



SCREENING DECISION REPORT
NIRB FILE NO.: 07EN004

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INAC No.: N2006C0036
QIA No.: Q05L2C14
DFO No.: NU-07-0002
NWB No.: NWB2MRY0406

March 26, 2007

Honourable Jim Prentice, PC., MP.
Minister of Indian Affairs and Northern Development
Gatineau, Quebec

Via email: PrenticeJ@parl.gc.ca

and

Thomas Alikatuktuk
President, Qikiqtani Inuit Association
Iqaluit, NU
Via email: pres@qia.ca

Re: Screening Decision for Baffinland's Mary River Geotechnical Drilling Project Proposal

Dear Honourable Jim Prentice and President Alikatuktuk:

The primary objectives of the Nunavut Land Claims Agreement are set out in section 12.2.5 of the Land Claims Agreement. This section reads:

In carrying out its functions, the primary objectives of NIRB shall be at all times to protect and promote the existing and future well-being of the residents and communities of the Nunavut Settlement Area, and to protect the ecosystemic integrity of the Nunavut Settlement Area. NIRB shall take into account the well-being of the residents of Canada outside the Nunavut Settlement Area.

Section 12.4.4 of the Nunavut Land Claim Agreement states:

Upon receipt of a project proposal, NIRB shall screen the proposal and indicate to the Minister in writing that:

- a) the proposal may be processed without a review under Part 5 or 6; NIRB may recommend specific terms and conditions to be attached to any approval, reflecting the primary objectives set out in Section 12.2.5;

- b) the proposal requires review under Part 5 or 6; NIRB shall identify particular issues or concerns which should be considered in such a review;
- c) the proposal is insufficiently developed to permit proper screening, and should be returned to the proponent for clarification; or
- d) the potential adverse impacts of the proposal are so unacceptable that it should be modified or abandoned.

NIRB Assessment and Decision

After a thorough assessment of all material provided to the Board (please see Appendix C), the decision of the Board as per section 12.4.4 of the NLCA is:

12.4.4 (a): the proposal may be processed without a review under Part 5 or 6; NIRB may recommend specific terms and conditions to be attached to any approval, reflecting the primary objectives set out in Section 12.2.5

NIRB Recommendations and Recommended Conditions

The Nunavut Impact Review Board is recommending the following:

1. Indian and Northern Affairs Canada (INAC) impose similar mitigation measures and/or conditions pursuant to the Federal Land Use Permit to those which were imposed upon Baffinland Iron Mines Corporation (the Proponent) on June 29, 2004, in regard to:
 - a. Location and Area
 - b. Time
 - c. Equipment
 - d. Methods and Techniques
 - e. Type, Location, Capacity and Operation of Facilities
 - f. Control or Prevention of Flooding, Erosion and Subsidence of Land
 - g. Use, Storage, Handling and Disposal of Chemical or Toxic Material
 - h. Wildlife and Fisheries Habitat
 - i. Objects and Places of Recreational, Scenic and Ecological Value
 - j. Petroleum Fuel Storage
 - k. Matters Not Consistent with the Regulations
2. The Qikiqtani Inuit Association (QIA) impose mitigation measures and/or conditions pursuant to the Inuit Owned Lands License upon the Proponent in regard to:
 - a. General Standards
 - b. Fuel and Chemical Storage
 - c. Drilling
 - d. Campsites
 - e. Fisheries
 - f. Ground Disturbance
 - g. Other General
 - h. Any other conditions recommended by the appropriate Community Lands and Resource Committee (CLARC)
3. The QIA require the Proponent to follow the QIA Code of Conduct for Land Users.

In addition, the Board is recommending the following or similar project-specific terms and conditions be imposed upon the Proponent through all relevant legislation pursuant to 12.4.4(a) of the NLCA:

