

**Titan Uranium Inc.**

**Spill Contingency Plan**

**Thelon Project**  
**Located Northwest of Baker Lake, Nunavut**

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## **1.0 Preamble**

The Spill Contingency Plan will be effective from April 1, 2006 to April 1, 2009 and applies to the Thelon Project operated by Titan Uranium Incorporated. The Thelon Project is located approximately 150 kilometres northwest of the Hamlet of Baker Lake in N.T.S. Sheets 66B, 66G, and 66H and consists of eight mineral leases and one hundred twelve mineral claims that are subject to an agreement with Ronald McMillan. The agreement defines the boundary project boundary by the following points: Point A - 97°34'W, 65°33'N; Point B - 100°29'W, 64°57'N; Point C - 99°43'W, 64°36'N; Point D - 97°55'W, 65°02'N; and Point E - 97°13'W, 65°18'N.

Additional or revised copies of the Spill Contingency Plan can be obtained from Titan Uranium Inc., Suite 100 – 2100 Airport Drive, Saskatoon, Saskatchewan, S7L 6M6 (Phone: 306-651-2405; fax : 306-651-5105). Titan Uranium Inc. head office address is 2nd Floor - 157 Chadwick Ct., North Vancouver BC, V7M 3K2.

## **2.0 Introduction**

### **2.1 Purpose of Plan**

The purpose of this Spill Contingency Plan is to provide a plan of action for all spills of hazardous materials that could occur within the Thelon project area or at the camp located on the southwest shore of Itza Lake in N.T.S. Sheet 66 G/1 (Crown Land; 65°02'38"N and 98°22'30"W), approximately 150 kilometers northwest of Baker Lake in Nunavut. This Spill Contingency Plan defines the responsibilities of key personnel; outlines procedures to effectively and efficiently contain and recover spills of hazardous materials; lists steps that will be taken to limit the possibility of spills; and will be revised as required to reflect materials on site.

The exploration program for 2008 will be supported by helicopter and will include the operation of a diamond drill. The principal hazardous materials on site will be Jet A1 and P-50 diesel. Lesser amounts of gasoline, propane, lubricants, and drill additives are also considered in the plan.

### **2.2 Titan Uranium Inc. Environmental Policy**

It is the policy of Titan Uranium Inc. to fully comply with all applicable Acts and Regulations to ensure the protection of the environment of Nunavut. Titan Uranium Inc. shall cooperate with other groups committed to protecting the environment and shall ensure that our employees, regulatory authorities and the public are informed on the policies and procedures we have developed to help protect the environment of Nunavut.

### **3.0 Site Information**

#### **3.1 General**

This spill contingency plan covers the principal fuel storage area, helicopter refueling area at the camp, and fuel handling at the widely separated drill sites within the project area. Refueling of the generator, camp heating, propane supply for cooking, and general camp operations are also considered under the plan.

#### **3.2 Petroleum Storage and Transport**

The fuel for the project will be sledded over land from Baker Lake. The fuel cache will be located adjacent to the camp on a relatively flat, elevated area more than 70 meters from the high water mark of nearby ponds and lakes. The Jet-A1, P-50, and unleaded gasoline are contained in 205 litre drums. Each drum will be inspected immediately upon delivery to the cache site to ensure that there has been no damage during transport. The fuel haul for the 2008 program will include approximately 400 drums of Jet-A1 and 2 drums of unleaded gasoline. Fuel drums will be stored in instabermes setup in 2006 and 2007.

Fuel drums that are in use outside of the instaberm will have secondary containment. This includes fuel drums used for tent stoves as well as all other drums stored in camp. The camp manager will make daily inspections of the fuel in camp.

#### **3.3 Greywater and Sewage**

Greywater will be discharged into sumps located at the minimum required distance from all water bodies. Sewage will be incinerated. Sumps will be inspected regularly to ensure that there is no erosion or leaching.

