SCREENING DECISION REPORT
NIRB FILE NO.: 11EN031

INAC File No. N2011C0016
KIA File No. KVL111B05
NWB File No. 2BE-MRP

July 13, 2011

The Honourable John Duncan
Minister of Aboriginal Affairs and Northern Development Canada
Executive Offices
10 Wellington St.
Gatineau, QC K1A 0H4

Via email: Duncan.J@parl.gc.ca and minister@inac-ainc.gc.ca

Re: Screening Decision for IronOne Inc.'s "Maguse River" Project Proposal, 11EN031

Dear Mr. John Duncan:

The primary objectives of the Nunavut Impact Review Board (NIRB) are set out in Section 12.2.5 of the Nunavut Land Claims Agreement (NLCA) as follows:

> *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 NLCA 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 *Procedural History* and *Project Activities* in **Appendix A**), in accordance with the principles identified within Section 12.4.2 of the NLCA, 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.

RECOMMENDED PROJECT-SPECIFIC TERMS AND CONDITIONS (pursuant to Section 12.4.4(a) of the NLCA)

The Board is recommending that the following or similar project-specific terms and conditions be imposed upon the Proponent through all relevant legislation:

General

1. IronOne Inc. (the Proponent) shall maintain a copy of the Project Terms and Conditions at the site of operation at all times.
2. The Proponent shall forward copies of all permits obtained and required for this project to the Nunavut Impact Review Board (NIRB) prior to the commencement of the project.
3. The Proponent shall operate in accordance with all commitments stated in correspondence provided to the NIRB (NIRB Part 1 and NIRB Part 2 PSIR forms, May 26, 2011), to Indian and Northern Affairs Canada [INAC] (Class A Land Use Permit application, May 23, 2011) and to the Nunavut Water Board [NWB] (Type B Water Licence Application, May 3, 2011).
4. The Proponent shall operate the site in accordance with all applicable Acts, Regulations and Guidelines.

Water Use

5. The Proponent shall not extract water from any fish-bearing waterbody unless the water intake hose is equipped with a screen of appropriate mesh size to ensure that there is no entrapment of fish. Small lakes or streams should not be used for water withdrawal unless approved by the Nunavut Water Board.
6. The Proponent shall not use water, including constructing or disturbing any stream, lakebed or the banks of any definable water course unless approved by the Nunavut Water Board.

Waste Disposal/Incineration

7. The Proponent shall incinerate all combustible wastes daily, and remove the ash from incineration activities and non-combustible wastes from the project site to an approved facility for disposal.

8. The Proponent shall keep all garbage and debris in bags placed in a covered metal container or equivalent until disposed of at an approved facility. All such wastes shall be kept inaccessible to wildlife at all times.
9. The Proponent shall ensure that the incineration of combustible camp wastes comply with the *Canadian Wide Standards for Dioxins and Furans,* and the *Canadian Wide Standards for Mercury*.
10. The Proponent shall ensure that no waste oil/grease is incinerated on site.

Fuel and Chemical Storage

11. The Proponent shall locate all fuel and other hazardous materials a minimum of thirty-one (31) metres away from the high water mark of any water body and in such a manner as to prevent their release into the environment.
12. The Proponent shall ensure that re-fuelling of all equipment occur a minimum of thirty-one (31) metres away from the high water mark of any water body.
13. The Proponent shall store all fuel and chemicals in such a manner that they are inaccessible to wildlife.
14. The Proponent shall use adequate secondary containment or a surface liner (e.g. self-supporting insta-berms and fold-a-tanks), when storing barrelled fuel and chemicals at all locations.
15. The Proponent shall remove and treat hydrocarbon contaminated soils on site or transport them to an approved disposal site for treatment.
16. The Proponent shall ensure that all personnel are properly trained in fuel and hazardous waste handling procedures, as well as spill response procedures. All spills of fuel or other deleterious materials of any amount must be reported immediately to the 24 hour Spill Line at (867) 920-8130.

Wildlife - General

17. The Proponent shall ensure that there is no damage to wildlife habitat in conducting this operation.
18. The Proponent shall not harass wildlife. This includes persistently worrying or chasing animals, or disturbing large groups of animals. The Proponent shall not hunt or fish, unless proper Nunavut authorizations have been acquired.
19. The Proponent shall ensure that all project personnel are made aware of the measures to protect wildlife and are provided with training and/or advice on how to implement these measures.

Migratory Birds and Raptors Disturbance

20. The Proponent shall not disturb or destroy the nests or eggs of any birds. If nests are encountered and/or identified, the Proponent shall take precaution to avoid further interaction and or disturbance (e.g., a 100 metre buffer around the nests). If active nests of any birds are discovered (i.e. with eggs or young), the Proponent shall avoid these areas until nesting is complete and the young have left the nest.

Aircraft Flight Restrictions

21. The Proponent shall restrict aircraft/helicopter activity related to the project to a minimum altitude of 610 metres above ground level unless there is a specific requirement for low-level flying, which does not disturb wildlife and migratory birds.
22. The Proponent shall ensure that aircraft maintain a vertical distance of 1000 metres and a horizontal distance of 1500 metres from any observed groups (colonies) of migratory birds. Aircraft should avoid critical and sensitive wildlife areas at all times by choosing alternate flight corridors.
23. The Proponent shall ensure that aircraft/helicopter do not, unless for emergency, touch-down in areas where wildlife are present.
24. The Proponent shall advise all pilots of relevant flight restrictions and enforce their application over the project area, including flight paths to/from the project area.

