Baffinland Response to Final Written Submissions from Parties for NIRB Hearings - Early Revenue Phase				
January 25, 2014				
QIA				
Number	QIA Comment Reference Number	Category	Comment	Baffinland Response
2.1.1	FM-1	Dust dispersal and deposition	It is recommended that dust dispersal modeling be revisited to reduce uncertainty and inform monitoring. The quantity and chemical composition of dust entering aquatic systems should be monitored to ensure that mitigation measures are effective. Sediment impact thresholds should be established for Arctic char, and possibly other taxa, to inform impact assessment, monitoring, and mitigation.	The dust dispersion modeling was revised for the ERP. The Calpuff model was used which is an industry standard and recognized by Environment Canada. The emission inventory was also updated. Both the methodology and the updated emission inventory were reviewed and accepted by EC experts. The output of the model gives predictions for air quality and expected dustfall based on model input and meteorological data. As with any model, there are uncertainties in predictions. QIA's concern is with the potential effects of dust and its chemical composition on freshwater. The dust resulting from the mining operation will be of the same composition as the ore which is inert in water. Road dust will have the same composition as surface soils which are also inert. The concern over potential effect arise from excessive loading and sedimentation of dust in freshwater bodies. baffinland's expert have concluded that this will not result in significant effects. The AEMP approved under the Type A Water Licence has monitoring paramaters included to validate Baffinland's conclusion. New Project Terms and Conditions FM1-1 - this condition is not required as further modeling will not improve the accuracy of the predictions. FM1-2 - the AEMP is a requirement of the Type Water Licence and regulated by the NWB. Any changes or revisions required to the AEMP can be incorporated following the annual review of the monitoring results. The AEMP has an adaptive management approach built into it.
	FM-2	Shipping uncertainties	The Proponent should provide NIRB, regulators and relevant stakeholders (including QIA and impacted communities) with detailed information on the number and characteristics of chartered vessels, vessel routes and transit times, the frequency of transits along the northern shipping route, locations where vessels pass each other en route, and the number of days that are lost to weather or other delays during the shipping season. This information will be an important part of Project monitoring and should be maintained as a spatial database that can be provided to interested parties on a timely basis. This information shall be used when comparing monitored data to actual impacts. There will be trade-offs with potential impacts between the number and size of vesselsused as part of the proposed ERP, and the Proponent should conduct a sensitivity analysis to explore these effects (e.g., differences in bowhead collision risk, cumulative noise exposure, risk of aquatic invasive species introductions, etc. from smaller number of larger vessels versus larger numbers of smaller vessels). This information should be used to inform and develop effective mitigating measures. Thresholds are required to trigger further impact assessment in response to changes in shipping volume, frequency, seasonality, routing, and possibly other changes related to design specifications (e.g., hull strength, seasonal sea ice, ballast water treatment). As such, thresholds for shipping activity that will trigger a reassessment of impacts should be defined.	The EIS Addendum describes the required number of vessels and pattern of shipping, as well as the variables associated with: vessel size; weather and ice considerations; operational and logistics issues; and fleet selection/availability. A scenario was developed as a reasonable representation of the anticipated ore shipping operation. The FEIS Addendum describes the factors which will affect the number and frequency of vessel transits each season. The anticipated variance in fleet size and/or number of transits falls within a narrow range that would not materially affect the identified factors. Marine mammal collision risk remains extremely low (given identified and committed mitigation and monitoring measures). Noise exposure patterns will vary little with changes in fleet makeup. Risk of invasive species introductions will not change as the total quantity of ballast water will not vary. The trigger for any additional environmental assessment is established by the regulator and would relate to the overall scale of the Mary River Project.

	FM-3	Ballast water	BIMC should re-calculate both their dispersal modeling and risk assessments taking to consideration mid-ocean exchange alone as well as in combination with treatment options that offer the best potential for mitigating risks from foreign species introductions. A robust monitoring program for ballast water and its potential impacts should be in operation prior to any ballast water discharges into Milne Inlet. Options for adaptive management should be identified for defined thresholds.	The risk assessment took mid-ocean ballast water exchange into account. Dispersion modeling will be unaffected by ballast water treatment. Monitoring has commenced in 2013 to document environmental conditions in Milne Inlet. As stated in the Shipping and Marine Wildlife Management Plan (SMWMP, Section 4.2.2) (June 2013), Baffinland's monitoring and sampling plans for treated ballast water discharge will follow IMO Guidelines for Ballast Water Sampling (G2) MEPC.173 (58) and will be integrated into the Project Aquatic Environmental Effects Monitoring (AEEM) Program. Monitoring and sampling of ballast water will occur onboard the vessel itself as well as within Milne Port.
	FM-4	Oil spills	It is recommended that the Proponent assess in detail the risk of Project-related shipping accidents, noting areas along the shipping route where vessels may be particularly vulnerable to environmental conditions including sea ice, seasonal differences in accident and impact risks, and the sensitivity of risk predictions to navigation errors and vessel ice class. The Marine Environmental Working Group should consider tagging studies to assess shipping interactions with juvenile murres from Cape Graham Moore and the Cape Searle-Reid Bay areas, and possibly other species. Controls may be required to avoid loss of materials performance by non-polar class ships (see ERP FEIS v.9, app.9E, p.9 of 28). It is recommended that the Proponent reassess its spill predictions to inform spill response planning. The Proponent should revise and rerun its oil spill dispersal modeling to consider: 1) local forcing, 2) the whole shipping route in Canadian waters, 3) ice conditions, 4) spill volumes up to and including loss of a full tanker cargo, and 5) differences in the quantity and properties of each type of bulk fuel transported by ships when they are at, or in transit to, Milne Port. The results should be used to reassess seasonal spill impact predictions along the shipping route and in port, and to reassess the adequacy of spill response planning and preparedness.	The possibility of oil spills and emergency response was discussed at length during the NIRB review process where experts from Transport Canada and Environment Canada were present. At the Technical Meeting, Baffinland has acknowledged that further spill modeling would be done and has commited to consult with the Environment Canada Science Table, the Canadian Coast Guard and Transport Canada. A revised wording for Project Conditions 97, 98 and 176 which will ensure Baffinland and its contracted Response Organization (OSRL) consult with Canadian Arctic experts on spill response: "For the Northern and Southern shipping routes, prior to the shipment of iron ore, the Proponent shall conduct additional fuel spill modeling along the shipping route in order to inform spill response preparedness . The Proponent shall engage with EC, CCG and TC for the development of its spill response plan. Fuel spill modeling locations along the shipping routes shall be reviewed with the Environment Canada Science Table." The above re-wording was supported by all parties attending the NIRB Technical Meeting in November 2013. Baffinland believes that the expertise of the Environment Canada Science Table is best positioned to direct/guide Baffinland's additional modeling work. <u>Project conditions listed under QIA comment FM-4 refer to ballast water and are not related to oil spills.</u>

	FM-5	Shipping impacts to marine mammals - narwhal impact thresholds, monitoring and mitigation	The Proponent should work with QIA, Inuit in impacted communities, and other interested parties (via the MEWG) to develop a robust monitoring plan that identifies the monitoring tools to be used and the details of how, where and when the various tools will be used (e.g., aerial survey coverage and scheduling, deployment locations for autonomous acoustic recorders, shore-based monitoring locations). It is critically important that the degree of monitoring required to detect a change of 10% in a measurable parameter be adequately determined, and that changes to measurable parameters be linked to appropriate mitigation steps at specific threshold levels. The acceptable levels for impact thresholds and the mitigation steps to be employed should be determined in collaboration with Inuit and regulators. A range of mitigation steps, linked to increasing severity of impacts, should be identified. For example, a shore-based monitoring program was initiated in 2013 to investigate narwhal response to sealift traffic and provide insight into narwhal response to shipping along the northern route. This project will need to continue for an extended period should ore shipments take place, and the research schedule will have to be determined in an adaptive manner (i.e., based on observed effects, statistical power, cumulative effects, etc.). The intensity (in time and space) of application of the different monitoring tools that are to be employed (e.g., aerial surveys, MMOs, passive acoustics) will similarly have to be determined on an on-going basis. Required monitoring programs can be identified by NIRB, and details developed by the MEWG with extensive input from Inuit. QIA recommends that a variety of monitoring tools be used, and that the Proponent and MWEG identify ways to conduct monitoring in a manner that is robust, cost-effective, responsive to Inuit concerns, and maximizing benefits to impacted communities. For example, passive acoustic monitoring (PAM, see QIA ERP Technical Comment FM-06) can be used to measure vessel noise outputs, refine sound transmission models, and monitor marine mammal distribution and relative abundance. Narwhal vocalization rates recorded via PAM may serve as a cost-effective method to monitor narwhal relative abundance and use of important habitats within the RSA and northern route LSA (see Marcoux et al. 2011). Similarly, community based-monitoring (CBM) could be a cost-effective way to monitor narwhal habitat use and distribution, and could provide initial early warnings of seasonal abandonment of important habitat (see QIA ERP Technical Comment FM-09).	This comment reflects the process already in place. Caution should be noted, both with respect to establishing a priori, the detection limits for a monitoring program. The natural variability of the phenomenon of interest will often dictate the ability to detect change, and the level of certainty that can apply. As well, set limits should not be imposed on monitoring programs (frequency or duration). Rather, the results of each monitoring program can serve to inform decisions on continuation, termination and altered frequency of such programs.
	FM-6	Shipping impacts to marine mammals – noise and disturbance	The Proponent should conduct verification studies to assess the accuracy of their sound propagation models and associated zones of impact. Acoustic monitoring programs should be developed following guidelines identified by Wartzok and Tyack (2008) and Moore et al. (2012). These programs will require intensive deployments of hydrophone systems and detailed sound modeling, which should start immediately.	Baffinland notes that timing will be dictated by Project scheduling and other factors.
	FM-7		The ERP (v.8, s.5.10.2.5) proposes to have observers present on “some vessel passages”, and only in “the early stages of ERP operations”. Effective monitoring will require observer coverage throughout the entire ERP of the Project, not just the early stages. Bowhead whale numbers are increasing in the eastern Arctic so collision likelihood will change over time. Triggers for adaptive management should be linked to a collision, regardless of outcome, and not just a mortality event (i.e., any injury). The Proponent should conduct a modeling exercise to explore possible relationships between bowhead density, vessel density, and vessel characteristics and bowhead collision risk.	Observer programs will be consistent with NIRB Project Certificate No. 005 conditions and the IIBA. The program will be subject to review and revision as experience is gained. A modeling exercise might be worth consideration, should credible modeling tools become available.

