



**NIRB No.: 07YN019**  
**INAC No.: N2006N0028**  
**NRI No.: 0202107N-M**

July 18, 2008

The Honourable Chuck Strahl  
Minister of Indian and Northern Affairs Canada  
c/o Jeff Holwell, Land Specialist  
Indian and Northern Affairs Canada  
Iqaluit, Nunavut

Via email: [holwellj@inac-aine.gc.ca](mailto:holwellj@inac-aine.gc.ca)

**Re: Extension Request for Dr. Wayne Pollard's Land Use Permit with Indian and Northern Affairs Canada for the Investigation of the Sensitivity of High Arctic Permafrost to Climate Change Project Proposal**

Dear Jeff Holwell:

On June 16, 2008 the Nunavut Impact Review Board (NIRB or Board) received an application from Indian and Northern Affairs Canada (INAC) for a one-year extension to Dr. Wayne Pollard's Land Use Permit (N2006N0028) related to the *Investigation of the Sensitivity of High Arctic Permafrost to Climate Change* research project on Axel Heiberg Island.

The original application for the above research project was received by the NIRB on January 25, 2007 from the Nunavut Research Institute (NRI). The NIRB assigned the project proposal file Number 07YN019 and screened it in accordance with Part 4, Article 12 of the Nunavut Land Claims Agreement (NLCA). On March 20, 2007 the NIRB issued 12.4.4(a) Screening Decision to NRI allowing the proposed research project to proceed subject to project-specific terms and conditions.

The original NIRB screening file and extension request of 07YN019 are available from NIRB's ftp site at the following link:

[http://ftp.nirb.ca/SCREENINGS\\_COMPLETED%20SCREENINGS\\_ARCHIVE/2007\\_SCREENINGS/07YN019-Wayne\\_Pollard/](http://ftp.nirb.ca/SCREENINGS_COMPLETED%20SCREENINGS_ARCHIVE/2007_SCREENINGS/07YN019-Wayne_Pollard/)

After completing a review of the information provided from INAC, the NIRB has determined that the proposed extension does not *significantly* change the scope of the original project activities. Therefore, the original terms and conditions in the attached March 20, 2007 Screening Decision remain valid and NIRB recommends their incorporation into the extended INAC Land Use Permit for this project.

If you have any questions or concerns, please do not hesitate to contact the NIRB's Technical Advisor Li Wan at [liwan@nirb.ca](mailto:liwan@nirb.ca) or by phone 867-983-4606.

Sincerely,



Stephanie Autut  
Executive Director

Cc: Wayne Pollard, McGill University ([pollard@geog.mcgill.ca](mailto:pollard@geog.mcgill.ca))  
Andrew Dunford, NRI ([Adunford@nac.nu.ca](mailto:Adunford@nac.nu.ca))

Attachment: March 20, 2007 Screening Decision Report



## SCREENING DECISION REPORT NIRB FILE NO.: 07YN019

March 20, 2007

Honourable Ed Picco  
Minister of Education  
Iqaluit, NU

Via email: [epicco@gov.nu.ca](mailto:epicco@gov.nu.ca)

**Re: Screening Decision for Dr. Wayne Pollard's The Nature and Significance of Perennial Springs in the Canadian High Arctic Project Proposal**

Dear Honourable Ed Picco:

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

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

Section 12.4.4 of the Nunavut Land Claim Agreement states:

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

- a) the proposal may be processed without a review under Part 5 or 6; NIRB may recommend specific terms and conditions to be attached to any approval, reflecting the primary objectives set out in Section 12.2.5;
- b) the proposal requires review under Part 5 or 6; NIRB shall identify particular issues or concerns which should be considered in such a review;
- c) the proposal is insufficiently developed to permit proper screening, and should be returned to the proponent for clarification; or
- d) the potential adverse impacts of the proposal are so unacceptable that it should be modified or abandoned.

### NIRB Assessment and Decision

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

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

NIRB's decision is based on specific considerations that reflect the primary objectives of the Land Claims Agreement. Our considerations in making this decision included:

- Storage and disposal of fuel, garbage, sewage, and gray water, and impact of these on the ecosystem;
- The potential impact and disturbance to nesting and migrating birds;
- The potential impact on wildlife
- The impact on terrain;
- The impact on archaeological sites or cultural landmarks in the area; and
- Clean up/restoration of the camp site upon completion of research.

**Therefore, the Board is recommending:**

**The Nunavut Research Institute (NRI) incorporates the following or similar terms and conditions into its Permit pursuant to Section 12.4.4 (a) of the NLCA.**

**Project-Specific Terms and Conditions to be incorporated into the Nunavut Research Institute Scientific Research License Application pursuant to Section 12.4.4(a) of the NLCA**

**General**

1. Wayne Pollard (the Permittee) shall maintain a copy of the Project Terms and Conditions at the site of operation at all times.
2. The Permittee shall forward copies of all permits to the NIRB obtained and required for this project prior to the commencement of the project.
3. The NIRB shall be notified of any changes in operating plans or conditions associated with this project prior to any such change.

