VIA COURIER

January 25, 2010

Indian and Northern Affairs Canada – Land Administration
PO Box 100
Iqaluit, NU X0A 0H0

Kivalliq Inuit Association
PO Box 340
Rankin Inlet, NU X0C 0G0

Nunavut Impact Review Board
PO Box 1360
Cambridge Bay, NU X0B 0C0

Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU X0B 1J0

Government of Nunavut – Department of Environment
PO Box 1000 Station 1300
Iqaluit, NU X0A 0H0

Dear All:

Re: 2009 Annual Report for the Kiggavik Project
INAC Land Use Permit N2006C0037; KIA Land Use Licence KVL306C02; NWB Water Licence 2BE-KIG0812

Please find enclosed the 2009 AREVA Resources Canada Inc. (AREVA) Annual Report for the Kiggavik Project and accompanying updated operational plans for your review, comment and distribution. A hard copy and CD of the annual report and plans have been sent via courier.

This report fulfills the Nunavut Impact Review Board screening recommendation; Indian and Northern Affairs Canada permit condition No. 5, and Nunavut Water Board Licence Part B, Item 2 for an annual report submitted by January 31 and March 31st respectively, which addresses the previous year of operation.

AREVA trusts that this annual report is a concise and useful summary of the activities conducted in 2009. Please do not hesitate to contact Kim Sarauer at 306-343-4043 or kim.sarauer@areva.ca or myself at 306-343-4631 with any questions or comments.

Yours truly,

Frederic Guerin, Ph.D
General Manager, Kiggavik-Sissons
AREVA Resources Canada Inc.
Tel: (306) 343-4631
frederic.guerin@areva.ca

cc:
Workers' Safety and Compensation Commission
Government of Canada – Department of Fisheries and Oceans
ARC Distribution

AREVA Resources Canada Inc. - Kiggavik Project Field Program

2009 Annual Report

January 2010

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Title	Name	Signature

History of Revisions

Version	Date	Details of Revision
1	25-Jan-10	• Original Release

AREVA Resources Canada Inc.

KIGGAVIK PROJECT FIELD PROGRAM

2009 ANNUAL REPORT

Date of issue: January 2010

AREVA

AREVA Resources Canada Inc.

Kiggavik Project, Nunavut

Field Program

2009 Annual Report

Date of Issue: January 2010

Executive Summary

The following Annual Report is a summary of the 2009 field programs conducted at the Kiggavik Project and is required by condition #5 of Land Use Permit N2006C0037 issued by Indian and Northern Affairs Canada (INAC) and under Part B, Item 2 of Licence No. 2BE-KIG0812 issued by the Nunavut Water Board (NWB).

The 2009 field program of the Kiggavik Project was focused on diamond drilling, ore and waste rock sampling and geophysical surveys in order to improve the understanding of known uranium deposits in the Kiggavik and Sissons areas. Drilling started on May 27, 2009. During the drilling period 9040.5 metres was completed on 27 drill holes using NQ and HQ sized diamond core equipment. Ore and waste rock samples were collected from core drilled and sent to laboratories for testing. Detailed geotechnical logging was conducted on all drill holes. Packer tests were performed in deep holes that extended below the base of expected permafrost. Four thermisters were installed while ground temperature data from the thermistors installed in 2007 continued to be collected.

Environmental baseline work in 2009 was focused on aquatic, terrestrial wildlife, hydrological, marine and archaeological assessments. The 2009 program also included a LiDAR survey.

All drilling operations were conducted out of the Kiggavik camp and were supported by helicopter services and the Baker Lake office. In 2009, the camp accommodated up to 59 persons. There were no lost time incidents involving AREVA Resources Canada Inc. personnel and one lost time accident involving a contractor (slip and fall on ice). The Wildlife Mitigation and Monitoring Plan was successfully implemented, protecting wildlife by avoiding conflicts and minimizing impacts within the Project area.

Occupational health and safety and radiation protection programs were implemented to ensure work was performed in a safe and responsible manner and that workers were not adversely exposed to radiation from uranium exploration activities.

A community engagement program was carried out to support all aspects of the Kiggavik Project, including the field program.

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ᑕᒪᒃᑯᐊ ᐊᕋᒍ ᑕᒪᖅᓯᐅᑎᑦ ᑎᑎᕋᖅᓯᒪᔪᖅ ᓇᐃᓇᖅᓯᒪᑉᐳᒍ ᑕᒪᑐᒪᓃ 2009 ᐱᓕᕆᐊᖑᓚᐅᖅᑐᑦ ᑕᐃᑲᓂ ᑭᒡᒐᕕᖕᒥ ᐱᔭᕆᐊᖅᑎᑕᐅᒪᑕ ᑕᒪᑐᒧᖓ ᓈᓴᐅᑎᖃᖅᑐᒧᑦ 5 ᓄᓇᒥᒃ ᐊᑐᕈᑕᐅᔭᖅᑐᒧᑦ N2006C0037 ᑐᓂᔭᐅᓚᐅᖅᑐᖅ ᑕᑉᑯᓇᖓᑦ ᐃᓄᓕᕆᔩᑐᖅᑯᓐᓂᑦ ᑲᓐᓈᑕᒻᒥ ᐊᒪᓘ ᑕᒪᑐᒧᖓ ᐃᓚᖓᓄᑦ ᑎᑎᖅᑲᖓ H. ᐅᕗᖓ 2 ᓚᐃᓴᕆᔭᐅᕝᕙ ᓇᓴᐅᑎᖓ 2HE-KIG0812 ᑐᓂᔭᐅᓚᐅᖅᑐᖅ ᑕᑉᑯᓇᖓᑦ ᓄᓇᕗᑦ ᐃᒪᓕᕆᔩᑯᖏᓂᑦ.

ᑕᒪ 2009 ᐱᓕᕆᓂᐅᓚᐅᕐᑐᖅ ᑕᐃᑲᓂ ᑭᒡᒐᕕᖕᒥ ᐱᓕᕆᐊᖃᕈᐊᓛᐅᖅᑐᖅ ᐃᑯᑕᖅᓂᖅᒥᒃ. ᐅᔭᕋᓕᕆᓂᖅᒥᒃ ᖃᐅᔨᓴᖅᓂᖅᒥᒃᑯ ᓄᓇᖑᐊᑯᑦᑯ ᖃᐅᔨᓴᖅᓂᐅᔪᓂᒃ ᐱᔪᑎᕆᑉᑐᕆᑦ ᑕᒪᑐᒥᖓ ᑐᑭᓯᕙᓪᓚᕈᑎᒃᓴᓐᓂᒃ ᐱᑕᖅᑲᓂᖕᓚᓂᒃ ᓄᖑᓯᐃᑐᒥᒃ ᑕᐃᑲᓂ ᑭᒡᒐᕕᖕᒥ ᖅᑭᑭᖅᑕᓕᖕᒥᓗ. ᐃᑯᑕᓇᐊᓚᐅᕐᑐᑦ ᒥ 27, 2009 ᐃᑯᑕᖅᓂᖅᑲᑎᑦᑐᕆᑦ 9040.5 ᐊᖏᓂᖅᑲᖅᑐᒻᒥᒃ ᐃᑯᑖᓚᐅᕐᑐᑦ 27 ᐃᑯᑕᖅᑕᐅᓛᐅᖅᑐᑦ ᐊᑐᖅᓱᑎᒃ ᑕᒪᑯᓂᖓ ᐃᑯᑕᐅᑎᓂᒃ ᓯᑎᔪᓐᓂᒃ ᐊᕿᑦᑐᓂᒃᑯ ᐊᖏᓂᖅᑲᐅᑦ ᐅᔭᕋᓕᕆᓐᓂᐅᑎᓂᒃ. ᐅᔭᕋᐃᓪᓗ ᐊᑐᖑᕆᑐᓪᓗ ᑲᑎᖅᓱᖅᑕᐅᓚᐅᕐᑐᑦ ᐃᑯᑦᑕᖅᓐᓇᑦᓂᑦ ᐊᐅᓚᖅᑎᑕᐅᓗᑎᒃᑯ ᖃᐅᔨᓴᑕᐅᖕᓂᐊᖅᒪᑕ ᖃᐅᔨᓴᖅᑕᐅᑦᓯᐊᓚᐅᖅᑐᑦ ᑕᒪᒃᑯᐊ ᐃᑯᑕᖅᐱᐅᓚᐅᖅᑐᓃ ᑕᒪᐃᖕᓂ. ᖃᐅᔨᓴᖅᑕᐅᓚᐅᖅᑐᑕᐅᖅ ᖃᐅᔨᕆᐊᖅᑕᐅᓚᐅᖅᓱᑎᒃᑯ ᐊᑦᓯᑐᒻᒧᑦ ᐃᑯᑕᖅᓂᒃᑯᑦ ᑕᒪᑐᒪ ᕿᕿᓃᐅᑉ ᐅᖓᑕᓄᑦ ᐃᑯᑕᖅᓂᑯᓚᐅᖅᑐᑦ. ᓯᑕᒪᓂᒃ ᖃᐅᔨᓴᕈᑎᓐᓂᒃ ᐃᓕᓯᓚᐅᖅᑐᑦ ᐊᒪᓘ ᑕᒪᒃᑯᐊ ᐃᓕᔭᐅᖕᓂᑯᓚᐅᖅᑐᑦ 2007ᒥ ᑲᑎᖅᓱᓚᐅᖕᒋᓐᓇᕐᑐᑦ.

ᐊᕙᑎᓕᕆᓐᓂᖅᒧᑦ ᐱᓕᕆᓂᑯᓚᐅᕐᑐᑦ 2009 ᐱᑦᔪᑎᖃᕈᐊᓚᐅᖅᑐᖅᑕ ᐃᒪᓕᕆᓐᓂᖅᒥᒃ. ᓂᖅᔪᑎᓕᕆᓂᖅᒥᒃ ᓄᓇᐅᑉᐳ ᖃᓄᐃᐸᓪᓕᐊᓂᖓᓂᒃ ᖃᐅᔨᓴᓐᓂᐅᓚᐅᖅᑐᑦ. ᑕᒪᓐᓇ ᐃᓚᖃᓚᐅᖅᑐᖅ ᐃᒪᖅᒥᐅᑕᓪᓕᕆᓐᓂᖅᒥᒃ ᖃᖓᓯᖅᓂᑕᓕᕆᓂᖅᒥᒃᑯ ᖃᐅᔨᓴᖕᓂᐅᓚᐅᖅᑐᑦ.

ᑕᒪᖅᒥᒃ ᐃᑯᑦᓂᑯᓚᐅᖅᑐᑦ ᑕᐃᑲᖓᑦ ᑭᒡᒐᕕᖕᒥ ᐱᓕᕆᐊᖑᒪᐅᕐᑐᑦ ᐱᓕᕆᑐᑎᑲᖅᓗᑎᒃ ᖁᓕᒥᔫᓕᒃᑯᑦ ᐊᒪᓘ ᖃᒪᓂᑐᐊᖅᒥ ᑎᑎᕋᕝᕙᖕᒥᑦ. ᑕᒥᓃ 2009, ᐱᓕᕆᕝᕕᕆᔭᐅᔭᖅ ᐃᓄᖃᓚᐅᖅᑐᖅ 59. ᐱᓕᕆᓂᐅᓚᐅᖅᑐᑦ ᐊᓯᐅᕐᓂᖅᑲᓚᐅᖕᕆᑦ ᑕᑉᑯᓇᓐᓂ ᐊᓅᕙᒃᑯᓂᑦ. ᐱᖕᓂᖅᑰᐊᑭᖅᔪᖅᑲᓚᐅᕐᖑᕆᑐᖅ ᐊᑕᐅᓯᖅᒥᒃ ᑲᓐᑐᖅᑲᒃᑯᑦ ᐱᓪᓕᕆᐊᔪᒥᒃ, ᑕᒪᒃᑯᐊ ᐅᒪᔪᓕᕆᓂᖅᒥᒃ ᖃᐅᔨᓵᐅᓚᐅᖅᑐᑦ ᐱᑦᓯᐊᓚᐅᖅᑐᑦ ᐊᑐᓂᖅᑲᑦᓯᐊᓚᐅᕐᑐᑦ. ᒥᓐᐊᓂᖅᓯᓂᖅ ᐅᒻᒪᔪᓂᒃ ᐊᒃᑐᖅᓐᓂᖅᑲᖅᑲᓇᒍ ᑕᒪᑯᓄᖓ ᑕᒪᑐᒪᖕᓂᒃ ᐱᓪᓕᕆᕝᕕᕆᔭᐅᔪᒥ.

ᐊᓂᐊᖅᑕᐃᓕᒪᑎᑦᓯᓂᖅᒧᑦ ᐊᕿᐅᒪᑎᑦᓯᓂᖅᒧᓪᓗ ᐅᑕᖅᖕᓇᖅᑐᒧᑦ ᒥᐊᓂᖅᓯᓂᐅᔪᖅ ᑕᒪᒃᑯᐊ ᐊᑐᖅᑕᐅᑎᑕᐅᓚᐅᖅᑐᑦ ᑕᒪᒃᑯᐊ ᐱᓪᓕᕆᐊᖑᔪᑦ ᐊᕿᐅᒪᑦᓯᐊᕈᑎᒃᓴᖏᓄᑦ ᑕᒪᒃᑯᐊᓘ ᐱᓪᓕᕆᔨᐅᔪᑦ ᐅᓪᓗᓅᐊᓐᓇᑐᖅᑲᕐᓂᖅᒧᑦ ᐊᒃᑐᖅᑕᐅᖅᑲᓇᒋᑦ ᐅᑕᖅᓇᖅᑐᐊᓃ ᓄᖑᓯᐃᑐᓕᕆᓂᖅᒥᑦ ᐱᓪᓕᕆᐊᖅᖅᓂᖏᓐᓂ.

ᓄᓇᓕᓐᓄᑦ ᖃᐅᔨᕆᐊᖅᓂᖅ ᐊᑐᖅᑕᐅᓚᐅᖅᑐᖅ ᑕᒪᒃᑯᐊ ᐃᑲᔪᖅᑐᖅᑕᔪᑎᓴᕆᓂᒃ ᑭᒡᒐᕕᖕᒥ ᐱᓕᕆᐊᖅᑲᓂᖅ ᑕᒪᒃᑯᐊᓘ ᖃᐅᔨᓴᖅᓂᐅᓚᐅᖅᑐᑦ ᐱᓕᕆᐊᖑᓚᖅᑐᑦ.

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1 SUMMARY OF ACTIVITIES UNDERTAKEN IN 2009

1.1 General

Field activities undertaken by AREVA Resources Canada Inc. (AREVA) and its contractors in 2009 have included feasibility work, deposit appraisal and environmental baseline work:

- Deposit appraisal and feasibility work in 2009 was focused on diamond drilling in the Kiggavik and Sissons areas for the purposes of ore and waste rock sampling in order to improve the understanding of the known mineral deposits. Activities also included geophysical surveys, geotechnical logging, packer testing and ground temperature measurements.
- Environmental baseline work in 2009 was focused on aquatic, terrestrial wildlife, hydrological, and marine assessments. The program also included an archaeological component.

Operations were conducted out of the Kiggavik camp and were supported by helicopter services and the Baker Lake office. In 2009 the camp accommodated up to 59 persons. Main Project contributors were as follows:

Activity	Contributors
Management	AREVA
Drilling	Boart Longyear
Geological logging and probing	AREVA
Ore and waste rock sampling	AREVA
Geotechnical logging	Golder
Packer testing and thermal monitoring	Golder
Environmental Baseline Work/Aquatic studies	Golder
Environmental Baseline Work/archaeology	Golder
Environmental Baseline Work/Hydrology	Golder
Environmental Baseline Work/Wildlife studies	Gebauer
Environmental Baseline Work/Marine studies	Nunami Jacques Whitford
Civil Engineering Studies	EBA Engineering
Wildlife Monitoring	AREVA & NPS
Helicopter	Forest Helicopters
Environment,	AREVA
Health and Safety	AREVA & 1984 Enterprises
Occupational First Aid & Catering	5136 Nunavut
Radioactive Storage Compound Expansion	BLCS
Camp Operations & Maintenance	AREVA & NPS
Fuel and other Overland Transportation	Peter's Expediting
Expediting	AREVA & Peter's Expediting
LiDAR Survey	LSI

1.2 Camp Activities

The temporary wooden camp at the Kiggavik site was expanded in 2009 with additional new buildings, including: 2 weather-haven tents for sleeping units and 1 core logging tent. As well, an expansion to the radioactive storage compound was completed in 2009.

During the first week of September the site was prepared for seasonal abandonment with equipment and supplies that can withstand winter conditions placed in storage, while supplies and equipment requiring heated storage were brought to Baker Lake. The generator was shut down and winterized. Waterlines were drained, flushed, and winterized with antifreeze. All buildings were secured. Windows and doors of all buildings were boarded up for the winter. All personnel vacated the site by September 2, 2009. Figures 1.1 and 1.2 show aerial views of the winterized Kiggavik camp and lay-down area in September 2009.

1.3 Fuel Cache

Two primary fuel cache locations were utilized:

- Fuel cache at esker:
  64° 25' 37.98" N, 97° 43' 22.07" W
  (14W 561512, 7145240)
- Fuel cache at Kiggavik camp:
  64° 26' 25.82" N, 97° 39' 39.05" W
  (14W 564464, 7146782)

All drums of jet fuel were stored in approved 205 litre steel drums. All diesel fuel was stored in six 50,000 litre double walled envirotanks. All fuel containers were labelled, identifying the contents and AREVA's name. Fuel drums were stored within a secondary containment system. Figure 1.3 shows an aerial photo of the fuel cache.

Two 50,000L double walled steel EnviroTanks tanks for jet fuel storage were transported to the esker between January and March 2009. It is AREVA's intention to have these tanks functioning for the 2010 field season. Please refer to Section 2.3 for further details.

1.4 Drilling and Sampling

Drilling started on May 27, 2009. During the drilling period, a total of 9,040.50 metres were completed on 27 drill holes using NQ and HQ sized diamond core equipment. Average drilling rates were generally good. All drill core was geologically and geotechnically logged. Ore and waste rock samples were collected from drill core and sent to the laboratory for testing. Additionally, waste rock samples were collected from the historical drill cores and a geophysical survey was conducted over the lease area. Table 1.1 includes a summary of the 2009 drilling program.

Diamond drilling was carried out on four areas in 2009: the Kiggavik, the Andrew Lake, the End Grid, and the Mill Site. Drilling started on May 27, 2009 and stopped on August 17, 2009. During the drilling period 9,064.5 metres (9035.0 meters excluding the mill site holes) was completed on 27 drill holes using NQ and HQ sized diamond core equipment on the End Grid, Kiggavik, Andrew Lake, and Mill sites. Three HQ holes were drilled with a total meterage of 329.50 meters: one on the Kiggavik site for the hydrogeology study and two on the Mill Site for the geotechnical study. Diamond drilling on the End Grid deposit included seventeen drill holes with a total meterage of 6,649.0 meters, the Kiggavik Main Zone and Centre Zone included five drill holes for 1,357 meters, and the Andrew Lake deposit included three drill holes for 999 meters. Two shallow drill holes were drilled on the Mill Site with a total meterage of 59.5 meters.

End Grid

Thirteen out of seventeen holes were drilled to completion. Thirteen drill holes were probed out of seventeen in total. Three drill holes could not be probed due to the poor ground condition and technical problem. Eleven drill holes intercepted the mineralization in 2009. Three of those drill holes (END-09-03, END-09-10, and END-09-08A) confirmed the presence of mineralization beyond the previously defined boundaries i.e. deposit was extended in northwest and south direction, whereas two drill holes (END-09-05 and END-09-07) confirmed the limit of the mineralization known to East and South of the deposit. Other eight drill holes confirmed the presence of mineralization known in the past.

The main rock type observed at the End Grid was metasediment with local granite and quartzite intrusions throughout, which could be divided into four general groups: the upper paleo-weathered zone with hematitic alteration, the chlorite cap, the mineralized zone, and the slightly weathered to fresh zone. All lithological units are assumed to be closely related to the structural features, which consists of major faults, late cross-cutting faults, breccia fault zone, shear zones, foliation, and fractures. The recent study has revealed that the cross-cutting faults, which trend NNW-SSE and dip towards SW, is believed to have a controlling role on mineralization throughout this deposit.

Four holes were hydrogeologically (packer) tested: END-09-01, END-09-02, END-09-05, and END-09-11. One deep thermistor with the vibrating wire piezometer at the bottom was installed on one hole: END-09-01.

Kiggavik

Five holes were completed at the Kiggavik site in 2009: four at the Main Zone and one at the Center Zone. All holes were geotechnically logged for the pit slope design parameters. The major rock types observed at Main and Centre Zones included metasediment, pelitic gneiss, granite, and mafic or felsic dykes. Near surface rock appeared to be slightly to moderately weathered to a depth of approximately 50 metres

below ground surface (mbgs). In general, alteration within the pelitic gneiss appears to be silicified while granite was observed slightly altered and bleached.

The drill hole MZ-09-04 was drilled HQ and dedicated for the groundwater sampling. This hole intercepted the artesian water at a significant depth (possibly below the base of permafrost) and purged water (artesian) samples were collected for the laboratory analysis. Thermistor with the vibrating wire piezometer was installed on two holes: MZ-09-02 and MZ-09-04. MZ-09-03 and CZ-09-01 were hydrogeologically (packer) tested.

Andrew Lake

Three holes were completed at the Andrew Lake site. All holes were geotechnically logged for the pit slope design parameters. The major rock type comprises paleo-weathered metasediment with varying degrees of weathering, leaching, hematization, chloritization, sericite, and clay alteration, which is usually structurally related. More intense alteration may be associated with zones of faulting and brecciation. Two holes were hydrogeologically (packer) tested: AND-09-01 and AND-09-03. Thermistor with the vibrating wire piezometer was installed on one hole: AND-09-03.

Mill Site

Two shallow holes were completed at the Mill Site. Both drill holes RMI-09-01 and RMI-09-02 were geotechnically logged to collect information on ground ice condition of the overburden and rock quality of the bed rock. Approximately 2.6 to 4.1 m of overburden observed, which overlies moderately weathered granite. Overburden recovery was not satisfactory for the ground ice description as ice was not visible with unaided eyes. It is assumed that the thin and shallow overburden was either under the seasonal thawing condition or the frozen interval of overburden might have thawed due to heat produced by the drilling operation (without using water).

Table 1.1 Summary of 2009 Drill Holes

			Location (UTM NAD 83)			DH Orientation		Drilling date			
HOLE ID	Area	Zone	UTM X Easting	UTM Y Northing	Elevation (m)	Azimuth (TN)	Dip	Start	Finish	Length (m)	Core diameter
END-09-01	Sissons	End Grid	554642	7135960	166	0	-90	27-May-09	05-Jun-09	432	NQ3
END-09-02	Sissons	End Grid	554542	7135934	168	150	-80	08-Jun-09	15-Jun-09	495	NQ3
END-09-03	Sissons	End Grid	554582	7135912	167	330	-70	13-Jun-09	21-Jun-09	472	NQ
END-09-04	Sissons	End Grid	554752	7136018	169	240	-70	18-Jun-09	26-Jun-09	420	NQ3
END-09-05	Sissons	End Grid	554674	7136005	167	90	-70	22-Jun-09	27-Jun-09	408	NQ
END-09-06	Sissons	End Grid	554686	7135983	167	105	-80	27-Jun-09	04-Jul-09	264	NQ
END-09-07	Sissons	End	554678	7135967	166	160	-80	27-Jun-09	04-Jul-09	411	NQ3

END-09-08	Sissons	End Grid	554622	7136032	166	170	-65	04-Jul-09	05-Jul-09	24	NQ
END-09-08A	Sissons	End Grid	554622	7136032	166	170	-65	05-Jul-09	12-Jul-09	504	NQ3
END-09-09	Sissons	End Grid	554525	7135924	168	60	-85	05-Jul-09	14-Jul-09	423	NQ3
END-09-10	Sissons	End Grid	554622	7135879	166	333	-65	13-Jul-09	21-Jul-09	438	NQ3
END-09-11	Sissons	End Grid	554602	7135895	167	10	-85	15-Jul-09	22-Jul-09	441	NQ
END-09-12	Sissons	End Grid	554590	7135944	167	0	-90	22-Jul-09	27-Jul-09	456	NQ
END-09-13	Sissons	End Grid	554630	7135982	167	320	-87	23-Jul-09	29-Jul-09	456	NQ3
END-09-14	Sissons	End Grid	554654	7135946	166	0	-90	28-Jul-09	30-Jul-09	228	NQ
END-09-14A	Sissons	End Grid	554654	7135946	166	0	-90	31-Jul-09	06-Aug-09	321	NQ
END-09-15	Sissons	End Grid	554564	7135945	167	0	-90	30-Jul-09	04-Aug-09	456	NQ3
MZ-09-01	Kiggavik	Main Zone	565239	7146776	180	15	-52	01-Jun-09	10-Jun-09	309	NQ3
MZ-09-02	Kiggavik	Main Zone	565340	7146959	180	137	-75	11-Jun-09	18-Jun-09	260	NQ3
MZ-09-03	Kiggavik	Main Zone	565312	7147070	185	4	-70	23-Jun-09	29-Jun-09	248	NQ3
MZ-09-04	Kiggavik	Main Zone	565318	7147152	190	0	-90	05-Aug-09	09-Aug-09	270	HQ
CZ-09-01	Kiggavik	Center Zone	565761	7147207	170	47	-75	23-Jun-09	29-Jun-09	270	NQ3
AND-09-01	Sissons	Andrew Lake	553548	7134927	177	228	-70	07-Jul-09	12-Jul-09	342	NQ3
AND-09-02	Sissons	Andrew Lake	553319	7134809	177	330	-65	13-Jul-09	21-Jul-09	330	NQ3
AND-09-03	Sissons	Andrew Lake	553312	7134574	177	284	-70	22-Jul-09	26-Jul-09	327	NQ3
RMI-09-01	Mill Site		565014	7147747	N/A	0	-90	14-Aug-09	15-Aug-09	30	HQ3
RMI-09-02	Mill Site		564975	7147905	N/A	0	-90	16-Aug-09	17-Aug-09	29.5	HQ3

1.5 Packer Testing and Groundwater Sampling

A total of 16 single well response tests using a single packer tool were carried out in 10 geotechnical drill holes in 2009. A shut-in test was also conducted in a drill hole drilled especially for groundwater sampling. Seven out of sixteen single well response tests were analyzed: three from End Grid (END-009-01, END-09-05, and END-09-11), two from Kiggavik (MZ-09-03 and CZ-09-01), and two from Andrew Lake (AND-09-01 and AND-09-03). All the tests were conducted below the base of expected permafrost. The holes tested were drilled using NQ diamond coring equipment, and packer testing carried out using wireline packer. Packer system was inflated using nitrogen gas. In general, all tests resulted in very low injection inflow and a low estimate of apparent hydraulic conductivity, as expected in the deep bedrock environment. The hydraulic conductivity values obtained from the tests in the Kiggavik Main and Centre Zone varied

from approximately $5X10^{-8}$ to $1x10^{-8}$ m/s. The tests conducted in the Andrew Lake deposit ranged from $1X10^{-6}$ to $1X10^{-9}$ m/s. The data obtained from the End Grid site varied from $5X10^{-10}$ to $5x10^{-11}$ m/s.

Groundwater sampling was planned and chosen using the results of the hydraulic conductivity derived from the packer tests for drill holes that penetrated the bottom of permafrost. However, challenges with respect to packer testing (rods becoming stuck due to squeezing ground or freezing in, etc...) and the low hydraulic conductivity rock mass encountered made in-situ water sampling difficult. Groundwater samples were collected from the apparent flowing artesian hole MZ-09-04 and were shipped to the Saskatchewan Research Council (SRC) Laboratory for analysis. A review of the laboratory results supports the groundwater flows and artesian conditions of the drill hole, suggesting that the drill hole water quality was representative of formation water. The concentration of major elements (principally calcium, sodium and chloride), corresponding electrical conductivity and total dissolved solids (TDS) concentration appears to be considerably higher than those of local lake waters. It may indicate that the concentration of major elements is likely characterized by the natural calcium-sodium-chloride salinity of the deep bedrock.

1.6 Thermistor Installation and Monitoring

Four deep thermistor strings were installed as part of the 2009 field program to confirm estimated depths of permafrost: two on Kiggavik, one on End Grid, and one on Andrew Lake.

The temperature data collected in 2008 at Kiggavik and Andrew Lake (i.e., inside MZ-07-03 and ANDW-07-01) was essentially the same as in 2007 with the exception of some erratic readings / high temperature values recorded locally within the frozen ground. These high temperature values are likely due to faulty thermistors.

The temperature data collected from 2009 thermistors at End Grid and Andrew Lake shows the base of the permafrost at approximately 235 to 253 meters below ground surface (mbgs) respectively. At Kiggavik Main Zone the thermistors record the base of the permafrost at 207 to 216 mbgs. The temperature data collected from the multilevel thermistors indicate a temperature gradient of 0.02 °C/m at the End Grid and the Andrew Lake, and 0.03 °C/m at the Kiggavik Main Zone. The lowest measured temperatures varied from -4.4 to -6.6 °C with the coldest temperature -6.6 °C measured at 6.4 m depth at Kiggavik Main Zone (MZ-09-04).

The depth of permafrost was inferred from temperature profiles measured with deep thermistor strings in selected boreholes. In 2009, the estimated average depth to the bottom of permafrost is about 211 metres at Kiggavik. At Sissons site, the permafrost depth is estimated to be between 240 and 250 m bgs. Table 1.2 provides estimated

permafrost depths at multi-level thermistor locations and information about the drillholes penetrating the bottom of the permafrost.

Table 1.2 Estimated permafrost depths at Multi-Level Thermistor Locations

Drillhole ID	Site	Deposit Zone	Estimated Permafrost (PF) Depth (m bgs)	DrilledLength (m bgs)	Is EOH below PF Depth?
END-09-01	Sissons	End Grid	240	432	Yes
END-09-02	Sissons	End Grid		495	Yes
END-09-03	Sissons	End Grid		472	Yes
END-09-04	Sissons	End Grid		420	Yes
END-09-05	Sissons	End Grid		408	Yes
END-09-06	Sissons	End Grid		264	No
END-09-07	Sissons	End Grid		411	Yes
END-09-08	Sissons	End Grid		24	No
END-09-08A	Sissons	End Grid		504	Yes
END-09-09	Sissons	End Grid		423	Yes
END-09-10	Sissons	End Grid		438	Yes
END-09-11	Sissons	End Grid		441	Yes
END-09-12	Sissons	End Grid		456	Yes
END-09-13	Sissons	End Grid		456	Yes
END-09-14	Sissons	End Grid		228	No
END-09-14A	Sissons	End Grid		321	Yes
END-09-15	Sissons	End Grid		456	Yes
MZ-09-01	Kiggavik	Main Zone		309	Yes
MZ-09-02	Kiggavik	Main Zone	210	260	Yes
MZ-09-03	Kiggavik	Main Zone		248	Yes
MZ-09-04	Kiggavik	Main Zone	216	270	Yes
CZ-09-01	Kiggavik	Centre Zone		270	Yes
AND-09-01	Sissons	Andrew Lake		342	Yes
AND-09-02	Sissons	Andrew Lake		330	Yes
AND-09-03	Sissons	Andrew Lake	250	327	Yes

EOH- End of Hole

Additionally, three vibrating wire (VW) piezometers were installed beneath each deep thermistor string in three drill holes (END-09-01, AND-09-03, and MZ-09-04) below the bottom of the permafrost to obtain groundwater pressure (hydraulic head) information over time in the deep groundwater flow system. 2009 data from VW piezometers indicate that hydraulic heads measured beneath the permafrost in the deep groundwater flow system are generally consistent with the elevations of lakes near the proposed mines. In other words, the groundwater pressures were near to or above ground surface in all three locations. The groundwater pressures measured in the area of Kiggavik Main Zone, Andrew Lake, and End Grid deposits were approximately 25m, 3m, and 9m above the ground surface, respectively.

1.7 Geophysical Survey

The airborne geophysical survey started in 2007 was continued over the Kiggavik project in the summer of 2009 by ARKeX Ltd. The survey was flown at 150m line spacing, covering the northern portion of the Kiggavik property and extending over the St. Tropez property. A total of 3213.2 line kilometers were flown in 2009, and the data collected included Gravity Gradiometry, Magnetic Gradiometry, and Digital Terrain Mapping (LiDAR). Lines were flown at 125º, while tie lines were flown every 750m at 035º.

1.8 Civil Engineering Work

A survey was undertaken by EBA Engineering (EBA) during April 2009. Ice thickness and ground-penetrating radar (GPR) investigations were conducted along the proposed winter road route and the Thelon crossing. All-weather road route reconnaissance and potential borrow source identification surveys were also conducted during the 2009 summer field season.

1.9 Environment, Health and Safety Monitoring

The 2009 Environmental, Health and Safety program was implemented and carried out by AREVA staff along with 1984 Inc who provided safety coordinators for the Kiggavik Project. The wildlife monitoring program involved independent wildlife monitors from the Baker Lake community, consulting biologists conducting height-of-land (HOL) surveys and AREVA field staff.

Wildlife Monitoring

Caribou protection measures were in place throughout the drilling period and local wildlife monitors were employed. Records were kept of wildlife observed near camp and during flights. The largest group of caribou was observed by the independent wildlife monitor on July 27 approximately 3 km south from the camp near Pointer Lake. Muskox and wolves were seen near the site on several occasions. During field work, crews also observed several other mammals (arctic fox, lemming, and siksik) and birds (ptarmigan,

ducks, geese, cranes, and other birds). Further details regarding wildlife monitoring and mitigation measures are provided in section 3.6 of this annual report.

Environment Protection

All drill sites were subject to gamma radiation surveys prior to conducting any drilling activities and again following completion of the hole. If elevated levels of gamma radiation were detected during the post-operational survey, clean-up activities were conducted followed by another gamma survey to ensure remaining gamma radiation readings are below the cleanup criterion of 1 µSv/h.

