on an evaluation of the effect of the “project stabilization approach” which was negotiated between the QIA and Baffinland, but which was not reviewed or considered by the Board. As the NIRB was not provided full details on the framework and commitments around this agreement, the Board is unsure of the extent to which the current contents of the audit workshop is addressing all relevant items that may be contained in the framework and commitments. The Board would appreciate receiving direction to highlight if there are specific components of the “project stabilization approach” that the Responsible Minister(s) expect to be addressed in the workshop.

For reference the full text of the relevant Term and Condition is as follows:

Varied Term and Condition No.	<i>179 (c) New condition for Production Increase Proposal and varied by the Minister for the Extension Request to the Production Increase Proposal</i>
Category:	Operational Variability/Flexibility
Responsible Parties:	The Proponent
Project Phase:	Operations
Objective:	To ensure commitments made by the Proponent with respect to the 2018 production increase and delivery of benefits to Inuit are adhered to, and, can be determined through a body of evidence.
Term or Condition:	The Proponent shall be required to resource and support a third party to conduct bi-annual performance audits of commitments made by the proponent in relation to both the IIBA and every proponent commitment and every term or condition of the Project Certificate relating to environmental management of the tote road component or environmental management related to shipping. <u>The Proponent shall file Performance Audit Reports with the NIRB on or before March 31 and September 30 of each calendar year.</u>
Reporting Requirements:	On a bi-annual basis, the Proponent shall file a Performance Audit Report with the NIRB <u>on or before March 31 and September 30 of each calendar year.</u> This report shall include the findings of the third-party auditor, and, Baffinland’s commitment to addressing the findings of the auditor. This term and condition will remain in force

Varied Term and Condition No.	179 (c) <i>New condition for Production Increase Proposal and varied by the Minister for the Extension Request to the Production Increase Proposal</i>
	for the duration of the Mary River project, unless it is modified under the <i>Nunavut Planning and Project Assessment Act</i> .

Annual Marine Monitoring and Marine Mitigation Workshop in the Community of Pond Inlet

In the Responsible Minister’s decision letter for the Production Increase Project, further direction was provided to the NIRB with regards to holding an additional workshop to facilitate engagement of the community and Regional Inuit Association in project monitoring, but this direction was limited to the Production Increase Project activities.

Recognizing the concerns of the Qikiqtani Inuit Association and those most affected by the Project, and their expressed desire to actively engage with the Board with respect to Project monitoring, the Ministers also encourage the Board to host an annual marine monitoring and marine mitigation workshop in the community of Pond Inlet. Such a workshop would allow for direct involvement of the community in the review of project monitoring data, including but not limited to information collected under community-based monitoring programs. Ideally, such a workshop would be scheduled at a time which best aligns with the availability of monitoring results and review of the Annual Monitoring Report, yet prior to the commencement of the shipping season such that additional mitigations can be applied if warranted. Such a workshop should be held for the duration of the production increase.

Before receiving this specific direction, the NIRB held annual monitoring updates in both Pond Inlet and Igloolik each year to update both communities on project activities and NIRB monitoring activities throughout the year. As a result of this direction from the Responsible Ministers, the NIRB continued its community update in both communities and coordinated the Pond Inlet event with a day-long Marine Monitoring Workshop with its own agenda. During the Board’s assessment of the Phase 2 Development Proposal, the Board heard that the uncertainty and community concerns about the effects of the current Mary River Project, which led the Ministers to recommend the Marine Workshop, persist and remain an unresolved issue for the North Baffin communities. At the time of this Report, Baffinland has not applied for a further continuation of the Production Increase Project. On this basis, the Board is seeking specific direction from the Responsible Minister(s) as to whether the Marine Monitoring Workshop should continue to be held in respect of the approved Mary River Project, notwithstanding the expiry of the Production Increase Project and the Extension Request to the Production Increase Proposal.

Extension Request to the Production Increase Proposal

The decision letter from the Responsible Ministers for the Extension Request to the Production Increase Project¹⁶⁵ was signed by then-Minister of Northern Affairs, The Honourable Dan Vandal, was issued May 19, 2020. The board would like to first note that in its decision to the Minister, two (2) terms and conditions were updated:

179(a) and (b)

179(a) Until **December 31, 2021**, the total volume of ore shipped via Milne Inlet may exceed 4.2 million tonnes per year, but must not exceed 6.0 million tonnes in any calendar year. After **December 31, 2021**, the maximum total volume of ore shipped via Milne Inlet in a calendar year returns to 4.2 million tonnes per year, unless this condition has been further modified under section 112 of *Nunavut Planning and Project Assessment Act*, S.C. 2013, c. 14, s. 2.

179(b) Until **December 31, 2021**, the total volume of ore transported by truck on the Milne Inlet Tote Road may exceed 4.2 million tonnes per year, but must not exceed 6.0 million tonnes in any calendar year. After **December 31, 2021**, the maximum total volume of ore transported by truck on the Milne Inlet Tote Road in a calendar year returns to 4.2 million tonnes per year, unless this condition has been further modified under section 112 of *Nunavut Planning and Project Assessment Act*, S.C. 2013, c. 14, s. 2.

The Board is verifying that the date in both of these terms and conditions has passed, and that to date, the Board has not received an application to continue the production increase activities. Consequently, unless the Responsible Minister(s) direct otherwise, the terms and conditions in Project Certificate No. 005 will return to the terms and conditions as amended under Amendment No. 001 (the Early Revenue Phase). This would mean that the maximum production rate under the Project Certificate will return to 4.2 million tonnes or iron ore per year.

¹⁶⁵ (Doc ID No. 323105) Ministers' Correspondence Re: Approval of the Extension Request to the Production Increase Proposal.

For reference the full text of the relevant Term and Condition is as follows:

REVISED Term and Condition No.	179 (a) modified for Production Increase Proposal and Extension Request to the Production Increase Proposal
Category:	Operational Variability/Flexibility
Responsible Parties:	The Proponent
Project Phase:	Operations
Objective:	To ensure that there are appropriate limits on the Milne Inlet marine shipping component in order to limit and manage likely project effects, while balancing the need for operational flexibility.
Term or Condition:	Until December 31, 20 19 21 , the total volume of ore shipped via Milne Inlet may exceed 4.2 million tonnes per year, but must not exceed 6.0 million tonnes in any calendar year. After December 31, 20 19 21 , the maximum total volume of ore shipped via Milne Inlet in a calendar year returns to 4.2 million tonnes per year, unless this condition has been further modified under section 112 of <i>Nunavut Planning and Project Assessment Act</i> , S.C. 2013, c. 14, s. 2.
Reporting Requirements:	For each year after the Proponent commences shipping ore via Milne Inlet under the Early Revenue Phase Proposal, the Proponent shall include in the Annual Report to the NIRB, a summary of the total amount of ore shipped via Milne Inlet for the previous calendar year.

REVISED Term and Condition No.	179 (b) modified for Production Increase Proposal and Extension Request to the Production Increase Proposal
Category:	Operational Variability/Flexibility
Responsible Parties:	The Proponent
Project Phase:	Operations
Objective:	To ensure that there are appropriate limits on the Milne Inlet Tote Road land transportation component in order to limit and manage likely project effects, while balancing the need for operational flexibility.
Term or Condition:	Until December 31, 20 19 21 , the total volume of ore transported by truck on the Milne Inlet Tote Road may exceed 4.2 million tonnes per year, but must not exceed 6.0 million tonnes in any calendar year. After December 31, 20 19 21 , the maximum total volume of ore transported by truck on the Milne Inlet Tote Road in a calendar year returns to 4.2 million tonnes per year, unless this condition has been further modified under section 112 of <i>Nunavut Planning and Project Assessment Act</i> , S.C. 2013, c. 14, s. 2.
Reporting Requirements:	For each year after the Proponent commences transportation of ore via the Tote Road under the Early Revenue Phase Proposal, the

REVISED Term and Condition No.	179 (b) modified for Production Increase Proposal and Extension Request to the Production Increase Proposal
	Proponent shall include in the Annual Report to the NIRB, a summary of the total amount of ore shipped via the Tote Road for the previous calendar year.

The Responsible Ministers further varied term and condition 183 “provide Fisheries and Oceans Canada and other Working Group members with a more effective role in the management and the mitigation of potential adverse impacts to the marine environment, especially to marine mammals, while still allowing for the increased level of shipping as proposed”.

The Proponent shall collaborate with the Marine Environmental Working Group (**MEWG**) to develop impact avoidance or mitigation strategies for the protection of the marine environment and **shall implement these strategies.**

The Proponent shall implement any direction from the Department of Fisheries and Oceans (**DFO**), **issued in accordance with the Fisheries Act furtherance of their mandate**, for any avoidance or mitigation measures, including cessation of any activity, for the protection of the marine environment. ~~and shall give due consideration to recommendations from the NIRB and members of the MEWG. Where recommendations are not implemented, the proponent shall provide written rationale to the NIRB and members of the MEWG and provide an update in the Annual Report.~~

The Proponent shall, every six months, provide to DFO a tracking table of (i) collective recommendation of the other members of the working group, and (ii) any directions from DFO. For each, the table must show the Proponent’s means of implementation. Where any direction or recommendations are not fully implemented, the Proponent shall include the rationale.

However, the Board supports the intent of the updated wording, and would further recommend that the transparency sought by DFO in requiring the tracking table of issues and results of implementation should be communicated back to all members of the Marine Environmental Working Group (MEWG).

For reference the full text of the relevant Term and Condition is as follows:

REVISED Term and Condition No.	183 New condition for Production Increase Proposal and modified for the Extension Request to the Production Increase Proposal
Category:	Project monitoring of impacts to marine mammals
Responsible Parties:	The Proponent, members of Marine Environment Working Group
Project Phase:	Construction, Operations, Temporary Closure/Care and Maintenance, Closure and Post-Closure Monitoring
Objective:	To address concerns associated with the potential for impacts to marine mammals, and compliance and enforcement of terms and conditions in Project Certificate No. 005 relating to ship-based observer programs, noise exposure assessments, and the identification of other mitigation measures that have the potential to further reduce potential impacts to marine mammals.
Term or Condition:	<p>The Proponent shall collaborate with the Marine Environmental Working Group (MEWG) to develop impact avoidance or mitigation strategies for the protection of the marine environment, and shall implement these strategies.</p> <p>The Proponent shall implement any direction from the Department of Fisheries and Oceans (DFO), <u>issued in accordance with the Fisheries Act furtherance of their mandate</u>, for any avoidance or mitigation measures, including cessation of any activity, for the protection of the marine environment. <u>and shall give due consideration to recommendations from the NIRB and members of the MEWG. Where recommendations are not implemented, the proponent shall provide written rationale to the NIRB and members of the MEWG and provide an update in the Annual Report.</u></p> <p>The Proponent shall, every six months, provide to DFO a tracking table of (i) collective recommendation of the other members of the working group, and (ii) any directions from DFO. For each, the table must show the Proponent’s means of implementation. Where any direction or recommendations are not fully implemented, the Proponent shall include the rationale.</p>

REVISED Term and Condition No.	183 <i>New condition for Production Increase Proposal and modified for the Extension Request to the Production Increase Proposal</i>
Reporting Requirements:	<p>Results of the observer program shall be provided in the Annual Report to the Board. Further, Baffinland shall report annually all data it generates from the implementation of monitoring of marine impacts it is required to implement pursuant to the Terms and Conditions of the Project Certificate.</p> <p>In relation to the specific reporting associated with the Extension Request to the Production Increase Proposal, Baffinland shall provide the tracking table referenced above to Fisheries and Oceans Canada and the other members of the Marine Environment Working Group within six months following the NIRB's issuance of Amendment 003 to the Project Certificate and shall provide subsequent updates to the table every 6 months thereafter.</p>

APPENDIX A NIRB COVID-19 PROTOCOLS

The Board's Public Health Protocol's developed by Board staff and approved by the GN's CPHO for safe operation of Public Meetings during the COVID-19 Pandemic



August 21, 2020

To: NIRB Distribution List

Sent via email

Re: **Public Meeting Workplace Safety Planning for COVID-19 and Exposure Control Plan**

Dear Parties:

On March 12, 2020 due to public health concerns related to the COVID-19 pandemic and restrictions on gatherings and travel, the Nunavut Impact Review Board (NIRB or Board) cancelled all in-person meetings.

Recent changes to Public Health Orders that allow for the reopening of offices, increasing group size of indoor gatherings and updates to flight schedules in response to increased travel within Nunavut have enabled the Board to reconsider options for resuming in-person meetings. The Board has developed this procedural direction after considerable deliberation and assessment by the Board of:

- the emerging best practices of courts and tribunals across Canada, including tribunals similar to the NIRB;
- available technology and technological limits;
- consideration of the Board's objectives for the conduct of these next steps in the Board's assessment;

In the development of this guidance, the Board emphasizes that the preservation and protection of the health of participants to the process, and Nunavummiut in general, remains a central guiding principle, and the Board has modified our existing processes to reflect the current guidance of public health authorities. The Board also recognizes however, the importance of the Board finding a way to continue to deliver on our mandate and conduct thorough and timely assessments even during this unprecedented and challenging time. To all parties, the Board notes that the COVID-19 pandemic has had global and far-reaching effects on all decision-makers who generally hold in-person proceedings to support their decision-making. The Board notes that although there is a strong desire and comfort in returning to the Board's pre-pandemic practices, the Board has concluded that modifications and new approaches are necessary because an indefinite suspension of the Board's usual in-person proceedings to await a return to normal is unacceptable.

With these considerations in mind, the Board has directed that the following modifications to the previously planned processes to in-person meetings. Specifically, these modifications will enable the NIRB to hold a combination of in-person and teleconference meetings to complete the next steps for its assessments. While the Board recognizes that these modifications require all parties,

V3-Nov 4, 2020

including the Board, to adopt new approaches that may not be their preference, the Board is entitled, and obligated to modify our processes to fulfill our objectives.

In providing this guidance on next steps in a COVID-19 era, the Board preserves the right to further modify the proposed processes - as may be required to reflect changed circumstances such as:

- Updates to applicable guidance from public health authorities and changes to public health measures put in place to prevent the spread of COVID-19;
- Technological innovations and limits; and
- New information from parties.

The NIRB has modified the format of upcoming meetings using a hybrid approach to ensure that in-person community engagement can be preserved, while recognizing that there are significant travel restrictions that may prevent participants who are not resident within Nunavut from being able to travel into the Territory. The Board has concluded that combinations of in-person and video conference meetings, teleconference sessions, and the receipt of written and video submissions by the parties are the best alternatives to the in-person attendance of all participants. The Board has determined that in-person meetings in Nunavut and in-person attendance of parties represented by individuals for which travel into the territory is not currently practical at a single central location or “hub” outside of Nunavut that is linked to the venues in Nunavut can be conducted in compliance with the direction provided by public health authorities in the relevant jurisdictions.

PUBLIC MEETING EXPOSURE CONTROL PLAN

Sign in procedures

The NIRB will maintain a sign in desk for all participants entering a venue to sign in with their name and phone number. The NIRB staff member administering this desk will either have a protective glass separating them from the participants entering. Where this is not achievable, the NIRB staff member will be required to wear a face mask.

The NIRB staff member will keep an accurate count of participants inside the venue to ensure capacity limits as per Public Health Orders are not exceeded. Entry will be denied once the capacity target is reached.

Participants when signing in will be asked if they have a cough, fever or shortness of breath and have been outside of the territory in the last 14 days. If they do, they will be asked to refrain from the meeting. If the symptomatic person has an inquiry that they want addressed, they provide their concerns in writing to be presented by a proxy.

Social Distancing

Social Distancing of 2 meters will be mandatory for all meeting Participants.

Personal Protective Equipment

Current advice for Nunavut concludes that non-medical facemasks are not mandatory for daily wear, NIRB will follow suit. The NIRB will supply daily masks for individuals who choose to wear them at Public Meetings, but they will not be mandatory until Public Health Orders change. If, during the meeting, social distancing cannot be maintained (i.e.: small meeting spaces, non-

compliant members of the Public on the 2-meter social distancing order, etc.) masks will become a mandatory requirement for entering the Public Meeting space.

Disposable Gloves will also be kept on site for safety measures and staff who may be required to handle sound equipment.

Where the NIRB is required to fly community members to be active in a meeting, each participating community will be provided with masks for air travel for their community representatives.

Hand Washing and Sanitizing

Prior to anyone entering the Public Meeting Space, all attendees must use hand sanitizer. The NIRB will hire a runner/dedicated staffer to dispense hand sanitizing solution to all persons coming into the meeting venue.

Cleaning and Disinfection

NIRB will ensure high touch areas, such as microphones and other shared sound gear, is disinfected prior to the next participant using the equipment. This will also be done for tables and chairs when Intervenor or Community Reps move from the Public Side of the Meeting to the Round Table. At the end of each day Audio/Video technicians will ensure all equipment is ready for the next day's use, including cleaning and disinfection.

Venue staff will be asked to do large cleaning at the end of each meeting day.

Ensuring Proper Protocol Regarding Social Distancing is followed

Each member of the Public who does not adhere to the social distancing requirement will receive one (1) warning. Further infractions will result in an individual being asked to leave the premises. Examples of noncompliance include: not physical distancing when seeing family members and friends from other communities, refusing the use hand sanitizer, trying to force entry when visibly sick.

Warnings will be included in a logbook of incidents for back-up purposes. NIRB Staff will make sure to use plain language and language of preference when communicating the warning and will ensure that the message is understood before logging the incident.

External Contractors

NIRB Audio / Sound technicians and Court Reporters will be hired through an outside firm from outside of the Government of Nunavut's Common Travel Area. The NIRB will be seeking to classify these external contractors as essential service workers given there are no service providers capable of conducting the required work in Nunavut. This means they will be required to isolate in their hotel accommodation outside of work hours, will wear a mask and disposable gloves, and return to their hotel accommodations at the end of each day with no interaction with the Public after the meeting. Although negative COVID-19 tests are not required for essential services through the Government of Nunavut's public health orders, the NIRB will insist that all external contractors provide evidence of a negative COVID-19 test before entering the territory.

Public Health and Health Centre

 (866) 233-3033  (867) 983-2594  info@nirb.ca  www.nirb.ca  @NunavutImpactReviewBoard
P.O. Box 1360, Cambridge Bay, NU X0B 0C0
Page 3 of 6

The NIRB will advise local health centers or public health units that a public meeting is scheduled in advanced so that they are aware of a large public gathering taking place. The NIRB will invite members of Public Health Office or the local Health Centre to provide opening remarks at the start of meetings in each Nunavut hub location. They will be invited to speak about social distancing and how to interact in a public space with other members of the public to ensure the safety of everyone. The NIRB will provide all COVID-19 action plans and measures for Public Safety to Public Health and local Health Centers.

Security

NIRB has decided against hiring an outside security firm, as this has negative implications in a neutral meeting space. The NIRB will endeavor to hire additional local people to help with venue sign-in, cleaning and disinfecting, and identifying individuals not from the same households who are not respecting the social distance rule. Individuals who do not adhere to the policies and procedures in place will be asked to leave the meeting venue and not come back. This includes community representatives.

Individuals who are visibly sick (in this case, with symptoms associated with Covid-19) will be asked to leave. The NIRB will create COVID-19 specific protocols and procedures for asking an individual to leave and associated documentation for transparency and fairness.

Signage

The NIRB will post current Publications and Signage from the Government of Nunavut and the Government of Canada at all venues. This will include signs on social distancing, handwashing, the Government of Nunavut COVID-19 hotline and other associated signage in English and Inuktitut. All safety measures will be posted in the venues in clearly visible locations.

Communications

All safety measures will be clearly communicated to Meeting Participants in advance through letters, emails and social media. All advice from the Chief Public Health Officer will be strictly followed and this shall be communicated to all meeting attendees.

Vulnerable Populations

The NIRB will outline the risk of attending large public gatherings to vulnerable groups in advanced. The definition of “Vulnerable populations” as outlined by the Government of Nunavut is:

- an older adult (aged 65 and older)
- underlying medical conditions (e.g. heart disease, hypertension, diabetes, chronic respiratory diseases, cancer)
- compromised immune system from a medical condition or treatment (e.g. chemotherapy)

NIRB will not bar community representatives with any of the above conditions from participating. This warning is to inform individuals of the risks of attendance.

Floor Plans

NIRB will implement floor plans including one direction walkways and social distancing seating arrangements.

Catering

Coffee and Tea services will not be offered during public meetings, as this leads to a bottleneck effect of many individuals grouped around a small area, with coffee and tea urns becoming highly touched surfaces. Bagged snacks will be offered to Community Reps with choice of individually packaged water bottles or individually packaged juice.

Policies and Procedures

Under the direction of the Executive Director or the Board, meetings may be paused under the following circumstances:

- an active COVID-19 case has been confirmed in the territory
- the Chief Public Health Officer issues instructions to close all public meetings
- The City or Municipality has issued direction to close all Public Meetings

In the event that the meeting is paused, all attendees will be informed they must return to their hotel room at once and await further announcements via Facebook, the local Community Radio Station or a phone call in the case of community representatives.

A separate policy will be created for NIRB staff on a suspected COVID-19 meeting attendee. This will include putting on a mask and disposable gloves prior to talking to the individual, documenting the incident and advising other floor staff of the incident.

If a Board Member becomes ill and needs to leave a Public Meeting, as long as there is quorum the meeting will not need to be paused.

SUMMARY OF KEY DATES

In closing, the following is a summary of the important upcoming tentative public meeting dates for various assessments and impacted communities:

Date	Community	Meeting purpose
August 20, 2020	Cambridge Bay	Annual monitoring update for Doris North, Hope Bay Phase 2 and Back River
August 24 – 25, 2020	Pond Inlet	Annual monitoring update and Marine Workshop for Mary River
August 24 – 25, 2020	Rankin Inlet	Annual monitoring update for Meliadine

(866) 233-3033

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August 27 – 28, 2020	Baker Lake	Annual monitoring update for Meadowbank and Whale Tail
September 28 – October 2, 2020	Pond Inlet With participants via audio/video links with Iqaluit, Ottawa and Winnipeg	Community Round Table and Pre-Hearing Conference for Mary River's Phase 2 Project Proposal
November 23 – 26, 2020	Rankin Inlet	Technical Meeting, Community Round Table and Pre-Hearing Conference for Meliadine's Saline Effluent Discharge Project Proposal

The NIRB thanks all parties for their continued active participation in the NIRB's processes. Should you have questions or require any additional clarification regarding the upcoming COVID-19 measures at the various public meetings, please contact the NIRB's Director, Finance and Administration: Mark Ings at (867) 983-4602 or via email at mings@nirb.ca.

Sincerely,



Karen Costello
Executive Director
Nunavut Impact Review Board

**PUBLIC HEALTH ORDER GRANTED BY THE GOVERNMENT OF NUNAVUT'S CPHO FOR
THE JANUARY-FEBRUARY 2021 PUBLIC HEARING SESSION**

CANADA
NUNAVUT

PUBLIC HEALTH ACT, S. Nu. 2016, c. 13

**ORDER RESPECTING NUNAVUT IMPACT REVIEW BOARD PUBLIC HEARINGS
POND INLET AND IQALUIT**

WHEREAS:

- A. The Minister of Health has declared a Public Health Emergency in Nunavut effective March 20, 2020 to address the novel coronavirus COVID-19 pandemic, and may renew this declaration every fourteen (14) days for the duration of the Public Health Emergency;
- B. Pursuant to section 41(1) of the *Public Health Act*, the Chief Public Health Officer may take certain actions, including issuing directions or orders for the purposes of protecting the public health and preventing, remedying or mitigating the effects of the Public Health Emergency; and
- C. The Nunavut Impact Review Board has scheduled public hearings respecting the Baffinland Iron Mines Mary River Project Phase 2 to be held in Pond Inlet and Iqaluit between January 24 and February 6, 2021 (the "Public Hearings"); and
- D. The Chief Public Health Officer is satisfied that the Nunavut Impact Review Board has taken appropriate measures to protect the public from exposure to novel coronavirus COVID-19;

THEREFORE, the Chief Public Health Officer hereby orders the following:

1. The Public Hearings are exempt from the gathering size restrictions set out in section 7 (b) of the *Order Respecting Social Distancing and Gatherings (#13)* issued January 11, 2021.
2. Attendance at the Public Hearings shall be restricted to no greater than one hundred (100) persons at each meeting site, including participants and staff.

January 24, 2021

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3. All persons participating in the Public Hearings shall wear non-medical masks or face coverings as defined in section 15 of the *Order Respecting Social Distancing and Gatherings (#13)*.
4. The Nunavut Impact Review Board shall implement its COVID-19 Response Plan dated August 21, 2020, which is attached as Appendix "A" and forms part of this Order.
5. All other provisions of the *Order Respecting Social Distancing and Gatherings (#13)* shall continue to apply to the Public Hearings.

This order is effective at 12:01 am ET (UTC-5:00) on January 24, 2021 and expires at 11:59 pm ET (UTC-5:00) on February 6, 2021.



Dr. Michael Patterson
Chief Public Health Officer

January 24, 2021

Page 2 of 3

**Public Health Order Granted by the Government of Nunavut’s CPHO for the
April 2021 Public Hearing Session**

CANADA

NUNAVUT

PUBLIC HEALTH ACT, S. No. 2016, c. 13

ORDER RESPECTING NUNAVUT IMPACT REVIEW BOARD PUBLIC HEARINGS

POND INLET AND IQALUIT

WHEREAS:

- A. The Minister of Health has declared a Public Health Emergency in Nunavut effective March 20, 2020 to address the novel coronavirus COVID-19 pandemic, and may renew this declaration every fourteen (14) days for the duration of the Public Health Emergency;
- B. Pursuant to section 41(1) of the *Public Health Act*, the Chief Public Health Officer may take certain actions, including issuing directions or orders for the purposes of protecting the public health and preventing, remedying or mitigating the effects of the Public Health Emergency; and
- C. The Nunavut Impact Review Board has scheduled an extension to the public hearings respecting the Baffinland Iron Mines Mary River Project Phase 2 to be held in Pond Inlet and Iqaluit between April 12, 2020, and April 23, 2021 (the “Public Hearings”); and
- D. The Chief Public Health Officer is satisfied that the Nunavut Impact Review Board has taken appropriate measures to protect the public from exposure to novel coronavirus COVID-19;

THEREFORE, the Chief Public Health Officer hereby orders the following:

- 1. The Public Hearings are exempt from the gathering size restrictions set out in section 7 (b) of the *Order Respecting Social Distancing and Gatherings (#13)* issued January 11, 2021.
- 2. Attendance at the Public Hearings shall be restricted to no greater than one hundred and fifty (150) persons at each meeting site, including participants and staff.

April 12, 2021

Page 1 of 3

3. All persons participating in the Public Hearings shall wear non-medical masks or face coverings as defined in section 15 of the *Order Respecting Social Distancing and Gatherings (#13)*.
4. The Nunavut Impact Review Board shall implement its COVID-19 Response Plan dated August 21, 2020, which is attached as Appendix "A" and forms part of this Order.
5. All other provisions of the *Order Respecting Social Distancing and Gatherings (#13)* shall continue to apply to the Public Hearings.

This order is effective at 12:01 am ET (UTC-5:00) on April 12, 2021 and expires at 11:59 pm ET (UTC-5:00) on April 23, 2021.



Dr. Michael Patterson
Chief Public Health Officer

APPENDIX B PROCEDURAL HISTORY

Date	Party	Process Steps	Notes
October 29, 2014	Nunavut Planning Commission (Commission)	Proposal received from Proponent, NIRB received copy	Baffinland Iron Mines Corporation (Baffinland) submitted Phase 2 Development proposal and additional referrals received from Fisheries and Oceans Canada and Nunavut Water Board on January 8, 2015. On April 8, 2015 the Commission provided notice that the proposal did not conform to the North Baffin Regional Land Use Plan.
May 21, 2015	Baffinland	Applied to Minister for Exemption from Land Use Plan	Minister of Aboriginal Affairs and Northern Development grants exemption to North Baffin Regional Land Use Plan under section 11.5.11 of the Nunavut Agreement on July 13, 2015 and Phase 2 Development referred to the NIRB for assessment.
July 13, 2015	Responsible Minister	Exemption granted and proposal referred to NIRB for assessment	Minister of Aboriginal Affairs and Northern Development grants exemption to North Baffin Regional Land Use Plan for the Phase 2 Development proposal under section 11.5.11 of the Nunavut Agreement.
August 27, 2015	NIRB	Confirm proposal required amendment to the NIRB Project Certificate	Input received from Qikiqtani Inuit Association, Government of Nunavut, Aboriginal Affairs and Northern Development Canada, Environment Canada, Fisheries and Oceans Canada, Natural Resources Canada, Parks Canada, Transport Canada, World Wildlife Fund, and Helen Gerson. NIRB determines that amendment to Project Certificate No. 005 required.

Date	Party	Process Steps	Notes
October 6, 2015	NIRB	Issued Amended Guidelines for the preparation of a Final Environmental Impact Statement (FEIS) Addendum to Proponent	Input received from Qikiqtani Inuit Association, Government of Nunavut, Aboriginal Affairs and Northern Development Canada, Environment Canada, Fisheries and Oceans Canada, Natural Resources Canada, Parks Canada, and Transport Canada.
February 16, 2016	Baffinland	Notice of preferred option change, possible change of scope for proposal	Prior to submitting the FEIS Addendum, Baffinland provided notice to NIRB that the preferred option changed from use of the Tote Road to transport by North Railway.
February 22, 2016	NIRB	Request to Minister for clarification if exemption continued to apply	NIRB requested clarification from Minister of Aboriginal Affairs and Northern Development whether previous exemption applies to updated scope and preferred option.
October 4, 2016	Responsible Minister	Confirmation that previous exemption continues to apply only if scope change non-significant	Minister provides clarification that exemption continued to apply to scope change that were non-significant, however several differing perspectives were provided if changes to this land-based method of ore transport would be significant and left it to the Board to determine if the change was a significant modification to the proposal.
November 31, 2016	Baffinland	Complete updated scope provided	On October 28, 2016 NIRB requested Baffinland clarify the activities being considered in the Phase 2 Development proposal; Baffinland updated scope.

Date	Party	Process Steps	Notes
December 19, 2016	NIRB	Issued notice of scope change; proposal referred to Commission	NIRB determines that the change to scope for the Phase 2 Development is a significant modification and refers Baffinland to the Commission as required under NuPPAA s. 141.
May 29, 2018	Nunavut Planning Commission	Conformity determination issued with referral to the NIRB for assessment	Phase 2 Development proposal received positive conformity determination to North Baffin Regional Land Use Plan. Proposal determined to be a significant modification to project and required amendment to Project Certificate No. 005.
June 11, 2018	NIRB	Notice of Assessment and confirmation of applicability of Amended Guidelines	NIRB provided direction to parties on the processing of modification applications including the Phase 2 Development proposal, confirmed previous Guidelines were still adequate in providing direction on requirements of the FEIS Addendum.
August 23, 2018	Baffinland	FEIS Addendum submitted with request for NIRB/ NWB coordinated assessment	Following the original request for a coordinated assessment process, on September 10, 2018 Baffinland clarified that it was seeking coordination in the form of a joint technical meeting and separate but consecutive public hearings.
September 14, 2018	NIRB	FEIS Addendum not accepted	NIRB provided notice that the submission did not fulfill the requirements of the Guidelines; specifically, additional information required on Environmental Management Plans, increased accuracy of references in concordance table, and ambiguity in content.

Date	Party	Process Steps	Notes
October 3, 2018	Baffinland	Submission date for revised FEIS Addendum provided	Additional detail on updates to the Addendum provided with submission; NIRB received complete document by October 5, 2018 and initiated internal conformity check discussions with NWB.
October 10, 2018	NIRB	Internal conformity check of FEIS Addendum	NIRB provided Baffinland additional direction on conformity check of FEIS Addendum.
October 12, 2018	NIRB/NWB	NIRB accepts FEIS Addendum and initiates technical review process NWB initiates completeness check of application	NIRB/NWB joint letter of acceptance of the revised FEIS Addendum and receipt of application for amendment to Water Licence. <ul style="list-style-type: none"> ▪ NIRB initiates technical review by requesting parties submit information requests ▪ NWB requested parties comment on completeness of application Process map provided to demonstrate steps to coordinated process for parties.
November 2, 2018	QIA	Extension on deadline for IRs requested	Additional time was requested to ensure effective participation of the Inuit members; NIRB granted extension to November 23, 2018 as requested.
November 23, 2018	Parties	Information Requests (IRs) submitted to NIRB	IRs submitted by Qikiqtani Inuit Association (QIA), Government of Nunavut (GN), Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC), Environment and Climate Change Canada (ECCC), Fisheries and Oceans Canada (DFO), Health Canada (HC), Natural Resources Canada (NRCan), Parks Canada (PC), Transport Canada (TC), Oceans North (ON), World Wildlife Fund (WWF).

Date	Party	Process Steps	Notes
December 11, 2018	CIRNAC/NIRB	CIRNAC Participant Funding Notice distributed	NIRB distributes participant funding guide and applications on behalf of CIRNAC, completed applications due January 11, 2019. CIRNAC provides update on funds awarded on March 6, 2019 and May 27, 2019. Pond Inlet Hamlet, Mittimatalik HTO, Igloodik Community Working Group, Hall Beach HTA, and NITV awarded funding.
December 21, 2018	NIRB	Technical Review commenced	Following receipt of Baffinland's responses to IRs, NIRB initiated the technical review period. NIRB process proceeding while NWB application completeness check required additional time.
January 25, 2019	QIA	Extension to Deadline for Technical Review Comments	Provided with several justifications to extend the comment period by 14 days, the NIRB found these justifications reasonable and extended the deadline for technical comments to March 7, 2019.
January 15-30, 2019	NIRB	Community Information Sessions Held in Potentially Impacted Communities	Afternoon and evening sessions held in Pond Inlet, Clyde River, Arctic Bay, Resolute, Grise Fiord, Hall Beach and Igloodik. NIRB staff, NWB, Government of Canada, Government of Nunavut, and Isuma TV representatives accompanied tour. Report issued May 7, 2019.
February 4, 2019	NIRB	Updated Process Issued	In response to concerns raised by the Northern Projects Management Office and QIA, with input from Baffinland, and considering the NWB's determination of the application being incomplete, the NIRB provided an updated process map for the guidance of parties.

Date	Party	Process Steps	Notes
February 12, 2019	NIRB	Notice of Technical Meeting	Notice provided of Technical Meeting to be held April 8-10, 2019 in Iqaluit, NU. Draft Agenda circulated to parties on March 1, 2019 and final version circulated on March 28, 2019.
March 7, 2019	Parties	Technical review comments submitted	Comments received from the QIA, GN, CIRNAC, ECCC, DFO, HC, NRCan, PC, TC, ON, and WWF.
March 29, 2019	Baffinland	Response to comments submitted	Baffinland provided response to parties' technical review comments.
April 8-10, 2019	NIRB	Technical Meeting held	NTI, QIA, GN, CIRNAC, ECCC, DFO, HC, NRCan, PC, TC, ON, and WWF and Baffinland attended in-person meeting in Iqaluit.
April 18, 2019	NIRB	Notice of second Technical Meeting	Due to the number of outstanding issues parties requested a second technical meeting; NIRB scheduled a second meeting in Iqaluit June 17-19, 2019. Draft Agenda circulated on April 29, 2019 and final version circulated on June 6, 2019.
May 27, 2019	NIRB	Update to Public Hearing Logistics	Parties notified that due to limited accommodations the Public Hearing would be held both in Iqaluit and Pond Inlet. NIRB encouraged Intervenors to contact CIRNAC to update participant funding contracts as may be required.

Date	Party	Process Steps	Notes
June 17-19, 2019	NIRB	Second Technical Meeting held	NTI, QIA, GN, CIRNAC, ECCC, DFO, HC, NRCan, PC, TC, ON, and WWF, and Baffinland attended in-person meeting in Iqaluit.
June 28, 2019	Baffinland	Commitment list provided	Updated commitment list from Technical Meetings provided.
July 25, 2019	NIRB/NWB	Joint correspondence provided to update parties on timing of events and expectations for coordination	<p>Following the NWB's Notice of Application (May 16, 2019) and request for teleconference with parties to determine options for scheduling of the NWB technical meeting, both the NIRB and NWB received a request on July 4, 2019 from Baffinland to delay the NIRB's hearing to the week of November 4, 2019 and NWB's technical meetings following the NIRB hearing.</p> <p>Joint NIRB/NWB correspondence provided to update parties on timing of events and expectations for coordination; specifically, a NIRB Public Hearing on November 2-9, 2019 and subsequent NWB technical meeting the following week.</p>
August 21, 2019	NIRB	Notice of Public Hearing	Public hearing dates of November 2-9, 2019 circulated with requests for intervenors, and request for final written submissions. Request for Intervenor note Inuit organizations, regulators, and groups that received participant funding to participate in the hearing would be granted Intervenor status (Pond Inlet Hamlet and Mittimatalik HTO, Igloolik Community Working Group, Hall Beach HTA, and NITV).

Date	Party	Process Steps	Notes
August 29, 2019	NIRB	Notice of Site Visit for the NIRB's Board and Intervenors	Baffinland provided a tour of the Mary River site on September 21, 2019; report issued October 22, 2019 ¹⁶⁶ .
September 6, 2019	Parties	Request for Intervenor status submitted to the NIRB	Intervenor applications received from Nunavut Independent Television Network (NITV), Oceans North, World Wildlife Fund; NIRB grants Intervenor Status to these organizations on September 6, 2019.
September 16, 2019	NIRB	Draft Public Hearing Agenda circulated	Draft agenda provided to parties for comment; final agenda released October 10, 2019.
September 24, 2019	NIRB	Request for community representatives to attend the Public Hearing	Correspondence sent to Pond Inlet, Resolute Bay, Grise Fiord, Arctic Bay, Igloolik, Clyde River, Hall Beach, and Iqaluit seeking nomination of 5 representatives per community.
September 27, 2019	Intervenors	Final written submissions (FWS) submitted to NIRB	FWS received from QIA, Hamlet of Pond Inlet, Mittimatalik HTO, GN, CIRNAC, ECCC, DFO, HC, NRCAN, PC, TC, ON, WWF, and NITV.
October 17, 2019	Baffinland	Responses to FWS submitted	

¹⁶⁶ Board Site Visit Report Document ID No. 327177

Date	Party	Process Steps	Notes
October 29, 2019	NIRB	Procedural Guidance issued	As a result of Oceans North and Mittimatalik HTO submitting separate motions for the Hearing, as well as the Hamlet of Pond Inlet and Oceans North requesting additional time for Dr. J. Loxley to present his paper, the NIRB provided clarification to parties on expectations for the Hearing. In addition, NTI requested additional time to present at the hearing.
November 2-9, 2019	NIRB	Public Hearing held, including Technical sessions and Community Roundtable	Parties represented at the hearing included: Baffinland, NTI, QIA, Hamlet of Pond Inlet, Mittimatalik HTO, Igloodik Working Group, Hall Beach HTO, GN, CIRNAC, ECCC, DFO, HC, NRCan, PC, TC, ON, WWF, and NITV, residents of Iqaluit, and designated representatives from Pond Inlet, Resolute Bay, Grise Fiord, Arctic Bay, Igloodik, Clyde River, Hall Beach. Technical and Community Roundtable sessions were scheduled for Iqaluit, with additional Community Roundtable in Pond Inlet.
November 6, 2019	NTI/Intervenors	Motion submitted at Hearing	NTI brought a motion to suspend the Public Hearing for a period of 9-12 months.

