

APPENDIX F

Hazardous Materials Spill Contingency Plan

Response Procedures for Site Personnel



Pine Point Pilot Project

DRAFT

May 2006

1.0 INTRODUCTION

1.1 Plan Purpose

The purpose of the Spill Contingency Plan is to provide a strategic action plan for hazardous materials spills that may occur at the Pine Point Pilot Project (PPPP) site. The plan clearly defines the responsibility of key personnel and outlines procedures to effectively and efficiently contain and recover hazardous materials spills.

Petroleum products and hazardous materials considered in the PPPP Spill Contingency Plan include:

- Diesel Fuel and/or Biodiesel
- Hydraulic Oil
- Motor Oil
- Gasoline
- Antifreeze
- Propane
- Greywater Sewage

1.2 Tamerlane Ventures Inc. Environmental Policy

Tamerlane Ventures Inc.'s policy is to comply with all existing laws and regulations to help ensure protection of the environment. Tamerlane Ventures Inc. cooperates with other groups committed to protecting the environment and ensures that employees, government and the public are informed of the procedures to follow to help protect the environment.

2.0 SITE DESCRIPTION

2.1 General Site Description

The proposed PPPP site is located approximately 48 kilometers east of Hay River. The access road to the site from Hay River is paved with the exception of the last kilometer, which is dirt/gravel. The project area is planned to include an isolated fuel and lube storage area enclosed in a catch basin.

2.2 Petroleum Storage and Transport

Surface fuel storage will be less than 80,000 liters (20,000 gallons). The storage will include individual totes with capacities of less than 4,000 liters (1,000 gallons). The fuel storage area will allow the totes to be easily accessed and removed in the isolated area with low permeability. The fuel supply will be contracted with local area businesses and transported to the site via Provincial Highway 5.

2.3 Graywater Sewage

Tamerlane Ventures Inc. anticipates that all graywater and sewage will be treated by a portable sewage treatment plant. Disinfected effluent will be mixed into the DMS circuit and discharged into the proposed primary infiltration basin.

3.0 SPILL RESPONSE ORGANIZATION

In the event of a hazardous materials spill on the PPPP site, all personnel will follow a defined response and notification procedure led by the On-Site Coordinator and supported by the Environmental Advisor (EBA) and site employees. This group will form the PPPP Spill Response Team and will be responsible for specific tasks during a hazardous materials spill.

3.1 On-Site Coordinator

The On-Site Coordinator has the following responsibilities:

- Assume complete authority over the spill area and coordinate the actions of site personnel.
- Evaluate the spill and develop an overall response plan.
- Mobilize personnel and equipment to the site of the spill.
- Report the spill immediately to the Northwest Territory (NWT) Spill Line and Environmental Advisor.
- Obtain additional manpower, equipment and materials if they are not available on-site.
- Provide regulatory agencies and Tamerlane Ventures Inc. with information regarding the status of clean-up activities.
- Prepare and submit a report on the spill incident to regulatory agencies within 30 days of the event.

3.2 Environmental Advisor

The Environmental Advisor has the following responsibilities:

- Provide technical advice regarding probable environmental effects from the spill.
- Provide advice to the On-Site Coordinator for spill response procedures.
- Assist in developing any sampling, testing or monitoring of soil or water directly affected by the spill.

3.3 Site Employees

The PPPP will employ an estimated 170 personnel. Approximately 33 personnel will work on the surface. These employees will be available to assist and mitigate spills response situations. Spills Response training for surface employees is discussed in Section 9.0.