**Fuel and Wastes Storage**

4. The Permittee shall not deposit, nor permit the deposit of any fuel, chemicals, wastes or sediment into any water body.
5. The Permittee shall locate, if applicable, all sumps, pits, spill basins and fuel caches 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 the contents from entering any water body frequented by fish.
6. The Permittee shall not store materials on the surface ice of lakes or streams, except that which is for immediate use.
7. The Permittee shall ensure that any non-combustible and hazardous waste, including waste oil, is disposed appropriately off site at an approved facility.
8. The Permittee is required to use secondary containment with impervious linens for storage of all barreled fuel rather than relying on natural depressions to contain spills.
9. All spills of harmful substances should be documented and reported to the 24-hour spill line at (867) 920-8130, regardless the quantity of release.
10. The Permittee shall ensure that any temporary camps are restored to their natural state after the completion of project activities.

## **Wildlife**

11. The Permittee is required to ensure that there is minimal disturbance to any nesting birds and wildlife in the area.
12. The Permittee shall not disturb or destroy the nests or eggs of migratory birds. If active nests are encountered during project activities, the nesting area should be avoided to prevent disturbance (i.e. the young have left the vicinity of the nest).
13. The Permittee is required ensure that camp waste be made inaccessible to wildlife at all times.
14. The Permittee shall follow procedures outlined in the "Territorial Safety in Bear Country Manual", and should contact the Regional Biologist or the Wildlife manager for information and advice on measures which should be taken to minimize the possibility of conflicts/interactions with bears. Consideration should be given to setting up an electric fence around the camp.
15. In the event of a defense kill of a Polar Bear, the Permittee shall be aware of section 5.6.52 and 5.6.55 of Nunavut Land Claims Agreement (NLCA.) and shall contract nearest government of Nunavut wildlife office immediately for further direction.
16. Any observations of Ivory Gulls should be forwarded to Mark Mallory, Seabird Biologist, Environment Canada, CWS, Box 1714, Qimugjuk Bldg. 969, Iqaluit, NU, X0A 0H0, Phone: (867) 975-4637 Email: mark.mallory@ec.gc.ca or Grant Gilchrist, Environment Canada, NWRC, Raven Road, Carleton University Ottawa, ON, Canada K1A 0H3 P: (613) 998-7364 F: (613) 998- 0458 Email: grant.gilchrist@ec.gc.ca .

## **Aircraft Operations**

17. The Permittee shall ensure that aircraft do not, unless for emergency, touch-down in areas where concentrations of wildlife are present. And raptor nesting sites and concentrations of nesting or molting waterfowl should be avoided by aircraft.
18. If the disturbance can not be avoided, it is recommends that aircraft used in conducting project activities maintain a flight altitude of at least 610 m and a horizontal distance of 2 km during horizontal (point to point) flight from any known colonies of Ivory Gulls and any other observed groups (colonies) of Ivory Gulls during the nesting season.

## **Archaeological**

19. The Permittee should be aware of the law regarding disturbance of archaeological and palaeontological sites and the removal of artifacts found. If a site is found it should remain undisturbed and its location should be reported to the Government of Nunavut Department of Culture, Language, Elders and Youth. See Appendix A.

## **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 20, 2007 at Cambridge Bay, NU.



Lucassie Arrangutainaq, A/Chairperson

cc: Indian and Northern Affairs Canada  
Environment Canada  
Canadian Wildlife Service  
Dr. Wayne Pollard

## APPENDIX A



### BACKGROUND

#### Archaeology

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

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

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

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

#### Palaeontology

Under the Nunavut Act<sup>1</sup>, the federal government can make regulations for the protection, care and preservation of palaeontological sites and specimens in Nunavut. Under the *Nunavut Archaeological and Palaeontological Sites Regulations*<sup>2</sup>, it is illegal to alter or disturb any palaeontological site in Nunavut unless permission is first granted through the permitting process.

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

<sup>2</sup> P.C. 2001-1111 14 June, 2001

## 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:

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

## Terms and Conditions

- 1) The Permittee shall not operate any vehicle over a known or suspected archaeological or palaeontological site.
- 2) The Permittee shall not remove, disturb, or displace any archaeological artifact or site, or any fossil or palaeontological site.
- 3) The Permittee shall immediately contact the Department of Culture, Language, Elders and Youth (867) 934-2046 or (867) 975-5500 or 1 (866) 934-2035 should an archaeological site or specimen, or a palaeontological site or fossil be encountered or disturbed by any land use activity.
- 4) The Permittee shall immediately cease any activity that disturbs an archaeological or palaeontological site encountered during the course of a land use operation, until permitted to proceed with the authorization of the Department of Culture, Language, Elders and Youth, *Government of Nunavut*.
- 5) The Permittee shall follow the direction of the Department of Culture, Language, Elders and Youth and DIAND in restoring disturbed archaeological or palaeontological sites to an acceptable condition.
- 6) The Permittee shall provide all information requested by the Department of Culture, Language, Elders and Youth concerning *all archaeological sites or artifacts and all palaeontological sites and fossils encountered in the course of any land use activity*.
- 7) The Permittee shall make best efforts to ensure that all persons working under authority of the permit are aware of these conditions concerning archaeological sites and artifacts, and palaeontological sites and fossils.



