



**SCREENING DECISION REPORT**  
**NIRB FILE NO.: 08EN015**

KIA File No.: KVL307C02

AANDC File No. N2012C0007 (*previous file no. N2008C0007*)

NWB File No.: 2BE-QAM0813

April 5, 2012

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

Via email: [duncan.j@parl.gc.ca](mailto:duncan.j@parl.gc.ca) and [minister@aandc-aadnc.gc.ca](mailto:minister@aandc-aadnc.gc.ca)

*and*

David Ningeongan  
President  
Kivalliq Inuit Association  
Rankin Inlet, NU

Via email: [dningeongan@kivalliqinuit.ca](mailto:dningeongan@kivalliqinuit.ca)

**Re: Screening Decision for Cameco Corporation's Amendment Request with the Kivalliq Inuit Association for its "Turqavik-Aberdeen" project, Additional Application Terms and Conditions, 08EN015**

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Dear Mr. John Duncan and Mr. David Ningeongan:

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 12.4.3 of the NLCA states that:

*“Any application for a component or activity of a project proposal that has been permitted to proceed in accordance with these provisions shall be exempt from the requirement for screening by NIRB unless:*

- (a) such component or activity was not part of the original project proposal; or*
- (b) its inclusion would significantly modify the project.”*

#### NIRB ASSESSMENT AND DECISION

The NIRB has completed the review of Cameco Corporation’s (Cameco) request to the Kivalliq Inuit Association (KIA) for an amendment to their Land Use Licence for their “Turqavik-Aberdeen” project.

After a thorough assessment of the project proposal, the amendment application information and the comments received (please see *Procedural History* and *Project Activities* in **Appendix A**), in accordance with Section 12.4.3 of the NLCA, the Board has determined that this request will result in a change to the original scope of the project. Therefore, the NIRB is re-issuing the recommended project-specific terms and conditions contained in the April 4, 2008 Screening Decision, NIRB File No.: 08EN015 in addition to new terms and conditions which are designed to mitigate any potential impacts to the environment as per Section 12.4.4(a) of the NLCA.

#### **PREVIOUSLY APPROVED** PROJECT-SPECIFIC TERMS AND CONDITIONS

The following terms and conditions were previously approved by the NIRB for file **08EN015** in a Screening Decision Report dated April 4, 2008 and is available from NIRB’s ftp site using the following link: <ftp://ftp.nirb.ca/01-SCREENINGS/COMPLETED%20SCREENINGS>.

1. Cameco Corporation (the Proponent) shall operate in accordance with commitments stated in all documentation provided to the Nunavut Impact Review Board (NIRB or Board) namely:
  - a. NIRB Part 2 Form - Project Specific Information Requirements (January 2008)
  - b. Indian and Northern Affairs Canada (INAC) Application for Land Use Permit (February 2008)
  - c. Nunavut Planning Commission – Conformity Determination (February 2008)
  - d. Cameco Corporation – Project Description (February 2008)
  - e. Cameco Corporation – Wildlife Monitoring and Mitigation Plan (December 2007)
2. The Proponent shall maintain a copy of the Screening Decision issued by the NIRB at the site of operation at all times.
3. The Proponent shall forward copies of all permits required for this project to the NIRB prior to the commencement of the project.
4. The NIRB shall be notified of any changes in operating plans or conditions associated with this project prior to any such change.
5. The Proponent shall operate the project in accordance with all applicable Acts, Regulations and Guidelines.

6. The Proponent shall submit an annual report with copies provided to the NIRB, INAC, the Kivalliq Inuit Association (KIA) and the Government of Nunavut, Department of Environment (GN-DOE) by January 31 each year that the project is in operation. The report must contain, but not be limited to, the following information:
- a. A summary of activities undertaken for the year, including local hires and initiatives;
  - b. A work plan for the following year, including any progressive reclamation work undertaken;
  - c. A discussion regarding the effects to human health from uranium exploration activities;
  - d. A discussion regarding the steps taken (including any baseline work conducted) by the Proponent to thoroughly identify, analyze and manage the environmental and cumulative effects from the project activities, particularly with respect to barren ground caribou;
  - e. A discussion on how and with whom the company has tried to work with (i.e. government agencies, other companies etc.) in the project area to combine and develop wildlife and environmental monitoring programs to gain a better understanding of how exploration impacts the area as a whole.
  - f. Specific to the Wildlife Monitoring and Mitigation Plan:
    - all monitoring results should include species, location (i.e., latitude and longitude), number of animals, description of the animal activity (prior to encounter and their response to human interaction), description of gender and age (young present?) of animal if possible;
    - observations and location of denning, calving areas, caribou crossing, raptor nests;
    - timing of critical life history events observed such as calving, mating, denning, nesting;
    - all potential impacts to wildlife from project;
    - all actions/mitigation taken;
    - an analysis of the effectiveness of mitigation measures for wildlife; and
    - any anticipated changes to the monitoring program(s);
  - g. A summary of community consultations undertaken, including issues and concerns, discussions and advice offered to the company and follow-up actions required to resolve any concerns expressed about the project proposal.
  - h. Site photos;
  - i. Efforts made to achieve compliance with the *Canadian Wide Standards for Dioxins and Furans*, and the *Canadian Wide Standards for Mercury*; and
  - j. 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.