Caribou and Muskoxen Disturbance

25. The Proponent shall cease activities that may interfere with the migration or calving of caribou or muskox, until the caribou or muskox have passed or left the area.
26. The Proponent shall not block or cause any diversion to caribou migration, and shall cease activities likely to interfere with migration such as airborne geophysics surveys, drilling or movement of equipment or personnel until such time as the caribou have passed.
27. The Proponent shall not construct or operate any camp, cache any fuel or conduct blasting within 10 km, or conduct any drilling operation within 5 km of any paths or crossings known to be frequented by (e.g. designated caribou crossings).
28. During the period of May 15 to July 15, when caribou are observed within 1 km of project operations, the Proponent shall suspend all operations, including low-level over flights, blasting, and use of snow mobiles and all-terrain vehicles outside the immediate vicinity of the camps. Following July 15, if caribou cows or calves are observed within 1 km of project operations, the Proponent shall also suspend all operations in the vicinity, including low-level over flights, blasting, and use of snow mobiles and all-terrain vehicles, until caribou are no longer in the immediate area.

Drilling on Land

29. The Proponent shall not conduct any land based drilling or mechanized clearing within thirty-one (31) metres of the normal high water mark of a water body.
30. The Proponent shall not allow any drilling wastes to spread to the surrounding lands or water bodies.
31. If an artesian flow is encountered, the Proponent shall ensure the drill hole is immediately plugged and permanently sealed.
32. The Proponent shall ensure that all drill areas are constructed to facilitate minimizing the environmental footprint of the project area. Drill areas should be kept orderly with garbage removed daily to an approved disposal site.

33. The Proponent shall ensure that all sump/depression capacities are sufficient to accommodate the volume of waste water and any fines that are produced. The sumps shall only be used for inert drilling fluids, and not any other materials or substances.

34. The Proponent shall not locate any sump within thirty-one (31) metres of the normal high water mark of any water body. Sumps and areas designated for waste disposal shall be sufficiently bermed or otherwise contained to ensure that substances to do not enter a waterway unless otherwise authorized.

35. The Proponent shall ensure all drill holes are backfilled or capped prior to the end of each field season. All sumps must be backfilled and restored to original or stable profile prior to the end of each field season.

Drilling on Ice

36. If drilling is conducted on lake ice, the Proponent shall ensure that any return water is non-toxic, and will not result in an increase in total suspended solids in the immediate receiving waters above the Canadian Council of Ministers for the Environment (CCME) Guidelines for the Protection of Freshwater Aquatic Life (i.e. 10 mg/L for lakes with background levels under 100 mg/L, or 10% for those above 100 mg/L).

37. The Proponent shall ensure that drill muds and additives are not used in connection with holes drilled through lake ice unless they are re-circulated or contained such that they do not enter the water, or are demonstrated to be non-toxic.

38. The Proponent shall ensure that all drill cuttings are removed from ice surfaces daily.

Winter Road/Trail

39. The Proponent shall select a winter route that maximizes the use of frozen water bodies.

40. The Proponent shall not erect camps or store materials on the surface ice of lakes or streams, except that which is for immediate use.

41. The Proponent shall ensure that no disturbance of the stream bed or banks of any definable watercourse be permitted.

42. The Proponent shall not move any equipment or vehicles without prior testing the thickness of the ice to ensure the lake is in a state capable of fully supporting the equipment or vehicles.

43. The Proponent shall not move any equipment or vehicles unless the ground surface is in a state capable of fully supporting the equipment or vehicles without rutting or gouging.

44. The Proponent shall suspend overland travel of equipment or vehicles if rutting occurs. Likewise, upon spring break up, or at such a time as the shorelines of frozen water bodies begin to thaw, the Proponent shall suspend all travel over water bodies if disturbance to the banks or shorelines of any definable water body occurs.

45. The Proponent shall ensure that winter lake/stream crossings are located to minimize approach grades and constructed entirely of ice and snow materials. Ice or snow free of sediment should be the only materials used to construct temporary crossings over any ice-covered watercourse.

46. The Proponent shall ensure that bank disturbances are avoided, and no mechanized clearing carried out immediately adjacent to any watercourse.

47. The Proponent shall ensure that stream crossings and/or temporary crossings constructed from ice and snow, which may cause jams, flooding or impede fish passage and or water flow, are removed or notched prior to spring break-up.

48. The Proponent shall avoid disturbance on slopes prone to natural erosion, and alternative locations shall be utilized.

49. The Proponent shall implement sediment and erosion control measures prior to, and during operations to prevent sediment entry into the water during the spring thaw. This includes ensuring that a sufficient thickness of snow and ice is present on the winter road to prevent unnecessary erosion of the underlying ground surface and impact on underneath vegetation.

50. The Proponent shall implement a clean-up and reclamation stabilization plan which should include, but is not limited to, re-vegetation and/or stabilization of exposed soil in road bed.

Temporary Camps

51. The Proponent shall ensure that all camps are located on gravel, sand or other durable land.

52. The Proponent shall not erect camps or store material on the surface ice of lakes or streams.

Restoration of Disturbed Areas

53. The Proponent shall ensure that all disturbed areas are restored to a stable or pre-disturbed state as practical as possible upon completion of field work.

54. The Proponent shall complete all clean-up and restoration of the lands used prior to the end of each field season and/or upon abandonment of site.

Other

55. The Proponent should, to the extent possible, hire local people and to consult with local residents regarding their activities in the region.

