Inukshuk
CONSTRUCTION

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Spill Contingency Plan

Fuel Facility Upgrade Project
Rankin Inlet, NU

GPS Location: Latitude: 62˚48N Longitude: 92˚04W

Prepared by:
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Rankin Inlet NU,
X0C 0G0

Mosher Engineering Limited
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Prepared for:

Government of Nunavut
Public Works and Services
P.O. Box 002
Rankin Inlet, NU
X0C 0G0

Date Prepared: January 12, 2010
Effective date: April 1st, 2010 to November 15th, 2010

Point of Contact for Inukshuk Construction Limited:

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1. 0 Introduction

Inukshuk Construction has been contracted by the Government of Nunavut to upgrade the fuel storage facility in Rankin Inlet, NU. Our firm will be handling various hazardous materials and there is the potential for a spill.

Inukshuk Construction and its sub contractors are committed to ensuring that hazardous materials are not accidentally discharged to the environment. However, in the event a spill does occur, we have prepared the following spill contingency plan to minimize the environmental impact.

An emergency, such as a spill is a very stressful situation. The following plan will ensure that all personnel are aware of the procedures that must be following in the event of a spill. This plan will ensure that life is protected, injuries minimized, resources are used effectively, environmental impact is kept to a minimum and essential reporting is conducted.

1.1 Applicable Regulations

The GN requires that any person or company storing over 20,000 litres of contaminants in an aboveground storage facility must have a spill contingency plan in place.

1.2 Scope of Work

General

The Rankin Inlet Fuel Facility Expansion project involves the following work.

- Mobilization of materials, machinery and equipment required to complete the work via sealift from Montreal and Churchill, MB
- Provision of a temporary fuel dispensing facility
- Construction of containment berms and installation of an impervious HDPE liner
- Cleanup of approximately 6,000 cu m of contaminated soil
- Installation of resupply pipelines for gasoline, LSDL and JET A1 product
- Installation of spill basin and resupply manifold
- Erection of three 3,064,000 liter Jet A1 storage tanks
- Erection of two 2,565,000 liter LSDL storage tanks
- Erection of one 1,986,000 liter LSDL storage tank
- Surface preparation, sandblasting of existing lead-based paint and painting of all tanks, piping and structural steel
- Installation of new Operators Shelter
- Installation of a new Gasoline/Diesel Dispenser Building
- Installation of a Jet A1 Dispenser Building
- Installation of new fencing
- Site electrical work including grounding, lighting and power

1.3 Hazardous Materials Expected to Be Encountered

During the implementation of this project, we will encounter the following hazardous materials will be encountered.

Hazardous Material	Quantities
Jet A1 Fuel	9000cum (Max tank capacity)
Tank Sludge	5000L (Estimate)
Contaminated Soil	Unknown
Lead-Based Paint	Unknown
Hydrotest Water	3000cum

1.4 Owner Contact Information

The owner of the facility is the Government of Nunavut, Petroleum Products Division. The contact personnel are as follows:

Project Officer
Wayne Thistle, CET
Acting Regional Projects Manager
Dept. of Community & Government Services
Kivalliq Region, Government of Nunavut
PO Bag 002, Rankin Inlet, NU, X0C 0G0
Phone # (867) 645-8178
Fax # (867) 645-8196
Cell # (867) 645-6806
Email: WThistle@GOV.NU.CA]

Petroleum Products Division
Mr. Todd MacKay
Government of Nunavut
Public Works and Services
P.O. Box 002
Rankin Inlet, NU
X0C 1X0

Tel: (867) 645-5172
Fax: (867) 645-6806
Email: TMcKay@GOV.NU.CA

1.5 Inukshuk Construction Limited and Mosher Engineering Limited Contact Personnel

In the event of a spill, the Inukshuk Construction Site Supervisor will be responsible for activating the spill contingency plan.

The 24 hour contact information for our personnel are as follows:

Tony King
Site Supervisor
Rankin Inlet, NU

Hotel #: (867) 645-2231
Fax #: (867) 645-2231
Cell #: (902) 478-4700

John Winters
Site Supervisor
Rankin Inlet, NU
Hotel #: (867) 645-2231
Fax #: (867) 645-2231
Cell #: (902) 483-0398

The crew are also equipped with radios.

David Mosher, Senior Project Manager
Office: (902) 429-0272
Home: (902) 429-3430
Cell: (902) 483-9677
Fax: (902) 429-7762
E-mail: dave@mosher.ca

1.6 Fuel Storage Facility Description

The existing fuel storage facility consists of storage tanks for gasoline, LSDL and Jet A1 fuel located in three separate bermed dykes with impervious HDPE liner. The east dyke is containing one 1655 cum Jet A1 vertical tank. The south dyke is containing two 1351cum LSDL vertical tanks, one 1351cum gasoline vertical tank, and four 106cum gasoline horizontal tanks. The north dyke is containing one 4983cum LDSL vertical tank and two 1351cum LDSL vertical tanks. There are dispensers for gasoline, diesel and Jet A1 located just outside the dyke.