## Wildlife

6. The Proponent shall adhere to all mitigation measures and monitoring commitments as outlined in their Wildlife Monitoring and Mitigation Plan (Appendix D). Furthermore, the proponent shall update its Wildlife Monitoring and Mitigation Plan to include any NIRB conditions contained within this Screening Decision. The proponent shall also forward any

subsequent direction provided by the Parties, such as the GN-DOE (Mitch Campbell) and/or the KIA regarding the Wildlife Monitoring and Mitigation Plan to NIRB.

7. The Proponent shall abide by all DIAND Caribou Protection Measures (CPM), in addition to all caribou protection terms and conditions recommended by the NIRB. In the case where the CPM and the NIRB's recommended terms and conditions conflict, the NIRB expects that the proponent will adhere to the NIRB's recommended terms and conditions for the protection of caribou and all wildlife.
8. The proponent shall employ a fully independent wildlife monitor to determine when caribou cows and calves are in the area of operation.
9. The Proponent shall, between May and August, prior to conducting any significant operational activities (i.e. drilling, moving drill rigs, conducting airborne geophysical surveys etc.), undertake a high altitude aerial reconnaissance (minimum altitude of 610 metres (m)) with the assistance of the independent wildlife monitor to determine if any migrating caribou, caribou cows and calves, herds of musk oxen with calves are present within a twenty (20) kilometre (km) radius of the camp, drill sites, geophysical survey grids, or other activity. If wildlife are observed the Proponent shall suspend the exploration activity or re-locate to another area until the animals are a distance of 10km or more from the area.
10. During spring and fall migration of caribou, 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.
11. During the period of May 15 to July 15 if caribou are observed calving in the area, or there are caribou with calves present the proponent should suspend all operations, particularly drilling, blasting, over flights by aircraft of less than 610 m above ground, and the use of snowmobiles and ATV's (All terrain vehicles) outside the immediate vicinity of camp.
12. During all other time periods, the proponent shall monitor for wildlife presence near their operations and if monitoring indicates caribou presence within two (2) km of project activities, the Proponent shall cease drilling operations, blasting, airborne geophysical surveys and the operation of ground, air or water based mobile equipment until caribou are at least two (2) km from the project activity location.
13. The Proponent must ensure all aircraft pilots avoid the Beverly caribou calving ground (northwest of the project area) and all Designated Crossings north of the airstrip and adjacent to the project area.
14. The Proponent shall not conduct any low-level airborne geophysical surveys or drilling activities within one (1) km of either side of the Thelon Heritage River.
15. The Proponent shall not between May 15 and September 1 construct any camp, cache any fuel, conduct blasting or drilling operations, operate ground, air or water based mobile equipment, including airborne geophysics surveys, within ten (10) km of any Designated [caribou] Crossing as outlined on the Caribou Protection Map.
16. If the Proponent is exploring near the Thelon Heritage River system and caribou are observed crossing the Thelon River outside of the Designated [caribou] Crossings, the Proponent shall

immediately cease activities until monitoring results indicate that caribou are 10km from the area.

17. The Proponent shall be prohibited from allowing aircraft take-offs and landings when groups of caribou are within two (2) km of the airstrip or helipad, except during emergency circumstances.
18. The Proponent shall restrict aircraft/helicopter activity related to the project to a minimum altitude of 610m above ground level unless there is a specific requirement for low-level flying, which does not disturb wildlife.
19. The proponent shall submit at the end of each month, a daily logbook of caribou reconnaissance to the Government of Nunavut – Department of Environment, detailing when and how the caribou protection measures have been implemented.
20. The Proponent shall not disturb nesting raptors (particularly during the period from April 15 to September 01), keeping at least 1.5 km away from known nests when in transit by aircraft and avoiding close approaches while on foot.
21. The proponent shall take extra precautions to avoid all disturbances to nests during the early part of the nesting cycle (avoid nests from late May through to mid July).
22. The Proponent shall treat all nest sites with equal precaution, regardless of the response of the bird. It is especially important not to disturb raptor nests during conditions of poor weather (rain, snow or high winds).
23. The Proponent shall avoid any and all activity within 100 m of a raptor nest site during the latter part of the nesting stage (August 10 to August 20 for peregrine falcons in this region).
24. The Proponent must avoid concentrations of nesting or molting waterfowl by aircraft/helicopter at all times.
25. The Proponent shall ensure that aircraft maintain a vertical distance of 1000 m and a horizontal distance of 1500 m from any observed groups (colonies) of migratory birds.
26. The Proponent shall ensure that there is no hunting or fishing by employees of the company or any hired contractors unless the proper Nunavut authorizations have been obtained.
27. The Proponent is advised that the operation is in an area where carnivores such as foxes, wolves, wolverine and bears may be encountered and could result in injury or death to either the animal or humans. Therefore all possible efforts to avoid human-wildlife encounters must be made, including proper food handling, storage and garbage disposal procedures. Additionally all staff should be fully aware and trained in human – bear/wolf/fox/wolverine encounter and avoidance plans. If the proponent experiences any interactions with carnivores they are advised to contact the local conservation officer.
28. The Proponent and all employees should follow procedures outlined in the "Safety in Bear Country Manual", and should contact the regional biologist indicated below for information and advice on measures which should be taken to minimize the possibility of bear-people conflicts.

