

APPENDIX A CONTINGENCY PLAN

1.0 INTRODUCTION

This plan has been developed as part of a commitment by Matrix Exploration Ltd. (Matrix) to minimize any detrimental effect its operations may have on the environment. The focus of the plan will be on the exploration camp flight operations and the related support activities that are the responsibility of Matrix.

The plan is designed to combat spills on land and/or into water courses.

As the need arises, Matrix may enter into agreements for the sharing of expertise and equipment with other companies, municipalities and resource agencies.

The Plan will be updated and revised as required.

2.0 REPORTING PROCEDURES

2.1 Organization and Responsibilities

The overall responsibility for the contingency plan lies with:

Martin Knutson, President
Matrix Aviation Solutions
#8 Yellowknife Airport
Yellowknife, NT X1A 3T7
Phone: 867-766-3134
FAX: 867-766-3374

The on-site responsibility for the plan lies with Matrix's site manager who will be the on-site coordinator (OSC).

The name of the site manager and the camp phone number will be supplied to the regulators when available.

Contractors, sub-contractors and suppliers will provide assistance in all phases of a cleanup as directed by the OSC. In the event that a contractor, sub-contractor or supplier or their employees causes a spill, Matrix will charge cleanup and disposal expenses to the responsible party. The OSC will:

1. be familiar with fuel spill procedures, equipment and contact numbers;
2. provide liaison with Territorial Government Emergency Programs, Ministry of

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Environment and Department of Fisheries personnel where applicable;

3. direct the actions of personnel during clean-up operations;
4. familiarize key personnel with fuel spill equipment and procedures; and
5. prepare a report on all aspects of any spill.

There will be a satellite phone in the camp and the number will be provided to the government of NWT before the camp is operational.

3.0 SITE INFORMATION

Fuel stored on site will be	Diesel	Total = 60,000 L
	Unlabeled gasoline	Total = 4,000 L

Total petroleum products storage on site = 64,000 L

Propane will be flown from the nearest Yellowknife in 100 pound bottles as required.

4.0 FAILURE PREVENTION

The system components where spills are most likely to occur are:

- Petroleum products and other fuels:
 - Drummed Product: Leaks or ruptures may occur. This includes drums of Jet B, Waste Fuel, and Waste Oil.
 - Fuel Cylinders: Propane, leaks may occur at the valves. All cylinders are secured at all times.
 - 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.

The risk of spills will be reduced through regular inspection and maintenance of all storage areas and equipment associated with fuel handling in accordance with recognized and accepted standard practices at all Matrix camps. These include:

- routine checks of fuel transfer hoses and cam lock;
- carefully monitor fuel content in the receiving vessel during transfer;
- cleaning up drips and minor spills immediately;

- regularly inspect drums, tanks and hoses for leaks or potential to leak; and
- training personnel, especially those who will be operators, in proper fuel handling and spill response procedures.

A record of these inspections and any remedial action will be maintained in camp.

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.

Two oil/fuel spill kits are positioned at all camps. A 5 gallon spill kit will be positioned in the general camp area and will be used for minor spills and drips. A 45 gallon spill kit will be placed in the area of the fuel storage for any major events.

5.0 RESPONSE ACTION

5.1 Discovery of a Fuel Spill

Upon discovery of a spill, personnel will immediately:

- a) identify the product that is spilling, or has spilled;
- b) assess immediate hazards and ensure all on-site persons are aware of them;
- c) secure the site; and
- d) commence initial notification of appropriate personnel and agencies.

5.2 Identification/Assessment of Spill

This step is critical to ensure the safety of responders and to minimize the impact to the environment. The assessment should include:

- a) Reassess the material spilled and quantity spilled.
- b) Reassess any immediate hazards.
- c) Identify all the safety issues that need to be dealt with before taking action. These include ignition sources, protective clothing and public safety.
- e) Refer to Material Safety Data Sheets for product identification and handling.

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5.3 Notification

The OSC will take note of the following information from the discoverer of the spill:

- a) discoverer's name;
- b) time and location of the spill;
- c) material spilled and approximate quantity;
- d) cause of spill if known;
- e) weather conditions;
- f) action taken so far; and
- g) immediate serious threats (water courses, fire)

The OSC will then make the following contacts as required and dependent on seriousness or threat:

1. Immediately notify the Matrix corporate office.
2. The SPILL LINE and/or the DIAND 24 Hour Line at:
 - a. Spill Line Phone: 1-867-920-8130; and
 - b. Fax: 1-867-873-6924.
3. Spill Report Form is filled out as completely as soon as possible before or after contacting the 24 Hour Spill Line.
4. Other members of the response team are notified as deemed necessary
5. Other contacts for spill response/assistance as necessary

Environment Canada
Indian and Northern Affairs

David Tilden
Ken Dahl

1-867-975-4644
1-867-669-2757

5.4 Action

This part of the plan will reconfirm steps that need to be followed when taking action. The person who takes charge is responsible and should:

- i) Ensure the use of trained personnel is prioritized when possible.
- ii) Brief responders on safety issues, first aid procedures for material involved.
- iii) Secure the site from access.
- iv) Ensure responders are wearing appropriate protective equipment.
- v) Eliminate all sources of ignition.
- vi) Stop the source of the spill or contamination.
- vii) Remain at the scene and use every effort to contain the spill until such time as help arrives. This would include the arrival of the OSC, or agency of authority.

5.4.1 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. 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.
3. Absorbent sheeting is placed on the rock to soak up spilled oil, fuel, etc.
4. Multi Sorb (crushed lava rock) can be used to scrub the rock surface.
5. Saturated material is disposed of in an empty drum, which is then labeled and sealed. Alternatively, the pads may be wrung out into the empty drum(s), the drums marked and then secured for eventual disposal.
6. Depending on the nature and volume of the spill, the 24-Hour Spill Line may be contacted after Step 4 or Step 5.

5.4.2 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. The tarp is placed in such away that the fuel can pool for collection and removal (e.g., at the foot of the berm).
3. 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-Hour Spill Line.
4. Applying a thin dusting of Multi Sorb or other ultra-dry absorbent to the groundcover may control petroleum-product sheen on vegetation.
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 cleanup/restoration.

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

5.4.4 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.

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.

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5.4.5 Procedure for Spills on Ice

Spills on ice are handled in similar fashion as those on snow. However, as ice presents the added danger of immediate access to water, care must be taken to respond quickly to such spills. Should fuel seep or flow through cracks or breaks in the ice, despite all precautions, assistance should be sought immediately.

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 ice surface and disposed of in an appropriated manner. Contact the 24 Hour Spill Line. Receive disposal instructions (e.g., sealing in drums, burn off, etc.) from the appropriate contact agencies.

5.4.6 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 global positioning system (GPS) coordinates and relay to camp or base ASAP. Include quantity and type of load loss.
2. Base or camp will contact 24 Hour Spill Line, and receive direction and instruction. Administer the appropriate procedure for spills on land, water, snow, or ice.

6.0 RESPONSE EQUIPMENT

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

7.0 TRAINING EXERCISES

All members of the Response Team will be familiar with the spill response resources at hand, this Contingency Plan, and appropriate spill response methods. 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).

7.1 Practice Drills

Matrix 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.