EMERGENCY PLAN

FOR PETROLEUM AND ALLIED PETROLEUM PRODUCTS

— Eureka High Arctic Weather Station —

Prepared by: Technical Services, Property Management Division
Assets, Real Property and Security Directorate
Corporate Services Branch
Environment and Climate Change Canada

June 2017

CONTROL PAGE

On receipt of revisions and/or amendments, Technical Services shall complete this control page to ensure that the Emergency Plan for Storage Tank Systems of Petroleum and Allied Petroleum Products at Eureka High Arctic Weather Station (HAWS) is always current and consistently reflects the operations and activities taking place on site.

Version	Description / Purpose	Date in Force	Revision Date	Revised By:	Approved By:
1	Original Plan	April 1, 2010			Natalie Boulanger
2	Original Plan updated : 1-as per ECCC, Environmental Enforcement Branch, Iqaluit 2-as per changes in the applicable regulatory regimes & identification of inadequacies		September 2012	Marie-Michelle Modéry & Carl Carroll	Rebekah Olson
3	Addition of ECCC Movement Document Manifest		April 2013	Carl Carroll	Rebekah Olson
4	Modifications to Spill Response contact numbers and notification procedures		June 2014	Carl Carroll	Rebekah Olson
5	Modifications to Spill Response contact numbers, notification procedures and NWB License number		March 2015	Jean-Philippe Cloutier-Dussault	Rebekah Olson
6	General Update and modifications to spill response contact numbers.		July 2016	Jean-Philippe Cloutier-Dussault	Rebekah Olson
7	General Update and modifications to spill response contact numbers.		June 2017	Jean-Philippe Cloutier-Dussault	Rebekah Olson

Environment Canada Environnement Canada

June 7, 2017

Rebekah Olson Signature Date (Month/Day/Year)
Manager
Technical Services

TABLE OF CONTENTS

LIST OF TABLES AND FIGURES

ACRONYMS

ARPSD	Assets, Real Property and Security Directorate
BMP	Best management practices
C	Celsius
CCG	Canadian Coast Guard
CEPA	Canadian Environmental Protection Act
CPR	Cardiopulmonary Resuscitation
CSA	Canadian Standards Association
DSD	Nunavut Department of Sustainable Development
ECCC	Environment and Climate Change Canada
FIRSTS	Federal Identification Registry for Storage Tank Systems
FSTS	Fuel Storage Tank System
HAWS	High Arctic Weather Station
INAC	Indigenous and Northern Affairs Canada
L	Liters
Licence	Nunavut Water Board Licence No. 3BC-EUR1116
M	Meters
MSDS	Material Safety Data Sheets
NFCC	National Fire Code of Canada
NWB	Nunavut Water Board
OSC	On-Scene Commander
PEARL	Polar Environmental Atmospheric Research Lab
PPE	Personal Protective Equipment
PSI	Pounds per square inch
SPM	Station Program Manager
SOP	Standard Operation Procedure
WHMIS	Workplace Hazardous Materials Information System

1. INTRODUCTION

Figure 1: Eureka High Arctic Weather Station, Eureka, NU

1.1 Context

Spills of petroleum and allied petroleum products cannot be entirely prevented; however, the impacts of spills can be minimized by training and establishing a predetermined line of response and action plan. The remoteness of Eureka High Arctic Weather Station (HAWS) coupled with the environmental sensitivity of the region underline the necessity for good spill contingency planning.

This Eureka Environmental Emergency Response Plan (EERP) for petroleum and allied petroleum products applies to the Eureka High Arctic Weather Station (HAWS) located in Eureka, Nunavut. The HAWS is located on the north side of Slidre Fjord, at the north-western tip of Fosheim Peninsula on Ellesmere Island. HAWS is owned and operated by the Meteorological Service of Canada. Although remote, the Eureka HAWS is a hub of activity for Environment and Climate Change Canada, the Department of National Defence, the Polar Continental Shelf Program, and the Polar Environment Atmospheric Research Lab (PEARL).