Ecosystems Biologist (Environmental Assessment)

Hillary Robinson (867) 934-2176, [hrobinson@nunavutwildlife.ca](mailto:hrobinson@nunavutwildlife.ca)

GN-DOE Manager, Wildlife

Dan Shewchuck, (867) 857-2828, [dshevwchuck@gov.nu.ca](mailto:dshevwchuck@gov.nu.ca)  
Biologist, Kivalliq Region  
Mitch Campbell, (867) 857-2828, [mcampbell@gov.nu.ca](mailto:mcampbell@gov.nu.ca)

### **Waste Disposal and Air Quality**

29. The Proponent shall incinerate all combustible and food wastes daily and shall store the ash in such a way that it is inaccessible to wildlife at all times.
30. The Proponent shall apply appropriate technologies to ensure the complete combustion of wastes. The use of a dual chamber, forced-air incinerator is recommended. In addition, the proponent is encouraged to implement a comprehensive waste management strategy (especially waste segregation) to reduce and control the volumes of waste produced, transported and disposed of.
31. 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*. Wastewood treated with preservatives such as creosote, pentachlorophenol or heavy metal solution should not be burned. Additionally plastics, electrical wire, asbestos and building demolition wastes (except clean wood) are wastes likely to produce dioxins and furans and should be excluded from incineration.
32. The Proponent shall not burn or incinerate hazardous wastes.
33. The Proponent shall ensure that all hazardous material is managed, removed from site and disposed in accordance with the *Environmental Protection Act (EPA)* and the Nunavut Hazardous Waste Disposal Manual.
34. The Proponent shall ensure that no waste oil will be incinerated on site. All waste oil will be transported off site and disposed of at an approved facility. A waste manifest must accompany the shipment of all waste oil and the proponent must register with the DOE. Contact Robert Eno at [reno@gov.nu.ca](mailto:reno@gov.nu.ca) or (867) 975-7748 to obtain a manifest if hazardous waste is generated during project activities.

### **Fuel Storage / Spill Contingency Plan**

35. The Proponent shall update their Spill Contingency Plan prior to the start of operation to include:
  - a. The proponent's 24 hour point of contact for the persons activating the spill contingency including name, job, title, phone number.
  - b. The correct Environment Canada 24 hour on call Duty Officer contact number should be changed to (867) 766-3737.
  - c. The correct Government of Nunavut Department of Environment contact numbers:
    - i. General Reception (867) 975-7700
    - ii. Manager of Pollution Control (867)975-7748
  - d. To include overland transport precautions:
    - i. Speed on winter roads should not exceed 30km/hr for fully loaded vehicle and 50km/hr for empty vehicles
    - ii. Trucks should carry at least 10 square metres of polyethylene material (for lining a trench or depression), a spark proof shovel and oil absorbent blankets and squares

- iii. Trucks should carry reliable radio and / or satellite phone communication
  - iv. Trucks should carry sufficient response equipment for the safe removal of fuel from and overturned truck (such as hatch cone covers, hoses etc.)
  - v. How the proponent is prepared to deal with spills resulting from a vehicle collision in a timely and efficient manner.
  - e. Procedures for registering and tracking the movement of hazardous waste via a Waste Manifest. A Waste Manifest must accompany all movements and all parties must register with Government of Nunavut – Department of Environment by contacting Robert Eno at (867) 975-7748 or [reno@gov.nu.ca](mailto:reno@gov.nu.ca)
  - f. Updated NWT-NU Spill Report Form (<http://www.gov.nu.ca/env/>)
36. The Proponent shall inspect and document the condition of all large fuel caches (in excess of 20 drums) on weekly a basis.
37. The Proponent shall locate all fuel and other hazardous materials a minimum of thirty (30) metres away from the high water mark of any water body and in such a manner as to prevent their release into the environment.
38. The proponent shall ensure the main fuel cache at camp is placed within an Insta-berm.
39. The proponent shall use secondary containment or a surface liner (drip pans, fold-a-tanks, etc) at all refueling spots.
40. The Proponent shall ensure that appropriate spill kits are located at every fuel cache and drill site and that the drilling staff trained to respond in the event of a spill.
41. The Proponent shall utilize the revised spill reporting form in case of spills, and any spill reporting is to be recorded electronically. This revised spill form, with instructions, can be obtained from the Spill Line or at (<http://www.gov.nu.ca/env/>)

### **Drilling and Disposal of Related Radioactive Substances**

42. The *Canadian Environmental Protection Act* lists calcium chloride (CaCl) as a toxic substance. The Proponent shall therefore ensure that if CaCl is used as a drill additive, all sumps containing CaCl are properly constructed and located in such a manner to ensure that the contents will not enter any water body.
43. The Proponent shall ensure that all drill holes are sealed by cementing (grouting) the upper 30 meters of the bedrock or the entire depth of the holes; whichever is less. Drill holes that encounter uranium mineralization with a content greater than 1.0% over a length of one (1) metre with a metre-percent concentration greater than 5% should be sealed by cementing over the entire mineralization zone; this should be at least ten (10) metres above and below each mineralization zone.
44. The Proponent shall ensure that drill cuttings with a uranium concentration greater than 0.05% should be disposed of down the drill hole and the hole subsequently sealed.
45. The Proponent shall ensure that core storage shacks/tents are well ventilated and remain open when employees or contractors are working within. Core storage areas should be located at least 100 m from the high water mark of all water bodies. Gamma radiation levels of a long-term core storage area should not be greater than 1.0 µSv, and should never exceed 2.5 µSv. Instruments that measure radiation in counts per second should be converted to µS.

