



**DIAMONDS NORTH RESOURCES LTD.**

**FUEL SPILL CONTINGENCY PLAN**

**FOR DRILL SITES**

**AND EXPLORATION CAMPS**

**KAGLORYUAK RIVER, BURNS LAKE AND TAHOE LAKE AREA**

**KITIKMEOT REGION**

**NUNAVUT**

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## **1.0 PREAMBLE:**

This Fuel Spill Contingency Plan is effective from April 1, 2006 to March 31, 2011 and applies to exploration programs conducted by Diamonds North Resources Ltd. in the Kagloryuak River, Burns Lake and Tahoe Lake areas, Kitikmeot Region Nunavut; centrally located Latitude 70°07' Longitude 109°30'.

The Fuel spill Contingency Plan has been prepared for internal company use and distributed to the Nunavut Water Board for approval as part of Diamonds North's application for a Water Licence renewal.

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

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Exploration Manager  
Diamonds North Resources Ltd.  
510-510 Burrard Street  
Vancouver, B.C. V6C 3A8  
Ph: 604-689-2010  
Fx: 604-484-7143

### **Company Responsible for Undertaking:**

Diamonds North Resources Ltd.  
510-510 Burrard Street  
Vancouver, B.C. V6C 3A8

### **Company Representative (Corporate):**

D. Graham Gill, P.Geo  
Exploration Manager  
Ph: 604-689-2010  
Fx: 604-484-7143

### **Company Representative (On-site):**

Unknown at this time.  
Phone and fax numbers for camp will be provided when communication contract is finalized.

## **2.0 INTRODUCTION**

The purpose of Diamonds North 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 Kagloryuak River, Burns Lake and Tahoe Lake areas of Nunavut. This Plan provides the protocol for responding to spills (or potential spills) that will minimize health and safety hazards, environmental damage and clean up costs as well as defining responsibilities of response personnel. This Fuel Spill Contingency Plan describes the nature of the exploration project anticipated over the next 5 years, details the sites that operations will be conducted upon, describes the response organization, action plans, reporting procedures and training exercises in place.

### **2.1 Project Description**

The proposed exploration program is a continuation of Diamonds North's diamond exploration efforts that have been ongoing on Victoria Island during 2002-2005. The property covers four known kimberlite trends within the recognized Victoria Island kimberlite district. Currently a total of 442 claims totaling 949,072 acres are held in the name of Diamonds North on Victoria Island. Central Victoria Island is generally a flat to undulating plain at an average elevation of 150 metres above sea level. Numerous small lakes and local large lakes occur throughout the region. The surface is covered in glacial till with frost heaved boulder fields of carbonate rocks. Permafrost is common throughout the area. Bedrock exposures occur in the form of mounds and low hills scattered throughout the area. Eskers, raised beaches and strandlines are common features. Vegetation is typical of Arctic tundra with sparse lichen, moss, sedge grass, Labrador tea bush and dwarf willow trees distributed throughout the region.

The proposed program consists of conventional mineral exploration techniques that are designed to locate and test certain rock types for their diamond potential only. The program will involve three main phases of exploration operated (nonconcurrently) from two base camps housing up to 15-25 men; the locations of which are shown on the accompanying map. Two camps will be required due to the distances to the work sites/kimberlite occurrences. The first stage will involve regional till sampling and additional airborne magnetic surveying. Once the data from the stage one program has been interpreted only those areas meeting certain geophysical/geological criteria will be considered for additional follow-up work. Stage two will involve site specific work including ground geophysical surveying and prospecting. This will involve the daily shuttling, via helicopter, of a 2-4 man crew to each target to establish a wooden picketed grid which will be used as control for subsequent ground geophysical surveying. As the results from the stage 1 and 2 work become available further interpretation of the data will provide the basis for stage 3 target delineation which involves small scale trenching and hand pitting as well as diamond drilling of select targets to collect sample material for diamond analysis. Note that some of the drilling program will overlap the Stage 1 and 2 programs as drill targets have been identified from exploration work conducted in previous years.

The single drill unit will be heli-portable and surface disturbance of the drilling phase will be very localized and minimal. Each drill site will cover approximately 100 (10 x 10) square meters and drill pads will be returned as near as possible to their original state. Water and drill cuttings returned from drilling operations will be collected in hand dug sumps or natural depressions

located 30 or more metres from the ordinary high water mark of any water body. All drill cuttings will be removed from ice surface of any lake based target. All garbage and fuel drums will be backhauled to camp and then deposited in the approved landfill site in Cambridge Bay by our contract expeditor. All barrels will be crushed prior to disposal.

