

2008



## **Fuel Spill Contingency Plan**

## Table of Contents

<b>1.</b>	<b>Introduction</b>	<b>3</b>
<b>2.</b>	<b>Facilities</b>	<b>3</b>
<b>3.</b>	<b>Petroleum and Chemical Product Storage and Inventory</b>	<b>3</b>
3.1	Remote Location Fuel Inventory, Storage and Handling Procedures	3
3.2	Petroleum product Transfer	3
<b>4.</b>	<b>Risk Assessment and Mitigation of Risk</b>	<b>3</b>
4.1	Petroleum Products and Other Fuels	3
<b>5.</b>	<b>Responding to Failures and Spills</b>	<b>4</b>
5.1	Spill Response Contact List	4
5.2	Basic Steps – Spill Procedure	5
5.3	Basic Steps – Chain of Command	5
5.4	Other contact for spill response/assistance	5
<b>6.</b>	<b>Taking Action</b>	<b>6</b>
6.1	Before the Fact: Preventative Measures	6
6.2	After the Fact: Mitigative Measures	6
6.3	Fuel Spill on Land	7
6.3.1	Procedure for Spills on Rock	7
6.3.2	Procedure for Spills on Land	7
6.4	Fuel Spills on Water	8
6.4.1	Procedure for Spills on Water	9
6.5	Fuel spills on Snow and Ice	9
6.5.1	Procedure for Spills on Snow	9
6.5.2	Procedure for Spills on Ice	9
6.6	Procedure for Chemical Spills	9
6.7	Procedure for Loss of External Load	10
<b>7.</b>	<b>Spill Equipment</b>	<b>10</b>
<b>8.</b>	<b>Training and Practice Drills</b>	<b>10</b>
8.1	Training	10
8.2	Practice Drills	11

## List of Appendices

<b>Appendix I</b>	Distribution List	<b>12</b>
<b>Appendix II</b>	Spill Report Form - Attached Version in PDF	
<b>Appendix III</b>	Table of Chemicals to be used for Ur-Energy's 2008 Bugs Project Drill Program	

### **1. Introduction**

The Ur-Energy Inc. Spill Contingency Plan shall be in effect from May 15, 2007 to May 15, 2012. All future amendments will be posted and recorded on the attached amendment record form.

This Ur-Energy Inc. Spill Contingency Plan encompasses the Bugs Project camp.

This Spill Contingency Plan will be posted in the Bugs camp.

Ur-Energy Inc. endeavours to take every reasonable precaution toward ensuring the protection and conservation of the natural environment, the safety and health of Ur-Energy Inc. sub-contractors and contractors and (protecting) the community (at large) from any harmful effects of its materials and operations.

### **2. Facilities**

*No camp facilities have been established at this time. However as stated in the Water Licence application, as well as in the Land Use application, there will be a 9–tent camp consisting of kitchen, dry, office, and sleeping quarters for 14 people on average. There will be an outhouse and a generator shack, as well as a helicopter landing area and fuel storage behind the camp about 150 metres from high water.*

### **3. Petroleum and Chemical Product Storage and Inventory**

#### **3.1 Remote Location Fuel Inventory, Storage and Handling Procedures**

At times, Ur-Energy Inc. may establish remote fuel caches for company use. Typically these caches would consist of 6 drums or less of jet fuel, stored in accordance with CSA approved methods of storage of drummed product.

#### **3.2 Petroleum product Transfer**

Manual and automatic pumps (and aviation fuel filter for jet fuel) are used for the transfer of all petroleum products. Smoking sparks, or open flame are prohibited in fuel storage and fuelling areas at all times.

### **4. Risk Assessment and Mitigation of Risk**

#### **4.1 Petroleum Products and Other Fuels**

Following, is a list of potential sources of fuel spills

- 1) Drummed product. Leaks or ruptures may occur. This includes and is not limited to drums of Jet A/B, diesel, waste fuel, waste oil
- 2) Fuel cylinders. Propane, leaks may occur at the valves. All cylinders are secured at all times or lying down.
- 3) Vehicles and equipment. Wheeled vehicles and equipment, aircraft (fixed and rotary wing), snowmobiles, generators, pumps. Incidents involving leaking or dripping fuels and oils may occur due to malfunctions, impact damage, and lack of regular maintenance, improper storage, or faulty operation.