	FM-8		The Proponent should consult the Marine Environment Working Group before deciding whether pile driving will occur under ice or during the open water season. Consultation with Inuit in impacted communities is also required before any acoustic seal deterrents are used. A bubble curtain is an important mitigation tool for noise impacts on marine mammals and should always be employed. An acoustic contractor should be hired to measure sound levels from pile driving immediately at the start of activities. Sounds measurement should also be taken to verify the efficacy of the bubble curtain. Accurate data are needed to test the accuracy of existing models and refine impact predictions, given the differences in the size of the sheet piles being proposed in the ERP and those modeled for noise impact predictions. A new set of simulations should be conducted to improve confidence in the predictions, and verification studies conducted to confirm predictions (of both pile-driving impacts and bubble curtain effectiveness). Depending on the analysis completed, there may be a need to refine mitigation, monitoring and impact predictions. Sewage should not be discharged in port but instead pumped into a sewage truck and carried to the sewage treatment facilities. Bilge water should also not be released in port due to possible foreign biota and contaminants, and could be collected and pumped ashore for treatment in the tank farm containment area, similar to meltwater.	The role of the MEWG does not include advice or decisions with respect to operational project requirements. Use of a bubble curtain will be considered and proposed where noise attenuation is likely to provide reduction in effects potential. Monitoring will be implemented where appropriate to validate impact predictions and to confirm the effectiveness of mitigation measures. Vessels will not discharge sewage while in port. Vessels are prohibited from pumping bilge water within Arctic waters. Baffinland will require ships to comply with the regulations governing discharge of solid and liquid waste specified in the Canadian Arctic Water Pollution Prevention Act (AWPPA). (FEIS Addendum SMWMP Appendix 10D-10 Appendix 2)
	FM-9		BIMC should provide a cumulative impact assessment that integrates the impacts of all Project activities on all VECs and VSECs, in the context of other human activities, natural stressors such as climate change, and developments including Project expansion, and considering all interactions.	Baffinland has completed a cumulative impact assessment that is consistent with regulatory requirements.
2.3	B-1	Barrier effect of the Tote Road on caribou movement	The Proponent must re-evaluate the potential impact on caribou movement of upwards of 200 trucks per day, the majority of them haul trucks, travelling along the Tote Road for the life of the mine. This re-evaluation should include revisions to the mitigation and adaptive monitoring plans, especially the TEMMP (version 2.1), to include mitigation and monitoring plans that are in place for the Tote Road and any relevant triggers for these programs (BIMC has agree to undertake these revisions to the TEMMP). The Roads Management Plan should specify how caribou presence on and in the vicinity will be monitored and what thresholds (other than the tracks) will be used to trigger specific levels of traffic management. Baffinland have committed to providing this information (20 November 2013 conference call between BIMC and QIA) as well as investigating dash camera technology and wildlife road surveillance systems, as appropriate, to prevent collisions and describe caribou use of the road corridor.	The addendum to the FEIS evaluated the potential impact of caribou movement along the road with increased traffic. This assessment is conservative and accounts for the road as a potential barrier to movement. The Terrestrial Environment Mitigation and Monitoring Plan (TEMMP) was updated/enhanced to include the mitigation and monitoring plans that are in place for the Tote Road and any relevant triggers for these programs. This includes the Caribou Decision Tree, reporting and monitoring related to the Caribou Decision Tree, mitigation for known caribou crossing locations, remote-camera monitoring of crossing locations, snow track monitoring, and snow bank management, among others, as well as an explanation for why dash-mounted cameras are not being considered at this point. QIA's continued participation in the TEWG is encouraged to ensure that monitoring plans are reviewed and revised on an as-needed basis. B1-1: While the surveys noted by QIA are being included in the TEMMP and implemented in 2014, Baffinland is not considering weekly snow track monitoring surveys until preliminary surveys (scheduled for 2014) show that that this frequency will provide statistically robust data to determine Project-related effects. B1-2: As part of operating the Tote Road, Baffinland endevors to keep snow banks of less than 1 meter. B1-3: Potential caribou crossing areas along the road were considered in the Approved Project's FEIS. Details can be reviewed at a TEWG meeting to determine if they are sufficient to assess the effectiveness of the ability of caribou to cross the road.

	B-2	Effects of increased traffic along the Tote Road on caribou calving	The Proponent must re-evaluate the potential impact on caribou calving of upwards of 200 trucks per day, the majority of them haul trucks, travelling along the Tote Road for the life of the mine within the cumulative effects energetic and population model. The Proponent will also revise the mitigation and monitoring plans, including the TEMMP (version 2.1) to include the mitigation and monitoring plans that are in place for the Tote Road during calving; this was agreed to during the 20 November 2013 teleconference.	The TEMMP was updated/enhanced to include the mitigation and monitoring plans that are in place for the Tote Road. These include height of land surveys, local environmental monitors, and traffic guidelines if caribou are observed along the Tote Road. B2-1: The mitigation measures applied for the Project account for the Caribou Protection Measures identified in Appendix I of the NBRLUP There is no caribou protection area identified in the North Baffin Island region, so area-specific mitigation measures are not proposed. Consistent with the Caribou Protection Measures, the Project-specific mitigation measures are based on animal presence and activity as identified in the TEMMP.
	B-3	Effects of increased traffic along the Tote Road on caribou mortality	The Proponent must re-evaluate the potential impact on caribou injuries and deaths from upwards of 200 trucks per day, the majority of them haul trucks, travelling along the Tote Road for the decades to come. This re-evaluation should include an assessment of potential effects and revisions to the mitigation and monitoring plans, particularly the TEMMP, to include enhanced designs for monitoring and mitigation of potential impacts of the increased traffic along the Tote Road on traffic-related injuries and deaths. During the 20 November 2013 conference call prior to the Technical Hearings, BIMC committed to update/enhance the TEMMP to include mortality thresholds, mitigation and monitoring plans that are in place for the Tote Road.	The TEMMP was updated/enhanced to include the mortality thresholds, mitigation and monitoring plans that are in place for the Tote Road. Mitigation measures include the Caribou Decision Tree, radio communication among drivers, and reporting requirement, among others. In response to a commitment made to QIA on the Nov. 20 teleconference, an updated energetics model that better addresses the combined Project effects will be provided to the QIA as a separate document (Russell 2014).
2.4	C-1	Impact Assessment and Production Volumes	It is recommended that the following be implemented as conditions for the amendment to the Project certificate: The nominal production rate for Deposit #1 for the Mary River Mine Project be set at 21.5 Mt/year.	Baffinland confirms that the nominal production rate should increase from 18 Mt/a to 21.5 Mt/a. As discussed during the Mary River Final Hearing in July 2012, Baffinland reiterates that the nominal production rate allows for operational flexibility.
	C-2	Tote Road Camp	It is recommended that the following be implemented as a condition for the amendment to the Project certificate: Prior to camp occupation, a rigorous monitoring protocol shall be developed for any camp located along the Tote Road that accounts for the aquatic, atmosphere and land environments.	Baffinland is no longer proposing to build a camp along the tote road.
2.5	SE-1	Employment and Training	Increase the monitoring of socioeconomic metrics to properly measure the effectiveness of the impact predictions, as required under NLCA 12.7.2 (a) and (d), particularly as it relates to the delivery of anticipated significant and positive socio-economic impacts. NLCA 12.7.2 (a) and (d) states: The purpose of a monitoring program set up pursuant to Section 12.7.1 shall be: (a) to measure the relevant effects of projects on the ecosystemic and socio-economic environments of the Nunavut Settlement Area (d) to assess the accuracy of the predictions contained in the project impact statements.	The IIBA provides monitoring programs for Inuit-specific employment and training needs, in cooperation with the Qikiqtani Inuit Association. This will be done with the use of the IIBA Committees. The training and employments skills acquired on-site may translate into the increase of community job skills set and community based Human Resource infrastructure. This ripple effect will be a benefit to the Project but also the North Baffin communities.
2.6	D1 – MRPC	Milne Port and Northern Shipping Route	Existing Terms and Conditions need to be modified to specifically address Milne port shipping and Milne port construction and operation.	The recommendations for Project Conditions 1, 7, 8, 83, 91, 114 and 115 are noted. As stated throughout the NIRB review process, Baffinland considers that all generally worded Project conditions are also applicable to the ERP.

