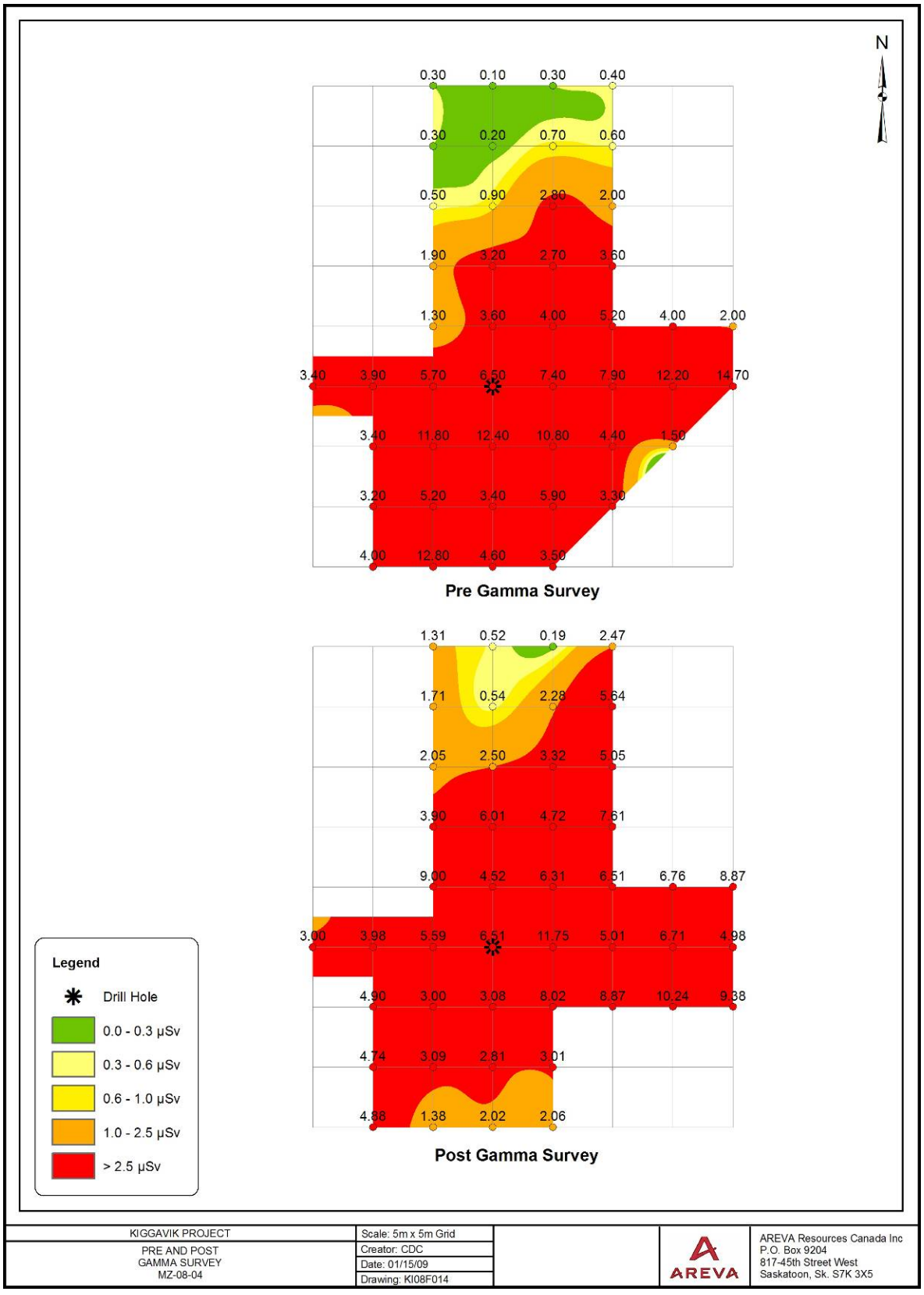


Figure 9.16 Gamma Surveys MZ-08-04

Figure 9.17 Gamma Surveys MZ-08-06

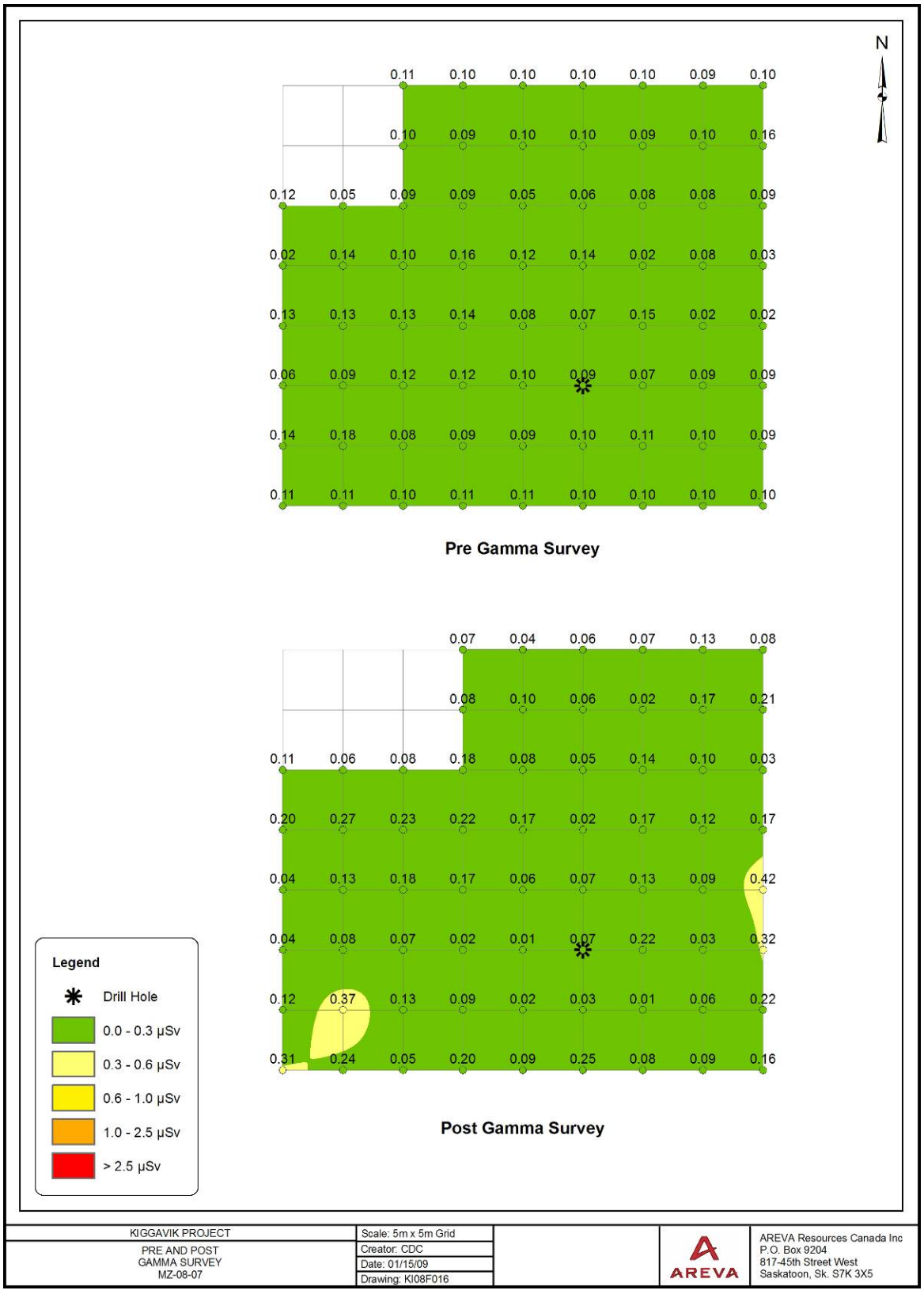


Figure 9.18 Gamma Surveys MZ-08-07