As the property is very remote access is primarily by variously configured aircraft. During the summer months, between June and September, fixed-wing, wheeled aircraft are restricted to a few suitable eskers or mud flats. There are several lakes in the region that are suitable for lighter aircraft on floats. During the winter months, ski equipped fixed wing aircraft can land on many of the frozen lakes throughout the area. Larger aircraft such as the Hercules C130 are able to land on the larger lakes during the winter following suitable preparation of an ice landing strip. Heavy equipment may also be transported to applicable sites during the winter using snow cat trains. Access in and around the property is best accomplished by helicopter. Camp support for the southern most camp is via ski-equipped Twin Otter only and therefore is used only in the spring time. The northern most camp can be accessed by ski equipped Twin Otter while the lakes and rivers are frozen and by wheeled aircraft to an area of flat silty tundra 5 kilometers south of the camp from late July onwards once the ground has dried. This location, known as ‘Mud Strip’, offers the longest landing strip permitting full loads to be back-hauled. All transport of loads and personnel between the campsite and ‘Mud Strip’ is achieved via helicopter. An esker 2 kilometers north of camp across Tuktu River offers an all season landing strip. This location has approximately 300 meters of usable surface. With good headwinds a full load can be brought in and 50 – 75% loads can be back-hauled. A landing location 500 meters directly north of camp on the camp (west) side of the Tuktu River provides a very short landing strip of less than 200 meters. A Twin Otter can use this location when there are very strong head winds, however no load can be back hauled. This location is considered to be only for emergency medi-vac purposes. No float plane accessible lakes exist in the immediate region.

The northern camp currently consists of six 14’ x 16’ wooden structured sleep tents, one 32’ x 14’ kitchen tent, a 14’ x 16’ core shack, one 14’ x 16’ dry and two 14’ x 16 tents for first aid and office facilities, an outhouse and generator shack as shown on photo #1. The southern camp currently has only three 14’ x 16’ wooden structures in place as it has not been used since 2002. Six additional temporary wooden structures will be added to this site prior to start up of operations. Photo #2 illustrates this camp while operating in 2002. Fuel storage at the camps will utilize an “Insta-berm” system as shown in Appendix IV and be capable of holding up to 100, 45 gallon drums as well as all drill additives. All other fuel caches as shown on the accompanying map will be less than 40 drums, located on eskers or sandy substrate no closer than 31 metres from any normal high water mark.

### **3.0 SITE INFORMATION**

#### **1. Campsite (Northern) – See Photo 1 and topographic maps provided**

Capacity: 25 people

Structures: Six 14’ x 16’ wooden sleep tents

One 32’ x 14’ kitchen tent

One 14’ x 16’ core shack

One 14' x 16' dry  
 One 14' x 16' first aid tent  
 One 14' x 16' office tent  
 One outhouse  
 One generator shack  
 One heli-pad  
 One burn barrel  
 One fuel cache with Spill Kit (see below for cache capacities)  
 Spill response equipment located outside of core shack (see Section 8)

**2. Campsite (Southern)** – See Photo 2 and topographic maps provided

Capacity: 25 people

Structures: Four 14' x 16' wooden sleep tents

One 32' x 14' kitchen tent  
 One 14' x 16' core shack  
 One 14' x 16' dry  
 One 14' x 16' first aid tent  
 One 14' x 16' office tent  
 One outhouse  
 One generator shack  
 One heli-pad  
 One burn barrel  
 One fuel cache with Spill Kit (see below for cache capacities)  
 Spill response equipment located outside of core shack (see Section 8)

**3. Drill sites** - See topographic maps for reference.

Detailed maps for only two drill sites have been provided (Appendix I) as the remaining drill targets have not been finalized at this time.

Campsite and  
airstrip:

Aviation and diesel fuel, gasoline to be stored in 45 gal (205 litre) drums. These will be stored in quantities of up to 100 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. Approximately 12, 100 pound propane bottles will also be stored at camp. One drum of diesel will be stored behind each tent for heating purposes complete with drip trays. Four, 100 pound bottles of propane to be located behind kitchen tent. One 45 gallon diesel drum stored near generator. One – two drums of gasoline located in bermed cache,

Fuel Caches (Outside of Camp)	Aviation, diesel fuel and propane to be stored in fuel caches near drilling 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. All fuel 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. Caches will have the capacity to store up to 20-40 diesel and Jet-A drums combined.
Drill sites:	2-3 barrels of diesel, propane and drill additives to be stored on each drill pad consecutively. All fuel to be removed at completion of drill hole.

**Note: Spill kits will be provided at each fuel cache, at each operational drill site and the camp.**

#### **4.0 RESPONSE ORGANIZATION**

**Camp Technician** - responsible for checking fuel drum conditions and evidence of leakage daily, assuring drip trays are in place and not overflowing; keeping response equipment, 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**.

**Project Supervisor** 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.

If one or more of these key personnel are absent from site an alternative person will be named as either Camp Technician or Project Supervisor in the interim.

Names of key personnel to be responsible for activating spill contingency plan will be made available once crew members have been hired.

#### **5.0 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 so that it can be immediately reported to the Project Supervisor to implement the Plan. Satellite telephone/fax/internet communications will be available to contact outside help and for reporting requirements.

