

## ENVIRONMENTAL CODE OF PRACTICE AREVA Resources Canada Inc. - Kiggavik Project

#### 1. **GENERAL**

Environmental awareness and a good knowledge of environmental protection measures help to avoid or reduce adverse impacts. Ultimate responsibility for environmental protection rests with the company having authorization (i.e. permit, license, letter, etc.) from the regulatory agencies to conduct activities (this includes all personnel and contractors). Accordingly, personnel and contractors must know and follow the applicable work conditions established by the regulatory agencies. All contractors will be required to adhere to the standards that AREVA Resources Canada Inc. (ARC) has developed for its operations.

ARC Kiggavik Project expects that all personnel and contractors operating on its behalf will recognize and respect the rights of other land users, including, but not limited to, trappers, tourists, hunters and outfitters. This may require that other land users, if identified by regulatory agencies, will be duly consulted prior to the start of work. As well, any such human traffic encounters, during the course of field activities, should be reported to the regulatory agencies. Contractors can report such encounters to ARC personnel.

#### ARC Kiggavik Project strongly encourages:

- reducing waste (i.e. using rechargeable batteries)
- reusing materials
- recycling where practicable (i.e. batteries, printer cartridges, beverage containers)
- fuel conservation (restricting vehicle idle time and the number of trips to the absolute minimum required)

#### ARC Kiggavik Project requires:

- the use of environmentally friendly (i.e. non-toxic and / or biodegradable) agents where readily available, and discourages the use of non-environmentally friendly products except when absolutely necessary (i.e. no efficient alternative exists, safety / health considerations, etc.).
- all garbage and litter to be removed from all field sites for proper management (incineration or shipment off-site for handling).
- preventive maintenance activities to reduce the likelihood of failure resulting in an environmental impact. Examples include tightening of bolts, changing worn hydraulic hoses, performing regular oil changes and scheduled servicing of fire extinguishers.



#### **Authorizations Required**

Any activity requiring authorization by regulatory agencies (federal, provincial/territorial or otherwise) will only proceed when written copies of such authorization are in the possession of the key personnel (foreman of contractor crew, senior ARC Kiggavik Project personnel, etc.). Any such activity will only be conducted in full compliance with all conditions attached to such authorization. In the event of changes to programs underway, activity may proceed following verbal authorization from the regulatory agencies on the condition that such verbal authorization is later documented in writing. Authorizations must be posted in camps.

Storage of equipment and fuel from one season to another requires authorization by regulatory agencies.

ARC Kiggavik Project will obtain any required authorization from regulatory agencies. The Project personnel are responsible to ensure that:

- all activity is discussed with the relevant regulatory agencies to obtain the necessary authorizations
- all activity is conducted in accordance with conditions of authorizations and with ARC Kiggavik Project's ENVIRONMENTAL CODE OF PRACTICE

The Contract Administrator (i.e. the ARC employee responsible for the contractor) is responsible to ensure that:

- all activity by non-ARC Kiggavik Project personnel is conducted with a signed contract which will identify the requirement to adhere to authorizations from regulatory agencies and to ARC Kiggavik Project's Manual.
- contractors have received copies of all authorizations, AREVA Resources Canada Inc.
   ENVIRONMENTAL POLICY and Kiggavik Project ENVIRONMENTAL CODE OF PRACTICE
- all activity by non-ARC Kiggavik Project personnel is conducted in accordance with conditions of authorizations and with ARC Kiggavik Project's ENVIRONMENTAL CODE OF PRACTICE

#### Training, Awareness & Competence

All ARC Kiggavik Project personnel, contractors and long-term visitors will have the necessary training, competence and awareness to perform their duties in an environmentally responsible manner and to fully comply with regulatory authorizations.

Prior to commencement of work, contractors must provide proof of required training in writing for all contractor personnel to be on site.