4.0 INITIAL SPILL RESPONSE

Specific actions and communications are in place to ensure an expedient response to a hazardous materials spill (Figure 4.0-1). Initial Spill Response measures include the following steps:

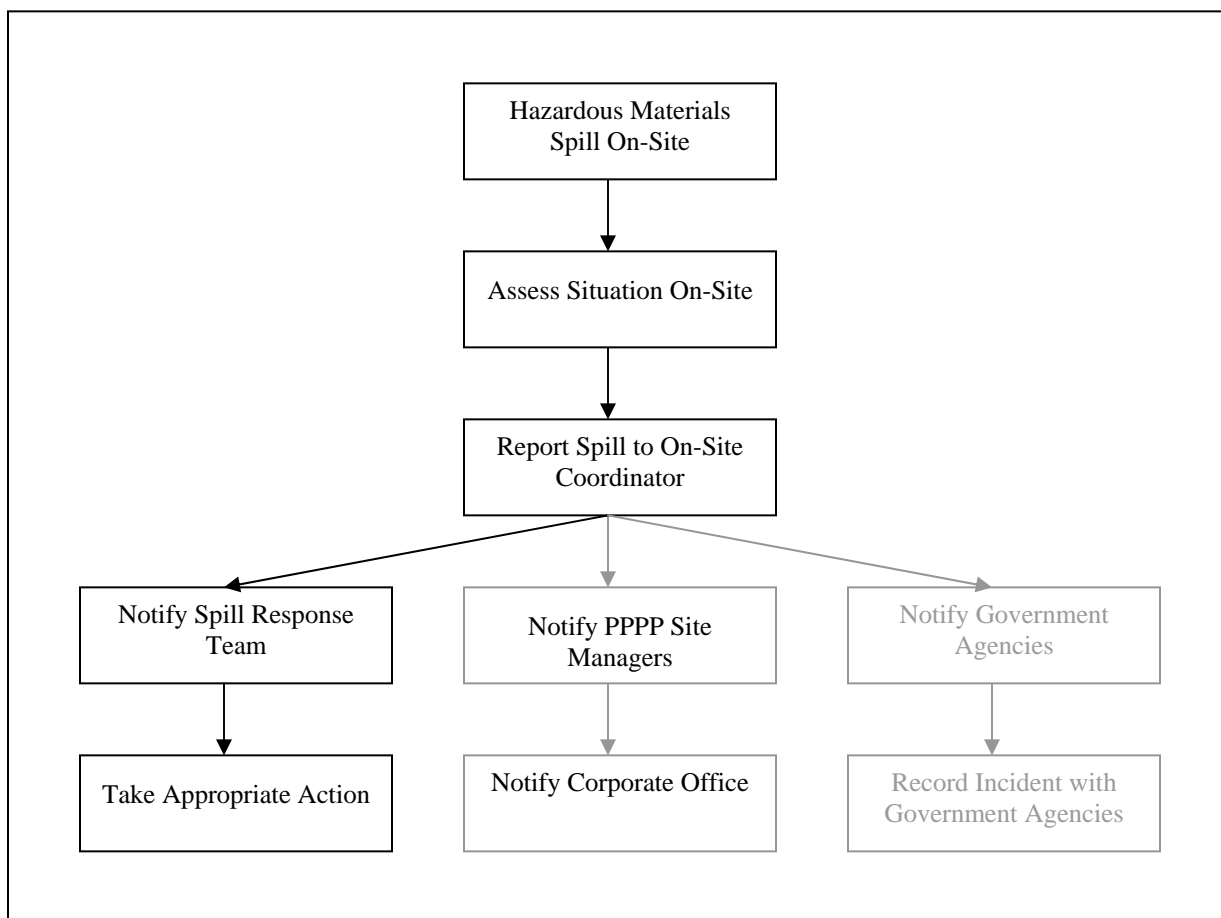
4.1 First Person at the Site

- Identify the material that has been spilled.
- Assess any potential hazard to people in the vicinity of the spill.
- Control the danger to human life if it is possible to do so without additional assistance.
- Assess if the spill can be stopped or brought under control.
- Stop the flow of material if it can be done safely.
- Immediately report the spill to the On-Site Coordinator.
- Call the 24 hr NWT Spill Line ((867) 920-8130) **IF** the On-Site Coordinator cannot be contacted.
- Resume effective action to contain, mitigate, or terminate the flow of spilled material.

