Kivalliq Energy Corporation

SPILL CONTINGENCY PLAN
ANGILAK PROPERTY

NUNAVUT

Submitted To: NWB, AANDC, KivIA
Submitted By: Andrew Berry
Originally Submitted: January 2008
Updated: January 09, 2012

SUMMARY OF AMENDMENTS

PAGE #	DESCRIPTION	DATE
	Appendix II figures updated	01/01/2012
9	6.2 Emergency contacts updated	01/01/2012
8	5.3 Contacts updated	01/01/2012
7	5.1 Spill Response Contacts updated	01/01/2012
4	2.0 Facilities – updated	01/01/2012
4	1.0 Introduction – updated	01/01/2012
5	5.1 Additions to the Spill Response Contact List	30/08/2008
6	5.3.1 Phone numbers corrected	30/08/2008
7	6.2 Additions to the Emergency Contact Table	30/08/2008
7	6.2 Explanation of 24 hour Emergency Contact #	30/08/2008
3	2.0 New camp coordinates	01/03/2009
Appendix II	New maps and photos for new camp location	01/03/2009

Table of Contents

List of Appendices

1.0 Introduction

This Spill Contingency Plan shall be in effect from January 01, 2012. This Plan has been specifically prepared for the Angilak Property, Kivalliq Region, Nunavut. A copy of this plan will be kept in the office at site and at the head office in Vancouver.

Kivalliq Energy Corporation (Kivalliq Energy) has been exploring in Nunavut since 2007. Kaminak Corporation, a predecessor to Kivalliq Energy, signed an exploration agreement with Nunavut Tunngavik Inc. (NTI) in September 2007 that granted uranium rights on 18,000 acres of Inuit Owned Land (IOL RI-30), located in the Kivalliq Region of Nunavut. In discussions with NTI, it was decided cooperatively that Kaminak spin-out all of its uranium interests in Nunavut into a new, uranium exploration and development company called Kivalliq Energy Corporation (KIV: TSX-V). Kivalliq Energy was specifically formed to focus on projects in Nunavut.

Kivalliq Energy Corp. endeavours to take every reasonable precaution toward ensuring the protection and conservation of the natural environment and the safety and health of all employees and contractors from any potential harmful effects of stored materials and operations. All plans, licences and permits will be reviewed with employees and contractors when hired and copies of the plans will be available in the office tent for reference.

2.0 Facilities

All mineral claims are contiguous and extend north, south, east and west between latitudes 62° 26’ and 62° 43’ North and longitudes 98° 21’ and 99° 24’ West in NTS map areas 65 J/06, 65 J/09, 65 J/10 and 65 J/11 (UTM coordinates: 6925000N to 6955000N and 480000E to 535000E, NAD83, Zone 14). The camp is located at 527975m E, 6937950m N. See Appendix II for figures, maps and photos.

The main fuel cache has been established at the camp. All fuel stored on site is contained in secondary containment, Instaberms manufactured by Raymac Industries in British Columbia. Drums of fuel are stored in neat, orderly rows and are inspected daily. A spill kit is located at the fuel cache. Empty drums are removed from site regularly and returned to Aviation Fuel Enterprises in Baker Lake.

Smaller caches are established temporarily to support drilling activities and sampling/survey programs. Spill kits are located at every fuel cache.

Currently Kivalliq Energy is permitted to cache 200 drums of fuel on site at a time. In 2012, to supply the camp, equipment and drills, Kivalliq Energy will cache upwards of approximately 3,000 drums of fuel on site. This will include:

- 1500 - 205 L drums of diesel
- 1500 - 205 L drums of Jet fuel
- 10 - 205 L drums of gasoline
- 50 - 100 lb cylinders of propane

Most of this fuel will be used by the end of each season. However, enough fuel will be left on site over winter to ensure a supply for re-opening the camp in the spring. Kivalliq Energy is currently investigating the purchase and use of double-walled enviro tanks. Please refer to the Fuel Management Plan for more information.

The fuel will be stored in neat, orderly rows with enough space between rows to allow for inspections. Bungs will face 3 and 9 o'clock. The fuel cache will be inspected daily. A spill kit will be located at the fuel cache.

