File # 2500-00-01

SPILL RESPONSE PLAN- WHITEHORSE	DEPARTMENT:	INQUIRIES TO:	TOPIC:	Last Review Date
	Operations	Director, Operations	Spill Response/Hazardous Material Location Page 1 of 87	August 13, 2015
	ISSUED:	REVIEW DATE:	APPROVED BY:	Revision #
	May 2000	Annually	Director, Operations	6

WHITEHORSE RAPIDS GENERATION SITE

SPILL RESPONSE PLAN

Yukon Energy Corporation
#2 Miles Canyon Rd
Box 5920, Y1A 6S7
Whitehorse, Yukon

1.0 EMERGENCY CONTACT INFORMATION

SCC (Available 24/7)

Phone: **867-393-5324**

YEC Radio:

1. Ensure your radio is on the correct channel for your area.
2. Press and hold the "push to talk (PTT)" button (large button on left hand side of the mic)
3. While pressing the PTT button dial 1111 on the mic.
4. Voicecall your party.

If you are in the Aishihik Area, use channel 15

MOBILE RADIO OPERATOR CALL METHOD

1. Locate the your mobile channel on the Mobile Telephone Service Map according to your location
2. Change mobile channel
3. Hold radio key down to ring the operator
4. When operator answers, use you call sign to place a call to a phone number

YEC Radio Notes:

- The link can be enabled/disabled from the northern or the southern radio network.
- The link will automatically be disabled after five minutes of inactivity.
- When in the Carmacks area you will hear a beep-beep after enabling the link and a beep-beep-beep after disabling the link. Unfortunately these acknowledgment tones are not transmitted in other areas of the radio network.
- The radio link between the southern and northern networks is very long and heavy snow or ice fog between Carmacks and Stewart Crossing may render the link inoperable at times.

2.0 INITIAL ACTION/SAFE APPROACH GUIDELINES

The following are intended as Guidelines. Consider the circumstances of each event and act accordingly.

NOTIFY SSC and SUPERVISOR IF AVAILABLE **SCC Phone# 867-393-5324**

- Arrange Call-Back time, if appropriate.

ALERT OTHER EMPLOYEES/PERSONS IN AREA

- Approach spill site from up-wind or, if indoors, ensure you have a clear escape route
- Establish Perimeter Security
- Evacuate, if necessary
- Eliminate Ignition Sources
- Commence documentation

USE THE BUDDY SYSTEM

IDENTIFY MATERIAL, SPILL SOURCE, ESTIMATE QUANTITY SPILLED AND POTENTIAL FATE

- Block Potential Escape Routes, if appropriate

IF SPILL CONTINUING, CONTROL SOURCE, IF SAFE TO DO SO

- **SUBSTATION SPILLS. DO NOT ENTER UNLESS AUTHORIZED. HIGH VOLTAGE: CONTACT SCC then LEADHAND ELECTRICAL MAINTENANCE 334-2690**
- Develop Spill Site Safety Plan located on page 9 and 10 of this document.
- Refer to product MSDS. Wear appropriate PPE.
  (See "Fast Fact Sheets" at the back pages of this plan for spills of specific products.)

SUMMON RESPONSE RESOURCES, AS APPROPRIATE

UPDATE SCC and SUPERVISOR ON PROGRESS

Note: In some instances, initial on-scene personnel will only be able to monitor and/or contain the spill with resources at hand until assistance arrives.

DO NOT PUT YOURSELF at RISK

3.0 PURPOSE AND SCOPE

This Spill Contingency Plan covers situations related to a spill or other unintended release of a liquid, solid and/or gas that may present a threat to those in a YEC facility or to the environment.

This spill contingency plan applies to all spills that occur at Yukon Energy's hydro and diesel and liquid natural gas and compressed natural gas (LNG/NG) facilities located at #2 Miles Canyon Road. The Director of Operations and Leadhands of Mechanical, Electrical and Hydro Maintenance will review the plan yearly to ensure the information is current.

Purpose

The purpose of Yukon Energy's Hazardous Materials Spill Contingency Plan is to provide a plan of action for every foreseeable spill/release event at the Whitehorse Rapids Generating Facility. It defines the responsibilities of key response personnel and outlines the procedures for responding to spills in a way that will minimize potential health and safety hazards, environmental damage, and cleanup costs. The plan has been prepared to provide easy access to all the information needed in dealing with a spill.

It is the policy of Yukon Energy to initiate clean up activity when, in the opinion of its management, Yukon Energy is clearly associated, or likely to be associated with the spilled material. As well it is our company policy:

- To meet or surpass regulatory requirements;
- To provide protection of the environment using all of YEC's resources;
- To cooperate with other groups working on protection of the environment;
- To minimize the adverse effects of our activities on the natural and social environment;
- To keep employees, government officials and the public informed.

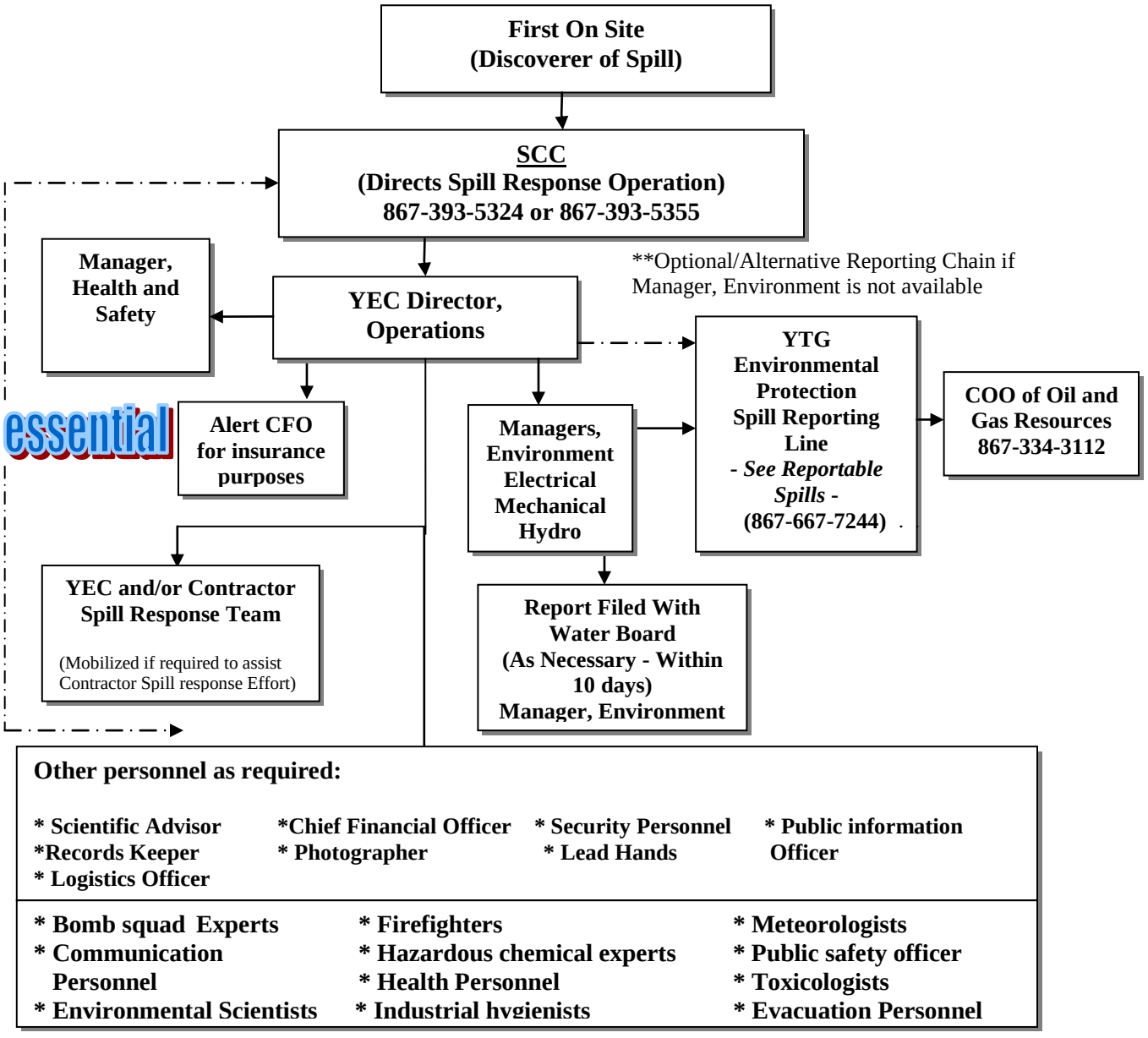
Scope

The Whitehorse Hydro/Diesel/LNG/NG/Substation Spill Response Plan, covers all hazardous materials stored and used at the Whitehorse Hydro, Diesel, LNG/NG and Substation sites. This document covers both spills on land, air as well as in adjacent watercourses (e.g., the Yukon River). This plan is approved yearly by the Director of Operations. Leadhands of Electrical, Mechanical and Hydro Maintenance will review the plan yearly to ensure the information is current.

4.0 NOTIFICATIONS

Figure 1. Contact/Reporting Flow Chart
Contact flow chart in the event of a fuel or oil spill. Qualified alternates will be contacted in the event someone is unavailable.

All spills of petroleum products of **5 litres** or more of fresh or unused, or **0.5 L** of used waste oil or other hazardous materials to permeable surface and any amount to water must be reported to the 24 Hour Spill Report Line by the Manager, Environment to insure that an investigation may be undertaken by the appropriate government authority. In the event of a LNG or natural gas release, the Chief Operating Officer of the Oil and Gas Branch must be informed.



The specific information requested when a spill is reported to government is outlined in Yukon Energy's Environmental Work Procedure EWP-006 Spill Reporting
https://sp2010.yec.yk.ca/Departments/env/YECEMS/procedures/Lists/Work%20Practices/View2.aspx

5.0 RESPONSE ORGANIZATION

Response organization structure (s) by Classification Level of Response

MINOR: Level 1 INCIDENT COMMANDER: **RESPONDER/SUPERVISOR**

A Level 1 is a spill of a minor nature that presents no significant threat to employees, property or the environment and absolutely no risk to the public. It can be cleaned up and remediated using manpower and equipment available at the facility or site.

Example: A litre of varsol was spilled on the shop floor. The spiller alerts those around him of the occurrence, that the incident has occurred and cleans the product up using a small spill kit. Waste is disposed of in an appropriate manner. No need to report externally or internally unless an equipment deficiency is raised.

MODERATE: Level 2 INCIDENT COMMANDER: **LEAD HAND** or delegate

A medium spill event where there is potential risk to employees, property or the environment but no risk to the public. This level may require external assistance to contain, recover or remediate.

Example: A vehicle entering the Whitehorse facility has impacted and punctured several barrels of waste oil stored directly on the ground with no spill tray to catch any release.

MAJOR: Level 3 INCIDENT COMMANDER: **DIRECTOR, OPERATIONS** or delegate

A major spill event where there is a significant risk to employees, property, the environment and/or the public. Considerable internal and possibly external resources may be required to effectively respond.

Example: The 160,000L fuel tank in the yard of the Whitehorse facility has leaked and the product is escaping through a previously unidentified crack low on the secondary containment wall. The spill is spreading around the yard and entering the unpaved area adjacent to the property fence.

Responsibility to summon/manage external resources:

First Responders: SCC or personnel at the scene

Regulators: Manager, Environment or Delegate. Director of Operations

Contractors: SCC, Manager of Environment, Director of Operations, Lead hands

6.0 SPILL SITE SAFETY PLAN

Incident Name _____ ***Operational Period*** From _____ To _____

1. DESCRIBE THE INCIDENT AND SPECIFY THE SITE ENTRY OBJECTIVES

Description _____

Location _____

Incident Type

- ☐ Spill
- ☐ Gas release
- ☐ Explosion
- ☐ Fire
- ☐ Other _____
- ☐ Unknown

Site Entry Objectives under this Site Safety Plan

- ☐ Initial assessment or reconnaissance
- ☐ Account for personnel and/or rescue victims
- ☐ Source control
- ☐ Fire suppression
- ☐ Spill containment
- ☐ Spill recovery and/or cleanup

2. IDENTIFY PRODUCT HAZARDS

Consult MSDS; if no MSDS call CANUTEC at 613-996-6666 or "*666" (in Canada only)

Product Properties

Name _____
Estimated Amount_____
MSDS on Hand?_____
Gas / Liquid / Solid (circle)
Water soluble? _____
Specific gravity or vapor density_____

Product Hazards *(check all that apply)*

- ☐ Flammable (flash point _____°C)
- ☐ Explosive (LEL range _____ to _____ %)
- ☐ Corrosive (corrodes _____)
- ☐ Reactive (reacts with _____)
- ☐ Toxic (IDLH _____; TLV_____)
- ☐ Carcinogenic

Potential Routes of Exposure to the Product *(check all that apply)*

☐ Inhalation ☐ Ingestion ☐ Eye contact ☐ Skin contact

3. IDENTIFY PHYSICAL SITE HAZARDS AND CONDITIONS

Physical Site Hazards

- ☐ Confined space
- ☐ Elevated area
- ☐ Pit or trench
- ☐ On or near water
- ☐ Unstable structure
- ☐ Electrocution
- ☐ Wildlife encounter
- ☐ Noise/vibration
- ☐ Extreme temperatures
- ☐ Low visibility
- ☐ Slip or trip hazards

Site Conditions *(as applicable)*

Air temperature _____
Wind chill temperature _____
Water temperature _____
Wind speed & direction _____
Precipitation _____
Humidity _____
Visiblity _____
Wave ht. (avg & max) _____
Speed of current _____
Direction of current _____
High/low tide times _____
High/low tide heights _____
Forecast _____
_____
_____
_____

Wind Chill Temperature Chart

Wind Speed (km/hr)

