



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

September 28, 2011

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

RECEIVED

By Licensing Administrative Assistant at 4:24 pm, Sep 28, 2011

Your file - Votre référence
8BD-ARV----
Our file - Notre référence
CIDM# 483672

**Re: 8BD-ARV---- Arviat Surface Diamond Driller Training Program – Hamlet
of Arviat – Kivalliq Region – New Application**

Dear Phyllis Beaulieu:

Aboriginal Affairs and Northern Development Canada (AANDC) has performed a review of the water licence renewal application, 8BD-ARV---- (Arviat Surface Diamond Driller Training Program) submitted by the Hamlet of Arviat 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 8BD-ARV----.

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. David Abernethy, 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: 8BD-ARV---- Arviat Surface Diamond Driller Training Program – Hamlet
of Arviat – Kivalliq Region – New Application**

A. Project Description

On August 30, 2011, the Nunavut Water Board (Board) distributed the Hamlet of Arviat's application for a Type B water licence for water use and waste disposal in association with the Surface Diamond Drillers Program. The applicant has requested a licence term of 5 years (September 2011 to December 2016) for surface diamond drilling training.

The Hamlet of Arviat is planning an Assistant Diamond Driller Training Program, expected to run twice a year for 10 weeks. The Hamlet proposes two locations, both of which are within the Hamlet municipal boundary and outside the airport reserve (61° 05' 60" N, 94° 03' 37" W). One or both drill sites will be used intermittently for approximately 5 weeks during the latter half of each program. No camp is proposed and site equipment and facilities include the drill and associated drill shack, 2 sealift containers, pumps, heaters, tools, a generator, and fuel storage.

Water will be drawn from nearby ponds for drilling activities. The estimated quantity of water required is 1250 m³ per year or 25 m³ per day (0 m³ for domestic use and 25 m³ for drilling operations). Sewage will be picked up by sewage trucks and disposed at the municipal sewage lagoon. Drill cuttings will be filtered and released into a gravel pit. Solid waste will be picked up and trucked to the Arviat dump; bulky items and empty fuel drums will be picked up and trucked to the metal dump; and waste oil will be stored in used fuel drums and burned in the Hamlet's waste oil furnace.

B. Results of Review

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



1. General

- AANDC recommends that the water licence be issued to the Northern College and/or Nunavut Arctic College because they will be delivering the training program and they will be involved in the drilling activities.
- Drill waste is proposed to be disposed in a sump but the location of the sump is unknown. AANDC recommends that the distance of each sump is at least 31 m from the ordinary high water mark of any water body.
- The applicant indicates that waste oil will be burned in the Hamlet's waste oil furnace. AANDC recommends that any burning of waste is conducted in accordance with Environment Canada's Technical Document for Batch Waste Incineration.

2. Spill Prevention and Response Plan

- The contact for AANDC is the Manager of Field Operations at (867) 975-4295.
- Material Safety Data Sheets (MSDS) for this project could not be found on the FTP site. AANDC recommends that MSDS sheets for all chemicals on site be included in this plan.
- AANDC recommends that all students and personnel involved in the spill response plan be certified in Workplace Hazardous Materials Information System (WHMIS)
- It is unclear as to whether the submitted action plan will be used for all chemicals on site. AANDC recommends that the action plan be used in conjunction with the appropriate MSDS for the spilled chemical.
- The Hamlet indicated that they will accept solid waste and sewage into their facilities but it is unclear whether the Hamlet will accept contaminated materials and hazardous waste.
- In-situ combustion was included in the plan as a disposal method for fuels and petroleum product spills on snow and ice. AANDC recommends that in-situ combustion is only undertaken with the approval from appropriate authorities and in accordance with the terms and conditions of the water licence.

3. Abandonment and Restoration Plan

- AANDC recommends that a plan for seasonal closure (between training sessions) be incorporated into the plan.
- AANDC could not locate plans for removal of the drill shack, sealift containers, and other equipment on site
- AANDC recommends that all areas where fuel is stored and transferred be tested for soil contamination prior to final closure
- Sumps shall be backfilled and leveled prior to seasonal and final closure

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