



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

May 30, 2012

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

Your file - Votre référence  
3BC-GCS----  
Our file - Notre référence  
CIDM# 529844

**Re: 3BC-GCS---- Glacier-Climate Studies – Shawn Marshall, University of  
Calgary - New Application**

Dear Phyllis Beaulieu:

Aboriginal Affairs and Northern Development Canada (AANDC) has performed a review of the water licence application 3BC-GCS---- (Glacier-Climate Studies) submitted by Shawn Marshall at the University of Calgary 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-GCS----.

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](mailto:Jean.Allen@aandc-aadnc.gc.ca)

Sincerely,

*Original Signed By*

Jean Allen  
Water Management Specialist

cc. David Abernethy, A/Manager of Water Resources, AANDC  
Andrew Keim, A/Manager of Field Operations, AANDC



## **Technical Review Memorandum**

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

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

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**Re: 3BC-GCS---- Glacier-Climate Studies – Shawn Marshall, University of  
Calgary - New Application**

### **A. Project Description**

On May 7, 2012, the Nunavut Water Board (NWB) distributed Shawn Marshall's application for a Type B water licence for water use and waste disposal in association with the Glacier-Climate Studies Project, Prince of Wales Icefield, Ellesmere Island, Nunavut. The applicant is requesting a licence term of 3 months (May to August 2012) to further understand glacier-climate processes and glacier response to climate change.

A small temporary camp will be set up adjacent to the Humphrey outlet glacier (78° 2' 50" N, 82° 7' " W) to accommodate 4 people over two 2-week periods (May and July 2012). The camp is approximately 220 km from Grise Fiord and is located on Crown and Inuit Owned Lands.

Water Sources include snow packs in May and a glacier meltwater stream adjacent to the camp in July. The overall estimated quantity of water for camp use is 0.03 m<sup>3</sup> per day. Portable camp toilets will be used and all solid waste will be shipped out; grey water will be poured into the soil away from water bodies; and all solid waste will be shipped to Polar Continental Shelf Program (PCSP) facilities in Resolute Bay for disposal.

### **B. Results of Review**

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

#### General

- AANDC recommends that final GPS coordinates for the camp location be submitted to the NWB.
- The Supplementary Questionnaire indicates that all solid waste will be disposed at PCSP facilities. AANDC recommends that the applicant submit to the NWB, written authorization from PCSP confirming that they



- will accept the proposed types and quantities of waste for proper disposal at the PCSP facility.
- While no Abandonment and Restoration Plan was submitted, AANDC acknowledges that all equipment, gear, and waste will be flown out on completion of the field work in August 2012 as stated in the Project Description and the Supplementary Questionnaire.

### The Fuel Spill Contingency Plan

The Plan lacks sufficient detail to show that the applicant is prepared and able to adequately respond to a spill. AANDC recommends that the plan be revised to address the following comments:

- Material Safety Data Sheets (MSDS) are not provided for gasoline or propane. It is recommended that MSDS be provided for all chemicals onsite.
- The plan does not mention any orientation or training for workers on site with regards to a spill response.
- There are no response plans for any spills involving gasoline (mopping up any spills is inadequate). It is proposed that a maximum of 60L of gasoline will be onsite, thus a contingency should be prepared to respond to a spill of this magnitude. What will be used to absorb spilled fuel/hazardous materials, how will you clean a spill if it is on the land and how will you ensure that the spill does not reach nearby waterbodies?
- A plan for the proper disposal of contaminated material (soil, tarp, rags, etc.) is required.
- The plan makes no reference to any spill kits located on site. There should be at least one spill kit on site and the contents and location of any kit should be included in a revised spill plan.

cc. David Abernethy, A/Manager of Water Resources, AANDC  
Andrew Keim, A/Manager of Field Operations, AANDC