1. Baffinland Iron Mines Corporation (the Proponent) shall maintain a copy of this Screening Decision at the site of operation at all times.
2. The Proponent shall forward copies to NIRB of all permits obtained and required for this project prior to the commencement of the project.
3. The Proponent shall operate in accordance with commitments stated in Appendix A and all documentation provided to NIRB, INAC, the QIA and the Nunavut NWB. Where information in the documentation conflicts with Appendix A, Appendix A shall prevail.
4. The Proponent shall submit an annual report with copies provided to the NIRB, INAC, the QIA, and EC by January 31 each year that the project is in operation commencing January 31, 2008. The report must contain, but not be limited to, the following information:
 - a. A summary of activities undertaken for the year, including the amount of drilling;
 - b. A work plan for the following year;
 - c. The results of environmental studies undertaken and plans for future studies;
 - d. Wildlife encounters and actions/mitigation taken;
 - e. A summary of local hires and initiatives;
 - f. A summary of community consultations undertaken and the results;
 - g. A summary of site-visits by inspectors with results and follow-up actions ;
 - h. The number of take-offs & landings from an airstrip with approved flight path with date and location;
 - i. The number of helicopter touch-downs on the land with date and location (provide unless confidential);
 - j. Site photos;
 - k. Progressive reclamation work undertaken; and
 - l. A summary of how the Proponent has complied with NIRB conditions contained within this Screening Decision, and the conditions associated with all authorizations for the project proposal.
5. Immediately upon clarification regarding the commitment of the Proponent to participate in a Government of Nunavut Department of Environment (GN-DOE) caribou collaring initiative with the GN-DOE, the Proponent shall submit to NIRB relevant documentation providing evidence of the commitments of the Proponent and the GN-DOE in this regard.
6. On or before May 31, 2007, the Proponent shall submit to NIRB, the NWB, the QIA and the Department of Fisheries and Oceans Canada (DFO) a report describing all possible locations where water-taking may result in a water body being drawn down. This report must include:
 - a. Effects analysis of water draw-down in these locations;
 - b. Proposed mitigation/abatement measures for potential adverse effects; and
 - c. Monitoring and follow-up strategies regarding water draw down effects.
7. On or before May 31, 2007, the Proponent shall submit to NIRB, Environment Canada (EC), the QIA and the NWB a comprehensive Water Quality Monitoring and Management Program. This Water Quality Monitoring and Management Program may include the elements of the *Site Water Management Plan* (dated February 20, 2007 – to be submitted to the NWB ninety (90) days

following the issuance of the water license) and any monitoring requirements included in the NWB water license and must also include:

- a. Details of the weekly monitoring program, such as monitoring locations, frequency of sampling, and parameters monitored;
 - b. Guidelines used in the monitoring program, such as Canadian Council of Ministers for the Environment guidelines for the protection of freshwater aquatic life (CCME-FWAL), and any site-specific criteria established by the NWB;
 - c. Operational procedures intended to mitigate the potential adverse effects to water quality, including those from drill wastes;
 - d. Anticipated adaptive management strategies to deal with adverse impacts identified from the 2007 and 2008 monitoring program, including:
 - i. Description of alternative methods of containment for waste deposition which may be considered by the Proponent;
 - ii. Criteria the Proponent will use when considering the requirement for adaptive management.
 - e. The requirement to report any exceedences of CCME-FWAL to Environment Canada, the Nunavut Water Board, and the Department of Fisheries and Oceans Canada
8. The Proponent shall ensure that the Wastewater Treatment Plan Design and Operations/Maintenance (O/M) Report to be submitted to the NWB for approval, must address design criteria such as:
- a. Identification of control parameters (COD/BOD₅, TSS, heavy metals);
 - b. Corresponding discharge limits;
 - c. Emergency/O&M failure measures;
 - d. Identification of the water bodies where effluent will be discharged; and
 - e. Potential impacts to aquatic life from effluent discharge.
9. The Proponent shall consult Transport Canada's Canadian Aviation Regulations to ensure compliance where appropriate.
10. Prior to any ground disturbance activities, the Proponent shall submit an Archaeological Assessment Report to NIRB and the Government of Nunavut Department of Culture, Language, Elders and Youth (GN-CLEY). Any subsequent direction provided by the GN-CLEY the Archaeological Plan must be forwarded to NIRB.
11. The Proponent shall adhere to conditions stated in attached Appendix B *Archaeological and Palaeontological Resources – Terms and Conditions for Land Use Permit Holders*.
12. On or before May 31, 2007, the Proponent shall submit a report describing all ongoing baseline research activities to NIRB, GN-DOE and the QIA, which must include:
- a. Summary of the activities in the 2007 Environmental Baseline Program; and
 - b. Protocols to be followed by researchers to reduce unnecessary impacts to the environment from research activities.
13. On or before May 31, 2007, the Proponent shall submit a Wildlife Mitigation and Monitoring Plan to NIRB, the GN-DOE, and the QIA, which must include:
- a. All relevant baseline terrestrial data collected by the Proponent from previous baseline research activities;
 - b. Predicted impacts to wildlife from project activities (wildlife assessment report);

- c. Proposed site-specific measures to reduce anticipated adverse impacts to wildlife, including adaptive management measures and all relevant Proponent commitments in Appendix A;
- d. Proposed measures for wildlife monitoring; and
- e. Incorporation, where possible, of data collected by the Pisikik Inuit Qaujimajatuqangit Working Group into the wildlife assessment report, measures to reduce adverse impacts to wildlife and proposed measures for wildlife monitoring.

