



October 17, 2007

File: NUN 1560-75-08

Ms. Phyllis Beaulieu  
Manager of Licensing  
Nunavut Water Board  
PO Box 119  
Gjoa Haven, NT X0E 1J0

Dear Ms Beaulieu:

**Re: Kiggavik Project: Uranium Exploration Plan**

Part F of the NWB Licence for the Kiggavik Project (No. 2BE-KIG0708), condition 1 requires the submission of a Uranium Exploration Plan to the Board. The submission of this Plan also addresses Part F of the water license inspection report submitted to AREVA by INAC on September 21, 2007.

Please find the attached Uranium Exploration Plan and attached figures for your review and approval.

I trust this information to be satisfactory. Please do not hesitate to contact myself or Frederic Guerin at 306 343-4631 with any questions, comments or concerns.

Please acknowledge receipt of this document.

A handwritten signature in black ink, appearing to read 'Tina Hessdorfer', is written over the text 'Please acknowledge receipt of this document.'

Tina Hessdorfer, BSc  
Licensing Co-ordinator, Regulatory Affairs and Licensing  
AREVA Resources Canada Inc.  
306 343-4525  
tina.hessdorfer@areva.ca

Enclosure

cc: Andrew Keim, INAC

**AREVA Resources Canada Inc.**

**KIGGAVIK PROJECT, NUNAVUT**

**URANIUM EXPLORATION PLAN**

**Date of Issue: October 2007**

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Photo #1 – Kiggavik Camp Layout

## 1. INTRODUCTION

The AREVA Resources Canada Inc. (AREVA) Uranium Exploration Plan shall be in effect from the time the exploration license is issued to the time it expires and it applies to the Kiggavik Project.

- West Boundary 97° 57' 50.4" W Longitude;
- East Boundary 97° 20' 56.4" W Longitude;
- North Boundary 64° 39' 28.8" N Latitude; and,
- South Boundary 64° 17' 02.4" N Latitude.

AREVA has two primary uranium exploration properties in this area – Kiggavik and Sissons. The Sissons property is located approximately 80 km west of Baker Lake, Nunavut at 64.20 N and 97.52.5 W. It consists of 20 mineral leases totalling 12,725 ha.

The Kiggavik property is located 17 km north of the Sissons property and consists of 17 mineral leases totalling 3,972 ha.

Project Management contacts include:

Position	Name/Location	Contact #	
Facility Supervisor	Dan Zunti/Kiggavik	Sat Phone	011 8816 341 67865
Manager, Nunavut Affairs	Barry McCallum/Baker Lake	Phone Cell	867 793 2000 306 242 4636
General Manager Kiggavik Sissons	Frederic Guerin AREVA Resources Canada Inc. 817 - 45th Street West Saskatoon, SK S7K 3X5	Phone Cell	306 343 4631 306 270 2915

The Uranium Exploration Plan is designed to meet the requirements of the Water License issued by the Nunavut Water Board (2BE-KIG0708) and the Saskatchewan Environment Mineral Exploration Guidelines and Best Management Practices and the Canadian Nuclear Safety Commission (CNSC) Regulations (although CNSC does not regulate exploration activities).

In addition to this plan AREVA has developed a Radiation Protection Plan, which has been submitted and accepted by regulatory agencies with the permit applications for the field season. The Plan is reviewed and revised if necessary on an annual basis. AREVA also has an established Radiation Protection Program which includes comprehensive work instructions for planning, monitoring and maintenance of the Program for exploration activities. Work instructions have been developed for staff and exploration facilities regarding dosimetry and radiological monitoring, safe handling of radioactive materials and the shipping of radioactive materials.

## **2. TRAINING**

AREVA provides necessary training to all its employees and contractors to ensure worker safety and protection of the environment during exploration activities. The training programs provided are designed to meet the requirements of the Canadian Nuclear Safety Commission (CNSC) *Uranium Mines and Mills Regulations* (although CNSC does not regulate uranium exploration projects), territorial *Workers Compensation Board* and *ISO14001:2004 Standard*. Although the project is not currently ISO certified – AREVA strives to meet ISO standards.

All new employees, including contractors, receive appropriate radiation protection training prior to beginning work. Employees and contractors are instructed in the origins of ionizing radiation, the types of radiation, the associated health risks, the principles of radiation safety and regulatory compliance. Training also includes the safe handling, management and disposition of radioactive materials such as drill muds and cuttings, and radioactive core.