The site is accessed primarily by air with an all season air strip located about 1.5 km northeast of the site. An annual sea lift is conducted to provide Eureka HAWS with petroleum products to generate electricity, heat and operate motorized vehicles, pumps, snowmobiles, etc. Many stakeholders occupy the Station during the short summer season and the population can range from an average of 20-30 people up to as many as 40-60 people at any given time. During the winter months which last around 10 months of the 12, there are approximately 8-10 people on site, primarily consisting of MSC staff and researchers.

1.2 Purpose and Objectives of the Plan

The aim of this Environmental Emergency Response Plan (EERP) is to provide clear, timely, safe and effective coordinated response procedures by Environment and Climate Change Canada personnel in relation to environmental emergencies at Eureka and compliance with relevant regulations, in order to protect the environment and human health in the event of accidental release of petroleum products. The EERP provides ECCC and related personnel, who are involved in incident responses, with the necessary information to manage fuel storage tank systems (FSTS) through the adoption of preventative measures, plans for preparedness, as well as response and recovery procedures in the event of accidental release.

The principle objectives of the Plan are to:

1) Comply with all relevant federal government regulations, including the following;
   -Nunavut Water Board license 3BC-EUR1116 pursuant to the *Nunavut Waters and Subsurface Tribunal Act*
   -*Storage tank systems for petroleum and allied petroleum products regulations* pursuant to *the Canadian Environmental Protection Act*, 1999;
2) Protect Environment and Climate Change Canada (ECCC) employees, other persons working at or visiting Eureka HAWS and the environment by meeting or surpassing all applicable environmental and health and safety legislation, licenses, policies, codes of practice and plans (See Appendix A for the major requirements of the preceding);
3) Provide detailed information and guidance on actions important for the prevention of spills and procedures to detect and respond to them when they occur;
4) Identify potential emergency situations;
5) Minimize the impact of emergencies; and finally
6) Continually improve response procedures.

2. ADMINISTRATION

2.1 Effective Date of Emergency Plan

April 1, 2010

2.2 Plan Distribution List

This Plan and all subsequent updates shall be issued to (see Appendix B):

1) Environment and Climate Change Canada – Station Program Manager Nunavut;
2) Environment and Climate Change Canada – Head Aerological & Surface Operational Programs- Winnipeg, Manitoba;
3) Environment and Climate Change Canada – Manager, District 1 Property Management, Ottawa, Ontario;
4) Environment and Climate Change Canada – Environmental Compliance Officer, Gatineau, Quebec;
5) Department of Environment, Government of Nunavut; and
6) Nunavut Water Board, Gjoa Haven, Nunavut.

2.3 Plan Review and Maintenance

Manager, District 1 Property Management is responsible for the maintenance and update of the Plan.

The Plan shall be reviewed and updated:

1) **Annually**, taking into account changes in the applicable regulatory regimes, environmental factors and any petroleum and allied petroleum-related infrastructural changes at Eureka HAWS; and/or
2) **Following** a spill greater than 100 L; and/or
3) **Following** a spill of any amount that reaches water (Fisheries Act); and/or
4) The identification of any inadequacies in the Plan or in its implementation.

Changes in phone numbers and names of individuals etc. that do not affect the intent of the Plan are to be made on an annual basis. Plan updates shall be made in accordance with the above requirements. With each modification to the Plan, the Control Page shall be update and re-issued as per the Distribution List.

2.4 Response to Media and Public Inquiries

Media inquiries of Eureka or other ECCC staff concerning petroleum spills at Eureka should be directed to Environment and Climate Change Canada - Media Relations (see Appendix B). The Prairie and Northern Region's Communications Unit will coordinate a response to the inquiries.

3. EUREKA PETROLEUM AND ALLIED PETROLEUM PRODUCTS INVENTORY

This section provides a description of the:

1) Types of petroleum and allied petroleum products and their systems at Eureka;
2) Hazards associated with petroleum products;
3) Location and maximum expected quantities of the petroleum products or allied petroleum products stored at Eureka at any time during any calendar year; and
4) Characteristics of Eureka and the surrounding area that may increase the risk of harm to the environment or of danger to human life or health.

