

FUEL SPILL CONTINGENCY PLAN FOR THE CENTRAL BAFFIN ISLAND PROJECT NUNAVUT, CANADA

February, 2010

PREAMBLE:

This Fuel Spill Contingency Plan applies to exploration programs to be conducted by Commander Resources Ltd. in central Baffin Island, Nunavut.

Copies and updates of this Plan may be obtained by writing to:

Gordon Davidson General Manager, Projects Commander Resources Ltd. 510-510 Burrard Street Vancouver, B.C. Canada V6C 3A8

1.0 INTRODUCTION

The purpose of Commander Resources Ltd's Fuel Spill Contingency Plan is to provide a plan of action for any spill event during the Company's exploration programs in the central area of Baffin Island, Nunavut. This Plan provides the protocols for responding to spills (or potential spills) that minimizes health and safety hazards, environmental damage and clean up costs as well as defining responsibilities of response personnel.

The area of exploration is 225 kilometres to 300 kilometres southwest of Clyde River within NTS maps 37A/9.10 and 27B/5,6, 11-14, 37A/7,8,10.

The duration of exploration programs is typically April to October. Work could involve mobile skid-mounted drilling on ice in the spring and helicopter supported diamond drilling, mapping, sampling, prospecting and ground geophysical programs during the summer months.

Once the exploration program commences fuel and hazardous materials will be stored at proposed fuel caches at a base camp located on Dewar Lakes, immediately adjacent to the North Warning radar station Fox-3 airstrip.

Fuel Caches

Aviation and diesel fuel to be stored in fuel caches. All fuel caches with 205 litre steel drums will have secondary containment in the form of Arctic Insta Berms that are provided by Raymac Environemental Services Inc.

The majority of diesel fuel is stored in two 57,000 litre Arctic Terra Tank fuel bladders. These two fuel bladders and the secondary containment for them are provided by Raymac Environmental Services Inc. These fuel bladders and the secondary containment have been installed by qualified personnel from Raymac Environmental Services Inc. following the manufacturer's specifications and guidelines. Commander's use of the fuel bladders will follow the manufacturer's specifications, guidelines and recommended usage.

2.0 RESPONSE ORGANIZATION

<u>Project Supervisor</u> - will report any spill to the Yellowknife 24-Hour Spill Report Line and initiate cleanup. Project Supervisor will request additional aid from external sources if deemed necessary. Responsible for checking fuel drum and fuel bladder conditions and evidence of leakage daily, keeping spill kits and absorbent mats in good repair and accessible.

Project Supervisor – Alan Sexton, P.Geo., MSc

GeoVector Management Inc. 10 Green Street Suite 312 Ottawa Ontario K2J 3Z6 CANADA

Tel: 613-843-8109 Fax: 613-843-8110 mobile: 613-864-3937

24 Hour Emergency Contact for Commander Resources Ltd.

Gordon Davidson, General Manager, Projects

(604) 484-7108 (day), (604) 928-1320 (night & mobile)

<u>Pilots</u> to report spills or potential spills to the **Project Supervisor**

3.0 INITIAL ACTION

- 1. Stay alert and consider safety first. Identify the source of leak or spill and the type of product.
- 2. Assess the hazards to persons in the vicinity of the spill.
- 3. Isolate or remove any potential ignition source.
- 4. Control danger to human life if possible.
- 5. Assess whether the spill can be readily stopped or brought under control.
- 6. If safe (and possible) try to stop the flow.
- 7. Report the spill to the Project Supervisor and to the Yellowknife 24-hour Spill Report Line at (867) 920-8130.
- 8. Initiate or resume clean up.

4.0 REPORTING PROCEDURE

Communication in the way of two-way radios will be set-up in the event that if a spill occurs outside of camp at either the drill rig or external fuel cache it can be immediately reported to the Project Supervisor.

All spill kits located at all sources of fuel will have contact information for the Yellowknife Spill Report Line prominently displayed.

A listing of the Yellowknife 24 Hour Spill Report Line as well as other government contacts and company officials will be displayed adjacent to the satellite phone in camp. (See Reporting Procedure and Contacts provided below.