MONITORING AND REPORTING REQUIREMENTS

In addition, the Board is recommending the following:

Annual Report

1. The Proponent shall submit a comprehensive annual report with copies provided to the Nunavut Impact Review Board, Aboriginal Affairs and Northern Development Canada and the Government of Nunavut – Department of Environment by March 31st of each year of permitted activities beginning March 31, 2012. The annual report must contain the following information:
    a. A summary of activities undertaken for the year including a map showing the location of drill sites;
    b. A work plan for the coming year including a map showing the approximate location of targeted drill sites;
    c. Description of wildlife observations and critical habitats documented including:
        i. Types, distribution and abundance of wildlife species in the project area;

ii. Map(s) illustrating the locations of sensitive wildlife sites such as denning sites, calving areas, caribou crossing sites, and raptor nests;
iii. Details on the timing of critical life history events of wildlife in the project area (i.e. calving, mating, denning, and nesting);
iv. Potential impacts to wildlife from project activities including mitigation measures to manage or avoid impacts on wildlife and sensitive sites;
v. Wildlife log recorded during project activities;
vi. Any measures that were taken to comply with standards outlined in the AANDC regulations regarding the Qamanirjuaq Caribou Protection Area, specifically conducting daily, high-point-of-land reconnaissance for caribou during the calving and post-calving seasons, recording results of this reconnaissance into the Wildlife log, and operational changes made as a result of these observations;
vii. Any caribou-specific information or analysis undertaken by the Proponent as outlined in the Caribou Protection Measures with regard to detailed plans, wildlife data, maps, monitoring, or establishment specific triggers for action; and

d. Annual amounts of fuel quantities stored on site for the project;
e. Any spills that occurred within the operational year; and
f. Any site inspections including details of the inspection, any resulting inspection reports, and follow up actions taken.

Wildlife Log/Record of Observations

2. In addition to the information submitted in the annual report, the Wildlife Log should contain details on the following:
    a) detailing location (i.e., latitude and longitude),
    b) species,
    c) number of animals,
    d) gender and age of animals if possible,
    e) a description of the animal activity and behaviour,
    f) a description of the project activity occurring around the time of observation,
    g) as well as any action or mitigation measure taken as a result of the encounter.

3. The proponent should contact the nearest Conservation Officer when and if:
    - A situation occurs where wildlife becomes a nuisance (returning frequently, or unable to deter).
    - Immediately if you have killed wildlife (either to resolve a conflict or unintentionally).
    - Immediately if you have injured wildlife and have not been able to relocate or destroy.
    - Immediately if a human has been attacked or bitten by wildlife. Note: Current policy is for any wildlife that attack humans to be destroyed; only in special circumstances would wildlife not be destroyed. If no further injury or human life is in danger contact the Conservation Officer to report and for further instructions.

4. Contact the Regional Biologist or Wildlife Manager for information and advice on measures which should be taken to minimize wildlife-human conflict. Further contact and follow up may be required as outlined above can be directed to the **Biologist, Kivalliq Region:** Mitch

Campbell, (867) 857-2828, mcampbell1@gov.nu.ca and the **Chief Environmental Protection Officer:** Robert Eno, (867) 975-7729, reno@gov.nu.ca.

Fuel and Chemical Storage

5. The Proponent shall update its Fuel Spill Contingency Plan to up to date emergency contact numbers for the Government of Nunavut-Department of Environment (867-975-4644) and the Manager of Pollution Control and Air Quality (867-975-7748), as well as the Chief Environmental Protection Officer (Rob Eno) as the DOE contact: 867-975-7729 and refer to the GN-DoE's Spill Contingency Planning and Reporting which can be viewed at http://env.gov.nu.ca/programareas/environmentprotection/legislation. The Proponent shall also include in this update the fuel quantities in the Spill Contingency Plan and submit it to the Chief Environmental Protection Officer.
6. The Proponent shall implement the recommendations found in the 2003 CCME Guidance Document PN 1326 entitled "Environmental Code of Practice for Above Ground and Underground Storage Tank Systems containing Petroleum Product and Allied Petroleum Products".
7. For long term storage (longer than 6 months), it is strongly recommended that drummed fuel be stored on pallets to prevent the bottoms from rusting out. Drum caches should ideally be enclosed in a fenced-in compound to prevent unauthorized access.
8. A site map that is intended to illustrate the facilities relationship to other areas that may be affected by the spill. The map should be to scale and be large enough to include the location of your facility, nearby buildings or facilities, roads, culverts, drainage patters, and any nearby bodies of water.
9. Spill kits should include materials such as a spark-free shovel and pick-axe, drums, booms, absorbent pad/sheet, disposable protective gloves/coveralls, and disposal bags.

Transport of Waste/Dangerous Goods

10. The Proponent shall ensure that a waste manifest accompanies the shipment of all waste oil/grease and is registered with the Government of Nunavut Department of Environment (GN-DoE). Contact the Manager of Pollution Control and Air Quality at (867) 975-7748 to obtain a manifest if hazardous waste will be generated during project activities.
11. The Proponent shall ensure that an export manifest or the appropriate transportation of dangerous goods (TDG) documentation accompany all potential hazardous samples and/or materials that are transported off site

OTHER NIRB CONCERNS AND RECOMMENDATIONS

In addition to the project-specific terms and conditions, the Board is recommending the following:

Bear and Carnivore Safety

1. The Proponent review the bear/carnivore detection and deterrent techniques outlined in "Safety in Grizzly and Black Bear Country" which can be down-loaded from this link:

http://www.enr.gov.nt.ca/_live/documents/content/Bear_Safety.pdf. Note that some recommendations in this manual are also relevant to polar bears. There is a DVD about polar bears and safety available from Nunavut Parks at the following link http://www.nunavutparks.com/english/visitor-information/suggested-resources.html and a "Safety in Polar Bear Country" pamphlet from Parks Canada at the following link http://www.pc.gc.ca/eng/pn-np/nu/auyuittuq/visit/visit6/d/i.aspx.