3.1 Types of Petroleum and Allied Petroleum Products at Eureka

1) Diesel fuel which is used to generate electricity and heat as well as fuel diesel motorized equipment;
2) Gasoline to fuel automobiles, pumps and snowmobiles;
3) Hydraulic fluids, greases, etc. for equipment and vehicles;
4) Aviation Fuel for aircraft;
5) Diesel engine oil for equipment and vehicles;
6) Hydraulic fluids for equipment and vehicles;
7) Glycol for equipment and vehicles; and
8) Petroleum and allied petroleum wastes.

3.1.1 Description of Eureka's Petroleum and Allied Petroleum Product Systems

3.1.1(a) Diesel System

Diesel fuel is shipped to Eureka HAWS by a Canadian Coast Guard (CCG) ice breaker. The ice breaker anchors approximately 100 to 300 metres off-shore, and using a floating hose, connects to a land based pipe system to pump the oil to the tank farm (See Appendix E for details).

3.1.1(b) Gasoline System

Gasoline is brought on shore in 205 L drums. Approximately ten drums are required to fill the 2,273L gasoline tank that is located just south of the tank farm. The average yearly consumption of gasoline is approximately 3,000 L (See Appendix F for details).

3.1.1(c) Other Petroleum and Allied Products Systems

Much of the barrel petroleum and allied petroleum products that arrive each year on the ice breaker are for agencies/customers other than ECCC. Further, other than for a few days following the departure of the ice breaker, most of the barrel products are stored at the north apron of the runway near the DND facility. These products include diesel engine oil, solvents, and hydraulic fluids. In addition, there could be up to 4000 barrels of aviation fuel from other agencies/customer.

Finally, ECCC and other agencies/customers site operations result in Eureka accumulating up to 80 barrels of waste oil and waste aviation fuel which are stored at ECCC's Petroleum and Allied Petroleum Barrel Storage Area.

3.2 Hazards of Petroleum Products

Material Safety Development Sheets (MSDS) are provided in Appendix C and Appendix D for diesel and gasoline respectively. These outline in detail the properties of the diesel and gasoline fuel on site at Eureka for the year 2015.

3.3 Diesel and Gasoline Tank Systems at Eureka, HAWS

Table 1 documents the characteristics of Eureka's HAWS diesel and gasoline tank systems.

Table 1: Volumes and locations of tanks containing petroleum materials

ECCC Registration Number	Fuel	Tank Storage Volume	Number of Tanks	Containment Type	Maximum Tank Capacity*	Storage Location and Uses
EC-00001218	Diesel Fuel	770,000 L	1	Single-Walled Tank with impermeable liner and berm (110%)	693,000 L	Tank Farm
EC-00001218	Diesel Fuel	60,000 L	9	Single-Walled Tanks with impermeable liner and berm	54,000 L x 9	Tank Farm
EC-00001218	Diesel Fuel	567 L	2	Single-Walled	Day tank	Generate power; part of Tank farm system
EC-00001195	Diesel Fuel	9,000 L	1	Double-Walled Tank	8,100 L	Transmitter Building, Heating
EC-00001212	Diesel Fuel	9,000 L	1	Double-Walled Tank	8,100 L	Old Maintenance Garage, Heating
EC-00001146	Diesel Fuel	9,000 L	1	Double-Walled Tank	8,100 L	Warehouse, Heating
EC-00001124	Diesel Fuel	9,000 L	1	Double-Walled Tank	8,100 L	Incinerator, Burning
N/A (Regulated by Transport Dangerous Goods Act)	Diesel Fuel	1, 850 L	1	Double-Walled Mobile Tank AGB Product Inc.	1, 665 L	Employed to transfer diesel to Transmitter Building, Old Maintenance Garage, Warehouse & Incinerator
EC-00001251	Gasoline	2,273 L	1	Double-Walled Tank	2,045 L	South and adjacent to Tank Farm, vehicle fuel, snowmobiles, small generators
N/A Day Tank	Diesel Fuel	1,150 L	1	Single-Walled Tank	1,035 L	Inside PEARL generator room

*Tanks are only filled to 90% of their capacity to accommodate any possible volume expansion due to a rise in temperature.

