



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

NWB file - Votre référence
2BE-QAM0813 - Renewal

AANDC file - Notre référence
IQALUIT - # 513084

March 12, 2012

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

**Re: Water Licence No. 2BE-QAM0813, Amendment Renewal Application
– Qamanaarjuk Lake Project – Cameco Corporation – Kivalliq Region**

Aboriginal Affairs and Northern Development Canada (AANDC) has performed a review of Cameco Corporation's Water Licence Number 2BE-QAM0813 – Qamanaarjuk Lake Project. The Nunavut Water Board distributed the application for comment on February 15, 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 2BE-QAM. 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
Andrew Keim, 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. 2BE-QAM0813, Amendment Renewal Application – Qamanaariuk Lake Project – Cameco Corporation – Kivalliq Region

Background

Existing water license #2BE-QAM0813

Cameco Corporation "*the Proponent*" has submitted an amendment/renewal application for a proposed new camp located near Aberdeen Lake, with water use from nearby lakes to operate diamond drills. The main part of this amendment is to operate an additional 3 drills (for a total of 5 drills); each drill will require fifty five (55) cubic metres of daily allowable water use.

Recommendations/Comments

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

- **Drill Locations**

Prior to the commencement of diamond drilling the Proponent shall submit to the Inspector proposed drill targets on a 1:50,000 scale map with the coordinates and map datum.

- **Monitoring**

The project's licence monitoring program requirements should be expanded to include the collection of basic water quality data at the downstream water sources potentially affected by each new drill site, the new proposed camp sewage effluent release site and the new bulk fuel storage area. This information shall also be provided to the Nunavut Water Board in the Proponent's annual report.

If drilling extends through the permafrost base, AANDC recommends the Nunavut Water Board request the Proponent to provide the drill locations and depth of the permafrost in their annual report to the Board.

- **Water Use**

The amendment will allow operation an additional 3 drills (for a total of 5 drills); each drill will require fifty five (55) cubic metres of daily allowable water use. There will be a total of two hundred and eighty (280) cubic metres of water being used per day. This quantity of water use currently falls under a Type 'B' water licence according to the Northwest Territories Water Regulations.

AANDC would like to advise the Proponent that when the new water regulations are put in place for Nunavut, the use of water for milling and mining regulations will have a maximum use of 300 cubic metres per day for a Type "B" water licence. If the water use goes over 300 cubic metres per day the Nunavut Water Board may require a Type "A" water licence.

- **Spill Contingency Plan**

The Spill Contingency Plan should make reference to the Nunavut Spill Report Line and include a copy of the Nunavut Spill Report Form. This form can be obtained from the Nunavut Water Board public registry at <http://www.nunavutwaterboard.org>.

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.

Please note there are a couple of errors on page 16 of the Spill Contingency plan. Mr. Peter Kusugak, Manager of Field Operations no longer works for AANDC. AANDC recommends that Mr. Peter Kusugak's name be removed from the list leaving the contact as "AANDC Field Operations Manager" – the contact phone number remaining the same. Also, AANDC's Water Resources Inspectors phone number is incorrect, the correct number is 867.975.4289.

- **Waste**

Hazardous Waste

AANDC recommends that Hazardous waste/waste oil 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 waste/waste oils 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 manifest forms related to the transport of hazardous waste/waste oil as part of the Annual Report for this site.

Greywater and Drilling Wastes

AANDC recommends that all sumps for the disposal of grey water or drilling wastes shall be located a minimum distance of thirty one (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.

- **Incineration**

No Open Burning

According to Environment Canada's (EC) Technical Document for Batch Waste Incineration Guidelines, there should be no open burning of plastics, wood treated with preservatives, electrical wire, Styrofoam, asbestos or painted wood. This is to prevent the deposition of waste materials from incomplete combustion and/or leachate from contaminated ash residues from affecting any surrounding waters.

Incineration

AANDC recommends the Nunavut Water Board consider specifying a mode of incineration. This would provide greater clarity to the Proponent, and ensure waste is incinerated appropriately as to avoid possible leaching into surrounding waters from improperly burnt ash, and the excessive deposition of particulate matter into watersheds which could adversely affect water quality. For camps of 10 to 50 people or greater, it is generally advised to use a dual chamber forced-air incinerator or a dual chamber controlled-air incinerator. The new proposed exploration camp will house thirty eight to sixty (38-60) people (with a maximum capacity of 75 people).

EC's Technical Document for Batch Waste Incineration Guidelines recommends that a facility incinerating more than twenty six (26) tonnes of waste per year should do so with a dual chamber, controlled air incinerator. The Proponent shall make determined efforts to achieve compliance with the Canada-Wide Standards for Dioxins and Furans and the Canada-Wide Standard for Mercury Emissions. Efforts should include the implementation of a comprehensive waste management strategy (especially waste segregation) that is designed to reduce and control the volumes of wastes produced, transported, and requiring disposal.

- **Additional Comments**

AANDC has no additional comments on the water licence application and suggests that a renewal/amendment of water licence 2BE-QAM with the existing terms and conditions would be appropriate.

Prepared by Andrea Cull

Cc: Murray Ball, Manager of Water Resources, AANDC
Andrew Keim, A/Manager of Field Operations, AANDC