Regular inspection and maintenance in accordance with recognized and accepted standard practices will take place at the Ur-Energy Inc. camp and/or fuel caches to reduce risks associated with the categories listed above.

Spill response training is provided to personnel who handle fuels and other petroleum products, and at least one emergency response drill will be held during the season. A report will be prepared by the response coordinator following each drill, noting response time, personnel involved and any problems or deficiencies encountered. This report will be used to evaluate emergency response capability and remedy any deficiencies if required.

Oil/Fuel Spill Kits are positioned at all camps and/or fuel caches. A list of Spill Kits, their location, description, and contents are listed in Section 8.

### **5. Responding to Failures and Spills**

#### **5.1 Spill Response Contact List**

#### **UR-Energy Inc. 24 hour telephone contact:**

**J. D. Charlton**

Work: 450-455-2850

Home: 450-455-5559

**Paul Pitman**

Work: 905-456-5436

Mobile: 416-705-3421

## 5.2 Basic Steps – Spill Procedure

In the case of any spill or other environmental emergency, it is necessary to react in the most immediate, safe, and environmentally responsible manner. No spill or incident is so minor that it can be ignored.

The basic steps of the response plan are as follow:

- 1) **Ensure** the safety of all persons at all times
- 2) **Identify** and find the spill substance and its source, and if possible, stop the process or shut off the source.
- 3) **Inform** the immediate supervisor or his/her designate at once, so that he/she may take appropriated action. (Appropriate action includes the notification of a government official, if required, Spill Report forms are included in Appendix 3)
- 4) **Contain** the spill or environmental hazard, as per its nature, and as per the advice of the Spill Line as required.
- 5) **Implement** any necessary clean-up or remedial action.

## 5.3 Basic Steps – Chain of Command

- 1) **Immediately** notify Ur-Energy Inc. You will then be instructed to directly contact the:  
**NUNAVUT 24 HOUR SPILL LINE and/or the DIAND 24 HOUR LINE at:**  
Telephone: 867.920.8130      FAX: 867.873.6924  
**DIAND (INAC) - Mr. Peter Kusugak**  
Telephone: 867.975.4295
- 2) **A Spill Report Form (Appendix B1))** is filled out as completely as possible before or after contacting the 24 Hour Spill Line.
- 3) Other members of the team are notified as deemed necessary.

## 5.4 Other contact for spill response/assistance

Environment Canada	James Noble	867.975.4644
DIAND – Land Use Inspector	Henry Kablatik	867.645.2831
Water Licence Inspection	Philip DePiso	867.360.6338

## 6. Taking Action

### 6.1 Before the Fact: Preventative Measures

The following actions illustrate the proactive approach of Ur-Energy Inc. to environmental care. In addition, these actions minimize the potential for spills during fuel handling, transfer and storage:

- 1) Fuel transfer hoses with cam lock mechanisms are used.
- 2) Carefully monitor fuel content in the receiving vessel during transfer.
- 3) Clean up drips and minor spills immediately.
- 4) Regularly inspect drums, tanks and hoses for leaks or potential to leak.
- 5) Train personnel, especially those who will be operators, in proper fuel handling and spill response procedures.

### 6.2 After the Fact: Mitigative Measures

- 1) First steps to take when a spill occurs
  - a) Ensure your own safety and that of others around you, beginning with those nearest to the scene
  - b) Control danger to human life, if necessary
  - c) Identify the source of the spill
  - d) Notify your supervisor
  - e) Assess whether or not the spill can be readily stopped
  - f) Contain or stop the spill at the source, if possible, by following these actions
    - If filling is in progress, STOP AT ONCE
    - Close or shut off valves
    - Place plastic sheeting at the foot of the tank, barrel, or piece of equipment to prevent seepage into the ground or runoff of fuel

- Use absorbent materials (sheets, pads, brooms) to absorb and contain the fuel spill
  - Use a patch kit to seal leaks, if practical to do so
- 2) Secondary steps to take
- Determine status of the spill event
  - If necessary, pump fuel from a damaged and/or leaking tank or drum into a refuge container
  - Notify the 24-hour Spill Report Line, and receive further instructions from the appropriate contact agencies listed in Section 5.4 (e.g. disposal of contaminated soil or ice/snow in sealed containers for removal from site, etc.)
  - Complete and FAX a copy of the Spill Report Form (Appendix II)
  - Notify permitting authorities
  - If possible, resume clean-up and containment

### **6.3 Fuel Spill on Land**

“Land” may be defined as soil, gravel, sand, rock and vegetation. Advice on spill containment and clean-up may be obtained from the 24-Hour Spill Line.