3.3 Location of Petroleum and Allied Petroleum Products and Systems at Eureka

The location of Eureka's petroleum and allied petroleum products are identified in Figure 2.

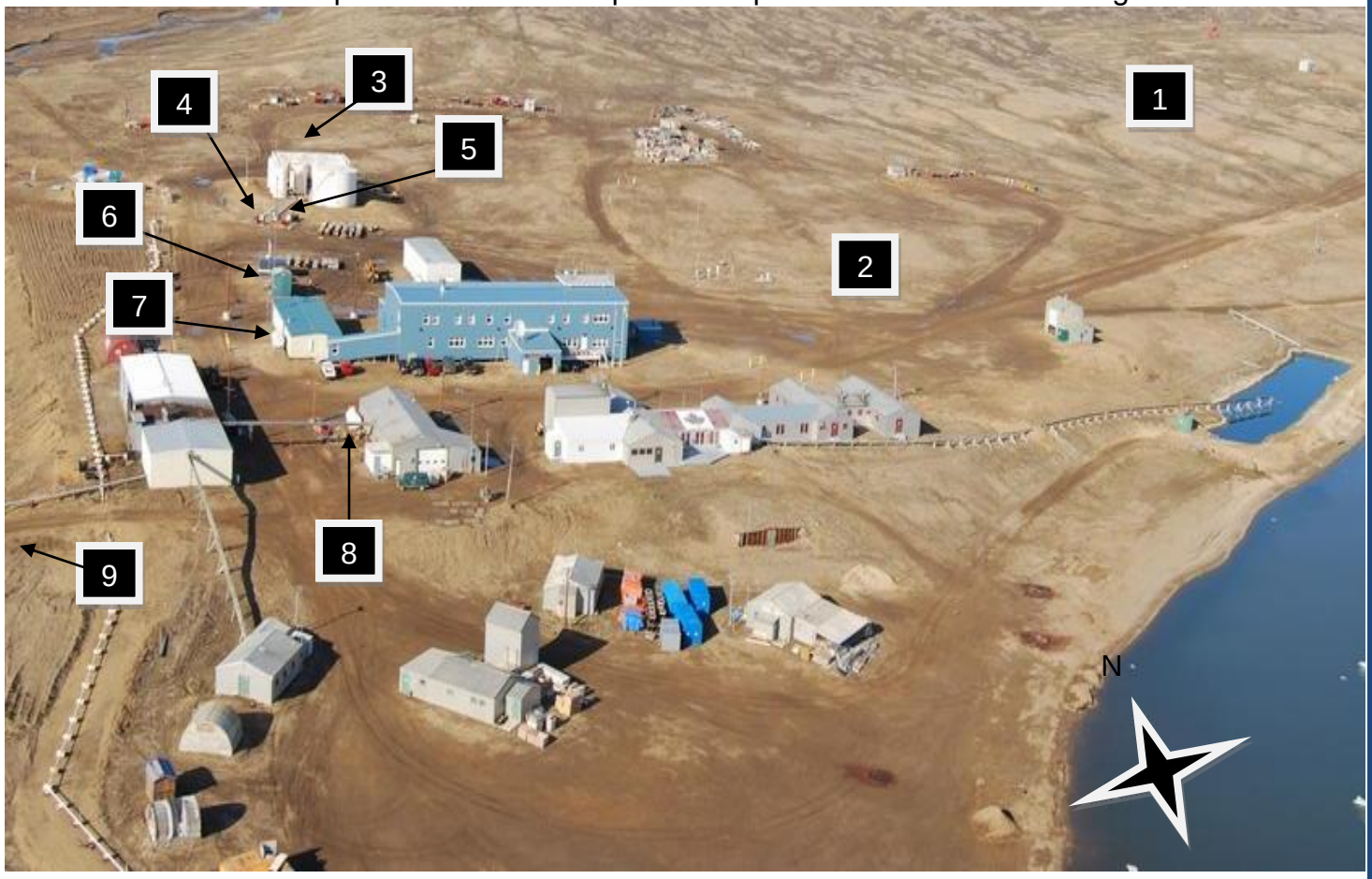


Figure 2: Location of Eureka's Petroleum and Allied Petroleum Products

Legend

1: *Transmitter Tank EC-00001195*

2: *ECCC's petroleum and Allied Barrel Storage Area*

3: *Tank Farm EC-00001218*

4: *Diesel Dispenser Mobile*

5: *Gasoline Tank EC-00001251*

6: *Incinerator Tank EC-00001214*

7: *Warehouse Tank EC-00001146*

8: Maintenance Tank EC-00001212

9: PEARL Day tank

3.4. EUREKA SITE CONDITIONS