Incineration of Wastes

2. The Proponent review Environment Canada's "Technical Document for Batch Waste Incineration", available at the following link: http://www.ec.gc.ca/gdd-mw/default.asp?lang=En&n=F53EDE13-1. The technical document provides information on appropriate incineration technologies, best management and operational practices, monitoring and reporting.
3. Efforts to reduce and control the volumes of wastes produced, transported, and disposed of should include the implementation of a comprehensive waste management strategy (especially waste segregation) which may consider:
    - Purchasing policies that focus on reduced packaging,
    - On-site diversion and segregation programs (i.e. the separation of non-food waste items suitable for storage and subsequent transport and disposal or recycling),
    - If incineration is required, ensure diligent operation and maintenance of the incineration device and provide appropriate training to the personnel operating and maintaining the incinerator,
    - Waste wood treated with preservatives such as creosote, pentachlorophenol or heavy metal solutions should not be burned. Additionally, plastics, electrical wire, asbestos and building demolition wastes (except clean wood) are wastes likely to produce dioxins and furans when burned and should be excluded from incineration. Under no circumstance should hazardous wastes be managed through burning or incineration. The efforts made to achieve compliance shall be reported annually.
    - The Proponent should ensure that the appropriate incineration technology is used and is referred to Environment Canada's *Technical Document for Batch Waste Incineration*.
    - The proponent is also referred to the GN-DoE's Environmental Guideline for Burning and Incineration of Solid Waste as outlined in the following reference: http://env.gov.nu.ca/programareas/environmentprotection/legislation.

Species at Risk

4. The Proponent review Environment Canada's "Environment Assessment Best Practice Guide for Wildlife at Risk in Canada", available at the following link: http://www.ec.gc.ca/Publications/default.asp?lang=En&xml=5407909E-10F6-4AFE-ACDF-75B9E820B4A1. The guide provides information to the Proponent on what is required when Wildlife at Risk, including *Species at Risk*, are encountered or affected by the project.

Winter Roads/Trails

5. If ice bridges are constructed, the Proponent follow the mitigation measures outlined in Fisheries and Oceans Canada's (DFO) Operational Statement for Ice Bridges, available at the following internet address: http://www.dfo-mpo.gc.ca/regions/central/habitat/os-eo/provinces-territories-territoires/nu/index-eng.htm.
6. Cutting or filling of crossing approaches below the high water mark will require prior review and approval by Fisheries and Oceans Canada - Fish Habitat Management Branch (DFO-FHM).

Change in Project Scope

7. Any activity related to this application, and outside the original scope of the project as described in the application, will be considered a new project and should be submitted to the NIRB for Screening.
8. All Authorizing Agencies shall notify the NIRB of any changes in operating plans or conditions associated with this project prior to any such change.

Caribou Management

9. Territorial and federal government agencies in Nunavut should work together with Regional Inuit Associations, co-management boards and industry to develop an action plan to identify and mitigate potential cumulative effects of human land use activities, including mineral exploration, on barren-ground caribou. This assessment of cumulative effects should occur at a regional scale (i.e., larger than individual project areas).
10. Territorial and federal government agencies update the Caribou Protection Map with updated data and information from the Beverly Qamanirjuaq Caribou Management Board (BQCMB).
11. Territorial and federal government agencies and regional Inuit associations should ensure that protection of caribou and caribou habitat figure prominently into their contributions towards the Nunavut Planning Commission's development of a Nunavut-wide land use plan.

Nunavut Planning Commission

12. The Nunavut Planning Commission should be aware of the ongoing concerns regarding a lack of protection for caribou and caribou habitat within the Kivalliq Region of Nunavut. In developing a Nunavut-wide land use plan, the NPC may wish to consider formalized protection of important caribou habitat, and seasonal restrictions on exploration activities in these areas to minimize disturbance to caribou lifecycles and Inuit harvesting activities.

Aboriginal Affairs and Northern Development Canada (AANDC)

13. Aboriginal Affairs and Northern Development Canada (AANDC) impose mitigation measures, conditions and monitoring requirements pursuant to the Federal Land Use Permit, which require the Proponent to respect the sensitivities and importance of the area. These mitigation measures, conditions and monitoring requirements should be in regard to the location and area; type, location, capacity and operation of facilities; use, storage, handling and disposal of chemical or toxic material; wildlife and fisheries habitat; and petroleum fuel storage.

14. AANDC consider the importance of conducting regular Land Use Inspections, pursuant to the authority of the Federal Land Use Permit, while the project is in operation. The Land Use Inspections should be focused on ensuring the Proponent is in compliance with the conditions imposed through the Federal Land Use Permit.

15. It is recommended to AANDC that no extension be issued to the Land Use Permit until the annual report is received.

AANDC – Water Resources Division

16. INAC – Water Resources Division should consider the importance of conducting regular inspections, pursuant to the authority of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*, while the project is in operation. Inspectors should focus on ensuring the Proponent is in compliance with the conditions imposed through the Water Licence.

Kivalliq Inuit Association

17. The Kivalliq Inuit Association (KIA) impose strict mitigation measures and/or conditions upon the Proponent pursuant to the Inuit Owned Lands License in regard to fuel and chemical storage, drilling, water conditions, ground disturbance and wildlife on Inuit owned land.

