

Fuel Spill Contingency Plan

For

Cambridge Bay Gravel Pit

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Table of Contents

| | |
|---|-----------|
| 1.0 Introduction | 1 |
| 2.0 Site Description | 2 |
| 3.0 Regulations | 3 |
| 4.0 Contacts & Regulatory Authorities | 4 |
| 5.0 Potential Contaminants and Spill Scenarios | 5 |
| 6.0 Reportable Spill Quantities | 6 |
| 7.0 Spill Response Procedures | 8 |
| 7.1. Spills on Land | 8 |
| 7.2. Spills on Water | 9 |
| 7.3. Spills on Snow and Ice | 10 |
| 7.4. Additional Spill Delineation/Monitoring..... | 10 |
| 8.0 Spill Kit and Training Requirements | 12 |
| 8.1. Spill Kit..... | 12 |
| 8.2. Additional Spill Response Supplies..... | 12 |
| 8.3. Spill Kit Locations..... | 13 |
| 8.4. Training..... | 13 |
| 9.0 General Safety Practices and Site Rules | 14 |
| 10.0 Closure | 15 |

NT-NU Spill Report Form

- **Introduction**

The purpose of this Fuel Spill Contingency Plan is to address potential environmental spill incidents that may occur during granular extraction activities at the gravel pit, Cambridge Bay. The Fuel Spill Contingency Plan is designed to be protective of the local natural environment.

The Fuel Spill Contingency Plan includes a spill response procedures and general health, safety and emergency response requirements necessary when conducting activities that may require contact with the subsurface materials. The Fuel Spill Contingency Plan does not replace any Health & Safety protocols, procedures, etc. already established, but rather is intended to be complimentary to existing protocols.

All persons involved with on-site operations will be required to read the Fuel Spill Contingency Plan.

- **Site Description**

Nunavut Excavating 2007 Inc. is planning to establish own quarry near the community of Cambridge Bay for the purpose of extraction an approximate quantity of 1200 cu.m of granular annually. The proposed quarry location is adjacent to the gravel pit being used by the Hamlet of Cambridge Bay. The propose location have been disturbed and used previously for quarrying activities. Extracted materials will be used in the Community for building house pads, parking areas, and access roads. Figure 1 (below) is showing the Cambridge Bay borrow source location.

Figure 1: Location of the Cambridge Bay Gravel Source



Cambridge Bay

Airport

Gravel Pit Road

Gravel Pit

Gravil Pit

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Google Earth

2006

Imagery Date: 7/8/2011 69°06'09.30" N 105°08'51.15" W elev 0 m eye alt 9.13 km

• Regulations

With respect to spills, the Guidelines for Spill Contingency Planning and Environmental Protection require that all spill response plans include:

- The name, address and job title of the owner or person in charge, management or control of the facility;
- The name, job title and 24-hour telephone number for the person(s) responsible for activating the spill response plan;
- A description of the facility, a description of the type and amount of contaminants normally stored at the facility and a site map of the facility;
- The steps to be taken to report, contain, clean up and dispose of contaminants in the case of a spill;
- The means by which the spill response plan is activated;
- A description of the training provided to employees to respond to a spill;
- An inventory of and the location of response and clean-up equipment available to implement the spill response plan; and,
- The date the spill response plan was prepared.

- **Contacts & Regulatory Authorities**

The following table includes the contact information for the persons responsible for the facility. The persons listed below should be contacted in the event of a spill.

Table : Contacts

| Name | Job Title | 24-Hour Telephone # |
|-------------|------------------|----------------------------|
| | | |
| | | |
| | | |

In each instance that a spill is identified, the Emergency Spill Hotline and the INAC Water Resources Inspector shall be contacted as soon as possible. A NT-NU Spill Report Form (included) should also be completed and faxed to the Emergency Spill Hotline. The necessity to contact the other agencies will be contingent upon direction from the Emergency Spill Hotline.

Emergency Spill Hotline: Phone: (867) 920-8130, Fax (867) 873-6924

INAC Water Resources Inspector: Phone: (867) 975-4295

In addition to the local contacts described above, the following table summarizes the additional regulatory authorities that have a vested interest in the event of a spill.

