

Spill Contingency Plan Canadian Forces Station Alert (ALT), Nunavut

In support of the
Nunavut Water Board Licence
No. 3BC-ALT1015

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1 Canadian Air Division,
Department of National Defence

Originally prepared by:
Environmental Services
Defence Construction Canada

Revised by:
8 Wing Environmental Management
Department of National Defence

Revision Control Page

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Acronyms

1 CAD	1 Canadian Air Division
8 Wing	8 Wing Trenton
AANDC	Aboriginal Affairs and Northern Development Canada
BFDS	Bulk Fuel Delivery System
CARF	Consignment Authorization and Receipt Form
CFS	Canadian Forces Station
DFA	Diesel Fuel Arctic
DND	Department of National Defence
EC	Environment Canada
E2P	Environmental Emergency Plan
ERT	Emergency Response Team
HazMat	Hazardous Materials
HazWaste	Hazardous Waste
KIA	Kitikmeot Inuit Association
LTF	Lower Tank Farm
MSDS	Material Safety Data Sheet
NT-NU	Northwest Territories- Nunavut
NWB	Nunavut Water Board
O&M	Operation and Maintenance Plan
POL	Petroleum Oil Lubricants
QA/QC	Quality Assurance/Quality Control
SWO	Station Warrant Officer
UTF	Upper Tank Farm
WHMO	Wing HazMat Officer
WEnvO	Wing Environment Officer

1 Introduction

This contingency spill plan for Canadian Forces Station (CFS) Alert has been created to address the requirements of the Nunavut Water Board (NWB) under licence number 3BC-ALT1015 issued to the Department of National Defence (DND) on August 5, 2010.

CFS Alert is situated on the north-eastern tip of Ellesmere Island, approximately 817 kilometres from the geographic North Pole at coordinates (lat/long) 82°28' N, 62°30' W. (UTM) Easting 552375.7996584666, Northing 6874583.726844844 (Map sheet number 120E05).



The station has been in continuous operations as part of the Canadian Military since September 1958. Staffing on site typically ranges from 50 to 100 military and civilian individuals although for short durations the population can rise to 400 during military exercises.

1.1 LICENCEE INFORMATION

Col. Kevin Horgan
Director A4 Construction Engineering
1 Canadian Air Division Headquarters
Department of National Defence
PO Box 17000 Stn Forces
Winnipeg, Manitoba, R3J 3Y5

1.2 INFORMATION OF 24 HOUR CONTACT

Alert Commanding Officer

1.3 GENERAL DESCRIPTION OF THE PROPERTY

Fuel Storage

The station's Petroleum Oil Lubricant (POL) System consists of a lower (i.e. airfield) Tank Farm (LTF) located adjacent to the airstrip, an Upper Tank Farm (UTF) midway between the airfield and the station, and a Day Tank at the station. Refer to Figure 1 Appendix A and Photo 1 below. Three types of fuel are used and stored on site, and include JP-8 aviation fuel, diesel fuel arctic and ultra-low sulphur diesel. Fuel consumption at the station is approximately 2,500,000 L/year, most of which is used for power generation and heating.

CFS Alert flies in all the fuel using CC130 Hercules and C-17 Globemaster aircraft. The Bulk Fuel Delivery System consists of several aluminum tanks that are locked into the aircraft cargo compartment, carrying between 16,000 L to 18,000 L per load. When an aircraft lands, the fuel is transferred to two 455,000 L aboveground storage tanks at the LTF near the airstrip. From the LTF diesel fuel arctic is transferred to the UTF, and then led to the Day Tank to supply the station. Any refuelling of aircraft is conducted using fuel from the two-236,000 L JP-8 Aviation Fuel Tanks at the LTF. Vehicles are refuelled from the one 31,400 L ultra-low Sulphur diesel tank at the LTF.

Fuel from the aircraft wings is transferred by the aircraft's pumps. Fuel from the Bulk Fuel Delivery System (BFDS) tank, which is mounted in the cargo compartment of the aircraft is transferred through a 4-inch receiving/transfer coupler manifold at the back of the aircraft to the DFA tanks. The station then transfers the DFA fuel from the LTF to the UTF.



Photo 1. Upper Tank Farm at CFS Alert

Water Supply

The station's potable water is pumped 2.5 kilometres from Upper Dumbell Lake in a 100 mm diameter aboveground insulated/heated high density polyethylene water line; this is known as the Intake Line. A 50 mm diameter water line (parallel to the intake line) returns untreated (raw) water that has run the 2.5 km pipeline to the Water Treatment Plant back to the source to prevent the intakes from freezing; this is known as the Return Line. The three water intake points are positioned well below the thick ice that forms on the lake. The water is treated, chlorinated and stored in two-227,000 L storage tanks in the Water Treatment Plant Building, and distributed aboveground throughout the station through an independent water distribution system. Buildings at the station supplied with water are identified in Table 1 below. In fall 2010, three magnetic flow meters on the water system were installed on the main Intake Line, the Return Line, and the distribution (Consumption) Line.

Wastewater/sewage

The station is also serviced by a combined sewage and greywater collection system with insulated/heated high density polyethylene pipeline (i.e. Black Pipeline); this is known as the Sewage Line. The system discharges the wastewater into a new Terrace System, which in turn discharges into Dumbell Bay. Buildings at the station connected to the sewage system are identified in Table 1 below.