#### **3.4 Locations of Spill Response Equipment**

Spill kits (with additional absorbent pads) will be located at the fuel cache near the helicopter refueling area and at the drill. A third kit will be located in the camp. Hand tools will also be located with each spill kit. Fire extinguishers will be located in each tent and at the generator.

### **4.0 Response Organization**

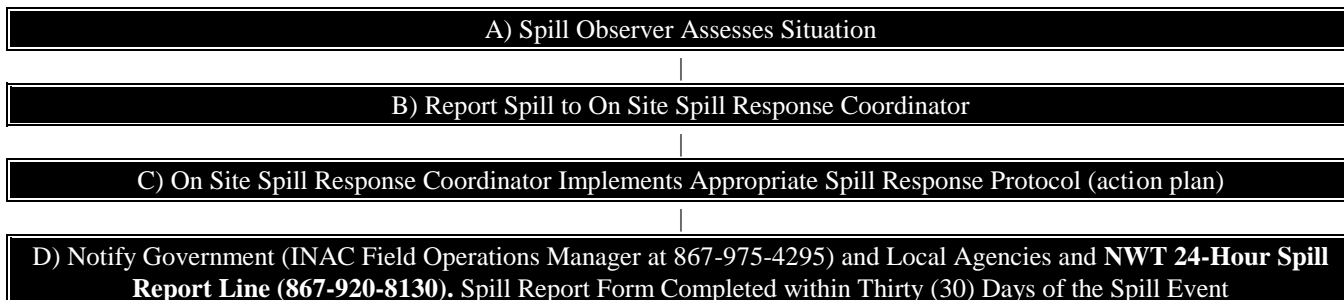
The Camp Manager or Field Supervisor will act as the On Site Spill Response Coordinator for Titan Uranium Incorporated in the event of a spill. On site personnel will vary from 3 to 15 people during the field season.

The responsibilities of the Spill Response 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 Response Plan
4. Immediately report the spill to the NWT 24-Hour Spill Report Line **(867) 920- 8130**
5. Obtain additional spill response resources from the Hamlet of Baker Lake if not available on site for spill response:
6. Provide regulatory agencies with information regarding the status of the clean-up activities
7. Prepare and submit a report on the spill incident to regulatory agencies within 30 days of the event (Appendix 1).

## 5.0 Reporting Procedures

The following chart illustrates the procedures to be followed in the event of a hazardous material spill incident during the exploration program:



A satellite phone will be on site and available for the response team to use. The phone number has not yet been determined.

## 5.1 List of Contacts

Titan Uranium Inc.	Philip Olson, President	(306) 651-2405
	John Dixon, Field Supervisor	(306) 651-2405
<b>NWT 24-Hour Spill Report Line</b>		<b>(867) 920-8130</b>
INAC	Spencer Dewar, Lands Administrator	(867) 975-4283
	Water Resources Manager	(867) 975-4550
	Field Operations Manager	(867) 975-4295
	Environment Manager	(867) 975-4549
	Water Resources Inspector	(867) 975-4298
	Resource Management Officer – Kivalliq (Henry Kablalik -Rankin Inlet)	(867) 645-2831 kablalikh@inac.gc
RCMP	Baker Lake	(867) 793-0123
Environment Canada	Iqaluit	(867) 975-4644
	emergency paging system	(867) 920-5131
DFO	Iqaluit	(867) 975-8007
Kivalliq Inuit Association	Rankin Inlet	867) 645-2800
Government of Nunavut	Department of Environment	(867) 975-5900
	Manager Pollution Control & Air Quality	(867) 975-5907
Nunavut Water Board		(867) 630-6338
Ookpik Aviation	Boris Kotelewetz	(867) 793-2234

## 6.0 Action Plans

### 6.1 Potential Sources and Sizes of Leaks

A review of the planned activities on the Thelon Project indicates that there are potentially several sources for spills as follows:

- a) Leakage from Stored Drums
- b) Refueling of helicopter
- c) Refueling of Diamond Drill Equipment
- d) Refueling of Camp Generator, Camp Stoves, Incinerator

Preventative measures to minimize the occurrence of spills are summarized in the table below