Effective temperature (°C)	0	10	15	20	25	30	35	40	45	50	55	60
10	8.6	7.9	7.4	6.9	6.6	6.3	6	5.7	5.5	5.3	5.1	
5	2.7	1.7	1.1	0.5	0.1	-0	-1	-1	-1	-2	-2	
0	-3	-4	-5	-6	-7	-7	-7	-8	-8	-9	-9	
-5	-9	-11	-12	-12	-13	-14	-14	-15	-15	-15	-16	
-10	-15	-17	-18	-19	-20	-20	-21	-21	-22	-22	-23	
-15	-21	-23	-24	-25	-26	-27	-27	-28	-29	-29	-30	
-20	-27	-29	-31	-32	-33	-33	-34	-35	-35	-36	-37	
-25	-33	-35	-37	-38	-39	-40	-41	-42	-42	-43	-43	
-30	-39	-41	-43	-45	-46	-47	-48	-48	-49	-50	-50	
-35	-45	-48	-49	-51	-52	-53	-54	-55	-56	-57	-57	
-40	-51	-54	-56	-57	-59	-60	-61	-62	-63	-63	-64	
-45	-57	-60	-62	-64	-65	-66	-68	-69	-70	-70	-71	
-50	-63	-66	-68	-70	-72	-73	-74	-75	-76	-77	-78	

4. CHOOSE CORRECT LEVEL OF PPE (personal protective equipment)

Responders

- ☐ LEVEL A
- ☐ LEVEL B
- ☐ LEVEL C
- ☐ LEVEL D

Decon Team

- ☐ LEVEL A
- ☐ LEVEL B
- ☐ LEVEL C
- ☐ LEVEL D

A	B	C	D	*Equipment Requirement (*depends on situation)*
x	x			SCBA (self-contained breathing apparatus) or positive pressure supplied air respirator with escape SCBA
		x		Full-face or half-face respirator with appropriate cartridges
		x	x	Escape mask*
x				Encapsulating suit (chemical protective with vapor barrier)
x	x	x		Outer gloves (chemically resistant)
x	x	x		Inner gloves (chemically resistant)
x	x	x	x	Boots (chemically resistant, steel-toe and shank)
x				Disposable protective suit worn over entire ensemble
x	x	x	x	Disposable outer boot covers, chemically-resistant*
x	x	x	x	Hard hat
	x	x	x	Face shield*
		x	x	Safety glasses or chemical splash goggles
x	x	x	x	Coveralls*
x	x	x	x	Hearing protection*
x	x	x	x	Personal flotation device*
x	x	x	x	Cold weather gear*

5. SPECIFY MONITORING REQUIREMENTS

Site Safety Officer or designee is responsible for monitoring the following parameters (indicated by checked boxes) at the appropriate frequency and for immediately communicating levels requiring action to the On-Scene Commander. Action levels based on TLVs published by ACGIH.

Parameter	*Frequency*	*Action Level*	*Required Action*
☐ Oxygen		<19.5%	Wear SCBA
		>23.5%	Fire potential; stop monitoring, leave area
☐ Flammable gas		≥10% LEL	Explosion hazard; leave area
☐ Benzene		>25 ppm	Wear SCBA
		0.5 - 25 ppm	Use full-face air purifying respirator with organic vapor cartridges
☐ Carbon dioxide		>50,000 ppm	Wear SCBA
		5,000 - 50,000 ppm	Use half-face air purifying respirator with appropriate cartridge
☐ Hydrocarbons		50 to 500 ppm	Use half-face air purifying respirator with appropriate cartridge
		>500 - 2,500 ppm	Use full-face air purifying respirator with appropriate cartridge

6. BRIEF ALL PERSONNEL

Site Diagram attached? ☐ Yes ☐ No

Reviewed with all team members (check all applicable items)

- ☐ Buddy system
- ☐ Hazards / conditions on site
- ☐ Emergency hand signals
- ☐ Evacuation alarm
- ☐ Evacuation / escape route
- ☐ Criteria for immediate evacuation
- ☐ Radio communications
- ☐ Location of first aid/rescue gear
- ☐ Required PPE
- ☐ Safe access route to site

Prepared by Site Safety Officer — *Approved by* On-Scene Commander

Signature Date/Time Signature Date/Time

7.0 MATERIAL/EQUIPMENT

MSDS

Refer to the MSDS binder is available at all control rooms at each plant location, and is updated every 3 years by the Health and Safety department. In the diesel plant for Aishihik, Whitehorse and Dawson, the MSDS binder is located in the Operators office.

PPE

Use/wear the appropriate PPE as recommended by the MSDS sheet. The appropriate PPE is mandatory.

Yukon energy operational locations and available equipment.

The following tables can be used during an inventory and faxed to the Environmental Coordinator or purchasing to purchase selected items

Location: Aishihik

Total Hydro and Diesel

Total Diesel:	9,000L
Total Oils:	1500L
Total varsol/glycol:	200L
Gasoline	4500L

Location: Aishihik (to replace Large Spill kit behind garage)

Container: Wheeled Spill kit

Quantity	Description	Size	To Purchase	Date needed
	HD oil/water resistant red nylon bag			
100	White Oil/Gas sheets	17"x19" ea		
6	White Oil/Gas Small pillows	8"x18"		
2	White Oil/Gas Large pillows	18"x18"		
5	White Oil/Gas only Socks	3"x8'		
2	White Oil/Gas only Socks	3"x4'		
1	Plug n' Dike (Leak Repair Putty)	1 lbs Jar		
1	Multi-Zorb Granular Sorbent	25lb bag		
1	Drain covers: Neoprene			
2	Yellow oil resistant Disposal Bag	33"x45"x6mil		
2	Gloves Nitrile	Pairs XL		
2	Splash Goggles	One fits all		
2	Disposable poly coated overalls	One fits all		

Location: Aishihik

Container: Spill Response Kit wheeled- Rocky Mountain

	Inventory Date: Oct 2013			
Quantity	**Description**	**Size**	**To Purchase**	**Date needed**
100	White Oil/Gas sheets	17"x19" ea		
6	White Oil/Gas Small pillows	8"x18"		
2	White Oil/Gas Large pillows	18"x18"		
5	White Oil/Gas only Socks	3"x8'		
2	White Oil/Gas only Socks	3"x4'		
1	Plug n' Dike (Leak Repair Putty)	1 lbs Jar		
1	Multi-Zorb Granular Sorbent	25lb bag		
1	Drain covers: Neoprene			
2	Yellow oil resistant Disposal Bag	33"x45"x6mil		
2	Gloves Nitrile	Pairs XL		
2	Splash Goggles	One fits all		
2	Disposable poly coated overalls	One fits all		

Location: Dawson

Total Diesel Plant only

Total Diesel: 131,735L

Total Oils: 6790L

Total varsol/glycol: 4035L

Inventory Date: Oct 2013

Location: Fuel Shack Dawson City

Container: Mobile Facility Spill Response Kit

Quantity	**Description**	**Size**	**To Purchase**	**Date needed**
1	Yellow Wheeled Container with Lid	240L		
1	Multi-Zorb Granular Sorbent	25lb bag		
100	Grey universal absorbant sheets	17"x19" ea		
2	Grey Universal Absorbent Sock	3"x 48"		
5	Grey Universal Absorbent Sock	3"x 96"		
5	Grey Universal Pillow	16"x16"		
125	White Oil/Gas only Absorbent sheets	17"x19" ea.		
1	Plug n' Dike (Leak Repair Putty)	1 lbs Jar		
7	Yellow oil resistant Disposal Bag	33"x45"x6mil		
3	Gloves Nitrile	Pairs XL		
3	Splash Goggles	One fits all		
3	Disposable Respirator	One fits all		

Inventory Date: Oct 2013
Location: YM-1 Dawson City
Container: Spill Response Kit

Quantity	Description	Size	To Purchase	Date needed
1	HD oil/water resistant red nylon bag			
30	White oil/gas absorbant sheets	17”x19” ea.		
30	White Oil/Gas only Absorbent sheets	17”x19” ea.		
1	Plug n’ Dike (Leak Repair Putty)	1 lbs Jar		
2	Yellow oil resistant Disposal Bag	33”x45”x6mil		
1 box	Gloves Nitrile	Pairs XL		
2	Splash Goggles	One fits all		

Inventory Date: Oct 2013
Location: SC-1 Building Callison, Dawson
Container: Spill Response Kit

Quantity	Description	Size	To Purchase	Date needed
1	HD oil/water resistant red nylon bag			
15	Grey universal absorbent sheets	17"x19" ea		
2	White Oil/Gas only Absorbent sock	3”x 96”		
30	White Oil/Gas only Absorbent sheets	17”x19” ea.		
1	Plug n’ Dike (Leak Repair Putty)	1 lbs Jar		
2	Yellow oil resistant Disposal Bag	33”x45”x6mil		
1 box	Gloves Nitrile	Pairs XL		
2	Splash Goggles	One fits all		

Location: Faro

Glycol	5,100L
Diesel Fuel	112,250L
Oil	6,000L
Oil – Voltesso	12,900L

Inventory date: January 8 2014

Location: Faro FD1

Container: Spill Response Kit - Rocky Mountain Small, wheeled

Quantity	Description	Size	To Purchase	Date needed
1	White Oil/Gas sheets (bag of 100)	17"x19" ea		
6	White Oil/Gas Small pillows	8"x18"		
2	White Oil/Gas Large pillows	18"x18"		
5	Grey universal Socks	3"x8'		
2	Grey universal Socks	3"x4'		
1	Plug n' Dike (Leak Repair Putty)	1 lbs Jar		
1	Multi-Zorb Granular Sorbent	25lb bag		
2	Drain covers: Neoprene			
1 box	Gloves Nitrile	Pairs XL		
2	Splash Goggles	One fits all		
2	Disposable poly coated overalls	One fits all		
1	Disposal bags (6mil plastic) industrial waste	6mil plastic, box of 50		
1	Shovel, small foldable			
1	Meter tag on spill kit after restocked			
100	Grey sheets -full bag			
5	Grey pillows 18x18			

Inventory date: January 8 2014

Location: Faro FD7

Container: Spill Response Kit - Large box Outside FD7 plant

Quantity	Description	Size	To Purchase	Date needed
1	White Oil/Gas sheets (bag of 100)	17"x19" ea		
4	White Oil/Gas small pillows	8”x18”		
5	White Oil/Gas Large pillows	18"x18"		
6	White Oil/Gas only socks	3”x4”		
6	White Oil/Gas only socks	3”x3”		
5	Grey universal Socks	3"x8'		
2	Grey universal Socks	3"x4'		
1	Plug n’ Dike (Leak Repair Putty)	10 lbs bag		
1	Multi-Zorb Granular Sorbent	25lb bag		
1	Drain covers: Neoprene			
1	Gloves Nitrile	Pairs XL		
2	Splash Goggles	One fits all		
2	Disposable poly coated overalls	One fits all		
2	Disposal bags (6mil plastic) industrial waste	6mil plastic		
1	Shovel			
1	Grey sheets -full bag	100 sheet bag		
5	Grey pillows 8x8			
1	Tarp			
1	Meter tag on spill kit after restocked			

Location: Mayo

Mayo Diesel Plant – Material amounts

Diesel Fuel	30,800L
Transformer Oil	2,380L
Engine oil	1410L
Glycol	1350L

Location: Mayo Diesel Plant

Container: Spill Response Kit - Rocky Mountain

Quantity	Description	Size	To Purchase	Date needed
1	HD oil/water resistant red nylon bag			
100	White Oil/Gas sheets	17"x19" ea		
6	White Oil/Gas Small pillows	8"x18"		
2	White Oil/Gas Large pillows	18"x18"		
5	White Oil/Gas only Socks	3"x8'		
2	White Oil/Gas only Socks	3"x4'		
1	Plug n' Dike (Leak Repair Putty)	1 lbs Jar		
1	Multi-Zorb Granular Sorbent	25lb bag		
1	Drain covers: Neoprene			
2	Yellow oil resistant Disposal Bag	33"x45"x6mil		
1 box	Gloves Nitrile	Pairs XL		
1	Splash Goggles	One fits all		
1	Disposable poly coated overalls	One fits all		

Location: Mayo A Hydro Plant

Plant Material amounts:

Oils 1,230L

Container: Spill Response Kit - Rocky Mountain

Quantity	Description	Size	To Purchase	Date needed
1	HD oil/water resistant red nylon bag			
100	White Oil/Gas sheets	17"x19" ea		
6	White Oil/Gas Small pillows	8"x18"		
2	White Oil/Gas Large pillows	18"x18"		
3	White Oil/Gas only Socks	3"x8'		
2	White Oil/Gas only Socks	3"x4'		
1	Plug n' Dike (Leak Repair Putty)	1 lbs Jar		
1	Multi-Zorb Granular Sorbent	25lb bag		
1	Drain covers: Neoprene			
2	Yellow oil resistant Disposal Bag	33"x45"x6mil		
1 box	Gloves Nitrile	Pairs XL		
2	Splash Goggles	One fits all		
2	Disposable poly coated overalls	One fits all		

Location: Mayo B Hydro Plant

Plant Material amounts:

Oils 1,230L

Container: Spill Response Kit - Rocky Mountain

Quantity	Description	Size	To Purchase	Date needed
1	HD oil/water resistant red nylon bag			
100	White Oil/Gas sheets	17"x19" ea		
6	White Oil/Gas Small pillows	8"x18"		
2	White Oil/Gas Large pillows	18"x18"		
5	White Oil/Gas only Socks	3"x8'		
2	White Oil/Gas only Socks	3"x4'		
1	Plug n' Dike (Leak Repair Putty)	1 lbs Jar		
1	Multi-Zorb Granular Sorbent	25lb bag		
1	Drain covers: Neoprene			
2	Yellow oil resistant Disposal Bag	33"x45"x6mil		
1 box	Gloves Nitrile	Pairs XL		
1	Splash Goggles	One fits all		
1	Disposable poly coated overalls	One fits all		

Location: Whitehorse

Total Hydro and Diesel

Total Diesel:	195,800L
Total Oils:	23,600 L
Total varsol/glycol:	9,600 L
Liquid natural gas	510m3
Natural Gas	2000m3