Two environmental incidents (spills) occurred and were reported during the 2009 season. These are summarized in Section 13. The Spill Contingency Plan was adequately engaged for both incidents, to ensure proper response, reporting and clean-up of the spill sites.

Occupational Health and Safety

There were no lost time accidents in 2009 involving AREVA personnel, however one lost time accident occurred involving a contractor. Details of the incident can be found in section 3.1.

A training session was held on February 11, 2009 to improve helicopter safety. This training session was open to AREVA employees and contractors who were planning on being at the Kiggavik site during the 2009 field season. The session, facilitated by experienced transportation safety consultants, focused on helicopter safety in exploration and mine development projects.

Radiation Protection

A 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 Project activities.

The Radiation Protection program was conducted using:

- Gamma dosimetry: OLDs (Optically stimulated Luminescent Dosimeter) and DRDs (Direct Reading Dosimeter) for personnel dosimetry
- Automess survey instruments for gamma radiation monitoring
- Ludlum survey Instrument / pancake probe and swipes for contamination monitoring
- Portable sample counters and air pumps for radon progeny and long lived radioactive dust (LLRD) monitoring
- Track etch cups for environmental radon monitoring
- 3 PS vols also for environmental radon monitoring

No Code of Practice dosimetry action levels were exceeded during the 2009 program. The worker radiation doses observed were well below regulatory dose limits for members of the public (1 mSv/a) or occupational workers (20 mSv/a). During the 2009 program, worker gamma radiation exposures ranged from 0.00 mSv to 0.09 mSv with an average exposure of 0.01 mSv. The highest gamma radiation exposure was received by a geologist.

Worker exposures from radon progeny (RnP) and long-lived radioactive dust (LLRD) were conservatively estimated from workplace monitoring to be less than 0.03 mSv and 0.1 mSv respectively.

1.10 Environmental Baseline Work

1.10.1 Hydrology

The focus of the 2009 hydrological assessment was to gather baseline streamflow and lake water level information from drainage areas which could be impacted by the proposed project, both in terms of reduced flow due to water usage or augmented flows due to treated water releases. Lakes and streams in the Project area and along the proposed road corridors were studied.

1.10.2 Aquatic - Freshwater

The general objective of the 2009 field program was to conduct assessments of the physical aquatic habitat and biological aquatic communities in selected waterbodies. Objectives of the field studies included gathering information on waterbodies crossed by proposed road corridors and gather additional information on waterbodies that may be directly affected by the proposed project. Field assessments were carried out during winter, spring, summer, and fall of 2009 in the lakes, streams, and rivers of the Project area. Specific information collected about physical aquatic habitat included lake bathymetry; fish habitat in lakes and streams; limnology measurements (i.e., dissolved oxygen, temperature, conductivity, and pH measurements) and water chemistry in lakes and streams; and sediment chemistry and particle size in lakes. Specific information collected about biological aquatic communities included plankton communities (i.e., phytoplankton and zooplankton in lakes, and periphyton in streams); macrophyte chemistry in lakes; benthic invertebrate communities in lakes and streams; fish community composition; spring and fall spawning surveys; fish migration patterns; and fish tissue chemistry.

1.10.3 Atmospheric

During 2009, two weather stations were installed near the Kiggavik site, one at the Kiggavik exploration camp and one near Pointer Lake, to provide on-going baseline weather data.

Air quality monitors were also installed near the Project site to monitor baseline TSP, PM-2.5, PM-10, metals and radionuclides. These monitors will be operated during future active field seasons.

1.10.4 Terrestrial Wildlife

The 2009 terrestrial program provided baseline data on valued components found in the immediate and regional area around AREVA's Kiggavik and Sissons leases and proposed facilities. Field programs started in 2007 with a focus on aerial surveys for caribou, but by 2009 we have shifted from aerial surveys to more ground-based investigations to address regional concerns related to the cumulative impacts of aircraft overflights in the region. Various ground surveys were completed in the local and regional area around the proposed Kiggavik mine including along proposed road alignments, quarry sites, bridge crossing and dock facilities. We also documented waterbird and breeding bird populations throughout the study area. Details on the various programs conducted in 2009 are presented in Section 4.

1.10.5 Soil and Vegetation

Work initiated in 2008 to classify available habitat types within the local and regional study areas of the proposed Kiggavik mine was completed in 2009. To monitor changes to terrestrial baseline conditions and to provide future reference sites, soil, plant and wildlife tissue samples were collected for chemical analysis.

1.10.6 Alpha Emissions

Three site alpha dosimeters were installed in 2009; one in Baker Lake, one at Kiggavik and one at Sissons. These instruments included an air sampler, an electronic flow meter for the continuous measurement of the sampling volume of air and a head for the integrated measurement of alpha emissions of short life daughter products of radon 222 and 220 and long life products of uranium and thorium. Track etch cups for environmental radon gas measurements were also installed in 21 locations around the Kiggavik and Sissons areas.

1.10.7 Archaeology

In August 2009, Golder conducted an archaeological survey on behalf of AREVA. The survey was completed under Permit 09-010A. This was the third field season of archaeological baseline data collected by Golder Associates Ltd. for this project. The 2009 field crew consisted of Brad Novecosky and Patrick Young of Golder Associates Ltd. as well as Timothy Evviuk and Richard Pudnak of Baker Lake.

The primary purpose of the 2009 archaeological survey was to continue to collect baseline information on heritage resources in the Project area. The archaeological investigation included a combination of pedestrian and low level helicopter survey of proposed all season and winter road corridors, as well as potential quarry sources for road construction.

In addition to the fieldwork, a presentation by Brad Novecosky of Golder was made to members of the Kiggavik Community Liaison Committee visiting the AREVA exploration camp on August 19th. On August 20th, a presentation was also given at a public meeting held at the community centre in Baker Lake. The two meetings provided an update on the archaeological surveys carried out to date.

During September, the Heritage team completed a one page non-technical summary of field investigations. The summary was submitted to the Nunavut Government Department of Culture, Language, Elders and Youth in compliance with the conditions of the Nunavut Archaeologist Permit held by Golder for the Kiggavik Project.

1.10.8 Marine Studies

Marine studies were conducted during 2009 in Chesterfield Inlet and coastal areas between Chesterfield Inlet and Churchill by Nunami Stantec Limited (Nunami) staff and local assistants from the communities.

The main objective of the 2009 aerial survey program was to provide seasonal documentation of the distribution of marine mammals in the study area, which includes the shipping corridor between Churchill and Chesterfield Inlet. Surveys were performed during summer (July 29 – 30) and fall (August 31 – September 3). Beluga whales, polar bears and pinnipeds were observed.

At community meetings on May 29, 2008 and July 16, 2009, the residents of Chesterfield Inlet indicated they would like a vessel tour to be conducted in Chesterfield Inlet to impart local knowledge of important hunting and fishing grounds in the area. This survey was completed in August 2009. Beluga whales, polar bears, snow geese, seals, black guillemots, and caribou were observed during the vessel survey.

Figure 1.1 Winterized Kiggavik Camp, September 2009

Figure 1.2 Winterized Kiggavik Lay-Down Area, September 2009

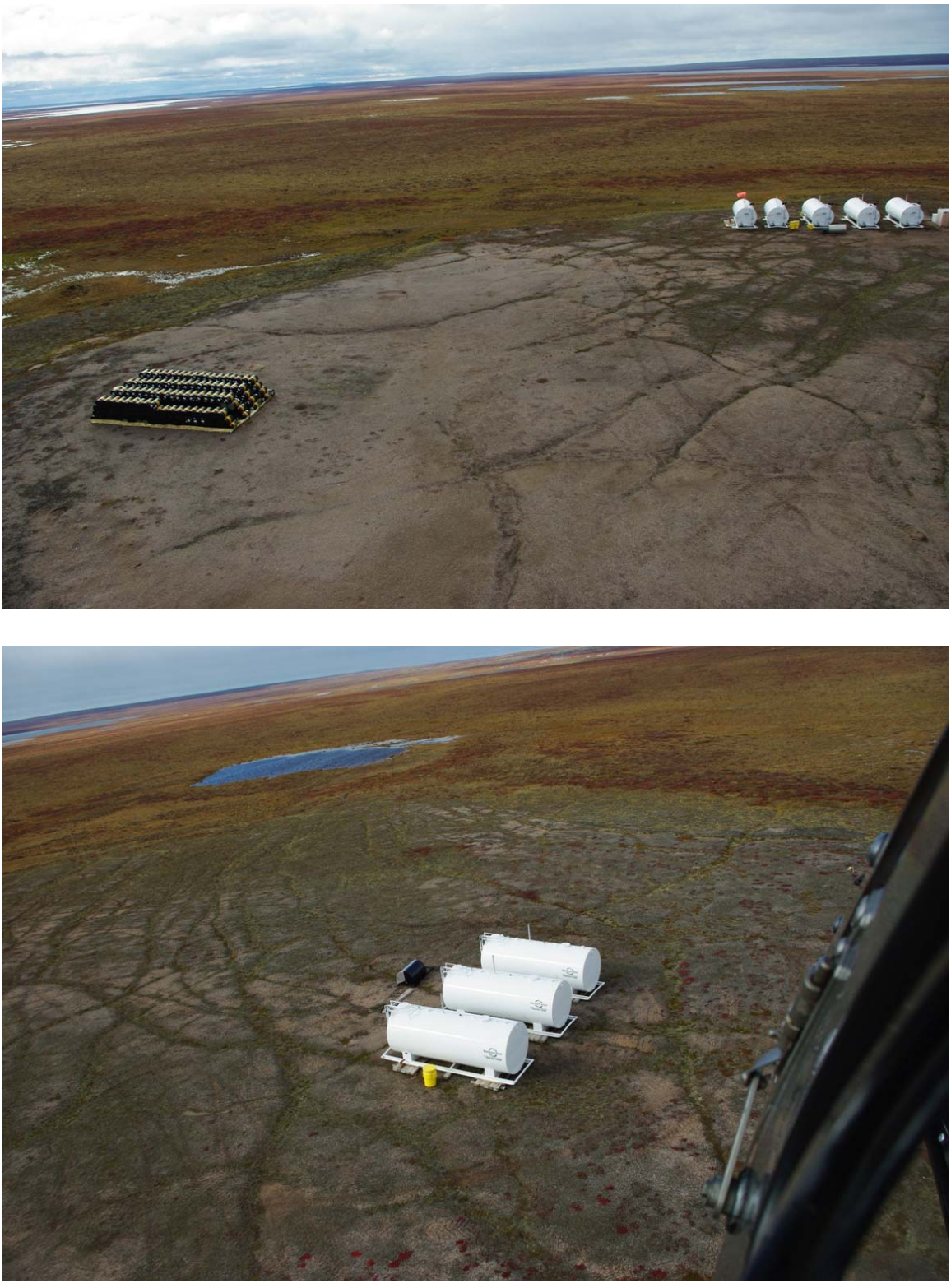

Figure 1.3 Fuel Cache at Esker, September 2009

2 SUMMARY OF PLANNED ACTIVITIES FOR THE 2010 PROGRAM

2.1 General

Exploration activities planned for 2010 field program consist primarily of exploration drilling throughout the lease areas to identify potential for additional mineral deposit and to further evaluate known deposits. A limited deposit appraisal drilling program is also planned to take place throughout the 2010 field program. The intent is to gather information required to determine whether these deposits can be safely and economically extracted and processed, while protecting the environment.

It is expected that the drilling and environment crews will be mobilized to the site early in June 2010. The program is expected to be shut down and prepared for the winter season by the end of September or beginning of October. 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 2010.

2.2 Camp Expansion

There is no camp expansion planned for 2010. Minor renovations to existing buildings may occur as required.

2.3 Fuel Cache

The usage of the bulk fuel tank storage systems for both diesel and jet fuel is planned for 2010. However, approximately 300 drums of jet fuel remaining from 2009 will continue to be used to supplement tank capacity as needed.

The bulk fuel tank storage system now includes eight (8) double-walled steel EnviroTanks, each with a capacity of 50,000-litres. The eight (8) tanks were installed by an approved installer and in accordance with Canadian Council for Ministers of the Environment (CCME) – Environment Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products at an esker on the Kiggavik lease, east of the Kiggavik camp (see Figure 1.4). The tanks have been registered with Environment Canada. Three (3) of the tanks are for the storage of Jet-B fuel and five (5) tanks are for the storage of diesel fuel.

AREVA will comply with Environment Canada's Storage Tank Systems for Petroleum Products and Allied Petroleum Product Regulations and the Canadian Council for Ministers of the Environment (CCME) – Environment Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products. Procedures and work instructions for tank operation are under development to support compliance with these regulations.

2.4 Geophysics

A geophysical exploration program will not be conducted during the 2010 field program.

2.5 Drilling, Sampling and Testing

Drilling at End Grid

- The objectives of the drilling campaign will be to collect resource and geotechnical data
- Diamond drilling will include a total of 4 to 7 drill holes
- Total meterage is expected to range between 2,000m and 3000m.
- The drill hole size will be mainly NQ
- Core orientation will be conducted using the Ace core orientation system, or equivalent
- Triple tube drilling will be conducted where possible to enhance sample quality for geotechnical purposes
- Holes will be inclined (between -85° and -65°)
- Hole length is expected to range between 410m and 480m
- Packer tests may be conducted on some holes below the permafrost.

Potential Drilling at Thelon River Proposed Bridge Site

AREVA applied for KIA and NWB licence amendments on (date) that would allow on-ice drilling. No drilling will take place until all required amendments and approvals are obtained.

- The primary objective of the drilling campaign will be to collect geotechnical data
- Diamond drilling will include a total of approximately 10 drill holes: one or two drill holes will be drilled on each abutment and one to two drill holes will be drilled at each pier location, and six to eight drill holes in the river
- Depth for each drill hole will range between 20m and 40m, which may give a total meterage between 200 to 400m
- The drill hole size will be mainly NQ with triple barrel (NQ3)
- Generally, drill holes will be vertical

Exploration Drilling

- The objectives of the drilling campaign will be to collect resource data
- Diamond drilling will include a total of 15 to 20 drill holes
- Total meterage is expected to be approximately 6,000m
- The drill hole size will be NQ
- Core orientation will be conducted using the Ace core orientation system, or equivalent

- Holes will be inclined (between -85° and -45°)
- Hole length is expected to range between 400m and 450m

2.6 Thermistor Installation and Monitoring

An additional deep thermistor may be installed at the End Grid site to confirm the 2007, 2008, and 2009 findings.

2.7 Environment, Health and Safety Monitoring

The 2010 Environmental, Health and Safety (EH&S) monitoring program will continue to be conducted by AREVA staff with some support provided by contractors if necessary. Wildlife monitoring will involve independent wildlife monitors from the Baker Lake community and AREVA field staff. The EH&S 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 have been designed and implemented to ensure compliance with regulatory conditions and internal AREVA requirements.

2.8 Environmental Baseline Work

The 2010 environmental baseline work may include the collection of hydrological, aquatic, atmospheric, wildlife, vegetation and soil, marine and archaeological baseline data as required to support the preparation of the Kiggavik Project Environmental Impact Statement.

3 OPERATIONAL PLANS

Prior to initiation of the 2009 field season, seven Environmental Management Plans, originally prepared in 2007, were updated and submitted to the regulatory agencies to aid in developing best management practices and procedures to mitigate any potential adverse environmental impacts. These Plans also ensure compliance with regulatory approval conditions and internal AREVA requirements. It is AREVA's intention to operate in accordance with commitments made in the Plans; however, such Plans are living documents and lessons learned during the field season and AREVA's commitment to continual improvement warranted some revision of these Plans prior to the 2010 season. These revised Plans have been included with the submission of this Annual Report (refer to Appendix A).

The seven plans are as follows and are discussed below:

- Spill Contingency
- Radiation Protection
- Waste Management
- Wildlife Mitigation and Monitoring
- Abandonment and Restoration
- Noise Abatement
- Uranium Exploration Plan

3.1 Spill Contingency Plan

In accordance with existing legislation and AREVA's Environmental Policy, a Spill Contingency Plan exists for the Kiggavik Project. The objectives of the Plan are to:

- identify the potential for and the appropriate response to spills at the Project;
- have procedures to follow to prevent or mitigate adverse environmental effects through effective and efficient response;
- identify personnel and their responsibilities;
- identify emergency contacts; and,
- describe reporting requirements.

To effectively implement this Plan all site staff and contractors are given a site orientation upon their arrival at the Kiggavik site which includes the location of Material Safety Data Sheets (MSDS), the location of spill kits and spill response supplies and tools. Training for all site staff consists of how to identify potential or existing leaks or spills, where they are most likely to occur and instruction on how to effectively use spill response supplies and tools. Additional training is provided as necessary.

Spill prevention is addressed by the implementation of secondary containment and spill kits at locations identified to be potential hazards, daily inspections are carried out at all storage locations and MSDS sheets are readily available. Spill response is reviewed with all site staff and contractors and site supervisors and designates are aware of spill reporting procedures.

The Plan was implemented twice during the 2009 field season as a result of one unplanned release of core onto land and one unplanned release of red tinged water into a nearby water body. These incidents and the associated responses are discussed in Section 12.

A revised Spill Contingency Plan has been submitted with this Report to reflect opportunities for improvement.

3.2 Radiation Protection Plan

The Radiation Protection Plan is designed to meet the requirements of the applicable Nunavut Occupational Health and Safety Regulations, Saskatchewan Mineral Exploration best practices, the Canadian Nuclear Safety Commission (CNSC) Regulations (although current activities are not regulated by CNSC), AREVA's Corporate Integrated Quality Management System (IQMS) as well as the Kiggavik Project's IQMS. The administrative and program elements are as follows:

Administrative Elements

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

Program Elements

- Exposure as Low as Reasonably Achievable (ALARA)
- Radiological monitoring
- Dosimetry monitoring
- Code of Practice
- Management of radioactive materials
- Shipping of radioactive materials
- Site abandonment and restoration
- Emergency response

All 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. Any personnel involved with the shipment of radioactive materials are required to receive training and certification in the Transportation of Dangerous Goods (TDG).

The Plan is implemented by the development and implementation of a routine monitoring schedule carried out by the EH&S Group; dosimetry monitoring to determine worker exposure; proper management of radioisotopes (cesium-137 used for testing the operation of down hole probes); 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.

A more detailed description and results of the Plan are discussed in Section 5. A revised Radiation Protection Plan has been submitted with this Report to reflect opportunities for improvement.

3.3 Waste Management Plan

In accordance with AREVA's Environmental Policy, a Waste Management Plan has been developed and implemented to adequately address any concerns regarding waste and to mitigate any potential adverse environmental impacts. AREVA is committed to ensuring that all wastes generated at the Kiggavik Project site are collected, stored, transported and disposed of in a safe, efficient and compliant manner.

In the development of this Plan, potential waste streams were identified, followed by identification of a treatment strategy and disposal plan. All site staff and contractors review this Plan and are trained in the aspects required to effectively adhere to the Plan (i.e. proper identification of waste, proper storage methods, proper handling and transport methods).

All food, paper and non-treated wood waste are incinerated in an approved incinerator. All other wastes are properly sorted and stored for future handling.

The Waste Management Plan was updated in January 2009 and implemented during the 2009 field season. AREVA is committed to the removal of all non-incinerating waste off-site to approved facilities. Due to the limited number of approved facilities for recyclable or hazardous waste dangerous goods in the immediate area, AREVA ensures that all materials are properly sorted, packaged and stored on-site until approved facilities or handlers can be identified and contracted.

Internal Waste Disposal forms have been implemented for any domestic waste requiring transport from site to the Baker Lake landfill. Materials transported during 2009 are shown in Table 3.1.

Table 3.1 Kiggavik Site Waste Manifest 2009

Date	Type of Waste	Quantity	Location of Disposal	Comments
14-Jul-09	waste oil	3 drums	Baker Lake (BLCS)	To be used in waste oil generators
23-Jun-09	incinerator ash	4 drums	Baker Lake Dump	
06-Jul-09	incinerator ash	5 drums	Baker Lake Dump	
30-Aug-09	incinerator ash	6 drums	Baker Lake Dump	
01-Sep-09	Waste oil	3 drums	Baker Lake (BLCS)	To be used in waste oil generators

As required, an inventory of all waste and material remaining on site was recorded upon seasonal shutdown and is summarized in Table 3.2.

All radiologically contaminated drill cuttings are collected and stored in the radioactive storage area for future handling.

The Waste Management Plan is frequently reviewed and revised upon the identification of new waste streams, new handling methods or requirements and improved logistics. The current Waste Management Plan has been submitted with this Report.

Table 3.2 Kiggavik Site End of Season Inventory 2009

Type of Waste/Product	Quantity	Storage Method
Waste oil and fuel	8– 205 litre bung drums	6 drums shipped back to Baker Lake to be used by BLCS in their furnaces; 2 drums remain on site in secondary containment
Incinerator Ashes	15 – 205 litre ring top drums from 2009	All taken and emptied at Baker Lake land fill. Empty drums returned to Kiggavik.
Empty metal drums	10– 205 litre drums empty Diesel fuel	Stacked and stored in secondary containment at site
Scrap metal	10 - Wooden crates 4x4x4 with lids	Located beside incinerator until can be shipped off site for handling
Engine filters Oil and Fuel	3 – 205 litre ring top drum	In sea-can type storage container until can be shipped off site for handling
Oil cans Empty	3 – 205 litre ring top drum	In sea-can type storage container until can be shipped off site for handling
Oil contaminated rags	3 – 205 litre ring top drum	In sea-can type storage container until can be shipped off site for handling

Type of Waste/Product	Quantity	Storage Method
Empty/used paint cans	1 – 205 litre ring top drum	In sea-can type storage container until can be shipped off site for handling
Generator Oil	5 – 20 litre pails 12 – 1 litre jugs	In secondary containment in generator building
Diesel contaminated soil and rags from spill clean-up	1 – overpack drum	In sea-can type storage container until can be shipped off site for handling
Calcium Chloride and cement bags	392 bags $CaCl_2$ 2 bags of bulk cement (5000lbs)	In sea-can type storage container for use in 2010
Jet Fuel	301 – 205 litre drums	In secondary containment at fuel cache
Diesel Fuel	25 – 205 litre drums plus 14 450L slip tanks	In secondary containment at camp site
Gasoline	1-205 L drum	In secondary containment at camp site
Propane	26 – 100 lb bottle	Upright in a locked fence compound
Aerosol cans – empty and punctured	1 – 205 litre ring top drum	In sea-can type storage container until can be shipped off site for handling
Boart Longyear Supplies	25 -20 litre pails Hydraulic Oil 45 – Cases Motor Oil 15 – Cases Gun Grease 8 – Cases Antifreeze 12 – Cases Menthol Hydrate 10 - Cases 2 cycle Oil 12 – 20 litre Transmission Oil 45 – 20 litre Rod Grease	In sea-can type storage container for use in 2010

It is expected that during the winter fuel haul to the Kiggavik site (early 2010) Peter's Expediting will backhaul, to a storage location for re-use in Baker Lake seven (7) rock bags containing cement and calcium chloride, which have been ruined by moisture.

Figure 3.1 Kiggavik Incinerator

3.4 Abandonment and Restoration Plan

An Abandonment and Restoration Plan has been developed to address conditions of permits, regulations and industry standards throughout the operational season, at seasonal shut-down and at final closure of the site. The 2009 implementation of the Plan is discussed in Section 9. This Plan is frequently reviewed and revised to reflect the expansion of infrastructure, changing field programs and the identification of improved reclamation practices. The current Abandonment and Restoration Plan has been submitted with this Report.

The objectives of the Plan are to:

- Protect human health
- Reduce or eliminate environmental effects
- Re-establish conditions which permit the land to return to a similar pre-exploration land use
- Establish physical and chemical stability of disturbed areas

3.4.1 Abandonment

As required by the Abandonment and Restoration Plan the following activities were conducted for the seasonal shutdown of the Kiggavik camp:

- All equipment has been stored in secure buildings or containers

- Plywood has been nailed over windows and doors have been secured to prevent inadvertent opening
- Pumps and hoses have been drained and dismantled
- Full inventory of chemicals, products and wastes remaining on site has been conducted
- Final inspection of all storage areas and secondary containment
- Removal of chemicals or storage in secure buildings
- A final inspection of drill sites, including gamma surveys and the removal of any fuel or radiologically contaminated soil
- Drill rigs have been dismantled

Photos are shown in Figures 1.1 and 1.2.

3.4.2 Restoration

AREVA intends to implement progressive restoration practices and incorporate new abandonment and/or reclamation methods and procedures, when applicable. The current Plan has been implemented at all drill sites operated during the field season to establish chemical stability. All drill sites from the current year's field program are inspected for fuel stained soil and undergo a gamma survey for radioactive contamination. Contaminated soil or cuttings are collected in appropriate containers and stored in the long-term core storage area for future handling, which may include transfer to an operating mine site.

Drill sites must be remediated to the extent that gamma dose at a height of 1 m from surface is less than 1 µSv/h above background, although efforts are made to reduce gamma doses to the greatest extent possible. Residual radioactive materials accumulated during drilling are disposed of down the drill hole. Where this is not practicable, as in most cases, radioactive material is collected, appropriately packaged and stored in the existing core storage areas. Gamma radiation levels at 1 m from the outer boundary of the core storage area is reduced as much as practical with the target of less than 1 µSv/h and in no instances exceed 2.5 µSv/h. If necessary, residual radioactive material will be transported to the McClean Lake Operation for storage and disposal.

Challenges surrounding physical reclamation of disturbed surfaces include lack of local knowledge or available information. To minimize the affected footprint and therefore the amount of required physical reclamation there is a focused effort on proper planning of infrastructure placement and drill sites. It is AREVA's intention to reclaim disturbed sites in an acceptable manner, when adequate information becomes available. Proper reclamation techniques are currently being investigated and will be implemented under the direction and approval of experienced consultants, community members and regulatory agencies. Restoration work will be completed prior to the expiry of the land use licence.

3.5 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 main focus of this Plan is the control of environmental noise for the protection of wildlife.

Implementation of this 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 required flying altitudes and the take-off and landing of aircraft.

This Plan is reviewed with all site staff and contractors, as well as head office contract administrators to ensure all contractors operating drill rigs, vehicles or aircraft are aware of the requirements of this Plan.

Frequent review allows for revision to occur with the expansion of infrastructure, changing field programs and the identification of improved practices. The current Noise Abatement Plan has been submitted with this Report.

3.6 Wildlife Mitigation and Monitoring Plan

A Wildlife Mitigation and Monitoring Plan has been developed in order to monitor and reduce Project impacts on wildlife, particularly caribou. The mitigation and monitoring plan is based on recommendations made by the Government of Nunavut – Department of Environment, Environment Canada and the Beverly and Qamanirjuaq Caribou Management Board; permit and lease conditions from NIRB, KIA, INAC and the NWB. The Plan is designed to protect wildlife from Project activities, increase the current understanding of wildlife interactions with human development and help determine the effectiveness of mitigation measures.

3.6.1 Summary of 2009 Monitoring Activities and Results

Independent Ground Based Monitoring

The consistency and quality of the monitoring program improved considerably through the 2009 season due to the efforts of both AREVA Resources Canada Inc. (AREVA) staff and local monitors. Staffing difficulties in May and June resulted in monitoring gaps and a limited program focused on monitoring in and around camp with updates to the Environment and Radiation Supervisor as necessary. Staffing efforts were increased in July and there were collaborative efforts among AREVA staff, the Department of Environment – Government of Nunavut, the consulting biologist and local monitors to improve and expand monitoring responsibilities and reporting. A wildlife monitoring procedure and form record was implemented to ensure daily communication between

the wildlife monitor and the E&RP Supervisor, and in addition to monitoring wildlife activity around camp all operating drills were visited by the wildlife monitor on a daily bases. Wildlife Monitors accounted for 241 reported wildlife sightings or 18% of the total.

Areva Staff and Contractor Wildlife Sightings

In addition to the observations made by the Independent Wildlife Monitor all observations from the following methods were entered into a spreadsheet by the Environment and Radiation Protection Supervisor. Sighting details vary with the observer, with the protocols for the survey and the records vary from detailed records taken according to strict procedures for the Height of Land Surveys to minimal information from incidental observations by contractors not involved in environmental baseline work. A summary of the wildlife findings are shown in Table 3.3.

Height-of-Land (HOL) Surveys:

Gebauer & Associates Ltd. was on site for two weeks in May and throughout the remainder of the field season conducting HOL surveys. The data collected from HOL surveys is primarily used as baseline data in preparation for an environmental review but sightings were regularly provided to AREVA to assist in the implementation of the Wildlife Monitoring and Mitigation Plan as required. These sightings, which were carried out according to a specific protocol throughout the season, make up 1028 of the 1362 recorded sightings or 75 percent. This level of consistent wildlife siting detail is available this year because of the baseline study. Fig 3.1 shows the HOL locations.

Aerial Observation:

Wildlife seen during routine helicopter flights were noted on the wildlife spreadsheet located at camp. This method resulted in only 3 records throughout the season. Helicopter sightings are incidental to the helicopter flight and to this point have been used to record very noteworthy wildlife occurrences but not routine sightings. The three events recorded were the presence of a grizzly bear on one occasion, a herd of caribou on another occasion and a wolf on a third occasion.

All other incidental sightings:

Wildlife logs were placed in the camp kitchen and office. AREVA employees and contractors were informed of its location and were encouraged during site orientation to report wildlife sightings. Incidental camp sightings accounted for 90 sightings or 8% of the total number of sightings. Animals continuously around camp such as ptarmigan, siksik and hare were often not recorded each day they were observed and are therefore under recorded by this method.

Table 3.3 Summary of Wildlife Sightings

Species	# of Sightings	% of Sightings	Observation Type				Date of	
			HOL	Aerial	Monitor	Camp	First Sighting	Last Sighting
Caribou	838	61.6	X	X	X	X	May-14	Aug-29
Muskox	59	4.3	X		X	X	May-27	Aug-26
Wolf	16	1.2	X	X	X	X	May-25	Aug-16
Fox	31	2.3	X		X	X	May-20	Aug-26
Wolverine	9	0.7	X				May-29	Jun-13
Grizzly	2	0.1		X		X	Jun-03	Jun-21
Hare	53	3.9	X		X	X	May-20	Aug-28
Siksik	8	0.6	X				May-29	Aug-28
Ptarmigan	86	6.3	X			X	May-20	Jul-08
Falcon/ eagle/hawk	24	1.8	X		X	X	May-26	Aug-29
Jaeger	12	0.9	X		X		May-26	Aug-04
Owl	3	0.2	X			X	Jun-01	Aug-06
Goose	57	4.2	X			X	May-17	Aug-29
Duck	26	1.9	X				Jul-06	Aug-29
Shorebird	3	0.2	X				Jun-04	Jul-23
Crane	90	6.6	X		X	X	Jun-05	Aug-29
Loon	3	0.2	X				Jun-12	Aug-21
Plover	25	1.8	X			X	Jun-07	Aug-06
Swan	2	0.1	X		X		Jun-23	Jul-27
Gull	12	0.9	X				Jun-23	Aug-29
Robin	1	0.1				X	Jun-14	Jun-14
Ravin	2	0.1	X				Aug-20	Aug-27

3.6.2 Summary of Mitigation Actions

At no time did caribou groups approach within 2 km of drilling activities necessitating suspension of activity. Locations of groups larger than 50 individuals and smaller groups known to have calves were communicated to AREVA staff and contractors to assist in avoidance. The incinerator was shut down when groups of caribou were near in order to avoid smoke blowing over them.

Only one caribou disturbance was noted during the 2009 field season which involved a helicopter flying over head. Helicopter pilots were informed to avoid flying over groups of caribou whenever possible.

3.7 Uranium Exploration Plan

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

The Plan discusses activities related to uranium exploration including:

- Training requirements
- Drilling practices
- Core storage and logging
- Radioisotopes
- Spills
- Shipping radioactive material
- Site abandonment and restoration

On August 30th, 2009 a shipment of core samples (low specific activity) were sent via air from Kiggavik to Points North, Saskatchewan and by truck from Points North to Saskatoon where they were shipped to SRC in Saskatoon and geotech/waste rock labs in Canada. Shipper's Declaration for Dangerous Goods were completed and filed by appropriately trained AREVA staff.

The Uranium Exploration Plan is reviewed on an annual basis and revised if necessary; the current version has been accepted by the Nunavut Water Board via Part F(1) of the licence 2BE-KIG0812 issued May 12, 2008.

4 ENVIRONMENTAL STUDIES

There were six main components of the environmental studies undertaken in 2009, including hydrology, aquatics, atmospheric, terrestrial, archaeological and marine. The following sections detail the content and results of these studies. Figures are appended to the end of this section.

4.1 Hydrology Component

The focus of the hydrological assessment was to gather baseline stream flow and lake water level information from drainage areas which could be impacted by the proposed project, both in terms of reduced flow due to water usage or augmented flows due to treated water releases.

The collection of stream discharge data and lake level monitoring is to meet the following objectives for the project:

- collect sufficient water data to document the natural range in stream flow from selected locations to satisfy regulatory requirements;
- collect hydrology information that can be used for engineering design purposes; and
- collect baseline hydrology information that will be used in support of the Environmental Assessment (EA).

Results of recent field investigations along with past studies in the local area have been used in combination with long-term regional hydrological and climatic regional data to characterize hydrological conditions in the local study area (LSA). Information compiled for the Project will be used as a basis environmental impact assessment, engineered designs for water management and supply, and for decommissioning. In addition to hydrological data collected for the proposed mine development, field investigations were also undertaken to support of the proposed access road from the Kiggavik Project to the community of Baker Lake

The LSA for hydrology includes four sub-basins draining to Judge Sissons Lake along its northern and western shoreline, and two sub-basins which occur north and east of the Project site. All of the sub-basins related to the Project are drained to the Aniguq River system which flows eastward and discharges to Baker Lake. Lakes, wetlands and streams are common in the LSA. Water is abundant at times, particularly during the freshet, when permafrost strongly limits infiltrations and eight months of precipitation has accumulated on the landscape and melts over a period several weeks. However in winter, there is little or no flow and only the deeper lakes contain significant water.

