Spill Contingency Plan

AREVA Resources Canada Inc.

Exploration Department – Kiggavik Project

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HISTORY OF REVISIONS

Version	Revision	Date	Details of Revision
1	0	March 2007	Original submission
2	0	October 2007	Update to reflect changes in field activities/capabilities and goals of continual improvement
2	1	May 2008	Updated to reflect comments and conditions received by the Nunavut Water Board associated with the issuance of water licence no. 2BE-KIG0812
3	0	January 2009	Update to reflect changes in field activities/capabilities and goals of continual improvement
4	0	March 2009	Updated to reflect changes in field activities/capabilities and goals of continual improvement
5	0	January 2010	Updated to reflect changes in field activities/capabilities and goals of continual improvement
6	0	May 2011	Updated to reflect personnel titles, grammatical changes, reorganized information and clarified responsibilities. Made consistent with other Plans and Manual and updated to reflect changes in fuel storage and equipment.
7		May 2012	Updated to reflect personnel changes, grammatical changes, reorganized information and clarified responsibilities. Made consistent with other Plans.
7	1	May 2013	Updated to reflect personnel changes, and correction of grammatical errors.
7	2	May 2014	Updated infrastructure list, surface land administration, and proximity to water mark

Original Copy of this Manual:

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June 2, 2014

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The original hard copy of this approval page has been signed and is located at the AREVA Resources Canada Inc. Exploration central records.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

1 INTRODUCTION

This Spill Contingency Plan (Plan) applies to the Kiggavik Project located approximately 80 km west of Baker Lake, Nunavut and all points located between the site and Baker Lake. In addition, the Plan is made available at the Kiggavik Site, AREVA Resources Canada Inc (ARC) Baker Lake Office as well as ARC's exploration office.

1.1 PURPOSE AND SCOPE

The primary objective of the Plan is to help prevent or reduce the potential of spills of pollutants and prevent, reduce or eliminate any adverse effects that may result. As such, the Plan provides information and guidance on actions important for the prevention of spills and procedures to detect and respond to spills if they occur.

The Plan will evoke a risk management approach when considering potential spill events. Effective implementation of spill prevention planning is also an important proactive component for minimizing the risks posed by spills. By implementing effective spill prevention, the risk of spills can be reduced in magnitude and perhaps avoided.

Furthermore, the purpose of this plan is to identify safe, effective and efficient response methods to spills in the vicinity of ARC's operations in Nunavut. This Plan is intended to satisfy Nunavut R-068-93 *Spill Contingency Planning and Reporting Regulations*. In said regulations, "spill" is defined as "…a discharge of a contaminant in contravention of the Act or regulations made under the Act or a permit or license issued under the Act or regulations made under the Act." ARC's working definition of a spill is defined as any accidental discharge to the environment of a hazardous material.

1.2 REVISION TO PLAN

The Plan is reviewed on an annual basis and is updated as required to keep the information current and consistent with regulatory and procedural changes. A History of Revisions can be found at the front of this document.

1.3 RESPONSIBILITIES

The District Geologist, Nunavut is responsible to ensure that this plan is implemented. Implementation may be completed by:

- Project Geologist
- Facility Supervisor
- Safety Health Environment and Quality (SHEQ) Supervisor
- Or designates

The Vice President, Exploration is ultimately responsible for any activity being carried out by Kiggavik Project personnel.

2 SITE INFORMATION

2.1 LOCATION

The Kiggavik Project includes two sites, collectively composed of 37 mineral leases covering 45,638.5 acres located in the Kivalliq Region of Nunavut:

- The Kiggavik site is located at approximately 64°26'N and 97°37'W. The property consists of 15 mineral leases totaling 3,753 hectares (ha) (officially 9,267 acres).

- The Sissons site is situated roughly 17 km south-west of Kiggavik at approximately 64°20'N and 97°52'W. The Sissons site consists of 22 mineral leases totaling 14,730 ha (officially 36,372 acres).

The surface rights for 31 mineral leases on Inuit Owned Land (IOL) are administered by the Kivalliq Inuit Association (KIA) while the remaining six mineral leases remain on Crown land. The Crown land covers 3,794 acres of the Jane prospect of the south-west portion of the Project with surface rights administered by Aboriginal Affairs and Northern Development Canada (AANDC).

There is an existing temporary exploration camp at the Kiggavik site which can accommodate approximately 60 people. The Kiggavik camp is located at the following coordinates:

- UTM 14W 564530 E 7146879 N
    - Latitude: 64° 26' 29'' N
    - Longitude: 97° 39' 34'' W

In 2007, the temporary camp accommodated approximately 32 persons, was expanded to accommodate approximately 50 persons in 2008 and 60 in 2009. Further camp expansions and personnel requirements will be discussed in permit applications for the field season. Detailed site maps showing topography can be found in Appendix III. The camp currently consists of the following:

- One storage shed/back-up generator/shop
- One generator building (housing current generator)
- Helicopter storage/shop
- Three helicopter pads

- One washroom/dry building constructed with separate male/female facilities
- One kitchen with storage
- One wooden office
- 15 wooden sleeping units (one is a first aid shack)
- Wooden boardwalk throughout camp
- Five prospector tents (core logging tents)
- Three weather havens (2 for sleeping units, 1 for office)
- One mechanical services room
- Grey water collection area
- Industrial incinerator
- Core storage
- Radioactive materials storage compound
- Eight bulk fuel storage tanks (50,000 L capacity per tank)

There is a fuel esker containing one shed and eight bulk fuel tanks. Three bulk tanks are for Jet-B fuel and five are for diesel fuel, and additional fuel drums within secondary containment may also be stored at the esker.

Currently there is one shed and core storage located at the Andrew Lake drill site, as well as core storage at the Kiggavik site and Pointer Lake.

2.2 PETROLEUM AND CHEMICAL PRODUCT STORAGE AND INVENTORY

The table below provides a list of products used, along with the maximum amount stored and type of storage. A specific inventory of all petroleum and chemical products used during the field operations is recorded at site.

Table 2-1 Petroleum and Chemical Storage

Chemical/Material	Amount	Storage Type
Diesel Fuel	250,000 L	EnviroTanks
Jet B Fuel	150,000 L	EnviroTanks
Gasoline	1,025 L	Secondary Containment
Generator Oil	20 x 20L (400 L)	Secondary Containment
Hydraulic Oil	20 x 20L (400 L)	Secondary Containment
Engine Oil	20 x 20L (400 L)	Secondary Containment
Propane	75 x 100 lb (7500 lb)	Secondary Containment
Grease (for grease gun)	5 cases x 12 tubes (60 tubes)	Secondary Containment
Salt	50,000 lbs	Secondary Containment
Cement	15,000 lbs	Secondary Containment

2.2.1 Fuel Storage

To accommodate increased fuel demand and reduce the potential of fuel spills, bulk fuel storage tanks were installed. The eight double-walled steel EnviroTanks, each with a capacity of 50,000 L were installed at the esker located on the Kiggavik lease, west of the Kiggavik camp. Three tanks on the north side of the esker are for the storage of Jet-B fuel, and five tanks on the south side of the esker are for the storage of diesel fuel as shown in Figure 2.1. The coordinates for the fuel cache are 14W 561512 7145240.