Inventory done: Dec-13

Location: **Whitehorse Diesel Plant -By Fuel Tank**

Container: Spill Response Kit - Rocky Mountain

Quantity	Description	Size	To Purchase	Date needed
100	White Oil/Gas sheets	17"x19" ea		
6	White Oil/Gas Small pillows	8"x18"		
4	White Oil/Gas Large pillows	18"x18"		
5	White Oil/Gas only Socks	3"x8'		
3	White Oil/Gas only Socks	3"x4'		
6	Grey 3"x10' socks	3" x10'		
2	Grey 8"x8" pillows	8"x8"		
1	Plug n' Dike (Leak Repair Putty)	1 lbs Jar		
1	Multi-Zorb Granular Sorbent	25lb bag		
3	Drain covers: Neoprene			
2	Yellow oil resistant Disposal Bag	33"x45"x6mil		
2	Gloves Nitrile	Pairs XL		
2	Splash Goggles	One fits all		
2	Disposable poly coated overalls	One fits all		
1	Meter tag on spill kit after restocked			

Inventory done: January 2014

Location: **Whitehorse Hydro Plant**

Container: Spill Response Kit - Rocky Mountain

Quantity	Description	Size	To Purchase	Date needed
100	White Oil/Gas sheets	17"x19" ea		
6	White Oil/Gas Small pillows	8"x18"		
2	White Oil/Gas Large pillows	18"x18"		
5	White Oil/Gas only Socks	3"x8'		
2	White Oil/Gas only Socks	3"x4'		
1	White Oil/Gas only Socks	3"x3"		
1	Multi-Zorb Granular Sorbent	25lb bag		
3	Drain covers: Neoprene			
2	Gloves Nitrile	Pairs XL		
2	Splash Goggles	One fits all		
2	Disposable poly coated overalls	One fits all		
1	Meter tag on spill kit after restocked			

Inventory Date: Mar 2014

Location: **Kulan warehouse, main building**

Container: Spill Response Kit

Quantity	Description	Size	To Purchase	Date needed
4	Universal absorbant pillows	17"x19" ea		
4	White oil/Gas only absorbant pillows	17"x19" ea		
100	White oil/Gas only absorbant sheets	17"x19" ea		
5	oily only booms	3x8		
2	Yellow oil resistant Disposal Bag	33”x45”x6mil		
1	Gloves Nitrile	One size		
2	Splash Goggles	One fits all		

Inventory done: Purchased May 2015

Location: **Whitehorse Gas Plant**

Container: 2x Spill Response Kits - Rocky Mountain

Quantity	Description	Size	To Purchase	Date needed
100	White Oil/Gas sheets	17"x19" ea		
6	White Oil/Gas Small pillows	8"x18"		
2	White Oil/Gas Large pillows	18"x18"		

5	White Oil/Gas only Socks	3"x8'		
2	White Oil/Gas only Socks	3"x4'		
1	White Oil/Gas only Socks	3"x3"		
0	Plug n' Dike (Leak Repair Putty)	1 lbs Jar		
1	Multi-Zorb Granular Sorbent	25lb bag		
3	Drain covers: Neoprene			
2	Gloves Nitrile	Pairs XL		
2	Splash Goggles	One fits all		
2	Disposable poly coated overalls	One fits all		
	Meter tag on spill kit after restocked			

Inventory done: **March 2014**
Location: **Whitehorse Spill trailer**
Container: Spill Response Kit - Rocky Mountain

Quantity	Description	Size	To Purchase	Date needed
Safety Equipment/PPE				
1	Rain Suit			
1	Organics respirator			
3	Protective Goggles			
1	Gloves, Nitrile, box of 100			
4	Rubber gloves, Latex 12"			
4	High visibility safety vests			
6	Pairs Rubber Boots			
12	Disposable Coveralls			
1	Emergency Response guide			
2	Headlamps			
2	Hand lanterns battery operated			
2	Paint orange aerosol			
2	Blankets			
Containers/Absorbents				
1	White, Oily only Absorbent rolls (new)			
1	Absorbent rolls (open)			
1	150 Gallon pop-up pool			
1	20 gallon pop up pool			
1	3' by 3" absorbent sock			
1	33lb bag granular "floor dry"			
2	25lb bags granular oil absorbent			

3	Soild waste barrels, poly over packs			
1	ft 10'x4" boom (soiled)			
50	Rags			
1	Boom 10’ x8” (soiled, torn)			
1	ft 10'x8" boom (new)			
1	Putty, jar for drum and tank leaks			
1	Garbage bags, industrial waste	6mm 50 per box		
1	Plastic sheeting	6mil, roll		
1	Rubbermaid bins for equipment			
2	Wire flags, bundles	bundles		
Tools/Equipment				
1	Camera (disposable)			
1	Box road hazard triangles (3)			
1	Pick-axe			
1	Rake			
1	Shovel			
1	Push Broom			
1	Nylon hand broom			
1	4L container of solvent			
1	Plastic dust pan			
2	Spades			
2	100' bags poly rope			
3	Flashlights (replace batteries)			
4	Pylons			
1	Air Horn			
1	Fire extinguisher			
1	Pick			
Decontamination				
3	Drum plastic with removable lid	45 gal		

***Edits of this inventory will be catalogued and sent to the Environmental coordinator.**

8.0 EQUIPMENT/SERVICES

Table 1. Inventories/services supplied by contractor/consultant in the Whitehorse area

NAME	PHONE/ADDRESS	EQUIPMENT/SERVICES AVAILABLE	SERVICE AREA
Arctic Backhoe	334-1911	If spill containment needs external resources (Pumping out an existing, leaking tank) 1 large tank truck 2000 Gallon 1Small tank truck 300 Gallon Excavators Contaminated material treatment facility	Whitehorse/Southern lakes
Ajax	667-4800	Spill kits, sorbents, containment berms etc..	
Acklands Grainger	667-6660	Spill kits, sorbents, overpacks, spill trays	
Groundtrax Environmental	667-2515	Provides contaminated site assessment, and corrective action plan preparation services.	Whitehorse/Southern lakes
General Waste Management	668-4004	If spill containment needs external resources Carries inventory of Sorbents Crew available to clean up and mop up Capacity to dispose of contaminant Bobcats, tractors and trailers Vacuum service for hydro carbons	Whitehorse/Southern lakes
Laberge Environmental Services	1-405 Ogilvie St Whitehorse Y.T. Phone: (867) 668-6838 668-6838	Provides incident command, spill response, contaminated site assessment, and corrective action plan preparation services.	Yukon-wide
MacPherson Rentals	633-4426	Heavy equipment	
Petro Canada	110 Galena Rd Whitehorse Y.T. Phone: (867) 667-2468	Vacuum trucks	
Northwest Vacuum	667-7854	Vacuum trucks	
Sunset Septic	633-2907	Vacuum Trucks for fuel transfer	
Skookum Contracting	668-6326	Heavy equipment	
RC Crane	633-5755 334-5753	Crane equipment	
KBL Environmental	867-334-3455	Waste facility, LNG spill response	Whitehorse
SEEWOLF	867-993-6644	Spill response equipment	Dawson and Whitehorse

9.0 CONTACT DIRECTORY

Yukon Energy SCC **867-393-5324**
867-393-5355
800-676-2843

Emergency Services	**Fire**	**Ambulance**	**Police**
Dawson City	993-2222	993-4444	993-5555
Faro	994-2222	994-4444	994-5555
Mayo	996-2222	996-4444	996-5555
Whitehorse	911	911	911
Aishihik (Haines Junction)	634-2222	634-4444	634-5555

Yukon Energy Contacts

Yukon Energy Director of Engineering	867-393-5317 (w) 867-334-8139 (cell)
Yukon Energy Director of Operations	867-393-5366 (w) 867-334-6904 (cell)
Yukon Energy Manager, Electrical Operations and T&D	867-393-5383(w) 867-334-6586 (cell)
Yukon Energy Lead Hand, System Control Operations	867-393-5399(w) 867-334-6759 (cell)
Yukon Energy Lead Hand, Transmission & Distribution	867-667-6213 (w) 867-335-2865 (cell)
Yukon Energy Lead Hand, Mechanical and Hydro Maintenance	867-393-5384 (w) 867-335-2863(cell)
Yukon Energy Lead Hand, Electrical Maintenance	867-393-5374 (w) 867-334-2690 (cell)
Yukon Energy Manager, Environment	867-393-5350 (w) 867-333-0300 (cell)

Yukon Energy Manager, Health and Safety	867-393-5353 (w) 867-334-2073(cell)

External Agency Contacts

Department of Environment, YTG, Whitehorse. Yukon	Phone: (867) 667-7244 (24 Hour Spill Report Line) Fax: (867) 667-7962
Oil and Gas Resources	Toll Free: 1-800-661-0408 ext 5087
Oil and Gas Resources Chief Operations Officer	Phone: (867) 667-3565 Cell: 867-334-3112
CANUTEC National Advisory Centre offering advice On dangerous goods emergencies	Phone (613) 996-6666
Fire Marshall National Fire Code (fuel storage)	Phone: (867) 667-5417 (work)
Dawson City Fire Marshall (24 hr emergency line)	Phone: (867) 993-2222
Environmental Protection Spill Regulations	Phone: (867) 667-3436 (work)
Water Inspections Section Yukon Government Yukon Waters Act	Phone (867) 667-3227 (work)
Canadian Environmental Protection Agency Fisheries Act PCB Regulations	Phone (867) 667-3470 (work)
Department of Fisheries and Oceans	Phone (867)-393-6722

10.0 SITE SPECIFIC INFORMATION: WHITEHORSE

The Facility

The Whitehorse Rapids Generating Station site is located on the Yukon River within the City of Whitehorse. It includes two hydro plants housing a total of four units with a total capacity of 40 MW, a diesel generation plant with a total of 10MW of diesel and a natural gas generation plant with a total capacity of 8.8 MW. The diesel (WG0) and natural gas plants provide emergency backup and supplement the hydro plants in winter when the river flows are lower, during peak demand times and/or during an outage. The first two hydro units were placed in service in 1958 and a third unit was added in 1969. An additional power plant, housing a fourth unit, was constructed in 1985. Significant diesel fuel, liquid natural gas and lubricating oil volumes and a moderate amount of glycol and mercaptan for natural gas odourizing are in storage or in use at the site.

The Whitehorse Rapids GS facility includes the following structures:

- Two hydro power houses
- Main spillway
- Headworks structures and associated headgate structures / enclosure buildings
- Penstocks
- Diesel generating plant
- Natural Gas Plant and S151 substation
- Diesel fuel storage tank
- LNG Vapourization and Storage site
- S150 Substation
- Switching station
- Corporate office building
- Fish ladder and fish weir, fish screens and underwater canal to direct fish to the ladder
- Other miscellaneous civil components such as access roads, parking areas and ancillary buildings.

The map on the following page (pg.18) shows the existing layout of the Yukon Energy's area at the Whitehorse Rapids Generating Facility.

To comply with Yukon's Gas Processing Plant Regulations (R-OGA-GPPR (NE)-13-FIN), Yukon Energy must:

- Immediately notify the Chief Operations Officer of the incident or near-miss.

- Submit to the Chief Operations Officer a final report regarding the incident or near miss within 45 days after the incident or near-miss occurred.

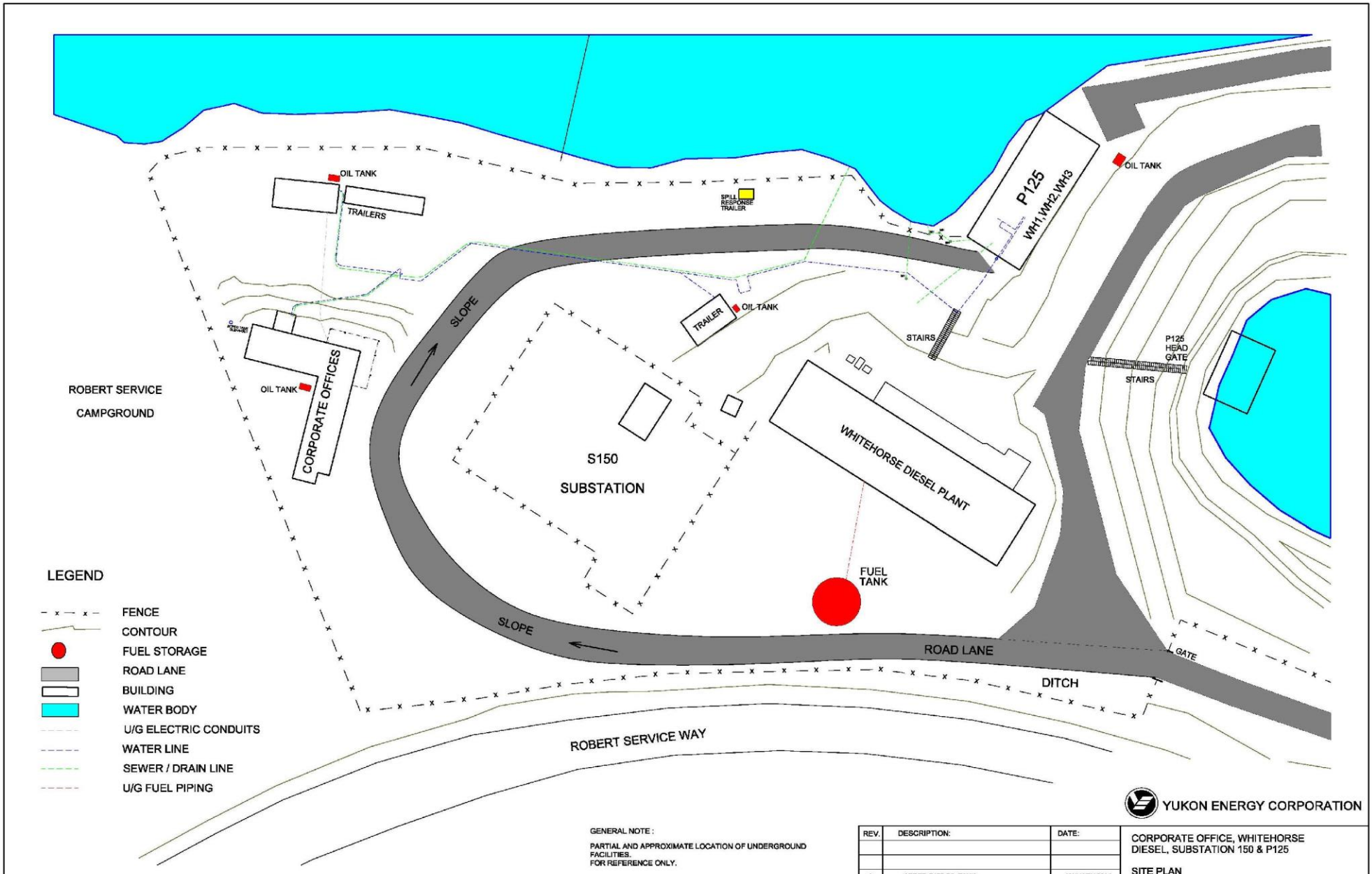
To comply with YEC's Water Use Licence for the Whitehorse Rapids Facility HY99-010;

- A detailed written report on any such spill event including, but not limited to, dates, quantities, parameters, causes and other relevant details and explanations, shall be submitted to the Board not later than 10 days after the occurrence, as well as included in the annual report.

