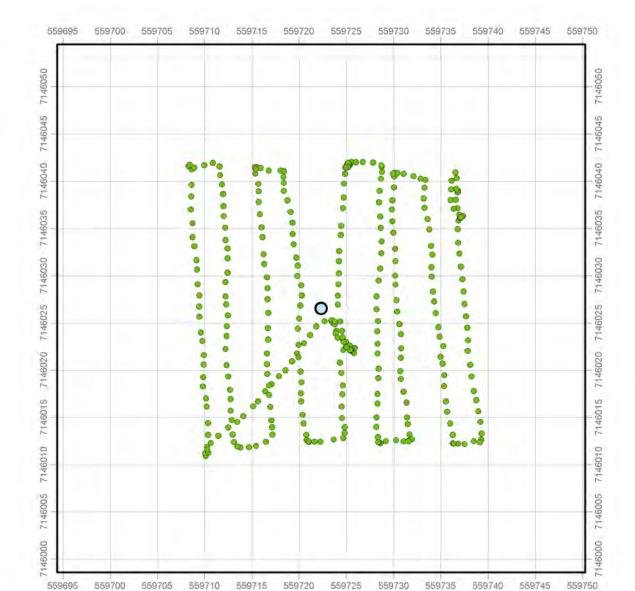
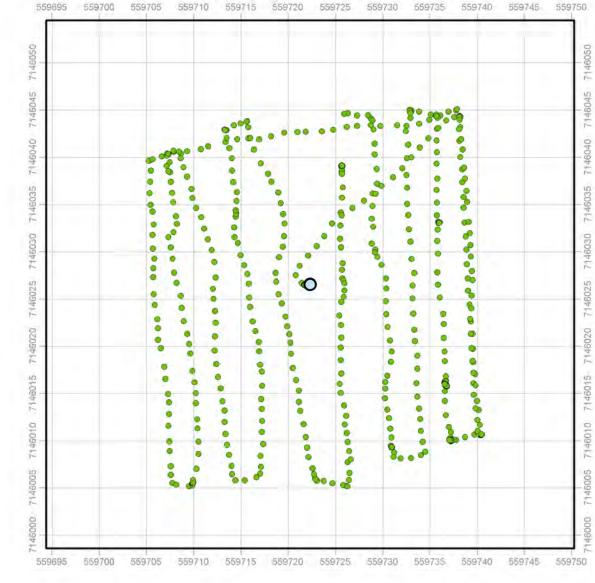
O Drill Hole Gamma Value

- 0.0 0.3 µSv
- 0.3 0.6 μSv
- 0.6 1.0 μSv
- 1.0 2.5 μSv
- > 2.5 µSv





GG-026 Pre Gamma Survey

Min-Max: 0.040 - 0.077 μSv

GG-026 Post Gamma Survey

Min-Max: 0.037 - 0.078 μSv

Projection: NAD 1983 UTM Zone 14N
Compiled: C. CARTER Drawn; C. CARTER
Date: 09/01/2012 Scale: 5m x 5m GRID
File: KI08F097
Data Sources: AREVA Resources Canada Inc.

FIGURE 1.4-9 PRE AND POST GAMMA SURVEY DRILL HOLE GG-026





O Drill Hole Gamma Value

- 0.0 0.3 μSv
- 0.3 0.6 μSv
- 0.6 1.0 μSv
- 9 1.0 2.5 μSv
- > 2.5 μSv









BONG-053/054 Pre Gamma Survey

562155 562160 562165 562170 562175 562180 562185 562190 562195 562200 562205

Min-Max: 0.030 - 0.077 μSv

BONG-053/054 Post Gamma Survey

562155 562160 562165 562170 562175 562180 562185 562190 562195 562200 562205 562210

Min-Max: 0.040 - 0.086 μSv

Projection: NAD 1983 UTM Zone 14N Compiled: C. CARTER Drawn; C. CARTER Date: 09/01/2012 Scale: 5m x 5m GRID File: KI08F098 Data Sources: AREVA Resources Canada Inc.

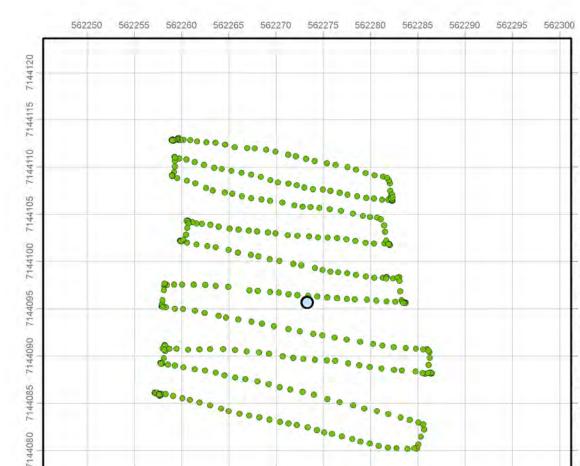
FIGURE 1.4-10 PRE AND POST GAMMA SURVEY DRILL HOLE BONG-053/054

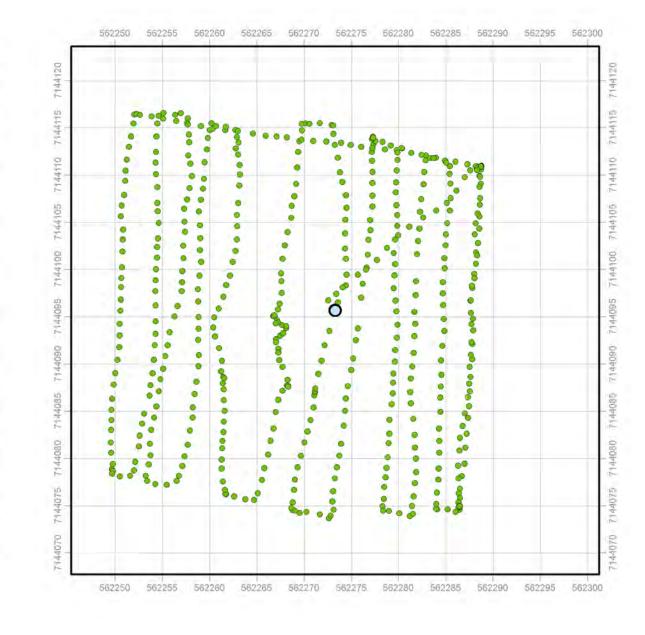




O Drill Hole Gamma Value

- 0.0 0.3 μSv
- 0.3 0.6 μSv
- 0.6 1.0 μSv
- 9 1.0 2.5 μSv
- > 2.5 μSv





BONG-055 Pre Gamma Survey

562255 562260 562265 562270 562275 562280 562285 562290 562295 562300

Min-Max: 0.011 - 0.034 μSv

BONG-055 Post Gamma Survey

Min-Max: 0.046 - 0.085 μSv

Projection: NAD 1983 UTM Zone 14N
Compiled: C. CARTER Drawn; C. CARTER
Date: 09/01/2012 Scale: 5m x 5m GRID
File: KI08F099
Data Sources: AREVA Resources Canada Inc.

FIGURE 1.4-11 PRE AND POST GAMMA SURVEY DRILL HOLE BONG-055

562250

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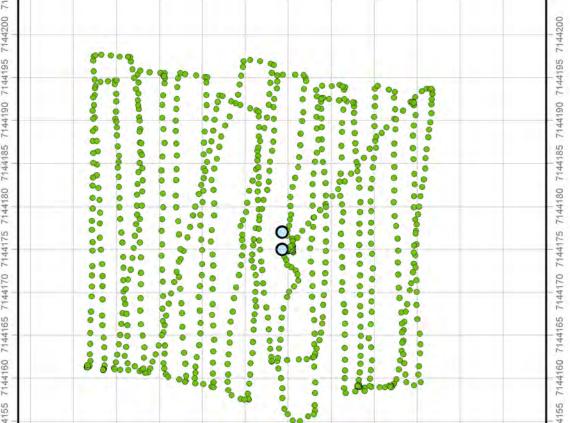


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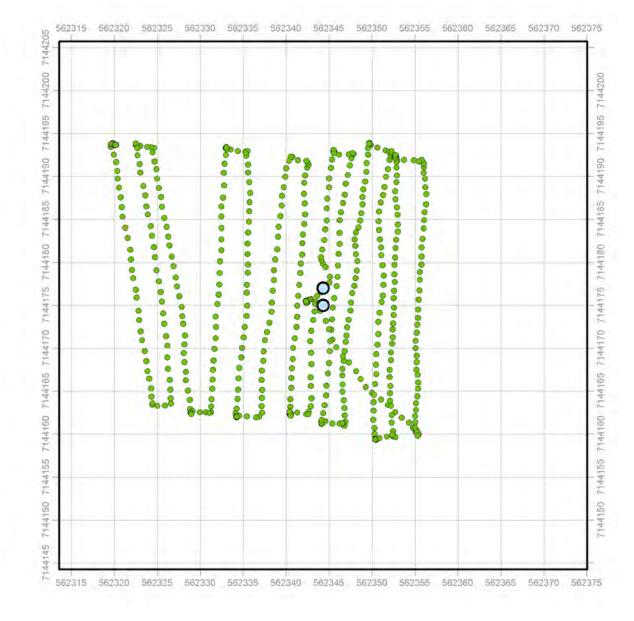
O Drill Hole Gamma Value

- 0.0 0.3 μSv
- 0.3 0.6 μSv
- 0.6 1.0 μSv
- 9 1.0 2.5 μSv
- > 2.5 µSv





562315 562320 562325 562330 562335 562340 562345 562350 562355 562360 562365 562370 562375



BONG-056/057/057A Pre Gamma Survey

562315 562320 562325 562330 562335 562340 562345 562350 562355 562360 562365 562370 562375

Min-Max: 0.007 - 0.091 μSv

BONG-056/057/057A Post Gamma Survey

Min-Max: 0.053 - 0.093 μSv

Projection: NAD 1983 UTM Zone 14N Compiled: C. CARTER Drawn: C. CARTER Date: 09/01/2012 Scale: 5m x 5m GRID File: KI08F100 Data Sources: AREVA Resources Canada Inc.

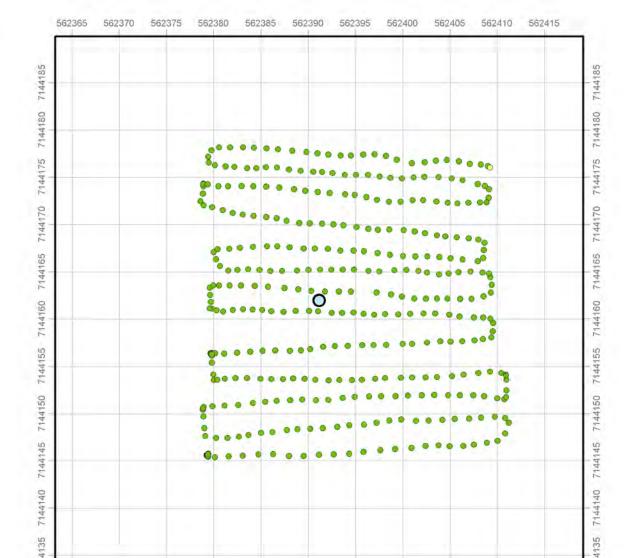
FIGURE 1.4-12 PRE AND POST GAMMA SURVEY DRILL HOLE BONG-056/057/057A

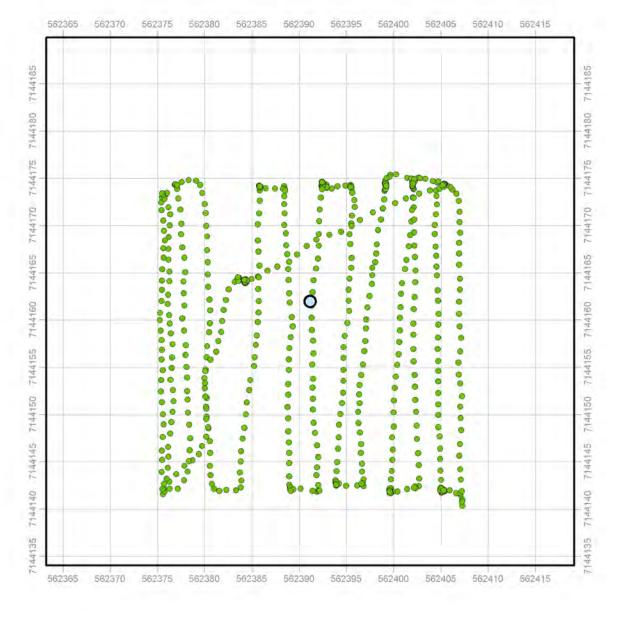
KIGGAVIK PROJECT - 2012 ANNUAL REPORT



O Drill Hole Gamma Value

- 0.0 0.3 µSv
- 0.3 0.6 μSv
- 0.6 1.0 μSv
- 1.0 2.5 μSv
- > 2.5 μSv





BONG-058 Pre Gamma Survey

562375 562380 562385 562390 562395 562400 562405 562410 562415

Min-Max: 0.042 - 0.330 μSv

BONG-058 Post Gamma Survey

Min-Max: 0.049 - 0.108 μSv

Projection: NAD 1983 UTM Zone 14N
Compiled: C. CARTER Drawn; C. CARTER
Date: 09/01/2012 Scale: 5m x 5m GRID
File: KI08F101
Data Sources: AREVA Resources Canada Inc.

FIGURE 1.4-13 PRE AND POST GAMMA SURVEY DRILL HOLE BONG-058

562365 562370

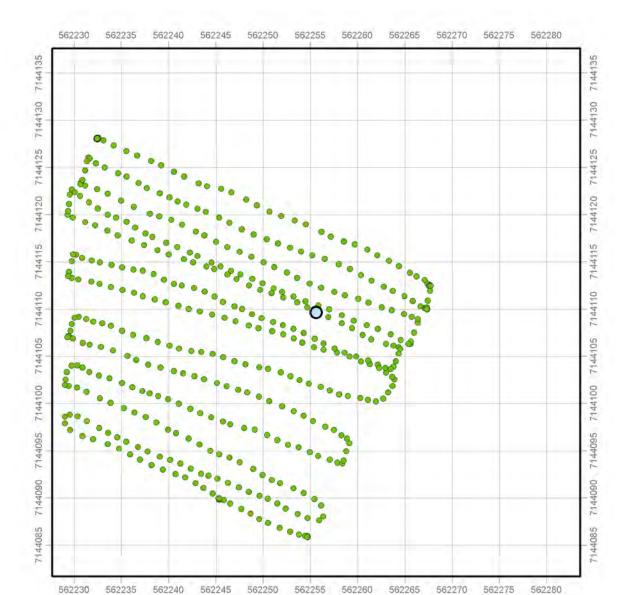
KIGGAVIK PROJECT - 2012 ANNUAL REPORT

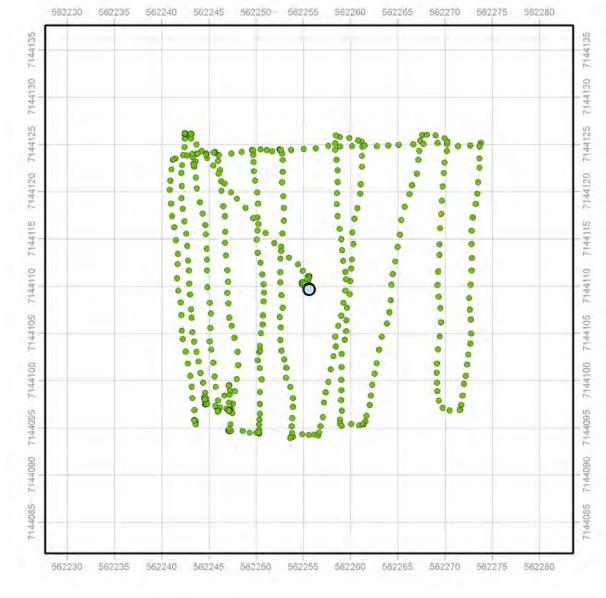


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O Drill Hole
Gamma Value

- 0.0 0.3 μSv
- 0.3 0.6 μSv
- 0.6 1.0 μSv
- 1.0 2.5 μSv
- > 2.5 μSv





BONG-059 Pre Gamma Survey

Min-Max: 0.046 - 0.092 μSv

BONG-059 Post Gamma Survey

Min-Max: 0.050 - 0.086 μSv

Projection: NAD 1983 UTM Zone 14N

Compiled: C. CARTER Drawn: C. CARTER

Date: 09/01/2012 Scale: 5m x 5m GRID

File: KI08F102

Data Sources: AREVA Resources Canada Inc.

