

Environmental Protection Operations  
Prairie and Northern  
5019 52nd Street, 4th Floor  
P.O. Box 2310  
Yellowknife, NT, X1A 2P7

20 May 2011

EC file: 4704 004 058  
NWB file: 3BC-ACS

Phyllis Beaulieu  
Manager of Licensing  
Nunavut Water Board  
PO Box 119  
Gjoa Haven, NU X0B 1J0

Via email: [licensing@nunavutwaterboard.org](mailto:licensing@nunavutwaterboard.org)

**RE: 3BC-ACS- Benoit Beauchamp's Arctic carbonates, sandstones and volcanic rocks project proposal- NW Ellesmere Island**

Environment Canada (EC) has reviewed the information regarding the above-mentioned project proposal, as submitted to the Nunavut Water Board (NWB). The following specialist advice has been provided pursuant to the *Canadian Environmental Protection Act 1999*, Section 36(3) of the *Fisheries Act*, the *Migratory Birds Convention Act*, and the *Species at Risk Act*.

Benoit Beauchamp, of the University of Calgary, has applied for a Scientific Research License to investigate ocean acidification in the Sverdrup Basin centered on Raanes Peninsula, southwest Ellesmere Island. The project will examine outcrops of large ancient reefs west of Blind Fiord and outcrops of carbonates and sandstones east of Blind Fiord on Raanes Peninsula. About 50 small rock samples, less than 0.5 kg each, will be collected for geochemical analysis. The project team of three people will operate out from temporary tent camps at five different locations for three weeks between June 20 and August 6, 2011. Project crew will initially access the project area by Twin Otter, from Resolute Bay to Eureka, Nunavut. Transport to and around the study areas will include a helicopter and accessing sites on foot. If more work is required, project activities could continue into 2011 and 2012.

Upon review of the project proposal submitted by Benoit Beauchamp, EC is of the opinion that the research program is unlikely to result in significant adverse effects on areas under EC's jurisdiction and that the project is unlikely to arouse significant public concern and therefore suggests the project be allowed subject to the terms and conditions proposed by the Nunavut Water Board (NWB). Environment Canada provides the following comments and recommendations for the proposed terms and conditions for the NWB's consideration:

**Camp**

- In the Exploration/Remote Camp Supplemental Questionnaire under Waste Treatment and Disposal the proponent stated "Waste to be burned in a metal pail as much as possible. This includes paper, cardboard, plastics and human waste". EC does not encourage the open burning of waste as a means of disposal and provides the following comments and recommendations for the NWB's consideration:
  - Solid wastes that are conditionally suitable for open burning are paper products, paperboard packaging and untreated wood. Plywood, painted wood or other treated

wood should not be disposed of in an open pit. For reference, attached is the Nunavut Open Burning Policy and below is a link to information from EC regarding open burning: [http://www.ec.gc.ca/gdd-mw/684B44DD-5780-4F73-BC58-A97E31A19EDC/COM1170\\_Open\\_Burning\\_Brochure\\_e\\_v6\\_for%20web.pdf](http://www.ec.gc.ca/gdd-mw/684B44DD-5780-4F73-BC58-A97E31A19EDC/COM1170_Open_Burning_Brochure_e_v6_for%20web.pdf)

- EC recommends that all non-conditionally suitable waste (i.e. plastics) be thoroughly removed prior to burning.
- EC recommends that all residual waste from the burning (i.e. nails and coals) be thoroughly collected, removed from site and disposed of at a suitable facility.
- All sumps used for the disposal of camp greywater shall be located above 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.
- Drip pans, or other similar preventative measures, should be used when refueling equipment on site.

