



**EMERGENCY RESPONSE/
SPILL CONTINGENCY PLAN**

FOR

**NUNAVUT WATER BOARD
REGARDING NANUQ PROJECT
WATER LICENCE NWB2NAN03**

**PREPARED BY
DUNSMUIR VENTURES LTD.**

OCTOBER 2003

1.0 INTRODUCTION

1.1 PURPOSE OF PLAN

The purpose of this Spill Contingency Plan is to provide a plan of action for all spills of hazardous materials that may occur on any exploration property. This plan defines the responsibilities of key personnel and outlines procedures to effectively and efficiently contain and recover spills of hazardous materials.

Petroleum products and hazardous materials that will be considered in this Spill Contingency Plan include:

- diesel fuel
- engine oil
- gasoline
- Jet "B" fuel
- propane

1.2 DUNSMUIR VENTURES LTD. ENVIRONMENTAL POLICY

It is the policy of Dunsmuir Ventures Ltd. (DVL) to comply with all existing laws and regulations to help ensure the protection of the environment. DVL cooperates with other groups committed to protecting the environment and ensures that employees, government, and the public are informed on the procedures followed to help protect the environment.

2.0 SITE DESCRIPTION

2.1 GENERAL SITE DESCRIPTION:

This spill contingency plan is to be implemented at all field camps established for mineral exploration.

2.2 PETROLEUM STORAGE AND TRANSPORT

205 litre fuel drums are to be stored at a distance greater than 100 metres from the normal high water mark of any water body.

All fuel and oil are transported to the various exploration properties by plane.

2.3 CHEMICAL STORAGE AND TRANSPORT

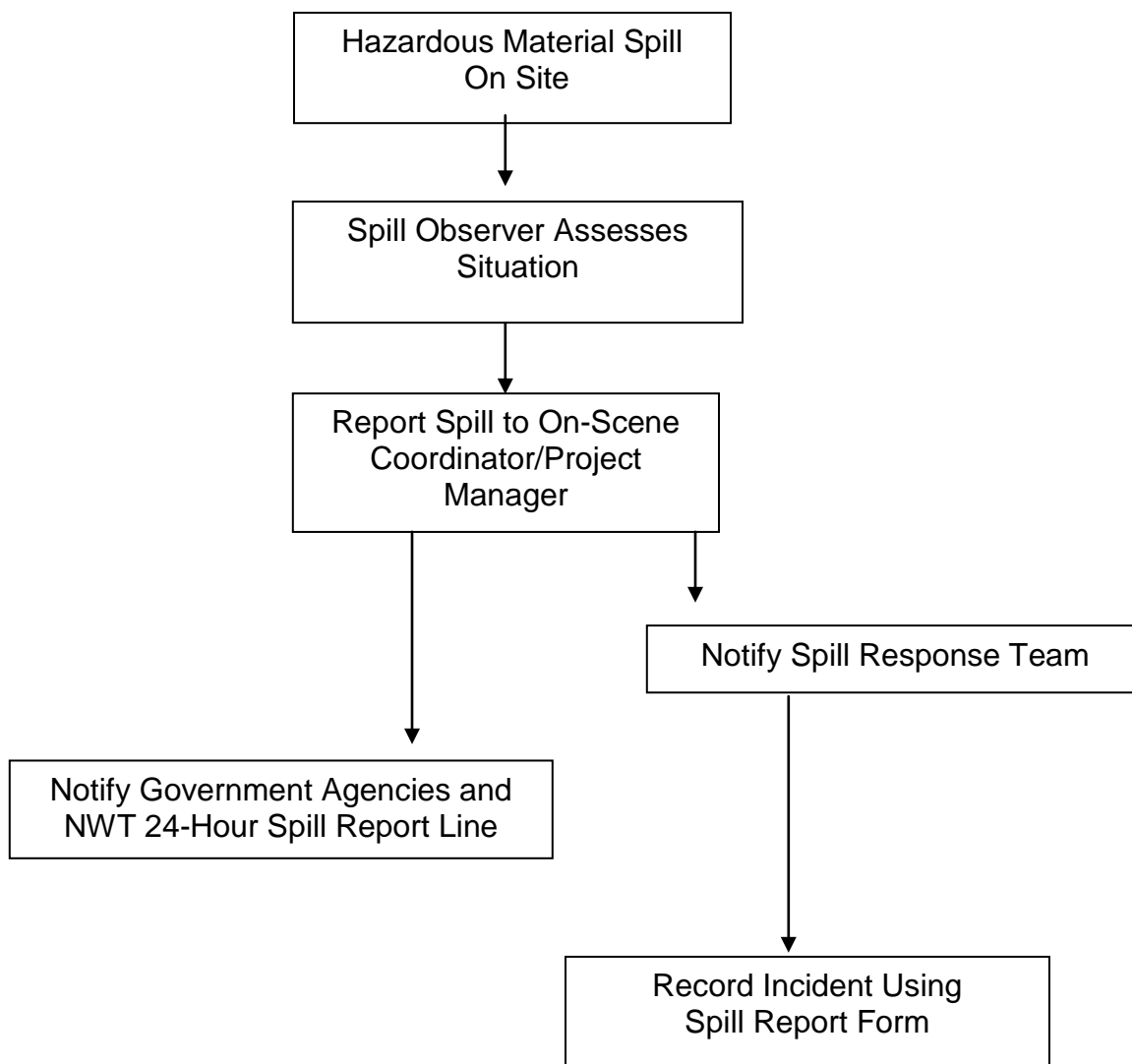
Any required chemicals are transported to site by plane.