Activity	Cause of Spill	Size of Spill	Preventative Measures
Fuel Storage	Fuel may leak from improperly sealed drums or damaged drums	maximum 205 litre	a) fuel drums routinely inspected b) report any problems. c) Fuel from any suspect drum is immediately pumped to an empty drum d) drums stored with bungs at the 3 and 9 o'clock to limit leak to 100 litres
Refueling of helicopter	During refueling a hose could break, spring a leak, fall out of the receptacle, or an overfilling of the tank could occur resulting in fuel being spilled at the refueling site.	Limited fuel spills possibly resulting in small puddles of fuel	a) refueling equipment routinely examined for integrity by air crew b) refueling completed by the air crew c) helicopters refueled at the fuel cache d) air crew will be made aware of the location of fuel spill kit and extra absorbent pads, spill kits, and spill trays
Refueling of Diamond Drill Equipment	During refueling a hose could break, spring a leak, fall out of the receptacle, or an overfilling of the tank could occur resulting in fuel being spilled at the drill site	Limited fuel spills possibly resulting in small puddles of fuel	a) refueling completed by the drill crew who will routinely examine equipment for integrity b) spill kit with additional absorbent pads will be stored at the drill site
Refueling of Camp Generator, Camp Stoves, Incinerator		Limited fuel spills possibly resulting in small puddles of fuel	a) refueling equipment will be routinely examined for integrity b) camp attendant will constantly monitor refueling process c) containment trays are kept under all open drums, or drums in use d) Taps for supply lines to diesel fired heating stoves are to be wrapped with a sorbent pad e) absorbent pads are kept beneath the generator
Use of chemicals, lubricants, and other additives	spillage during transfer from container	small	a) use drip pan to prevent leakage

Instabermers will be used as secondary containment for the stored fuels.

## 6.2 **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, estimate the volume of material that has been spilled
3. Assess the hazard to people in the vicinity of the spill:
4. If possible, and safety permits, attempt to stop the release of product to minimize the potential for environmental impacts
5. Immediately report the spill to the On Site Spill Response Coordinator
6. Resume any effective action to contain, mitigate, or terminate the flow of the spilled material.

## 6.3 **Action: Fuel Spills**

If possible, and safety permits, stop the flow of product which is occurring and eliminate all ignition sources. *Smoking is prohibited during all spill response activities.*

### 6.3.1 **Spill on Soil, Gravel, Rock, or Vegetation**

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 vapors 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 are to be removed from the site, Titan Uranium Incorporated shall contact regulatory agencies for approval before commencing with the removal.

### 6.3.2 **Spill 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, 20 liter pails, and/or polypropylene bags.

### 6.3.3 **Spill on Water**

It is important to immediately limit the extent of spills. If the spill is small, deploy hydrophobic (water repellent) absorbent pads on the water. Hydrophobic pads readily absorb hydrocarbons. Alternatively, an ultra-dry absorbent designed for use on water-based spills may be deployed. If the spill is larger ready several empty drums to act as refuge containers for the spill. Deploy containment booms on the water surface to "fence in" the spill area gradually and to prevent it from spreading. Keep in mind such environmental factors as high winds and wave action can adversely affect attempts at spill cleanup. Absorbent booms can then be deployed to encircle and then absorb any hydrocarbon spillage that may have escaped the containment boom. Once a boom has been secured, a skimmer may be brought on-scene to aid in capture of the hydrocarbon; once captured, the product should be pumped to the empty fuel drums and held for disposal.

#### **6.4     Action: Chemical Spills**

Members of the emergency response team who might be susceptible in certain situations (such as asthmatics, where fumes or airborne particles are evident), should be replaced with alternates. Assemble the necessary safety equipment before response (e.g. latex or other protective gloves, goggles, or safety glasses, masks or breathers, etc.). Apply absorbents to soak up liquids. Place plastic sheeting over solid chemicals, such as dusts and powders, to prevent their disbursement by wind or investigation by birds or other mammals. Neutralize acids or **caustics**. Place spilled material and contaminated cleanup supplies in an empty refuge drum and seal for disposal.