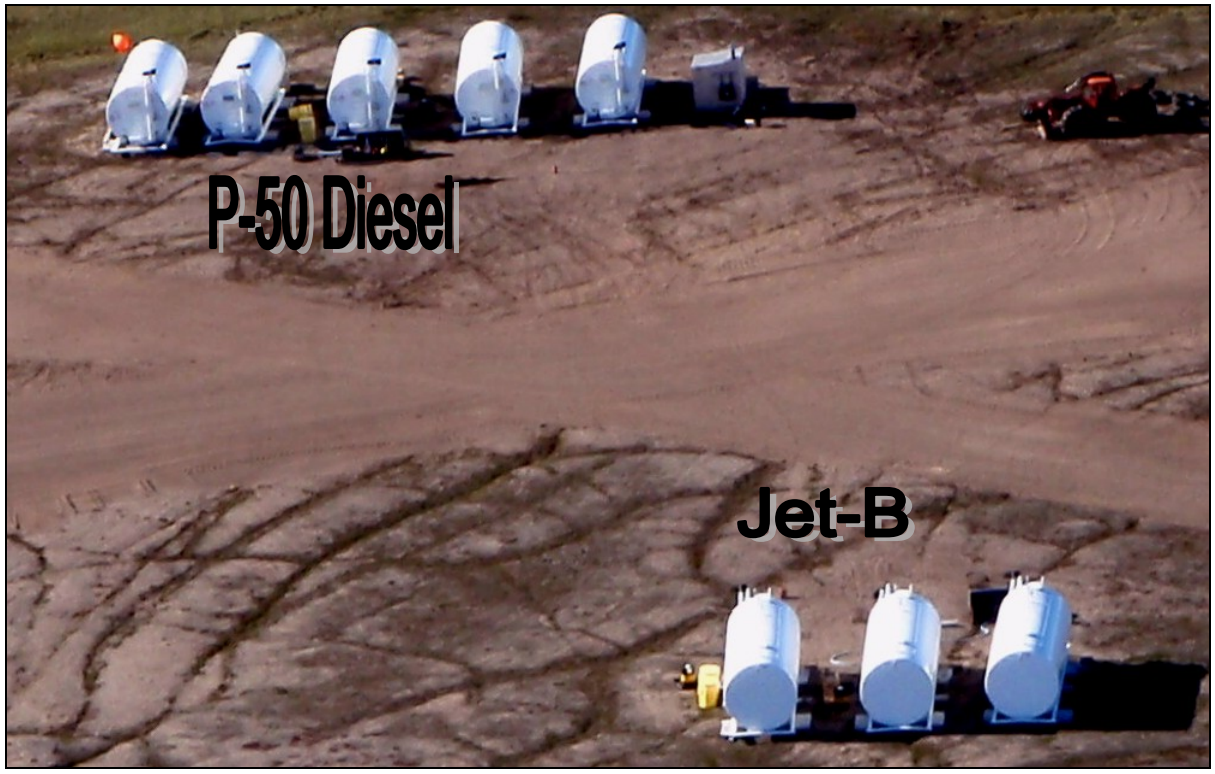


Figure 2.1 Kiggavik Fuel Cache

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 to AREVA, November 20, 2007).

The design basis, operation and maintenance requirements for all petroleum storage and handling on site are based on the CCME Environmental Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products, 2003 and in compliance with the *Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations*, under the *Canadian Environmental Protection Act, 1999* (CEPA 1999). The fuel storage system at the Kiggavik site has been registered with Environment Canada (EC) through an online database, the Federal Identification Registry for Storage Tank Systems (FIRSTS).

Double walled steel EnviroTanks and associated pump meet the requirements of secondary containment within their own structure. For further secondary containment, rubberized berms (Arctic berms) or other suitable lined structures are utilized during fuel transfers to minimize the potential for fuel spills where possible. Absorbent padding is used during fueling to control dripping fuel. Further protection against spills is provided by high level alarms, overfill preventers, and catch basins around each fill pipe.

The fuel is transported to the Kiggavik site fuel cache during the winter via ground transport using snow cats, foremosts or other tundra trucks. The fuel is transported using 10,000 L fuel bladders containing Jet-B or P-50 diesel fuel, and is transferred from the fuel bladders to the EnviroTanks located at the fuel cache. Unleaded gasoline and propane cylinders may be brought to the Kiggavik site during the winter haul or by aircraft from Baker Lake.

Diesel fuel is transferred from the EnviroTanks double-walled fuel tanks for use in camp and/or drill sites. There is also a fuel cache located at the Kiggavik Camp (14W 564464, 7146782). This fuel cache includes double walled fuel tanks used to supply the generators. All fuel containers are labelled, identifying the contents and the name “AREVA”. Should fuel drums be used, the 205 L drums are stored within secondary containment. Secondary containment is used for all liquid fuels, and lubricants, and drill additives are stored in sea containers to avoid adverse weather conditions. All secondary containment systems being used are capable of containing 110% of the total aggregate storage capacity. The following photo shows secondary containment used for the storage of petroleum products and other hazardous materials and hazardous waste products. The Insta-Berm made of industrial-strength fabrics, is a durable and easy-to-use environmental safeguard.

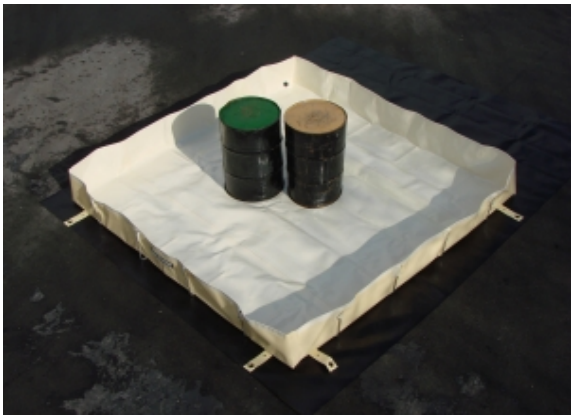


Figure 2.2 Insta-berm

Absorbent matting and/or drip pans must be placed under all areas where fuel leaks are likely to occur (e.g., fuel line hose connections, fuelling stations, generators, water pump), and these areas must be inspected on a daily basis where possible.

Waste oil, waste filters, and cleaned-up spill materials are contained in ring top barrels within secondary containment. Degreasing agents used for maintenance of equipment parts and grease are also contained in ring top barrels within secondary containment. These hazardous wastes are stored in the storage shed during the season, and later transferred to a sea container until they are removed from site during the winter haul. The materials are then disposed of at an approved facility.

2.3 PETROLEUM PRODUCT TRANSFER

To minimize fuel spillage associated with dispensing of product, all dispensing and tank filling operations are attended and involve the use of manually controlled nozzles equipped with automatic shut off mechanisms. Smoking, sparks or open flames are prohibited in fuel storage and fuelling areas at all times. Petroleum transfer operations will be carried out by trained personnel.