- YEC and its contractors shall maintain a report of all spill or unauthorized discharge occurrences, including spills that are less than the reportable quantities under the Yukon *Spills Regulations.* The log book shall be made available at the request of the inspector. The log book shall include, but not necessarily be limited to:

- Date and time of the spill;
- Substance spilt or discharged;
- Approximate amount spilled or discharged;
- Distance between the spill or discharge and the nearest watercourse; and
- Remedial measures taken to contain and clean-up the spill area or to cease the discharge

These are written in the log book by the first responder, Lead Hand or Director of Operations depending on the severity of the spill. See page 6 for response organization structure.



YUKON ENERGY CORPORATION

GENERAL NOTE :

PARTIAL AND APPROXIMATE LOCATION OF UNDERGROUND FACILITIES.
FOR REFERENCE ONLY.

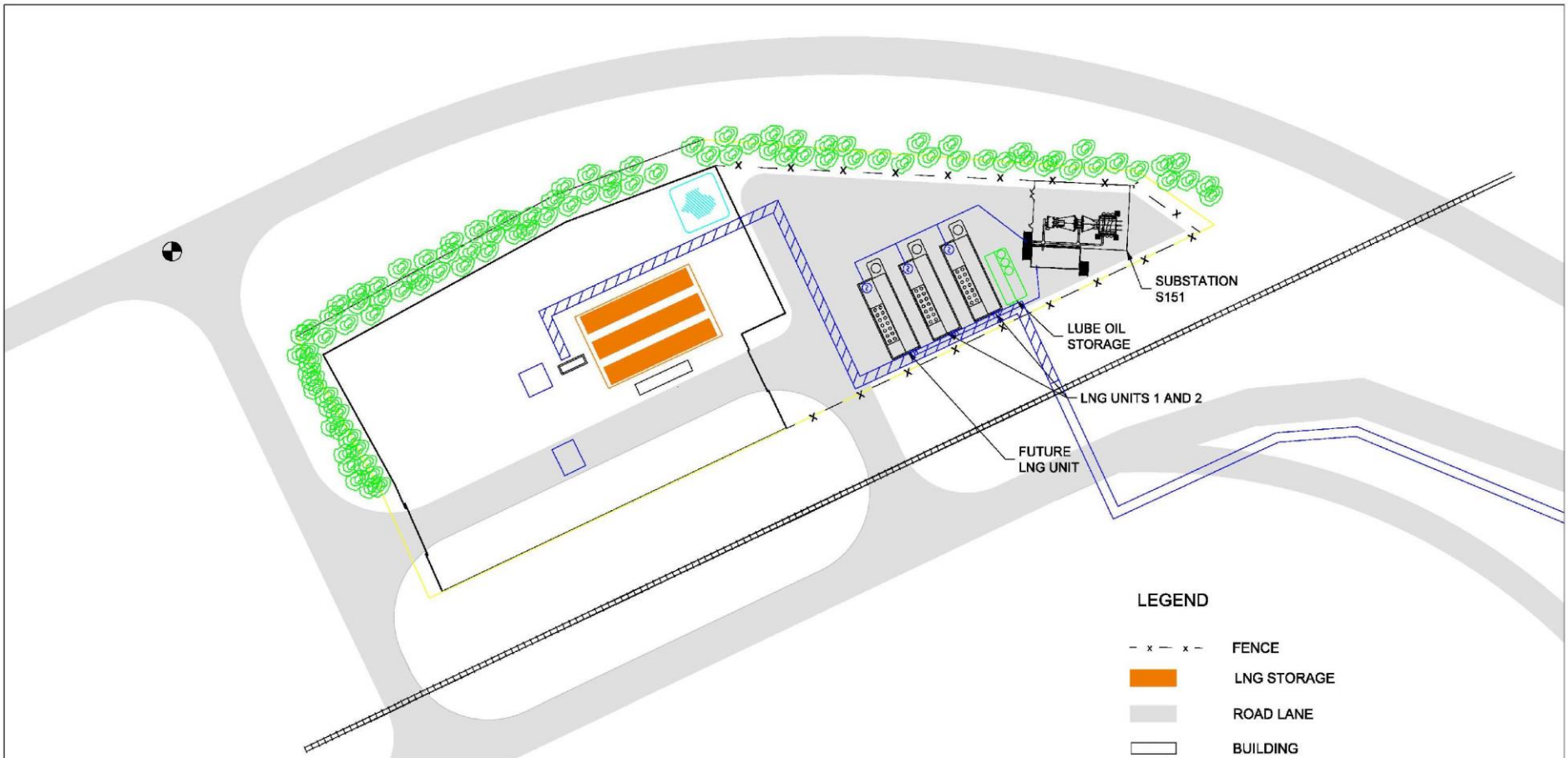
REV.	DESCRIPTION:	DATE:
1	ADDED P125 OIL TANK	JANUARY 2014
	ISSUED FOR SPILL RESPONSE PLANS	FEB. 2012

CORPORATE OFFICE, WHITEHORSE DIESEL, SUBSTATION 150 & P125

SITE PLAN

SCALE: N.T.S. DES: N/A DRAWN: G.D.

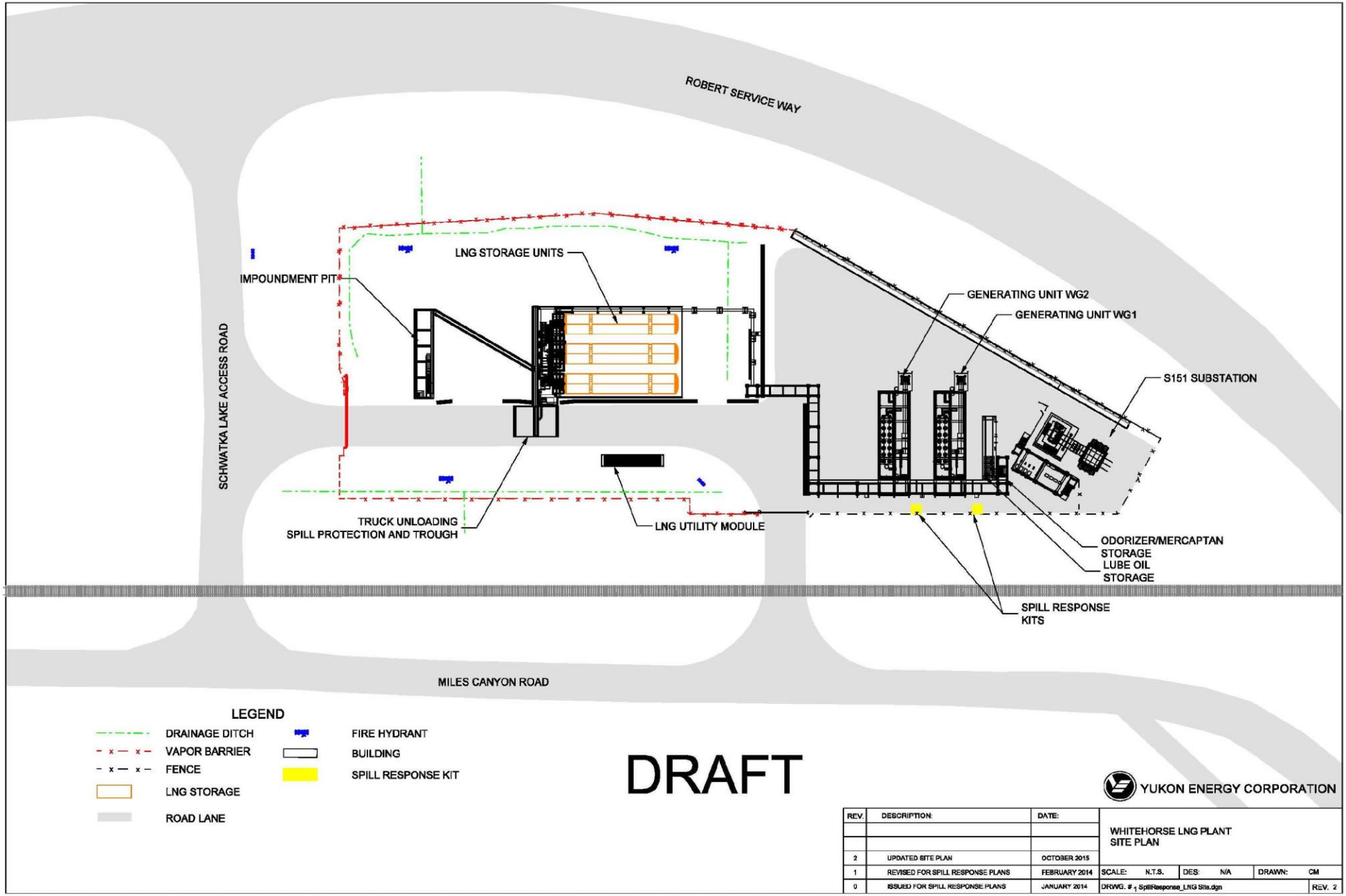
DRWG. # SpillResponseWhitehorse.dgn REV. 1



DRAFT

YUKON ENERGY CORPORATION

REV.	DESCRIPTION:	DATE:	WHITEHORSE LNG PLANT SITE PLAN				
0	ISSUED FOR SPILL RESPONSE PLANS	JANUARY 2014	SCALE: N.T.S.	DES: N/A	DRAWN: CM		
			DRWG. # SpillResponse_LNG Site.dgn			REV. 0	



DRAFT

YUKON ENERGY CORPORATION

REV.	DESCRIPTION:	DATE:
2	UPDATED SITE PLAN	OCTOBER 2015
1	REVISED FOR SPILL RESPONSE PLANS	FEBRUARY 2014
0	ISSUED FOR SPILL RESPONSE PLANS	JANUARY 2014

WHITEHORSE LNG PLANT
SITE PLAN

SCALE: N.T.S. | DES: N/A | DRAWN: CM

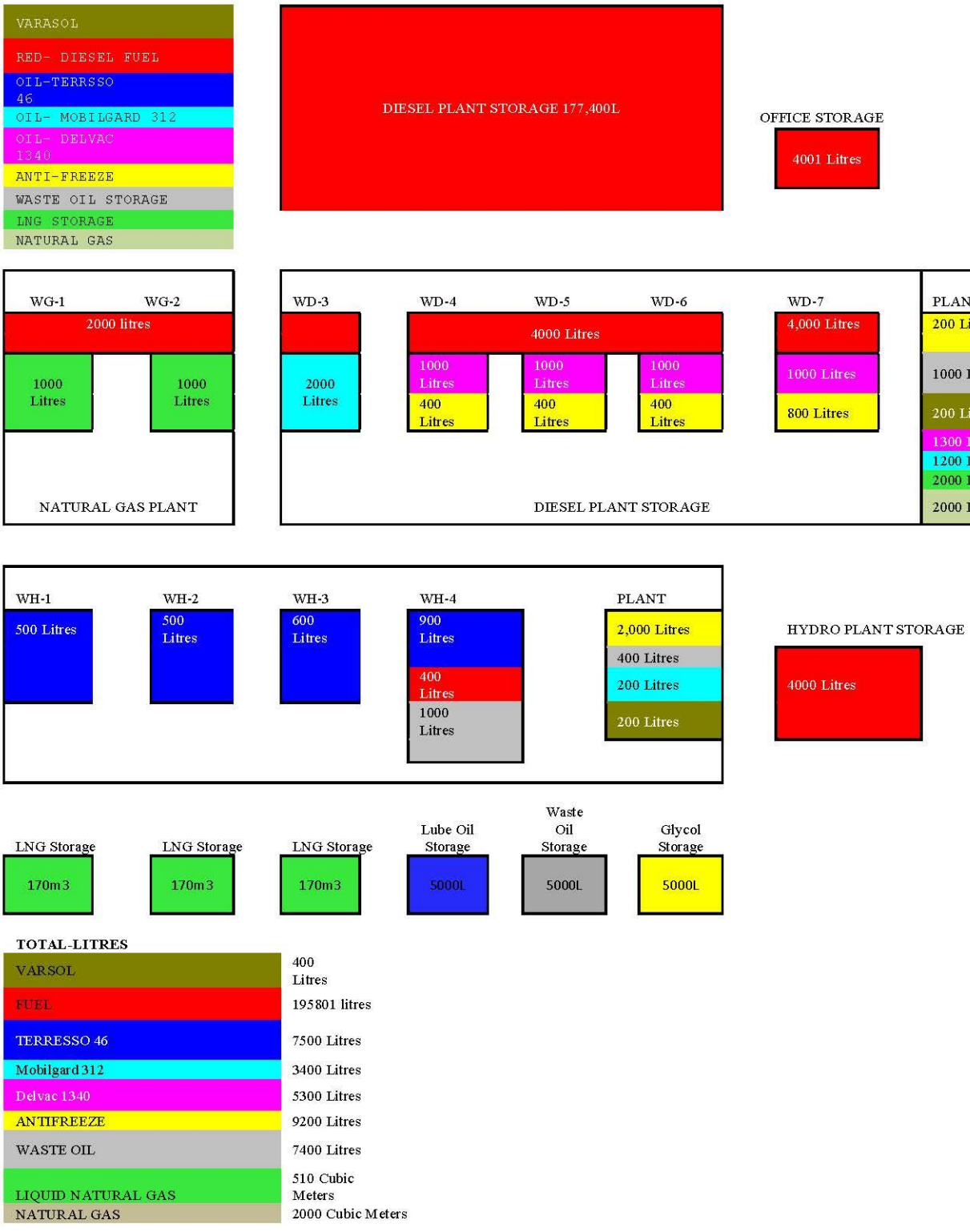
DRWG. # 1 SpillResponse_LNG Site.dgn | REV. 2

