



Participation in the NIRB Process

- Part 4 Screening of Development Proposal
- Guidelines Development
- DEIS Review
 - Conformity Technical Review
 - DEIS Information Requests
 - DEIS Technical Review
 - “Tote Road Option” Review
 - PHC Technical Meeting
 - “Pre-development Works Application”
 - 2012 Work Plan Application
- FEIS Review
 - FEIS Information Requests
 - FEIS Technical Meeting
 - Final Hearings



QIA Participation

- Organizational direction is derived from the communities
- Mary River Project Committees
- Balancing Impacts against Benefits



Mary River Project Committees

- QIA Executive Establishment of the MRPC
- MRPC creation in Arctic Bay, Cape Dorset, Clyde River, Hall Beach, Igloolik, Kimmirut, and Pond Inlet
- A MRPC Coordinator supports the MRPC.
- Each MRPC are comprised of up to six individuals and include representatives appointed by:
 - local Hunters and Trappers Organization,
 - local Hamlet Council,
 - local Community Lands and Resource Committee,
 - woman's representative appointed by QIA Board,
 - youth representative appointed by QIA Board,
 - and one hunter appointed by QIA Board
- Recommendations made by MRPCs form the basis of QIA's Final Submission



Overarching Issues

1. Socio-economics
2. Caribou
3. Steensby Inlet
4. Marine Mammals
5. Community Based Monitoring
6. Working Groups



1. Socio-Economics

- QIA remains concerned about some significance determinations set out for the Valued Socio-economic Components.
 - Potential for serious negative outcomes, or the challenges to actually realizing benefits, is downplayed in the FEIS.
 - Imperative that the proposed mitigation measures be fully implemented and effective; that monitoring and adaptive management will successfully address issues as they arise over time; and that BIMC, QIA and government agencies will cooperate and each fulfill their responsibilities and mandates.
 - All partners in monitoring and mitigation must identify and commit the human and financial resources necessary to sustain this effort over the life of the Project.



1. Socio-Economics

- Qikiqtaaluk Socio-Economic Monitoring Committee
 - Project Specific Committee – draft Terms of Reference (Appendix D, G-1)
- IIBA
 - Variety of provisions, IIBA does not deal with all predicted impacts



2. Caribou

- The rail route passes through known barren-ground caribou calving and post-calving ranges.
- Uncertainties regarding the predicted effects and proposed mitigations to caribou are of importance to Inuit.
- The uncertainties are partially a reflection of limited baseline, which in turn, resulted in shortcomings in the assessment of effects, mitigations and monitoring.
- **QIA has worked to develop a Terrestrial Environment Working Group – Draft Terms of Reference.**



3. Steensby Inlet

- While a number of views continue to be expressed by Inuit regarding the port-site, QIA understands that a port-site at Steensby Inlet may in fact be the most viable option for BIMC.
- QIA respects that project feasibility is based on multiple factors including: socio-economic impacts, environmental impacts, and, project economics.
- Overwintering of fuel in a fuel vessel at Steensby Inlet is also proposed. The Mary River Project Committee members have requested that an alternative means to fuel storage be considered, with a preference for fuel storage on land.



4. Marine Mammals

- The shipment of iron ore through Hudson Strait and Foxe Basin crosses important areas for marine mammals and seabirds.
- The magnitude of shipping and ice-breaking activities is unprecedented in Canadian Arctic waters. Potential impacts of shipping and icebreaking are a substantial concern among Inuit.
- QIA has identified important information gaps and methodological issues that raise uncertainty about the significance of potential impacts. Further, current baseline information may not provide a sound basis for impact prediction and future monitoring.
- **Consequently, QIA believes that additional information and further analyses are required in advance of commercial shipments of iron ore.**
- **QIA has worked to develop a Marine Environment Working Group – Draft Terms of Reference.**



5. Community Based Monitoring

- Inuit expect to participate in and maintain long-term monitoring programs over all aspects and phases of the Project.
- The Mary River Project Committees strongly recommend community-based monitoring as a major component in overall monitoring plans, particularly in relation to ongoing monitoring of affected land and marine species (e.g., seals, walrus, narwhal, fish, caribou and birds) and socio-economics.
- **QIA concludes that specific components of the Mary River Project require further planning in terms of baseline, monitoring, mitigation, and adaptive management.**



6. Working Groups

- Provide a mechanism for parties to engage in the development and execution of monitoring programs and management plans post-permitting through to construction, operation, and closure of the mine.
- QIA, BIMC and other agencies have agreed in concept to develop working groups in the following areas:
 - Marine, terrestrial, and socio-economics
- QIA cannot understate the risk posed to project monitoring and assessment by creating Working Groups with limited commitments to participate and adequately fund participation to support the mandate of each working group.