SPILL REPORTING PROCEDURE

- 1. Fill, out "SPILL REPORT" form as completely as possible before making the report.
- 2. Report IMMEDIATELY to Yellowknife using the 24-hour Spill Report Line

24-HOUR SPILL REPORT LINE (867) 920-8130 AND TO DIAND WATER RESOURCES INSPECTOR (NUNAVUT) (867) 975-4298

NOTE: Telephone calls can be made collect by informing the Operator that you wish to report a spill.

RCMP communications may be used if other means are not available.

Additional Information or Assistance:

Environment Canada, Yellowknife

Phone: (867) 669-4700

Environment Canada Office, Iqaluit (867) 975-4664, Fax: (867) 975-4594

Mobile: (867) 975-1925

Nunavut Water Inspector Phone: (867) 975-4298

Qikiqtani Inuit Association Lands and Resources Officer

Phone: (867) 979-5391

Nunavut Tunngavik Inc. Cambridge Bay, NU

Fax: (867) 983-2723

Commander Resources Ltd.

Phone: (604) 685-5254

Gordon Davidson, General Manager,

Projects

Office (604) 484-7108

Home & Mobile (604) 928-1320

Ken Leigh, President Office 604-484-7110

> Home 604-646-0416 Cell 604-318-4106

A detailed report on each occurrence must also be filed with the DIAND Water Resources Inspector no later than 30 days after initially reporting the event.

5.0 ACTION PLAN

The following responses are recommended for fuel spills in differing environments. Depending on the location and size of the exploration program some of the equipment mentioned in the responses listed below will obviously not be located on site but could be transported to the spill if deemed necessary.

Spills on Land (gravel, rock, soil and vegetation)

- > Trench or ditch to intercept or contain flow of fuel or petroleum products on land where feasible (loose sand, gravel and surface layers of organic materials are amenable to trenching/ditching-trenching in rocky substrates is typically impractical and impossible.)
- Construct a soil berm downslope of the spill. Use of synthetic, impervious sheeting can also be used to act as a barrier.
- Where available, recover spills through manual or mechanical means including shovels, heavy equipment and pumps.
- Absorb petroleum residue with synthetic sorbent pad materials.
- Recover spilled and contaminated material, including soil and vegetation.
- > Transport contaminated material to approved disposal or recovery site. Equipment used will depend on the magnitude and location of the spill.
- Land based disposal is only authorized with the approval of government authorities.

Spills on Snow

- Trench or ditch to intercept or contain flow of fuel or petroleum products on snow, where feasible (ice, snow, loose sand, gravel and surface layers of organic materials as amenable to trench/ditching; trenching in solid, frozen ground or rocky substrates is typically impractical and impossible).
- Compact snow around the outside perimeter of the spill area.
- Construct a dike or dam out of snow, either manually with shovels or with heavy equipment such a graders and dozers where available.
- If feasible, use synthetic liners to provide an impervious barrier at the spill site.
- Locate the low point of the spill area and clear channels in the snow, directed away from waterways, to allow non-absorbed material to flow into the low point.
- Once collected in the low area, options include shoveling spilled material into containers, picking up with mobile heavy equipment, pumping liquid into tanker trucks or using vacuum truck to pick up material.
- Where safe, disposal can be done through in-situ combustion with approval from government and safety consultants.
- Transport contaminated material to approved disposal site. Equipment used will depend on the magnitude and location of the spill.

- Contain material spill using methods described above for snow, if feasible and/or mechanical recovery with heavy equipment.
- Prevent fuel/petroleum products from penetrating ice and entering watercourses.
- Remove contaminated material, including snow/ice as soon as possible.
- Containment of fuel/petroleum products under ice surface is difficult given the ice thickness and winter conditions. However, if the materials get under ice, determine area where the fuel/petroleum product is located.
- > Drill holes through ice using ice auger to locate fuel/petroleum product.
- Once detected, cut slots in the ice using chain saws and remove ice blocks. Fuel/petroleum products collected in ice slots or holes can be picked up via suction hoses connected to portable pump, vacuum truck or standby tanker. Care should be taken to prevent the end of the suction hose clogging up by snow, ice or debris.
- Fuel/petroleum products that have collected in ice slots may be disposed of by in-situ burning if sufficient holes are drilled in ice. Once all the holes are drilled, the oil which collects in the holes may be ignited. Consult with fire/safety consultants and government authorities to obtain approval.