Date	Party	Process Steps	Notes
November 6, 2019	NIRB	NIRB suspends Public Hearing proceedings, cancelled the Community Roundtable scheduled for November 8-9 in Pond Inlet and adjourned completion of the Public Hearing pending consideration of the NTI Motion	Submissions from parties were requested regarding the NTI Motion, including addressing the length of the suspension of the Public Hearing and additional process steps required, in accordance with the following timeline: Intervenors to file on or before November 15, 2019 Baffinland to file on or before November 22, 2019
November 21, 2019	Baffinland	Requested one-week extension to timeline for filing written response to NTI's November 6, 2019 motion	The basis for Baffinland's request to file their response on November 29, 2019 was to allow Baffinland to meet with potentially affected communities to discuss next steps and timelines; NIRB issued response granting the extension.
November 29, 2019	Baffinland	Written response received	Filed written response to NTI's November 6, 2019 motion to suspend the Hearing for 9-12 months
December 16, 2019	NIRB	Direction issued to Ministers and parties on reconsideration process and procedures	Accompanied by the NIRB's Record of Proceedings and Disposition of Motions Report for the Phase 2 Development proposal.

Date	Party	Process Steps	Notes
January 6, 2020	Igloolik Working Group	Report on meetings between North Baffin communities	Updated information (report or other summary) from the meeting amongst affected community organizations by the Igloolik Working Group in November be filed with the Board. NIRB did not receive formal submission, however correspondence from the North Baffin communities was received during planning of subsequent meetings.
January 6, 2020	Intervenors Baffinland	Responses to deferred items from Hearing and applicable additional materials submitted	Intervenors: required to provide response to questions deferred during the Public Hearing. Baffinland: required to provide updated project scope with clarification on operational flexibility, preferred options (such as railway alignment, wildlife mitigation and/or human crossing structures, etc.). Baffinland also to provide additional supplemental materials, including list of commitments and responses to questions deferred during the Hearing.
December/ January 2020	CIRNAC	Participant Funding Update	CIRNAC to work with the Intervenors to update participant funding agreements and provide additional required funding; NIRB received update that parties received additional funding, and several additional parties received funding, specifically Hamlet of Hall Beach (Sanirajak), Hamlet of Clyde River, and Clyde River Hunters and Trappers Association, Igloolik Hunters and Trappers, Hamlet of Arctic Bay and Ikajutit Hunters and Trappers Association.

Date	Party	Process Steps	Notes
February 6, 2020	Intervenors	Provide updated technical review submissions	Intervenors and interested parties could provide updated technical review submissions (if they so chose).
February 13, 2020	Baffinland	Response to updated technical review submissions	Baffinland may provide a reply to updated technical review submissions (if they so chose).
February 25, 2020	Baffinland	Presentation materials provided	Baffinland files presentation materials they intend to present during the Technical Meeting/Pre-hearing Conference.
March 12 & 13 2020	NIRB	Meeting format change due to pandemic	NIRB changed format and timing for Technical Meeting and Pre-hearing Conference planned for March 16-25, 2020 due to concerns around the spread of COVID-19. The Board determined that the meetings would no longer be held in-person, but expected to occur via a combination of teleconference sessions and written submissions.
March 17, 2020	NIRB	Meetings deferred due to pandemic	NIRB paused the assessment process due to challenges associated with public health response to COVID-19. and did not issue a revised schedule for formal technical teleconferences.
April 14, 2020	Baffinland	Requested resuming Technical Meetings	Requested that the NIRB schedule and conduct the Technical Meetings and Pre-Hearing Conference by way of teleconference by the end of April 2020.

Date	Party	Process Steps	Notes
April 16, 2020	NIRB	Technical Meetings	Correspondence provided to interested parties with suggested time, format, and draft agenda for the Technical Meetings.
April 20, 2020	Impact Assessment Agency of Canada	Applicability of Espoo Convention to the Phase 2 Development Proposal	NIRB received inquiry as part of the consideration of the Espoo Convention; clarification on current scope of the Phase 2 Development provided April 23, 2020.
April 22, 2020	Baffinland & Intervenor	Updated direction regarding scheduling of Technical Meetings	Most community organization/parties objected to conducting the Meeting by teleconference due to challenges posed by the Covid-19 pandemic.
June 16, 2020	Impact Assessment Agency of Canada	Applicability of Espoo Convention to the Phase 2 Development Proposal	Confirms that Espoo Convention applies to the Mary River Phase 2 Development Proposal.
June 19, 2020	Baffinland	Project Description update	Baffinland provided updates and clarification on the Phase 2 Development Proposal Description and the anchorage point in Greenland.
July 14, 2020	Responsible Minister	Resumption of the reconsideration process	Minister of Northern Affairs recommended that the NIRB resume the reconsideration process due to successful negotiation of the Inuit Certainty Agreement on June 16, 2020.

Date	Party	Process Steps	Notes
July 29, 2020	NIRB	Notice of Technical Meetings	Notified parties of the rescheduled Technical Meeting and resumption of the assessment process and format of meetings; dates of the meetings initially scheduled for August 31-September 3, 2020 later deferred by 2 weeks as a result of challenges experienced by parties to being prepared for the meetings.
August 5, 2020	Baffinland	Notice of Motion	Baffinland seeks an Order that the Public Hearing of the Mary River Project Phase 2 Development Proposal be rescheduled to reconvene on October 30, 2020 for a two-week period.
August 24, 2020	NIRB	Response to Motion filed by Baffinland	Following receipt of the Motion, NIRB provides parties one week to provide comments on the Motion. NIRB issues its reasons for decision for the motion filed by Baffinland; a public hearing will not be scheduled until the Board successfully concludes the Technical Meeting or issues its PHC decision.
September 14-18, 2020	NIRB	Third Technical Meeting	Meeting was held via teleconference involving intervenors and observers.
September 22, 2020	NIRB	Tentative dates for reconvening Public Hearing	NIRB provided update from the motion and defers release Hearing dates for until after Pre-hearing Conference Decision.
September 28-October 1, 2020	NIRB	Community Roundtable/Pre-hearing Conference	The proceedings were conducted from Pond Inlet using a dedicated audio-video feed to link the hubs in Iqaluit, Winnipeg, and Ottawa.

Date	Party	Process Steps	Notes
October 30, 2020	NIRB	Pre-Hearing Conference Decision Report Released	The NIRB released the PHC Decision Report indicating the Resumed Public Hearing would be scheduled from January 25-February 6, 2021.
December 7, 2020	NIRB	Notice of Public Hearing	NIRB released a Draft Agenda and procedural Guidance scheduling the
December 17, 2020	MHTO & Hamlet of Clyde River	Motions to adjourn the Public Hearing	The MHTO and Hamlet of Clyde River each submitted a motion to adjourn the Resumed Public Hearing and the MHTO submitted a second motion to allow Intervenor presentations at the CRT.
January 15, 2021	NIRB	Disposition of Motions	NIRB released its disposition of Motions determining that the Hearing would resume as scheduled due to the Board's enhanced COVID-19 Safety protocols and that with community representatives attending technical session there is no need to repeat presentations at the CRT.
January 18, 2021	NIRB	Public Hearing Final Agenda	NIRB Released the Final Agenda for the upcoming Public Hearing

Date	Party	Process Steps	Notes
January 25- February 6, 2021	NIRB	Public Hearing	NIRB held a in-person Public Hearing in Pond Inlet, Iqaluit and provided remote access via Zoom for participants unable to attend in person due to COVID-19 travel restrictions. Due to delays in the agenda and several parties submitting various motions and objections to filing of evidence, the Hearing was unable to complete the agenda as planned. The Board used 11 of the 12 scheduled Hearing days to cover technical sessions while using the final day in Pond Inlet to host a CRT to provide Pond Inlet Community members an opportunity to comment on the proposal.
January 25, 2021	NIRB	Decision Making Panel Established	The Board's chairperson notified Parties in its' opening remarks that it has established a decision-making panel for this proposal.
January 30, 2021	Ikajutit Hunters and Trappers Association	Motion to Extend the Public Hearing	The Ikajutit Hunters and Trappers Association submitted a Motion requesting an order by the Panel to either extend the current sessions of schedule additional sessions at a future date.
February 2, 2021	NIRB	Disposition of Motion	The Panel partially granted the motion from the Ikajutit Hunters and Trappers Association tentatively scheduling additional sessions in March 2021.

Date	Party	Process Steps	Notes
February 12, 2021	NIRB	Draft Agenda for the Extended Public Hearing Sessions	The Panel released a draft agenda for the Extended Public Hearing sessions scheduled from April 12-21, 2021. The Board further indicated the purpose of these meetings is to provide parties an opportunity to ask limited follow-up questions and to provide adequate time for the Board to hear directly from the affected communities regarding the Proposal.
February 17, 2021	NIRB	Procedural Direction and opportunity to comment on outstanding Motions	The Panel issued guidance to parties along with a summary of outstanding Motions from the January-February 2021 sessions requesting parties to provide any comments or objections by March 23, 2021.
February 24, 2021	NIRB	Direction from the Board Re: Rebroadcasting	The Panel provided direction to Parties indicating that any rebroadcast or retransmission of the January-February 2021 sessions without the NIRB's written consent is prohibited.
March 26, 2021	NIRB	Final Agenda for the Extended Public Hearing	The Panel released the Final Agenda for the Extended Public Hearing from April 12-21, 2021
April 6, 2021	NIRB	Disposition of Motions	The Panel provided direction to parties on the admissibility of Exhibits, hosting an additional CRT in Pond Inlet and the reservation of late filings. The direction from the Panel noted that the Extended Public Hearing would continue as planned in Iqaluit.

Date	Party	Process Steps	Notes
April 12, 2021	NIRB	Extended Public Hearing Sessions	The Panel commenced the scheduled Extended Public Hearing sessions in Iqaluit Nunavut to complete the remaining technical sessions on the agenda and the community round table.
April 15, 2021	NIRB	Suspension of the Public Hearing	The Panel announces the immediate suspension of the Extended Public Hearing under orders from Nunavut's Chief Public Health Officer due to a positive case of COVID-19 in Iqaluit.
April 27, 2021	NIRB	Extension to Commenting deadlines on outstanding motions	During the Extended Public Hearing, ECCC, Baffinland and WWF submitted proposed Exhibits. The Panel had initially set a commenting deadline of April 15, 2021; however, with the suspension of the Hearings, the Panel provided an updated deadline to Parties.
June 10, 2021	NIRB	Disposition of Proposed Exhibits	The Panel issued direction to Parties indicating the filing of ECCC's, WWF's and one of Baffinland's Proposed documents as Exhibits.
July 30, 2021	NIRB	Procedural Guidance: Resumption of the Extended Public Hearing	The Panel issued notice to Parties regarding the resumption of the Extended Public Hearing in Iqaluit and Pond Inlet on November 1-6, 2021
September 1, 2021	NIRB	Final Agenda Issued	The Panel issued the final agenda for the resumption of the Extended Public Hearing sessions in Iqaluit and Pond Inlet from November 1-6, 2021.

Date	Party	Process Steps	Notes
September 16, 2021	NITV	Notice of Motion Re: Rebroadcasting of Public Hearing Video	Notice of Motion from NITV requesting permission from the Board to broadcast the upcoming Public Hearing sessions as well as rebroadcast previous sessions under their proposed broadcast protocol.
October 6, 2021	NIRB	Disposition of NITV Motion	The Panel released their disposition of the Motion and a news release granting NITV access to the NIRB's audio and video feed for the upcoming Public Hearing sessions; but prohibits NITV from rebroadcasting previous Public Hearing Sessions.
November 1-6, 2021	NIRB	Resumption of the Extended Public Hearing Process	The Panel commenced the scheduled resumption of the Extended Public Hearing sessions in Iqaluit and Pond Inlet to complete the remaining technical sessions on the agenda and the Community Roundtable.
November 1, 2021	GoC	Proposed Filing of the Espoo Materials	NPMO, on behalf of the Government of Canada proposed the filing of the Espoo Materials provided from the Government of Greenland in relation to their Public Hearing process for the assessment of the Espoo Report provided by Baffinland.
November 2, 2021	Oceans North	Objection to Filing the IUOE, Local 793's Video Submission	Oceans North filed an objection to a video submission provided by IUOE, Local 793 including Inuit employees at Baffinland providing their views on the Phase 2 Development Proposal.

Date	Party	Process Steps	Notes
November 6, 2021	GoC	Proposed Filing of a Summary of Meetings as an Exhibit	CIRNAC, on behalf of the Government of Canada proposed the filing of Summary of Meetings between the Government of Canada and the Community of Pond Inlet since the beginning of operations at Mary River.
November 6, 2021	Amaruq HTA	Notice of Motions	Amaruq HTA provided three (3) Notice of Motions requesting an order from the Board to extend the deadlines for Final Written Statements and requesting designated Inuit Organizations and Institutions of Public Government move to disseminate as per the Implementation Plan and Inuit Tradition.
November 6, 2021	NIRB	Closing of the Public Hearing in-person Sessions	The Panel heard the closing statements from nominated community representatives at the end of the Community Roundtable and subsequently noted the close of the in-person Public Hearing sessions. The Panel further indicated that forthcoming guidance would lay out the next steps in the process and the closing of the Public Hearing Record.
November 26, 2021	NIRB	Panel Disposition of Motions and Proposed Exhibits	The Panel provided procedural guidance on the filing of the Espoo Materials, GoC's summary of meetings & the admissibility of IUOE, Local 793's video submission allowing all three submissions to be filed on the record but excluding the narration, video and photos from the IUOE video submission. Further, the Panel disposed of the Amaruq HTA Motions indicating that the upcoming timeline would facilitate the requested extension and that the remaining motions were outside of the jurisdiction of the Board.

Date	Party	Process Steps	Notes
December 10, 2021	Intervenors	Deadline to File Written Comments on the Espoo Materials	Deadline for Registered Intervenors to file a written comment submission on the new information contained in the Espoo Materials
December 17, 2021	Baffinland	Deadline to File Written comments and Responses on the Espoo Materials	Deadline for Baffinland to file a written comment submission with the Board in respect of the new information contained in the Espoo Materials
January 10, 2021	Intervenors	Deadline to File Written Closing Statements	
January 24, 2021	Baffinland	Deadline to File Written Closing Statements	
January 28, 2021	NIRB	Close of Public Hearing Record	

APPENDIX C RECORD OF PUBLIC HEARING PROCEEDINGS

JANUARY 25-FEBRUARY 6, 2021 PUBLIC HEARING SESSION

Project Proponent:	Baffinland Iron Mines Corporation 2275 Upper Middle Road East, Suite 300 Oakville, Ontario, Canada L6H 0C3
Date Updated Project Description of the Proposal Received:	October 3, 2018
Positive Conformity Determination Received from the Nunavut Planning Commission:	May 29, 2018
Dates of Hearings:	Day 1: January 25, 2021, Pond Inlet & Iqaluit, NU Day 2: January 26, 2021, Pond Inlet & Iqaluit, NU Day 3: January 27, 2021, Pond Inlet & Iqaluit, NU Day 4: January 28, 2021, Pond Inlet & Iqaluit, NU Day 5: January 29, 2021, Pond Inlet & Iqaluit, NU Day 6: January 30, 2021, Pond Inlet & Iqaluit, NU Day 7: February 1, 2021, Pond Inlet & Iqaluit, NU Day 8: February 2, 2021, Pond Inlet & Iqaluit, NU Day 9: February 3, 2021, Pond Inlet & Iqaluit, NU Day 10: February 4, 2021, Pond Inlet & Iqaluit, NU Day 11: February 5, 2021, Pond Inlet & Iqaluit, NU Day 12: February 6, 2021, Pond Inlet & Iqaluit, NU *Indicates Remote Participation
Panel Members Present:	K. Kaluraq, Chairperson M. Qumuatuq, Board Member C. Emrick, Board Member
NIRB Staff:	K. Costello, Executive Director *T. Arko, Director, Technical Services C. Barker, Technical Advisor II G. Daoust Technical Advisor I M. Ings, Director, Finance and Administration K. Gillard, Manager, Project Monitoring *Solomon Amuno, Technical Advisor II

	K. Morrison, Manager Impact Assessment
NIRB Legal Counsel:	T. Meadows, Meadows Law
Interpreters:	V. Dewar R. Katsak T. Arnakallak J. Peter J. Tucktoo, NIRB
Court Reporters:	S. Burns, Dicta Court Reporting Inc. A. Vital, Dicta Court Reporting Inc.
Audio/Visual Technician:	O. Sirois, Duoson Multimedia R. Poulin, Duoson Multimedia F. Baril, Duoson Multimedia R. Carrier, Duoson Multimedia B. Beattie, NIRB
<i>Parties:</i>	
<i>Proponent:</i>	
Baffinland Iron Mines Corporation	C. Kowbel, Legal Counsel B. Armstrong, Legal Counsel *L. Duke, Legal Counsel *J. Andrews, Legal Counsel B. Penney, President, Chief Executive Officer M. Lord-Hoyle, Vice President, Sustainable Development L. Kamermans, Senior Director, Sustainable Development A. Moore, Manager, Government and Public Affairs U. Hanson, Vice President, Community and Strategic Development *E. Malcolm, <i>Acting</i> Manager, Environmental, Social & Governance *C. Murray, Environmental & Regulatory Compliance Manager *C. Devereaux, Environmental Superintendent *K. Button, Environmental Superintendent *K. Johnson, Environmental Assessment Specialist M. Clark, Manager, Recruitment & Inuit Success Assurance *G. Goruk, Director, Sales & Shipping *F. Pittman, Deputy Project Director/Rail Area Manager

	<p>*T. Sewell, Senior Director, Health, Safety, Environment, Security & Training</p> <p>*S. Borcsok, Approvals Manager</p> <p>*T. Peter, Executive Administration Officer Manager</p> <p>*S. Douville, Advisor</p> <p>*M. Anderson, Senior Director, Financial Planning & Analysis</p> <p>*G. Morinville, Manager, Environmental Social & Governance</p> <p>C. Merkosak, IIBA Employment & Training Specialist</p> <p>*P. Osborne, Golder Associates Ltd.</p> <p>*P. Rouget, Golder Associates Ltd.</p> <p>*P. Abgrall, Golder Associated Ltd.</p> <p>*M. Winterbottom, Golder Associates Ltd.</p> <p>*B. Wheeler, Golder Associates Ltd</p> <p>*M. Austin, JASCO Research Ltd.</p> <p>*C. Moore, Intrinsik</p> <p>*Mike Settington, Environmental Dynamics Inc.</p> <p>*A. Macleod, Environmental Dynamics Inc.</p> <p>*J. Krizan, Environmental Dynamics Inc.</p> <p>*J. McClintock, Wood</p> <p>*S. Wallace, Stantec Consulting Ltd</p> <p>*P. Glenen, Stantec Consulting Ltd.</p> <p>*D. Jarrat, Stantec Consulting Ltd</p> <p>*Vicki Corning, Stantec Consulting Ltd</p> <p>*C. Legault, Fednav Limited</p> <p>*K. Varadarajan, Canfornav</p> <p>*D. Del Cardo, Genessee & Wyoming Canada</p> <p>*S. Sefsik, Genessee & Wyoming Canada</p> <p>*L. Pelletier, Genessee & Wyoming Canada</p> <p>*R. Cook, Knight Piesold Consulting</p> <p>*J. Prno, Jason Prno Consulting Services Ltd.</p> <p>*F. VanBiljon, Hatch Ltd.</p> <p>*G. Clinton, Impact Economics</p>
<i>Intervenors:</i>	

Qikiqtani Inuit Association:	<ul style="list-style-type: none"> *L. Land, Legal Counsel P.J. Akeeagok, President L. Barnabas, Mary River Project Portfolio Lead J. Ottenhof, Director Qikiqtani Nunalirijikkut R. Paton, Director IQ & Engagement S.W. Bathory, Special Advisor *C. Spencer, Regulatory Manager *R. Olson, Firelight Research Group *A. MacDonald, Firelight Research Group *S. Leech, Firelight Research Group *B. Stewart, Arctic Biological Consultants *J. Higdon, Higdon Wildlife Consulting *N. Jewitt, Arktis Solutions *M. Hemp, Assistant Executive Director, Infrastructure and Development
Nunavut Tunngavik Incorporated	<ul style="list-style-type: none"> *A. Yuan, Legal Counsel *N. Gonzalez, Legal Counsel P. Irngaut, Director, Wildlife and Environment H. Uniuqsaraq, Chief Administrative Officer *D. Lee, Wildlife Biologist *B. Dean, Assistant Director *C. Lyall, Executive Assistant to the Vice President *D. Kunuk, Chief Operating Officer
Hamlet of Pond Inlet	<ul style="list-style-type: none"> *F. Tester, Technical Advisor
Mittimatalik Hunters and Trappers Organization	<ul style="list-style-type: none"> *E. Murphy, Legal Counsel *J. Zyla, Legal Counsel *K. Julta, Legal Counsel *L. Mar, Legal Counsel *M. Bradley, Legal Counsel E. Ootoovak, Chair I. Inuarak, Vice Chair S.Elverum, IQ Advisor J. Simonee, Advisor *A. Hanson-Main, Technical Advisor *V. Vergera, Technical Advisor *V. L'Hereault, Technical Advisor *E. Solomon, Director, Changing Arctic

Igloolik Working Group	M. Recinos, Technical Advisor P. Ivalu, Chair J. Quassa, Group Member J. Malliki
Hamlet of Sanirajak	J. Audlakiak, Mayor L. Primeau, Senior Administrative Officer V. Curley, Deputy Mayor D. Arvaluk, Councilor T. Kuppaq, Councilor
Sanirajak Hunters and Trappers Association	S. Arnardjuak
Hamlet of Arctic Bay	L. Idlout, Technical Advisor O. Eegeetsiak, Technical Advisor
Ikajutit Hunters and Trappers Association	L. Idlout, Technical Advisor O. Eegeetsiak, Technical Advisor
Hamlet of Clyde River	*W. Bernauer, Technical Advisor
Nangmoutaq Hunters and Trappers Association	*W. Bernauer, Technical Advisor
Amaruq Hunters and Trappers Association	M. Mike, Technical Advisor J. Kakee, Board Member
Government of Nunavut	E. Stockley, Legal Counsel N. O'Grady, Avatiliriniq Coordinator J. Onalik, Associate Deputy Minister A. Robinson, Manager, Land Use and Environmental Assessment S. Atkinson, Wildlife Consultant E. Zell, Manager Regulation and Environmental Assessment J. Ringrose, Qikiqtani Regional Biologist *G. Karlik, <i>Acting</i> Assistant Deputy Minister *J. Elliot, Project Manager, Land use Planning *A. Cyr-Parent, Senior Advisor *M. Kinney, Deputy Minister

Crown-Indigenous Relations and Northern Affairs Canada	<p>*M. Hopkins, Director General</p> <p>*K. Pawley, Manager, Environmental Assessment, Land Use Planning & Conservation</p> <p>S. Dewar, Director, Resource Management</p> <p>A. Chaikine, Senior Environmental Assessment Specialist</p> <p>K. Henricksen, Regional Director General</p> <p>*F. Ngwa, Manager, Impact Assessment</p> <p>*D. Abernethy, Regional Socio-economic Analyst</p> <p>*J. Neary, Manager, Environmental Policy Analyst</p> <p>*J. Walsh, Senior Environmental Policy Analyst</p>
Northern Projects Management Office	<p>L. Dyer, Regional Director</p> <p>S. Qazi, Senior Project Manager</p> <p>A. Shafi, Project Manager</p> <p>S. Hitchcox, Project Manager</p>
Department of Justice	S. Gruda-Dolbec, Legal Counsel, Department of Justice
Fisheries and Oceans Canada:	<p>*T. Hoggarth, Regional Director</p> <p>*A. Beattie, Team Lead</p> <p>*A. Sorckoff, Biologist</p> <p>*G. Bernard-Lecaille, Senior Biologist</p> <p>*M. Marcoux, Research Scientist and Marine Mammal Specialist</p> <p>*K. Howland, Research Scientist and Invasive Species Specialist</p> <p>*C. Matthews, Research Scientist</p> <p>*S. Ferguson, Research Scientist</p> <p>*S. Bailey, Research Scientist</p> <p>*S. Nudds, Physical Scientist (Oceanographer)</p> <p>*K. Hedges, Research Scientist</p> <p>*J. Paulic, Science Advice Liaison</p> <p>*J. Shead, Aquatic Invasive Species Biologist</p> <p>*P. Smith, Regional Senior Fisheries Management Officer</p> <p>*S. McLennan, Senior Policy Advisor</p> <p>*T. Seal, Junior Project Officer</p>
Environment and Climate Change Canada	<p>*A. Graham, Environmental Assessment Coordinator</p> <p>*M. Fairbairn, <i>Acting</i>, Regional Director</p> <p>*A. Wilson, Expert Support</p> <p>*R. Ejeckam, Expert Support</p> <p>*B. Asher, Environmental Assessment Coordinator</p>

	<p>*C. Kabanguka, Environmental Emergencies Program Officer</p> <p>*K. Patel, Wildlife Expert</p> <p>*M. Parsons, Senior Air Quality Scientist</p> <p>*M. Tobin, Expert Support</p> <p>*R. Holt, Energy and Technology Directorate</p> <p>*J. Dufour, Lead Wildlife Expert</p>
Health Canada	<p>*M. Gale, <i>Acting</i>, Regional Manager Environmental Health Program</p> <p>*W. Wilson, Environmental Assessment Coordinator</p> <p>*K. Buset, Impact Assessment Program Manager</p> <p>*T. Nguyen, Indigenous Engagement Specialist</p> <p>*K. Ma, Regional Environmental Assessment Coordinator</p> <p>*N. Lyrette, Senior environmental health specialist</p>
Natural Resources Canada:	<p>*P. Unger, Team Leader</p> <p>*R. Johnstone, Deputy Director</p>
Parks Canada	<p>*A. Stoddart, Environmental Assessment Specialist</p> <p>*J. Bastick, Environmental Assessment Specialist</p> <p>*J. Boon, Nunavut Field Unit Superintendent</p> <p>J. Chisholm, Ecologist Team Leader</p> <p>L. Jonart, Nunavut Field Manager for Tallurutiup National Marine Conservation Area</p> <p>A. Maher, Resource Conservation Manager</p>
Transport Canada	<p>*A. Gudmunson, Regional Manager Environmental Services</p> <p>*J. Johar, Manager Marine Safety and Security</p> <p>*J. Cram, Manager Rail Safety Engineering</p> <p>*J. Barker, Environmental Advisor</p> <p>*M. O'Soup-Bushie, Major Resource Development Projects & Aboriginal Consultations</p>
Nunavut Independent Television Network	<p>*L. Lipsett, Technical Advisor</p> <p>*Z. Kunuk, Founder and Director</p> <p>*L. Tulugarjuk, Executive Director</p> <p>*I. Gilles, Advisor</p> <p>B. Kunuk</p> <p>M. Malliki</p> <p>C. Kunuk</p>

Oceans North	*C. Debicki, Vice President Policy Development and Counsel *A. Joynt, Senior Policy Advisor *G. Macdonald, Arctic Research Specialist *J. Jones, Scripps Institute
World Wildlife Fund	*A. Dumbrille, Senior Specialist Sustainable Shipping P. Okalik, Senior Advisor Arctic Conservation *B. Laforest, Senior Specialist Arctic Species and Ecosystems E. Keenan, Manager, Arctic Marine Conservation
<i>Nominated Representatives</i>	<i>Community</i>
Pond Inlet	J. Arreak, Hamlet C. Sangoya Hunters and Trappers Organization
Igloolik	P. Awa, Hamlet D. Irngaut, Hunters and Trappers Association N. Piugattuk, Elder M. Ivalu, Women W. Immaroitok, Youth
Sanirajak	J. Kaernerker, Hamlet
Arctic Bay	M. Koonoo, Hunters and Trappers Association O. Naqitarvik, Elder
Clyde River	J. Natanine, Hamlet S. Aipellee, Hunters and Trappers Association O. Audlakiak, Women S. Palituq, Elder J. Palituq, Youth
Grise Fiord	N/A
Resolute Bay	S. Idlout, Hunters and Trappers Association M. Amarualik, Hamlet

APRIL 12-14, 2021 PUBLIC HEARING SESSION

Project Proponent:	Baffinland Iron Mines Corporation 2275 Upper Middle Road East, Suite 300 Oakville, Ontario, Canada L6H 0C3
Date Updated Project Description of the Proposal Received:	October 3, 2018
Positive Conformity Determination Received from the Nunavut Planning Commission:	May 29, 2018
Dates of Hearings:	Day 13: April 12, 2021, Iqaluit & Pond Inlet, NU Day 14: April 13, 2021, Iqaluit & Pond Inlet, NU Day 15: April 14, 2021, Iqaluit & Pond inlet, NU *Indicates Remote Participation
Panel Members Present:	K. Kaluraq, Chairperson M. Qumuatuq, Board Member C. Emrick, Board Member
NIRB Staff:	K. Costello, Executive Director T. Arko, Director, Technical Services* C. Barker, Technical Advisor II G. Daoust Technical Advisor I *M. Ings, Director, Finance and Administration K. Morrison, Manager Impact Assessment
NIRB Legal Counsel:	T. Meadows, Meadows Law
Interpreters:	V. Dewar R. Katsak L. Janes J. Tucktoo, NIRB
Court Reporters:	S. Burns, Dicta Court Reporting Inc. A. Vital, Dicta Court Reporting Inc.

Audio/Visual Technician:	O. Sirois, Duoson Multimedia R. Poulin, Duoson Multimedia L. Baril-Simard R. Carrier, Duoson Multimedia J. McCarthy, Duoson Multimedia
<i>Parties:</i>	
<i>Proponent:</i>	
Baffinland Iron Mines Corporation	C. Kowbel, Legal Counsel B. Armstrong, Legal Counsel *L. Duke, Legal Counsel *J. Andrews, Legal Counsel *N. Saunders, Legal Counsel B. Penney, President, Chief Executive Officer M. Lord-Hoyle, Vice President, Sustainable Development L. Kamermans, Senior Director, Sustainable Development J. Tigullaraq, Head of Northern Affairs A. Moore, Manager, Government and Public Affairs U. Hanson, Vice President, Community and Strategic Development *E. Malcolm, <i>Acting</i> Manager, Environmental, Social & Governance *C. Murray, Environmental & Regulatory Compliance Manager *C. Devereaux, Environmental Superintendent *K. Button, Environmental Superintendent *K. Johnson, Environmental Assessment Specialist M. Clark, Manager, Recruitment & Inuit Success Assurance *G. Goruk, Director, Sales & Shipping *F. Pittman, Deputy Project Director/Rail Area Manager *T. Sewell, Senior Director, Health, Safety, Environment, Security & Training *S. Borcsok, Approvals Manager *T. Peter, Executive Administration Officer Manager *S. Douville, Advisor *M. Anderson, Senior Director, Financial Planning & Analysis *G. Morinville, Manager, Environmental Social & Governance C. Merkosak, IIBA Employment & Training Specialist *P. Osborne, Golder Associates Ltd. *P. Rouget, Golder Associates Ltd. *P. Abgrall, Golder Associated Ltd.

	<ul style="list-style-type: none"> *B. Wheeler, Golder Associates Ltd *M. Austin, JASCO Research Ltd. *C. Moore, Intrinsic *Mike Settington, Environmental Dynamics Inc. *A. Macleod, Environmental Dynamics Inc. *J. McClintock, Wood *S. Wallace, Stantec Consulting Ltd *P. Glenen, Stantec Consulting Ltd. *D. Jarrat, Stantec Consulting Ltd *Vicki Corning, Stantec Consulting Ltd *C. Legault, Fednav Limited *K. Varadarajan, Canfornav *D. Del Cardo, Genessee & Wyoming Canada *S. Sefsik, Genessee & Wyoming Canada *L. Pelletier, Genessee & Wyoming Canada *R. Cook, Knight Piesold Consulting *J. Prno, Jason Prno Consulting Services Ltd. *F. VanBiljon, Hatch Ltd. *G. Clinton, Impact Economics
<i>Intervenors:</i>	

Qikiqtani Inuit Association:	<p>*L. Land, Legal Counsel P.J. Akeeagok, President O. Akesuk, Vice President L. Barnabas, Mary River Project Portfolio Lead J. Ottenhof, Director Qikiqtani Nunalirijikkut R. Paton, Director IQ & Engagement S.W. Bathory, Special Advisor *A. MacDonald, Firelight Research Group *S. Leech, Firelight Research Group *B. Stewart, Arctic Biological Consultants *J. Higdon, Higdon Wildlife Consulting *N. Jewitt, Arktis Solutions *J. Ash, Arktis Solutions</p>
Nunavut Tunngavik Incorporated	<p>*A. Yuan, Legal Counsel *N. Gonzalez, Legal Counsel A. Kotierk, President P. Irngaut, Director, Wildlife and Environment J. Eetoolook, Vice President *H. Uniuqsaraq, Chief Administrative Officer *D. Lee, Wildlife Biologist *B. Dean, Assistant Director C. Lyall, Executive Assistant to the Vice President D. Kunuk, Chief Operating Officer</p>
Hamlet of Pond Inlet	<p>Joshua Arreak, Mayor *F. Tester, Technical Advisor</p>
Mittimatalik Hunters and Trappers Organization	<p>*E. Murphy, Legal Counsel *J. Zyla, Legal Counsel E. Ootoovak, Chair A. Hanson-Main, Technical Advisor *V. Vergera, Technical Advisor *V. L'Hereault, Technical Advisor</p>
Igloolik Working Group	<p>M. Recinos, Technical Advisor P. Ivalu, Chair J. Quassa, Group Member</p>
Hamlet of Sanirajak	<p>J. Audlakiak, Mayor L. Primeau, Senior Administrative Officer</p>

Sanirajak Hunters and Trappers Association	Micheal Ferguson, Technical Advisor
Hamlet of Arctic Bay	L. Idlout, Technical Advisor
Ikajutit Hunters and Trappers Association	L. Idlout, Technical Advisor
Hamlet of Clyde River	J. Natanine, Mayor *W. Bernauer, Technical Advisor *G. Hostetler, Technical Advisor
Nangmoutaq Hunters and Trappers Association	Phillip Sangoya, Board Member
Amaruq Hunters and Trappers Association	M. Mike, Technical Advisor J. Kakee, Board Member
Government of Nunavut	E. Stockley, Legal Counsel N. O'Grady, Avatiliriniq Coordinator J. Onalik, Associate Deputy Minister A. Robinson, Manager, Land Use and Environmental Assessment S. Atkinson, Wildlife Consultant J. Ringrose, Qikiqtani Regional Biologist *G. Karlik, <i>Acting</i> Assistant Deputy Minister
Crown-Indigenous Relations and Northern Affairs Canada	*M. Hopkins, Director General *K. Pawley, Manager, Environmental Assessment, Land Use Planning & Conservation *A. Vigna, Environmental Policy Analyst S. Dewar, Director, Resource Management *A. Roy, Environmental Assessment Coordinator *M. Staniewski, Environmental Policy Analyst *K. Henricksen, Regional Director General *F. Ngwa, Manager, Impact Assessment *D. Abernethy, Regional Socio-economic Analyst *J. Walsh, Senior Environmental Policy Analyst
Northern Projects Management Office	L. Dyer, Regional Director *S. Qazi, Senior Project Manager A. Shafi, Project Manager

	<ul style="list-style-type: none"> *S. Hitchcox, Project Manager *B. Tracz, Senior Project Manager
Department of Justice	S. Gruda-Dolbec, Legal Counsel, Department of Justice
Fisheries and Oceans Canada:	<ul style="list-style-type: none"> *T. Hoggarth, Regional Director *A. Beattie, Team Lead *A. Sorckoff, Biologist *G. Bernard-Lecaille, Senior Biologist *M. Marcoux, Research Scientist and Marine Mammal Specialist *K. Howland, Research Scientist and Invasive Species Specialist *P. Smith, Regional Senior Fisheries Management Officer *S. McLennan, Senior Policy Advisor *T. Seal, Junior Project Officer
Environment and Climate Change Canada	<ul style="list-style-type: none"> *A. Graham, Environmental Assessment Coordinator *M. Fairbairn, <i>Acting</i>, Regional Director *A. Wilson, Expert Support *R. Ejeckam, Expert Support *B. Asher, Environmental Assessment Coordinator *C. Kabanguka, Environmental Emergencies Program Officer *K. Patel, Wildlife Expert *M. Tobin, Expert Support *R. Holt, Energy and Technology Directorate *J. Dufour, Lead Wildlife Expert
Health Canada	<ul style="list-style-type: none"> *M. Gale, <i>Acting</i>, Regional Manager Environmental Health Program *W. Wilson, Environmental Assessment Coordinator *K. Buset, Impact Assessment Program Manager *T. Nguyen, Indigenous Engagement Specialist *N. Lyrette, Senior environmental health specialist
Natural Resources Canada:	<ul style="list-style-type: none"> *P. Unger, Team Leader *R. Johnstone, Deputy Director

Parks Canada	<ul style="list-style-type: none"> *A. Stoddart, Environmental Assessment Specialist *J. Bastick, Environmental Assessment Specialist *J. Boon, Nunavut Field Unit Superintendent J. Chisholm, Ecologist Team Leader L. Jonart, Nunavut Field Manager for Tallurutiup National Marine Conservation Area A. Maher, Resource Conservation Manager
Transport Canada	<ul style="list-style-type: none"> *A. Gudmunson, Regional Manager Environmental Services *J. Johar, Manager Marine Safety and Security *J. Cram, Manager Rail Safety Engineering *J. Barker, Environmental Advisor *M. O'Soup-Bushie, Major Resource Development Projects & Aboriginal Consultations *K. Klarenbach, Project Development
Nunavut Independent Television Network	<ul style="list-style-type: none"> *L. Lipsett, Technical Advisor Z. Kunuk, Founder and Director *L. Tulugarjuk, Executive Director *I. Gilles, Advisor
Oceans North	<ul style="list-style-type: none"> *C. Debicki, Vice President Policy Development and Counsel *A. Joynt, Senior Policy Advisor *G. Macdonald, Arctic Research Specialist *J. Jones, Scripps Institute
World Wildlife Fund	<ul style="list-style-type: none"> *A. Dumbrille, Senior Specialist Sustainable Shipping P. Okalik, Senior Advisor Arctic Conservation *B. Laforest, Senior Specialist Arctic Species and Ecosystems E. Keenan, Manager, Arctic Marine Conservation
<i>Nominated Representatives</i>	<i>Community</i>
Pond Inlet	<ul style="list-style-type: none"> J. Idlout, Hamlet M. Koonark, Hamlet I. Inuarak, Hunters and Trappers Organization J. Allooloo, Elder C. Sangoya, Elder E. Pitseolak, Women S. Nutarak, Women