Nunavut Water Board

18. The Nunavut Water Board (NWB) impose mitigation measures, conditions and monitoring requirements pursuant to the Water Licence, which require the Proponent to respect the sensitivities and importance of water in the area. These mitigation measures, conditions and monitoring requirements should be in regard to use of water, snow and ice; waste disposal; access infrastructure and operation for camps; drilling operations; spill contingency planning; abandonment and restoration planning; and monitoring programs.

19. In particular, mitigation measures, conditions and monitoring requirements should be considered for the use of water, snow and ice for the development and maintenance of the winter road/trail for this project.

Drill Additive Use

20. The Proponent should assess alternatives (including biodegradable and non-toxic) to drill additives prior to the use of calcium chloride, as these salts in high concentrations are harmful to the environment. If calcium chloride is to be used, the Proponent should ensure that return water is contained in a properly constructed sump. The Proponent should not rely on permafrost integrity to contain and isolate drilling waste.

REGULATORY REQUIREMENTS

The Proponent is also advised that the following legislation may apply to the project:

1. The *Fisheries Act* (http://laws.justice.gc.ca/en/showtdm/cs/F-14///en).

2. The *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (http://www.canlii.org/ca/sta/n-28.8/whole.html).

3. The *Migratory Birds Convention Act* and *Migratory Birds Regulations* (http://laws.justice.gc.ca/en/showtdm/cs/M-7.01).

4. The *Species at Risk Act* (http://laws.justice.gc.ca/en/showtdm/cs/S-15.3). Attached in **Appendix B** is a list of Species at Risk in Nunavut.

5. The *Nunavut Wildlife Act* which contains provisions to protect and conserve wildlife and wildlife habitat, including specific protection measures for wildlife habitat and species at risk.

6. The *Nunavut Act* (http://laws.justice.gc.ca/en/showtdm/cs/N-28.6). The Proponent must comply with the proposed terms and conditions listed in the attached **Appendix C**.

7. The *Transportation of Dangerous Goods Regulations*, *Transportation of Dangerous Goods Act* (http://www.tc.gc.ca/eng/tdg/safety-menu.htm), and the *Environmental Protection Act* (http://laws.justice.gc.ca/en/C-15.31/text.html) The Proponent must ensure that proper shipping documents accompany all movements of dangerous goods. The Proponent must register with the GN-DOE Manager of Pollution Control and Air Quality at 867-975-7748.

8. The *Aeronautics Act* (http://laws.justice.gc.ca/en/A-2/).

9. The *Navigable Waters Protection Act (NWPA)* (http://laws.justice.gc.ca/en/N-22/index.html).

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 _____July 12, 2011____ at Sanikiluaq, NU.

_____
Lucassie Arragutainaq, Chairperson

Attachments: Appendix A: Procedural History and Project Activities
Appendix B: Species at Risk in Nunavut
Appendix C: Archaeological and Palaeontological Resources Terms and Conditions for Land Use Permit Holders

Appendix A
Procedural History and Project Activities

Procedural History

On May 3, 2011 the Nunavut Impact Review Board (NIRB or Board) received IronOne Inc.'s 'Maguse River Project' proposal from the Nunavut Water Board. On May 10, 2011 the NIRB received a positive conformity determination (Keewatin Regional Land Use Plan) from the Nunavut Planning Commission for this project proposal. On May 11, 2011 the NIRB send out correspondence advising parties that a referral for screening would be required from Government departments/agencies or Regional Inuit Associations responsible for authorizing the proposed project works or activities. In addition, the NIRB requested that the Proponent complete the NIRB Part 1 Form in order to permit proper screening. On May 23, 2011 the NIRB received a request from Aboriginal Affairs and Northern Development Canada (AANDC) to screen this project proposal and on May 26, 2011 the NIRB received the requested additional information from the Proponent. On June 2, 2011 the NIRB requested an extension to the screening deadline from the Minister of AANDC due to several delays in receiving necessary information. The NIRB assigned this project proposal file number 11EN031.

This project proposal was distributed to community organizations in Arviat and Whale Cove, as well as to relevant federal and territorial government agencies, and Inuit organizations. The NIRB requested that interested parties review the proposal and provide the Board with any comments or concerns by June 22, 2011 (extended to June 30, 2011 as requested by the Government of Nunavut) regarding:

- 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, (providing any recommended mitigation measures); and
- Any matter of importance to the Party related to the project proposal.

On or before June 30, 2011 the NIRB received comments from the following interested parties:

- **Environment Canada (EC)**
- **Fisheries and Oceans Canada (DFO)**
- **Arviat Hunters and Trappers Organization**
- **Government of Nunavut**
  - Culture, Language, Elders & Youth (GN-CLEY)
  - Economic Development and Transportation (GN-ED&T)
  - Department of Environment (GN-DoE)
- **Beverly and Qamanirjuaq Caribou Management Board (BQCMB).**

All comments provided to the NIRB regarding this project proposal can be viewed on NIRB's ftp-site, at the following location:
ftp://ftp.nirb.ca/01-SCREENINGS/COMPLETED%20SCREENINGS/

Project Activities

The proposed project is located within the Kivalliq region, approximately 70 kilometres (km) northwest of Arviat and 90 km southwest of Whale Cove. The Proponent intends to explore for the presence of iron in the Maguse River Project area (focus would be on Crown Land only with future testing potentially on surface Inuit Owned Land) and is proposed to take place from July to October 2011, and then between March and October for the subsequent years until 2016.

