



---

**Stantec**

**Spill Contingency Plan for the Right of  
Way Clearing, Km 1508-1478,  
Mackenzie Valley Winter Highway**

January 2013



## Table of Contents

---

<b>1.0 INTRODUCTION .....</b>	<b>1.1</b>
<b>2.0 SITE DESCRIPTION.....</b>	<b>2.1</b>
2.1 POTENTIAL CONTAMINANTS.....	2.1

---

<b>3.0 RESPONSE ORGANIZATION.....</b>	<b>3.1</b>
<b>4.0 INITIAL ACTIONS .....</b>	<b>4.1</b>
<b>5.0 REPORTING PROCEDURE .....</b>	<b>5.1</b>
<b>6.0 ACTION PLANS .....</b>	<b>6.1</b>
6.1 SPILL RESPONSE .....	6.1
6.1.1 Spills on Snow / Ice .....	6.2
6.1.2 Spills on Land.....	6.3
6.1.3 Spills in Water .....	6.4
6.2 ADDITIONAL SPILL DELINEATION OR MONITORING .....	6.4

---

<b>7.0 ENVIRONMENTAL MAPPING .....</b>	<b>7.1</b>
<b>8.0 RESOURCE INVENTORY .....</b>	<b>8.1</b>
8.1 ON-SITE RESOURCES .....	8.1
8.1.1 Personnel.....	8.1
8.1.2 Equipment.....	8.1
8.1.3 Spill Kits .....	8.1
8.1.3.1 Spill Kit Locations .....	8.1
8.1.3.2 Spill Kit Contents .....	8.1
8.2 OFF-SITE RESOURCES .....	8.3

---

<b>9.0 TRAINING AND EXERCISES.....</b>	<b>9.1</b>
9.1 OUTLINE .....	9.1
9.2 SCHEDULE .....	9.1

---

<b>10.0 REFERENCES .....</b>	<b>10.1</b>
------------------------------	-------------

## LIST OF APPENDICES

<b>APPENDIX A.....</b>	<b>Northwest Territories Spill Report Form</b>
------------------------	--



## **1.0 Introduction**

---

This Spill Contingency Plan (SCP) has been developed for use by the Government of the Northwest Territories (GNWT) Department of Transportation (DOT) and its Contractor during the Right of Way (ROW) Clearing along Km 1508 – 1478 of the proposed Mackenzie Valley Highway (MVH) in the Gwich'in Settlement Area (GSA). The Project activities to be completed include mobilization and demobilization of equipment, clearing of vegetation and construction of snow fill crossings during the period of January to March.

The purpose of the SCP is to provide a guide to all site personnel in the event of an accidental release of fuel or other waste during the Project. All persons involved with the Project should read and be familiar with the SCP. To be effective, it is important that all personnel are familiar with their responsibilities and steps to take in the event of a spill. Personnel should not read the SCP for the first time during an emergency.

This SCP has been developed for the Project and regulatory approvals in accordance with the Guidelines for Spill Contingency Planning prepared by Indian and Northern Affairs Canada (INAC) (2007). The Contractor is required to submit a SCP prior to Project start-up. The Contractor's SCP will meet or exceed the features of this SCP and can be provided to the appropriate regulatory authorities once complete.



## **2.0 Site Description**

---

The project site is the proposed ROW for the northernmost section of the MVH. Originating at Km 248 of the Dempster Highway, the ROW clearing will occur for approximately 30 km south to Km 1478 of the proposed MVH.

The project is located in the Travaillant Lake High Subarctic Ecoregion. Soils in the area include fine-grained fluvial deposits and unsorted sandy silt- clay mixtures with some gravel, cobbles and boulders. The project is within the zone of continuous permafrost. Vegetation in the area primarily consists of open black spruce stands with shrub meadows. The project site crosses three creeks and is proximate to other surface water bodies. All work will be undertaken when the ground surface is frozen and water bodies are iced over.