Spills on Water

- Contain spills on open water immediately to restrict the size and extent of the spill.
- Fuel/petroleum products which float on water may be contained through the use of booms, absorbent materials, skimming and the erection of culvers.
- > Deploy containment booms to minimize spill area, although effectiveness of booms may be limited by wind, waves and other factors.
- ➤ Use sorbent booms to slowly encircle and absorb spilled material. These absorbent are hydrophobic (absorb and repel water).
- Once booms are secured, use skimmers to draw in hydrocarbons and minimal amounts of water. Skimmed material can be pumped through hoses to empty fuel tanks/drums.
- Culverts permit water flow while capturing and collecting fuel along the surface with absorbent materials.
- Chemical methods including dispersants, emulsion treating agents and shoreline cleaning will be considered.

NOTE:

1. In-situ combustion is a disposal method available for fuels and petroleum products. In-situ burning can be initiated by using a large size portable propane torch (tiger torch) to ignite the fuel/petroleum products. Highly flammable products such as gasoline or alcohol, or combustible material such as wood, may be used to promote ignition of the spilled product. The objective is to raise the temperature for sustained combustion of the spilled product.

Precautions need to be taken to ensure safety of personnel. Also, spilled product should be confined to control burning. These include area where the spilled material has pooled naturally or been contained via dikes, trenches, depressions or ice slots. Prior to any attempts at in-situ burning, consultation with experts and approval by government authorities are required.

- 2. Chemical response methods are also available and may include the use of dispersants, Emulsions-treating agents, visco-elastic agents, herding agents, solidifiers, and shoreline cleaning agents.
- 3. Biological response methods include nutrient enrichment and natural microbe seeding.
- 4. Site remediation will be completed as per the advice of government authorities.

6.0 ENVIRONMENTAL MAPPING

Spill response equipment will be located at NWS Fox-3 and Fox-8 airstrips.

7.0 RESOURCE INVENTORY

Resources available on site:

- > Trenching/digging equipment in the form of picks and shovels.
- ➤ Absorbent material (pads)
- > Pumps
- > Impervious sheeting (tarps)
- > Plastic bags, buckets, empty drums for collection of contaminated material.

8.0 TRAINING/EXERCISE

Commander Resources Ltd. is an established mining exploration company and has explored for minerals in every major mining province and territory for over ten years. The Company's record of compliance with regulations and environmental management is excellent. All contract personnel will be briefed and given a copy of the Fuel Spill Contingency Plan before field operations begin.

9.0 SPILL KITS

Spill Kits on site consist of the following:

- 1-205 litre, 16 gauge open top drum with bolting ring and gasket
- 1 package of 10 disposable 5 mil polyethylene bags
- 1 shovel
- 4-5" x 10" booms
- 10 lb bag of particulate
- 1 bail 17' x 19' sorbent sheets (100 sheets per bail)
- 2 PVC oil resistant gloves
- 2 respirators
- 2 pairs of splash protective goggles

10.0 Material Data Sheets (MSDS)

MSDS sheets are attached for Jet A-1, Diesel fuel, unleaded gasoline and Propane.

11.0 Fuel Inventory on site (starting April, 2010)

- Maximum 200 drums Jet A-1
- Maximum 100 drums Diesel fuel
- 150 x 100lb propane
- 6 drums unleaded gasoline

All fuel caches have secondary containment in the form of Arctic Insta Berms that are provided by Raymac Environemental Services Inc.

12.0 NOTES ON FUEL BLADDERS

The majority of diesel fuel is stored in two 57,000 litre Arctic Terra Tank fuel bladders. These two fuel bladders and the secondary containment for them are provided by Raymac Environmental Services Inc. These fuel bladders and the secondary containment have been installed by qualified personnel from Raymac Environmental Services Inc. following the

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