AANDC				
Number	Condition Number	Category	Comment	Baffinland Response
			AANDC does not have any specific issues to raise in this final submission to NIRB and is not recommending any specific amendments to existing terms and conditions or inclusion of additional terms and conditions.	Baffinland agrees with AANDC that no additional Project conditions are required for the ERP.
			Although no specific terms and conditions are being recommended, AANDC has noted during the community consultation sessions in early October 2013 that there were uncertainties expressed regarding the temporal scale of the ERP, particularly in Pond Inlet. The principle cause for concern in the communities was the potential impact of shipping on the marine environment: in particular the impacts on marine mammal populations. It has since been clarified by Baffinland that the use of the tote road and the Milne Inlet port facility to transport iron ore would continue for the life of the project. However, concern over the temporal scale of the ERP may persist in the communities as evidenced in recent correspondence by the Hamlet of Pond Inlet (Hamlet of Pond Comments to NIRB, November 12, 2013).	Noted. Baffinland confirms that the ERP was assessed for the life of the Project and can clarify this if necessary at the Final Hearing.

DFO				
Number	**Condition Number**	**Category**	**Comment**	**Baffinland Response**
3.1.1		Avoidance, disturbance and masking	No specific recommendations. See submission for DFO's conclusion.	In general the issues raised by DFO can best be addressed in the context of the Marine Environment Working Group, rather than as conditions of a NIRB Certificate.
3.1.2 a)		Ship strikes	BIM should finalize their proposed monitoring program to monitor the impacts of shipping on Narwhals and Bowhead Whales prior to the commencement of iron ore shipments. BIM should continue to collect marine mammal baseline data required to support monitoring programs associated with the Project.	The Project Certificate outlines in detail monitoring requirements in conditions 109 through 112 and in the establishment of the MEWG.
b)			BIM should collect baseline acoustic data to characterize underwater ambient noise, sound propagation characteristics and marine mammal acoustic behaviour before construction of port facilities and shipping activities commence. BIM should continue to collect these data once port construction and shipping activities commence.	The Project Certificate outlines in detail monitoring requirements in conditions 109 through 112 and in the establishment of the MEWG.
c)			The collection and analysis of additional baseline data should be used to identify areas where there is a high potential for ship interactions with marine mammals and to inform mitigation measures to reduce the potential for interaction with them.	The Project Certificate outlines in detail monitoring requirements in conditions 109 through 112 and in the establishment of the MEWG.
d)			BIM should have experienced Marine Mammal Observers aboard the ore carriers to monitor reactions and provide localized measures of marine mammal densities along the shipping route. BIM should consider using standard optical aides (medium eye or big eye binoculars, high resolution video cameras) to detect and identify marine mammals at greater distances from the ships. There are well established protocols for much monitoring.	Baffinland conducted a Program for Ship-Based Observers in 2013. The program included training of Inuit in formal Observation protocols as described in the Shipping and Marine Wildlife Management Plan (FEIS Addendnum, Appendix 10D-10). Use of high resolution video cameras could be investigated along with other techniques, in 2014.
e)			BIM should provide sufficient marine mammal observers on project vessels to ensure that their proposed monitoring program is able to detect avoidance behaviours by marine mammals. For animals that are too far ahead of the ship to be detectable by observers, other methods should be considered. Once shipping operations commence, additional surveillance should be undertaken to detect potential changes in distribution patterns and behaviour. This may be achieved using unmanned aircraft flown well ahead of ships. Live cameras along the shipping route might also be used to monitor the presence of marine mammals in the track of a ship, at least in narrower parts such as near Bruce Head and Stephens Island.	As per NIRB Certificate No. 005 conditions 106 and 107, Baffinland will, commencing in 2014, identify and evaluate additional surveillance techniques in consultation with the MEWG.
f)			The proponent should immediately report to DFO any accidental contact of project vessels with marine mammals. In addition, BIM should summarize and report annually any accidental contact by Project vessels with marine mammals through the applicable monitoring report.	This is a requirement of the approved Project (NIRB Certificate No. 005 Condition 121) and is contained in the Shipping and Marine Wildlife Management Plan (FEIS Addendum Volume 10, Appendix 10D-10, Section 4.5)
g)			BIM should couple the ship-based visual observation program as well as the Bruce Head Observation Program with the underwater acoustic monitoring of ship noise, ambient noise and marine mammal vocal behaviour and responses within, near and far from the shipping route.	Baffinland will coordinate these various monitoring programs and will discuss with the MEWG how best to "couple" them. Baffinland's proposed methodology was submitted to DFO in December 2013 as committed through NIRB's technical meeting.
h)			BIM should endeavor to identify and follow individual whales (Narwhals and Bowhead Whales) over time as part of the monitoring program to understand how individual animals respond to Project activities so that harmful effects do not go unrecognized and corrective actions can be taken as needed.	Baffinland is open to discussing opportunities for collaboration on efforts by DFO to carry out such work, to the extent justifiable as a monitoring technique related to the Mary River Project, however we do not feel that such studies, involving potential tagging of animals is appropriate for implementation by an agency other than the government resource manager.

i)			The monitoring program should have sufficient statistical rigour so that changes in monitoring parameters relative to established thresholds can be detected.	See the EEM Framework document (FEIS Volume 10 Appendix 10D-13)
j)			If mitigation measures currently proposed for vessel traffic to/from Milne Port (open-water period only) are inadequate or ineffective then the length of the shipping season may have to be reduced during those periods when marine mammals impacts are most significant. The third objective of the vessel-based marine mammal monitoring program should not be limited to "confirm the predictions in the Project EIS" but rather to assess the predictions.	The Adaptive Management approach as presented by Baffinland (see FEIS Volume 10, Appendix 10D-13) provides for review of predictions, evaluation of mitigation measures, and application of additional mitigation measures as appropriate. Should the measures in place for vessel traffic to/from Milne Inlet prove to be inadequate or ineffective, other means of mitigation will be considered and implemented as appropriate.
k)			Marine mammal population-level effects need to be monitored over the life of the Project. Repeated surveys (using standard methods) at least annually or biannually should be undertaken over the life of the project to provide estimates of abundance and trend over time. Surveys should include Navy Board Inlet, Milne Inlet, Eclipse Sound and Pond Inlet and the various inlets off these main waterbodies (i.e., Tremblay Sound, Eskimo Inlet, White Bay, Oliver Sound, Tay Sound). These surveys would also provide data on distribution patterns and trends.	The current Project Certificate conditions address these issues and there is no need for additional terms or conditions. Population estimates are the responsibility of DFO and, in any case, are unlikely to be appropriate for Environmental Effects Monitoring. Baffinland has proposed a series of distribution surveys that will document Project-induced changes in distribution of affected marine mammal populations.
l)			In the course of Project-related activities, Baffinland should report any marine mammal carcasses observed to DFO's Marine Mammal Response Program (DFO Iqaluit office).	Project Condition 121 already requires Baffinland to report any vessel contact with marine mammals.
3.2		Marine Environment-Impacts of Ballast Water Discharge	Ballast water treatment, rather than ballast water exchange, should be considered to manage ballast water.	As per the Ballast Water Control and Management Regulations administered under the Canada Shipping Act (Shipping and Marine Wildlife Management Plan, Appendix 10D-10), ships entering Canadian waters are required to exchange ballast in the offshore oceanic areas prior to entering Canadian waters (FEIS Addendum Volume 8, Section 3.5.2.3). As well Baffinland is committed to using ballast water treatment systems once the International Convention for the Control and Management of Ships' Ballast Water and Sediment comes into force.
			When selecting which ballast water treatment system will be used, the proponent should consider the following: a) Exposure time required for effective treatment versus the duration of the voyage to Milne Inlet b) Physical and chemical characteristics of source and recipient ports versus operating requirements of the system (e.g. ensure that the system will function correctly at cold temperatures) c) Potential effects of treated ballast water on marine organisms and communities in Milne Inlet. d) The feasibility of shore-side versus shipboard treatment should be considered.	As stated above, Baffinland is committed to using ballast water treatment systems once the International Convention for the Control and Management of Ships' Ballast Water and Sediment comes into force. Currently, ballast water exchange is accepted as an effective ballast water management method, and adherence to regulations and protocols will reduce the potential for invasive species to be introduced into Milne and Steensby Inlets (FEIS Volume 8, Section 4.4 p100). Refer to EIS Addendum. The identified factors will be taken into account when ballast water treatment systems are to be selected. Note, shore-side treatment is not feasible for implementation in respect of the Mary River Project.
			A contingency plan should be developed in the event that ballast water exchange or treatment is not effective.	Baffinland's existing environmental effects monitoring addresses the effectiveness of ballast water management and adaptive management techniques will be implemented as required.