QIA Proposed Terms and Conditions

- Draft Project Certificate Conditions have been developed by QIA for NIRB's consideration in drafting a Project Certificate for the proposed Mary River Project.
- **Conditions ensure that Inuit issues are addressed.**
- QIA understands and respects NIRB's mandate and authority in developing Project Certificate Terms and Conditions.



Project Scope

Proposed Ore Production Rate

- The Mary River Project, as presented in the FEIS, is associated with mining ore from the reserve at Deposit No. 1 only.
- A production rate of 18 million tons per year (Mt/a) has been used in the impact assessment, with higher and lower production rates considered in the alternatives assessment and cumulative impacts.



Project Scope

Proposed Ore Production Rate

- There is no NIRB documentation that scopes the project in a level of detail that outlines the upper bound variance to the nominal production rate.
- BIMC has stated that on site infrastructure is able to accommodate up to 30 Mt/a.
- It is QIA opinion that increases in ore production rate above the nominal amount could result in changes to the predicted impacts, particularly for socio-economics, terrestrial, and marine environments.



Recommendations

Development in Calving Ground

- The Proponent should acknowledge that the mine will be constructed in a calving area.
- Construction avoidance during the calving period (15 May – 15 July), if monitoring demonstrates that mitigation measures exceed thresholds for caribou behaviour and displacements in high probability calving areas (e.g., near “Big A Lake” and “Cockburn Lake”)
- Innovative programs should be developed to monitor caribou presence and behaviour during railway construction.
- **During technical meetings and subsequent discussions with QIA in Iqaluit 1-4 May 2012, BIMC acknowledged all of these comments and suggestions, and committed to incorporating them into future documents, specifically revised Management Plans.**

Recommendations

Caribou Mitigation and Monitoring Plan



- The mitigation and monitoring plans lack detail.
- The overall approach acknowledges adaptive management but again without a clear explanation of how it will work.
- The Proponent should revise, prior to construction, the mitigation, monitoring and management plans (particularly the TEMMP) to include enhanced designs for monitoring and mitigation of potential impacts of the project on caribou, particularly during the calving period.
- **BIMC has acknowledged all of these comments and suggestions, and committed to incorporating them into future documents, specifically a revised TEMMP.**

Recommendations

Adaptability of the current caribou population



- BIMC should develop a more comprehensive approach to mitigation for the railway.
 - snow track surveys during construction
 - video-surveillance to improve the predictability of caribou exposure to the railway.
 - During operations, the improved information base should be used to scale up an early warning system for caribou on the railway.
- BIMC has acknowledged all of these comments and suggestions, and committed to incorporating them into future documents, specifically a revised TEMMP.



Recommendation

Dust Fall and Caribou Forage

- Monitoring and mitigation should be developed to reduce the risk to caribou forage from dust fall. Details should be refined through establishment of a Terrestrial Working Group.
- BIMC has acknowledged most of these comments and suggestions, and committed to incorporating them into future documents, specifically a revised TEMMP.



Recommendations

Archaeological Resources

- Wherever possible the Proponent will ensure that Elders are involved in the planning and execution of archeological surveys.
- In the event that it becomes necessary to disturb an archeological site the Proponent should consult with Elders, GN-CLEY and QIA to develop a site-specific mitigation plan.



Recommendations

Overwintering of Fuel (1/2)

- The regulatory instrument that governs the storage of fuel in Steensby Inlet should be identified and adequate financial security bonding shall be required.
- Reassess the risk analysis of using tanker-based fuel storage, which shall include:
 - the potential environmental impacts of tanker failure under a range of winter ice conditions, which shall consider how the spill may spread; and,
 - the impact of fuel if it does not volatilize to the atmosphere..