#### Wildlife and Species at Risk

- Section 5.1 of the *Migratory Birds Convention Act* prohibits persons from depositing substances harmful to migratory birds in waters or areas frequented by migratory birds or in a place from which the substance may enter such waters or such an area.
- The following comments are pursuant to the Species at Risk Act (SARA), which came into full effect on June 1, 2004. Section 79 (2) of SARA, states that during an assessment of effects of a project, the adverse effects of the project on listed wildlife species and its critical habitat must be identified, that measures are taken to avoid or lessen those effects, and that the effects need to be monitored. This section applies to all species listed on Schedule 1 of SARA. However, as a matter of best practice, Environment Canada suggests that species on other Schedules of SARA and under consideration for listing on SARA, including those designated as at risk by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), be considered during an environmental assessment in a similar manner.

Terrestrial Species at Risk potentially within project area <sup>1</sup>	COSEWIC Designation	Schedule of SARA	Government Organization with Primary Management Responsibility <sup>2</sup>
Red Knot ( <i>islandica</i> subspecies)	Endangered	Pending	EC
Porsild's Bryum	Threatened	Pending	Government of Nunavut
Wolverine (Western population)	Special Concern	Pending	Government of Nunavut
Peary Caribou	Endangered	Pending	Government of Nunavut
Polar Bear Special	Concern	Pending	Government of Nunavut

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

<sup>2</sup> Environment Canada 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. Thus, for species within their responsibility, the Territorial Government is best suited to provide detailed advice and information on potential adverse effects, mitigation measures, and monitoring. Impacts could be disturbance and attraction to operations.

Environment Canada recommends:



- Species at Risk that could be encountered or affected by the project should be identified and any potential adverse effects of the project to the species, its habitat, and/or its residence noted. All direct, indirect, and cumulative effects should be considered. Refer to species status reports and other information on the Species at Risk registry at [www.sararegistry.gc.ca](http://www.sararegistry.gc.ca) for information on specific species.
- If Species at Risk are encountered or affected, the primary mitigation measure should be avoidance. The proponent should avoid contact with or disturbance to each species, its habitat and/or its residence.
- Monitoring should be undertaken by the proponent to determine the effectiveness of mitigation and/or identify where further mitigation is required. As a minimum, this monitoring should include recording the locations and dates of any observations of Species at Risk, behaviour or actions taken by the animals when project activities were encountered, and any actions taken by the proponent to avoid contact or disturbance to the species, its habitat, and/or its residence. This information should be submitted to the appropriate regulators and organizations with management responsibility for that species, as requested
- For species primarily managed by the Territorial Government, the Territorial Government should be consulted to identify other appropriate mitigation and/or monitoring measures to minimize effects to these species from the project.
- Mitigation and monitoring measures must be taken in a way that is consistent with applicable recovery strategies and action/management plans
- All mitigation measures identified by the proponent, and the additional measures suggested herein should be strictly adhered to in conducting project activities. This will require awareness on the part of the proponents' representatives (including contractors) conducting operations in the field. Environment Canada recommends that all field staff be made aware of the proponents' commitments to these mitigation measures and provided with appropriate advice/training on how to implement these measures.
- Implementation of these measures may help to reduce or eliminate some effects of the project on migratory birds and Species at Risk, but will not necessarily ensure that the proponent remains in compliance with the *Migratory Birds Convention Act*, *Migratory Birds Regulations*, and the *Species at Risk Act*. The proponent must ensure they remain in compliance during all phases and in all undertakings related to the project.

If there are any additional changes in the proposed project, EC should be notified, as further review may be necessary. Please do not hesitate to contact the undersigned with any questions or comments with regards to the foregoing at (867) 669-4724 or by email at [Sarah-Lacey.McMillan@ec.gc.ca](mailto:Sarah-Lacey.McMillan@ec.gc.ca)

Yours truly,



Sarah-Lacey McMillan  
Environmental Assessment Coordinator

cc: Carey Ogilvie (Head, Environmental Assessment-North, EPO, EC, Yellowknife, NT)  
Allison Dunn (Sr. Environmental Assessment Coordinator, EPO, EC, Iqaluit, NU)  
Ron Bujold (Environmental Assessment Technician, EPO, Yellowknife, NT)