### **2.1 POTENTIAL CONTAMINANTS**

Over the course of the Project, several contaminants may be used by equipment and crews working within or near the Project footprint. These potential contaminants are listed below and may be involved in a spill:

- Gasoline
- Diesel
- Hydraulic oil
- Motor oil
- Lubricating oils and grease
- Antifreeze and other coolants
- Contaminated soil, snow/ice and/or water

**Spill Contingency Plan for the Right of Way Clearing, Km 1508-1478, Mackenzie Valley Winter Highway**

Site Description

December 11, 2012

---

As construction is occurring in the winter, contaminant spills may occur on snow covered land or ice. Spills may result from any of the following occurrences:

- Leaks or ruptures of fuel storage drums or tanks
- Valve or line failure in systems, vehicles or heavy equipment
- Heat expansion due to overfilling or improper storage
- Improper storage of contaminants
- Vehicular accidents
- Spill during transfer of contaminant(s)
- Vandalism



**SPILL CONTINGENCY PLAN FOR THE RIGHT OF WAY CLEARING, KM 1508-1478, MACKENZIE VALLEY WINTER HIGHWAY**

### 3.0 Response Organization

---

A qualified professional with experience in northern road construction will manage execution of the Project. The Contractor, once selected, will be responsible for implementing the SCP during the entire construction period.

Whenever a spill is identified, the Contractor and the DOT representative should be contacted as soon as possible. The Contractor is responsible for initiating the SCP. Contact information for the DOT and Contractor are provided in Table 3-1 below.

**Table 3-1: Spill Contingency Contacts for ROW Clearing KM 1508-1478, Proposed MVH**

DOT Contact Information	Contractor Contact Information
Jim Stevens Project Manager Department of Transportation Government of the Northwest Territories 200, 4510 – 50 Avenue Yellowknife, NT X1A 2L9  Phone: 867-920-5247 Fax: 867-920-2565 Email: Jim_Stevens@gov.nt.ca	TBD     Phone: Fax: Email:



## **4.0 Initial Actions**

---

The following actions should be taken by the first person(s) who identifies a spill:

1. Be alert and considerate of your safety and of those around you. If possible, identify the spilled contaminant.
2. Assess the hazard to persons in the area of the spill.
3. If possible, without further assistance, control any danger to human life or the environment.
4. Assess whether the spill can be readily stopped or brought under control.
5. If safe to do so, and if possible, try to stop the spillage of contaminant.
6. Gather information about the status of the situation.
7. Report the spill immediately to the Contractor or the DOT site representative who will report the spill to the 24-Hour Emergency Spill Report Line – **867 – 920 – 8130**
8. Resume any effective action to contain, clean up or stop the flow of spilled contaminant. See Section 6.1 for more information on spill response procedures.



## 5.0 Reporting Procedure

---

All spills or potential spills of contaminants must be reported to the 24-hour Northwest Territories – Nunavut Emergency Spill Report Line to ensure that an investigation may be undertaken by the appropriate government authority. Reporting of any spills associated with the Project should be completed by the Contractor or the DOT site representative.

To report a spill:

1. Fill out the Northwest Territories Spill Report Form (found in Appendix B of this SCP) as completely as possible before calling in the spill report.
2. Contact the Government of the Northwest Territories 24-hour Emergency Spill Report Line  
**24-HOUR EMERGENCY SPILL REPORT LINE                      867-920-8130**
3. Where fax is available, fax the completed Northwest Territories Spill Report Form to **867-873-6924**. Alternatively, if email is available, email the completed Northwest Territories Spill Report Form to [spills@gov.nt.ca](mailto:spills@gov.nt.ca)

Any person reporting a spill is required to give as much information as possible, however reporting of a spill should not be delayed if all of the necessary information is not known. Additional information can be provided later. From the *Consolidation of Spill Contingency Planning and Reporting Regulations* (1998), as much of the following information should be reported during the initial spill report:

- Date and time of spill
- Location of spill
- Direction spill is moving
- Name and phone number of a contact person close to the location of the spill
- Type of contaminant spilled and quantity
- Cause of spill
- Whether spill is continuing or has stopped
- Description of existing contaminant
- Action taken to contain, recover, clean up, and dispose of spilled contaminant
- Name, address and phone number of person reporting the spill
- Name of owner or person in charge, management or control of contaminants at the time of the spill



## **6.0 Action Plans**

---

The most likely spill possibilities during the Project would be leakage or line failure from heavy equipment or other vehicles, spilling during fuel transfer, or vehicular accident. The likelihood of a major spill is negligible as large quantities of contaminants will not be stored within the Project area. All contaminants will be stored at a designated storage area (e.g., the skid mounted fuel sloop or skid mechanic shelter). Spill response kits will be kept with the fuel sloop and mechanic shelter.