FIGURE 1.4-14 PRE AND POST GAMMA SURVEY DRILL HOLE BONG-059

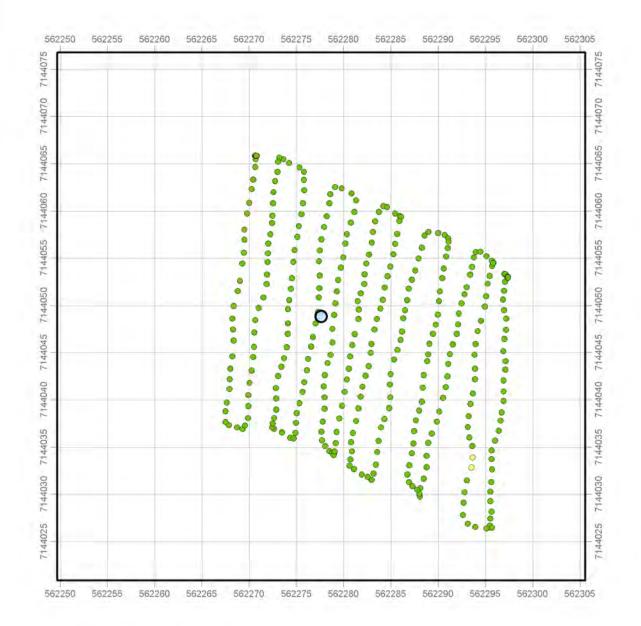




O.6 - 1.0 μSv

• 1.0 - 2.5 μSv

> 2.5 μSv



562250 562255 562260 562265 562270 562275 562280 562285 562290 562295 562300 562305 562250 562255 562260 562265 562270 562275 562280 562285 562290 582295 562300 562305

BONG-060 Pre Gamma Survey

Min-Max: 0.043 - 0.398 μSv

BONG-060 Post Gamma Survey

Min-Max: 0.043 - 0.273 μSv

Projection: NAD 1983 UTM Zone 14N
Compiled: C. CARTER Drawn; C. CARTER
Date: 09/01/2012 Scale: 5m x 5m GRID
File: Kl08F103
Data Sources: AREVA Resources Canada Inc.

FIGURE 1.4-15 PRE AND POST GAMMA SURVEY DRILL HOLE BONG-060

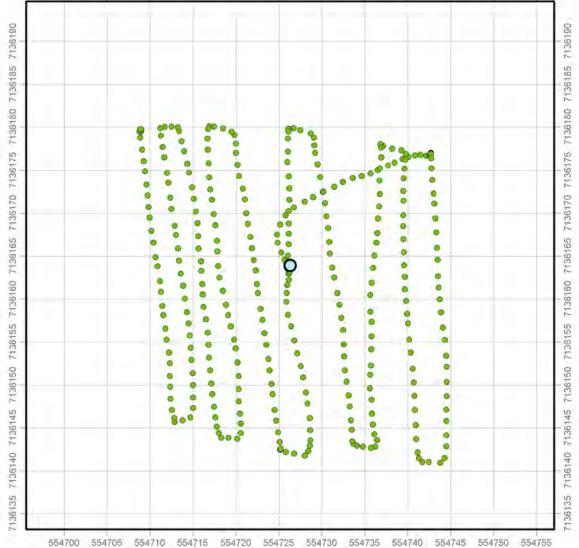




O Drill Hole Gamma Value

- 0.0 0.3 μSv
- 0.3 0.6 μSv
- 0.6 1.0 μSv
- 1.0 2.5 μSv
- > 2.5 μSv





O

SET 136160 7136165 7136170 7136175 7136180 7136185 7136190 7136165 7136160 7136165 7136165 7136160 7136165 7136165 7136165 7136165 7136165 7136165 7136185 7136165 7136165 7136185

554695 554700 554705 554710 554715 554720 554725 554730 554735 554740 654745 554750 554755 554760

END-12-03/04 Post Gamma Survey

554695 554700 554705 554710 554715 554720 554725 554725 554730 554740 554745 564750 554760

Missing Data
To Be Completed 2013 Season

END-12-03/04 Pre Gamma Survey

Min-Max: 0.047 - 0.127 µSv

 Projection: NAD 1983 UTM Zone 14N

 Compiled: C. CARTER
 Drawn: C. CARTER

 Date: 09/01/2012
 Scale: 5m x 5m GRID

 File: KI08F104

Data Sources: AREVA Resources Canada Inc.

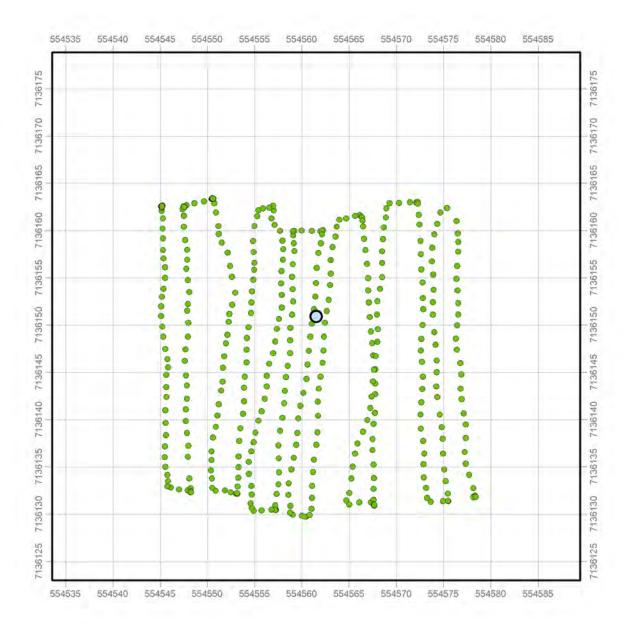
FIGURE 1.4-16 PRE AND POST GAMMA SURVEY DRILL HOLE END-12-03/04

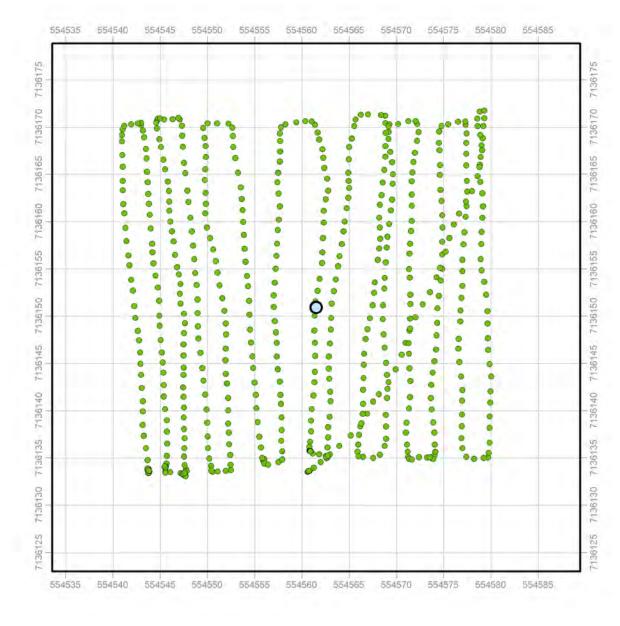




O Drill Hole Gamma Value

- 0.0 0.3 µSv
- 0.3 0.6 μSv
- 0.6 1.0 μSv
- 1.0 2.5 μSv
- > 2.5 μSv





END-12-05 Pre Gamma Survey

Min-Max: 0.033 - 0.069 μSv

END-12-05 Post Gamma Survey

Min-Max: 0.031 - 0.067 μSv

Projection: NAD 1983 UTM Zone 14N

Compiled: C. CARTER Drawn: C. CARTER

Date: 09/01/2012 Scale: 5m x 5m GRID

File: KI08F105

Data Sources: AREVA Resources Canada Inc.

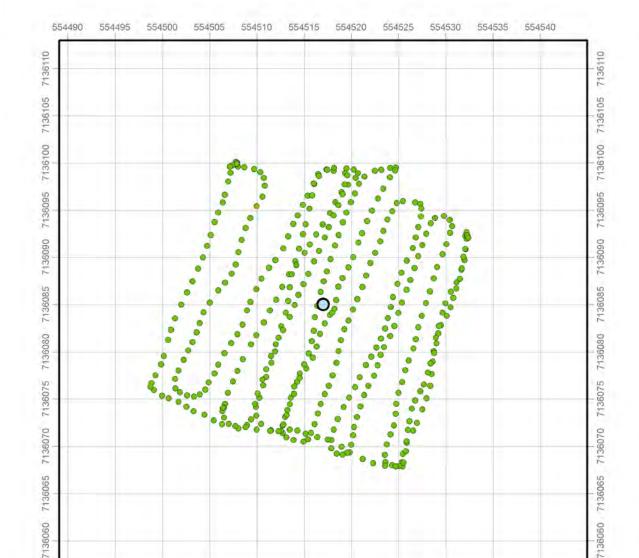
FIGURE 1.4-17
PRE AND POST GAMMA SURVEY
DRILL HOLE END-12-05

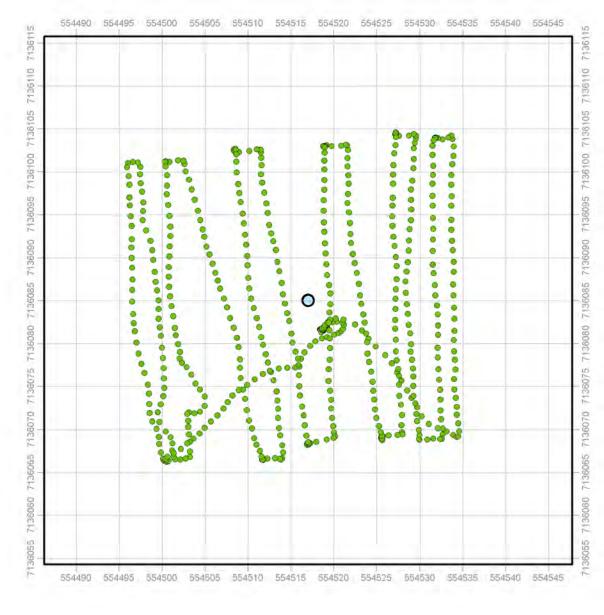




9 1.0 - 2.5 μSv

> 2.5 μSv





END-12-06 Pre Gamma Survey

554490 554495 554500 554505 554510 554515 554520 554525 554530 554535 554540

Min-Max: 0.030 - 0.054 μSv

END-12-06 Post Gamma Survey

Min-Max: 0.030 - 0.064 μSv

Projection: NAD 1983 UTM Zone 14N

Compiled: C. CARTER Drawn: C. CARTER

Date: 09/01/2012 Scale: 5m x 5m GRID

File: KI08F106

Data Sources: AREVA Resources Canada Inc.

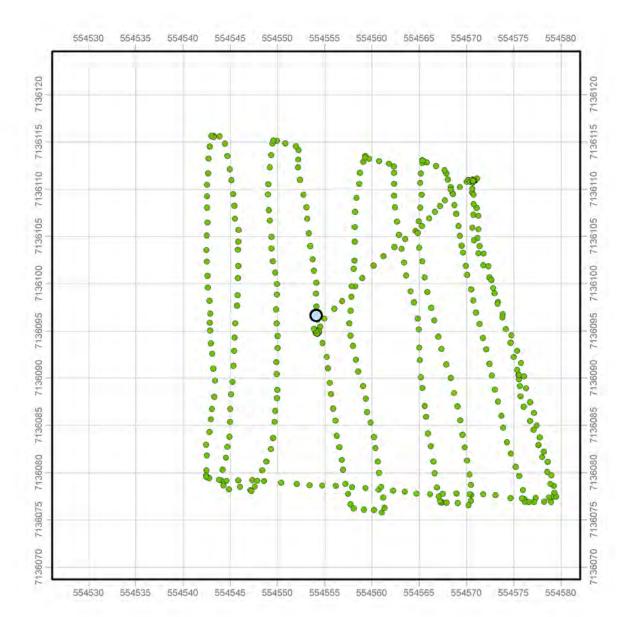
FIGURE 1.4-18 PRE AND POST GAMMA SURVEY DRILL HOLE END-12-06

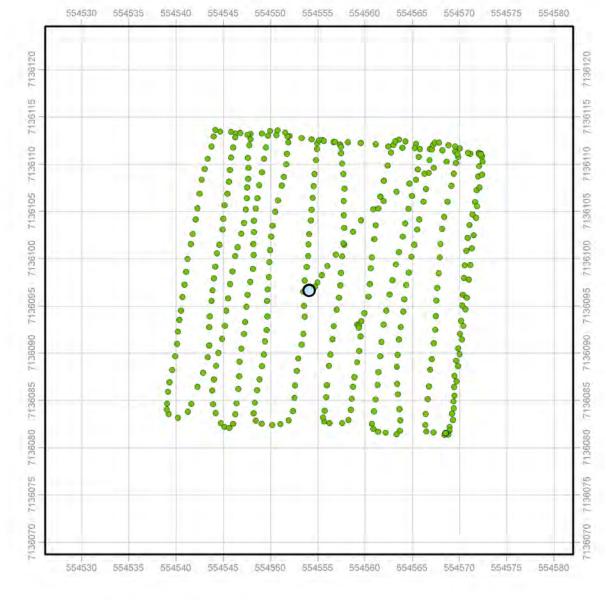




O Drill Hole Gamma Value

- 0.0 0.3 µSv
- O.3 0.6 μSv
- 0.6 1.0 μSv
- 1.0 2.5 μSv
- > 2.5 μSv





END-12-07 Pre Gamma Survey

Min-Max: 0.036 - 0.060 μSv

END-12-07 Post Gamma Survey

Min-Max: 0.037 - 0.072 μSv

Projection: NAD 1983 UTM Zone 14N
Compiled: C. CARTER Drawn; C. CARTER
Date: 09/01/2012 Scale: 5m x 5m GRID
File: Kl08F107
Data Sources: AREVA Resources Canada Inc.