Table : Additional Agencies

| Agency | Legislation | Contact Phone # |
|---|---|------------------------|
| Nunavut Water Board | Nunavut Waters and Surface Right Tribunal Act | (867) 360-6338 |
| Nunavut Impact Review Board | Nunavut Land Claims Agreement Act | (867) 983-2593 |
| Environment Canada | Canadian Environmental Protection Act, 1999 | (867) 975-4464 |
| Transport Canada (Coast Guard) | Transportation of Dangerous Goods Act | (867) 979-5269 |
| Department of Fisheries and Oceans | Fisheries Act | (867) 645-2871 |

• Potential Contaminants and Spill Scenarios

Potential spill scenarios are dependent on the types and volumes of materials that are being used on the sites and the activities being carried out. For the purpose of this Fuel Spill Contingency Plan, spill sizes are described as small (<10 litres), medium (>10 litres and <100 litres) or large (>100 litres).

The primary potential contaminants at the Cambridge Bay quarry site include gasoline, diesel fuel, hydraulic oil, motor oil and other lubricants, antifreeze and coolants from the construction equipment in use for granular production and for road upgrades purposes. Spills may be the result of any of the following occurrences:

- Leaks or ruptures of vehicular fuel or hydraulic oil storage tanks;
- Valve or line failure in systems on vehicles or operating equipment;
- Heat expansion due to overfilling;
- Vehicular accidents; and/or,
- Vandalism.

• Reportable Spill Quantities

In the event of a spill, the following table is to be used as a guide to determine if the spill should be reported to the proper authorities. Any spilled quantities that exceed the specified amounts must be reported to the **Emergency Spills Hotline**. Spills of any quantity that occur near or into fish-bearing waters or sensitive environment, wildlife or habitat must be reported. In addition, spills of any quantity that pose an imminent threat to human health or life or listed species at risk or critical habitat must also be reported. It is recommended that any spill of significant size be reported and the advice received should be followed.

Table : Reportable Quantities¹

| Item | TDGA ² Class | Contaminant | Amount Spilled |
|------|-------------------------|---|---|
| 1 | 2 | Explosives | Any amount |
| 2 | 2.1 | Compressed Gas (flammable) | Any amount of gas from containers with capacity greater than 100 kg |
| 3 | 2.2 | Compressed Gas (non-corrosive, non-flammable) | Any amount of gas from containers with capacity greater than 100 kg |
| 4 | 2.3 | Compressed Gas (toxic) | Any amount |
| 5 | 2.4 | Compressed Gas (corrosive) | Any amount |
| 6 | 3.1, 3.2, 3.3 | Flammable Liquid | 100 L |
| 7 | 4.1 | Flammable Solid | 25 kg |
| 8 | 4.2 | Spontaneously Combustible Solids | 25 kg |
| 9 | 4.3 | Water Reactant Solids | 25 kg |
| 10 | 5.1 | Oxidizing Substances | 50 L or 50 kg |
| 11 | 5.2 | Organic Peroxides | 1 L or 1 kg |
| 12 | 6.1 | Poisonous Substances | 5 L or 5 kg |
| 13 | 6.2 | Infectious Substances | Any amount |
| 14 | 7 | Radioactive | Any amount |
| 15 | 8 | Corrosive Substances | 5 L or 5 kg |
| 16 | 9.1(in part) | Misc. products or Substances Excluding PCB Mixtures | 50 L or 50 kg |
| 17 | 9.2 | Environmentally Hazardous | 1 L or 1 kg |
| 18 | 9.3 | Dangerous Wastes | 5 L or 5 kg |
| 19 | 9.1 (in part) | PCB Mixtures of 5 or More Parts Per Million | 0.5 L or 0.5 kg |

| | | | |
|-----------|------|--------------------|-----------------|
| 20 | None | Other Contaminants | 100 L or 100 kg |
|-----------|------|--------------------|-----------------|

Notes:

- 1) Environmental Protection Act, Consolidation of Spill Contingency Planning and Reporting Regulations
- 2) TDGA Class – Transportation of Dangerous Goods Class under the *Transportation of Dangerous Goods Act*.