The risk of spills will be further reduced through regular inspection and maintenance of all heavy equipment storage tanks and vehicles associated with the Project, as well as routine activities. These activities may include, but not be limited to:

- Routine checks of fuel transfer hoses and equipment;
- Inspection of fuel and oil lines on all equipment;
- Completing on-site fuel transfer over spill pads and a minimum of 30 mm from the high water mark of any water bodies;
- Monitoring of tank volume during fuel transfer;
- Cleaning up drips and minor spills immediately; and,
- Ensure the quick repair of any identified deficiencies on heavy equipment or other vehicles.

### **6.1 SPILL RESPONSE**

The following steps outline the general spill response procedures for initial actions to be taken to contain and clean up a contaminant spill, as well as disposing of contaminated materials. Three procedures have been developed for handling contaminant spills, depending on where the spill has occurred (i.e., on snow/ice, land, or in water). As construction will be occurring during the winter only, procedures outlined for spills on snow/ice and spills on land may be most applicable.

**Spill Contingency Plan for the Right of Way Clearing, Km 1508-1478, Mackenzie Valley Winter Highway**

Action Plans

December 11, 2012

---

**6.1.1 Spills on Snow / Ice**

1. Once a spill is identified, all sources of ignition should be turned off (e.g., no smoking, shut off engines).
2. The spilled material (e.g., gasoline, diesel, antifreeze, etc) should be identified, if possible.
3. The affected area should be secured, ensuring the area is safe for entry and does not represent a threat to human health and safety of the spill responders. Public access of the area should be restricted.
4. If possible, identify where the spill is coming from (the source). Determine if the spill is still occurring (i.e., still leaking) or if the spillage has stopped. If the spill has not stopped, determine if it is safe to stop or control the spill (e.g., plug hole, close valve, upright container).
5. If the spill is too large to be controlled with the spill materials at hand, contact the Contractor or the DOT site representative and report the spill immediately and request assistance (see Section 3 for contact information). Use materials on hand to attempt to control the spill.
6. If the spill is small enough to be controlled with the spill response materials at hand, prevent spilled contaminants from spreading or entering waterways by using sorbent materials or a snow/soil dyke down slope from the spill. This is especially the case with liquid contaminants (e.g. gasoline, diesel).
7. Once the spill has been controlled and further spreading prevented, contact the Contractor or the DOT site representative and report the spill (see Section 3 above for contact information). The contractor or the GN-CGS representative is responsible to report the spill to the 24-Hour Emergency Spill Report Line.
8. If possible with the spill response materials at hand, clean up the remaining spilled contaminant and store contaminated materials in a secure container for disposal. Impacted snow should be stored in drums for proper disposal.



### **6.1.2 Spills on Land**

1. Once a spill is identified, all sources of ignition should be turned off (e.g., no smoking, shut off engines).
2. The spilled material (e.g., gasoline, diesel, antifreeze, etc) should be identified, if possible.
3. The affected area should be secured, ensuring the area is safe for entry and does not represent a threat to human health and safety of the spill responders. Public access of the area should be restricted.
4. If possible, identify where the spill is coming from (the source). Determine if the spill is still occurring (i.e., still leaking) or if the spillage has stopped. If the spill has not stopped, determine if it is safe to stop or control the spill (e.g., plug hole, close valve, upright container), or contain the spill (e.g., place a container or tarp with built up edges under the spill source to contain the spill).
5. If the spill is too large to be controlled with the spill materials at hand, contact the Contractor or the DOT site representative and report the spill immediately and request assistance (see Section 3 for contact information). Use materials on hand to attempt to control the spill.
6. If the spill is small enough to be controlled with the spill response materials at hand, prevent spilled contaminants from spreading or entering waterways by using sorbent (oil-absorbing) materials or a soil dyke down slope from the spill. This is especially the case with liquid contaminants (e.g., gasoline, diesel).  
  
If some contaminant has entered a waterway, follow procedures in the next section (***Spills in Water***) to contain and clean-up the contaminant in the water.
7. Once the spill has been controlled and further spreading prevented, contact the Contractor or the DOT site representative and report the spill (see Section 3 for contact information). The Contractor or the DOT site representative is responsible to report the spill to the 24-Hour Emergency Spill Report Line.
8. If possible with spill response materials at hand, clean up the remaining spilled contaminant and store contaminated materials in a secure container for proper disposal. Do not flush the affected area with water.
9. If possible, remove any contained liquid by pumping into secure drums.

