

Strongbow Resources Spill Response Plan

Spill Response Plan

A spill is classified as the discharge of petroleum products or other dangerous substances into the environment. Potential hazards created by the spill for humans, vegetation, water resources, fish and wildlife vary in severity, depending on several factors, including nature of the material, quantity spilled, location and season. The general response to be followed in the event of a spill is:

- Identify the product* - check container design, warning labels, markings, etc.
- Protect people* - prevent personnel from approaching the site and keep them at a distance sufficiently removed that they will not be injured by, or cause, a fire or explosion
- Stop the flow at the source* - reduce or terminate the flow of product without endangering anyone
- Assess the seriousness of the spill* - evaluate potential dangers of the spill to human health and safety, the aquatic environment, wildlife, ground water, vegetation and other land resources
- Report the spill* - provide basic information such as location of spill, name of polluter, type and amount of material spilled, date and time of the spill and any perceived threat to human health or the environment (complete NWT Spill Report form)
- Clean up the spill* - follow procedures appropriate for the location, environment, and material and time of year

24-Hour Spill Report Line (867) 920-8130 or fax (867) 920-8127
DIAND Water Resources Inspector (867) 979-4405

Detailed Response Plan

(a) *On-site person in charge, management or control of contaminants*

Ken Armstrong/Felicia Chang; Strongbow Resources. (403-997-2797 camp phone)

(b) *Name and address of employer of personnel described in part (a)*

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phone: (604) 608-1282
fax: (604) 668-8366

(c) Description of the facility

Facility - temporary, 12-16 person mineral exploration camp (tents) with above ground fuel storage facility

Locations – Camp likely located on Crown Lands along the north shore of Canoe Lake at 66° 59' 34"N / 111° 07' 00" W; Fuel to be stored on naturally vegetation free site located a safe distance from the tents and well away (>100m) from water bodies

Size - fuel stored at above ground facility in sealed 205 litre (45 gal.) steel drums

Storage Capacity – Maximum fuel stored at site will be 19 drums (3895 litres) of Jet-B and diesel combined, plus two 100lb-propane tanks.

(d) Description of the type and amount of potential contaminants normally stored on-site

JET B fuel for the helicopter – 3485 litres (17 drums)

Diesel for the drill and camp - 410 litres (2 drums)

Propane for cooking, etc. - Two (2) 100 lb. tanks

(e) Steps to be taken to report, contain, clean up and dispose of a contaminant in the case of a spill

Preventative Measures

Fuel drums will be monitored for any signs of leakage:

- (i) Immediately after they arrive on-site,
- (ii) Once they have been transported to the designated storage area, and
- (iii) Periodically after that time (i.e. as the stocks are accessed).

Drums will be stored upright on flat stable terrain during the summer to reduce chances of a leak. If available a natural depression situated well away from water bodies will be utilized for storage. The contents of any drum that leaks, or shows the potential to leak, will be transferred by wobble pump to a different drum. With the exception of the container in use, all fuel container outlets will be kept sealed to prevent leakage. On-site equipment (e.g. helicopter) will be refueled at some distance from the main storage facilities to reduce potential damage should a fire occur.

Reporting

- (i) Identify the product - check container design, warning labels, markings, etc.
- (ii) Protect people - prevent personnel from approaching the site and keep them at a distance sufficiently removed that they will not be injured by, or cause, a fire or explosion
- (iii) Stop the flow at the source - reduce or terminate the flow of product without endangering anyone

- (iv) Assess the seriousness of the spill - evaluate potential dangers of the spill to human health and safety, the aquatic environment, wildlife, ground water, vegetation and other land resources
- (v) Report the spill to the Yellowknife 24-Hour Spill Report Line (867) 920-8130 - provide basic information such as location of spill, direction of motion if any, name of contact on-site, type and amount of material spilled, cause of spill, date and time of the spill and any perceived threat to human health or the environment (complete Spill Report form - attached)
- (vi) Report the spill to Strongbow's office in Vancouver
- (vii) Depending on severity of the spill, report to the other appropriate authorities (i.e. Nunavut Water Board, Department of Fisheries and Oceans; Regional Inuit Association)

Containment

Oil spill containment techniques include:

- (i) Earth dams - simple and effective control means for surface and small streams
- (ii) Interceptor trenches - control on land and shallow subsurface seepage
- (iii) Culvert weirs - not applicable
- (iv) Underflow dams - effective in narrow ditch or stream
- (v) Net and absorbent barriers - effective in tundra area and slow moving water
- (vi) Containment booms - commercial product for large bodies of water
- (vii) Space spraying or 'herding' - using a very fine water spray as a means of cleaning vegetation, shorelines, lake surface, etc.
- (viii) Absorbent materials - include fine sand, soil or snow; commercial sorbents include sheets, rolls, pillows and booms that can be rapidly deployed with no preparation

Clean up

The most likely spill scenario is the partial loss of petroleum products from one of the 205 l (45 gal.) drums. Drums will be checked on arrival in camp, after transfer to the designated storage facility and periodically thereafter. Contents of any leaking drum will be immediately transferred via wobble pump to an empty, leak free drum. It is unlikely that more than one drum will leak at any time. Any spills will be contained, and pumped into empty barrels.

Disposal

No organic soils are present at the proposed storage site, and if possible, any sands and gravels contaminated by a significant spill of petroleum products will be excavated by hand, incinerated to remove hydrocarbons, and returned to their natural site.

Consultations:

Contingency Planning and Spill Reporting in the NWT - A guide to the new regulations, GNWT, 8pp.

Oil Spill Containment and Clean up Techniques - 22 minute instructional video prepared by NWT Renewable Resources Pollution Control Division, 1988.

Report All Spills - Environment Series, GNWT Renewable Resources, Pollution Control Division, 1988.

Spill Containment and Clean-up Course, GNWT Renewable Resources, Pollution Control Division, 1991, 74pp.

Spill Contingency Planning and Reporting Regulations - Environmental Protection Act - Northwest Territories, July 22, 1993, 11pp.

Spills, Our Record in the Northwest Territories - Environment Series, GNWT Renewable Resources, Culture and Communications, 1990

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