



NIRB File No.: 07LN014 (03YN005 and 05YN077)

INAC LUP File No.: N2003J0001

June 11, 2009

Honourable Daniel Shewchuck
Minister of Environment
c/o Donna Kenneally
Manager, Technology Services
Nunavut Research Institute

Via e-mail: dkenneally@nac.nu.ca

Re: Application Exempt from Screening under Section 12.4.3: Mars Society's "Devon Island Research Facility" project

Dear Donna Kenneally:

On June 9, 2009 the Nunavut Impact Review Board (NIRB) received an application from the Nunavut Research Institute (NRI) for Mars Society - Robert Zubrin's "Devon Island Research Facility" project. The application is for a renewal to the Proponent's Research License.

The original application for the above project was received by the NIRB from INAC on January 23, 2003 (NIRB File No. 03YN005). The proposal was screened in accordance with Part 4, Article 12 of the Nunavut Land Claims Agreement. On February 19, 2003 the NIRB issued a 12.4.4(a) screening decision to Indian and Northern Affairs Canada and to the Nunavut Water Board allowing the proposed campsite and research activities to proceed subject to specific terms and conditions.

On May 5, 2005, the NIRB received a scientific research application from the Nunavut Research Institute (NRI) to conduct field investigations in Devon Island's polar desert, while replicating a human exploration on planet Mars (NIRB File No. 05YN077). The application included additional research activities not covered in the 2003 application (NIRB File No. 03YN005). On June 27, 2005 the NIRB issued a 12.4.4(a) screening decision to NRI, allowing the proposed project to proceed subject to recommended project-specific terms and conditions.

On February 20, 2007 the NIRB received a Land Lease application from INAC for the Mars Society's Devon Island Research Facility (NIRB File No. 07LN014). The proposal included a land lease for the existing research facility, as well as proposed research activities and on-site use of mechanized vehicles and fuel storage. On April 3, 2007 the NIRB issued a 12.4.4(a) screening decision to INAC allowing the proposed activities to proceed subject to specific terms and conditions.

The NRI application, the original NIRB screening file and Screening Decision, **07LN014** are available from the NIRB's ftp site at the following link:

ftp://ftp.nirb.ca/SCREENINGS/COMPLETED%20SCREENINGS/ARCHIVE/2007_SCREENINGS/07LN014-Robert_Zubrin/1-SCREENING/.

Please note that 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.”

After completing a review of the information provided, the NIRB is of the understanding that the application received from NRI does not change the general scope of the original project activities, and the exceptions noted in NLCA 12.4.3(a) and (b) do not apply. Therefore, this application is exempted from screening as per Section 12.4.3 of the NLCA and the activities therein remain subject to the terms and conditions recommended in the original April 3, 2007 Screening Decision Report.

If you have any questions or concerns, feel free to contact NIRB's Assistant Technical Advisor, Tara Arko, at tarko@nirb.ca.

Best regards,



Stephanie Autut
Executive Director

cc: Mosha Cote, NRI
Jamal Shirley, NRI
Phyllis Beaulieu, NWB
Spencer Dewar, INAC
Robert Zubrin, Mars Society

Attachment: NIRB Screening Report Decision, File No.: 07LN014 (April 3, 2007)

NIRB Assessment and Screening Decision

After a thorough assessment of all material provided to the Board (please see Appendix B), 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

It is recommended that Indian and Northern Affairs incorporate the following or similar terms and conditions into its Lease Agreement pursuant to Section 12.4.4 (a) of the NLCA.

General

5. Robert Zubrin (the Proponent) shall maintain a copy of the Project Terms and Conditions at the site of operation at all times.
6. The Proponent shall forward copies of all permits to the NIRB obtained and required for this project prior to the commencement of the project.
7. The NIRB shall be notified of any changes in operating plans or conditions associated with this project prior to any such change.

Water/Waste

8. Camp waste shall be made inaccessible to wildlife at all times.
9. The Proponent shall not construct or disturb any stream, lakebed or banks of any definable water course unless authorized by the Department of Fisheries and Oceans.
10. The Proponent shall ensure compliance with Section 36 of the *Fisheries Act* which requires that no person shall deposit or permit the deposit of a deleterious substance on any type in water frequented by fish or in any place under any conditions where the deleterious substance may enter such a water body.
11. The Proponent shall remove all garbage, fuel containers, and equipment from the project location upon completion of operations.

Fuel and Chemical Storage

12. Drip pans, or other similar preventative measures, shall be used when refueling equipment on site.
13. The Proponent shall store all fuel and chemicals in such a manner that they are inaccessible to wildlife.
14. The Proponent shall report all spills of fuel, or other deleterious materials immediately to the 24 hour Spill Line at (867) 920-8130.