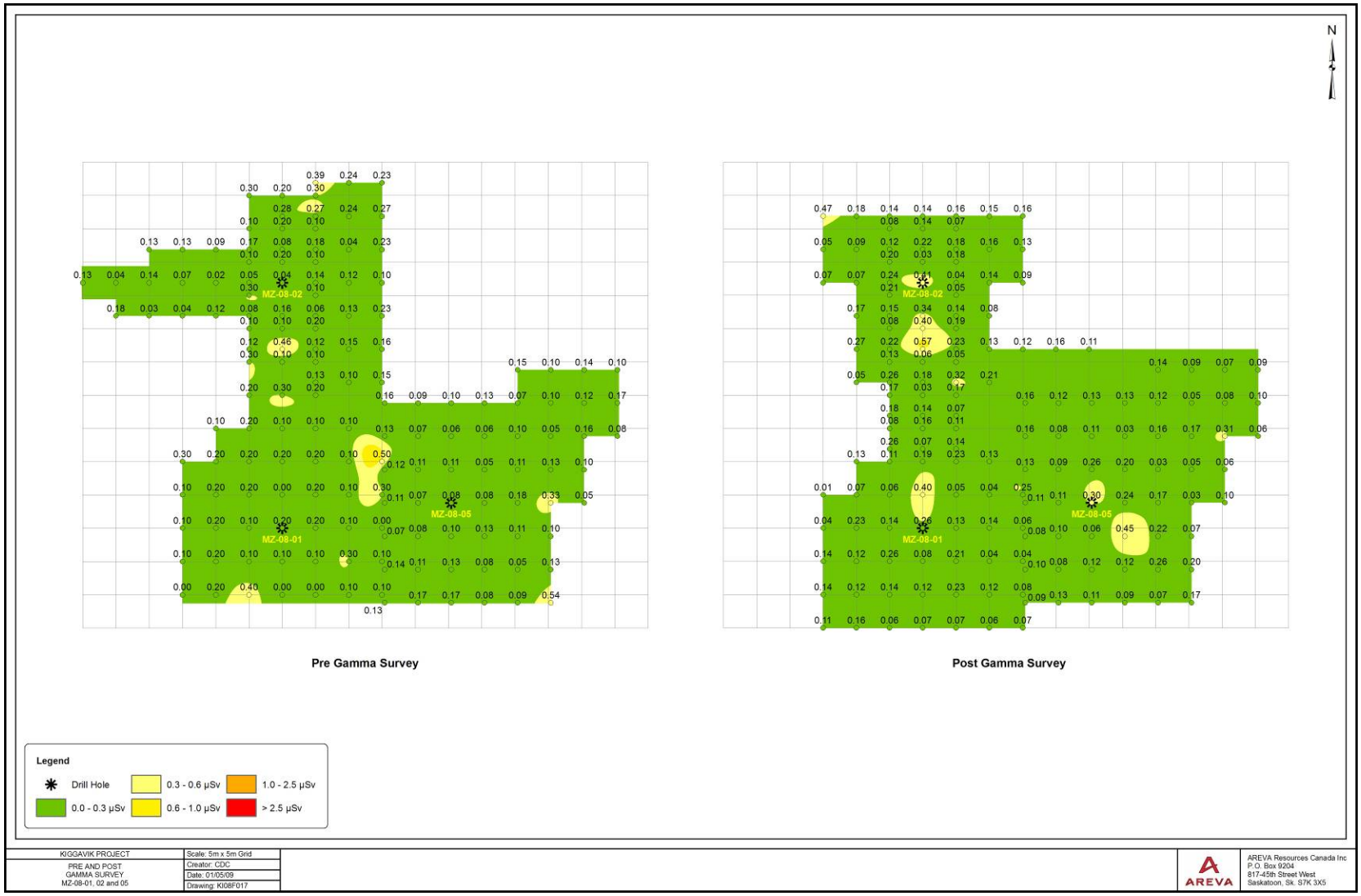


Figure 9.19 Gamma Surveys MZ-08-01,-02,-05

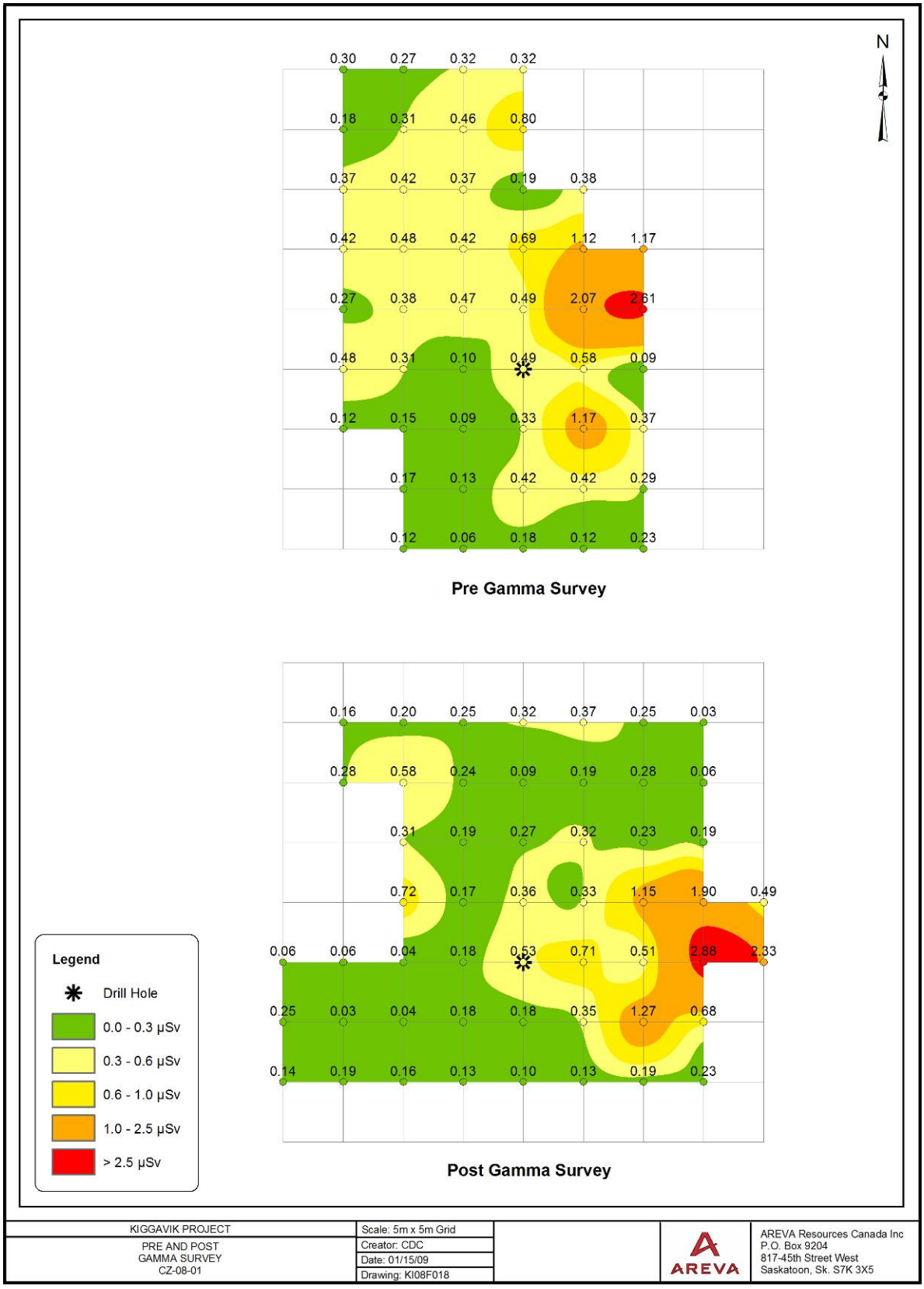


Figure 9.20 Gamma Surveys CZ-08-01

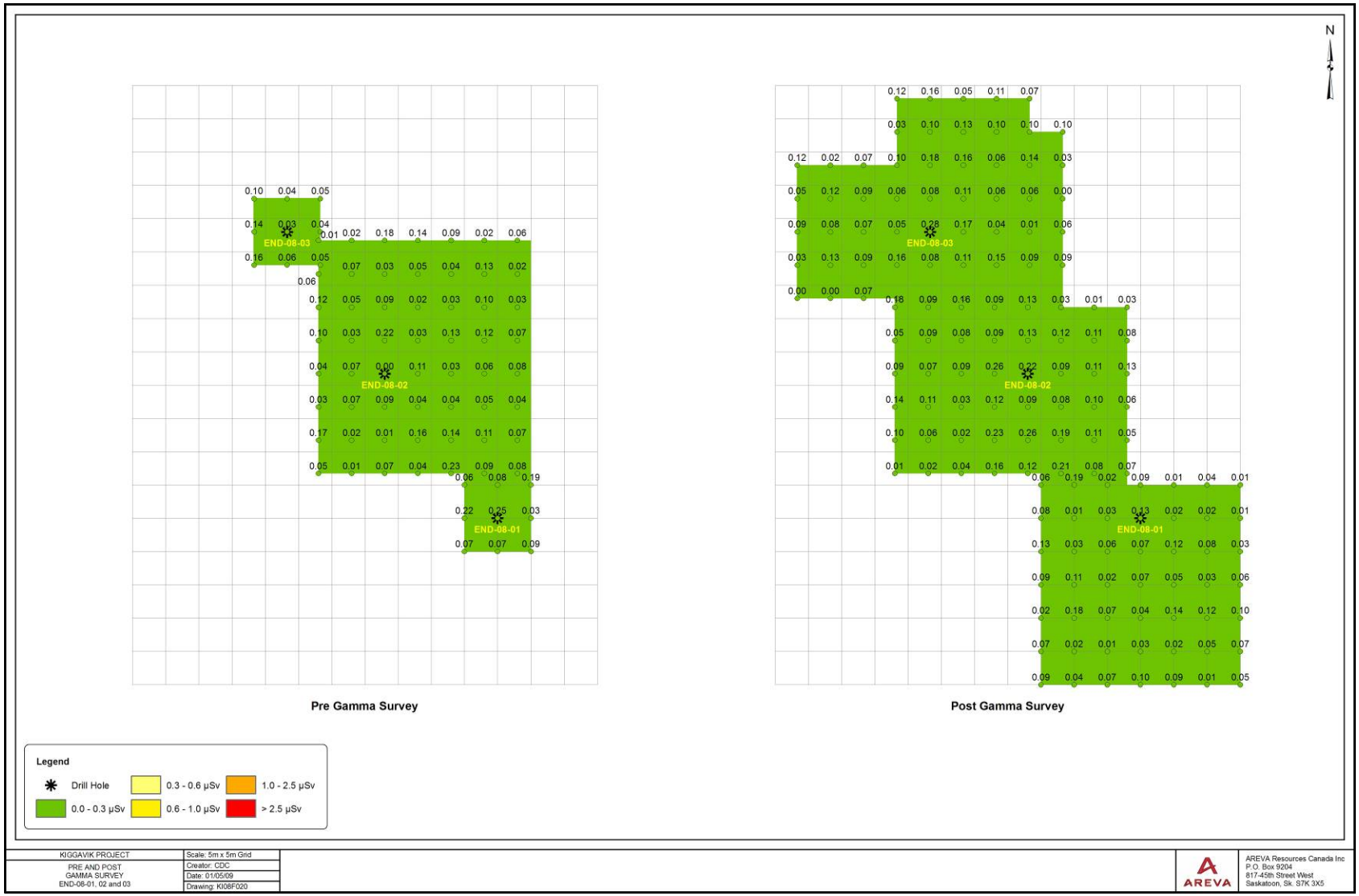


Figure 9.21 Gamma Surveys END-08-01,-02,-03

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 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. Air emissions sampling will be conducted if deemed necessary.