Prin
This
SHA

Table 2. Fuel, Petroleum Product and other Hazardous Materials Brought On-Site or Generated On-Site

Hazardous Material Name	Est. Max. Amount of Material On-Site at Any One Time	Material Staging, Use, and Storage Location(s)' & Material Storage and Secondary Containment Practices and Structures[1]	Distance of Material Staging, Use, and Storage Locations from Nearby Waterways[2] and Sensitive Areas[3]
Varsol	400L		60m
Diesel Fuel	195,801	A concrete secondary containment berm was constructed around the main fuel tank	100m
Liquid Natural Gas	510m3	Three storage Tanks for LNG will be located at the storage and vaporization facility, at the expanded site area	80m to WH4 spillway, which is elevated with a dyke
Lube oil for Natural Gas Modules	5000L	Lube oil, used oil and Glycol tanks will be located next to the natural gas generators. Double wall tanks with alarms.	80m to WH4 spillway, which is elevated with a dyke
Used Oil storage for Natural Gas modules	5000L	Lube oil, used oil and Glycol tanks will be located next to the natural gas generators. Double wall tanks with alarms.	80m to WH4 spillway, which is elevated with a dyke
Glycol storage for Natural Gas modules	5000L	Lube oil, used oil and Glycol tanks will be located next to the natural gas generators. Double wall tanks with alarms.	80m to WH4 spillway, which is elevated with a dyke
Oil – Mobilgard 312	3,400L	Operators walk through the building once every 24 hours and visually check for spills in process.	60m
Oil – Delvac 1340	5,300L	Operators walk through the building once every 24 hours and visually check for spills in process.	60m
Anti-Freeze	9,200L	Operators walk through the building once every 24 hours and visually check for spills in process.	60m
Waste Oil Storage	3,400L	Operators walk through the building once every 24 hours and visually check for spills in process.	60m
Mercaptan	62.22 gallons	Leak proof assembly minimizes the possibility of, pressure gauge and levels checked once every 24 hours	60m

Figure 2. Total Volumes of Hazardous Materials at the Whitehorse Generating Station



File location: https://sp2010.yec.yk.ca/Departments/env/ECW/Shared Documents/EMS/Spill Response Plans/Draft Spill Plans/FINAL

Figure 3. Sub-station S150 Oil

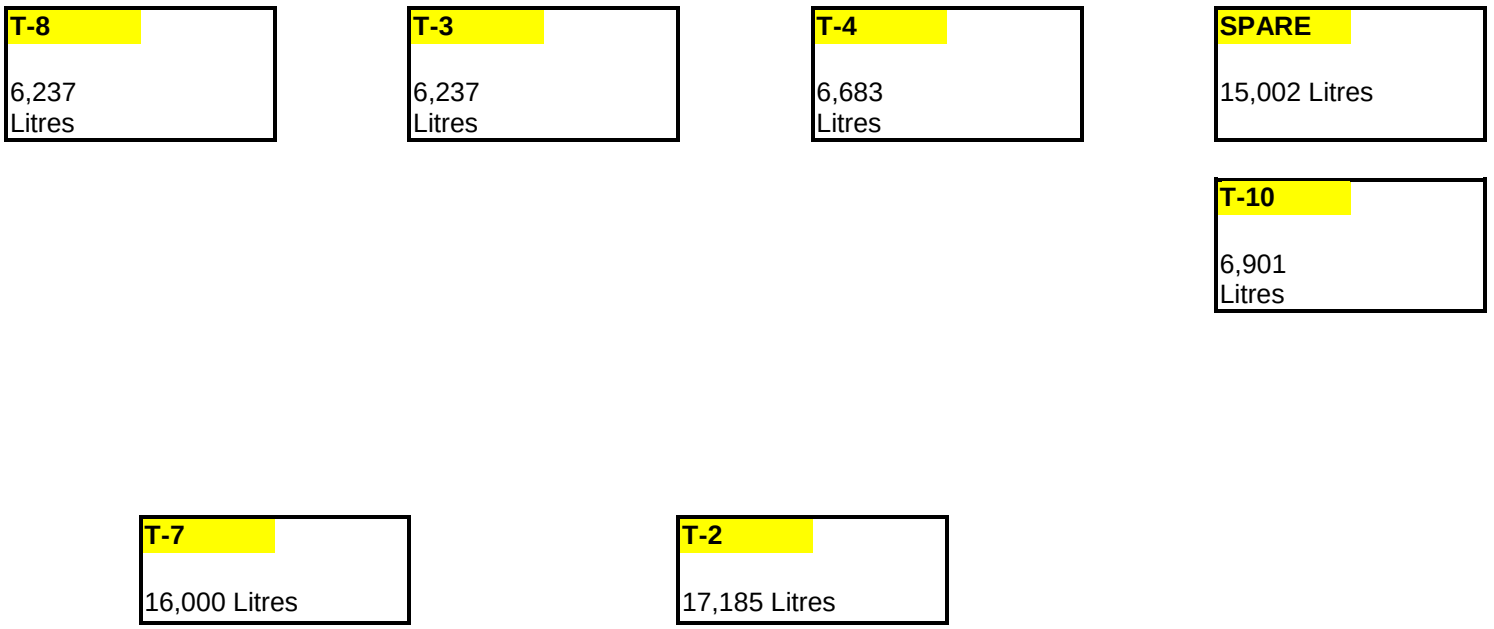
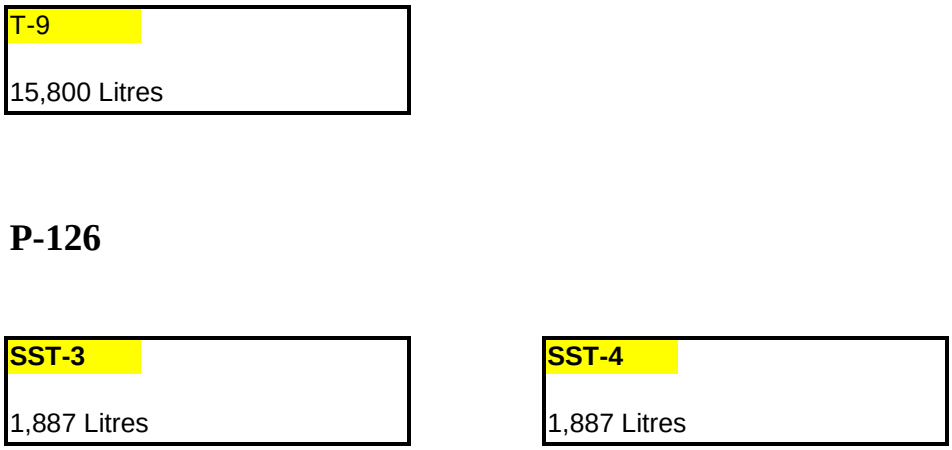


Figure 4. Whitehorse Hydro #4 Oil



11.0 RESOURCES AT RISK

Table 3. Site Description

A.	**Site Locations**	Diesel Plant Hydro Plant Natural Gas Plant Hydro electricity generation Fish Ladder Liquid Natural Gas Storage and Vapourization facility
B.	**The site location and boundaries:**	Whitehorse, Yukon, Canada. Yukon Energy Dam site
C.	**The drainage pathways from the site:**	Towards Millennium trail, north east side of property
D.	**Nearby waterways and sensitive areas and their distances from the site:**	Yukon River, City of Whitehorse Residents, millennium trail, Robert Service Campground

It is very unlikely that Yukon Energy would affect any water resources as mineral oils are used in the Hydro plant. As well sumps are located under the plant floors to intercept oils from going into the waterway.

12.0 SITE SPECIFIC SCENARIOS

SCENARIO 1

Oil alarm sounds for p126 in the Diesel Plant. Operator is called out to investigate. Oil is leaking from WD1 crankcase into the oil sump.

1. **NOTIFY SUPERVISOR OR SSC**

    - Call SCC and Director of Operations
    - Arrange Call-Back time, if appropriate.
    - Incident commander will call all emergency response teams

2. **ALERT OTHER EMPLOYEES/PERSONS IN AREA**

    - Approach spill site from up-wind or, if indoors, ensure you have a clear escape route
        - Check to make sure flow is turned off and safe to approach
        - Two operators are asked to start clean up around the sump
        - Create a barricade around the sump with spill response equipment located in the diesel spill kit.
        - Barricade area using safety flagging tape.
        - Get a crane in to remove sump grate, or use hooks
        - Get sorbent and clean up equipment situated bear the spill site (sump)
        - Confirm status with SCC – inform them of status
        - Continue with oil clean up
        - Stopping of water feed to engine and isolating all water leakage.
        - Start barricading with sorbent booms inside piping flooring
        - Inspection of water separator sump, located in p125 plant for oil – sorbent installed, manhole put back on
        - Monitor river bank to see if oil is present.
        - Inform SCC again on status. Oil has been contained and no leakage into the river
        - Isolate all possible sources of drainage into sump.
        - Obtain clearance with SCC to isolate WD1
        - Debrief with group
        - Contact Septic company to assist with cleanup – engine crankcase to be pumped out as well as surrounding piping area
        - Follow up inspection of oil separator outside P125 –clean up sorbent into plastic bags – reinstall manhole

    - Commence documentation

USE BUDDY SYSTEM

3. **IDENTIFY MATERIAL, SPILL SOURCE, ESTIMATE QUANTITY SPILLED AND POTENTIAL FATE**

Block Potential Escape Routes, if appropriate

4. **IF SPILL CONTINUING, CONTROL SOURCE, IF SAFE TO DO SO**

   - Develop Initial Incident Response Plans (Defensive, Offensive or Non-Intervention)
   - Refer to product MSDS. Wear appropriate PPE.
     (See "Fast Fact Sheets" in this Plan for spills of specific products.)

5. **SUMMON RESPONSE RESOURCES, AS APPROPRIATE**

6. **UPDATE SUPERVISOR AND/OR SCC ON PROGRESS**

7. **COMPLETE DETAILED INCIDENT REPORT**

Table 4. Other Possible Scenarios

Hazardous Materials and Location	Spill Response Task			
	Assess the Spill	**Secure the Area**	**Contain and Eliminate the Spill Source**	**Clean Up Spilled Material Decontaminate Equipment Dispose of Spilled & Contaminated Material[1]**
Diesel Plant Storage – Mobilgard 312, Delvac 1340, Diesel, Varasol, Anti-Freeze	• Any considerable losses in the dip readings from one check to the next • Any fuel/lubricants smells or any pools on the floor	Inside the diesel plant	• Cover drains with the drain covers from the spill kit. • Use leak filler if leak is accessible and if it is safe to do so	• Use granular sorbents and sorbent sheets to mop up the spill • Hydrocarbon soiled materials will be disposed of in barrels and sealed. Barrels are located in the spill trailer. • Special waste is picked up is once a year by Environment Yukon
Waste oil	• Oil smells or any pools outside the waste oil containment	Outside the diesel plant in waste oil containment	• Use the spill kit located next to WD3 • Use oilwik boom around the spill site	• Use granular sorbents and sorbent sheets • Dig up the area to assess the extent of the spill • Place the contaminated soil in a poly lined temporary containment or a metal bin. • Attain a contaminated soil removal permit and transport to a land treatment facility
Any hazardous material	• See material flowing in the Whitehorse YEC yard	Cover the man holes immediately and contain the spill	• Use the Spill response trailer. Use man hole covers and a sorbent boom	• Clean up material with sorbents and discard appropriately
Liquid Natural Gas	• See rupture or leak • Hear alarm	Stop the leak IF SAFE TO DO SO Evacuate area Call fire department	• Let LNG evaporate to gas	• No clean up required as product turn into a gas
Mercaptan	• Indication of garlic smell of the mercaptan	Evacuate non-essential personnel	• Stop the release if safe to do so	• No clean up required as product is a gas

13.0 APPENDIX A: FORMS

ICS 201 –BREIFING DOCUMENT
ICS 214A – INDIVIDUAL LOG
Safe action/Initial Action Checklists by Substance

- **Diesel Fuel**
- **Liquid Natural Gas**
- **Natural Gas**
- **Delvac 1340**
- **Coolant- CAT EC-1 (238-8650)**
- **Mobilgard 312**
- **Teresso 46**
- **Varsol**
- **Waste Oil**
- **Voltesso 35**
- **SF6**
- **Mercaptan**

Appendix A1: **ICS 201-BRIEFING DOCUMENT**

Purpose. The Incident Briefing form provides the Incident Commander (YEC Site Supervisor) with basic information regarding the incident situation and the resources allocated to the incident. It also serves as a permanent record of the initial response to the incident.

Preparation. The briefing form is prepared by the Incident Commander (YEC Site Supervisor) for presentation to the incoming Incident Commander along with a more detailed oral briefing. Proper symbology should be used when preparing a map of the incident.