• Spill Response Procedures

The following section describes the appropriate spill response procedures that will be followed in the event of a spill to various media (bedrock, gravel, soil, water, ice or snow).

• Spills on Land

For spills on land (soil, gravel, sand, rock, and vegetation), the following procedure will be followed;

1. Extinguish all sources of ignition (i.e., shut off engines, no smoking).
2. If possible, identify the spilled material.
3. Make sure the area is safe for entry and the spill does not represent a threat to the health or safety of the responder or others at the spill site.
4. Assess whether the spill can be readily stopped or brought under control and if safe and possible, stop the source of the spill (i.e., plug hole, close valve, install upright container) or place tarp under spill source and build up tarp edges to contain spill.
5. If the spill is sufficiently large that it cannot be controlled with the materials at hand, the spill should be reported immediately.
6. Stop spilled liquids from spreading or entering waterways using absorbent materials or a soil dyke down slope from the spill.
7. Contact facility supervisor and report the spill.
8. If possible with materials at hand, clean up remaining spilled material and store in a secure container for disposal. Do not flush area with water.
9. If possible, pump any contained liquid into drums.
10. Complete a Spill Reporting Sheet.
11. Contact: Emergency Spill Hotline: Phone: (867) 920-8130, Fax (867) 873-6924 for additional advice.
12. Contact: INAC Water Resources Inspector: Phone: (867) 975-4295 to report the spill.
13. Submit to the INAC Water Resources Inspector, a detailed report including the GPS location of the spill, no later than thirty (30) days after initially reporting the event.

• Spills on Water

For spills on water, the following procedure will be followed:

1. Extinguish all sources of ignition (i.e., shut off engines, no smoking).
2. If possible, identify the spilled material.
3. Make sure the area is safe for entry and the spill does not represent a threat to the health or safety of the responder or others at the spill site.
4. Assess whether the spill can be readily stopped or brought under control and if safe and possible, stop the source of the spill (i.e., plug hole, close valve, upright container).

5. If the spill is sufficiently large that it cannot be controlled with the materials at hand, spill report the spill immediately.
6. Use sorbant booms to contain spill for recovery, place sorbant sheets on water within boomed perimeter. For narrow waterways, place one or more booms across the waterway, down stream of the spill location and anchor boom ends on each bank. Store saturated sorbant sheets and booms in drums for disposal.
7. Contact facility supervisor and report the spill.
8. If possible with materials at hand, clean up remaining spilled material and store in a secure container.
9. Complete a Spill Reporting Sheet.
10. Contact: Emergency Spill Hotline: Phone: (867) 920-8130, Fax (867) 873-6924 for additional advice.
11. Contact: INAC Water Resources Inspector: Phone: (867) 975-4295 to report the spill.
12. Submit to the INAC Water Resources Inspector, a detailed report including the GPS location of the spill, no later than thirty (30) days after initially reporting the event.

- **Spills on Snow and Ice**

Spills on ice present the potential for immediate access of the contaminants to water therefore, immediate response to the spill is essential. For spills on snow and ice, the following procedure should be followed:

1. Extinguish all sources of ignition (i.e., shut off engines, no smoking).
2. If possible, identify the spilled material.
3. Make sure the area is safe for entry (i.e., ice thickness) and the spill does not represent a threat to the health or safety of the responder or others at the spill site.
4. If the spill is sufficiently large that it cannot be controlled with the materials at hand, the spill should be reported immediately.
5. Assess whether the spill can be readily stopped or brought under control and if safe and possible, stop the source of the spill (i.e. plug hole, close valve, install upright container) or place tarp under spill source and build up tarp edges to contain spill.
6. Stop spilled liquids from spreading or entering waterways using absorbent materials or a snow/soil dyke.
7. Contact facility supervisor and report the spill.
8. If possible with materials at hand, clean up remaining spilled material and store in a secure container (i.e., drum, polyethylene bags). Store impacted snow in drums for disposal.
9. Contact: Emergency Spill Hotline: Phone: (867) 920-8130, Fax (867) 873-6924 for additional advice.
10. Contact: INAC Water Resources Inspector: Phone: (867) 975-4295 to report the spill.