The new facility will consist of six additional storage tanks, a two new containment dykes, new tank lot piping, and new pipelines going to the sea hose connection. The east dyke will now have two additional 2565cum LSDL vertical tanks and the existing Jet A1 1655cum tank will be converted to LSDL. The south dyke will have an additional1986cum LDSL vertical tank. One of the 1351cum LSDL vertical tank will be relocated to the north dyke. Two of the four existing 106cum gasoline horizontal tank will be relocated out of this dyke to the new northeast dyke. The north dyke will receive the existing 1351cum LSDL from the south dyke. The two existing 1351cum LDSL tanks will be relocated inside the dike. A new bermed dyke will be constructed north of the existing north dyke. This dyke will contain three new 3064cum Jet A1 vertical tanks. A new dyke berm has been constructed north of the east dyke and is now containing twelve 106cum horizontal tanks for surplus storage. A new LDSL/Gasoline dispenser building and a Jet A1 dispenser building will be constructed south and moved into position outside the dyke to replace the existing dispenser buildings.

During construction, a temporary fuel dispenser will be installed. It will consist of two 106cum horizontal tanks located inside a lined berm for spill containment.

This contract also includes remediation of fuel contaminated soil in the tank farm. A new contaminated landfarm has been constructed under on year 1 (2009) of this contract. Contaminated soil from the tankfarm will be excavated and transported to the new landfarm.

1.7 Potential Hazards & Risk Mitigation

We have considered the various types of spills that can occur during this project and listed them below. The type of spill will affect our response.

Fuel Spill during Decommissioning
While fuel lines and tanks are being decommissioned, there is the potential for a spill. To mitigate this risk, we will use only trained, experienced person for this work. We will also have on hand half drums for catching fuel, absorbent pads and speedy dry in case of a spill.

If a spill were to occur, we would immediately excavate the contaminated soil and place it in the new contaminated soil storage area.

Tank Sludge
There is the potential for tank sludge to spill on the ground while cleaning tanks.

If this were to occur, we would excavate the contaminated soil and place it in the new contaminated soil storage area.

Refueling of Equipment
There is the potential for a spill while we are refueling equipment. To mitigate this hazard we use a truck mounted fuel truck with Gasboy dispenser. We only use experienced personnel for this task and the fuel pump will automatically shut off if left unattended.

Paint Spill
There is the potential for a paint spill while the tanks are being painted. This risk is mitigated by the use of tarps for storing paint.

Lead Paint Removal

During the surface preparation process, we will encounter lead paint chips. This risk will be mitigated by the use of tarps to contain the debris. The personnel will also wear appropriate PPE to eliminate inhalation risks.

Detailed procedures for the lead abatement will be submitted prior to start of painting operation.

1.8 Spill Contingency Plan

Introduction
In the event of a spill, the site supervisor will immediately be notified by telephone. The site will be secured and steps will be taken to minimize spill impact.

Personnel
There will be two persons doing the hydrostatic testing and both will have two way radio. Also, there will be up to twelve workers in the tank farm doing other work. In the event of a spill all can becomes available to help contain and clean the spill under the instruction of the site supervisor.

Reporting
As soon as the site is secure, the site supervisor will notify the owners and the Inukshuk Construction project management staff. There will be working activity 24hrs per day during the construction period. There will always be someone with a two way radio who could call the site supervisor and arrange the manpower contain and proceed with cleanup.
Contact the 24-hr Spill Report Line: (867) 920-8130
Contact the INAC's Manager of Field Operations: (867) 975-4295

Cleanup
All the tanks are located in a containment dyke made of gravel and an HDPE Geomembrane. The capacity of the dyke is larger than the capacity of the largest tank. Therefore, if an entire tank would drain out, there would be no fuel spilled in an un-contained terrain. In the event of small leak, the fuel would be contained using absorbent speedy dry and absorbent pads and disposed in overpack drums. In the event of a large leak, the fuel would be filtered and pump back into the tank. We also have heavy equipment on site in the event contaminated soil has to be excavated.

Disposal
Any contaminated soil that gets excavated will be stored in the new contaminated soil land farm. Overpack drums containing sludge, and used speedy dry and absorbent pads would be sent to Montreal QC by sealift and disposed at an approved facility.

Location of MSDS
The MSDS will be stored in the site office.

Content and location of spill kits
Spill kits contain shovels, broom, buckets, hydrophobic pads, speedy dry, for petroleum liquid leak. The spill kit will be located at the tank farm inside the dyke area. The kit will be easily accessible. A pump and hose in the event of a large hydrostatic test water spill will also be readily available in the tool container at the tank farm.