Igloolik	M. Iqqaqsaq, Youth
Sanirajak	J. Kaernerik, Hamlet P. Nagmalik, Hunters and Trappers Association D. Nasook, Youth E. Irqittuq, Elder M. Kuppaq Women,
Arctic Bay	M. Koonoo, Hunters and Trappers Association G. Ejangiag, Hamlet E. Qaqqasiq-Taqtu. Youth S. Qaunaq, Women
Clyde River	S. Aipellee, Hunters and Trappers Association O. Audlakiak, Women J. Angutikjuaq, Elder J. Palituq, Youth
Grise Fiord	L. Audlaluk, Hunters and Trappers Association
Resolute Bay	J. Amagoalik, Hunters and Trappers Association M. Amarualik, Hamlet

NOVEMBER 1-6, 2021 PUBLIC HEARING SESSION

Project Proponent:	Baffinland Iron Mines Corporation 2275 Upper Middle Road East, Suite 300 Oakville, Ontario, Canada L6H 0C3
Date Updated Project Description of the Proposal Received:	October 3, 2018
Positive Conformity Determination Received from the Nunavut Planning Commission:	May 29, 2018
Dates of Hearings:	Day 1: November 1, 2021, Iqaluit & Pond inlet, NU Day 2: November 2, 2021, Iqaluit & Pond inlet, NU Day 3: November 3, 2021, Iqaluit & Pond inlet, NU Day 4: November 4, 2021, Iqaluit & Pond inlet, NU Day 5: November 5, 2021, Iqaluit & Pond inlet, NU Day 6: November 6, 2021, Iqaluit & Pond inlet, NU *Indicates Remote Participation
Panel Members Present:	K. Kaluraq, Chairperson M. Qumuatuq, Board Member C. Emrick, Board Member
NIRB Staff:	K. Costello, Executive Director T. Arko, Director, Technical Services* C. Barker, Technical Advisor II G. Daoust Technical Advisor I M. Ings, Director, Finance and Administration
NIRB Legal Counsel:	T. Meadows, Meadows Law
Interpreters:	V. Dewar R. Katsak L. Janes J. Tucktoo, NIRB
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Audio/Visual Technician:	C. Burroughs, Duoson Multimedia R. Poulin, Duoson Multimedia M. Cummings, Duoson Multimedia D. Ayala, Duoson Multimedia
<i>Parties:</i>	
<i>Proponent:</i>	
Baffinland Iron Mines Corporation	C. Kowbel, Legal Counsel B. Armstrong, Legal Counsel *L. Duke, Legal Counsel *J. Andrews, Legal Counsel *N. Saunders, Legal Counsel B. Penney, President, Chief Executive Officer M. Lord-Hoyle, Vice President, Sustainable Development L. Kamermans, Senior Director, Sustainable Development J. Tigullaraq, Head of Northern Affairs A. Moore, Manager, Government and Public Affairs U. Hanson, Vice President, Community and Strategic Development *E. Malcolm, <i>Acting</i> Manager, Environmental, Social & Governance *C. Devereaux, Environmental Superintendent *K. Button, Environmental Superintendent *K. Johnson, Environmental Assessment Specialist M. Clark, Manager, Recruitment & Inuit Success Assurance *G. Goruk, Director, Sales & Shipping *T. Sewell, Senior Director, Health, Safety, Environment, Security & Training *S. Borcsok, Approvals Manager *T. Peter, Executive Administration Officer Manager *S. Douville, Advisor *M. Anderson, Senior Director, Financial Planning & Analysis *G. Morinville, Manager, Environmental Social & Governance C. Merkosak, IIBA Employment & Training Specialist P. Quassa, Senior Advisor *P. Osborne, Golder Associates Ltd. *P. Rouget, Golder Associates Ltd. *P. Abgrall, Golder Associated Ltd. *B. Wheeler, Golder Associates Ltd *M. Austin, JASCO Research Ltd. *C. Moore, Intrinsik

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<i>Intervenors:</i>	

Qikiqtani Inuit Association:	<p>*L. Land, Legal Counsel O. Akasuk, President L. Barnabas, Mary River Project Portfolio Lead J. Ottenhof, Director Qikiqtani Nunalirijikkut J. Kunuk, Chief Negotiator R. Paton, Director IQ & Engagement S.W. Bathory, Special Advisor *A. MacDonald, Firelight Research Group *S. Leech, Firelight Research Group *B. Stewart, Arctic Biological Consultants *J. Higdon, Higdon Wildlife Consulting *J. Ash, Arktis Solutions *J. Groves, Executive Director *M. Hemp, Assistant Executive Director, Infrastructure and Development *R. Stevenson, Assistant Executive Director *R. D’Orazio, Assistant Executive Director, Operations and Benefits *S. Foulds, General Counsel</p>
Nunavut Tunngavik Incorporated	<p>*A. Yuan, Legal Counsel C. Gillis, Director P. Irngaut, Director J. Eetoolook, Vice President *D. Lee, Wildlife Biologist D. Kunuk, Chief Operating Officer C. Lyall, Executive Assistant to the Vice President</p>
Hamlet of Pond Inlet	<p>Joshua Arreak, Mayor *F. Tester, Technical Advisor</p>
Mittimatalik Hunters and Trappers Organization	<p>*E. Murphy, Legal Counsel E. Ootoovak, Chair *A. Hanson-Main, Technical Advisor *V. Vergera, Technical Advisor *V. L’Hereault, Technical Advisor</p>
Igloolik Working Group	<p>*M. Recinos, Technical Advisor P. Ivalu, Chair *J. Quassa, Group Member</p>
Igloolik Hunters and Trappers Association	<p>Micheal Ferguson, Technical Advisor</p>

Hamlet of Sanirajak	J. Audlakiak, Mayor L. Primeau, Senior Administrative Officer
Sanirajak Hunters and Trappers Association	Micheal Ferguson, Technical Advisor
Hamlet of Arctic Bay	
Ikajutit Hunters and Trappers Association	O. Egeesiak, Technical Advisor Q. Robinson, Legal Counsel
Hamlet of Clyde River	J. Natanine, Mayor *W. Bernauer, Technical Advisor
Nangmoutaq Hunters and Trappers Association	*G. Hostetler, Technical Advisor *L. Tanguay, Technical Advisor
Amaruq Hunters and Trappers Association	M. Mike, Technical Advisor J. Kakee, Board Member
Government of Nunavut	N. O'Grady, Manager Environmental Assessment & Regulation S. Chari, Legal Counsel J. Onalik, Deputy Minister *J. Noble, Deputy Minister *A. Cyr-Parent, <i>Acting</i> Director, Minerals and Petroleum Resources *S. Atkinson, Wildlife Consultant *K. Sameer, Project Manager Impact Assessment G. Karlik, Assistant Deputy Minister D. Haney, Project Manager Impact Assessment
Crown-Indigenous Relations and Northern Affairs Canada	K. Pawley, Manager, Environmental Assessment, Land Use Planning & Conservation *A. Vigna, Environmental Policy Analyst S. Dewar, Director, Resource Management *A. Chaikine, Senior Environmental Assessment Specialist *C. Rose, Environmental Policy Analyst *M. Staniewski, Environmental Policy Analyst *K. Henricksen, Regional Director General *H. Baba, Consultant *J. Ankersmit, Director General

	<ul style="list-style-type: none"> *F. Ngwa, Manager, Impact Assessment *D. Abernethy, Regional Socio-economic Analyst *J. Walsh, Senior Environmental Policy Analyst *N. Pfeiffer-Major, Junior Policy Analyst *R. Bingley, Environmental Assessment Coordinator
Northern Projects Management Office	<ul style="list-style-type: none"> Lisa Dyer, Regional Director *T. Simmons, Senior Project Manager A. Paradis, Senior Project Manager A. Shafi, Project Manager *N. D'Souza, Project Manage Officer *B. Tracz, Consultation Manager
Department of Justice	S. Gruda-Dolbec, Legal Counsel, Department of Justice
Fisheries and Oceans Canada:	<ul style="list-style-type: none"> *T. Hoggarth, Regional Director *A. Beattie, Team Lead *A. Sorckoff, Biologist *G. Bernard-Lecaille, Senior Biologist *M. Marcoux, Research Scientist and Marine Mammal Specialist *K. Howland, Research Scientist and Invasive Species Specialist *P. Smith, Regional Senior Fisheries Management Officer *S. Mclennan, Senior Policy Advisor *T. Seal, Junior Project Officer *N. Pashkoski, Project Analyst
Environment and Climate Change Canada	<ul style="list-style-type: none"> *M. Pinto, Environmental Assessment Coordinator *A. Wilson, Expert Support *R. Ejeckam, Expert Support *J. Small, <i>Acting</i>, Head-Environmental Assessment North *B. Asher, Senior Policy Advisor *C. Kabanguka, Environmental Emergencies Program Officer *K. Patel, Wildlife Expert *R. Holt, Energy and Technology Directorate *J. Dufour, Lead Wildlife Expert
Health Canada	<ul style="list-style-type: none"> *M. Gale, <i>Acting</i>, Impact Assessment Specialist *W. Wilson, Environmental Assessment Coordinator *E. Kalcsics, Public Engagement Specialist *J. Anderson, Impact Assessment Specialist

	<p>*P. Partridge, <i>Acting</i> Regional Manager *N. Lyrette, Senior Environmental Health Specialist</p>
Natural Resources Canada:	<p>*P. Unger, Team Leader *R. Johnstone, Deputy Director</p>
Parks Canada	<p>*A. Stoddart, Environmental Assessment Specialist *J. Bastick, Environmental Assessment Specialist *J. Boon, Nunavut Field Unit Superintendent J. Chisholm, Ecologist Team Leader L. Jonart, Nunavut Field Manager for Tallurutiup National Marine Conservation Area *A. Maher, Resource Conservation Manager *J. Hoffman, Marine Ecologist Team Leader Tallurutiup Imanga National Marine Conservation Area</p>
Transport Canada	<p>*J. Johar, Manager Marine Safety and Security *J. Cram, Manager Rail Safety Engineering *J. Barker, Environmental Advisor *M. O'Soup-Bushie, Major Resource Development Projects & Aboriginal Consultations *K. Klarenbach, Project Development</p>
Nunavut Independent Television Network	<p>*L. Lipsett, Technical Advisor *Z. Kunuk, Founder and Director *M. Malliki L. Tulugarjuk, Executive Director I. Gilles, Advisor</p>
Oceans North	<p>C. Debicki, Vice President Policy Development and Counsel A. Joynt, Senior Policy Advisor *K. Westdale, Arctic Field Research Director *G. Macdonald, Arctic Research Specialist J. Jones, Scripps Institute</p>
World Wildlife Fund	<p>*A. Dumbrille, Senior Specialist Sustainable Shipping P. Okalik, Senior Advisor Arctic Conservation *B. Laforest, Senior Specialist Arctic Species and Ecosystems E. Keenan, Manager, Arctic Marine Conservation</p>
<i>Nominated Representatives</i>	<i>Community</i>

Pond Inlet	J. Idlout, Hamlet M. Koonark, Hamlet I. Inuarak, Hunters and Trappers Organization S. Komangapik, Hunters and Trappers Organization C. Sangoya, Elder N. Kautuk, Women S. Nutarak, Youth
Igloodik	G. Morash, Hamlet
Sanirajak	J. Kaernerik, Hamlet P. Nagmalik, Hunters and Trappers Association K. Naulluq, Youth E. Irgittuq, Elder M. Kuppaq Women,
Arctic Bay	L. Kalluk, Elder M. Koonoo, Hunters and Trappers Association E. Qaqqasiq-Taqtu, Youth D. Oyukuluk, Women
Clyde River	A. Cormack, Hamlet S. Aipellee, Hunters and Trappers Association O. Audlakiak, Women J. Angutikjuaq, Elder J. Palituq, Youth
Grise Fiord	L. Nungaq, Women
Resolute Bay	A. Salluviniq, Elder R. Attagootak, Women

APPENDIX D LIST OF COMPLETED COMMITMENTS MADE BY BAFFINLAND

APPENDIX B - FINAL TABLE OF COMPLETED COMMITMENTS

APPENDIX B: FINAL TABLE OF COMPLETED COMMITMENTS

ID#	FWS ID#	Intervener	Topic	Review Phase	Commitment	Current Status	Notes
226	NEW	QIA	Marine Environment	5 - Public Hearing 2021	Baffinland commits to providing Passive Acoustic Monitoring Results from fall 2019 and early-summer 2020, at the latest, 30 days from the release of the NIRBs Recommendation Report to the Minister.	Complete	Provided in 2020 PAM Report
212	NEW	MHTO QIA	Atmospheric Environment	5 - Public Hearing 2021	Baffinland continues to implement dust mitigation solutions at the Milne Port ore stockpiles and has retained a third party consultant to further review the effectiveness of the DusTreat application. Through this investigation and consultation with the QIA and MHTO alternatives to the current mitigation measures will be evaluated as contingency. As this work is ongoing for the current operation Baffinland proposes to host a workshop with interested parties in Q2 2021.	NA	Replaced by commitments 230 and 232
211	QIA-01 QIA-02	QIA	Terrestrial Environment	5 - Public Hearing 2021	Baffinland commits to working with the TEWG and the Inuit Committee to update the Caribou Protection Measures for the Mary River Project within 6 months post-PC. Baffinland commits to funding a caribou-focused IQ study with the HTOs and QIA with 6 months post-PC. The IQ study will be scoped to ensure that it builds upon existing well-documented IQ, and includes verification of this information with Inuit knowledge holders. The results of this study will be used by QIA, the HTOs, the Inuit Committee and Baffinland to further update the Caribou Protection Measures, develop a Caribou Protection Map and project protection zones, and inform monitoring, mitigations and thresholds established through the Inuit Committee and the TEWG.	NA	Replaced by commitment 223
185	DFO-3.6.4 DFO-3.6.6	DFO	Marine Environment	3 - September 2020 - Technical Meetings	Baffinland and DFO will provide an update on DFO Comment 3.6.4 and 3.6.6 following bilateral discussions	Complete	See DFO 3.6 series of commitments
183	HPI	HPI	Corporate Environment	3 - September 2020 - Technical Meetings	Baffinland will provide a list of participants to each Hamlet and HTO from the North Baffin impacted communities who were present in the North Baffin community meetings reported in the February 2020 community update submission to the NIRB.	Complete	Provided in community engagement update
182	MHTO	MHTO	Marine Environment	3 - September 2020 - Technical Meetings	Baffinland will look into the feasibility of installing acoustic monitoring equipment at the floe edge.	Complete	Recorder Installed in Fall 2021, will record through Fall 2021 and Spring 2022 shoulder seasons
181	GN-TRC24	GN	Marine Environment	3 - September 2020 - Technical Meetings	Baffinland will support a revised Term and Condition 103 that reflects and incorporates the commitment made in relation to GN-TRC24. This commitment will be reflected in an updated commitment list. "Baffinland will provide maps with its Annual Reports that illustrate tracks taken by each Project-related ship within the RSA and Baffin Bay, relative to recorded ice coverage. (3) Every 3 years Baffinland will conduct an analysis of ship tracks through Baffin Bay in relation to sea ice to assess the extent of Project shipping's interaction with sea ice in Baffin Bay. Results to be reported in the Annual Report." (June commitment from Baffinland) (GN comment TRC 24)	Replaced	Replaced by updated commitment, line 210
180	QIA-08	QIA	Socio-economic Environment	3 - September 2020 - Technical Meetings	Baffinland and the QIA will work to provide more details on the CRLU Risk Community strategy (QIA 08), including a review of the commitment wording to ensure that it is clear that Baffinland will be working with Inuit on the development of this strategy.	Complete	Term and Condition Proposed in revised draft PC005
179	GN-TRC24	GN	Marine Environment	3 - September 2020 - Technical Meetings	Baffinland is committed to preparing a memo which includes a fuel spill risk assessment on polar bears, consistent with the risk assessment framework applied in Section 10 of the Phase 2 Addendum.	Complete	Submitted Oct 16, 2020
175	MHTO	MHTO	Corporate Environment	3 - September 2020 - Technical Meetings	For the duration of the Phase 2 Review Baffinland will prepare and provide public records of all engagement and consultation meetings with MHTO, which include the number of people in attendance, a record of questions comments and concerns raised, as well as copy of any materials provided by Baffinland or other parties as applicable.	Complete	Ongoing for the Community Engagement Updates Provided prior to each review milestone
174	MHTO	MHTO	Marine Environment	3 - September 2020 - Technical Meetings	Baffinland commits to reviewing proposed ecological triggers from the MHTO for the fall season if they can provide dates and supporting and verified IQ.	Complete	Ecological triggers and rationale by MHTO not supplied.
173	GNDFO	GN	Corporate Environment	3 - September 2020 - Technical Meetings	Baffinland will provide a technical memo providing additional details on Operational Flexibility.	Complete	Submitted Sept 30, 2020
172	MHTO	MHTO	Freshwater Environment	3 - September 2020 - Technical Meetings	Baffinland commits to work with the MHTO to achieve the objective of PC Term and Condition 48(a)	Complete	Initiative under existing Project; MHTO supported 2021 Program
171	MHTO	MHTO	Terrestrial Environment	3 - September 2020 - Technical Meetings	Baffinland will meet with the MHTO to discuss their specific objectives with respect to local caribou monitoring programs	Complete	Meeting minutes submitted as part of community engagement updates
169	MHTO-4a	MHTO	Marine Environment	3 - September 2020 - Technical Meetings	Baffinland commits to working with MHTO to better understand any issues relating to sea ice use between October 15 and October 31.	Complete	Meeting minutes submitted as part of community engagement updates

APPENDIX B: FINAL TABLE OF COMPLETED COMMITMENTS

ID#	FWS ID#	Intervener	Topic	Review Phase	Commitment	Current Status	Notes
166	HPI	HPI	Corporate Environment	3 - September 2020 - Technical Meetings	Baffinland commits to provide the January EA Workshop to each Hamlet and HTO from the North Baffin communities who participated in, with the caveat that this summary report will be unverified by participants.	Complete	Submitted Oct 16, 2020
165	QIA-01 QIA-02	QIA	Terrestrial Environment	3 - September 2020 - Technical Meetings	Baffinland commits to compile all commitments related to caribou in a single document for review by relevant parties	Complete	This has been achieved through reorganization of this commitment list
164	QIA-01 DFO-3.4 NEW PCA-02 WWF-FWS-03	QIA	Terrestrial Environment Marine Environment	3 - September 2020 - Technical Meetings	Baffinland will provide an updated draft revised terms of references for the marine and terrestrial working groups, including notes provided by other parties, by October 16.	Complete	Submitted on or before October 16, 2020
158	QIA-02 GN-03	QIA	Terrestrial Environment	3 - September 2020 - Technical Meetings	Baffinland will provide the full cut and fill profile of the north rail in relation to the potential caribou movement corridors to the QIA and GN. The figures will be colour-coded to show cut and fill profiles categorized into <1 m, 1-2 m, and >2 m profiles.	Complete	Submitted on or before October 16, 2020
149	QIA-40	QIA	Atmospheric Environment	3 - September 2020 - Technical Meetings	Baffinland will provide an update on the development of the Climate Change Strategy 15 days prior to a Public Hearing. A full draft is expected by December 31, 2020 and a final copy by June 30, 2021. Baffinland will endeavor to meet the requested timeline, but this should not be viewed as a barrier to moving forward with a Public Hearing as this is an ongoing operational commitment.	NA	Replaced by Commitment Line 221
148	QIA-41	QIA	Freshwater Environment	3 - September 2020 - Technical Meetings	Baffinland is prepared to adopt a more precautionary moderate risk threshold for lake sedimentation. The current moderate risk threshold for lake sedimentation is 1 mm, adopted from the FEIS. Baffinland will adopt the lake sedimentation rate predicted in the FEIS of 0.54mm, which is about half the current threshold. A low risk threshold of 0.15 mm will also be applied that will trigger corresponding low risk response actions.	Replaced	Replaced by Commitment Line 200
147	QIA-42	QIA	Freshwater Environment	3 - September 2020 - Technical Meetings	The commitment made under QIA 42 will be amended to reflect the following: Metrics on fish health (fish presence, catch per unit effort, fish length and fork length) are collected from 60 crossing sites along the Tote Road and reported annually to DFO, as well as in the Annual Report for Operations to the QIA and NWB, as well as the Annual Report for the NIRB. Baffinland already monitors water quality and sediment quality as part of the Tote Road Monitoring Program, and we commit to add observations regarding physical condition of fish (e.g., lesions, injuries). Baffinland and QIA will determine an appropriate approach to analysis for the 2021 reporting period.	Replaced	Replaced by Commitment Line 201
146	QIA-42	QIA	Freshwater Environment	3 - September 2020 - Technical Meetings	Baffinland commits to coordinating freshwater focused workshops to address specific freshwater issues. Baffinland does not support the implementation of a regular occurring freshwater working group.	Replaced	Replaced by Commitment Line 202
141	QIA-51	QIA	Marine Environment	3 - September 2020 - Technical Meetings	Baffinland commits to provide a supplementary submission that documents actual vessel noise signatures as recorded during PAM, a comparison with the modelled noise outputs used in the assessment, and a discussion on how any differences, if they exist, affect the impact assessment or inform opportunities for mitigation and adaptive management. Baffinland notes that QIA has requested the details to be shared prior to a Public Hearing. Baffinland will endeavor to meet the requested timeline, but this should not be viewed as a barrier to moving forward with a Public Hearing.	Complete	Submitted with 2020 PAM Report
140	WWF	WWF	Marine Environment	3 - September 2020 - Technical Meetings	WWF has proposed Baffinland restrict the dumping from ore carriers of treated and untreated sewage and greywater in the RSA and restricting the use of open loop scrubbers. Baffinland is evaluating the feasibility of this proposal for Phase 2 and will provide an update prior to a Public Hearing.	Complete	See Commitment Line 235
120	DFO 3.4.1 NEW	DFO	Marine Environment	02 - February 2020 - Response to Updated Technical Comments	DFO and BIM are still working to update commitment wording from 3.4.1. DFO does not currently agree with the wording provided for 3.4.1. DFO continues to request that a specific monitoring plan for icebreaking/shoulder season be developed and will continue to work with BIM to find agreed upon wording for DFO 3.4.1 NEW. Baffinland has provided a draft Marine Monitoring Plan (MMP) as part of the Phase 2 review process. Should Phase 2 be approved, Baffinland will update this Plan to reflect all relevant commitments and terms and conditions.	Replaced	Replaced by new commitments to DFO 3.4 series
119	DFO 3.4.1 NEW	DFO	Marine Environment	02 - February 2020 - Response to Updated Technical Comments	Rather than develop a separate, stand alone monitoring plan specific to icebreaking as suggested by DFO, Baffinland will include a specific section relevant to icebreaking and shoulder season shipping activities in the MMP. Survey methodology and indicators (including rationale) will be determined in consultation with the MEWG, of which DFO is a member. Recommendations from MEWG members will be treated consistent with the consensus based decision requirements of the final updated MEWG Terms of Reference.	Replaced	Replaced by new commitments to DFO 3.4 series
118	DFO 3.4.1 NEW	DFO	Marine Environment	02 - February 2020 - Response to Updated Technical Comments	An updated draft MMP will be provided to the MEWG for comment and the NIRB within 180 days of issuance of an amended Project Certificate, should Phase 2 be approved. Baffinland commits to continue working with DFO and the MEWG to finalize the Plan.	Replaced	Replaced by new commitments to DFO 3.4 series

APPENDIX B: FINAL TABLE OF COMPLETED COMMITMENTS

ID#	FWS ID#	Intervener	Topic	Review Phase	Commitment	Current Status	Notes
117	DFO 3.4.3 NEW	DFO	Marine Environment	02 - February 2020 - Response to Updated Technical Comments	Baffinland commits to produce a response plan for the potential event of an ice entrapment, should this be observed during the annual end of season clearance surveys. This plan will include action level triggers and associated response actions. This plan will be developed in consultation with the MHTO and DFO, understanding that these two groups are ultimately responsible for determining the appropriate course of action should an entrapment event occur.	Replaced	Replaced by new commitments to DFO 3.4 series
116	DFO 3.5 NEW	DFO	Marine Environment	02 - February 2020 - Response to Updated Technical Comments	Baffinland will prepare and submit to DFO a literature review of ship-based marine mammal remote monitoring systems. This literature review will include a summary of commercially available remote wildlife monitoring systems that could be installed on vessels to supplement existing marine mammal monitoring programs and enhance detection of ship strikes on marine mammals. The remote monitoring systems identified in this literature review will inform adaptive management, should the need be triggered. For clarity, in the event of a ship strike on a marine mammal, a single event, although unlikely based on present mitigations (i.e. speed restrictions), would trigger an adaptive management response.	Complete	Replaced by new commitment to DFO 3.5
112	DFO 3.6.2 NEW	DFO	Marine Environment	02 - February 2020 - Response to Updated Technical Comments	Baffinland commits to record the Milne Port anchorage and associated coordinates where compliance testing and discharge occurs in the ballast water testing forms, completed by Baffinland's environmental monitors. A dataset with discharge coordinates will be provided to MEWG members as part of annual reporting requirements.	Replaced	Replaced by new commitment wording incorporating input from QIA
111	DFO 3.6.3 NEW	DFO	Marine Environment	02 - February 2020 - Response to Updated Technical Comments	Baffinland will require all vessels calling on Milne Port that treat their ballast under the D2 Standard to also perform a ballast water exchange prior to treatment. For ships unable to conduct exchange as specified in Canadian Ballast Water Regulations (e.g. ships on Canadian domestic trips), exchange is to be conducted as specified in revised ABWEZs for Eastern Arctic as per DFO CSAS advice (see DFO 2015, Stewart et al. 2015 and Goldsmit et al. 2019). This updated commitment will be reflected in the 2020 Standing Instructions to Masters.	Replaced	Replaced by new commitment wording incorporating input from QIA
110	DFO 3.6.4 NEW	DFO	Marine Environment	02 - February 2020 - Response to Updated Technical Comments	Baffinland will consider discontinuing exchange plus treatment requirements should treatment systems efficacy reach a point that makes the benefits of an exchange plus treatment system negligible. This decision will be made in consultation with TC and DFO, and will be based on a consideration of factors outlined in DFO 2019 (i.e. if ballast water organism concentration or composition, environmental conditions, shipping patterns, proportion of voyages meeting the D-2 standard, or available data describing these conditions change in the future, and updates to global research on ballast systems). In this event Baffinland will update ballast water dispersion modelling to more accurately reflect the spectrum of salinity, temperature, and discharge volumes that can be expected to be discharged at Milne Port under Phase 2 operations if prior exchange were to be discontinued.	Replaced	Replaced by new commitment wording incorporating input from QIA
108	DFO 3.6.6 NEW	DFO	Marine Environment	02 - February 2020 - Response to Updated Technical Comments	Baffinland remains committed to conducting ship hull biofouling monitoring surveys using an ROV on ore carriers, with focused efforts on areas of the hull and niche areas where biofouling has the greatest potential to occur (e.g. chain lockers, stern tube, rope guard, bottom, rubber side, etc.). The projected number of ore carriers that will be sampled annually will be determined in consultation with the MEWG, of which DFO is a member. Recommendations from MEWG members will be treated consistent with the consensus based decision requirements of the final updated MEWG Terms of Reference.	NA	Replaced by new series of commitments to DFO
107	DFO 3.6.7 NEW	DFO	Marine Environment	02 - February 2020 - Response to Updated Technical Comments	Baffinland commits to updating the marine monitoring plan (MMP) in consultation with MEWG members and this will be completed prior to the start of the Phase 2 increased shipping season. The updated MMP will detail the revised MEEMP sampling design which includes greater seasonal and spatial coverage and increased sampling effort and sample sizes to address DFO concerns related to achieving sufficient statistical power for detection of project effects (≥ 0.8) (as per recommendations in DFO 2020, pages 4-7). <u>Background</u>The Aquatic Invasive Species (AIS) Monitoring Program is a biological screening program (species ID, presence/absence data); as such, it does not involve any statistical analysis. The updated MMP will include clear protocols for determining identity and status of species collected as part of this program (as per recommendations in DFO 2019 and DFO 2020 and comments on disposition table provided in June (DFO 3.8.1) and November (DFO 3.10.4). The sampling effort for the AIS Monitoring Program is currently very rigorous.	NA	Replaced by new commitment wording incorporating input from QIA
106	DFO 3.6.8 NEW	DFO	Marine Environment	02 - February 2020 - Response to Updated Technical Comments	Baffinland continues to maintain that the identification of high-risk biological species or groupings of species of concern is the primary responsibility of DFO. Despite this, Baffinland is committed to supporting the development of a trigger list of species and associated response plans through the process outlined in response to DFO 3.6.9 and 3.6.10, and to refining that list with DFO following Phase 2 approval.	NA	Replaced by new commitment wording incorporating input from QIA
101	ECCC-1 NEW ECCC-FC4	ECCC	Atmospheric Environment	02 - February 2020 - Response to Updated Technical Comments	Baffinland commits to investigate and implement black carbon reduction measures, where feasible, and provide a preliminary mitigation measure feasibility assessment 30 days prior to a Public Hearing, and a follow up report in the 2020 Annual Report (which wouldn't be until 2021). The feasibility assessment will consider the use of distillate fuels as a reduction measure for local black carbon emissions.	Complete	Submitted on or before October 16, 2020

APPENDIX B: FINAL TABLE OF COMPLETED COMMITMENTS

ID#	FWS ID#	Intervener	Topic	Review Phase	Commitment	Current Status	Notes
98	DFO 3.10.2 TC-02	DFO 3.10.2 TC	Marine Environment	01 - November 2019 - Public Hearing	Baffinland will revise the Ballast Water Management Plan to include a requirement for all vessels to conduct ballast water exchanges (with or without D2 treatment systems) prior to calling on Milne Port, until such a time that ballast water treatment systems are compliant with the D2 standards set by the IMO. Should Baffinland wish to discontinue the practice of exchange plus treatment, Baffinland will provide updated ballast water modelling that reflects the range of salinity that may be present in the ballast water tanks where no exchange occurs.	Replaced	Replaced by DFO 3.6 NEW Commitments
97	DFO 3.10.5	DFO	Marine Environment	01 - November 2019 - Public Hearing	Baffinland will update the AIS monitoring program to describe the process it follows for identifying high-risk biological species discovered through its sampling programs.	Replaced	Replaced by DFO 3.6 NEW Commitments
96	DFO 3.10.6	DFO	Marine Environment	01 - November 2019 - Public Hearing	Baffinland will work with DFO to develop a management and response approach in the event a non-indigenous species is identified during monitoring. This response approach will be added as an attachment to the AIS monitoring program.	Replaced	Replaced by DFO 3.6 NEW Commitments
90	DFO 3.5.4	DFO	Marine Environment	01 - November 2019 - Public Hearing	Baffinland is not proposing to ship during sensitive lifecycle periods for seal, which typically occur in the months between March and May. No additional mitigation measure is necessary for the current Shoulder Season Shipping Guide.	Complete	Baffinland has not changed the scope of proposed shipping to overlap sensitive lifecycle periods and the review is now complete
85	DFO 3.7.4	DFO	Marine Environment	01 - November 2019 - Public Hearing	An analyses will be conducted using data collected during the 2019 shipping season to characterize the degree of conservatism in the sound propagation modelling that has been conducted. Additional AMARs have been deployed and will collect data during the Fall 2019 and Spring 2020 seasons to further this analysis. See response to DFO 3.8.4 for commitment to long term acoustic monitoring.	Complete	Submitted with 2020 PAM program report
83	DFO 3.9.1	DFO	Marine Environment	01 - November 2019 - Public Hearing	Baffinland will implement an incidental marine mammal monitoring program with vessel operators calling on Milne Port, which will request incidental observations of marine mammals to be recorded and relayed to Baffinland. In support of this program, Baffinland will develop educational materials for vessel crew to assist in marine mammal identification and data recording. Baffinland will provide a draft of the materials and program for review by the MEWG before they are finalized.	Replaced	Replaced by Commitment in Line 115
82	DFO 3.10.3, DFO 3.10.4, TC-02, QIA-45, DFO-3.10.4, QIA-44	DFO	Marine Environment	01 - November 2019 - Public Hearing	Baffinland will implement a pilot ballast water biological monitoring program for ships calling on Milne Port. This program will be designed to reflect a more appropriately scoped form of a ballast water sampling protocol provided by DFO to Baffinland in 2017. This program will include sampling from one ballast tank on a total of five vessels per shipping season. Baffinland remains committed to continue conducting temperature and salinity test sampling of one randomly selected ballast water tank for all vessels calling to Milne Port, and biological sampling in the marine receiving environment to monitor for non-native species in Milne Port and at Ragged Island.	Replaced	Replaced by DFO 3.6 NEW Commitments
72	ECCC-FC4	ECCC	Marine Environment	01 - November 2019 - Public Hearing	Baffinland commits to investigate and implement black carbon reduction measures, where feasible, and report on this in the 2020 annual air quality report (to be submitted by March 31, 2021). The investigation will consider the use of distillate fuels as a reduction measure for local black carbon emissions.	Replaced	Replaced by ECCC-01 NEW Commitment
71	ECCC-FC-5	ECCC	Marine Environment	01 - November 2019 - Public Hearing	Baffinland remains committed to updating the Phase 1 Waste Rock Management Plan and evaluating the appropriateness of the 0.2% cutoff for PAG classification, irrespective of the Phase 2 approvals process.	Complete	Updated Phase 2 WRMP submitted in 2021
54	HPI	HPI	Socio-economic Environment	01 - November 2019 - Public Hearing	To further Baffinland's goal of meaningful consultation and engagement it has committed to the development of community-specific engagement guidelines. The development of these guidelines will serve to improve the two-way dialogue between the Company and Inuit.	Repeat	Same commitment as line 47
52	HPI	HPI	Socio-economic Environment	01 - November 2019 - Public Hearing	Pending approval of the Phase 2 Proposal, Baffinland has committed to provide \$1.2 million/year to each of the five North Baffin communities for the life of the mine (\$6 million/year total). These amounts are intended to support socio-economic opportunities, cultural opportunities, and hunter support opportunities.	NA	Replaced by ICA Commitments
49	HPI-11	HPI	Socio-economic Environment	01 - November 2019 - Public Hearing	Baffinland commits to working with the Hamlet of Mittimatalik: - to establish community-specific engagement guidelines, and - to ensure the active participation and representation of Mittimatalik on the Inuit Advisory Panel.	NA	Replaced by ICA Commitments
44	MHTO-5c	MHTO	Marine Environment	01 - November 2019 - Public Hearing	Baffinland is not proposing any additional shipping routes under the Phase 2 Proposal. This includes the use of Navy Board Inlet and the Northwest Passage.	Complete	No additional routes proposed
35	QIA-01, QIA-03, QIA-05, QIA-08, QIA-10, QIA-11	QIA	Socio-economic Environment	01 - November 2019 - Public Hearing	Baffinland and QIA will jointly develop a culturally appropriate component of the Culture, Resources and Land Use ("CRLU") monitoring program that addresses harvest surveys. Adaptive management measures will be informed by the results of the surveys and the CRLU monitoring program. This development will be completed within 12 months of the issuance of the amendment to the Project Certificate implementing Baffinland's Phase 2 proposal to align with the development and implementation of the CRLU monitoring program.	NA	Replaced by ICA Commitments

APPENDIX B: FINAL TABLE OF COMPLETED COMMITMENTS

ID#	FWS ID#	Intervener	Topic	Review Phase	Commitment	Current Status	Notes
34	QIA-01 QIA-02	QIA	Terrestrial Environment	01 - November 2019 - Public Hearing	Baffinland will continue to comply with the existing QIA caribou protection measures and will work with relevant IPG's as well as the TEWG and Inuit Advisors to develop a Caribou Protection Map and project protection zones, if and where appropriate to enhance caribou protection. Development of any Caribou Protection Map or project protection zones will take into account all relevant available IQ and scientific information, including results of an IQ study of caribou use with HTOs and QIA to be carried out through the CRLU Monitoring Program;	NA	Replaced by updated commitment, line 211
31	QIA-03	QIA	Socio-economic Environment	01 - November 2019 - Public Hearing	<ul style="list-style-type: none"> - Baffinland will carry out engagement with the 5 North Baffin communities during 2020 in order to identify, together with Inuit and in consultation with QIA, the specific metrics that Inuit identify should be monitored as part of the CRLU program, and to identify, together with Inuit and in consultation with QIA, thresholds for change that should trigger adaptive management by the company. - Baffinland would report on changes and trends in monitoring, based on previous reports. Baffinland will consider adaptive management actions and consult with the community on the best path forward in relation to any changes to CRLU identified through the CRLU monitoring program. For clarity, Baffinland would not only consider adaptive management in the event that effects exceed the FEIS addendum estimations but instead would have regard to triggers for action identified through consultation with the community. 	NA	Replaced by ICA Commitments
29	QIA-07	QIA	Socio-economic Environment	01 - November 2019 - Public Hearing	<p>Baffinland commits to integrating IQ into the objectives of its terrestrial and marine environmental management plans. Reporting will focus on the topics as outlined in the QIA's original technical comment:</p> <ol style="list-style-type: none"> 1. Show respect to animals; 2. Leave animals alone unless hunting them; 3. Animals are to be used, not wasted; 4. Each animal has its own habitat; and 5. Protect animal habitat. 	NA	Replaced by ICA Commitments
28	QIA-08	QIA	Socio-economic Environment	01 - November 2019 - Public Hearing	Baffinland commits to develop a risk communication strategy focused on gathering and dissemination of information to Inuit related to the Baffinland Iron Ore Mines Project, and linkages between the Project and human health and ecological risk assessment topics. The strategy will focus on building capacity within community groups to understand the mining process, elements of the mining process and how substances produced from the mining process move in the environment.	NA	BIM and QIA to determine integration with Inuit Stewardship Plan
27	QIA-21	QIA	Freshwater Environment	01 - November 2019 - Public Hearing	Implementation of the Water Compensation Agreement, particularly with respect to the integration of IQ, will require a collaborative effort between Baffinland and the QIA to which Baffinland remains fully committed. As a Water Compensation Agreement is required under Section 62 of the Nunavut Waters and Surface Rights Tribunal Act and Article 20 (Part 3) of the Nunavut Land Claims Agreement, Baffinland maintains that a process to establish compensation in respect of Inuit Water Rights exists and will be adhered to outside of the Project Certificate amendment process.	NA	Replaced by ICA Commitments
21	QIA-38	QIA	Socio-economic Environment	01 - November 2019 - Public Hearing	Baffinland commits to the development of socio-economic monitoring thresholds and actions, in consultation with the Mary River Socio-Economic Monitoring Working Group (SEMWG). Once finalized, these will be reflected in an updated Socio-Economic Monitoring Plan.	NA	Replaced by ICA Commitments
17	QIA-45	QIA	Marine Environment	01 - November 2019 - Public Hearing	Baffinland has committed to implementing a pilot ballast water biological monitoring program for ships currently only subject to the D1 standard (open water exchange). This program has been designed to reflect a more appropriately scoped form of a ballast water sampling protocol provided by DFO to Baffinland in 2017 and will include sampling from one ballast tank on a total of five vessels per shipping season. Baffinland remains committed to continue conducting temperature and salinity test sampling of one randomly selected ballast water tank for all vessels calling to Milne Port, and biological sampling in the marine receiving environment to monitor for non-native species in Milne Port and at Ragged Island.	NA	Replaced by DFO 3.6 NEW Commitments
10	TC-02 DFO 3.6.5	TC	Marine Environment	01 - November 2019 - Public Hearing	Transport Canada appreciates the efforts by BIM to ensure current regulations are followed with respect to their plans for ballast water management. Given the learning curve associated with use of ballast water treatment systems, for Phase 2, Transport Canada (TC) in consultation with Fisheries and Oceans Canada (DFO), recommends, in conjunction with present sampling and testing protocols being proposed/adopted [NTD - will be summarized in complete package] by BIM, that BIM implement a ballast water compliance sampling plan based on a risk based targeting methodology to be developed in consultation with DFO and TC. Such a risk based methodology should be applied to evaluate the risk of all vessel ballast water management (D1, D2) with subsequent salinity and D-2 biological compliance sampling conducted on vessels identified as high or very high risk. The respective risk based methodology and associated ballast water compliance sampling plan will be developed in consultation with DFO and TC following completion of DFO's Project specific sampling conducted on a subset of vessels calling to Milne Port. The risk based methodology and associated ballast water compliance sampling plan should include a consideration of other compliance initiatives or research being undertaken elsewhere by TC relative to implementation of the D-2 standard. Sampling conducted that supports building a body of knowledge for D-2 treatment systems, beyond biological compliance sampling conducted on high risk and very high risk tanks, should not compromise Baffinland's ability to transport annual ore quantities as approved under a modified Project Certificate No 005. Understanding that the rationale for this program is tied to a learning curve associated with the use of ballast water treatment systems, the compliance sampling program and risk based methodology will be adapted as deemed necessary based on the results of the program	Replaced	Replaced by Commitment in Line 109