All exploration personnel involved in the shipment of radioactive materials are required to take Transportation of Dangerous Goods (TDG) training and must possess a valid TDG certificate in accordance with Transport Canada Transportation of Dangerous Goods Regulations. If radioactive materials are to be transported by aircraft, TDG training is to include the necessary aviation components for Class 7 materials. If contractors for the project have their own training program they must submit evidence of the training program.

## **3. DRILLING OPERATIONS**

All drill sites are located at a minimum of 30 meters beyond the ordinary high level water mark of any nearby water bodies.

During drilling activities, drill mud solids or cuttings in non-mineralized zones, that can not be re-circulated during the drilling operations are deposited into the receiving environment, preferably in a selected natural low-lying depression. This natural depression must also be located at a minimum of 30 meters beyond the ordinary high level water mark of any nearby water bodies, and where direct flow into the water body is not possible. Upon completion, a radiological survey is conducted to ensure elevated readings are not occurring. The depression is then backfilled and contoured, as much as possible, back to natural pre-existing conditions.

When mineralized core is intersected, all drill mud and cuttings are collected in appropriate containers and categorized as radioactive through appropriate radiation measurements in accordance with work instructions.

Drill mud or cuttings with an uranium content greater than 0.05% that are not otherwise retained is disposed down the drill hole, when practicable and then the upper 30 meters of bedrock is sealed by grouting. Where down hole disposal is not practicable, drill cuttings are collected and stored in the on-site long-term core storage area with appropriate containment systems in place.

Any drill hole that encounters mineralization with uranium content greater than 1.0 per cent over a length of > 1.0 metre and with a metre-per-cent concentration of > 5.0 is sealed by grouting over the entire length of the mineralization zone and not less than 10 metres above or below each mineralization zone.

GPS locations of all drill locations are recorded on the drill log and submitted with the annual report submitted to the regulatory agencies.

#### **4. CORE LOGGING AND STORAGE**

All logging of core is conducted in a separate facility, which is located a few hundred metres away from the camp facilities.

Permanent and long-term storage areas of radioactive material, including core and drill cuttings, are located at least 30 m from the main camp and at least 100 m from the high water mark of all water bodies.

Gamma radiation levels at 1 m from the surface of a storage area should be reduced to 1  $\mu\text{Sv/h}$  and in no instances exceed 2.5  $\mu\text{Sv/h}$ .

Permanent on-site core storage areas are appropriately labelled with radiation warning signs.

If long-term off-site storage is required, AREVA intends to transport the material to be stored at an operating uranium mining facility.

#### **5. RADIOISOTOPES**

The primary source employed by exploration is a Cesium-137 (Cs-137) gamma source which is used for testing the operation of down hole probes. Other sources that may be used include small instrument calibration sources.

The transport, storage and use of radioactive sources is carried out in accordance with work instructions implemented by AREVA's Radiation Protection Program.

Radiation sources are maintained at all times and stored in a secure location when not being used.

The disposal of radioactive sources used during exploration activities is carried out in accordance with CNSC *Nuclear Substances and Radiation Devices Regulations* and applicable licence conditions.

## **6. SPILLS**

The uncontrolled or accidental release of any radioactive materials including drill mud solids and cuttings is considered a spill. All spills of radioactive material are to be appropriately reported and responded to in accordance with the Spill Contingency Plan, which has been submitted and approved by regulatory agencies with previous permit applications.

In the event of a spill, radioactive materials are collected and necessary site remediation undertaken to meet the site abandonment criteria of less than 1  $\mu\text{Sv/h}$  at a height of 1 m above background. To the greatest extent possible, all spill affected areas are to be decontaminated.

Material collected during the clean-up is stored in appropriate containers and stored in the on-site long-term storage area, for future handling.

## **7. SHIPPING OF RADIOACTIVE MATERIALS**

Shipping and receiving radioactive material is carried out in accordance with procedures implemented by AREVA's Radiation Protection Program, the CNSC *Packaging and Transport of Nuclear Substances Regulations* and the Transport Canada *Transportation of Dangerous Goods Regulations*.

The responsibility for supervising the preparation for shipment of radioactive material from remote sites rests with the Project Geologist or the Facility Supervisor or the Environmental, Health and Safety Coordinator.

All personnel directly involved in the shipment of radioactive materials must possess a valid transportation of dangerous goods certificate which includes the transportation of Class 7 materials.