Recommendations

Overwintering of Fuel (2/2)

- BIMC should undertake to consult directly with affected communities regarding the topic of overwintering of fuel in Steensby Inlet. Topics to be discussed shall include but not be limited to
 - a description of the duration and impact of proposed activities;
 - vessel type;
 - oil spill preparedness; and,
 - and emergency response



Recommendations

QIA B-8-B – Oil Spills

- Conduct oil spill dispersal modeling that will consider:
 - Entire ship track in Canadian waters;
 - Open water and ice-covered conditions;
 - Spill volumes up to and including loss of a full tanker cargo; and,
 - Differences in the quantity and properties of each type of bulk fuel transported by ships when they are at, or in transit to, the proposed Steensby Port.
- The results of revised oil spill dispersal modeling should be used for:
 - Assessment of spill response planning and preparedness;
 - Updating of spill response planning; and,
 - Reassessment of spill impact predictions.



Recommendations - Thresholds

- Monitoring and thresholds should be ecologically appropriate.
- Monitoring results should be analyzed to include the ecological and biological context to ensure impacts are not missed.
- Comply with the Guidelines for the Use of Explosives In or Near Canadian Fisheries Waters as modified by the DFO for use in the north.
- Incorporate into the appropriate mitigation plan prior to construction, thresholds for the use of specific mitigation measures.
 - Ex: bubble curtains for blasting, and nitrate removal.



Recommendations

Icebreaking Impacts on Sea Ice Habitat

- Update the baseline for landfast ice using a long-term dataset (28 years), and with information on inter-annual variation.
- The updated analysis for pack and landfast ice should be synthesized and reported in a management plan (e.g., Shipping and Marine Wildlife Management Plan), in addition, annual sea ice data should be analyzed and incorporated into the same management plan.
- Conduct landfast ice monitoring for the duration of the Project Operations Phase.



Recommendations

Ballast Water (1/3)

- Complete a risk analysis regarding ballast water discharge to assess the adequacy of treatment and implications on the receiving environment. This risk analysis shall consider:
 - Invasive species;
 - Seasonal oceanography;
 - Ballast water quality and quantity;
 - Receiving water quality; and,
 - Residual physical, chemical, and/or biological effects.
- Treatment of ballast water must occur along with confirmatory sampling of the effectiveness of the treatment system to ensure that discharge criteria are achieved as a means to mitigate the potential impact of invasive species.

Recommendations

Ballast Water (2/3)



- Modeling of ballast water discharge should occur. This model should account for:
 - Annual timescales over project life; and,
 - Density dependent flow.
- Incorporate into the Shipping and Marine Mammals Management Plan provisions to minimize the potential for effects from ballast water discharge on fish and fish habitat, and water quality.
 - Comply with the requirements under the International Convention for the Control and Management of Ship's Ballast Water and Sediment (2004);
 - Monitor for the presence of non-indigenous species in receiving waters;
 - Develop a monitoring plan to measure the effect of ballast-water discharge; and,
 - Develop mitigation plans to limit impacts from ballast-water discharge.



Recommendations

Ballast Water (3/3)

- Additional baseline collection must consider the establishment an all-season, inter-annual baseline in Steensby Inlet
- Enable effective monitoring of physical and chemical effects of ballast water releases.
- This should include the selection and identification of physical, chemical, and biological community/indicator components.
- Such topics could be addressed through the Marine Environment Working Group (BIM, DFO, EC, GN, QIA)

Recommendations: Uncertainty in Vessel Routing and Timing



- Vessels should be tracked and recorded, and data shall be accessible in real time to communities.
- Seasonal reporting of ship tracks and sea ice information .
- Conduct a detailed assessment of the risk of Project-related shipping accidents, noting areas along the ship tracks where ships may be particularly vulnerable to environmental conditions including sea ice, and any seasonal differences in risk.



Recommendations

Vessel Disturbance (Noise) (1/2)

- Acoustical monitoring should be implemented that provides an assessment of the negative effects of vessel noise on marine mammals.
- Carefully consider the early warning indicator(s) that will be best examined to ensure rapid identification of negative impacts.
- Thresholds should be developed to determine if negative impacts as a result of vessel noise are occurring.