2.4 LOCATION AND CONTENT OF SPILL KITS

Spill kits can vary in size and content depending on supplier and manufacturer however to remain consistent and provide adequate spill supplies, ARC has chosen two types of spill kits which are considered to be standard. The kits generally include the following contents, or similar products:

1. Universal Emergency Response Kit 30Gallon/135L
    - Sorbant capacity of 96L
    - 4 socks (3” X 10’)
    - 75 pads
    - 1 drain cover
    - 1 caution tape
    - 2 pairs nitrile gloves
    - 2 pairs safety goggles
    - 2 protective coveralls
    - 5 disposable bags
    - 1 instruction book
2. Universal Overpack Kits 95 US Gallon Drums
    - Sorbant capacity of 275L
    - 4 socks (3” x 10’)
    - 5 socks (3” x 4’)

- 50 pads
- 5 pillows
- 1 roll
- 1 drain cover
- 1 caution tape
- 2 pairs nitrile gloves
- 2 pairs safety goggles
- 2 protective coveralls
- 10 disposable bags
- 1 instruction book

A variety of spill kits are available, other kits than those listed above may be purchased for a variety of reasons (availability, intended use, etc). All spill kits contain an itemized list of its contents and an inventory is conducted at the beginning of each field season and immediately following use to identify and replenish missing items.

Figure 2.3 Example of Spill Kits available at Project site

In addition, the following spill response material is also readily available in the generator building for spill response:

- Plugging compound
- Bulk supplies of oil absorbent pads and socks
- Aluminium or brass shovels or tools
- Bonding cables

Due to the volume of fuel being stored in the fuel tank storage system and the remote nature of the sites, at least one of the Bulk Storage Site Spill Kits 95 US Gallon Spill Kits will be present for each 100,000L of fuel being stored.

In addition:

- At least one empty fuel drum and a pump will be located at each fuel cache and tank storage system in the event of damaged or leaking drums.
- Fire extinguishers of the proper type, size and number will be stationed in each building, at the fuel tank storage system and near each site where equipment is normally serviced and anywhere else it is deemed advisable.
- A supply of sealable 20-litre steel pails or 205-litre drums will be reserved for the collection and storage of used absorbent materials. Steel drums, clearly labelled for the storage of spent absorbent materials will be located at camp and at each fuel storage tank location as well as at each cache of drummed fuel or lubricants.

2.5 ORIENTATION

All personnel at camp (ARC employees, contractors, and long term visitors) are given formal orientation upon arrival at camp. The Spill Contingency Plan is reviewed during orientation which and includes the location of the Material Safety Data Sheets, location of spill kits and additional supplies or tools. Training for spill contingency consists of alerting all personnel to be watchful for any leaks or spills and where these are most likely to occur, instruction in the use of the equipment and materials, introduction to the protocol of the chain of command and the legal requirement to report certain spills, and how to collect, store and dispose of spilled product.

3 POTENTIAL HAZARDS, MITIGATION AND PREVENTATIVE MEASURES

3.1 POTENTIAL HAZARDS

Potential sources for spills have been identified as follows:

- Stored drums of P-50 diesel, gasoline, waste fuel, and waste oil may leak or rupture
- Overfilling of tank(s) at the fuel tank storage system of Jet-B or P-50 diesel
- Transfer of fuel between EnviroTanks, drums and fuel bladders
- Transportation of fuel during winter haul
- Fire at the fuel tank storage system
- Collision at the fuel tank storage system
- Vandalism of fuel tank storage system
- Propane cylinders: propane leaks may occur at the valves
- Refuelling equipment such as diamond drill equipment, helicopters, camp generator, stoves, incinerator, wheeled vehicles, snowmobiles and pumps. Incidents involving leaking or dripping fuels and oils may occur due to malfunctions, impact damage, lack of regular maintenance, improper storage, or faulty operation
- Damaged lead/acid batteries causing spills of acid
- Improper drilling or transport of cuttings bags causing a spill of radiologically contaminated drill cuttings and drill return water.

3.2 MITIGATION AND PREVENTATIVE MEASURES

The Environmental Code of Practice discusses how to conduct activities so as to minimize the risk of spills. In addition, the following measures will further minimize the potential for spills during fuel handling, transfer and storage:

- Fuel transfer hoses with cam lock mechanisms to be used when transferring bulk fuel deliveries into the bulk storage tanks.
- Carefully monitor fuel content in the receiving vessel during transfer. Always have additional absorbent pads on hand while transferring fuel.
- Clean up drips and minor spills immediately.
- Regularly inspect drums, tanks and hoses for leaks or potential to leak and for proper storage.
- Create fuel caches that are located at least 31 m from the normal high-water mark of any water body.
- Inventory and reconciliation procedures developed to ensure tanks are not overtopped and to ensure that tank leakage is not occurring.
- Overfill protection on tanks include visual and audible alarms; catch basins around fill pipe; additional secondary containment at transfer locations; corrosion protection.

- Train personnel, especially those who will be operators, in proper fuel handling and spill response procedures. This training is to include a “mock” spill, review of spill kit contents and their use and reporting.

3.2.1 Spill of Fuel from Metal Drums on Tundra

Should drums be used, the metal drums are stored in such a manner that they are not susceptible to tipping over, rolling or otherwise being unstable. Care is exercised so that nothing can cause damage to metal fuel drums by falling or rolling onto or into them. The use of a ramp or a cushion (e.g. automotive tire) while unloading metal fuel drums from aircrafts lessens the possibility of damage.

3.2.2 Spill of Fuel from Fuel Tank Storage System

To prevent spillage during the filling of the fuel tank storage system the following items will be in place:

- Visible and audible high level alarm
- Automatic high liquid shut off device
- Manual dips are conducted in conjunction with the inventory and reconciliation procedures by fuel delivery personnel and site personnel. Site personnel log all deliveries and fuel dips to coordinate the filling of the Envirotanks with the contractor delivery personnel.
- All tanks are double-walled
- Spill/Overfill protection – catch basins around the fill pipe will collect any liquid spilled during connecting or disconnecting of the fill hose
- Corrosion Protection – provided by painting of the tanks
- Where drums are used, the drums will be placed in appropriated lined structures for fuel transfer from tank to drum

Personnel conducting fuel transfers are to be adequately trained in the procedure and spill contingency. Most releases at a fuel tank storage system are due to piping and line failure. This system of tanks are independent of each other and do not require any piping. Spills or leaks are known to occur due to improper management of tanks prior to installation. All tanks located at the Kiggavik Sisson site have been inspected by a qualified person prior to filling and again prior to initial use.

3.2.3 Winter Fuel Hauling

Refer to Winter Road Plan for further details regarding transport, safety and training requirements used to minimize hazards generated during the winter haul.

