SCREENING DECISION REPORT
NIRB FILE NO.: 08EN052

AANDC File No: N2008C0026
KIA File No.: KVL308C09
NWB File No.: 2BE-ANG0813

March 22, 2012

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

Via email: Duncan.J@parl.gc.ca and minister@aandc.gc.ca

Re: <u>Screening Decision for Kivalliq Energy Corporation's Amendment request with Aboriginal Affairs and Northern Development Canada for its "Angilak" project, Additional Application Terms and Conditions, 08EN052</u>

Dear Mr. 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 12.4.3 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 a review of Kivalliq Energy Corporation's request to Aboriginal Affairs and Northern Development Canada (AANDC) for an amendment to their Land Use Permit N2008C0026 for their "Angilak" 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 July 31, 2008 Screening Decision, NIRB file No.: 08EN052 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 08EN052 in a Screening Decision Report dated July 31, 2008 and is available from NIRB's ftp site using the following link
http://ftp.nirb.ca/01-SCREENINGS/COMPLETED%20SCREENINGS :

General

1. Kivalliq Energy Corporation (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 NIRB (*NIRB Part 1 Form* dated June 26, 2008), to Indian and Northern Affairs Canada (*INAC Application for Land Use Permit)* and to the Kivalliq Inuit Association (*Access to Inuit Owned Lands*).
4. The Proponent shall operate the site in accordance with all applicable Acts, Regulations and Guidelines.

Water

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.
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

7. The Proponent shall keep all garbage and debris in bags placed in a covered metal container or equivalent until disposed of. All wastes should be kept inaccessible to wildlife at all times.

8. 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.
9. 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*.

Fuel and Chemical Storage

10. 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.
11. The Proponent shall store all chemicals in such a manner that they are inaccessible to wildlife.
12. The Proponent shall report all spills of fuel, or other deleterious materials immediately to the 24 hour Spill Line at (867) 920-8130.
13. The Proponent shall use secondary containment or a surface liner (drip pans, fold-a-tanks, etc.) at all refueling stations and fuel caches.
14. The Proponent shall ensure that proper spill kits are located at every fuel cache, drill site and refueling station.
15. The Proponent shall ensure that all on site personnel are properly trained in fuel and hazardous waste handling procedures as well as spill response procedures.

Wildlife

16. The Proponent shall ensure that there is no damage to wildlife habitat in conducting this operation.
17. 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.
18. The Proponent shall ensure that, unless there is a specific requirement for low-level flights, aircraft/helicopters maintain a minimum altitude of 610 metres above ground level in places where there are occurrences of wildlife. The Proponent shall ensure that aircraft/helicopter avoid critical and sensitive wildlife areas at all times.
19. In areas where there are observed groups (colonies) of birds, the Proponent shall ensure that flight levels are restricted to a vertical distance of 1000 metres and a horizontal distance of 1500 metres from the birds.
20. The Proponent shall ensure that aircraft/helicopter do not, unless for emergency, touch-down in areas where wildlife are present.
21. 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.
22. In addition to the Caribou Protection Measures, the Proponent shall implement the following mitigation measures regarding caribou:

a. During the period of May 15th to July 15th, if caribou are observed in the project area, the Proponent shall suspend all disruptive project activities. This includes drilling, blasting, over flights, surveys and the use of snowmobiles and ATVs outside of the immediate vicinity of the camp. Activities should not resume unless caribou are at least five (5) kilometers away from the areas where these activities are conducted.

b. The Proponent shall avoid flights of less than 610 metres above the ground when caribou are in sight of the project area.

c. During caribou migration, the Proponent shall not position or operate drilling activities such that they may block or cause diversion to migrating caribou.

d. The Proponent shall cease all activities that may interfere with migration of caribou, until the caribou have passed.

23. The Proponent shall follow procedures outlined in the "Safety in Bear Country Manual". Information about the latest bear detection and deterrent techniques can be obtained from the Department of Environment (Dan Shewchuk, 867-857-2828 or dshewchuk@gov.nu.ca) or the Regional Biologist (Mitch Campbell, 867-857-2828 or mcampbell@gov.nu.ca).

Physical Environment

24. 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.

25. The Proponent shall ensure that the land use area is kept clean and tidy at all times.

Drilling on Land

26. 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.