The activities/components associated with this proposal include:

- Exploration program to consist of geophysical surveys, prospecting, mapping, diamond drilling including:
    - Locating and sampling historical drill core and fresh bedrock sampling by drilling approximately 30-50 drill holes per year;
    - On land drilling to approximately 300 metres (m) in inclined boreholes;
    - Possible on-ice drilling in 2012;
- Establishment of temporary base camp to accommodate 15 to 20 people including:
    - 7-10 sleeping canvas tents with metal/wood frames;
    - One each kitchen, core logging, core cutting, cook/first aid, office tents and two dry tents;
    - Generator shack;
    - Incinerator;
    - Fuel cache;
    - Helicopter pad;
- Camp supplies to be brought in by helicopter or local fixed wing aircraft;
- Transportation, storage and use of fuel at camp site with small fuel caches located at drill sites (4-5 drums of diesel and 3-4 100 pound canisters of propane). Total amount of fuel to be stored at site include:
    - 175 drums (205 litres [L]) diesel;
    - 100 drums (205 L) aviation fuel;
    - 10 drums (205 L) gasoline;
    - 100 cylinders (100 pounds);
- Transportation, storage and use of chemicals and hazardous materials;
- Use of esker(s) for landing fixed wing aircrafts;
- Potential transportation of supplies and equipment overland between March and April from Arviat using Cat-train services. Route will utilize some rivers, lakes and frozen snow covered ground;
- Use of snowmobile, helicopter and/or fixed-wing aircraft to transport personnel and equipment to drill sites depending on season;
- Use of water for domestic and drilling purposes;
- Production of human, combustible, non-combustible and grey-water wastes;
- Incineration of combustible wastes; and
- Removal of non-combustible wastes to local landfill and removal of waste oil to approved waste facility.

Appendix B
Species At Risk in Nunavut

This list includes species listed on one of the Schedules of SARA (*Species at Risk Act*) and under consideration for listing on Schedule 1 of SARA. These species have been designated as at risk by COSEWIC (Committee on the Status of Endangered Wildlife in Canada). This list may not include all species identified as at risk by the Territorial Government.

- Schedule 1 is the official legal list of Species at Risk for SARA. SARA applies to all species on Schedule 1. The term "listed" species refers to species on Schedule 1.
- Schedule 2 and 3 of SARA identify species that were designated at risk by the COSEWIC prior to October 1999 and must be reassessed using revised criteria before they can be considered for addition to Schedule 1.
- Some species identified at risk by COSEWIC are "pending" addition to Schedule 1 of SARA. These species are under consideration for addition to Schedule 1, subject to further consultation or assessment.

Schedules of SARA are amended on a regular basis so it is important to periodically check the SARA registry (www.sararegistry.gc.ca) to get the current status of a species.

Updated: October 2010

Species at Risk	**COSEWIC Designation**	**Schedule of SARA**	**Government Organization with Lead Management Responsibility** [1]
Eskimo Curlew	Endangered	Schedule 1	EC
Ivory Gull	Endangered	Schedule 1	EC
Ross's Gull	Threatened	Schedule 1	EC
Harlequin Duck (Eastern population)	Special Concern	Schedule 1	EC
Rusty Blackbird	Special Concern	Schedule 1	Government of Nunavut
Felt-leaf Willow	Special Concern	Schedule 1	Government of Nunavut
Peregrine Falcon (*anatum-tundrius* complex)	Special Concern	Schedule 1 (*anatum*) Schedule 3 (*tundrius)*	Government of Nunavut
Short-eared Owl	Special Concern	Schedule 3	Government of Nunavut
Peary Caribou	Endangered	Pending	Government of Nunavut
Beluga Whale (Eastern Hudson Bay population)	Endangered	Pending	DFO

Species at Risk cont.	COSEWIC Designation cont.	Schedule of SARA cont.	Government Organization with Lead Management Responsibility cont. [1]
Red Knot (*rufa* subspecies)	Endangered	Pending	EC
Beluga Whale (Cumberland Sound population)	Threatened	Pending	DFO
Atlantic Cod (Arctic population)	Special Concern	Pending	DFO
Beluga Whale (Western Hudson Bay population)	Special Concern	Pending	DFO
Beluga Whale (Eastern High Arctic – Baffin Bay population)	Special Concern	Pending	DFO
Bowhead Whale (Eastern Canada – West Greenland population)	Special Concern	Pending	DFO
Killer Whale (Northwest Atlantic / Eastern Arctic populations)	Special Concern	Pending	DFO
Porsild's Bryum	Threatened	Pending	Government of Nunavut
Atlantic Walrus	Special Concern	Pending	DFO
Narwhal	Special Concern	Pending	DFO
Red Knot (*islandica* subspecies)	Special Concern	Pending	EC
Horned Grebe (Western population)	Special Concern	Pending	EC
Atlantic Cod, Arctic Lakes	Special Concern	No schedule	EC
Barren-ground Caribou (Dolphin and Union population)	Special Concern	Pending	Government of Nunavut
Grizzly Bear	Special Concern	Pending	Government of Nunavut
Polar Bear	Special Concern	Pending	Government of Nunavut
Wolverine (Western Population)	Special Concern	Pending	Government of Nunavut

[1] Environment Canada (EC) has a national role to play in the conservation and recovery of Species at Risk in Canada, as well as responsibility for management of birds described in the Migratory Birds Convention Act (MBCA). Day-to-day management of terrestrial species not covered in the MBCA is the responsibility of the Territorial Government. Populations that exist in National Parks are also managed under the authority of the Parks Canada Agency. The Department of Fisheries and Oceans (DFO) has responsibility for management of aquatic species.