Building	Water	Bleeder	Sewer	Status
Water Treatment Plant	Yes	No	Yes	Operational
Standby Power Plant	Yes	Yes-1	Yes	Operational
Main Power Plant	Yes	No	Yes	Operational
Main Supply & Warehouse	Yes	Yes-1	Yes	Operational
Main Workshop & Firehall	Yes	No	Yes	Operational
Maintenance Transport	Yes	No	Yes	Operational
Transport Storage Building	No	No	No	Operational
Main Ops	Yes	Yes-1	Yes	Operational
Chimo Quarters	Yes	Yes-2	Yes	Operational
Ladner Quarters	Yes	Yes-2	Yes	Operational
Whitehouse Quarters	Yes	Yes-1	Yes	Operational
Churchill Hall	Yes	No	Yes	Operational
Cold Storage Building	No	No	No	Operational
Incinerator Building	Yes	Yes-1	Yes	Operational
Gymnasium Building	Yes	Yes-1	Yes	Operational
Curling Rink Building	No	No	No	

2 Project Facility Description

2.1 WASTEWATER/SEWAGE

The wastewater collection and discharge system is designed to prevent freeze ups. The wastewater flows under gravity, the system was designed so there are no low locations where the wastewater may accumulate and freeze. There are several different piping arrangements for the wastewater collection system. Each support building has a single wastewater line that joins before crossing the compound at the southeast end to discharge to the wastewater (i.e., sewage) outfall. The main complex has a separate wastewater pipe that collects wastewater from the complex and discharges it to the wastewater (i.e. sewage) outfall. Food waste is disposed of through a garbage disposal unit (i.e., garburator) connected to the wastewater collection system.

2.2 SOLID WASTE

All combustible garbage is compacted, bailed and incinerated before disposal at the dump site.

2.3 FUEL STORAGE

CFS Alert fuel storage facility consists of a total of 16 fuel tanks at the following three locations: UTF, Day Tank Farm and LTF. The UTF, comprised of eight tanks, uses pumps to feed the Day Tank which supplies diesel fuel arctic to the main station. The LTF comprised of seven fuel tanks, is situated adjacent to the airstrip, refer to Figure 2, Appendix A for the location of the fuel storage tanks. The number of tanks, tank sizes, locations and contents are as follows:

Location	Number & sizes of Tanks	Contents
Upper Tank Farm	8 X 455,000 L	Diesel fuel Arctic
Day Tank Farm	1 X 30,000 L	Diesel fuel arctic (supplies main station)
Lower (i.e., airfield) Tank farm	2 X 455,000 L 1 X 236,000 L 2 X 236,000 L 1 X 236,000 L 1 X 31,400 L	Diesel fuel arctic Diesel fuel arctic JP8-Aviation fuel Ultra-low sulphur diesel Ultra-low sulphur diesel (day tank for fuelling vehicles)

2.4 CHEMICALS AND HOUSEHOLD DETERGENTS

The only chemicals used on the station are typical household cleaners/detergents for cleaning and laundry, and chlorine for treating the stations potable water at the Water Treatment Plant; as a result, wastewater from CFS Alert is non-hazardous in nature.

2.5 MATERIAL SAFETY DATA SHEETS

Refer to Appendix B for the Material Safety Data Sheets (MSDS) for diesel and JP8 fuel.

3 Type and Amount of Contaminants Stored at Site

3.1 DOMESTIC SEWAGE

Domestic sewage is not stored on site; it is piped through a gravity collection system to the sewage outfall. There is no lift station where sewage may accumulate.

3.2 SOLID WASTE

All combustible garbage is compacted, bailed and incinerated before disposal at the dumpsite.

3.3 WASTE LUBRICANTS

All waste lubricants are used to fuel the waste oil furnace in the garage.

3.4 FUEL

As previously indicated diesel arctic fuel, JP8 and ultra low-sulphur diesel fuel are stored in 16 fuel tanks at the station. Refer to Figure 2, Appendix A for tank farm locations at CFS Alert.

3.5 CHEMICALS AND HOUSEHOLD DETERGENTS

All products are purchased in Canada, and where required, registered with applicable legislation.

3.6 RADIOACTIVE MATERIALS

No known radiation sources are stored on site, unless as part of telecommunications systems. They are all removed and shipped to the support base for disposal if/when required.

4 Spill Prevention Measures

4.1 DOMESTIC SEWAGE

The sewage system is designed to be in continuous motion to prevent blockage and breakage due to freeze-up. Sewage lines run through the heated spaces in the buildings before entering the outfall line. No chemicals, petroleum products or waste other than sewage and garburated food scraps are permitted to be disposed of via the wastewater collection system

4.2 SOLID WASTE

All combustible is compacted bailed and incinerated in proper facilities to ensure safe disposal.

4.3 FUEL STORAGE

The 31,400 L and 30,000 L fuel tanks are doubled walled; one tank is located at the Ultra-low Sulphur Diesel dispensing site (and connected to the one 236,000 L ultra low sulphur diesel fuel tank system in the Lower Tank Farm) and one tank at the Day Tank Facility (connected to the Upper Tank Farm). All other tanks are housed within containment berms, and include:

Upper Tank Farm:

- Eight 455,000 L diesel fuel arctic tanks

Lower (i.e. Airfield) Tank Farm:

- Two 455,000 L diesel fuel arctic tanks
- One 236,000 L diesel fuel arctic tanks
- Two 236,000 L JP8 aviation fuel tanks
- One 236,000 L ultra low-m sulphur diesel fuel tank

Conditions along with effluent limits for discharge of contained materials and water accumulation in the secondary containment (i.e. berm) at the tank farms are outlined in the CFS Alert's Operation and maintenance (O&M) Plan. Conditions specify that water

will be sampled and analysed from the secondary containment prior to the release of effluent to ensure the water meets the NWB criteria.

