



Environment Canada
Prairie and Northern Region
Room 200, 4999-98 Avenue
Edmonton, AB T6B 2X3

February 10th, 2009

Leslie Payette
Manager, Environmental Administration
Nunavut Impact Review Board
P.O. Box 1360
Cambridge Bay, NU X0B 0C0

Our file: 4703 001 006
Your File: NIRB 09MN003

Via email: lpayette@nirb.ca

Re: 09MN003-Notice of Part 4 Screening and Comment Request for AREVA Resources Canada's Kiggavik Project Proposal

Thank you for the opportunity to provide input into the Nunavut Impact Review Board's (NIRB) Part 4 screening decision for the AREVA Resources Canada's Kiggavik Project Proposal. The following specialist advice has been provided pursuant to Environment Canada's mandated responsibilities arising from the *Canadian Environmental Protection Act*, Section 36(3) of the *Fisheries Act*, the *Migratory Birds Convention Act*, and the *Species at Risk Act*.

After reviewing the project proposal and supporting documents, Environment Canada (EC) is of the opinion that the proposed project may cause significant adverse effects on the ecosystem and wildlife habitat. This advice is based on the scale of the proposed project and the anticipated environmental impacts that may occur if this project proceeds. As outlined in the project proposal, the Kiggavik Mine Proposal includes, among other components:

- The construction, operation, decommissioning and reclamation of a uranium mine that includes four open pit mines and an underground mine;
- On-site processing of 675,000 tonnes of ore per year with an approximate mill production rate of 3,000 tonnes uranium (U) per year;
- Construction of a mill facility, tailings management facilities, backfill plant, and fuel storage facilities;
- Landfill construction, solid waste management, incineration of domestic wastes, and industrial/non-combustible wastes deposited in landfills;
- Construction of waste rock stockpile and special waste management facilities;
- Use of clean waste rock for the construction of haul roads, pads, berms, etc.;
- Construction of ore storage pads at Kiggavik and Sissons;
- Transportation of ore from Sissons to the Kiggavik ore storage pad for mill processing;
- Construction of a 2,000 metre long airstrip, and airport facilities for the transportation of employees and materials;
- Explosives transportation, storage and on-site manufacture;
- Chemical and hazardous material transportation and storage;
- Construction of water storage, wastewater treatment and sewage treatment facilities;
- Water withdrawal from lakes to the north and east of Kiggavik site;
- Dewatering of a portion of Andrew Lake;
- Discharge of treated effluent into receiving environment;

- Construction of an access road from the community of Baker Lake to Kiggavik and the potential construction of bridge crossing or cable-ferry/ice bridge crossing over the Thelon River;
- Construction of an approximately 20 km long all season Kiggavik-Sissons site haul road;
- Construction of additional site infrastructure to support the mine including: power supply and facilities, warehouse, maintenance shops, administration complexes, offices and a permanent accommodation complex for capacity of approximately 300 people;
- Construction of facilities at Baker Lake including wharf, fuel storage tank farm, storage facility, laydown area, satellite administration and community liaison office;
- Marine shipment of reagents, fuel and supplies to the storage facility near Baker Lake and continued shipment via truck to the Kiggavik site; and,
- Shipment of yellowcake (~ 3,000 tonnes as U annually or 3,600 tonnes yellowcake) from the Kiggavik site to southern Canada via truck, barge and/or air.

EC is of the opinion that there is potential for this project to cause significant adverse environmental impacts. Potentially impacted ecosystem components include, but may not be limited to:

- Surface freshwater as result of the deposit of treated effluent into a lake, nutrient input from blasting and sewage treatment, suspended sediment as a result of construction activities, surface runoff from ore and waste rock, and accidents and malfunctions;
- Marine water quality as a result of the potential for accidents and malfunctions along the proposed shipping route;
- Air quality as a result of the operation of the incinerator, mine site activities and the hauling of ore concentrate along the haul and access roads;
- Migratory birds as a result of habitat loss and disturbances at the proposed site facilities, roads, airstrip, dock facilities and shipping routes; and
- Species at risk as a result of habitat loss and disturbance at proposed site facilities, roads, airstrip, dock facilities and shipping routes.

Due to the potentially significant adverse impacts to these ecosystem components resulting from the project, it is EC's opinion that at a minimum a Part 5 Review under Section 12.4.4(b) of the NLCA would be appropriate.

Should you have any further questions please contact Carrie Spavor at (867) 975-4631 or via email at carrie.spavor@ec.gc.ca.

Yours truly,



Mike Norton
A/Manager, Environmental Assessment Program
Prairie and Northern Region
Environmental Protection Operations
Environment Canada

cc: Carey Ogilvie (Head, Environmental Assessment North, Yellowknife NT)
Anne Wilson (Water Pollution Specialist, Environment Canada, Yellowknife, NT)
Carrie Spavor (Environmental Assessment Coordinator, Environment Canada, Iqaluit, NU)