Any subsequent direction provided by the Government of Nunavut regarding the Wildlife Mitigation and Monitoring Plan must be forwarded to NIRB.

- 14. The Proponent shall submit its updated Spill Contingency Plan and Abandonment and Restoration Plan to NIRB, INAC, QIA and the NWB immediately.
- 15. The Proponent shall ensure that the disposal of combustible camp wastes comply with the *Canadian Wide Standards for Dioxins and Furans*, and the *Canadian Wide Standards for Mercury*. Efforts made to achieve compliance shall be reported to the NIRB as part of the annual report.
- 16. The Proponent shall not conduct any activity associated with the land use operation if critical periods of wildlife cycles are observed (e.g. caribou migration, calving, fish spawning, raptor nesting, polar bear movement).

Validity of Land Claims Agreement

Section 2.12.2

Where there is any inconsistency or conflict between any federal, territorial and local government laws, and the Agreement, the Agreement shall prevail to the extent of the inconsistency or conflict.

Dated ____ March 26, 2007 ____ at Cambridge Bay, NU.



Lucassie Arragutainaq, A/Chairperson

Appendix A – Proponent Commitments

1. Submission of an Archaeological Assessment Report to Government of Nunavut Department of Culture, Language, Elders and Youth
2. Continue collecting and compiling wildlife baseline data, and identify critical habitat and avoid impacts based on current knowledge
3. Support a Government of Nunavut initiated caribou collaring program and a peregrine falcon research project, in addition to Baffinland's baseline studies
4. Conduct a wildlife assessment report for submission to DOE for mid-April 2007
5. Comply with caribou protection measures
6. Contact local HTO and Wildlife Officer in the event of a defense polar bear kill.
7. Initiate discussions with the Mittimatalik Hunters and Trappers Organization and Igloolik Hunters and Trappers Association regarding compensation for any future defense kills of polar bear
8. Undertake the following with respect to air traffic:
 - a. Minimize the number of flights
 - b. Implement a 610 m flight altitude minimum and 1,000 m flight altitude minimum near concentrations of birds with exceptions where required;
 - c. Avoid caribou calving grounds between May 15 and July 15. After July 15, post-calving areas known to have aggregations of caribou will be avoided
 - d. Avoid a large concentration of wildlife, (i.e., Migratory Bird Sanctuaries, breeding colonies and caribou calving grounds), and take alternate routes
 - e. Plan routes that are likely to have least occurrences of wildlife
 - f. Use small aircraft rather than large aircraft whenever possible
 - g. Hovering or circling may greatly increase disturbances and must be avoided
 - h. Use fixed-wing aircraft rather than helicopters whenever possible
 - i. Inform pilots of the wildlife sensitive areas
 - j. Pilots to report caribou movements and locations during calving and post-calving periods, so that these areas can be avoided
9. Seek NWB approval prior to drilling within 30m of a water body
10. Management plan of drill wastes to be submitted to the NWB for approval
11. Return drill cuttings at surface to the drill hole, at all land-based drilling locations
12. Drilling through sea ice at potential port locations will be undertaken using drums, or equivalent, to collect and re-circulate all drill water and no drill water will be released from the casing into the water
13. Drill additives will not be used during on-ice drilling, and final disposal of drill water will be within a snow berm on land more than 30m from a water body
14. Improve drilling practices through use of in-ground sumps and/or alternative methods of containment will be identified and employed
15. Installation of a new incinerator to replace current incinerator at Mary River site and completion of stack test in early season to determine compliance with the *Canada-wide Standards for Dioxins and Furans*
16. Discussions with Government of Nunavut Department of Environment regarding waste oil disposal options
17. Compliance with Nunavut requirements as outlined in the *Environmental Guideline for the General Management of Hazardous Waste*
18. Filing of updated Spill Contingency Plan with the Nunavut Water Board
19. Filing of updated Abandonment and Restoration Plan with the Nunavut Water Board
20. Review of bird survey methodologies and study findings with Canadian Wildlife Service
21. Develop and expand site orientation program

22. Establishment of an on-going bird monitoring program consistent with precautions outlined by Government of Nunavut Department of Environment
23. On-going monitoring of polar bears with appropriate plans implemented as needed
24. Continuation of weekly water quality monitoring program
25. Seek approval from NWB regarding sewage treatment plant and enlargement of sumps, if required