3.2.4 Leak of Liquid Fuel from Distribution Lines

Stability of all storage tanks and distribution assemblies is of utmost importance to ensure that the risk of damage is minimized. All stands for reservoir tanks and fuel tanks are constructed to strength

standards beyond those required. Distribution lines from reservoir tanks and fuel tanks are fitted with appropriate shut-off valves immediately downstream from the tank. All valves are closed when the tank is not in use. All associated distribution lines are installed in such a way to prevent being chafed in the wind, chewed on by animals or tripped on by humans. This is done by securing it to rigid structures, encasing it in armour or any other effective manner. These measures apply broadly to oil, jet fuel, gasoline, and propane set-ups.

3.2.5 Spill of Liquid Fuel into Lake Water

Fuel must be at a minimum of 31 m from ordinary high water mark on stable and level ground unless approved by regulatory agencies. Refuelling must not take place below the high water mark of any water body under any circumstance.

3.2.6 Release of Propane

Propane is stored in certified containers and is inspected and monitored on a regular basis for any signs of deterioration or corrosion. Containers are secured and fastened in an upright position to ensure there is no risk of damage to the regulator in the event of a fall.

Only qualified gas fitters will connect or disconnect piping to any bulk propane storage system. In the event that larger propane tanks are introduced on site, only qualified gas fitters will connect or disconnect the piping.

3.2.7 Spill of Battery Acid

Acquisition of non-spillable batteries reduces the risk of a spill of this type. These batteries can be shipped by air as they are exempt from UN2800 classification. All batteries are protected from damage by fastening them into the space designed for them within various types of equipment and stored safely when not in use.

3.2.8 Fire at the Fuel Tank Storage System

Grounding cables are used for all transfers of bulk gasoline or jet fuel to minimize to potential of a static discharge and potential fire.

3.2.9 Crash at Fuel Storage Tanks

The following measures will be followed to minimize the risk of a crash at the fuel storage areas:

- Clear communication between aircraft (fixed wing and helicopters)
- Use of wind socks

- In the event that the use of vehicles is introduced in the operation, crash protection will be put in place

3.2.10 Spill of Radiologically Contaminated Drill Cuttings

During drilling activities, drill mud solids or cuttings in non-mineralized zones are deposited on the ground in low-lying areas. When mineralized core is intercepted, all drill mud and cuttings are collected in appropriate containers and categorized as radioactive through appropriate radiation measurements in accordance with work instructions. A gamma survey is also conducted before and after drilling activities at each hole to ensure there is no radiologically contaminated material at the site.

3.2.11 Spill of Potentially Contaminated Drill Return Water

Return water from drilling activities, including general drainage from the drill footprint, are diverted into low-lying areas to keep these waters from directly entering lakes and streams. Low lying depressions where non-mineralized drill cuttings and drill return water are deposited are monitored while in use.

4 SPILL RESPONSE

4.1 RESPONSE TO A SPILL – CONTAINMENT AND CLEAN-UP

In the case of any spill or other environmental emergency, it is necessary to react in the most immediate, safe, and environmentally responsible manner. No spill or incident is so minor that it can be ignored.

The basic steps of the response plan are as follows:

Ensure the safety of all persons at all times

The safety of yourself and others is the most important consideration when responding to a spill. As such, all actions that you perform as part of your spill response must only be undertaken if they can be undertaken in a safe manner. If an action can not be undertaken in a safe manner or if you do not feel that you are adequately trained or equipped to respond to a spill, the only appropriate thing to do is to safely evacuate all personnel in the area to a safe area away from the spill. Once everyone is safe you will then need to request assistance from trained emergency responders with the appropriate resources to manage the spill safely and effectively.

KEY POINTS TO CONSIDER WHEN RESPONDING TO A SPILL

- *It is your responsibility to act safely, using appropriate personal protective equipment and work practice.*
- *It is your responsibility to respect the safety of others in the area.*
- *It is your responsibility to refuse to perform activities that you feel are unsafe.*
- *It is your responsibility to inform those involved or in the area if you believe that their actions, or proposed actions, are unsafe. This includes colleagues, first responders, contractors, members of the public, etc.*

Identify and find the spill substance and its source.

Individual discovering the spill shall:

- Move upwind of the material
- Call for help – contact the Facility Supervisor or designate
- Attempt to stop leak – only if safe to do so
- Attempt to contain spilled material – only if safe to do so

Facility Supervisor (or designate) shall:

- Designate responders and proceed to the scene of the spill.
- The responders (including the Facility Supervisor if necessary) shall attempt to stop further spillage and contain the spilled material if safe to do so.
- Ensure documentation of the spill is completed using the Spill Report Form, the NT-NU 24-Hour Spill Report Line to be contacted immediately (see Section 5 for Spill Reporting requirements) and the appropriate regulatory agencies have been contacted.

SHEQ Supervisor shall:

- Provide assistance and expertise in the response to a spill
- Once under control, shall interview the individual who discovered the spill. Noting name, time discovered, and details on how the spill occurred, any actions taken by the individual to stop the spill.
- Submit Spill Report required regulatory agencies within seven calendar days of the incident (see Section 5)
- Within 30 days ensure a written detailed report is prepared for submittal to required regulatory agencies (see Section 5).

Responders shall:

- Position themselves upwind of the spill.
- Determine what has been spilled.
- Consult the Material Safety Data Sheet (MSDS) for the product in order to determine the appropriate personal protective equipment and to understand the physical properties of what was spilled.
- If the spilled substance is flammable (Gasoline or Jet Fuel), eliminate all ignition sources and shut off machinery in the area.
- If safe to do so, take actions to ensure that the leak or spill has been stopped at the source (i.e.: shut off valves, reconnect hoses, etc.).
- Contain spill with appropriate material and equipment (i.e.: spill response kit, etc.). Refer to the MSDS if this is a controlled substance. Pump large spills into barrels or other suitable container as available. **Ensure that grounding or bonding cables are used for all flammable product transfers.**
- Control access to the spill area and keep all bystanders away. If necessary, barricade the spill area. Do not use flares unless you are certain the spilled material and its vapours are not flammable or explosive.
- If safe to do, keep spilled material out of waterways. Use aluminium/non-sparking shovels to dig trenches or make soil and sand barriers or utilize the placement of socks as barriers
- If a fuel or oil spill, place contaminated absorbent and associated materials into steel pails or drums for storage in a sea container prior to removal from site to an approved facility.
- If radioactive material, place material into appropriate container (i.e. cuttings bag or IP3 pail) to be stored in radioactive storage compound.
- If a spill has entered flowing water, take a water sample immediately upstream of the spill and downstream (e.g., 50 m, 150 m and 500 m from spill)

The following table demonstrates the spill supplies that may be utilized during the response to a spill on site (items not stored in spill kits and kit replacement items are stored in the generator building):

Table 4-1 Spill Response Supplies

Incident	Spill Supplies	Use
Wet Spill	Drums with removable lids that contain bailers	For manual removal of large liquid spills Empty drums
	Folded sweeps and white rolls	Skimming of gas or diesel from water body
	Socks, peat moss	Containment of wet spill on land
	Pads, rolls, bags of dry absorbent	Cleanup of wet spills
Punctured Drum	Overpack (plastic drum) Plug 'n Dyke	Either: 1. Place overpack overtop of leaking drum, lay overpack and drum on its side, then flip upright, or 2. Use Plug 'n Dyke or other plugging compounds to seal and stop leak
Dry Spill	Plastic sheet (roll), mallet, spikes, knife	Covering dry spills to protect from wind and rain

If necessary ask for help and wait for others with the appropriate training and/or equipment to arrive. Acting inappropriately can often be dangerous to you, to others, and to the environment.