FIGURE 1.4-19
PRE AND POST GAMMA SURVEY
DRILL HOLE END-12-07

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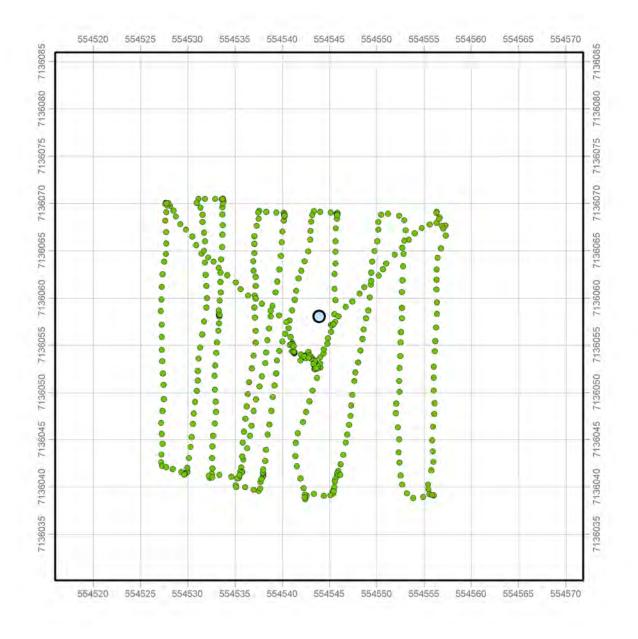


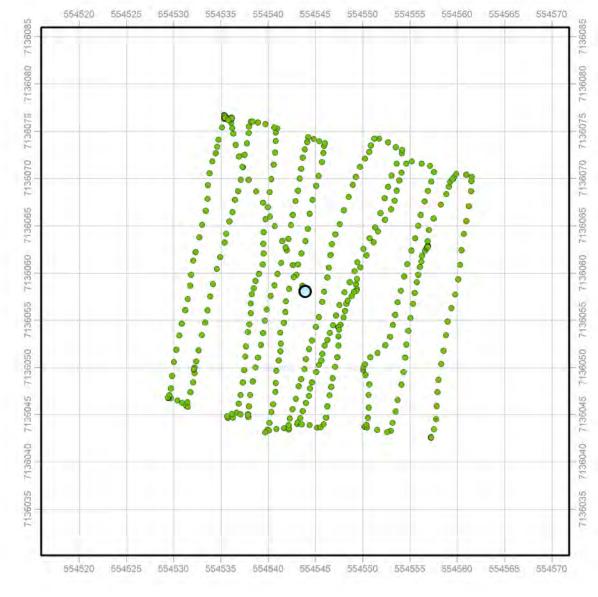
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O.6 - 1.0 μSv

1.0 - 2.5 μSv

> 2.5 μSv





END-12-08 Pre Gamma Survey

Min-Max: 0.029 - 0.061 µSv

END-12-08 Post Gamma Survey

Min-Max: 0.029 - 0.059 μSv

Projection: NAD 1983 UTM Zone 14N
Compiled: C. CARTER Drawn; C. CARTER
Date: 09/01/2012 Scale: 5m x 5m GRID
File: KI08F108
Data Sources: AREVA Resources Canada Inc.

FIGURE 1.4-20 PRE AND POST GAMMA SURVEY DRILL HOLE END-12-08

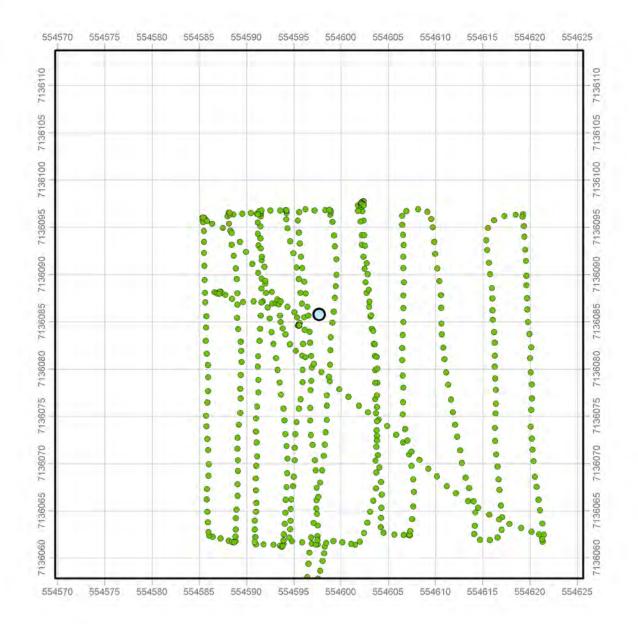


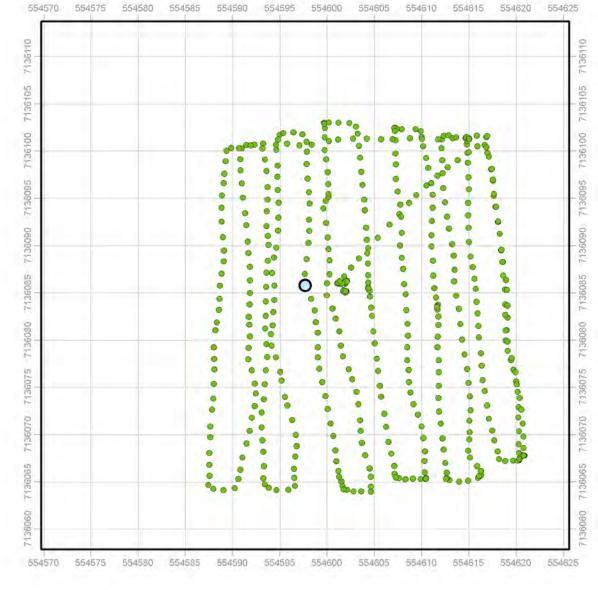


0.6 - 1.0 μSv

1.0 - 2.5 μSv

> 2.5 µSv





END-12-09 Pre Gamma Survey

Min-Max: 0.038 - 0.081 μSv

END-12-09 Post Gamma Survey

Min-Max: 0.035 - 0.073 μSv

Projection: NAD 1983 UTM Zone 14N
Compiled: C. CARTER Drawn; C. CARTER
Date: 09/01/2012 Scale: 5m x 5m GRID
File: Kl08F109
Data Sources: AREVA Resources Canada Inc.

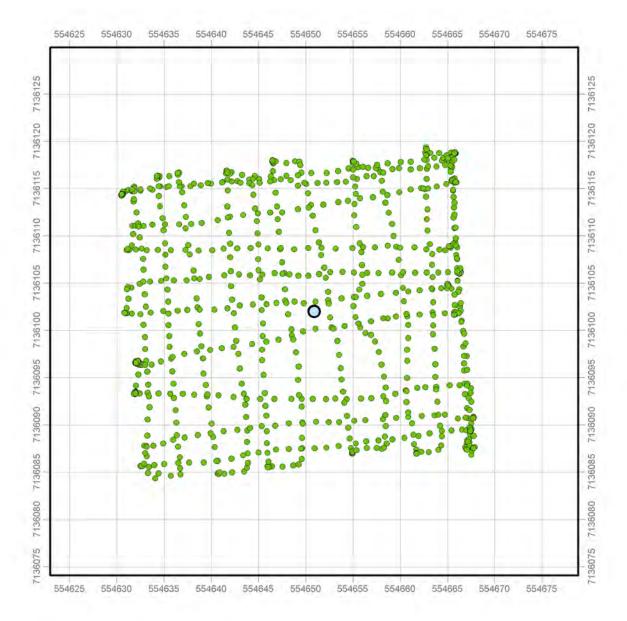
FIGURE 1.4-21 PRE AND POST GAMMA SURVEY DRILL HOLE END-12-09

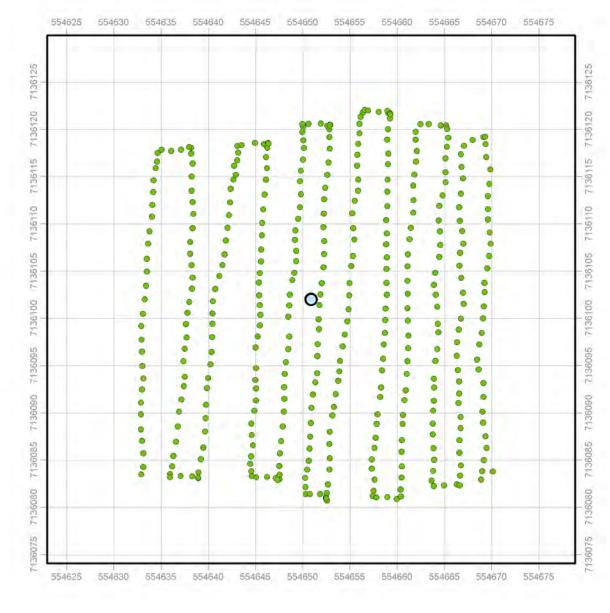




O Drill Hole Gamma Value

- 0.0 0.3 μSv
- 0.3 0.6 μSv
- 0.6 1.0 μSv
- 1.0 2.5 μSv
- > 2.5 µSv





END-12-01/02/02A/02B Pre Gamma Survey

Min-Max: 0.035 - 0.067 μSv

END-12-01/02/02A/02B Post Gamma Survey

Min-Max: 0.043 - 0.099 μSv

Projection: NAD 1983 UTM Zone 14N
Compiled: C. CARTER Drawn; C. CARTER
Date: 09/01/2012 Scale: 5m x 5m GRID
File: Kl08F110
Data Sources: AREVA Resources Canada Inc.

FIGURE 1.4-22 PRE AND POST GAMMA SURVEY DRILL HOLE END-12-01/02/02A/02B







## 1.4.5 Wildlife Mitigation and Monitoring Plan

The Wildlife Mitigation and Monitoring Plan (WMMP) was developed to monitor and reduce disturbance to wildlife, particularly caribou. The Plan incorporated recommendations from the Government of Nunavut – Department of Environment (GN-DoE), Environment Canada (EC) and the Beverly and Qamanirjuaq Caribou Management Board (BQCMB); as well as permit and lease conditions from the NIRB, Kivalliq Inuit Association (KIA), Aboriginal Affairs and Northern Development Canada (AANDC) and the Nunavut Water Board (NWB). The Plan is designed to protect wildlife from Project activities, increase the current understanding of wildlife interactions with human development and aid in determining the effectiveness of mitigation measures. Following the 2010 field season, the Plan underwent contractor, biologist, and AREVA review to further detail caribou mitigating actions and the responsibilities of the Independent Wildlife Monitor (Wildlife Monitor).

The WMMP was implemented during the 2012 field program to prevent or reduce any potential adverse effects from exploration activities on wildlife and was implemented by Wildlife Monitors from the Baker Lake community, as well as AREVA staff. Wildlife Monitors kept records of wildlife observations from survey stations located around the Kiggavik camp.

Wildlife observations and mitigation measures were summarized in monthly reports, and distributed to the Baker Lake Hunter and Trapper's Organization (HTO), the Baker Lake Conservation Officer, and the GN-DoE Regional Biologist. Wildlife monitoring occurred throughout the 2012 field program from June 11 to August 30, 2012. Eleven wildlife species were documented (Table 1.4-4), and no mitigation measures were required throughout the field season.

# 1.4.5.1 Summary of 2012 Monitoring Activities and Results

During the field season, Kiggavik personnel conducting fieldwork observed mammals (caribou, weasel, arctic hare, arctic fox, and siksiks) and birds (ptarmigan, ducks, geese, cranes and sparrows). Muskox and wolves were occasionally observed near the Kiggavik site.

### **Ground Based Wildlife Monitoring**

The AREVA staff and Wildlife Monitors provided detailed wildlife information throughout the field program. A wildlife monitoring record was utilized to ensure daily communication between the Wildlife Monitor and the Environment and Radiation Protection (ERP) Supervisor. In addition to

A AREVA

monitoring wildlife activity around camp, all operating drills were visited by the Wildlife Monitor. Wildlife Monitors accounted for 36 sightings, which equates to 46% of the total reported wildlife sightings.

#### **AREVA Staff and Contractor Wildlife Sightings**

In addition to the Wildlife Monitor, Kiggavik personnel recorded wildlife observations through aerial observations from the helicopter, sightings around the Kiggavik camp, and the incidental sightings during field work. The ERP Supervisor and designate recorded all observations in a spreadsheet format for ease of monthly reporting. The observation details varied depending on the observer, survey protocols and recording method.

#### **Aerial Observation**

Wildlife observed during routine helicopter flights were noted by passengers in booklets located in each helicopter. Helicopter sightings often occurred during routine flights to drill locations or Baker Lake. This method resulted in 15 sightings or 19% of the total throughout the season.

## **All Other Sightings**

AREVA employees and contractors were encouraged to record wildlife observations on the wildlife logs available in the camp kitchen and office. These sightings were separated between those witnessed within or near camp and those witnessed in the field (incidental). Incidental sightings accounted for 6 sightings or 8% of the total. Camp observations accounted for 21 sightings or 27% of the total wildlife sightings. Animals present regularly around camp such as the ptarmigan, siksik and hare were often not recorded each day they were observed, thus being under recorded by this method. A summary of the wildlife sightings is shown in Table 1.4-4.



Table 1.4-4 Summary of Wildlife Sightings, Kiggavik 2012

Species			Total Indiv	Range of Individuals	Timeline of Sightings		Observation Method			
(common name)	Number	% of Total	Number of Individuals	per Sighting	Initial	Final	Incidental (Field)	Aerial	Monitor	Camp
Mammals										
Arctic Fox	10	13	21	1 - 8	Jun-17	Aug-06		Х	Χ	Х
Arctic Hare	1	1	1	1	Jun-26	Jun-26				Х
Caribou	17	22	40	1 - 8	Jun-13	Aug-09	Χ	Х	Χ	Х
Muskox	33	42	475	1 - 51	Jun-11	Aug-24	Χ	Х	X	Х
SikSik (Ground Squirrel)	1	1	1	1	Aug-07	Aug-07			X	
Weasel	1	1	1	1	Jun-19	Jun-19			Χ	
Wolf	5	6	6	1 - 2	Jun-18	Jul-28	Χ		Χ	Χ
Birds	1	•		Ī	1	•		•		
Canada Goose	3	4	34	2 - 27	Jun-16	Jun-23			X	Х
Pintail Ducks	1	1	2	2	Jun-16	Jun-16				Х
Sandhill Crane	5	6	4	1	Jun-15	Aug-10			Х	
Sparrow	1	1	1	1	Jun-14	Jun-14			Х	
Total	78		586							

# 1.4.5.2 Summary of 2012 Wildlife Mitigation

Mitigation measures outlined within the WMMP were not required during the 2012 field season. Caribou did not approach within 2 km of drilling activities necessitating suspension of activity. Locations of groups larger than 50 individuals (none observed in 2012) and smaller groups known to have calves were communicated to AREVA staff and contractors to assist in avoidance.

No disturbances to wildlife were noted during the 2012 field season. Helicopter pilots received training on the flight restrictions that are described in the WMMP and the avoidance of flights over herds of caribou whenever possible.



## 1.4.6 Noise Abatement Plan

A Noise Abatement Plan was developed to mitigate the effects from noise generated during camp set-up, camp operation, winter road use, and drilling activities. Noise controls and abatement serve a combination of environmental and occupational health and safety purposes. The focus of the Plan is the control of environmental noise for the protection of wildlife.