Map of suitable scale
See attached drawing C1 and C3

NT/NU Spill Report Form
See attached

Fuel/hazardeous Material Inventory
The following are the tanks capacities:
Jet A1 Tanks, qty 3, 2064cum
LSDL Tanks, qty 4, 1351cum
LSDL Tank, qty 1, 4935cum
LSDL Tank, qty 1, 1986cum
LSDL Tank, qty 2, 2565cum

Gasoline Tank, qty 1, 1655cum
Gasoline Tank, qty 1, 1351cum

1.9 Training

The members of the crew performing fuel transfers, moving tanks, cleaning tanks, and hydrostatic testing of tanks consist of journeymen fitter/welder, experienced labour in tank cleaning, and certified equipment operator. Workers working inside tanks must have their confine space entry and fall arrest training up to date. The equipment operators must have a valid equipment operator license. The supervisor must be training and aware of all applicable health, safety, and environmental regulations.

2.0 Other Contacts

Environment Canada: 867-975-4644
GN – Department of Environment: 867-360-6338
Hamlet of Rankin Inlet: 867-645-2895
Kivalliq Inuit Association: 867-645-5725

FSC
ARCHITECTS & ENGINEERS
4910 53rd St. Yellowknife, NT
X1A 2P4 (867) 920- 2882
Fax (867) 920- 4319 www.fsc.ca

PERMIT TO PRACTICE
FSC ARCHITECTS AND ENGINEERS
Signature _____
Date Mar 31, 2007

PERMIT NUMBER: P0457
The Association of Professional Engineers, Geologists and Geophysicists of the NWT/NU

REGISTERED PROFESSIONAL ENGINEER
NWT

NO.	REVISION	DATE	BY	APP'D
2	ISSUED FOR TENDER	MAR 31 2007		
1	90% REVIEW SUBMISSION	MAR 2006		
0	50% REVIEW SUBMISSION	FEB 2006		