Distribution. After the initial briefing of the Incident Commander (YEC Site Supervisor) and General Staff members, the Incident Briefing is duplicated and distributed to the Command Staff, Section Chiefs, Branch Directors, Division/Group Supervisors, and appropriate Planning and Logistics Section Unit Leaders. The sketch map and summary of current action portions of the briefing form are given to the Situation Unit while the Current Organization and Resources Summary portion are given to the Resources Unit.

1. Incident Name:	2. Prepared by: Date: Time:	INCIDENT BRIEFING ICS 201-OS (pg 1 of 4)

3. Map/Sketch (include maps drawn here or attached, showing the total area of operations, the incident site/area, overflight results, trajectories, impacted shorelines, or other graphics depicting situational and response status)

1. Incident Name:	2. Prepared by: Date: Time:	INCIDENT BRIEFING ICS 201-OS (pg 2 of 4)

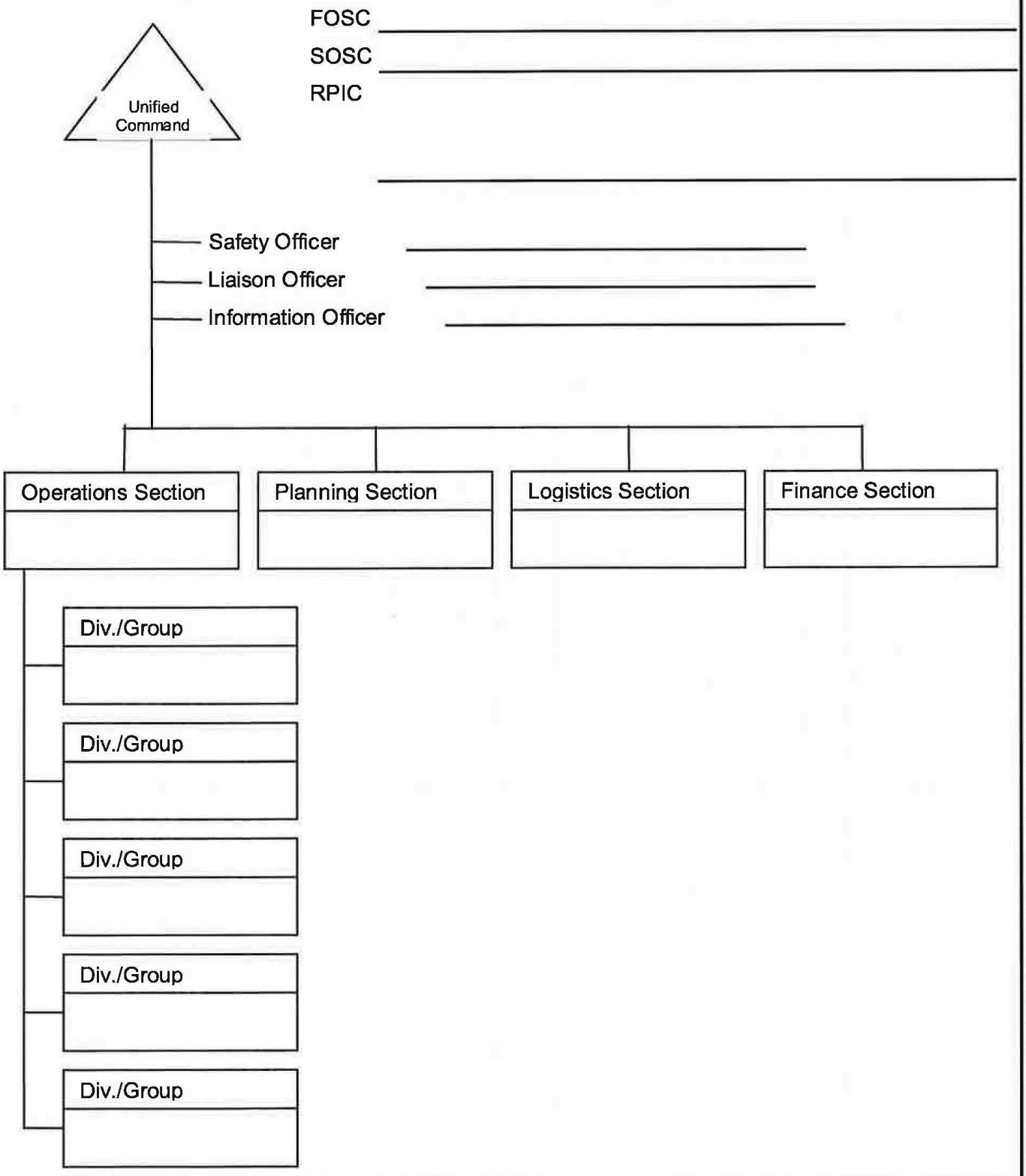
4. Initial Incident Objectives

5. Summary of Current Actions

Time	Action/Note

1. Incident Name:	2. Prepared by: Date: Time:	INCIDENT BRIEFING ICS 201-OS (pg 3 of 4)

3. Current Organization



INCIDENT BRIEFING	June 2000	ICS 201-OS (pg 3 of 4)

1. Incident Name:	2. Prepared by: Date: Time:	INCIDENT BRIEFING ICS 201-OS (pg 4 of 4)

7. Resources Summary

Resources Needed	Time Ordered	Resources Identifier	ETA	On-Scene?	NOTES: (Location/Assignment/Status)

Appendix A2-: **ICS 214A – INDIVIDUAL LOG**

Purpose. The Unit Log is used to record details of unit activity including strike team activity. The file of these logs provides a basic reference from which to extract information for inclusion in any after-action report.

Initiation of Log. A Unit Log is initiated and maintained by head of the spill response effort.

1. Incident Name	2. Operational Period (Date / Time) From: To:	INDIVIDUAL LOG ICS 214a-OS
3. Individual Name	4. ICS Section	5. Assignment / Location

6. Activity Log	Page of

Time	Major Events

7. Prepared by:	Date / Time

Record all personal activity --> Supervisor at end of shift --> Documentation Unit

SHAREPOINT SITE FOR MOST CURRENT VERSION

Appendix A3-14: SAFE ACTION/INITIAL ACTION CHECKLISTS BY SUBSTANCE

Purpose. The purpose of the Safe Action/Initial Action Checklists by substance are to provide safety measures, PPE to be worn, first aid, emergency response, physical and chemical properties of a particular substance.

Use: These checklists are to be used as initial first action by the first responder.

Appendix A3: **DIESEL FUEL -SAFETY MEASURES**

- May cause eye, respiratory and skin irritation, headache, nausea, mental confusion, unconsciousness and death
    - Wear appropriate PPE
- Combustible liquid, may form explosive vapours
    - Eliminate ignition sources and monitor for combustible gases
- May accumulate static electricity
    - Ground and bond during transfers
- Vapours heavier than air
    - Stay out of low areas and confined spaces

Personal Protection

- If there is a high level of fumes during a spill, ventilate area before entering
- Wear required PPE, as appropriate

First Aid

- **Eyes**
    - Flush eyes immediately with fresh warm water (40C-45C) for at least 15 minutes holding lids open. DO NOT USE excessively hot or cold water
    - Get medical attention
- **Skin**
    - Remove contaminated clothing
    - Wash contaminated skin thoroughly with soap and warm water
    - Obtain medical attention if irritation or redness develops
- **Inhalation**
    - Move person to fresh air
    - Administer oxygen therapy, as necessary
    - WHEN OXYGEN IS IN USE, ENSURE NO SMOKING
- **Ingestion**
    - If swallowed, DO NOT INDUCE VOMITING and obtain immediate medical attention
    - Small amounts of materials that enter the mouth should be rinsed out until taste of substance is eliminated. Remove dentures and rinse well, if applicable

For Further Information Consult Product MSDS

Appendix A3: **DIESEL FUEL –EMERGENCY RESPONSE**

Spill

- Isolate area, restrict access and evacuate if necessary
- Eliminate ignition sources
- Advise SCC and/or Supervisor (867) 393 5324/ 393 5355
- Request assistance
- Attempt to limit escape routes and shut off source – IF SAFE TO DO SO
- Contain and recover using sorbent materials and/or vacuum truck

Fire

- Isolate area, restrict access and evacuate if necessary
- Call Fire Department, advise supervisor and/or SCC # (867) 393 5324/ 393 5355 to request assistance
- Shut off fuel to fire, IF SAFE TO DO SO
- If qualified, extinguish with dry chemical extinguisher, CO2, foam and/or H20 fog. DO NOT use a direct stream of water as it may spread the fire

Physical & Chemical Properties

Appearance:	Clear white to pale/bright yellow liquid
Odour:	Petroleum
Flashpoint:	Approximately > + 37.8C
Solubility in water:	Insoluble
Specific Gravity:	0.78 – 0.85
Vapour Density:	> than 1 (Air = 1)

For Further Information Consult Product MSDS

Appendix A4: **LIQUEFIED NATURAL GAS (LNG) – UN 1972 –SAFETY MEASURES**

(Using Conoco Philips MSDS –Will need to be updated with supplier's MSDS when available)

- May be fatal if swallowed and enters airways
- Causes skin irritation
- May cause drowsiness or dizziness
- Contact with gas or liquefied gas may cause burns, severe injury and/or frostbite
- Fire may produce irritating and/or toxic gases

PERSONAL PROTECTION

- Ensure use of proper personal protective equipment (PPE) at all times when handling this product, safety glasses or face shield, safety boots

FIRST AID

Eye Contact:

- If irritation or redness develops from exposure, flush eyes with clean water. If symptoms persist, seek medical attention.

Skin Contact:

- Remove contaminated clothing and flush affected area(s) with water.
- If skin surface is not damaged, cleanse affected area(s) thoroughly by washing with mild soap and water or a waterless hand cleaner.

Inhalation (Breathing):

- Move victim away from source of exposure and into fresh air
- If victim is not breathing, clear airway and immediately begin artificial respiration.
- If breathing difficulties develop, administer oxygen

Ingestion (Swallowing):

- Do not induce vomiting or give anything by mouth
- If victim is drowsy or unconscious and vomiting, place on the left side with the head down.
- Do not leave victim unattended

For further information refer to the product MSDS

Appendix A4: **LIQUID NATURAL GAS- EMERGENCY RESPONSE**

SPILL OR LEAK

- ISOLATE areas until gas has dispersed
- ELIMINATE all ignition sources
- Call Fire Department, advise supervisor and/or SCC # (867) 393 5324/ 393 5355 to request assistance
- Truck spill - Evacuate area up to 50m in all directions
- Large truck spill evacuate area for 300m (1000 ft)
- Spill from the facility evacuate area for 600m (2000ft) radius
- Use spark proof equipment
- Do not touch or walk through spilled material
- Stay upwind from spill or release.

FIRE

DO NOT EXTINGUISH FLAME UNTIL GAS FLOW IS SHUT OFF

- ISOLATE area, restrict access and evacuate if necessary
- ELIMINATE all ignition sources
- Turn off fuel to fire IF SAFE TO DO SO
- Call Fire Department, advise supervisor and/or SCC # (867) 393 5324/ 393 5355 to request assistance
- If a tank truck is involved in a fire evacuate area for 800 metres or 1/2 mile in all directions
- If qualified, extinguish with dry chemical extinguisher, CO2, foam and/or H20 fog to prevent fire from further spreading
- DO NOT use a direct stream of water as it may spread the fire

ALWAYS stay away from tanks involved in fire

PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Colourless
Odour:	Odourless
Flashpoint:	<-99^{o}C
Solubility in water:	Insoluble
Lower/Upper Explosive Limits:	No data
Vapour Density:	No data

For further information refer to the product MSDS

Appendix A5: **NATURAL GAS- SAFETY MEASURES**

- Natural Gas can displace oxygen causing asphyxiation and cause central nervous system (CNS) depression and cardiac sensitization
- Extremely flammable. Spillages of liquid product will create a fire hazard and may form an explosive atmosphere.
- Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

PERSONAL PROTECTION

- Ensure use of proper personal protective equipment (PPE) at all times when handling this product,
- The use of eye/face protection is not normally required; however, good industrial hygiene practice suggests the use of eye protection that meets or exceeds ANSI Z.87.1 whenever working with chemicals.
- The use of skin protection is not normally required; however, good industrial hygiene practice suggests the use of gloves or other appropriate skin protection whenever working with chemicals.

FIRST AID

Eye Contact:
- If irritation or redness develops from exposure, flush eyes with clean water. If symptoms persist, seek medical attention.

Skin Contact:
- First aid is not normally required. However, it is good practice to wash any chemical from the skin.

Inhalation (Breathing):
- If respiratory symptoms develop, move victim away from source of exposure and into fresh air in a position comfortable for breathing. If breathing is difficult, oxygen or artificial respiration should be administered by qualified personnel. If symptoms persist, seek medical attention.

Ingestion (Swallowing):
- This material is a gas under normal atmospheric conditions and ingestion is unlikely.

For further information refer to the product MSDS

Appendix A5: **NATURAL GAS- EMERGENCY RESPONSE**

SPILL OR LEAK

INITIAL ACTION

- ISOLATE AREA, restrict access and evacuate if necessary
- Turn off leak source IF SAFE TO DO SO
- Call Fire Department, advise supervisor and/or SCC # (867) 393 5324/ 393 5355 to request assistance
- Truck release - Evacuate area up to 100m in all directions
- Facility release – Large spill evacuate personnel to 750m
- Keep all sources of ignition and hot metal surfaces away from spill/release if safe to do so.
- Beware of accumulation of gas in low areas or contained areas, where explosive concentrations may occur.
- Prevent from entering drains or any place where accumulation may occur.
- Ventilate area and allow to evaporate.
- Stay upwind and away from spill/release.