Implementation of the Plan ensures that drill rigs and vehicles are equipped with mufflers and/or silencers and is subject to commitments made in the Wildlife Mitigation and Monitoring Plan regarding minimum flying altitudes required and the take-off and landing of aircraft.

The Plan is reviewed by all site staff, contractors, and head office contract administrators to ensure all contractors operating drill rigs, vehicles or aircraft are aware of the Noise Abatement Plan requirements.

Frequent review allows for revision to occur with the expansion of infrastructure, changing field programs and the identification of improved practices.

## 1.4.7 Environmental Baseline work

One high volume air sampler, which monitors metals and radionuclides, was in operation throughout the field season to gather additional information to that which was listed in the Draft Environmental Impact Statement (DEIS).



## 1.5 OCCUPATIONAL HEALTH AND SAFETY PROGRAM

AREVA is committed to taking every reasonable precaution toward ensuring the safety and health of all employees and contractors from any potential harmful effects of uranium exploration activities. This commitment is reflected in AREVA's Health and Safety Policy and is supported through a comprehensive Health and Safety Program for the Kiggavik Project.

The Health and Safety Program was implemented to ensure work activities were performed in a safe and responsible manner, and was conducted in accordance with the Nunavut Mine Health and Safety Regulations, exploration best practices and AREVA safety requirements. AREVA completed the field season in accordance with its OHSAS 18001:2007 certification for the Kiggavik Project's Health and Safety Management System which was originally achieved in 2011. The OHSAS 18001 standard provides the minimum requirements for a comprehensive Health and Safety Management System which allows an organization to proactively minimize occupational health and safety risks and to continually improve its health and safety performance. An external third party, SGS, conducted the OHSAS 18001:2007 surveillance audit for the Kiggavik Project's Health and Safety Management System during the 2012 field season. The OHSAS 18001:2007 surveillance audit concluded that the health and safety program continues to meet requirements.

Throughout 2012 field program, the Health and Safety Program and Management System were implemented by AREVA staff. The Project Geologist was responsible for overseeing the program with the assistance of the ERP Supervisor or designate for managing routine safety activities. To ensure worker safety and protection of the environment, all employees and contractors of the Kiggavik site received orientation and appropriate safety training prior to commencing work. Employees and contractors were also required to participate in weekly safety meetings (Safety Huddles) to discuss and reinforce safety issues and act as the Occupational Health Committee (OHC). The meeting minutes and list of members were forwarded to the Mines Inspector, NU.

There were no lost time accidents in 2012 involving AREVA or contractor personnel. There was one first aid involving a contractor, and one medical aid involving an AREVA employee. The medical aid was due to a slipped disc in the worker's back. A medical aid is classified as an injury requiring a visit to the Baker Lake clinic or personal doctor.



#### 1.6 RADIATION PROTECTION

The Radiation Protection program was implemented to ensure work activities were performed in a safe and responsible manner and that workers were not adversely exposed to radiation from drilling activities. The results of the 2012 monitoring program indicate that the field activities, conducted as part of the Kiggavik Project, did not pose a significant health risk to people working with the Project or living in nearby communities.

The Radiation Protection program was conducted using:

- Gamma dosimetry which included optically stimulated luminescent dosimeters (OLDs) and direct reading dosimeters (DRDs) for personal dosimetry
- Automess survey instrument for gamma radiation monitoring
- Ludlum model 2221 with Trimble Pro-Xrt for pre and post gamma surveys
- Ludlum model 12 survey instrument and swipes for contamination monitoring
- Alpha monitors for radon progeny and long lived radioactive dust (LLRD) monitoring

## 1.6.1 Radiation Protection Plan

The Radiation Protection Plan for the Kiggavik Project is designed to meet the requirements of the applicable Nunavut Occupational Health and Safety Regulations, exploration best management practices, and AREVA's Corporate Integrated Management System (IMS). Although current activities are not regulated by the CNSC, the Radiation Protection Plan is designed in accordance with the CNSC Regulations.

The Plan is implemented by the development and implementation of a routine monitoring schedule carried out by AREVA personnel. This includes dosimetry monitoring to determine worker exposure, proper management of radioisotopes, proper shipping and receiving of radioactive material, the proper storage and collection of radioactive materials and the development of a corporate and site specific emergency response plan.

## 1.6.1.1 Administrative Elements

The administrative elements are as follows:

- Program documentation
- Training
- Designation of Occupational Workers
- Dose limits and dose levels



- Obligations of Occupational Workers
- Pregnant workers

## **Program Documentation**

The Radiation Protection Program for the Kiggavik Project is supported through a comprehensive series of work instructions for worker dosimetry, radiological monitoring, contamination control and the safe handling of radioactive materials.

### **Training**

All AREVA employees and contractors receive appropriate radiation protection training prior to beginning work at the Project site to ensure worker safety and protection of the environment.

Personnel involved with the shipment of radioactive materials received the required training in Transportation of Dangerous Goods (TDG) Class 7 Radioactive Material.

# 1.6.1.2 Program Elements

The program elements are as follows:

- Exposure As Low as Reasonably Achievable (ALARA)
- Radiological monitoring
- Dosimetry monitoring
- Action and Administrative Levels
- Management of radioactive materials
- Shipping of radioactive materials
- Site abandonment and restoration
- Emergency response

## **Radiological Monitoring Program**

As part of the Radiation Protection Program, workplace radiological monitoring is performed for gamma radiation, radon progeny (RnP) and long-lived radioactive dusts (LLRD) to detect potentially abnormal radiological conditions, estimate worker doses, and document radiological conditions. The gamma radiation exposures are expressed in millisieverts (mSv), and ranged from 0.01 – 0.03 mSv with an average exposure of 0.013 mSv during the 2012 season.



Continuous radiological monitoring was conducted for LLRD and RnP in the core shacks. The LLRD concentrations ranged from  $0-0.0054~Bq/m^3$  with an average concentration of  $0.0014~Bq/m^3$ . Radon progeny measurements are expressed in units of Working Level (WL), a measure of the airborne potential alpha energy concentration. Indoor radon progeny levels ranged from 0-0.001~WL with an average radon progeny measurement of 0.00007~WL. The appropriate personal protective equipment and ventilation methods were used throughout the season. A summary of the radiological monitoring results is provided in Table 1.6-1.

**Table 1.6-1 Radiological Monitoring Results** 

Radiation Type	Average	Maximum
Gamma (mSv)	0.013	0.03
Radon Progeny (WL*)	0.00007	0.001
Long-Lived Radioactive Dust (Bq/m <sup>3</sup> *)	0.0014	0.0054

<sup>\*</sup>Working Levels

Contamination control measures are implemented to minimize the spread of radioactive materials into unintended locations. Contamination monitoring using a pancake probe and swipes was performed at the core shacks when gamma dose rates exceeded 10  $\mu$ Sv/h. If removable contamination levels exceed 5.0 Bq/cm² for beta/gamma over 300 cm² the affected surface or equipment must be cleaned. Contamination levels did not exceed 5.0 Bq/cm² during the 2012 field season.

#### **Dosimetry Monitoring Program**

Dosimetry monitoring is conducted to document and determine worker exposures to radiological components which include gamma radiation, RnP, and LLRD. No dosimetry action levels were exceeded during the 2012 program. The worker radiation doses observed were well below regulatory dose limits for members of the public (1 mSv/a) and occupational workers (20 mSv/a).

#### Gamma Exposures

The largest component of radiation exposure during uranium exploration activities is expected to come from gamma radiation emitted from mineralized core, rock and drill cuttings.

Worker exposures to external gamma radiation were measured using optically stimulated luminescent dosimeters (OLDs) provided by the licensed dosimetry provider, Landauer Inc. For

<sup>\*\*</sup>Becquerels per cubic meter



exposure control, workers handling and logging radioactive drill core and rock samples were also issued direct reading dosimeters (DRDs). Action and Administrative Levels are set for gamma radiation dose rates which are measured using the automess survey instrument. Action levels were never exceeded during the 2012 field season. During the 2012 program, worker gamma radiation exposures ranged from 0.01 mSv to 0.03 mSv with an average exposure of 0.013 mSv.

#### Radon Progeny and Long-Lived Radioactive Dust Exposures

Worker exposures to radon progeny (RnP) and long-lived radioactive dust (LLRD) are estimated from industry-accepted area monitoring techniques and occupancy time information. During the 2012 program, worker exposures from RnP and LLRD ranged from 0.00022 mSv to 0.002 mSv with an average exposure of 0.00103 mSv.

## **Total Effective Exposure**

The maximum annual dose permitted for an occupational worker is 50 mSv in a given year or an average of 20 mSv/a over 5 years. The maximum annual dose for a member of the public is 1 mSv/a. Total effective exposure for Kiggavik personnel was calculated for each individual based on OLD results, RnP and LLRD radiological monitoring results and time occupancy information. The maximum dose received by an individual working at Kiggavik in 2012 was 0.031 mSv, and the average dose was 0.024 mSv. Therefore, the Kiggavik personnel exposures were below the regulatory limit for members of the public (Figure 1.6-1).



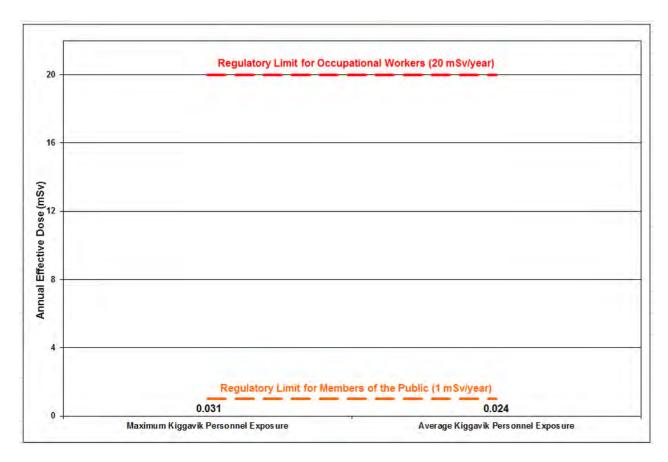


Figure 1.6-1 2012 Kiggavik Personnel Annual Effective Dose



## 2 SUMMARY OF PLANNED ACTIVITIES FOR 2013

## 2.1 GENERAL

Planned activities for the 2013 field season are similar to those conducted during the 2007-2012 field seasons; and consist primarily of exploration drilling throughout the lease areas to identify potential for additional mineral deposits and further evaluate known deposits. It is expected that the drill and support crews will commence mobilization to site between May and June with drilling completed and camp prepared for the winter season by the end September. All operations will be conducted out of the Kiggavik camp and will be supported by helicopter services and the Baker Lake office. The maximum number of people at the camp is estimated to be 59 in 2013.

## 2.2 FUEL CACHE

Bulk fuel tank storage systems (50,000 L Envirotanks) for both diesel and jet fuel will continue to be used during the 2013 field season.

## 2.3 DRILLING, SAMPLING AND TESTING

Although the 2013 drilling program has not been fully defined at this time, it may include drilling at Bong Grid, End Grid, Granite Grid, Kiggavik North, Kiggavik East, 85 West and Andrew Lake North (Figure 2.3-1).

- The objectives of the drilling campaign will be to collect resource data and to test new, previously untested areas for mineralizing systems
- Diamond drilling will include a total of 20 to 30 drill holes
- Total meterage is expected to be approximately 11,000 m
- The drill hole size will be NQ, though HQ is being considered in some areas
- Core orientation will be conducted using the Ace core orientation system, or equivalent
- Holes will be inclined (between -90° and -45°)
- Hole length is expected to range between 200 m and 500 m
- Drill locations will be picked in the spring of 2013



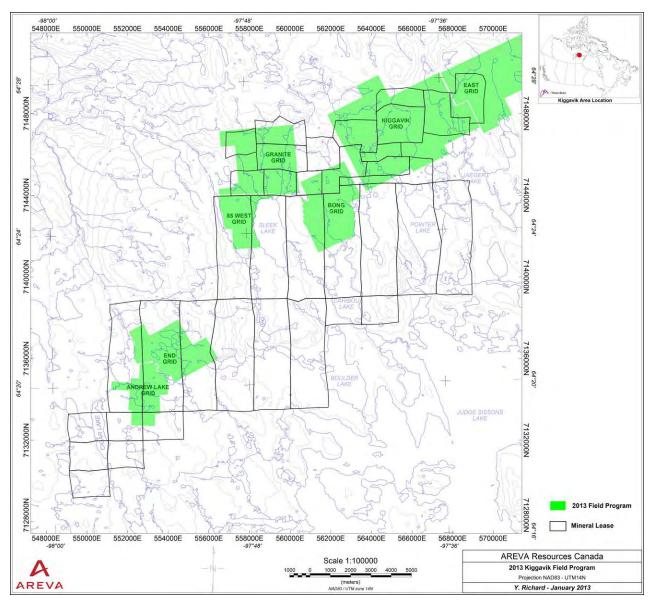


Figure 2.3-1 2013 Kiggavik Field Program

## 2.4 GEOPHYSICS

Ground geophysical surveys may be carried out throughout the lease areas to identify potential for additional mineral deposits and to further evaluate known deposit areas.

## 2.5 PROSPECTING AND GEOLOGICAL MAPPING

Prospecting and geological mapping may take place on the Kiggavik Lease and St. Tropez claim.



## 2.6 THERMISTOR INSTALLATION AND MONITORING

Currently there are no plans for the installation of additional thermistors in 2013. Monitoring of the existing thermistor network within the Project area may be conducted.

# 2.7 ENVIRONMENT AND RADIATION PROTECTION MONITORING

The 2013 Environment and Radiation Protection (ERP) monitoring program will continue to be conducted by AREVA staff with support provided by contractors if necessary. Wildlife monitoring will involve Wildlife Monitors from the Baker Lake community and Kiggavik personnel. AREVA staff will be responsible for the implementation of the following plans: Radiation Protection Plan, Spill Contingency Plan, Waste Management Plan, Noise Abatement Plan, Wildlife Mitigation and Monitoring Plan, and the Abandonment and Restoration Plan. These Plans were designed and implemented to ensure compliance with regulatory conditions and internal AREVA requirements.

## 2.8 ENVIRONMENTAL BASELINE WORK

As the review of the DEIS progresses, additional environmental baseline studies may be scheduled for the 2013 field season, however there are currently no studies anticipated for the 2013 season.



## 3 SUMMARY OF LOCAL HIRES AND INITIATIVES

An important aspect of the Kiggavik Project is that it brings employment and business opportunities to local residents. In 2012, local people were hired for work carried out at the Kiggavik camp and in Baker Lake. Local companies were successful in winning contracts. In addition to providing direct employment and business contracts, AREVA sponsored several events in the Kivalliq region in 2012.

## 3.1 LOCAL EMPLOYMENT

The Kiggavik Project provided employment to local people through direct hiring as well as by hiring local companies to supply labor services to the Project. During 2012, the project hired three local people directly – a Community Liaison Officer who worked afternoons throughout the year, a Community Relations Assistant who worked during the summer, and an Environmental Technician for the summer. The Environmental Technician from Rankin Inlet conducted environmental work at the Kiggavik Project, AREVA's McClean Lake mine site in Saskatchewan, and AREVA's decommissioned Cluff Lake mine site in Saskatchewan. Following completion of the field season, the Environmental Technician participated in the Kiggavik Project Community Tour through the Kivalliq region in October and November, 2012.