This section of the EERP describes types of biotic, abiotic, and human receptors present in Eureka which are relevant during any environmental emergencies.

3.4.1 Receptors

There are a number of receptors at Eureka that could be adversely affected by a spill of petroleum or allied petroleum products. Figure 3 illustrates the location of the principle environmental, human and economic receptors at Eureka.

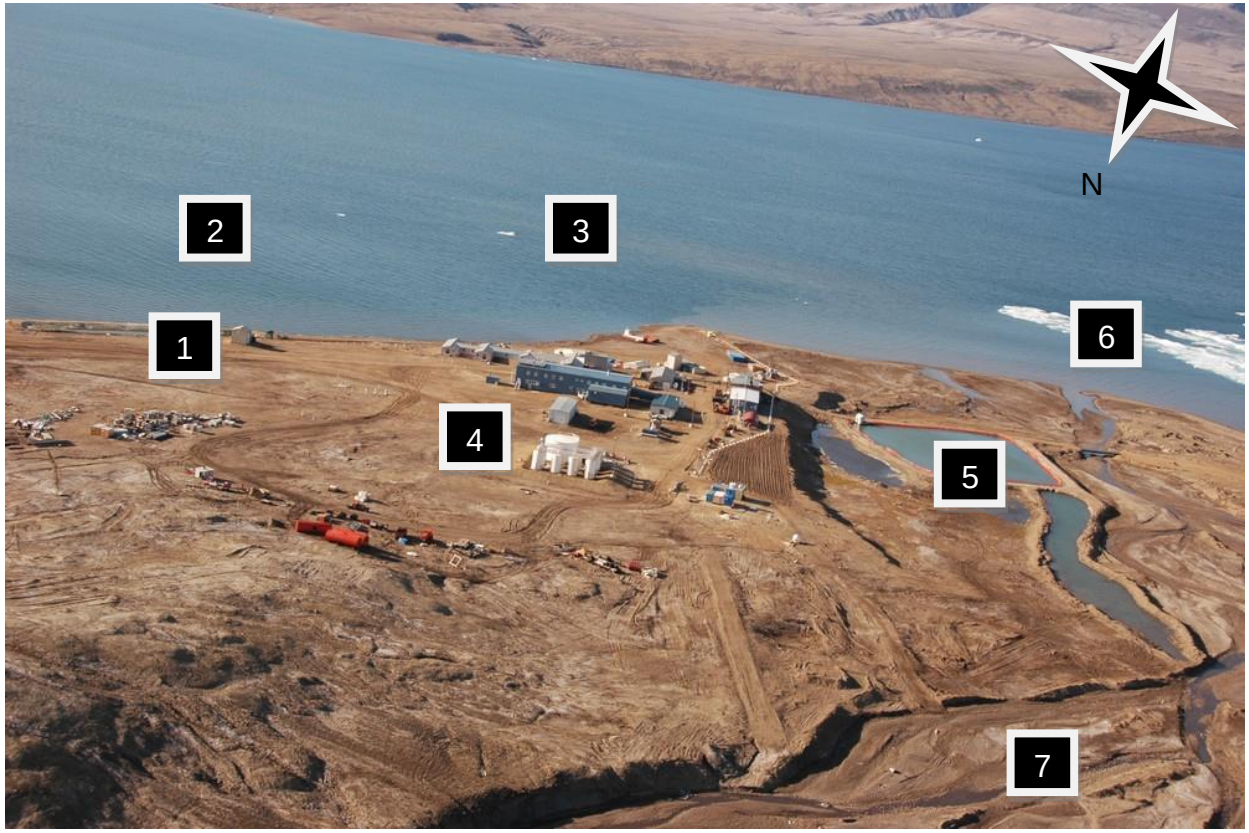


Figure 3: Location of environmental, human and economic receptors at Eureka

3.4.2 Climatic Conditions

The prevailing climatic conditions in Eureka are:

1) Wind – the prevailing wind is from the west during late summer and east for the remainder of the year;
2) Temperatures – well below freezing for the majority of the year (September to July);
3) Snow cover – snow is present for 9-10 months of the year; and
4) Ice – ice conditions are such that only an icebreaker can perform the annual re-supply. Resupply is usually conducted in August or September.

3.4.3 Topography

The topography at Eureka determines the direction and speed of spilled petroleum and allied petroleum products. Figure 4 illustrates a shallow north to south slope (10 M in 450 M or approximately 2%) in the land from the base of the tank farm to the Fjord and a steep slope of the land just to the west of the pipeline.

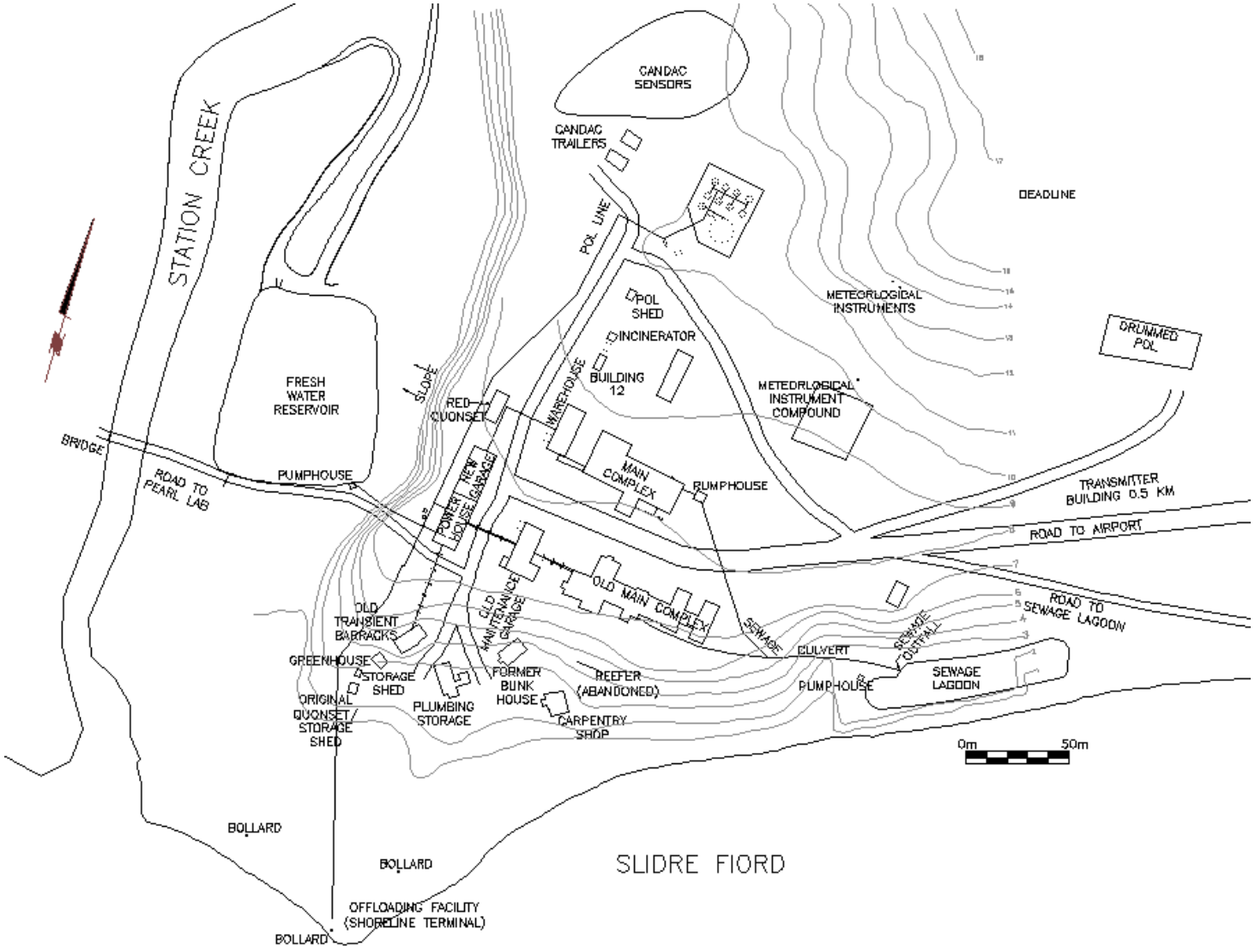
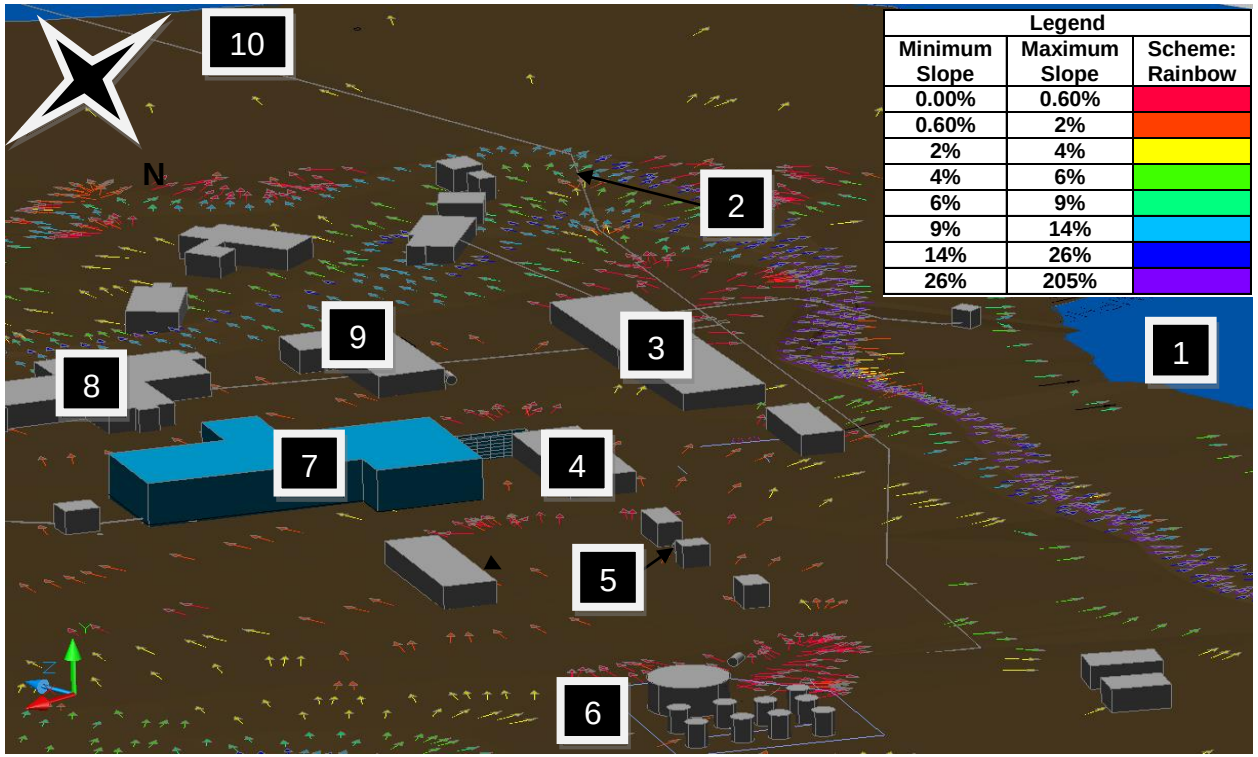


Figure 4: Topographical Map of Eureka

Figure 5 illustrates the Eureka's HAWS topography and direction of flow of possible discharges at Eureka HAWS.