			The proponent should develop a detailed monitoring program at a number of sites over the long term to evaluate changes to marine habitat and organisms and to monitor for non-native introductions resulting from project-related shipping. This program needs to be able to detect changes that may have biological consequences and should be initiated several years prior to any ballast water discharge into Milne Inlet to collect sufficient baseline data and should continue over the life of the project. (Term and Condition 87)	Relevent baseline data was collected in Milne Inlet in 2013 and further baseline data will be collected in 2014.
3.3 a)		Marine Environment – Impacts of Milne Inlet Port Infrastructure	DFO recommends that the proponent continue to consider all opportunities to avoid and mitigate serious harm to fish.	Agreed.
b)			DFO recommends that the proponent develop a plan to undertake offsetting measures to counterbalance the unavoidable residual serious harm to fish.	Agreed.
c)			As offsetting measures are being developed community consultation should also occur so that input from the communities can be incorporated into the design of the Offsetting plan.	Agreed.
d)			In order to evaluate the success of off-setting plan the proponent should a monitoring plan and ensure that sufficient baseline data is collected to determine whether the offsetting measures are stable and functioning as intended.	Agreed.

Environment Canada				
Number	Condition Number	Category	Comment	Baffinland Response
Please refer to EC's submission for longer comments. As Environment Canada considered all technical comments to be resolved based on Baffinland's submission and technical meeting commitments, no comments have been included here.				

Government of Nunavut				
Number	**Condition Number**	**Category**	**Comment**	**Baffinland Response**
1		Polar Bear	Given the mandate for conservation and human safety, the GN recommends that the Project Certificate include Terms and Conditions on the following areas regarding polar bears: We are requesting that a comprehensive, detailed, prescriptive and public polar bear safety and response plan be added as a NIRB certificate condition. We are also requesting that this plan should be reviewed and approved by the GN within one year of the early revenue amendment certificate issue. A new project certificate term and condition specific to polar bears needs to be included as part of the early revenue amendment process. This new project certificate term and condition should state the need to identify methodology that will provide the reliable baseline and monitoring information on polar bears in the SMWMP. Because the early revenue option is an amendment to the initial project, the methodology listed below stands as both early revenue specific needs and as a cumulative effects impact from the initial project. For greater clarity, our suggestion is for collaboration and support for the GN-DOE initiatives listed below. Specific projects include: a.) Polar Bear baseline monitoring (Baffin Bay) b) Polar Bear baseline monitoring (Davis Strait and Hudson Strait) c) Polar Bear baseline monitoring (Foxe Basin) d) Opportunistic and Systematic studies to determine Polar Bear response to project activities and develop mitigation measures. Baseline monitoring for polar bears means that the affected subpopulations will be monitored at a geographical and temporal scale that is appropriate to detect demographic, condition, behavioral impacts. The affected subpopulations include Baffin Bay (BB), Davis Strait (DS), and Foxe Basin (FB). Although bear-human interactions in the vicinity of the development and associated ship traffic are of interest, the project impacts on population distribution, abundance, population productivity (birth and survival rates) are our main concern. The GN recognizes that Baffinland's project impacts are not the only factors that affect these polar bear subpopulations, and that the technical expertise to carry out the required studies may exceed corporate staff capacity. For these reasons GN proposes a collaborative approach based on joint studies that would be cost shared throughout the life of the project. The specific projects will be identified in a proposed draft MOU between the Proponent and the GN that could be discussed before the Final Hearing. The GN requests that NIRB identify baseline monitoring for all impacted polar bear subpopulations at both local and population levels as a condition for the early revenue certificate. Similarly GN requests that systematic and opportunistic studies on polar bear behavior and response to development disturbance in all environments where polar bears encounter both mine operations and shipping be specified as a condition on the project certificate. The protocols for these studies and suggested cost sharing will also be included in our proposed draft MOU. As part of the early revenue amendment process, a new project certificate term and condition needs to be included that addresses the risk that the shipping operations pose with respect to spill and/or other catastrophe clean-up costs, as well as temporal and spatial loss or damage to the productivity and carrying capacity of the marine arctic ecosystem to support healthy sub-populations of polar bears. In the event of a large scale impact, the magnitude of the damage would have to be estimated to identify an appropriate management response. An accurate estimate of environmental damage would require thorough base-line and ongoing ecosystem monitoring studies (e.g. marine arctic ecosystem indicator species monitoring to be developed in collaboration with GC-DFO, CWS and GN-DOE). We also suggest requiring a bond for clean-up and remediation costs associated with a major incident.	While noting the overall success of Mary River Project operations in minimizing polar bear interactions, Baffinland would be pleased to cooperate with GN in the review and updating of its Polar Bear Safety and Response Plan. Similarly, Baffinland would appreciate advice with respect to the potential interactions between the Project and polar bears in the event of a fuel spill. The issue of potential interaction between Project elements and polar bear was exhaustively considered in the FEIS. The potential for environmental effects on polar bear or polar bear habitat is minimal. Issues such as changes in ice habitat have been incorporated into Project Certificate Terms and Conditions (see # 78). There is negligible potential for interaction related to the Early Revenue Phase, and hence no justification for conditions related to " temporal and spatial loss or damage to the productivity and carrying capacity of the marine arctic ecosystem to support healthy sub-populations of polar bears." We note that the Project Certificate at condition 105 confirms that "marine mammals" includes polar bears.
			The GN recommends that terms and conditions 53, 54 and 61 should be amended, augmented, and updated, and/or that additional "early revenue" Project Certificate conditions be imposed as follows:	
			1) The Proponent should be directed to participate and support the GN-DOE population level monitoring and harvest programs required to detect and manage these impacts.	Baffinland disagrees with the GN-DOE's suggestion that mandatory support of GN-DOE population level surveys be included as a Project Condition. Baffinland supports the idea of regional monitoring programs that increase the knowledge of wildlife ecology in the north Baffin Island region and has been cooperative with the GN's efforts to date. In addition to the collaborative nature in which BIM operates, existing Project Condition 51 states: "The Proponent, either directly or as part of the TEWG, shall consider and, where appropriate, cooperate with relevant regional and/or community-based monitoring initiatives that raise issues or produce information pertinent to mitigating project-induced impacts." In addition to previous in-kind support of the South Baffin Island survey conducted in 2012 (Jenkins et al 2013), and an initial contribution of $250,000 to the North Baffin Island caribou collaring program, BIM continues to work with the Terrestrial Environment Working Group (TEWG, within which the GN participates) on the following initiatives that contribute to North Baffin Island caribou knowledge: 1. Commitment to support a GN-led harvest survey (minutes from the 3rd TEWG meeting in October 2013). BIM's support of that work addresses Project Condition 54(f); 2. Commitment to working with the TEWG and the GN on a caribou health survey (Project Condition 35). 3. Various Project-specific surveys such as calving season height-of-land surveys, snow track surveys, pellet collections, and on-site record keeping of caribou observations and harvesting as required.
			3) The Proponent needs to improve their protocols for reducing disruption of caribou movements and habitat use along the haul roads at night because the existing protocols are all visual, and because caribou can be attracted to headlights.	Baffinland believes that its protocols and proposed mitigations are precautionary and reasonable.
			4) The Proponent should be directed to conduct a joint (TEWG) annual review of all caribou monitoring and mitigation programs and protocols to ensure they are appropriate and effective for current population densities. The Proponent should be directed to implement temporary closure of transportation corridors as required to mitigate significant impacts on seasonal movements of calving and post-calving caribou.	Annual review of all caribou monitoring and mitigation programs is already included in existing Project Condition 57. The Project's effects assessment has documented mitigation measures to ensure that there will be not significant effects on North Baffin Island caribou. Based on the Caribou Decision Tree in the TEMMP, this could include temporary traffic stoppages.