#### **6.3.1 Procedure for Spills on Rock**

For hydrocarbon spills on rock outcrops, boulder fields, etc.

- 1) First responder or his designate obtains plastic tarp(s) and absorbent sheeting on-site
- 2) A berm of peat, native soil or snow is constructed down slope of the seepage or spill
- 3) The tarp is placed in such a way that the fuel can pool for collection and removal (e.g. at the foot of the berm). If there is a large volume of spilled product, pump the liquid into spare empty drums for sealing and disposal
- 4) Absorbent sheeting is placed on the rock to soak up spilled oil, fuel, etc.
- 5) Multi Sorb (crushed lava rock) can be used to scrub the rock surface
- 6) Saturated material is disposed of in an empty drum, which is then labelled and sealed.  
Alternatively, the pads may be wrung out into the empty drum(s), the drums marked and then secured for eventual disposal.
- 7) Depending on the nature and volume of the spill, the 24-Hour Spill Line may be contacted after Step 4 or Step 5.

#### **6.3.2 Procedure for Spills on Land**

- 1) First responder or his designate obtains plastic tarp(s), absorbent sheeting. Multi Sorb or other ultra-dry absorbent and any other necessary spill containment equipment, pump, hoses, etc.
- 2) A berm of peat, native soil or snow is constructed down slope of the seepage or spill
- 3) The tarp is placed in such a way that the fuel can pool for collection and removal (e.g. at the foot of the berm). If there is a large volume of spilled product, pump the liquid into spare empty drums, and dispose of product as advised by the 24-Hours Spill Line.
- 4) Petroleum-product sheen on vegetation may be controlled by applying a thin dusting of Multi Sorb or other ultra-dry absorbent to the groundcover.
- 5) Contact the 24-Hour Spill Line, Receive instructions from the appropriate contact agencies listed in Section 5.4 regarding collection of the contaminated soil or vegetation, its removal and site clean-up/restoration.

### **6.4 Fuel Spills on Water**

#### **6.4.1 Procedure for Spills on Water**

It is important to immediately limit the extent of spills. The following is the procedure to be implemented when an incident occurs.

- 1) 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.
- 2) If the spill is larger, ready several empty drums to act as refuge containers for the spill.
- 3) Deploy containment booms on the water surface to “fence in” the spill area gradually and to prevent it from spreading. Keep in mind those environmental factors such as high winds and wave action can adversely affect attempts at spill clean-up.

- 4) Absorbent booms can then be deployed to encircle and then absorb any hydrocarbon spillage that may have escaped the containment boom.
- 5) Once the boom has been secure, 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) As soon as possible either during or after the incident, contact the 24-Hour Spill Line. (This will ensure government agencies are informed)

## **6.5 Fuel spills on Snow and Ice**

By its nature, snow is an absorbent, and fuel spilled on snow is collected with relative ease, either by shovel in the case of small-range spills, and by loader, in the case of more extensive spills.

### **6.5.1 Procedure for Spills on Snow**

- 1) Assess the nature of the spill. Necessary equipment might include shovels, plastic tarp(s), empty drums, and wheeled equipment.
- 2) Shovel or scrape contaminated snow and deposit in empty refuge drums. If the spill is more extensive, build peat-bale berms or compacted snow berms with plastic over top, around the affected area.
- 3) Either during or immediately after the accident, notify the 24-Hour Spill Line. Receive instructions on the preferred disposal method (e.g. storage in sealed drums, incineration or deposit in a designated lined containment area on land) from the appropriate contact agencies listed in Section 5.4.

### **6.5.2 Procedure for Spills on Ice**

- 1) Construct a compacted-snow berm around the edge of the spill area.
- 2) Although hard ice will retard or prevent fuel entry to the receiving waters below, all contaminated snow and ice, as well as objects embedded in the ice (such as gravel or frozen absorbent pads) must be scraped from the surface and disposed of in an appropriated manner.
- 3) Contact the 24-Hour Spill Line. Receive disposal instructions (e.g. sealing in drums, burn off, etc.) from the appropriate contact agencies listed in Section 5.4.