The 2009 field season began on June 15 due to a later than usual spring snowmelt. The spring program continued until July 6, the summer field program was conducted from July 24 to 28, and the fall field program was conducted from August 24 to September 3. Continuous water surface elevation sensors were installed at SF2, SF3, SF4, SF5, SF6, SF7, SF8, SF13, and SF14. Two new sites were established to monitor stream discharge near the outflows of Andrew and Mushroom lakes, and lake elevation on Andrew and Mushroom lakes. A continuous water level sensor was also installed in the outflow channel of Andrew Lake. Stream topographic surveys were conducted as part of each of the field programs in 2009 for stream crossing locations along the proposed north all-weather road route.

Instantaneous lake water surface elevations were measured using an engineer's rod and level during each of the field programs in 2009. Lakes for which water surface elevations were measured in 2009 include Pointer Lake, Unnamed Lake downstream of Cirque Lake, Judge Sissons Lake, Skinny Lake, Kavisilik Lake, and Siamese Lake. Two additional lake water surface elevation monitoring sites were added in 2009: Andrew Lake and Mushroom Lake (Table 2). Lake water surface elevation data were used with coincident lake outflow (discharge) data to create lake elevation-outflow curves.

Table 4.1 Local Hydrometric Monitoring Stations, 2009

Stream Discharge Monitoring Stations			
Station ID	**Description**	**Crossing Location (UTM NAD 83 Coordinates)**	**Continuous Monitoring**
SF1	Outflow of Skinny Lake	Zone 14 W 571655E 7155266N	No
SF2	Outflow of Unnamed Lake Downstream of Cirque Lake	Zone 14 W 563554E 7146242N	Yes
SF3	Northeast Inflow of Pointer Lake	Zone 14 W 565717E 7147088N	Yes
SF4	Outflow of Siksik Lake	Zone 14 W 565790E 7140386N	Yes
SF5	Outflow of Pointer Lake	Zone 14 W 566477E 7140840N	Yes
SF6	Outflow of Shack Lake	Zone 14 W 558223E 7131912N	Yes
SF7	Outflow of Judge Sissons Lake	Zone 14 W 574605E 7134734N	Yes
SF8	Outflow of Siamese Lake	Zone 14 W 580364E 7146775N	Yes
SF10	Tributary to the Northeast Inflow of Pointer Lake	Zone 14 W 565328E 7146771N	No
SF11	Northwest Inflow of Pointer Lake	Zone 14 W 565015E 7144882N	No

Stream Discharge Monitoring Stations			
SF13	Aniguq River	Zone 14 W 617415E 7123391N	Yes
SF14	Qinguq Creek	Zone 14 W 630101E 7128437N	Yes
SF15	Outflow of Andrew Lake	Zone 14 W 553586E 7134121N	Yes
SF16	Outflow of Mushroom Lake	Zone 14 W 554181E 7136655N	No

Lake Water Surface Elevation Monitoring Stations			
Station ID	**Description**	**Benchmark Location (UTM NAD 83 Coordinates)**	**Continuous Monitoring**
LE1	Pointer Lake	Zone 14 W 565652E 7142467N	No
LE2	Unnamed Lake Downstream of Cirque Lake	Zone 14 W 563603E 7146244N	No
LE3	Judge Sissons Lake	Zone 14 W 574537E 7134751N	No
LE5	Skinny Lake	Zone 14 W 571626E 7154893N	No
LE6	Kavisilik Lake	Zone 14 W 571712E 7155299N	No
LE7	Siamese Lake	Zone 14 W 576086E 7151648N	No
LE8	Andrew Lake	Zone 14 W 553222E 7134135N	No
LE9	Mushroom Lake	Zone 14 W 554219E 7136721N	No

Notes: (a) E is easting (in meters), N is northing (in meters)

Two new stream discharge monitoring locations were installed in 2009: SF15, Outflow of Andrew Lake, and SF16, Outflow of Mushroom Lake (Table 4.1). Instantaneous stream discharge measurements were taken at all stream discharge monitoring locations but SF13, as the Aniguq River at this location is too fast to wade. Continuous monitoring was conducted at ten locations, and daily hydrographs were prepared for each of these locations.

Based on unadjusted precipitation data from Baker Lake, the proportion of precipitation which becomes runoff was assessed for from four hydrometric stations monitored on the Project site over the open water period in 2009. The range among these stations was estimated to be 0.59 to 0.77. The Aniguq River reported a runoff ratio of 0.56 over the same period. For small drainages with little storage capacity, nearly all the runoff will be over the freshet period (June) with flow outside this period only following substantial precipitation. In other larger basins with large storage capacity such as Judge Sissons

Lake outflow, approximately 50% of the runoff may occur in June, with the remainder draining over the balance of the open water period.

Flood magnitude and frequency assessments have been carried out for selected streams in the LSA and all the stream crossings located along the proposed all weather road (north alignment). Calculated values are based on regional data and compare favourably to measured values collected over the period 2007 to 2009, and older historical data collected on the site in the late 1980's and early 1990's. In stream topographic surveys were conducted for each of the proposed crossings along the north road alignment, and preliminary sizing for cross-drainage structures was conducted.

4.2 Aquatic Component

The general objective of the 2009 field program was to conduct assessments of the physical aquatic habitat and biological aquatic communities in selected water bodies. Objectives of the field studies included gathering information on water bodies crossed by proposed road corridors and gathering additional information on water bodies that may be directly affected by the proposed project. Field assessments were carried out during winter, spring, summer, and fall of 2009 in the lakes, streams, and rivers of the Project area.

Specific information collected about physical aquatic habitat included lake bathymetry; fish habitat in lakes and streams; limnology measurements (i.e., dissolved oxygen, temperature, conductivity, and pH measurements) and water chemistry in lakes and streams; and sediment chemistry and particle size in lakes. Specific information collected about biological aquatic communities included plankton communities (i.e., phytoplankton and zooplankton in lakes, and periphyton in streams); macrophyte chemistry in lakes; benthic invertebrate communities in lakes and streams; fish community composition; spring and fall spawning surveys; fish migration patterns; and fish tissue chemistry.

4.2.1 Physical Aquatic Habitat

Lake Bathymetry:

Lake bathymetry was completed for three lakes (i.e., Sik Sik Lake, Andrew Lake, and Mushroom Lake) and for the north portion of Judge Sissons Lake. New bathymetry maps have contour intervals of 0.1 m or 0.2 m for shallow lakes (i.e., Sik Sik Lake and Andrew Lake) and 1.0 m for deep lakes (i.e., Mushroom Lake and Judge Sissons Lake).

Fish Habitat:

Detailed fish habitat mapping of Sik Sik Lake and Andrew Lake was completed. The information was used to increase the level of detail for the habitat maps previously

completed. The information about the abundance of habitat will be used in the preparation of a fish habitat compensation plan.

Detailed fish habitat mapping was also completed for the streams crossed by the proposed all-weather road alignment and six locations on the proposed winter road alignment. Additional detailed fish habitat mapping was completed at the end of the field season, for selected streams crossed by the south all-weather road alignment and the all-weather road alignment east of the Thelon River.

Limnology:

Limnology measurements (i.e., dissolved oxygen, temperature, pH, and conductivity) were recorded during the winter, spring, summer, and fall field sampling sessions. Depending on the station and the sampling program, either a surface reading or measurements along a vertical profile in the water column were recorded.

Under ice limnology and ice thickness measurements were undertaken in May 2009. Six lakes located within the local study area (i.e., Sik Sik, Rock, Willow, Mushroom, Andrew, and Judge Sissons lakes), and four lakes located in the regional study area (i.e., Siamese, unnamed [L2], Long, and Audra lakes) as well as the Qinguq Bay and Baker Lake were sampled. The results of the winter limnology sampling program showed that Sik Sik Lake, Rock Lake, Willow Lake, and Andrew Lake were frozen to the bottom. In some of the deeper lakes, there was a decline in dissolved oxygen near the bottom of the lake, during the late winter. Dissolved oxygen concentrations were supersaturated near the surface of several lakes.

Water Chemistry:

Water samples were collected during spring, summer, and fall field sampling sessions. In the spring, water sampling was conducted in streams concurrently with Arctic grayling (*Thymallus arcticus*) spawning survey (i.e., Northeast Inflow of Pointer Lake, Northwest Inflow of Pointer Lake, Pointer/Rock Stream, Sik Sik/Rock Stream, Rock/Willow Stream, and Willow/Judge Sissons Stream). In the summer, water sampling was conducted in lakes that were still frozen during the spring field session (i.e., Sik Sik, Rock, Willow, and Judge Sissons lakes). In the fall, streams were sampled concurrently with erosional benthic invertebrate community (BIC) and periphyton sampling, while lakes were sampled concurrently with depositional BIC, sediment chemistry, and plankton sampling. Water samples collected were sent to Saskatchewan Research Council Laboratories (SRC) for chemical analysis, including metals and radionuclides. Analytical results were received by mid-October 2009 and were similar to previous results.

Sediments:

During the fall of 2009, sediment chemistry and particle size samples were collected using an Ekman dredge from Sik Sik, Rock, Willow, Andrew, and Judge Sissons lakes. The samples were collected at depositional BIC sampling sites.

Sediment chemistry and particle size samples were sent to SRC to be analyzed. Sediment chemistry samples were analysed for metals and radionuclides, while particle size samples were analysed for particle size (by EEM classifications), percent moisture, and total organic carbon. Analytical results were received by mid December for the sediment chemistry and by mid-October for the particle size.

4.2.2 Biological Aquatic Communities

Plankton Community:

Phytoplankton and zooplankton were assessed in lakes (i.e., Sik Sik, Rock, Willow, Andrew, and Judge Sissons lakes) and periphyton in streams (i.e., Northeast Inflow of Pointer Lake, Rock/Willow Stream, Willow/Judge Sissons Stream, and the Aniguq River). Sik Sik/Rock Stream was not sampled for periphyton because of the absence of appropriate substrate. Chlorophyll *a* concentrations were also analyzed as part of the characterization of the plankton community.

Phytoplankton and zooplankton samples were preserved and shipped to taxonomists (Bio-Limno Research and Consulting, Inc. [Bio-Limno] in Halifax, Nova Scotia) and analyzed for taxonomy, density (number of units/L), and biomass ($\mu g/m^3$). Chlorophyll *a* samples were shipped to SRC for analysis. Taxonomy results for phytoplankton and zooplankton were received by mid-November. Analytical results for chlorophyll *a* were received by early October.

During the fall of 2009, periphyton surveys were conducted concurrently with erosional BIC and water sampling in streams. The periphyton samples were collected by scraping shallow rocks that are exposed to light. The samples were preserved and shipped to Eco-Logic Ltd for taxonomic analysis, density and biomass. Taxonomy results for the periphyton are not yet available.

Macrophytes Chemistry:

Macrophyte sampling was conducted during the fall field sampling session. Samples were collected from Pointer, Sik Sik, Rock, Willow, and Judge Sissons lakes. Samples were collected by hand, cleaned of soil, photographed, weighed, and frozen.

Macrophyte samples collected were sent to SRC for chemical analysis, including metals and radionuclides. Analytical results were received by mid-December 2009. In general,

concentrations of metals and radionuclides are higher in the roots compared to the shoots for the *Carex sp*.

Benthic Invertebrate Community:

Erosional and depositional BIC sampling was conducted during the fall of 2009. Water bodies sampled included Sik Sik, Rock, Willow, Andrew, and Judge Sissons lakes as well as Northeast Inflow of Pointer Lake, Rock/Willow Stream, Willow/Judge Sissons Stream, and in the Aniguq River. Sik Sik/Rock Stream was not sampled for BIC because of the absence of appropriate substrate. Samples in lakes were collected concurrently with water quality, sediment and plankton, whereas BIC samples in streams were collected concurrently with water quality and periphyton. BIC samples were preserved and shipped to Dr. J. Zloty for taxonomic identification and lab analysis. Taxonomy results were received by mid-November.

Fish Population and Tissue Chemistry:

The fish community composition was assessed for Andrew Lake, the Aniguq River, and the proposed road crossing streams (proposed all weather road alignments [north and south routes, as well as east of the Thelon River], and the proposed winter road alignment). Arctic grayling, burbot (*Lota lota*), and lake cisco (*Coregonus artedi*) were captured in 2009 in Andrew Lake. In the Aniguq River, Arctic grayling and lake trout (*Salvelinus namaycush*) were captured in portion of river below Audra Lake. Burbot and ninespine stickleback (*Pungitius pungitius*) were captured in the Aniguq River at the proposed road crossing for the south all weather road alignment. Fish species captured during sampling of stream crossed by the proposed road alignments included Arctic grayling, burbot, lake trout, longnose sucker, (*Catostomus catostomus*), ninespine stickleback, round whitefish (*Prosopium cylindraceum*), and slimy sculpin (*Cottus cognatus*). In general, ninespine stickleback and slimy sculpin were present in stream greater than 2 m wide, while game fish species (e.g., Arctic grayling, burbot, lake trout) were present in streams with bankfull widths of approximately 3 m or more.

The Arctic grayling spring spawning survey included intensive fishing and egg search in the streams that connected Pointer, Sik Sik, Rock, Willow, and Judge Sissons lakes. Similar search was added in the inflow and outflow of Andrew Lake. Arctic grayling eggs were captured in Pointer/Rock Stream, Rock/Willow Stream, Lunch/Andrew Stream, and in Andrew/Shack Stream.

The Aniguq River was sampled for Arctic char (*Salvelinus alpinus*) in the fall, by intensive angling deep pools of the Aniguq River. Several Arctic grayling and lake trout were captured; however, Arctic char were not captured or observed.

Fish migration pattern was evaluated using the fish presence/absence information throughout the watershed in association with the aquatic habitat characteristics. As

many of the lakes in the local study area are too shallow for overwintering, it is thought that the majority of the fish in the local study area are part of the Judge Sissons Lake population. These fish seasonally move from Judge Sissons Lake into the smaller lakes of the adjacent sub-basins to feed during the open-water period. Lake trout have been observed moving into the tributary streams, using the initial melt water that is flowing overtop of the ice. In the case of Arctic grayling, they appear to be moving into the tributary streams to spawn immediately after ice-out, as eggs were located in the late June 2009. Fish abundance shows a marked decrease in the late August sampling; therefore, it is thought that fish may be moving back into Judge Sissons Lake to overwinter.

The fish population in the local study areas appears to be an isolated population, that is, the Judge Sissons Lake population is isolated from Baker Lake by the physical barriers in the Aniguq River. This conclusion is supported by the lack of Arctic char in Judge Sissons Lake or its tributaries. Movements upstream from Baker Lake appear to be blocked by two sets of cascades in the Aniguq River, shown in figure 4.1. Therefore, Judge Sissons Lake and its tributaries are not used by Arctic char for spawning and rearing.

Figure 4.1 First set of cascades in the Aniguq River

Fish tissue chemistry sampling focused on Arctic grayling and lake trout in Pointer Lake and Judge Sissons Lake as these species will likely be identified as valued ecosystem components. Round whitefish was also added to the Judge Sissons Lake sampling. Arctic grayling and lake trout were not captured in Pointer Lake during the August 2009 sampling; however, lake cisco were captured. Therefore, lake cisco were added to the fish chemistry component. Fish carcasses were frozen and submitted to SRC Laboratories for chemical analysis. Fish tissue chemistry results were received in mid January 2010.

4.3 Atmospheric Component

In May 2009, a climate monitoring station was installed at the Project exploration camp (Figure 3.1-1). This station made observations at ten-minute time intervals until September 2009; during the winter of 2009 to 2010, the data loggers were reprogrammed to measure at two-hour time intervals (Carter 2009b. pers. comm.). In August 2009, EBA Consultants installed another climate station near the proposed airstrip, also in the vicinity of the Project. Station parameters include air temperature, rainfall, atmospheric pressure, wind speed and direction, humidity, solar radiation, and ultra-violet radiation. Installation of meteorological stations at the Project in 2009 allowed for improved comparisons with the Baker Lake climate station. The locations of the weather stations are shown in Figure 4.1.

The purpose of a baseline climate program is to document the range of local climate conditions and to characterize the climatic parameters which could influence the operation of the Project and assess how the Project could affect climate controlled environmental conditions.

The regional climate station nearest the Project is located at Baker Lake, approximately 80 km east. Climate data collected at Baker Lake from 1949 to the present include precipitation, temperature, wind speed and direction, and atmospheric pressure. Net radiation had been collected at Baker Lake for the years 1969 to 2003. The mean annual precipitation recorded at Baker Lake A over the period 1949 to 2008 was 344 mm, approximately 49% of which fell as rain (169 mm). Mean air temperatures for the period of record ranged between -32.4°C in January and 11.2°C in July. Extreme temperatures have ranged between -50.6°C in January and 33.6°C in July.

The historical mean monthly wind strength varies between 16.9 km/h in July and 23.9 km/h in January. Maximum mean daily wind speeds range between 22.4 km/h in August and 37.1 km/h in February. Similarly, minimum mean daily wind speeds have ranged between 11.0 km/h in July and 16.7 km/h in October. One hour wind speeds of 78 km/h can be expected to occur once every two years, on average. Wind speeds exceeding 100 km/h are expected to occur only once in 30 years. The most frequent wind direction at the Baker Lake climate station for the years 1953 to 2009 was north-northwest. Similarly, the most frequent wind speed in this direction was of the range 20.5 km/h to 31.7 km/h(5.7 m/s - 8.8 m/s) (EC 2009b, internet site). On a seasonal basis, the wind was predominantly from the north during the second and third quarters of the year, and from the northwest during the first and fourth quarters. Wind speeds greater than 39.6 km/h (11 m/s) were most frequent over the period of January to March. On an annual basis, the wind rarely blows from the southwest or the northeast.

Lake Evaporation was estimated for Baker Lake using the Priestley-Taylor equation with historical climate data. Annual lake evaporation was estimated to be 152 mm, which falls within the range of evaporation estimates that have been presented in the region.

There is not enough coincident data available for the local study area to provide a statistical assessment or comparison of means among data sets (Kiggavik to Baker Lake). The data collected thus far suggest that temperatures at Baker Lake and Kiggavik are similar. The coincident wind magnitude data were between 10% and 58% different at the Kiggavik and Baker Lake sites. Despite the difference in wind magnitudes, Baker Lake climate station provides the most reasonable climate data for use at the Kiggavik site, and no other long-term climate stations exist within 100 km of the site. The representativeness of meteorological data from Baker Lake climate station for the Project was discussed previously in reports by Beak (1987, 1989, 1990a, 1992). Differences in the climate between Baker Lake and the Kiggavik site were attributed to the positioning of the climate station at the west end of Baker Lake, and the difference in elevation between the two sites; 180 masl at Kiggavik versus 18 masl at Baker Lake. The presence of Baker Lake may modify the local climate as measured at the climate station during the ice-free period.

Air quality monitors (2 – PQ-100s and 1 – hi-vol) were also installed near the Project site to monitor baseline TSP, PM-2.5, PM-10, metals and radionuclides. Data from 2009 are not yet available. These monitors will be operated during future active field seasons and used in air dispersion and Project environmental assessment predictions.

4.4 Terrestrial Component

The 2009 terrestrial program provided baseline data on valued components found in the immediate and regional area around AREVA's Kiggavik and Sissons leases and proposed facilities. Preliminary results generated from the various programs conducted in 2009 are presented below.

4.4.1 Ungulates (Caribou and Muskox) and Predatory Mammals

Weekly Height-of-Land (HOL) surveys were conducted at 20 stations during the 2009 field season. HOL surveys are used to identify wildlife species using the area and to identify wildlife aggregations or predator presence that may have implications for camp or exploration activities. Surveys are stationary and consisted of a 15-minute observation period where wildlife species and distance from survey point was documented. The focus of the HOL survey was on ungulates, predatory mammals and larger birds and raptors. Caribou and muskox were regularly observed during HOL surveys, as were wolverine, wolf, grizzly bear, peregrine falcon, rough-legged hawk, bald eagle, and short-eared owl. A total of 1,963 caribou were sighted during HOL surveys in 588 groups ranging from one to 200 animals. A total of 160 muskoxen were sighted during HOL surveys in 35 groups ranging from one to 28 animals. There were three individual wolf sightings on HOL surveys in 2009.

Ground surveys along the proposed southern all-weather route resulted in sightings of:

- Fourteen (14) caribou in 10 groups ranging from one to three animals

- Seven (7) muskoxen in four groups ranging from one to four animals
- One wolf

There were three incidental observations and evidence of two digs of grizzly bear, two incidental observations and evidence of one dig of wolverine and three incidental observations of wolves.

In November 2009, 10 AREVA satellite collars and 11 collars supported by Agnico-Eagle Mines were deployed on caribou. Aerial reconnaissance surveys were completed prior to deployment, and all 21 collars were deployed with no injury to animals. All of the animals were collared in the Kiggavik RSA as few caribou were present in the Meadowbank RSA. These satellite collars will contribute to the larger caribou collaring programs overseen by the territorial governments that are conducted in collaboration with various Hunter and Trappers Organizations and other interested parties. During the 2009 field season, the only previously collared caribou known to be present within the Kiggavik RSA were two Qamanirjuaq cows that appeared to move along the southern perimeter of the RSA from 19 to 29 July 2009 (GN-DoE, unpublished data).

Hunter harvest data were collected using a harvest calendar handed out at the beginning of the year. Participating households in Baker Lake use the harvest calendar to record harvest details for each date, including number of animals, sex and age, and harvest location on a reference map. Hunter interviews were also conducted a number of times throughout the year to ensure completeness of harvest data and to maintain relationships. The 2009 harvest data are currently being collected.

4.4.2 Upland Breeding Birds

Twenty-five (25) PRISM[1] plots in the Mine LSA and 20 plots in the RSA were monitored during the 2009 field season. The most common breeding bird was lapland longspur, followed by savannah sparrow, horned lark, and common redpoll. In 2009, the total count for the mine LSA increased (n=409), whereas the total count for the RSA control area (n=320) remained similar to 2008. The PRISM method allows calculation of density for some breeding birds near and far from mine site facilities.

Ten transects were established perpendicular to the proposed northern all weather access road and were surveyed three times during the breeding season. Survey results were recorded in 100 m intervals, allowing calculation of bird diversity at variable distances from the proposed northern all weather access road. Locations of some transects were changed in 2009 to follow the revised northern all weather access road alignment. Twenty-nine species were recorded (10 of which were waterbirds) during breeding bird transects, reflecting a decrease in total birds observed along the north all weather access road compared to 2008.

[1] Program for Regional and International Shorebird Monitoring

4.4.3 Water birds

Surveys were conducted in the Mine LSA and along the north all weather access road, during nesting and molting. Nesting surveys involved a thorough assessment of nesting water birds along shorelines within 200 m of proposed facilities. A total of 19 species were observed during the nesting survey and nests were found for 11 of these species. Later in the field season, wetlands, ponds and lakes within 200 m of the proposed mine and road facilities were surveyed to determine whether any of the larger water bodies were used as molting areas for water birds. Active molting of long-tailed duck was observed at lakes along the north all weather access road. Groups of recently molted feathers were also observed along the edges of water bodies in the Mine LSA and along the northern all weather access road.

To evaluate the importance of the Sissons lease to water birds and shorebirds, ground surveys were conducted throughout the field season along nine transects in both the Sissons lease section and a new control area further south in the RSA. An average of 73 water birds were observed during each survey at the Sissons lease compared to an average of 141 water birds in the control area. This difference was likely the result of unavoidable variation between habitat types. King eider (including breeding pairs) was observed in both areas; king eider is typically restricted to coastline areas and is thought to seldom breed in the areas observed.

4.4.4 Raptors

A raptor nest site occupancy survey was conducted in June by helicopter and all known nest sites along the proposed northern all weather access road were surveyed and some new sites were located. Nests were visited again in late July/August to determine hatching success. Peregrine falcon and rough-legged hawk were observed most frequently, followed by bald eagle. A total of eight active nests (all peregrine falcon) were visited in the Mine LSA and along the proposed all weather access roads; one of these active nests was observed for the first time in 2009. Six of these nests were confirmed to contain eggs, and three were confirmed to have produced young.

4.4.5 Wildlife Habitat

To determine the quality and quantity of habitats within the Project's regional study area, we conducted field surveys and analyses to describe Ecological Land Classification (ELC) units. Field surveys refined ELC units and their boundaries. In 2009, a total of 84 ELC field plots were surveyed in the Mine LSA and at the potential quarry sites. Detailed information relating to landform characteristics, moisture regime, substrate, and vegetation were collected and compiled in a database. Soil pits at some plots were excavated to approximately 50 cm or less where bedrock or permafrost was

encountered. Soils were classified and general site characteristics were assessed in 20 by 20 m plots according to standard methodology. At each location several attributes were recorded to describe the soil horizon layer, including: depth, grade, class size, kind, consistency, colour, coarse fragment, mottles, roots, and texture. Plant species were also recorded at each ELC plot using 20 by 20 m sampling plots. Data forms created by the Government of Nunavut – Department of Environment (GN-DoE) were used to ensure compatibility between AREVA and the Government of Nunavut (GN) field programs.

4.4.6 Vegetation and Soil Chemistry

Soil samples were collected at two 'far-field' or reference locations in the Regional study Area (RSA), in areas outside the potential influence of proposed mine facilities (previous sampling in 2008 collected soil samples from within the Mine LSA). At each sampling location, five sample sites were selected at least 150 m from each other. Within each sample site, representative grab samples were collected from five separate test pits and composited. Samples were analyzed for metals and radionuclides.

Plant tissue samples were also collected at two 'far-field' locations in the RSA. At each sampling location, five sample sites were selected at least 150 m from each other. Within each sample site, five grab samples of plant tissue were collected within a five m radius. Tissues were collected by randomly selecting and simply grabbing/pulling representative plants (sedges, lichens, and berries). Individual samples were analyzed for moisture content, total metals on a wet weight basis, and radionuclides.

Wildlife tissue samples were collected from insects, small mammals, birds and harvested caribou. Insects were sampled using a Skeeter-Vac, which attracts insects to a carbon dioxide source (e.g. propane). This method proved to be unsuccessful but may have been influenced by timing of the collection period. Only one sample was collected from the Mine LSA in 2009. Small mammals and birds were sampled using snap-traps and samples were collected from seven locations in the Mine LSA and one location in the RSA in 2009. Seventy-six (76) samples of caribou tissues from 27 separate animals were collected from hunters in Baker Lake. Details regarding the approximate location and date of the kill, age, sex, and health condition of the animal were recorded where possible as well as information regarding storage and handling methods. All tissue samples were analyzed for total metals and radionuclides.

4.5 Archaeological Component

The heritage field studies were carried out between August 10 and 23, 2009 under Permit No. 2009-010A issued to Brad Novecosky of Golder Associates by the Department of Culture, Language, Elders and Youth, Government of Nunavut. The 2009 field season was the third year of archaeology baseline data collection for the Kiggavik Project. The purpose of this baseline collection is to describe the existing archaeological sites that may be affected directly or indirectly by the Project. This

information will be combined with previous years' data to provide sufficient information to support the Environmental Impact Statement.

During the 2009 field season, a general reconnaissance was conducted to identify heritage and/or cultural resources that may be present in the following proposed project components:

- North All-Weather Access Road revisions and quarry locations;
- South All-Weather Access Road;
- Winter Access Road; and
- Water pipeline routes.

In addition to examining these project components, a regional low level helicopter reconnaissance was carried out. Areas examined included a portion of the Thelon River extending from Baker Lake to Aberdeen Lake, portions of the north and south shore of Schultz Lake, as well as the north shore of Judge Sissons Lake and adjacent Qamanaujaq Lakes. These areas were examined as part of a general archaeology reconnaissance of the region, and in an effort to locate grave sites that were reported by elders from Baker Lake as part of the AREVA sponsored Inuit Qaujimajatuqangit (IQ) and Traditional Land Use (TLU) interviews and homeland visits.

A final objective of the 2009 field season was to revisit four previously recorded archaeology sites, LcLe-19, 20, 21 and 22, identified by Golder in 2007. These sites are in unavoidable conflict with the Kiggavik Site mine infrastructure and were evaluated for heritage significance and mitigation requirements.

As a result of the heritage reconnaissance, 81 previously unrecorded archaeology sites were identified and 12 sites were revisited. The 81 newly recorded sites can be classified according to five general site types based on observed stone features (Table 4.2). Campsites are the most common, and contain, but are not restricted to, tent outlines that indicate habitation of a landform (n=40). This is followed by lithic scatters/workshops that consist of debitage resulting from stone tool manufacture with no associated features (n=19); hunting sites, which include caches and blinds that relate to hunting activities (n=12); lookout sites (n=7), which include inuksuit or boulder markers placed at prominent locations; and recent graves (n=3) of family members now living in Baker Lake.

Table 4.2 Summary of newly recorded Archaeology Sites by Type

Archaeological Survey	Camp	Lithic Scatter	Hunting	Lookout	Grave	Total
North All-weather Access Road	7	3	4	0	0	14
South All-weather Access Road	14	16	1	3	0	34
Winter Access Road	7	0	2	0	0	9
Water Pipelines	1	0	0	0	0	1
Regional Helicopter Survey	11	0	5	4	3	23

Total	40	19	12	7	3	81

Of the campsites, 24 contain tent outlines only, ranging from one to 15 tent features. The remaining 16 campsites contain multiple features that consist of not only tent rings, but also caches, blinds, kayak stands, fox traps and/or inuksuk features. This suggests people were engaged in multiple activities at these areas beyond camping. Of the hunting sites, six contain single features and six contain multiple or recurrent cache or blind features. The lookout sites consist of four sites with Inuksuit only, and three sites with multiple features including inuksuit, cache and/or blind features. No culturally diagnostic tools were observed at any of the sites; however, past studies have recovered projectile points indicating occupation of the region potentially as early as 8,000 radiocarbon years before present. The majority of stone features are likely affiliated with historically known Caribou Inuit who continue to hunt in the region.

None of the graves reported by elders during the IQ and TLU interviews or homeland visits occur within proposed project components. The graves recorded during the 2009 field season were identified during the regional survey along Schultz Lake and the Thelon River. Three sites were identified consisting of five graves. They represent recent graves of family members now living in Baker Lake that date to the latter part of the 20th Century.

The four archaeology sites in unavoidable conflict with the mine infrastructure at the Kiggavik Site consisted of three stone markers (LcLe 19, 20 and 22) and one recent cache feature (LcLe 21). These sites were evaluated and determined to be of minor heritage significance.

4.6 Marine Component

Marine studies were conducted during 2009 in Chesterfield Inlet and coastal areas between Chesterfield Inlet and Churchill by Nunami Stantec Limited (Nunami) staff and local assistants from the communities.

The study area for the 2009 aerial survey program was designed to include proposed vessel routes between Churchill and Chesterfield Inlet, covering a significantly larger study area (76,000 km^2) than in 2008. Transects reached up to 100 km offshore in order to capture the extent of potential tug/barge routing.

The main objective of the 2009 aerial survey program was to provide seasonal documentation of the distribution of marine mammals in the study area, which includes the shipping corridor between Churchill and Chesterfield Inlet.

Aerial surveys were conducted in early summer (July 29 – 31) and early fall (August 31 – September 3) in an attempt to capture how marine mammal distribution and abundance varies seasonally within the study area. The summer (July) surveys were timed to survey

the study area immediately after ice break-up, as relatively little is known on beluga presence, abundance or distribution at the start of the open water period. The fall (late August/early September) surveys were timed to gain a better understanding of beluga abundance and distribution during their northward migration to overwintering habitat. Flights were grounded due to inclement weather on July 31, September 1, and September 2.

In total, 7,035 km of trackline was flown across four survey days, including 2,922 km of coastline and 4,113 km of offshore transects. Transects reached up to 100 km offshore in order to capture the extent of potential tug/barge routing.

As shown in Table 4.3, beluga whales, polar bears and pinnipeds were observed each day during the surveys.

Table 4.3 Marine Mammal Observations during Aerial Surveys

	Number of Animals Observed		
Day	**Beluga**	**Pinniped**	**Polar Bear**
July 29	952	31	16
July 30	1177	20	1
August 31	3867	16	2
September 3	1131	2	3
Total	7127	69	22

Overall, 66% of beluga whale sightings occurred on the coastal survey, with the remaining 34% on the offshore transects. However, the whales were almost exclusively coastally associated; only one sighting of three whales was made greater than 5 km offshore, on the July 30 survey. A total of 102 whales (1.3%) were observed north of Rankin Inlet over the course of the surveys, 70% of which were sighted on the September 3 survey alone. In total, 7,127 belugas were detected during 763 separate sighting events over 7,035 km of trackline surveyed. This translates to 0.12 sightings per kilometer and 1.2 whales per kilometer; while these metrics give an idea of encounter rates throughout the study area, they fail to capture the clumped distribution of whales centred on the Churchill estuary.

The majority of polar bears were observed on coastal headlands (95%), indicating a strong coastal association. 71% of these sightings occurred on the coastal survey and 29% along the offshore transects; however, like belugas, two of the three bears documented on the offshore transects were actually observed along the coastal portion. A lone bear was spotted offshore swimming in the residual brash ice northeast of Churchill during the July 29 survey. In total, 22 polar bears were documented across seven separate sighting events over 7,035 km of trackline surveyed, resulting in 0.001 sightings per kilometer and 0.004 bears per kilometer.

Seals were observed both coastally and offshore, with 43% of the sightings documented on the coastal survey and 57% on the offshore transects. Again, many of the sightings on the offshore transects were actually made in the coastal region. Walrus (one herd of 20 individuals) were observed exclusively offshore and associated with residual ice floes northeast of Churchill. In total, 69 pinnipeds were observed during 28 separate sighting events over 7,035 km of trackline surveyed; this resulted in 0.004 sightings per kilometer and 0.01 pinnipeds per kilometer.

At community meetings on May 29, 2008 and July 16, 2009, the residents of Chesterfield Inlet indicated they would like a vessel tour to be conducted in Chesterfield Inlet to impart local knowledge of important hunting and fishing grounds in the area. This survey was completed in August 2009.