			6) The following collaboration programs should be identified as mandatory if the Proponent cannot demonstrate complete mitigation of all project impacts on the North Baffin caribou population:	See individual responses below.
2		Caribou	I. Caribou Harvest Program Subject to Total Allowable Harvest (TAH) limits or other caribou management and/or regulatory actions that may be in place over time in the affected area, the Proponent will maintain accurate and effective harvest records and reporting capacity at the mine site to augment the GN caribou harvest collection program that is still developing. The GN will provide harvest reporting materials including data collection protocols and specimen collection protocols. Data and specimens collected will be provided to a designated GN Biologist in Pond Inlet who will be responsible for analyzing the specimens, archiving the data, and providing periodic reports to communities, co-management partners, and the Terrestrial Working Group. The North Baffin caribou harvest program will be regarded as collaborative and all reports, publications, and consultations will acknowledge all financial contributions and will include as authors biological staff from both parties as appropriate.	As per existing Project Condition 54(f), BIM contributions to a GN-led harvest study has been discussed, with the GN, at all three TEWG meetings in 2013. To date, the GN has not provided details on how the program is conducted or where BIM may best contribute/participate. BIM appreciates the GN's input provided in this written submission and detials will be developed in the TEMMP.
			II. Caribou Enumeration and Distribution Survey The Proponent will contribute jointly to periodic (not more frequently than 5 year intervals) aerial surveys of North Baffin caribou. The surveys will be conducted jointly with Proponent biological staff, but the GN will have responsibility for survey design and survey logistics. The first aerial survey will occur in February and March of 2014 as part of a Baffin wide caribou survey. The North Baffin caribou surveys will be regarded as collaborative and all reports, publications, and consultations will acknowledge all financial contributions and will include as authors biological staff from both parties as appropriate.	Further to our response to GN 2(1), and in regards to this particular survey request, Baffinland received the research proposal “Distribution and Abundance of North Baffin Island Barren-Ground Caribou, March 2014” at the technical meeting in Iqaluit in late November 2013. Based on the material submitted, BIM understands that the goal of the survey is to determine the abundance and distribution of caribou on the northern half of Baffin Island. The three objectives are to observe caribou in late winter habitat, estimate yearling and adult abundance, and to involve north Baffin Hunter and Trapper Organizations (HTOs) in the program. The survey will be conducted by multiple observers in multiple fixed-wing aircraft from March 1st to April 10th, 2014, for a total survey cost estimate of $636,000. The GN is requesting from Baffinland $100,000. BIM prefers that the proposal for the North Baffin Island survey has been presented within the TEWG. Despite the GN’s presence at three previous meetings, neither this survey nor a broader strategy of regional caribou studies where BIM support may be requested have been discussed. It is important to discuss these efforts within the TEWG so that all parties can consider the survey effort and investment required that may affect other programs necessary to meet Project conditions.
			III. Caribou Movements Telemetry Study The Proponent will contribute to any required satellite telemetry studies of North Baffin caribou movements. The North Baffin caribou telemetry studies will be regarded as collaborative and all reports, publications, and consultations will acknowledge all financial contributions and will include as authors biological staff from both parties as appropriate.	Baffinland's previous contribution to the GN-led collaring program resulted in useful data for the Project's baseline and effects assessment. The utility of collaring data, or community support of future study, is yet to be determined. It is premature for BIM to commit to contributing to further telemetry studies without further discussion within the TEWG.
			IV. Social, Economic, and Harvest Impacts of the Milne Inlet to Steensby Inlet Infrastructure Complex A consideration of the role of Proponent operations, infrastructure, and socio-economic benefits in determining the number and location of terrestrial species taken is agreed as part of considering TAH and other harvest controls as necessary conservation measures.	It is not clear what is being requested.
			V. Caribou Habitat Monitoring Using Exclosures An exclosure study is proposed to complement current Project habitat monitoring (e.g., dust studies) and GN North Baffin habitat studies. Such studies would complement existing or any new data on caribou habitat use and contribute to identification of preferred foraging and calving habitat for the North Baffin caribou range, as well as impact monitoring for Project activities. The exclosure study would be focused on the mine site and transportation corridor. The sample design would be a series of directional exclosures extending from the mine footprint away from the area of most intensive impacts to an area sufficiently distant that impacts would be unlikely and or no impact. It will include all associated environmental/ climatological information (wind speed, direction etc.). The number and direction of transects would depend on the perception of distinct habitats and a statistical consideration of sample size requirements to detent changes. The purpose of the exclosures would be to document habitat changes without the confounding effects of grazing. This would allow discrimination between grazing effects (which may be affected by mine activities) and direct effects on vegetation from mine activities. It would also provide documentation of no direct effects on habitat if no gradient within a habitat type or direction in relation to prevailing winds was identified. GN also commits to providing an appropriate study design, and recommends collaboration with a qualified academic research for this monitoring program. Because the exclosures would be built in proximity to the project footprint, the Proponent would take the lead in constructing and monitoring these experiments. The exclosure monitoring study will be regarded as collaborative and all reports, publications, and consultations will acknowledge all financial contributions and will include as authors biological staff from all participants as appropriate.	As per existing Project Condition 36, this topic has been an ongoing discussion in two TEWG meetings. The GN had committed to providing further details on an exclosure design. BIM appreciates the input provided in this written submission and consideration will be given in updates to the TEMMP.
3		Hunter Harvests and Food Security	The Proponent’s initial response to the GN’s recommendations was not considered to adequately address the concern raised, and the issue was carried forward to the Technical Meeting held in Iqaluit November 26-28, 2013. At the Technical Meeting, with respect to Project Certificate Term and Condition 109, the Proponent agreed to the amendment as recommended. On the matter of reporting to the QSEMC, the Proponent identified that the requested information would be provided as part of the NIRB’s annual reporting and that should be sufficient for the QSEMC. The GN notes that, since Baffinland is a member of the QSEMC, opportunities exist for the sharing and discussion of available information related to harvest impacts and food security, and is satisfied with this response.	Noted.
4		Risk Analysis Related to ERP	The Proponent identified that the normal decline in employment following major construction works was addressed during the FEIS and that this is not a new effect introduced by the ERP. Regardless, the inclusion of the ERP into Term and Condition 149 was considered reasonable and the Proponent agreed to the suggested revisions. This is considered satisfactory to the GN.	Confirmed.
5		Monitoring and Mitigation Applied to ERP	The Proponent agreed to include the ERP into the socio-economic monitoring program and to include the suggested wording for all the Project Certificate Terms and Conditions identified by the GN. The GN is satisfied by this response.	Confirmed.
6		Benefits Royalties and Taxation	The Proponent agreed to include the ERP in the socio-economic monitoring program and agreed to include the ERP in its discussions with the GN. The GN was satisfied by this response.	Confirmed.

7		Milne Inlet Tote Road and Port Upgrades	The Proponent indicated that archaeology has been placed as a very high priority and that they will continue to annually propose any protection and mitigations to the GN for approval. They also noted that all new quarries will be surveyed before exploitation, that water crossings have been designed to withstand the 1 in 100 year flood event, and that they are open to discussing existing site protection with Culture and Heritage. At the Technical Meeting, the GN stated its role as the regulator for cultural resources. The GN is satisfied with continued discussion between the Proponent and GN, and with meeting obligations through the permitting phases. An update regarding the terms of annual reporting will be presented at the time of the Final Hearing.	Baffinland concurs, and had a follow-up discussion with the GN on January 14, 2014. Baffinland has agreed to provide map updates as per GN's request each year that an archaeological permit is obtained and archaeological assessment and/or mitigation work is completed.

Transport Canada				
Number	Condition Number	Category	Comment	Baffinland Response
3.1.1		Over-wintering of Vessels	The Proponent will be required to provide Transport Canada with their operations plan and risk assessment for over-wintering of a fuel vessel in Milne Port to determine if required regulatory requirements are met.	Noted.
3.1.2		Use of Containment Booms	Transport Canada does not recommend pre-booming.	Baffinland agrees.
3.1.3		Marine Environment	The SOPEP and Voyage planning in the Arctic should take into consideration remoteness and reality of operations, particularly in regard to responding to a spill and seeking outside assistance, as thereare no ROs (ResponseOrganizations) in the Arctic.	Noted.
3.1.4		Open-Water Shipping	Vessels transiting to/from Milne Inlet and employed within the port are to comply with the AWPPA and the CSA 2001, and their associated regulations.	Noted.
3.1.5		Oil Pollution Emergency Plan (OPEP)	Transport Canada recommends that Baffinland establish contact with one of Canada's four Response Organizations to ascertain whether response services could not be provided wholly or partially by a Canadian entity. Milne Port OHF is bound by regulations and standards to respond to a spill at their terminal and it is recommended that the contracted response provider conduct regular spill preparedness exercises. The Proponent is recommended to engage with CCG in regards to their plan for contracting OSR.	Baffinland did contact Canadian Response organizations at an earlier phase of the project but was informed by these R.O's that they were not authorized by Transport Canada to engage in emergency response outside their respective geographical areas unless called upon by the CCG for a specific intervention. Baffinland has commited to engage with EC, CCG and TC regarding its plan to contract OSRL. Baffinland will conduct regular spill preparedness at Milne Port.
3.1.6		Navigable Waters	Transport Canada recommends that the Proponent submit NWPA applications with final design drawings, for any works built in, on,over, under, through or across a navigable waterway.	Noted. A submission for the Milne Port ore dock will be submitted once the ERP is approved by the Minister.

