

# **Mega Uranium Ltd.**

## **Spill Contingency Plan**

**Itza Lake Camp  
Located Northwest of Baker Lake, Nunavut**

**Revised by: Michael McNeill for Mega Uranium Ltd.  
Revised Date: January 26, 2013**

## Table of Contents

<b>1.0</b>	<b>Preamble .....</b>	<b>1</b>
<b>2.0</b>	<b>Introduction.....</b>	<b>1</b>
2.1	Purpose of Plan .....	1
2.2	Mega Uranium Ltd. Environmental Policy .....	1
<b>3.0</b>	<b>Site Information .....</b>	<b>1</b>
3.1	General .....	1
3.2	Petroleum Storage .....	1
3.3	Greywater and Sewage .....	2
3.4	Locations of Spill Response Equipment .....	2
<b>4.0</b>	<b>Response Organization .....</b>	<b>2</b>
<b>5.0</b>	<b>Reporting Procedures.....</b>	<b>2</b>
5.1	List of Contacts.....	2
<b>6.0</b>	<b>Action Plans .....</b>	<b>3</b>
6.1	Potential Sources and Sizes of Leaks .....	3
6.2	Initial Action .....	4
6.3	Action: Fuel Spills .....	4
6.3.1	Spill on Soil, Gravel, Rock, or Vegetation .....	4
6.3.2	Spill on Ice and Snow .....	4
6.3.3	Spill on Water.....	4
6.4	Action: Chemical Spills .....	5
6.5	Storage and Disposal of Contaminants.....	5
<b>7.0</b>	<b>Environmental Mapping.....</b>	<b>5</b>
<b>8.0</b>	<b>Resource Inventory .....</b>	<b>6</b>
8.1	List of On-site Spill Containment Equipment.....	6
8.1.1	Spill Kits .....	6
8.1.2	Absorbent Pads .....	6
8.1.3	Hand Tools .....	6
8.1.4	Plastic Pails and Bags .....	6
<b>9.0</b>	<b>Training.....</b>	<b>6</b>
9.1	Orientation.....	6

9.2	Inventories .....	6
9.3	Practice Drills .....	7
<b>10.0</b>	<b>Product Information.....</b>	<b>7</b>
10.1	Diesel, Jet-A1 and Gasoline.....	7
10.2	Motor Oil, Hydraulic Oil, Transmission Fluid .....	7

### List of Figures

Figure 1	General Location of Camp and Fuel Storage Area (1:50,000 scale)	9
Figure 2	Detailed Location of Camp and Fuel Storage Area (1:10,000 scale)	10
Figure 3	Schematic Diagram Mega Camp	11

## **1.0 Preamble**

The Spill Contingency Plan will be effective from April 1, 2006 to August 28, 2013 and applies to the Itza Lake Camp now operated by Mega Uranium Ltd. The camp is located approximately 150 kilometres northwest of the Hamlet of Baker Lake in N.T.S. Sheets 66G/1

## **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 during the final reclamation and abandonment of Itza Lake 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 principal hazardous materials on site will be P-50 diesel. Lesser amounts of Jet B and lubricants are also considered in the plan.

### **2.2 Mega Uranium Ltd. Environmental Policy**

It is the policy of Mega Uranium Ltd. to fully comply with all applicable Acts and Regulations to ensure the protection of the environment of Nunavut. Mega Uranium Ltd. 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 at the camp. No active exploration programs are planned at the Itza Lake camp. The sole purpose of this plan is for the final reclamation and abandonment of the camp.

### **3.2 Petroleum Storage**

An ongoing care and maintenance program for fuel the fuel stored at the Itza Lake camp is to consist of site visits by a contracted individual from Baker Lake or Mega representatives whose responsibilities include; monitoring of installed rain drain filters and replacing when necessary, monitoring of water levels in berms, ensuring all berm walls are erect, continued surveillance of fuel drum bungs for leaks and punctures, and containment of spills inside of berms. As part of the 2013 reclamation and abandonment plan for Itza Lake Camp all petroleum products will be removed from site.

### 3.3 Greywater and Sewage

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

### 3.4 Locations of Spill Response Equipment

Spill kits (with additional absorbent mating and absorbent coils) to be located at the fuel cache near the helicopter refueling area and at the drill. A third kit to be located in the camp. Hand tools to be located with each spill kit. Fire extinguishers to be located in each tent and at the generator when camp is in operation.