A boat was chartered from Leo and Don Mimialik for the survey. The route basically followed the north coast of Chesterfield Inlet for about 40 – 50 km and then followed the south coast on the way back. Along the way, fishing cabins and popular hunting spots were pointed out. Additionally all marine mammal sightings were recorded using a Garmin GPS. A series of informal questions were asked to both Leo and Don, relating to timing and location of hunting various marine mammals, such as beluga, seal, polar bear and walrus. Beluga whales, polar bears, snow geese, seals, black guillemots, and caribou were observed during the vessel survey.

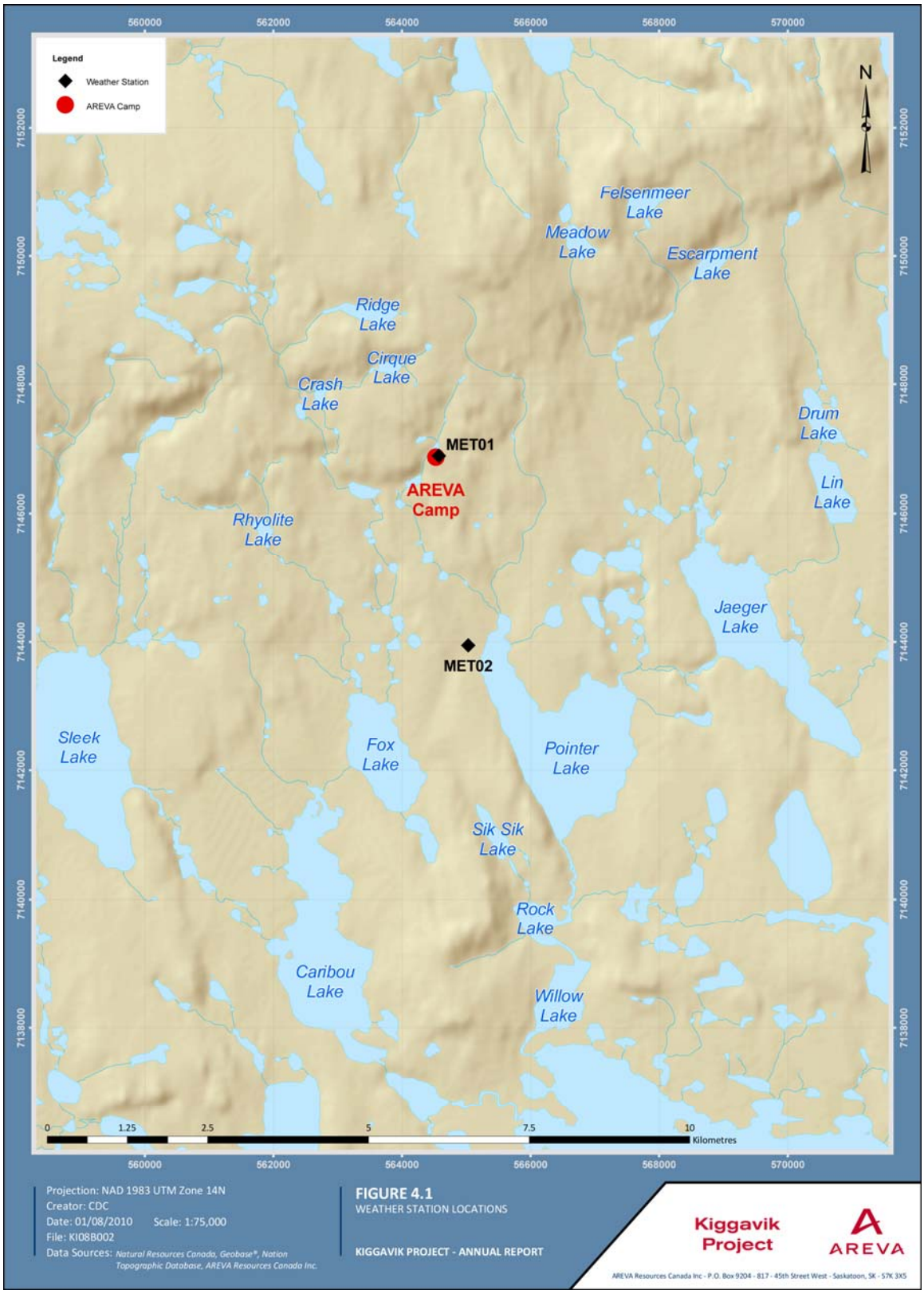

Figure 4.1 Weather Station Location

5 EFFECTS OF THE PROJECT ON HUMAN HEALTH

AREVA endeavours to take every reasonable precaution toward ensuring the protection and conservation of the natural environment and 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 and environmental policies and is supported through a comprehensive Environment, Health and Safety Program for the Kiggavik Project.

Occupational health and safety and radiation protection programs were implemented to ensure work activities are performed in a safe and responsible manner and that workers are not adversely exposed to radiation from uranium exploration activities.

The results of the 2009 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.

5.1 Occupational Health and Safety Program

Health and safety activities at the Kiggavik Project are conducted in accordance with Nunavut Mine Health and Safety Regulations, exploration best practices and AREVA requirements.

All employees and contractors working at the Kiggavik site received orientation and appropriate safety training prior to beginning work to ensure worker safety and protection of the environment. Employees and contractors were also required to participate in weekly safety meetings (Safety Huddles) to discuss and reinforce safety issues.

An Occupational Health Committee (OHC) was established with regular meetings being held by the Committee.

Occupational health and safety was largely monitored and enforced by 1984 Inc. employees with the help of the Environment and Radiation Protection Group. The Occupational health and safety program was also overseen by the Facility Supervisor.

A summary of work related injuries that occurred during the 2009 program is given in Table 5.1.

Table 5.1 Injury Summary for 2009

Group	First Aids	Medical Aids	Lost Time Accidents
AREVA	2	0	0
Contractors	13	2	1

The medical aids include injuries requiring a visit to the Baker Lake clinic. In 2009, these included treatment of a steel sliver to hand and a cut to hand.

There were no lost time accidents in 2009 involving AREVA personnel.

A lost time accident was sustained by a 1984 Inc. kitchen helper on May 13, 2009. The accident occurred while the helper was walking to her cabin when she slipped on ice and bumped her shin on the bottom of the cabin. As a result she was off work for 48 hours. All employees were reminded to wear proper footwear while walking outside and sand was made available near all walkways so that it could be easily spread on any slippery areas.

In February 2009, AREVA held a training session for all employees and contractors who planned to be at the Kiggavik site during the 2009 field season. The session, facilitated by experienced safety consultants, focused upon helicopter safety in exploration and mine development projects.

5.2 Radiation Protection

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 practices and AREVA requirements.

5.2.1 Administrative Elements

Program Documentation:

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

Training:

All AREVA employees and contractors working at the Kiggavik site received orientation and appropriate radiation protection training prior to beginning work 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).

5.2.2 Program Elements

Dosimetry Monitoring Program:

Dosimetry monitoring is conducted to determine and document worker exposures to radiological components which include gamma radiation, radon progeny (RnP) and long-lived radioactive dusts (LLRD). A Code of Practice (COP) sets Action and Administrative Levels.

No COP dosimetry action levels were exceeded during the 2009 program. The worker radiation doses observed during the 2009 program were well below regulatory dose limits for members of the public (1 mSv/a) or 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. For exposure control, workers handling and logging radioactive drill core and rock samples are also issued direct reading dosimeters (DRDs).

During the 2009 program, worker gamma radiation exposures ranged from 0.00 mSv to 0.09 mSv with an average exposure of 0.01 mSv. The highest gamma radiation exposure was received by a geologist. A frequency distribution of worker gamma radiation exposures is presented in Table 5.2. As shown, 49% of the exposure results were below the OLD detection limits of 0.01 mSv and 95% of the gamma exposure results were below 0.05 mSv.

Table 5.2 Worker gamma dose frequency distribution

Gamma Radiation Exposure (mSv)	Frequency
0.00	66
0.01 – 0.05	62
0.05 – 0.10	6
> 0.10	0

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.

Worker exposures from RnP and LLRD during the 2009 program were conservatively estimated from workplace monitoring to be less than 0.03 mSv and 0.1 mSv respectively.

Total Effective Exposure:

Total effective exposure was estimated for each individual based on OLD, RnP and LLRD results. The maximum dose received by an individual working at Kiggavik in 2009 was 0.206 mSv. The average dose was 0.035 mSv. The maximum 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. The estimated individual exposure of all personnel working at the Kiggavik site was therefore below the regulatory limit for members of the public (Figure 5.1). The total effective dose for the site (all personnel collectively) was 4.74 mSv.

5.2.3 Radiological Monitoring Program

Workplace monitoring:

As part of the Radiation Protection Program, routine radiological monitoring is performed for gamma radiation, radon gas (Rn), radon progeny (RnP), and long-lived radioactive dust (LLRD) in order to detect potentially abnormal radiological conditions, estimate worker doses, and document radiological conditions.

Radiological monitoring was conducted during the program at and around the drilling sites, in the camp and mobile core shacks and the driller dry shacks. A summary of the radiological monitoring results from the 2009 program is given in Table 5.3.

Table 5.3 Radiological Monitoring Results for 2009 Program

Radiation Type	Average	Maximum
Gamma (μSv/h)	0.171	3.415*
Radon Gas (Bq/m^3)	24.2	55.5
Radon Progeny (Grab Sampling) (WL)	0.001	0.016
Long-Lived Radioactive Dust (Grab Sampling) (Bq/m^3)	0.014	0.163**

*The maximum gamma reading recorded was from elevated core in the hot core shack which personnel were not using at the time.

**The maximum LLRD reading recorded was while splitting mineralized core in the core shacks.

Gamma dose rate measurements ranged from 0.00 – 3.415 μSv/h with an average dose rate of 0.171 μSv/h. It is noteworthy that the highest gamma readings recorded during the program were from the hot core shack which contained hot core but was not being used at the time by personnel. The amount of hot core within the shack was minimized before being used by any personnel.

Indoor radon progeny measurements ranged from 0 – 0.016 WL with an average radon progeny potential alpha energy concentration of 0.001 WL. Radon progeny levels were typical of natural background indoor levels.

Long-lived radioactive dust concentrations ranged from 0.00 – 0.163 Bq/m^3 with an average concentration of 0.014 Bq/m^3. 89% of readings were below the first administration level of 0.04 Bq/m^3, 7% were between 0.04 and 0.1 while 3% were above the second administration level of 0.1 Bq/m^3. All elevated readings were taken in the geology shacks while mineralized core was being split. During this time LLRD readings were taken on a daily basis and appropriate personal protective equipment and ventilation methods were used.

Three site alpha dosimeters were installed in 2009; one in Baker Lake, one at Kiggavik and one at Sissons. These instruments include an air sampler, an electronic flow meter for the continuous measurement of the sampling volume of air and a head for the integrated measurement of alpha emissions of short life daughter products of radon 222 and 220 and long life products of uranium and thorium. The results of all three site alpha dosimeters were very minimal.

Track etch cups for environmental radon gas measurements were also installed in twenty one locations in the Kiggavik and Sissons areas. At the beginning of the 2009 field season four track etch cups were placed at each location. Two were considered to be seasonal and sent to the Landauer laboratory for analysis at the end of the 2009 field season while the remaining two were left in place and will remain there until the beginning of the 2010 field season. Due to timing constraints there were six locations which only had the annual track etch cups set up.

The results for the seasonal track etch cups range between 14.8 Bq/m^3 and 55.5 Bq/m^3 with an average of 24.2 Bq/m^3. The locations of the seasonal track etch cups and their results are shown in figure 5.2.

Contamination Monitoring:

Contamination control measures are implemented to minimize the spread of radioactive materials into unintended locations. Routine contamination monitoring using a pancake probe and swipes was performed weekly throughout the site including at the drill site, core shacks and at the camp facilities. The Administrative Level was exceeded in one

instance during the season, in a core logging shack. The shack was cleaned until readings were below the Administrative Level.

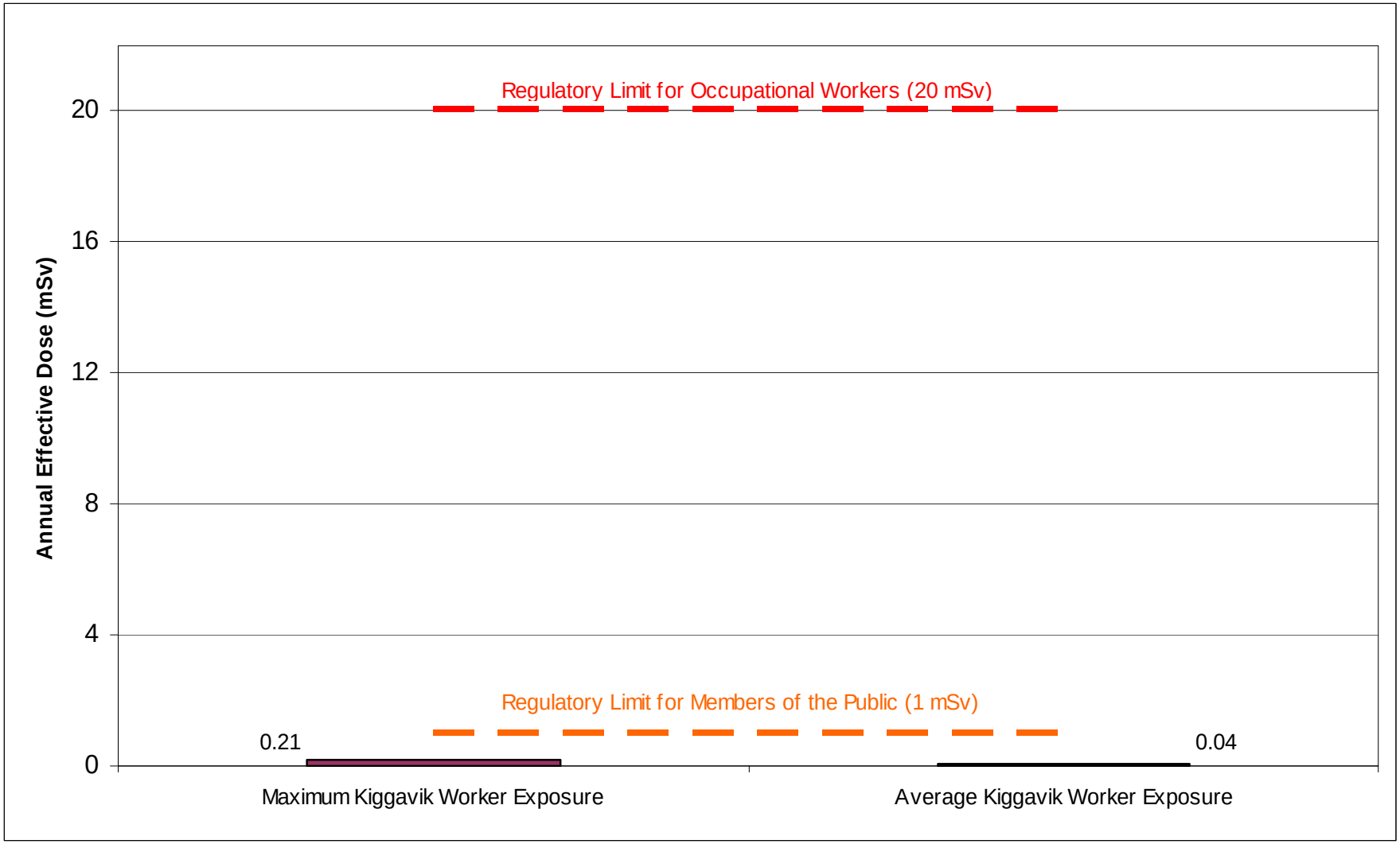

Figure 5.1 Comparison of Kiggavik Exposures (2009) and Regulatory Limits

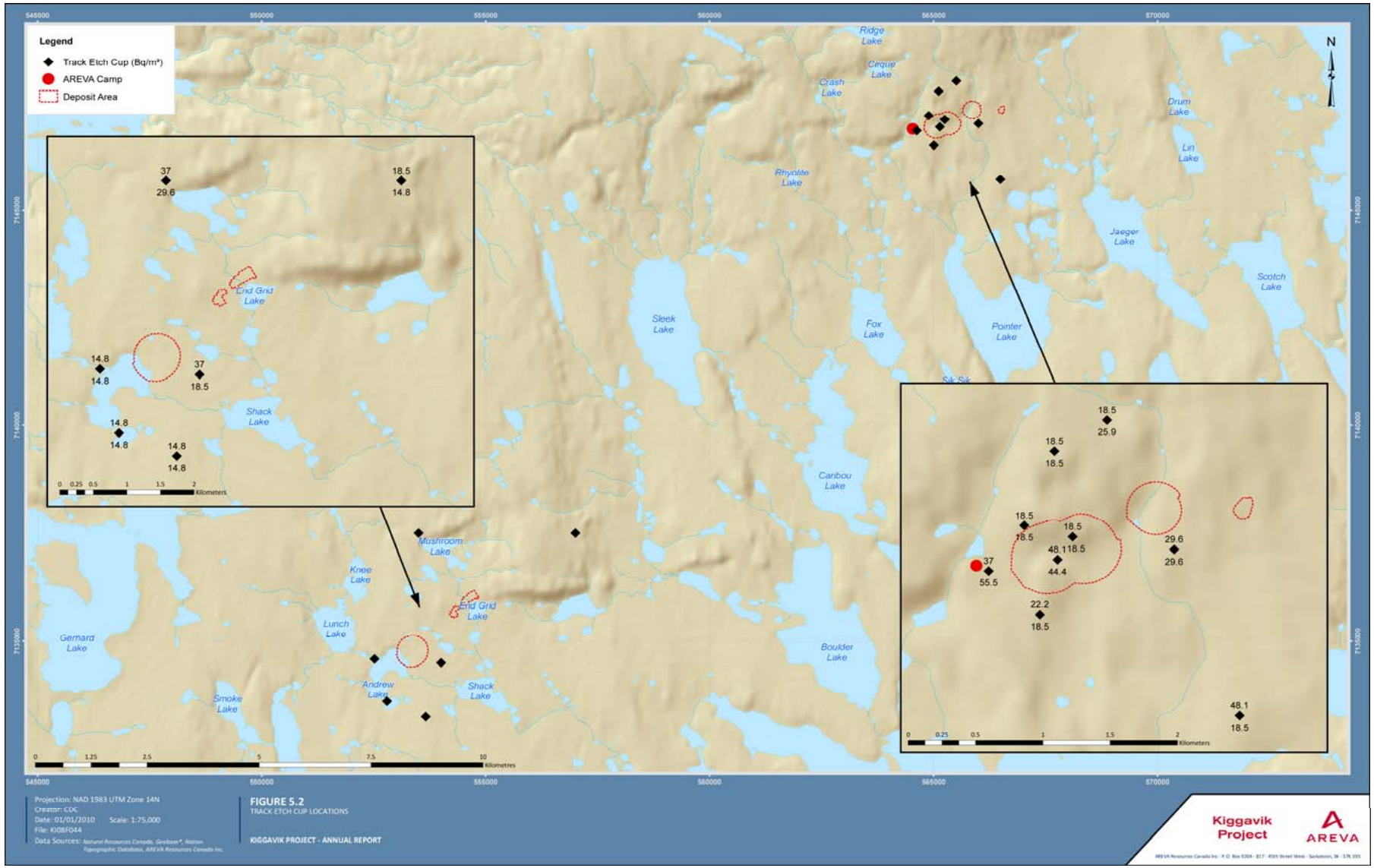

Figure 5.2 Track Etch Cup Location

6 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 2009, local people were hired for work carried out at the Kiggavik camp, in Baker Lake and in Hudson Bay . 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 2009.

6.1 Local Employment

The Kiggavik Project provided employment to local people through direct hiring as well as by hiring local companies to supply labour services to the Project. During 2009, the Project hired three local people directly – a Community Liaison Officer who worked afternoons throughout the year, a Community Relations Assistant who worked from February until August, and a Logistics Assistant who worked through the field season from June until September.

The Project contracted Inuit workers from a Baker Lake company for camp operations and maintenance, wildlife monitoring, logistics, and environmental studies. In addition, consultants contracted local Inuit workers from Baker Lake and Chesterfield Inlet for environment studies. Table 6.1 summarizes the employment provided to local Inuit workers since the field program resumed in 2007.

Table 6.1 Local Employment

	2007		2008		2009	
	Inuit Workers	**Hours**	**Inuit Workers**	**Hours**	**Inuit Workers**	**Hours**
Local AREVA Employees	3	1731	2	2,214	3	2993
Contracted Workers	28	6730	29	10,958	31	10,205
Total	31	8461	31	13,172	34	13,198

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.

6.2 Locally Contracted Work

Many goods and services obtained for the Kiggavik Project in 2009 were contracted to local suppliers. The total value of the local contracts in 2009 was $2.8 Million. The majority of this work went to companies with offices in Baker Lake. Some work,

including accommodation and meals and translation services, was given to companies in other Kivalliq communities.

Table 6.2 summarizes the value of contracts awarded to northern businesses since 2007. The work contracted to local companies in 2009 consists of:

- Diesel and jet fuel
- Expediting and transportation
- Aircraft charters
- Marine baseline investigations
- Groceries
- Meals and accommodations
- Core box construction
- Construction materials
- Vehicle rental
- Translation services
- Cleaning services
- Camp construction and renovation
- Labour
- Office utilities

Table 6.2 Kiggavik Project Northern Contracts

	2007	2008	2009
Inuit Owned companies**	$1.3M	$2.0M	$1.8M
Other Northern companies***	$1.1M	$1.5M	$1.0M
Total	$2.4M*	$3.5M	$2.8M

*Number differs from the $1.85M reported in 2007 because the selection criteria have been modified

**Companies on the NNI list of Inuit owned companies

***Companies not on the NNI list but with offices in Nunavut and a significant number of Inuit employees

6.3 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 2009 is shown in Table 6.3.

Table 6.3 Sponsorships and Donations for 2009

Category	Organization	Activity	Date
Community	Baker Lake Hamlet	Hamlet Days Feast	May
	Baker Lake Elders	Cash contribution	April

Category	Organization	Activity	Date
	RCMP	Youth Program in Baker Lake	June
	Repulse Bay	Hamlet Day Celebrations	June
	Whale Cove Food Bank	Assistance with Open Houses	June
	Mianiqsijit Project, Baker Lake	Childrens Summer Program	July
	Arviat High school	Assistance with Open Houses	July
	Bowhead Whale Hunt	Bowhead hunt	June
	Repulse Bay	Assistance with Open Houses	June
	Baker Lake Search and Rescue	Helicopter support for lost person	September
	Baker Lake Take Back the Night	Walk	December
	RCMP	Christmas Charity	December
Sports and Recreation	Baker Lake Fishing Derby	Fishing Derby	April
	Senior Mens Hockey	Coral Harbour Tournament	March
	NAHC Hockey	Hockey Tournament	April
	Baker Lake Snowmobile Club	Race	June
	Baker Lake Basketball Team	Tournament in Winnipeg	June
	Team Kivalliq	Volleyball tournament in Rankin Inlet	October
	Dog Trotters	Christmas events in Baker Lake	December
	Rankin Inlet	Christmas Events in Rankin Inlet	December
Education	Whale Cove High school grads	Grad expenses	April
	JA High School Graduates	Grad Trip	June
	Arviat High school	Computers	March
	Northern Youth Abroad		April
	Kivalliq Science Fair	Science Camp	September
	Whale Cove High school	Award of Excellence	May
	Baker Lake High School	Award of Excellence	August
	Repulse Bay High school	Award of Excellence	August
	Rankin Inlet High school	Award of Excellence	August
	Chesterfield Inlet High school	Award of Excellence	August
	Coral Harbour High school	Award of Excellence	August
	Arviat High school	Award of Excellence	August
	Kivalliq Science Fair	Rocks and Minerals Camp	September
Culture	Bowhead Whale Hunt	Bowhead hunt	June

Figure 6.1 Kiggavik Camp Operators from Baker Lake working on the generator in July 2009

Figure 6.2 Wildlife Assistant from Chesterfield Inlet Participating in an Aerial Marine Mammal Survey in Hudson Bay in July 2009

Figure 6.3 Peter Tapatai of Peter's Expediting

7 COMMUNITY ENGAGEMENT

AREVA recognizes that for the Kiggavik Project to be successful, it will need the support of the people in the region. Information sharing and community engagement are requirements of environmental assessment review and one of AREVA's corporate commitments.

7.1 Information Sharing and Community Engagement

7.1.1 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 2009 on a daily basis. A bilingual Community Liaison Officer was present each afternoon to speak with visitors. Between February and August, a full time Community Relations Assistant was also working in the Information office.

7.1.2 Kiggavik Project Liaison Committees

Baker Lake 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. The CLC was endorsed by the Hamlet Council. 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 2009, the Baker Lake CLC met on 11 occasions, nine times for meetings and twice for tours. The dates are shown in Table 7.1. Meetings were held at the AREVA Information Office in Baker Lake and were open to the public. 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 presented to the CLC at meetings/workshops:

- updates of Project activities including the field program, environmental baseline work and permits;
- information on possible road routes to the Kiggavik site;
- four consultant presentations on environmental studies performed; and
- information and updates on local employment opportunities and sponsorships.

The CLC provided advice to AREVA on:

- how to obtain broad community input on a possible Kiggavik access road.
- general advice on community engagement and open houses
- effectiveness of communication materials
- Baseline environmental studies (Archaeology, socioeconomic, wildlife)
- Cleanup of drums in Baker Lake
- Selection of the location of a possible bridge to cross the Thelon River.

The CLC visited the Meadowbank mine under construction on July 21 and the CLC made its third visit to the Kiggavik site on August 19.

Regional Liaison Committee:

A Regional Liaison Committee (RLC) was formed in 2007. This committee consists of one representative, appointed by the Hamlet Council, from each Kivalliq community. This committee is a means of ensuring ongoing communication between the Kiggavik Project and Kivalliq communities. Minutes are kept of the meetings.

The RLC met on one occasion in 2009. In February, the committee met in Rankin Inlet for a two day workshop to discuss community engagement and the Inuit Qaujimajatuqangit (IQ) plans for the year.

The topics of most interest to the RLC continue to be regional communications, training and employment development and business opportunities. RLC members participated in the May/June round of information sessions that took place throughout the region by assisting with advertising and distributing information.

7.1.3 Information Sessions

A series of information sessions were held in all seven Kivalliq communities in 2009. The sessions consisted of an open house and public meeting with a team of Kiggavik staff available to discuss aspects of the project one-on-one or in groups. The team consisted of management, engineering, regulatory, community relations, Corporate Social Responsibility and mine site employees. Athabascan elders were also present. The information sessions began in Baker Lake on April 16 and 17. Sessions were then

held in the six remaining communities from May 25 to June 3. During the open houses, displays of project information were distributed around the venue and people could speak individually with team members. During the public meeting component, presentations were made and questions were asked and answered in a group format. A total of 550 people signed the guest book for this round of information sessions.

On November 24 and 25, a series of workshops and an open house were held in Baker Lake to get community input on possible road options between Baker Lake and Kiggavik. Workshops were held with the CLC, the Elders Group, the Hunters and Trappers Organization and the District Education Authority. The Hamlet Council was briefed on the sessions before they began. At the sessions a presentation of three possible road options was given and questions were answered. People were then asked to state a preference for road options on a poster at the open house or in workbooks at the workshops. Approximately 175 people signed the guestbook at the open house and about half expressed a preference for a road option. About 30 Baker Lake residents attended the workshops and about 20 workbooks were completed.

The community input received during these 2009 community information sessions will be used to inform Project design and an environmental assessment for the Kiggavik project.

7.1.4 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 2009 are detailed in this section and are listed in Table 7.1. The various activities are discussed in the remainder of the section.

Table 7.1 Community Information, Involvement and Consultation Activities – 2009

Community	Group	Date	*Purpose/ Topic*
Baker Lake	Community Liaison Committee	Mar 27	*Regular Meeting*
		Apr 15	*Regular meeting*
		May 14	*Regular meeting*
		July 21	*Tour of Meadowbank mine construction site*
		July 27	*Regular meeting*
		Aug 18	*Regular meeting*
		Aug 19	*Visit to Kiggavik, Archaeology presentation by Golder*
		Sept 30	*Regular meeting*
		Nov 2	*Regular meeting*
		Nov 25	*Road Options Workshop*
		Nov 26	*Debrief on Road Options Workshop*
	Hamlet council	Jan 27	*Road Options Consultations with Hamlet representatives in Vancouver*
		Nov 23	*Overview of Road Options Open House and Workshops*
	Elders	Mar 4	*Project Update presentation & discussion*
		Apr 16-17	*Project proposal discussion*
		Nov 24	*Road Options Workshop*
	Hunters and Trappers Organization	Mar 4	*Project Update presentation and discussion*
		July 24	*Project Update discussion*

		Aug 20	*GN presentation on collaring, update on Wildlife Report*
		Aug 26	*Presentation & discussion with Nunami Stantec re marine baseline work*
		Nov 24	*Road Options workshop*
	High school	Mar 5	*Project Update presentation and discussion*
		Apr 17	*Valued Ecosystem Component session*
		Aug 28	*Presentation of award of excellence*
		Nov 26	*Overview & discussions of Road Options Workshops*
	Community	Apr 16-17	*Open House & public meeting on the Project Proposal*
		Aug 20	*Public Meeting - Archaeological update*
		Nov 25	*Open House on Road Options*
	District Education Authority	Aug 19	*Visit to Kiggavik, Archaeology presentation by Golder*
		Nov 25	*Road Options Workshop*
	Community residents	Aug 11	*Homeland visit to Garry Lake and visit to Kiggavik for 4 Baker Lake residents*
		Aug 12	*Homeland visit to Aberdeen and Beverly Lakes and visit to Kiggavik for 4 Baker Lake residents*
		Aug 13	*Homeland visit to Aberdeen Lake and visit to Kiggavik for 4 Baker Lake residents*
		Sept 9	*Homeland visit to Schultz and Aberdeen Lake and visit to Kiggavik for 4 Baker Lake residents*
		Sept 10	*Homeland visit to Sand Lake and visit to Kiggavik for 4 Baker Lake residents*
Arviat	HTO	May 26	*Project Update presentation & discussion*
		July 30	*Presentation & discussion with Nunami Stantec re Marine studies*
	High school	May 26	*Mining opportunities overview*
		Aug 29	*Presentation of Award of excellence*
	Community	May 25	*Project Proposal Information session & public meeting*
Chesterfield Inlet	HTO	Jun 2	*Project Update presentation & discussion*
		July 16	*Presentation & discussion with Nunami Stantec re Marine studies*
	High school	Sept 2	*Presentation of award of excellence*
	Community	Jun 2	*Project Proposal Information session & public meeting*
Rankin Inlet	High school	Aug 22	*Presentation of Award of excellence*
	Community	Jun 1	*Project Proposal Information session & public meeting*
Whale Cove	HTO	Jun 3	*Project Update presentation and discussion*
	High school	May 13	*Presentation of Award of excellence*
	Community	Jun 3	*Project Proposal Information session & public meeting*
Coral Harbour	HTO & Council	May 27	*Project Update presentation & discussion*
	High school	Feb 11	*Project and mining Overview presentation & discussion*
		Aug 28	*Presentation of award of excellence*
	Community	May 27	*Project Proposal Information session & public meeting*
Repulse Bay	Hamlet Council	May 28	*Project Update presentation and discussion*
	HTO	May 29	*Project Update presentation and discussion*
	High school	Aug 14	*Presentation of award of excellence*
	Community	May 28	*Project Proposal Information session and Public Meeting*
	NTI/ KIA	Mar 31	*Project Update discussion in Iqaluit*
		Feb 28	*Project Update presentation in Toronto*
	Kivalliq Wildlife Board	May 13	*Project Wildlife Update in Rankin Inlet*
		Oct 29	*Wildlife Studies and road options update in Rankin Inlet*
	BQCMB	May 14	*Project Wildlife Update in Prince Albert, SK*
		Nov 20-21	*Update and Road Options presentation in Winnipeg*
	Regional Liaison Committee	Feb 25-26	*Workshop in Rankin Inlet on 2009 plan*
	Kivalliq Chamber of Commerce	Mar 24	*Project Update at Annual General Meeting in Rankin Inlet*

	Kivalliq Mayors	Feb 11	*Project update at Mayors meeting in Coral Harbour*
	Kivalliq Science Camp	Sept 9-10	*Helicopter for Exploration briefing and orientation flight for 25 participants in Baker Lake*
	Minister of Environment	Apr 2	*Project Briefing in Iqaluit*
	Minister of Health	June 1	*Project Briefing in Rankin Inlet*
	Arctic College	*Dec 3*	*Conference call to Coral Harbour Intro to Mining Class- Kiggavik Project overview and employment opportunities in mining.*

In addition to the information sessions and high school award presentations, project staff met with several groups in several communities to provide information about the Kiggavik project and to solicit comments. The list of events for 2009 is shown in Table 7.1 and is summarized here.

Hamlet Councils:

Kiggavik team members met with some councillors and staff from Baker Lake on January 27 and formally met with Council on November 23 to brief them on the road options open house and workshops that were planned. Hamlet Councils in Repulse Bay and Coral Harbour were briefed on the Information sessions that during the visits to these communities in May.

Hunters and Trappers Organizations:

Twelve meetings were held with Kivalliq HTOs and two meetings were held with the Kivalliq Wildlife Board in 2009. Five of the meetings were held with the Baker Lake HTO. A detailed presentation of the Project proposal and discussion was held on March 4 with the Baker Lake HTO. This was followed up on July 24 with a meeting with the President and Secretary Treasurer. On August 20, an AREVA rep attended a meeting of the Baker Lake HTO where GN was presenting a cooperative campaign of caribou collaring. AREVA is one of the partners in the program. On August 26, AREVA and Nunami Stantec consultants presented and discussed marine studies in Baker Lake. On November 24, the Baker Lake HTO participated in a workshop on road options between Baker Lake and Kiggavik.

AREVA met with the Arviat and Chesterfield Inlet HTO's on two occasions each. An update meeting and discussion took place with both HTO's during the Kivalliq information sessions during the last week of May and first week of June. AREVA and Stantec representatives met with the two HTO's in July to present and discuss the marine studies taking place in Hudson's Bay. A project update meeting was held with the Whale Cove, Coral Harbour and Repulse Bay HTO's during the information sessions in late May and early June.