APPENDIX E LIST OF COMMITMENTS MADE BY BAFFINLAND (TO BE COMPLETED FOLLOWING APPROVAL OF PHASE 2)

APPENDIX C - FINAL TABLE OF POST PHASE 2 APPROVAL/REGULATORY PHASE COMMITMENTS

APPENDIX C: FINAL TABLE OF POST PHASE 2 APPROVAL/REGULATORY PHASE COMMITMENTS

ID#	FWS ID#	Intervener	Topic	Review Phase	Commitment	Current Status	Notes
258	NEW	Hamlet of Pond Inlet	Socio-Economic Environment	10 – Post Public Hearing	Baffinland will work with the QIA to ensure the Hamlet of Pond Inlet is prioritized under Article 23.4 when surplus equipment and machinery becomes available.	NA	This commitment will be implemented post PC approval
257	NEW	Hamlet of Pond Inlet	Socio-Economic Environment	10 – Post Public Hearing	To further support hunters Baffinland will provide funding for the purchase of a dedicated hunting vessel in Pond Inlet, not to exceed \$500k.	NA	This commitment will be implemented post PC approval
256	NEW	Hamlet of Pond Inlet	Socio-Economic Environment	10 – Post Public Hearing	To manage dust created from conventional road building, Baffinland will continue to support Cypher Environmental in their contributions to the Hamlet of Pond Inlet of their trademark product DustBlok to reduce dust coming from community roads.	NA	This commitment will be implemented post PC approval
255	NEW	Hamlet of Pond Inlet	Socio-Economic Environment	10 – Post Public Hearing	Baffinland will work with the Hamlet of Pond Inlet to prepare applications for the GN's community roads program. If applications are denied, or insufficient to cover the full costs of planning, design, and construction, Baffinland will pay the difference. This will be a 5-year agreement to improve road infrastructure in Pond Inlet.	NA	This commitment will be implemented post PC approval
254	NEW	Hamlet of Pond Inlet	Socio-Economic Environment	10 – Post Public Hearing	Baffinland will also support the Hamlet of Pond Inlet with a direct contribution toward an upgrade or construction of a Health Center in Pond Inlet. Baffinland commits to a \$5M donation toward this cause should approvals through Federal and Territorial Governments grant approve such a project.	NA	This commitment will be implemented post PC approval
253	NEW	Hamlet of Pond Inlet	Socio-Economic Environment	10 – Post Public Hearing	Baffinland proposes to commit the funds necessary to build the Fire Hall proposed in the Hamlet of Pond Inlet's Integrated Community Sustainability Plan (ICSP) for the 2021/2022 year.	NA	This commitment will be implemented post PC approval
252	NEW	Hamlet of Pond Inlet	Socio-Economic Environment	10 – Post Public Hearing	Baffinland will make additional payments to the Tasiuqtiit Working Group, or another group as created or directed by the Hamlet of Pond Inlet, for each loaded ore car delivered to Milne Port, valued at up to \$2 million per year (\$16.67/car)	NA	This commitment will be implemented post PC approval
251	NEW	QIA	Freshwater Environment	9 - Public Hearing (November 2021)	Include Tuggat, Qurluktuk and Ikaluit river systems in its Arctic Char Health Monitoring Program, carried out pursuant to PC005 Term and Condition 48(a). Baffinland may alter or add to this list of water bodies in the future based on consultation with Pond Inlet.	NA	This commitment will be implemented post PC approval
250	NEW	DFO	Marine Environment	9 - Public Hearing (November 2021)	Work with DFO to ensure future aerial surveys are carried out based on the most advanced methodologies, and that where practicable, these improvements yield results that can be compared against previous years data.	NA	This commitment will be implemented post PC approval
249	NEW	MHTO	Marine Environment	8 - Public Hearing (April 2021)	Baffinland will include body condition, or an equivalent indicator, in its marine monitoring program. For clarity, this is not a commitment to use body condition as an Early Warning Indicator or other adaptive management threshold.	NA	This commitment will be implemented post PC approval
248	NEW	Hamlet of Clyde River	Marine Environment	8 - Public Hearing (April 2021)	Commit to more regular updates of working groups meeting minutes, presentations, etc.	NA	This commitment will be implemented post PC approval
247	NEW	Hamlet of Pond Inlet	Socio-economic Environment	7 - Community Engagements	Baffinland will start an Arctic Char monitoring program in Navy Board should Phase 2 be approved	NA	This commitment will be implemented post PC approval
246	NEW	Hamlet of Pond Inlet	Socio-economic Environment	7 - Community Engagements	Baffinland will provide an additional \$10,000 per ore carrier required to transport up to 4.2 MT to the Tasiuqtiit Working Group annually. This payment per ship will be indexed against the consumer price all items index for Iqaluit (not seasonally adjusted). Under Phase 2, this total could reach as high as \$1,680,000 per year. These funds may be used by the Working Group to harvest and supply country food to residents of the community as agreed by the MHTO and Hamlet.	NA	This commitment will be implemented post PC approval
245	NEW	5 North Baffin Communities	Socio-economic Environment	7 - Community Engagements	Baffinland will commit to the creation of 27 new positions in each impacted community (Arctic Bay, Clyde River, Igloolik, Pond Inlet, and Sanirajak). There will be 20 positions within a community-based training program as well as 7 community-based positions, including a Baffinland Community Liaison Officer (BCLO), Inuit Qaujimatuaqangit Advisor, Community Resource Coordinator, Inuit Success Team Advisor, Community Counselor, Trainer and Office Manager. Pond Inlet will have two additional positions, including a second BCLO and a Community Monitoring Coordinator.	NA	This commitment will be implemented post PC approval
244	NEW	5 North Baffin Communities	Socio-economic Environment	7 - Community Engagements	A community garage pilot project will be established to provide opportunities for apprentice mechanics and high school co-op students to further develop their skills while filling a critical services gap that exist in the community for vehicle maintenance. The pilot project will be constructed in Sanirajak, with garages or equivalent projects constructed in Arctic Bay, Clyde River, Igloolik and Pond Inlet following the completion of the pilot project.	NA	This commitment will be implemented post PC approval
243	NEW	5 North Baffin Communities	Socio-economic Environment	7 - Community Engagements	Baffinland will construct and operate a Baffinland office centre in each community. Each office centre will have Baffinland office space, a training room, engagement walls to share Project updates and information, a medical examination room, country food kitchen and an Elders room. Office centres will be constructed in Arctic Bay, Clyde River, Igloolik, Pond Inlet, and Sanirajak.	NA	This commitment will be implemented post PC approval
242	NEW	5 North Baffin Communities	Marine Environment	7 - Community Engagements	Baffinland will not transition from approximately 84 to 168 vessels in a single season, instead, Baffinland commits to a gradual ramp-up to full shipping capacity, adding approximately 21 ore carriers per year starting in year 1 after Phase 2 Approval; additional ore carrier transits during the construction period will be simulated (i.e. will be loaded with ore, but will not be used to ship more ore than can be hauled via the Tote Road (6Mt))	NA	This commitment will be implemented post PC approval
241	NEW	5 North Baffin Communities	Marine Environment	7 - Community Engagements	Baffinland will reduce the maximum number of ore carriers from 176 to 168 that can come to Milne Port in a single year	NA	This commitment will be implemented post PC approval
240	NEW	5 North Baffin Communities	Marine Environment	7 - Community Engagements	Baffinland will develop of a protocol to be followed when sea-ice is being used in Pond Inlet in the spring even when all of the Baffinland conditions for start of the shipping season have been met	NA	This commitment will be implemented post PC approval
239	NEW	5 North Baffin Communities	Marine Environment	7 - Community Engagements	Baffinland has committed to reduce the proposed shipping season to be more in-line with the current project: 1. Baffinland will not start shipping before July 15 2. Baffinland will plan to close the shipping season at October 31 (only limited ice conditions and consultation with Pond Inlet may extend this to November 15) (previously committed under row #214)	NA	This commitment will be implemented post PC approval

APPENDIX C: FINAL TABLE OF POST PHASE 2 APPROVAL/REGULATORY PHASE COMMITMENTS

ID#	FWS ID#	Intervener	Topic	Review Phase	Commitment	Current Status	Notes
238	NEW	5 North Baffin Communities	Terrestrial Environment	7 - Community Engagements	To facilitate caribou monitoring and other Inuit driven research along the North Railway, three observation stations, that will double as emergency shelters, will be constructed at locations to be determined with relevant parties. (24 new positions to be held by Inuit will be created to staff the observation stations)	NA	This commitment will be implemented post PC approval
237	NEW	QIA	Terrestrial Environment	6 - Response to Additional Questions	Baffinland is committed to installing outward facing video cameras mounted on the ore haul trains to record the presence of caribou and to record a caribou mortality incident. Video footage of a caribou mortality and photographs from the incident scene will be assessed as part of Baffinland's incident investigation process. Baffinland will report the incident to the QIA, the Hunters and Trappers Organization, and the Department of Environment for the Government of Nunavut following the currently established steps detailed in Baffinland's Reporting Procedure for Wildlife Incidents.	NA	This commitment will be implemented post PC approval
236	NEW	QIA	Terrestrial Environment	6 - Response to Additional Questions	Baffinland is committed to modifying the railway over time to include greater lengths at 1:3, as necessary. The drivers of these extensions will include the results of regional monitoring programs led by the Government of Nunavut, local programs led by Baffinland and/or QIA (through the CRLU monitoring program), and the lived experience of Inuit that travel the area and observe caribou interacting with the railway. Baffinland, working with Inuit and the TEWG will develop a Caribou Crossing Construction Decision Matrix to define the exact process that will be used to make additional modifications to the railway for the purpose of caribou crossings. This would be similar to the Additional Level Crossing Construction Decision Matrix submitted in October 2019, describing the process to add additional land use crossings.	NA	This commitment will be implemented post PC approval
235	ECCC-1 NEW ECCC-FC4 WWF-FWS-06 WWF-FWS-08	ECCC WWF	Atmospheric Environment	6 - Response to Additional Questions	Should Phase 2 be approved, Baffinland will require directly chartered ore carriers, through its contracts, to use lighter distillate fuels (MGO or equivalent) within the northern marine Regional Study Area, which shares a border with the Nunavut Settlement Area (NSA). Baffinland notes that scrubbers are not required when lighter distillates are used.	NA	This commitment will be implemented post PC approval
234	NEW	QIA	Atmospheric Environment	6 - Response to Additional Questions	Baffinland will develop and fund a Community Based Monitoring (CBM) program out of Pond Inlet that is Inuit led to monitor the extent of visual dust in the Project Area as well as a snow sampling program. The CBM program could include a combination of snow coring and visual observation collection, as well as geochemical and satellite imagery analysis. Baffinland has already commenced with a pilot program that included snow sampling at multiple locations in and around the Milne Port development area, and compared the metals concentrations against Health Canada established drinking water and aesthetic guidelines. A final report on this pilot program will be shared in an information package on dust Baffinland is preparing to submit with its response to questions through the Phase 2 review. The final report will include a next steps section specific to establishing the community based component of this program, to be funded and administered by Baffinland until QIA is prepared to take over the program under the Inuit Stewardship Plan.	NA	This commitment will be implemented post PC approval
233	NEW	QIA	Atmospheric Environment	6 - Response to Additional Questions	Baffinland will increase the number of dust collectors across the Project. Similar to the process for locating the 6 additional dust collectors along the Tote Road in 2018 as part of the Production Increase Proposal, Baffinland will look to work with QIA and representatives from the community of Pond Inlet to determine the best locations to place additional dust collectors across the mine site, including around the quarry, ship loader and port activities at Milne Port. These stations could be established this Spring and contribute to the comprehensive audit of dust sources across the Project.	NA	This commitment will be implemented post PC approval
232	NEW	QIA	Atmospheric Environment	6 - Response to Additional Questions	Baffinland will implement additional mitigations at Milne Port if DusTreat (stockpile spray) does not appear to reduce fugitive dust in 2021. Performance monitoring of DusTreat applications will be evaluated using data obtained from existing dustfall monitoring programs and remote sensing of dust deposition using available satellite imagery. Should monitoring indicate that DusTreat has not been effective in reducing dust around Milne Port, Baffinland will work with QIA to investigate and agree to additional mitigation measures. These may include, but are not limited to: <ul style="list-style-type: none"> • Modifications to the application process for DusTreat; • Evaluation and implementation of alternative spray technologies/products; • Installation of wind fencing around the Milne Port stockpiles; and • Stockpile covers (tarp like product). Additional mitigations for dust at Milne Port will be provided to QIA by mid-March as part of the adaptive management update to the Air Quality and Noise Abatement Management Plan, a plan selected by QIA for approval as part of the Inuit Certainty Agreement. The comprehensive audit to be initiated this year will likely add to the potential mitigations to include in our base operating plans as well as our adaptive management plans.	NA	This commitment will be implemented post PC approval
231	NEW	QIA	Atmospheric Environment	6 - Response to Additional Questions	Baffinland will consider covering open boxes of haul trucks and/or rail cars, and enclosing the Mine Site crushers as part of the independent audit. Should the intended dust audit indicate that covering the open boxes of ore haul trucks and/or rail cars, or enclosing the primary crushing facility at the Mine Site would lead to meaningful reductions in dust, they will be implemented. Should the outcome of the audit not require the pre-emptive application of these mitigations, they will be integrated into Baffinland's Adaptive Management Plan as response to passing moderate or high level thresholds, as agreed to with the QIA, and by extension the Inuit Committee.	NA	This commitment will be implemented post PC approval

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230	NEW	QIA	Atmospheric Environment	6 - Response to Additional Questions	Baffinland will fund an independent audit of all present and future (Phase 2) dust sources across the Project to ensure the proper dust controls are in place. This will include an evaluation of existing and proposed dust controls for the purpose of identifying where improvements or additional measures are required. To ensure the audit fully considers the knowledge and concerns of Inuit, and that Baffinland is accountable for implementing the recommendations that follow from the audit, Baffinland will seek to establish a joint Project Charter with the QIA and designated representatives from the impacted communities. The project charter will outline the audit goals, roles and responsibilities, approach to the use of IQ, major milestones, timelines, risks, etc. Any onsite inspections by the auditors will be attended by designated community representatives to provide their insights at each audit location.	NA	This commitment will be implemented post PC approval
229	NEW	QIA	Socio-Economic Environment	6 - Response to Additional Questions	Baffinland will work with QIA and the impacted communities to develop a final IQ Management Framework, subject to co-approval of QIA and the impacted communities. If the communities agree, their approval could be facilitated through the Inuit Committee for the Mary River Project.	NA	This commitment will be implemented post PC approval
228	NEW	QIA	Marine Environment	5 - Public Hearing 2021	Baffinland commits to a retrospective analysis of the behavioural responses of narwhal to vessels travelling both southbound and northbound, and integrating this analysis in future monitoring	NA	This commitment will be implemented post PC approval
227	NEW	QIA	Marine Environment	5 - Public Hearing 2021	Baffinland commits to investigating additional mitigation measures with respect to the Botnica and Sara Desgagne.	NA	This commitment will be implemented post PC approval
225	NEW	QIA	Marine Environment	5 - Public Hearing 2021	Baffinland commits to developing a ringed seal monitoring plan that incorporates Inuit perspectives into the design, planning and implementation phases. Additionally, Baffinland commits to including Inuit OITRs for ringed seal, which will include low, moderate and high risk thresholds and responses into the Adaptive Management Plan for the Marine Monitoring Plan.	NA	This commitment will be implemented post PC approval
224	NEW	QIA	Marine Environment	5 - Public Hearing 2021	Baffinland commits to reporting on observed behavioural responses of ringed seal collected through the Ship-Based Observer Monitoring Program during the shoulder seasons.	NA	This commitment will be implemented post PC approval
223	QIA-01 QIA-02	QIA	Terrestrial Environment	5 - Public Hearing 2021	Baffinland commits to working with the TEWG and the Inuit Committee to update the Caribou Protection Measures in the Terrestrial Environment Mitigation and Management Plan (TEMMP) for the Mary River Project within 6 months of the issuance of an amended Project Certificate 005. Baffinland commits to funding a caribou-focused IQ study with invite to the HTOs and supported by the QIA within 6 months of the issuance of an amended Project Certificate 005. These timelines are contingent on the QIA forming the Inuit Committee at least 6 months' prior the date of agreement. The IQ study will be scoped to ensure that it builds upon existing well-documented IQ, and includes verification of this information with Inuit knowledge holders. The results of this study will be used by QIA, the HTOs, the Inuit Committee and Baffinland to further update the Caribou Protection Measures, develop a Caribou Protection Map and project protection zones, and inform monitoring, mitigations and thresholds established through the Inuit Committee and the TEWG.	NA	This commitment will be implemented post PC approval
222	QIA-01 QIA-02	QIA	Terrestrial Environment	5 - Public Hearing 2021	Baffinland is committed to coming to agreement on railway monitoring. A multi-dimensional approach to monitoring is proposed which would involve Inuit staff working under the Inuit Stewardship Plan monitoring according to Inuit interests as informed by the Inuit Committee, and, QIA technical staff. Baffinland commits to coming to agreement on a railway monitoring plan within 6 months of the issuance of an amended Project Certificate 005. This timeline is contingent on the QIA forming the Inuit Committee at least 6 months' prior the date of agreement.	NA	This commitment will be implemented post PC approval
221	QIA-40	QIA	Atmospheric Environment	5 - Public Hearing 2021	Baffinland will provide a Climate Change Strategy within 30 days of the issuance of a positive NIRB Recommendation	NA	This commitment will be implemented post PC approval
220	GN-02	GN	Terrestrial Environment	5 - Public Hearing 2021	Baffinland will work with the TEWG and Inuit Committee to develop a preliminary threshold for caribou group size that would trigger the temporary suspension of road and/or rail traffic. The threshold will be based on monitoring outcomes, operating experience, community input, and further discussion with the TEWG and Inuit Committee.	NA	This commitment will be implemented post PC approval
219	DFO 3.4.4 NEW (7)	DFO	Marine Environment	5 - Public Hearing 2021	Baffinland commits to collect acoustic data near the floe edge during the 2021/2022 shipping season. Baffinland will collaborate with Inuit and DFO on the development of the draft program following the process as outlined in DFO 3.3.3 (NEW).	NA	This commitment will be implemented post PC approval
218	DFO 3.4.4 NEW (6)	DFO	Marine Environment	5 - Public Hearing 2021	Host dedicated workshops throughout 2021 to identify, develop and review objectives, indicators, thresholds and responses to be applied in Baffinland's adaptive management of project activities in the marine environment, including icebreaking. Baffinland and the MEWG will review these objectives, indicators, thresholds and responses bi-annually to determine if they are still sufficient, or if more suitable measures may exist (as supported by literature, Project monitoring, updated national or international guidelines, and/or measures applied for similar projects, if relevant to Project conditions). This includes working with the MEWG to improve the existing monitoring and reporting for the Early Warning Indicator(s); and working with the MEWG to review and ensure that existing EWIs are effective and select new or additional EWIs, where needed. If and when they are available, DFO will provide the MEWG with indicators and values used by DFO for the purposes of stock assessment and management of narwhal or other marine mammals. Monitoring methodologies for the selected indicators will be informed by DFO and Inuit in advance of submission to the MEWG. These recommendations and the implementation of monitoring will begin no later than the 2022 shipping season.	NA	This commitment will be implemented post PC approval Note that reference to implementation in 2021 and/or 2022 was made prior to regulatory delays; implementation should occur in first year following approval.
217	DFO 3.4.4 NEW (5)	DFO	Marine Environment	5 - Public Hearing 2021	Conduct monitoring using remote technology during ice breaking and shoulder season shipping activities, as a component of DFO 3.5 NEW, to detect and monitor ship strikes and sea ice.	NA	This commitment will be implemented post PC approval

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216	DFO 3.4.4 NEW (4)	DFO	Marine Environment	5 - Public Hearing 2021	Provide, in a report: <ul style="list-style-type: none"> Confirm whether icebreaker vessels were used in spring and fall shoulder season transits; Baffinland will provide daily ice conditions for days icebreakers were used; and Updated noise exposure calculations for a half-transit vs full-transit scenario for the shoulder seasons once acoustic monitoring from the 2019 shoulder seasons has been processed. Based on DFO's review of information provided in point 4, if DFO determines that use of half-transit scenario exceeds established thresholds for duration of exposure to noise disturbance for marine mammals, then Baffinland will not operationalize the use of half-transits in either or both seasons. 	NA	This commitment will be implemented post PC approval
215	DFO 3.4.4 NEW (3)	DFO	Marine Environment	5 - Public Hearing 2021	Beginning in 2021, apply the following transit restriction mitigations in the fall: <ul style="list-style-type: none"> When a continuous sailing route of open water and/or new ice (<10cm) occurs between the entrance of Pond Inlet and Milne Port, then icebreaker transits and other unescorted vessels in the RSA may proceed under open-water operating conditions. A maximum of two transits or four half transits will occur per day (24-h period) where grey ice (10-15cm) cannot be avoided along the shipping route. No breaking of landfast ice along the shipping route. For the purpose of this commitment, the following terms are defined as: <ul style="list-style-type: none"> Open-water: <ol style="list-style-type: none"> for the commencement of annual shipping season: for the purposes of the project, this is uninterrupted transits through ice concentration of 3/10 or less. For the close of the annual shipping season: for the purposes of the project, this is uninterrupted transits through new ice depths of less than 10 cm. Half-transit: the equivalent of half or less of the distance between Milne Port to the eastern edge of the RSA (73 W longitude). 	NA	This commitment will be implemented post PC approval Note that reference to implementation in 2021 and/or 2022 was made prior to regulatory delays; implementation should occur in first year following approval.
214	DFO 3.4.4 NEW (2)	DFO	Marine Environment	5 - Public Hearing 2021	Plan to complete shipping by no later than October 31st of any given year. On an exceptional basis, Baffinland may ship up until November 15th, provided a complete and operational adaptive management plan is in place.	NA	This commitment will be implemented post PC approval
213	DFO 3.4.4 NEW (1)	DFO	Marine Environment	5 - Public Hearing 2021	Apply spring transit restriction mitigations described in the Assessment of Icebreaking Activities as long as ice concentrations, as defined by the Canadian Ice Service, of greater than 3/10 persist along the Northern Shipping Route, or meet the obligations of applicable commitments to others if more conservative, to determine the earliest date for commencing the shipping season. Initiation of this commitment will begin in 2021.	NA	This commitment will be implemented post PC approval
210	GN-TRC24	GN	Marine Environment	5 - Public Hearing 2021	Section 10.3.2 of the Spill at Sea Response Plan will be updated to reflect a requirement for coordination with the Government of Nunavut's Department of Environment and Emergency Management Office in the mobilization of emergency wildlife teams for the purpose of preventing wildlife contamination. Special consideration will be given to polar bear deterrence, which could be facilitated by helicopter or emergency response vessels. The feasibility of implementing catch and relocation as a deterrence for polar bear will be coordinated with the Department of Environment based on the circumstances of the spill.	NA	This commitment will be implemented post PC approval
209	DFO 3.6.8 NEWQIA-43QIA-44QIA-45	DFOQIA	Marine Environment	4 - Post September 2020 Technical Meetings	Updated commitment wording in relation to DFO 3.6.8 NEW: Baffinland continues to maintain that the identification of high-risk biological species or groupings of species of concern is the primary responsibility of DFO. Despite this, Baffinland is committed to supporting the development of a trigger list of high biological risk species or groupings of species of concern and associated response plans through the process outlined in response to DFO 3.6.9 and DFO 3.6.10 and to refining that list with DFO on an ongoing basis starting in 2021.	NA	This commitment will be implemented post PC approval
208	DFO 3.6.7 NEW QIA-43 QIA-44 QIA-45	DFO QIA	Marine Environment	4 - Post September 2020 Technical Meetings	Updated commitment wording in relation to DFO 3.6.7 NEW: Baffinland commits to updating the marine monitoring plan (MMP) in consultation with MEWG members and this will be completed prior to the start of the 2022 shipping season and prior to any Phase 2 shipping. The updated MMP will detail the revised MEEMP sampling design which includes greater seasonal and spatial coverage and increased sampling effort and sample sizes to address DFO concerns related to achieving sufficient statistical power for detection of project effects (≥ 0.8 , as per recommendations in DFO 2020, pages 4-7). The updated MMP will include clear protocols for determining identity and status of species collected as part of this program.	NA	This commitment will be implemented post PC approval Note that reference to implementation in 2021 and/or 2022 was made prior to regulatory delays; implementation should occur in first year following approval.
207	QIA-43 QIA-44 QIA-45	QIA	Marine Environment	4 - Post September 2020 Technical Meetings	The risk-based methodology and associated ballast water compliance sampling plan to be developed in relation to DFO-3.6.5 will include a component for the monitoring of contaminants from each port and treatment type to assess potential chemical risks (e.g., from foreign ports or treatment residuals). Further risk-based assessment of contaminants will be conducted, using methodology and approaches developed in relation to DFO 3.6.5, in the event project vessels switch from exchange plus treatment to just treatment of ballast water.	NA	This commitment will be implemented post PC approval

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206	DFO 3.6.4 NEW QIA-43 QIA-44 QIA-45	DFO QIA	Marine Environment	4 - Post September 2020 Technical Meetings	Updated commitment wording in relation to DFO 3.6.4 NEW: Baffinland will consider discontinuing exchange plus treatment requirements should treatment systems efficacy reach a point that makes the benefits of an exchange plus treatment system negligible. This decision will be made in consultation with TC and DFO and will be based on a consideration of factors outlined in DFO 2019 (i.e. if ballast water organism concentration or composition, environmental conditions, shipping patterns, proportion of voyages meeting the D-2 standard, or available data describing these conditions changes in the future, and updates to global research on ballast systems). In this event Baffinland will update ballast water dispersion modelling to more accurately reflect the spectrum of salinity, temperature, and discharge volumes that can be expected to be discharged at Milne Port under Phase 2 operations if prior exchange were to be discontinued. Baffinland will conduct a risk-based assessment of contaminants that could be released into Milne Inlet in the event project ore vessels switch from exchange plus treatment to just treatment of their ballast water.	NA	This commitment will be implemented post PC approval
205	DFO 3.6.3 NEW QIA-44 QIA-45	DFO QIA	Marine Environment	4 - Post September 2020 Technical Meetings	Updated commitment wording in relation to DFO 3.6.3 NEW: Baffinland will require all vessels calling on Milne Port that treat their ballast under the D2 Standard to also perform a ballast water exchange prior to treatment. By 2024, for ore carriers originating from Canadian waters (i.e., domestic trips) Baffinland will only charter vessels equipped with treatment systems, and will require those vessels to treat their ballast under the D2 Standard and to also perform a ballast water exchange prior to treatment. For ships unable to conduct exchange as specified in Canadian Ballast Water Regulations (e.g. ships on Canadian domestic trips), exchange is to be conducted as specified in revised ABWEZs for Eastern Arctic as per DFO CSAS advice (see DFO 2015, Stewart et al. 2015 and Goldsmit et al. 2019). This updated commitment will be reflected in the 2021 Standing Instructions to Masters.	NA	This commitment will be implemented post PC approval
204	DFO 3.6.2 NEWQIA-43QIA- 44QIA-45	DFOQIA	Marine Environment	4 - Post September 2020 Technical Meetings	Updated commitment wording in relation to DFO 3.6.2 NEW: Baffinland commits to record the Milne Port anchorage and associated coordinates where compliance testing and discharge occurs in the ballast water testing forms, completed by Baffinland's environmental monitors. Baffinland will also report the duration and volume that occurs at each discharge point concurrent with biological testing that will be conducted to support the risk based methodology under DFO 3.6.5, and for one additional year following commissioning of the second ore dock, if required. A dataset with discharge coordinates and the durations and volumes of discharges at each discharge point will be provided to MEWG members as part of annual reporting.	NA	This commitment will be implemented post PC approval
203	DFO 3.6.1 NEW QIA-43 QIA-44 QIA-45	DFO QIA	Marine Environment	4 - Post September 2020 Technical Meetings	Updated commitment wording in relation to DFO 3.6.1 NEW: Project vessels are limited to releasing ballast water at one of the three anchorage locations at Milne Port, or while berthed at the ore dock. Further, prior to any ballast water discharge D-1 compliance testing must be completed. Instructions to not release ballast water prior to arrival at Milne Port and completion of ballast water testing is provided to all ship operators in Baffinland's Standing Instruction to Masters (SITM). This requirement will remain under Phase 2.	NA	This commitment will be implemented post PC approval
202	QIA-42	QIA	Freshwater Environment	4 - Post September 2020 Technical Meetings	In conjunction with project stakeholders, Baffinland will develop a Terms of Reference for a Freshwater Environment Working Group (FEWG). Respecting the heightened regulatory oversight in relation to the freshwater environment, the FEWG will meet on an as needed basis to discuss items to be agreed upon by members of the FEWG. In person meetings, if required, will be coordinated with the planning of Marine and Terrestrial Environment Working Group meetings, where possible.	NA	This commitment will be implemented post PC approval
201	QIA-42	QIA	Freshwater Environment	4 - Post September 2020 Technical Meetings	Baffinland collects and reports data on fish presence, catch per unit effort, and fork length from 30-60 crossing sites along the Tote Road annually. Baffinland commits to adding observations regarding physical condition of fish (e.g., lesions, injuries, activity level). Baffinland and QIA will determine an appropriate approach to analysis and development of a metric for monitoring fish health for the 2022 reporting period. The program will be evaluated every three (3) years to determine if monitoring locations may be reduced due to no observations of project related-impacts.	NA	This commitment will be implemented post PC approval Note that reference to implementation in 2021 and/or 2022 was made prior to regulatory delays; implementation should occur in first year following approval.
200	QIA-41	QIA	Freshwater Environment	4 - Post September 2020 Technical Meetings	Baffinland is prepared to adopt a more precautionary moderate risk threshold for lake sedimentation. The current moderate risk threshold for lake sedimentation is 1 mm, adopted from the FEIS. Baffinland will adopt the lake sedimentation rate predicted in the FEIS of 0.54mm, which is about half the current threshold, at the moderate risk level. Exceedance of the 0.54mm moderate risk level will trigger additional study to validate the thresholds relative to impacts on arctic char eggs. A low risk threshold of 0.15 mm will also be applied that will trigger corresponding low risk response actions. Data will be collected and reported in 2021 to characterize sediment grain size.	NA	This commitment will be implemented post PC approval Note that reference to implementation in 2021 and/or 2022 was made prior to regulatory delays; implementation should occur in first year following approval.

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199	PCA-03	PCA	Marine Environment	4 - Post September 2020 Technical Meetings	See Commitments to DFO 3.6.6 NEW	NA	This commitment will be implemented post PC approval
198	DFO 3.7 NEW	DFO	Marine Environment	4 - Post September 2020 Technical Meetings	Baffinland recognizes that DFO disagrees with the determinations of the Combined Effects Assessment located in Table 22 of Baffinland's Marine Mammal Monitoring Technical Memorandum updated in May 2020 (document # 1663724-186-TM-Rev2-38000). DFO is concerned that the combined effects assessment does not adequately consider uncertainty and potential interactions between combined effects, nor does it consider combined effects outside of the Regional Study Area. To account for residual uncertainty in the effects assessment, Baffinland has made several commitments related to the strengthening of monitoring programs, as well as the implementation of pilot projects to better detect and monitor effects of the project on the marine environment. Implementation of these commitments will be developed in collaboration with DFO, Inuit, and relevant organizations to ensure that all recommendations and concerns are addressed and accounted for. If results of the monitoring programs indicate that there are significant or meaningful impacts to the marine environment, Baffinland commits to undertake investigations to determine the cause of the impact, and will identify any mitigations or other adaptive management strategies to address the impact for review and recommendations by Inuit and the MEWG. Recommendations from MEWG members will be treated consistent with the decision-making requirements as outlined in the forthcoming updated MEWG Terms of Reference.	NA	This commitment will be implemented post PC approval
197	DFO 3.6.6 NEW	DFO	Marine Environment	4 - Post September 2020 Technical Meetings	BIM commits to ensuring that vessels arriving to Milne Port and Steensby Port are following IMO International Guidelines for Biofouling Management (and any associated updates to these Guidelines) by including adherence to these Guidelines as a requirement in vessel procurement contracts. <ul style="list-style-type: none"> Baffinland will include in its contracts with ship owners a requirement to follow IMO Guidelines for Biofouling Management Baffinland will require each vessel to maintain a Biofouling Management Plan and Biofouling Record Book consistent with Appendix 1 and 2 of the IMO Guidelines Baffinland will provide a copy of the management plans and record books for each vessel in its Annual Report to the MEWG. Initiation of this commitment will begin in 2021. 	NA	This commitment will be implemented post PC approval Note that reference to implementation in 2021 and/or 2022 was made prior to regulatory delays; implementation should occur in first year following approval.
196	DFO 3.6.6 NEW	DFO	Marine Environment	4 - Post September 2020 Technical Meetings	BIM will develop a robust monitoring program design with input from DFO and other relevant parties that describes its plan for conducting ROV surveys of vessels to evaluate the extent of biofouling on ship hulls arriving in Milne Port prior to the 2022 shipping season. The sampling design will include appropriate sampling effort (with respect to number of vessels and coverage of each vessel) to evaluate differences in extent of biofouling across vessels with different biofouling management measures and histories to provide data for risk assessments to guide future monitoring and management of high risk vessels. Targets for sampling efforts will be established in consultation with DFO and submitted for review and recommendations from Inuit and the MEWG. Recommendations from MEWG members will be treated consistent with the decision-making requirements as outlined in the forthcoming updated MEWG Terms of Reference. This monitoring program will also be applied to vessels calling at Steensby Port as soon as shipping commences for the southern route	NA	This commitment will be implemented post PC approval Note that reference to implementation in 2021 and/or 2022 was made prior to regulatory delays; implementation should occur in first year following approval.
195	DFO 3.6.6 NEW	DFO	Marine Environment	4 - Post September 2020 Technical Meetings	Based on new information gathered through vessel biofouling monitoring, a review of vessels Biofouling Management Plans and Record Books and, where known, a review of vessels sailing history relative to variables that could influence the extent of hull fouling and have already been well described in the literature (e.g., Coutts 1999; Coutts & Taylor 2004; Ruiz & Smith 2005), BIM will develop a risk assessment and establish a risk-based sampling plan to guide future monitoring and management of high risk vessels. This risk assessment and risk-based sampling plan will be developed in consultation with DFO, and submitted to the MEWG (of which DFO is a member) for review and recommendations. Recommendations from MEWG members will be treated consistent with the decision-making requirements as outlined in the forthcoming updated MEWG Terms of Reference	NA	This commitment will be implemented post PC approval