- 8) The Permittee shall avoid the known archaeological and/or palaeontological sites listed in Attachment 1.
- 9) *The Permittee shall have an archaeologist or palaeontologist perform the following functions, as required by the Department of Culture, Language, Elders and Youth:*
- a) survey
  - b) inventory and documentation of the archaeological or palaeontological resources of the land use area
  - c) assessment of potential for damage to archaeological or palaeontological sites
  - d) mitigation
  - e) marking boundaries of archaeological or palaeontological sites
  - f) site restoration

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

## APPENDIX B – FILE HISTORY

On January 25<sup>th</sup>, 2007, the Nunavut Impact Review Board (NIRB) received McGill University's project proposals entitled:

- *Investigation of the Sensitivity of High Arctic Permafrost to Climate Change; and*
- *The Nature and Significance of Perennial Springs in the Canadian High Arctic.*

from the Nunavut Research Institute (NRI). Following that, on February 28<sup>th</sup>, 2007 the NIRB received a positive conformity decision from the Nunavut Planning Commission (NPC). The decision advised that these two projects one as associated with a previous (2006) conformity determination (Keewatin Regional Land Use Plan) and therefore could be considered as a single project proposal as per 12.3.1.section 12.3.1,NLCA.

These two project proposals were submitted by the same proponent. The research activities will be in the same spatial and temporal span by the same research groups. The activities will take place on Crown land in Qikiqtaaluk Region. NIRB has assigned these two project proposals a combined file number, 07YN019, under the project name of *The Nature and Significance of Perennial Springs in the Canadian High Arctic.*

The Proponent has proposed to conduct scientific field work in order to achieve the following objectives:

1. *The Nature and Significance of Perennial Springs in the Canadian High Arctic:*
  - a) To understand and explain processes related to the interaction between water, frozen ground unique to cold environments.
  - b) To describe the characteristics of microbial communities associated with springs, lakes and permafrost in cold polar deserts.
2. *Investigation of the Sensitivity of High Arctic Permafrost to Climate Change:*
  - a) To detect and assess landscape changes associated with warming and melting permafrost, and to investigate changing weathering patterns of rock surface.

The project proposals involve the following components:

- Research fieldwork activities including the mapping of permafrost, ground water, and group ice.
- The establishment of small, temporary camps on Axel Heiberg Island.
- Other research activities located at the Environment Canada atmospheric station at Eureka in above noticed region.

Operational procedures identified by the proponent to reduce and/or eliminate potential adverse environmental impacts include:

- The project supposed will be small with limited number and person days carried out at any one site. Most of the fieldwork will be based out of 2-3 person camps for short durations (4-5 days); therefore the expect impact to environment will be minimized.
- In all cases, garbage will be removed; the grey water pits will be refilled and human waste will be burned and removed (in sealed barrels).

- All activities will be based out of the Environment Canada atmospheric station at Eureka; fieldwork at Expedition fiord will be based out of the McGill camp covered under Nunavut land use permit #N2006N0028.

### **NIRB SCREENING ASSESSMENT**

On March 6, 2007, this application was sent to the Qikiqtani distribution list including the Hamlets of Resolute Bay and Grise Fiord. On March 13, 2007, comments were received from Environment Canada (EC), The Canadian Wildlife Service (CWS) and Government of Nunavut, Department of Culture, Language, Elders and Youth's (GN-CLEY). All parties supported the project.

### **Comments and Concerns**

#### **Environment Canada:**

- Deposition of deleterious substances (*Fisheries Act*)
- Location of sumps, pits, spill basins and fuel caches with concerns of water body pollutions
- Materials stores on the surface ice of lakes or streams
- Waste disposal
- *Secondary containment disposal*
- Reporting of releases of harmful substances regardless of quantity

#### **The Canadian Wildlife Service:**

- Measures to minimize and/or avoid the disturbance to birds (Migratory Birds Regulations)
- Measures of camp waste inaccessibility to wildlife
- Ivory Gull colonies disturbance relief measures and observation reporting

#### **Government of Nunavut, Department of Culture, Language, Elders and Youth's:**

- Disturbance Avoiding of archaeological or palaeontological artifacts and/or sites
- Provision of information to GN CLEY regarding archaeological or palaeontological artifacts and/or sites.

### **NIRB Staff Technical Assessment**

After completing a review of all the information received, it is the technical advisor's opinion that the project proposal should be processed with out a review under Part 5 or 6 and that NIRB should recommend specific terms and conditions to be attached to any approval in accordance with NLCA 12.4.4 (a).