4.2 On-Site Coordinator

- Call the NWT 24 hr Spill Line at (867) 920-8130 as soon as possible to report the spill and provide initial incident details.
- Complete and fax a NWT Spill Report Form to (867) 873-6924.
- Gather relevant information and submit a detailed spill report to the applicable regulatory agencies no later than 30 days after the spill event.

**Figure 4.0-1
PPPP Response and Notification Process**



5.0 SPILL RESPONSE CONTACTS

5.1 Internal Contacts

On-Site Coordinator	TBD	office: TBD cell: TBD
Environmental Advisor (EBA)	Rick Hoos	office: (604) 685-0275 cell: (604) 813-4952
Site Manager	TBD	office: TBD cell: TBD
Project Manager	David Swisher	office: (360) 332-4653 cell: (360) 927-6103
Senior Geologist	Chuck Watts	office: (360) 332-4653 cell: (360) 220-7261
President and CEO	Ross Burns	office: (360) 332-4653 cell: (360) 303-3429

5.2 External Contacts

Additional assistance may be obtained from the following organizations:

Emergency Services

Ambulance	(867) 874-9333
Fire	(867) 874-2222
Police	(867) 874-1111
Medical Emergency	(867) 874-7100
Poison Control	(867) 874-7100
Oil and Chemical Spills	(867) 920-8130

Charter Companies

Great Slave Helicopters	(867) 873-2081
Carter Air Service	(867) 874-2281
Denendeh Helicopters Ltd.	(867) 874-3399
Landa Aviation	(867) 874-3500
Remote Helicopters Ltd.	(867) 874-6999

Government

WCB Mine Accident Reporting Line	1-800-661-0792
INAC Contaminants	(867) 669-2756
INAC Contaminants Hot Line	1-800-661-0827
INAC Hay River Sub-District Office	(867) 874-6994

6.0 SPILL RESPONSE ACTION PLAN

6.1 Diesel Fuel, Hydraulic Oil and Lubricating Oil

Stop the spill flow if it is possible and safety permits. No smoking is permitted when responding to a diesel fuel, hydraulic oil or lubricating oil spill.

On Land

- Do not flush into ditches or drainage systems.
- Build barrier with soil to block entry into waterways.
- Remove the spill by using sorbent pads or digging out the soil.

On Water

- Use a containment boom to concentrate the spill for recovery.
- Use sorbent pads to remove small spills.
- Use a skimmer to remove larger spills.

On Ice and Snow

- Block entry into waterways by building a barrier with snow to contain the spill.
- Remove the spill using sorbent pads and shovel contaminated ice and snow into plastic buckets with lids and/or polypropylene bags.

Storage and Transfer

- Store all contaminated water, snow/ice, soils, clean-up supplies, and absorbent materials in closed, labeled containers.
- Store containers in ventilated areas away from incompatible materials.

Disposal

- Consult with Federal and Territorial Environmental Authorities before disposing contaminated material.
- See Section 8.0

6.2 Gasoline

Stop the spill flow if it is possible and safety permits. Eliminate ignition sources. Gasoline forms vapors that can ignite and explode. No smoking is permitted when responding to a gasoline spill.

On Land

- Build barrier with soil to block entry into waterways.
- Do not attempt to contain the spill if ignition potential exists.
- Use particulate sorbent material to soak up the spill.

On Water

- Contain and remove spills only after vapors have dissipated.
- Use containment booms to concentrate spills.
- Use a skimmer on a contained slick.

On Ice and Snow

- Block entry into waterways by building a barrier with snow to contain the spill.
- Remove the spill by using particulate sorbent and shovel contaminated ice and snow into plastic buckets with lids and/or polypropylene bags.

Storage and Transfer

- Store all contaminated water, snow/ice, soils, clean-up supplies, and absorbent materials in closed, labeled containers.
- Store containers in ventilated areas away from incompatible materials.
- Electrically ground all containers and transporting equipment.

Disposal

- Consult with Federal and Territorial Environmental Authorities before disposing contaminated material.
- See Section 8.0

6.3 Antifreeze

Stop the spill flow if it is possible and safety permits.