Appendix C
Archaeological and Palaeontological Resources Terms and Conditions
for Land Use Permit Holders

INTRODUCTION

The Department of Culture, Language, Elders and Youth (CLEY) routinely reviews land use applications sent to the Nunavut Water Board, Nunavut Impact Review Board and the Department of Indian and Northern Affairs Canada. These terms and conditions provide general direction to the permittee/proponent regarding the appropriate actions to be taken to ensure the permittee/proponent carries out its role in the protection of Nunavut's archaeological and palaeontological resources.

TERMS AND CONDITIONS

1) The permittee/proponent shall have a professional archaeologist and/or palaeontologist perform the following **Functions** associated with the **Types of Development** listed below or similar development activities:

	Types of Development (See Guidelines below)	**Function** (See Guidelines below)
a)	Large scale prospecting	Archaeological/Palaeontological Overview Assessment
b)	Diamond drilling for exploration or geotechnical purpose or planning of linear disturbances	Archaeological/ Palaeontological Inventory
c)	Construction of linear disturbances, Extractive disturbances, Impounding disturbances and other land disturbance activities	Archaeological/ Palaeontological Inventory or Assessment or Mitigation

Note that the above-mentioned functions require either a Nunavut Archaeologist Permit or a Nunavut Palaeontologist Permit. CLEY is authorized by way of the *Nunavut and Archaeological and Palaeontological Site Regulations*[1] to issue such permits.

[1] P.C. 2001-1111 14 June, 2001

2) The permittee/proponent shall not operate any vehicle over a known or suspected archaeological or palaeontological site.

3) The permittee/proponent shall not remove, disturb, or displace any archaeological artifact or site, or any fossil or palaeontological site.

4) The permittee/proponent shall immediately contact CLEY at (867) 934-2046 or (867) 975-5500 should an archaeological site or specimen, or a palaeontological site or fossil, be encountered or disturbed by any land use activity.

5) The permittee/proponent 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 CLEY.

6) The permittee/proponent shall follow the direction of CLEY in restoring disturbed archaeological or palaeontological sites to an acceptable condition. If these conditions are attached to either a Class A or B Permit under the Territorial Lands Act INAC's directions will also be followed.

7) The permittee/proponent shall provide all information requested by CLEY concerning all archaeological sites or artifacts and all palaeontological sites and fossils encountered in the course of any land use activity.

8) The permittee/proponent shall make best efforts to ensure that all persons working under its authority are aware of these conditions concerning archaeological sites and artifacts and palaeontological sites and fossils.

9) If a list of recorded archaeological and/or palaeontological sites is provided to the permittee/proponent by CLEY as part of the review of the land use application the permittee/proponent shall avoid the archaeological and/or palaeontological sites listed.

10) Should a list of recorded sites be provided to the permittee/proponent, the information is provided solely for the purpose of the proponent's land use activities as described in the land use application, and must otherwise be treated confidentially by the proponent.

LEGAL FRAMEWORK

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

Where an application is made for a land use permit in the Nunavut Settlement Area, and there are reasonable grounds to believe that there could be sites of archaeological importance on the lands affected, no land use permit shall be issued without written consent of the Designated Agency. Such consent shall not be unreasonably withheld. [33.5.12]

Each land use permit referred to in Section 33.5.12 shall specify the plans and methods of archeological site protection and restoration to be followed by the permit holder, and any other conditions the Designated Agency may deem fit. [33.5.13]

Palaeontology and Archaeology

Under the *Nunavut Act*[2], the federal government can make regulations for the protection, care and preservation of palaeontological and archaeological sites and specimens in Nunavut. Under the *Nunavut Archaeological and Palaeontological Sites Regulations*[3], it is illegal to alter or disturb any palaeontological or archaeological 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.

"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:
Fossil means the hardened or preserved remains or impression of previously living organisms or vegetation and includes:

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

[2] s. 51(1)
[3] P.C. 2001-1111 14 June, 2001

GUIDELINES FOR DEVELOPERS FOR THE PROTECTION OF ARCHAEOLOGICAL RESOURCES IN THE NUNAVUT TERRITORY

(**NOTE:** Partial document only, complete document at: http://gov.nu.ca/cley/english/arch.html)

Introduction

The following guidelines have been formulated to ensure that the impacts of proposed developments upon heritage resources are assessed and mitigated before ground surface altering activities occur. Heritage resources are defined as, but not limited to, archaeological and historical sites, burial grounds, palaeontological sites, historic buildings and cairns Effective collaboration between the developer, the Department of Culture, Language, Elders and Youth (CLEY), and the contract archaeologist(s) will ensure proper preservation of heritage resources in the Nunavut Territory. The roles of each are briefly described.

CLEY is the Nunavut Government agency which oversees the protection and management of heritage resources in Nunavut, in partnership with land claim authorities, regulatory agencies, and the federal government. Its role in mitigating impacts of developments on heritage resources is as follows: to identify the need for an impact assessment and make recommendations to the appropriate regulatory agency; set the terms of reference for the study depending upon the scope of the development; suggest the names of qualified individuals prepared to undertake the study to the developer; issue an archaeologist or palaeontologist permit authorizing field work; assess the completeness of the study and its recommendations; and ensure that the developer complies with the recommendations.