The Project contracted Inuit workers from a Baker Lake company for camp operations and maintenance, wildlife monitoring, and as geological assistants. Table 3.1-1 summarizes the employment provided to local Inuit workers for the past 5 years.



**Table 3.1-1 Local Employment** 

	2008		2009		2010		2011		2012	
	Inuit Workers	Hours	Inuit Workers	Hours	Inuit Workers	Hours	Inuit Workers	Hours	Inuit Workers	Hours
Local AREVA Employees	2	2,214	3	2993	3	3076	2*	2044	3*	1830
Contracted Workers	29	10,958	31	10,205	27	6495	17	4980	10	4332
Total	31	13,172	34	13,198	30	9571	19	7024	13	6162

<sup>\*</sup> Includes a non-Inuit local Community Relations Assistant from Baker Lake who worked in Baker Lake during the summer

The reduction in Inuit workers in 2011 and 2012 compared with previous years is due to a shorter season and no baseline field work compared with the previous years. In addition to the local employment listed here, the contracted work described in the next section also provided employment to residents of Baker Lake and other Kivalliq communities.

## 3.2 LOCALLY CONTRACTED WORK

Many goods and services obtained for the Kiggavik Project in 2012 were contracted to local suppliers. The total value of the local contracts in 2012 was \$3M, approximately 28% of the total exploration and mine development expenditures of \$10.7M. Much of this work went to companies with offices in Baker Lake and Rankin Inlet. There was also accommodation and meals in other Kivalliq communities.

Table 3.2-1 summarizes the value of contracts awarded to northern businesses since 2007. The work contracted to local companies in 2012 consists of:

- Diesel and jet fuel
- Expediting and transportation
- Environmental Assessment studies
- Helicopter services
- Groceries
- Meals and accommodations
- Translation services
- Cleaning services
- Labour
- Office utilities
- Snow clearing at site



**Table 3.2-1 Kiggavik Project Northern Contracts** 

	2007	2008	2009	2010	2011	2012	Total
Inuit Owned companies*	\$1.3M	\$2.0M	\$1.8M	\$2.2M	\$3.4M	\$2.5M	\$13.2M
Other Northern companies**	\$1.1M	\$1.5M	\$1.0M	\$0.6M	\$0.3M	\$0.5M	\$5.0M
Total Northern Expenditures	\$2.4M	\$3.5M	\$2.8M	\$2.8M	\$3.7M	\$3.0M	\$18.2M
Total Project Expenditures	\$9.5M	\$15.5M	\$19.0M	\$15.3M	\$13.3M	\$10.7M	\$83.3M
Northern Content	25%	23%	15%	18%	28%	28%	22%

<sup>\*</sup>Companies on the NNI list of Inuit owned companies

## 3.3 SPONSORSHIPS AND DONATIONS

The Kiggavik Project has sponsored community events in Baker Lake and other communities in the Kivalliq since 2006. Sponsorships were given to educational, community, cultural and sports events and celebrations. The list of events sponsored and donations given in 2012 is shown in Table 3.3-1.

**Table 3.3-1 Sponsorships and Donations for 2012** 

Category	Organization	Activity		
	Baker Lake	Hamlet Days feast		
Community.	Baker Lake	Recreation Centre Improvements		
Community	Chesterfield Inlet	Recreation Centre Improvements		
	Chesterfield Inlet Food Bank	Food Bank at Christmas		
	Baker Lake Ladies Volleyball	Tournament		
	Baker Lake Soccer	Tournament		
Consider and Decimalities	Baker Lake Snowmobile Club	Race		
Sports and Recreation –	Whale Cove Fishing Derby	Fishing Derby		
	Bike Rodeo	Kivalliq Communities		
	Kivalliq Science Camp	Kivalliq Communities		
	Partire later Otyphants	Exchange trip		
	Rankin Inlet Students	Graduation		
Education	Actua	Program Support		
	Northern Youth Abroad	Program Support		
	Nunavut Sivaniksavut	Trip		

<sup>\*\*</sup>Companies not on the NNI list but with offices in Nunavut and a significant number of Inuit employees



Category	Organization	Activity		
	Canada World Youth Program	Baker Lake		
	Baker Lake grade school awards	Graduation		
	Geocache	Baker Lake		
	Coral Harbour School	Materials for pen making Project		
	High School awards	7 communities graduation		
	Back River Visit	Visit to Homeland		
Culture	Fashion Show	Baker Lake Nunavut Day		
	Bowhead Whale Hunt	Repulse Bay		
Environment	Spring cleanup	Baker Lake		
	Baker Lake Search and Rescue	Helicopter support for search		
Health & Safety	ASIST	Suicide Prevention Session in Arvia		



## 4 COMMUNITY ENGAGEMENT

AREVA recognizes that for success of the Kiggavik Project, AREVA will need the support of the people in the region. Information sharing and community engagement are not only requirements of the environmental assessment process, but also one of AREVA's corporate commitments. This section presents the engagement activities that were carried out by AREVA in Nunavut in 2012 primarily for the environmental assessment process. The exploration program carried out at Kiggavik was discussed at some of these events.

### 4.1 INFORMATION SHARING

## 4.1.1 Information Office

AREVA has operated an information office in Baker Lake since August of 2006. The office continued to be open to the public throughout 2012 on a daily basis. A bilingual Community Liaison Officer was present each afternoon to speak with visitors. Between June and August, a full time Community Relations Assistant was also working in the Information office.

# 4.1.2 Kiggavik Project Community Liaison Committee

The Kiggavik Project established a Community Liaison Committee (CLC) in December 2006 as a means of maintaining community involvement in Baker Lake. Committee members are appointed by their respective organizations and a community member is elected as Chair of the Committee.

The organizations represented on the CLC are:

- Hamlet Council
- Elders Society (male and female representatives)
- Youth Group (male and female representatives)
- District Education Authority
- Hunter and Trappers Organization
- Health Committee
- Justice Committee
- Business Community
- Aberdeen Lake People



During 2012, the Baker Lake CLC met on 4 occasions and the group visited the Kiggavik site once. The dates are shown in Table 4.1-2. Meetings were held at the AREVA Information Office in Baker Lake and were open to the public (Photograph 4-1). Meeting announcements were made on the local radio with the date, time and location. Following the meetings, radio announcements were made to provide Baker Lake residents with a meeting summary. Translation was provided and minutes were kept of each meeting. Meeting minutes are available at the information office in Baker Lake.

The Baker Lake CLC provided community advice to the Kiggavik Project throughout the year. Following is a summary of topics discussed with the CLC:

- Updates of Project activities including the field program, the overland haul, environmental baseline work and permits
- Updates on the environmental assessment process
- The Tour of Kivalliq Communities
- Information and updates on local employment opportunities and sponsorships



Photograph 4-1 AREVA Group at CLC meeting, June 19



# 4.1.3 Kiggavik Blog

On June 29, 2010 a new communication initiative, the Kiggavik Blog <a href="www.kiggavik.ca">www.kiggavik.ca</a> went live. This website contains project information, a schedule of events and allows for the public to ask questions. Answers to questions are usually posted within one or two days and the questions and answers remain for others visiting the blog to see. Statistics for the blog are shown in Table 4.1-1. Blog activity was fairly consistent throughout the year with the highest activity in June, July and November. There were 4,211 site visits in 2012, down from 5,649 in 2011.

Table 4.1-1 Statistics for Kiggavik Blog

Mon	Month		Page views	Unique visitors	Ave Pages viewed per visit
December 2012		233	500	183	2.15
November 2012		425	976	310	2.3
October	2012	369	828	248	2.24
Septembe	er 2012	349	803	270	2.30
August	2012	307	683	212	2.22
July 2012		533	1354	303	2.54
June 2012		432	1271	303	2.94
May 2012		390	1058	300	2.71
April 2012		325	804	257	2.47
March 2012		256	756	233	2.83
February 2012		253	529	207	2.09
January 2012		339	1027	249	3.03
Total	2012	4211	10589	3075	
	2011	5649	12986	4657	



# 4.1.4 Summary of Meetings and Events

AREVA has engaged in a series of initiatives to inform, consult with and involve the community in the Kiggavik Project since 2005. The initiatives and events carried out in 2012 are detailed in this section and are listed in Table 4.1-2. Included are events that were organized by AREVA as engagement for the environmental assessment and as part of community involvement. The majority of events occurred in Kivalliq communities or with organizations from Kivalliq communities. Some events took place with communities outside the Kivalliq Region. The various activities are discussed in the remainder of the section.

Table 4.1-2 Community Information, Involvement and Engagement Activities - 2012

Community	Group	Date	Purpose/ Topic
		March 19	Overland Haul discussed
		Apr 26	EA and IIBA. IIBA team introduced
	Community Liaison Committee	Jun 19	Operation at camp discussion
		Aug 14	Visit to Kiggavik
		Oct 17	Kivalliq Open House community tour discussed
Baker Lake	Hamlet	Jan 25	Meeting with the Mayor and staff members in Vancouver during conference
	Elders	Oct 30	Meeting to discuss DEIS and Significance
	Youth	June 30	Geocache 1
		July 7	Geocache 2
		Aug 14	Youth Forum
	Community	July 9	Fashion Show
	Community	Oct 29/30	AREVA Open House re DEIS
Arviat	Hunters and Trappers Organization	May 24	Meeting with Secretary/ Manager
	Community	Nov 9	AREVA Open House re DEIS
Chesterfield	Hunters and Trappers Organization	Nov 3	Meeting to discuss DEIS and Significance
	Hamlet	May 28	Meeting with Mayor and SAO
Inlet		Nov 2	Meeting with Mayor and SAO
	Community	Nov 2/3	AREVA Open House re DEIS



Community	Group	Date	Purpose/ Topic
	Hunters and Trappers Organization	Nov 6	Meeting to discuss DEIS and Significance
	High School	Nov 6	Discussion about mining opportunities with three classes
Rankin Inlet	BEAHR Class	June 20	Spoke to this environmental program class about job opportunities.
	Community	Nov 5/6	AREVA Open House re DEIS
	Hamlet	May 25	Project update to EDO
Whale Cove	Hunters and Trappers Organization	May 25	Meeting with President and Secretary/Manager
	Community	Nov 10	AREVA Open House re DEIS
	Hamlet	Nov 1	Meeting with Hamlet Executive re DEIS
Coral Harbour	School	Nov 1	Discussion with grades 9-12 re opportunities in mining
	Community	Oct 31	AREVA Open House re DEIS
	Hamlet	May 29	Meeting with Mayor
		Nov 2	Meeting with Mayor and SAO
Repulse Bay	Hunters and Trappers Organization	May 30	Update meeting with President and Secretary/Manager
	Community	Nov 1	AREVA Open House re DEIS
	KIA	Apr 17	Meeting with staff in Iqaluit
		May 28	Meeting with CLO in Chesterfield inlet
		June 20	Meeting with staff in Rankin Inlet
	NTI	May 8	Meeting with President of NTI in Saskatoon
	NIDD	Jan 24	Meeting with Staff in Vancouver
Regional	NIRB	Apr 18	Meeting with staff in Iqaluit
Organizations, Inuit, Government	Nunavut Mine Training Roundtable	Apr 18	Annual meeting in Iqaluit
and IPG meetings	Kivalliq Wildlife Board	June 18	Project wildlife update at annual general meeting in Rankin Inlet
	Kivalliq Mayors	Sept 19	Presentation at Annual meeting in Rankin Inlet
		May 17	Discussion at Meeting in Prince Albert
	BQCMB	Oct 15/16	Discussion of Information Requests at Annual Meeting in Winnipeg
	Kivalliq Socioeconomic	Oct 16/17	Annual Meeting in Rankin Inlet



Community	Group	Date	Purpose/ Topic
	Monitoring Committee		
	Northern Project Management Office	Jan 25	Update meeting in Vancouver
		April 18	Update meeting in Iqaluit
	Federal Senator for Nunavut	Jan 24	Project Update meeting in Vancouver
		Mar 5	Project Update meeting in Toronto
	AANDC	Jan 24	Update meeting in Vancouver
		Apr 17/18	Meeting with staff in Iqaluit
	Parks Canada	May 30	Update meeting in Repulse Bay
Lutsel Ke	Council	July 23-25	Meeting with stakeholder re Kiggavik DEIS

### **Hamlet Representatives**

Kiggavik team members met with the Mayors or Hamlet Representatives of Baker, Chesterfield Inlet, Whale Cove, Repulse Bay and Coral Harbour. Meetings were for an annual update of the status of the project with a focus on the Draft Environmental Impact Statement submitted in 2012.

AREVA gave a presentation to the Kivalliq Mayors at their annual meeting on September 19 in Rankin Inlet.

### **Hunters and Trappers Organizations**

Meetings were held with the HTO's of five of the Kivalliq HTOs in 2012 during the tours of communities. An update briefing was given to the President and Secretary Manager of Repulse Bay and Whale Cove and to the Secretary/Manager of Arviat in May. A working meeting on the Draft Environmental Impact Statement was held with the Rankin Inlet and Chesterfield Inlet HTO's during the Open House tour in November.

AREVA met with the Kivalliq Wildlife Management Board on June 18 for a project update meeting during their Annual General Meeting.



### 4.2 KIVALLIQ COMMUNITY INVOLVEMENT

Community involvement for the Kiggavik project began in 2006. Community involvement activities are described in the following sections

## 4.2.1 High School Visits and Awards

The Kiggavik Project has been speaking with high school students in the Kivalliq region since 2006. The Award of Excellence is presented to the graduating high school student showing proficiency in math, science and Inuktitut. It has been awarded to a Baker Lake high school student each year since 2006. Since 2009, it has been awarded to a high school student in each of the seven Kivalliq communities. In 2012, a student at each high school was presented with of an Award of Excellence. Additionally, during the tour of Kivalliq communities in October and November, discussions on the Kiggavik Project and mining in general were held with classes in Coral Harbour and Rankin Inlet.

## 4.2.2 Baker Lake Summer Community Involvement

The 2012 summer events are summarized below.

### **Fashion Show**

AREVA sponsored a traditional fashion show in Baker Lake on July 9. Inuit of all ages dressed in traditional Inuit clothing and were judged in various categories with prizes awarded. There were four categories from age 2 to adults. This is the third year AREVA sponsored a fashion show in Baker Lake. Photograph 4-2 shows fashion show participants.





Photograph 4-2 Traditional Fashion Show in Baker Lake

### **Bike Rodeo**

AREVA was a sponsor to RCMP Bike rodeos held throughout Kivalliq communities for the second year. RCMP taught bicycle safety to youth. AREVA's participation consisted of providing new helmets for each of the youth, providing safety coloring books and refreshments.

### **Geo Cache**

Youth geocache days were held in Baker Lake on June 30 and July 7 (Photograph 4-3). This was the third year for these events. Prizes were placed at locations around Baker Lake. Teams of youth were taught how to read GPS devices and were given the coordinates of the prizes and sent to find them. All prizes were found by all teams.





Photograph 4-3 Geo-cache participants, Baker Lake, June 30, 2012

#### **Youth Forum**

On August 12, youth from Baker Lake participated in the second Youth Forum, designed specifically to engage youth from Baker Lake about the Kiggavik project. The event was held at the AREVA office in Baker Lake. AREVA staff discussed issues with Baker Lake youth. This was the second Youth Forum held.