AREVA met with the Kivalliq Wildlife Management Board on May 13 for a third project update meeting with this organization. A second longer session was held on October 29 where the wildlife studies and road options were discussed in greater detail.

Elders

In 2009, AREVA met with the elders group in Baker Lake on three occasions. A project update presentation and discussion was held on March 4. On April 16 and 17, the Kiggavik team discussed the Kiggavik project with the elders group and other elders on April 16 and April 17 during the Open House and Public meeting in Baker Lake. This meeting was held in the recreation centre and was open to the public. On November 24, the Elders Group in Bake Lake held a Workshop on road options between Baker Lake the Kiggavik site.

Beverly and Qaminirjuaq Caribou Management Board

AREVA has been providing updates to the BQCMB since 2006. AREVA presented a project update focussing on caribou protections measures and environmental studies twice – at the May 14 meeting in Price Albert and at the November 20 meeting in Winnipeg.

Other events

Other events included a third presentation to the Kivalliq Mayors, a fourth presentations to the Kivalliq Chamber of Commerce and a presentation by telephone to the Introduction to Mining Course held in Coral Harbour by Arctic College.

7.2 Kivalliq Community Involvement

Community Involvement for the Kiggavik project began in 2006. Kiggavik Project staff visited communities throughout the Kivalliq region during 2009 and made presentations to various organizations. Community involvement activities are described in the following sections

7.2.1 High School Visits and Awards

The Kiggavik project has been speaking with high school students in the Kivalliq region since 2006. In 2009, each high school was visited at least once for a presentation of an Award of Excellence and some were visited more than once. 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. In 2009, it was awarded to a high school student in each of the seven Kivalliq communities. The award was presented by AREVA staff or community or regional liaison committee members.

In addition to the visits to present awards, the Baker Lake high school was visited on March 5 for a general project update, on April 17 for a working session on valued ecosystem components, and on November 26 for a discussion on the road options workshop carried out the previous two days in Baker Lake.

Other visits to Kivalliq high schools in 2009 included a Project overview to Coral Harbour students on February 11 and a discussion with Arviat students on May 26 about employment opportunities in mining.

7.2.2 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, 63 people have participated in 14 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.

Five visits of four people each took place in 2009. In August three visits were made, one to Garry Lake, one to Aberdeen and Beverly lakes, and one to Aberdeen Lake. In September, two more visits were made – one to Shultz and Aberdeen Lakes and one to Sand Lake. AREVA's Community Liaison Officer accompanied each group on a visit to their homeland and to the Kiggavik camp for a meal. A summary of AREVA's Homeland visits since 2006 is provided in Table 7.2.

Table 7.2 Homeland Visits

Date		Location	Community Participants
2006	Jul 27	Aberdeen Lake and Beverly Lake	12
	Jul 28	Aberdeen Lake and Beverly Lake	3
	Aug 24	Aberdeen Lake	3
2007	Aug 17	Schultz Lake and Aberdeen Lake	4
2008	Aug 21	Schultz Lake	4
	Aug 21	Judge Sissons Lake	5
	Sep 5	Mallory Lake	4
	Sep 6	Schultz Lake	4
	Sep 7	Herman River	4
2009	Aug 11	Garry Lake	4
	Aug 12	Aberdeen Lake and Beverly Lake	4
	Aug 13	Aberdeen Lake	4
	Sept 9	Shultz Lake and Aberdeen Lake	4
	Sept 10	Sand Lake	4
Total		14 Homeland visits	63 Participants

7.3 Site Tours

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

7.3.1 Saskatchewan Minesite Tours

During 2009, the Kiggavik Project hosted one tour where two Indian and Northern Affairs Canada (INAC) representatives toured the mining and milling operations at McClean Lake. Since 2005, AREVA has hosted nine tours of Saskatchewan minesites with 126 participants. A list of tours carried out since 2005 is provided in Table 7.3.

Table 7.3 Tours of Saskatchewan Mines

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

7.3.2 Kiggavik Site Tours and Visits

In 2009, five homeland visitor groups visited the Kiggavik site as part of their homeland visit. The Community Liaison Committee had their third annual visit to the site on August 19 and they were accompanied by members of the District Education Authority. The tour included a visit to the camp and to the core logging and storage area. Staff members explained the various aspects of the Project. The Golder archaeologists were onsite and gave the group a presentation of their archaeological work. The homeland visit groups stopped at Kiggavik for a short time and had a meal there. A list of the stakeholder and community visits to Kiggavik since 2005 is provided in Table 7.4.

Table 7.4 Site Visits to Kiggavik

Date		Group		Visit
2005	Aug 23	4	Baker Lake elders	Visit after 2003 and 2004 cleanup
2006	Jul 27	12	Homeland visitors	Visit Kiggavik site during homeland visit
	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
2008	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
	Aug 27	5	Regional Liaison Committee	Tour of camp, core area and drilling
	Sep 5	4	Homeland visitors	Visit Kiggavik site during homeland visit
	Sep 6	4	Homeland visitors	Visit Kiggavik site during homeland visit
2009	Aug 11	4	Homeland visitors	Visit Kiggavik site during homeland visit
	Aug 12	4	Homeland visitors	Visit Kiggavik site during homeland visit
	Aug 13	4	Homeland visitors	Visit Kiggavik site during homeland visit
	Aug 19	12	CLC and DEA reps	Tour of camp and core area
	Sept 9	4	Homeland visitors	Visit Kiggavik site during homeland visit
	Sept 10	4	Homeland visitors	Visit Kiggavik site during homeland visit
Totals		96	Visitors	

Figure 7.1 William Noah, Community Liaison Officer, Baker Lake

Figure 7.2 CLC meeting, July 2009

Figure 7.3 Frederic Guerin, Kiggavik General Manager discusses transportation with Chesterfield Inlet Mayor Harry Tootoo during the Open House on June 2

Figure 7.4 Road Options Poster at the November 24 Open House in Baker Lake

Figure 7.5 AREVA Community Relations Assistant Dianne Iyago presenting Award of Excellence to Rankin Inlet High school Graduate Appolina Manilak on August 22.

Figure 7.6 The AREVA team and Community Liaison Committee discuss the Kiggavik project with Baker Lake elders On August 17, 2009

Figure 7.7 Homeland Visit, August 2009

Figure 7.8 Archaeological presentation by Golder over lunch during the Community Liaison Committee and District Education Authority visit to Kiggavik on August 19

8 INSPECTIONS

Land Use Inspectors visited the Kiggavik Project site three times during the 2009 field season, on July 22, August 7 and August 24. The Mines Inspector (Workers' Safety & Compensation Commission) also conducted an inspection on June 26th.

An Indian and Northern Affairs Canada (INAC) environmental inspection was conducted on July 25, 2009. The Kiggavik camp was the only location inspected at this time. The following are the recommendations and/or concerns noted INAC's Field Inspection Report and the associated actions taken:

RECOMMENDATIONS/CONCERNS	ACTION TAKEN
Reminder to give 48 hrs notice of commencing activities	Noted and will follow through with this condition prior to starting the 2010 field season.
Grey water sump needs improvement - suggested sump be deeper and more of them	Further modifications to the sump are planned to take place at the beginning of the 2010 field season

A second inspection, focusing on water use, was conducted by INAC on August 7, 2009. The Water Use Inspection Report indicates that the Kiggavik camp was well maintained and clean. The following is a list of the concerns reported and associated actions taken:

RECOMMENDATIONS/CONCERNS	ACTION TAKEN
Grease trap must be installed by the end of the current field season. Sump must be enlarged to accommodate the increase in camp numbers. Screens are required to remove food particles.	Due to time constraints the installation of a grease trap was delayed until the opening of the camp planned for May 2010. The grease trap will collect most food particles, while a new screen will be placed at the point of discharge in order to collect the remaining particles. Efforts were made to dig a new sump in 2009. Large rocks were encountered and plans are in place to further develop the sump during the 2010 field season. All issues have been discussed with the Water Use inspector via email.
Waste hauled to Baker Lake including waste oil must be documented and those records provided in the annual report.	Documented in Section 3.3 of this annual report
Results of monitoring to be submitted. Water quality at site where drilling was within the 30	End Grid Lake was sampled both prior to drilling and after the completion of

m setback are required for review.	the drilling program. The water samples were then sent to SRC in Saskatoon for analysis. For further details please refer to section 13 of this report

A third inspection was conducted by the Kivalliq Inuit Association (KIA) on August 24, 2009. The inspection covered the overall site locations.. At the time of this inspection drilling activities had been completed and the camp site was preparing to shut down for the season. The inspection report has not been submitted to AREVA at this time.

The findings of the inspections by the Mines Inspector (Workers' Safety and Compensation Commission) were as follows:

RECOMMENDATIONS/CONCERNS	ACTION TAKEN
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.	Winch cable was replaced on June 29th.
Please ensure this highly traveled area in the pump shack is a good solid footing that does not pose a trip, slip, fall or twisting hazard to its user.	All entrances, doorways and highly traveled areas were cleared of any potential tripping hazards and appropriate steps installed. These areas were inspected on a weekly basis by the safety coordinator.

9 PROGRESSIVE RECLAMATION

As discussed in the Abandonment and Restoration Plan, it is AREVA's intention to establish chemical and physical stability at all sites impacted by exploration activities, to the greatest extent practical. However, due to challenges surrounding physical reclamation of surface disturbance the primary focus is currently on chemical stability. All drill sites from the current year's field program are inspected for fuel stained soil and undergo a gamma survey for radioactive contamination. Radiologically or chemically contaminated soil or cuttings are collected in appropriate containers and stored in the long-term core storage area for future handling.

Drill sites must be cleaned to the extent that gamma radiation at a height of 1 metre from surface is as close to pre drilling conditions as is practical and is less than 1 µSv/h. Radioactive material is collected, appropriately packaged and stored in the existing core storage areas. Gamma radiation levels at 1 m from the surface of the core storage area should be reduced to 1 µSv/h and in no instances exceed 2.5 µSv/h. If necessary, residual radioactive material will be transported to the McClean Lake Operation for storage and disposal.

9.1 Chemical and Radiological Restoration

All drill sites are subject to gamma surveys prior to conducting any drilling activities and again following the completion of the hole. If elevated levels of gamma radiation are detected in the post-drilling survey, clean-up activities are conducted followed by another gamma survey to ensure levels have been reduced and are below 1 µSv/h.

A gamma radiation survey was conducted in the vicinity of each borehole and along the discharge route of the drilling water. Readings with an Automess 6150 AD 6 were made at one meter above the ground at approximately five meter intervals.

A summary of the gamma survey data collected at each drilling location from the 2009 field season is presented in Table 9.1 and discussed below. Note that in some cases, more than one hole was drilled from a single rig location, and therefore one set of pre- and post-gamma survey results correspond to a number of holes. Drill hole locations are presented in Figure 9.1 and Figures 9.2 through 9.21 show the survey results.

Table 9.1 Gamma Survey Data from 2009 Drill Locations

Drill Hole	Pre-Gamma		Post Gamma	
	Date	Average Dose Rate (µSv/h)	Date	Average Dose Rate (µSv/h)
AND-09-01	6-Jul-09	0.078	18-Jul-09	0.08
AND-09-02	12-Jul-09	0.083	24-Jul-09	0.085
AND-09-03	19-Jul-09	0.068	14-Aug-09	0.091
CZ-09-01	30-Jun-09	0.062	8-Jul-09	0.091
END-09-01	21-May-09	0.068	28-Jun-09	0.067
END-09-02	6-Jun-09	0.049	25-Jun-09	0.065
END-09-03	12-Jun-09	0.066	25-Jun-09	0.062
END-09-04	16-Jun-09	0.065	28-Jun-09	0.066
END-09-05	11-Jun-09	0.049	5-Jul-09	0.06
END-09-06	26-Jun-09	0.072	15-Aug-09	0.078
END-09-07	28-Jun-09	0.058	16-Aug-09	0.08
END-09-08	4-Jul-09	0.067	16-Aug-09	0.079
END-09-09	4-Jul-09	0.056	15-Aug-09	0.056
END-09-10	14-Jul-09	0.068	16-Aug-09	0.063
END-09-11	14-Jul-09	0.082	16-Aug-09	0.067
END-09-12	21-Jul-09	0.072	14-Aug-09	0.063
END-09-13	23-Jul-09	0.083	14-Aug-09	0.052
END-09-14	27-Jul-09	0.07	14-Aug-09	0.076
END-09-15	29-Jul-09	0.085	14-Aug-09	0.07
MZ-09-01	28-May-09	0.079	1-Jul-09	0.086
MZ-09-02	6-Jun-09	0.07	25-Jun-09	0.083
MZ-09-03	19-Jun-09	0.061	23-Jul-09	0.093
MZ-09-04	1-Aug-09	0.083	20-Aug-09	0.075
RMI-09-01	12-Aug-09	0.084	17-Aug-09	0.067
RMI-09-02	16-Aug-09	0.06	20-Aug-09	0.073

All measured dose rates during the 2009 field season were below 1 µSv/h.

9.2 Physical Reclamation

As discussed in the Abandonment and Restoration Plan, it is AREVA's intention to reclaim surface disturbed sites in an acceptable manner. Reclamation methods are currently being investigated and will be implemented under the direction and approval of experienced consultants, community members and regulatory agencies. Restoration work will be completed prior to the expiry of the Land Use License.