11. Submit to the INAC Water Resources Inspector, a detailed report including the GPS location of the spill, no later than thirty (30) days after initially reporting the event.

- **Additional Spill Delineation/Monitoring**

As a result of a large spill in which not all of the spilled material can be readily recovered as described above, additional delineation in the form of a subsurface investigation (i.e., test pits, boreholes, and monitoring wells) may be required to determine the lateral and vertical extents of the impacts to the subsurface soil and/or groundwater. The additional delineation/monitoring information will be used to develop an appropriate remediation plan. In such cases, a qualified environmental consultant will be retained to provide advice with respect to how to proceed with the additional assessment.

• Spill Kit and Training Requirements

The following section presents the recommended minimum requirements for the content and number of spill kits that will be present.

• Spill Kit

Each spill kit should be inspected regularly to ensure that it contains, as a minimum, the following:

- 1 – 205 litre, open top steel drum with a lid, bolting ring and gasket;
- 1 Spark proof shovel;
- 1 package of 10 disposable 5 mil polyethylene bags (approx. 65 cm x 100 cm);
- 4 – 12.5 cm (approx. 5”) x 3 m (approx. 10’) sorbant (oil-absorbing) booms;
- 10 kg bag of sorbant particulate;
- 1 bail of 50 cm x 50 cm (approx.) sorbant sheet (100 Sheets/bail);
- 1 x 5m x 5m approx. plastic tarp;
- 2 pairs of oil resistant gloves; and,
- 2 pairs of splash protective goggles.

• Additional Spill Response Supplies

In addition to the materials contained in the spill kits, an inventory of the following supplies will be available for use if required.

- 10 – 205 litre, open top steel drum with a lid, bolting ring and gasket;
- 2 Spark proof shovels;
- 5 packages of 10 disposable 5 mil polyethylene bags (approx. 65 cm x 100 cm);
- 10 – 12.5 cm x 3 m sorbant (oil-absorbing) booms;
- 5 x 10 kg bags of sorbant particulate;
- 5 bails of 50 cm x 50 cm (approx.) sorbant sheet (100 Sheets/bail);
- 2 pairs of oil resistant gloves; and,
- 2 pairs of splash protective goggles.

• Spill Kit Locations

The spill kit, with the exception of the shovel, can be contained within the 205 L drum which should be sealed securely to protect the contents. The drum will also be accessible without the use of tools (i.e., bolt ring only finger tight). The bolt ring should be inspected regularly to ensure that it turns freely and lubricated if it does not. At least one spill kit should be clearly identified and present on the site.

- **Training**

To ensure the effectiveness of the Fuel Spill Contingency Plan, the following actions will be followed:

1. The Fuel Spill Contingency Plan will be reviewed, as a minimum, on an annual basis and updated as required by changes in operation and/or technology.
2. The Fuel Spill Contingency Plan will be distributed to the personnel on the site.
3. The personnel will be informed of the locations of all potentially hazardous materials and their associated Material Safety Data Sheets (MSDS).
4. The personnel will be trained in the use of the MSDS and the techniques and materials used to contain and remediate spilled materials.
5. The personnel will be informed as to the importance of first response with respect to the protection of human health and safety, the environment, property, wildlife and the ecosystem by reducing the impact of spills.

• General Safety Practices and Site Rules

The following is a list of site rules that will be followed to maintain safe working conditions during a spill response:

1. Eating, drinking, chewing gum and smoking are prohibited in contaminated or potentially contaminated areas, or where the possibility for the transfer of contamination exists. This would include areas of active excavation and metal removal.
2. Personnel who have worked on-site shall wash their hands and face thoroughly with soap and water and remove themselves from the spill area prior to eating, drinking or smoking.
3. All field crew workers should be aware of potentially dangerous situations that they should avoid (i.e. the presence of strong, irritating or nauseating odours). Field crew workers should also be familiar with the physical characteristics of the site including:
 - wind direction in relation to areas of known contamination;
 - accessibility to equipment and vehicles;
 - communications; and,
 - site access.

- **Closure**

This Fuel Spill Contingency Plan does not replace the general provision of the applicable Federal and Territorial statutes regarding workplace safety or any protocols previously established by the Hamlet of Arctic Bay. Instead, it may be used to augment any existing plans.