At a minimum, the following training is required:

Kiggavik Project Site Orientation

**Who**? All ARC Kiggavik Project personnel, contractors and long-term visitors. This training may take the form of a PowerPoint presentation, a general information pamphlet, or any other form deemed appropriate

Supervisor Certificate as required by Nunavut WCB

Who? Senior ARC Kiggavik Project personnel

**Who?** Senior site personnel of all ARC Kiggavik Project contractors.

- Transportation of Dangerous Goods
- First Aid (basic)
- WHMIS
- Fire Prevention / Response
- Spill Response

Who? All ARC Kiggavik Project personnel

Who? Senior site personnel of all ARC Kiggavik Project contractors.

ARC strongly encourages all contractors to obtain First Aid (basic), Fire Response, Spill Response and WHMIS for their junior employees.

#### 2. WILDLIFE

Approaching and feeding wildlife is prohibited.

All Kiggavik Project personnel, contractors and visitors are required to review and adhere to the Wildlife Mitigation and Monitoring Plan.

Sightings of rare wildlife, if recognized, should be reported to regulatory agencies. Contractors can report such sightings to ARC personnel.

Nuisance wildlife kills must be reported to regulatory agencies. Contractors can report such kills to ARC personnel.

Harassment of wildlife is strictly forbidden by all individuals conducting business on behalf of ARC Kiggavik Project. Firearms may be carried for safety reasons, but only if such firearms are properly registered (to be verified by the Facility Supervisor) and stored in accordance with applicable legislation. All such firearm discharges must be reported to ARC Kiggavik Project Facility Supervisor.



#### **Aquatic Life**

Working in and around water bodies must be done in such a way that disturbance to aquatic life and its habitat is minimized.

If activity on ice is initiated and permitted by regulatory agencies, the drill contractor is responsible for proper testing of ice-thickness prior to moving heavy equipment across waterbodies and prior to drilling on ice.

ARC field workers must test for ice-thickness (using an ice auger) prior to crossing waterbodies via snowmobile or trucks, using the following table as a guide:

Permissible Load	Effective Ice Thickness	
	Lake	River
Snowmobile	10 cm (4")	15 cm (6")
Light Truck (2,400 kgs / 5,200lbs)	21 cm (8")	23 cm (9")
Medium Truck (4,000 kgs / 8,800lbs)	26 cm (10")	30 cm (12")

When travelling via truck on ice, maintain a steady pace and reduce speed near the shoreline to prevent ice from cracking underneath the vehicle.

Waterlines must be properly placed and screened in accordance with the "Freshwater Intake End-of-Pipe Screen Guideline" (from the DFO).

No drill wastes are to enter waterbodies.

Drill pads and new camps must not be located within 100 metres of a waterbody, unless approved by environmental regulatory agencies.

Kiggavik Project activities in the vicinity of fish-bearing water bodies during spawning seasons will likely be subject to special conditions from regulatory agencies (i.e. avoid shallower portions of lakes, river mouths, gravel bars and bays).

#### **Birds & Mammals**

Low-level aircraft and helicopter flights must make efforts to avoid areas which are crucial nesting habitat for eagle and osprey (such as near rapids or rapidly flowing water).

Proper food storage and handling of cooking wastes will prevent problems with nuisance bears and wolves. Trapping of animals for removal from a site requires authorization by regulatory agencies.



Special caribou protection measures are required for areas of Nunavut so as to avoid disturbance of migrating and calving herds. See "Reference Materials" below.

#### 3. <u>VEGETATION</u>

#### **Minimizing Removal / Damage**

Careful planning of access routes, drill pads and temporary work camps will minimize vegetation damage.

It is ideal to perform activities on dry or frozen ground, however during extremely wet conditions exploration activity must stop for all activities that could potentially cause rutting of the ground surface or mitigation measures must be implemented to minimize any potentially negative impacts. i.e. rutting can be avoided by using soft turns.

#### **Avoiding Contamination**

See also section below on "Fuels and Lubricants – Transporting and Handling".