When transferring fuels only trained personnel operated and supervise the transferring process. Sumps and fuel storage tanks are located at a distance greater than 31 m from any water body high water mark and inspected regularly. Maintenance and servicing of equipment is to be conducted only in designated areas. Secondary containments such as drip pans and portable berms are to be used to manage vehicle fluids and contain potential product releases.

4.4 ABOVEGROUND FUEL (POL) PIPELINE

A new aboveground fuel pipeline was commissioned in September 2013, and extends around the Main Station Complex (Figure 3, Appendix A). There are seven (7) pipeline air bridges at road crossings.

In the event of an emergency arising in which there is either a known leak or other loss of product with the fuel system:

1. Evacuate any unsafe areas immediately.
2. Switch off all pumps (located at the Day Tank Facility Pump house Building) and other electrical equipment if it is safe to do so.
3. Close dispenser valves
4. Close all tank valves.
5. Notify the Station Fire Chief (Smokey) and the Emergency Response Team as soon as it is safe to do so.
6. Implement Section 5.1 of this Spill Contingency Plan.

4.5 CHEMICALS AND HOUSEHOLD DETERGENTS

All chemicals and household detergents are stored within a proper fire proof and spill proof storage unit. Care is taken when using or transferring these materials. Only containers in good condition, properly labelled, and free of defects/damage shall be used.

4.6 HAZARDOUS WASTE

Hazardous Waste (HazWaste) Shipping and Manifesting are regulated at CFS Alert under CFS Alert's Water Licence and the *Interprovincial Movement of Hazardous Waste Regulation (IMHWR)* of the Canadian *Environmental Protection Act (CEPA)*.

Hazardous waste is shipped from CFS Alert to 8 Wing Trenton in DND transport aircraft (i.e., Supply – HazWaste Facility) that follows a direct (non-international) flight path, as a requirement under the *Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations (EIHWRRM)* of CEPA.

The Department of National Defence CFS Alert, Government of Nunavut issued Hazardous Waste Generator number is: NUG100048 and the Hazardous Waste Carrier number is: NUC200012. HazWaste is tracked using the standard Movement Document/Manifest (MOE 04-1917 07/07) provided by the Territory of Nunavut Department of Environment. Copies are kept at CFS Alert Traffic/Shipping Section, with copies at 8Wing Trenton's Wing Environmental Management Office and Wing Supply-HazWaste Section.

HazWaste is internally tracked using DND's Manifest Tracking System. Hazardous waste is shipped only once the consignment Authorization and Receipt Form (CARF) is completed and identifies whether the cargo is a dangerous good. CARF's (i.e., manifests) are kept on file at the 8Wing Trenton Supply-HazWaste Section. This facility receives and properly disposes of hazardous waste through contractors. Refer to Appendix C for the CARF template; form reference number DND 690(5-94, 7530-21-903-1515).

All hazardous waste disposal activities are reported to the NWB annually through the annual report.

5 Spills

5.1 IN CASE OF SPILL

5.1.1 Initial Response

All spills of fuel or hazardous materials, regardless of size, must be immediately reported to the Emergency Response Team. The Emergency Response Team is comprised of the following responders listed in sequence of notification: Site Manager or Fire Chief, HazMa/Environmental Technician, Fuel Technicians (i.e., Zippo) or Station Furnace Technician (i.e., heating). CFS Alert must notify the 8 Wing Environmental Officer or the 8 Wing Assistant Environment Officer at 8 Wing Trenton of the spill as soon as possible.

Contact	Telephone No.
CFS Alert	
Site Manager (Contractor)	(613) 945-3145 x3262
Fire Chief (Call sign: Smokey) (Military)	(613) 945-3145 x3394
Deputy Fire Chief (Call sign: Bandit) (Military)	(613) 945-3145 x3301
HazMat/Environmental Technician (Contractor)	(613) 945-3145 x3342
Fuel Technician (Contractor)	(613) 945-3145 x3211
Furnace/Boiler Technician (Contractor)	(613) 945-3145 x3211
Station Warrant Officer (Military)	(613) 945-3145 x3218
8 Wing Trenton	
8 Wing Environmental Officer	(613) 392-2811 x3930
8 Wing Assistant Environment Officer	(613) 392-2811 x4821

Refer to Appendix D for the Roles and Responsibilities of the qualified responders. The excerpt from Appendix D is from the Environmental Emergency Plan (E2P) that are located on all transfer points of regulated fuel storage tank systems as per the *Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations* of CEPA. Additional copies of the E2P are stored with at the station in the Site Manager (or Contractor's Main Office) and the Station Fire Chief's Office in the Station Fire Hall. The Master copies are stored at 8 Wing Environmental Management Office in Trenton, Ontario.

Initial response:

1. Containment of the spill is the responsibility of the unit/persons experiencing the incident.
2. Immediately contact the Emergency Response Team (ERT).

3. Secure the area until the ERT arrived to the spill/incident site. The Emergency Response Team handles HazMat spills/incidents and associated clean-up.

Complete a Hazardous Material incident Report Form upon resolution of the incident and submit to 8 Wing Environmental Management by the Chain of Command and as per Section 5.1.6.

5.1.2 Methods of Containment

The main objective of containment shall be to limit the area affected by the spill and to prevent its spread to adjoining waterways or surface drainage systems.