Natural Resources Canada				
Number	**Condition Number**	**Category**	**Comment**	**Baffinland Response**
2.1		Permafrost and Terrain Stability of Tote Road Corridor and Milne Port site	NRCan is satisfied with BIMC's response and has no additional comments.	Noted.
2.2		Coastal Geosciences	NRCan notes that with respect to ship wake effects, the Final Hearing Report for the Mary River Project (September 2012) includes the following, "Baffinland stated that it is committed to the development and application of a comprehensive Environmental Effects Monitoring Program as described in the FEIS and that it will monitor to verify the wake effect modeling". Where further modelling on wake effects and the potential for sediment re- suspension and transport is not undertaken, BIMC's commitments to monitoring and adaptive management will be important.	Noted.

Parks Canada				
Number	**Condition Number**	**Category**	**Comment**	**Baffinland Response**
PCA-1		Visitor Experience	Flight and shipping schedules: While the proponent expressed the intention of providing Parks Canada with shipping and flight schedules in the Final Environmental Impact Statement, the proponent has not followed up on this commitment. To date Parks Canada has not received any scheduling information. As the project certificate condition only encourages the proponent to keep Parks Canada informed of the schedules, technically they are not in violation of the project certificate. With an increase in the number of ships passing Sirmilik National Park over the length of the project, Parks Canada recommends term and condition 150 be modified so that the proponent is required to provide Parks Canada with regular flight and shipping schedules. Parks Canada should also be advised of any changes to the schedule. During the technical hearings at the end of November, Baffinland committed to “provide Parks Canada with shipping schedules on a daily basis as needed and with air traffic information on an annual basis and to provide updates as required.”	Only generalized shipping "schedules" can be provided because projected time and location data are not available on a ship-by-ship basis. Shipping will be regular enough during the open water season that vessels can be expected at any time of day from Milne Inlet out through Eclipse Sound. Baffinland suggests that a more useful tool for Parks Canada and Parks Canada visitors, and local users of Eclipse Sound and Milne Inlet areas is an information brochure which highlights shipping and potential shipping hazards along the shipping route. Draft text of an informational brochure will be provided to Parks Canada seperately for their comment.
PCA-2		Marine Environment Working Group	To ensure Parks Canada’s continued involvement in advising on the protection of the marine environment of the proposed national marine conservation area (NMCA) in Lancaster Sound, Parks Canada is requesting membership on the Marine Environment Working Group through a change to Condition 77 of the Project Certificate.	Noted.

HAMLET OF POND INLET				
Number	**Condition Number**	**Category**	**Comment**	**Baffinland Response**
	58b	Caribou	Amend 58b to include the tote road and road leading from the deposit to camp	Baffinland agrees with this amendment.
		Shipping	The route should be closer to the eastern side of the entrance to Milne, upon consultation with the residents of Pond Inlet, to avoid affecting hunters and others using the area.	Within the corridor and subject to primary issues of safety and security, Baffinland is willing to discuss potential variations with HTO and the community of Pond Inlet. Baffinland does not believe a specific term and condition is required for this matter.
		Shipping	Monitoring of erosion along the ship route, including Milne Inlet, Eclipse Sound and the coastline at the entrance of Baffin Bay.	This request is duplicative of Project Conditions 81 and 82. Baffinland has committed to monitoring of wakes from transiting ore carriers (NIRB Conditions 81, 82) in order to measure the waves washing along the shore.
		Shipping	The proponent must provide a clear rationale as to whether smaller, more frequent ships or larger, less frequent ships will have greater impacts on the Northern shipping route	The FEIS Addendum addresses the possible range of vessel sizes and numbers associated with the annual transport of 3.5 million tonnes of ore per year (see Volume 3, Section 2.4.3).
	86-90	Marine Environment	The Hamlet of Pond Inlet request options to be presented to the community including, but not limited: - Amend 87 to include Milne Inlet - Revise conditions as BIM is not building their own ships but renting them - Early adoption of treatment standards prior to 2015 - An additional ballast water exchange within Eclipse Sound - Other measures to prevent the majority of mid-ocean ballast water to be discharged in Milne Inlet -Advice from Transport Canada and DFO to the Hamlet on any options presented by Baffinland -Financial and in-kind support for community-based monitoring of marine issues	Baffinland has suggested an amendment for Project Condition 87 to account for Milne Inlet. Baffinland notes that Project Certificate Conditions 86 through 91 already account for ballast water and that these will apply to the Early Revenue Phase. We also note that for approved Project, baseline information was collected at Milne in 2013 and will continue in 2014, with shipping of ore scheduled in 2015. Baffinland will comply with all regulations applicable to ballast water exchange and treatment. The IIBA makes provision for support of community-based monitoring and the QIA has responsibility for the distribution of such funding.
	117	Marine Environment	Invasive work in the marine environment, such as construction, use of explosives, and dredging must only be permitted after mid-September so as not to conflict with the critical period of narwhal calving, fishing, and subsistence hunting.	In-water work is subject to mitigation and monitoring measures as described in the Shipping Marine Wildlife Management Plan. Mitigation measures are designed to respond to seasonal phenomena. Blasting in marine water is not anticipated for Project construction.
		Marine Environment	No invasive work in the marine environment to be carried out during the month of August so as to support both environmental and cultural needs.	In-water work is subject to mitigation and monitoring measures as described in the Shipping Marine Wildlife Management Plan. Mitigation measures are designed to respond to seasonal phenomena.
	113-115	Marine Environment	Amend 3 TCs to include Milne Inlet. And, where no recent science exists, the Company must learn from Inuit Qaujimajatuqangit and conduct further studies on char in the vicinity of the proposed dock.	Baffinland agrees with the suggested changes to NIRB conditions 113, 114 115.
	109	Marine Environment	Include Eclipse Sound, Milne Inlet, and Koluktoo Bay	Monitoring programs will encompass these areas.
	99, 101, 109	Marine Mammals	The "best available science" is not acceptable. New, accurate, applicable studies and long term monitoring must take place, led by objective researchers and assisted in project design and analysis by local Inuit. 99-101 - add acoustic monitoring in Eclipse Sound, Milne Inlet, Koluktoo Bay by an independent researcher and community-based research.	The study designs are developed based on best available science and expertise. As per the Baffinland FEIS and FEIS Addendum, study designs have been developed and tabled to address key issues. The MEWG is acting to provide advice and input to the design of these studies. The Bruce Head is an example of one such program. It was initiated by Pond Inlet HTO/QIA; implemented by local Inuit with participation by specialist consultants. Acoustic monitoring will be initiated in 2015 and the study design will be developed in consultation with the Marine Environment Working Group.