FIRE

DO NOT EXTINGUISH FLAME UNTIL GAS FLOW IS SHUT OFF

- ISOLATE AREA, restrict access and evacuate if necessary
- Turn off leak source IF SAFE TO DO SO
- Call Fire Department, advise supervisor and/or SCC # (867) 393 5324/ 393 5355 to request assistance
- For large fires, evacuate personnel within 750m radius.
- Use dry chemical, carbon dioxide, or foam fry extinguisher to prevent further spread of fire
- Stay away from ends of containers
- If release cannot be stopped, allow fire to burn
- Stay upwind from spill or release.
- Extremely flammable. This material can be ignited by heat, sparks, flames, or other sources of ignition (e.g., static electricity, pilot lights, mechanical/electrical equipment, and electronic devices such as cell phones, computers, calculators, and pagers which have not been certified as intrinsically safe).
- Vapors may travel considerable distances to a source of ignition where they can ignite, flash back, or explode. May create vapor/air explosion hazard indoors, in confined spaces, outdoors, or in sewers. If container is not properly cooled, it can rupture in the heat of a fire.

ALWAYS stay away from tanks involved in fire

PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Colourless
Odour:	Slight hydrocarbon
Flashpoint:	<-184^{o}C /-299 ^{o}F
Solubility in water:	Slight
Lower/Upper Explosive Limits (vol% in air):	2.0/10.0
Vapour Density (air=1):	0.5

Appendix A6: **DELVAC 1340- SAFETY MEASURES**

- Excessive exposure may result in eye, skin, or respiratory irritation. Wear appropriate PPE
- Material will not burn unless preheated. Avoid excessive heat as it may cause formation of vapours or mists in which case SCBA must be worn
    - Eliminate ignition sources
- Spilled material may create a slipping hazard

Personal Protection

- Wear required PPE, as appropriate

First Aid

- **Eyes**
    - Flush eyes immediately with fresh warm water (40C-45C) for 15 minutes holding lids open
    - Get medical attention if irritation occurs and persists
- **Skin**
    - Wash contaminated skin with mild soap and warm water. Remove contaminated clothing
    - Get medical attention if irritation occurs and persists
- **Inhalation**
    - Remove from further exposure.
    - For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection.
    - If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance
    - WHEN OXYGEN IS IN USE, ENSURE NO SMOKING
- **Ingestion**
    - Not normally a factor.
    - If swallowed, DO NOT INDUCE VOMITING and get immediate medical attention
    - If vomiting occurs, keep the head low to prevent product entering the lungs

For Further Information Consult Product MSDS

Appendix A6: **DELVAC 1340- EMERGENCY RESPONSE**

Spill

- ISOLATE AREA, restrict access and evacuate if necessary
- Eliminate ignition sources
- Spill may create slipping hazard
- Advise Supervisor and/or SCC # (867) 393 5324/ 393 5355 to request assistance
- Attempt to limit product escape routes and shut off source – IF SAFE TO DO SO
- Contain and recover using sorbent materials and/or vacuum truck

Fire

- Evacuate and isolate area, restrict access
- Advise supervisor and/or SCC # (867) 393 5324/ 393 5355 to request assistance
- Shut off fuel to fire, IF SAFE TO DO SO
- If qualified, extinguish with dry chemical extinguisher, CO_2, foam and/or H_20 fog. DO NOT use direct stream of water as it may spread fire

Physical & Chemical Properties

Appearance:	Liquid. Brown
Odour:	Hydrocarbon odour
Flashpoint:	+ 230 C (446^{o}F)
Solubility in water:	Negligible
Specific Gravity:	< 1 (Water = 1)
Vapour Density:	Not available

For Further Information Consult Product MSDS

Appendix A7: **COOLANT- CAT EC-1 (238-8650) - SAFETY MEASURES**

- DO NOT taste or swallow antifreeze. DO NOT breathe vapours or fumes
    - Wear appropriate PPE
- Material is unlikely to burn unless preheated
- It may possibly accumulate static electricity
    - Ground and bond containers during transfer

Personal Protection

- If high level of fumes are present during a spill, ventilate area before entering
- Wear other required PPE, as appropriate

First Aid

- **Eyes**
    - Flush eyes immediately with fresh warm water (40C-45C) for 15 minutes holding lids open
    - Obtain medical attention if irritation persists
- **Skin**
    - Wash contaminated area with plenty of mild soap and water. Remove contaminated clothing
    - If irritation occurs and persists, obtain medical attention
- **Inhalation**
    - Move exposed person to fresh air
    - Administer oxygen therapy, as necessary and only if trained
    - WHEN OXYGEN IS IN USE, ENSURE NO SMOKING
    - If symptoms occur, obtain medical attention
- **Ingestion**
    - Remove dentures, if any, and rinse. Rinse out mouth until taste of product dissipates
    - If swallowed, DO NOT INDUCE VOMITING. Get immediate medical attention
    - If vomiting occurs, keep the head low to prevent product entering the lungs.

For Further Information Consult Product MSDS

Appendix A7: **COOLANT- CAT EC-1 (238-8650) - EMERGENCY RESPONSE**

Spill

- ISOLATE area, restrict access and evacuate if necessary
- Eliminate ignition sources though substance unlikely to ignite
- Advise Supervisor and/or SCC # (867) 393 5324/SCC Cell. (867) 393 5355
- Request assistance
- Attempt to limit product escape routes and shut off source – IF SAFE TO DO SO
- Contain and recover using appropriate sorbent materials and/or vacuum truck

Fire

- Isolate area, restrict access and evacuate if necessary
- Advise supervisor and/or SCC # (867) 393 5324/ 393 5355 to request assistance
- Shut off fuel to fire, IF SAFE TO DO SO
- If qualified, extinguish with dry chemical extinguisher, CO_2, foam and/or H_20 fog
  DO NOT use a direct stream of water as it may spread fire

Physical & Chemical Properties

Appearance:	Liquid. Yellow Colour
Odour:	Faint or mild
Flashpoint:	+ 127 C
Solubility in water:	Soluble
Lower/Upper Explosive Limits:	Lower 3.2% Upper: Not stated
Vapour Density:	2.1 (Air = 1)

For Further Information Consult Product MSDS

Appendix A8: **MOBILGARD 312 – SAFETY MEASURES**

- Excessive exposure may result in eye, skin, or respiratory irritation.
- Exposure most likely to occur through skin contact or from inhalation of mechanically or thermally generated oil mists. Normally, product has a low level of toxicity
    - Wear appropriate PPE
- Material will not burn unless preheated. Avoid excessive heat as it may cause formation of vapours or mists
    - Eliminate ignition sources
- Spilled material may create a slipping hazard

Personal Protection

- If high level of fumes are present during a spill, ventilate area before entering
- Wear other required PPE, as appropriate
- If contact is likely with eyes, then safety glasses should be worn.

First Aid

- **Eyes**
    - Flush eyes immediately with fresh warm water (40C-45C) for 15 minutes holding lids open
    - Get medical attention if irritation occurs and persists
- **Skin**
    - Wash contaminated skin with mild soap and water. Remove contaminated clothing
    - Get medical attention if symptoms occur and persist
- **Inhalation**
    - Move exposed person to fresh air
    - Administer oxygen therapy, as necessary and only if trained
    - WHEN OXYGEN IS IN USE, ENSURE NO SMOKING
- **Ingestion**
    - Remove dentures, if any. Wash out mouth with water. Substance has low oral toxicity
    - First Aid is normally not required. Seek medical attention if discomfort occurs

For Further Information Consult Product MSDS

Appendix A8: **MOBILGARD 312 – EMERGENCY RESPONSE**

Spill

- Isolate area, restrict access and evacuate if necessary
- Eliminate ignition sources
- Spill may create slipping hazard
- Advise supervisor and/or SCC # (867) 393 5324/ 393 5355 to request assistance
- Request assistance
- Attempt to limit product escape routes and shut off source – IF SAFE TO DO SO
- Contain and recover using sorbent materials and/or vacuum truck

Fire

- Isolate area, restrict access and evacuate if necessary
- Call Fire Department, advise supervisor and/or SCC # (867) 393 5324/ 393 5355 to request assistance
- Shut off fuel to fire, IF SAFE TO DO SO
- If qualified, extinguish with dry chemical extinguisher, CO_2, foam and/or H_20 fog. DO NOT use direct stream of water as it may spread the fire

Physical & Chemical Properties

Appearance:	Liquid. Brown colour
Odour:	Hydrocarbon odour
Flashpoint:	> + 225 C (437 F)
Solubility in water:	Insoluble
Specific Gravity:	< 1 (Water = 1)
Vapour Density:	Not available

For Further Information Consult Product MSDS

Appendix A9: **TERESSO 46 – SAFETY MEASURES**

- Low order of toxicity. Excessive exposure may result in eye, skin or respiratory inhalation
    - Wear appropriate PPE
- Material will not burn unless preheated. Avoid excessive heat as it may cause formation of vapors or mists
    - Eliminate ignition sources
- Spilled material may create a slipping hazard

Personal Protection

- If high levels of fumes are present during the event of a spill, ventilate area before entering
- Wear other required PPE, as appropriate

First Aid

- **Eyes**
    - Flush eyes immediately with fresh water (40C-45C) for 15 minutes holding lids open. DO NOT USE excessively hot or cold water
    - Get medical attention if irritation occurs
- **Skin**
    - Wash contaminated skin with mild soap and water. Remove contaminated clothing
    - Get medical attention if symptoms occurs or the substances comes in contact with an open wound
- **Inhalation**
    - Move exposed person to fresh air
    - Administer oxygen therapy, as necessary and only if trained
    - WHEN OXYGEN IS IN USE, ENSURE NO SMOKING
- **Ingestion**
    - First aid is not normally required. Seek medical attention if discomfort occurs
    - Remove dentures, if any, and rinse before replacing. Rinse out mouth with water until taste of product dissipates. Substance has low oral toxicity

For Further Information Consult Product MSDS

Appendix A9: **TERESSO 46 – EMERGENCY RESPONSE**

Spill

- Isolate area, restrict access and evacuate if necessary
- Eliminate ignition sources
- Spill may create slipping hazard
- Advise supervisor and/or SCC # (867) 393 5324/ 393 5355 to request assistance
- Attempt to limit product escape routes and shut off source – IF SAFE TO DO SO
- Contain and recover using sorbent materials and/or vacuum truck

Fire

- Isolate area, restrict access and evacuate if necessary
- Call Fire Department, advise supervisor and/or SCC # (867) 393 5324/ 393 5355 to request assistance
- Shut off fuel to fire, IF SAFE TO DO SO
- If qualified, extinguish with dry chemical extinguisher, CO_2, foam and/or H_20 fog. DO NOT use direct stream of water as it may spread fire

Physical & Chemical Properties

Appearance:	Liquid. Amber in colour
Odour:	Lubricating oil odour
Flashpoint:	+ 200 C
Solubility in water:	Negligible
Specific Gravity:	< 1 (Water = 1)
Vapour Density:	> 2 (Air = 1)

For Further Information Consult Product MSDS

Appendix A10: **VARSOL – SAFETY MEASURES**

- May cause mild irritation to eyes and skin upon contact, drowsiness, lack of coordination, headache and nausea.
    - Wear appropriate PPE
- Combustible liquid. May form explosive vapours. Use in adequately ventilated area
    - Eliminate ignition sources
- Vapours heavier than air
    - Stay out of low areas and confined spaces
- May accumulate static electricity
    - Ground and bond containers during transfer

Personal Protection

- If high level of fumes are present during a spill, ventilate area before entering
- Wear other required PPE, as appropriate

First Aid

- **Eyes**
    - Flush eyes immediately with fresh warm water (40C-45C) for 15 minutes holding lids open
    - Get medical attention if irritation occurs
- **Skin**
    - Flush contaminated skin with plenty of water. Remove contaminated clothing
    - Get medical attention if symptoms occur
- **Inhalation**
    - Move exposed person to fresh air
    - Administer oxygen therapy, as necessary and only if trained
    - WHEN OXYGEN IS IN USE, ENSURE NO SMOKING
    - Get medical attention if adverse health effects persist or are severe
- **Ingestion**
    - Remove dentures, if any, and rinse with water. Rinse out mouth with water
    - Obtain medical attention if symptoms occur
    - If swallowed, DO NOT INDUCE VOMITING. Give small quantities of water or milk to drink and get immediate medical attention
    - If vomiting occurs, keep the head low to prevent product entering the lungs

For Further Information Consult Product MSDS

Appendix A10: **VARSOL – EMERGENCY RESPONSE**

Spill

- Isolate area, restrict access and evacuate if necessary
- Eliminate ignition sources
- Advise Supervisor and/or SCC # (867) 393 5324/. (867393 5355
- Request assistance
- Attempt to limit product escape routes and shut off source – IF SAFE TO DO SO
- Contain and recover using sorbent materials and/or vacuum truck

Fire

- Isolate area, restrict access and evacuate if necessary
- Call Fire Department, advise supervisor and/or SCC # (867) 393 5324/ 393 5355 to request assistance
- Shut off fuel to fire, IF SAFE TO DO SO
- If qualified, extinguish with dry chemical extinguisher, CO_2, foam and/or H_20 fog. DO NOT use direct stream of water as it may spread fire

Physical & Chemical Properties

Appearance:	Clear liquid
Odour:	Petroleum distillate
Flashpoint:	> + 37.8 C (Combustible liquid)
Solubility in water:	Insoluble
Lower/Upper Flammability Limits:	1% - 13%
Vapour Density:	5 (Air = 1)

For Further Information Consult Product MSDS

Appendix A11: **VOLTESSO 35 - SAFETY MEASURES**

- May cause eye, respiratory and skin irritation. Frequent or prolonged contact may de-fat and dry the skin
    - Wear appropriate PPE
- Combustible liquid, may form explosive vapours
    - Eliminate ignition sources and monitor for combustible gases
- May accumulate static electricity
    - Ground and bond during transfers
- Vapours heavier than air
    - Stay out of low areas and confined spaces

Personal Protection

- If high level of fumes are present during a spill, ventilate area before entering
- Wear other required PPE, as appropriate