The camp currently consists of:

- 12 – 14' x 16' insulated tents on wood frames. These tents function as sleep tents, an office, core tent and first aid station
- 2 – 14' x 32' insulated tent on wood frames. These tents function as the kitchen mess and the dry
- A toilet facility
- A generator building to house a 20 kW diesel generator as well as a backup generator
- A helicopter landing area, and
- A garbage incineration area.

In 2012, two (2) additional 14' x 16' sleeper tents will be erected as well as a 30' x 50' sprung tent for storage.

3.0 Petroleum and Chemical Product Storage and Inventory

3.1 Remote Location Fuel Inventory, Storage and Handling Procedures

These remote fuel caches will be stored in accordance with approved methods of storage of drummed product. Inspections of the fuel caches will be conducted during each visit. There will be a spill kit at each fuel cache location.

3.2 Petroleum Product Transfer

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

In areas of refuelling, a spill kit will always be stored. Secondary containment will be used in areas of refuelling and drums will be stored within this secondary containment.

4.0 Risk Assessment and Mitigation of Risk

4.1 Petroleum Products and Other Fuels

Following, is a list of sources:

1) Drummed product: Leaks or ruptures may occur. This includes drums of Jet A, Diesel, Gasoline, Waste Fuel, and Waste Oil.

2) Fuel cylinders: Propane, leaks may occur at the valves. All cylinders are secured at all times.

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 at all camps and fuel caches, reduces risks associated with the categories listed above. Large fuel caches of 20 drums or more will be inspected daily.

Spill response training is provided to all personnel with particular attention to those personnel who handle fuels and other petroleum products. This training will include a presentation, "mock" spill, review of spill kit contents and their use and reporting.

Spill Kits will be located at all camps, fuel caches and drill shacks. A description of contents is listed in Section 7.0.

5.0 Responding to Failures and Spills

5.1 Spill Response Contact List

24 Hour Spill Line
(867) 920-8130

GN-DOE
(867) 975-7700

AANDC Water Resources Inspector
Iqaluit, Nunavut
(867) 975-4295

Manager of Pollution Control & Air Quality
(867) 975-7748

Environment Canada
Iqaluit, Nunavut
(867) 975-4644
24 hour pager – (867) 766-3737

Kivalliq Inuit Association
Rankin Inlet
(867) 645-2800

Kivalliq Energy Corp.
Jeff Ward, President and CEO
and/or Andrew Berry, VP Operations
Suite 1440 – 625 Howe Street
Vancouver BC
V6C 2T6
Tel: 604-646-4527, Fax: 604-646-4526
Email: jward@kivalliqenergy.com

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 and every spill must be reported.

The basic steps of the response plan are as follows:

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 on-site coordinator or his/her designate at once, so that he/she may take the appropriate actions. Appropriate action includes the notification of the spill to the 24 hour Spill Line and AANDC Water Resource Officer, a copy of the Spill Report form can be found in Appendix I.

4. *Contain* the spill or environmental hazard, as per its nature, and as per the advice of the Spill Line and the AANDC Water Resource Officer as required.

5. *Implement* any necessary cleanup and/or remedial action.

5.3 Basic Steps — Chain of Command

1. *Immediately* notify and report to the 24-Hour Spill Line at (867) 920-8130, the AANDC Water Resources Inspector in Nunavut at (867) 975-4295, Environment Canada personnel at 867-766-3737, Kivalliq Inuit Association Land Inspector at (867) 645-2800.

2. ***A Spill Report Form (Appendix I)*** is filled out as completely as possible before or after contacting the 24 Hour Spill Line. A copy of the guidelines for completing the spill report form can be found in Appendix III.

3. Notify Jeff Ward, President at (604) 646-4527.

5.4 Other contacts for spill response/assistance and further reporting

Nunavut Water Board	(867) 360-6338
Fisheries and Oceans Canada Habitat Impact Assessment Biologist	(867) 979-8007
Government of Nunavut Department of Environment	(867) 975-5910
Kivalliq Inuit Association, Land Use Inspector	(867) 645-2800

6.0 Taking Action

6.1 Before the Fact: Preventative Measures

The following actions illustrate a proactive approach to environmental stewardship. 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. Always have additional absorbent pads on hand while transferring fuel.

3. Clean up drips and minor spills immediately.

4. Regularly inspect drums, tanks and hoses for leaks or potential to leak and for proper storage.

5. Create fuel caches in natural depressions that are located a **minimum** of 31 metres from the normal high-water mark of any water body.