2.4 GREYWATER AND SEWAGE

Greywater will be discharged into sumps or natural depressions away from water bodies.

3.0 RESPONSE ORGANIZATION

The following is a flow chart to illustrate the sequence of events in the event of a hazardous material spill occurring at any of the Dunsmuir Ventures exploration properties.



3.1 SPILL RESPONSE TEAM

Ken Hicks will be the On-Scene Coordinator for the Dunsmuir Ventures (DVL) exploration properties. He will appoint and train appropriate personnel to make up the DVL Spill Response Team for the various DVL exploration properties. The key personnel that make up the DVL Spill Response Team are as follows:

On-Scene Coordinator	Ken Hicks
Site Personnel	Will generally vary from 6 to 14 people throughout the year
Project Manager	Ken Hicks

The responsibilities of the On-Scene Coordinator are as follows:

1. Assume complete authority over the spill scene and coordinate all personnel involved.
2. Evaluate spill situation and develop overall plan of action.
3. Activate the spill contingency plan
4. Immediately report the spill to the NWT 24-Hour Spill Report Line (867) 920-8130, regulatory agencies, and Dunsmuir Ventures management
5. Obtain additional manpower, equipment, and material if not available on site for spill response.

The responsibilities of the Project Manager are as follows:

1. Provide regulatory agencies and Dunsmuir Ventures management with information regarding the status of the clean up activities.
2. Act as a spokesperson on behalf of Dunsmuir Ventures with regulatory agencies as well as the public and media.
3. Prepare and submit a report on the spill incident to regulatory agencies within 30 days of the event.

3.2 ADDITIONAL CONTACTS

Table 1 – Emergency Contacts

CONTACT	TELEPHONE NUMBER
DIAND – Land Use Inspector, Iqaluit	(867) 975-4500
Dunsmuir Ventures – Art Ettlinger, President & CEO	(604) 220-7677 (cell)
Dunsmuir Ventures – Jennifer Pell, VP, Exploration	(604) 778-772-8918 (cell)
Environment Canada	(867) 669-4700 Fax (867) 873-8185
Calm Air	(867) 793-2873
Helicopters: Matrix Aviation Solutions	(867) 766-3134
Nunavut Fire Department	(867) 645-8103
Baker Lake RCMP	(867) 793-1111
Baker Lake Health Centre	(867) 793-2816
Exploration Camp Satellite Phone	(403) 987-0728
Dunsmuir Ventures Office, Vancouver	(604) 681-6311

4.0 REPORTING PROCEDURE

The On Scene Coordinator must be notified immediately of any spill either by phone, radio, or in person.