Recommendations

Vessel Disturbance (Noise) (2/2)

- Mitigation and adaptive management practices should be developed to restrict negative impacts as a result of vessel noise.
 - Ex: Identification of zones where noise could be mitigated due to biophysical features (e.g., water depth, distance from migration routes, distance from overwintering areas etc.); Vessel transit planning, for all seasons.



Recommendations

Vessel Collisions with Bowhead Whales

- Provide sufficient marine mammal observer coverage on project vessels to ensure that collisions are observed and reported over the life of the Project.
- The marine wildlife observer protocol should include protocols for all marine mammals, seabirds, and environmental conditions and immediate reporting of significant observations to the ship masters of other vessels along the shipping route.
- BIMC should immediately report any accidental contact with a marine mammal.



Recommendation

Baseline for Steensby Inlet

- BIMC should be required to collect additional baseline data in Steensby Inlet on walrus, beluga, bearded seal and Arctic Char abundance, distribution ecology and habitat use.
- Data collected should support project monitoring and impact predictions
- Exemplifies the importance of the Marine Working Group.



Recommendations

Monitoring in Steensby Inlet

- Monitor ringed seal birth lair abundance and distribution prior to the start of icebreaking.
- BIMC be required to develop a monitoring program that focuses on walrus use of Steensby Inlet and their reaction to disturbance from construction activities, aircraft, and vessels.
- Develop a comprehensive Arctic Char monitoring program during the open-water season that is able to identify the stock(s) affected by Project activities and monitor for changes in stock size and structure of affected stocks and fish health (condition, taste).

Recommendations

Mitigation of Impacts In Steensby Inlet



- Blasting in water should only occur in open water.
- Prior to construction, implement thresholds for the use of specific mitigation measures such as bubble curtains for blasting, nitrate removal, and changes to ship routing.
- Prior to use of acoustic deterrent devices, engagement with impacted communities should occur to assess the acceptability of these devices.



Recommendation

Cumulative Impacts

- During regular project monitoring and reporting of data, BIMC should be required to analyze the impacts of individual Project activities relative to selected VECs and VSECs, as compared to impact predictions.
- Indicators used should be analyzed both individually and in the context of other indicators (i.e. to avoid results of isolation)
- The analysis should include the assessment of potential cumulative impacts where a project interaction exists.
- This assessment should be used to inform the development of monitoring and mitigation plans.



QIA B-10 – Regulatory Regime

- Due to recent changes in environmental regulation in Canada, regulatory agencies may lack the necessary regulatory tools and staff to participate in project monitoring and management.
- Budgetary cuts have been announced to Fisheries and Oceans Canada, Environment Canada, and other Federal Government departments and agencies.
- The impacts of these cut on northern research, impact assessment, and enforcement are uncertain and pose a real and significant risk to being able to monitor and manage all the activities associated with the proposed project.



Recommendation Regulatory Regime

- Uncertainty related to how potential changes to the Fisheries Act may impact DFO's responsibilities and duties relative to the proposed project.



Regulatory Review Subjects (1/2)

- Effluent Discharge Locations and Characteristics
- Project Monitoring and Reporting (Waste Discharge)
- Explosive Residue Management and Modeling



Regulatory Review Subjects (2/2)

- Mine Closure, Reclamation Planning and Financial Security
- Final Drawings and Designs



Conclusions (1/3)

- Should all the conditions presented during this presentation be accepted by all parties and be endorsed by NIRB through a Project Certificate, QIA feels that appropriate mechanisms will be in place to effectively monitor and manage the Mary River Project in an acceptable manner.



Conclusions (2/3)

- Significance as described in environmental assessment is not equivalent to significance for Inuit. Major impacts will exist should the project proceed.
- Inuit involvement and engagement is a cornerstone for the success of this project.
- Information gaps related to baseline information must be addressed prior to impacts occur.



Conclusions (3/3)

- Key thrust of QIA's interest is the development and function of Working Groups (Socio-Economic, Terrestrial and Marine).
- A significant project risk is the capacity of all agencies to fulfill their roles in the project, throughout the life of the project.
- Inuit have an important and critical role to play in the development and stewardship of this project.
- Capturing the potential benefit from the project is not without significant challenge or risk – Inuit are taking a long-term multigenerational approach to this project.