## 4.0 Response Organization

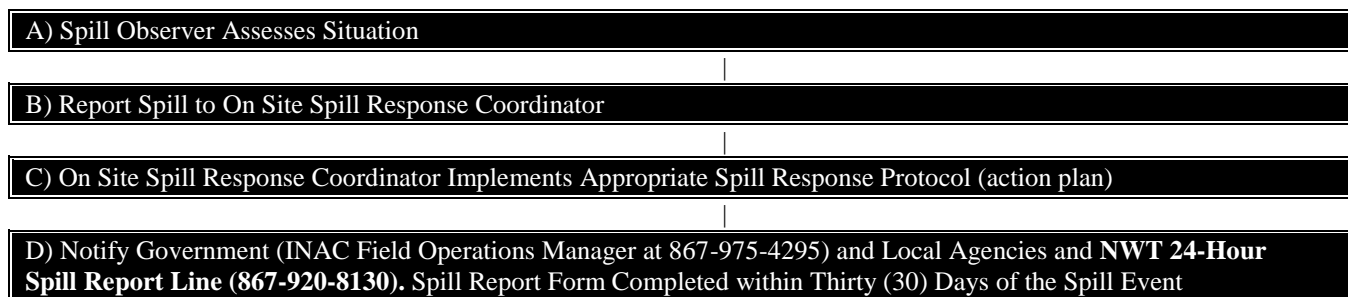
A Mega project manager or operations manager to act as the Spill Response Coordinator for Mega Uranium Ltd. in the event of a spill.

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.

## 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:



### 5.1 List of Contacts

Mega Uranium Ltd.	Michael Downes, VP, North America	(416) 643-7636
Mega Uranium Ltd.	Mike McNeill, Operations Manager	(709) 745-6448

<b>NWT 24-Hour Spill Report Line</b>		<b>(867) 920-8130</b>
INAC/AANDC	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 Region	(867) 645-2831
RCMP	Baker Lake	(867) 793-0123
Environment Canada	Iqaluit	(867) 975-4644
	emergency paging system	(867) 766-3737
DFO	Iqaluit	(867) 975-8007
Kivalliq Inuit Association	Rankin Inlet	(867) 645-2800
Government of Nunavut	Department of Environment	(867) 975-7700
	Manager Pollution Control & Air Quality	(867) 975-7748
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

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

<b>Activity</b>	<b>Cause of Spill</b>	<b>Size of Spill</b>	<b>Preventative Measures</b>
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

Use of chemicals, lubricants, and other additives	spillage during transfer from container	small	a) use drip pan to prevent leakage
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Berms 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 that 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 is to be removed from the site, Mega Uranium Ltd. 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 absorbent 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 Disposal of Contaminants**

All contaminated water, ice, snow, soil, and clean up supplies will be stored in closed, labeled containers, specific to the nature of the spill. All containers will be stored in a well ventilated area away from incompatible materials. Disposal of contaminated materials will be specific to each individual occurrence as there are likely many variables involved. Aspects such as type of spill, size of spill, concentration of contaminants, and materials to be disposed will determine the appropriate method of disposal. Contact with Federal and Nunavut regulatory agencies must be made prior to the disposal of any materials in order to ensure that the disposal/treatment methods occur in an approved and authorized method.

Hydrocarbons are the main source of spill potential for the project. In prior years, the Nunavut Department of Environment has advised that minor amounts of contaminated sand, gravel, soil, and spill cleaning materials may be incinerated to remove elevated levels of hydrocarbons. Incineration must be conducted with only minor amounts to ensure thorough combustion of all contaminants. The remaining sand, gravel, or soil may then be dispersed once the contamination levels are below the levels outlined in “Environmental Guideline for Site Remediation” by the Department of Sustainable Development Environmental Protection Service. For amounts of contaminated sand, gravel, soil, and spill cleaning materials that exceed the capacity for incineration on site, the materials shall be disposed of at Baker Lake. Prior authorization from the town of Baker Lake must be given before any materials are disposed of at the landfill.