### 4.2.3 Homeland Visits

An initiative for people with close ties to the area where the Kiggavik Project is located began in 2006 and continues. Participants visit both the Project site and their traditional homeland. Since the start, 103 people have participated in 24 homeland visits. Each visit consists of one or more Inuk, who was born on the land, along with family members traveling by helicopter and visiting a location where they lived on the land. The AREVA Community Liaison Officer normally accompanies the group on the visit. Seven visits occurred in 2012.

A summary of the homeland visits to date is provided in Table 4.2-1. Homeland visits were conducted throughout 2012. As shown in Photograph 4-4, Baker Lake elders were able to return to Qikigtayualik, which was their homeland north of Shultz Lake.



## **Table 4.2-1 Homeland Visits**

D	ate	Location	Community Participants
	Jul-27	Aberdeen Lake and Beverly Lake	12
2006	Jul-28	Aberdeen Lake and Beverly Lake	3
	Aug-24	Aberdeen Lake	3
2007	Aug-17	Schultz Lake and Aberdeen Lake	4
	Aug-21	Schultz Lake	4
	Aug-21	Judge Sissons Lake	5
2008	Sep-05	Mallory Lake	4
	Sep-06	Schultz Lake	4
	Sep-07	Herman River	4
	Aug-11	Garry Lake	4
	Aug-12	Aberdeen Lake and Beverly Lake	4
2009	Aug-13	Aberdeen Lake	4
	Sep-09	Shultz Lake and Aberdeen Lake	4
	Sep-10	Sand Lake	4
2010	Aug-28	Ferguson Lake	4
2010	Aug-29	Aberdeen Lake	4
2011	Jun-21	Kazan River	4
	July 30	30 Mile Lake, Kazan River	5
	Aug 6	Aleksektok Rapids	4
	Aug 14	308 Lake	3
2012	Aug 17	Kazan River	4
	Aug 20	Qikiqtaqyualik	4
	Aug 31	Garry Lake	4
	Sept 1	Mallory Lake	4
To	otal	24 Homeland visits	103 Participants





Photograph 4-4 Homeland Visit en route to Qikigtayualik Lake on August 20, 2012

## 4.3 SITE TOURS

Since 2005, community and other stakeholder groups have taken tours of uranium mines in Saskatchewan and the Kiggavik site.

## 4.3.1 Saskatchewan Minesite Tours

No Saskatchewan Mine tours were carried out in 2012, however mine site tours will continue. Since 2005, AREVA has hosted nine tours of Saskatchewan mine sites with 126 participants. A list of tours carried out since 2005 is provided in Table 4.3-1.



**Table 4.3-1 Tours of Saskatchewan Mines** 

Date		Group		Tour and meetings
			Governments and co- management boards	Toured McArthur River and McClean Lake and held meetings in Saskatoon with Saskatchewan Environment, CNSC and Environmental Quality Committee members
	Sep 13-15	14	32 from NTI, the three RIA's and the mayor of Baker Lake.	
2005	Sep 19-21	32	NTI, the three RIA's and the mayor of Baker Lake.	Toured McArthur River and McClean Lake and met with Saskatchewan northerners who have worked with uranium mines.
	Oct	11	Councilors, elders, students, hunter/trappers and business people from Baker Lake	Toured McArthur River and McClean Lake
2007	Sep 11-13	12	NPC Commissioners and Staff	Toured McArthur River, McClean Lake and Cluff Lake and met with EQC reps in LaRonge
	May 21-22	8	Regional Committee members	Toured McClean Lake and Cluff Lake and
	Way 21-22	1	Arctic College representative	met with the McClean Lake Elder
	Jun 21-22	7	Staff members from Government of Nunavut Departments	Toured McClean Lake and Cluff Lake
2008	Jul 15-17	12	KIA Board Members and Staff	Toured McClean Lake and Cluff Lake and met with AREVA and CAMECO representatives in Saskatoon
		11	Kivalliq Wildlife Management Board	
	Oct 6-7	9	CLC	Toured McClean Lake and Cluff Lake and met with McClean Lake elder and AREVA
		5	Minerals Class from JA High School	staff from the northern affairs office in LaRonge.
		2	Regional Committee	
2009	Jul-14	2	INAC representatives	Toured McClean Lake
Total	9 tours	126	Visitors	



# 4.3.2 Kiggavik Site Tours and Visits

Community people have been visiting the Kiggavik site since 2005. There was one community visit to Kiggavik in 2012. On August 14, 8 representatives of the Community Liaison Committee visited the Kiggavik site. A list of the stakeholder and community visits to Kiggavik since 2005 is provided in Table 4.3-2.

Table 4.3-2 Site Visits to Kiggavik

Date		Group		Visit
2005	Aug-23	4	Baker Lake elders	Visit after 2003 and 2004 cleanup
	Jul-27	12	Homeland visitors	Visit Kiggavik site during homeland visit
2006	Jul-28	3	Homeland visitors	Visit Kiggavik site during homeland visit
	Aug-24	3	Homeland visitors	Visit Kiggavik site during homeland visit
2007	Aug-12	10	CLC & community members	Tour of camp, core area and drilling
	Aug-17	4	Homeland visitors	Visit Kiggavik site during homeland visit
	Jun-12	7	Premier, Mayor and group	Tour of camp, core area and drilling
	Aug-21	8	CLC	Tour of camp, core area and drilling
2008	Aug-27	5	Regional Liaison Committee	Tour of camp, core area and drilling
	Sep-05	4	Homeland visitors	Visit Kiggavik site during homeland visit
	Sep-06	4	Homeland visitors	Visit Kiggavik site during homeland visit
	Aug-11	4	Homeland visitors	Visit Kiggavik site during homeland visit
	Aug-12	4	Homeland visitors	Visit Kiggavik site during homeland visit
2009	Aug-13	4	Homeland visitors	Visit Kiggavik site during homeland visit
2009	Aug-19	12	CLC and DEA reps	Tour of camp and core area
	Sep-09	4	Homeland visitors	Visit Kiggavik site during homeland visit
	Sep-10	4	Homeland visitors	Visit Kiggavik site during homeland visit
	Jul-20	3	Blog Question Contest Group	Tour of camp and core area
	Jul-25	3	Shultz lake group	Visited Kiggavik following a visit to Schultz Lake
2010	Aug-07	3	Community members	Tour camp and core area
	Aug-22	8	CLC	Tour of camp and core area
	Aug-24	3	нто	Tour of camp and core area



Date		Group		Visit
	Aug-25	7	Elders	Tour of camp and core area
	Aug-25	3	Blog question Contest Group	Tour of camp and core area
	Aug-25	2	Mayor and one other	Tour of camp and core area
	Aug-29	4	Homeland Visitors	Visit Kiggavik site during homeland visit
2011	Jun-21	3	Mineral and Energy Class from JA High School	Tour of camp and core area
	Aug-11	4	Bloq Question and Youth Forum Group	Tour of camp and core area
2012	Aug-14	8	CLC Visit	Tour of camp and core area
То	tals	147	Visitors	



# 5 INSPECTIONS

Inspections of the Kiggavik Project 2012 field activities were carried out by the KIA (June 27 and August 9), WSCC (July 18), Environment Canada (July 26), and AANDC (July 29).

During the inspection conducted by Environment Canada on July 26, the inspectors looked at the Kiggavik camp and drill rigs. No inspection report has been submitted to AREVA at this time however, no issues were brought up at the time of the inspection.

## 5.1 KIVALLIQ INUIT ASSOCIATION

Two inspections were conducted by the KIA during the 2012 field season. The first inspection occurred June 27 and included the inspector looking at the camp, core facilities, Bong drill site, and the fuel cache. During the second inspection on August 9, the inspector focused on the findings from the first inspection and confirmed that all action items had been completed. The findings of the first inspection are outlined in Table 5.1-1.

Table 5.1-1 KIA Inspection – June 27, 2012

RECOMMENDATIONS/CONCERNS	ACTION TAKEN
Boart Longyear section (storage area) needs to be organized	Large items in the Boart Longyear laydown area which had been brought to site during the winter haul had shifted after the spring melt. The area was organized and drill rods were properly and securely stacked.
Catalogue core on ground, store properly	Non-mineralized core from old core racks had fallen on the ground. The core was picked up and properly stored in racks.



# 5.2 WORKERS SAFETY AND COMPENSATION COMMISSION

The Mines Inspector for the WSCC conducted an inspection on July 18. The findings of the inspection are outlined in Table 5.2-1. The modifications to the roof of the drill are shown in Photograph 5-1.

Table 5.2-1 WSCC Inspection – July 18, 2012

RECOMMENDATIONS/CONCERNS	ACTION TAKEN
Please install a handrail or provide suitable fall protection on the roof to prevent a person falling from it.	Handrails were installed on the roof of the drill along the path from the top of the latter to the drill tower.
Please remove the damaged section of the diamond drill's winch line from service and ensure that when the line is fully played out for its full working length at least 3 dead wraps of rope remain on the drum. Alternatively replace the damaged cable with a new winch cable.	The hoisting cable was replaced on drill #1.



Photograph 5-1 Handrails Installed for Fall Protection



# 5.3 ABORIGINAL AFFAIRS AND NORTHERN DEVELOPMENT CANADA

A water use inspection was conducted by AANDC on July 29, 2012. The inspector visited the Kiggavik camp, fuel cache and drill areas. The recommendations and/or concerns were noted in the Water Use Inspection Report, and are outlined in Table 5.3-1.

Table 5.3-1 AANDC Inspection – July 29, 2012

RECOMMENDATIONS/CONCERNS	ACTION TAKEN
The Inspector encourages the Licensee to seek assistants, to engineer an acceptable sump and treatment system, which will not only retain the waste water but also remove the food particulate before discharging into the environment	At the end of the 2012 field season a pit was dug at the site of the sump deep enough to fit a drum (Photograph 5-3). Holes were punctured in the drum to allow water to seep out (Photograph 5-2). The drum will be filled with sand on the bottom and larger grained gravel on the top for filtration. This sump will then be ready to be used in the 2013 field season.
Inspector Requires  Artesian flow document in regards to acceptable rates  Water use volumes for this quarter  The inspector requires a timeline in regards to waste water management within 30 days of this inspection	The technical support document which was submitted to the NWB as part of the Amendment #6 application to allow drilling to continue during artesian flows and describes how "low flow artesians"/acceptable rates were determined was submitted to the Inspector on August 10. Also submitted at that time were the water use volumes to date and the timeline in regards to waste water management (sump construction).





Photograph 5-2 Punctured Drum to aid Seepage



Photograph 5-3 Sump after the Installation of the Punctured Drum



## 6 COMPLIANCE WITH CONDITIONS

The following sections list the conditions of the Nunavut Impact Review Board (NIRB) Screening Decision, the Aboriginal Affairs and Northern Development Canada (AANDC) Land Use Permit, the Kivalliq Inuit Association (KIA) Land Use Licence and the Nunavut Water Board (NWB) Water Licence for the Kiggavik Project and also describe the means by which the Project has achieved compliance with these conditions.

### 6.1 NUNAVUT IMPACT REVIEW BOARD FILE NO. 06AN085

On March 26, 2008 NIRB re-issued the original terms and conditions (April 3, 2007 Screening Decision) along with the additional terms and conditions outlined in the August 30, 2007 and January 9, 2011 letters.

# 6.1.1 Original NIRB Screening Decision – April 3, 2007

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
AANDC imposed mitigation measures, conditions and monitoring requirements pursuant to the Federal Land Use Permit	Refer to Section 6.2 AANDC.
AANDC conducted a water use inspection pursuant to the Federal Land Use Permit on July 29, 2012. AANDC recommended that AREVA engineer an acceptable sump and treatment system, and requested documents regarding water use volumes and acceptable rates for artesian flow volumes.	AREVA provided the technical support document submitted to the NWB which defined acceptable "low flow artesian" flow rates. Water use volumes were also submitted to the inspector on August 10, and a sump management system was constructed.
KIA imposed mitigation measures and/or Environment Terms and Conditions pursuant to the IOL Licence	Refer to Section 6.3 KIA Land Use Licence.



RECOMMENDATION/CONDITION	COMPLIANCE ACTION
Additional work (related to AANDC or KIA land applications) outside the original scope of the project proposal requires screening by NIRB; NIRB recommends any renewal request to be forwarded to them	Continual communication efforts are made with all regulatory agencies and boards.
GN – DOE CO's should conduct random inspections of the location from May to August to monitor compliance with DIAND Caribou Protection Measures	Conservation Officer Rob Harmer visited the Kiggavik Site on August 9.
GN-DOE should conduct on-going review of wildlife monitoring results as required by WMMP	Monthly wildlife reports were submitted to GN DOE during the duration of the 2012 field season.
After receiving the annual report, GN-DOE should report to NIRB and AANDC its findings regarding the possible impact of the Project on the Beverly and Ahiak caribou herds	No AREVA action required.
AANDC permit and KIA licence subject to any findings, direction or advice received from GN-DOE as result of 2007 GN/GNWT population surveys.	No AREVA action required.
AREVA to maintain a copy of Screening Decision at site	Located in the camp office and kitchen.
AREVA is to forward copies to NIRB of all permits obtained and required for the Project.	Ongoing.
AREVA shall operate in accordance with commitments made in all the Operation	AREVA is committed to achieving compliance as part of AREVA's commitment to continuous



RECOMMENDATION/CONDITION	COMPLIANCE ACTION
Plans (namely Spill Contingency,	improvement. Operational Plans are reviewed
Abandonment and Restoration, Noise	at least once per year and revised as
Abatement, Waste Management, Wildlife	necessary. All revisions to Operational Plans
Mitigation and Monitoring, Radiation Safety	are submitted with this annual report.
and the Environmental Code of Practice)	
AREVA to operate in accordance with	Refer to Section 6.1.2 Summary of Proponent
proponent commitments stated in Appendix	Commitments.
A (see 6.1.2 below)	
AREVA to submit annual report to NIRB,	Annual Reports have been submitted for 2007,
AANDC, KIA and GN-DOE by 31 January	2008, 2009, 2010, 2011 and 2012.
each year	
Shall abide by DIAND Caribou Protection	This is ongoing throughout the field season with
Measures (see 6.1.4) and those mitigation	employee/contractor training and awareness.
measures outlined in the WMMP.	This is monitored by AREVA staff and Wildlife
	Monitors. Refer to Section 6.1.4.
Prohibited to allow aircraft to take-off or land	Addressed in the Wildlife Mitigation and
if groups of caribou are within 1 km of the	Monitoring Plan; pilots receive training and
airstrip or helipad.	awareness; verified by a Wildlife Monitor. Refer
	to Section 1.4.5 for more information.
Update WMMP to include "Section 2.1	Revised conditions established in previous
During June and July – To avoid injuries to	Wildlife Mitigation and Monitoring Plan.
caribou and humans, if one or more caribou	GNDOE believes that 50 caribou is an
approach within 1 km of drilling operations,	appropriate threshold for the suspension of
then activities will be suspended until caribou	activities (December 16, 2008 letter to NIRB
leave the area." Any direction from GN-DOE	regarding INAC and KIA land use permit
or KIA regarding caribou management plan	extension request). Monitoring program
must be forwarded to NIRB.	(including Inuit wildlife monitors) help to guide
	this protection measure.