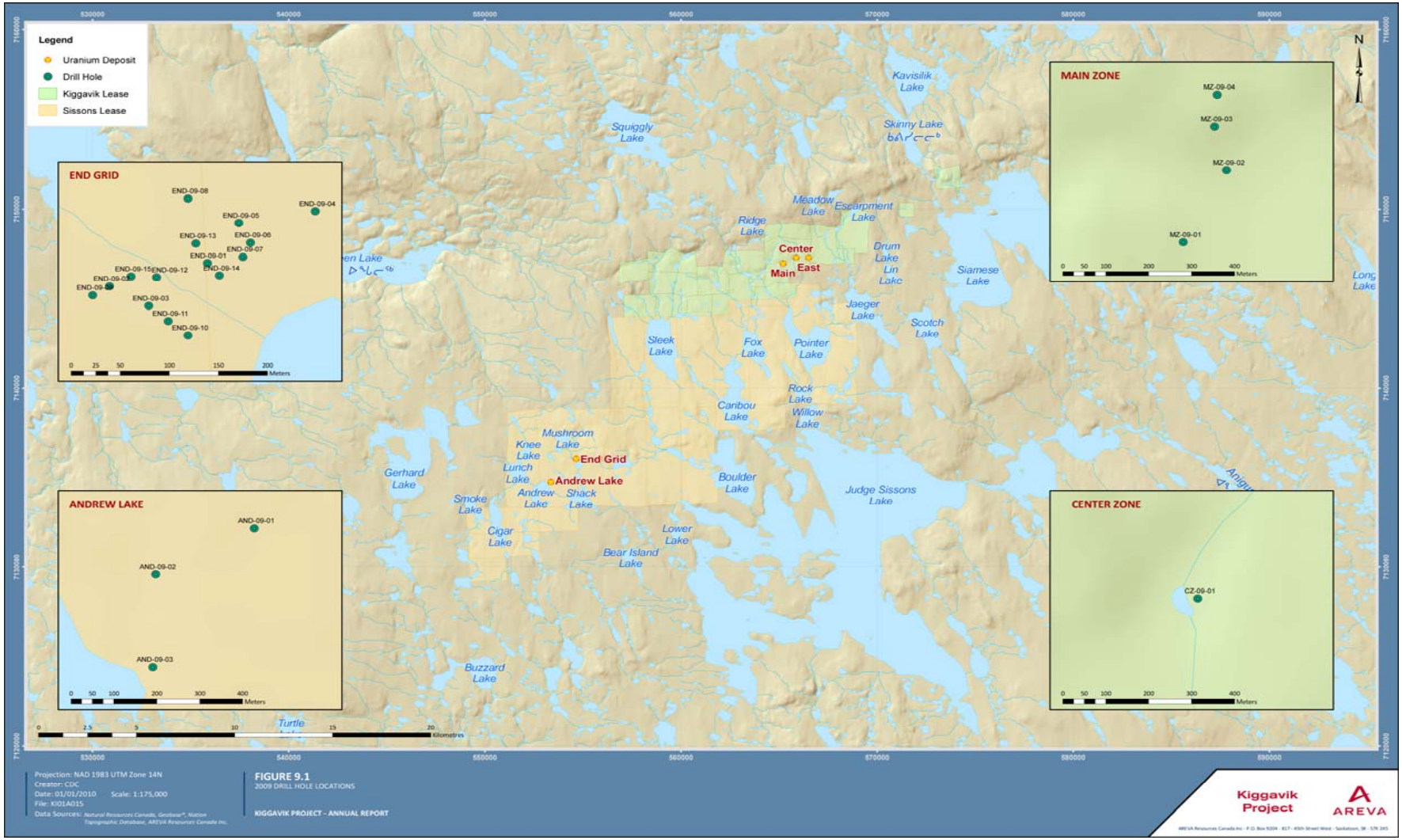

Figure 9.1 2009 Drill Hole Locations

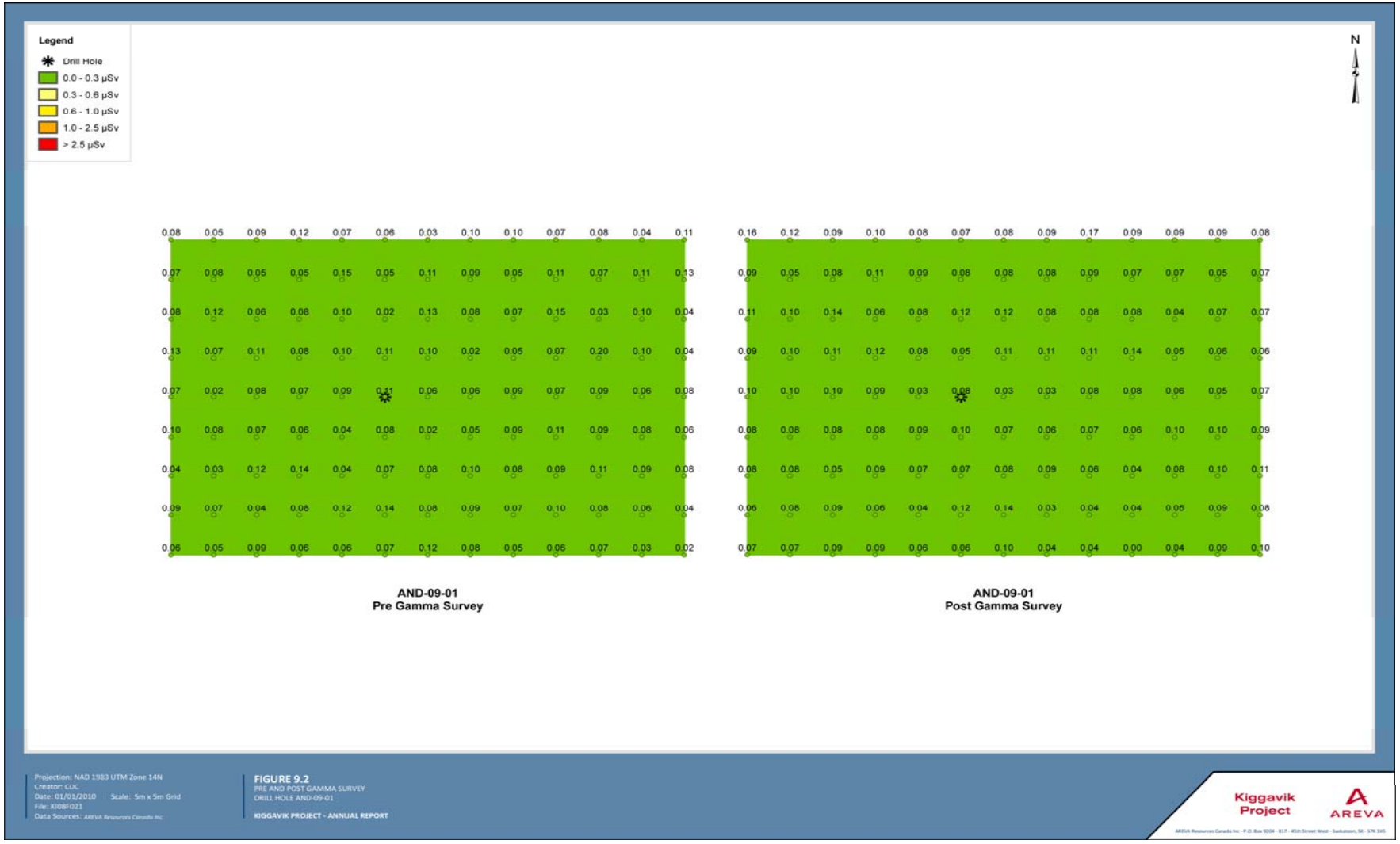

Figure 9.2 Gamma Surveys AND-09-01

Figure 9.3 Gamma Surveys AND-09-02

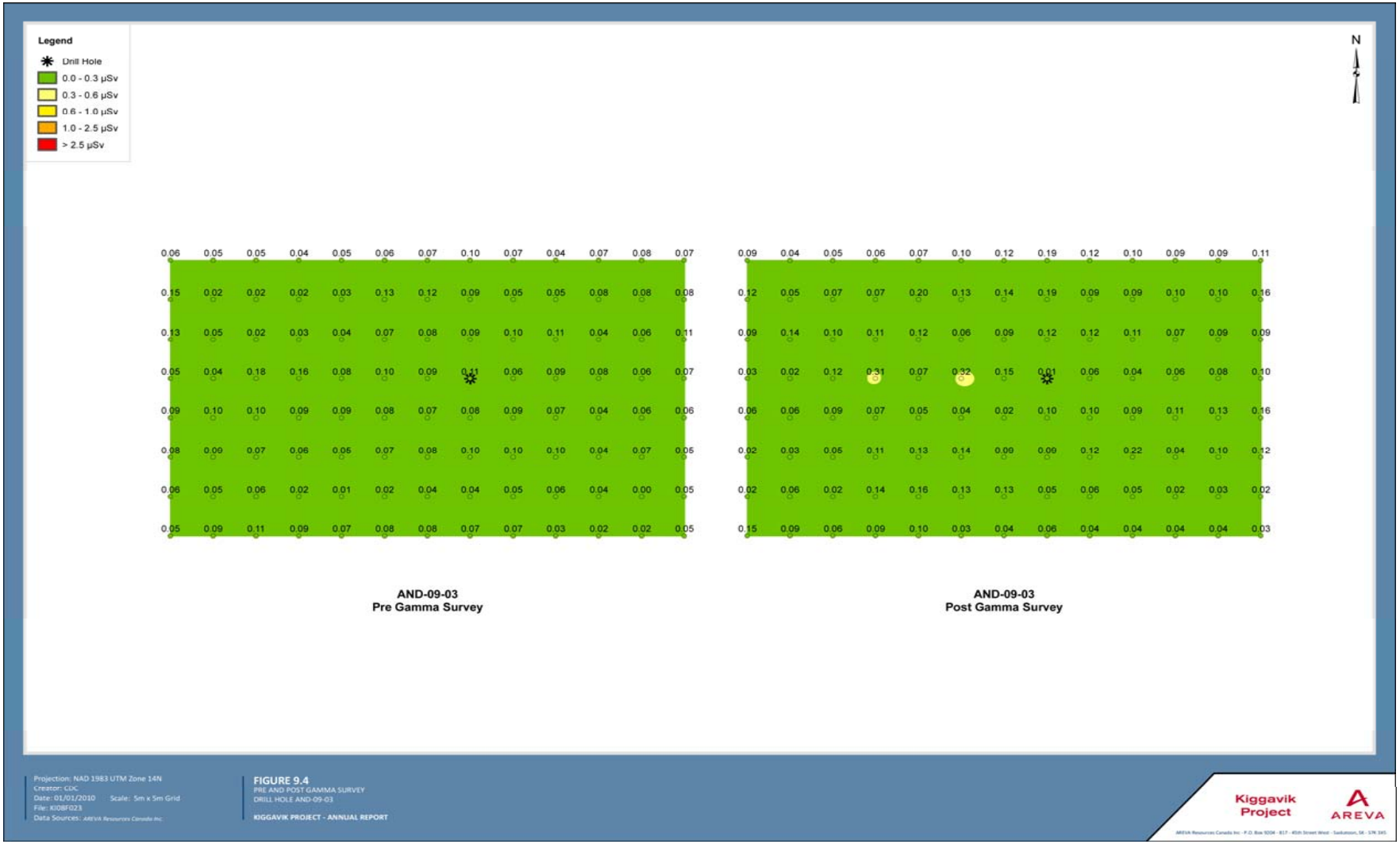

Figure 9.4 Gamma Surveys AND-09-03

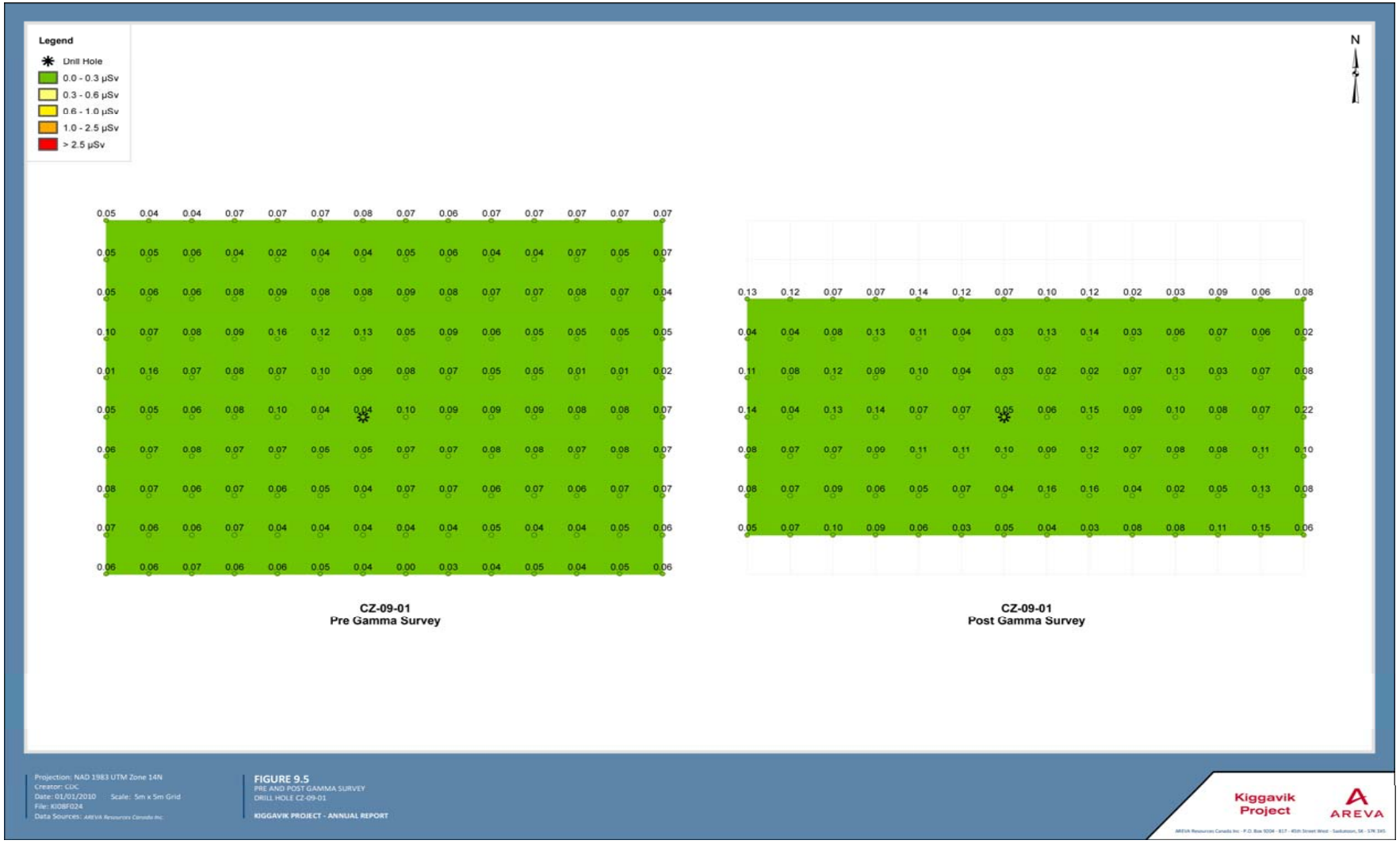

Figure 9.5 Gamma Surveys CZ-09-01

Figure 9.6 Gamma Surveys END-09-01

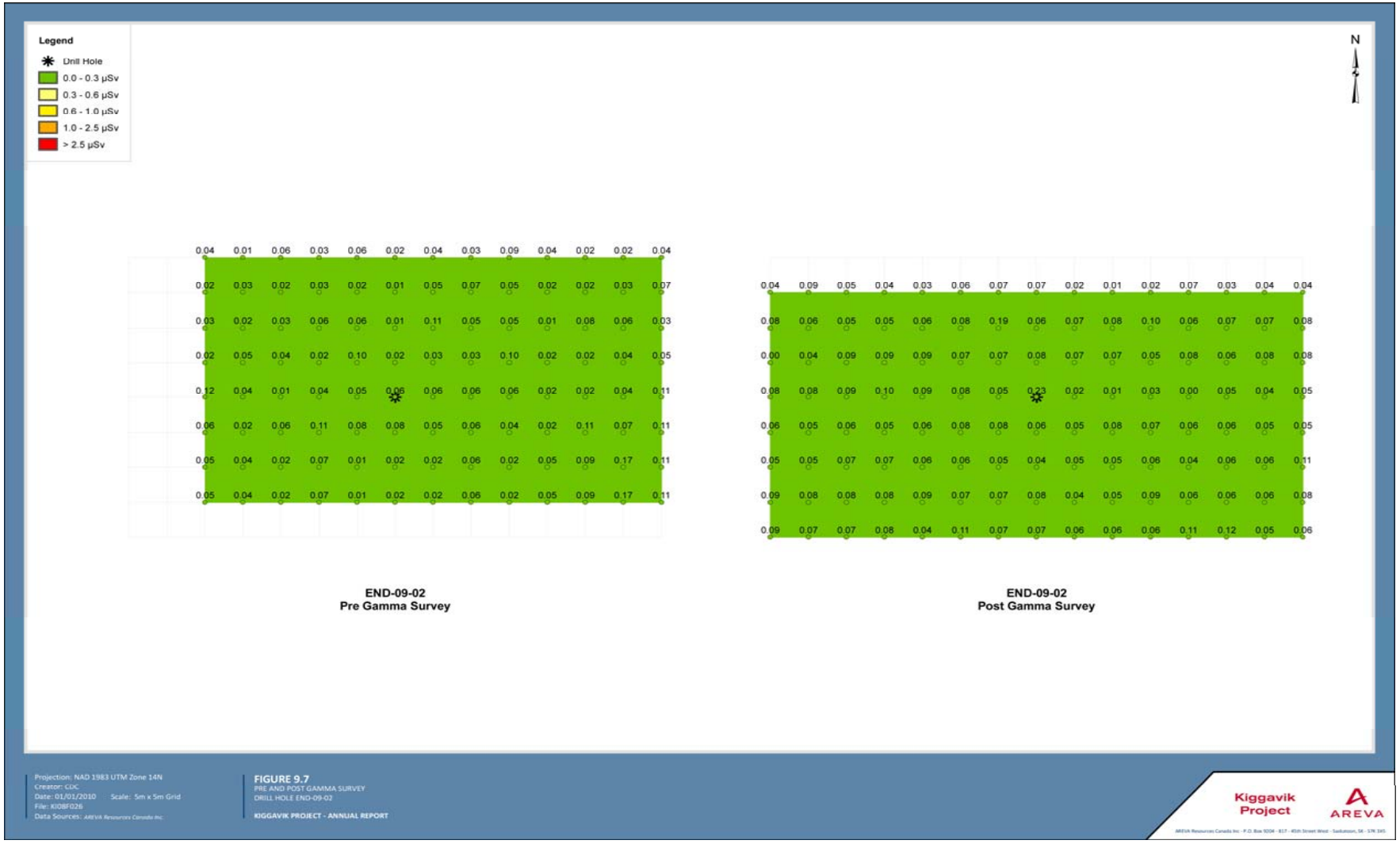

Figure 9.7 Gamma Surveys END-09-02

Figure 9.8 Gamma Surveys END-09-03

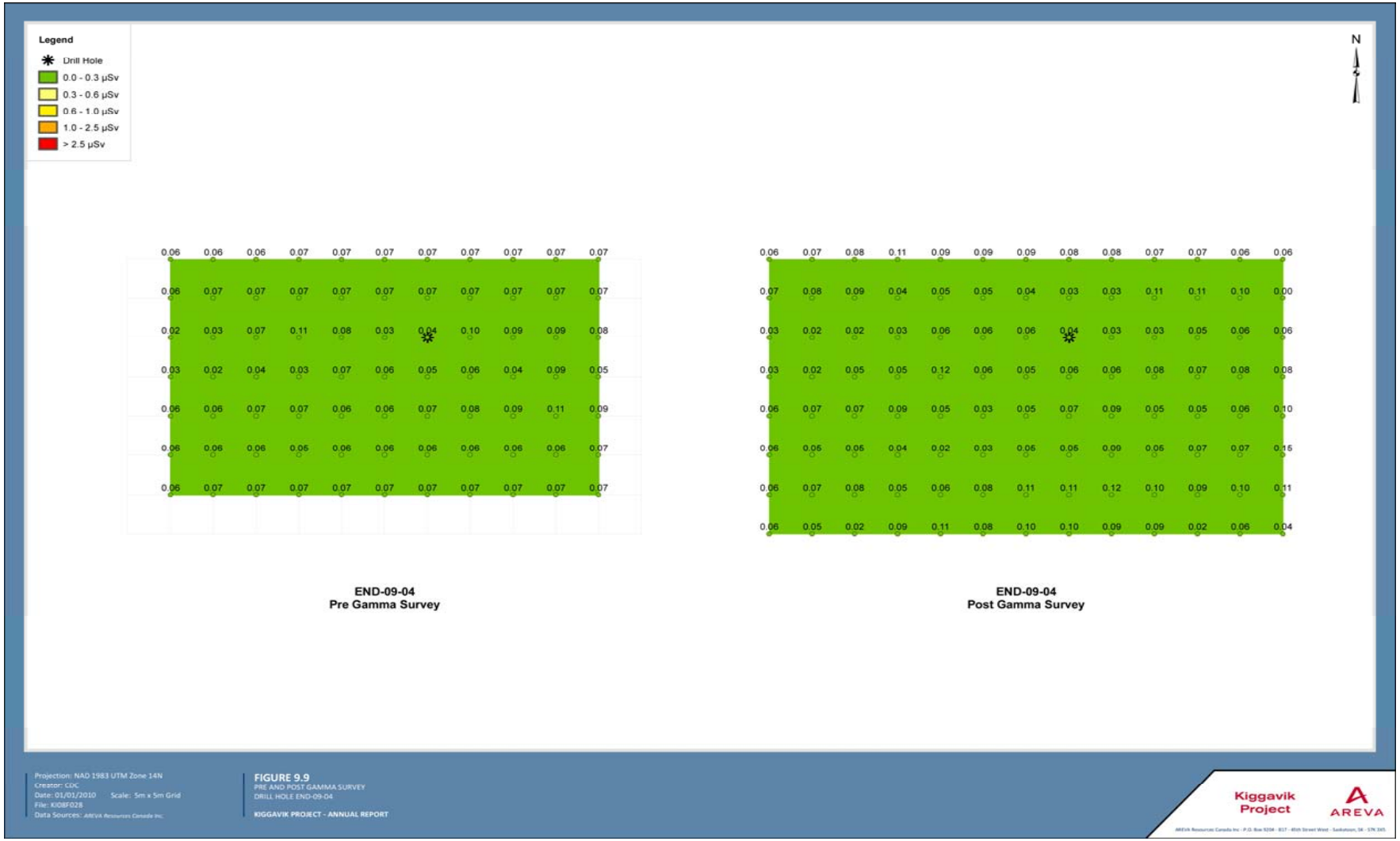

Figure 9.9 Gamma Surveys END-09-04

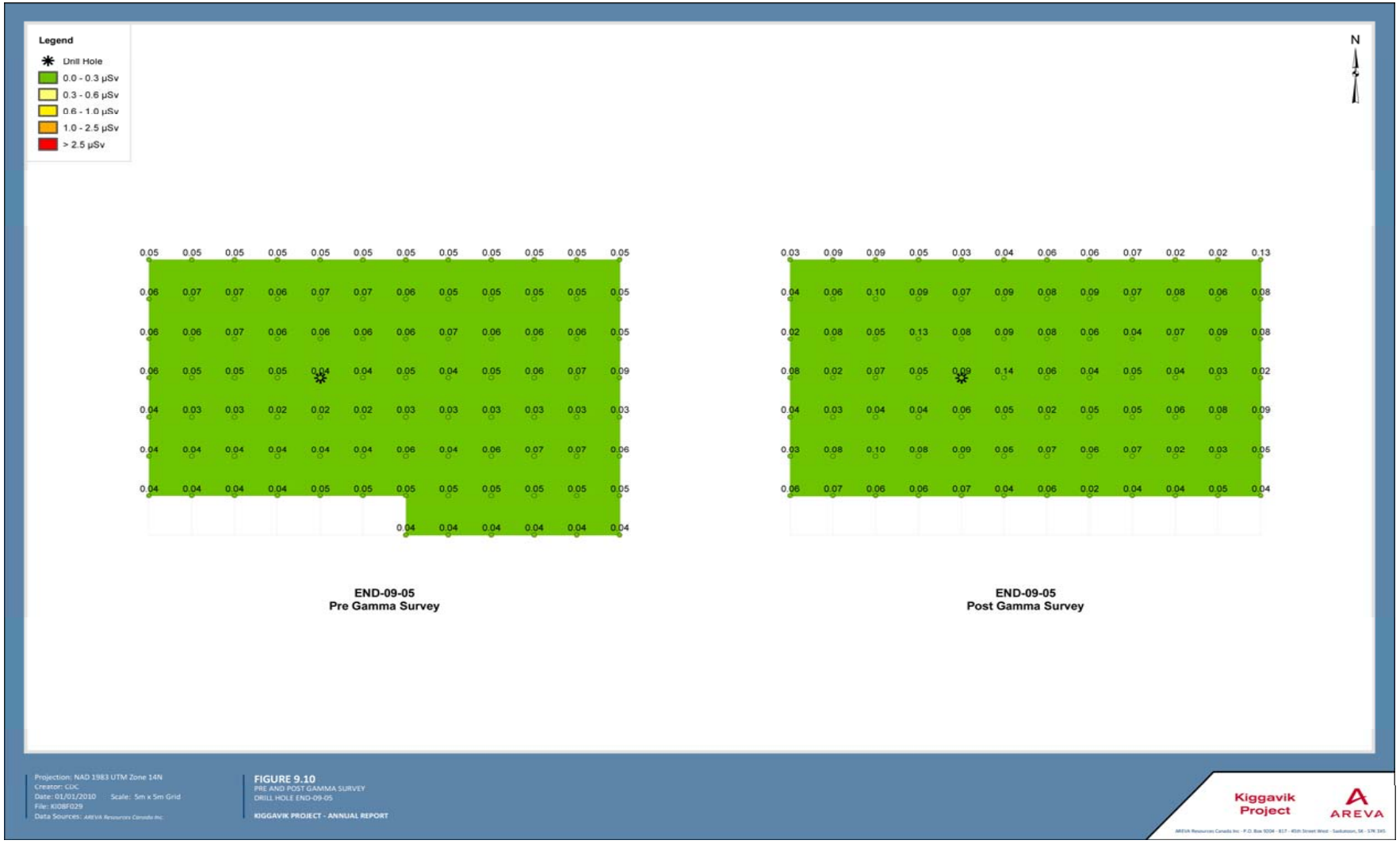

Figure 9.10 Gamma Surveys END-09-05

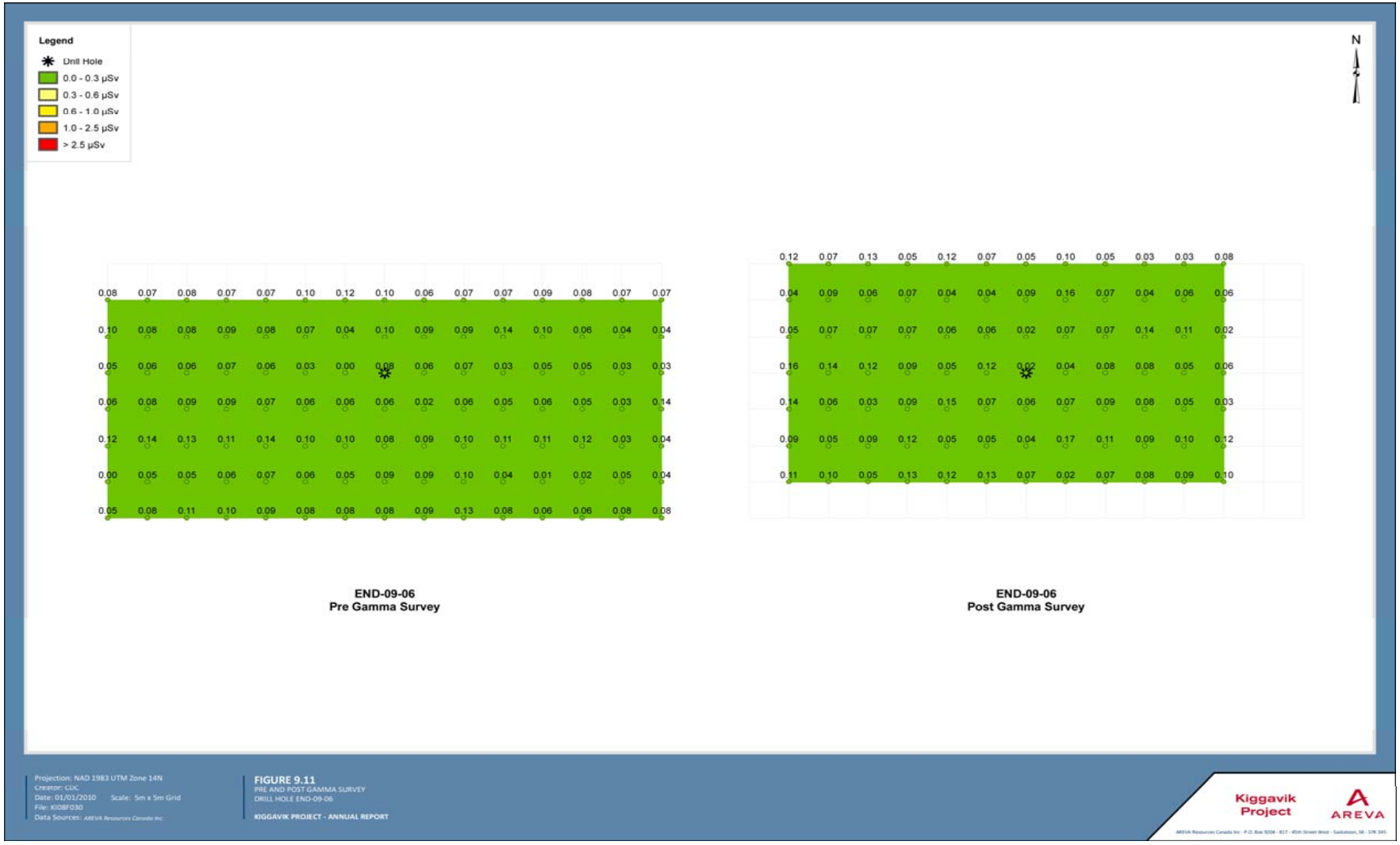

Figure 9.11 Gamma Surveys END-09-06

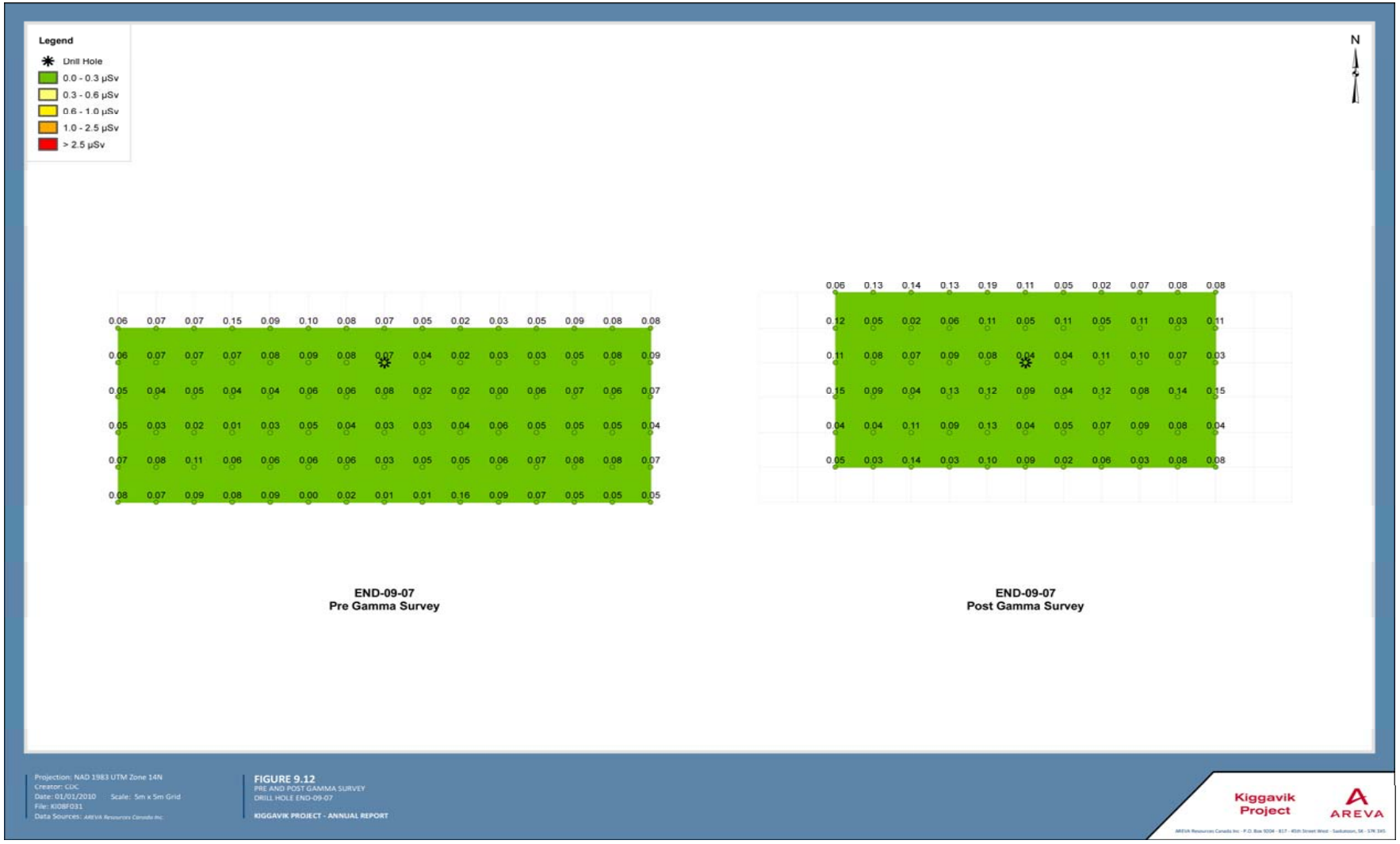

Figure 9.12 Gamma Surveys END-09-07

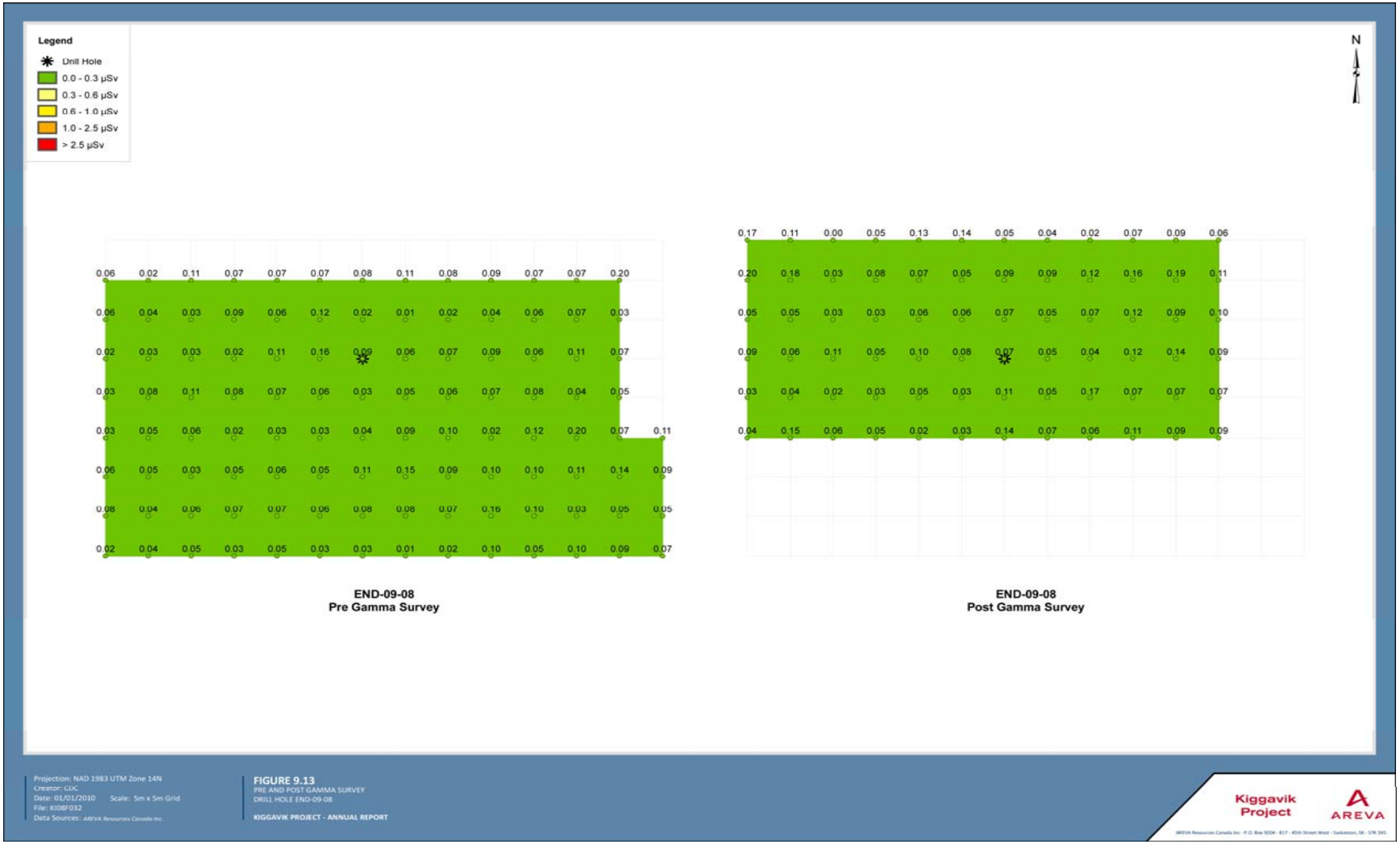

Figure 9.13 Gamma Surveys END-09-08

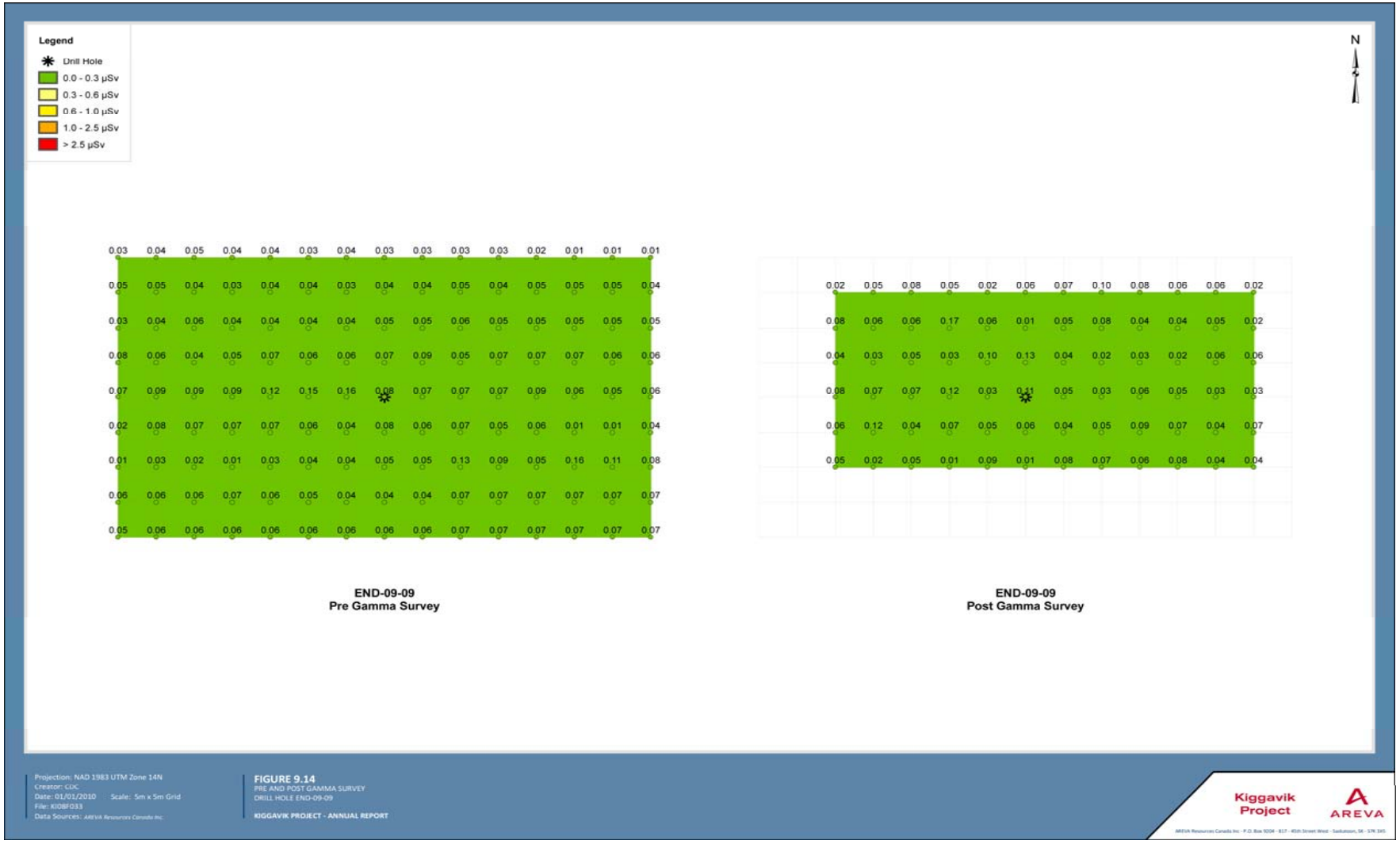

Figure 9.14 Gamma Surveys END-09-09

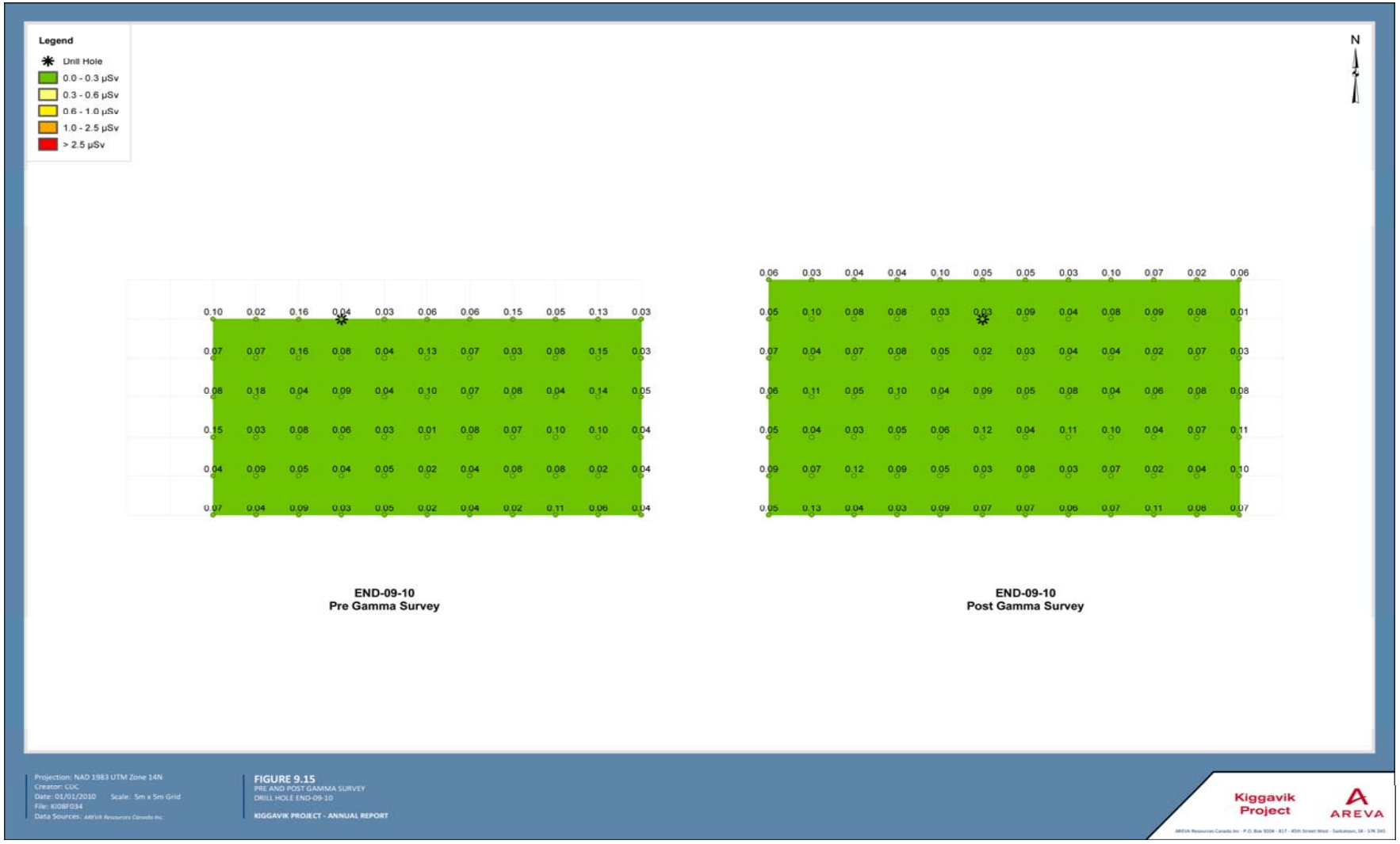

Figure 9.15 Gamma Surveys END-09-10

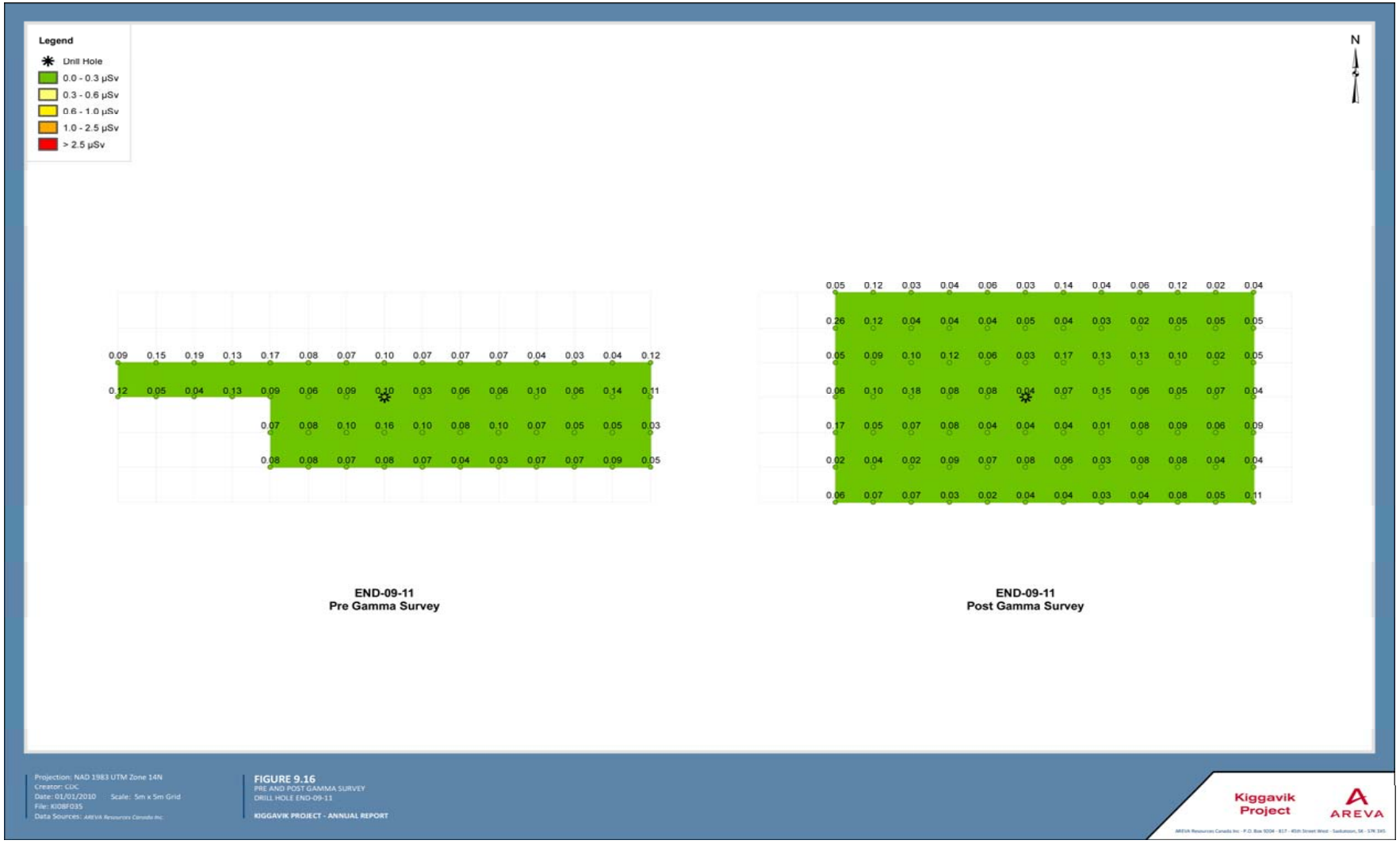

Figure 9.16 Gamma Surveys END-09-11

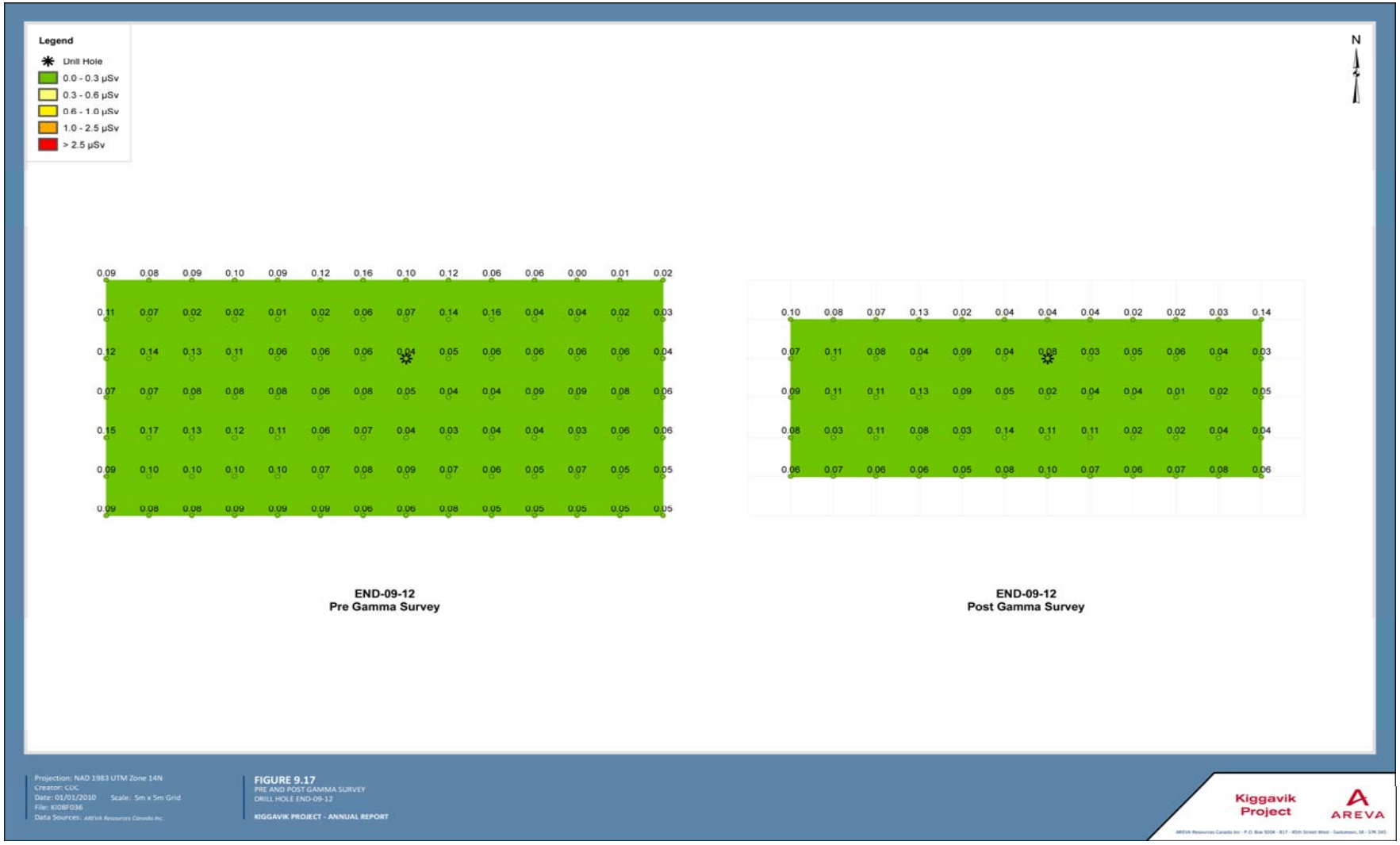

Figure 9.17 Gamma Surveys END-09-12

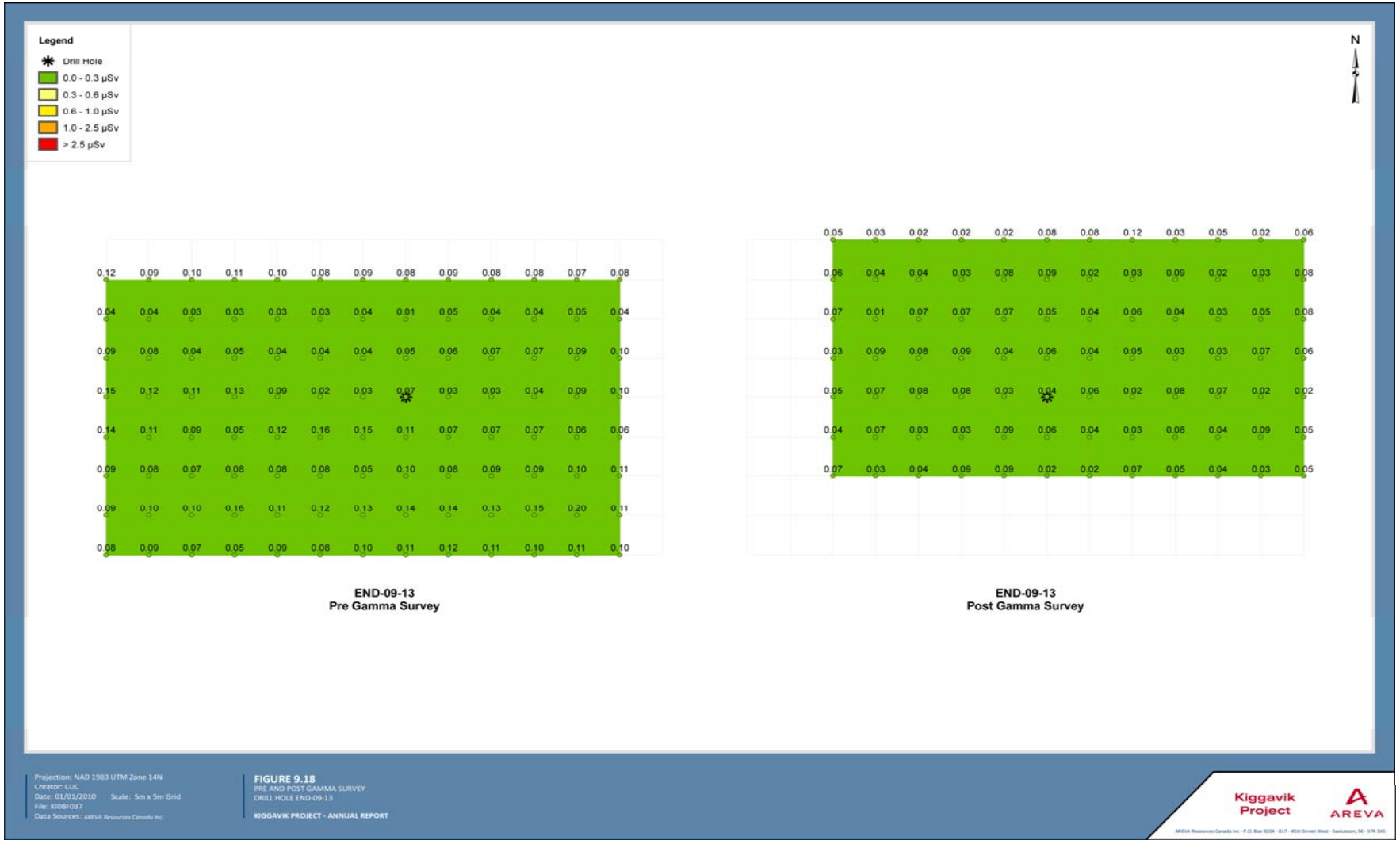

Figure 9.18 Gamma Surveys END-09-13

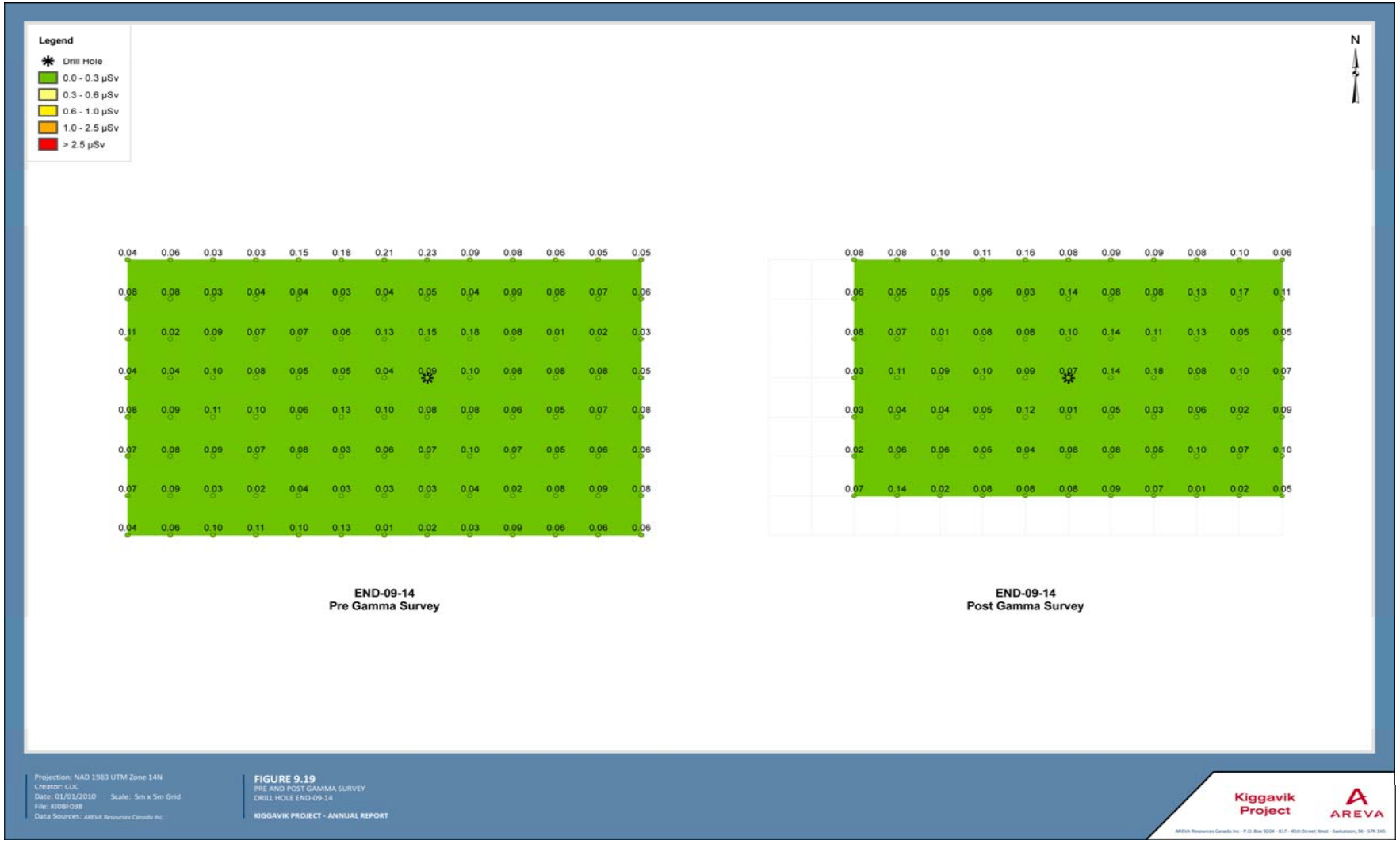

Figure 9.19 Gamma Surveys END-09-14

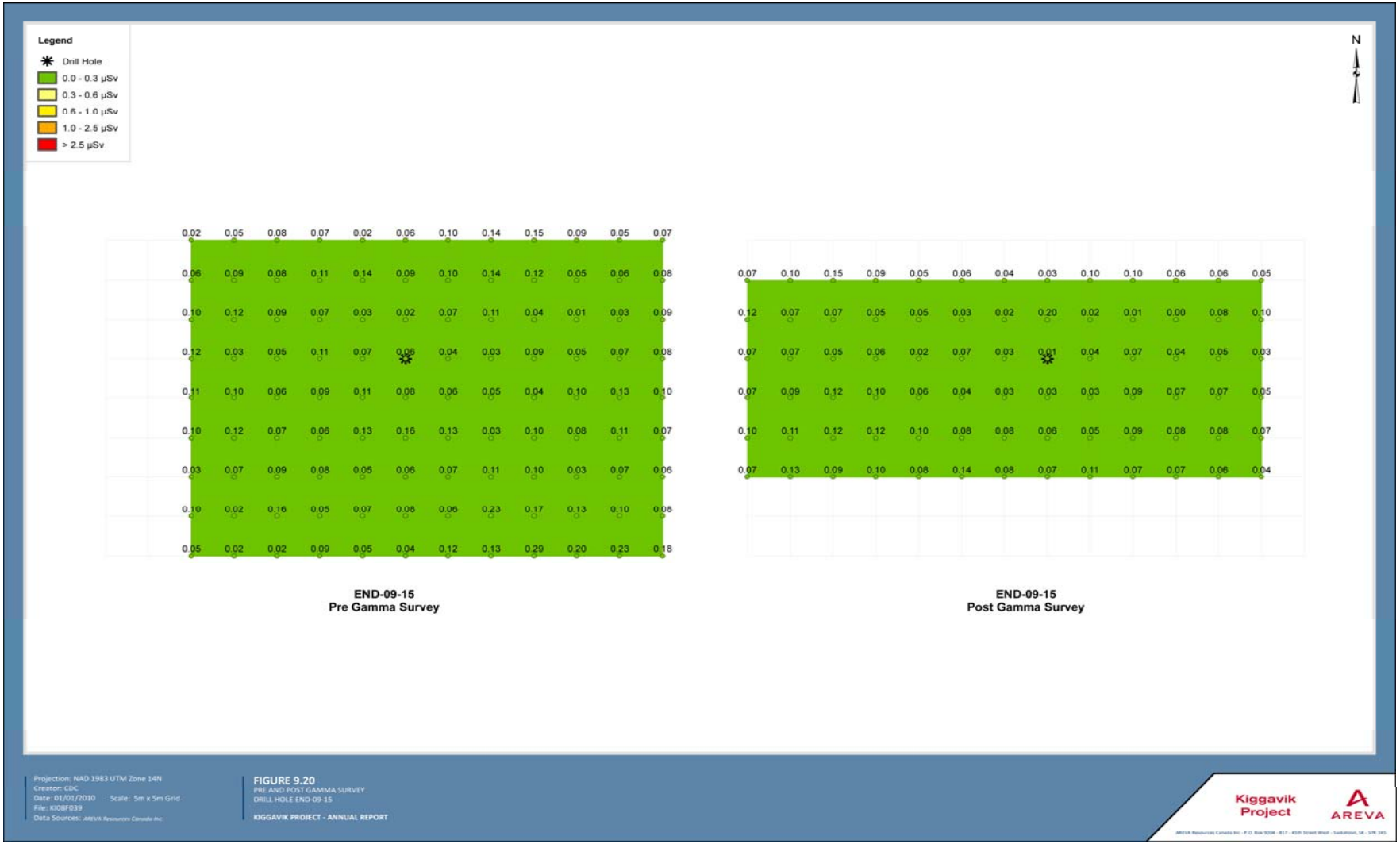

Figure 9.20 Gamma Surveys END-09-15

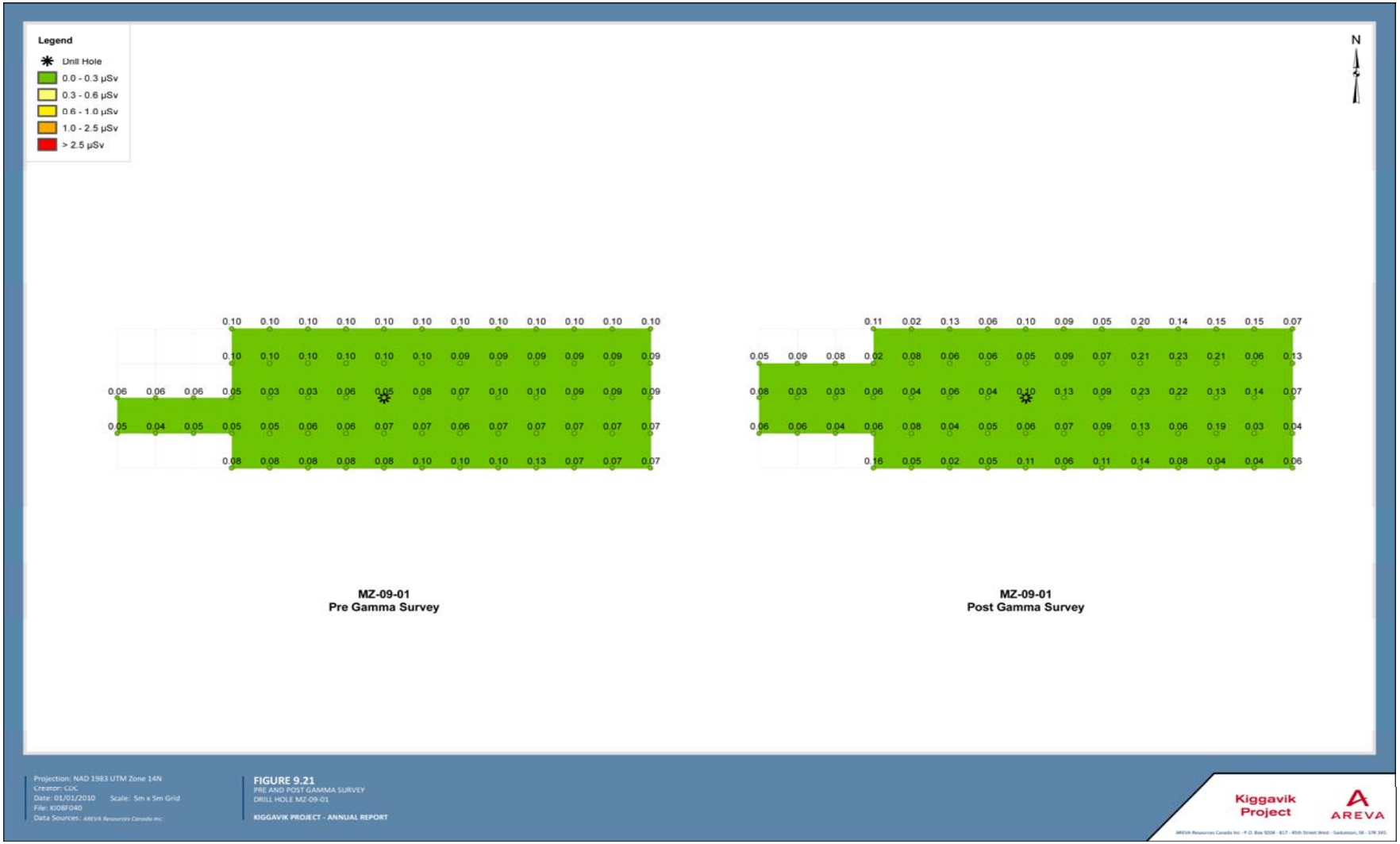

Figure 9.21 Gamma Surveys MZ-09-01

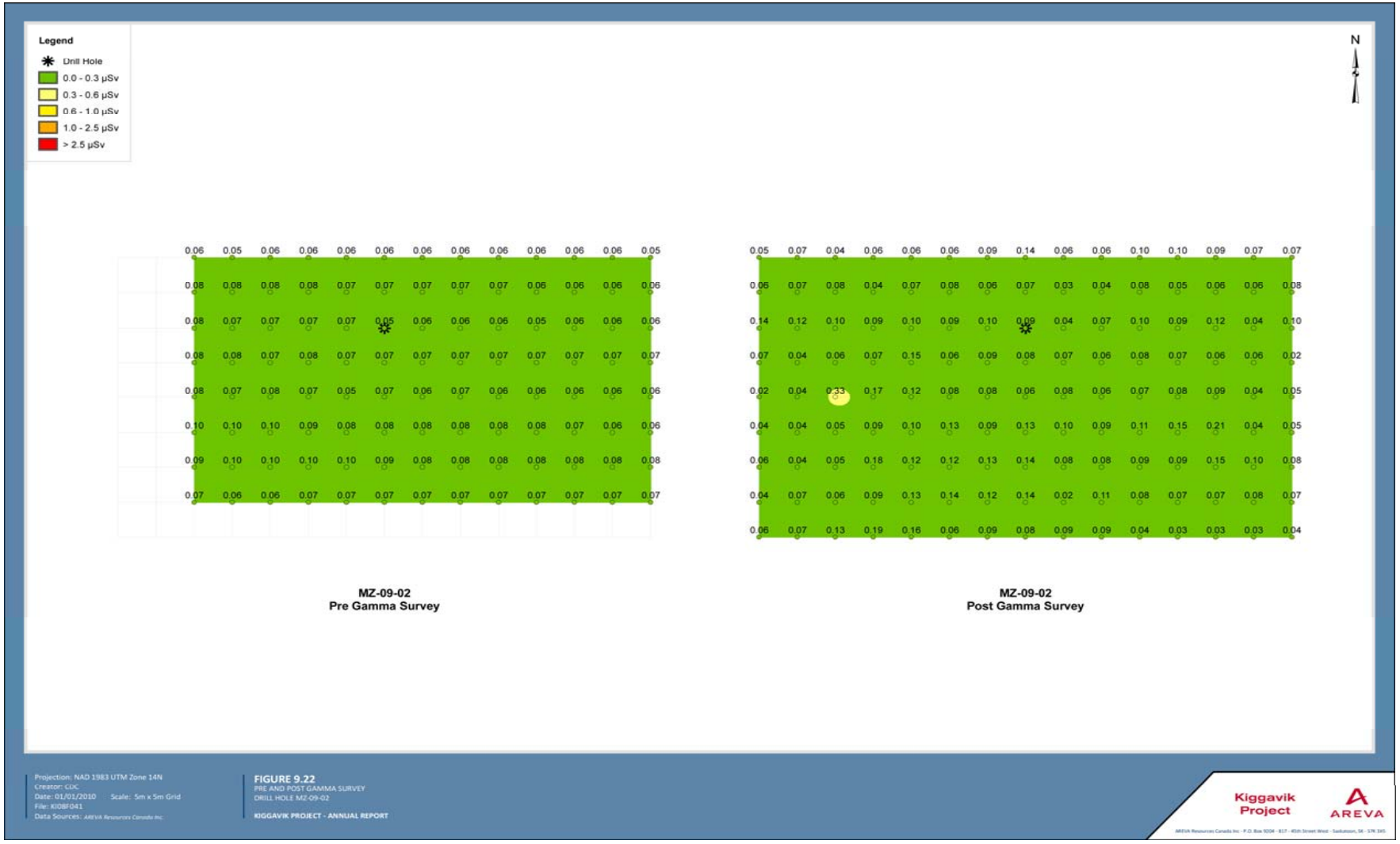

Figure 9.22 Gamma Surveys MZ-09-02

Figure 9.23 Gamma Surveys MZ-09-03

Figure 9.24 Gamma Surveys MZ-09-04

10 CANADA WIDE STANDARDS

Efforts being made to meet the Canada-Wide Standard (CWS) for Dioxins and Furans and the CWS for Mercury include the development and implementation of a Waste Management Plan involving waste inventorying, diversion and sorting prior to incineration. Only allowable materials are incinerated, including paper, food and packaging waste, non-treated wood and solid sewage waste. The potential impact of wastes on emissions is considered in the development of waste management procedures.

11 COMPLIANCE WITH CONDITIONS

The following sections list the conditions of the Nunavut Impact Review Board (NIRB) Screening Decision, the Indian and Northern Affairs Canada (INAC) 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.

11.1 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 letter.

11.1.1 Original NIRB Screening Decision – April 3, 2007

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
INAC imposed mitigation measures, conditions and monitoring requirements pursuant to the Federal Land Use Permit	Refer to Section 11.2 INAC Conditions of Land Use Permit
INAC conducted land use inspections (pursuant to the Federal Land Use Permit) focused on ensuring compliance with DIAND Caribou Protection Measures	Occur throughout field season, followed by an Inspection Report, AREVA strives to promptly follow-up on all recommendations/concerns/deficiencies. Please refer to section 8 of this report for inspection details.
KIA imposed mitigation measures and/or Environment Terms and Conditions pursuant to the IOL License	Refer to Section 11.3 KIA Land Use Licence
Additional work (related to INAC 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 are expected during the 2010

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
inspections of the location from May to August to monitor compliance with DIAND Caribou Protection Measures	field season.
GN-DOE should conduct on-going review of wildlife monitoring results as required by WMMP	A mid-season wildlife monitoring report was submitted to GN-DOE for the period of May – July. An end of season report was then submitted on Oct.9, 2009 which outlined all wildlife monitoring activities and results for the 2009 season This information will be supplied to the GN-DOE on a monthly basis during the 2010 field season.
After receiving the annual report, GN-DOE should report to NIRB and INAC its findings regarding the possible impact of the Project on the Beverly and Ahiak caribou herds	No AREVA action required.
INAC 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 site office and kitchen
AREVA is to forward copies to NIRB of all permits obtained and required for the Project	Noted
AREVA shall operate in accordance with commitments made in all the Operation Plans (namely Spill Contingency, Abandonment and Restoration, Noise Abatement, Waste Management, Wildlife Mitigation and Monitoring, Radiation Safety and the Environmental Code of Practice)	AREVA is committed to achieving compliance as part of AREVA's commitment to continuous improvement. Operational Plans are reviewed at least once per year and revised as necessary. All revisions to Operational Plans are submitted with this annual report.

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
AREVA to operate in accordance with proponent commitments stated in Appendix A (see 11.1.2 below)	Refer to Section 11.1.2 Summary of Proponent Commitments
AREVA to submit annual report to NIRB, INAC, KIA and GN-DOE by 31 January each year	Completed. Annual Reports have been submitted for 2007, 2008 and 2009
Shall abide by DIAND Caribou Protection Measures (see 11.1.4) and those mitigation measures outlined in the WMMP.	This is ongoing throughout the field season with proper work instructions and employee/contractor training and awareness. This is monitored by EHS staff and independent wildlife monitors. Refer to Section 11.1.4
Prohibited to allow aircraft to take-off or land if groups of caribou are within 1 km of the airstrip or helipad.	Addressed in the Wildlife Mitigation and Monitoring Plan; pilots receive training and awareness; verified by an independent wildlife monitor
Update WMMP to include "Section 2.1 During June and July – To avoid injuries to caribou and humans, if one or more caribou approach within 1 km of drilling operations, then activities will be suspended until caribou leave the area." Any direction from GN-DOE or KIA regarding caribou management plan must be forwarded to NIRB.	Revised conditions established in previous Wildlife Mitigation and Monitoring Plan. GNDOE believes that 50 caribou is an appropriate threshold for the suspension of activities (December 16, 2008 letter to NIRB regarding INAC and KIA land use permit extension request). Monitoring program (including independent Inuit wildlife monitors) help to guide this protection measure.
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.	In compliance, please refer to section 10 of this report.

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
Adherence to conditions in Appendix B *Archaeological and Palaeontological Resources – Terms and Conditions for Land Use Permit Holders* (see 11.1.3 below)	Refer to Section 11.1.3; hiring of an independent consultant to conduct heritage surveys and investigations
Shall avoid known archaeological and/or palaeontological sites	Record of known sites is kept updated and sites are avoided or handled appropriately by consultants and responsible authorities

11.1.2 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 camp and geology areas. All staff use walkways as much as possible; addressed through training and awareness
Avoid wildlife during flights and avoid low flying to minimize impact of helicopter and airplane noise and presence	Ongoing through the implementation of the Wildlife Mitigation and Monitoring Plan; proper training and awareness to all site employees/contractors.
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	

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
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	Previously grey water was being placed in a natural depression; metal screen collected solids in discharge and this material was collected and incinerated. During the start-up of the 2010 field season a grease trap will be installed in order in order to eliminate grease and food particles from being released into the environment.
No garbage to remain on site	Ongoing through the implementation of the Waste Management Plan
Camp to be decommissioned when no longer in use	This is 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 implemented of the Waste Management Plan and the Spill Contingency Plan; proper training and awareness provided to all site employees/contractors. During the 2009 field season a small amount of red tinged water entered a nearby lake. For more details on the cause and the mitigation actions taken please see section 12 Reportable Spills.
Sumps located above the high water mark of any water body to prevent contents from entering water body frequented by fish	Addressed through site planning
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	Have not conducted on ice drilling 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

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
	materials wherever possible.
Land-based drilling not to occur within 30m of the high water mark	In Compliance and 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 highwater 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.	All artesian flows encountered have been plugged and permanently sealed promptly.
Winter road travel will not begin until the ground is sufficiently frozen to provide support and to avoid surface damage and rutting	In compliance and ongoing. This is done by following the Environmental Code of Practice; proper training and awareness 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

11.1.3 Appendix B: Archaeological and Palaeontological Resources

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

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
AREVA shall not operate any vehicle over a known or suspected archaeological or palaeontological 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 palaeontological 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 palaeontological site or fossil be encountered or disturbed by a land use activity.	AREVA strives to promptly contact CLEY should any site or specimen be encountered or disturbed
AREVA will cease any activity that disturbs an archaeological or palaeontological site until permitted to proceed by CLEY	In compliance through proper training and 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 palaeontological sites	Training and awareness of archaeological and palaeontological protocol is included in site orientation. Copies of all permits and licences are kept on site for reference.
AREVA shall avoid known archaeological or palaeontological sites	Record of known sites is kept updated and avoided or handled by consultants on the advice/recommendations of responsible

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
	authorities
AREVA shall have an archaeologist or palaeontologist perform those functions required and permitted by CLEY.	In compliance; hiring of an independent consultant to conduct heritage surveys and investigations

11.1.4 *DIAND Caribou Protection Measures*

Note that these conditions are also included in the INAC 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.	These requirements are included in the

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
The following operations will be suspended in the presence of caribou cows and calves: o blasting o overflights at <300m above ground o snowmobile and ATV use outside vicinity of camp	Wildlife Monitoring and Mitigation Plan. Employees are made aware of these commitments and they are monitored by EHS staff and independent Wildlife Monitors.
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 employees/contractors
All activities that may interfere with migration will cease during migration	
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 5km 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

11.1.5 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 PN 1326 entitled "Environmental Code of Practice for Aboveground Storage Tank Systems Containing Petroleum Product and Allied Petroleum Products"	The site layout and tanks have been designed by a consulting professional engineer and have been installed by a registered company/petroleum contractor to ensure compliance with the Canadian Council of Ministers of the Environment (CCME) Environmental Code of Practice for 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. All necessary changes and appropriate training requirements have been made in both the Project's Spill Contingency Plan and the Emergency Response Manual.
