



Water Resources
Nunavut Regional Office
P.O. Box 100
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October 19, 2011

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

Your file - Votre référence
3BC-SSS----
Our file - Notre référence
CIDM# 485151

**Re: 3BC-SSS---- Stream Sediment Sample Survey – Geological Survey of
Canada – Kitikmeot Region – New Application**

Dear Phyllis Beaulieu:

Aboriginal Affairs and Northern Development Canada (AANDC) has performed a review of the water licence renewal application, 3BC-SSS---- (Stream Sediment Sample Survey) submitted by the Geological Survey of Canada to the Nunavut Water Board (NWB). The following advice has been provided pursuant to AANDC's mandated responsibilities for the enforcement of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (NWNSRTA) and the *Department of Indian Affairs and Northern Development Act* (DIAND Act). In conducting our review, AANDC referred to the documents on the NWB's FTP-site under 3BC-SSS----.

Should you have any questions or comments, please do not hesitate to contact me at (867) 975-4738 or by e-mail at Jean.Allen@aandc-aadnc.gc.ca

Sincerely,

Original Signed By

Jean Allen
Water Management Specialist

Cc. Ian Parsons, A/Manager of Water Resources, Aboriginal Affairs and
Northern Development Canada, Nunavut Regional Office
Andrew Keim, A/Manager of Field Operations, Aboriginal Affairs and
Northern Development Canada, Nunavut Regional Office



Technical Review Memorandum

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

From: Jean Allen – Water Management Specialist, Aboriginal Affairs and
Northern Development Canada

**Re: 3BC-SSS---- Stream Sediment Sample Survey – Geological Survey of
Canada – Kitikmeot Region – New Application**

A. Project Description

On September 23, 2011, the Nunavut Water Board (Board) distributed the Geological Survey of Canada's application for a Type B water licence for water use and waste disposal in association with the Stream Sediment Sample Survey Project. The applicant has requested a licence term of 1 year or less (June to October 2012) to conduct a geochemical and mineralogical survey on Crown and Inuit Owned Land in the Ellice- Back River area of the Kitikmeot region.

Helicopter supported sample collection of stream sediments and waters (240 x 12 kg samples) will be collected from streams and analyzed for mineral content and geochemistry to evaluate the nature of the surrounding rocks and to determine whether the surrounding area has mineral potential.

The Geological Survey of Canada proposes the set up of one camp (65° 22' 07" N, 105° 11' 32" W) to accommodate 5-7 people for approximately 15 days. The camp will consist of up to 7 sleeping tents, 2 kitchen tents, 1 office tent, 1 food storage tent, 1 gear/sample storage tent, and 1 latrine tent. The camp is approximately 410 km N of Cambridge Bay, 450 km SE of Baker Lake, and 550 km SW of Yellowknife, NT.

Water will be drawn from a nearby lake for domestic use only. The estimated quantity of water required is less than 0.1 m³ per day. Greywater will be disposed in a sump at least 35 m from any water source. Sewage, solid waste, and fuel drums will be backhauled to Yellowknife, NT. Geological Survey of Canada proposes the storage of 36 x 205L drums of aviation fuel (18 stored at the camp and 18 stored at a cache 80 km north), 1 x 205L drum gasoline, and 2 x 88L tanks of propane on impermeable membranes surrounded by berms.

B. Results of Review

AANDC Water Resources Division offers the following comments/
recommendations for the Board's consideration.



1. General

- AANDC recommends that the proponent submit a map of the camp that identifies locations of the airstrip, tents, sumps, latrines, fuel caches, spill kits, etc.
- The application indicates that changes may be made to the camp and fuel cache locations based on recommendations made by the Kitikmeot Inuit Association or the Polar Continental Shelf Project. AANDC recommends that the final locations for the camp and fuel cache be submitted to the Board once established by the applicant.
- AANDC recommends that the proponent receive written authorization from the manager of the approved waste facility prior to backhauling any wastes to Yellowknife, NT.

2. Spill Contingency Plan

- In the event of a spill, the contact for AANDC is the Manager of Field Operations at (867) 975-4295.
- Material Safety Data Sheets (MSDS) could not be located on the NWB FTP site for propane, fuel, etc. AANDC recommends that MSDS for all chemicals on site be included in the plan, which is to be kept in a location accessible to all employees.
- Training was not included in the plan. AANDC recommends that an orientation/training session be provided to all personnel on site.
- It is unclear how contaminated material will be stored. AANDC recommends that all chemicals including contaminated material be stored within secondary containment.
- Burning was included in the plan as a disposal method for gasoline and Jet B fuel spills on muskeg. AANDC recommends that in-situ combustion is only to be undertaken with the approval from appropriate authorities and in accordance with the terms and conditions of the water licence.
- A change to the remote camp questionnaire was requested to allow 36 barrels of fuel on site (18 barrels at the camp and 18 barrels at the fuel cache) while the plan indicates that 5-6 barrels and no more than 25 barrels will be stored at the camp and fuel cache sites respectively. AANDC recommends that the Spill Contingency Plan be updated to include these changes prior to transporting any fuel on site.

3. Abandonment and Restoration Plan

- While no specific Abandonment and Restoration plan was provided, AANDC is satisfied that the provisions for waste removal and site cleanup provided in the water licence application and the supplementary questionnaire are sufficient to the size and scale of the camp. AANDC recommends that the site be restored according to provisions identified in any approved water license.



Aboriginal Affairs and
Northern Development Canada

Affaires autochtones et
Développement du Nord Canada

cc. Ian Parsons, A/Manager of Water Resources, AANDC
Andrew Keim, A/Manager of Field Operations, AANDC