46. The proponent is advised that if artesian flow is encountered, the drill holes be immediately plugged and permanently sealed.
47. Drill areas should be kept to a minimum and constructed to facilitate minimizing the environmental footprint of the project area. It also should be kept orderly and any garbage is to be removed daily from the area to an approved disposal site.

### **Physical Environment**

48. 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. The Proponent shall suspend overland travel of equipment or vehicles if rutting occurs.

### **Abandonment and Restoration**

49. The Proponent shall transport all waste oil and waste fuels from the site to an approved facility for disposal.
50. The Proponent shall remove and treat hydrocarbon contaminated soils on site or transport them to an approved disposal site.
51. The Proponent is required to ensure the camp-site is clean and tidy. Furthermore, upon abandonment of the project activities, the Proponent shall ensure that the entire project area is clean and tidy, and no remnants of past exploration activities are left within the project area. The area should be left in a state as near as possible to pre-exploration conditions.
52. The Proponent shall conduct final inspections of the entire site with the lead authorizing agency to ensure that all areas of the site have been reclaimed as much as possible to its previous condition. Soil samples and pictures before and after project would make this process easy on the proponent and leading agencies involved in determining the areas of concern.

### **Other**

53. The Proponent shall adhere to conditions stated in attached Appendix C *Archaeological and Palaeontological Resources – Terms and Conditions for Land Use Permit Holders*.
54. The proponent shall consult with community residents of the Kivalliq Region, conduct regular information meetings to ensure that residents are kept aware of the activities and progress of the project and its phases.

### ***NEW* 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 ***additional*** project-specific terms and conditions be imposed upon the Proponent through all relevant legislation:

### **Water Use**

55. 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.



56. 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.

### **Fuel and Chemical Storage**

57. The Proponent shall ensure that re-fuelling of all equipment occurs a minimum of thirty-one (31) metres away from the high water mark of any water body.

58. The Proponent shall use adequate secondary containment or a surface liner (e.g. self-supporting insta-berms and fold-a-tanks) at all refueling stations. Appropriate spill response equipment and clean-up materials (e.g., shovels, pumps, barrels, drip pans, and absorbents) must be readily available during any transfer of fuel or hazardous substances, as well as at vehicle-maintenance areas and at drill sites.

59. The Proponent shall inspect and document the condition of all fuel tanks on a weekly basis. All fuel and chemical storage containers must be clearly marked with the Proponent's name and examined for leaks immediately upon delivery.

60. 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.

### **Ground Disturbance**

61. The Proponent shall implement suitable erosion and sediment suppression measures on disturbed areas before, during and after construction in order to prevent sediment from entering any waterbody.

### **Temporary Camps**

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

## **MONITORING AND REPORTING REQUIREMENTS**

The Board has previously recommended the following:

### **From original Screening Decision Report (April 4, 2008)**

6. The Proponent shall submit an annual report with copies provided to the NIRB, INAC, the Kivalliq Inuit Association (KIA) and the Government of Nunavut, Department of Environment (GN-DOE) by January 31 each year that the project is in operation. The report must contain, but not be limited to, the following information:

- a. A summary of activities undertaken for the year, including local hires and initiatives;
- b. A work plan for the following year, including any progressive reclamation work undertaken;
- c. A discussion regarding the effects to human health from uranium exploration activities;
- d. A discussion regarding the steps taken (including any baseline work conducted) by the Proponent to thoroughly identify, analyze and manage the environmental and cumulative effects from the project activities, particularly with respect to barren ground caribou;
- e. A discussion on how and with whom the company has tried to work with (i.e. government agencies, other companies etc.) in the project area to combine and

- develop wildlife and environmental monitoring programs to gain a better understanding of how exploration impacts the area as a whole.
- f. Specific to the Wildlife Monitoring and Mitigation Plan:
- all monitoring results should include species, location (i.e., latitude and longitude), number of animals, description of the animal activity (prior to encounter and their response to human interaction), description of gender and age (young present?) of animal if possible;
  - observations and location of denning, calving areas, caribou crossing, raptor nests;
  - timing of critical life history events observed such as calving, mating, denning, nesting;
  - all potential impacts to wildlife from project;
  - all actions/mitigation taken;
  - an analysis of the effectiveness of mitigation measures for wildlife; and
  - any anticipated changes to the monitoring program(s);
- g. A summary of community consultations undertaken, including issues and concerns, discussions and advice offered to the company and follow-up actions required to resolve any concerns expressed about the project proposal.
- h. Site photos;
- i. Efforts made to achieve compliance with the *Canadian Wide Standards for Dioxins and Furans*, and the *Canadian Wide Standards for Mercury*; and
- j. 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.