RECOMMENDATION/CONDITION	COMPLIANCE ACTION
Ensure no hunting or fishing without proper Nunavut authorizations	Employees and contractors made aware of required authorization during orientation and through on-going awareness.
Compliance with the CWS for Dioxins and Furans, and the CWS for Mercury. Efforts to achieve compliance reported in annual report.	Refer to Section 1.4.3.1.
Adherence to conditions in Appendix B  Archaeological and Paleontological  Resources – Terms and Conditions for Land  Use Permit Holders (see 6.1.3 below)	Refer to Section 6.1.3; hiring of an independent consultant to conduct heritage surveys and investigations
Shall avoid known archaeological and/or paleontological sites	Record of known sites is kept updated and sites are avoided or handled appropriately by consultants and responsible authorities.

# 6.1.2 Appendix A: Summary of Proponent Commitments

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
Disturbance to permafrost mitigated through insulating floors of buildings, keeping sump and incinerator area small and raising incinerator above ground	In compliance through proper site planning.
Use walkways to minimize soil and vegetation disturbance	Walkways are present between all buildings at the cabin and geology areas of camp; a new boardwalk was also built in 2012 connecting the two areas. This is addressed through training and awareness and all staff use walkways as much as possible.
Avoid wildlife during flights and avoid low flying	Ongoing through the implementation of the



RECOMMENDATION/CONDITION	COMPLIANCE ACTION
to minimize impact of helicopter and airplane noise and presence  Carefully monitor wildlife presence and collect daily wildlife sighting records. Information reported to management boards and regulatory authorities and used to plan work that minimizes wildlife disturbance	Wildlife Mitigation and Monitoring Plan; proper training and awareness to all site employees/contractors. Refer to Section 1.4.5 for more information.
Use protective procedures and containments to protect water quality	Ongoing through the implementation of the Spill Contingency Plan.
Grey water treated and monitored to ensure containment	At the end of the 2012 field season a pit was dug at the site of the grey water sump deep enough to fit a drum. Holes were punctured in the drum to allow water to seep out. The drum will be filled with sand on the bottom and larger grained gravel on the top for filtration. This sump will then be ready to be used in the 2013 field season.
No garbage to remain on site	Ongoing through the implementation of the Waste Management Plan.
Camp to be decommissioned when no longer in use	Addressed in the Abandonment and Restoration Plan.
No fuel, drill cuttings, chemicals, wastes or sediment will be deposited into any water body as per the Fisheries Act, S 36(3).	Ongoing through the implementation of the Waste Management Plan and the Spill Contingency Plan; proper training and awareness is provided to all site employees/contractors.
Sumps located above the high water mark of any water body to prevent contents from	No sumps are located above the high water



RECOMMENDATION/CONDITION	COMPLIANCE ACTION
entering water body frequented by fish	mark of a water body.
Drilling additives or mud not to be used in connection with holes drilled through lake ice unless re-circulated or contained such that they do not enter the water or are demonstrated to be non-toxic	On ice drilling has not been conducted to date.  If such activities take place in the future all proper methods will be applied in order to ensure drilling additives and muds do not enter the water. AREVA uses non-toxic materials wherever possible.
Land-based drilling not to occur within 30 m of the high water mark	Ongoing through the implementation of the Environmental Code of Practice; proper training and awareness provided; regular inspections of drill sites performed by environment group. Any drilling within 30 m of the high water mark will be under an approved licence amendment with applicable protection and mitigation measures in place to the satisfaction of the NWB and DFO.
Material will not be stored on the surface ice of lakes or streams. Materials on ice surface must be for immediate use.	Any materials on ice surface are for immediate use and completely removed before the melting of the ice.
If artesian flow is encountered, the drill hole will be immediately plugged and permanently sealed.	As approved by the NWB on March 14, 2012 AREVA is permitted to drill while under low flow artesian conditions within all areas encompassed by the Kiggavik Lease provided the appropriate measures are implemented (as outlined in Amendment approval). Refer to Section 7.2 for information regarding artesians encountered during the 2012 field season.
Winter road travel will not begin until the ground is sufficiently frozen to provide support	In compliance and ongoing. This is done by following the Environmental Code of Practice;



RECOMMENDATION/CONDITION	COMPLIANCE ACTION
and to avoid surface damage and rutting	proper training and awareness is provided.
Locate winter road stream crossings that will minimize grades. Avoid bank disturbance and mechanized clearing immediately adjacent to any watercourse.	Committed to conduct when required and achievable.
Winter road lake and stream crossings to be constructed entirely of ice and snow materials and stream crossings are to be removed or notched prior to spring break-up.	Committed to conduct when required and achievable.

# 6.1.3 Appendix B: Archaeological and Palaeontological Resources

Terms and Conditions for Land Use Permit Holders (Also attached to AANDC permit).

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
AREVA shall not operate any vehicle over a known or suspected archaeological or paleontological site	In compliance; use of ATV's only permitted around camp and for limited activities; addressed through proper training and awareness; included in site orientation.
AREVA shall not remove, disturb, or displace any archaeological artifact or site, or any fossil or paleontological site	Site rule that is reinforced during orientation.
AREVA will immediately contact the Dept. of Culture, Language, Elders and Youth (CLEY) should an archaeological site or specimen, or a paleontological site or fossil be encountered or disturbed by a land use activity.	AREVA will promptly contact CLEY should any site or specimen be encountered or disturbed.
AREVA will cease any activity that disturbs an	In compliance through proper training and



RECOMMENDATION/CONDITION	COMPLIANCE ACTION
archaeological or paleontological site until permitted to proceed by CLEY	awareness; included in site orientation.
AREVA will follow CLEY and DIAND direction in restoring disturbed sites if required	AREVA strives to promptly follow-up on all recommendations/concerns.
AREVA will provide CLEY with requested information on sites encountered in the course of land use	Any information requested on sites encountered will continue be provided to CLEY.
AREVA will make best efforts to ensure all those working under a permit are aware of conditions concerning archaeological or paleontological sites	Training and awareness of archaeological and paleontological protocol is included in site orientation. Copies of all permits and licences are provided on site for reference.
AREVA shall avoid known archaeological or paleontological sites	Record of known sites is kept updated and avoided or handled by consultants on the advice/recommendations of responsible authorities.
AREVA shall have an archaeologist or paleontologist perform those functions required and permitted by CLEY.	In compliance; hiring of an independent consultant to conduct heritage surveys and investigations.



# 6.1.4 DIAND Caribou Protection Measures

Note that these conditions are also included in the AANDC and KIA permits.

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
CARIBOU PROTECTION AREAS	
No activity, without approval of Land Use Inspector, between May 15 and July 15 within the Caribou Protection Areas	AREVA does not conduct any activity within the designated Caribou Protection Areas.
When caribou cows approach area of operation within the Caribou Protection Areas all personal not required for maintenance and protection of camp and equipment must leave the area.	
Activities within the Caribou Protection Areas occurring between May and July may be permitted by the Land Use Inspector if caribou cows are not expected to use the area for calving or post-calving.	
CARIBOU PROTECTION – GENERAL	
Operations will be suspended within any area occupied by cows and calves between May 15 and July 15 in the event caribou cows calve outside the designated Caribou Protection Areas.  The following operations will be suspended in the presence of caribou cows and calves: blasting overflights at <300m above ground	These requirements are included in the Wildlife Monitoring and Mitigation Plan. Employees are made aware of these commitments and they are monitored by AREVA staff and Wildlife Monitors. See Section 1.4.5 for further information.



RECOMMENDATION/CONDITION	COMPLIANCE ACTION
snowmobile and ATV use outside vicinity of camp	
CARIBOU PROTECTION - MIGRATION	
No operation will block or cause diversion to migration	Ongoing through the implementation of the Wildlife Mitigation and Monitoring Plan; proper training and awareness provided to all site
All activities that may interfere with migration will cease during migration	employees/contractors
CARIBOU CROSSING	
No camp construction, caching of fuel or blasting will occur within 10 km of a Designated Caribou Crossing between May 15 and September 1	Ongoing through the implementation of the Wildlife Mitigation and Monitoring Plan; proper training and awareness provided to all site employees/contractors.
No diamond drilling operations within 5 km of a Designated Caribou Crossing between May 15 and September 1	
ADDITIONAL	
Concentrations of caribou should be avoided by low level aircraft at all times	Ongoing through the implementation of the Wildlife Mitigation and Monitoring Plan; proper training and awareness provided to all pilots.  Refer to Section 1.4.5 for more information



### 6.1.5 Additional NIRB Terms and Conditions

Terms and conditions contained in August 30, 2007 letter:

#### RECOMMENDATION/CONDITION

#### **COMPLIANCE ACTION**

### SPILL CONTINGENCY PLAN

**AREVA** to consult and implement recommendations found in the 2003 CCME guidance document PΝ 1326 entitled of "Environmental Code Practice for Aboveground Storage Tank Systems Containing Petroleum Product and Allied Petroleum Products"

AREVA to revise Spill Contingency Plan regarding this amendment and conduct personnel re-training as per revised Spill Contingency Plan. AREVA to submit revised plan to NIRB and other regulators within 30 days of this decision

Revisions to include: quantity of the proposed double-walled tanks and the site layout plan; design considerations for safe operation and maintenance; operation, maintenance and inspection procedures and an emergency response plan.

The site layout and tanks have been designed by a consulting professional engineer and have been installed by а registered company/petroleum contractor to ensure compliance with the Canadian Council of Ministers of the Environment (CCME) Environmental Code of Practice Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products, 2003. In 2007 Golder Associates (Golder) conducted an engineering assessment to identify potential issues with the installation of storage tanks. Recommendations were provided for the foundation support for the storage tanks. To mitigate the potential issues described in the report, Golder recommended that the tanks be placed on timbers located under each saddle to provide an increased bearing area.

The use of timbers is a deviation from the CCME COP, however it should be noted that this is common practice in the area and AREVA received permission from the area Fire Marshal, Tim Hinds with the Government of Nunavut-Community and Government Services via email (Trevor Carlson, AREVA) on November 20th, 2007.



RECOMMENDATION/CONDITION	COMPLIANCE ACTION
	All necessary changes and appropriate training requirements have been made in both the Project's Spill Contingency Plan and the Emergency Response Manual.
Secondary containment or surface liner with adequate size and volume utilized during all fuel or hazardous substance transfers	In compliance and ongoing through the implementation of the Spill Contingency Plan and the Environmental Code of Practice.
Sufficient absorbent materials and spill kits during fuel transportation, storage and transfers are provided	In compliance and ongoing through the implementation of the Spill Contingency Plan.
DRILLING AND DISPOSAL OF RADIOACTIVE	SUBSTANCES
Use of biodegradable and non-toxic additives (Canadian Environmental Protection Act lists CaCl <sub>2</sub> as a toxic substance)	Committed to minimize the use of CaCl <sub>2</sub> when drilling conditions allow.
Drill holes that encounter uranium mineralization with a content >1.0% over a length of >1 m with a meter-percent concentration greater than 5% should be sealed by cementing over the entire mineralization zone; this should be at least 10 m above and below each mineralization zone.	Committed to conduct when required and achievable as per Uranium Exploration Plan.
All land-based artesian holes shall be documented, plugged and sealed with grout.	Refer to section 7.2 for information regarding all artesians encountered during the 2012 field season.
Core storage areas should be located at least 100 m from the high waterline of all water	Ongoing through the implementation of the Radiation Protection Program and appropriate



RECOMMENDATION/CONDITION	COMPLIANCE ACTION
bodies.	site planning.
PHYSICAL ENVIRONMENT	
No movement of equipment or vehicles unless the ground is in a state capable of fully supporting the equipment or vehicles without rutting or gouging. Overland travel suspended if rutting occurs	Ongoing throughout field season. Importance communicated to employees and contractors during orientation and on-going awareness. ATV and snowmobile use is strictly controlled.
Additional camp facilities to be located on gravel, sand or other durable land  New sleeping units properly designed to prevent any degradation to permafrost	Is in compliance and is ongoing through site planning. All buildings/sleeping units built in 2007 and later are located on timbers placed on gravel to allow airflow underneath the building which prevents degradation to permafrost.
Final inspections of entire site to be conducted by proponent and lead agency to ensure all areas have been reclaimed in accordance with authorizations	Addressed in the Abandonment and Restoration Plan

Terms and conditions contained in January 9, 2009 letter:

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
The Proponent shall make all efforts to	In replacement of aerial surveys, ground
minimize the use of aerial surveys to obtain	observations are utilized each day around
information about caribou. It is recommended	camp and at the drill sites by the Wildlife
that the Proponent employ daily stationary	Monitor. Satellite caribou collar data is
ground observations and satellite caribou	provided AREVA by the GNWT and GN
collar data in obtaining the necessary	weekly. See Section 1.4.5 for further details
monitoring data.	on wildlife monitoring and mitigation.



RECOMMENDATION/CONDITION	COMPLIANCE ACTION
The Proponent shall not conduct aerial surveys with flight altitudes less than 120 m above ground level between June 1 and August 15.	Aerial surveys are conducted for the purpose of gathering geophysical data. As included in the Wildlife Mitigation and Monitoring Plan it is required that such surveys are conducted at an altitude > 120 m.
The Proponent shall not construct camps, cache fuel, conduct blasting or drilling activities, or operate ground, air, or marine based mobile equipment within 10 km of a 'designated and/or recognized caribou crossing' during periods of caribou migration.	There is no infrastructure or activities occurring within 10 km of a designated and/or recognized caribou crossing. Refer to Appendix A (Wildlife Mitigation and Monitoring Plan) for further details on AREVA's requirements.
Where wildlife are present, AREVA shall maintain a minimum flight altitude of 610 m above ground level where it is safe to do so	This requirement is specified in the Wildlife Mitigation and Monitoring Plan and communicated to the helicopter pilots. Flight altitudes checks are conducted by AREVA personnel to confirm this is complied with.
The Proponent shall maintain a daily logbook of caribou observations and submit these records to the Government of Nunavut, Department of Environment on a monthly basis.	A wildlife log is maintained in the Kiggavik kitchen, camp office and in each helicopter for personnel to track wildlife sightings. Wildlife sightings made by the wildlife monitor are also recorded. All wildlife sightings are reported to the GN-DoE monthly during the field season. See Section 1.4.5 for further details on monitoring and mitigation.



# 6.2 ABORIGINAL AFFAIRS AND NORTHERN DEVELOPMENT CANADA

The following table lists terms and conditions appended to AANDC Land Use Permit N2009C0017 (Received January 21, 2010; permit extended to April 9, 2013).

Development of a Waste Management Plan and an Abandonment and Restoration Plan address these issues; efforts are being made to identify local approved handling acilities.
Noted. Has not been required to date.
All combustible garbage is burned in a ingle chamber, forced-air fuel-fired ncinerator.
Noted.
Refer to Section 7.2 for information egarding artesians encountered during the 2012 field season
Valkways around camp prevent rutting and
No.



RECOMMENDATION/CONDITION	COMPLIANCE ACTION
prevent rutting of the ground surface	ground disturbance. As well an ATV is used around camp, however its use is not permitted when ground is soft. The area is inspected regularly by AREVA site personnel.
Shall dispose of all fluids used to wash machinery and equipment in a sump unless otherwise authorized in writing by a Land Use Inspector	Noted.
Prior to the discharge of any sump, shall carry out an analysis of the fluids in a manner prescribed by the Engineer and obtain his written approval to discharge.	Noted.
Shall not conduct land use operation on any lands not designated in accepted application	Plans are made for activity only on approved lands.
Locate all camps on durable land	Camp location has been inspected and approved by regulatory agencies
Advise a Land Use Inspector at least 10 days prior to completion of land use operation (1. removal or storage of equipment and materials or 2. final clean-up and restoration of the lands use will be completed)	Addressed in the Abandonment and Restoration Plan.
Shall complete all clean-up and restoration of lands prior to expiry date of permit	Development of a Seasonal and Final Abandonment and Restoration Plan.
Only allow the use of equipment that is listed in the accepted application	AREVA abides by this and has made amendment requests seeking approval for additional equipment prior to its purchase/arrival on site.