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
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 of the location from May to August to monitor compliance with	Inspections are expected during the 2009 field season.

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
DIAND Caribou Protection Measures	
GN-DOE should conduct on-going review of wildlife monitoring results as required by WMMP	Results will be submitted to the DOE on a monthly basis. In 2007 the senior wildlife officer, presently the Minister of the Environment, requested these results to be submitted bi-weekly, with which Areva complied.
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 posted at kitchen entrance
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 about once per year and revised as necessary
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

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
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 and 2008.
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.	Development and implementation of a Waste Management Plan involving waste diversion and sorting that occurs prior to incineration
Adherence to conditions in Appendix B *Archaeological and Palaeontological Resources – Terms and Conditions for Land Use Permit Holders* (see 11.1.3	Refer to Section 11.1.3; hiring of an independent consultant to conduct heritage surveys and investigations

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
below)	
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	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	
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	Currently grey water is being placed in a natural depression; metal screen collects solids in discharge and then is collected

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
	and incinerated – approved by Inspector
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
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	Not conducting drilling on ice
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.	Not conducting drilling on ice
If artesian flow is encountered, the drill	All artesian flows encountered have been

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
hole will be immediately plugged and permanently sealed.	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.
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	AREVA strives to promptly contact CLEY should any site or specimen be

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
specimen, or a palaeontological site or fossil be encountered or disturbed by a land use activity.	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 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	

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
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 Wildlife Monitoring and Mitigation Plan. Employees are made aware of these commitments and they are monitored by EHS staff and independent Wildlife Monitors.
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	
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	

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
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"	Will be implement via the development and implementation of activity specific work instructions
AREVA to revise Spill Contingency Plan regarding this amendment and conduct personnel re-training as per revised Spill Contingency Plan. AREVA to submit	AREVA is committed to ensuring adequate revisions are conducted prior to the use of the fuel storage system

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
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.	AREVA is committed to ensuring adequate revisions are conducted prior to the use of the fuel storage system. Procedures for operation, maintenance, and inspection are currently being developed.
Secondary containment or surface liner with adequate size and volume utilized during all fuel or hazardous substance transfers	In compliance and ongoing through the implementation of the Spill Contingency Plan and the Environmental Code of Practice
Sufficient absorbent materials and spill kits during fuel transportation, storage and transfers are provided	In compliance and ongoing through the implementation of the Spill Contingency Plan
DRILLING AND DISPOSAL OF RADIOACTIVE SUBSTANCES	
Use of biodegradable and non-toxic additives (Canadian Environmental Protection Act lists 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	Ongoing through the implementation of the

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
least 100 metres from the high waterline of all water bodies.	Radiation Protection Program
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. Vehicle use is strictly controlled
Additional camp facilities to be located on gravel, sand or other durable land	Is in compliance and is ongoing through 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, 2009).

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

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
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
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	All non-radioactive drill waste is

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
surrounding lands	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
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

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
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 meter, and with a meter-percent concentration >5.0	Committed to conduct when required and achievable
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 – results discussed in 2008 Annual report
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. Provide KIA with written notices of non-compliance.	AREVA strives to comply with all regulations, laws, orders and with terms of licence. Written notices are and will continue to be provided to KIA should a non-compliance occur
Obtain and maintain such licences, permits or approvals from the federal, territorial or other governing bodies as may be necessary to enable the 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
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	This is addressed in the Abandonment and Restoration Plan

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
KIA.	
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	Generally submitted with annual report
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
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	In 2007 a man-bear interaction occurred

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
nearest Renewable Resources Office	and was reported. AREVA will continue to comply if such interactions were to occur.
Licence available for viewing in a conspicuous place on site	In compliance. All site staff are made aware of its location
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

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
No petroleum or chemical products to spread to surrounding lands or waters	Ongoing through the implementation of the Environmental Code of Practice and the Spill Contingency Plan. This involves extensive preventative measures and careful monitoring. All fuel and equipment is kept at a minimum of 30 meters from the high water mark
All petroleum shall be kept in approved containers marked or with a bermed area. All containers labelled with licencee 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

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
No deposit of deleterious substances into any water body	Ongoing through the implementation of the Spill Contingency Plan
Not cause obstruction of any stream	In Compliance through implementation of the Environmental Code of Practice; proper training and awareness
Winter stream crossings must be removed prior to annual break-up	Condition noted
Shall abide by Caribou Protection Measures	Measures have been integrated into the Wildlife Mitigation and Monitoring Plan
Ensure there is not damage to wildlife habitat	Condition integrated into Wildlife Mitigation and Monitoring Plan and continued employee awareness through orientation and on-going training
Shall cease activities that may interfere with migration or calving	Integrated into Wildlife Mitigation and Monitoring Plan and considered when planning site activities
Shall not move any equipment or vehicles without prior testing the thickness of ice	Not conducting any ice drilling; 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
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	Being conducted and monitored
Obtain drill water from local source(s) to a	Licence No 2BE-KIG0812 Amendment

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
maximum of 105 m^3/day	#1 effective as of Aug. 5, 2008 states that the volume of drill water obtained from local source(s) is not to exceed 295 m³/day. AREVA was compliant with this licence throughout the field season
Volume of water under this licence not to exceed 110 m^3/day	Licence No 2BE-KIG0812 Amendment #1 effective as of Aug. 5, 2008 states that the volume of water under this licence is not to exceed 300 m³/day. AREVA was compliant with this licence 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 2008 field season and will be further implemented during the 2009 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; local approved waste disposal/handling sites are currently being identified
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	This is included along with the submission of this annual report
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 about once per year and revised as necessary
No land based drilling within 30 m of the high water mark	Licence No 2BE-KIG0812 Amendment #2 effective as of March 23, 2009 states "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" Enforced through training and awareness and project planning; 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

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
	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 daily.
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	In compliance when required
Record the depth of permafrost – include in annual report	Part of regular drilling activities
No on-ice drilling	Does not apply – current program is from May to September
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.