#### **6.5     Storage and Transfer and Disposal of Contaminants**

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. Ensure contact with Federal and Nunavut regulatory agencies to identify appropriate disposal methods before disposing of contaminated material.

#### **7.0     Environmental Mapping**

The camp and fuel storage area are located on relatively flat sandy area on the southwest shore of Itza Lake in N.T.S. Sheet 66 G/1 (Crown Land; 65°02'38"N and 98°22'30"W). The camp site and the fuel storage area are located more than 70 metres from the lake and smaller bodies of water (figures 1, 2, and 3).

#### **8.0     Resource Inventory**

##### **8.1     List of On-site Spill Containment Equipment**

##### **8.1.1   Spill Kits**

A minimum of three spill kits will be maintained, one at the main fuel cache, a second at the diamond drill site, and a third kit for use at the camp. These drums will have a capacity of 205 litres and contain the following:

- 150 - 16"X 20"oil absorbent pads
- 8 - 3"X 4"oil absorbent socks
- 2 - 5"X 10'oil absorbent booms
- 4 - temporary disposal bags
- 1 - pair chemi-pro gloves
- 1 - pair disposable coveralls
- 1 - pair clear safety goggles
- 1 - 4 oz. Strong Steel Gapseal
- 1 - 205 litre containment drum

##### **8.1.2   Absorbent Pads**

Absorbent pads or rolls will be kept in good supply. These will be stored at the camp, fuel storage area, and at the drill.



### **8.1.3 Hand Tools**

Hand tools will be stored at the camp, fuel storage area, and at the drill for the removal of contaminated material, or the construction of small containment berms.

### **8.1.4 Plastic Pails and Bags**

A sufficient quantity of 20 litre plastic pails and 20 litre plastic sample bags will be stored for the disposal of contaminated material.

## **9.0 Training**

### **9.1 Orientation**

All field personnel upon arriving in the camp will be given a project orientation which will include:

- ◆ notification of the location of all fuels and applicable MSDS sheets;
- ◆ notification of the location, and use: of fuel spill kits and supplies;
- ◆ notification of the location of ancillary equipment - shovels, pails, plastic bags, etc.
- ◆ instruction in the use of all equipment and supplies
- ◆ instruction in the reporting of incidents
- ◆ instruction in the cleanup and proper storage/disposal of contaminated materials.

### **9.2 Inventories**

Regular inventory updates will be provided in list form to all team members. Information will include a listing of all resources, number of items, their location, condition, date of last inspection and any special comments (such as expiry dates, under whose authority they may be accessed and special handling instructions).

### **9.3 Practice Drills**

At least one practice drill will be held per season to give personnel a chance to practice emergency response skills. Each practice will be evaluated and a report prepared with the objective of learning where gaps and deficiencies (either in skills or physical resources) exist, and in what areas more practice is required.

## **10.0 Product Information**

The following sections summarize some of the more important details that need to be considered when dealing with the fuels and chemicals that will be at the project. The MSDS sheets are given in Appendix 2 and a separate book containing the MSDS sheets will be kept in the office. A copy of this plan with the MSDS sheets will be kept with the Spill Kits at the camp, fuel storage area and at the drill. As contractors have not yet been selected for the project the list of materials may change and this plan will be updated to reflect any changes to the list of materials that will be present on site.

### **10.1 Diesel, Jet-A1 and Gasoline**

- ♦ Diesel, Jet-A1 and Gasoline are highly flammable and easily ignited by heat, sparks or flames
- ♦ ***Do not smoke***
- ♦ Gasoline and Jet-A are more volatile than diesel
- ♦ Explosion hazard indoors, in confined spaces and outdoors
- ♦ Vapours may form explosive mixtures with air
- ♦ Vapours may travel to source of ignition and flash back
- ♦ Most vapours are heavier than air. They will spread along ground and collect in low or confined areas.
- ♦ Keep pump or electrical equipment far away, be very careful with metallic tools that could sparks on rocks, wait for vapours to dissipate
- ♦ Inhalation may cause central nervous effects
- ♦ Eye and skin irritation
- ♦ Prolonged exposure has caused cancers in laboratory animals