1. Containment dikes or berms – constructed of impermeable or absorbing materials will be the main method of containing spills on land.
2. Dams – a system that is useful for small streams is to dam the stream with earth material.
3. Containment booms – a barrier to contain or deflect the spill, and flotation or support to maintain the position in the water. To keep the boom effective within a current, position the boom in a diversionary manner deflecting the spill to a recovery location. For fast-moving streams, the boom must be angled quite sharply to prevent losses under the boom.
4. Trenches or Storage pits – used for temporary storage of spilled liquids and as intercepting channels for large spills. This can be used when the spill zone has a significant slope.
5. Spills on pavement – tend to spread very quickly and flow toward the drainage systems. In most cases, it is important to prevent this from happening, or at least minimizing the amount of the spill that enters the surface drains or catch basins.
6. Small spots – to be cleared with absorbent material in granular or blanket form to immobilize or absorb the spilled liquid.
7. Spills in winter – frozen ground is much less permeable to fluids, and therefore spilled material will flow differently in winter than summer. These spills will be contained when possible with berms of snow. When the entire spill is absorbed with snow, the snow will be deposited within a containment area. Cold temperatures will inhibit the flow of most liquids, but de-icing fluids and most jet fuels will resist freezing. Spills in or on ice covered streams and ponds require special techniques depending on weather on whether the spill materials sink, floats or dissolves.

5.1.3 Initial Incident Reporting

All spills are immediately reported to the Emergency Response Team.

Major spills are reported by message using a Significant Incident Report. All hazmat spills that require a Significant Incident Report have an Air Command Hazardous Material Incident Report completed and forwarded to Command within 14 days. (Refer to http://admfincs.mil.ca/adminfincs/subjects/daod/2008/3_e.asp for more information on SIRs).

5.1.4 Decontamination Action

1. Ensure the spill has been stopped and contained.
2. Remove all contaminants to designated areas.
3. If the spill happens in the winter mark the extent of the contamination to provide a guide for the Inspector in the summer months.
4. During the summer season 8 Wing Environmental Management, will take soil samples as necessary and submit them for appropriate analysis to determine the course of remediation action, if any.

5.1.5 Site Inspection

During summer months, a qualified inspector will complete a site inspection, take soil samples and submit them for appropriate analysis where necessary. The site inspector in conjunction with the 8 Wing Environmental Officer will develop a remediation plan, where required.

5.1.6 Reporting Action

In the event of a spill:

1. The Spill Contingency Plan will be employed by all station personnel.
2. The Hazmat Coordinator or Site Manager (Contractors) will complete the CFS Alert Spill Report for all spills regardless of size, and submit the Spill Report to 8 Wing Trenton Environmental Management within 24 hours by fax/e-mail.
3. 8 Wing Trenton Environmental Management is responsible for reporting to required legislative authorities to prevent any potential financial or disciplinary penalties. CFS Alert does not report to outside departments/agencies, such as 8 Wing will:
 - Report the spill to the Northwest Territories-Nunavut (NT_NU) 24 Hour spill line (867-920-8130), that exceed the guidelines in Table 2 (below).
 - Complete and submit the Northwest Territories-Nunavut (NT-NU) Spill Response Form to the spill line as soon as possible, with revisions if any.
 - Inform the Aboriginal Affairs and Northern Development Canada Water (AANDC Iqaluit) Resource Officer (Inspector) (867-975-4289)
 - Inform the Environment Canada (EC Iqaluit) Enforcement Officer (Inspector) (867-975-4644)
 - Enter the 1 Canadian Air Division (1CAD) Hazardous Materials Incident Report Spreadsheet for SpillNet (refer to Appendix F for spill report spreadsheet).
 - Complete and submit a detailed spill report to the Inspector and Enforcement Officer within 30 days after the initial reporting event (as per the Water Licence).
4. The site manager will ensure the Spill Report is signed by the Commanding Officer (CO) or delegated authority.
5. Spills must be reported to ensure that the appropriate site clean-up is initiated. Should any remediation for a spill be undertaken on site a qualified site inspector shall fill out a daily process report.

Table 2. 8 Wing will all spills to the NT-NU Spill Line that exceed the below guidelines.

Classification	Hazard	Reportable Quantity
1	Explosives	All
2.1	Compressed Gas (flammable)	100 L
2.2	Compressed Gas	100 L
2.3	Compressed Gas (toxic)	All
2.4	Compressed Gas (corrosive)	All
3	Flammable Liquids	50 L
4	Flammable Solids	1 kg
5.1 PG I & II	Oxidizer	1 kg or 1 L
PG III	Oxidizer	50 kg or 50 L
5.2	Organic Peroxide	1 kg or 1 L
6.1 PG I	Acute Toxic	1 kg or 1 L
PG 11 & III	Acute Toxic	5 kg or 5 L
6.2	Infectious	All
7	Radioactive	Any discharge or radiation level exceeding 10 mSv/h at the package surface and 200 uSv/h at 1 m from the package surface
8	Corrosive	5 kg or 5 L
9.1	Miscellaneous (except PCB mixtures)	50 kg
9.1	PCB Mixtures	500 g
9.2	Aquatic Toxic	1 kg or 1 L
9.3	Wastes (chronic toxic)	5 kg or 5 L

5.2 SPILL RESPONSE TRAINING

Training is to be conducted annually. All DND personnel at CFS Alert will be trained and made available to assist the Emergency Response Team. Personnel will be trained in the following:

1. Spill awareness & prevention
2. Methods of detection
3. Types of spills and seasonal conditions
4. Report procedures and Initial responses
5. Spill response kit
6. Clean-up and site remediation
7. Occupational health & safety, protective equipment & selection
8. Safe operation of machinery & tools
9. Construction of a containment berm using snow or soil & plastic liner

5.3 SPILL KITS

Spill kits and absorbent materials are kept and maintained at several specified locations at CFS Alert at all times. Refer to Figure 2, Appendix A illustrating the spill kit locations at CFS Alert. Spill kits and locations include.