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
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.	Licence No 2BE-KIG0812 Part H Item 7 as part of Amendment #2 effective as of March 23, 2009 states "While drilling is occurring as per Part F, Item 3 the Licensee is permitted to allow a limited supply of fuel within the thirty (30) metres 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 in the drilling operations." In compliance through the implementation of the Spill Contingency Plan; proper training and awareness
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 on a regular basis 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	Complete The Kiggavik Contact List is kept as a separate document to allow frequent

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
November 12, 2007 not incorporated into October 2007 version.	updates. All operational plans are reviewed and updated as necessary.
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 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	This is addressed in the Abandonment and Restoration Plan and the Spill

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
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.	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
Drill core must be stored >30m above high water mark	Drill core is stored in or nearby the drill shelter which must also be located a minimum of 30 m above high water mark
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	Condition is noted, AREVA is committed to its compliance if required

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
approved levels	
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 annual report submitted to NWB
Provide GPS coordinates of all water sources	Completed, available in annual report to NWB
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, however, AREVA plans on sampling the camp's water source during the 2009 field season.
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

RECOMMENDATION/CONDITION	COMPLIANCE ACTION
	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

12 WATER CONSUMPTION

Water used during the 2008 Kiggavik Project was permitted under the Nunavut Water Board License No. 2BE-KIG0812. On June 18th, 2008 AREVA submitted an amendment request to the Nunavut Water Board regarding an increase in the maximum allowed water usage. On August 5th, 2009 AREVA received approval of the amendment and was allowed to increase the water usage from 105 m³/day to 300 m³/day; allowing daily maximum usage from camp to be 5 m³/day and maximum daily usage for drilling to be 295 m³/day.

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)	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
End Grid	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
Center Zone	drill water	64º 26' 39.07" N 97º 38' 4.9" W
East Zone	drill water	64º 26' 41.7" N 97º 36' 47.2" W
Bong	drill water	64º 24' 57.81" N 97º 42' 43.44" W
Granite	drill water	64º 25' 43.18" N 97º 45' 18.38" W

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. Prior to the installation of the flow meter, the camp's water usage was calculated each time the water tank was refilled by subtracting the amount in the tank before filling from the amount in the tank after refilling. Towards the end of the season a flow meter was installed at the camp in order to measure the volume of water used.

Unfortunately, the majority of the water log sheets were left at camp during the seasonal shut down. The daily logs for May 19th to June 15th and September 2nd to September 19th were available for this report. For the dates that fall in between, the daily amount of water used at camp was calculated by taking a daily average of the weekly values previously reported to the NWB.

In the writing of this report it was discovered that the daily amount allowable for the camp, which is 5 m³/day, was marginally exceeded during the week of August 4th – 10th as well as September 10th and 11th. An amendment request will be filed prior to the 2009 field season in order to increase the camp limit to 10 m³/day.

The daily amount of water used during the 2008 field season is summarized in table 12.1 below:

Table 12.2 Water Used During the 2008 Season of the Kiggavik Project

Month	Day	Total Water Used At Drills (m³)	Total Water Used at Camp (m³)	Total Water (m³)
May	19	0.0	1.9	**1.9**
	20	0.0	0.9	**0.9**
	21	0.0	0.9	**0.9**
	22	0.0	0.9	**0.9**
	23	0.0	0.9	**0.9**
	24	0.0	1.9	**1.9**
	25	0.0	1.4	**1.4**
	26	0.0	1.4	**1.4**
	27	0.0	1.4	**1.4**
	28	0.0	1.4	**1.4**
	29	0.0	1.4	**1.4**
	30	0.0	2.4	**2.4**
	31	0.0	1.4	**1.4**
June	1	0.0	1.5	**1.5**
	2	0.0	1.6	**1.6**
	3	0.0	1.3	**1.3**
	4	38.2	2.8	**41.0**
	5	38.2	1.4	**39.6**
	6	38.2	3.3	**41.5**
	7	54.1	2.8	**56.9**
	8	76.3	3.0	**79.3**
	9	76.3	2.3	**78.7**
	10	76.3	2.0	**78.4**
	11	76.3	2.8	**79.1**
	12	73.1	2.9	**76.0**
	13	76.3	2.0	**78.4**
	14	76.3	1.6	**77.9**
	15	114.5	1.6	**116.0**
	16	114.5	2.1	**116.6**
	17	114.5	2.1	**116.6**

	18	114.5	2.1	**116.6**
	19	111.3	2.1	**113.4**
	20	114.5	2.1	**116.6**
	21	114.5	2.1	**116.6**
	22	93.8	2.1	**95.9**
	23	89.0	3.1	**92.1**
	24	76.3	3.1	**79.4**
	25	76.3	3.1	**79.4**
	26	38.2	3.1	**41.3**
	27	89.0	3.1	**92.1**
	28	114.5	3.1	**117.6**
	29	114.5	3.1	**117.6**
	30	114.5	3.1	**117.6**
July	1	114.5	3.1	**117.6**
	2	114.5	3.1	**117.6**
	3	104.9	3.1	**108.0**
	4	85.9	3.1	**89.0**
	5	114.5	3.1	**117.6**
	6	98.6	3.1	**101.7**
	7	57.2	3.6	**60.8**
	8	38.2	3.6	**41.8**
	9	38.2	3.6	**41.8**
	10	38.2	3.6	**41.8**
	11	38.2	3.6	**41.8**
	12	54.9	3.6	**58.5**
	13	76.3	3.6	**79.9**
	14	63.6	3.7	**67.3**
	15	77.9	3.7	**81.6**
	16	19.1	3.7	**22.8**
	17	0.0	3.7	**3.7**
	18	19.1	3.7	**22.8**
	19	38.2	3.7	**41.9**
	20	38.2	3.7	**41.9**
	21	30.2	3.6	**33.8**
	22	0.0	3.6	**3.6**
	23	38.2	3.6	**41.8**
	24	38.2	3.6	**41.8**
	25	38.2	3.6	**41.8**
	26	38.2	3.6	**41.8**
	27	38.2	3.6	**41.8**
	28	38.2	2.7	**40.9**
	29	38.2	2.7	**40.9**
	30	76.3	2.7	**79.0**
	31	76.3	2.7	**79.0**
August	1	76.3	2.7	**79.0**
	2	114.5	2.7	**117.2**
	3	114.5	2.7	**117.2**
	4	114.5	5.3	**119.8**
	5	114.5	5.3	**119.8**
	6	114.5	5.3	**119.8**
	7	95.4	5.3	**100.7**
	8	82.7	5.3	**88.0**
	9	114.5	5.3	**119.8**