### **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°02'25"N and 98°22'26"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 is planned to give personnel a chance to practice emergency response skills. Such 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

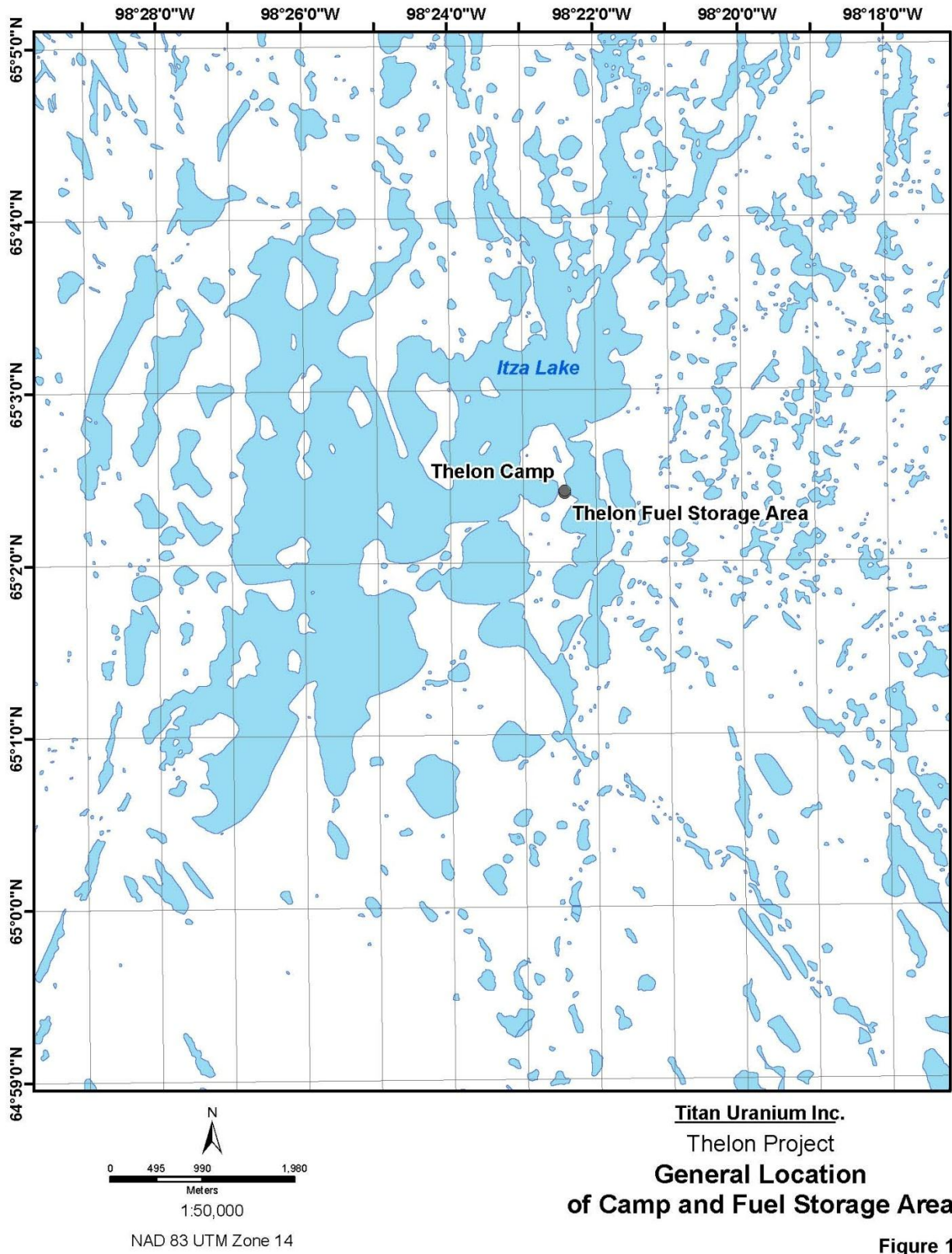
The following sections summarize some of the more important details that need to be considered when dealing with the fuels and chemicals on the site. The MSDS sheets will be provided and a separate book containing the MSDS sheets to be kept in the office. A copy of this plan with the MSDS sheets will be kept with the Spill Kits at the camp and fuel storage area.

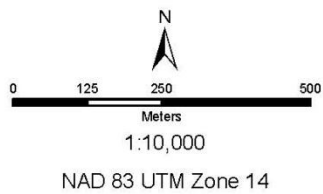
### 10.1 Diesel, Jet-A1 and Gasoline

- ◆ 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 Motor Oil, Hydraulic Oil, Transmission Fluid

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





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

**Figure 2**