Location	Spill Kits
Airfield Fuel Tank Farm (B112)	<ul style="list-style-type: none">• Full-size Tri-wall spill kits (i.e., 10 kits total).
HazMat Team Trailers (B12) – adjacent to Day Fuel Tank Farm	
Building 65 (B65)	
Vehicle Maintenance Building (B17)	<ul style="list-style-type: none">• Three large spill kits• Spill pads and approximately 80 bags of absorbent for oils• Four medium-sized spill kits
CHIMO Furnace Room (B115)	<ul style="list-style-type: none">• Spill kit
Ladner Furnace Room (B116)	<ul style="list-style-type: none">• Spill kit
Whitehorse Furnace Room (B117)	<ul style="list-style-type: none">• Spill kit

Spill kits* should contain at a minimum the following contents:

- 12 Fuel absorbent pads/pillows
- 2 Gloves
- 3 Bags absorbal
- 1 Drain cover
- 1 Non-sparking shovel
- 10 Garbage bags
- 2 Goggles
- 1 Water prove package containing the Emergency Response Plan

5.4 EXTERNAL EMERGENCY CONTACTS

NT-NU 24 hour Spill Report Line (867) 920-8130

AANDC Water Resource Officer (Inspector) (867) 975-4295

Government Nunavut Department of Environment, Iqaluit (867) 979-7800

Environment Canada Enforcement Officer (867) 975-4644

Kitikmeot Inuit Association (KIA) (867) 983 2458

APPENDIX A: Figures

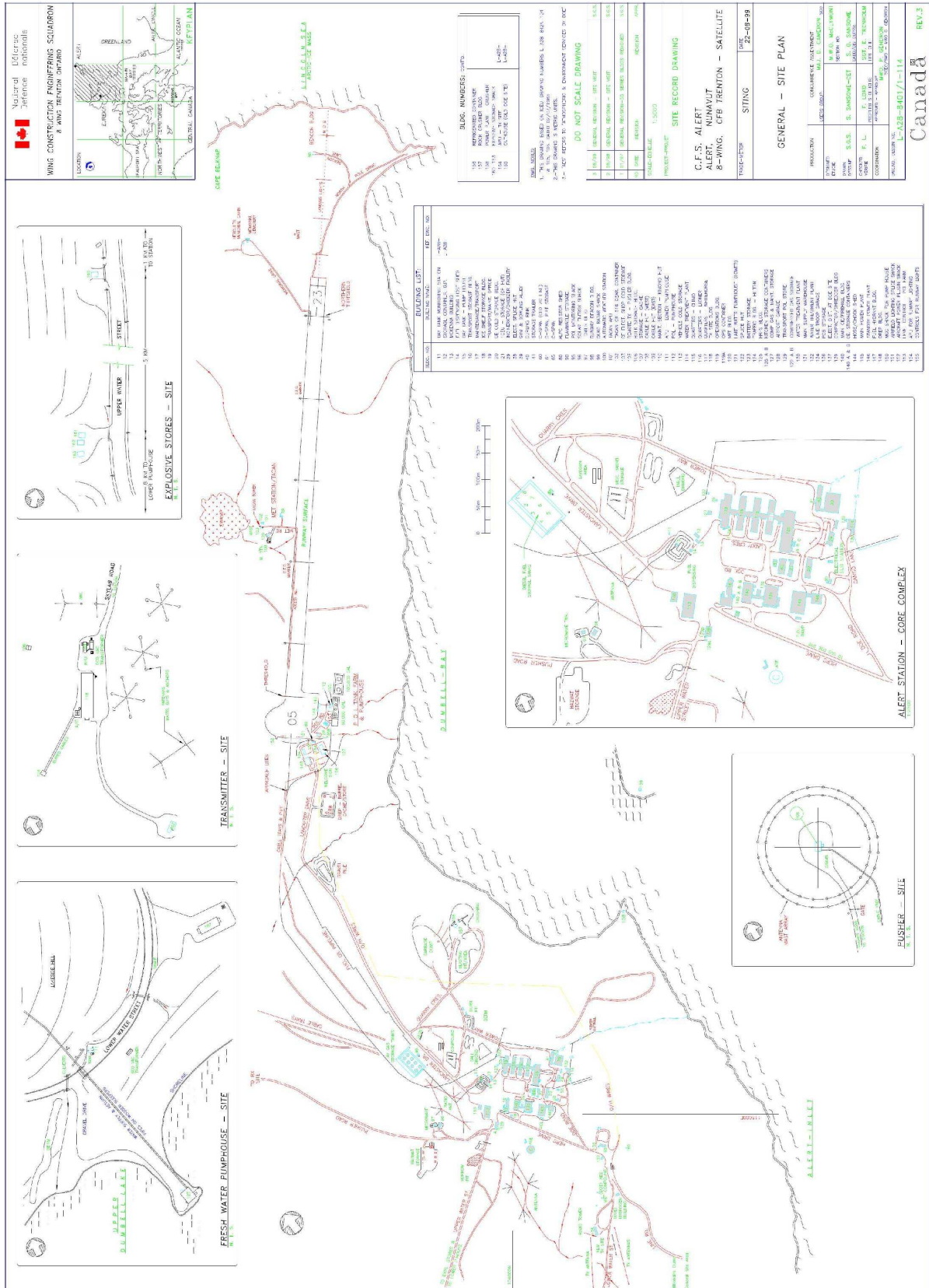


Figure 1 Map of CFS Alert.