Drill muds and flocculents must be environmentally safe (i.e. non-toxic and / or biodegradable).

#### **Preventing Fire Hazards**

Approved chemical fire extinguishers must be located in each tent, building, at all sites of heavy equipment (generator shack, drill rig,) and at all areas containing combustible materials (fuel caches, tool cribs).

Heavy equipment (large generators, drill rigs,) must be equipped with vertical exhaust stacks free of leaks.

Heavy equipment (large generators, drill rigs,), vehicles (trucks, snowmobiles, ATV's) and other small equipment (generators, chain saws, ice augers) must be maintained in good working order (i.e. regular maintenance), and free of accumulated grease and oil.

Diesel stoves, large propane stoves and water heaters must be maintained in good working order and inspected weekly.

Adequate fire fighting equipment (water pumps, shovels, buckets, etc.) must be available in camp.



On May 1, 2004, Nunavut's *Tobacco Control Act* came into effect banning smoking in all enclosed businesses and work sites - including bars. The Act also bans smoking within a three-metre radius of entrances and exits, and within a 15-metre radius of school grounds.

Health Canada Website

These regulations are enforced at the Kiggavik Project.

Tents and buildings must be located some distance apart to reduce the spread of a fire.

#### 4. FUELS AND LUBRICANTS – TRANSPORTING AND HANDLING

Material Safety Data Sheets (for controlled substances) must be readily available in the work camp and posted at all drill rigs. The location of these documents must be known by all site employees, contractors and visitors.

No fuel storage or lay-down areas are permitted or within 100 metres of water bodies, unless otherwise stated.

All individual fuel drums, fuel storage tanks, drill rig fuel tanks and pump shack fuel tanks must have secondary containment (i.e. rubberized berm or other suitable construction to contain 110% capacity of the fuel). In the case of fuel caches (i.e. multiple drums stored in one location), secondary containment must be sufficient to handle 10% of the total fuel volume PLUS the size of the largest container. For example, a single site containing five 45-gallon drums and two 50-gallon drums, must have containment as follows:

- 5 drums x 45 gallons = 225 gallons
- 2 drums x 50 gallons = 100 gallons

**Total Fuel Volume** = 325 gallons

- 10% of Total Fuel Volume = 32.5 gallons
- Size of Largest Container = 50 gallons

### **Secondary Containment Requirement = 82.5 gallons**

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

Lubricant storage areas must have secondary containment to handle leaks and spills.

Appropriate sized spill kits must be located at the drill rig, at the water pump and in work camps.



Waste oil, waste filters, and cleaned-up spill materials must be contained for removal from the site, and disposed of in accordance with applicable regulations. Please note that most jurisdictions require that waste oil, waste filters and empty containers be recycled.

Degreasing agents used for maintenance of equipment parts must be environmentally friendly and grease must be contained for removal from the site.

# 5. REFERENCE MATERIALS (available in Q:\KS Feasibility\Prefeasibility\KA200FieldProgram\Procedures and in hard-copy format in the Kiggavik Project camp office.)

"Caribou Protection Measures: Qamanirjuaq and Beverly Herd." (Nunavut: Kivalliq Inuit Association, and Federal Department of Fisheries and Oceans)

"Freshwater Intake End-of-Pipe Screen Guideline" (Department of Fisheries and Oceans)

"Interim Guidelines for the Disposal of Drill Hole Waste Generated During Exploration for Metallic Minerals [Gold, Diamond, Etc.], Oil Sands and Uranium in the Green Area." (Alberta Department of Sustainable Resource Development)

Wildlife Mitigation and Monitoring Plan

Spill Contingency Plan

"Timing Windows" Nunavut Operational Statement (Department of Fisheries and Oceans)

#### 6. REFERENCES

AREVA Resources Canada Inc. ENVIRONMENTAL POLICY, in Q:\KS Feasibility\Prefeasibility\KA200FieldProgram\Procedures