27. The Proponent shall not allow any drilling wastes to spread to the surrounding lands or water bodies.

28. The Proponent shall ensure all sumps are properly closed out at the end of project. Sumps should only be used for inert drilling fluids, not any other materials or substances.

29. If an artesian flow is encountered, the Proponent shall ensure the drill hole is immediately plugged and permanently sealed.

30. 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.

Drilling on Ice

31. If drilling 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.

32. 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 demonstrated to be non-toxic.

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

Drilling and Disposal of Related Radioactive Substances

34. 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.

35. The Proponent shall ensure that drill holes which encounter uranium mineralization with a content greater than 1.0% over a length of one (1) metre, or with a metre-percent concentration greater than 5%, are sealed by cementing over the entire mineralization zone; this should be at least ten (10) metres above and below each mineralization zone.

36. The Proponent shall ensure that drill cuttings with a uranium concentration greater than 0.05% are disposed of down the drill hole and the hole subsequently sealed.

37. Following backfilling, the Proponent shall conduct a radiometric survey. When material is found to exceed background radiation levels, then the appropriate regulator must be contacted for review and approval of handling procedures.

38. 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 metres from the high water mark of all water bodies.

39. The Proponent shall ensure that gamma radiation levels of a long-term core storage area are not greater than 1.0 micro Sievert (µSv), and never exceeds 2.5 µSv. When core is found to exceed the levels identified, then the appropriate regulator must be contacted for review and approval of the handling procedures.

Camp

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

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

Restoration

42. The Proponent shall remove all garbage, fuel and equipment upon abandonment.

43. The Proponent shall complete all clean-up and restoration of the lands used prior to the end of each field season.

Other

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

45. The Proponent shall follow the Heritage River Management Plan for the Kazan River and shall not locate camps or facilities within one (1) kilometre of the river.

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:

46. The Proponent shall use adequate secondary containment or a surface liner (e.g. self-supporting insta-berms and fol-da-tanks) when storing barreled fuel and chemicals at all

locations. 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 fuel caches, vehicle-maintenance areas and drill sites. Spill kits and secondary containment structures should accommodate 110% of the total cache capacity.

47. The Proponent shall flag all fuel caches in a manner which ensures they remain visible during winter months.

48. The Proponent shall inspect all fuel caches on a daily basis during seasonal operations, and during seasonal shutdowns, shall ensure fuel caches are inspected at a minimum of once per month.

MONITORING AND REPORTING REQUIREMENTS

The Board has previously recommended the following:

1. The Proponent shall update its Spill Contingency Plan to include the following:
    a. Updated contact information:
        i. Government of Nunavut-Department of Environment (867-975-7700)
        ii. Manager of Pollution Control and Air Quality (867-975-7748)
        iii. Environment Canada's 24 hour duty officer (867-766-3737)
    b. Site map illustrating the project's facility locations relative to areas that may be affected by a potential spill. This map shall be provided once the camp is established; and
    c. Locations of disposal sites.

    The Proponent shall provide the NIRB with this updated plan ***no more than 30 days*** after commencing operations.

2. The Proponent shall maintain a record of wildlife observations while operating within the project area. The Proponent shall compile this information into a *Wildlife Monitoring Report* which will include but not limited to:
    a. Locations (i.e., latitude and longitude);
    b. Species;
    c. Number of animals;
    d. Description of the animal activity;
    e. Description of the gender and age (young present) of animals, if possible;
    f. Observations and locations of denning sites, calving areas, caribou crossing sites, and raptor nests;
    g. Observations of Species at Risk;
    h. Timing of critical life history events observed such as calving, mating, denning and nesting;
    i. All potential impacts to wildlife from project activities;
    j. All actions/mitigation taken to reduce adverse impacts to wildlife; and
    k. An analysis of the effectiveness of mitigation measures implemented with regards to wildlife based on the results of the "Wildlife Record".