**Spill Contingency Plan for the Right of Way Clearing, Km 1508-1478, Mackenzie Valley Winter Highway**

Action Plans

December 11, 2012

---

**6.1.3 Spills in Water**

1. Once a spill is identified, all sources of ignition should be turned off (e.g., no smoking, shut off engines).
2. The spilled material (e.g., gasoline, diesel, antifreeze, etc) should be identified, if possible.
3. The affected area should be secured, ensuring the area is safe for entry and does not represent a threat to human health and safety of the spill responders. Public access of the area should be restricted.
4. If possible, identify where the spill is coming from (the source). Determine if the spill is still occurring (i.e., still leaking) or if the spillage has stopped. If the spill has not stopped, determine if it is safe to stop or control the spill (e.g., plug hole, close valve, upright container).
5. If the spill is too large to be controlled with the spill materials at hand, contact the Contractor or the DOT site representative and report the spill immediately and request assistance (see Section 3 for contact information). Use materials on hand to attempt to control the spill.
6. If the spill is small enough to be controlled with the spill response materials at hand, use sorbent booms to contain the spill for recovery. Place sorbent sheets on the water within the boomed area to help contain the contaminant. For narrow waterways such as streams, place one or more sorbent booms across the waterway, downstream of the spill location, and anchor the booms on the each bank.
7. Once the spill has been controlled and further spreading prevented, contact the Contractor or the DOT site representative and report the spill (see Section 3 for contact information). The Contractor or the DOT site representative is responsible to report the spill to the 24-Hour Emergency Spill Report Line.
8. If possible with the spill response materials at hand, clean up the remaining spilled contaminant within the boomed area. Store contaminated materials in a secure container for proper disposal.

**6.2 ADDITIONAL SPILL DELINEATION OR MONITORING**

In the event of a large spill or a spill in which not all of the spilled contaminant can be readily cleaned up with materials at hand (as described above), delineation of the affected area may be required. This would include subsurface investigation of the area (i.e., digging of test pits, soil sampling, installation of monitoring wells) to determine how large and how deep the contaminant affected the subsurface soil and/or groundwater (horizontal and vertical extent of the spill). The delineation would result in the development of an appropriate remediation plan for the affected area. In this case, a qualified environmental consultant should be retained to provide advice on how to proceed with delineation and remediation of a large spill.

## **7.0 Environmental Mapping**

---

As described in Section 1, activities will be restricted to the proposed 30 m wide ROW. Impacts from spills could occur along the ROW and possibly on adjacent lands and waters should a large volume of material be released. Spills into water can dissipate and affect a larger area than on land. Spills into creeks or other water bodies could impact the downstream environment creek, including water quality, fish and fish habitat.

Spill response equipment (e.g., spill kits) will be present at the designated fuelling and maintenance areas (fuel sloop and mechanic shed). Fueling will be prohibited within 30 of the high water mark of all water bodies. All site personnel will be familiar with locations of spill response equipment.



## **8.0 Resource Inventory**

---

### **8.1 ON-SITE RESOURCES**

#### **8.1.1 Personnel**

All personnel hired to work on the Project will be trained on-site in spill prevention, response and clean-up measures (see Section 9).

#### **8.1.2 Equipment**

The following is a list of equipment that will be on-site and available to respond to potential spills:

- Loader
- Dozers
- Snowcat/Nodwell
- Pick-up trucks / crew vehicles (light vehicle)

#### **8.1.3 Spill Kits**

##### **8.1.3.1 Spill Kit Locations**

At least one spill kit should be clearly marked and present at the designated fuelling and mechanic area. An additional spill kit should be kept with all equipment working within 30 m of all creeks or rivers.

##### **8.1.3.2 Spill Kit Contents**

The following outlines the recommended minimum requirements for contents of spill kits to be used during the Project; the Contractor is responsible to supply the spill kits. Each spill kit should be regularly inspected to ensure it always contains the following, at a minimum:

- 1 – 205 L open top steel drum with lid, bolting ring and gasket (spill kit container)
- 10 disposable large 5 mil polyethylene bags (dimensions 65 cm x 100 cm) with ties
- 4 – 12.5 cm x 3 m (5 in. X 10 ft.) sorbent booms
- 10 kg bag of sorbent particulate
- 100 sheets (1 bail) of 50 cm x 50 cm sorbent sheets
- 2 large (5 m x 5 m) plastic tarps
- 1 roll duct tape
- 1 utility knife
- 1 field notebook and pencil
- 1 rake
- 1 pick-axe
- 3 spark-proof shovels
- 4 Tyvex® splash suits

**Spill Contingency Plan for the Right of Way Clearing, Km 1508-1478, Mackenzie Valley Winter Highway**

Resource Inventory

December 11, 2012

---

- 4 pairs chemical resistant gloves
- 4 pairs of splash protective goggles
- Instruction binder, including Spill Contingency Plan.