Implement any necessary cleanup and/or remedial action in a safe manner; *this may be coordinated and or conducted by a third party consultant, if necessary.*

Report the spill *as per Section 5 of this Plan once it is safe to do so. Do not delay reporting as there are legal requirements in this regard.*

4.2 EXAMPLES OF SPILL SCENARIOS

4.2.1 Spill of Fuel from Metal Drums, 10,000 L Fuel Bladders, or Fuel Tanks on Tundra

A puncture or rupture of containers containing liquid fuels should initially be assessed for risk of ignition. Sources of ignition will be extinguished or isolated from the spill area if safe to do so. While using appropriate personal protective equipment as described in the MSDS, efforts should be undertaken to plug punctures with appropriate material from the spill kit (plugging compound or other improvised materials). Ruptures or holes should be high-centered to stop further spillage of fuel.

Absorbent materials should be used to absorb spilled fuel. A containment berm should be built using available materials such as soil, snow, absorbent socks, portable berms and/or tarps to contain a large spill.

Report the spill to the Facility and SHEQ Supervisor or designates immediately.

Remove the spilled products using absorbent material or soil, gravel or snow, placing all recovered spilled fuel and spent absorbents into appropriate containers (metal cans, pails or drums in good condition). Again, all fuel skimmed or wicked off of the ground is to be disposed of, in appropriate steel containers. All containers will be stored in a sea container until the material can be transported to an approved facility. High-centered ruptures will be used as a point of entry for manually-operated fuel transfer pump suction tubes, and remaining fuel is removed to a sound drum. Small amounts of contaminated soil, vegetation or gravel is removed and placed into sealable steel drums or pail and then disposed of appropriately. Large areas of spilled product on the ground are only to be remediated after consultation with ARC SHEQ personnel, regulators, etc. to avoid unnecessary damage to the environment.

Before commencing removal of soil or vegetation regulatory agencies will be contacted.

If spill of significant volume occurs at one of the fuel storage tanks or from a 10,000 L fuel bladder attempt to prevent the spread of the fuel if safe to do so and immediately contact ARC personnel to provide assistance with the spill response and clean-up.

4.2.2 Leak of Liquid Fuel from Distribution Lines

A detected leak from a distribution line assembly is to be initially assessed for risk of ignition. Sources of ignition are to be extinguished or isolated from the leak if safe to do so. If safe to do so, the shut-off valve on the tank and/or distribution line is to be turned off. Report the spill to the Facility and SHEQ Supervisors or designates immediately. Absorbent material is placed on the spilled fuel; if spilled onto snow or ice it is scooped up with an aluminium (non-sparking) shovel and stored in an appropriate sealable steel container. Ultimate disposal of these materials is only to be done after consultation with the SHEQ group and the appropriate regulatory agencies.

4.2.3 Spill of Liquid Fuel into Lake Water

If safe to do so, identify the source of the spill and prevent further release of fuel. Report the spill to the Facility and SHEQ Supervisor or designates immediately. Never attempt to contain or clean up a spill of gasoline on water, the risk of fire is simply too high. Confinement needs to occur as close to the release point as possible. The collection of liquid diesel or lubricating oil in lake water is attempted with floating booms of petroleum absorbent material, after vapours have dissipated. For larger spills of diesel or lubricating oil, raw liquid can often be removed by skimming while absorbent pads can be used to collect small spills.

Prior to attempting any clean up on water, a site specific safety plan needs to be developed that factors in water safety aspects.

All fuel skimmed or wicked off of the water surface as well as spent absorbent materials must be disposed of, in appropriate sealable steel containers. Ultimate disposal of these materials shall only be done after consultation with the SHEQ Group and the appropriate regulatory agencies.

4.2.4 Fire at Fuel Storage Tanks

In the event that a fire occurs at the fuel storage tanks, it is ARC's primary intentions to ensure the safety of the site personnel by allowing the fire to burn. Report the spill to the Facility and SHEQ Supervisors or designates immediately. Appropriate third party personnel will be contacted to ensure proper response and clean-up occurs.

4.2.5 Release of Propane

Report the spill to the Facility and SHEQ Supervisors or designates immediately.

- No attempt should be made to contain a propane release.
- Water spray can be used to knock down vapours and to reduce the risk of ignition.
- Small fires can be extinguished with dry chemical or CO_2.

Personnel shall withdraw from the area immediately upon identifying a leak and shall not return until the leak is stopped and all the vapours have diffused. Contact will be made with the proper agency for disposal instructions of a defective container.

4.2.6 Spill of Radiologically Contaminated Drill Cuttings

Report the spill to the Facility and SHEQ Supervisors or designates immediately. In the event of a spill of any amount of radioactive materials, the material will be collected into appropriate storage containers (i.e. cuttings bag or IP3 pail). The site will be remediated as much as practical, meeting/exceeding the minimum necessary abandonment criteria of less than 1 μSv/h above background at a height of 1 m.

4.2.7 Spill of Potentially Contaminated/Drill Return Water into a Water Body

Report the spill to the Facility and SHEQ Supervisors or designates immediately. In the event of a spill of any amount of potentially contaminated/drill return water into a water body, any activities which are the possible cause will cease until a review of the incident has taken place. Water and sediment samples will be taken and a gamma survey conducted on the effected area. Activities will continue once the District Geologist, Nunavut or designate is satisfied with the corrective measures taken.

5 SPILL REPORTING REQUIREMENTS

This Plan is initiated by the Project Geologist or designate, this includes initiating response, documenting associated activities and reporting the spill, within 24 hours to the NT-NU 24-HOUR SPILL REPORT LINE. All emergency contact phone numbers are located in Appendix I Contact List.

Based on Environment Canada's recommendation, all releases of harmful substances, regardless of quantity are immediately reportable where the release is:

- Near or into a water body;
- Near or into a designated sensitive environment or sensitive wildlife habitat;
- Poses an imminent threat to human health or safety;
- Poses an imminent threat to listed species at risk or its critical habitat.

Based on Nunavut's regulation R-068-93, Spill Contingency Planning and Reporting Regulations impose a legal requirement to report any spill of flammable liquids greater than 100 L in quantity. In addition, ANY quantity of spilled radioactive material is reportable. The following table (Schedule B) is a reference from regulation R-068-93 and indicates quantities of spilled product that requires reporting to the Department of Environment-Government of Nunavut (DoE-GN).

