MAJOR GENERAL RESOURCES LTD. FUEL SPILL CONTINGENCY PLAN FOR DRILL SITES AND EXPLORATION CAMPS TAHOE LAKE AREA KITIKMEOT REGION NUNAVUT

PREAMBLE:

This Fuel Spill Contingency Plan is effective from July 11, 2001 to December 31, 2003 and applies to exploration programs conducted by Major General Resources Ltd. licensed by the Nunavut Water Board in the Tahoe Lake Area, Kitikmeot Region Nunavut; Latitude 70°07' Longitude 109°30'.

As this Plan is a resubmission of an earlier submitted Fuel Spill Contingency Plan no formal distribution has been made of this resubmission.

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

D. Graham Gill, P.Geo Project Manager Major General Resources Ltd. 1550 - 409 Granville Street Vancouver, B.C. V6C 1T2

1.0 INTRODUCTION

The purpose of Major General 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 Tahoe Lake area of Nunavut. This Plan provides the protocol 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 map attached reveals Major General's proposed exploration sites, camp locations and fuel caches for the upcoming 2002 field season. At this stage these sites are preliminary and will be finalized once a physical ground inspection of the area has been conducted prior to the beginning of fieldwork.

At this point there is no hazardous material, fuel or equipment of any kind on site. Once the exploration program commences fuel and hazardous materials will be stored at the proposed fuel caches, campsite and drill pads in the following manner:

Campsite: Aviation and diesel fuel, gasoline to be stored in 45 gal (205 litre) drums.

These will be stored in quantities of less than 20 drums located a minimum of 31 metres from normal high water mark and in such a manner

that no fuel can enter any such water body.

Fuel Caches Aviation and diesel fuel to be stored in fuel caches near drilling

(Outside of Camp) operations. Once drilling is complete in one area the fuel cache will be

moved to a new location proximal to the next site of drill operations. Quantities of less than 20 drums will be located a minimum of 31 metres from normal high water mark and in such a manner that no fuel can enter

any such water body.

Drill sites: 2-3 barrels of diesel, propane and drill additives to be stored on each drill

pad consecutively.

2.0 RESPONSE ORGANIZATION

<u>Camp Technician</u> - responsible for checking fuel drum conditions and evidence of leakage daily, assuring drip trays are in place and not overflowing; keeping spill kits and absorbent mats in good repair and accessible. If spill or likelihood of a spill occurs the Technician will immediately report to the **Project Supervisor**.

Pilots and Drill Shift Boss to report spills or potential spills to the Project Supervisor.

<u>Project Supervisor</u> will report any spill to the NWT 24-Hour Spill Report Line and initiate cleanup. Project Supervisor will request additional aid from external sources if deemed necessary.

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 NWT 24-hour Spill Report Line at (403) 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 NWT Spill Report Line prominently displayed.

A listing of the NWT 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 (403) 920-8130 AND TO DIAND WATER RESOURCES INSPECTOR (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:

Government of Northwest Territories

Pollution Control Division

Yellowknife Phone: (403) 873-7654

Department of Indian Affairs and

Northern Development

Yellowknife Phone: (403) 920-8240

Environment Canada

Yellowknife Phone: (403) 873-3456

Major General Resources Ltd. Phone: (604) 685-5254

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.

Spills on Ice

- 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.

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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

Please refer to Figure 1 for possible sites of spill impact, i.e. drill targets, campsite and fuel cache

locations.

Spill response equipment will be located at all of the above listed locations.

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.

Resources available from other sources:

➤ Larger pumps if necessary; Cambridge Bay

➤ Bobcat/excavator; Cambridge Bay

Contact: Kitnuna Construction Ltd.

Phone: (867) 983-2331

8.0 TRAINING/EXERCISE

Major General 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.

ATTACHMENT 1

As the drill contract for the upcoming 2002 exploration program has not been let Major General Resources Ltd. is unable at this time to provide Hazardous Material Information. Once the drill contract has been awarded a complete listing of all hazardous materials will be forwarded.