*[Please note: numbering of T&C's is incorrect in original Screening Decision Report where a second #6 is listed].*

6. The Proponent shall adhere to all mitigation measures and monitoring commitments as outlined in their Wildlife Monitoring and Mitigation Plan (Appendix D). Furthermore, the proponent shall update its Wildlife Monitoring and Mitigation Plan to include any NIRB conditions contained within this Screening Decision. The proponent shall also forward any subsequent direction provided by the Parties, such as the GN-DOE (Mitch Campbell) and/or the KIA regarding the Wildlife Monitoring and Mitigation Plan to NIRB.
35. The Proponent shall update their Spill Contingency Plan prior to the start of operation to include:
- a. The proponent's 24 hour point of contact for the persons activating the spill contingency including name, job, title, phone number.
  - b. The correct Environment Canada 24 hour on call Duty Officer contact number should be changed to (867) 766-3737.
  - c. The correct Government of Nunavut Department of Environment contact numbers:
    - i. General Reception (867) 975-7700
    - ii. Manager of Pollution Control (867)975-7748
  - d. To include overland transport precautions:
    - i. Speed on winter roads should not exceed 30km/hr for fully loaded vehicle and 50km/hr for empty vehicles

- ii. Trucks should carry at least 10 square metres of polyethylene material (for lining a trench or depression), a spark proof shovel and oil absorbent blankets and squares
  - iii. Trucks should carry reliable radio and / or satellite phone communication
  - iv. Trucks should carry sufficient response equipment for the safe removal of fuel from and overturned truck (such as hatch cone covers, hoses etc.)
  - v. How the proponent is prepared to deal with spills resulting from a vehicle collision in a timely and efficient manner.
- e. Procedures for registering and tracking the movement of hazardous waste via a Waste Manifest. A Waste Manifest must accompany all movements and all parties must register with Government of Nunavut – Department of Environment by contacting Robert Eno at (867) 975-7748 or [reno@gov.nu.ca](mailto:reno@gov.nu.ca)
- f. Updated NWT-NU Spill Report Form (<http://www.gov.nu.ca/env/>)

***In addition, the Board is recommending the following:***

### **Fuel and Chemical Storage**

1. The Proponent shall update its Spill Contingency Plan to include:
  - a. 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).
  - b. The proposed changes to on-site facilities, including the installation and commissioning of bulk fuel storage tanks that would be replacing the use of drummed fuel and include:
    - i. Identify the appropriate spill response equipment and clean-up materials (e.g., shovel, pumps, barrels, drip pans and absorbents) that will be available at the bulk fuel storage tanks; and
    - ii. Provide a discussion on potential spills and clean-up procedures.
2. 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”.

### OTHER NIRB CONCERNS AND RECOMMENDATIONS

In addition to the project-specific terms and conditions, the Board has previously recommended the following:

Due to the proximity of the project proposal to the Thelon Heritage River, Beverly Herd Calving Grounds and Designated [caribou] Crossings, as outlined on the DIAND Caribou Protection Map, and the fact that project activities will be taking place within the range of the Beverly and Ahiak caribou herds, the following are recommended:

1. As an overriding consideration, Indian and Northern Affairs Canada (INAC) impose strict mitigation measures, conditions and monitoring requirements pursuant to the Federal Land Use Permit, which require Cameco Corporation (the Proponent) to respect the sensitivities

and importance of the area. These mitigation measures, conditions and monitoring requirements should be in regard to:

- a. Location and Area
- b. Time
- c. Equipment
- d. Methods and Techniques
- e. Control or Prevention of Flooding, Erosion and Subsidence of Land
- f. Use, Storage, Handling and Disposal of Chemical or Toxic Material
- g. Wildlife and Fisheries Habitat
- h. Objects and Places of Recreational, Scenic and Ecological Value
- i. Petroleum Fuel Storage
- j. Matters Not Consistent with the Regulations

INAC must ensure the conditions imposed reflect the activities associated with the activities.

2. INAC must 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 DIAND Caribou Protection Measures and the conditions imposed through the Federal Land Use Permit.
3. As the primary landowner, INAC should make all reasonable efforts to ensure that community of Baker Lake understands that this project activity will be occurring on or near lands used by community members.
4. INAC is advised that any activity related to this application (INAC Land Use Permit application N2008C0007) outside the original scope of the project proposal will be considered a new project and must be submitted to the NIRB for screening. This is particularly relevant if the Proponent expands the 2009 drilling program beyond what has been described in the project information provided to NIRB and INAC. Therefore, the NIRB recommends that any renewal requests for the project proposal should be forwarded to the NIRB for assessment in accordance with 12.4.3 of the Nunavut Land Claims Agreement.
5. The Kivalliq Inuit Association (KIA) impose strict mitigation measures and/or Environment Terms and Conditions pursuant to the Inuit Owned Lands License in regard to:
  - a. General Standards
  - b. Fuel and Chemical Storage
  - c. Campsites
  - d. Fisheries
  - e. Ground Disturbance
  - f. Wildlife
  - g. Any other conditions recommended by the appropriate Community Lands and Resource Committee (CLARC)
6. KIA is advised that any activity related to this application (KIA Inuit Owned Lands License KVL307C02) outside the original scope of the project proposal will be considered a new project and should be submitted to the NIRB for screening. This is particularly relevant if the Proponent expands the drilling program beyond what has been described in the project information provided to NIRB and KIA. Therefore, the NIRB recommends that any renewal

requests for the project proposal should be forwarded to the NIRB for assessment in accordance with 12.4.3 of the Nunavut Land Claims Agreement.