## **8. SITE ABANDONMENT AND RESTORATION**

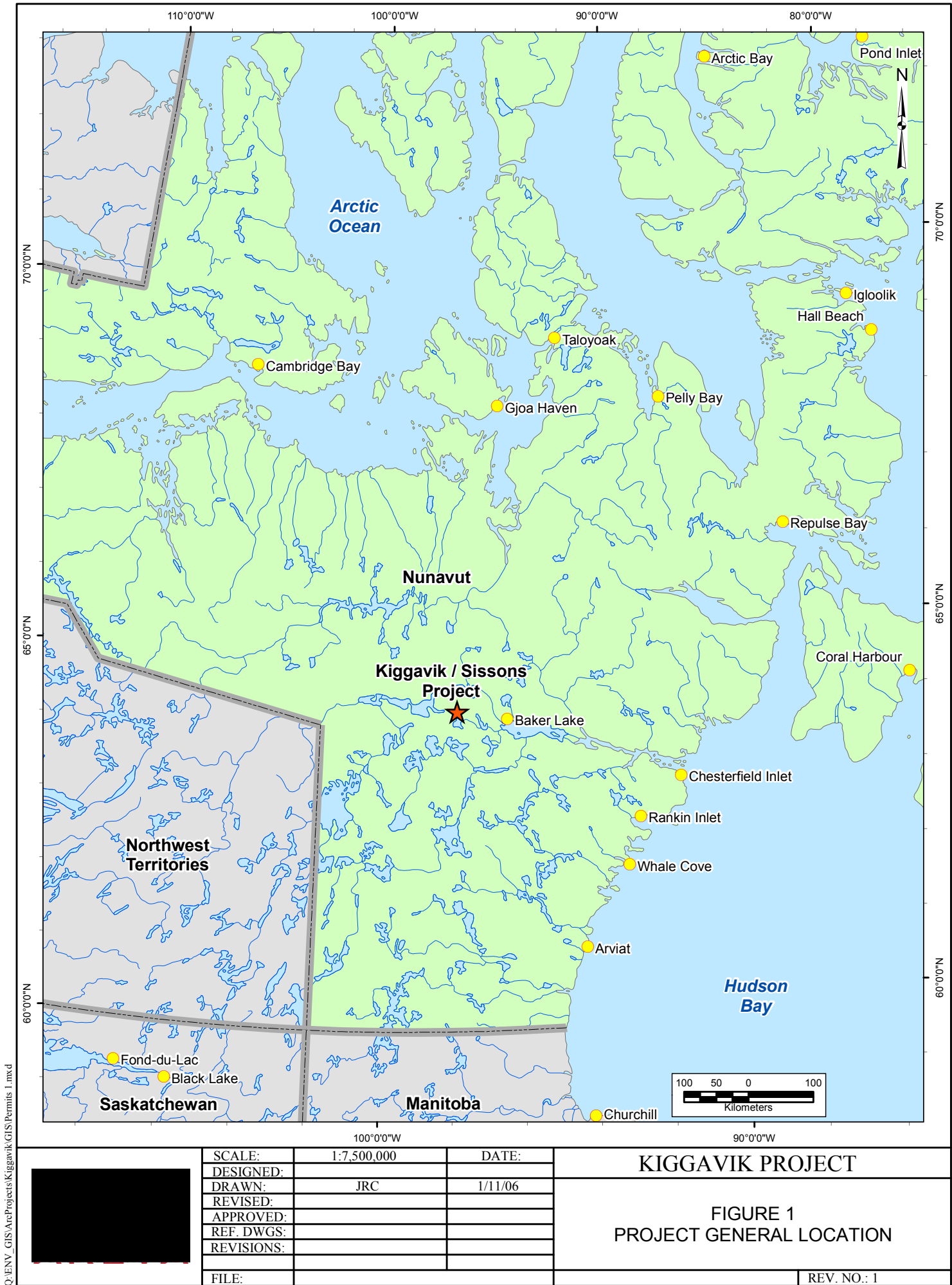
Site abandonment and restoration is carried out in accordance with the Abandonment and Restoration Plan, which was submitted and approved by regulatory authorities with the permit applications for the field program.