		Marine Mammals	Require a new term and condition that clearly states that avoidance of key areas is considered an impact, and that the proponent be required to have a plan in place that will show the steps it will take to mitigate this impact.	This point has been addressed in the FEIS and the FEIS Addendum. A specific monitoring program has been designed to address avoidance of areas by marine mammals. Baffinland has indicated the range of possible mitigation measures that will apply in the event such avoidance behaviour is detected and persists. Again, this study is being done in consultation with all interested parties.
	109, 110, 111	Marine Mammals	All terms and conditions refer to monitoring plans for marine mammals must be amended to include concrete plans for accpetable and unacceptable levels of change to marine mammal populations, and the steps that will be taken if these levels are reached. To be determined in consultation with the community of Pond Inlet.	These matters are properly addressed through the Environmental Effects Monitoring Framework presentated in the Final Environmental Impact Statement (FEIS) and the FEIS Addendum. Further, the mandate of the marine environment working group addresses these concerns. Baffinland supports the HTO being a part of the MEWG.
		Marine Mammals	The Hamlet of Pond Inlet requests additional information showing how far noise is carries, both in air and water, from construction, project activities and maintenance, including blasting, dredging, shipping, port activities, ore transportation and ship loading. We would require the information to be mapped so as to make this information more easily accessible to the community.	This issue is addressed in FEIS Addendum Volume 5 and Volume 8.
	Various	Marine Mammals	Terms and conditions relating to Marine Mammals that refer only to Steensby Inlet need to be amended to inlcude "Koluktoo Bay, Milne Inlet and Eclipse Sound.	Baffinland agrees with the comment with respect to Milne Inlet and Eclipse Sound and has suggested that the terms and conditions be updated accordingly. However, the shipping route does not transit through Koluktoo Bay.
	7, 8, 9	Freshwater	Monitor glaciers along the shipping route for carbon deposition and melt rate Amend T+C 7 to include carbon from ship emissions along the northern shipping route Amend T+C 8 to include Milne Port Amend T+C 9 to include Milne Port	There is no evidence to suggest that this is a significant issue.
	113, 114, 115	Fish	Include Milne Inlet in 113, 114, 115	Monitoring of fish stocks is the responsibility of government. Therefore, Project Certificate Condition 113 and 114 should not apply to Milne Inlet. With respect to 115, Baffinland is exploring off-setting options.
	10	Dust	The Hamlet of Pond Inlet requires a better undertanding of why dust collection appears to start so far from the road, and would like collection closer than 15 metres. Also, amend T+C to include the road from the deposit to where it joins the tote road, as well as monitoring in the vicinity of the camp, the airstrip and the entire length of the tote road.	Baffinland is employing standard practice for dust monitoring. Baffinland has initiated monitoring of dust along the tote road in consultation with the TEWG. Within the development areas of the mine and port air quality will be monitored as per requirements of the mine safety act.
	10	Dust	Amend all dust monitoring to include the ice on Philips Creek and other fish bearing freshwater, as well as the sea ice in the vicinity of the port.	Marine baseline sampling in the area of Milne Port is addressing this concern. Further, the Aquatic Effects Monitoring Program under the Type A water licence (which is required to be reviewed annually) is the mechanism for addressing this concern.
		Socio-Ec	Monitoring of socio-economic indicators especially relating the food security, human health and well-being, livelihoods, self-reliance, cultural health. Also, steps to be taken if these VSECs are affected.	Baffinland continues to engage with the Qikiqtaaluk Socio-Economic Monitoring Committee, most recently at meetings in Cape Dorset in December 2013. Baffinland also participates with the Mary River Socio Economic Monitoring Committee, a sub-set of the QSEWC whose members include GN-EDT and NBS, AANDC, and QIA. Socio-economic monitoring priorities and Terms and Conditions have been identified and agreed upon.

	140	Socio-Ec	Amend 140 so that it does not just "monitor" staff leaving the Hamlet for mining jobs, but has concrete plans to ensure that the Hamlet does not lose staff needed to perform municipal services.	Baffinland cannot prevent or restrict Hamlet staff from applying for jobs with Baffinland, especially when leaving part time work for full time opportunties. These jobs create further opportunities for people in the Hamlet to be hired on by the Hamlet. A larger working pool is a benefit to everyone. There is no need to amend Project Certificate condition 140.
	147	Socio-Ec	Replaced "encouraged" with "required" to work with the GN and NHC.	Baffinland has already expressed its willingness to cooperate with the GN and NHC. However, housing in Nunavut is the responsibility of the GN and the NHC.
		Accidents and Malfunctions	The Hamlet of Pond Inlet requests training and equipment to deal with potential aircraft accidents or malfunctions occuring in the community as a result of shift-change flights.	This is an issue to be addressed by the appropriate government authorities.
		Accidents and Malfunctions	The Hamlet of Pond Inlet requests training and equipment to deal with potential aircraft accidents or malfunctions occuring in the community as a result of shift-change flights. Unclear if this is an issue for BIM or the GN.	This is an issue to be addressed by the appropriate government authorities.
		Education	Include working with Nunavut Arctic college to support and encourage diploma programs.	Nunavut Arctic College has been and will continue to be a partner in helping us to build capacity in Nunavut. No amendment to the Project Certificate is required as it is already addressed in Project Certificate 005.
	140	Education	When presenting mining career information in public school, be sensitive to community and territorial needs and ensure that strong messages are given encouraging student not to drop out of school to pursue mining jobs.	Baffinland will continue to encourage students to complete their high school education before considering a job at the mine. A completed high school education benefits both Baffinland and the employee.
		Business Development	Do not just refer to funds available under the IIBA - this is meaningless unless a real plan is developed to help people in the community access these funds and learn the business skills necessary to win contracts. New T+C to develop a plan with the community in order determin community needs and how best to address these needs.	This matter is between the Hamlet and the QIA as they will administer the funds available for these activities and this development. We strongly encourage the Hamlet and QIA to begin working closely and quickly to identify and address issues that may be preventing Hamlet members from taking advantage of possible opportunities.
		IQ	Original materials collected for the project must be returned to the community.	Baffinland has initiated completion of outstanding translations and will return everything to the community in the upcoming months, as committed to at the technical meetings in November 2013. NIRB does not need to set a condition for this item.
		IQ	IQ must be given the respect that it is entitled under the NCLA - equal consideration with science. This has not been the case thus far, and the Hamlet of Pond Inlet wants it formalized with a T+C	Baffinland concurs that IQ deserves respect and equal consideration. Baffinland suggests that current Terms and Conditions related to the Marine and Terrestrial working groups provide the appropriate way for considerating and incorporating IQ during the Project's operation.
		Monitoring	There needs to be meaningful financial and in-kind support of community-based monitoring intiatives, both social and environmental. This should be a condition of any move forward by the proponent.	The IIBA addresses this concern. We encourage the Hamlet to work with the QIA and HTO on this concern.
		Monitoring	The community of Pond Inlet must be meaninfully involved in all aspects of monitoring project design, data collection and analysis. All monitoring must continue for length of time that is satisfactory to the community of Pond Inlet.	Baffinland notes that protocols and working relations have been established with QIA and incorporated in the Project IIBA. Baffinland would be available to participate with QIA in discussions with the Hamlet on approaches to increase the involvement by the Pond Inlet Hamlet in monitoring design, data collection and analysis. The duration of monitoring would be dictated by the results achieved, and agreed through consultation with the TEWG and MEWG.
	110, 111, 112 plus many more	Cumulative Effects	The Hamlet of Pond Inlet requires objective studies showing cumulative effects of using both transportation routes at once. The Hamlet of Pond Inlet will request a discontinuation of the use of the northern shipping route once the southern route is operational unless objective studies can clearly demonstrate that the cumulative effects (both environmentall and culturally) are not significant.	The cumulative effects assessment is presented in the FEIS Addendum Volume 9 and concludes that the cumulative effects of using both shipping routes over the life of the Project are not significant.

	163	Process-related Comments	Amend to include BIM being required to produce minutes of meetings available to affected communities.	Baffinland has presented meeting minutes within the FEIS and FEIS Addendum. In addition, Table 2-1.3 summarizes the most commonly heard feedback and Baffinland's response or how the company has addressed the feedback. We appreciate the size of the document makes this difficult to find.

WWF				
Number	Condition Number	Category	Comment	Baffinland Response
Baffinland received WWF's final submission and notes there were no specific recommendations; however, Baffinland agrees with WWF's position that the mechanisms for monitoring are now in place through the project certificate, the MEWG, and the TEWG, as well as the MRSEMWG.				

ISUMA TV				
Number	Condition Number	Category	Comment	Baffinland Response
1			That BIMC reiterate its voluntary commitment about the development of corporate responsibility policies in line with ArcelorMittal's grouplevel arrangements, the international standards contained in ISO26000:2010 and other relevant standards such as the UN Guiding Principles on Business and Human Rights. We recommend that BIMC provide an indicative timeline for the development of these corporate responsibility policies, including through consultation with relevant parties and affected stakeholders.	Baffinland regularly reviews and updates it's corporate responsibility policies.
2			That the NIRB, BIMC, QIA and other relevant parties (that will be involved in the implementation of the above-noted conditions) undertake a participatory assessment of the various information and consultation mechanisms and processes that have been utilized to date for the development of the Mary River mine. The objective of such an assessment is to identify the best practices for sharing information and most effective means of consulting with Inuit on an ongoing basis. It should also identify opportunities for coordinating the various information and consultation plans on a going-forward basis.	Suggestion noted.
3			That future information and consultation mechanisms for the Mary River Mine include the development of a project-specific web-portal as per condition 12 of the Project Certificate. This is an obvious mechanism for providing information in a timely and coordinated manner. In developing the project-specific website, the NIRB, Proponent, QIA and other relevant parties—including the Government of Canada and Government of Nunavut—should address the current technical and cost barriers to internet access in order to make the web-portal accessible and effective at the community level. This specifically entails that the web-portal have the capacity to support media-based audio-visual oral Inuktitut communications that can be downloaded, played and televised in the Baffin region's low-bandwidth environment—through enhanced bandwidth to communities or through a local server network.	Suggestion noted.