7. The Government of Nunavut – Department of Environment (GN-DOE) Conservation Officers should conduct random inspections of the project location during the months of May, June, July and August to ensure the Proponent is in compliance with the NIRB Terms and Conditions and the DIAND Caribou Protection Measures.
8. The GN-DOE should conduct on-going review of wildlife monitoring results submitted from the Proponent as required by the Wildlife Monitoring and Mitigation Plan. Following submission of the required annual report by January 31, 2009 to NIRB, INAC, the KIA and the GN-DOE, the GN-DOE should report to NIRB, INAC and the KIA its findings regarding the possible impact of the project on the Beverly and Ahiak caribou herds.
9. That the GN-DOE continue to conduct population surveys in 2008 and future years to obtain information on the status and health of the Beverly and Ahiak herds that can be used towards future impact assessment.
10. That the regulatory, territorial and federal government agencies in Nunavut should work together with 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).

***The Board is currently also recommending the following:***

#### **Winter Roads/Trails**

11. 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-territoires-territoires/nu/index-eng.htm>.
12. 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).

#### **Caribou Management**

13. Territorial and federal government agencies should update the Caribou Protection Map with updated data and information from the Beverly Qamanirjuaq Caribou Management Board (BQCMB) and with any other relevant research and data available.
14. Territorial and federal government agencies and regional Inuit associations should ensure that the 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**

15. 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.

## REGULATORY REQUIREMENTS

The Proponent has been previously advised that the following legislation may apply to the project:

1. The *Fisheries Act* (<http://laws-lois.justice.gc.ca/eng/acts/F-14/index.html>) which has orders and regulations for the protection of fish, fish habitat and pollution prevention measures. For example according to the *Fisheries Act*, *Section 36(3)*, the deposition of deleterious substances of any type in water frequented by fish, or in any other place under any conditions where the deleterious substance, or any other deleterious substance that results from the deposit of the deleterious substance, may enter any such water is prohibited.
2. The Proponent shall ensure compliance with the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (<http://www.canlii.org/ca/sta/n-28.8/whole.html>) which permits the use of waters in Nunavut in accordance with the conditions of a licence, and has such regulations as “no person shall deposit or permit the deposit of waste (a) in waters in Nunavut; or (b) in any other place in Nunavut under conditions in which the waste, or any other waste that results from the deposit of that waste, may enter waters in Nunavut”
3. The *Migratory Birds Convention Act* and *Migratory Birds Regulations* which requires that no person disturb or destroy the nests or eggs of migratory birds, and that no person shall deposit or permit to be deposited oil, oil wastes or any other substance harmful to migratory birds in any waters or any area frequented by migratory birds (<http://laws-lois.justice.gc.ca/eng/acts/M-7.01/>)
4. The *Species at Risk Act* (<http://laws-lois.justice.gc.ca/eng/acts/S-15.3/index.html>). Attached in **Appendix B** is a list of Species at Risk in Nunavut. The Proponent should consult the Species at Risk Public Registry (<http://www.sararegistry.gc.ca/>) to identify any Species at Risk within the project location. Further, the Proponent shall develop monitoring plans for each relevant Species at Risk in accordance with any applicable status reports, recovery strategies, action plans, and management plans posted on the Species at Risk Public Registry and in consultation with the Government Organization with Primary Management Responsibility. Monitoring plans should record the locations and frequency of observing species of special concern and note any actions taken to avoid contact or cause disturbance to the species, its residence, or its critical habitat.
5. The *Nunavut Act* (<http://laws-lois.justice.gc.ca/eng/acts/N-28.6/>) which requires that no person alter or disturb any archaeological or palaeontological sites in Nunavut unless permission is first granted through the permitting process. If any archaeological or palaeontological sites are found they should remain undisturbed and their location should be reported to the Government of Nunavut Department of Culture, Language, Elders and Youth. The Proponent must comply with the proposed terms and conditions listed in the attached **Appendix C**.
6. The *Nunavut Wildlife Act* contains provisions to protect and conserve wildlife and wildlife habitat, including specific protection measures for wildlife habitat and species at risk.

7. The *Navigable Waters Protection Act (NWPA)* (<http://laws-lois.justice.gc.ca/eng/acts/N-22/index.html>). All proponents must deal with the Navigable Waters Protection Program under Transport Canada for any work(s) to be built or placed in, on, over, under, through, or across any navigable water. The proponent will need to submit formal applications to the NWPP in order to obtain NWPP's approval, promulgation, or exemption for each specific work. The proponent shall also inform the NWPP of any design, construction, or operational changes accordingly. If the proponent is uncertain of the NWPP's requirements as they pertain to an application for specific work, please refer to the NWPP Internet site or contact the NWPP office.
8. The *Aeronautics Act* (<http://laws-lois.justice.gc.ca/eng/acts/A-2/>). Transport Canada's Aviation Branch administers and supports the regulatory requirements under the Aeronautics Act. This legislation is concerned with the regulation and supervision of aeronautic matters such as aerodrome certification, pilots, aircraft, operations and safety. The Canadian Aviation Regulations are a component of the Aeronautics Act, which compile regulatory requirements to enhance safety within the Canadian aviation industry. Construction and operation of airstrips may require certification to Transport Canada requirements and standards based upon their classification. The following Internet link provides the necessary information concerning the requirements contained in CARs.
9. The *Transportation of Dangerous Goods Regulations, Transportation of Dangerous Goods Act* (<http://www.tc.gc.ca/tdg/menu.htm>), and the *Environmental Protection Act* (<http://laws-lois.justice.gc.ca/eng/acts/C-15.31/>) which present the requirements for the handling, storing, managing and transportation of dangerous goods, including hazardous wastes, fuel and contaminated material. The Proponent must ensure that proper shipping documents accompany all movements of dangerous goods. The Proponent must register with GN-DOE by contacting Robert Eno at 867-975-7748 or [reno@gov.nu.ca](mailto:reno@gov.nu.ca).