Prior to conducting project activities, the Proponent should map the location of any sensitive wildlife sites such as denning sites, calving areas, caribou crossing sites, and raptor nests in the project area, and identify the timing of critical life history events (i.e., calving, mating, denning and nesting). A copy of the *Wildlife Monitoring Report* shall be submitted annually at the end of the operational season to the NIRB as part of the *Annual Report*, and also to the Beverly and Qamanirjuaq Caribou Management Board (BQCMB) and to the following Government of Nunavut contacts:

a. Manager, Wildlife – Dan Shewchuk, (867) 857-2828, dshewchuk@gov.nu.ca [*update to David Vetra, (867) 857-2828, dvetra@gov.nu.ca*]
b. Kivalliq Region Biologist – Mitch Campbell, (867) 857-2828, mcampbell@gov.nu.ca

3. The Proponent shall submit a comprehensive *Annual Report* to the NIRB, with copies to INAC, GN-DOE, EC and KIA by January 31st of each year of project activities. The report must contain, but not be limited to, the following information:
    a. A summary of activities undertaken for the reporting year;
    b. A work plan for the following year, including any progressive reclamation work to be undertaken;
    c. A *Wildlife Monitoring Report* as described above in item (2);
    d. A discussion regarding the steps taken (including any baseline work conducted) by the Proponent to thoroughly identify, analyze and manage the environmental impacts and cumulative effects from the project activities, particularly in respect to caribou;
    e. Site photos;
    f. Efforts made to achieve compliance with the *Canadian Wide Standards for Dioxins and Furans*, and the *Canadian Wide Standards for Mercury*;
    g. Efforts to implement a comprehensive waste management strategy (especially waste segregation) that is designed to reduce and control the volumes of wastes produced, transported, and disposed of;
    h. A summary of emissions from the sewage incineration as per the National Pollutant Release Inventory (NPRI); as well as the following:
        i. manufacturer, model and year of the incinerator
        ii. air pollution control equipment used
        iii. handling procedures for transporting the sewage from the "Pacto Toilets" to the incinerator
    i. A summary of community consultations conducted; and
    j. A summary of how the Proponent has complied with the NIRB terms and conditions contained within this Screening Decision, and the terms and conditions associated with all authorizations for the project.

In addition, the Board is recommending the following:

Annual Report

4. The Proponent shall continue to submit a comprehensive annual report with copies provided to the same authorizing agencies by January 31 of each year of permitted activities. The annual report must also contain, but not limited to, the following information:
    a. Records of any fuel spills, actions taken to remediate the spill site, and reports from any resulting inspections,

b. Use of the ice airstrip including landing dates and times as well as any action taken by the Proponent to mitigate any impacts of the ice airstrip or protect the lake resources on which the ice airstrip is located.
c. Any updates regarding the Proponent's plans to move from caching large quantities of fuel in barrels to using larger fuel storage tanks.

Fuel and Chemical Storage

5. 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*".

Transport of Waste/Dangerous Goods

6. 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.
7. 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 has previously recommended the following:

General

1. All Authorizing Agencies shall notify the NIRB of any changes in operating plans or conditions associated with this project prior to any such change.
2. 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).
3. Territorial and federal government agencies update the Caribou Protection Map with updated data and information from the Beverly Qamanirjuaq Caribou Management Board (BQCMB).
4. The Proponent should refer to the Canadian Council of Ministers of the Environment (CCME): *Canada-Wide Standards for Petroleum Hydrocarbon in Soil*, for remediation guidelines.

Kivalliq Inuit Association (KIA) and Indian and Northern Affairs Canada (INAC)

5. As an overriding consideration, the Kivalliq Inuit Association and Indian and Northern Affairs Canada (the Agencies) impose mitigation measures, conditions and monitoring requirements pursuant to the Land Use Permit/Licence, 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.

6. That the Agencies recognize that any activity related to this application outside the original project scope should be considered a new project and submitted to NIRB for screening. In addition, NIRB would like to recommend to the Agencies that any renewal requests for the project proposal should be forwarded to NIRB for assessment in accordance with 12.4.3 of the Nunavut Land Claims Agreement.

7. The Agencies must consider the importance of conducting regular Land Use Inspections, while the project is in operation. The Land Use Inspections should be focused on ensuring the Proponent is in compliance with the NIRB terms and conditions, and the conditions imposed through the authorizing permits.

8. It is recommended to the Agencies that no renewals or extensions be issued to any permits/licences until the Proponent's *Annual Report* (including their *Wildlife Monitoring Report*) is received. These reports are due January 31st of each year of the project activities.

Government of Nunavut – Department of Environment (GN-DoE)

9. The Government of Nunavut – Department of Environment (GN-DoE) Conservation Officers should coordinate with INAC and KIA to conduct random inspections of the project location during the months of April, May, June and August to ensure the Proponent is in compliance with the NIRB terms and conditions related to wildlife protection.