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194	DFO 3.6.6 NEW	DFO	Marine Environment	4 - Post September 2020 Technical Meetings	<p>Biological sampling (i.e., collection of genetic material, tissue samples, and/or whole organisms) of vessel biofouling would contribute to the identification and monitoring of aquatic invasive or non-indigenous species that have the potential to propagate in northern waters as a result of the Project's shipping activities. BIM will revisit the state of technology and methods used to assess and conduct biological sampling of vessel biofouling and submit a report, to the MEWG by the end of 2021, on options that exist to conduct this work. It is not expected that this report will consider diving as a means to conduct the biological sampling.</p> <ul style="list-style-type: none"> Once a feasible and safe technology or method has been determined with the MEWG, a pilot program will be run during the next shipping season to determine if it is suitable. If it is not, the report will be revisited and a new technology or method will be selected for another pilot program to be implemented during the next shipping season. Based on the results of the pilot program, it will be confirmed with the MEWG whether a technically and economically feasible technology or methods exist. If the MEWG agrees by consensus that the program stands to provide valuable data, BIM will update its MMP to include a biological sampling component for biofouling in advance of the next shipping season. The updated monitoring plan will be provided to the MEWG for review and comment before it is finalized. BIM will revise and update its risk assessment and risk-based sampling plan (see 3, above) once a robust set of biological data has been collected. This will be reviewed by the MEWG prior to the next shipping season. Recommendations from MEWG members will be treated consistent with the decision-making requirements as outlined in the forthcoming updated MEWG Terms of Reference. Any feasible technology or method for biological sampling applied at Milne Port will also be applied at Steensby Port. 	NA	<p>This commitment will be implemented post PC approval</p> <p>Note that reference to 2021 is not feasible given regulatory delays, should be moved to first year following approval.</p>
193	DFO 3.6.6 NEW	DFO	Marine Environment	4 - Post September 2020 Technical Meetings	<p>In the event that modifications to biofouling management practices are proposed, Baffinland will consult with DFO and other relevant parties to determine if updates to the risk assessment and risk-based sampling plan are required. Updates to the assessment and the sampling plan will be submitted to the MEWG for review and recommendations prior to implementation. Recommendations from MEWG members will be treated consistent with the decision-making requirements as outlined in the forthcoming updated MEWG Terms of Reference.</p>	NA	<p>This commitment will be implemented post PC approval</p>
192	DFO 3.5 NEW	DFO	Marine Environment	4 - Post September 2020 Technical Meetings	<p>Baffinland has indicated that it is only feasible to have Marine Wildlife Observer's present on the MSV Botnica. Noting that having MWO's present on ships may not be feasible at all times due to safety concerns, and that certain environmental conditions may limit visibility, Baffinland commits to develop a pilot project using remote technology to monitor for ship strikes along the shipping route within the Nunavut Settlement Area. The intent of the pilot project is to determine the efficacy of mitigation to prevent ship strikes and of monitoring to detect ship strikes and any near misses. To solicit early feedback from DFO in advance of developing and submitting the methodology and parameters for the monitoring program to the MEWG, DFO will provide reports from all comparable studies conducted by DFO 8 months in advance of the start of the program and will identify what aspects of these programs DFO is recommending Baffinland integrate into the program design. Where relevant, Baffinland will incorporate the guidance provided by DFO into the study design prior to distributing it to the MEWG for review. Methodology and parameters for the monitoring program will be submitted to the MEWG (of which DFO is a member) for review and recommendations. Recommendations from MEWG members will be treated consistent with the decision-making requirements as outlined in the forthcoming updated MEWG Terms of Reference. The monitoring program will run for three years, and will begin one year in advance of Phase 2 shipping operations, with a report submitted to DFO and MEWG members each year the program is implemented. The report will include the following information:</p> <ol style="list-style-type: none"> The number of hours and ships on which the program ran Types and size of vessels on which the program ran Timing during the shipping season when the program was run The number of vessels that were called to Milne Port relative to Project certificate limits If distance of animals to the vessels can be calculated, a discussion of relative CPAs. Relevant environmental conditions that may affect detection or increase potential likelihood of an encounter with marine mammals If the program is collecting information related to Project effects on the marine environment that is not otherwise being collected through other programs. Discussion of cost/value of the Project. <p>After the third year, Baffinland will submit an overview report on the program, to the MEWG for review. This report will document and discuss the benefits of the project and any challenges faced. If the pilot program confirms ship strikes and/or near misses are occurring the project will be extended and included as a component of the MMP, in consultation with the MEWG, of which DFO is a member. Otherwise, the program will be discontinued as a permanent component of the MMP based on the above listed factors, though the program may be implemented again periodically based on advice from the MEWG or Inuit.</p>	NA	<p>This commitment will be implemented post PC approval</p>

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191	DFO 3.4.3 NEW	DFO	Marine Environment	4 - Post September 2020 Technical Meetings	Baffinland commits to run an annual end of season clearance survey. The survey will occur within 7 days following the close of the shipping season. Determination on the need for the end of season surveys will be where ice conditions warrant the survey, and in collaboration with MHTO and DFO. Baffinland commits to provide GIS coordinates and a description of group size(s) of narwhal along the aerial survey tracks. In addition, Baffinland will document ice conditions along the aerial survey tracks in order to inform changes in ice conditions and/or areas of greater risk for entrapment. This data will be provided to DFO as part of the fall shoulder season shipping reports as committed to under DFO 3.2.1 (NEW). A reporting structure will be determined in collaboration with MHTO, DFO, and other relevant boards and organizations in the event an ice entrapment is observed during the annual end of season clearance survey, as will procedures for determining if the event is a natural or project-related event, and associated response actions. This reporting structure is essential to determine the best course of action should an ice entrapment occur. After five years of annual end of season clearance surveys once Phase 2 shipping is operational, Baffinland and DFO will collaborate to analyze the data acquired from these surveys to determine what has been learned about any potential ice entrapments, and if the annual surveys should continue to proceed.	NA	This commitment will be implemented post PC approval
190	DFO 3.4.2 NEW	DFO	Marine Environment	4 - Post September 2020 Technical Meetings	Baffinland recognizes that DFO disagrees with the certainty assigned to the potential for ice entrapments of marine mammals in the Phase 2 FEIS Addendum. To address DFO's concerns about uncertainty, Baffinland has committed to run annual end of season clearance surveys (DFO 3.6.2) and develop a response plan for the potential event of an ice entrapment (DFO 3.4.3 NEW).	NA	This commitment will be implemented post PC approval
189	DFO 3.4.1 NEW	DFO	Marine Environment	4 - Post September 2020 Technical Meetings	Baffinland commits to update the Marine Monitoring Plan (MMP) to include a specific section relevant to icebreaking and shoulder season shipping activities in advance of the 2021 shipping season. Through the ICA, Baffinland is also committed to the development initial Indicators for the MMP in collaboration with QIA by December 2020. These initial OITR's will then be subject to review by Inuit (through the Inuit Committee) and regulators (through the MEWG) before finalization (no later than August 30, 2021). In advance of the 2021 shipping season, BIM can also commit to providing an updated draft MMP that will include a placeholder for a dedicated section specific to icebreaking and shoulder season activities. A full update to the MMP will occur following receipt of a positive decision from the Minister. Updates to the MMP will be actively worked on with the MEWG in 2021 (following a decision). A final MMP would then be in place for the 2022 shipping season. Recommendations from MEWG members on survey methodologies and initial indicators will be treated consistent with the decision-making requirements as outlined in the forthcoming updated MEWG Terms of Reference.	NA	This commitment will be implemented post PC approval Note that reference to implementation in 2021 and/or 2022 was made prior to regulatory delays; implementation should occur in first year following approval.
188	CIRNAC-01 NEW	CIRNAC	Freshwater Environment	3 - September 2020 - Technical Meetings	CIRNAC requests that Baffinland commits to the providing the following information during the Water Licence Amendment process, subject to Nunavut Water Board requirements. i. Baffinland shall provide a heat balance and relationship of the heat generation associated with the exothermic reaction of PAG waste rock deposited and soluble sulphates and demonstrate that the current design of the waste rock facility will maintain permafrost conditions in the long term (closure and beyond). ii. Baffinland shall perform an oxygen balance of the waste rock facility and correlate it with soluble sulphates. This will provide understanding of the process of ARD generation and the performance of the waste rock facility.	NA	This issue is resolved for environmental assessment purposes and will be further addressed during water license
187	CIRNAC-01a NEW	CIRNAC	Terrestrial Environment	3 - September 2020 - Technical Meetings	Baffinland shall develop a detailed site program to monitor the thaw consolidation and soil deformation under the structures/embankments constructed as part of the Phase 2 Project. The monitoring results shall be compared with the Final Environmental Impact Statement Addendum predictions and appropriate mitigation measures shall be identified and incorporated into the adaptive management approach.	NA	This commitment will be implemented post PC approval
186	CIRNAC-03 NEW	CIRNAC	Freshwater Environment	3 - September 2020 - Technical Meetings	CIRNAC requests that Baffinland commits to the providing the following information during the Water Licence Amendment process, subject to Nunavut Water Board requirements. i. Baffinland shall develop reliable criteria for identification of PAG rock that clearly accounts for uncertainty in the 0.2% total sulphur threshold and the presence of acidic soluble sulphates upon projected life of mine tonnages of PAG and Non-Acid Generating (NAG) rock. ii. Baffinland shall incorporate these criteria, clearly stated ranges in projected life of mine PAG and NAG rock tonnages and the resultant necessary contingencies and methods of validation that need to be incorporated into engineering design, environmental monitoring and management strategies for the Waste Rock Management Plan and Interim Closure and Reclamation Plan. These documents are to be submitted for review during the Water Licence Amendment process, subject to Nunavut Water Board requirements. iii. Baffinland shall review the performance of these plans and provide evidence of the effectiveness of these plans by demonstrating compliance with the management measures and that the desired outcomes of mitigation are achieved on an annual basis.	NA	This issue is resolved for environmental assessment purposes and will be further addressed during water license
184	ECCC-3 NEW ECCC-4 NEW ECCC-6 NEW	ECCC	Freshwater Environment	3 - September 2020 - Technical Meetings	Baffinland will address ECCC's outstanding concerns, as identified in their letter to the NIRB on September 4, 2020, through the Nunavut Water Board Water License amendment process for Phase 2	NA	This issue is resolved for environmental assessment purposes and will be further addressed during water license
178	IGW HB-HTO	IGW HB	Corporate Environment	3 - September 2020 - Technical Meetings	Baffinland will work with the communities of Igloolik and Sanijarak to establish monitoring programs in relation to the Southern Transportation Corridor to Steensby Inlet following a decision to move forward with that component of the Project	NA	This commitment will be implemented post PC approval

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177	IWG	IWG	Atmospheric Environment	3 - September 2020 - Technical Meetings	Baffinland will integrate IQ into its analysis of satellite photo data, once available, of dust dispersion in relation to the Mary River Project	NA	Initiative under existing Project
176	IWG NrCan	IWG	Terrestrial Environment	3 - September 2020 - Technical Meetings	Baffinland will share the results of the Route 3 Geotechnical Program, currently planned to begin in October 2020, with the Igloolik Working Group and Natural Resources Canada	NA	Results will be shared as they become available
170	MHTO-6 GN-01	MHTO	Terrestrial Environment	3 - September 2020 - Technical Meetings	Baffinland is committed to an annual maximum of 6MT throughput during the construction period for Phase 2.	NA	This commitment will be implemented post PC approval
168	PCA-04b	PCA	Marine Environment	3 - September 2020 - Technical Meetings	Baffinland will update the definition of sea ice concentration at which regular shipping activities can proceed as 3/10 ice cover.	NA	This commitment will be implemented post PC approval Resolution is pending resolution of outstanding DFO issues
167	QIA-20 QIA-21	QIA	Atmospheric Environment	3 - September 2020 - Technical Meetings	Baffinland will consider rail car coverings as part of a suite of potential response actions through the development of adaptive management objectives, indicators, thresholds, and responses for rail operation and dust. These OITRs will be developed in consultation and with agreement from the QIA.	NA	This commitment will be implemented post PC approval
163	QIA-01 QIA-02	QIA	Terrestrial Environment	3 - September 2020 - Technical Meetings	Baffinland is committed to using Inuit input to finalize wildlife crossings, land user crossings (subject to Transport Canada regulations and acceptance), slope designs, and adaptive management (i.e. future rail improvements or mitigation measures).	NA	This commitment will be implemented post PC approval
162	QIA-01 QIA-02	QIA	Terrestrial Environment	3 - September 2020 - Technical Meetings	Baffinland is committed to coming to agreement on railway monitoring. A multi-dimensional approach to monitoring is proposed which would involve Inuit staff working under the Inuit Stewardship Plan monitoring according to Inuit interests as informed by the Inuit Committee, and, QIA technical staff.	NA	This commitment will be implemented post PC approval
161	QIA-01QIA-02	QIA	Terrestrial Environment	3 - September 2020 - Technical Meetings	Baffinland is committed to evaluating the Railway Operation and Maintenance Plan against the Adaptive Management Plan and Checklist, and subsequent updates.	NA	This commitment will be implemented post PC approval
160	QIA-01 QIA-02	QIA	Terrestrial Environment	3 - September 2020 - Technical Meetings	Baffinland is committed to having QIA's approval of the Interim Closure and Reclamation Plan (ICRP) prior to the NWB Public Hearing for Phase 2 Water License Amendments.	NA	This issue is resolved for environmental assessment purposes and will be further addressed during water license
159	QIA-01 QIA-02	QIA	Terrestrial Environment	3 - September 2020 - Technical Meetings	Baffinland will be solely responsible for all railway and rail feature construction costs, and all associated maintenance, should Adaptive Management Plan measures be triggered and identify that a modification to the rail must be made in accordance with adaptive management principles.	NA	This commitment will be implemented post PC approval
157	QIA-08	QIA	Socio-economic Environment	3 - September 2020 - Technical Meetings	Baffinland commits to develop a risk communication strategy focused on the gathering and dissemination of information to Inuit related to the Baffinland Iron Ore Mines Project, and linkages between the Project and human health and ecological risk assessment topics. The strategy will focus on, but not be limited to, building capacity within community groups to understand the mining process, elements of the mining process and how substances produced from the mining process move in the environment. Baffinland will work with communities to develop this program to ensure it is relevant to Inuit.	NA	This commitment will be implemented post PC approval
156	QIA-09	QIA	Terrestrial Environment	3 - September 2020 - Technical Meetings	Baffinland commits to working with QIA and the North Baffin Communities to develop revegetation standards based on IQ for reclamation and revegetation including meeting standards for cultural use and addressing community concerns with respect to re-establishing use of critical areas	NA	This commitment will be implemented post PC approval
155	QIA-20 QIA-21	QIA	Freshwater Environment	3 - September 2020 - Technical Meetings	Baffinland has agreed to a process to work with QIA to consider waterbodies of heightened importance and a tiered approach to compensation in the Water Compensation Agreement Process.	NA	This commitment will be implemented post PC approval
154	QIA-38	QIA	Socio-economic Environment	3 - September 2020 - Technical Meetings	Baffinland commits to providing Inuit employees with a childcare subsidy	NA	This commitment will be implemented post PC approval
153	QIA-38	QIA	Socio-economic Environment	3 - September 2020 - Technical Meetings	Baffinland commits to providing support to communities to ensure adequate childcare facilities become available	NA	This commitment will be implemented post PC approval
152	QIA-38	QIA	Socio-economic Environment	3 - September 2020 - Technical Meetings	Baffinland commits to working with QIA to develop quantitative measurable objectives that will provide greater insight into the mitigation of negative social impacts and the promotion of positive benefits	NA	This commitment will be implemented post PC approval

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151	QIA-38	QIA	Socio-economic Environment	3 - September 2020 - Technical Meetings	Baffinland commits to funding QIA and the communities development of a social monitoring program to greater insight into the mitigation of negative social impacts and the promotion of positive benefits?	NA	This commitment will be implemented post PC approval
150	QIA-38	QIA	Socio-economic Environment	3 - September 2020 - Technical Meetings	Baffinland is committed to working with QIA and to allow QIA with approval of socioeconomic objectives, indicators, thresholds and responses as part of Baffinland's adaptive management principles.	NA	This commitment will be implemented post PC approval
145	QIA-42 MHTO HPI	QIA	Freshwater Environment	3 - September 2020 - Technical Meetings	Baffinland commits to providing QIA, MHTO and HPI a copy of the comprehensive lessons learned report (for the Tote Road crossings) when it is sent to DFO as part of the Phase 2 FAA.	NA	This commitment will be implemented post PC approval
144	QIA-45	QIA	Marine Environment	3 - September 2020 - Technical Meetings	<p>Details of the DFO led sampling program to be carried out at Milne Port in 2021 will be shared through the Marine Environment Working Group prior to the 2021 shipping season.</p> <p>Baffinland notes that QIA has requested the details to be shared prior to a Public Hearing. This is contingent on the completion of the initial draft by DFO, and preliminary review by Baffinland, before it can be released for public review. Baffinland and DFO will endeavor to meet the requested timeline, but this should not be viewed as a barrier to moving forward with a Public Hearing.</p>	NA	<p>Tentatively before the Final Hearing, not a requirement</p> <p>Note that reference to implementation in 2021 and/or 2022 was made prior to regulatory delays; implementation should occur in first year following approval.</p>
143	QIA-47 QIA-48	QIA	Marine Environment	3 - September 2020 - Technical Meetings	Baffinland commit to working with community organizations and community members to address any issues arising with respect to sea ice use and potential inference from shipping activity	NA	This commitment will be implemented post PC approval
142	QIA-47 QIA-48	QIA	Marine Environment	3 - September 2020 - Technical Meetings	Baffinland commits to include a checklist of information with regard to Inuit use of sea ice in its various forms (not just use of the floe edge) in the start and close of shipping season determinants report committed to DFO in relation to DFO 3.2.1 NEW.	NA	This commitment will be implemented post PC approval
139	WWF-08	WWF	Atmospheric Environment	3 - September 2020 - Technical Meetings	Baffinland commits to tracking and reporting annually GHG emissions for its operations, and upon evaluation of existing data, subsequently pursue efforts to set multi-year energy use and GHG emissions targets, that aim to ensure continual performance improvements over time, and achieve alignment with industry best practice, in the next draft of the Climate Action Plan.	NA	This commitment will be implemented post PC approval
138	MHTO-5d WWF	MHTO	Corporate Environment	3 - September 2020 - Technical Meetings	Baffinland commits to integrating independent relevant community based monitoring into phase 2 adaptive management, and mitigation measures when available and shared with Baffinland for inclusion. This could be integrated under the Inuit Stewardship Plan or brought forward through other venues by community participants in the environmental and socio-economic working groups. Baffinland will incorporate results of relevant community based monitoring that have been brought forward to it in future environmental assessments should they be developed.	NA	This commitment will be implemented post PC approval
137	General	General	Corporate Environment	3 - September 2020 - Technical Meetings	Baffinland commits to including information on activities and modifications made to the Project resulting from input from the Inuit Committee, the Inuit Stewardship Plan, the Inuit Social Oversight Committee, and any Culture Resource and Land Use assessments and monitoring results in their Annual Report to NIRB.	NA	This commitment will be implemented post PC approval
136	QIA-08	QIA	Socio-economic Environment	3 - September 2020 - Technical Meetings	<p>Baffinland is committed to fully resourcing an Inuit-led country food baseline study for Pond Inlet and integrating the results into Project management, monitoring and compensation systems, including reconsideration of mitigations and compensation programs proposed by Baffinland in relation to food security based on the results of the Pond Inlet Country Food Baseline Study. This work will be Inuit-led and administered by the QIA, and supported by Baffinland.</p> <p>This information will inform long-term project monitoring consistent with the vision and principles of the Inuit Stewardship Plan and the Adaptive Management Plan. This project may also provide a basis against which the Wildlife Compensation Fund and Baffinland's other food security initiatives can be assessed over time. Baffinland will fund this study to completion.</p>	NA	Implementation is ongoing, completion not required for environmental assessment purposes
135	QIA-01 QIA-02 QIA-04 QIA-07 QIA-11 QIA-38 QIA-46 QIA-49	QIA	Corporate Environment	3 - September 2020 - Technical Meetings	<p>Baffinland will work with the QIA to jointly develop and approve the Adaptive Management Plan and associated sub-plans for the Mary River Project. This process will also include the development of Inuit Objectives, Indicators, Thresholds, and Responses, which will involve the impacted communities through the Inuit Committee and Inuit Social Oversight Committee. The Inuit Social Oversight Committee will support decision making if additional responses are required due to the monitoring results.</p> <p>Key areas for which QIA, based on Inuit input, will have adaptive management approvals are, but not limited to, the marine, terrestrial and social environments. This process will ensure that both Inuit Qaujimagatuqangit and western science will be applied to project operations and management decisions. Baffinland will fund Inuit participation in this initiative as well as activities needed to implement Adaptive Management responses for the life of the Project.</p>	NA	Implementation is ongoing, completion not required for environmental assessment purposes

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134	QIA0-2QIA-03QIA0-7QIA-10QIA-11QIA-38	QIA	Corporate Environment	3 - September 2020 - Technical Meetings	Baffinland will support the development of an independent, Inuit-led Inuit Committee. The Inuit Committee will be administered by the QIA and shall be comprised of members nominated from the five Project impacted Communities. The Inuit Committee will direct the monitoring of the Inuit Stewardship Plan's Culture, Resource, and Land Use stream to capture the Inuit experience and will support decision making if additional responses are required due to the monitoring results. The Inuit Committee will also have a role in identifying Inuit objectives, indicators, thresholds and responses to be built into the Project's Adaptive Management Plan. Baffinland will fund the ISP and Inuit Committee for the life of the Project. QIA will administer the ISP for the life of the Project.	NA	Implementation is ongoing, completion not required for environmental assessment purposes
133	QIA-02 QIA-09 QIA-11 QIA-38 QIA-46 QIA-49	QIA	Socio-economic Environment	3 - September 2020 - Technical Meetings	Baffinland and QIA agree to complete an additional Inuit-driven CRLU Assessment in consultation with the impacted communities, prior to major construction activities related to Phase 2. It is expected that this work will result in modifications and additions to mitigation, monitoring, adaptive management, and compensation measures, to be reflected in the Adaptive Management Plan and associated Environmental Management Plans. This will include updating Objectives, Indicators, Thresholds and Responses used in Project monitoring and Management. Baffinland will fund this work to completion.	NA	Implementation is ongoing, completion not required for environmental assessment purposes
132	QIA-22 QIA-30 QIA-53	QIA	Corporate Environment	3 - September 2020 - Technical Meetings	Changes in project scope, which could reasonably require amendment of the Project Certificate would result in the following obligations being initiated prior to the filing of a formal proposal to amend the project certificate: (a) Baffinland commits to carry out a Culture Resource and Land Use assessment conducted with QIA and Impacted communities, prior to the submission of an FEIS or FEIS Addendum. (b) Baffinland commits to carry out a Cumulative Effects Assessment conducted with QIA and Impacted communities, prior to the submission of an FEIS or FEIS Addendum. (c) Baffinland commits to review and renegotiation of the IIBA consistent with IIBA Article 22.4. (d) Parties come to agreement on increases to IIBA Implementation Costs.	NA	Implementation is ongoing, completion not required for environmental assessment purposes
131	QIA-03 QIA-04 QIA-05 QIA-09 QIA-10 QIA-38 QIA-46 QIA-49	QIA	Corporate Environment	3 - September 2020 - Technical Meetings	Baffinland will support Inuit to conduct independent, proactive monitoring of the Project for the purpose of mitigating adverse impacts and enhancing beneficial outcomes in a manner that captures the direct experiences of Inuit. A project management plan (the Inuit Stewardship Plan) will be developed by QIA, with input from an Inuit Committee and an Inuit Social Oversight Committee made up of members from the five Project impacted Communities. The Inuit Stewardship Plan will have two separate but linked streams: • Culture, Resource, and Land Use Stream • Social Stream Each stream will include dedicated monitoring led by Inuit monitors: • The Culture, Resources and Land Use Monitoring Program, with a focus on gathering data from impacted communities and through direct observations of changes on the land, waters, ice and wildlife • The Social Stream will see impacted community members trained to gather information about impacts on community well-being Information from both monitoring streams, and input from the two Committees, will directly inform the Project management system. Baffinland will fund the ISP for the life of the Project. QIA will administer the ISP for the life of the Project.	NA	Implementation is ongoing, completion not required for environmental assessment purposes
130	QIA-38	QIA	Socio-economic Environment	3 - September 2020 - Technical Meetings	Baffinland will support the development of an independent, Inuit-led Inuit Social Oversight Committee (ISOC). The Inuit Social Oversight Committee will be overseen and administered by QIA and shall be comprised of members nominated from the impacted communities. The Inuit Social Oversight Committee will direct the monitoring of the ISP's social stream to capture the Inuit experience and will support decision making if additional responses are required due to the monitoring results. Baffinland will work with QIA and the impacted Inuit communities to develop an enhanced, Inuit-driven, social monitoring program related to the Project. This monitoring program focused on community wellbeing will address a known monitoring gap and complement other forms of monitoring related to the project. Baffinland will fund the ISP and ISOC for the life of Project.	NA	Implementation is ongoing, completion not required for environmental assessment purposes
129	QIA-6 QIA-20	QIA	Terrestrial Environment	3 - September 2020 - Technical Meetings	Baffinland commits to adopt Route 3 for the final rail alignment and is committed to bearing the costs of transitioning to this alternative route. Baffinland agrees that technical issues associated with Route 3 will be addressed at the cost and risk of Baffinland and will not be used as the basis for reverting to Route 1.	NA	This commitment will be implemented post PC approval
128	QIA-20 QIA-21	QIA	Freshwater Environment	03 - September 2020 - Technical Meetings	Baffinland is committed, within the next year, to support an Inuit-led IQ study on water values in the Project-affected area, and to integrate the results into a revised water compensation agreement that establishes a tiered approach to compensation for substantial effects on water that increases compensation for impacts on waterbodies deemed by Inuit to be of heightened importance. In addition, a finding of a waterbody of heightened importance will increase the amount of monitoring focus such waterbodies receive, where a project impact pathway can be established. Monitoring will be carried out either through Baffinland's scientific monitoring or the new Inuit-led Culture, Resources and Land Use Monitoring Program.	NA	Implementation is ongoing, completion not required for environmental assessment purposes
127	DFO 3.1.2 NEW	DFO	Marine Environment	02 - February 2020 - Response to Updated Technical Comments	Baffinland can confirm that it will not surpass the number of vessels described and assessed in the Phase 2 FEIS Addendum to ship an additional 20% of ore over 12 Mtpa in the maximum operational flexibility scenario. For clarity, this is a limit of 176 ore carriers, 12 freight vessels and 12 fuel vessels.	NA	This commitment will be implemented post PC approval

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126	DFO 3.10.1 NEW	DFO	Marine Environment	02 - February 2020 - Response to Updated Technical Comments	Baffinland will provide a detailed water withdrawal plan that includes an in-depth risk analysis informed by site specific fish and fish habitat features for the waterbodies chosen for water withdrawal as supplemental information to water licensing and any DFO Request for Review submission.	NA	This commitment will be implemented post PC approval
125	DFO 3.10.2 NEW	DFO	Marine Environment	02 - February 2020 - Response to Updated Technical Comments	Baffinland will conduct a thorough localized assessment on the waterbodies selected for water withdrawal in order to adequately assess the potential impacts on the fish habitat resulting from 20% of the 10-year dry unit runoff water withdrawal on fish-bearing watercourses and connecting waterbodies. This assessment will include an assessment of the effects to littoral/shore/riparian areas from the proposed water withdrawal, the specific withdrawal locations proposed for each waterbody including fish habitat in the area and updated rationale on how this level of withdrawal will be an environmentally protective threshold. This content will be included as supplemental information to water licensing and regulatory permit applications made to DFO.	NA	This commitment will be implemented post PC approval
124	DFO 3.10.3 NEW	DFO	Marine Environment	02 - February 2020 - Response to Updated Technical Comments	Baffinland will provide additional rationale/ assessment to support the assertion that 40% of the 10-year dry unit runoff water withdrawal from non-fish-bearing streams will not negatively affect downstream fish-bearing waterbodies. This content will be included as supplemental information to water licensing and regulatory permit applications made to DFO.	NA	This commitment will be implemented post PC approval
123	DFO 3.2.1 NEW	DFO	Marine Environment	02 - February 2020 - Response to Updated Technical Comments	Baffinland commits to provide a summary of the following information as part of its annual reporting requirements, and in preliminary field reports within 35 days of Spring shoulder season shipping activities commencing and 15 days of Fall shoulder season activities ending: <ul style="list-style-type: none"> i. marine monitoring programs, ii. determinants for opening and closing the shipping season, iii. ecological and cultural (or "Inuit use") factors that influence shipping activities iv. other information, as requested by DFO and other regulators and key stakeholders, relevant to the marine environment. The requirement for, and format of, these reports will be included in the final Marine Monitoring Plan, should Phase 2 be approved. Additional information requested after submission of the preliminary field report is to be provided by Baffinland as a memo within 35 days and will be included in Annual Reporting.	NA	This commitment will be implemented post PC approval
122	DFO 3.2.2 NEW	DFO	Marine Environment	02 - February 2020 - Response to Updated Technical Comments	Baffinland commits to updating the Draft Early Shipping Season-Operational Guide, to better characterize considerations used in determining the nominal shipping season. See response to DFO 3.2.2 for the commitment to report on determinants of opening and closing the shipping season.	NA	This commitment will be implemented post PC approval
121	DFO 3.3.3 NEW	DFO	Marine Environment	02 - February 2020 - Response to Updated Technical Comments	Baffinland commits to collecting acoustic data in the RSA using AMARs to characterize the degree of conservatism in the sound propagation modelling, at an appropriate frequency for the duration of the Phase 2 construction and operation periods. Baffinland will collaborate with Inuit and DFO on the development of the draft program prior to submission to the MEWG for additional advice and recommendations. Recommendations from MEWG members will be treated consistent with the consensus-based decision requirements of the final updated MEWG Terms of Reference. Baffinland commits to updating the marine monitoring plan (MMP) with this long-term monitoring plan, should Phase 2 be approved.	NA	This commitment will be implemented post PC approval
115	DFO 3.5 NEW	DFO	Marine Environment	02 - February 2020 - Response to Updated Technical Comments	Baffinland will implement an incidental marine mammal monitoring program with vessel operators calling on Milne Port, which will request incidental observations of marine mammals to be recorded and relayed to Baffinland. In support of this program, Baffinland will develop educational materials for vessel crew to assist in marine mammal identification and data recording. Baffinland will provide a draft of the materials and program for review by the MEWG before they are finalized.	NA	This commitment will be implemented post PC approval
114	DFO 3.6.1 NEW	DFO	Marine Environment	02 - February 2020 - Response to Updated Technical Comments	Project vessels are limited to releasing ballast water at one of the three anchorage locations at Milne Port, or while berthed at the ore dock. Further, prior to any ballast water discharge D-1 compliance testing must be completed. Instructions to not release ballast water prior to arrival at Milne Port and completion of ballast water testing is provided to all ship operators in Baffinland's Standing Instruction to Masters (SITM). This requirement will remain under Phase 2.	NA	This commitment will be implemented post PC approval
113	DFO 3.6.10 NEW	DFO	Marine Environment	02 - February 2020 - Response to Updated Technical Comments	Baffinland commits to work with the MEWG and DFO to establish species-specific Rapid Response Plans. Rapid Response Plans will be developed for species identified as high risk through ongoing NIS monitoring in the receiving environment, the ROV (or any other future) biofouling monitoring program, results yielded from the 2021 biological ballast water sampling pilot program (and any ongoing ballast monitoring), examination of existing invasive species databases and lists in key ecoregions where vessels calling originate from (as per Goldsmit et al., 2020 Global Change Biology), and based on ranking of potential risk using the Canadian Marine Invasive Screening Tool.	NA	This commitment will be implemented post PC approval

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109	DFO 3.6.5 NEW TC-02 NEW	DFO 3.6.5 NEW TC	Marine Environment	02 - February 2020 - Response to Updated Technical Comments	<p>Transport Canada appreciates the efforts by BIM to ensure current regulations are followed with respect to their plans for ballast water management. Given the learning curve associated with use of ballast water treatment systems, for Phase 2, Transport Canada (TC) in consultation with Fisheries and Oceans Canada (DFO), recommends, in conjunction with present management measures and sampling and testing protocols being proposed/adopted by BIM, that BIM implement a ballast water compliance sampling plan based on a risk-based targeting methodology to be developed in consultation with DFO and TC. This approach will be supported by additional commitments provided in response to the DFO 3.6 NEW series of recommendations related to ballast water, hull fouling and aquatic invasive species.</p> <p>Such a risk-based methodology should be applied to evaluate the risk of all vessel ballast water management (D1, D2) with subsequent salinity and D-2 biological compliance sampling conducted on vessels identified as high or very high risk. The respective risk-based methodology and associated ballast water compliance sampling plan will be developed in consultation with DFO and TC following completion of DFO's Project-specific sampling conducted on a subset of vessels calling to Milne Port. The risk-based methodology and associated ballast water compliance sampling plan should include a consideration of other compliance initiatives or research being undertaken elsewhere by TC relative to implementation of the D-2 standard.</p> <p>Sampling conducted that supports building a body of knowledge for D-2 treatment systems, beyond biological compliance sampling conducted on high risk and very high risk tanks, should not compromise Baffinland's ability to transport annual ore quantities as approved under a modified Project Certificate No 005. Understanding that the rationale for this program is tied to a learning curve associated with the use of ballast water treatment systems, the compliance sampling program and risk based methodology will be adapted as deemed necessary based on the results of the program.</p>	NA	This commitment will be implemented post PC approval
105	DFO 3.6.9 NEW	DFO	Marine Environment	02 - February 2020 - Response to Updated Technical Comments	Baffinland commits to follow the most recent DFO published Rapid Response Framework in the event that a non-indigenous species is introduced and/or becomes established, and will incorporate updates as recommended by DFO and the MEWG, consistent with the decision-making requirements as outlined in the forthcoming updated MEWG Terms of Reference.	NA	This commitment will be implemented post PC approval
104	DFO 3.8 NEW	DFO	Marine Environment	02 - February 2020 - Response to Updated Technical Comments	Baffinland will provide decision criteria and decision matrix for the selection of water crossing methods for fish bearing watercourses in support of any regulatory permit applications made to DFO.	NA	This commitment will be implemented post PC approval
103	DFO 3.9.1 NEW	DFO	Marine Environment	02 - February 2020 - Response to Updated Technical Comments	Baffinland will analyze monitoring reports related to the Tote Road existing watercourses crossings and provide comprehensive lessons learned report (for the Tote Road crossings) that would include strategic analysis of what will be done differently to ensure the fish-passage issue will be mitigated, avoided and addressed. This report will be included as part of any regulatory applications made to DFO.	NA	This commitment will be implemented post PC approval
102	DFO 3.9.2 NEW	DFO	Marine Environment	02 - February 2020 - Response to Updated Technical Comments	Baffinland will provide an updated hydrological assessment of proposed watercourses crossings that includes, but is not limited to, crossing selection and design criteria, flow rates, velocities and discharge, and fish passage. This content will be included as part of any regulatory permit applications made to DFO.	NA	This commitment will be implemented post PC approval
100	CIRNAC-05	CIRNAC	Freshwater Environment	01 - November 2019 - Public Hearing	Baffinland shall complete thermal modeling of the Waste Rock Facility and include the results in the Waste Rock Management Plan prior to the conclusion of Water Licence Amendment process, subject to NWB requirements.	NA	This issue is resolved for environmental assessment purposes and will be further addressed during water license
99	CIRNAC-07	CIRNAC	Freshwater Environment	01 - November 2019 - Public Hearing	Baffinland shall confirm the origin of elevated concentrations of aluminum, mercury and copper in Shake Flask Extraction test results for rock materials sourced from quarry and borrow pits for road / railway construction, and develop and implement an appropriate water quality monitoring and management strategy for railway corridor rock quarries as part of water licensing. The monitoring results shall be compared with the FEIS Addendum predictions and appropriate mitigation measures shall be identified and implemented.	NA	This commitment will be implemented post PC approval; CIRNAC 2 NEW aligns with response to CIRNAC-07.