All spill kits located at all sources of fuel will have contact information for the NWT Spill Report Line prominently displayed. Contents of the spill kits are referenced in Appendix III.

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. See Appendix IV for SPILL REPORT FORM.
2. Report IMMEDIATELY to Yellowknife using the 24-hour Spill Report Line

**24-HOUR SPILL REPORT LINE ph: (867) 920-8130/ fx: (867) 873-6924  
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:**

#### **Regulatory Bodies:**

Government of Northwest Territories  
Pollution Control Division  
Yellowknife

Phone: (867) 873-7654

Department of Indian Affairs and  
Northern Development  
Yellowknife

Phone: (867) 920-8240

Environment Canada  
Environmental Protection Branch  
Yellowknife

Phone: (867) 669-4700  
Fax: (867) 873-8185

Environment Canada  
Iqaluit

Phone: (867) 975-4644  
Emergency Pager: (867) 920-5131

Nunavut Water Board

Phone: (867) 360-6338  
Fax: (867) 360-6369

Manager Pollution Control & Air Quality

Phone: (867) 975-5907



Environmental Protection  
Government of Nunavut

Fax: (867) 975-5981

Indian and Northern Affairs Canada  
Water Resources Manager  
Nunavut Regional Office

Phone: (867) 975-4550

Fax: (867) 975-4585

Indian and Northern Affairs Canada  
Land Administration Minister  
Nunavut Regional Office

Phone: (867) 975-4280

Fax: (867) 975-4286

Department of Fisheries and Oceans  
Nunavut Regional Office

Phone: (867) 979-8000

Fax: (867) 979-8039

RCMP Detachment  
Cambridge Bay

Phone: (867) 983-1111

Fax: (867) 983-2498

#### **Contractors:**

Kitnuna Construction Ltd.  
Cambridge Bay

Phone: (867) 983-2331

Fax: (867) 983-2043

Discovery Mining Services  
Yellowknife

Phone: (867) 920-4600

Fax: (867) 873-8332

#### **Company Contact:**

Diamonds North Resources Ltd.

Phone: (604) 689-2010

Fax: (606) 484-7143

**A detailed report on each occurrence MUST also be filed with the DIAND Water Resources Officer no later than 30 days after initially reporting the event. Contact Water Resources Officer, Nunavut District, Nunavut Region, P.O. Box 100, Iqaluit, NU, X0A 0H0, Ph: (867) 975-4298 or Fax: (867) 979-6445.**

## 6.0 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 (867) 920-8130.
8. Initiate or resume clean up.

## 7.0 ACTION PLANS

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. The most likely scenario for fuel spills in this type of exploration program would include; leaking drums, hydraulic line malfunction and re-fueling operations. It is not anticipated that a spill of more than 45 gallons will occur as no fuel container on-site will exceed this capacity.

### 7.1 *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.

## 7.2 *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 as 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.

## 7.3 *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.

#### 7.4 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. **Material Safety Data Sheets** for all hazardous materials involved in this project are listed in Appendix VI. These MSDS sheets are for all drilling muds, polymers and greases as well as for diesel, propane and gasoline. Some of the products listed are not on site but are included in case these drilling additives are required in the event of poor ground conditions.
2. 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.

3. 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.
4. Biological response methods include nutrient enrichment and natural microbe seeding.
5. Site remediation will be completed as per the advice of government authorities.

6. The clean-up and removal and/or disposal of any contaminated material will require registration with the Government of Nunavut, Department of Environment as well as the proper handling documentation for both the shipper and receiver in the form of a waste manifest. This information is provided in Appendix VII, **Environmental Guideline for General Management of Hazardous Waste**. For further information the Environmental Protection Service should be notified by phone in Iqaluit at (867) 975-5900 or by fax at (867) 975-5990.

## 8.0 RESOURCE INVENTORY

Resources available on site:

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

Resources available from other sources:

- Larger pumps if necessary; Cambridge Bay
- Bobcat/excavator; Cambridge Bay

Contact: Kitnuna Construction Ltd.

Phone: (867) 983-2331

## 9.0 TRAINING/EXERCISE

Diamonds North 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 regarding safety risks associated with the products that may be encountered and given a copy of the Fuel Spill Contingency Plan to read and sign off of before field operations begin. Mock spill response exercises will be conducted early in the program to ensure response criteria, communication and reporting requirements are met and fully understood.

## **Appendix I**

### **Project Maps and Photos**

Proposed Work map

North Camp Map

North Camp Photo

South Camp Map

South Camp Photo

North Drill Location

South Drill Location

## **Appendix II**

### **“Instaberm” Data Sheets**

## **Appendix III**

### **Spill Kit Contents**



## **Appendix IV**

### **Spill Report Form**

## **Appendix V**

### **Material; Safety Data Sheets**

## **Appendix VI**

### **Environmental Guideline for General Management of Hazardous Waste**