First Aid

- **Eyes**
    - Flush eyes immediately with fresh warm water (40C-45C) for at least 15 minutes holding lids open. DO NOT USE excessively hot or cold water
    - Get medical attention
- **Skin**
    - Remove contaminated clothing
    - Wash contaminated skin thoroughly with soap and warm water
    - Obtain medical attention if irritation or redness develops
    - Launder contaminated clothing before reuse
- **Inhalation**
    - Move person to fresh air
    - Administer oxygen therapy, as necessary and only if trained
    - WHEN OXYGEN IS IN USE, ENSURE NO SMOKING
- **Ingestion**
    - If swallowed, DO NOT INDUCE VOMITING and obtain immediate medical attention
    - Small amounts of materials that enter the mouth should be rinsed out until taste of substance is eliminated. Remove dentures and rinse well, if applicable

For Further Information Consult Product MSDS

Appendix A11: **VOLTESSO 35–EMERGENCY RESPONSE**

Spill

- Isolate area, restrict access and evacuate if necessary
- Eliminate ignition sources
- Advise Supervisor and/or SCC (867) 393 5324/ 867 393 5355 to request assistance
- Attempt to limit escape routes and shut off source – IF SAFE TO DO SO
- Contain and recover using sorbent materials and/or vacuum truck

Fire

- Isolate area, restrict access and evacuate if necessary
- Call Fire Department, advise supervisor and/or SCC # (867) 393 5324/ 393 5355 to request assistance
- Shut off fuel to fire, IF SAFE TO DO SO
- If qualified, extinguish with dry chemical extinguisher, CO2, foam and/or H20 fog. DO NOT use a direct stream of water as it may spread the fire

Physical & Chemical Properties

Appearance:	Pale Yellow, liquid
Odour:	N/D
Flashpoint:	Approximately > 145C
Solubility in water:	Negligible
Specific Gravity:	-
Vapour Density:	> N/D (Air = 1)

For Further Information Consult Product MSDS

Appendix A12: **SF6 GAS- SAFETY MEASURES**

- May cause eye, respiratory and skin irritation. Frequent or prolonged contact may de-fat and dry the skin
- Escaping gas may cause frostbite injury
    - Wear appropriate PPE
    - Eliminate ignition sources and monitor for combustible gases
- May accumulate static electricity
    - Ground and bond during transfers
- Vapours heavier than air
    - Stay out of low areas and confined spaces

Personal Protection

- General mechanical ventilation must be worn
- Ribber gloves
- ANSI approved Chemical Workers Goggles
- Coveralls

First Aid

- **Eyes**
    - Flush eyes immediately with fresh warm water (40C-45C) for at least 15 minutes holding lids open. DO NOT USE excessively hot or cold water
    - Get medical attention if pain or sensitivity to light persists
- **Skin**
    - Wash exposed area extremely thouroughly, but gently in cases of frostbite –like injury, with soap and water
- **Inhalation**
    - Move person to fresh air
    - Administer oxygen therapy, as necessary and only if trained
    - WHEN OXYGEN IS IN USE, ENSURE NO SMOKING
- **Ingestion**
    - If swallowed, DO NOT INDUCE VOMITING and obtain immediate medical attention
    - Contact MD immediately

For Further Information Consult Product MSDS

Appendix A12: **SF6 GAS –EMERGENCY RESPONSE**

Spill

- Evacuate personnel to safe areas. Wear PPE and self-contained breathing apparatus when entering area unless atmosphere is proved to be safe. Ventilate the area. Monitor oxygen level
- Stay upwind
- If possible, stop the flow of product
- Advise Supervisor and/or SCC (867) 393 5324/ 867 393 5355 Request assistance

Fire

- Isolate area, restrict access and evacuate if necessary
- Call Fire Department, advise supervisor and/or SCC # (867) 393 5324/ 393 5355 to request assistance
- Shut off fuel to fire, IF SAFE TO DO SO
- If qualified, extinguish with dry chemical extinguisher, CO2, foam and/or H20 fog. DO NOT use a direct stream of water as it may spread the fire

For Further Information Consult Product MSDS

Appendix A13: **WASTE OIL – SAFETY MEASURES**

- Mixture of water, oil and lubricant additives. Concentrations of components will vary. The product is not expected to be irritating and has a low level of toxicity under normal use. Exposure most likely to occur through skin or eye contact
    - Wear appropriate PPE
    - Spill may create slipping hazard
- Material is unlikely to burn unless preheated. Spilled material may produce a slipping hazard
    - Vapour pressure will vary dependent on the composition
- It may possibly accumulate static electricity
    - Ground and bond containers during transfer

Personal Protection

- If high level of fumes are present during a spill, ventilate area before entering
- Wear other required PPE, as appropriate

First Aid

- **Eyes**
    - Flush eyes immediately with fresh warm water (40C-45C) for 15 minutes holding lids open
    - Get medical attention if irritation persists
- **Skin**
    - Wash contaminated area with plenty of mild soap and water for 15 minutes. Remove contaminated clothing
    - If irritation occurs and persists, obtain medical attention
- **Inhalation**
    - Move exposed person to fresh air. Additional First Aid treatment is not usually required
    - Administer oxygen therapy, if necessary and/or obtain medical assistance
    - WHEN OXYGEN IS IN USE, ENSURE NO SMOKING
- **Ingestion**
    - Remove dentures, if any, and rinse with water. Rinse out mouth with water
    - If swallowed, DO NOT INDUCE VOMITING. Get immediate medical attention
    - If vomiting occurs, keep the head low to prevent product entering the lungs. Obtain medical attention

For Further Information Consult Product MSDS

Appendix A13: **WASTE OIL – EMERGENCY RESPONSE**

Spill

- Isolate area, restrict access and evacuate if necessary
- Eliminate ignition sources though substance unlikely to ignite
- Spilled material make create a slipping hazard
- Advise Supervisor and/or SCC # (867) 393 5324/ (867) 393 5355
- Request assistance
- Attempt to limit product escape routes and shut off source – IF SAFE TO DO SO
- Contain and recover using appropriate sorbent materials and/or vacuum truck

Fire

- Isolate area, restrict access and evacuate if necessary
- Call Fire Department, advise supervisor and/or SCC # (867) 393 5324/ 393 5355 to request assistance
- Shut off fuel to fire, IF SAFE TO DO SO
- If qualified, extinguish with dry chemical extinguisher, CO_2, foam and/or H_20 fog. DO NOT use a direct stream of water as it may spread fire

Physical & Chemical Properties

Appearance:	Liquid. Colour will vary depending on composition
Odour:	Hydrocarbon
Flashpoint:	Will vary depending on composition. Unlikely to burn
Solubility in water:	Insoluble
Lower/Upper Explosive Limits:	Will vary
Vapour Density:	Will vary

For Further Information Consult Product MSDS

Appendix A14: **BUTYL MERCAPTAN – SAFETY MEASURES**

- Extremely flammable liquid and vapour.
- Vapour is heavier than air
- Vapors and gases may ignite at distant ignition sources and flash back. Vapor/air mixtures are explosive
- Vapour may cause flash fire. Contact with water or moist air may generate flammable and/or toxic gases.
- Central nervous system depression

Personal Protection

- In the event of a spill, ventilation equipment should be explosion-resistant if explosive concentrations of material are present.
- Wear splash resistant safety goggles.
- Wear chemical resistant gloves and clothing

First Aid

- **Eyes**
  - Flush eyes immediately with fresh warm water (40C-45C) for 15 minutes holding lids open
  - Get medical attention if irritation persists

- **Skin**
  - Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention, if needed.
  - Thoroughly clean and dry contaminated clothing and shoes before reuse.

- **Inhalation**
  - If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention.

- **Ingestion**
  - If a large amount is swallowed, get medical attention.
  - Causes irritation, sore throat, nausea, stomach pain, headache, drowsiness, dizziness, loss of coordination

For Further Information Consult Product MSDS

Appendix A14: **BUTYL MERCAPTAN – EMERGENCY RESPONSE**

Spill

- ISOLATE AREA, restrict access and evacuate if necessary
- Turn off leak source IF SAFE TO DO SO
- Call Fire Department, advise supervisor and/or SCC # (867) 393 5324/ 393 5355 to request assistance
- Keep all sources of ignition and hot metal surfaces away from spill/release if safe to do so.
- Reduce vapors with water spray.
- Small spills: Absorb with sand or other non-combustible material.
- Collect spilled material in appropriate leak proof container for disposal.
- Large spills: Dike container for later disposal. Remove sources of ignition. Keep unnecessary people away, isolate hazard area and deny entry.

Fire

- ISOLATE AREA, restrict access and evacuate if necessary
- Call Fire Department, advise supervisor and/or SCC # (867) 393 5324/ 393 5355 to request assistance
- For tank, rail car or tank truck fire, evacuation radius: 800 meters (1/2 mile).
- Do not attempt to extinguish fire unless flow of material can be stopped first.
- Use regular dry chemical;, carbon dioxide, water, regular foam
- Move container from fire area, IF SAFE TO DO SO
- Dike container for later disposal.
- Do not scatter spilled material with high-pressure water streams. Cool containers with water spray until well after the fire is out. Stay away from the ends of tanks. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire.
- Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

Physical & Chemical Properties

Appearance:	Gas. Colourless
Odour:	Skunk–like or Garlic Odor
Flashpoint:	-48.4 C (-54.9 F)
Water solubility:	6.7% @20C (reacts)
Lower/Upper Explosive Limits:	L 2.8%, U 18%,
Vapour Density:	2.14
Specific gravity (water=1):	0.83 @25C

For Further Information Consult Product MSDS

14.0 WASTE MANAGEMENT

All equipment and/or material used in clean-up (e.g. used sorbents, oil containment materials etc.) must be disposed of in accordance with Environment Yukon requirements.

Accidental spills may produce special wastes (e.g., material with > 3% used oil) and contaminated soil. All waste disposal must comply with the *Yukon Special Waste Regulations* of the *Yukon Environment Act.*

Compliance with these regulations generally requires:

- Classification of the waste
- Packaging requirements (proper labeling and suitable storage containers)
- Transportation documentation
- All transporters must be properly trained
- Disposal in accordance with the regulations at an appropriate facility
- Spill reporting requirements must also be followed
- Waste sorbent material may not be disposed of in a landfill without prior approval from YTG Environment and the landfill operator.
- Contaminated soil must be treated and dealt with as required on a site specific basis and must comply with the requirements of the Yukon Contaminated Sites and Special Waste Regulations. At a minimum, the contractor must consider soil relocation agreement standards and obtain soil relocation permit as required.

Specific clean up requirements

Fuels and lubricants/Waste oil

After clean up, soiled sorbent materials will be placed inside an over pack or sealed metal drums and contained securely until organized special waste disposal can be coordinated.

Liquid wastes will be contained in a separate over pack or sealed metal drum.

Contaminated soils will be removed by an authorized contaminated soil receptor and transported to a land treatment facility.

Liquid Natural Gas

Methods for Containment and Clean-Up: Notify relevant authorities in accordance with all applicable regulations. Immediate cleanup of any spill is recommended. Dike far ahead of spill for later recovery or disposal. Absorb spill with inert material such as sand or vermiculite, and place in suitable container for disposal. If spilled on water remove with appropriate methods (e.g.skimming, booms or absorbents). In case of soil contamination, remove contaminated soil for remediation or disposal, in accordance with local regulations.

Mercaptan

Leaking containers after a release should be stored in a cool, dry place in a dike. Avoid heat, flames, sparks and other sources of ignition. Keep container tightly closed and in a well ventilated place. Avoid direct sunlight. Subject to storage regulations: U.S. OSHA 29 CFR 1910.106. Grounding and bonding required. Keep separated from incompatible substances.

All other products

All other products are to be contained in over packs or sealed metal drums separately from other products. Do not mix soiled materials. These materials are also to be picked up by Environment Yukon special wastes pick up, which occurs annually or another organized special waste disposal program at Yukon Energy. Contact the Manager of Environment for further information.

15.0 PLAN ADMINISTRATION

The following table must be filled out when changes are made to the plan.
YEC shall review the spill contingency plan annually and provide a summary of that review, including any revisions to the plan, as a component of the annual report.

Document Release and Revision History

Revision #	Revised Section/Page #	Purpose of Release: Details of Revisions/Amendments	Approved By:	Effective Date
00		New document	Director, Operations	May 2000
01	New cover page #1, #2	New cover page #1, added revision history page #2, updated contact info as required	Director, Operations	March 2004
02	Page #7, #10, #11, #12	Updated contact info as required & updated fuel day tank amounts	Director, Operations	May 2007
03	Pages 5,7, 8, and 11	Updated contact info and reporting chain as required	Manager, Environment	December 2009
04	All	Added site specific spill response procedures, updates contact information, added list of contractors for external resources, added resources at risk, updated on site spill response resources inventory. Added spill classification and clean-up plan. Added Spill Plan acknowledgement form, added sample incident report form. Added CFO to YEC reporting chain	Environmental Coordinator	June 20, 2012
05	Site specific pages, contacts, Initial action checklists	LNG and Oil and Gas regulation information added. Spill response equipment updated. Phone numbers updated	Environmental Coordinator	March 6, 2014, 2014

Name:	Signature:	Review Date:
Director, Operations		
Leadhand Mechanical Maintenance		
Leadhand Hydro Maintenance		
Leadhand Electrical Maintenance		
EMS Manager		

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This document is a Yukon Energy Environmental Management System (EMS) Environmental Work Plan (EWP), A hard copy of this document must be maintained in the operational area to which it refers (e.g., hydro plant) and replaced after the annual document review or whenever a revision is made to the plan.

References:

EMS-MP-011	Emergency Response
HS-000-E	MP-4 Incident Reporting & Investigation Procedures
HS-000-E-A	Incident Investigation Form
HS-000-E-B	Incident Reporting Form
EMS-MP-001	Environmental Management System Scope and Structural Overview

For additional copies of this plan please visit the YEC Sharepoint site
https://sp2010.yec.yk.ca/Departments/env/Spill%20Contingency%20Plans/Forms/AllItems.aspx

INDEX

LIST OF TABLES

LIST OF FIGURES