	10	76.3	5.3	**81.6**
	11	76.3	4.3	**80.6**
	12	76.3	4.3	**80.6**
	13	76.3	4.3	**80.6**
	14	76.3	4.3	**80.6**
	15	76.3	4.3	**80.6**
	16	76.3	4.3	**80.6**
	17	76.3	4.3	**80.6**
	18	57.2	1.3	**58.5**
	19	44.5	1.3	**45.8**
	20	95.4	1.3	**96.7**
	21	114.5	1.3	**115.8**
	22	114.5	1.3	**115.8**
	23	114.5	1.3	**115.8**
	24	95.4	1.3	**96.7**
	25	114.5	2.5	**117.0**
	26	114.5	2.5	**117.0**
	27	114.5	2.5	**117.0**
	28	114.5	2.5	**117.0**
	29	114.5	2.5	**117.0**
	30	114.5	2.5	**117.0**
	31	114.5	2.5	**117.0**
September	1	57.2	3.8	**61.0**
	2	41.3	3.4	**44.7**
	3	76.3	2.6	**78.9**
	4	114.5	3.6	**118.0**
	5	114.5	4.2	**118.7**
	6	114.5	2.6	**117.1**
	7	114.5	3.7	**118.1**
	8	76.3	4.2	**80.5**
	9	89.0	4.3	**93.4**
	10	101.0	5.4	**106.3**
	11	51.7	5.4	**57.0**
	12	38.2	3.4	**41.6**
	13	38.2	4.2	**42.4**
	14	38.2	2.3	**40.5**
	15	38.2	2.4	**40.6**
	16	38.2	0.0	**38.2**
	17	0.0	4.0	**4.0**
	18	0.0	0.0	**1.2**
	19	0.0	2.3	**1.2**
	20	0.0	0.0	**0.0**
	21	0.0	0.0	**0.0**

It is noted that 18 exceedences of the allowable water usage limit occurred prior to the approved amendment request to increase the allowable usage limits for drilling from 100 m³/day to 295 m³/day, which as noted above was granted August 5, 2008.

The exceedences are believed to be as a result of an increase in demand for drilling waters. Additionally water meters were installed at the drills during the 2008 field season. These flow meters were easily plugged and gave erratic readings. Therefore, the volume of water used by the drills was calculated by multiplying the amount of time

each drill was running per day by the average flow recorded while flow meter was in proper working order. This average was 7GPM (0.03 m³/min).

The water pumps that Boart Longyear use at each drill are all the same and capable of pumping a maximum of 15 GPM (0.06 m³/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 m³. 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 295 m³/day.

Due to changes in staff it is unclear whether or not these exceedences were communicated to the NWB. However, AREVA has set out to make improvements to this monitoring program for its 2009 field season. All EH&S staff responsible for monitoring the project's water usage as well as any contractors responsible for the installation and maintence of the flow meters will receive awareness training prior to the commencement of their duties. It is planned that all flow meters used both at the drills and at camp will have integrators which will provide more accurate readings. The daily flow reading will also be included on the Daily Inspection Form which is required to be filled out on a daily basis by EH&S staff.

It has also been stressed to AREVA EH&S employees responsible for monitoring the project's water use the importance of reviewing data on a regular basis and reporting any exceedences in a timely manner.

13 REPORTABLE SPILLS

There were three reportable spills that occurred at the Project during 2008. These incidents and the actions taken to remediate and prevent future occurrences are summarized in this section.

July 6 Unplanned Release of Drilling Fluid

On July 6, 2008 there was an unplanned release of drilling fluid from the operating diamond drill at AND-08-03. Drilling was suspended. As per the Spill Contingency Plan, the incident was reported on July 7, an interim report providing the information then available was submitted to the regulatory agencies on July 12 and the 30-day follow-up report was submitted on August 8.

The incident occurred when drill return water that was pooling near the active drill site entered the northwest part of Andrew Lake. The water had a strong reddish tinge due to the presence of extremely fine hematitic (iron mineral) clay in suspension. Upon entering the waterbody, the suspended hematite-clay particles began to settle, but the water along the shore retained a somewhat murky-red appearance for several days. Andrew Lake is a shallow water body, with a mean depth of approximately 20 cm. The wetland area affected by the reddish inflow is separated from the main water body by a sandbar.

The immediate cause of the incident appears to be over-saturation of the ground, which may have been the result of a number of factors, including an increase in the amount of reaming (i.e., making the hole wide enough to get the drill rods back down), which essentially limits the amount of water used in drilling and results in the water returning through the collar. This may have allowed more water to enter the above-surface system. A second possible reason is the presence of ice in the ground, in that the ground may have been more frozen within the last 30 - 40 m towards the lake, facilitating a quick flow once that “barrier” was breached. A third possibility may be simply that at that particular point, the soil reached its saturation point. In addition to drill water, during that time the weather was rainy, foggy and cool.

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

In the wetland area on the edge of Andrew Lake, a reddish tint in the water was visible for several days, slightly elevated turbidity and TSS results were measured, and concentrations of aluminum, copper, lead, iron, silver, and radium in the water at the shoreline temporarily exceeded SSWQO for protection of aquatic life. No significant impact occurred in Andrew Lake, beyond the wetland at the edge of the lake.

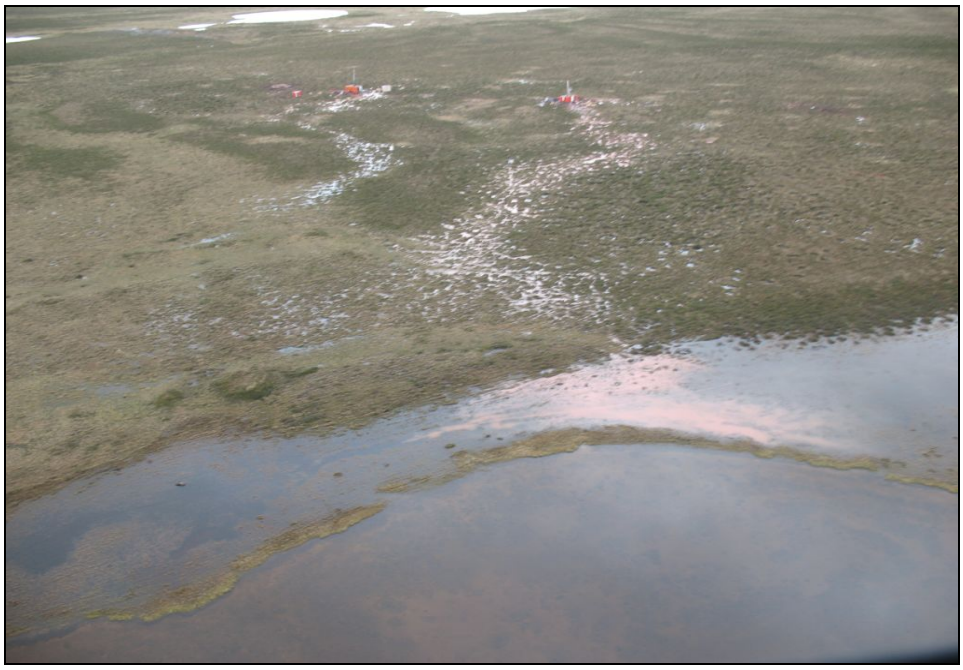
A series of measures to prevent future reoccurrence have been implemented. Drilling practice has been modified as follows:

- A collection pan/casing box is placed around the casing under the drill,
- The return water is collected in the pan and pumped rather than being allowed to flow directly from the casing,
- Non-radioactive cuttings are pumped to a designated low-lying area,
- A manifold system is installed in order to better manage the water supply, with the objective of routing the supply water (fresh water) back to the lake and reducing the amount of fresh water pooling around the drill site,
- The separator set-up has not been modified and continues to be used to collect radioactive cuttings within the mineralized zones.

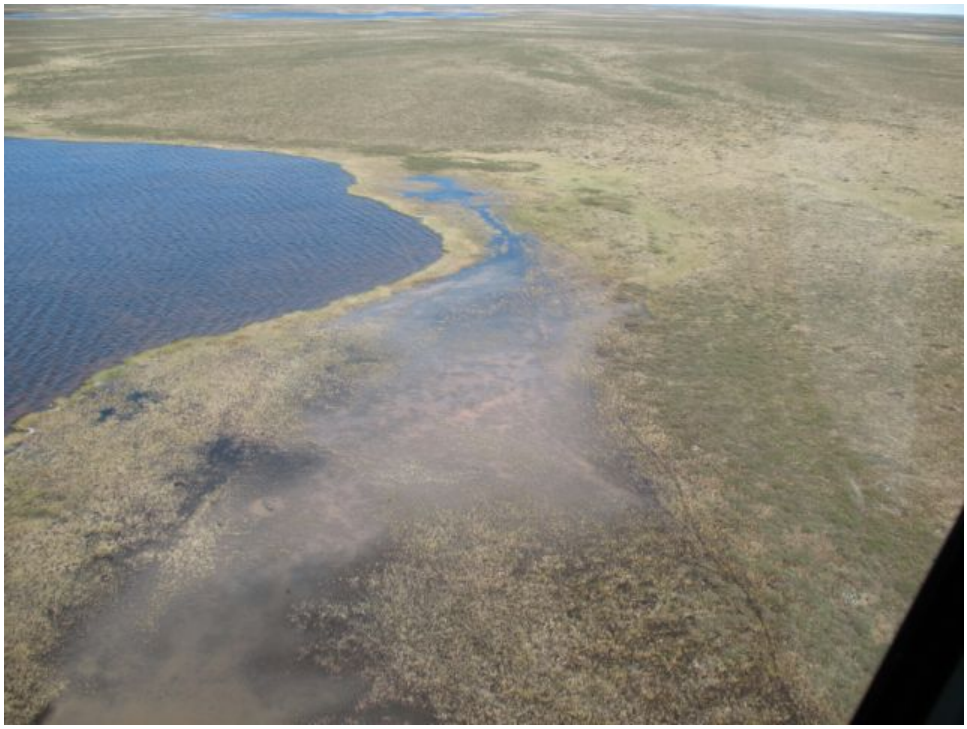
In addition, when a low-lying depression for non-radioactive cuttings deposition is not available, drill cuttings are now deposited within bermed areas. The bermed area is constructed of sandbags and additional poly layers (where applicable) to stop and/or slow the spread of drill cuttings. Wherever possible, non-radioactive drill cuttings from several drill holes will be deposited at the same bermed site to reduce the project footprint. When determining the disposal site of non-radioactive drill cuttings, AREVA considers a number of options, including the use of previous disposal sites. Topographic data is used to determine the slopes of the drill and deposit sites and to help determine the appropriate location for the cuttings deposit site.

Finally, the drill site, cutting deposit site and water release site are inspected daily to observe cutting movements. This helps to ensure that containment measures are implemented proactively at each site 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 cuttings drainage from all drill rigs for the remainder of the 2008 season.



July 6, 2008 – Looking North West



July 9, 2008 – Looking West

July 13 Radioactive Cuttings at a Deposition Site

During night shift on July 13, 2008, approximately 2 m³ of radioactive drill cuttings from the operating drill on hole BONG-40 was discharged into the non-mineralized cuttings deposition area. The contaminated area covered approximately 5 m^2 of tundra. The spill was discovered on July 14 during a routine EHS visit and reported to the regulatory agencies within 24 hours. The 30-day follow-up spill report was submitted on August 13.

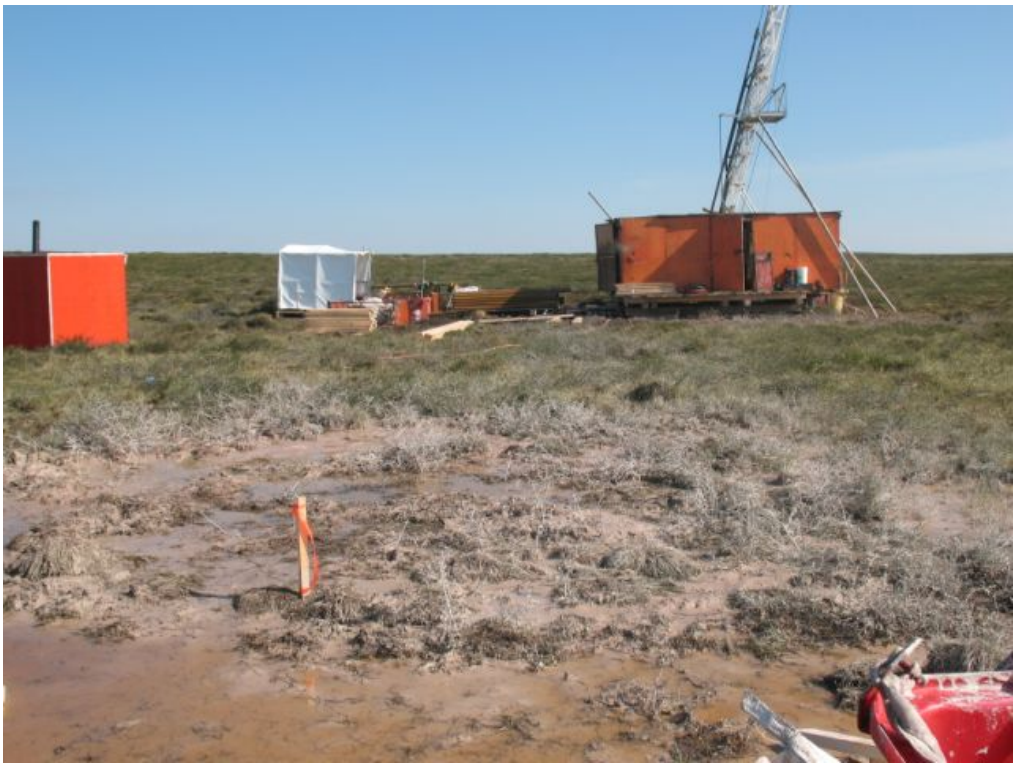
The spill was the result of failure to comply with standard AREVA procedures, which require the collection of cuttings in bags when drilling within mineralized zones. The drill crew had been instructed that cuttings were to be bagged; bagging had been performed on the day shifts prior to and following the night shift of July 13, 2008.