### **10.2 Propane**

- ♦ Extremely Flammable, easily ignited by heat, sparks or flames
- ♦ ***Do not smoke***
- ♦ Cylinders may explode when heated
- ♦ Cylinders may rocket if ruptured
- ♦ Explosion hazard indoors, in confined spaces and outdoors
- ♦ Vapours may form explosive mixtures with air
- ♦ Vapours may travel to source of ignition and flash back
- ♦ Vapours from liquefied gas are initially heavier than air and spread along ground.
- ♦ Contact with gas or liquefied gas may cause burns, severe injuries and / or frostbite
- ♦ Keep pump or electrical equipment far away, be very careful with metallic tools that could sparks on rocks, wait for vapours to dissipate
- ♦ Liquid may cause frostbite and blisters
- ♦ Blurred vision if goes in the eyes
- ♦ Narcotic asphyxiant
- ♦ Dizziness, disorientation, excitation, headache, vomiting, unconsciousness if inhaled

### **10.3 Motor Oil, Hydraulic Oil, Transmission Fluid**

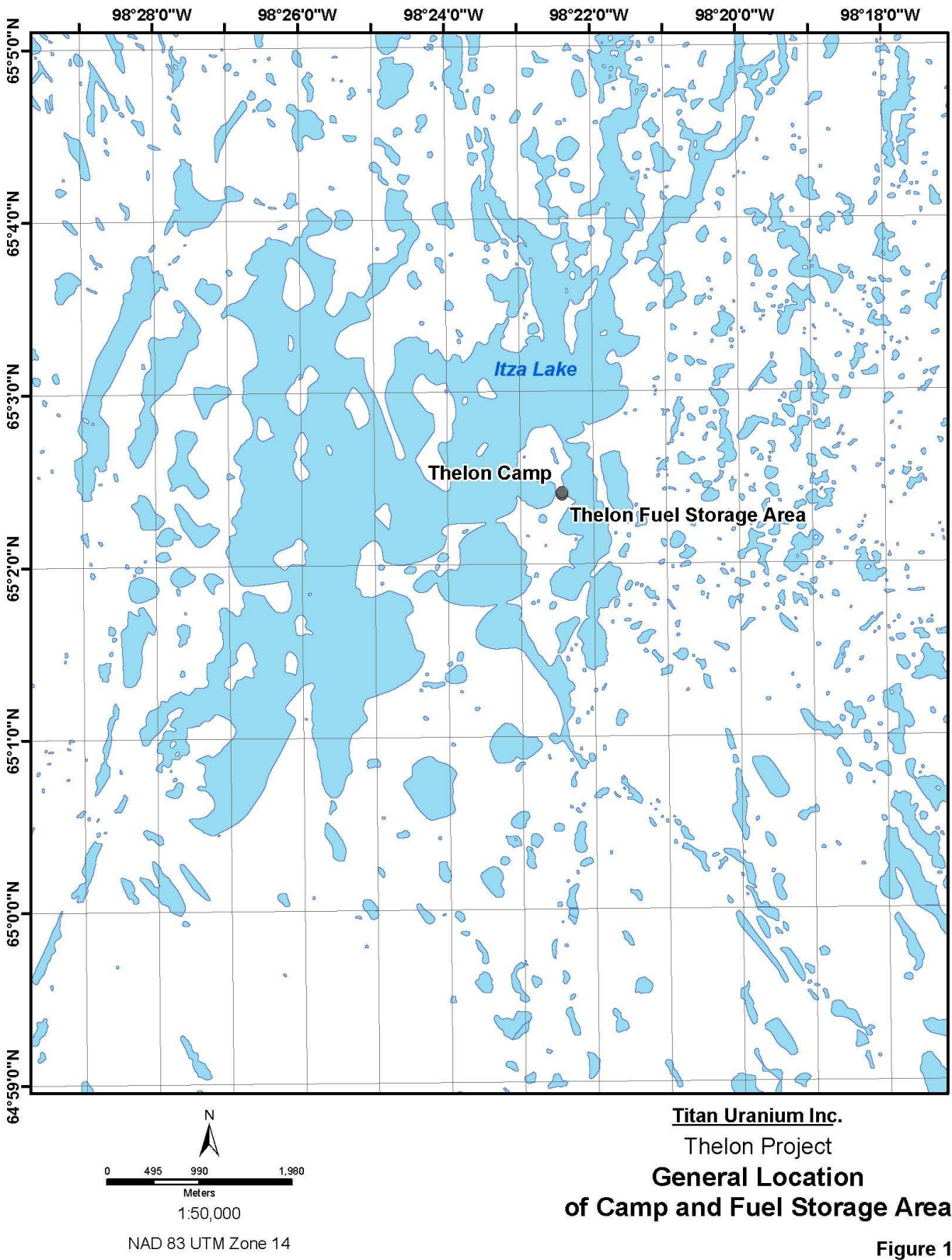
- ♦ Avoid breathing mists, may cause lung irritation
- ♦ On skin may cause mild irritation