BACKGROUND

Archaeology

As stated in Article 33 of the Nunavut Land Claims Agreement:

The archaeological record of the Inuit of Nunavut is a record of Inuit use and occupancy of lands and resources through time. The evidence associated with their use and occupancy represents a cultural, historical and ethnographic heritage of Inuit society and, as such, Government recognizes that Inuit have a special relationship with such evidence, which shall be expressed in terms of special rights and responsibilities. [33.2.1]

The archaeological record of Nunavut is of spiritual, cultural, religious and educational importance to Inuit. Accordingly, the identification, protection and conservation of archaeological sites and specimens and the interpretation of the archaeological record is of primary importance to Inuit and their involvement is both desirable and necessary. [33.2.2]

In recognition of the cultural, spiritual and religious importance of certain areas in Nunavut to Inuit, Inuit have special rights and interests in these areas as defined by Article 33 of the Nunavut Land Claims Agreement. [33.2.5]

Palaeontology

Under the Nunavut Act¹, the federal government can make regulations for the protection, care and preservation of palaeontological sites and specimens in Nunavut. Under the *Nunavut Archaeological and Palaeontological Sites Regulations*², it is illegal to alter or disturb any palaeontological site in Nunavut unless permission is first granted through the permitting process.

Definitions

As defined in the *Nunavut Archaeological and Palaeontological Sites Regulations*, the following definitions apply:

“archaeological site” means a place where an archaeological artifact is found.

¹

s. 51(1)

²

P.C. 2001-1111 14 June, 2001

“archaeological artifact” means any tangible evidence of human activity that is more than 50 years old and in respect of which an unbroken chain of possession or regular pattern of usage cannot be demonstrated, and includes a Denesuline archaeological specimen referred to in section 40.4.9 of the Nunavut Land Claims Agreement.

“palaeontological site” means a site where a fossil is found.

“fossil” includes:

- (a) natural casts
- (b) preserved tracks, coprolites and plant remains; and
- (c) the preserved shells and exoskeletons of invertebrates and the eggs, teeth and bones of vertebrates.

Terms and Conditions

- 1) The permittee shall not operate any vehicle over a known or suspected archaeological or palaeontological site.
- 2) The permittee shall not remove, disturb, or displace any archaeological artifact or site, or any fossil or palaeontological site.
- 3) The permittee shall immediately contact the Department of Culture, Language, Elders and Youth (867) 934-2046 or (867) 975-5500 or 1 (866) 934-2035 should an archaeological site or specimen, or a palaeontological site or fossil be encountered or disturbed by any land use activity.
- 4) The permittee shall immediately cease any activity that disturbs an archaeological or palaeontological site encountered during the course of a land use operation, until permitted to proceed with the authorization of the Department of Culture, Language, Elders and Youth, Government of Nunavut.
- 5) The permittee shall follow the direction of the Department of Culture, Language, Elders and Youth and DIAND in restoring disturbed archaeological or palaeontological sites to an acceptable condition.

- 6) The permittee shall provide all information requested by the Department of Culture, Language, Elders and Youth concerning all archaeological sites or artifacts and all palaeontological sites and fossils encountered in the course of any land use activity.
- 7) The permittee shall make best efforts to ensure that all persons working under authority of the permit are aware of these conditions concerning archaeological sites and artifacts, and palaeontological sites and fossils.
- 8) The permittee shall avoid the known archaeological and/or palaeontological sites listed in Attachment 1.
- 9) The permittee shall have an archaeologist or palaeontologist perform the following functions, as required by the Department of Culture, Language, Elders and Youth:
 - a) survey
 - b) inventory and documentation of the archaeological or palaeontological resources of the land use area
 - c) assessment of potential for damage to archaeological or palaeontological sites
 - d) mitigation
 - e) marking boundaries of archaeological or palaeontological sites
 - f) site restoration

The Department of Culture, Language, Elders and Youth shall authorize by way of a Nunavut Archaeologist Permit or a Nunavut Palaeontologist Permit, all procedures subsumed under the above operations.

Appendix C – File History

On January 24, 2007, the Nunavut Impact Review Board (NIRB or Board) received Baffinland Iron Mine Corporation's (Baffinland) Mary River Geotechnical Drilling Program (Drilling Program) project proposal from Indian and Northern Affairs Canada (INAC) and the Qikiqtani Inuit Association (QIA). This project proposal received a positive conformity determination from the Nunavut Planning Commission on January 22, 2007.