Gimailie and Elizabeth, residents of Pond Inlet				
Number	Condition Number	Category	Comment	Baffinland Response
			Transporting iron ore through Eclipse Sound have not approved the people of Pond Inlet. These are the reasons why: Marine mammals (seals) in Button Point area start preparing to travel into Inlets west of Pond Inlet. They start passing through Eclipse Sound in June and July to meet other seals in the inlets to mate, Marine mammls should not be disturbed by ships. Within two (2) years of shipping operation they won't be affected but on the third (3rd) of year of operation they start moving away. The proponent never asked the people of Pond Inlet this question: Can we need conduct early revenue phase by transporting iron ore through Eclipse Sound? Anyone needs to go through approval process before commencing a project and this is a mandatory. If iron ore is going to be transported through Eclipse Sound without Pond Inlet's approval, direct benefit to Pond Inlet will needs to be created towards a creation of relocating airstrip and build break water.	These concerns have been addressed in the addendum to the Final Environmental Impact Statement. Baffinland assessed potential impacts to both ringed seal and bearded seal as a result of shipping activities. Baffinland is confident in it's effects assessment which predicts that no significant residual effects will result on seals.

MHTO				
Number	Condition Number	Category	Comment	Baffinland Response
1		Hunting Rights and Access for Inuit Employees of Baffinland	MHTO, as an organization that represents Hunters and Trappers, urges Baffinland to include MHTO in developing policies related to hunting rights and access for Inuit employees of Baffinland. MHTO is aware that Baffinland has a no hunting policy for its employees. MHTO is also aware that Inuit harvesting rules have been included in the IIBA (article 11, sections 11.9 & 11.10 of the IIBA). MHTO appreciates that this is a complex issue for Baffinland and for the HTO. For example, not all Inuit employees will be from Pond Inlet, and there may be issues related to harvest reporting, impacts on quota, etc. MHTO does not have the answers on how to deal with these issues now, but we are committed to actively participating in these debates. We believe we can play a central role in engaging multiple groups in these discussions – including Baffinland employees, MHTO members, and the broader community of Pond Inlet. This is an important issue for MHTO. We know that hunting and being out on the land or water is central for the wellbeing of hunters and community members. MHTO believes Baffinland has a responsibility to respect that need, and has a role is supporting access to the land for its employees. MHTO urges Baffinland to consider making hunting equipment accessible for its staff. Furthermore, the MHTO requests that project certificate conditions 62 & 124 are amended to ensure that Inuit harvesting rights be respected, whether it is for Inuit employees or Inuit in general, under provisions of the NLCA and IIBA.	Baffinland believes that project conditions 62 and 124 are appropriate and that no amendment is required.
2		Impacting Access to Hunting Territories for HTO Members	MHTO is aware that hunters will need to use other hunting grounds in the area of the mining project and have started to go around the tote road to reach their hunting grounds. This has caused hunters to experience issues such as shortages of gasoline and not being able to use the cabins that HTO have set up in the area at Milne Inlet and at the Mary River site. MHTO recommends that a truck to haul their hunting equipment from Milne Inlet to Mary River is provided for the hunters who wish to go hunting near and around Mary River and Milne Inlet and that if the hunter has to experience shortage of gasoline that they get compensated for loss of their original trail to reach their destination. MHTO would also like to request new cabins from Baffinland Iron Mines Corporation. There were two cabins MHTO owned, one in Milne Inlet and the other one in Mary River and both were moved to a different area as they were inside the project site. Hunters have used these cabins for years and they haven't been able to use the cabins since part of them were destroyed while being moved.	Baffinland has initiated discussions with the HTO regarding preferred options for impacts on the two cabins.

3		HTO Involvement in the Development, Implementation, and Evaluation of Monitoring	A full understanding of the eco-systemic impacts of the ERP is unknown at this time, and its effects will only become known in real time. The MHTO appreciates that the potential eco-systemic impacts can be great and complicated. This is a view shared by multiple parties connected to the effected communities of this project, expressed by the call for diverse monitoring projects. The MHTO strongly recommends that it be included in the design, delivery and evaluation of monitoring plans as they relate to land, air, and water, for the mine, ports and transportation routes, in determining the impact to terrestrial and marine animals and their habitat. MHTO requests that its involvement is necessary, particularly as these monitoring programs inform mitigation plans, wildlife management plans, and the delivery of compensation programs for the life of this project. Particularly, MHTO requests that conditions 99-c, 110 & 112 be amended to include a requirement for the MHTO to be involved during the design and implementation of these programs. MHTO would like to request a new condition for Baffinland to consult with the MHTO to identify ideal ore vessel anchor site locations so as to minimize the impact on local wildlife populations as well as harvesters in the region.	Baffinland would be pleased to work with the HTO on environmental monitoring plans in an appropriate manner that is in accordance with IIBA and consistent with the existing working relationships with agencies, such as QIA. Baffinland invites the HTO to be a member of the Marine and Terrestrial Environment Working Group.
4		Polar Bear Monitors	Recently in 2013 there was a defence kill of a polar bear by Baffinland in the Milne Inlet project area. In that instance, the meat and hide were not kept. MHTO requests that a new condition be developed which would provide for MHTO involvement in selecting bear monitors. Baffinland must ensure that skills such as butchering, skinning and an understanding of polar bear behaviour be an asset of anyone hired as a bear monitor. MHTO also requests that a new condition be in place, which would require Baffinland to notify the MHTO immediately in the instance of a defence kill in the project area so as to minimize the likelihood of wasting meat and hide of a polar bear.	The IIBA has specfic provisions to deal with this concern. As communicated to the QIA and HTO, Baffinland acknowledges that the process requires improvement.
5		Speed of Vessels	The MHTO Board of Directors believe this project will greatly impact the animals surrounding Pond Inlet and at Milne Inlet. Of particular concern is the increase number of ships that will be passing through Pond Inlet to get to Milne Inlet. MHTO understands, through presentations made by NIRB and by information shared by Baffinland, that the proposed new shipping route will result in approximately 54 ore shipments out of Milne Inlet through Pond Inlet between July and October. This equals to 110 individual trips past the community of Pond Inlet in a three-month period. When you also consider the number of sealift vessels and tanker ships that will also be required annually, the sum result is SIGNIFICANT marine traffic within reach and view of the community. Note: Due to length of comment, Baffinland has only included a portion in the table; however, our response addresses the entire comment by MHTO.	Baffinland has considered the issue of ship wakes and the effect of waves that reach to the shoreline. As described in Baffinland's Project Description, vessels will be transiting as speeds between 7 to 10 knots and this will reduce the wake produced by them. Wakes effects are addressed in Project Certificate conditions 81 and 82. Therefore no additional Project Certificate conditions are required. Any wakes produced by vessels will be far smaller than naturally occurring waves and tides. Baffinland notes that the HTO can be added to the distribution list for the Emergency Response Plan.

6		Research	The MHTO would like to see there be an investment on research, particularly research that seeks to understand the impact the mine and its increased marine traffic has on marine wildlife. In particular, MHTO would like to see condition 99-c be amended to include a provision for the project about shore-based observations of pre-project narwhal behavior in Milne Inlet continue if the project were to go into operation and that multiple location are chosen for monitoring sites based on consultation with the MHTO. Along with research related to Narwhal occurring at Milne Inlet, the board would like BIMC to start an Arctic Char study in or near Milne Inlet, which would monitor the health of the Arctic Char. Therefore MHTO requests that conditions 113-115 be amended to have an objective to reduce impacts to marine fish in Steensby Inlet and Milne Inlet. Of particular importance is to consult with the MHTO to prior to commencing this work to determine the best times and locations to undertake such monitoring. The MHTO board also raised concern about ships travelling through Button Point. If the ships are travelling to Milne Inlet, the board would not like them to go out through Navy Board Inlet. In fact, the board does not want any ships to go in or out through Navy Board Inlet except for sealift vessels and the Coast Guard in case of any emergency in that area. We feel strongly about this, as water currents moves from Navy Board Inlet out through Button Point. According to Inuit Qaujimajatuqangit, animals follow this same movement; therefore, it is important to maintain the integrity of this water current. MHTO would like to see Baffinland operations being informed by Inuit Qaujimajatuqanit.	Baffinland has committed to a study program to collect baseline information and to measure for changes introduced by the Project on valued ecosystem components. Shore-based monitoring has been initiated in 2013 and will continue in cooperation with QIA and Pond Inlet. Results of this study will be reviewed in consultation with the HTO and other interested parties through the Marine Environment Working Group, so that monitoring objectives can be met (i.e. location, duration, etc.). Studies on Arctic char will also continue at Milne Port in 2014 and will involve Pond Inlet residents. Baffinland does not propose that shipping be through Navy Board Inlet. Baffinland hopes to continue using Inuit Qaujimajatuqanit as a valuable source of information. Baffinland reiterates that monitoring char stocks at the population level is the responsibility of government.