15. The proponent shall ensure that any non-combustible and hazardous materials, including waste oil, receive proper treatment and disposal at an approved facility.

Wildlife

16. The proponent shall document any wildlife observations (i.e., polar bears, muskoxen, caribou, fox and wolves) in the general vicinity of their operation so workers are aware of the kinds of wildlife present on site and are prepared to modify activities accordingly to avoid wildlife. The proponent shall report these observations annually to the Government of Nunavut Regional Wildlife Biologist at the end of the operational season to assist the government with collection of wildlife data. Documentation should include, location, species, number of animals, a description of the animals activity, and a description of the gender and age of animals if possible.
17. While the proposed project is not near any documented Ivory Gull colonies, it is possible that Ivory Gull colonies exist near the area and have not yet been noted. The proponent shall report any observations of Ivory Gulls, which are considered a Species at Risk, to the Canadian Wildlife Service (CWS).
18. The proponent shall ensure that there is minimal disturbance to any nesting birds and wildlife in the area.
19. The proponent shall contact a Government of Nunavut Wildlife Officer in order to receive a briefing on proper procedures to avoid bear encounters, proper procedures should a bear be encountered, and proper procedures to follow should any kind of an incident related to such an encounter occur.
20. While recognizing sections 5.6.52 and 5.6.55 of the Nunavut Land Claims Agreement, in the event of a defense kill of a Polar Bear, the proponent shall record the location of the carcass, sex of the bear, ensure the hide does not spoil, and contact the Government of Nunavut Wildlife Office in Resolute immediately for further direction.

Aircraft Operations

21. The proponent shall ensure that aircraft do not, unless for emergency, touch-down in areas where concentrations of wildlife are present.
22. Raptor nesting sites and concentrations of nesting or molting waterfowl should be avoided by aircraft.

Physical Environment

23. The Proponent shall ensure that all fuel storage facilities are kept clean and tidy at all times and a spill contingency plan shall be prepared and provided to the NIRB.

Archaeological

24. The Proponent 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 the 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 3, 2007 at Sanikiluaq, NU

A handwritten signature in black ink, consisting of several loops and a long horizontal stroke at the end.

Lucassie Arragutainaq, Acting Chairperson

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

¹ s. 51(1)

² 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 February 20, 2007 the Nunavut Impact Review Board (NIRB) received the Mars Society's Devon Island Research Facility-Lease project proposal from Indian and Northern Affairs Canada. On the same date, the NIRB also received notice of a positive conformity determination for the project from the Nunavut Planning Commission. On February 26, 2007, additional information was requested from the Mars Society, including the completion of a NIRB Part 1 Form and submission of a non-technical project summary in Inuktitut. This information was received on March 7th, 2007. On March 8th, 2007 the project was sent out to distribution for comments. NIRB assigned this project proposal file number, 07LN014.

The project activities include:

- Land lease for existing research facility on Devon Island
- Research activities
- Use of on-site mechanized vehicles and storage of fuel associated with these vehicles
- Grey water disposal and incineration/removal of combustible/non-combustible wastes at the facility

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

- Keeping all fuel drums together and only opening one drum at a time.
- Combustion of human and combustible waste with the residue flown out.
- Location of facility on primarily un-vegetated area.

NIRB Screening Assessment

On March 8, 2007, the Project Proposal was distributed to the Qikiqtani distribution list including the Hamlets of Grise Fiord and Resolute.

On March 22, 2007 comments were received from Environment Canada (EC). These comments were further revised with Canadian Wildlife Service (CWS) input on March 26, 2007. On March 22, 2007 comments were received from the Government of Nunavut – Department of Environment. On March 29, 2007 comments were received from the Department of Culture, Language, Elders, and Youth (CLEY), Government of Nunavut.

Comments

Environment Canada

Environment Canada (EC) supports this project. However, EC in association with the Canadian Wildlife Service, recommended a number of terms and conditions be applied to the project. These have been incorporated, where applicable, into our summary of terms and conditions following this memo.

Government of Nunavut Department of Environment

The GN-DOE recommended a number of terms and conditions be applied to the project. These have been incorporated, where applicable, into our summary of terms and conditions following this memo.

Government of Nunavut Department of Culture Language Elders and Youth

The GN-CLEY recommended approval of the project noting that it should not threaten any archaeological sites. The GN-CLEY provided archaeological and palaeontological resources terms and conditions for land use permit holders. These recommendations have been attached as Appendix A to the list of terms and conditions for your consideration.

NIRB Staff Technical Review Comments

After completing a review of all the information received, it is the technical advisor's opinion that the project proposal should be processed without 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 12.4.4 (a) of the NLCA. Please see attached Terms and Conditions. NIRB's recommended terms and conditions are intended to supplement any requirements that Indian and Northern Affairs Canada (INAC) attaches to the proposal.

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 without 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