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95	DFO 3.3	DFO	Marine Environment	01 - November 2019 - Public Hearing	<p>Baffinland will implement the following requirement for vessels serving the Mary River Project: Once advised of the presence and location of bowhead whales, Masters of project ships operating within the RSA will be instructed to exercise due caution in order to minimize the likelihood of interaction with the mammals. In such events, Masters will be authorized to adjust speed or alter course within safe and prudent navigational constraints to avoid to the extent possible interaction with bowhead whales.</p> <p>Baffinland notes that the surveillance measures implemented in the Gulf of St Lawrence, as referenced by DFO, are to spot right whales and implement the 10 knot speed restriction. This additional mitigation measure is not required in the RSA as a blanket 9 knot speed limit is in place for the entire season. The only mitigation measure more restrictive than the speed limit is a 15 day shut down for non-tended fixed gear fisheries. Again, this is not applicable to Mary River operations. Baffinland strongly urges DFO to consider the commitment provided above and work with Baffinland to implement it.</p>	NA	This commitment will be implemented post PC approval
94	DFO 3.4	DFO	Marine Environment	01 - November 2019 - Public Hearing	<p>Environmental and ecological criteria for the opening of the shipping season is described in the Shoulder Season Shipping Operational Guide. The following clarifications will be added to the Shoulder Season Shipping Operational Guide to reflect the environmental and ecological conditions for closing the shipping season. Environmental - The formation of fastice along the shipping route will trigger the end of the shipping season. Ecological - There are no ecological triggers to close the shipping season, however, monitoring and adaptive management will be applied to ensure no significant impacts occur.</p> <p>Note: Seals - During the Fall Season Seals are just beginning to establish breathing holes in the ice as part of their development of an overwinter territory, but this is not considered a critical life cycle period. Seals may avoid establishing breathing holes along the shipping route during this period, but this would be limited to general area of the ship path, which is minimal in extent. Seals do not start denning until January when enough snow is available on the ice for them to build a den. Shipping would not overlap with the denning period.</p> <p>Narwhal- The fall shoulder season will overlap with the outmigration of narwhal throughout October and November. Aerial surveys are planned each year to confirm no entrapment events have occurred, and to inform adaptive management, should it be required.</p>	NA	This commitment will be implemented post PC approval
93	DFO 3.5.1.	DFO	Marine Environment	01 - November 2019 - Public Hearing	During Phase 2 Operations, Baffinland commits to using the walrus haul out buffer zone guidelines set by the US Fish and Wildlife Service (USFWS) and the US Federal Aviation Administration (FAA).	NA	This commitment will be implemented post PC approval
92	DFO 3.5.2	DFO	Marine Environment	01 - November 2019 - Public Hearing	Baffinland will not break ice in closed embayment's and inlets where landfast ice exists. Should other areas of high seal density be encountered along the shipping route during the shoulder season, the ship Board Observer Program will record and report this for potential adaptive management actions. This may include notices to Masters of project ships operating within the RSA to exercise due caution in order to minimize the likelihood of interaction with the mammals. In such events, Masters will be authorized to adjust speed or alter course within safe and prudent navigational constraints to avoid to the extent possible interactions with high density seal areas. See other commitments related to the SBO Program in response to DFO 3.5.3 and 3.5.6.	NA	This commitment will be implemented post PC approval
91	DFO 3.5.3	DFO	Marine Environment	01 - November 2019 - Public Hearing	Baffinland's Ship Board Observer Program will confirm the current predictions that no seal strikes will occur as a result of project shipping. Should monitoring demonstrate that the predictions are incorrect, Baffinland will implement adaptive management measures in consultation with the MHTO and MEWG.	NA	Baffinland will not provide an updated estimate of ship strikes on seals based on a study that covers a period in time and location that are fundamentally different from what is proposed under Phase 2.
89	DFO 3.5.5	DFO	Marine Environment	01 - November 2019 - Public Hearing	<p>Before commencing shipping, Baffinland must receive written confirmation from Pond Inlet that the floe edge is no longer being used by community members. No transits to Milne Port will be permitted until confirmation is received.</p> <p>Baffinland will not break ice during ringed seal denning, pupping, nursing or mating periods and will manage its vessel traffic during the Eclipse Sound narwhal summer stock spring migratory period.</p> <p>Furthermore, Baffinland has established several precedent-setting mitigations to minimize potential effects on ringed seal as a result of ice breaking activities, including:</p> <ul style="list-style-type: none"> Restricting the number of transits during the early shoulder season where ice concentrations above 3/10 cannot be avoided. Implementation of speed restrictions (9 knots) that are more conservative than Government of Canada guidelines for speed reduction to 10 knots. Local Inuit Marine Wildlife Observers (MWOs) will be stationed on all icebreaker transits in the RSA and are responsible for alerting vessel Master and crew to observed potential risk of ship strikes on pinnipeds and other marine mammals, or record other signs of disturbance to marine wildlife. Implementation of a 40-km buffer zone around the floe edge at the entrance of the RSA to reduce interactions between Project vessels and marine mammals (vessels entering the RSA during the spring shoulder season must wait 40 km to the east of the RSA until clearance from the Port Captain is obtained to enter the RSA). 	NA	This commitment will be implemented post PC approval

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88	DFO 3.5.6	DFO	Marine Environment	01 - November 2019 - Public Hearing	Baffinland will updated the Marine Monitoring Program to make it clear what behavioral indicators are recorded during the Ship Board Observer Program. These indicators include breaching, flipper slapping, lob tailing, diving, fluking, blowing, resting, looking, feeding, hauled-out, milling, swimming, surfacing. Other recorded information includes initial distance from vessel, minimum distance from vessel (i.e. closest point of approach), and bearing from vessel and movement direction. These methods and indicators are currently described in annual Ship Board Observer Reports.	NA	This commitment will be implemented post PC approval
87	DFO 3.6.2 DFO 3.6.6	DFO	Marine Environment	01 - November 2019 - Public Hearing	Baffinland is committed to undertaking an end-of-season aerial survey of the LSA for each year shoulder season shipping occurs, to confirm no narwhal entrapment events have occurred. Baffinland will work directly with the Mittimatilik HTO in implementation of this survey. <u>Background</u> Mitigation measures are limited, Baffinland has proposed having an icebreaker re-enter the RSA to create an exit pathway, assuming it is safe to do so. it is uncertain if this is a desirable action from the communities perspective. There is also an issue of identifying a natural event from a project affected one. Baffinland suggests the MEWG is an appropriate forum to investigate such an event occurs in the future, and development adaptive mitigation measures, should they be necessary. Baffinland's commitment to annual aerial surveys is for the life of the project.	NA	This commitment will be implemented post PC approval
86	DFO 3.7.2	DFO	Marine Environment	01 - November 2019 - Public Hearing	Empirical data on ship noise levels have now been collected as part of JASCO's passive acoustic monitoring program for the Project. These data have been analyzed to calculate LRR for these additional areas in the RSA (Eclipse Sound, North Milne Inlet, Koluktoo Bay). Calculations of LRR associated with ship transits at these representative locations will be presented in a 'technical memorandum' or 'technical response', scheduled for delivery to DFO on February 17, 2020. The technical memorandum will include an analysis to estimate the LRR estimations for Phase 2 shipping operations based on the empirical results calculated for 2018 and 2019 shipping operations.	NA	This commitment will be implemented post PC approval
84	DFO 3.8.4	DFO	Marine Environment	01 - November 2019 - Public Hearing	Baffinland will continue to undertake acoustic monitoring supportive of its operations in accordance with terms and conditions of the existing Project Certificate No. 005.	NA	This commitment will be implemented post PC approval
81	DFO-3.12	DFO	Freshwater Environment	01 - November 2019 - Public Hearing	Baffinland will include the requested information in the application for the Fisheries Act Authorization.	NA	This commitment will be implemented post PC approval
80	DFO-3.13.1	DFO	Freshwater Environment	01 - November 2019 - Public Hearing	Baffinland will include the requested information in the application for the Fisheries Act Authorization.	NA	This commitment will be implemented post PC approval
79	DFO-3.13.2	DFO	Freshwater Environment	01 - November 2019 - Public Hearing	Baffinland will include the requested information in the application for the Fisheries Act Authorization.	NA	This commitment will be implemented post PC approval
78	DFO-3.14.1	DFO	Freshwater Environment	01 - November 2019 - Public Hearing	Baffinland will include the requested information in the application for the Fisheries Act Authorization.	NA	This commitment will be implemented post PC approval
77	DFO-3.14.2	DFO	Freshwater Environment	01 - November 2019 - Public Hearing	Baffinland will include the requested information in the application for the Fisheries Act Authorization.	NA	This commitment will be implemented post PC approval
76	DFO-3.14.3	DFO	Freshwater Environment	01 - November 2019 - Public Hearing	Baffinland will include the requested information in the application for the Fisheries Act Authorization.	NA	This commitment will be implemented post PC approval
75	ECCC-FC1 HC-FC-02	ECCC	Atmospheric Environment	01 - November 2019 - Public Hearing	Final language to be developed with BIMC. Proposed by BIM:Baffinland will provide all quality assured measured air quality and meteorological data in an annual report and compare to applicable criteria as outlined in the revised Air Quality and Noise Abatement Plan (AQNAMP) for the project. The annual report will include all raw data, averages in graphical and tabular form as most relevant to the data set, comparison to relevant criteria and visual presentation including wind roses and comparisons to previous year's data. In relation to photography, if major dusting events are observed, they will be photographed and included in the annual report. Also, the available satellite imagery will be reviewed and included if considered relevant. The use of satellite imagery will be evaluated on an ongoing basis to confirm whether it adds value or provides any relevant context to the dust fall evaluations. As the revised AQNAMP will be updated to detail these reporting requirements specifically, additional requirements in the Terms and Conditions of the Project are not deemed necessary. As per recent discussions, the 2020 CAAQS would be used for comparison purposes only with the objective to "keep clean areas clean" with respect to ambient air quality while the Project Standards are based on Nunavut Standards where available, or otherwise the most stringent available from a Provincial or other Territorial Government. Appendix G includes memos describing dustfall management action triggers for the protection of human health and vegetation. Baffinland will reflect the commitment to annual reporting in the final AQNAMP for the Phase 2 Proposal and subsequently does not believe a new Term and Condition is required.	NA	This commitment will be implemented post PC approval

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74	ECCC-FC2	ECCC	Atmospheric Environment	01 - November 2019 - Public Hearing	Baffinland commits to investigate and implement NOX reductions measures, where feasible, and report on this in the 2021 annual air quality report (to be submitted by March 31, 2022).	NA	This commitment will be implemented post PC approval Note that reference to implementation in 2021 and/or 2022 was made prior to regulatory delays; implementation should occur in first year following approval.
73	ECCC-FC3 HC-FC-02	ECCC	Atmospheric Environment	01 - November 2019 - Public Hearing	Final language to be developed with BIMC. Proposed by BIM: Baffinland is committed to updating the AQNAMP in consultation with ECCC and other interested interveners and has undertaken a number of discussions in relation to this commitment. The revised AQNAMP will include the following (which is consistent with ECCC's recommendations): <ul style="list-style-type: none"> Monitor PM2.5 and TSP using continuous monitors at: <ul style="list-style-type: none"> The sites that already monitor NO² and SO² at both Milne Port and the Mine Site. Seasonally at at least one new location on or close to the Project Boundary at both the Milne Port and Mine Site considering prevailing wind direction during the peak dust season and locations of sensitive receptors (camp locations). These will be seasonal as permanent power is not available near the boundaries thus the systems will run on solar power as feasible during the summer. The revised AQNAMP will also include the following recommended items: <ul style="list-style-type: none"> Presentation of the predicted concentrations in the AQNAMP as a range of absolute concentrations. Investigation of ways to mitigate the emissions from the stockpiles as warranted. Include management actions for the stockpiles in Section 4 of the AQNAMP as well as Table 5-2, and Table 5-3. Define the management action trigger levels for both the 24-hour and annual averaging periods for all species (Table 5-1, Table 5-2, and Table 5-3). Define the frequency at which air quality and meteorological data is reviewed that allows for timely response for implementation of corrective actions in response to exceedances of triggers. Include details on how the air quality data and meteorological data will be analyzed together during the investigation of exceedance of trigger levels and necessary management actions. Confirm the trigger levels for dustfall and include corrective actions associated with collected dustfall data. Include 24-hour and annual Total Suspended Particulate data in the dustfall management action trigger levels and describe how it will be used as a tool for determining potential causes of elevated dustfall. Include the wind roses from onsite meteorological stations, maps showing where these potential monitoring stations are located, discussion on the rational for the site locations, and discussion on how emissions from the stockpiles would be captured by these monitoring stations. The recommendations outlined above will be captured in a management plan update register, which Baffinland will use to track changes and additions to management plans committed to during the final review of the Phase 2 Proposal. Baffinland suggests that this register, submitted to the Board on the record before the close of the Public Hearing, is a more appropriate means of ensuring the requested updates to the AQNAMP are made, that an amendment to an existing Term and Condition. 	NA	This commitment will be implemented post PC approval
70	ECCC-FC6 WWF-FWS 06	ECCC	Marine Environment	01 - November 2019 - Public Hearing	Baffinland commits to conduct additional Arctic diesel fuel spill modelling to account for shoulder season shipping and update the SSRP as necessary (Appendix G). This will occur prior to the 2021 shipping season.	NA	Note that reference to implementation in 2021 and/or 2022 was made prior to regulatory delays; implementation should occur in first year following approval.
69	GN-01	GN	Corporate Environment	01 - November 2019 - Public Hearing	Baffinland is no longer pursuing trucking of iron ore in excess of 6Mtpa during the Phase 2 construction period. This commitment will require modification.	NA	

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68	GN-02WWF-FWS 07 MHTO-03	GN	Terrestrial Environment	01 - November 2019 - Public Hearing	<p>Baffinland is committed to work with the GN to develop a mutually agreed upon research agreement (also referred to as the Research and Relationship Agreement) that includes the following aspects, which are based on GN's internal budgeting and community consultation schedules for its North Baffin Regional Monitoring Program:</p> <ul style="list-style-type: none"> By July 30 of each year, the GN to share a preliminary proposal with Baffinland (the "GN Preliminary Proposal") outlining the planned activities that may be carried out as part of its North Baffin Regional Monitoring Program for the twelve-month period commencing on January 1 of the following year, which would be subject to any future revisions arising as a result of consultation by the GN with communities and the Qikiqtani Inuit Association. By October 1 of each year, the GN to share a final proposal with Baffinland (the "GN Final Proposal") based on the GN Preliminary Proposal and including any revisions as a result of consultation. Baffinland would provide its total annual financial contribution to GN on or before November 30 of each year following review and acceptance by Baffinland of a GN Final Proposal. The financial contribution could include monetary and/or in-kind support. Collaboration as possible regarding scientific peer-reviewed research into mitigative measures or potential disturbance effects, as related to the Mary River Project. GN will provide Baffinland with reports on work carried out under its North Baffin Regional Monitoring Program. GN-generated data needed to support Baffinland's assessment, monitoring and mitigation programs for the Mary River Project (which would remain Baffinland's sole responsibility) will be released upon request by GN to Baffinland, in accordance with the terms and conditions of the Research and Relationship Agreement. 	NA	Baffinland and the Government of Nunavut commit to complete a caribou research agreement and data sharing agreement prior to the Public Hearing for Phase 2. Should this not be possible, an Agreement in Principle will be developed to identify a timeline for the anticipated completion of both agreements. The caribou research agreement is currently with BIM for review.
67	GN-03	GN	Terrestrial Environment	01 - November 2019 - Public Hearing	<p>Baffinland commits to build the North Railway with the general specifications for the purposes of increasing caribou permeability Use of Type 8 over Type 12 fill material for the entire alignment For embankment heights under 4 meters the slope ratio will be 1V:2H; for embankment heights over 4 meters the slope ratio will remain 1V:1.5H Baffinland commits to a pilot program that will investigate the effectiveness of gentler slopes on caribou crossing. To evaluate this pilot program, Baffinland will support regional studies of caribou movements to assess caribou responses to the railway. The assessment of this pilot program's success shall be based on results from studies that have statistical power to detect Project effects exceeding those predicted in the FEIS addendum. The details of this program include:</p> <ul style="list-style-type: none"> The gentler slopes will be built with a slope ratio of 1V:3H The total amount of fill required to build the North Railway will remain unchanged from currently proposed i.e. the fill material required to build sections with a slope of 1:3 will be acquired by reverting other areas previously allocated a 1V:2H slope (at an embankment height of 4m and below) back to a 1V:1.5H slope The pilot program will include a minimum of 10km of 1V:3H slopes Members of the Terrestrial Environment Working Group will be required to identify and agree on the areas to build the gentler (1V:3H) slopes, and where to revert back to the steeper (1V:1.5H) slopes The pilot program shall not prevent fish passage or cause serious harm to fish. This program will be implemented prior to and during the North Railway's construction. This program will not preclude Baffinland's implementation of its Additional Level Crossing Decision Matrix. 	NA	This commitment will be implemented post PC approval
66	GN-04	GN	Terrestrial Environment	01 - November 2019 - Public Hearing	Baffinland will update the Additional Level Crossing Construction Decision Matrix to include advice from the Terrestrial Environment Working Group (TEWG).	NA	This commitment will be implemented post PC approval
65	GN-05	GN	Terrestrial Environment	01 - November 2019 - Public Hearing	Suggested Modified Commitment 65. BIMC will update the Terrestrial Environment Mitigation and Monitoring Plan to reflect that it will undertake research to estimate the Zone(s)-of-Influence (ZOI) and disturbance coefficients (DC) exerted by the Project on caribou, and shall provide to NIRB updated estimates of cumulative habitat losses for caribou, at least every 5 years. This research will take into account differences in caribou behaviour at lower and higher population levels in a manner that allows for equal consideration of IQ and science.	NA	This commitment will be implemented post PC approval
64	GN-06	GN	Socio-economic Environment	01 - November 2019 - Public Hearing	<ol style="list-style-type: none"> The Proponent shall work with the GN through their MOU to promote greater female employment at the Mary River Project, with the goals of a) employing and retaining more women with the Project including in more senior level positions, and b) attracting more women into the mining industry more generally. The Proponent will assess the ongoing implementation of current and proposed gender-specific initiatives, including their successes and challenges, in conjunction with monitoring female employment rates at the Project through its Socio-Economic Monitoring Plan. The Proponent will report to the QSEMC and SEMWG, as appropriate, on the effectiveness of these gender-specific initiatives. 	NA	This commitment will be implemented post PC approval

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63	GN-07	GN	Socio-economic Environment	01 - November 2019 - Public Hearing	<ol style="list-style-type: none"> 1. The Proponent will update its Workplace Harassment Policy and Workplace Harassment and Violence Program and include a component on sexual harassment that addresses the unique nature of sexual harassment in the workplace and supports the specific needs of sexual harassment victims. The Government of Nunavut will be engaged in this process. This update will occur within 6 months of amended Project Certificate issuance. 2. The Proponent will update its employee orientation program to reflect the revisions in the Workplace Harassment and Violence Program, including components related to sexual harassment in the workplace and bystander intervention. This update will occur within 6 months of amended Project Certificate issuance. 3. The Proponent will work with the GN to establish a sub-committee through their MOU to review implementation of Company policies and initiatives regarding sexual harassment in the workplace, subject to all applicable privacy laws, and to explore potential new ways to address this issue at the Mary River Project. The proponent and GN will move forward on this issue through the MOU within 6 months of issuance of the Project Certificate. Baffinland Human Resource Staff will be available to specifically address this topic through the MOU subcommittee as and when required. 	NA	This commitment will be implemented post PC approval
62	GN-08	GN	Socio-economic Environment	01 - November 2019 - Public Hearing	<ol style="list-style-type: none"> 1. The Proponent shall work with the GN through their MOU to promote employment opportunities with the Mary River Project across all Qikiqtani communities, consistent with relevant provisions of the Mary River Inuit Impact and Benefit Agreement. Initiatives may include training opportunities in non-point of hire communities, posting employment and training opportunities in all Qikiqtani communities, communicating with unsuccessful job applicants, and continuing to provide travel for all Inuit Baffinland employees from across the Qikiqtani Region to a point of hire community. 	NA	This commitment will be implemented post PC approval
61	GN-09	GN	Socio-economic Environment	01 - November 2019 - Public Hearing	<ol style="list-style-type: none"> 1. Baffinland will submit to NIRB a Safety Protocol and a Communications Plan prior to construction of the North Railway or within 18 months of issuance of the Project Certificate; and a Safety Protocol and a Communications Plan prior to operation of the North Railway. The protocols and plans will include: <ol style="list-style-type: none"> i. Safety Protocol and Communications Plan – prior to railway construction or within 18 months of Project Certificate issuance: <ol style="list-style-type: none"> a. Complete a risk register prior to construction b. Address safety issues related to both the road and rail, during the construction period c. Be implemented by the Company, its contractors, and non-Project land users d. Integrate Baffinland’s existing Hunter and Visitor Site Access Procedure e. Communicate to land users the rules and procedures for using the Tote Road and other project roads, visiting the project site, and the risks associated with the road and the North Railway during the construction period f. Include Rules of the Road, such as speed limits, signs on the road, right of way protocols, safety restrictions regarding the discharge of firearms in proximity to the road and rail construction areas, etc. g. Identify potential hazards on the road such as mine traffic, snow drifts, steep hills, sharp corners, construction areas, and washouts h. Identify the location of safety features such as rail crossings, emergency shelters and safe access routes to the Mine Site and Milne Port i. Identify the location of safety features such as emergency shelters and safe access routes to the Mine Site and Milne Port, and construction shelters and accommodations j. Be developed in consultation with the North Baffin Communities, with a particular focus on the Communities of Pond Inlet and Igloolik k. Identify the means and frequency of communicating the safety protocol, and to whom the information will be communicated ii. Safety Protocol and Communications Plan – prior to railway operation <ol style="list-style-type: none"> a. Complete a risk register prior to operation b. Address safety issues related to both the road and rail, during operations c. Be implemented by the Company, its contractors, and non-Project land users d. Integrate Baffinland’s existing Hunter and Visitor Site Access Procedure e. Communicate to land users the rules and procedures for using the Tote Road and other project roads, crossing the North Railway, visiting the project site, and the risks associated with the road and the North Railway f. Include Rules of the Road, such as speed limits, signs on the road, right of way protocols, safety restrictions regarding the discharge of firearms in proximity to the road and rail g. Identify potential hazards on the road such as mine traffic, snow drifts, steep hills, sharp corners, and washouts h. Identify potential hazards with the rail line such as train traffic, sharp corners, loading and unloading areas i. Identify the location of safety features such as rail crossings, emergency shelters and safe access routes to the Mine Site and Milne Port j. Identify the location of safety features such as emergency shelters and safe access routes to the Mine Site and Milne Port, and construction shelters and accommodations k. Be developed in consultation with the North Baffin Communities, with a particular focus on the Communities of Pond Inlet and Igloolik l. Identify the means and frequency of communicating the safety protocol, and to whom the information will be communicated 	NA	This commitment will be implemented post PC approval

APPENDIX C: FINAL TABLE OF POST PHASE 2 APPROVAL/REGULATORY PHASE COMMITMENTS

ID#	FWS ID#	Intervener	Topic	Review Phase	Commitment	Current Status	Notes
					m. Describe how the Operation Lifesaver program will be implemented, including information on when it may be offered, to whom, and how often.		
60	HC-FC-01	HC	Socio-economic Environment	01 - November 2019 - Public Hearing	Baffinland commits to investigate and implement NOX reductions measures, where feasible, and report on this in the 2021 annual air quality report (to be submitted by March 31, 2021).	NA	Note that reference to implementation in 2021 and/or 2022 was made prior to regulatory delays; implementation should occur in first year following approval.
59	HC-FC-02	HC	Socio-economic Environment	01 - November 2019 - Public Hearing	Baffinland will reflect the commitments provided in its response in the Air Quality and Noise Abatement Management Plan following the issuance of an amended Project Certificate. In the interim these commitments will be captured in a commitment register, to be provided to the Board during the Public Hearings. Baffinland does not object to having relevant terms and conditions modified to reflect this commitment. Baffinland commits to: <ul style="list-style-type: none"> Submit all air quality and meteorological monitoring data as part of the annual reports and compare the monitoring data to the Canadian Ambient Air Quality Standards, where applicable. Include any photos taken of dust on snow in the annual reports Present the predicted concentrations in the annual reports as a range of absolute concentrations Baffinland will: <ul style="list-style-type: none"> Complete the Air Quality and Noise Abatement Management Plan in consultation with HC and other interested interveners. Monitor PM2.5 and Total Suspended Particulates using continuous monitors at both Milne Port and the Mine site where monitoring already : he sites that already monitor NO2 and SO2 at both Milne Port and the Mine Site. New locations on or close to the Project Boundary at both the Milne Port and Mine Site. Update Air Quality and Noise Abatement Management Plan with the proposed changes. Baffinland will update the Air Quality and Noise Abatement Management Plan with the following text: "Use the existing continuous air quality monitors on site to validate the predictions of NO2 and other air quality contaminants in the EIS moving forward. Share results through reporting mechanisms, such as the annual report. Should exceedances occur beyond the EIS predictions, include an updated human health risk assessment in the annual report."	NA	This commitment will be implemented post PC approval
58	HC-FC-03	HC	Socio-economic Environment	01 - November 2019 - Public Hearing	Baffinland will continue with monitoring of COPCs reported in the country foods risk assessment during all phases (including closure). If increases in a specific COPC are confirmed to be occurring outside or inside (in the closure phase) of the Potential Development Area (PDA) and if country foods could be influenced by those changes, Baffinland will update the human health risk assessment model with the new data. Decisions related to extending the monitoring program to any relevant country foods would be made based on consideration of risk assessment outcomes. Updated modelling would be triggered by changes from any of the monitoring stations where harvesting could occur. Any remodeling effort should also consider changes (or lack thereof) using a distance gradient approach from the edge of PDA: Near (0–100 m); Far (101 –1,000 m); and Control (>1,000 m) and more ecologically relevant distant stations (i.e., those stations located between 100 m and 1,000 m from the PDA boundary). Consideration of change at PDA (closure phase), near sites (0 – 100m) and far sites (100 – 1,000 m), relative to baseline data, and environmental quality guidelines, in conjunction with statistical analyses, would be used to identify the need for supplementary risk assessment modelling.	NA	This commitment will be implemented post PC approval
57	HPI	HPI	Socio-economic Environment	01 - November 2019 - Public Hearing	Baffinland will undertake to encourage students and youth to consider possible careers with Baffinland.	NA	Implementation is ongoing, completion not required for environmental assessment purposes
56	HPI	HPI	Socio-economic Environment	01 - November 2019 - Public Hearing	Baffinland will undertake to promote access to employment for Inuit women. Following the Technical Meeting held in Iqaluit April 8-10, 2019, Baffinland committed to working with the GN through the implementation of the MOU to promote female employment at Mary River.	NA	Implementation is ongoing, completion not required for environmental assessment purposes
55	HPI	HPI	Socio-economic Environment	01 - November 2019 - Public Hearing	As part of Baffinland's early engagement in the planning stages for the Phase 2 Project, Mittimatalik raised concerns with respect to year round icebreaking resulting in Baffinland's commitment not to ship in land fast ice	NA	Implementation is ongoing, completion not required for environmental assessment purposes

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53	HPI	HPI	Socio-economic Environment	01 - November 2019 - Public Hearing	Baffinland remains committed to ongoing engagement with Mittimatalik throughout the Project's lifetime. As noted in Baffinland's new IQ Management Framework (Baffinland, 2019a), the Company is in the process of developing community-specific consultation guidelines for the North Baffin communities; these will be developed in consultation with individual communities in the near future. As the guidelines are developed, they will be appended to Baffinland's Community and Stakeholder Engagement Plan (TSD-28, Appendix Z).	NA	Implementation is ongoing, completion not required for environmental assessment purposes
51	HPI-1	HPI	Socio-economic Environment	01 - November 2019 - Public Hearing	Baffinland will conduct a review of internal procedures related to the conduct of community- focused research and identify areas for potential improvement. Baffinland will update its IQ Management Framework with information on research ethics and will provide clear direction on the procedures to be followed when applying for, securing, renewing, and reporting on research licensing. Baffinland will continue to engage the Nunavut Research Institute (NRI) in this process and will additionally provide NRI with annual IQ work plans for review and comment.	NA	This commitment will be implemented post PC approval
50	HPI-10	HPI	Socio-economic Environment	01 - November 2019 - Public Hearing	Baffinland is committed to using best efforts to improve its Inuit employment record each year, whether the MIEG has been met or not.	NA	Implementation is ongoing, completion not required for environmental assessment purposes
48	MHTO-2a	MHTO	Terrestrial Environment	01 - November 2019 - Public Hearing	Baffinland will undertake geotechnical drilling to further establish technical feasibility for Route 3, but at this time based on a preliminary review Baffinland does not anticipate that such drilling will reveal any fundamental issues with the route. This work will be carried out prior to construction.	NA	Baffinland has selected Route 3 as its preferred deviation alignment. There are no Post PC Amendment conditions required to finalize selection, including the results of geotechnical drilling.
47	MHTO-2b	MHTO	Socio-economic Environment	01 - November 2019 - Public Hearing	Baffinland has committed to the development of Community-specific engagement guidelines. Baffinland believes that the development and implementation of these guidelines will serve to improve the two-way dialogue between the Company and Inuit. These guidelines will be developed in consultation with the MHTO, as well as North Baffin community representatives. As the guidelines are developed, they will be appended to Baffinland's Community and Stakeholder Engagement Plan.	NA	This commitment will be implemented post PC approval
46	MHTO-3	MHTO	Terrestrial Environment	01 - November 2019 - Public Hearing	Baffinland is committed to continual improvement of its terrestrial monitoring program design, data analysis, and integration of Inuit perspectives and IQ.	NA	Implementation is ongoing, completion not required for environmental assessment purposes
45	MHTO-4a	MHTO	Marine Environment	01 - November 2019 - Public Hearing	Baffinland confirms it is committed to consultation with the MHTO regarding shipping plans.	NA	Implementation is ongoing, completion not required for environmental assessment purposes
43	MHTO-5e	MHTO	Marine Environment	01 - November 2019 - Public Hearing	Baffinland commits to continue to evaluate the feasibility of the development of a laboratory in Pond Inlet, in consultation with MHTO.	NA	This commitment will be implemented post PC approval See also DFO-3.10.3, QIA-44 (re pilot ballast water biological monitoring program)
42	MHTO-6	MHTO	Socio-economic Environment	01 - November 2019 - Public Hearing	With the discontinuation of ore haulage under Phase 2, it is possible for Baffinland to develop a policy that ensures the safety of all land users to travel the Tote Road with recreational vehicles, and that of Baffinland employees. Baffinland will look to engage the MHTO in the development of this policy, as well as the timeline for its implementation.	NA	This commitment will be implemented post PC approval
41	MHTO-7a	MHTO	Socio-economic Environment	01 - November 2019 - Public Hearing	Baffinland is committed to incorporating Inuit knowledge into its identification of indicators and development of thresholds. One example where this is currently being done is at the MEWG, which the MHTO is a member of, which is currently working on the development of early warning indicators for marine mammals.	NA	This commitment will be implemented post PC approval
40	NRCan-01	NRCan	Terrestrial Environment	01 - November 2019 - Public Hearing	Baffinland commits to: <ul style="list-style-type: none"> • Conducting the summer 2019 mapping program in areas where the railway corridor deviates from the Tote Road, including along the Route 1 deviation alignment. This summer mapping program was completed in summer 2019. • Conducting the winter 2019/2020 drilling program along the deviation route, following the proposed Route 3 deviation alignment, and near the port terminus to obtain additional information on subsurface conditions to inform the final design. • Conducting a pre-drilling program, to be completed by the railway contractor and supervised by BIM's Engineer during the construction period. Boreholes will be advanced into permafrost along the rail alignment prior to the railway earthworks. Boreholes will be used to delineate zones of ice-rich and ice-pore permafrost and to determine the required permafrost treatment prior to making cuts and placing fill for the embankments. • Installing thermistors and other monitoring instruments along the rail alignment including along the Route 3 deviation during the pre-drilling programs to establish baseline conditions prior and during rail construction. 	NA	This commitment will be implemented post PC approval

APPENDIX C: FINAL TABLE OF POST PHASE 2 APPROVAL/REGULATORY PHASE COMMITMENTS

ID#	FWS ID#	Intervener	Topic	Review Phase	Commitment	Current Status	Notes
39	NRCan-02	NRCan	Terrestrial Environment	01 - November 2019 - Public Hearing	Baffinland commits to: Implementing the recommendations to accommodate the 30-year design life provided in the project memorandum 'Analysis of Proposed Rail Line Cut Sections and Port Area Structures Considering a Mine Life of 30 Years' (Hatch, 2019) including those related to pile length embedment and number of piles required for foundations. Continue to refine the thermal, stability and creep analysis incorporating new data collected during geotechnical investigations and from instrumentation along the railway corridor, along the Route 3 deviation alignment as well the rail alignments outside the rail deviation, to support final design of embankments and bridges. Consider local factors (such as snow accumulation and presence of water bodies) in the 2D thermal modelling to support final design of embankments, cuts and bridges. Establish instrumentation along the rail alignment, including along the Route 3 deviation alignment, prior to and during construction to improve characterization of baseline ground conditions, support final design, evaluate impacts due to construction and railway performance, and to inform the implementation of mitigation /maintenance measures when triggers are reached.	NA	This commitment will be implemented post PC approval
38	PCA-02	PCA	Marine Environment	01 - November 2019 - Public Hearing	Baffinland commits to amend the Terms of Reference for the MEWG in collaboration with MEWG Members.	NA	This commitment will be implemented post PC approval Resolution is pending resolution of outstanding DFO issues
37	PCA-04c	PCA	Marine Environment	01 - November 2019 - Public Hearing	Should Phase 2 be approved, Baffinland will continue to engage DFO and Parks Canada through the MEWG for the purposes of ensuring our proposed mitigation and monitoring programs are robust, effective, and responsive.	NA	This commitment will be implemented post PC approval Resolution is pending resolution of outstanding DFO issues
36	QIA-01	QIA	Terrestrial Environment	01 - November 2019 - Public Hearing	Baffinland commits to support a harvester's survey as described by QIA in QIA-01, however, such a study must be led by harvesters, not Baffinland.	NA	This commitment will be implemented post PC approval; BIM and QIA to determine integration with Inuit Stewardship Plan
33	QIA-02	QIA	Terrestrial Environment	01 - November 2019 - Public Hearing	Based on input provided during the Crossing Selection Workshop from HTO participants representing Pond Inlet, Igloodik, as well as QIA and GN, the following modifications have been proposed for the design of the North Railway to aid in caribou crossing: <ul style="list-style-type: none"> • 30 level crossings to be installed at locations identified by community representatives during the workshop (subject to Transport Canada and Community Acceptance). • A smoother fill material (Type 8 - 6 inches or less in size) will be used along the entire railway embankment (change from Type 12 - 24 inches or less). • A gentler slope (1:2 ratio) will be used for all portions of the railway embankment between 2 and 4 meters (change from 1:1.5). • A gentler slope will be created at the edges of crossings to assure approach from any angle is safe. • 4 additional plate arch culverts will be installed in areas where the railway embankment is high enough to allow an underpass (10 plate arch culverts were already proposed at fish bearing water crossings, which may also serve to allow passage for terrestrial wildlife throughout the year). 	NA	This commitment will be implemented post PC approval
32	QIA-02	QIA	Terrestrial Environment	01 - November 2019 - Public Hearing	Baffinland commits to the following mitigation measures with respect to the operation of the railway to reduce interference with caribou: <ul style="list-style-type: none"> • Temporary speed restrictions may be implemented in areas where caribou have been observed over the previous 24hrs. • Permanent speed restrictions of 30km/hr will be applied to sections with steep hills for train safety. • If large groups of migratory caribou are moving through the area, rail operations will be temporarily suspended to allow caribou to cross the rail line. • In white out conditions, train crews will be required to travel at a speed suitable to stop before hitting an object based on sight distance, i.e. if you can see 50m ahead you need to be able to stop in 25m. 	NA	This commitment will be implemented post PC approval
30	QIA-04	QIA	Marine Environment	01 - November 2019 - Public Hearing	Baffinland commits to developing a ringed seal monitoring plan that incorporates Inuit perspectives into the design, planning and implementation phases.	NA	This commitment will be implemented post PC approval
26	QIA-22	QIA	Corporate Environment	01 - November 2019 - Public Hearing	Unless otherwise approved by the NIRB, the average number of ore haul truck transits along the Milne Inlet Tote Road should not exceed 280 for the duration of the Phase 2 construction period.	NA	This commitment will be implemented post PC approval
25	QIA-24 QIA-26	QIA	Corporate Environment	01 - November 2019 - Public Hearing	The final monitoring plan for the operations phase of the railway will be finalized following completion of the construction monitoring phase, when data collected has been analyzed and final recommendations can be provided. Adaptive management will be incorporated into the rail geotechnical monitoring program, to the extent practical.	NA	This commitment will be implemented post PC approval
24	QIA-31	QIA	Corporate Environment	01 - November 2019 - Public Hearing	Regarding the North Railway, Baffinland is committed to providing a construction plan that indicates specific monitoring locations and site-specific conditions that would lead to additional monitoring locations, and what construction monitoring results would trigger additional monitoring during operations which will be provided through the water licensing and Commercial Lease. These monitoring programs are currently being incorporated into an update to the Surface Water and Aquatic Ecosystems Management Plan that will be provided to the Nunavut Water Board in advance of the NWB technical meeting on November 12-13, 2019.	NA	This commitment will be implemented post PC approval

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ID#	FWS ID#	Intervener	Topic	Review Phase	Commitment	Current Status	Notes
23	QIA-33 QIA-34 QIA-35 QIA-36	QIA	Socio-economic Environment	01 - November 2019 - Public Hearing	Baffinland will work with QIA to develop an updated Inuit Training Plan that covers the period between Phase 2 construction and the first three years of operations. This plan will provide updates on programs that will be offered and how Baffinland intends to maximize Inuit engagement with the Project. This updated plan will be developed within six months of issuance of the amended Project Certificate.	NA	This commitment will be implemented post PC approval
22	QIA-37 QIA-39	QIA	Socio-economic Environment	01 - November 2019 - Public Hearing	Baffinland commits to continue to work with QIA to mitigate negative impacts and enhance positive Project opportunities and benefits through the Mary River IIBA.	NA	This commitment will be implemented post PC approval
20	QIA-41	QIA	Freshwater Environment	01 - November 2019 - Public Hearing	The Tote Road Monitoring Program will be expanded to include the future railway development, both in proximity to the existing Tote Road Monitoring Program locations and along the rail route deviation from the Tote Road. Baffinland has committed to long-term monitoring of water quality within the Northern Transportation Corridor with the Tote Road Monitoring Program to assess the potential for project-related effects on water quality. Until monitoring of water quality indicates the potential for the Project to have an effect on water quality, the expansion of monitoring to include sediment quality and biota in Phillips Creek is not necessary. Should impacts to Arctic char populations be identified through the AEMP studies, the source of these effects will be evaluated through review of all potential variables including sedimentation. Baffinland will continue to utilize the 1mm threshold for sedimentation effects.	NA	This commitment will be implemented post PC approval
19	QIA-42	QIA	Freshwater Environment	01 - November 2019 - Public Hearing	Baffinland has committed to continue to address existing fish passage issues on the Tote Road, and to address fish passage issues on the railway during the design phase, with verification monitoring post-construction. Baffinland will evaluate fish passage along the alternative rail line but this may not be done before the November NWB technical meetings. This is mainly an issue for the Fisheries Act authorization.	NA	This commitment will be implemented post PC approval
18	QIA-43	QIA	Terrestrial Environment	01 - November 2019 - Public Hearing	Baffinland has committed to conducting a desktop review of available data to evaluate the hydrological, geomorphological and sediment transport regime at the Project site.	NA	This commitment will be implemented post PC approval
16	QIA-46	QIA	Marine Environment	01 - November 2019 - Public Hearing	Baffinland will continue to work with members of the MEWG on the selection of appropriate Early Warning Indicators (EWIs) for noise impacts on marine mammals, for implementation prior to the start of Phase 2 shipping.	NA	Implementation is ongoing, completion not required for environmental assessment purposes
15	QIA-47	QIA	Marine Environment	01 - November 2019 - Public Hearing	Baffinland provided a detailed Draft Communication Protocol as part of the Phase 2 submission. The communication protocol is considered a live document, and will be updated on an annual basis, as needed, based on feedback about the effectiveness of the communication system received by MHTO during annual pre- and end-of-season shipping meetings. Additional communication tools or frequencies may also be adjusted ad hoc throughout the shipping season to address real-time concerns, which would again be captured in annual updates to the protocol as needed.	NA	Implementation is ongoing, completion not required for environmental assessment purposes
14	QIA-48, TC-04	QIA	Marine Environment	01 - November 2019 - Public Hearing	Baffinland will ensure there is a consistent description of ice conditions amongst its relevant management plans and standards of practice and that these terms are translated to Inuktitut for use more generally. Baffinland commits to providing dates and information on the conditions under which the shipping season was opened and closed each season in its Annual Report to NIRB.	NA	Implementation is ongoing, completion not required for environmental assessment purposes
13	QIA-50	QIA	Marine Environment	01 - November 2019 - Public Hearing	Baffinland formally commits to not having vessels go into the North Water Polynya (Pikialasorsuaq), subject to vessel safety. This commitment will be recognized in the Shipping and Marine Wildlife Management Plan and the Standing Instructions to Masters.	NA	This commitment will be implemented post PC approval
12	QIA-53	QIA	Marine Environment	01 - November 2019 - Public Hearing	BIM does recognize that there may be interactions between its vessels and other activity outside the RSA and agrees to participate as a key stakeholder in regional federal government initiatives and programs including federal initiatives aimed at evaluating regional cumulative effects in the Eastern Canadian Arctic.	NA	This commitment will be implemented post PC approval
11	TC-01	TC	Corporate Environment	01 - November 2019 - Public Hearing	Baffinland will contact Transport Canada's NPP Office prior to the submittal of any information to confirm regulatory requirements under the CNWA, should the project be approved to proceed.	NA	This commitment will be implemented post PC approval
9	TC-04	TC	Corporate Environment	01 - November 2019 - Public Hearing	For the purposes of shoulder season vessel traffic management, Baffinland considers uninterrupted transits through ice concentrations of 3/10 or less as the open water shipping season. This will be considered in any relevant management plans or operating procedures.	NA	This commitment will be implemented post PC approval
8	TC-05	TC	Marine Environment	01 - November 2019 - Public Hearing	Baffinland will make the recommended change from TC-05 to the Spill at Sea Response Plan (SSRP).	NA	This commitment will be implemented post PC approval
7	TC-06	TC	Marine Environment	01 - November 2019 - Public Hearing	Baffinland will update the SSRP to designate additional Tier 2 response equipment at Milne Port to enable a dual response as proposed by Transport Canada.	NA	This commitment will be implemented post PC approval
6	TC-07	TC	Marine Environment	01 - November 2019 - Public Hearing	Baffinland agrees that the use of lifeboats should be avoided and will be removed as part of the spill response equipment on pages 88 and 103 of the SSRP.	NA	This commitment will be implemented post PC approval