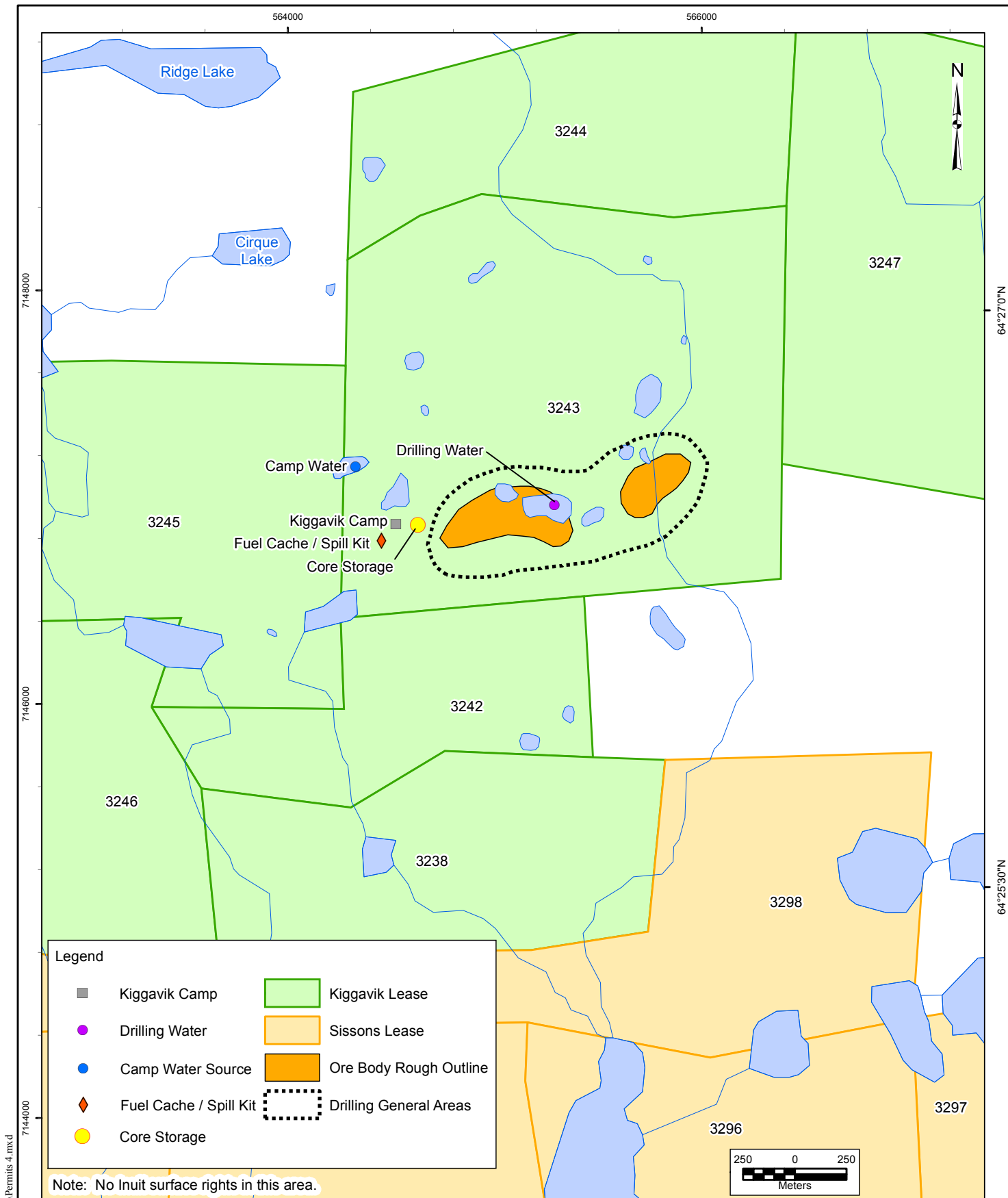
Prior to final abandonment, all drill sites undergo a radiation survey for radioactive contamination. Contaminated soil or cuttings are collected in appropriate containers and stored in the long-term core storage area for future handling, which may include transfer to a operating mine site.

If necessary, all drill sites are cleaned to ensure that the gamma dose rate at a height of 1 m is less than 1  $\mu\text{Sv/h}$  above background.

All materials and equipment leaving the drill site is monitored for contamination in accordance with work instruction implemented by AREVA's Radiation Protection Program.