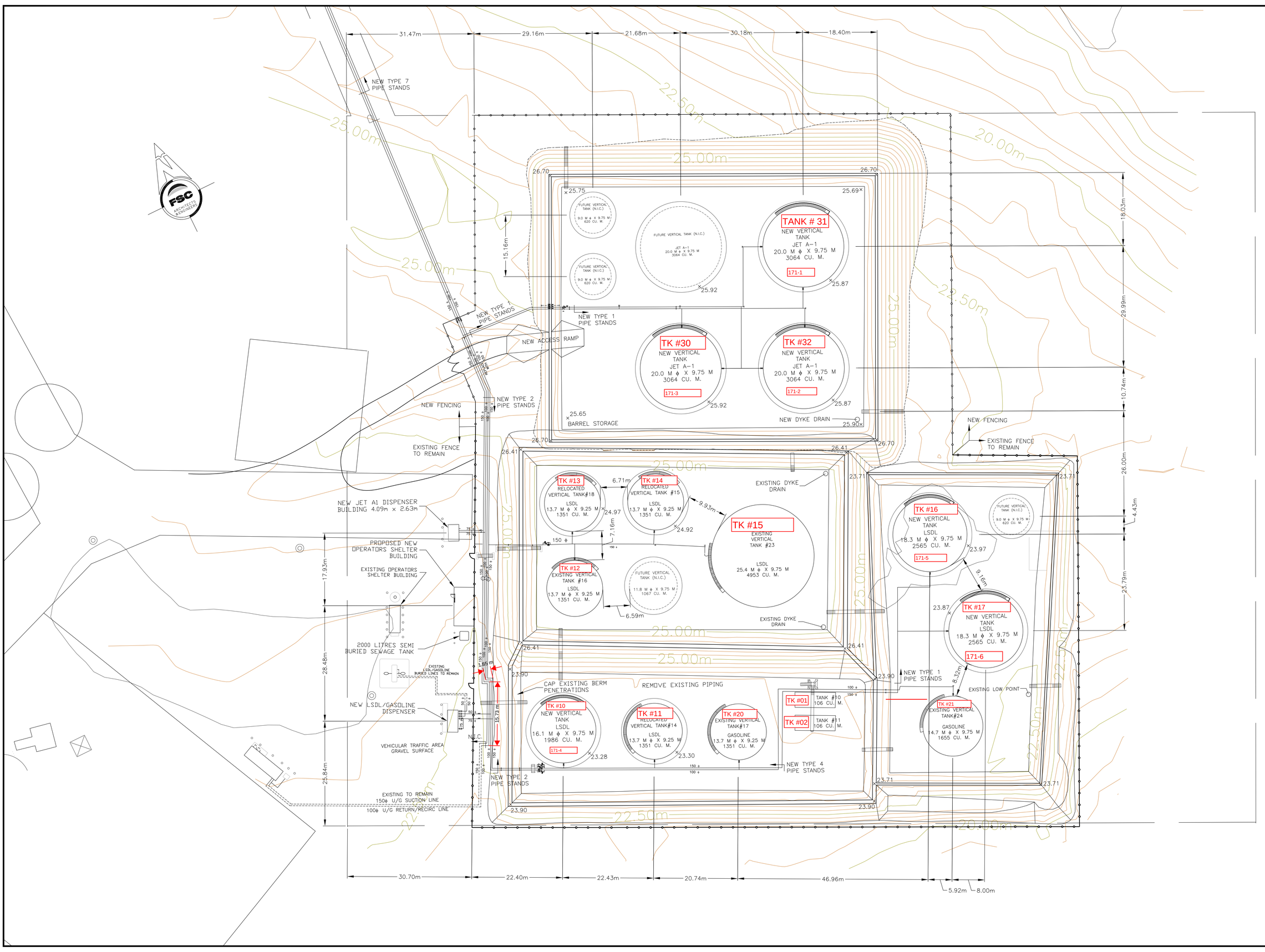
Nunavut

JOB TITLE
FUEL STORAGE FACILITY UPGRADE AND EXPANSION

RANKIN INLET, NU

DRAWING TITLE
OVERALL SITE PLAN

DESIGNED BY: WO	SCALE: 1:2500
DRAWN BY: SRB	DATE: MARCH 29, 2006
CHECKED BY: WO	CLIENT PROJECT NO.
F.S.C. FILE NO.: C1_REV.DWG	F.S.C. JOB NO.: 2005-2150
SHEET: 1 OF 67	DRAWING NO: C1



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PERMIT TO PRACTICE
FSC ARCHITECTS AND ENGINEERS
(NWT)
Signature _____
Date 31 MARCH 2007
PERMIT NUMBER: P0457
The Association of Professional Engineers, Geologists and Geophysicists of the NWT/NU

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NWT

NO	REVISION	DATE	BY	APP'D
2	ISSUED FOR TENDER	MAR 31 2007		
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0	50% REVIEW SUBMISSION	FEB 2006		

Nunavut

JOB TITLE
FUEL STORAGE FACILITY UPGRADE AND EXPANSION

RANKIN INLET, NU

DRAWING TITLE
PROPOSED SITE LAYOUT

DESIGNED BY: WO	SCALE: 1:400
DRAWN BY: SRB/FG	DATE: MARCH 29, 2006
CHECKED BY: WO	CLIENT PROJECT NO.
F.S.C. FILE NO.: C3.DWG	F.S.C. JOB NO.: 2005-2150
SHEET: 3 OF 67	DRAWING NO: C3

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	☐ ORIGINAL SPILL REPORT, OR	REPORT NUMBER
B	OCCURRENCE DATE: MONTH – DAY – YEAR	OCCURRENCE TIME	☐ UPDATE # _____ TO THE ORIGINAL SPILL REPORT	____-_____

C	LAND USE PERMIT NUMBER (IF APPLICABLE)	WATER LICENCE NUMBER (IF APPLICABLE)
D	GEOGRAPHIC PLACE NAME OR DISTANCE AND DIRECTION FROM NAMED LOCATION	REGION ☐ NWT ☐ NUNAVUT ☐ ADJACENT JURISDICTION OR OCEAN
E	LATITUDE DEGREES MINUTES SECONDS	LONGITUDE DEGREES MINUTES SECONDS

F	RESPONSIBLE PARTY OR VESSEL NAME	RESPONSIBLE PARTY ADDRESS OR OFFICE LOCATION	
G	ANY CONTRACTOR INVOLVED	CONTRACTOR ADDRESS OR OFFICE LOCATION	
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	HAZARDS TO PERSONS, PROPERTY OR ENVIRONMENT **TK #15**
K	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	EMPLOYER	LOCATION CALLING FROM	TELEPHONE
M	ANY ALTERNATE CONTACT	POSITION	EMPLOYER	ALTERNATE CONTACT LOCATION	ALTERNATE TELEPHONE

REPORT LINE USE ONLY

N	RECEIVED AT SPILL LINE BY	POSITION STATION OPERATOR	EMPLOYER	LOCATION CALLED YELLOWKNIFE, NT	REPORT LINE NUMBER (867) 920-8130

LEAD AGENCY ☐ EC ☐ CCG ☐ GNWT ☐ GN ☐ ILA ☐ INAC ☐ NEB ☐ TC | SIGNIFICANCE ☐ MINOR ☐ MAJOR ☐ UNKNOWN | FILE STATUS ☐ OPEN ☐ CLOSED

AGENCY	CONTACT NAME	CONTACT TIME	REMARKS
LEAD AGENCY			
FIRST SUPPORT AGENCY			
SECOND SUPPORT AGENCY			
THIRD SUPPORT AGENCY			