



**Appendix A**  
**TRIEX MINERALS CORPORATION**  
**SPILL CONTINGENCY PLAN**  
**KIRWAN LAKE CAMP**

**NUNAVUT**

March 2007



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## **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
- hydraulic oil
- lubricating oil
- gasoline
- Jet "B" fuel
- antifreeze
- propane

### **1.2 TRIEX MINERALS CORPORATION ENVIRONMENTAL POLICY**

It is the policy of Triex Minerals Corporation to comply with all existing laws and regulations to help ensure the protection of the environment. Triex Minerals Corporation cooperates with other groups committed to protecting the environment and ensures that employees, government, and the public is 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. Specifically for this application, this spill plan is to be implemented at the Kirwan Lake camp located approximately 100 km SW of Kugluktuk at approximately N 67° 18', W 116° 53'. A map showing the proposed approximate locations of the fuel caches can be found in Appendix III.

### **2.2 PETROLEUM STORAGE AND TRANSPORT**

All fuel will be stored no closer than the regulated distance (minimum of 31 m) from the normal high water mark of any water body, and main camp cache inspected daily.

All fuel and oil are transported to the various exploration properties by plane. MSDS Sheets for these products can be found in Appendix II.



The following is the anticipated product inventory:

- Diesel, 40 drums with a capacity of 205 litres each
- Gasoline, 1 drum with a capacity of 205 litres
- Aviation fuel, 31 drums with a capacity of 205 litres each
- Propane, 13, 100 lb tanks

### **2.3 CHEMICAL STORAGE AND TRANSPORT**

Any required chemicals are transported to site by plane. MSDS Sheets can be found in Appendix II.