The following is the spill reporting procedure:

1. Report immediately to the 24-Hour Spill Report Line Phone (867) 920-8130, Fax (867) 873-6924
2. Fill out the NWT Spill Report Form *NWT1752/0202* (form included at the back of this document).


5.0 ACTION PLANS

5.1 INITIAL ACTION

The instructions to be followed by the first person on the spill scene are as follows:

1. Always be alert and consider your safety first.
2. If possible, identify the material that has been spilled.
3. Assess the hazard of people in the vicinity of the spill.
4. If possible, safely try to stop the flow of material to minimize potential for environmental impacts.
5. Immediately report the spill to the On Scene Coordinator.
6. Resume any effective action to contain, mitigate, or terminate the flow of the spilled material.

The following pages include specific instructions to be followed in the response to various types of spills including diesel fuel, hydraulic oil, lubricating oil, gasoline, aviation fuel (Jet “B”), antifreeze, and propane.



5.2 SPILL RESPONSE ACTIONS

DIESEL FUEL, HYDRAULIC OIL, AND LUBRICATING OIL

Take action only if safety permits – stop the source flow if safe to do so and eliminate all ignition sources. Never smoke when dealing with these types of spills.

On Land

Build a containment berm using soil material or snow and place a plastic tarp at the foot of the berm for easy capture of the spill after all vapours have dissipated.

Remove the spill by using absorbent pads or excavating the soil, gravel or snow.

Remove spill splashed on vegetation using particulate absorbent material.

If soil, gravel, or vegetation must be removed, contact regulatory agencies for approval before commencing with the removal.

On Muskeg

Do not deploy personnel and equipment on marsh or vegetation.

Remove pooled oil with sorbent pads and/or skimmer.

Flush with low pressure water to herd oil to collection point.

Burn only in localized areas, e.g., trenches, piles or windrows.

Do not burn if root systems can be damaged (low water table).

Minimize damage caused by equipment and excavation.

On Water

Contain spill as close to release point as possible.

Use containment boom to capture spill for recovery after vapours have dissipated.

Use absorbent pads to capture small spills.

Use skimmer for larger spills.

On Rivers and Streams

Prevent entry into water, if possible, by building a berm of trench.

Intercept moving slicks in quiet areas using (sorbent) booms.

Do not use sorbent booms/pads in fast currents and turbulent water.

On Ice and Snow

Build a containment berm around spill using snow.

Remove spill using absorbent pads or particulate sorbent material.

The contaminated ice and snow must be scraped and shoveled into plastic buckets with lids, 205 litre drums, and/or polypropylene bags.

Storage and Transfer

All contaminated water, ice, snow, soil, and clean up supplies will be stored in closed, labeled containers. All containers will be stored in a well ventilated area away from incompatible materials.

Disposal

Contact Federal and Territorial regulatory agencies to identify appropriate disposal methods before disposing of contaminated material.

5.3 SPILL RESPONSE ACTIONS GASOLINE AND JET B AVIATION FUEL

Gasoline and Jet B form vapours that can ignite and explode – No Smoking!

Take action only if safety permits – stop the source flow if safe to do so and eliminate all ignition sources. Never smoke when dealing with these types of spills.

On Land

Build a containment berm using soil material or snow and place a plastic tarp at the foot of the berm for easy capture of the spill after all vapours have dissipated.

Remove the spill by using absorbent pads or excavating the soil, gravel or snow.

Remove spill splashed on vegetation using particulate absorbent material.

If soil, gravel, or vegetation must be removed, contact regulatory agencies for approval before commencing with the removal.

On Muskeg

Do not deploy personnel and equipment on marsh or vegetation.

Remove pooled gasoline or Jet B with sorbent pads and/or skimmer.

Flush with low pressure water to herd oil to collection point.

Burn only in localized areas, e.g., trenches, piles or windrows.

Do not burn if root systems can be damaged (low water table).

Minimize damage caused by equipment and excavation.

On Water

Contain spill as close to release point as possible.

Use containment boom to capture spill for recovery after vapours have dissipated.

Use absorbent pads to capture small spills.

Use skimmer for larger spills.

On Rivers and Streams

Prevent entry into water, if possible, by building a berm or trench.