SCHEDULE B

(Section 9)

Item No.	*TDGA Class*	*Description of Contaminant*	*Amount Spoiled*
1.	1	Explosives	Any amount
2.	2.1	Compressed gas (flammable)	Any amount of gas from containers with a capacity greater than 100 l.
3.	2.2	Compressed gas (non-corrosive, non flammable)	Any amount of gas from containers with a capacity greater than 100 l.
4.	2.3	Compressed gas (toxic)	Any amount
5.	2.4	Compressed gas (corrosive)	Any amount
6.	3.1, 3.2, 3.3	Flammable liquid	100 l
7.	4.1	Flammable solid	25 kg
8.	4.2	Spontaneously combustible solids	25 kg
9.	4.3	Water reactant solids	25 kg
10.	5.1	Oxidizing substances	50 l or 50 kg
11.	5.2	Organic Peroxides	1 l or 1 kg
12.	6.1	Poisonous substances	5 l or 5 kg
13.	6.2	Infectious substances	Any amount
14.	7	Radioactive	Any amount
15.	8	Corrosive substances	5 l or 5 kg
16.	9.1 (in part)	Miscellaneous products or substances, excluding PCB mixtures	50 l or 50 kg
17.	9.2	Environmentally hazardous	1 l or 1 kg
18.	9.3	Dangerous wastes	5 l or 5 kg
19.	9.1 (in part)	PCB mixtures of 5 or more parts per million	0.5 l or 0.5 kg
20.	None	Other contaminants	100 l or 100 kg

If you are in doubt as to whether or not a spill is reportable, it is best to report the spill.

5.1 SPILL RESPONSE CONTACT LIST

The most recent *Exploration Emergency Contacts* list is available in drill rigs and field offices. It can be found in the Appendix I of this Plan.

5.2 REPORTING REQUIREMENTS

1. Collect Required Information

During spill response and once safe to do so the following information should be generated and reported to appropriate personnel and agencies (refer to and complete the Spill Report Form found in Appendix II):

- Date and time of spill
- Location of spill
- Direction the spill is moving
- Name of contact person at location of spill, and phone number where applicable
- Type and quantity of contaminant
- Cause of spill
- Whether spill is contained or stopped
- Description of the existing contaminant
- Action taken to contain, recover, clean-up and dispose of spilled material

2. Report

NOTE: It is the responsibility of the senior AREVA staff on site to report spills to regulatory agencies. Contractors are asked to report all spills to the Project Geologist or designates immediately.

Once safe to do so, immediately notify the following agencies/people of the spill (phone numbers can be found in the *Emergency Contacts List* of this Plan):

- Project Geologist or designate (if not on site during incident)
- District Geologist, Nunavut
- Facility Supervisor
- SHEQ Supervisor (if not on site during incident)
- NT-NU 24-Hour Spill Report Line (within 24hours) by phone; utilize the information collected for the spill report form
- Coordinator, SHEQ Exploration
- Vice President, Exploration
- Manager, Nunavut Affairs and Baker Lake office
- The Nunavut Water Board (NWB) and AANDC request verbal notification as soon as possible, however they will also be notified by the spill report line

- A copy of the written Spill Report Form must be submitted to the DoE-GN, AANDC (Water Resources Office and Manager of Field Operations), NWB and Environment Canada (EC) within seven calendar days of the incident
- A detailed report must be submitted to the DoE-GN, AANDC, NWB and EC within 30 days
- Submit a copy of the Spill Report Form and detailed report to Kivalliq Inuit Association (KIA).

6 TRAINING AND PRACTICE DRILLS

All employees and contractors are to be familiar with the spill response resources at hand which include this Plan, MSDS sheets, and training for spill response. Involvement of other employees or third parties may be required, from time to time. Annual refreshers are conducted to review the procedures within this plan. At least one practice drill per season is conducted to allow field-personnel the opportunity to practice emergency response skills using response equipment, and to familiarize themselves with potential product hazards.

7 REFERENCES

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

CCME Environmental Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products, 2003

Contingency Planning and Spill Reporting in Nunavut. Environmental Protection Service Department of Sustainable Development.

Fire Marshal, Tim Hinds with the Government of Nunavut-Community and Government Services via email (Trevor Carlson, AREVA) on November 20, 2007.

Guidelines for Spill Contingency Planning. Indian and Northern Affairs Canada (INAC). April 2007.

Environmental Code of Practice (ECOP)

Kiggavik Project Winter Road Plan

Nunavut *Environmental Protection Act. March, 2010*

Nunavut R-068-93. *Spill Contingency Planning and Reporting Regulations*. September, 2007.

Northwest Territories-Nunavut Spill Report Form. Available at: http://env.gov.nu.ca/sites/default/files/NT%20NU%20Spill%20Report%20Form.pdf

Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations, *Canadian Environmental Protection Act, 1999* (CEPA 1999)

APPENDICES

Appendix I Exploration Emergency Contacts

Available at:

Q:\Exploration\IMS\006_Contacts

EXPLORATION EMERGENCY CONTACTS

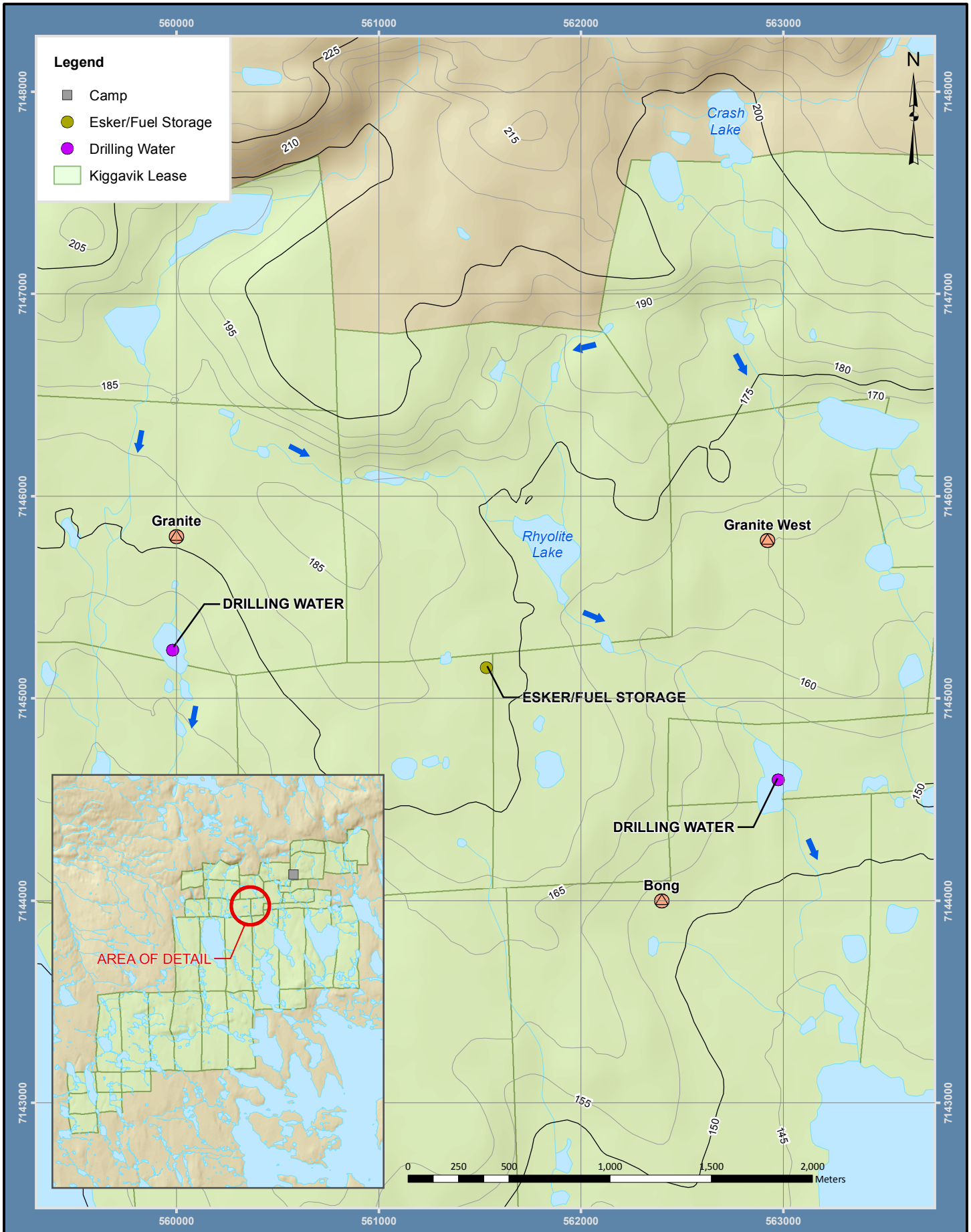
ARC Public Relations Office **Vice President, Communications**	**866-99AREVA**
Vice President, Exploration – Patrick Ledru	**306-343-4078 (Business)** **306-291-3638 (Cell)**
Director, Exploration Projects – Craig Cutts	**306-343-4668 (Business)** **306-244-6203 (Home)**
Coordinator, SHEQ Exploration – Stephanie Forseille	**306-343-4693 (Business)** **306-467-4820 (Home)**
District Geologist – West Athabasca – Dwayne Morrison	**306-343-4669 (Business)** **306-955-7636 (Home)** **306-291-5780 (Cell)**
District Geologist – Nunavut- John Robbins	**306-343-4513 (Business)** **306-955-7418 (Home)** **306-361-4520 (Cell)**
Police (RCMP) • **Saskatchewan (Regina-central dispatch)** • **Alberta (Fort Chipewyan)** • **Nunavut (Baker Lake)**	 **306-310-7276** **780-697-3665** **867-793-1111**
Spill Control Center • **Saskatchewan** • **Alberta** • **Nunavut**	 **800-667-7525** **800-222-6514** **867-920-8130**
Fire • **Saskatchewan** • **Alberta** • **Nunavut RCMP (Baker Lake)**	 **800-667-9660** **780-427-3473 or 310-3473 (no area code needed)** **867-793-1111**
Injury (When in Vicinity of Mine Site) • **McClean Lake (Safety & Health)** • **Points North (Paramedic)** • **Cluff Lake (Safety & Health)** • **Baker Lake Office** • **Nunavut Project Camp Phone** • **Key Lake** • **Cigar Lake** • **McArthur River** • **Air Ambulance (Saskatchewan)** • **Air Ambulance (Alberta)** • **Air Ambulance (Nunavut)** • **Saskatchewan Labour (LWRS** • **Mine Inspector (Nunavut WSCC)**	 • **306-633-2177 (Ext 405 or 403)** • **306-361-6241** • **306-498-2233 (Ext 22)** • **867-793-2000** • **306-683-9862** • **306-884-2100 (Ext 4545)** • **306-633-2072 (Ext 3206)** • **306-633-2001 (Ext 8888)** • **888-782-8247** • **800-661-3822** • **867-645-4455 (Rankin Inlet)** • **800-667-5023** • **867-979-8527**
Saskatchewan Ministry of Environment • **Patrick Rosen, Senior Ecological Protection Specialist** • **Ryan Mulligan, Senior Ecological Protection Specialist** **Kivalliq Inuit Association (KIA)** • **Simeon Mikkungwak, Lands Inspector (AANDC)** • **Henry Kablalik, Resource Management Officer III (Kivalliq Region)** **Nunavut Water Board (NWB)** • **Sean Joseph, Technical Advisor**	 **306-953-3558 Prince Albert Office** **306-953-2400 Prince Albert Office** **867-645-2800 Baker Lake** **867-645-2831 Rankin Inlet** **867-360-6338 Gjoa Haven**

Appendix II Spill Report Form

Available at:

http://env.gov.nu.ca/programareas/environmentprotection/forms-applications
http://env.gov.nu.ca/sites/default/files/NT%20NU%20Spill%20Report%20Form.pdf

Appendix III Maps



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Data Sources: *Natural Resources Canada, Geobase®, Nation Topographic Database, AREVA Resources Canada Inc.*

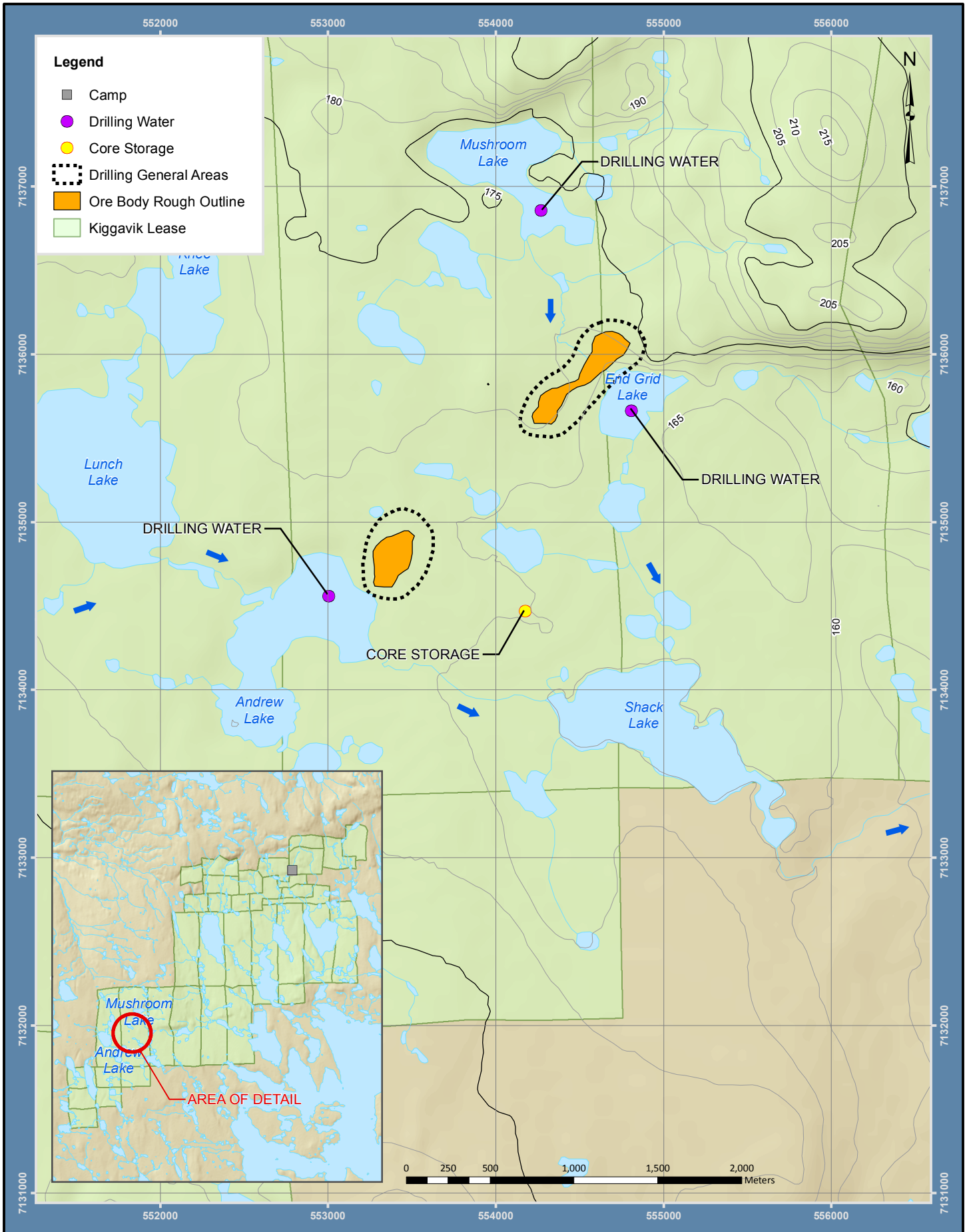
FIGURE 1.0-3
BONG AND GRANITE MAIN AREA COMPONENTS

