



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

NWB file - Votre référence
2BE-KIG0812-Amendment 6

AANDC file - Notre référence
IQALUIT - # 496713

December 21, 2011

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

**Re: Water Licence No. 2BE-KIG0812, Amendment No. 6 – Kiggavik
Project – AREVA Resources Canada Inc. – Kivalliq Region**

Aboriginal Affairs and Northern Development Canada (AANDC) has performed a review of AREVA Resources Canada Inc.'s Water Licence No. 2BE-KIG0812 - Kiggavik Project Amendment Application No. 6. The Nunavut Water Board distributed the application for comment on November 30, 2011. The following comments are provided pursuant to AANDC's mandated responsibilities for the enforcement of 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-KIG0812. 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 | B.Sc, Adv. Dip.
Pollution Policy Specialist, AANDC

Cc. David Abernethy, A/Manager of Water Resources, AANDC
Kevin Robertson, 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-KIG0812, Amendment No. 6 – Kiggavik Project – AREVA Resources Canada Inc. – Kivalliq Region

Background

AREVA Resources Canada Inc.'s Kiggavik Project is located in the Kivalliq Region, approximately 80 kilometers west of Baker Lake, Nunavut. The project activities are directed toward the study of localized uranium deposits. The proposed mineral exploration program comprises of prospecting, geological mapping, geochemical and geophysical survey work, diamond drilling, drill core logging, and sampling.

The following amendments have been issued for the project's Type 'B' water licence:

- August 5, 2008, Amendment No. 1: To allow for an increase in the volume of water from 40 cubic meters per day to 300 cubic meters per day.
- March 18, 2009, Amendment No. 2: To allow for drilling within thirty 30 meters of the ordinary high water mark within the End Grid Lake area as identified in the application dated October 9, 2008.
- July 27, 2009, Amendment No. 3: To allow for a reallocation in the volume of water used for domestic purposes, while maintaining the total volume of water allowed for under the licence at 300 cubic meters per day.
- April 1, 2010, Amendment No. 4: To allow for on-ice geotechnical drilling at the proposed Thelon River Crossing; that Amendment was rescinded on May 13, 2010. The proponent later requested that the Nunavut Impact Review Board suspend processing their amendment application.
- April 21, 2011, Amendment No. 5: To conduct land-based drilling during low flow artesian conditions and to allow drilling within 30 meters of the ordinary high water mark in the Andrew Lake and Mushroom Lake areas.

On November 30, 2011, Amendment No. 6 the NWB distributed AREVA's amendment application No. 6 for review. AREVA are requesting permission to (1) allow drilling during low flow artesian conditions in all areas of the Kiggavik Lease, and (2) to remove the authorization included in Amendment No. 5 that allows drilling activities to occur within 30 meters of the ordinary high water mark in the Andrew Lake and Mushroom Lake areas.

Recommendations/Comments

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

- AREVA has decided that drilling within 30 meters of the ordinary high water mark at the Andrew Lake and Mushroom lake areas is not necessary at this time and has requested that this authorization be removed from their water licence.

As part of AANDC's review of AREVA's Amendment Application No. 5 there were no concerns with an approval of drilling activities within 30 meters of the ordinary high water mark of the Andrew Lake and Mushroom Lake areas, so long as the environmental protection measures, drill water and cuttings management, water analysis, and abandonment and restoration are carried out in accordance with the plan submitted by AREVA in their application for amendment.

The AANDC Water Resources Division suggest that if AREVA decides to drill within 30 meters of the ordinary high water mark of the Andrew Lake and Mushroom lake areas in the future than another amendment application be submitted to the NWB for review if the above request in amendment No. 5 is removed.

- AREVA is requesting authorization for drilling during low flow artesian conditions in all areas of the Kiggavik Lease.

The AANDC Water Resources Division suggests that the proponent be required to continue following all the terms and conditions of their Type 'B' water licence if they are allowed to drill during low flow artesian condition in all areas of their project area. Specifically, the conditions outlined in Part F, Item 6 which pertains to artesian flow conditions must be followed.

AREVA has satisfied Part F, Item 1 of their water licence which requires the submission of a Uranium Exploration Plan. Section 3, Drilling Operations, of this plan adequately addresses the environmental and water related issues related to uranium exploration, drilling activities. This plan indicates that GPS locations of all drill locations are recorded on the drill log and submitted with the annual report submitted to the regulator agencies. Also, Section 3.5 of the project's Abandonment and Restoration Plan (A&R Plan), Drill Sites, indicates that drill holes are sealed by cementing/grouting for the upper 30 meters of bedrock or the entire depth of the hole, whichever is less or otherwise approved of by the Nunavut Water Board (NWB) in writing.

AREVA should ensure that all water encountered from an artesian flow be analyzed to confirm the age of the water (i.e. pre-glacial vs. regional, recent flow) and the water quality including salt and metal contents. These analyses will help improve the understanding of the source of the water and prevent potential complications which may arise should the source be confirmed to be regional flow (i.e. draining of connecting lakes, aquifers, potential ground water contamination, etc) and release of poor quality water to the surface.

Prepared by Andrea Cull

Cc. David Abernethy, A/Manager of Water Resources, AANDC
Kevin Robertson, A/Manager of Field Operations, AANDC