## **6.6 Procedure for Chemical Spills**

- 1) Assess the hazard of the spilled material. REFER TO THE MSDS SHEETS NOW. 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.
- 2) Assemble the necessary safety equipment before response (e.g. latex or other protective gloves, goggles, or safety glasses, masks or breathers, etc.)
- 3) Apply absorbents to soak up liquids
- 4) Place plastic sheeting over solid chemicals, such as dusts and powders, to prevent their disbursement by wind or investigation by birds or other mammals.
- 5) Neutralize acids or caustics. Place spilled material and contaminated clean-up supplies in an empty refuge drum and seal for disposal.
- 6) Contact the 24-Hour Spill Line. Receive instructions on disposal methods and designated locations from the appropriate contact agencies listed in Section 5.4.

## **6.7 Procedure for Loss of External Load**

The loss of external loads of fuel, oil, or chemicals from aircraft almost certainly results in complete and catastrophic failure of the container that once held the product. Immediate response is imperative.

- 1) Mark the loss target with GPS co-ordinates and relay to camp or base ASAP. Include quantity and type of load loss.
- 2) Base or camp will contact the 24-Hour Spill Line, and receive direction and instruction
- 3) Administer the appropriate procedure for Spills on Land, Water, Snow or Ice

## **7. Spill Equipment**

Complete spill kits, oil absorbent kits, are kept on hand at all camps.

## **8. Training and Practice Drills**

### **8.1 Training**

All members of the Response Team will be familiar with the spill response resources at hand, this Contingency Plan, and appropriate spill response methods. Involvement of other employees may be required from time to time.

This familiarity will be acquired through:

- 1) Initial or refresher training, as appropriate, provided once per season
- 2) Regular inventory updates are provided in list form to all team members. Information to be reported includes 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).

### **8.2 Practice Drills**

Ur-Energy Inc. is aware that without practice, no Contingency Plan has value.

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.

### Manual Distribution

<b>Title</b>	<b>Name</b>
Vice-President	Paul Pitman
Project Manager	J. D. Charlton
Camp Manager	Wilf Atkinson



**Appendix III** Table of Chemicals to be used for Ur-Energy's 2008 Bugs Project Drill Program

Product Name	Chemical Identification	Material Use	WHMIS Classification	Work Place Hazard	Classification
Extreme Super G- Gold	Polysaccharide suspension	Drilling Mud Additive	D-2B	Skin & Eye Irritant	Not Dangerous Goods
Extreme Torq-Eez	Proprietary	Drilling Fluid Lubricant	None	None	Not Dangerous Goods
Extreme Clay Seam	Polyacrylic	Specialty Clay Dispersant	D-2B	Skin & Eye Irritant	Not Dangerous Goods
Extreme Extra High Yield Gel	Sodium montmorillonite	Drilling Mud Additive/ Viscosifier	D-2A		Not Dangerous Goods
Extreme Linseed Lube	Linseed soap	Lubricating Compound	Not Applicable	Not Applicable	Not Dangerous Goods
Extreme Number One	Acrylamide, Acrylate co-polymer	Drilling Fluid Lubricant	Not Regulated	Not Applicable	Not Dangerous Goods
Extreme Rod Grease	Petroleum Hydrocarbon	Industrial Lubricant	Not Regulated	Not Applicable	Not Dangerous Goods
Extreme Super Trol	Semi-synthetic Cellulose	Drilling Fluid Lubricant	Not Regulated	Not Applicable	Not Dangerous Goods
Extreme Super-G Blue	Anionic polyacrylamides in water oil emulsion	Drilling Mud Additive	B3, D-2B	Combustible liquid; Skin and Eye Irritant	Not Dangerous Goods
Extreme Stop	Acrylamide Co-polymer	Lost Circulation Material	Non-Hazardous	Not Applicable	Not Dangerous Goods
Extreme Enviro Cote	Calcium Sulfonate thickened Greases	Lubricating Compound	Not Controlled	Skin & Eye Irritant	Not Dangerous Goods
Calcium Chloride	Calcium Chloride	Drilling Fluid & Cement Additive	D-2B	Skin & Eye Irritant	Not Dangerous Goods
Gasoline		Fuel	D-3	Flamm Liquid: Skin & Eye Irritant	Dangerous Good
Propane		Fuel	D-2	Flamm Gas; Skin & Eye Irritant	Dangerous Good