Yours truly,

Nunavut Excavating 2007 Inc.

| | |
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| Glen Molloy, Manager | |
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NT-NU Spill Report Form



Canada

NT-NU SPILL REPORT

OIL, GASOLINE, CHEMICALS AND OTHER HAZARDOUS MATERIALS

NT-NU 24-HOUR SPILL REPORT LINE

TEL: (867) 920-8130

FAX: (867) 873-6924

EMAIL: spills@gov.nt.ca

REPORT LINE USE ONLY

| | | | | | | | |
|--|---|--------------|--|--------------------------------------|--|-----------------------------------|-----------------|
| A | REPORT DATE: MONTH – DAY – YEAR | | REPORT TIME | | <input type="checkbox"/> ORIGINAL SPILL REPORT, OR <input type="checkbox"/> UPDATE # _____ TO THE ORIGINAL SPILL REPORT | REPORT NUMBER _____ | |
| | B | | OCCURRENCE DATE: MONTH – DAY – YEAR | | | | OCCURRENCE TIME |
| C | LAND USE PERMIT NUMBER (IF APPLICABLE) | | | WATER LICENCE NUMBER (IF APPLICABLE) | | | |
| | D | | | | GEOGRAPHIC PLACE NAME OR DISTANCE AND DIRECTION FROM NAMED LOCATION | | |
| E | LATITUDE | | | LONGITUDE | | | |
| | DEGREES | MINUTES | SECONDS | DEGREES | MINUTES | SECONDS | |
| F | RESPONSIBLE PARTY OR VESSEL NAME | | RESPONSIBLE PARTY ADDRESS OR OFFICE LOCATION | | | | |
| | G | | ANY CONTRACTOR INVOLVED | | | | |
| H | PRODUCT SPILLED | | QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES | | U.N. NUMBER | | |
| | SECOND PRODUCT SPILLED (IF APPLICABLE) | | QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES | | U.N. NUMBER | | |
| I | SPILL SOURCE | | SPILL CAUSE | | AREA OF CONTAMINATION IN SQUARE METRES | | |
| | J | | FACTORS AFFECTING SPILL OR RECOVERY | | DESCRIBE ANY ASSISTANCE REQUIRED | | |
| K | HAZARDS TO PERSONS, PROPERTY OR EQUIPMENT | | ADDITIONAL INFORMATION, COMMENTS, ACTIONS PROPOSED OR TAKEN TO CONTAIN, RECOVER OR DISPOSE OF SPILLED PRODUCT AND CONTAMINATED MATERIALS | | | | |
| | L | | REPORTED TO SPILL LINE BY | | POSITION | | |
| M | EMPLOYER | | LOCATION CALLING FROM | | TELEPHONE | | |
| | ANY ALTERNATE CONTACT | | POSITION | | EMPLOYER | | |
| N | ALTERNATE CONTACT | | LOCATION | | ALTERNATE TELEPHONE | | |
| | REPORT LINE USE ONLY | | | | | | |
| O | RECEIVED AT SPILL LINE BY | | POSITION | | EMPLOYER | | |
| | STATION OPERATOR | | LOCATION CALLED | | REPORT LINE NUMBER | | |
| LEAD AGENCY <input type="checkbox"/> EC <input type="checkbox"/> CCG <input type="checkbox"/> GNWT <input type="checkbox"/> GN <input type="checkbox"/> ILA <input type="checkbox"/> INAC <input type="checkbox"/> NEB <input type="checkbox"/> TC | | | SIGNIFICANCE <input type="checkbox"/> MINOR <input type="checkbox"/> MAJOR <input type="checkbox"/> UNKNOWN | | FILE STATUS <input type="checkbox"/> OPEN <input type="checkbox"/> CLOSED | | |
| AGENCY | | CONTACT NAME | | CONTACT TIME | | REMARKS | |
| LEAD AGENCY | | | | | | | |
| FIRST SUPPORT AGENCY | | | | | | | |
| SECOND SUPPORT AGENCY | | | | | | | |
| THIRD SUPPORT AGENCY | | | | | | | |