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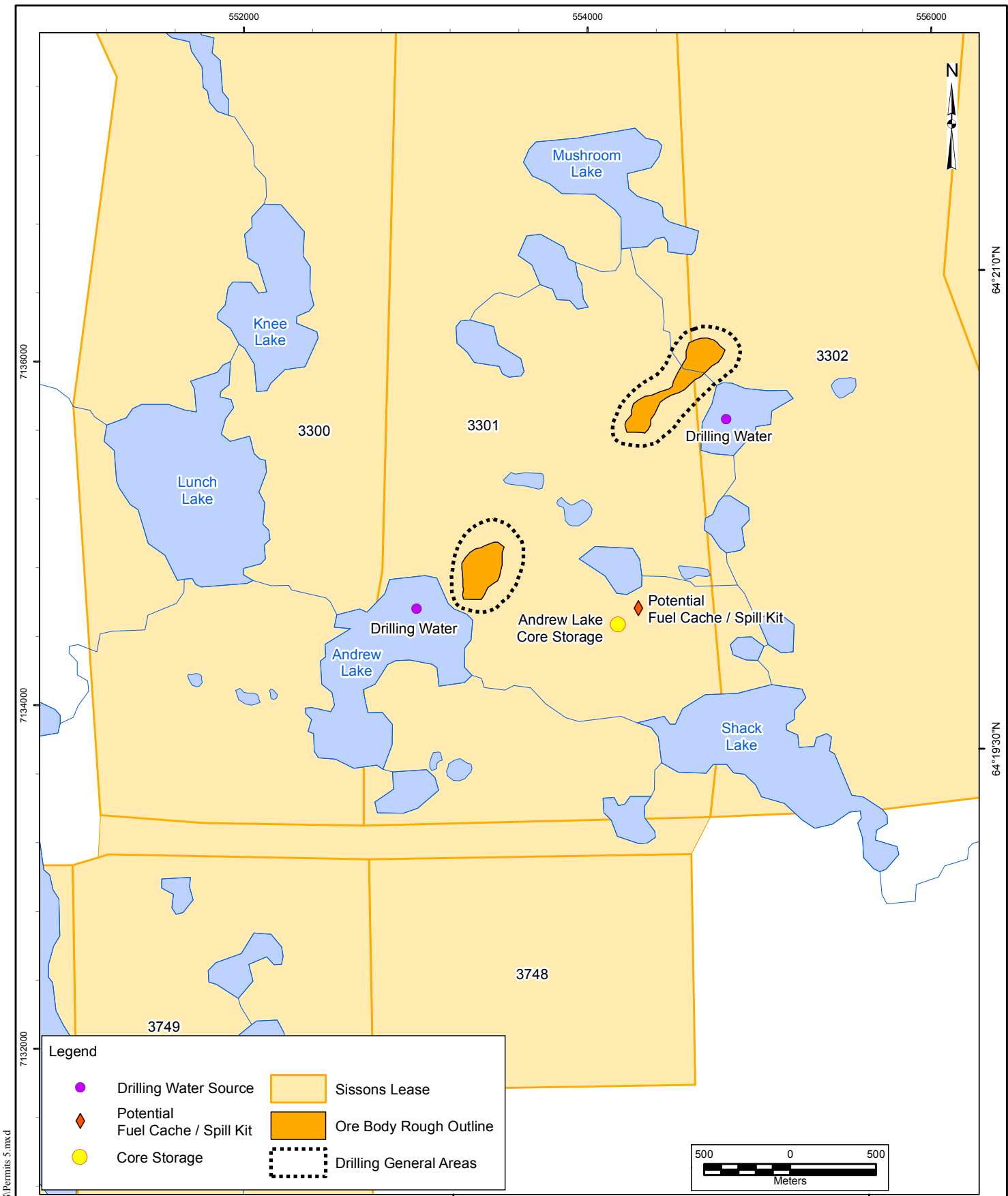


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## KIGGAVIK PROJECT

FIGURE 4  
KIGGAVIK SITE

REV. NO.: 1



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**Legend**

- Drilling Water Source
- ◆ Potential Fuel Cache / Spill Kit
- Core Storage
- Sissons Lease
- Ore Body Rough Outline
- Drilling General Areas



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**KIGGAVIK PROJECT**

**FIGURE 5  
SISSONS SITE**

REV. NO.: 1



Photo #1: Kiggavik Project - Camp  
August 2007



Radioactive Storage Compound

Incinerator

Washrooms & Dry Facility

Kitchen Complex

Core Storage

Fuel Cache

Propane Storage

Secondary Containment for Waste Products & Chemicals