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.	
Secondary containment or surface liner with adequate size and volume utilized during all fuel or hazardous substance	In compliance and ongoing through the implementation of the Spill Contingency Plan and the Environmental Code of

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
transfers	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 CaCl2 as a toxic substance)	Committed to minimize the use of $CaCl_2$ when drilling conditions allow
Drill holes that encounter uranium mineralization with a content >1.0% over a length of >1m with a metre-percent concentration greater than 5% should be sealed by cementing over the entire mineralization zone; this should be at least 10 metres 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.	Committed to conduct when required and achievable
Core storage areas should be located at least 100 metres from the high waterline of all water bodies.	Ongoing through the implementation of the Radiation Protection Program and appropriate 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	Is in compliance and is ongoing through

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
gravel, sand or other durable land	site planning
New sleeping units properly designed to prevent any 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	This is addressed in the Abandonment and Restoration Plan

11.2 Indian and Northern Affairs Conditions of Land Use Permit

The following table lists terms and conditions appended to INAC Land Use Permit N2006C0037 (Received April 5, 2007; permit extended to April 9, 2010).

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
Shall not conduct land use operation on any lands not designated in accepted application	Plans are made for activity only on approved leases
Shall remove all scrap metal, machinery parts, barrels and kegs, building and building materials	Development of a Waste Management Plan and a Abandonment and Restoration Plan to address these issues; efforts are being made to identify local approved handling facilities
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)	Seasonal shutdown management has been reviewed with regulatory agencies
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

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
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
Burn all combustible garbage in a acceptable container	An approved incinerator is used for burning
Keep all garbage and debris in a covered metal container until disposal.	All garbage is contained until incinerated
Not locate any sump within 31 meters of normal high water mark	Addressed through site planning
Backfill and restore all sumps prior to expiry date of permit	Addressed in Abandonment and Restoration Plan
Housekeeping	Addressed through formal daily site inspections conducted by EHS group
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	Is occurring
Remove all noncombustible 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 meters from normal high water mark	Instructed through Environmental Management Plans and adhered to through site planning
Shall not allow petroleum products to spread to surrounding lands or into water bodies	Ongoing through the implementation of the Spill Contingency Plan
Mark all fuel containers with Permittee's name	Is occurring
Display land use permit number on all vehicles and equipment	These will be 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	Occurs when possible, when not achievable the material is collected in bags and stored in proper facility
Seal by grouting entire mineralization zone and greater than 10 meters both above and below each mineralization zone, any drill hole that encounters mineralization with a uranium content greater than 1.0% over a length of >1	Committed to conduct when required and achievable

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
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	Committed to conduct when required and achievable
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
Ensure gamma radiation levels of core storage meet the decommissioning requirements of less than 1.0 μSv one meter from surface, not to exceed 2.5 μSv. 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 readout in μSv/h. Conversion is known for other instruments used to measure gamma radiation.

11.3 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 2011).

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
LICENCE TERMS AND CONDITIONS	
Compliance with all applicable regulations, laws, orders and with terms of licence.	AREVA strives to comply with all regulations, laws, orders and with terms of

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
Provide KIA with written notices of non-compliance.	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 Licensee 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 August 24, 2009.
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 license fees if operations cease and environmental remediation reclamation occurs	Condition is recognized by AREVA
Any damage or injury to lands or property caused by licensee will be repaired, rebuilt, replaced and restored to the satisfaction of KIA.	This is 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 30th each year	Obtained written agreement from KIA allowing all revised Plans to be submitted with the Annual Report in January of each year.

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
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	Responsibility of Facility Supervisor. This was overlooked prior to commencing field activities in 2009. However AREVA will ensure that KIA is contacted prior to commencing the 2010 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
Housekeeping – keep lands free of garbage and debris	Addressed through formal daily site inspections conducted by EHS group
All man-bear interactions reported to nearest Renewable Resources Office	In 2007 a man-bear interaction occurred and was reported. AREVA will continue to comply if such interactions were to occur.
Licence available for viewing in a	In compliance. All site staff are made aware of its location in the camp office and

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
conspicuous place on site	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 AREVA offers homeland visits where burial grounds are deliberately visited but this is done respectfully and with the consent of family members (Section 7)
Operations carried out as to minimize surface disturbance	Ongoing by continually following 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 moved by helicopter.
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 meters
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

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
	careful monitoring. All fuel and equipment is kept at a minimum of 30 meters from the high water mark
All petroleum shall be kept in approved containers marked or with a bermed area. All containers labelled with licensee name	In compliance and ongoing through the implementation of the Spill Contingency Plan
All spills reported	In compliance Implementation of the Spill Contingency Plan
All combustible waste will be incinerated or removed	In compliance and 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.	In compliance through proper site planning
No drill sumps to be located within 30 m of any water body	Instructed through Environmental Management Plans and adhered to through site planning
All drill sumps to be restored to natural surrounding contours of the land prior to licence expiry	Ongoing 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

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
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
Shall suspend overland travel of equipment or vehicles if rutting occurs	Condition is noted. AREVA staff monitor land conditions during regular inspections of field operations and winter hauls
Shall construct and maintain winter roads with a minimum of ten centimetres of packed snow at all times	Winter haul roads are constructed by local contractors
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

11.4 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 have been submitted for 2007 and 2008.
Notify NWB of any changes in operating plan	Continual communication efforts are made with all regulatory agencies and boards
Install flow meters for measuring water volumes	Complete on camp water supply. Ongoing for drilling water supply.
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 Inuktitut. Ensure documents are received and acknowledged.	Noted
WATER USE	
Obtain all camp water from small unnamed lake approx. 300m distance north of camp to maximum of 5 m^3/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 10m^3/day. Please see section 12 Water Consumption for more details on

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
	compliance.
Obtain drill water from local source(s) to a maximum of 295 m^3/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 m^3/day. AREVA was compliant with this licence throughout the field season
Volume of water under this licence not to exceed 300 m^3/day	AREVA was compliant with this licence condition throughout the season
Streams cannot be used as a water source	Streams 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 and will be complied with if required
Water intake hoses have screens of appropriated mesh size	Completed
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 noted
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 selected to be located more than 30 metres from the high water mark

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
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	Process was in place for the 2009 field season and will be further implemented during the 2010 field season
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. Currently all waste oil is shipped to BLCS in Baker Lake to be burned in waste oil furnaces.
Contain all grey water in a sump 30 m from high water mark	Currently grey water is being placed in a natural depression; metal screen collects solids in discharge and then is collected and incinerated – approved by INAC Water Resources Inspector
Handling of toilet wastes	Rather than incinerator toilets, solid sewage waste is collected and incinerated
CAMPS, ACCESS INFRASTRUCTURES AND OPERATIONS	
No camps or stored material on frozen streams or lakes	Operation is seasonal from May to September. Informed through training and awareness
Conduct activities in a way to minimize impacts on surface drainage	Drainage and flow are considered prior to activities
Winter lake and stream crossings shall be conducted entirely of water, ice or snow.	Training and awareness and discussed

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
Choose locations that minimize disturbance and remove or notch stream crossings prior to spring break-up.	with winter transport contractors
Deposition of any debris or sediment into or onto any water body is prohibited. Disposed of at least 30m from the high water mark.	Training and awareness and project planning
Within 90 days of licence issuance, provide Bulk Fuel Storage Facilities secondary containment facility design report and drawings and additional detail in the Spill Contingency Plan	Completed
DRILLING OPERATIONS	
AREVA to review and revise Uranium Exploration Plan as required by changes in operation and/or technology. Revisions to Plan submitted as addendum with Annual Report.	Board approved AREVA's Uranium Exploration Plan submitted October 17th, 2007. As part of AREVA's commitment to continuous improvement. Operational Plans are reviewed at least once per year and revised as necessary
The Licensee shall not conduct any land based drilling within thirty (30) metres of the ordinary high water mark of any water body with the exception of the End Grid Lake area as identified in the application received dated October 9, 2008"	Any drilling within 30 m of the highwater mark will be under an approved licence amendment with applicable protection and mitigation measures in place to the satisfaction of the NWB and DFO.
Drill waste (water, chips, muds, salts) from land-based drilling are disposed of in properly constructed sump or natural depression	Utilizing natural depressions, supplemented by temporary sandbag berms and visually monitoring flow. These inspections take place daily by EHS staff.