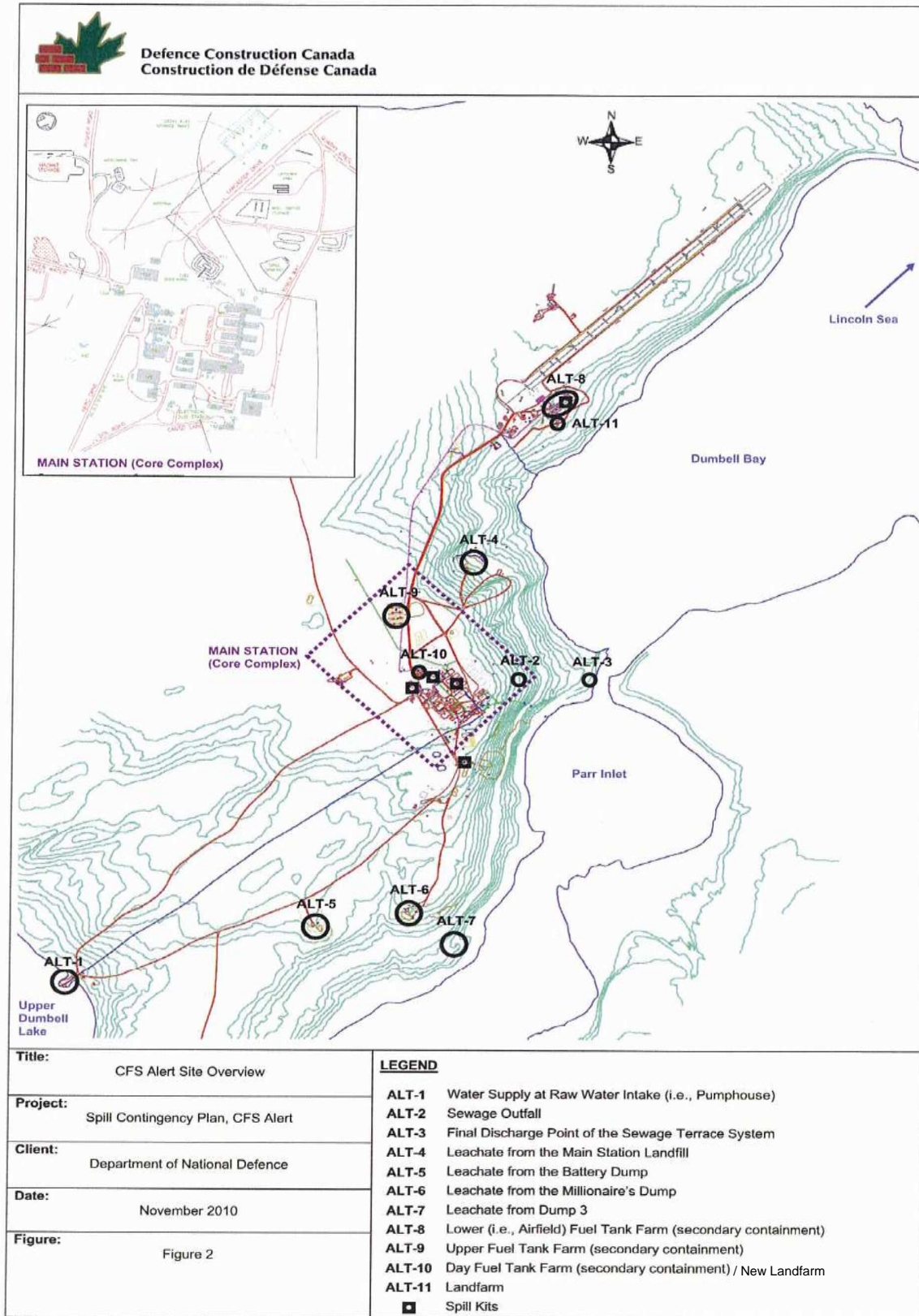
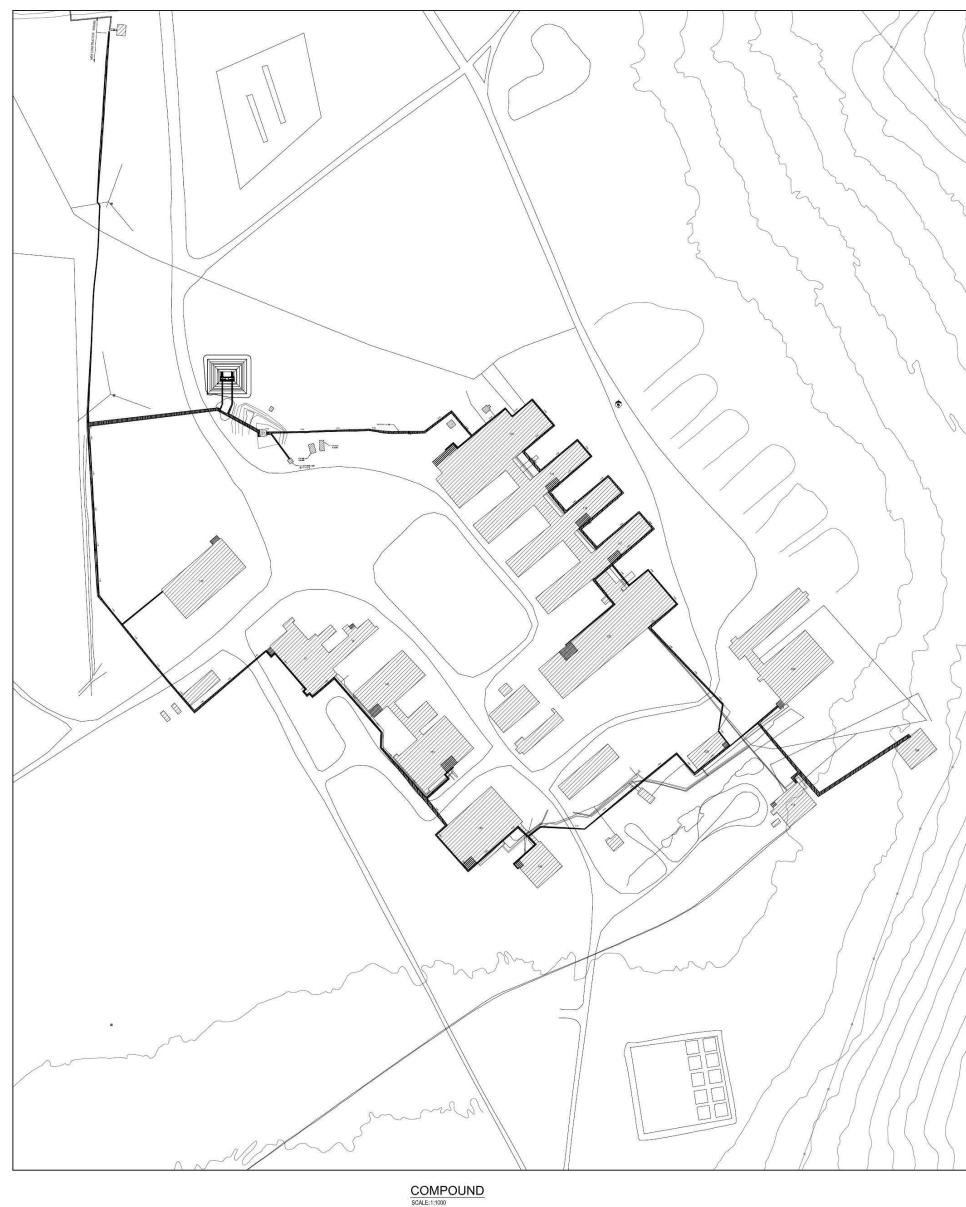