The Proponent will also be advised that:

1. All releases of harmful substances are immediately reportable where the release:
  - a. Is near or into a water body;
  - b. Is near or into a designated sensitive environment or sensitive wildlife habitat;
  - c. Poses an imminent threat to human health or safety; or
  - d. Poses an imminent threat to a listed species at risk or its critical habitat

***In addition, the Proponent is also advised that the following legislation may apply to the project:***

1. The *Storage Tank System for Petroleum Products and Allied Petroleum Products Regulations* ([www.ec.gc.ca/st-rs](http://www.ec.gc.ca/st-rs)). The Proponent must identify their tank system to Environment Canada and installation of new systems must comply with the regulations' design requirements.

## **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 April 5, 2012 at Arviat, NU.



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Elizabeth Copland, Acting 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 January 12, 2012 the Nunavut Impact Review Board (NIRB or Board) received Cameco Corporation's (Cameco) amendment request for its Land Use Licence with the Kivalliq Inuit Association (KIA) for its 'Turqavik-Aberdeen' project. On January 16, 2012 the NIRB indicated that a referral from an authorizing agency would be required to commence screening of the amendment application. On January 25, 2012 the NIRB received a request to screen the amendment application from the KIA. On March 9, 2012 the NIRB received a positive conformity determination (Keewatin Regional Land Use Plan) from the Nunavut Planning Commission (NPC) for the amendment application. On April 3, 2012 the NIRB received an additional request to screen the amendment application from Aboriginal Affairs and Northern Development Canada (AANDC).

The activities included within the amendment application involve the establishment of an exploration camp and the installation of bulk fuel storage tanks on Inuit Owned Land.

#### **Past File History**

The original application for the project (NIRB File No.: 08EN015) was received from Indian and Northern Affairs Canada (INAC; now AANDC) on February 13, 2008. The project proposal was screened in accordance with Part 4, Article 12 of the Nunavut Land Claims Agreement (NLCA) and on April 4, 2008 the NIRB issued a 12.4.4(a) screening decision to the Minister of INAC and to the President of the KIA allowing the proposed exploration activities to proceed subject to project-specific recommended terms and conditions (April 4, 2008 Screening Decision Report).

Additional amendment and extension requests for the AANDC Land Use Permit (No. N2008C0007) associated with this project have also been reviewed by the NIRB following screening of the original project proposal (see Table 1). In each instance, the NIRB confirmed that the applications were exempt from the requirement for screening pursuant to Section 12.4.3 of the NLCA and the activities therein remained subject to the terms and conditions recommended in the original April 4, 2008 Screening Decision Report.

**Table 1: Additional amendment and extension requests for AANDC Land Use Permit (No. N2008C0007)**

Authorization	Application			Correspondence Issued by NIRB
	Date Received by NIRB	Type	Reason for Application	
Land Use Permit	November 2, 2009	Extension	Continue exploration activities	November 9, 2009
Land Use Permit	January 19, 2010	Amendment	Addition of drills and amend water licence (2BE-QAM0813) to increase daily water allowance	February 1, 2010
Land Use Permit	February 17, 2011	Extension	Continue exploration activities	February 23, 2011

### **Current File History**

Cameco is proposing to amend its existing KIA Land Use Licence, renew its Water Licence with the Nunavut Water Board and apply for a new Land Use Permit with AANDC.

The NIRB determined that this request may result in a change to the original scope of the project and distributed the project proposal was distributed to community organizations in Baker Lake, as well as to relevant federal and territorial government agencies, and Inuit organizations. The NIRB requested that interested parties review the proposal and the NIRB's previously recommended terms and conditions and provide the Board with any comments or concerns by March 23, 2012 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 additional recommended mitigation measures); and
- Any matter of importance to the Party related to the project proposal.

On or before March 23, 2012 the NIRB received comments from the following interested parties:

- **Environment Canada (EC)**
- **Beverly and Qamanirjuaq Caribou Management Board (BQCMB)**

All comments provided to 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**

This project is located within the Kivalliq region, approximately 100 kilometres (km) from Baker Lake. The Proponent intends to continue exploration activities for uranium on their properties including diamond drilling, prospecting, mapping, as well as ground and airborne geophysical surveys.