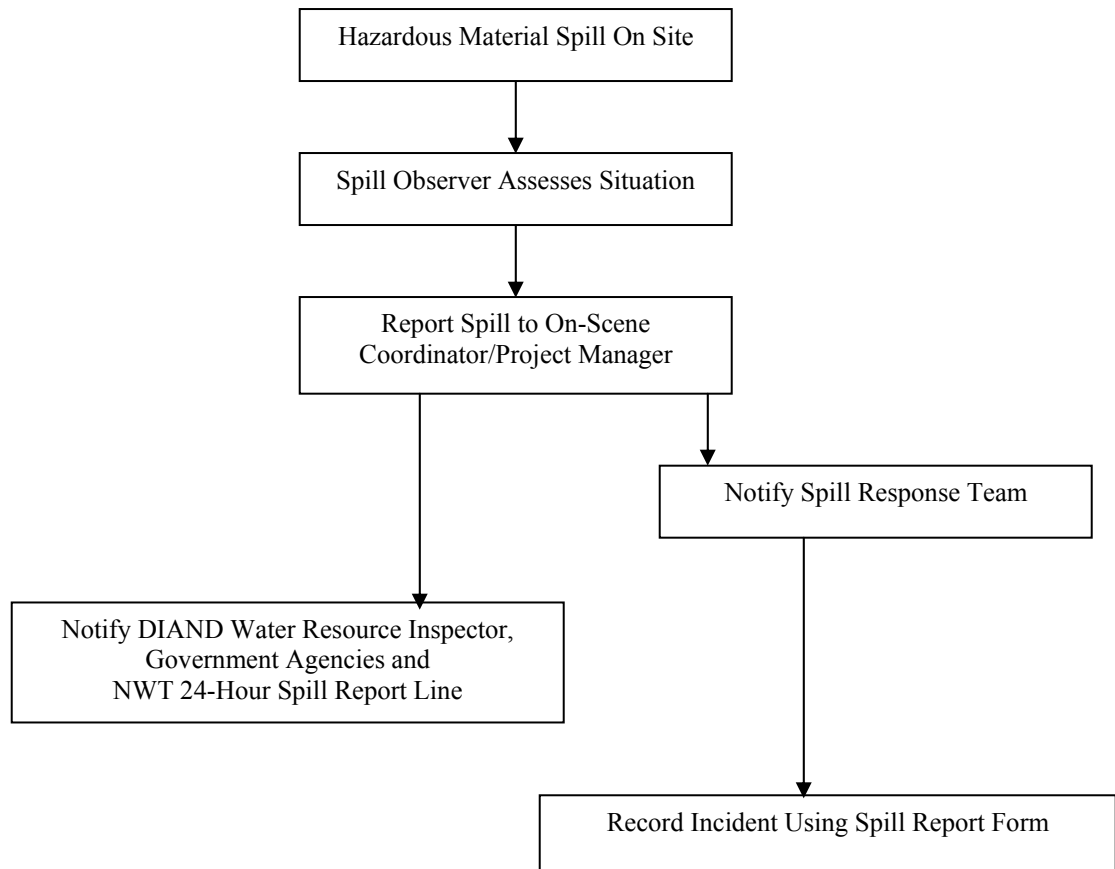
### **2.4 GREYWATER AND SEWAGE**

Greywater will be discharged into sumps or natural depressions located at the required distance 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 Triex exploration properties.





### 3.1 SPILL RESPONSE TEAM

Allan Armitage will be the On-Scene Coordinator for the Triex exploration properties. Allan Armitage will appoint and train appropriate personnel to make up the Triex Spill Response Team for the various Triex exploration properties. The key personnel that make up the Triex Spill Response Team are as follows:

On-Scene Coordinator: Allan Armitage - phone number for camp to be provided at the beginning of each field season.

Site Personnel Will generally vary from 3 to 24 people throughout the year

Project Manager Allan Armitage

The responsibilities of the On-Site 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**
  - **NWT 24-Hour Spill Report Line (867) 920-8130**
  - **DIAND Water Resources Inspector (867) 975-4298**
  - **Environment Canada (Iqaluit) (867) 975-4644**
  - **Environment Canada (24 hr pager) (867) 920-5131**
  - **Fisheries and Oceans (Iqaluit) (867) 979-8007 (Tanya Gordanier, Habitat Impact Assessment Biologist)**
  - **Nunavut Department of Environment (Iqaluit) (867) 975-5910 (Earl Baddaloo)**
  - **Kitikmeot Inuit Association (Kugluktuk) (867) 982-3310**
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 Triex management with information regarding the status of the clean up activities.
2. Act as a spokesperson on behalf of Triex 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**

<b>CONTACT</b>	<b>TELEPHONE NUMBER</b>
DIAND – Land Use Inspector, Kugluktuk	(867) 982-4306
Triex – Michael Gunning, President	(604) 687-6680
Triex – Ross McElroy, Exploration Manager	(604) 687-6680
Environment Canada	(867) 669-4700, Fax (867) 873-8185
Air Tindi	(867) 669-8212
Great Slave Helicopters	(867) 873-2081
Yellowknife Fire Department	(867) 873-2222
Kugluktuk RCMP	(867) 982-4111
Stanton Regional Hospital – Yellowknife	(867) 920-4111
Senior Geologist – Ross McElroy	(604) 687-6644
Discovery Mining Services	(867) 920-4600
Triex Office, Vancouver	(604) 687-6680

### 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  
**NWT 24-Hour Spill Report Line** (867) 920-8130  
**DIAND Water Resources Inspector** (867) 975-4298  
**Environment Canada** (24 hr pager) (867) 920-5131  
**Environment Canada** (Iqaluit) (867) 975-4644  
**Fisheries and Oceans** (Iqaluit) (867) 979-8007 (Tanya Gordanier, Habitat Impact Assessment Biologist)  
**Nunavut Department of Environment** (Iqaluit) (867) 975-5910 (Earl Baddaloo) and other regulatory agencies, and Triex management (**see Table 1 – Emergency Contacts**).
2. Fill out the NWT Spill Report Form *NWT1752/0202* and fax it to (867) 873-6924. See Appendix I.



## **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. If you are not sure of the material, use caution and consider your safety first.
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 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.



### **5.3 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 206 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, 206 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 CO<sub>2</sub>.

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 (Geologist), approximately 3 to 18 people are available on site to assist in spill response and clean up activities. The amount of people on site varies from site to site and 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. There will be five spill kits, one located at the main camp, one with the drill, and one at each fuel cache during active exploration periods. In addition to the spill kits at least 1 empty fuel drum will be located at each fuel cache along with absorbent pads for use in the event of a damaged or leaking drum. The spill kits contain 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")
- 1 – empty fuel drum

Sorbent capacity of this spill kit is 240 litres.