The project proposal includes a renewal and amendment of activities previously permitted by INAC, the QIA, and the NWB, which are:

- Continued mineral exploration at Deposits #1, 2, 3 and 3A (renewal of activities permitted previously)
- Initiation of mineral exploration on Deposit No. 4
- Continued operation of the existing 80-person tent camp and expansion to 100-persons
- Temporary installation of three (3) 8-12 person fly camps at Milne Inlet, Steensby Inlet and Deposit No. 4 to support drilling activities
- Land-based geotechnical investigations of mine-related infrastructure at Mary River, potential transportation routes, potential hydro and wind power sites, port-related facilities at Milne Inlet and Steensby Inlet (no construction activities)
- On-ice geotechnical drilling investigations of port-related facilities at Milne Inlet and Steensby Inlet
- Winter road use
- Airstrip use
- Fuel transportation and storage chemical transportation and storage
- Mobilization of three additional rock coring drills (for an on-site total of 7 rigs)
- Water use and deposition of waste

In addition, on January 25, 2007 NIRB received Baffinland's Bulk Sampling Program project proposal, and Baffinland requested NIRB conduct *separate* Part 4 screenings on the Drilling Program and this Bulk Sampling Program.

On January 29, 2007 NIRB notified Baffinland that it was commencing the Part 4 Screening process for the drilling program and allowed for Parties to comment on the following:

- Whether or not the Drilling Program and the Bulk Sampling Program were separate and discrete project proposals;
- Whether the project proposal is likely to arouse significant public concern; and if so, why;
- Whether the project proposal is likely to cause significant adverse eco-systemic and socio-economic effects; and if so, why;
- Whether the project is of a type where the potential adverse effects are highly predictable and mitigable with known technology, (please provide any recommended mitigation measures); and
- Any matter of importance to the Party related to the project proposal.

This application was distributed to the communities of Igloolik, Arctic Bay, and Pond Inlet and to interested Federal and Territorial Agencies.

On February 6, 2007 NIRB received comments from Indian and Northern Affairs Canada (INAC) and Environment Canada (EC) regarding whether or not the Drilling Program and the Bulk Sampling Program were separate and discrete project proposals. Both INAC and EC stated they agreed with NIRB's

determination that the project proposals could undergo separate Part 4 Screenings. However, EC requested clarification regarding the relationship of a proposed wind tower to the Bulk Sampling Program, and clarification regarding the permitting process of the wind tower.

On February 8, 2007 NIRB requested Baffinland respond to two questions posed regarding the request for clarification from EC, and on February 8, 2007 Baffinland provided a response to NIRB. Subsequently, Parties were directed to provide comments to NIRB by February 20, 2007.

On or before February 20, 2007 NIRB received comments on the project proposal from the following interested Parties:

- Department of Culture, Language, Elders and Youth
- The Government of Nunavut Department of Environment
- Environment Canada
- Transport Canada

Concerns regarding the project proposal were expressed by all interested Parties and NIRB directed Baffinland to respond to the concerns by February 27, 2007.

The main concerns included:

- potential cumulative effects with other projects in the area and ongoing land use activities (cumulative impacts from both projects should be assessed)
- potential for archeological site disturbance in the Mary River area
- potential impacts on caribou and other wildlife,
- lack of wildlife data (including baseline data sets), and effective impact and mitigation measures
- omissions in project proposal, such as wildlife observations map, aircraft activities, impact of noise
- potential human-wolf, wolverine and fox encounters resulting in injury or death to either animal or human(s)
- potential ecological impacts of shipping and geotechnical activities to polar bears
- potential human-polar bear encounters
- lack of information in the Spill Contingency Plan, such as training for employees, treatment of spilled material
- omissions in the Abandonment and Restoration Plan, such as clean-up and treatment at bone yard
- potential excessive run-off and erosion at drill sites
- potential runoff of calcium chloride into water bodies
- potential interference to navigation

On February 28, 2007 Baffinland responded to the concerns and comments by Parties (Response to Comments).

On March 5, 2007 NIRB provided interested Parties with an opportunity to review the Response to Comments before proceeding with the next steps of the Part 4 Screening process. Comments were due from Parties by March 9, 2007.

On March 9, 2007 NIRB received additional comments from the Government of Nunavut Department of Environment and Transport Canada. Environment Canada requested an extension to March 14, 2007 and provided comments on that date.

From these Parties, there still remained the following environmental concerns:

- Water quality impact prediction, mitigation for water quality and water quality monitoring strategies
- Site specific measures to reduce impact to wildlife
- Clarification regarding Baffinland support of GN-DOE caribou collaring initiative
- Clarification regarding aeronautical evaluation of test wind tower