SPILL CONTIGENCY PLAN
APPENDIX III

Kiggavik Project

AREVA

AREVA Resources Canada Inc - P.O. Box 9204 - 817 - 45th Street West - Saskatoon, SK - S7K 3X5



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Data Sources: *Natural Resources Canada, Geobase®, Nation Topographic Database, AREVA Resources Canada Inc.*

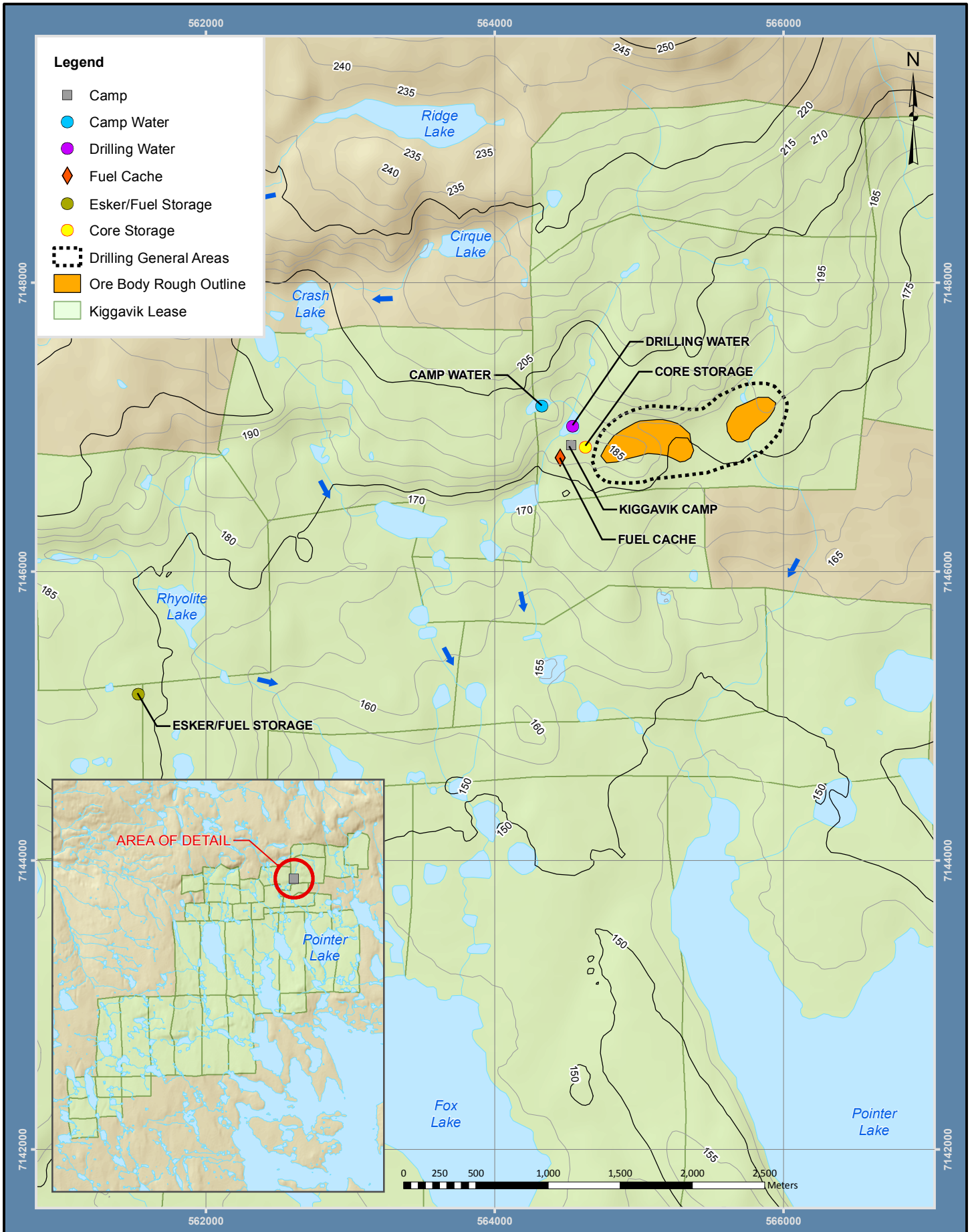
FIGURE 1.0-2
SISSONS MAIN AREA COMPONENTS

SPILL CONTIGENCY PLAN
APPENDIX III

Kiggavik Project

AREVA

AREVA Resources Canada Inc - P.O. Box 9204 - 817 - 45th Street West - Saskatoon, SK - S7K 3X5



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Creator: CDC
Date: 05/18/2011 Scale: 1:35,000
File: KI09A020
Data Sources: *Natural Resources Canada, Geobase®, Nation Topographic Database, AREVA Resources Canada Inc.*

FIGURE 1.0-1
KIGGAVIK MAIN AREA COMPONENTS

SPILL CONTIGENCY PLAN
APPENDIX III

Kiggavik Project

AREVA

AREVA Resources Canada Inc - P.O. Box 9204 - 817 - 45th Street West - Saskatoon, SK - S7K 3X5