Corrective measures were taken as follows:

- A berm was constructed around the spill in order to contain the material and prevent surface drainage from entering the area.
- The cuttings were allowed to dry then shoveled into containment bags. This drying and collecting cycle continued until gamma survey indicated that the area was cleaned.
- The cuttings were transported to the radioactive storage area at the Kiggavik site.

As the spill was confined to a relatively small area of land, did not reach water, and was cleaned up within one week, the environmental impact of the incident is considered minor. Approximately 5 m^2 of vegetation was disturbed during construction of the containment berm and subsequent clean-up of the site. No wildlife was observed in the immediate area during the incident or the clean-up. The gamma survey of the area conducted on July 22 indicated that the cleaned site meets the criterion (<1 µSv/h at a height of 1 m) established by the Uranium Exploration Plan, Abandonment and Restoration Plan and by Project permits.

Preventative measures include regular review and reinforcement of the cuttings collection procedure with the drilling contractor through safety meetings and site inspections. The driller involved in this incident will not be permitted to work on AREVA sites in the future. Hole depth is monitored daily by AREVA staff to ensure that bagging of cuttings begins prior to intersecting the mineralized zone. All drill set-ups are now provided with a SPP-gamma radiation meter so that cuttings can be checked anytime for radioactivity. The cuttings deposition sites are inspected and a gamma radiation survey conducted, prior to, during and following deposition by EHS personnel.



Spill of radioactive cuttings Monday July 15, 2008

Contained site of removed radioactive cuttings July 22, 2008

August 4, 2008 Mineralized Drill Cuttings

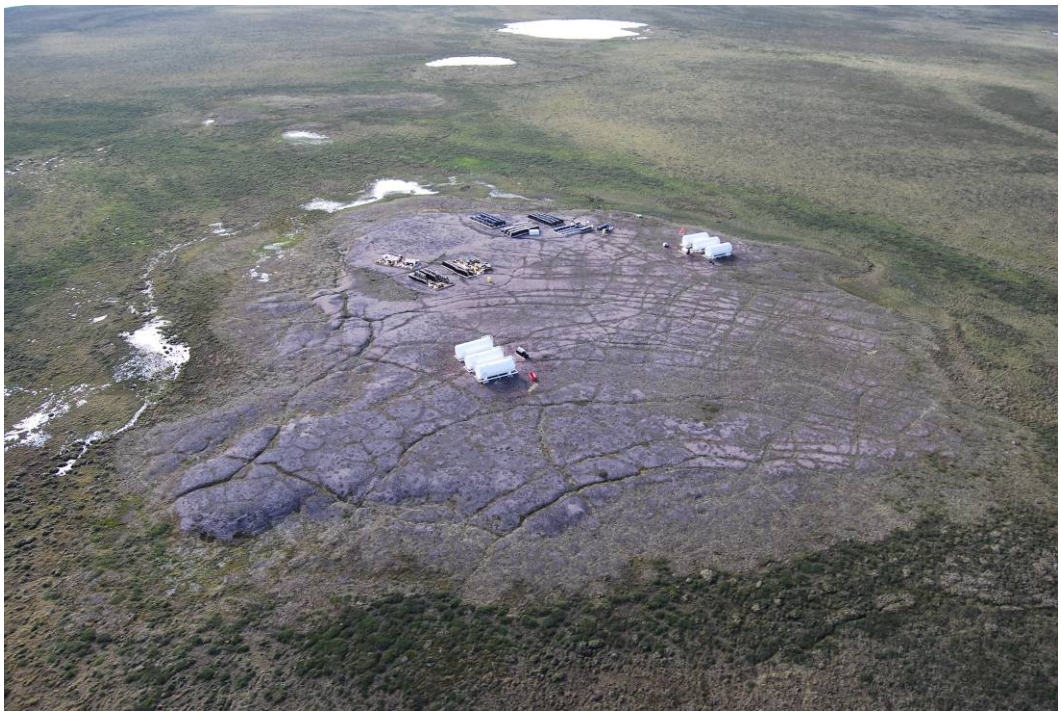
On August 4 a spill of mineralized drill cuttings occurred during drilling of hole AND-08-04. The spill occurred while the helicopter was lifting a bag of mineralized cuttings to transport it to the radioactive storage area. As the lift began, a failure in the bag resulted in approximately 0.25 m^3 of cuttings spilled onto the tundra, covering an approximately 2 m^2 area.

The spill did not reach water and was contained and cleaned up immediately following the incident. The Uranium Exploration Plan, Abandonment and Restoration plan and approvals for the Kiggavik Project states that drill sites must be cleaned to the extent that gamma dose at a height of 1m is less than 1 μSv/h. Gamma surveys conducted after the incident indicated that the site meets this criterion.

The spill was caused by the improper use of cuttings bags. Additional measures to contain cuttings upon bag failure, such as double bagging or the use of secondary containment for transport, are being investigated and will be implemented prior to the start of the 2009 field season.

August 4 Mineralized Cuttings Spill

14 ADDITIONAL PHOTOS



Fuel Cache at Esker

Slinging a Geotechnical Shack

Fuel Drums in Secondary Containment

Core Logging Shacks and Core Storage Area

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