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ID#	FWS ID#	Intervener	Topic	Review Phase	Commitment	Current Status	Notes
5	TC-08	TC	Marine Environment	01 - November 2019 - Public Hearing	Baffinland will update the SSRP to make it clear no oil discharge is permitted in Arctic waters per the ASSPPR.	NA	This commitment will be implemented post PC approval
4	WWF-FWS 01	WWF	Marine Environment	01 - November 2019 - Public Hearing	Baffinland is committed to the development of Early Warning Indicators but must reiterate this is not a conventional undertaking and all members of the MEWG are expected to provide meaningful input. As Phase 2 levels of shipping are not expected to occur before 2024 Baffinland is confident that Early Warning Indicators will be developed by that time based on a rigorous investigation of IQ and Inuit perspectives, scientific literature, and the expert opinions of MEWG members.	NA	This commitment will be implemented post PC approval
3	WWF-FWS 02	WWF	Corporate Environment	01 - November 2019 - Public Hearing	The NIRB has already initiated the development of the Mary River Monitoring Framework for attachment to Project Certificate 005, circulating a draft Appendix A Framework for public comment in 2017. Baffinland supports this initiative and will continue to participate in the development process following the completion of the Phase 2 reconsideration process.	NA	This commitment will be implemented post PC approval
2	WWF-FWS 04	WWF	Marine Environment	01 - November 2019 - Public Hearing	Baffinland commits to take part in a Marine Spatial Planning exercise, should an appropriate regional body lead the initiative.	NA	This commitment will be implemented post PC approval
1	WWF-FWS 08	WWF	Atmospheric Environment	01 - November 2019 - Public Hearing	Baffinland is committed to developing a comprehensive Climate Change Strategy. A critical component of this strategy will relate to the marine environment, where important developments are occurring at the international level that our world class fleet of vessels and ship contractors are poised to comply with, including the 2020 Sulphur Cap and a potential ban on Heavy Fuel Oil in the Arctic.	NA	This commitment will be implemented post PC approval

APPENDIX F LISTS OF EXHIBITS FROM PUBLIC HEARING SESSIONS

BAFFINLAND’S MARY RIVER PROJECT “PHASE 2 DEVELOPMENT PROPOSAL”

PUBLIC HEARING NOVEMBER 2-6, 2019 (IQUALUIT)

Exhibit No.	Date of Receipt	Exhibit Description	Party Tendering Exhibit	NIRB Doc. ID
1	November 2, 2019	Hard Copy PowerPoint Presentation Introduction: Phase 2 Proposal Final Hearing Iqaluit and Pond Inlet November 2019 <i>(English)</i>	Baffinland Iron Mines Corporation	327468
2	November 2, 2019	Hard Copy PowerPoint Presentation Introduction: Phase 2 Proposal Final Hearing Iqaluit and Pond Inlet November 2019 <i>(Inuktitut)</i>	Baffinland Iron Mines Corporation	327471
3	November 2, 2019	Hard Copy PowerPoint Presentation Introduction: Phase 2 Proposal Final Hearing Iqaluit and Pond Inlet November 2019 <i>(French)</i>	Baffinland Iron Mines Corporation	327472
4	November 3, 2019	Hard Copy PowerPoint Presentation Public Consultation and Inuit Qaujimajatuqangit Final Hearing Iqaluit and Pond Inlet November 2019 <i>(English)</i>	Baffinland Iron Mines Corporation	327473
5	November 3, 2019	Hard Copy PowerPoint Presentation Public Consultation and Inuit Qaujimajatuqangit Final Hearing Iqaluit and Pond Inlet November 2019 <i>(Inuktitut)</i>	Baffinland Iron Mines Corporation	327474

Exhibit No.	Date of Receipt	Exhibit Description	Party Tendering Exhibit	NIRB Doc. ID
6	November 3, 2019	Hard Copy PowerPoint Presentation Introduction: Phase 2 Proposal Final Hearing Iqaluit and Pond Inlet November 2019 <i>(French)</i>	Baffinland Iron Mines Corporation	327477
7	November 3, 2019	Hard Copy 2017-09-27 - Pond Inlet Hamlet Submission re NBRLUP Amendment #3 <i>(English/Inuktitut)</i>	Mittimatalik Hunters and Trappers Organizatio n	327478
8	November 3, 2019	Hard Copy 2017-09-29 - Mittimatalik (Pond Inlet) HTO Submission re NBRLUP Amendment #3 <i>(English/Inuktitut)</i>	Mittimatalik Hunters and Trappers Organizatio n	327479
9	November 3, 2019	Hard Copy 2017-12-01 - Resolute HTO & Hall Beach HTO Letters of Support to Mittimatalik HTO re NBRLUP Amendment 3 <i>(English/Inuktitut)</i>	Mittimatalik Hunters and Trappers Organizatio n	327480
10	November 3, 2019	Electronic Copy Only 2017-11-17 - Pond Inlet, Mary River Phase 2 Review Committee Submission re NBRLUP Amendment #3 <i>(English)</i>	Mittimatalik Hunters and Trappers Organizatio n	327481
11	November 3, 2019	Hard Copy 2018-03-18 NPC Recommendation Re NBRLUP Amendment No 3 <i>(English)</i>	Mittimatalik Hunters and Trappers Organizatio n	327482

Exhibit No.	Date of Receipt	Exhibit Description	Party Tendering Exhibit	NIRB Doc. ID
12	November 4, 2019	Hard Copy PowerPoint Presentation Alternatives Analysis Final Hearing Iqaluit and Pond Inlet November 2019 <i>(English)</i>	Baffinland Iron Mines Corporation	327483
13	November 4, 2019	Hard Copy PowerPoint Presentation Alternatives Analysis Final Hearing Iqaluit and Pond Inlet November 2019 <i>(Inuktitut)</i>	Baffinland Iron Mines Corporation	327484
14	November 4, 2019	Hard Copy PowerPoint Presentation Alternatives Analysis Final Hearing Iqaluit and Pond Inlet November 2019 <i>(French)</i>	Baffinland Iron Mines Corporation	327485
15	November 4, 2019	Hard Copy PowerPoint Presentation Terrestrial Environment Final Hearing Iqaluit and Pond Inlet November 2019 <i>(English)</i>	Baffinland Iron Mines Corporation	327489
16	November 4, 2019	Hard Copy PowerPoint Presentation Terrestrial Environment Final Hearing Iqaluit and Pond Inlet November 2019 <i>(Inuktitut)</i>	Baffinland Iron Mines Corporation	327493
17	November 4, 2019	Hard Copy PowerPoint Presentation Terrestrial Environment Final Hearing Iqaluit and Pond Inlet November 2019 <i>(French)</i>	Baffinland Iron Mines Corporation	327494

Exhibit No.	Date of Receipt	Exhibit Description	Party Tendering Exhibit	NIRB Doc. ID
18	November 5, 2019	Hard Copy Excerpt from Government of Nunavut Report <i>Research and Management Initiatives by Region and Species</i> ; Statutory Report on Wildlife 2018 Excerpt: Barren-ground Caribou Seasonal Range Analysis, Pages 52-55 (English)	Mittimatalik Hunters and Trappers Organization	327495
19	November 5, 2019	Electronic Copy PowerPoint Presentation Hamlet of Mittimatalik (Pond Inlet) Public Hearing Baffinland Phase 2 Expansion (English)	Hamlet of Mittimatalik (Pond Inlet)	327496
20	November 6, 2019	Hard Copy Map North Baffin Island Caribou Population Cycle FEIS Appendix 6-F Wildlife Baseline Report, Figure 3	Baffinland Iron Mines Corporation	327497
21	November 6, 2019	Hard Copy Governance Statement Concerning Baffin Island Caribou and Inuit (English)	Amarok Hunters and Trappers Association	327498
22	November 6, 2019	Hard Copy Governance Statement Concerning Baffin Island Caribou and Inuit (Inuktitut)	Amarok Hunters and Trappers Association	327499
23	November 6, 2019	Hard Copy Speaking Notes to PowerPoint Presentation of the Hamlet of Mittimatalik (Pond Inlet) (Exhibit 19) (English)	Hamlet of Mittimatalik (Pond Inlet)	327500

EXTENDED PUBLIC HEARING JANUARY 25-FEBRUARY 6, 2021 (POND INLET)

Exhibit No.	Date of Receipt	Exhibit Description	Party Tendering Exhibit	NIRB Doc. ID
1	January 25, 2021	Hard Copy PowerPoint Presentation Introduction and Project OverviewPhase 2 Proposal Public Hearing Iqaluit and PondInlet January 25 – February 6, 2021 <i>(English/Inuktitut)</i>	Baffinland Iron Mines Corporation	333374
2	January 26, 2021	Hard Copy PowerPoint Presentation Public Consultation, Inuit Qaujimagatuqangit (IQ),Alternatives Assessment Phase 2 Proposal Public Hearing Iqaluit and Pond Inlet January 25 – February 6, 2021 <i>(English/Inuktitut)</i>	Baffinland Iron Mines Corporation	333375
3	January 26, 2021	Electronic Copy RE: Draft Revised ProjectCertificate No. 005 for Phase 2 (updated version from August 2019) <i>(English)</i>	Baffinland Iron Mines Corporation	332729
4	January 27, 2021	Hard Copy PowerPoint Presentation Atmospheric Environment Phase 2 Proposal Public Hearing Iqaluit and PondInlet January 25 – February 6, 2021 <i>(English/Inuktitut)</i>	Baffinland Iron Mines Corporation	333376
5	January 27, 2021	Hard Copy PowerPoint Presentation Freshwater EnvironmentPhase 2 Proposal Public Hearing Iqaluit and Pond Inlet January 25 – February 6, 2021 <i>(English/Inuktitut)</i>	Baffinland Iron Mines Corporation	333377

Exhibit No.	Date of Receipt	Exhibit Description	Party Tendering Exhibit	NIRB Doc. ID
6	January 27, 2021	Hard Copy PowerPoint Presentation Human Health Exposure Phase 2 Proposal Public Hearing Iqaluit and Pond Inlet January 25 – February 6, 2021 (English/Inuktitut)	Baffinland Iron Mines Corporation	333379
7	January 28, 2021	Hard Copy PowerPoint Presentation Terrestrial Environment Public Hearing Iqaluit and Pond Inlet January 25 – February 6, 2021 (English/Inuktitut)	Baffinland Iron Mines Corporation	333380
8	January 28, 2021	Electronic Copy PowerPoint Presentation Two Slides – Caribou Migration Public Hearing Iqaluit and Pond Inlet January 25 – February 6, 2021 (English/Inuktitut)	Baffinland Iron Mines Corporation	333304
9	January 29, 2021	Hard Copy PowerPoint Presentation Marine Environment Public Hearing Iqaluit and Pond Inlet January 25 – February 6, 2021 (English/Inuktitut)	Baffinland Iron Mines Corporation	333381
10	January 29, 2021	Electronic Copy Baffinland Correspondence dated January 13, 2021: Response to Hamlet of Pond Inlet Proposal (English/Inuktitut)	Baffinland Iron Mines Corporation	Note: Filed as Attachment 1 in Exhibit 15 (ID No: 332819)
11	January 29, 2021	Electronic Copy Power Point Slides on Marine Noise. (Visual aids for reference in relation to slides 44 and 47 of Exhibit #9) (English)	Baffinland Iron Mines Corporation	332816

Exhibit No.	Date of Receipt	Exhibit Description	Party Tendering Exhibit	NIRB Doc. ID
12	January 29, 2021	Electronic Copy Power Point slides on narwhal harvest data and landed narwhal catch (English)	Baffinland Iron Mines Corporation	332817 & 332818
13	January 29, 2021	Electronic Copy Key Topics Reference Guide, previously filed with NIRB on December 18, 2020 (English/Inuktitut)	Baffinland Iron Mines Corporation	332182 & 332537
14	January 29, 2021	Electronic Copy Summary of Significance, previously filed with NIRB on December 18, 2020 (English/Inuktitut)	Baffinland Iron Mines Corporation	332183 & 332536
15	January 29, 2021	Electronic Copy Baffinland Response to Hamlet of Pond Inlet (Mittimatalik) Announcement with regard to Support for Baffinland Iron Mines Corporation Phase 2 Expansion of the Mary River Project (English/Inuktitut)	Baffinland Iron Mines Corporation	332819
16	January 30, 2021	Electronic Copy Written Motion of the Ikajutit Arctic Bay Hunters and Trappers Organization and affidavit of Moses Koonoo Provided to the Board on January 30, 2021; presented as an Oral Motion on February 1, 2021 (English)	Ikajutit Arctic Bay Hunters and Trappers Organization	333302
17	January 30, 2021	Electronic Copy Mary River Project Economics Explained Brief concerning for the Nunavut Impact Review Board Baffinland's Phase 2 Development Project Proposal (Prepared by Impact Economics) Dated January 29, 2021 (English/Inuktitut)	Baffinland Iron Mines Corporation	332873
18	January 30, 2021	Electronic Copy Resume for Graeme Clinton (Impact Economics) (English)	Baffinland Iron Mines Corporation	332874

Exhibit No.	Date of Receipt	Exhibit Description	Party Tendering Exhibit	NIRB Doc. ID
19	February 1, 2021	Electronic Copy Written version of the Oral Motion of the Mittimatalik Hunters and Trappers Organization presented on January 30, 2021 <i>(English)</i>	Mittimatalik Hunters and Trappers Organization	332835
20	February 1, 2021	Electronic Copy Written Reply of Baffinland IronMines Corporation to the Motion of the Mittimatalik Hunters and Trappers Organization presented on January 30, 2021 <i>(English)</i>	Baffinland Iron Mines Corporation	332834
21	February 1, 2021	Electronic Copy Response of the Hamlet of Pond Inlet to the Motions to Extend the Public Hearing <i>(English)</i>	Hamlet of Pond Inlet	332836
22	February 3, 2021	Electronic Copy Picture of Marenzelleria viridis	Baffinland Iron Mines Corporation	333305
23	February 3, 2021	Electronic Copy Written Notice of Objection Received from C. Debicki, Oceans North <i>(English)</i>	Oceans North	332896
24	February 3, 2021	Electronic Copy Reply to the Notice of Objection from Oceans North <i>(English)</i>	Mittimatalik Hunters and Trappers Organization	332901
25	February 3, 2021	Electronic Copy Reply to the Notice of Objection from Oceans North <i>(English)</i>	Qikiqtani Inuit Association	332902

Exhibit No.	Date of Receipt	Exhibit Description	Party Tendering Exhibit	NIRB Doc. ID
26	February 3, 2021	Hard Copy PowerPoint Presentation Socio-Economics and Food Security Public Hearing Iqaluit and Pond Inlet January 25-February 6, 2021 <i>(English/Inuktitut)</i>	Baffinland Iron Mines Corporation	333411
27	February 3, 2021	Hard Copy PowerPoint Presentation Adaptive Management, Management Plans and Monitoring Programs Public Hearing Iqaluit and Pond Inlet January 25 – February 6, 2021 <i>(English/Inuktitut)</i>	Baffinland Iron Mines Corporation	333412
28	February 3, 2021	Electronic Copy Reply to the Notice of Objection from Oceans North <i>(English)</i>	Nunavut Tungavik Incorporated	332903
29	February 4, 2021	Electronic Copy Reply to the Notice of Objection from Oceans North <i>(English)</i>	Ikajutit (Arctic Bay) Hunters and Trappers Organization	332904
30	February 4, 2021	Hard Copy PowerPoint Presentation Presentation to the Nunavut Impact Review Board Regarding Baffinland Iron Mines Corp “Phase 2 Development” Proposal January 25 – February 6, 2021 <i>(English)</i>	Qikiqtani Inuit Association	333413
31	February 4, 2021	Hard Copy PowerPoint Presentation Presentation to the Nunavut Impact Review Board Regarding Baffinland Iron Mines Corp. “Phase 2 Development” Proposal January 25 – February 6, 2021 <i>(Inuktitut)</i>	Qikiqtani Inuit Association	333414

Exhibit No.	Date of Receipt	Exhibit Description	Party Tendering Exhibit	NIRB Doc. ID
32	February 4, 2021	Electronic Copy QIA 2020 Community Engagement Summary – Mary River Project (English)	Qikiqtani Inuit Association	332937
33	February 4, 2021	Electronic Copy QIA 2020 Community Engagement Summary – Mary River Project (Inuktitut)	Qikiqtani Inuit Association	332938
34	February 4, 2021	Electronic Copy PowerPoint Slides Enhancing Inuit Participation (English/Inuktitut)	Qikiqtani Inuit Association	332939
35	February 4, 2021	Electronic Copy Reply to the Notice of Objection from Oceans North (English)	Government of Nunavut	332907
36	February 4, 2021	Electronic Copy Motion of the Amaruq Hunters and Trappers Organization in Reply to the Notice of Objection from Oceans North (English)	Amaruq Hunters and Trappers Organization	332997
37	February 4, 2021	Hard Copy Speaking Notes for the Nunavut Tunngavik Incorporated Presentation to the NIRB Public Hearing on the Mary River Phase 2 Development Proposal (English)	Nunavut Tunngavik Incorporated	333415
38	February 4, 2021	Hard Copy Speaking Notes for the Nunavut Tunngavik Incorporated Presentation to the NIRB Public Hearing on the Mary River Phase 2 Development Proposal (Inuktitut)	Nunavut Tunngavik Incorporated	333416
39	February 4, 2021	Electronic Copy Nunavut Tunngavik Incorporated's submission on the narwhal and Inuit harvest data presented by Baffinland (English)	Nunavut Tunngavik Incorporated	332958

Exhibit No.	Date of Receipt	Exhibit Description	Party Tendering Exhibit	NIRB Doc. ID
40	February 4, 2021	Hard Copy PowerPoint Presentation NIRB Final Hearing Baffinland Iron Mine Corporation's "Phase 2 Development" Project Proposal (English)	Government of Nunavut	333417
41	February 4, 2021	Hard Copy PowerPoint Presentation NIRB Final Hearing Baffinland Iron Mines Corporation's "Phase 2 Development" Project Proposal (Inuktitut)	Government of Nunavut	333418
42	February 4, 2021	Electronic Copy Reply to the Notice of Objection from Oceans North (English)	World Wildlife Fund	332908
43	February 4, 2021	Electronic Copy Reply to the Notice of Objection from Oceans North (English)	Hamlet of Pond Inlet	332909
44	February 4, 2021	Electronic Copy Reply to the Notice of Objection from Oceans North (English)	Igloodik Working Group	332910
45	February 4, 2021	Hard Copy NIRB Final Hearing Crown-Indigenous Relations and Northern Affairs Canada Pond Inlet, Iqaluit, Ottawa January 25-February 6, 2021 (English)	Crown-Indigenous Relations and Northern Affairs Canada	333419

Exhibit No.	Date of Receipt	Exhibit Description	Party Tendering Exhibit	NIRB Doc. ID
46	February 4, 2021	<p>Hard Copy NIRB Final Hearing Crown-Indigenous Relations and Northern Affairs Canada Pond Inlet, Iqaluit, Ottawa January 25-February 6, 2021 <i>(Inuktitut)</i></p>	Crown-Indigenous Relations and Northern Affairs Canada	333420
47	February 4, 2021	<p>Hard Copy Environment and Climate Change Canada’s Presentation to the Nunavut Impact Review Board Respecting the Mary River Phase 2 Development Proposal <i>(English)</i></p>	Environment and Climate Change Canada	333422
48	February 4, 2021	<p>Hard Copy Environment and Climate Change Canada’s Presentation to the Nunavut Impact Review Board Respecting the Mary River Phase 2 Development Proposal <i>(Inuktitut)</i></p>	Environment and Climate Change Canada	333423
49	February 4, 2021	<p>Hard Copy Baffinland Iron Mines Corporation’s Mary River Project “Phase 2 Development” Presentation to the Nunavut Impact Review Board <i>(English)</i></p>	Fisheries and Oceans Canada	333424
50	February 4, 2021	<p>Hard Copy Baffinland Iron Mines Corporation’s Mary River Project “Phase 2 Development” Presentation to the Nunavut Impact Review Board <i>(Inuktitut)</i></p>	Fisheries and Oceans Canada	333425
51	February 4, 2021	<p>Electronic Copy Reply to the Notice of Objection from Oceans North <i>(English)</i></p>	Baffinland Iron Mines Corporation	332996

Exhibit No.	Date of Receipt	Exhibit Description	Party Tendering Exhibit	NIRB Doc. ID
52	February 4, 2021	Hard Copy Mary River Phase 2 Final Hearing Presentation (English)	Health Canada	333426
53	February 4, 2021	Hard Copy Mary River Phase 2 Final Hearing Presentation (Inuktitut)	Health Canada	333427
54	February 4, 2021	Hard Copy Natural Resources Canada's Final Hearing Presentation: Baffinland Iron Mines Corporation's Phase 2 Development Proposal (English)	Natural Resources Canada	338616
55	February 4, 2021	Hard Copy Natural Resources Canada's Final Hearing Presentation: Baffinland Iron Mines Corporation's Phase 2 Development Proposal (Inuktitut)	Natural Resources Canada	338617
56	February 4, 2021	Hard Copy Parks Canada Presentation Mary River Phase 2 Development Public Hearing January 25 – February 6, 2021 (English)	Parks Canada	333428
57	February 4, 2021	Hard Copy Parks Canada Presentation Mary River Phase 2 Development Public Hearing January 25 – February 6, 2021 (Inuktitut)	Parks Canada	333429
58	February 4, 2021	Hard Copy Parks Canada Presentation Mary River Phase 2 Development Public Hearing January 25 – February 6, 2021 (French)	Parks Canada	333433

Exhibit No.	Date of Receipt	Exhibit Description	Party Tendering Exhibit	NIRB Doc. ID
59	February 4, 2021	Hard Copy Transport Canada Presentation Baffinland Iron Mines Corporation Phase 2 Development Proposal (<i>Inuktitut</i>)	Transport Canada	333434
60	February 4, 2021	Hard Copy Transport Canada Final Hearing Presentation Baffinland Iron Mines Corporation Phase 2 Development Proposal (<i>English</i>)	Transport Canada	333435
61	February 5, 2021	Hard Copy PowerPoint Presentation MHTO Intervention: Public Hearing for Mary River Phase 2 Proposal Submitted January 18, 2021 (<i>English</i>)	Mittimatalik Hunters and Trappers Organization	333436
62	February 5, 2021	Hard Copy PowerPoint Presentation MHTO Intervention: Public Hearing for Mary River Phase 2 Proposal Submitted January 18, 2021 (<i>Inuktitut</i>)	Mittimatalik Hunters and Trappers Organization	333438
63	February 5, 2021	Electronic Copy Northern Contaminants Program 2017-2018 Synopsis of Research Report (James Simonee); (<i>English</i>)	Mittimatalik Hunters and Trappers Organization	332990
64	February 5, 2021	Electronic Copy Northern Contaminants Program 2018-2019 Synopsis of Research Report (James Simonee); (<i>English</i>)	Mittimatalik Hunters and Trappers Organization	332991

Exhibit No.	Date of Receipt	Exhibit Description	Party Tendering Exhibit	NIRB Doc. ID
65	February 5, 2021	Electronic Copy Trace metals and Persistent Organic Pollutants concentrations in Narwhals from the Eclipse Sound (Vincent L'Herault and James Simonee). <i>(English)</i>	Mittimatalik Hunters and Trappers Organization	332993
66	February 5, 2021	Electronic Copy Developing local research capacity for the monitoring of marine resources near Pond Inlet, Nunavut [Poster] (Vincent L'Herault, James Simonee and others) <i>(English)</i>	Mittimatalik Hunters and Trappers Organization	332992
67	February 5, 2021	Electronic Copy Cortisol levels in narwhal (Monodon monoceros) blubber from 2000-2019 (Vincent L'Herault, James Simonee and others) <i>(English)</i>	Mittimatalik Hunters and Trappers Organization	332989
68	February 5, 2021	Electronic Copy Reply to the Notice of Objection from Oceans North <i>(English)</i>	Government of Canada	333012
69	February 5, 2021	Electronic Copy PowerPoint Presentation A Summary of Submissions made to the NIRB by the Hamlet of Pond Inlet <i>(English)</i>	Hamlet of Pond Inlet	332702
70	February 5, 2021	Electronic Copy Notice of Motion of Oceans North Regarding filing of Preliminary Information Circular <i>(English)</i>	Oceans North	333013
71	February 5, 2021	Electronic Copy PowerPoint Presentation Igloodik Working Group <i>(English)</i>	Igloodik Working Group	333005

Exhibit No.	Date of Receipt	Exhibit Description	Party Tendering Exhibit	NIRB Doc. ID
72	February 5, 2021	Electronic Copy Presentation Notes (English)	Ikajutit (Arctic Bay) Hunters and Trappers Association	333018
73	February 5, 2021	Hard Copy Hamlet of Sanirajak Presentation Notes (English)	Hamlet of Sanirajak	333439
74	February 5, 2021	Hard Copy Hamlet of Sanirajak Presentation Notes (Inuktitut)	Hamlet of Sanirajak	333008
75	February 5, 2021	Electronic Copy Objection of the Mittimatalik Hunters and Trappers Organization (English)	Mittimatalik Hunters and Trappers Organization	333166
76	February 5, 2021	Electronic Copy PowerPoint Presentation Presentation to NIRB Final Hearing for the proposed Phase 2 expansion (English)	Hamlet of Clyde River/ Nangmautaq Hunters and Trappers Association	333002
77	February 5, 2021	Electronic Copy PowerPoint Presentation Presentation to NIRB Final Hearing for the proposed Phase 2 expansion (Inuktitut)	Hamlet of Clyde River/ Nangmautaq Hunters and Trappers Association	333003
78	February 5, 2021	Electronic Copy Reply to the Notice of Objection from Oceans North (English)	Hamlet of Pond Inlet	333167

Exhibit No.	Date of Receipt	Exhibit Description	Party Tendering Exhibit	NIRB Doc. ID
79	February 5, 2021	Electronic Copy Amaruq Hunters and Trappers Association Governance Document & Presentation to Nunavut Impact Review Board <i>(English)</i>	Amaruq Hunters and Trappers Association	333001
80	February 5, 2021	Electronic Copy Amaruq Hunters and Trappers Association Governance Document & Presentation to Nunavut Impact Review Board <i>(Inuktitut)</i>	Amaruq Hunters and Trappers Association	333000
81	February 5, 2021	Electronic copy Nunavut Independent Television (NITV) Intervenor Presentation Nunavut Impact Review Board Public Hearings on the Mary River Phase 2 Development Proposal February 5, 2021 <i>(English)</i>	Nunavut Independent Television Network	333007
82	February 5, 2021	Electronic Copy Oceans North Presentation Mary River Mine Phase 2 Development Hearing <i>(English)</i>	Oceans North	333009
83	February 5, 2021	Electronic Copy PowerPoint Presentation Public Hearing presentation for the NIRB's Reconsideration of Mary River Project Certificate No. 005 for Baffinland's Phase 2 Development Proposal <i>(English)</i>	World Wildlife Fund	332585
84 ¹⁶⁷	February 5, 2021	Electronic Copy Curriculum Vitae of S. Elverum <i>(English)</i>	Mittimatalik Hunters and Trappers Organization	333168

¹⁶⁷ NOTE: Due to an oversight, Exhibits 84-87 were not filed on February 5, 2021 but these Exhibits were offered by the Mittimatilik Hunters and Trappers Organization to be filed in advance of the MHTO's Presentation on February 5, 2021 and have been added to the Exhibits List to reflect the date provided to the Board, rather than the date these Exhibits were added to the NIRB's Public Registry.

Exhibit No.	Date of Receipt	Exhibit Description	Party Tendering Exhibit	NIRB Doc. ID
85	February 5, 2021	Electronic Copy Curriculum Vitae of V. L'Hérault (<i>French</i>)	Mittimatalik Hunters and Trappers Organization	333169
86	February 5, 2021	Electronic Copy Curriculum Vitae of E. Matthew Solomon (<i>English</i>)	Mittimatalik Hunters and Trappers Organization	333170
87	February 5, 2021	Electronic Copy Curriculum Vitae of V. Vergara (<i>English</i>)	Mittimatalik Hunters and Trappers Organization	333171
88	February 5, 2021	Electronic Copy Email Re: Reservation of Objection to Exhibits 63-67 articles offered to be filed by Mittimatalik Hunters and Trappers Organization from C. Kowbel (Legal Counsel to Baffinland Iron Mines Corporation) (<i>English</i>)	Baffinland Iron Mines Corporation	333172
89	February 5, 2021	Electronic Copy Email Re: Reservation of Objection to Oceans North late-filed presentation materials from C. Kowbel (Legal Counsel to Baffinland Iron Mines Corporation) (<i>English</i>)	Baffinland Iron Mines Corporation	333173
90	February 6, 2021	Electronic Copy Baffinland Updated Community Roundtable Presentation (<i>English/Inuktitut</i>)	Baffinland Iron Mines Corporation	333175

RECONVENED EXTENDED PUBLIC HEARING APRIL 12-14, 2021 (IQALUIT)

Exhibit No.	Date of Receipt	Exhibit Description	Party Tendering Exhibit	NIRB Doc. ID
91	April 13, 2021	Electronic Copy Suggested Term and Condition to be added to Project Certificate No. 005. <i>(English)</i>	Environment and Climate Change Canada	334634
92	April 14, 2021	Electronic Copy Slides from Baffinland containing previously filed information <i>(English)</i>	Baffinland Iron Mines Corporation	334662
93	April 14, 2021	Electronic Copy An Excerpt of the Transcript of the Examination on Affidavit of Brian Penney during Nunavut Court of Justice Proceedings <i>(English)</i>	World Wildlife Fund	334682

RESUMPTION OF THE EXTENDED PUBLIC HEARING NOVEMBER 1-6, 2021 (IQUALUIT)

Exhibit No.	Date of Receipt	Exhibit Description	Party Tendering Exhibit	NIRB Doc. ID
94	November 2, 2021	Hard Copy Introduction and Project Overview Public Hearing Iqaluit and Pond Inlet, April 2021 <i>(English/Inuktitut)</i>	Baffinland Iron Mines Corporation	337394
95	November 2, 2021	Hard Copy Introduction and Project Overview Public Hearing Iqaluit and Pond Inlet, April 2021 <i>(English/French)</i>	Baffinland Iron Mines Corporation	337395
96	November 2, 2021	Electronic Copy November 2, 2021 Update to Baffinland Iron Mines Corporation's Community Engagement (previously filed with the Board on October 18, 2021, Doc ID: 337245) <i>(English)</i>	Baffinland Iron Mines Corporation	337396
97	November 6, 2021	Electronic and Hard Copy November 6, 2021 Correspondence from L. Dyer (NPMO) to K. Costello (NIRB) Re: Government of Canada's Deferred Response on visits to Pond Inlet from the beginning of production at the Mary River Mine <i>(English)</i>	Northern Projects Management Office (on behalf of the Government of Canada)	337397
98	November 6, 2021	Electronic and Hard Copy Table entitled "Government of Canada Engagements with the Community of Pond Inlet Production Phase of Mary River Project" (offered in writing as a deferred response to Panel question regarding GoC visits to Pond Inlet from the beginning of production at the Mary River Mine) <i>(English)</i>	Northern Projects Management Office (on behalf of the Government of Canada)	337398

APPENDIX G PARTICIPATION DURING THE 2021 PUBLIC HEARINGS

Table 29: Number of Remote Participants January -November 2021 Public Hearings

EVENT	DATES	MODE OF PARTICIPATION	LANGUAGE AND NUMBER OF PARTICIPANTS
Reconvened Public Hearing	Jan 25, 2021	Zoom*	122
		Teleconference	N/A**
	Jan 26, 2021	Zoom	130
		Teleconference	English-86 Inuktitut-2
	Jan 27, 2021	Zoom	132
		Teleconference	English-103 Inuktitut-3
	Jan 28, 2021	Zoom	140
		Teleconference	English - 122 Inuktitut - 7
	Jan 29, 2021	Zoom	148
		Teleconference	English - 183 Inuktitut - 3
	Jan 30, 2021	Zoom	128
		Teleconference	English - 109 Inuktitut - 2
	February 1, 2021	Zoom	144
		Teleconference	English - 111 Inuktitut - 2
	February 2, 2021	Zoom	148
		Teleconference	English - 117 Inuktitut – 6
	February 3, 2021	Zoom	141

EVENT	DATES	MODE OF PARTICIPATION	LANGUAGE AND NUMBER OF PARTICIPANTS	
		Teleconference	English - 125 Inuktitut – 6	
		Zoom	155	
	February 4, 2021	Teleconference	English - 99 Inuktitut - 1	
		Zoom	162	
	February 5, 2021	Teleconference	English – 126 Inuktitut - 2	
		Zoom	126	
	February 6, 2021	Teleconference	English - 36 Inuktitut - 2	
	Extended Public Hearing	April 12, 2021	Zoom	150
			Teleconference	English - 42 Inuktitut - 10
April 13, 2021		Zoom	162	
		Teleconference	English - 39 Inuktitut - 4	
April 14, 2021		Zoom	162	
		Teleconference	English - 39 Inuktitut - 4	
Resumption of the Extended Public Hearing	November 1, 2021	Zoom	168	
		Teleconference	English - 34 Inuktitut - 0	
	November 2, 2021	Zoom	170	
		Teleconference	English - 29 Inuktitut - 4	

EVENT	DATES	MODE OF PARTICIPATION	LANGUAGE AND NUMBER OF PARTICIPANTS
	November 3, 2021	Zoom	161
		Teleconference	English - 28 Inuktitut - 2
	November 4, 2021	Zoom	164
		Teleconference	English - 27 Inuktitut - 3
	November 5, 2021	Zoom	155
		Teleconference	English - 26 Inuktitut - 1
	November 6, 2021	Zoom	114
		Teleconference	English - 17 Inuktitut - 1

*Participants using the zoom feed selected their language of choice within the Zoom program and we were unable to obtain data on how many individuals used each language.

**Due to a technical issues with the toll-free teleconference phone lines on January 25, 2021, we were unable to obtain data for the number of participants on this day.

Table 30: In-Person Attendance During the January -November 2021 Public Hearing Sessions

January-February 2021						
Date	Pond Inlet			Iqaluit		
	Morning	Afternoon	Evening	Morning	Afternoon	Evening
January 25, 2021	53	50	52	63	63	52
January 26, 2021	50	63	N/A*	57	53	N/A*
January 27, 2021	63	53	54	59	57	53
January 28, 2021	48	56	51	59	57	54
January 29, 2021	47	56	58	54	54	53
January 30, 2021	43	69	53	53	53	37
February 1, 2021	52	55	N/A*	58	56	N/A*
February 2, 2021	46	57	N/A*	61	59	N/A*
February 3, 2021	50	53	54	57	53	53
February 4, 2021	52	55	N/A*	60	58	N/A*
February 5, 2021	60	62	60	56	54	52
February 6, 2021	68	90	81	59	57	54
April 2021						
Date	Pond Inlet			Iqaluit		
	Morning	Afternoon	Evening	Morning	Afternoon	Evening
April 12, 2021	7	13	13	96	92	96
April 13, 2021	9	8	N/A*	106	102	N/A*

April 14, 2021	10	15	6	104	98	104
November 2021						
Date	Pond Inlet			Iqaluit		
	Morning	Afternoon	Evening	Morning	Afternoon	Evening
November 1, 2021	24	33	N/A*	78	79	N/A*
November 2, 2021	27	37	32	88	89	84
November 3, 2021	23	26	N/A*	87	92	N/A*
November 4, 2021	32	38	38	92	92	92
November 5, 2021	25	30	N/A*	91	92	N/A*
November 6, 2021	20	46	N/A*	87	87	N/A*

*N/A indicates that there was no Public Hearing session conducted on that Evening.

APPENDIX H LIST OF ACRONYMS

Acronym	Full Name
Baffinland or Proponent	Baffinland Iron Mines Corporation
CIRNAC	Crown-Indigenous Relations and Northern Affairs Canada
Commission	Nunavut Planning Commission
COVID-19	Novel Coronavirus
CPHO	Chief Public Health Officer
DFO	Fisheries and Oceans Canada
ECCC	Environment and Climate Change Canada
EIS or IS	Environmental Impact Statement or Impact Statement
FEIS	Final Environmental Impact Statement
FEIS Addendum	Supplement to the FEIS of a previously approved project
GN	Government of Nunavut
HC	Health Canada
HFO	Heavy Fuel Oil
HHRA	Human Health Risk Assessment
HTA	Hunters and Trappers Association
HTO	Hunters and Trappers Organization
IR	Information Request
IWG	Igloolik Working Group
km	Kilometers
m	Meters

Acronym	Full Name
MEWG	Marine Environment Working Group
MHTO	Mittimatalik Hunters and Trappers Organization
ML	Million Liters
Mtpa	Million Tonnes per Annum (per year)
NIRB or Board	Nunavut Impact Review Board
NITV	Nunavut Independent Television Network
NRCan	Natural Resources Canada
<i>Nunavut Agreement</i>	<i>Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada</i>
<i>NuPPAA</i>	<i>Nunavut Planning and Project Assessment Act, S.C. 2013, c. 14, s. 2</i>
NTI	Nunavut Tunngavik Incorporated
NWB	Nunavut Water Board
ON	Oceans North
PC	Parks Canada
PHC	Pre-Hearing Conference
Public Hearing (Nov 2019)	Public Hearing — November 2-6, 2019
Public Hearing (Jan/Feb 2021)	Reconvened Public Hearing January 25 — February 6, 2021
Public Hearing (April 2021)	Extended Public Hearing — April 12-15, 2021
Public Hearing (Nov 2021)	Resumption of the Extended Public Hearing — November 1-6, 2021
QIA	Qikiqtani Inuit Association
TC	Transport Canada
TDS	Total Dissolved Solids

Acronym	Full Name
TEWG	Terrestrial Environment Working Group
TEMMP	Terrestrial Environment Management and Monitoring Plan
TM1	Technical Meeting #1 — April 8-10, 2019
TM2	Technical Meeting #2 — June 17-19, 2019
TM3	Technical Meeting #3 — September 14-18, 2021 (teleconference)
VEC	Valued Ecosystemic Component
VSEC	Valued Socio-Economic Component
WWF	World Wildlife Fund

APPENDIX I HIGHLIGHTS DOCUMENT

Highlights Document



for the Board's Reconsideration Report and Recommendations for Baffinland's Phase 2 Development Proposal

Baffinland Iron Mines Corporation
Project Certificate No. 005

NIRB File No. 08MN053



May 2022

NIRB Report for the Mary River Phase 2 Development Proposal

On May 13, 2022, the Nunavut Impact Review Board (NIRB or Board) provided the Reconsideration Report and Recommendation to the Minister of Northern Affairs and Responsible Ministers after completing its assessment of the Phase 2 Development Proposal in accordance with its responsibilities in the *Nunavut Agreement* and the *Nunavut Planning and Project Assessment Act*. The Board recommends that the Phase 2 Development Proposal **should not be allowed to proceed at this time**.

The Board has made this recommendation as it has concluded that as assessed, the Phase 2 Development Proposal **cannot proceed in a manner that will protect and promote the existing and future well-being of the residents and communities of the Nunavut Settlement Area, and Canada in general, and would not be protective of the ecosystemic integrity of the Nunavut Settlement Area**. The Board’s Reconsideration Report details the assessment process, how the Board considered the potential benefits and impacts of the proposal, and the Panel’s recommendation to the Responsible Ministers.