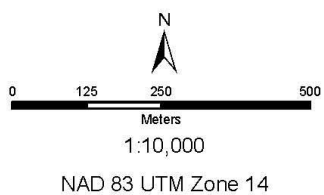
### **10.4 Antifreeze**

- ♦ Respiratory irritation with prolonged exposure.
- ♦ Kidney, liver and bladder problems reported in animals.

### **10.5 Battery Acid**

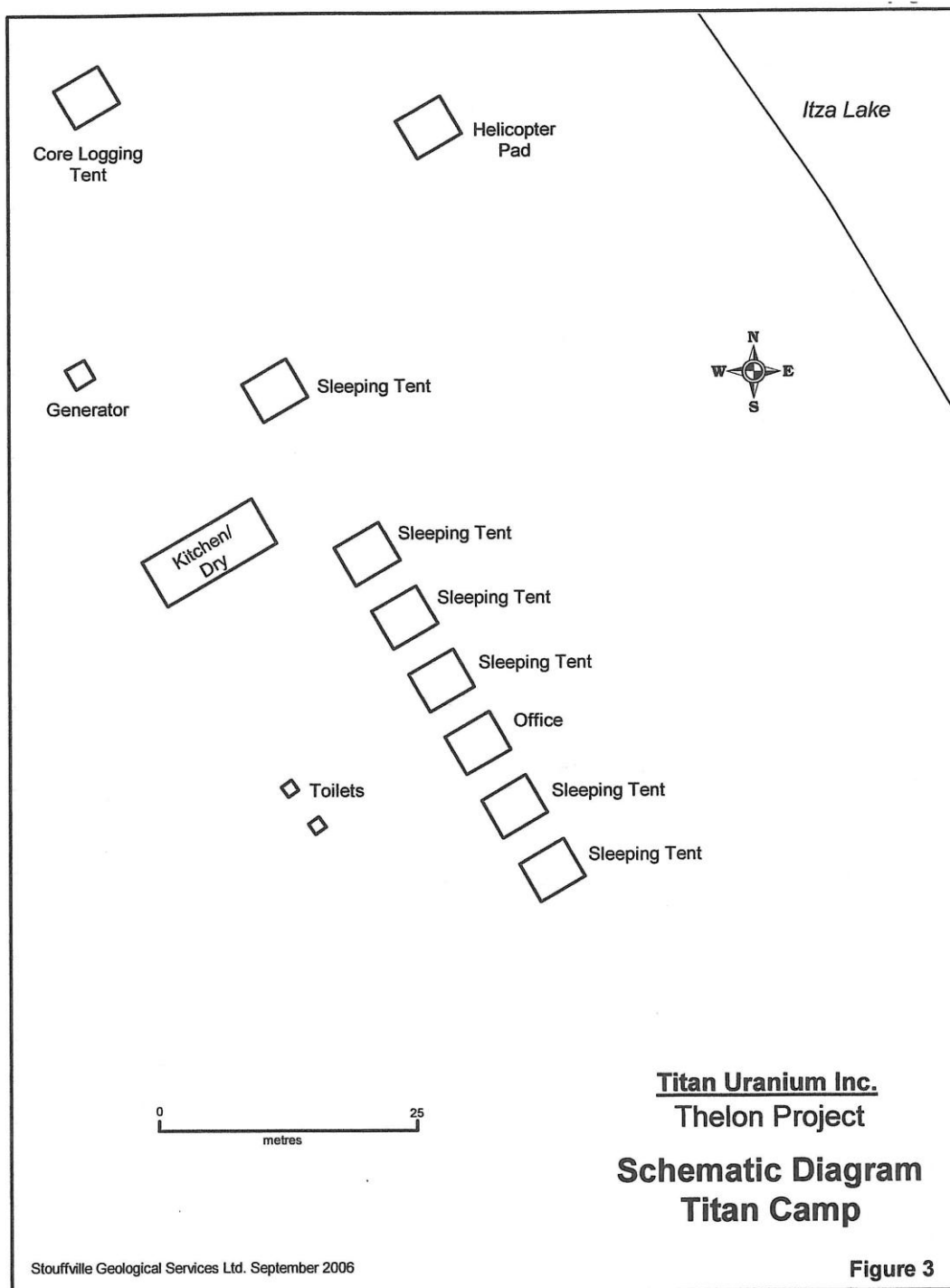
- ♦ Fire and explosion hazard
- ♦ Can be extinguished with dry chemical fire extinguisher.
- ♦ Ventilate area
- ♦ Remove combustible materials
- ♦ Mist inhalation hazard when being charged or spilled
- ♦ Acid burns to skin and eyes irritation