The primary regulatory agencies that CLEY provides information and assistance to are the Nunavut Impact Review Board, for development activities proposed for Inuit Owned Lands (as defined in Section 1.1.1 of the Nunavut Land Claims Agreement), and the Department of Indian and Northern Affairs, for development activities proposed for federal Crown Lands.

A developer is the initiator of a land use activity. It is the obligation of the developer to ensure that a qualified archaeologist or palaeontologist is hired to perform the required study and that provisions of the contract with the archaeologist or palaeontologist allow permit requirements to be met; i.e. fieldwork, collections management, artifact and specimen conservation, and report preparation. On the recommendation of the contract archaeologist or palaeontologist in the field and the Government of Nunavut, the developer shall implement avoidance or mitigative measures to protect heritage resources or to salvage the information they contain through excavation, analysis, and report writing. The developer assumes all costs associated with the study in its entirety.

Through his or her active participation and supervision of the study, the contract archaeologist or palaeontologist is accountable for the quality of work undertaken and the quality of the report produced. Facilities to conduct fieldwork, analysis, and report preparation should be available to this individual through institutional, agency, or company affiliations. Responsibility for the curation of objects recovered during field work while under study and for documents generated in the course of the study as well as remittance of artifacts, specimens and documents to the

repository specified on the permit accrue to the contract archaeologist or palaeontologist. This individual is also bound by the legal requirements of the *Nunavut Archaeological and Palaeontological Sites Regulations*.

Types of Development

In general, those developments that cause concern for the safety of heritage resources will include one or more of the following kinds of surface disturbances. These categories, in combination, are comprehensive of the major kinds of developments commonly proposed in Nunavut. For any single development proposal, several kinds of these disturbances may be involved

- *Linear disturbances: including the construction of highways, roads, winter roads, transmission lines, and pipelines;*
- *Extractive disturbances: including mining, gravel removal, quarrying, and land filling;*
- *Impoundment disturbances: including dams, reservoirs, and tailings ponds;*
- *Intensive land use disturbances: including industrial, residential, commercial, recreational, and land reclamation work, and use of heritage resources as tourist developments.*
- *Mineral, oil and gas exploration: establishment of camps, temporary airstrips, access routes, well sites, or quarries all have potential for impacting heritage resources*.

Types of Studies Undertaken to Preserve Heritage Resources

Overview: An overview study of heritage resources should be conducted at the same time as the development project is being designed or its feasibility addressed. They usually lack specificity with regard to the exact location(s) and form(s) of impact and involve limited, if any, field surveys. Their main aim is to accumulate, evaluate, and synthesize the existing knowledge of the heritage of the known area of impact. The overview study provides managers with baseline data from which recommendations for future research and forecasts of potential impacts can be made. A Class I Permit is required for this type of study if field surveys are undertaken.

Reconnaissance: This is done to provide a judgmental appraisal of a region sufficient to provide the developer, the consultant, and government managers with recommendations for further development planning. This study may be implemented as a preliminary step to inventory and assessment investigations except in cases where a reconnaissance may indicate a very low or negligible heritage resource potential. Alternately, in the case of small-scale or linear developments, an inventory study may be recommended and obviate the need for a reconnaissance.

The main goal of a reconnaissance study is to provide baseline data for the verification of the presence of potential heritage resources, the determination of impacts to these resources, the generation of terms of reference for further studies and, if required, the advancement of

preliminary mitigative and compensatory plans. The results of reconnaissance studies are primarily useful for the selection of alternatives and secondarily as a means of identifying impacts that must be mitigated after the final siting and design of the development project. Depending on the scope of the study, a Class 1 or Class 2 Permit is required for this type of investigation.

Inventory: A resource inventory is generally conducted at that stage in a project's development at which the geographical area(s) likely to sustain direct, indirect, and perceived impacts can be well defined. This requires systematic and intensive fieldwork to ascertain the effects of all possible and alternate construction components on heritage resources. All heritage sites must be recorded on Government of Nunavut Site Survey forms. Sufficient information must be amassed from field, library and archival components of the study to generate a predictive model of the heritage resource base that will:

- allow the identification of research and conservation opportunities;
- enable the developer to make planning decisions and recognize their likely effects on the known or predicted resources; and
- make the developer aware of the expenditures, which may be required for subsequent studies and mitigation. A Class 1 or 2 permit is required

Assessment: At this stage, sufficient information concerning the numbers and locations of heritage resources will be available, as well as data to predict the forms and magnitude of impacts. Assessments provide information on the size, volume, complexity and content of a heritage resource, which is used to rank the values of different sites or site types given current archaeological knowledge. As this information will shape subsequent mitigation program(s), great care is necessary during this phase.

Mitigation: This refers to the amelioration of adverse impacts to heritage resources and involves the avoidance of impact through the redesign or relocation of a development or its components; the protection of the resource by constructing physical facilities; or, the scientific investigation and recovery of information from the resource by excavation or other method. The type(s) of appropriate mitigative measures are dictated by their viability in the context of the development project. Mitigation strategies must be developed in consultation with, and approved by, the Department of Culture, Language, Elders and Youth. It is important to note that mitigation activities should be initiated as far in advance of the construction of the development as possible.

Surveillance and monitoring: These may be required as part of the mitigation program.

Surveillance may be conducted during the construction phase of a project to ensure that the developer has complied with the recommendations.

Monitoring involves identification and inspection of residual and long-term impacts of a development (i.e. shoreline stability of a reservoir); or the use of impacts to disclose the presence of heritage resources, for example, the uncovering of buried sites during the construction of a pipeline.