See attached map for the approximate location of the fuel caches, Appendix III.

## **7.0 TRAINING**

All employees working on a Triex Minerals Corporation 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.

A copy of this plan will be on site at camps and at the drills.



## **APPENDIX I**

### **NWT/Nunavut Spill Report Form**



Canada

# NT-NU SPILL REPORT

OIL, GASOLINE, CHEMICALS AND OTHER HAZARDOUS MATERIALS

NT-NU 24-HOUR SPILL REPORT LINE

TEL: (867) 920-8130

FAX: (867) 873-6924

EMAIL: spills@gov.nt.ca

REPORT LINE USE ONLY

A	REPORT DATE: MONTH – DAY – YEAR		REPORT TIME		<input type="checkbox"/> ORIGINAL SPILL REPORT, OR <input type="checkbox"/> UPDATE # _____ TO THE ORIGINAL SPILL REPORT	<b>REPORT NUMBER</b> _____
	B OCCURRENCE DATE: MONTH – DAY – YEAR		B OCCURRENCE TIME			
C	LAND USE PERMIT NUMBER (IF APPLICABLE)			WATER LICENCE NUMBER (IF APPLICABLE)		
D	GEOGRAPHIC PLACE NAME OR DISTANCE AND DIRECTION FROM NAMED LOCATION			REGION		
				<input type="checkbox"/> NWT <input type="checkbox"/> NUNAVUT <input type="checkbox"/> ADJACENT JURISDICTION OR OCEAN		
E	LATITUDE			LONGITUDE		
	DEGREES	MINUTES	SECONDS	DEGREES	MINUTES	SECONDS
F	RESPONSIBLE PARTY OR VESSEL NAME		RESPONSIBLE PARTY ADDRESS OR OFFICE LOCATION			
G	ANY CONTRACTOR INVOLVED		CONTRACTOR ADDRESS OR OFFICE LOCATION			
H	PRODUCT SPILLED		QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES	U.N. NUMBER		
	SECOND PRODUCT SPILLED (IF APPLICABLE)		QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES	U.N. NUMBER		
I	SPILL SOURCE		SPILL CAUSE		AREA OF CONTAMINATION IN SQUARE METRES	
J	FACTORS AFFECTING SPILL OR RECOVERY		DESCRIBE ANY ASSISTANCE REQUIRED		HAZARDS TO PERSONS, PROPERTY OR EQUIPMENT	
K	ADDITIONAL INFORMATION, COMMENTS, ACTIONS PROPOSED OR TAKEN TO CONTAIN, RECOVER OR DISPOSE OF SPILLED PRODUCT AND CONTAMINATED MATERIALS					
L	REPORTED TO SPILL LINE BY	POSITION	EMPLOYER	LOCATION CALLING FROM	TELEPHONE	
M	ANY ALTERNATE CONTACT	POSITION	EMPLOYER	ALTERNATE CONTACT LOCATION	ALTERNATE TELEPHONE	

## REPORT LINE USE ONLY

N	RECEIVED AT SPILL LINE BY	POSITION	EMPLOYER	LOCATION CALLED	REPORT LINE NUMBER
		STATION OPERATOR		YELLOWKNIFE, NT	(867) 920-8130
LEAD AGENCY <input type="checkbox"/> EC <input type="checkbox"/> CCG <input type="checkbox"/> GNWT <input type="checkbox"/> GN <input type="checkbox"/> ILA <input type="checkbox"/> INAC <input type="checkbox"/> NEB <input type="checkbox"/> TC			SIGNIFICANCE <input type="checkbox"/> MINOR <input type="checkbox"/> MAJOR <input type="checkbox"/> UNKNOWN		FILE STATUS <input type="checkbox"/> OPEN <input type="checkbox"/> CLOSED
AGENCY		CONTACT NAME	CONTACT TIME	REMARKS	
LEAD AGENCY					
FIRST SUPPORT AGENCY					
SECOND SUPPORT AGENCY					
THIRD SUPPORT AGENCY					



## **APPENDIX II**

### **MSDS Sheets**