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
Drill mud solids or cuttings with a Uranium concentration > 0.05 percent are collected and disposed down hole and sealed.	This material is disposed of down hole or collected in bags and stored in appropriate storage facility for future handling
Immediately seal and cap artesian flow and report to NWB in annual report	An artesian flow was encountered on August 10, 2009 at drill hole MZ-09-04 (64° 26' 37.18" N, 97° 38' 34.62" W). Drilling had already been completed and equipment for groundwater sampling was being installed at the time the artesian flow was discovered. Flow was estimated at 30 L/m. Since grouting would not have been possible when the artesian flow was first discovered (due to amount of water) and this drill hole was drilled for the purpose of collecting a groundwater sample, the groundwater sample was collected and a thermister with a vibrating wire piezometer was installed prior to sealing and capping the drill hole. The sample was collected on August 12, 2009 and the hole was able to be sealed and capped by approximately 2:00pm on August 13, 2009.
Record the depth of permafrost – include in annual report	Please refer to section 1.5 of this annual report
No on-ice drilling	On ice drilling will only occur under applicable approved licence amendments with appropriate protection and mitigation measures in place to the satisfaction all regulatory bodies.
When conducting drilling within 30 m of the ordinary high water mark of End Grid Lake, activities are to be on stable ground such as	All drilling activities are conducted on frozen ground.

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
frozen tundra or bedrock	
AREVA shall establish water quality conditions of adjacent waters or waters immediately downstream prior to and upon completion of any drilling program within 30 m of the high water mark	End Grid Lake was sampled on May 12, 2009 prior to commencing any drilling activities and again on August 14, 2009 after the completion of the drilling program. Please refer to section 13 for further details.
MODIFICATIONS	
Modification conditions	Project Manager is aware of these conditions and will comply to them if required
SPILL CONTINGENCY PLANNING	
Within 30 days of Licence issuance, submit addendum to Spill Contingency Plan to address issues identified during previous technical reviews and letter dated November 29, 2007 not incorporated into October 2007 version.	The Spill Contingency Plan was updated and submitted according to requirement and addressed all issues identified in 2007. The Plan will be continue to be reviewed at least annually and revised if necessary.
AREVA to review and revise Spill Contingency Plan as required by changes in operation and/or technology. Revisions to Plan submitted as addendum with Annual Report.	Reviewed at least annually and reviews are submitted with the annual report.
Ensure that any chemicals, petroleum products or wastes associated with the project do not enter water. All sumps and fuel caches located at least 30m from highwater mark and inspected on a regular basis. An exception to this condition is during drilling activities within 30 m of the ordinary high	In compliance through the implementation of the Spill Contingency Plan; proper training and awareness. All drilling sites are inspected daily by the

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
water mark at End Grid.	
While drilling is occurring within the 30 m high water mark at End Grid, AREVA may allow a limited supply of fuel within 30 m of the ordinary high water mark to support the drilling operations, provided that secondary containment is made available for the storage of fuel and all external pumps and motorized equipment used.	E&RP group.
Equipment maintenance and servicing conducted only in designated areas	Addressed through training and awareness
Spill reporting procedure	Addressed in Spill Contingency Plan; training and awareness and site planning.
ABANDONMENT AND RESTORATION OR TEMPORARY CLOSING	
Submit Abandonment and Restoration Plan	Submitted, will be reviewed at least annually and revised if necessary
Within 30 days of Licence issuance, submit addendum to Abandonment and Restoration Plan to address issues identified during previous technical reviews with letter dated November 12, 2007 not incorporated into October 2007 version.	Complete The Kiggavik Contact List is kept as a separate document to allow frequent updates. All operational plans are reviewed and updated at least annually.
AREVA to review and revise Abandonment and Restoration Plan as required by changes in operation and/or technology. Revisions to Plan submitted as addendum with Annual Report.	Noted This and other plans are reviewed annually and revisions are submitted with the annual report.
Complete restoration work prior to the expiry of this Licence	AREVA is committed to this condition. If unforeseen delays in permitting renewals occur, AREVA will consult with

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
	the agencies to arrange for an agreement regarding site infrastructure pending a permitting decision.
Progressive reclamation is to be carried out	Reclamation to ensure chemical stability occurs in a progressive manner; best management practices for reclamation to ensure physical stability of surface disturbance is currently being investigated
All sumps are backfilled to satisfaction of an Inspector	Will occur if required and will be inspected during regular visits to site
Remove all site infrastructure and material before expiry of licence	Addressed in the Abandonment and Restoration Plan
Shall re-grade roads and airstrip	Currently not required
Remove all culverts	Currently not required
Disturbed surfaces prepared for vegetation growth by ripping, grading or scaring surface to conform to natural topography	Addressed in the Abandonment and Restoration Plan
Ensure areas contaminated by hydrocarbons are reclaimed to meet objectives outlined in the GN's Environmental Guidance for Site Remediation, January 2002. GN consultation and approval necessary to use reclaimed soil for the purpose of backfill or general site grading.	This is addressed in the Abandonment and Restoration Plan and the Spill Contingency Plan
Drill holes and disturbed areas to be restored immediately upon completion of drilling. Reclamation must include removal of any drill casing material and capping of holes with a permanent seal.	The casing is removed from all drill holes and holes are sealed by cementing and/or grouting. This is addressed in the Abandonment and Restoration Plan

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
Drill core must be stored >30m above high water mark	Core is transported from the drill location on a daily basis and stored >30 m above the high water mark of the nearest water body.
Long term storage of core will not exceed radiation measurements of > 1.0 μSv at 1 meter from surface and not to exceed 2.5 μSv	Implemented Radiation Protection Plan; regular inspections and monitoring are conducted by EHS group
Seal by grouting entire mineralization zone and greater than 10 meters both above and below each 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	Committed to conduct when required and achievable
Seal by cementing the upper 30 meters of bedrock or entire depth of hole, which ever is less	Committed to conduct when required and achievable
A detailed report outlining test results and proposed long term core handling and storage/removal mitigation will be submitted to the INAC Water Resources Inspector if radiation levels for stored core exceed approved levels	Condition is noted, AREVA is committed to its compliance if required
All disturbed areas contoured and stabilized upon completion of work.	Addressed in the Abandonment and Restoration Plan
MONITORING PROGRAM	
Measure and record daily water quantities	Conducted and recorded daily by site staff – information available in this annual report. Please refer to Section 12 Water Consumption

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
Provide GPS coordinates of all water sources	Completed; please refer to section 12 Water Consumption
Provide GPS coordinates of all waste locations	Incinerator: 64º 26' 26.97" N 97º 39' 30.47" W Grey Water Discharge Point (south of Kitchen building): 64º 26' 26.75" N 97º 39' 31.68" W
Provide follow-up monitoring and analytical results of the potable water supply previously utilized under Licence 2BE-KIG0708 including contamination sources and possible mitigation. Plans to address matter included in Annual Report.	Lab analysis was determined to be subject to error, therefore, AREVA resampled the camp water supply on June 27, 2009. Analysis conducted at the SRC Laboratory showed no traces of grease and oil
All sampling, preservation and analysis to be conducted in accordance with the *Standard Methods for the Examination of Water and Wastewater*	Noted
All analysis performed in an accredited lab (ISO/IEC Standard 17025)	SRC is accredited by the Canadian Association for Environmental Analytical Laboratories (CAEAL) for environmental testing procedures. Accreditation ensures that procedures, facilities, and methods conform to ISO 17025, the internationally recognized standard. AREVA commits to only using labs that are adequately accredited.
Monitor drill sumps and core storage areas to assess and ensure mitigation required under Abandonment and Restoration Plan have been completed.	Ongoing, refer to Section 9.
All data, monitoring results and information required by this "Monitoring" section to be included in the annual report.	In compliance
AREVA shall establish baseline water quality	End Grid Lake was sampled on May 12,

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
conditions prior to drilling adjacent to End Grid Lake. Monitoring shall include but not be limited to the parameters listed in Part J, Item 10	2009 prior to drilling activities in order to establish baseline water quality conditions. It was then sampled again on August 14, 2009 after the completion of the 2009 drilling program. Details and results can be found in section 13 of this report.
AREVA shall determine GPS co-ordinates (in degrees, minutes and seconds of latitude and longitude) of all drill hole locations within the 30 m ordinary high water mark in the END Grid area and provide these locations on a map of suitable scale for review as part of the annual report.	In compliance. This information is included in section 13 of this report.

12 WATER CONSUMPTION

Water used during the 2009 Kiggavik Project was permitted under the Nunavut Water Board License No. 2BE-KIG0812. On April 24th,, 2009 AREVA submitted an amendment request to the Nunavut Water Board regarding a reallocation of the maximum allowed water usage. On August 7th, 2009 AREVA received approval of the amendment and was allowed to increase the camp water usage from 5 m³/day to 10 m³/day and decrease the drill water usage from 295 m³/day to 290 m³/day while still maintaining a maximum total water usage of 300 m³/day.

12.1 Water use at camp and drills

Water was drawn from local water sources for both hygienic uses at the camp, as well as to support drilling activities. The locations of these water sources are listed below in Table 12.1.

Table 12.1 Summery of Water Source Coordinates

Location Name	Use	Coordinates	
Camp	emergency water source (i.e. Firefighting), drill water	64º 26' 31.78" N	97º 39' 30.83" W
Unnamed Lake	hygienic water source	64º 26' 36.93" N	97º 39' 49.51" W
Mushroom Lake	drill water when End Grid Lake is still frozen to bottom		
End Grid Lake	drill water	64º 20' 36.73" N	97º 52' 5.66" W
Andrew Lake	drill water	64º 19' 57.48" N	97º 53' 52.46" W

The daily amount of water used during the 2009 field season is summarized in table 12.1 below:

Table 12.2 Water Used at Camp during the 2009 Season

Month	Date	Total Camp (m³)	Drill 1 (m³)	Drill 2 (m³)	Drill 3 (m³)	Total	Comments
May	1	0.00	0	0	0	0.00	no water use
May	2	0.00	0	0	0	0.00	no water use
May	3	0.00	0	0	0	0.00	no water use
May	4	0.00	0	0	0	0.00	no water use
May	5	0.00	0	0	0	0.00	no water use
May	6	0.00	0	0	0	0.00	no water use
May	7	0.00	0	0	0	0.00	no water use
May	8	6.82	0	0	0	6.82	
May	9	0.00	0	0	0	0.00	

May	10	0.00	0	0	0	0.00	
May	11	0.00	0	0	0	0.00	
May	12	6.25	0	0	0	6.25	
May	13	0.00	0	0	0	0.00	
May	14	0.00	0	0	0	0.00	
May	15	6.25	0	0	0	6.25	
May	16	0.00	0	0	0	0.00	
May	17	0.00	0	0	0	0.00	
May	18	0.00	0	0	0	0.00	
May	19	6.82	0	0	0	6.82	
May	20	0.00	0	0	0	0.00	
May	21	0.00	0	0	0	0.00	
May	22	0.00	0	0	0	0.00	
May	23	0.00	0	0	0	0.00	
May	24	6.18	0	0	0	6.18	
May	25	0.00	0	0	0	0.00	
May	26	6.27	0	0	0	6.27	
May	27	0.00	19.9	0	0	19.90	
May	28	4.74	19.9	0	0	24.64	filter changed
May	29	0.00	19.9	0	0	19.90	A reading of 59.7 was taken at Drill 1 for May 29th
May	30	4.19	4.6	0	0	8.79	The flow meter was changed after May 29th reading
May	31	0.00	58.7	0	0	58.70	
June	1	5.00	80.1	81.76	0	166.86	
June	2	3.70	81.76	81.76	0	167.22	
June	3	0.00	81.76	81.76	0	163.52	
June	4	5.75	81.76	81.76	0	169.27	
June	5	0.00	81.76	81.76	0	163.52	
June	6	7.94	81.76	81.76	0	171.46	Filled tank from near empty, recorded after a 24 hr period
June	7	6.99	81.76	81.76	0	170.51	
June	8	3.44	81.76	81.76	0	166.96	
June	9	4.04	81.76	81.76	0	167.56	
June	10	2.87	81.76	81.76	0	166.39	
June	11	0.00	81.76	81.76	0	163.52	
June	12	3.70	81.76	81.76	0	167.22	
June	13	2.42	81.76	81.76	81.76	247.70	
June	14	5.84	81.76	81.76	81.76	251.12	changed filters, cleaned tanks
June	15	2.62	81.76	81.76	81.76	247.90	
June	16	3.64	81.76	81.76	81.76	248.92	
June	17	3.58	0	81.76	81.76	167.10	Drill #1 move
June	18	3.92	0	81.76	81.76	167.44	
June	19	3.37	81.76	81.76	81.76	248.65	
June	20	6.63	81.76	0	81.76	170.15	drill #2 not drilling
June	21	2.91	81.76	0	81.76	166.43	drill #2 not drilling
June	22	4.93	81.76	0	0	86.69	camp water filled twice, drills 2, 3 not drilling
June	23	1.34	81.76	81.76	81.76	246.62	
June	24	5.44	81.76	81.76	81.76	250.72	Water was filled at camp twice
June	25	2.65	81.76	81.76	81.76	247.93	
June	26	3.18	81.76	81.76	81.76	248.46	

June	27	4.35	0	81.76	81.76	167.87	Drill 1 move
June	28	4.32	0	81.76	0	86.08	Drill 3 move
June	29	3.76	81.76	81.76	0	167.28	
June	30	5.27	81.76	81.76	0	168.79	
July	1	3.58	81.76	81.76	81.76	248.86	
July	2	3.83	81.76	81.76	81.76	249.11	replaced all 4 filters
July	3	0.88	81.76	81.76	81.76	246.16	
July	4	6.97	0	0	81.76	88.73	drill 1 and 2 move
July	5	3.13	81.76	0	81.76	166.65	
July	6	5.51	81.76	0	0	87.27	drill 3 move
July	7	2.37	81.76	81.76	81.76	247.65	replaced all 4 filters
July	8	4.41	81.76	81.76	81.76	249.69	
July	9	3.27	81.76	81.76	81.76	248.55	
July	10	2.72	81.76	81.76	81.76	248.00	
July	11	4.28	81.76	81.76	81.76	249.56	
July	12	3.63	81.76	81.76	81.76	248.91	
July	13	3.58	81.76	0	81.76	167.10	
July	14	2.40	0	0	81.76	84.16	Drill 1,2 move
July	15	3.72	81.76	81.76	0	167.24	Drill 3 move
July	16	3.56	81.76	81.76	81.76	248.84	
July	17	2.98	81.76	81.76	81.76	248.26	
July	18	3.81	81.76	81.76	81.76	249.09	
July	19	4.07	81.76	81.76	81.76	249.35	replaced all 4 filters
July	20	4.70	81.76	81.76	81.76	249.98	
July	21	0.00	81.76	81.76	81.76	245.28	camp water meter not functioning properly
July	22	0.00	81.76	0	0	81.76	between July 21 - 24 (drill 2, 3 move)
July	23	0.00	0	81.76	81.76	163.52	Drill 1 move
July	24	0.00	0	81.76	81.76	163.52	no drilling at drill 1
July	25	2.82	81.76	81.76	81.76	248.10	water flow meter replaced on July 25
July	26	2.40	81.76	81.76	81.76	247.68	replaced all 4 filters
July	26	2.00	81.76	81.76	81.76	247.28	
July	27	3.19	81.76	81.76	81.76	248.47	
July	28	2.21	81.76	0	81.76	165.73	drill 2 move
July	28	1.80	81.76	81.76	81.76	247.08	
July	29	2.80	81.76	81.76	81.76	248.08	replaced all 4 filters, drill 1 move
July	30	3.43	81.76	0	81.76	166.95	Drill 2 put into storage
July	31	2.74	81.76	0	81.76	166.26	
August	1	2.79	81.76	0	81.76	166.31	
August	2	3.24	81.76	0	81.76	166.76	replaced all 4 filters
August	3	5.95	81.76	0	81.76	169.47	
August	4	2.53	81.76	0	81.76	166.05	
August	4	2.18	81.76	0	81.76	165.70	
August	5	1.81	81.76	0	81.76	165.33	
August	6	2.87	81.76	0	81.76	166.39	
August	7	2.48	81.76	0	81.76	166.00	
August	8	3.01	0	0	81.76	84.77	Drill 1 put into storage
August	9	3.08	0	0	81.76	84.84	
August	10	2.15	0	0	81.76	83.91	
August	11	3.80	0	0	81.76	85.56	
August	12	2.39	0	0	81.76	84.15	

August	13	3.15	0	0	81.76	84.91	
August	14	3.79	0	0	81.76	85.55	
August	15	2.59	0	0	81.76	84.35	
August	16	3.13	0	0	81.76	84.89	
August	17	3.41	0	0	0	3.41	Drill 3 put into storage
August	18	3.92	0	0	0	3.92	
August	19	2.73	0	0	0	2.73	
August	20	3.32	0	0	0	3.32	
August	21	2.38	0	0	0	2.38	
August	22	1.59	0	0	0	1.59	
August	23	1.53	0	0	0	1.53	
August	24	2.22	0	0	0	2.22	
August	25	2.55	0	0	0	2.55	
August	26	1.76	0	0	0	1.76	
August	27	1.84	0	0	0	1.84	
August	28	1.75	0	0	0	1.75	
August	29	unknown	0	0	0	0.00	camp water meter not functioning properly
August	30	unknown	0	0	0	0.00	camp water meter not functioning properly
August	31	unknown	0	0	0	0.00	camp water meter not functioning properly

All camp water was pumped from the Unnamed Lake into holding tanks with marked volumes. These tanks were filled almost daily during slow periods and at least twice a day during busy periods. A water meter was installed at the beginning of the season which measured the accumulative amount of water used. The camp's daily water usage was calculated each time the water tanks were refilled by subtracting the water meter reading before filling from the reading after refilling. Between July 21st and 24th the water meter was not functioning properly and consequently had to be replaced.

The daily amount allowable for the camp, which at the time was 5 m^3/day, was marginally exceeded on 17 occasions prior to the approved amendment request to increase the allowable camp water usage limit from 5 m^3/day to 10 m^3/day, which as noted above, was granted August 7, 2008. Due to the cold conditions between the beginning of the field season and mid June it was difficult to collect water. Therefore the camp attendants would wait until the water tanks were near empty before filling. This resulted in the water being collected in larger quantities less often, causing the allowable quantity for camp to be exceeded during the collection days. The remaining seven in which the amount allowable for camp was exceeded were due to an increase in the number of personnel on site.

Prior to the 2009 field season AREVA consulted with Boart Longyear as to what type of water meters hold up the best in the field. Brass water meters were installed at the beginning of the 2009 field season inside each drill shelter, however these flow meters stopped working within days of being installed. AREVA is working to find a better system to measure the water used at each drill.

The water pumps that Boart Longyear use at each drill are identical and capable of pumping a maximum of 15 GPM (0.05678 m^3/min). At this rate, if all three pumps ran for 24 hours then the maximum volume of water that could be pumped to the drills in a day would be 245.29 m^3. Therefore, even if all water pumps are pumping at their maximum rate, which never occurred during the 2009 field season, the amount of water used at the drills would still fall below the limit of 290 m^3/day.

13 DRILLING WITHIN 30 M OF THE ORDINARY HIGH WATER MARK AT END GRID SITE

On March 23, 2009 AREVA received approval from the Nunavut Water Board (NWB) to drill within 30 m of the ordinary high water mark in the End Grid area which includes End Grid Lake and the surrounding temporary and permanent streams. The spring spawning timing window for this area is May 1 – July 15 while the fall spawning timing window is August 15 – June 30 as identified by the Department of Fisheries and Oceans (DFO). AREVA makes efforts to avoid drilling within the 30 m ordinary high water mark during spawning timing windows, however water management and environmental protection is more manageable when the ground, lakes and streams are frozen. Therefore AREVA made commitments to both the NWB and the DFO in order to carry out drilling operations in a safe and environmentally conscience manner. The coordinates of all drill holes located within 30 metres of the ordinary high water mark in the End Grid area are listed in Table 13.1 and shown in figure 13.1.

Table 13.1 Drill Hole Coordinates

Name	Date Started	Date Completed	Lat/Long Coordinates	UTM coordinates
END-09-01	May 27, 2009	June 5, 2009	64° 20' 42.46" N 97° 52' 7.81" W	14W 554642m E 7135960m N
END-09-12	July 22, 2009	July 27, 2009	64° 20' 41.98" N 97° 52' 11.71" W	14W 554590m E 7135944m N
END-09-13	July 23, 2009	July 29, 2009	64° 20' 43.18" N 97° 52' 8.68" W	14W 554630m E 7135982m N
END-09-14	July 29, 2009	Lost July 31, 2009	64° 20' 42.01" N 97° 52' 6.94" W	14W 554654m E 7135946m N
END-09-14A	July 31, 2009	Lost August 7, 2009	64° 20' 42.01" N 97° 52' 6.94" W	14W 554654m E 7135946m N
END-09-15	July 30, 2009	August 7, 2009	64° 20' 42.03" N 97° 52' 13.64" W	14W 554564m E 7135945m N

As a condition of this amendment approval the NWB required that water samples be taken prior to commencing drilling operations within 30 m of the ordinary high water mark and again once the drilling activities in this area were completed. These samples were taken on May 12 prior to the start of drilling activities and again on August 14 after the completion of the drilling program. The samples were then analyzed by a third party laboratory for the parameters set out by the NWB. Since End Grid Lake was frozen to the ground prior to drilling in May the sample collected consisted of chipped ice. Due to concerns with comparing ice to water samples, we have included results of water

samples collected by Golder and Associates in 2007 and 2008. The results of the water samples are shown in table 13.2.

Table 13.2 Water Analysis Results

Parameter	Units	SSWQO[1]	CWQG[2]	End Grid Lake Aug. 28, 2007	End Grid Lake Sept. 3, 2008	End Grid Lake May 12, 2009	End Grid Lake Aug. 14, 2009
pH	pH units		6.5-9	7.66	7.56	5.65	7.05
Specific Conductivity	uS/cm			25		2	38
Mercury	ug/L	0.026	0.026	<0.05	<0.05	<0.005	0.1
Aluminum	mg/L	0.5-0.1	0.5-0.1	0.0083	0.017	0.2	0.017
Antimony	mg/L			<0.0002	<0.0002	<0.0002	<0.0002
Arsenic	ug/L	5	5	0.1	0.2	<0.1	0.2
Barium	mg/L			0.026	0.03	0.0039	0.027
Beryllium	mg/L			<0.0001	<0.0001	<0.0001	<0.0001
Boron	mg/L			<0.01	<0.01	<0.01	<0.01
Cadmium	mg/L	0.000017	0.000017	<0.0001	<0.0001	<0.0001	<0.0001
Chromium	mg/L		0.001	<0.0005	<0.0005	<0.0005	<0.0005
Cobalt	mg/L			<0.0001	<0.0001	<0.0001	<0.0001
Copper	mg/L	0.002	0.002	0.0007	0.0009	0.0002	0.0008
Iron	mg/L	0.3	0.3	0.047	0.06	0.076	0.11
Lead	mg/L	0.001	0.001	<0.0001	<0.0001	0.0001	<0.0001
Manganese	mg/L			0.0013	0.0013	0.0007	0.0028
Molybderium	mg/L		0.073	<0.0001	<0.0001	<0.0001	<0.0001
Nickel	mg/L	0.025	0.025	0.0004	0.0006	0.0001	0.0004
Selenium	mg/L	0.001	0.001	0.0001	0.0002	<0.0001	0.0001
Silver	mg/L	0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Strontium	mg/L			0.02	0.0210	<0.0005	0.021
Thallium	mg/L		0.0008	<0.0002	<0.0002	<0.0002	<0.0002
Tin	mg/L			0.0001	0.0062	<0.0001	<0.0001
Titanium	mg/L			0.0004	<0.0002	0.0083	0.0002
Uranium	ug/L	15		<0.1	0.1	<0.1	0.1
Vanadium	mg/L			0.0001	<0.0001	0.0003	0.0001
Zinc	mg/L	0.03	0.03	0.0023	0.0065	0.0043	0.0011
TSS	mg/L			3	2	<1	<1

[1] Saskatchewan Surface Water Quality Guidelines

[2] Canadian Water Quality Guidelines (CCME 2007)

Figure 13.1 2009 Drill Holes Within 30 m of the Ordinary High Water Mark at End Grid Area

14 REPORTABLE SPILLS

There were two reportable spills that occurred at the Project during 2009. These incidents and the actions taken to remediate and prevent future occurrences are summarized in this section.

June 13 Unplanned Release of Core

On June 13, 2009, a core box containing mineralized core dropped from a sling basket while in transport from drilling area to camp. The core box had dropped and landed in a small, seasonal runoff pond as shown in Figures 13.1 and 13.2. The pond covered an area of approximately 7 m² and was 12 cm deep at its deepest point. This spill was reported on June 14, 2009 and a 30-day follow-up report was submitted on July 13, 2009.

Throughout the 2007 and 2008 field seasons core samples were transported back to camp using sling straps around each end of stacked core boxes and then slung at the end of a line beneath the helicopter. On several occasions the helicopter pilot noticed the core boxes spinning and twisting around and was worried that the boxes could come loose form these straps. Therefore at the start of the 2009 field season the method was changed to stacking the lidded core boxes in a metal basket which the helicopter would sling back to camp. The weight of the core limited the number of core boxes that could be loaded into the basket to 30 and limited how close the core boxes would come to the open top of the basket. It was believed that the weight of the core would prevent the core boxes from lifting out of the basket. Shortly after the helicopter took off from the drill area there was enough wind to lift a box enough so that it flew out of the basket and onto the ground.

All core was retrieved and a gamma radiation survey was conducted to measure the radioactivity levels in and around the spill area. The average reading recorded was 0.054 µSv/h with a maximum of 0.142 µSv/h. Comparison of the pre-gamma surveys conducted in the End Grid area, which is near the spill site, indicates that gamma levels in the vicinity of the spill remain similar to pre-spill conditions. In accordance with permit conditions and the Kiggavik Project's Management Plans, drill sites do not require radiological remedial action when the measured gamma dose rate at a height of 1 m is less than 1 µSv/h above background. It is AREVA's practice to reduce elevated radiation readings wherever practical when remediating a spill.

After the July 13 spill AREVA required all personnel who were involved with loading core boxes into the metal basket were instructed to use ratchet straps to secure the core boxes prior to transport. Geology personnel later found that these straps were not being properly utilized. Therefore a permanent lid was welded onto the basket, shown in figure 13.4, which has a permanent hinged lid with adjustable bars which hold in the core. This enables the core to be consistently secured inside.

Figure 14.1 Broken Box and Core Prior to Recover, June 14

Figure 14.2 Pond Prior to Recovery Facing North West, June 14

Figure 14.3 Pond after Recovery Facing West, June 14

Figure 14.4 Modified Core Basket

June 23 Unplanned Release of Red Tinged Water

On June 23, 2009 water containing red sediment worked up by drilling activities entered the End Grid Stream and subsequently entered End Grid Lake. The water had a strong reddish tinge due to the presence of extremely fine hematitic (iron mineral) clay in suspension. Upon entering the water body the suspended hematite-clay particles began to settle. End Grid Lake is a shallow water body with a mean depth of approximately 1 m. The incident was reported on June 24 and the 30-day follow-up report was submitted on July 23.

Throughout the 2009 field program, excess water from drilling activities was pumped out of tarps laying beneath the drill to the low-lying depression also used for depositing non-mineralized cuttings. However, this system could only be used after the casing had been installed causing the installation of the casing to create a wet area around the drill. This along with warm temperatures and high foot traffic caused an increase in reddish tinged coloured water in the area throughout the end June.

While drilling the previous hole (END-09-04) this excess water began to flow slowly away from the drill. Sandbags were put in place around the drill and at the end of the runoff in order to stop the flow. A red tinge was observed on the shore of the lake on June 20th but it was unclear as to where it came from due to the remaining snow cover. It was not believed to come from the END-09-04 drill hole as the extent of the red water appeared to have stopped before reaching the snow cover. Further investigation conducted by the Environment and Radiation Protection Supervisor concluded it was a natural cause of snow and ice melt run-off.

On the evening of June 22 drill casing was installed on drill hole END-09-05 which created excess water in the area as it had done at previous drill holes. In addition, an increase in temperatures caused a greater increase in snow melt. The red coloured water from the drill casing and snow melt was able to make its way to the closest temporary stream. Sandbag berms were put in place prior to the start of casing installation in close vicinity to the drill. However, additional sandbags were not put in place once the direction of water flow had been established. Daily inspections were conducted at approximately 3:00pm the next day, and it was then discovered that the run off of this water flowing toward the stream. At this time a sandbag berm was put in place to prevent further flow of drill casing water. A silt barrier was also temporarily installed at the mouth of the stream in order to prevent sediment from entering the lake. Both END-09-04 and END-09-05 were greater than 30 meters away from the ordinary high water mark of the streams and lake.

Water samples were collected from the drill casing, water runoff and the red tinged area of the lake. Analytical results for the lake water were compared to the Canadian Water Quality Guidelines (CWQG) and Saskatchewan Surface Water Quality Objectives

(SSWQO). The concentration of aluminum and iron exceeded the guidelines within the steam although all parameters were below SSWQO and CWQG for the sample taken within the End Grid Lake.

In addition, five sediment samples were collected at the mouth of the stream and along the shoreline where the red tinge could be seen. Analytical results were compared with the CCME Interim Sediment Quality Guidelines (ISQG) and Probable effects levels (PEL). Most sample parameters were below the ISQG and PEL guidelines. However, in the sediment sample taken closest to the point of origin the concentration of arsenic exceeded the ISQG and was equal to the PEL, at 17 ug/g, and chromium exceeded the ISQG at 43 ug/g but was well below the PEL (90 ug/g) A soil sample was taken in this area in 2008 by Gebauer and Associates which measured <5.0 ug/g of arsenic and 21.48 ug/g of chromium (Gebauer and Associates, unpublished data).

A post-incident gamma radiation survey was conducted in order to measure the radioactivity levels in and around the discharge path. Radioactivity measurements were collected using an Automess gamma survey instrument. Comparison of the pre and post gamma surveys indicates that the gamma levels in the vicinity of the spill remain similar to pre-incident conditions.

A series of measures to prevent future reoccurrence have been implemented. These included digging shallow ditches around the drill pad in order to channel water to a small pit approximately 1 ft deep, shown in Figure 13.8, where it was then pumped to the low lying discharge area also used for deposition of non-mineralized cuttings. This practice was especially useful when drill casing was being installed and the water could not be contained within the tarp located under the drill, All drill and cutting deposit sites were inspected daily to observe water movement in order to ensure proper containment measures were implemented proactively to reduce the risk of environmental impact and to meet all regulatory requirements.

The corrective and preventative measures implemented and discussed in the 30-day spill report were successful in controlling and containing the excess water around the drills for the remainder of the 2009 season.

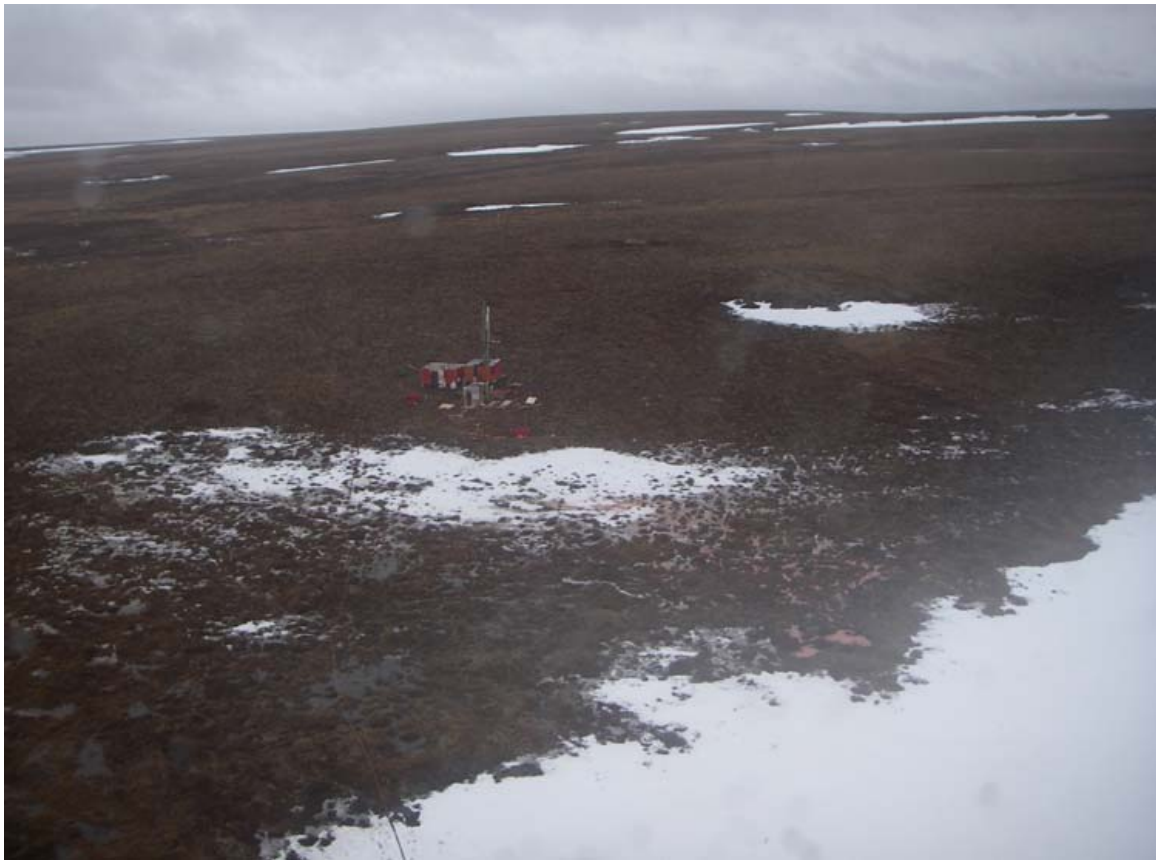

Figure 14.5 Red Water at END-09-04, June 21

Figure 14.6 End Grid Stream Heading Towards Lake, June 23

Figure 14.7 End Grid Stream and Lake with Silt Barrier, July 1

15 ADDITIONAL PHOTOS

Figure 15.1 Kiggavik Camp May 2009

Figure 15.2 Kiggavik Camp During 2009 Field Season

Figure 15.3 Kiggavik Camp During 2009 Field Season

Figure 15.4 Drilling at End Grid

APPENDIX A OPERATIONAL PLANS

Spill Contingency Plan
Radiation Protection Plan
Waste Management Plan
Wildlife Mitigation and Monitoring Plan
Abandonment and Restoration Plan
Noise Abatement
Uranium Exploration Plan