Intercept moving slicks in quiet areas using (sorbent) booms.

Do not use sorbent booms/pads in fast currents and turbulent water.

On Ice and Snow

Build a containment berm around spill using snow.

Remove spill using absorbent pads or particulate sorbent material.

The contaminated ice and snow must be scraped and shoveled into plastic buckets with lids, 205 litre drums, and/or polypropylene bags.

Storage and Transfer

All contaminated water, ice, snow, soil, and clean up supplies will be stored in closed, labeled containers. All containers will be stored in a well ventilated area away from incompatible materials.

Disposal

Contact Federal and Territorial regulatory agencies to identify appropriate disposal methods before disposing of contaminated material.

5.4 SPILL RESPONSE ACTIONS ANTIFREEZE

Take action only if safety permits – stop the source flow if safe to do so.

On Land

Build a containment berm using soil material or snow and place a plastic tarp at the foot of the berm for easy capture of the spill.

Remove the spill by using absorbent pads or excavating the soil, gravel, or snow.

Remove spill splashed on vegetation using particulate absorbent material.

If soil, gravel, or vegetation must be removed, contact regulatory agencies for approval before commencing with the removal.

On Water

Use containment boom to capture spill.

Pump contaminated water into 205 litre drum.

On Ice and Snow

Build a containment berm around spill using snow.

Remove spill using particulate sorbent material.

The contaminated sorbent material, ice and snow must be scraped and shoveled into plastic buckets with lids, 205 litre drums, and/or polypropylene bags.

Storage and Transfer

All contaminated water, ice, snow, soil, and clean up supplies will be stored in closed, labeled containers. All containers will be stored in a well ventilated area away from incompatible materials.

Disposal

Contact Federal and Territorial regulatory agencies to identify appropriate disposal methods before disposing of contaminated material.

5.5 SPILL RESPONSE ACTIONS PROPANE

Take action only if safety permits. Gases stored in cylinders can explode when ignited. Keep vehicles away from accident area – No Smoking!

On Land

Do not attempt to contain the propane release.

On Water

Do not attempt to contain the propane release.

On Ice and Snow

Do not attempt to contain the propane release.

General

It is not possible to contain vapours when released.

Water spray can be used to knock down vapours if there is NO chance of ignition.

Small fires can be extinguished with dry chemical or CO₂.

Personnel should withdraw immediately from area unless a small leak is stopped immediately after it has been detected.

If tanks are damaged, gas should be allowed to disperse and no recovery attempt should be made.

Personnel should avoid touching release point on containers since frost forms very rapidly.

Keep away from tank ends.

Storage and Transfer

It is not possible to contain vapours when released.

Disposal

Contact Federal and Territorial regulatory agencies to identify appropriate disposal methods for defective equipment that resulted in the release.

6.0 RESOURCE INVENTORY

6.1 PERSONNEL

In addition to the On Scene Coordinator and the Project Manager, approximately 6 to 14 people are available on site to assist in spill response and clean up activities. The amount of people on site varies throughout the year.

6.2 GENERAL EQUIPMENT

Equipment available on site to assist in responding to a hazardous materials spill includes various hand held tools including shovels. In addition to these, one spill kit will be on site during active exploration periods. The spill kit contains the following supplies:

- 1 – 360 litre/79 gallon polyethylene overpack drum
- 4 – oil sorbent booms (5" X 10')
- 100 – oil sorbent sheets (16.5" X 20" X 3/8")
- 1 – drain cover (36" X 36" X 1/16")
- 1 – Caution tape (3" X 500')
- 1 – 1 lb plugging compound
- 2 – pair Nitrile gloves
- 2 – pair Safety goggles
- 2 – pair Tyvek coveralls
- 1 – instruction booklet
- 10 – printed disposable bags (24" X 48")

Sorbent capacity of this spill kit is 240 litres.

7.0 TRAINING

All employees working on a Dunsmuir Ventures Ltd. exploration property will be trained in the safe operation of all machinery and tools to help prevent hazardous material spills. All employees on site will also be trained for initial spill response in the event of a spill. Annual refresher exercises will be conducted to review the procedures of this Spill Contingency Plan.