The original application, that was screened in accordance with Part 4, Article 12 of the NLCA, included the following project components/activities:

- Use of existing, temporary (20 person) camp at Qamanaarjuk Lake (constructed in 2006)
- Development of a natural airstrip near the camp for tundra wheeled aircraft - some levelling required;
- Exploration program to include:
  - Geophysics surveys including potential gravity, resistivity, electro-magnetic and magnetic surveys
  - On land diamond drilling
    - Between 10 & 20 diamond drill holes (3,000 – 6,000m) max. depth 500m
  - Geological mapping, prospecting, sampling and geophysical surveys (ground and airborne)
  - Borehole core sampling
- Transportation, storage and use of fuel at camp site with potential storage at designated drill site area;
  - Fuel to be transported overland in the winter and by aircraft in summer
- Use of snowmobile, helicopter and/or fixed-wing aircraft to transport personnel and equipment to drill sites depending on season;
- Movement of drill and/or equipment from Baker Lake during winter; to be moved overland using low ground pressure track vehicles;
- Use of water for domestic and drilling purposes;
- Production of human, combustible, non-combustible and grey-water wastes;
- Incineration of combustible wastes and solid sewage;
- Removal of non-combustible wastes to local landfill; and
- Storage of products, chemicals and hazardous materials.

The 2010 amendment application included the following project components/activities:

- Amend LUP N2008C0007 from operating 1 diamond drill to operating 2 diamond drills; and
- Amend Nunavut Water License 2BE-QAM0813 to increase the daily water allowance of 58 m<sup>3</sup> (to support camp and 1 drill) to 111 m<sup>3</sup> per day (to support the camp and 2 diamond drills).

The current application is to amend the existing KIA Land Use Licence, renew the Water Licence with the Nunavut Water Board and apply for a new Land Use Permit with AANDC. The amendment application includes the following additional components and activities:

- Construction of a larger exploration camp (averaging 38 people with total capacity of 75 people) on Inuit Owned Land on the southeast shore of Aberdeen Lake. This camp

would replace existing camp located on Crown Land on the southwest shore of Qamanaarjuk Lake;

- Use of a natural, flat, fine gravel area adjacent to the proposed camp as an airstrip to bring in supplies;
- Install and commission bulk fuel storage tanks to replace the use of drummed fuel. Bulk fuel storage tanks would be located adjacent to the proposed camp and would include:
  - Diesel – 250,000 litres [L] (5 x 50,000L tanks)
  - Jet A-1 – 300,000 L (6 x 50,000L tanks)
  - Gasoline – approximately 820 L (4 x 205L drums)
  - Propane – approximately 30 x 100 pound cylinders
- Increase usage of water for domestic and drilling purposes to a maximum of 5,000 L/day for camp use and approximately 55,000 L/day for each diamond drill (maximum 5 drills), for a total of 280,000 L/day (or 280 m<sup>3</sup>/day).

The proposed activities are to occur from the spring of 2012 to the fall of 2013.

## 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 ([http://www.sararegistry.gc.ca/default\\_e.cfm](http://www.sararegistry.gc.ca/default_e.cfm)) to get the current status of a species.

Updated: January 2012

<b>Terrestrial Species at Risk <sup>1</sup></b>	<b>COSEWIC Designation</b>	<b>Schedule of SARA</b>	<b>Government Organization with Primary Management Responsibility <sup>2</sup></b>
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	GN
Felt-leaf Willow	Special Concern	Schedule 1	GN
Peregrine Falcon	Special Concern ( <i>anatum-tundrius</i> complex <sup>3</sup> )	Schedule 1 - Threatened ( <i>anatum</i> ) Schedule 3 – Special Concern ( <i>tundrius</i> )	GN
Short-eared Owl	Special Concern	Schedule 3	GN
Peary Caribou	Endangered	Schedule 1	GN
			<b>Government</b>

<b>Terrestrial Species at Risk <sup>1</sup></b>	<b>COSEWIC Designation</b>	<b>Schedule of SARA</b>	<b>Organization with Primary Management Responsibility <sup>2</sup></b>
Barren-ground Caribou (Dolphin and Union population)	Special Concern	Schedule 1	GN
Polar Bear	Special Concern	Schedule 1	GN
Red Knot ( <i>rufa</i> subspecies)	Endangered	Pending	EC
Red Knot ( <i>islandica</i> subspecies)	Special Concern	Pending	EC
Porsild's Bryum	Threatened	Pending	GN
Horned Grebe (Western population)	Special Concern	Pending	EC
Grizzly Bear	Special Concern	Pending	GN
Wolverine (Western population)	Special Concern	Pending	GN
Atlantic Cod, Arctic Lakes	Special Concern	No schedule	DFO
Atlantic Walrus	Special Concern	Pending	DFO
Beluga Whale (Cumberland Sound population)	Threatened	Pending	DFO
Beluga Whale (Eastern Hudson Bay population)	Endangered	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
Narwhal	Special Concern	Pending	DFO

<sup>1</sup> The Department of Fisheries and Oceans has responsibility for aquatic species.

<sup>2</sup> 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.

<sup>3</sup> The *anatum* subspecies of Peregrine Falcon is listed on Schedule 1 of SARA as threatened. The *anatum* and *tundrius* subspecies of Peregrine Falcon were reassessed by COSEWIC in 2007 and combined into one subpopulation complex. This subpopulation complex was assessed by COSEWIC as Special Concern.

**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:

	<b>Types of Development</b> (See Guidelines below)	<b>Function</b> (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*<sup>1</sup> to issue such permits.

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<sup>1</sup> 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*<sup>2</sup>, 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*<sup>3</sup>, 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*

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<sup>2</sup> s. 51(1)

<sup>3</sup> 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.