Figure 2, Water Licence Monitoring Stations, revised January 2014.



	National Defence	Défense nationale
WING CONSTRUCTION ENGINEERING SQUADRON 8 WING, TRENTON, ONTARIO		
KEY PLAN N.T.S.		
<p style="text-align: center;"><u>GENERAL NOTES:</u></p> <ol style="list-style-type: none"> 1. PIPE SIZES SHOWN IN INCHES. 2. DIMENSIONS SHOWN IN FEET (INCHES). 3. FIELD VERIFY ALL MEASUREMENTS. 4. SEE DWG 403 FOR KEY PLAN LAYOUT. 5. NO EQUIPMENT SUPPORTS FOR HANGERS/BRACKETS. VALVES, CONNECTIONS ETC. ARE SHOWN. SEE DWG 919 TO 109 FOR PROPOSED PUMP AND PIPES. 6. COORDINATE CONSTRUCTION WITH CFS ALERT STAFF. REFER TO DRAWING 901 FOR STATIC ELECTRICITY GROUNDING CONNECTION DETAILS. PROVIDE AND WELD ALL GROUND LUG PLATES TO PIPING ETC. AT ALL LOCATIONS AS REQUIRED. 		
LEGEND		
PROPOSED ABOVE GROUND FUEL LINE		
DO NOT SCALE DRAWINGS		
SS 10/20/2014	RECORDED DRAWING	MR
DT 10/20/2014	DESIGNED FOR CONSTRUCTION	MR
REL. DATE:	REVISION:	MPT
<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px; text-align: center;"> PERMIT TO PRACTICE <small>11410000</small> PERMIT NUMBER P-600 <small>10 (2nd Association of Professional Engineers of Saskatchewan)</small> </div> <div style="text-align: center;"> </div> </div>		
SCALE: 1:500 AS NOTED		
PROJECT: 08352 PF#: 08352		
UPGRADE MAIN POL COMPOUND		
CFS ALERT, NUNAVUT		
TITLE/DRAWING:	CIVIL	DATE: 2013-09-13
PROPOSED NEW PIPING ROUTE PARTIAL SITE PLAN		
PRODUCTION		CONCURRENT-ASSIGNMENT
DESIGNED BY:	J.P.P. O'LEARY <small>PROJ. MGR.</small>	
DRAWN BY:	F.B. CHAP	
CHECKED BY:	CAPT P. MUSCAT GRAD	
COORDINATION: APPROVED - APPROVAL:		
DESIGNED/DESIGNED: C. BONAVENTURE, ENG D		
L- N28-9312/3 - 102		

Figure 3. New aboveground POL pipeline at CFS Alert (Sept 2013).