The entire spill kit contents, with the exception of the spark-proof shovels, can be stored within the 205 L steel drum. The drum should be sealed securely to protect the spill kit contents though should always be accessible without the use of tools (i.e., finger tight bolt ring). The drum's bolt ring should be inspected regularly during facility inspections to ensure it turns freely and is lubricated.

Extra spill response materials should also be available for use, in addition to the spill kit contents. These include:

- 10 – 205 L open top steel drum with lid, bolting ring and gasket
- 2 spark-proof shovels
- 50 disposable large 5 mil polyethylene bags (dimensions 65 cm x 100 cm)
- 10 – 12.5 cm x 3 m (5 in. X 10 ft) sorbent booms
- 5 – 10 kg bags of sorbent particulate
- 500 sheets (5 bails) of 50 cm x 50 cm sorbent sheets
- 2 Tyvex® splash suits
- 2 pairs of chemical resistant gloves
- 2 pairs of splash protective goggles.

## 8.2 OFF-SITE RESOURCES

The following agencies can be contacted for assistance in spill reporting, response and/or clean-up and remediation.

**Table 8-1: Regulatory Agencies' Contact Information for Spill Contingency Planning**

Agency	Legislation	Contact Information
Gwich'in Land and Water Board	<i>Mackenzie Valley Land Use Regulations</i> <i>Northwest Territories Waters Regulations</i>	Phone: 867 – 777-7960
Environmental Protection Division, Department of Environment and Natural Resources, Government of the Northwest Territories	<i>Environmental Protection Act</i> (1998) <i>Spill Contingency Planning and Reporting Regulations</i> (1993)	Phone: 867 – 873 – 7654
Environment Canada (Emergency) Yellowknife	<i>Canadian Environmental Protection Act</i> (1999)	Phone: 867 – 669 - 4725
Fisheries and Oceans Canada (Yellowknife)	<i>Fisheries Act</i>	Phone: 867 – 669 - 2900





## **9.0 Training and Exercises**

---

### **9.1 OUTLINE**

The Contractor will be responsible for providing a qualified supervisor and training site workers in spill response. All individuals hired to work on the Project should have their basic first aid and WHMIS (Workplace Hazardous Materials and Information System) training before working on site. A training session on spill prevention and response will be held for all individuals prior to the start of the construction project. The training session should review the SCP and include information on:

- Individuals roles and responsibilities in regards to spill prevention, detection, response and clean-up;
- Location(s) of hard copies of the SCP, maps and spill kits;
- Equipment available for spill response;
- Content of spill kits;
- Initial actions and spill reporting procedures; and,
- Spill response and clean-up actions.

Training exercises, including proper use of spill kits, should also be held prior to the start of construction to provide hands-on training for individuals on spill response procedures and equipment. Training exercises can be held during the training session for all individuals or at another time for individuals directly involved with handling of hazardous materials.

### **9.2 SCHEDULE**

The training session and exercises will be held prior to the start of construction as part of a Worker Orientation Seminar. This will ensure all returning individuals receive a refresher while any new individuals become familiar with on-site spill prevention and response measures.

The Contractor will keep records of all individuals who attend the training session and exercises, as well as copies of their training certificates (e.g., first aid, WHMIS).



## **10.0 References**

---

Indian and Northern Affairs Canada (INAC). 2007. Guidelines for Spill Contingency Planning. Water Resources Division, INAC, Yellowknife, NT Available online: <http://www.aadnc-aandc.gc.ca/eng/1100100024236/1100100024253> (19 November 2012).



# **APPENDIX A**





# NT-NU SPILL REPORT

**NT-NU 24-HOUR SPILL REPORT LINE**

FAX: (867) 873-6924

EMAIL: [spills@gov.nt.ca](mailto:spills@gov.nt.ca)

REPORT LINE USE ONLY

PAGE 1 OF 1