10. The GN-DoE should conduct on-going review of wildlife monitoring results submitted from the Proponent as required by the *Wildlife Monitoring Report*. Following submission of the required annual report by the Proponent, the GN-DoE should report to NIRB, INAC and the KIA its findings regarding the possible impact of the project on the Beverly and Qamanirjuaq caribou herds, as well as any recommendations regarding mitigation measures to minimize the associated impacts by March 31st of each year.

The Board is currently also recommending the following:

Bear and Carnivore Safety

11. 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.

12. Any problem wildlife or any interaction with carnivores should be reported immediately to the local Government of Nunavut, Department of Environment Conservation Office

(Conservation Officer of the Kivalliq region, Dave Vetra, phone: 867-857-2828, email: dvetra@gov.nu.ca).

Incineration of Wastes

13. 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.

Species at Risk

14. 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.

Change in Project Scope

15. 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

16. 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).

17. Territorial and federal government agencies 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.

Drill Additives

18. The Proponent should assess alternatives (including biodegradable and non-toxic options) 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.

Aboriginal Affairs and Northern Development Canada

19. 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.

20. 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.

21. AANDC forward to the NIRB copies of any decisions by Inspectors which allow project activities to continue in areas of caribou presence between dates indicating work stoppages are necessary (exemptions from Caribou Protection Measures).

22. AANDC – 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.

Nunavut Planning Commission

23. 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 Proponent is advised that the *Canadian Environmental Protection Act (http://laws.justice.gc.ca/en/C-15.31/)* lists calcium chloride (CaCl) as a toxic substance. The Proponent should assess alternatives (including biodegradable and non-toxic) to drill additives prior to the use of CaCl and try to avoid the use of CaCl.

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

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

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

5. 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.

6. 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.

7. 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.**

8. 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.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.

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

Validity of Land Claims Agreement

Section 2.12.2
Where there is any inconsistency or conflict between any federal, territorial and local government laws, and the Agreement, the Agreement shall prevail to the extent of the inconsistency or conflict.

Dated March 23, 2012 at Arviat, NU.

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 26, 2012 the Nunavut Impact Review Board (NIRB or Board) received an application from Aboriginal Affairs and Northern Development Canada (AANDC) for an amendment to the Land Use Permit (No. N2008C0026) previously issued for Kivalliq Energy Corporation's "Angilak" project. The NIRB also received an email on January 25, 2012 from the Nunavut Planning Commission for this application confirming that the amendment request would not require an NPC conformity review, and further, that the terms agreed to under the original conformity determination (May 28, 2010) remain applicable to the current amendment application.

Past File History

The original application for the project (NIRB File No.: 08EN052) was received from Kivalliq Inuit Association (KIA) on March 27, 2008. The project proposal was screened in accordance with Part 4, Article 12 of the Nunavut Land Claims Agreement (NLCA) and on July 31, 2008 the NIRB issued a 12.4.4 (a) screening decision to the Minister of Indian and Northern Development Canada (INAC; now AANDC) allowing the proposed exploration activities to proceed subject to project-specific recommended terms and conditions.

Additional authorization and extension requests for AANDC Land Use Permits (Nos. N2008C0026 and N2008C0029) associated with this project have also been reviewed by the NIRB following screening of the original project proposal. In each instance the NIRB confirmed that the applications were exempt from further 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 July 31, 2008 Screening Decision Report.

Authorization (Land Use Permit No.)	**Application**			**Correspondence Issued by NIRB**
	Date Received by NIRB	**Type**	**Reason for Application**	
N2008C0029	May 5, 2009	Amendment	Change camp location	May 8, 2009
N2008C0026	May 20, 2010	Amendment & Extension	One additional drill, increased water use and one year extension	June 1, 2010
N2008C0026	June 28, 2011	Extension	One year extension	July 28, 2011

Current Application

Kivalliq Energy Corporation is currently proposing to further amend its existing AANDC Land Use Permit (No. N2008C0026) associated with this project to include year round storage of a significantly increased amount of fuel on site, construct an ice airstrip to resupply camp using a

single shipment with a Hercules plane instead of numerous trips with a smaller aircraft, as well as conduct ongoing drilling and exploration activities.