On Land

- Do not flush into ditches or drainage systems.
- Build barrier with soil to block entry into waterways.
- Remove spill using sorbent pads or digging out soil.

On Water

- Be aware that antifreeze sinks and mixes with water.
- Confine and isolate the spill by damming or diverting the spill.
- Pump contaminated water into containers.

On Ice and Snow

- Block entry into waterways by building a barrier with snow to contain the spill.
- Remove the spill by using particulate sorbent and shovel contaminated ice and snow into plastic buckets with lids and/or polypropylene bags.

Storage and Transfer

- Store all contaminated water, snow/ice, soils, clean-up supplies, and absorbent materials in closed, labeled containers.
- Store containers in ventilated areas away from incompatible materials.

Disposal

- Consult with Federal and Territorial Environmental Authorities before disposing contaminated material.
- See Section 8.0

6.4 Propane

Stop the spill flow if it is possible and safety permits. Eliminate ignition sources. No smoking is permitted when responding to a propane spill.

On Land

- Do not attempt to contain or remove the spill.

On Ice and Snow

- Do not attempt to contain or remove the spill.

Storage and Transfer

- It is not possible to collect and/or contain propane once it is released.

Disposal

- No disposal is required.

7.0 SPILL RESPONSE EQUIPMENT

7.1 General Equipment

Hand tools will be kept on site to aid in the mitigation of hazardous materials spills. A rubber tire loader will also be available for emergency use and to respond to spill incidents.

7.2 Spill Kits

Tamerlane Ventures Inc. will maintain spill kits on-site. One spill kit will be located in the temporary Maintenance Shop and another spill kit will be located in the Fuel and Lube Storage Area. Spill kit inventories will contain the following items:

- (1) 16 Gauge Open-Top Drum with Bolting Ring and Gasket (205 litre)
- (1) Pkg. of 10 Disposable Polyethylene Bags (5 mil)
- (1) Shovel (spark proof)
- (4) 5" x 10' Absorbent Booms
- (1) 10 lb. Bag of Absorbent Particulate
- (1) Bail of 17' x 19' x d = Sorbent Sheets (100 sheets)
- (2) PVC Oil Resistant Gloves
- (2) Respirators
- (2) Pairs Splash Protective Goggles

8.0 DISPOSAL METHODS

In the event of a spill, the On-Site Coordinator will seek government approval and advice for proper disposal. The selected disposal method will require approval from the PPPP Project Manager. The following disposal options are considered appropriate and are expected to meet government approval.

- Off-Site Disposal (to a landfill that permits disposal of hazardous materials)
- Controlled Burning (contaminants)
- Incineration (liquid product)

9.0 SPILL RESPONSE TRAINING

The On-Site Coordinator will conduct training for all surface personnel working on the PPPP. Surface personnel will be trained in the techniques and materials required to manage hazardous spill responses. Training will include the following instruction:

- The initial spill response procedure to use in the event of a spill.
- Location and use of emergency equipment to respond to spills.
- Safe operation of equipment and tools to minimize the potential for spills.
- Operational procedures to limit the potential and impact of spills.
- Monthly safety discussions to address work hazards.

10.0 REFERENCES

Hope Bay Joint Venture. (2002). *Spill contingency plan: Hope Bay Project*. Retrieved March 22, 2006, from http://www.ainc-inac.gc.ca/nu/nuwork/pi/dng/eis/DPSSO_e.pdf

Indian Affairs & Northern Development Contaminated Sites Office. (2007, January). *Frobisher sour gas wells: Contingency plan and emergency spill response manual*. Retrieved March 23, 2006 from <http://www.mvlwb.com/pdf/2006Land/MV2006X0004/app/appx/G-Spillcontingency-Jan06.pdf>

Legislative Division, Department of Justice. (1998). *Environmental Protection Act: Spill contingency planning and reporting regulations (R-068-93)*. Retrieved March 29, 2006, from <http://www.ainc-inac.gc.ca/>

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