**Titan Uranium Inc.**  
Thelon Project  
**Location of Camp  
and Fuel Storage Area**

**Figure 2**



(Note: The schematic will remain the model for the new camp site located adjacent to the fuel berm)

Revised: February 28, 2008

Appendix 1  
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	REPORT NUMBER _____
	OCCURRENCE DATE: MONTH - DAY - YEAR		OCCURRENCE TIME			
B	LAND USE PERMIT NUMBER (IF APPLICABLE)		WATER LICENCE NUMBER (IF APPLICABLE)			
C	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	
D	LATITUDE		LONGITUDE			
	DEGREES	MINUTES	SECONDS	DEGREES	MINUTES	SECONDS
E	RESPONSIBLE PARTY OR VESSEL NAME		RESPONSIBLE PARTY ADDRESS OR OFFICE LOCATION			
F	ANY CONTRACTOR INVOLVED		CONTRACTOR ADDRESS OR OFFICE LOCATION			
G	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	
H	SPILL SOURCE		SPILL CAUSE		AREA OF CONTAMINATION IN SQUARE METRES	
I	FACTORS AFFECTING SPILL OR RECOVERY		DESCRIBE ANY ASSISTANCE REQUIRED		HAZARDS TO PERSONS, PROPERTY OR ENVIRONMENT	
J	ADDITIONAL INFORMATION, COMMENTS, ACTIONS PROPOSED OR TAKEN TO CONTAIN, RECOVER OR DISPOSE OF SPILLED PRODUCT AND CONTAMINATED MATERIALS					
K						
L	REPORTED TO SPILL LINE BY	POSITION	EMPLOYER	LOCATION CALLING FROM	TELEPHONE	
	ANY ALTERNATE CONTACT	POSITION	EMPLOYER	ALTERNATE CONTACT LOCATION	ALTERNATE TELEPHONE	
M	REPORT LINE USE ONLY					
N	RECEIVED AT SPILL LINE BY	POSITION STATION OPERATOR	EMPLOYER	LOCATION CALLED YELLOWKNIFE, NT	REPORT LINE NUMBER (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						

PAGE 1 OF \_\_\_\_\_

## Appendix 2

### Material Safety Data Sheets