RECOMMENDATION/CONDITION	COMPLIANCE ACTION
Burn all combustible garbage in an acceptable container	All combustible garbage is burned in a single chamber, forced-air fuel-fired incinerator.
Keep all garbage and debris in a covered metal container until disposal.	All garbage is contained either in secure containers or inside buildings until incinerated.
Not locate any sump within 31 m of normal high water mark	No sump is located within 31 m of the normal high water mark.
Backfill and restore all sumps prior to expiry date of permit	Addressed in the Abandonment and Restoration Plan.
Housekeeping	Addressed through formal daily site inspections conducted by AREVA site personnel.
Not use unapproved chemicals	Comply with list provided in application.
Deposit all sewage in sump	Received verbal approval from inspector to incinerate solid sewage waste and discharge liquid waste with grey water.
Not to allow the spreading of drilling waste on surrounding lands	All non-radioactive drill waste is contained to a low-lying depression. All radioactive drill waste is disposed of down hole when achievable or collected and stored in long-term on-site storage facility.
Burn all garbage at least daily	Ongoing throughout field season.
Remove all non-combustible garbage and debris from land use area to a disposal site approved in writing by a Land Use Inspector	Currently being separated and stored for future removal off-site; some items are being backhauled off-site.



RECOMMENDATION/CONDITION	COMPLIANCE ACTION
Report all spills immediately	Development and implementation of a Spill Contingency Plan; training and awareness.
Shall not unnecessarily damage wildlife habitat	Development and implementation of the Environmental Code of practice and the Wildlife Mitigation and Monitoring Plan; training and awareness
Shall not feed the wildlife	Implementation of the Wildlife Monitoring and Mitigation Plan; Communicated as site rule during orientation, training and awareness.
Provide in writing the location of all fuel caches within 10 days of establishment	Completed and AREVA will continue to communicate any fuel cache locations.
Fuel storage must be a minimum of 30 m from normal high water mark	The main and camp fuel caches are located >30 m from the normal high water mark.
Shall not allow petroleum products to spread to surrounding lands or into water bodies	Ongoing through the implementation of the Spill Contingency Plan and site orientation, training and awareness.
Mark all fuel containers with Permittee's name	Ongoing
Display land use permit number on all vehicles and equipment	These are displayed on both the ATV and the stand-up forklift
Dispose and seal drill mud solids or cuttings with uranium concentration >0.05% down hole	Radiologically contaminated material is collected in bags and stored in long term storage facility on site. All drill holes are permanently sealed.
Seal by grouting entire mineralization zone and greater than 10 m both above and below each	All drill holes are cemented and grouted as required.



RECOMMENDATION/CONDITION	COMPLIANCE ACTION
mineralization zone, any drill hole that encounters mineralization with a uranium content greater than 1.0% over a length of >1 meter, and with a meter-percent concentration >5.0	
Seal by cementing, all drill holes by grouting to an appropriate depth from the surface such that surface waters are prevented from interacting with ground waters	All drill holes are cemented and grouted as required.
Conduct radiometric surveys following backfilling of site. If material exceeds background radiation levels the Land Use Inspector must review and approve handling procedures.	Conducted upon completion of hole. Refer to Section 1.4.4.2 for further details.
Ensure gamma radiation levels of core storage meet the decommissioning requirements of less than 1.0 $\mu Sv$ one meter from surface, not to exceed 2.5 $\mu Sv$ . If core exceeds identified levels the Land Use Inspector must review and approve handling procedures.	Conducted as part of routine monitoring schedule.
Convert instruments to measure radiation counts per second to μSv/h	Automess has a read out in $\mu Sv/h$ . Conversion is known for other instruments used to measure gamma radiation.



# 6.3 KIVALLIQ INUIT ASSOCIATION LAND USE LICENCE

The following table lists terms and conditions appended to KIA Land Use Licence KVL306C02 (received 3 April, 2007; expiry January 2012).

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
LICENCE TERMS AND CONDITIONS	
Compliance with all applicable regulations, laws, orders and with terms of licence. Provide KIA with written notices of noncompliance.	AREVA complies with all regulations, laws, orders and with terms of licence. Written notices are and will continue to be provided to KIA should a non-compliance occur.
Obtain and maintain such licences, permits or approvals from the federal, territorial or other governing bodies as may be necessary to enable the Licencee to undertake the permitted activities on the lands	AREVA will obtain all required authorizations.
Permit KIA reasonable access to site for purpose of inspecting	Ongoing. KIA conducted an inspection of the Kiggavik Project on June 27 and August 9, 2012.
All fees required under licence due on the first of each month. AREVA responsible for reasonable costs of inspections KIA deems necessary to monitor compliance.	AREVA has provided all formally requested fees.
Obtain and maintain appropriate insurance at all times during occupation. Proof of all insurance shall be provided	Ongoing.
AREVA is required to pay the applicable licence fees if operations cease and environmental remediation reclamation occurs	Condition is recognized by AREVA.



RECOMMENDATION/CONDITION	COMPLIANCE ACTION
Any damage or injury to lands or property caused by licencee will be repaired, rebuilt, replaced and restored to the satisfaction of KIA.	Addressed in the Abandonment and Restoration Plan.
Submit a Work Plan (proposed operation for upcoming year) and an Environmental Action Plan (reclamation and remediation plans) to KIA no later than September 30 <sup>th</sup> each year	Obtained agreement from KIA allowing all revised Plans to be submitted with the Annual Report in January of each year.
SCHEDULE A: GENERAL STANDARDS	
No operations on lands not covered by approved licence	In compliance and ongoing.
Contact KIA at least 48 hours prior to commencement of licensed activities	KIA has been and will continue to be notified prior to the start of each field season.
Keep all computable garbage and debris in a covered metal container; combustible garbage burned in a suitable container; non-combustible removed to approved locations	Ongoing by implementing the Waste Management Plan; includes the proper sorting and storage of garbage; non-combustible garbage back-hauled off-site.
Sewage deposited into a sump or removed from lands	Received verbal approval from inspector to incinerate solid sewage waste and discharge liquid waste with grey water.
No metal wastes buried without consent of the KIA	In compliance through the implementation of the Waste Management Plan; proper training and awareness; proper sorting and storage.
Locate all camps on gravel, sand or other durable land. No permanent structures erected without KIA consent.	Addressed in site plans; all permanent structures have approval of KIA.



RECOMMENDATION/CONDITION	COMPLIANCE ACTION
Housekeeping – keep lands free of garbage and debris	Addressed through formal daily site inspections conducted by AREVA site personnel. Expectations are reviewed during site orientation.
All man-bear interactions reported to nearest Renewable Resources Office	AREVA will continue to comply if such interactions were to occur.
Licence available for viewing in a conspicuous place on site	All site staff is made aware of its location in the camp office and kitchen.
Within 60 days of licence expiry AREVA to provide KIA with final plan showing all areas used in operations	Condition noted and will be complied with upon expiry of approvals.
All buildings, equipment and materials removed (unless otherwise authorized) at completion of operations or licence termination.	This is addressed in the Abandonment and Restoration Plan.
All burial grounds avoided and left undisturbed. All discovered sites to be reported to KIA.	Condition noted and will be complied with upon occurrence.
Operations carried out as to minimize surface disturbance	Ongoing by implementation of the Environmental Code of Practice
All disturbed areas restored	AREVA continues to implement the Abandonment and Restoration Plan.
Surface vehicles not to be used to move drill rigs or other equipment/supplies without prior authorization. Vehicle use off approved routes prohibited.	In compliance; ATV approved to be used around camp only. Most material is transported by helicopter.



RECOMMENDATION/CONDITION	COMPLIANCE ACTION
No petroleum storage containers within 12 m of the normal high water mark.	In compliance through the implementation of the Spill Contingency Plan; generally adhere to the more stringent condition of 30 m.
No petroleum or chemical products to spread to surrounding lands or waters	Ongoing through the implementation of the Environmental Code of Practice and the Spill Contingency Plan. This involves extensive preventative measures and careful monitoring. All fuel and equipment is kept at a minimum of 30 m from the high water mark
All petroleum shall be kept in approved containers marked or within a bermed area. All containers labeled with licencee name	Ongoing through the implementation of the Spill Contingency Plan.
All spills reported	A hose carrying non-mineralized drill cuttings burst near the END Grid streams on August 1, 2012 and was reported the same day. Refer to Section 9 for details.
All combustible waste will be incinerated or removed	Ongoing through the implementation of the Waste Management Plan; proper sorting of wastes; proper training and awareness.
All drill fluids disposed of in sump or naturally occurring contained depression. Drill fluids recycled whenever possible.	Non-mineralized drill fluids are deposited in a naturally low lying depression >30 m from any water body. Mineralized cuttings are collected and stored in the Radioactive storage compound.
No drill sumps to be located within 30 m of any water body	Instructed through Environmental Management Plans and adhered to through site planning.



RECOMMENDATION/CONDITION	COMPLIANCE ACTION
All drill sumps to be restored to natural surrounding contours of the land prior to licence expiry	To be completed through the implementation of the Abandonment and Restoration Plan.
Restrict vegetation disturbance from deposit of drill fluids/cuttings to the area of the sump and ground prepared for re-vegetation upon abandonment	Ongoing throughout field season and implemented through the Abandonment and Restoration Plan.
No deposit of deleterious substances into any water body	Ongoing through the implementation of the Spill Contingency Plan.
Not cause obstruction of any stream	In Compliance through implementation of the Environmental Code of Practice; proper training and awareness.
Winter stream crossings must be removed prior to annual break-up	Condition noted.
Shall abide by Caribou Protection Measures	Measures have been integrated into the Wildlife Mitigation and Monitoring Plan.
Ensure there is not damage to wildlife habitat	Condition integrated into Wildlife Mitigation and Monitoring Plan and continued employee awareness through orientation and on-going training.
Shall cease activities that may interfere with migration or calving	Integrated into Wildlife Mitigation and Monitoring Plan and considered when planning site activities.
Shall not move any equipment or vehicles without prior testing the thickness of ice	No on ice drilling conducted to date; recommendation is implemented by contractors conducting winter haulage.



RECOMMENDATION/CONDITION	COMPLIANCE ACTION
Shall suspend overland travel of equipment or vehicles if rutting occurs	Condition is noted. AREVA site personnel monitor land conditions during regular inspections of field operations and winter hauls.
Shall construct and maintain winter roads with a minimum of ten centimeters of packed snow at all times	Condition communicated to contractor carrying out winter haul.
Shall not use any equipment except of the type, size and number listed in the application	AREVA is in compliance with this list and any other amendments issued.



# 6.4 NUNAVUT WATER BOARD LICENCE

The following table lists terms and conditions appended to NWB licence 2BE-KIG0812 (April 25, 2008 to December 31, 2012; previous licence No.'s 2BE-KIG0708 and 2BE-SIS0607).

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
GENERAL	
Annual fees paid in advance of water use	Ongoing.
File an annual report by March 31st	Fulfilled with submission of this report. Annual Reports had previously been submitted for 2007, 2008, 2009, 2010 and 2011.
Notify NWB of any changes in operating plan	Continual communication efforts are made with all regulatory agencies and boards and amendments applied for as necessary.
Install flow meters for measuring water volumes	Complete on camp water supply. Known pumping capabilities for all pumps at drills are known and can be used to calculate the maximum amount of water that can be used at the drills each day. This number is below the allowable limit for water used at the drills each day. Refer to Section 7 for further information.
Include proposed implementation timetable with submitted plans for Board approval and direction and implement plans as approved	All plans have been implemented.
Copy of Licence is maintained at site	Available in site office and in kitchen.
All reports, studies and plans submitted in paper and electronic and include executive summary in	Ongoing.



RECOMMENDATION/CONDITION	COMPLIANCE ACTION
Inuktitut. Ensure documents are received and acknowledged.	
WATER USE	
Obtain all camp water from small unnamed lake approx. 300 m distance north of camp to maximum of 5 m³/day	Licence No 2BE-KIG0812 Amendment #3 effective as of Aug. 7, 2009 states that the volume of water obtained for the camp is not to exceed 10m³/day. Please see Section 7 for more details on compliance.
Obtain drill water from local source(s) to a maximum of 295 m <sup>3</sup> /day	Licence No 2BE-KIG0812 Amendment #3 effective as of Aug. 7, 2009 states that the volume of drill water obtained from local source(s) is not to exceed 290 m³/day. AREVA was compliant with this licence condition throughout the field season.
Volume of water under this licence not to exceed 300 m <sup>3</sup> /day	AREVA was compliant with this licence condition throughout the season.
Streams cannot be used as a water source	Streams have not and will not be used as water sources.
Notify NWB of potential drawdown of a water source within 30 days of its occurrence	Condition is noted. NWB will be notified as required.
Water intake hoses have screens of appropriated mesh size	Ongoing. All water hoses are inspected by AREVA site personnel on an ongoing basis to ensure compliance with this condition. The appropriate mesh size is described in the Department of Fisheries and Oceans Freshwater Intake End-of-Pipe Fish Screen Guideline.



RECOMMENDATION/CONDITION	COMPLIANCE ACTION
Shall not remove any material from below the ordinary high water mark of any water body	Training and awareness. Inspections are conducted to note non-compliance.
Shall not cause erosion to banks of any body of water	Condition met throughout the 2012 field season.
Implement sediment and erosion controls prior to and maintained during operation	Condition noted. Preventative and mitigation measures are in place for sediment and erosion control during drilling activities.
WASTE DISPOSAL	
Waste disposal is a minimum of 30 m from high water mark	Waste disposal sites are located more than 30 meters from the high water mark.
No open burning or on-site land filling	On-site incinerator is the only permitted burning; development and implementation of a Waste Management Plan.
Provide authorization from the community of Baker Lake prior to backhauling any waste	Received written consent from Baker Lake, forwarded to NWB.
Waste manifesting	Waste manifests are up to date for all waste backhauled.
Backhaul and dispose of all hazardous wastes, waste oil and non-combustible waste in an approved waste disposal site	Waste management and sorting is addressed in the Waste Management Plan. Until 2012, all waste oil was shipped to BLCS in Baker Lake to be burned in waste oil furnaces. As BLCS is not able to burn waste oil at this time, all waste oil generated during the 2012 field season will be backhauled to Baker Lake during the winter haul and shipped to an approved waste



handling facility in 2013.  Currently grey water is being placed in a natural depression which is >100m from any water body.  Rather than incinerator toilets, solid sewage waste is collected and incinerated.  ERATIONS
natural depression which is >100m from any water body.  Rather than incinerator toilets, solid sewage waste is collected and incinerated.
waste is collected and incinerated.
ERATIONS
Operation is seasonal from May to September. Informed through training and awareness.
Drainage and flow are considered prior to activities.
Training and awareness are discussed with winter transport contractors.
Training and awareness and project planning.
Completed.