6. 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, request assistance if needed.
e) Assess whether or not the spill can be readily stopped.
f) Contain or stop the spill at the source.

2. Secondary steps to take:
    a) Determine status of the spill event.
    b) If necessary, pump fuel from a damaged and/or leaking tank or drum into a refuge container.
    c) Notify the 24-hour Spill Report Line, and receive further instructions from the appropriate contact agencies listed in *Section 5.3.* (disposal of contaminated soil or ice/snow in sealed containers for removal from site, etc.).
    d) Complete and Fax a copy of the Spill Report Form *(Appendix I).*
    e) Notify permitting authorities.
    f) If possible, resume cleanup and containment.

Emergency Contact Information

CONTACT	**TELEPHONE NUMBER**
AANDC Water Resource Officer, Iqaluit	(867) 975-4295
Environment Canada	(867) 975-4644, 24hr page (867) 766-3737
Nunavut Department of Environment	(867) 975-7700
Manager Pollution Control/Air Quality	(867) 975-7748
Kivalliq Inuit Association – Land Use Inspector	(867) 645-2800
DFO	(867) 979-8007
Kivalliq Energy Corp., Jeff Ward, President	(604) 646-4527
Air Tindi	(867) 669-8212
Yellowknife Fire Department	(867) 873-2222
Baker Lake RCMP	(867) 793-0123
Stanton Regional Hospital – Yellowknife	(867) 920-4111
Discovery Mining Services	(867) 920-4600

A **24 hour phone number** will be established at the time the camp is constructed. The Project Manager will be available at the 24 hour number at camp. This phone number will be provided to regulatory agencies as soon as it is established.

6.3 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.
Contact regulatory agencies for approval before commencing with the removal of any soil, gravel, or vegetation.

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 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 shovelled 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, labelled containers. All containers will be stored in a well ventilated area away from incompatible materials.

Disposal
Any contaminated material will be shipped from site to an appropriate and approved facility. The DOE monitors the movement of hazardous wastes from generators, carriers to receivers, through a tracking document (Waste Manifest). A Waste Manifest will accompany all movements. Kivalliq Energy Corp. will register at DOE with Robert Eno at reno@gov.nu.ca or (867) 975-7748.

6.3 SPILL RESPONSE ACTIONS
GASOLINE AND JET B AVIATION FUEL

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.
Contact regulatory agencies for approval before commencing with the removal of any soil, gravel, or vegetation.

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.
On advice from regulatory agencies, 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 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 shovelled 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, labelled containers. All containers will be stored in a well ventilated area away from incompatible materials.

Disposal
Any contaminated material will be shipped from site to an appropriate and approved facility. The DOE monitors the movement of hazardous wastes from generators, carriers to receivers, through a tracking document (Waste Manifest). A Waste Manifest will accompany all movements. Kivalliq Energy Corp. will register at DOE with Robert Eno at reno@gov.nu.ca or (867) 975-7748.

6.3 SPILL RESPONSE ACTIONS
PROPANE

Take action only if safety permits. Gases stored in cylinders can explode when ignited. Keep vehicles away from area. **Never smoke** when dealing with these types of spills.

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 of CO_2.
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
Any contaminated material will be shipped from site to an appropriate and approved facility. The DOE monitors the movement of hazardous wastes from generators, carriers to receivers, through a tracking document (Waste Manifest). A Waste Manifest will accompany all movements. Kivalliq Energy Corp. will register at DOE with Robert Eno at reno@gov.nu.ca or (867) 975-7748.

7.0 Spill Equipment

Complete spill kits are kept on hand at all camps and drill shacks. Spill kits contain:

1 – 360 litre/79 gallon polyethylene over-pack 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 – shovel

In addition at least one empty fuel drum will be located at each fuel cache in the event of damaged or leaking drums. Extra absorbent pads will be kept with the helicopter, drill and any area where re-fuelling, transferring and/or handling is done.

8.0 Training and Practice Drills

8.1 Training

All employees and contractors will be familiar with the spill response resources at hand, this Contingency Plan, and will also be trained for initial spill response methods. Involvement of other employees may be required, from time to time. Annual refreshers will be conducted to review the procedures within this plan.

Appendix I
Nunavut Spill Report Form

Appendix II
Figures, Maps, Photos

Appendix III
Instructions for Completing the NU Spill Report Form

Appendix IV
MSDS SHEETS