



Water Resources
Nunavut Regional Office
P.O. Box 100
Iqaluit, NU, X0A 0H0

NWB file - Votre référence
3BC-AET - New

AANDC file - Notre référence
IQALUIT - # 538859

June 22, 2012

Phyllis Beaulieu
Manager of Licensing
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU, X0A 1J0

**Re: Water Licence No. 3BC-AET – New Type ‘B’ – Study of Arctic Soils
Project – Dr. Steven Siciliano, University of Saskatchewan**

Aboriginal Affairs and Northern Development Canada (AANDC) has performed a review of the New Type ‘B’ Application for the Study of Arctic Soils Project, water licence number 3BC-AET. The Nunavut Water Board distributed the application for comment on May 25, 2012. The following comments are provided pursuant to AANDC’s mandated responsibilities under the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* and the *Department of Indian Affairs and Northern Development Act*.

In conducting this review, I have referred to all documents on the Nunavut Water Board’s FTP site as it relates to 3BC-AET. Attached is a Technical Review Memorandum for your consideration.

Please feel free to contact me should you have any questions or comments. I can be reached at 867.975.4566 or by email at Andrea.Cull@aandc-aadnc.gc.ca.

Sincerely,

Originally signed by

Andrea Cull
Pollution Policy Specialist, AANDC

Cc: Murray Ball, Manager of Water Resources, AANDC
Baba Pedersen, A/Manager of Field Operations, AANDC

Technical Review Memorandum

To: Phyllis Beaulieu – Manager of Licensing, Nunavut Water Board

From: Andrea Cull – Pollution Policy Specialist, Aboriginal Affairs and Northern Development Canada

Re: Water Licence No. 3BC-AET – New Type ‘B’ – Study of Arctic Soils Project – Dr. Steven Siciliano, University of Saskatchewan

Background

The study of Arctic soils project is being conducted by Dr. Steven Siciliano “proponent” – Professor from the University of Saskatchewan, during July 7, 2012 to August 25, 2012.

The project will take place at Alexandra Fiord, Ellesmere Island, Nunavut. The primary research site will be located in a polar desert on the adjacent Dome.

An aircraft will be used to transport persons and equipment to the base camp at Alexandra Fiord. At the beginning and end of the field work a helicopter will be used to deliver and remove research equipment and camping gear to the adjacent Dome.

Comments/ Recommendations

On behalf of the AANDC Water Resources Division the following comments/ recommendations are provided for the Board’s consideration,

- **Water Use**

The proponent has estimated that there will be 0.35 cubic metres of water being used per day.

The source water will be drawn from an existing water system at Alexandra Fiord RCMP camp. AANDC recommends that the proponent clarify the actual location of the source water (lake or river). Also, if there is a water licence associated with the Alexandra Fiord RCMP camp site, it should be brought to the NWB’s attention.

AANDC recommends that the proponent measure and record, in cubic metres, the daily quantities of water being used for camp purposes. Also, the proponent shall provide the GPS co-ordinates of all the locations of the source water.

In the water licence application, section 13 it states that there will be a 3 person temporary camp. In the non-technical project proposal description it states that there will be up to 5 small tents for sleeping and 1 medium sized tent for cooking set up at the Dome site for the duration of the field season. AANDC recommends that the proponent clarify the number of people on site, which in turn will reflect the amount of water use per day.

- **Spill Contingency Plan**

AANDC recommends that the proponent refer to the Spill Contingency Planning and Reporting Regulations and submit a more detailed Spill Contingency Plan to the NWB including but not limited to the following recommendations/comments,

Please note that the 24-hour Spill Report Line telephone number is 867.920.8130 and facsimile number is 867.873.6924. Furthermore, AANDC requests the Proponent report all spills to the Manager of Field Operations/AANDC, by phone at 867.975.4295 and by fax at 867.975.6445, as well as the Nunavut Spill Report Line.

AANDC recommends that the proponent provide a more detailed description on how to contain and clean-up spills that may occur.

Re/Fueling

AANDC recommends that the licensee have their refueling stations and/or operations no closer than 31 meters from the ordinary high water mark of any water body, unless otherwise approved by the Board in writing.

- **Hazardous Waste**

AANDC recommends that Hazardous materials and hydrocarbon contaminated soil stored on-site should be clearly labeled with labels visible under all conditions and in all seasons. This recommendation is intended to prevent possible damage or misplacement of the containers.

AANDC recommends that the Proponent remove all hazardous materials/ waste oil from the site on a regular basis to prevent the over accumulation of these materials. Hazardous materials must be disposed of at an approved facility outside of the Territory of Nunavut (no known facilities within Nunavut). All transfer of this type of waste must be in accordance with the GN's "Guideline for General Management of Hazardous Waste - January, 2002". In addition hazardous wastes should be stored within a lined secondary containment structure to prevent any off site impacts (other secured structures would also be acceptable).

AANDC recommends that the Proponent be required to submit copies of all material safety data sheets related to the transport of hazardous materials as part of the Annual Report for this site.

- **Waste Treatment and Disposal**

AANDC recommends that the proponent determine the GPS co-ordinates of all locations where camp waste are being deposited.

Camp Sewage Blackwater

AANDC recommends that the proponent use latrine pits, portable or composting toilets. Latrine pits shall be located at a distance of at least thirty one (31) metres above the ordinary high water mark of any water body. Latrine pits shall be treated with lime and covered with native material to achieve the pre-existing natural contours of the land prior to abandonment.

Camp Greywater

AANDC recommends that all sumps for the disposal of grey water shall be located a minimum distance of 31 metres from any water body and shall be managed to ensure that there are no adverse effects to the quality, quantity and flow of water. Furthermore, all sumps shall be backfilled and contoured to match the surrounding landscape prior to the end of the project.

- **Additional Comments**

AANDC has no additional comments at this time on the New Type 'B' Application for the Study of Arctic Soils Project, water licence number 3BC-AET.

Prepared by Andrea Cull

Cc: Murray Ball, Manager of Water Resources, AANDC
Baba Pedersen, A/Manager of Field Operations, AANDC