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Department of Environment

Ministère de l'Environnement

Feb. 18, 07

Phyllis Beaulieu
Manager of Licensing
Nunavut Water Board

via Email to: licensing@nunavutwaterboard.org

**RE: NWB FILE # 2BE-KIG – AREVA RESOURCES CANADA INC. –
KIGGAVIK & SISSONS WATER LICENSE RENEWAL APPLICATION**

Dear Ms. Beaulieu:

The Government of Nunavut, Department of Environment (DOE) has reviewed the water license renewal application for the Kiggavik-Sissons uranium exploration project approximately 80 km west of Baker Lake, submitted by Areva Resources Canada Inc. Based on our mandate under the *Environmental Protection Act*, DOE has the following comments and recommendations to make regarding spill contingency planning, waste management, abandonment and restoration, Canadian Heritage Rivers, and land use planning.

1. SPILL CONTINGENCY PLANNING

Based on DOE *Spill Contingency Planning and Reporting Regulations*, and the *Contingency Planning and Spill Reporting in Nunavut: a Guide to the New Regulations*, we have the following recommendations to make:

- In addition to fuel, names and quantity of chemicals (i.e., drill additives) should also be provided in the spill plan.
- For overland fuel transportation, page 12 of the Spill Contingency Plan states that a Bulk Site spill kit will be available on transportation vehicles. However, it is not clear what the kit content is; is this spill kit similar to the two spill kits described on page 7? In general, it is advised to carry on vehicles at least 10 square metres of polyethylene material (for lining a trench or depression), a spark-proof shovel, oil absorbent blankets or squares, and response equipment (such as hatch cone covers, hoses etc) to remove fuel from an overturned tanker.

2. WASTE MANAGEMENT

Hydrocarbon Contaminated Soil & Treatment

Page 20 of the Spill Contingency Plan indicates that hydrocarbon contaminated soil from a large spill will potentially be treated on site. However, the proponent has not provided further information about location, treatment methodology, monitoring, and remediation standards in the spill plan or the Waste Management Plan. For remediation standards, the proponent should refer to *Canada-Wide Standards for Petroleum Hydrocarbons (PHC) in Soil*, to which the Government of Nunavut is a signatory, and DOE's *Guideline for Contaminated Site Remediation*. For operation and maintenance procedures, the proponent is recommended to refer to Environment Canada's *Federal Guidelines for Landfarming Petroleum Hydrocarbon Contaminated Soils*.

Incinerator

The Government of Nunavut is a signatory to *Canada-Wide Standards for Dioxins and Furans*, and *Canada-Wide Standards for Mercury Emissions*. It is important emission from camp waste incineration complies with the standards.

It is noted in the application that the camp has been expanded to about 50 people, and that a single chamber incinerator is used. However, for camps of 10 to 50 people or greater than 50 people, it is generally advised to use a dual chamber forced-air incinerator or a dual chamber controlled-air incinerator, respectively. Therefore, it is unclear how the single chamber incinerator will comply with the standards. The proponent should provide further information to demonstrate compliance.

3. ABANDONMENT & RESTORATION PLAN

To ensure proper restoration of the project site after project closure, DOE recommends the following:

- Drilling additives used should be non-toxic and biodegradable, and be accompanied by MSDS sheets. Sumps for drill cuttings should only be used for inert drill cuttings, not any other materials or substances.
- Sumps and drill holes should be properly closed out to match the surrounding landscape and to encourage re-vegetation.
- In general, drill holes should be sealed by cementing the upper 30 meters of the bedrock or the entire depth of the holes; whichever is less.
- Drill holes that encounter uranium mineralization with a content greater than 1.0% over a length of more than 1 meter with a meter-percent concentration greater than 5% should be sealed by cementing over the entire mineralization zone; this should be at least 10 meters above and below each mineralization zone.

4. THE CANADIAN HERITAGE RIVERS SYSTEM

The project area is located in close proximity to the Thelon Canadian Heritage River, and DOE therefore asks the proponent takes the following comments into consideration.

During the summer months the Thelon River is frequented by recreational Canoeists providing much needed tourism dollars to Nunavut communities. Please note that the Canadian Heritage Rivers System (CHRS) is Canada's national program for freshwater conservation. In Nunavut (as elsewhere in Canada), it is a cooperative program between the governments of Canada and the Government of Nunavut (other provincial and territorial governments for the rest of Canada). The objectives of the program are to give national recognition to Canada's outstanding rivers and to ensure long-term management that will conserve their natural, cultural and recreational values for the benefit and enjoyment of Canadians, now and in the future.

In Nunavut, three rivers have been designated (Soper, Kazan and Thelon), meaning that management plans detailing how their heritage values will be protected have been lodged with the CHR Board, and one has been nominated (Coppermine). Therefore, we ask that if NWB approves the project proposal within the management areas of the Heritage Rivers that it insures, via conditions within the permits, that the proponent respects the values of the Heritage Rivers and not to engage in any activity that would interfere or other wise detract from the experience of tourists and Nunavummiut using the Heritage Rivers now and in the future. The Management Plan for the Thelon River can be obtained at DOE by contacting Richard Wyma at rwyma@gov.nu.ca.

5. LAND USE PLANNING

There is a concern that the issuing of licenses or permits relating to exploration for uranium may lead to an expectation that further development of these projects will be permitted. DOE is aware that Nunavut Planning Commission has determined low level exploration for Uranium to be in conformity with the Keewatin Regional Land Use Plan but believes the proponent should be aware of the following provisions in the plan:

3.5 - Uranium development shall not take place until NPC, NIRB, NWB and the NWMB have reviewed all of the issues relevant to uranium exploration and mining. Any review of uranium exploration and mining shall pay particular attention to questions concerning health and environmental protection. (A) (CR)

3.6 – Any future proposal to mine uranium must be approved by the people of the region.

DOE thanks NWB for the opportunity to provide comments on the Kiggavik-Sissons water license renewal application. Please contact us if you have further questions.

Yours sincerely,

Original signed by

Helen Yeh
Coordinator, Environmental Assessment
Department of Environment
Government of Nunavut