The Board Panel assessing the Mary River Phase 2 Development Proposal

Highlights Document

This document describes key information and findings from the Board’s Reconsideration Report and Recommendations (the Report); however, the Report is the authoritative description of the assessment and recommendations. The references provided in this document guide the reader to the applicable section of the Report; please refer to the Report for the full details.

The NIRB’s Mission is to protect and promote the well being of the Environment and Nunavummiut through our work.

This document was created for the public as a summary and guide to the Nunavut Impact Review Board's (NIRB or Board) Reconsideration Report and Recommendations (the Report) for Baffinland Iron Mines Corporation's (Baffinland) Phase 2 Development Proposal (the Proposal), which proposed major changes to the approved Mary River Iron Mine Project (the Project).

How was the Proposal determined to need a Reconsideration?

- see Report section 1

The NIRB considered the Proposal to be a significant modification of the previously-approved version of the Project. On this basis, and as permitted under the *Nunavut Agreement* and *Nunavut Planning and Project Assessment Act (NuPPAA)*, the Board decided that a re-examination of the Terms and Conditions of Project Certificate No. 005 was necessary to assess the potential environmental and socio-economic impacts of the Proposal. This reconsideration process was also intended to allow interested parties to participate in this evaluation of the changes to the Project as proposed by Baffinland in the Proposal.

Continuing assessments during the COVID-19 pandemic

- see Report section 1.4.2

The COVID-19 pandemic affected everyone and resulted in restrictions to gatherings, travel, and changing public health directives.

The Board's events were held with online access and grouping of participants in several key locations which were linked by audio and video. This allowed the Board to ensure video and speaking access from Pond Inlet.

How did COVID-19 Affect the NIRB's Process?

The NIRB adapted its practices for the assessment during the pandemic to:

- Provide online and teleconference access to proceedings,
- Work with public health authorities to develop new meeting protocols to protect public health and safety, and
- To prioritize time for community participation.



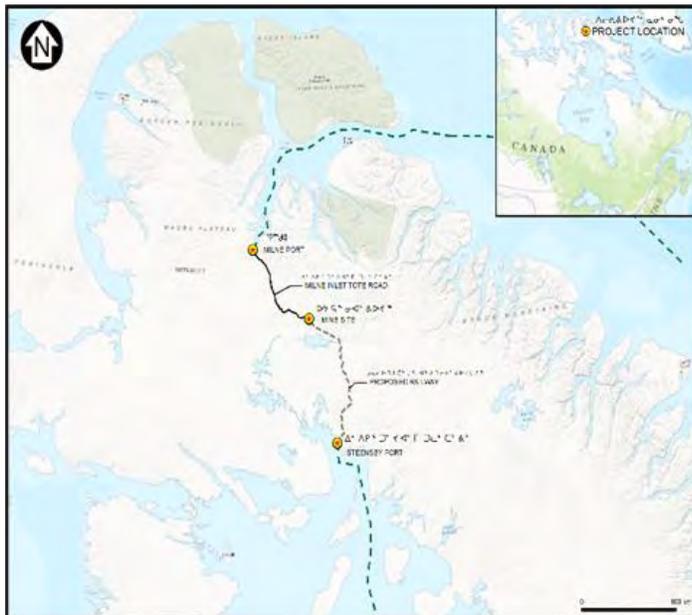
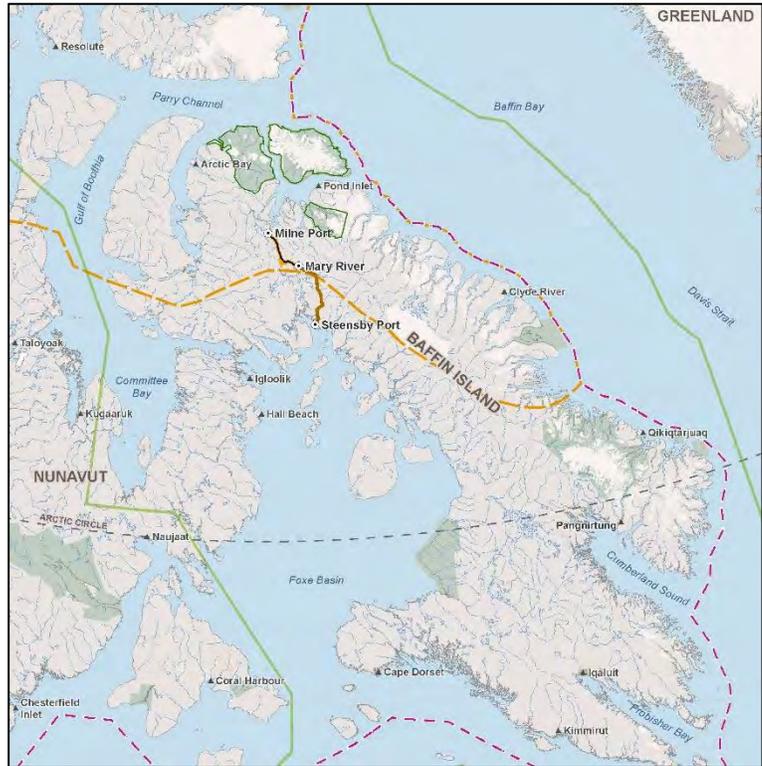
Mary River Project History and Summary of Activities

- see Report section 1.2

Baffinland is currently operating the Mary River Iron Mine located in the Qikiqtani region of Nunavut, approximately 150 kilometres southwest of Pond Inlet.

Due to the high iron concentration of the deposit, the ore is crushed and shipped directly to markets.

The Project as originally approved includes the Mary River Mine, a Tote Road to the North connecting the mine to Milne Port, and a Southern Railway to connect the Mine to the south with a port at Steensby Inlet, with year round shipping through Foxe Basin and Davis Strait.



Mary River Project (Approved in 2012)

- see Report section 1.2.3

- Mining of 18 million tonnes per year iron ore from Deposit No. 1,
- 150-kilometre Southern Railway from Mine Site to Steensby Inlet port to transport iron ore, and
- Year-round transportation and shipping activities.

Amendment 1 Early Revenue Phase (Approved in 2014)

- see Report section 1.2.4

- Truck transport of 4.2 million tonnes per year of iron ore along the Tote Road to Milne Port for crushing, stockpiling, and shipping during the open water season through Milne Inlet and Eclipse Sound.



Amendment 2 Production Increase Project (Approved in 2018)

- see Report section 1.2.5

- Improvements to camp facilities and additional fuel storage at Milne Inlet, and
- Until December 31, 2019: truck transport of 6 million tonnes per year of iron ore along the Tote Road for crushing, stockpiling, and shipping through Milne Inlet and Eclipse Sound during the open water season.

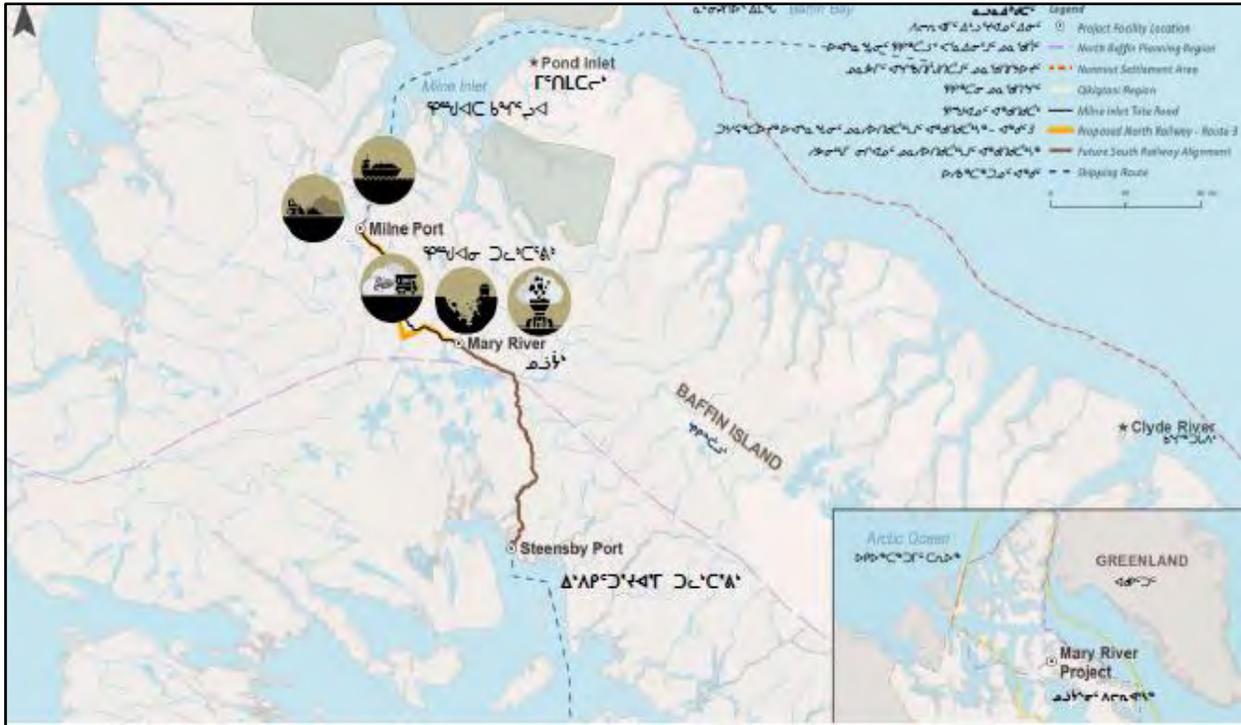
Amendment 3 Extension Request to the Production Increase Project (Approved in 2020)

- see Report section 1.2.6

- Extend the trucking and shipping of 6 million tonnes of iron ore per year through Milne Inlet and Eclipse Sound during the open water season for an additional year. Board provided until December 31, 2021.

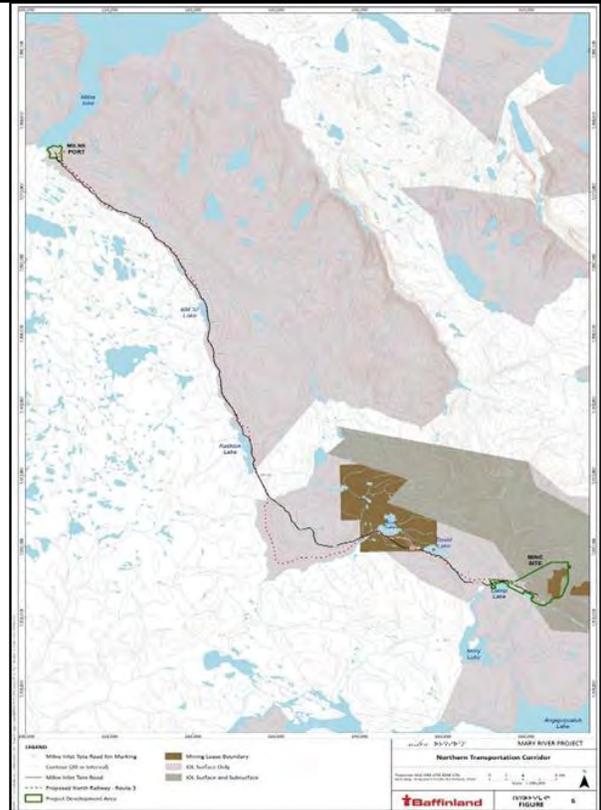


Phase 2 Development Proposal (2018) - see Report section 1.2.7



In October 2018, Baffinland submitted the Phase 2 Development Proposal (the Proposal) proposing to change the infrastructure and activities associated with the Mary River Project including:

- Increasing the amount of iron ore mined, transported, stockpiled and shipped through Milne Port from 4.2 to 12 million tonnes per year;
- Increasing the number of ore carrier transits from Milne Port to 168 per year during the open water season between July 15 and Oct 31; and
- Constructing and operating a 110 km Northern Railway to transport the ore from the Mine to Milne Port.





The Proposal would involve the following expansions/improvements to existing Project infrastructure:

- Changes to site infrastructure including expanding fuel storage as well as office and maintenance buildings.
- Enclosing the Ore crusher at Milne Port.
- Construction and operation of a second ore dock capable of receiving cape-size ore carriers.

Summary of Baffinland’s Impact Assessment – see Report section 2.0

In the impact statement submitted by Baffinland described the potential environmental and socio-economic impacts of the proposed changes to the current Mary River Project. Baffinland used the following three categories to describe the potential impacts:

No Change; not significant – effects may occur but with mitigation and the use of existing monitoring frameworks, the impacts would not be significant:

- **Air Quality**
- **Noise and Vibration**
- **Landforms, soils and permafrost**
- **Vegetation**
- **Terrestrial Wildlife, and wildlife habitat (including birds)**
- **Freshwater biota and habitat**
- **Freshwater quantity and quality**
- **Marine Environment – sea ice, marine water and sediment quality**
- **Economic development and contracting and self-reliance**

No change; significant positive – no residual impacts and the impact of benefits gained from specific programs would be positive:

- **Livelihood and employment**
- **Education and training**

Change; not significant – some changes may be permanent, but with the application of mitigation and monitoring, and compliance with regulatory requirements the effects would not be significant:

- **Contracting and business opportunities**
- **Population demographics**
- **Cultural, archaeological, and paleontological resources**
- **Human health and well-being**

Baffinland’s Conclusions from its impact statement:

The results of the environmental assessment found that with planned mitigation, the Phase 2 Development Proposal would not cause long-term significant negative effects on the biophysical and socio-economic environment.

Baffinland made 258 commitments to communities and parties through the assessment.

Registered Intervenors – see Report section 3.0

- Nunavut Tunngavik Incorporated (NTI)
- Qikiqtani Inuit Association (QIA)
- Government of Nunavut (GN)
- Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC)
- Environment and Climate Change Canada (ECCC)
- Fisheries and Oceans Canada (DFO)
- Health Canada (HC)
- Natural Resources Canada (NRCan)
- Parks Canada (PC)
- Transport Canada (TC)
- Hamlet of Pond Inlet
- Mittimatalik Hunters and Trappers Organization
- Hamlet of Igloodik/Igloodik Working Group
- Sanirajak Hunters and Trappers Organization
- Hamlet of Sanirajak
- Hamlet of Clyde River
- Nangmautuuq Hunters and Trappers Association
- Hamlet of Arctic Bay
- Ikajutit Hunters and Trappers Association
- Amaruq Hunters and Trappers Organization
- Nunavut Independent Television Network (NITV)
- Oceans North (ON)
- World Wildlife Fund (WWF)

Procedural Steps of NIRB's Assessment – see Report section 1.4

Nunavut Planning Commission referred Proposal to NIRB on May 29, 2018

NIRB Accepted Impact Statement on October 12, 2018

NIRB Information Sessions held in North Baffin Communities from January 15-30, 2019

In-Person Technical Meetings in Iqaluit April 8-10, 2019 and as Agenda not completed, meetings continued June 17-19, 2019

Public Hearing announced August 21, 2019
Intervenor Status awarded September 6, 2019
Intervenors Submit Final Written Statements on September 27, 2019

In-Person Public Hearing held in Iqaluit November 2-9, 2019
**Motion to suspend proceedings received prior to community roundtable in Pond Inlet - Board required additional Technical Meeting and Pre-Hearing Conference to resume Hearing proceedings*

Teleconference Technical Meeting - September 14-18, 2020
In-Person Pre-Hearing Conference and Community Roundtable - September 28-October 1, 2020

Resumed In-Person Public Hearing January 25-February 6, 2021
**Motion to extend proceedings*

Extended In-Person Public Hearing April 12-21, 2021
**suspended by Chief Public Health Officer April 15, 2021*

Resumed Extended In-Person Public Hearing November 1-6, 2021

Final Closing Statements – January 10, 2022
Baffinland Final Closing Statement – January 24, 2022
Public Hearing Record Closes – January 28, 2022

NIRB Issues Reconsideration Report and Recommendation to the Responsible Ministers – May 13, 2022



Community Information Session



2019 Public Hearing in Iqaluit - broadcast



Elder speaking

The Board took additional time to ensure the decision reflected **Ingalangaittuq** - observe the process and evidence with a cautious view, in a holistic and comprehensive manner.

Public Consultation Opportunities – see Report section 4.1

Community Members or Organizations:

- Information Sessions in North Baffin communities (afternoon open houses and evening meetings).
- Community Roundtables:
 - During Pre-Hearing Conference,
 - And during Public Hearings held in 2019 and 2021.
- Written comments accepted at Public Meetings and Hearings.

Intervenor and Regulators:

- Opportunities for written feedback:
 - Information Requests,
 - Technical Review Comments,
 - Final Written Submissions, and
 - Final Closing Statements.
- 3 Technical Meetings;
- 1 Pre-Hearing Conference; and
- 4 Public Hearing sessions.



November 2019 Public Hearing



2020 Pre-Hearing Conference and Community Roundtable



January 2021 Resumed Public Hearing in Pond Inlet



January 2021 Resumed Public Hearing in Iqaluit



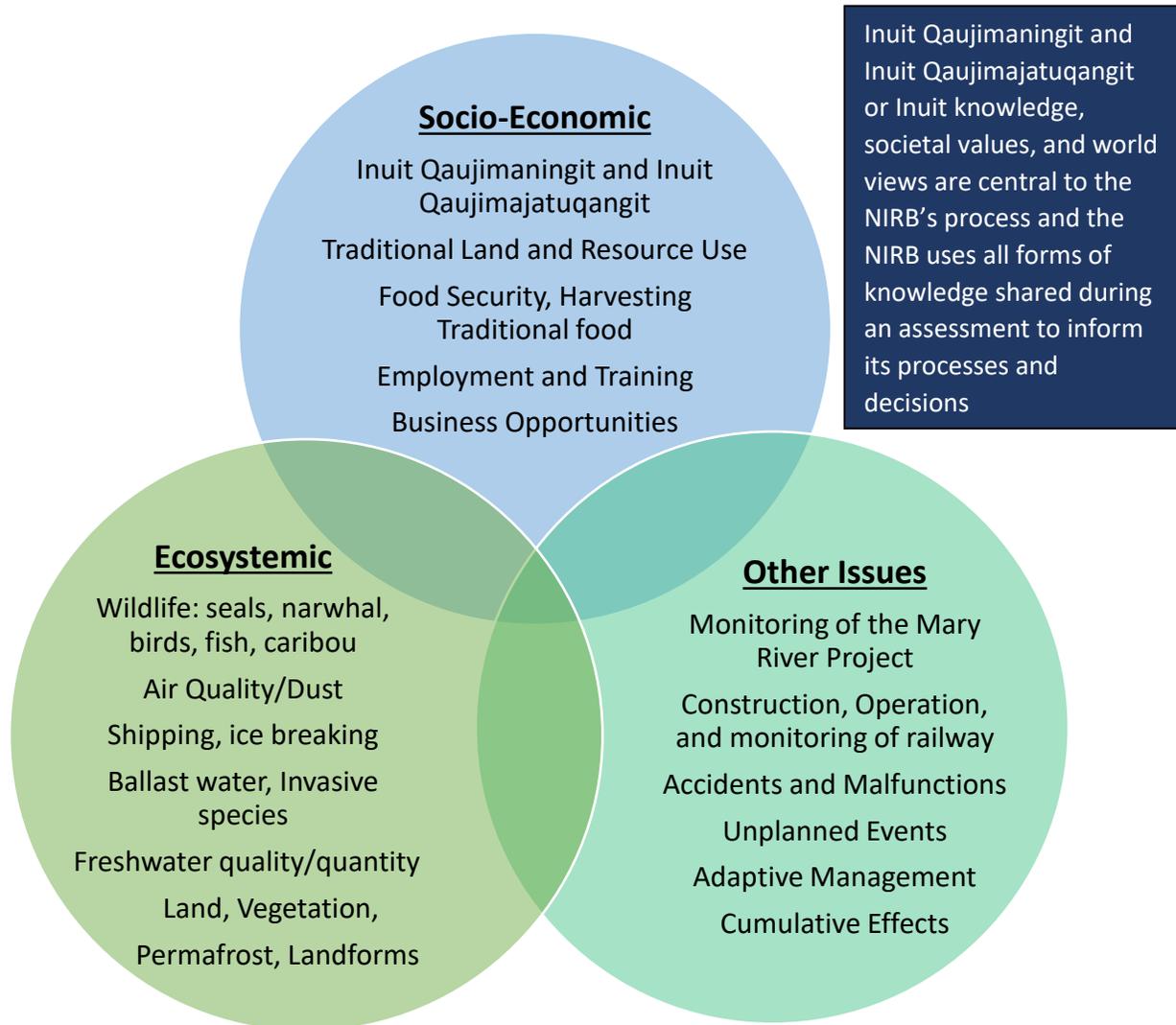
April/November 2021 Extended Public Hearing – Iqaluit (Pond Inlet venue shown on the right screen)

Participation at the NIRB Public Hearings – see Report section 1.4

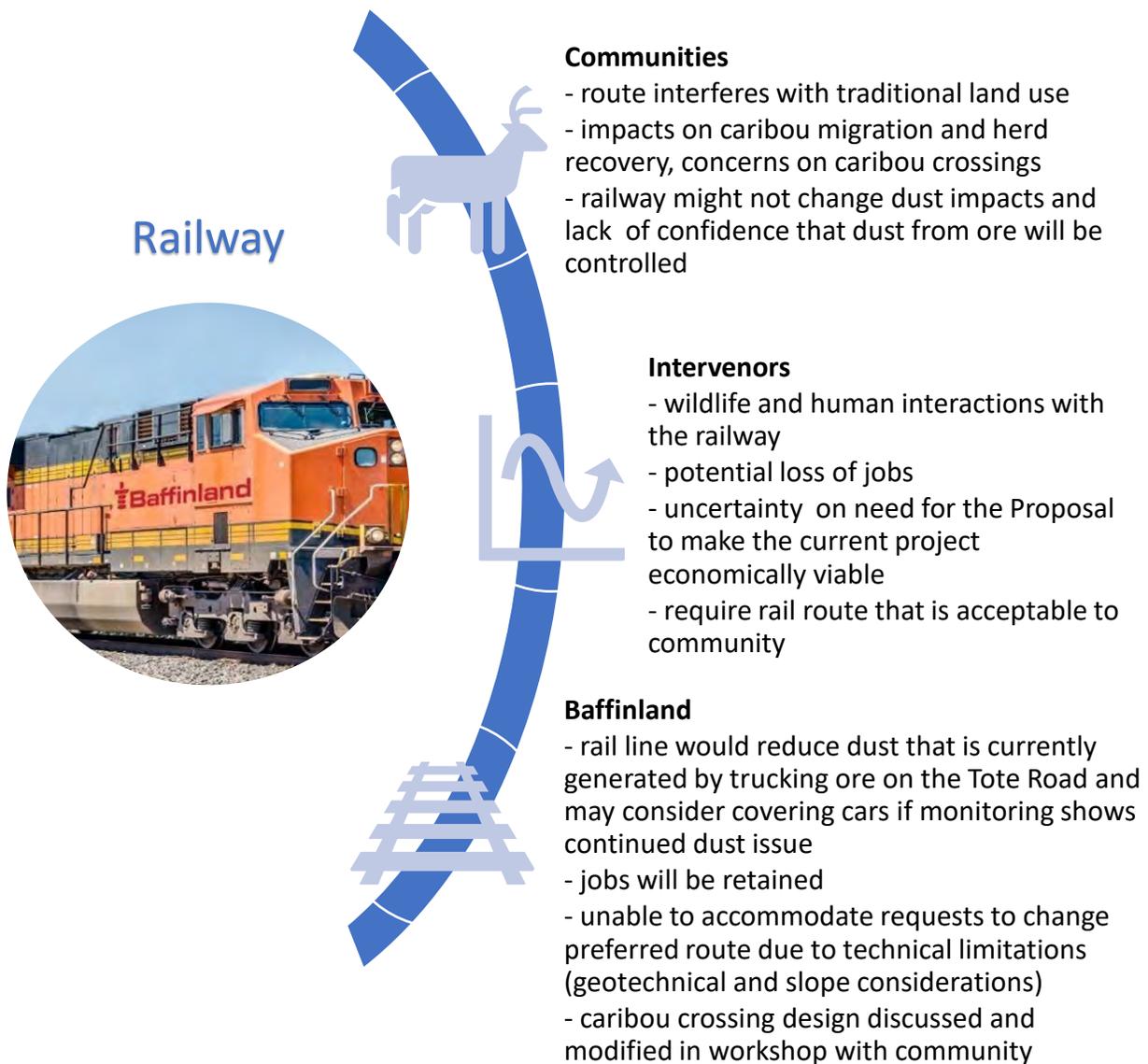
The Board tracked participation in the Hearing proceedings through in-person attendance as well as online access. The following are general numbers from each event:

	In-person -Pond Inlet	In-person -Iqaluit	Online
November 2019	Session suspended	135-171 people	*general broadcast
January 2021 Resumed Public Hearing	43-90 people	Max 100 by invitation	122-164 Zoom; 38-186 teleconference
April 2021 Extended Public Hearing	6-15 people	Max 100 by invitation	150-162 Zoom; 43-52 teleconference
November 2021 Resumed Extended Public Hearing	24-46 people	Max 100 by invitation	114-170 Zoom; 18-34 teleconference

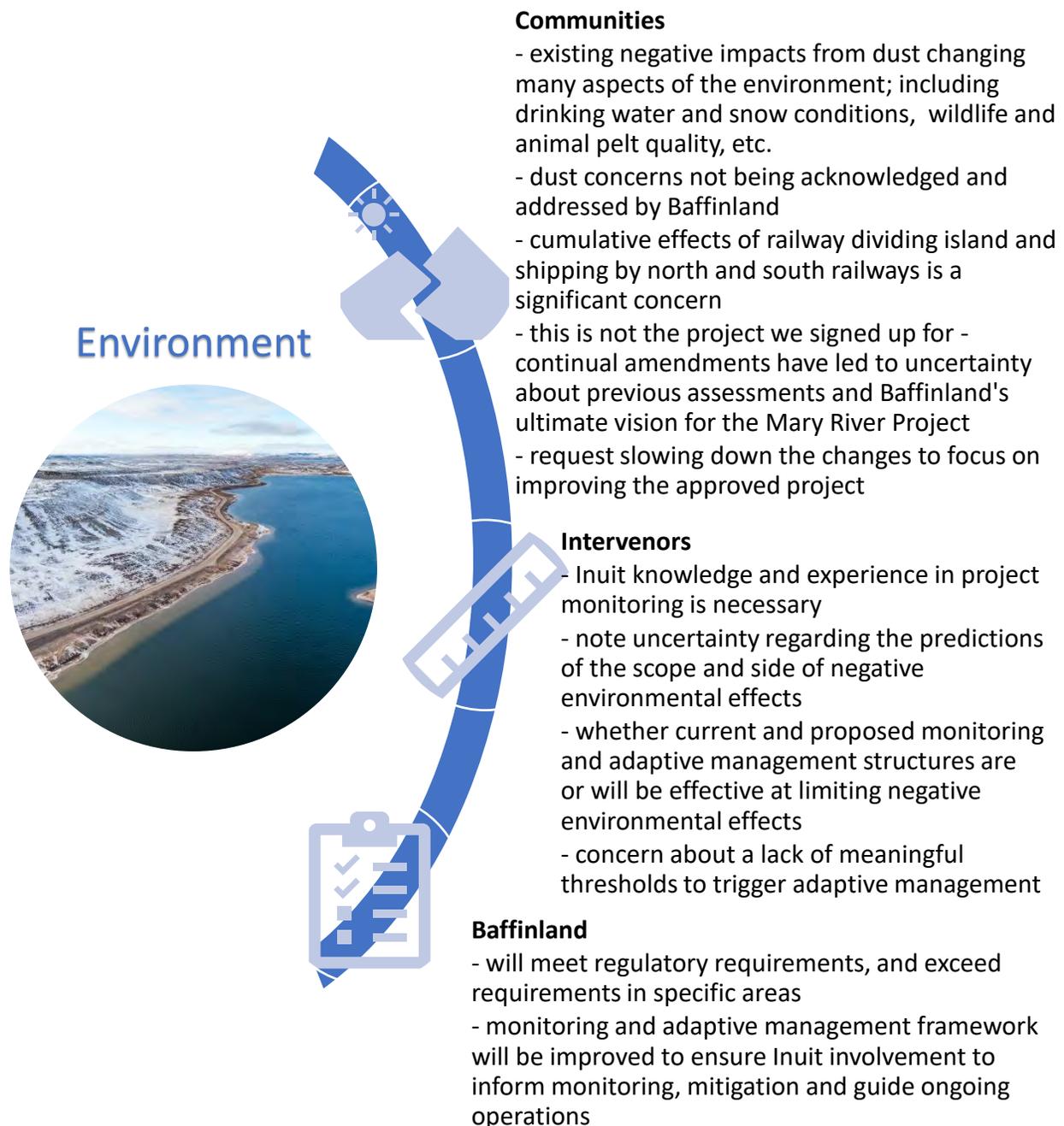
Summary of Key Issues Heard by the Board from Community Representatives – see Report section 4.1.1



Issues the Board Heard on Benefits and Impacts of the Mary River Phase 2 Development – see Report sections 3, 4 and 5



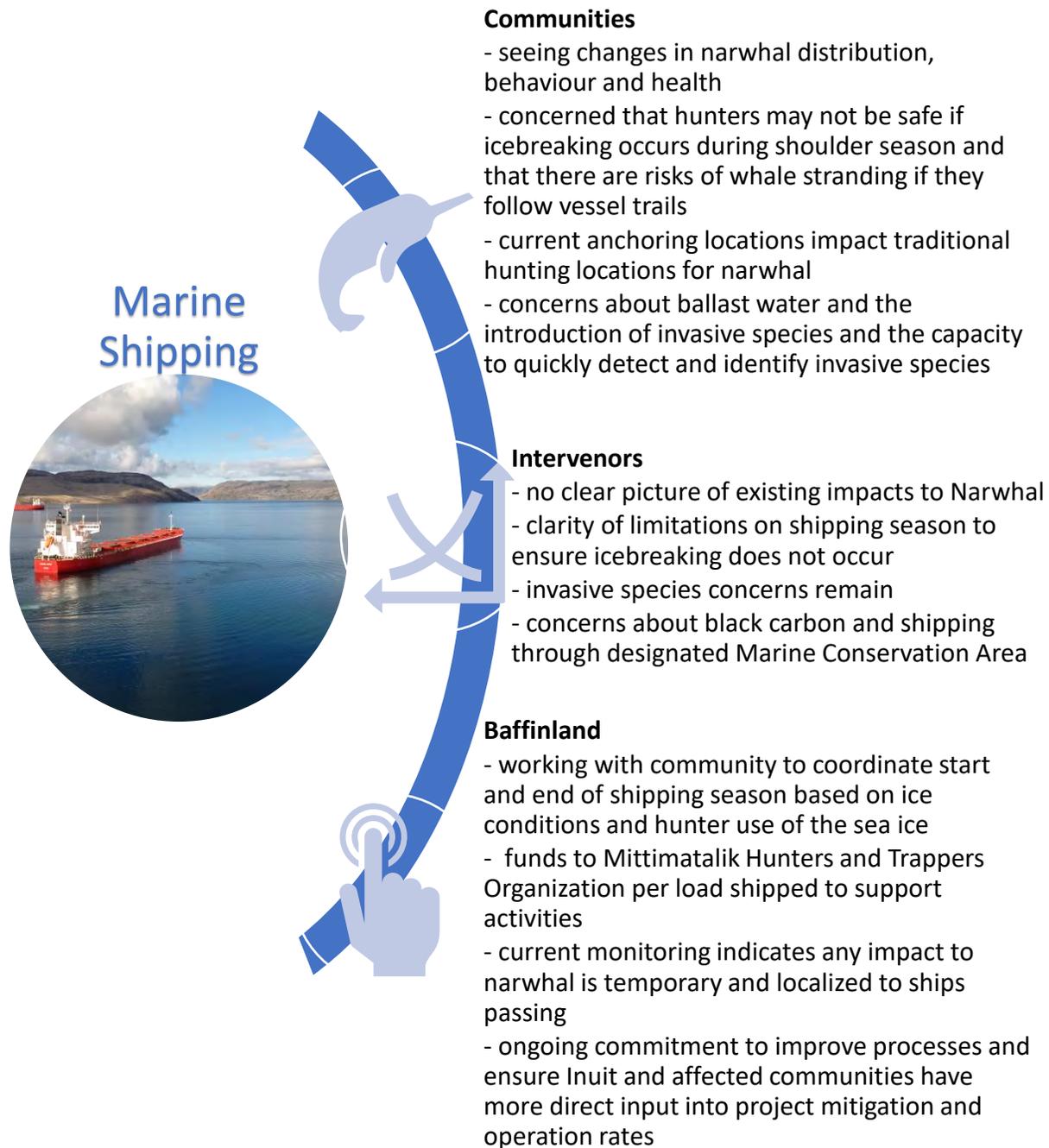
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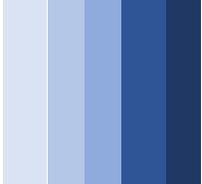


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Conclusions and Recommendations of the Board – see Report sections 5, 6, and 7

Through the Board’s assessment of potential ecosystemic effects, the Board heard that despite the experience gained with the current version of the Mary River Project since the Board’s assessment of the original Mary River Project in 2012, there are still significant gaps in understanding, regional monitoring, and regulatory capacity that lead to high levels of uncertainty remaining with respect to:

1. Baseline conditions in the terrestrial and marine environment;
2. Whether effects predicted during the Board’s assessments of the original Mary River Project and modifications under the Early Revenue Phase, the Production Increase Proposal and the Extension of the Production Increase Proposal accurately reflect the effects being seen in the North Baffin Communities; and
3. Whether Baffinland’s current and proposed mitigation and monitoring measures are and/or will be effective to prevent and manage the potential for significant adverse effects from the Phase 2 Development alone or in combination with the effects of Baffinland’s current and future operation of the Mary River Project.

Where there is uncertainty, the Board has applied the “precautionary principle”, which prevents uncertainty being used as a reason not to act. For effects on marine mammals, fish, and caribou the Board has applied a high standard of the precautionary principle. This requires that a “safety margin” be built into monitoring, mitigation and adaptive management plans for a Project. It requires that where there is a risk of significant and lasting impacts, monitoring programs are designed to provide early warning signs, and that plans are in place to respond quickly to prevent and limit effects if early warning signs are detected.

As was the case in the Board’s previous assessments of the Mary River Project and subsequent modifications, given the importance of marine mammals, fish, and caribou to Inuit, the vulnerability and sensitivity of marine wildlife and caribou to disturbance and disruption, and uncertainty regarding the baseline conditions and potential effects of the Phase 2 Development Proposal, the Board has applied a high standard of the precautionary principle to its assessment of the potential for effects on these valued ecosystem components.

The Board determined that the articles of the ICA relating to monitoring and mitigation of the effects of the Phase 2 Development were relevant to the Board's assessment and should be considered by the Board. As proposed, the ICA reflects a novel, made-in-Nunavut process, with the potential to ensure Inuit knowledge and experience plays a central role in project monitoring, adaptive management and mitigation programs for the current Mary River Project if the Phase 2 Development Proposal were to proceed. However, during the Technical Meeting and Community Roundtable conducted in the fall of 2020, the Board heard that there was limited trust in, and

Inuit Certainty Agreement (ICA)

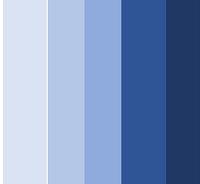


Signed in 2020 by Baffinland and the Qikiqtani Inuit Association, the ICA proposed a new Inuit-led and Inuit-informed approach to monitoring, mitigation, and adaptive management for the Phase 2 Development Proposal.

support for the ICA amongst the North Baffin communities. Important questions remained about how an independent, voluntary agreement without a clear linkage to regulatory and enforcement mechanisms would be effective. Some parties were skeptical that the new Committees proposed through the ICA could work well, noting that the Working Groups already established for the approved Project are not functioning effectively. During this assessment and the monitoring of the Mary River Project, the Board has noted that the existing Terrestrial Environmental Working Group and Marine Environment Working Group have been unable to come to agreement about important components of adaptive management for the current Mary river Project, such as the selection of Early Warning Indicators. The Board observed that the trust necessary for effective collaboration has eroded and important working relationships between the communities, Inuit Organizations, regulators, and Proponent have been damaged in the decade after the Board approved the original Mary River

Project. It is also unclear how the ICA could be implemented successfully in light of the Qikiqtani Inuit Association's statement that they do not support the Phase 2 Development Proposal, but would honor the commitments in the ICA if the Phase 2 Development Proposal was approved to proceed. Consequently, the Board has serious concerns about the heavy reliance of the Proponent and parties on the ICA being implemented as envisioned to address uncertainty, ensure Inuit knowledge and experience occupies a central role in the adaptive management of the Project, and supports community-led and culturally relevant monitoring.

However, the potential for economic benefits that the Phase 2 Development Proposal represents must be considered in a holistic way that takes into account the potential for significant adverse ecosystemic effects and socio-economic effects. As explained in greater detail and for the reasons contained in this Report, the Board has concluded the following:

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- The voluminous record filed in respect of the assessment highlighted that a high degree of uncertainty still remains in terms of the potential for the Phase 2 Development Proposal to have significant adverse effects in the marine and terrestrial environments; and
 - There are significant gaps in the application and understanding of Inuit knowledge and experience by the Proponent and regulators, which have eroded the trust and confidence in the measures being developed and implemented to effectively mitigate, adaptively manage and monitor the effects of the existing Mary River Project. In the current context, the Board is not confident that these gaps can be effectively bridged under the ICA, and as a result is not confident that the potential for significant adverse effects resulting from the Phase 2 Development Proposal can be mitigated.

After careful consideration, the Board has concluded that **there is potential for the Phase 2 Development Proposal to have significant and lasting adverse effects on marine mammals and fish, caribou and other terrestrial wildlife, along with vegetation and freshwater. The Board also finds that these ecosystemic effects may in turn lead to significant adverse socio-economic effects on Inuit harvesting, culture, land use and food security.**

The Board has decided that despite the best efforts of all involved in the development of more than 250 commitments and the ICA, the potential for these significant adverse ecosystemic and socio-economic effects cannot be adequately mitigated to allow the Phase 2 Development Proposal to proceed at this time.

The Board has therefore concluded that the Phase 2 Development Proposal as assessed cannot proceed at this time in a manner that will protect and promote the existing and future well-being of the residents and communities of the Nunavut Settlement Area, and Canada in general, and would also not be protective of the ecosystemic integrity of the Nunavut Settlement Area.

Next Steps

After receiving the Board's Report and Recommendation, the Responsible Ministers will review the Report and issue their decision in respect of the Proposal. Because the Board Panel's recommendation for this assessment is that it should not proceed, within 90-180 days of the Ministers' receipt of the Report, the Ministers must:



Responsible Ministers

Agree

- Agree with the Board's reconsideration decision and recommendations

Reject or Vary

- Reject or vary the Board's reconsideration decision and recommendations in any manner the Ministers consider appropriate