APPENDIX B: MSDS Sheets

APPENDIX C: Manifest Tracking System Form-CARF & Movement Document

document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifestation

[illegible]

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

Copy / Copie 1 (white / blanche)

APPENDIX D: Responder Roles and Responsibilities

QUALIFIED RESPONDERS

	RESPONSIBILITIES
8 Wing Environment Management (WEnv) - 8 Wing Environmental Officer	Report <u>spills</u> and <u>changes</u> to Environment Canada and AANDC Inspector, or required legislative authorities.
	Keep tank Environmental Emergency Plan (E2P) up to date
	Submit any changes of E2P to Fire hall
	Establish a schedule for replacing and upgrading tanks as required by regulations
	Respond to Emergencies as required
Fire Chief (Smokey)	First line response to HAZMAT related issues i.e. spill response
Deputy Fire Chief (Bandit)	Augment Fire Chief in providing a HAZMAT Response capability
HAZMAT/Environmental Technician/ Coordinator	Fill out CFS Alert Spill Report for all spills, regardless of quantity, and forward to Site Manager for review
	Augment Fire Chief in providing a HAZMAT Response capability
Zippo, B Furn O	Follows an established preventative maintenance schedule for regular tank inspections
All qualified personnel, as required	Spill Containment, Clean-up
Supervisor (Site Manager)	Contractor to maintain tank inspection and maintenance records; Keep tank inspection records for life of tank.
	<u>Request changes</u> required to tank, tank system, contents of tank or tank maintenance to Boss Beaver.
	Review CFS Alert Spill Report; Ensure spill reports signed by the CO or delegated authority
	Report any spills to WEnv within 24 hours
Daily Inspector (Zippo, B Furn O)	Report repair and maintenance issues to supervisor
	Have any combustible debris cleared away from around tank
	Maintain spill equipment
	Daily inspections every day tank is in use
	In case of spill, implement spill response procedures
	Initiate Emergency Response Plan on discovery of a spill

Excerpt from the Environmental Emergency Plan (E2P) for fuel tank systems registered under Environment Canada.

APPENDIX E: General Spill Procedures for CFS Alert

General Spill Procedures

Immediately contact Smokey at ext. 3300 or Bandit at ext. 3301, if spill technical assistance is required or the spill has occurred off the hard surface, or the spill has entered a waterway.

1. Ensure personnel safety and that of others by keeping unnecessary personnel away from the spill site;
2. Ensure that there is an appropriate fire extinguisher in the immediate area;
3. Ventilate area if release is indoors and remove all sources of ignition;
4. Stop the source of the release *only if safe to do so*. Stop leak by plugging hole or using, if available, a tank or pipe shut-off valve;
5. Control the further spread of the product to prevent the product from escaping the transfer or secondary containment area if possible, by use of spill kit. Ensure that proper PPE is worn when assessing, containing, and cleaning up a release. Ensure that the product does not enter streams or waterways by using absorbent booms, pads, mats, earth, dykes, trenches, and other available materials;
6. Any spills must be reported immediately to the Fire Chief (Smokey), Site Manager, Zippo, HAZMAT Coordinator; and,
7. 8 Wing Environmental Management staff are to be notified as soon as possible.

For Releases

1. Residues should be soaked up with appropriate absorbent material (do not flush away residues with water);
2. Clean up the spill, *only if safe to do so*;
3. Transfer absorbent material with non-sparking tools into a labelled, sealable container;
4. Excavate any impacted soil or snow to be stored in a sealed container for analysis and disposal;
5. Return all clean-up material and hazardous waste to the HAZMAT Coordinator for disposal;



Do not mix contaminated soil with existing soil in the BIOPILE

6. Return the completed *Hazardous Material Incident Report* to the 8 WEnv O by fax or E-Mail within 24 hours; and,
7. Replenish spill kit items.

APPENDIX F: Spill Report Forms

8 Wing/CFB Trenton Hazardous Material Spill Response and Reporting Form

1. Spill reported by:	Name & Initials:	Phone #:	Unit:
2. Spill Occurrence - Date:		Spill Start Time:	Spill Stop Time:
3. Source of Spill:		Location of spill: (reference to a geographical location)	
4. a. Hazardous Material Spilled:		b. Quantity Spilled (Litres/Kg):	
		Quantity Recovered:	
c. Weather conditions (snow -rain – dry)		d. Spill clean up completion time:	
		Spill cleaned up by:	
5. Cause of Spill (be brief):			
6. Effect(s) of Spill (be brief):			
7. Distance (in meters) from point of release to nearest:			
a. Water Well:		c. Catch Basin or Drain:	
b. Property Boundary:		d. Surface water course (i.e. creek, Bay, etc):	
8. Details of action, taken or proposed, to mitigate effects of spill:			
8. Internal/External agencies notified.			
10. Off -Base agencies that responded to spill:			
11. Aircraft Fuel Jettisons			
a. Tail # and Call Sign:			
b. Type of fuel		c. Quantity jettisoned (lbs):	
d. Altitude of jettisoning (m):		e. Ground temperature during jettisoning (°C):	
f. Duration of fuel jettison (min):		g. Aircraft velocity during jettisoning (Kt/hr):	
h. average wind speed between ground level and jettisoning altitude (kt/hr):		i. Wind orientation (relative to aircraft) during jettisoning (parallel/not parallel):	
<p>NOTE: Forward this report to Wing Environment Officer (WEnvO) within 24 hours of spill, fax # 613-965-3368. Contact WEnvO if questions regarding completing the report, ext 3930 or 613-965-3930.</p>			

Example of the DND 8 Wing 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: spill@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 _____
	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				REGION	
					<input type="checkbox"/> NWT <input type="checkbox"/> NUNAVUT <input type="checkbox"/> ADJACENT JURISDICTION OR OCEAN	
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		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	
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	EMPLOYER	LOCATION CALLED	REPORT LINE NUMBER	
		STATION OPERATOR		YELLOWKNIFE, NT	(867) 920-8130	
LEAD AGENCY <input type="checkbox"/> EC <input type="checkbox"/> COG <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						

PAGE 1 OF _____

Example of the NT-NU Spill Report Form.