The NIRB determined that this request may result in a change to the original scope of the project and distributed the project proposal to community organizations in Whale Cove and Rankin Inlet, 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 5, 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 5, 2012 the NIRB received comments from the following interested parties:

- **Environment Canada**

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

Project Activities

This project was located within the Kivalliq region, approximately 300 kilometres from Rankin Inlet. The Proponent intended to conduct exploration activities seasonally for IOCG (Iron Oxide Copper Gold) and uranium on Inuit Owned Land and Crown Land between 2008 and 2013.

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

- Temporary camp construction for 10-14 people;
- Exploration activities – prospecting, mapping and geophysical surveys both ground and airborne;
- On land and on-ice exploration drilling of up to 25 drill holes;
- Project supported by helicopter for transportation of field crews and movement of drill;
- Fuel storage and transportation of 70 drums diesel, 5 drums gasoline, 100 drums aviation fuel, 10 x 100 lb. propane tanks;
- Chemical and hazardous waste storage;
- Water use for domestic (camp) purposes and drilling purposes;
- Production of wastes;
- Incineration of combustible waste;
- Use of 'Pacto' toilets and incineration of sewage waste.

The activities and components associated with the previous amendments/extensions included:

- 2009: change to camp location;
- 2010: addition of one (1) diamond drill;
- 2011: one year extension to Land Use Permit N2008C0026 to continue:
  - Exploratory drilling;
  - Fuel caching; and
  - Upgrade camp infrastructure.

The Proponent is ***currently*** applying for an amendment to its AANDC Land Use Permit (No. N2008C0026) to include the following additional components and activities:

- Add 2 additional tents to the camp;
- Store up to 4,000 drums of fuel on site (total 820,000 litres);
- Add 2 additional pieces of large machinery (1 D6CAT and 1 CAT front end loader); and
- Clear and maintain an ice airstrip on Nutaaq Lake capable of landing a Hercules aircraft.

The updated scope of the project includes the following project activities:

- Drilling activities:
  - Currently 3 drills on site (two Diamond Drill rigs, one Reverse Circulation drill rig).
  - Two additional Diamond Drill rigs to be mobilized in the 2012 season (total 5 drills).
  - Drilling of approximately 24,000 metres total (9,000 metres of which will be reverse circulation drilling).
- Drill, crew, and fuel movement using helicopter.
- Ongoing ground geophysical surveying aimed at specific targets in 2012.
- Sample collection of rock, till, and soil property wide as a prospecting tool.
- Property-wide geological mapping and gridding on various scales.
- Ongoing operations at the Nutaaq camp to house for up to 60 personnel, including:
  - Previously upgraded, and with the addition of 2 additional tents during 2012.
  - Production of wastes, and incineration of combustible waste on site;
  - Use of 'Pacto' toilets and incineration of sewage waste.
  - Domestic water use.
- Addition of 2 pieces of large machinery (1 D6CAT and 1 CAT front end loader).
- Clear and maintain an ice airstrip on Nutaaq Lake capable of landing a Hercules aircraft.
- Increase amount of fuel caching capacity of current main cache (approximately 150 metres northwest of Nutaaq camp) from 600 drums to 4000 drums (with the intention of storing up to 3000 drums).
- Storage of drilling chemicals and hazardous wastes.
- Increased water use for drilling purposes.
- Project permitting period requested up to January 1, 2014.

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) to get the current status of a species.

Updated: January 2012

Terrestrial Species at Risk [1]	**COSEWIC Designation**	**Schedule of SARA**	**Government Organization with Primary Management Responsibility** [2]
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 (*anatum-tundrius* complex[3])	Schedule 1 - Threatened (*anatum*) Schedule 3 – Special Concern (*tundrius)*	GN
Short-eared Owl	Special Concern	Schedule 3	GN
Peary Caribou	Endangered	Schedule 1	GN
			Government

Terrestrial Species at Risk [1]	**COSEWIC Designation**	**Schedule of SARA**	**Organization with Primary Management Responsibility** [2]
Barren-ground Caribou (Dolphin and Union population)	Special Concern	Schedule 1	GN
Polar Bear	Special Concern	Schedule 1	GN
Red Knot (*rufa* subspecies)	Endangered	Pending	EC
Red Knot (*islandica* 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

[1] The Department of Fisheries and Oceans has responsibility for aquatic species.

[2] 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.

[3] 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:

	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.