Legend

1: *Freshwater Lagoon*
2: *Pipeline*
3: *Powerhouse*
4: *Warehouse*
5: *Incinerator*
6: *Tank Farm*
7: *Main Complex*
***8**: Old Main Complex*
***9**: Old Maintenance Garage*
***10**: Slidre Fjord*

Figure 5: Topography and flow transport model at Eureka

4. POTENTIAL SPILL SCENARIOS AND ENVIRONMENTAL IMPACTS

4.1 Likelihood of Spills at Eureka

Environment and Climate Change Canada's *Summary of Spill Events in Canada, 1984-1995* provides a review of all spill trends in Canada for the period indicated.

The report has a number of key findings:

1) The top five reasons for spills are equipment failure, human error, corrosion, material failure and storm or flood.
2) The environmental medium most frequently affected by spills is land.
3) The main consequences of spills would be vegetation, ocean and property damage.
4) Fifty-eight percent of the total number of reported spills involved petroleum products.

According to Environment and Climate Change Canada's *Summary of Spill Events in Canada, 1984-1995,* the likely causes ("what" went wrong) of federal spills are pipe leaks (19% of spills), above-ground tank leaks (15%), container leaks (12%) and overflows (8%). The report recommends material storage as an area in which to focus prevention efforts.
The likely reasons ("why" it went wrong) for spills in the government (all governments) sector are: storm (25%), equipment failure (22%), and human error (10%).

4.2 Overview of Non-Marine Spill Scenarios

Table 2 presents the principle petroleum products stored on site. For each, the table lists potential discharge events with associated discharge volumes and directions. The most likely discharge volume is indicated and the spill clean-up procedures will focus on spills of this quantity. A worst case scenario is also presented. Specific discharge rates are not indicated for each fuel type as these would vary from a few minutes to several hours, based on the source of leak or puncture.

Table 2: List of petroleum materials, potential discharge events, potential discharge volumes and direction of potential discharge

Material (sources)	Potential Discharge Event	Discharge Volume	Possible directions of discharge and susceptible receptors
Diesel	Over filling of portable tank or diesel vehicles from diesel dispenser Leaking pipeline (outside tank farm) to diesel dispenser and motorized valve inside tank farm stuck open	• Likely < 100L • Worst Case ~ 50,000L **(dispenser connected to 60,000L tank)**	Appendix G
	Over filling of 9,000L tanks from portable tank	• Likely: < 100 L • Worst Case: ~ 2000 L **(portable tank contains ~ 15 000 L)**	Appendix J, (Maintenance Tank) Appendix K (Warehouse Tank) Appendix L (Incinerator Tank)
	Leaking from any of the 10 tanks in Tank Farm	• Likely: < 100L • Possible: > 100 L to < 50,00L • Worst Case: ~ 700,000L **(largest single tank is ~ 700,000 L)**	Appendix G (Tank Farm)
	Leaking from pipeline during sea lift	• Likely: < 100L • Worst Case: ~ 25,000L **{volume of pipe (~ 270 M) between check valve at power house and tank farm}**	Appendix H (North End Pipeline) Appendix I (South End Pipeline)
	Leaking pipeline (outside tank farm) to power house and motorized valve inside tank farm stuck open	• Likely: < 100L • Worst Case: ~ 50,000L **(power house connected to 60,000L tank)**	Appendix H (North End Pipeline)
Gasoline	Over filling of gasoline tank or vehicles south of Tank Farm	• Likely: < 100L • Worst Case: ~ 200L **(volume of gasoline barrel)**	Appendix G (Tank Farm)
Jet A Fuel, Gasoline, Hydraulic Fluid, Glycol, Waste Petroleum	Piercing of 205L barrel	• Likely: < 100L • Worst Case: ~ 200L **(volume of barrel)**	Appendix M (Barrel Storage Area)
	Dropping of pallet of 205L barrels following sea-lift	• Likely < 100L • Worst Case ~ 800L **(pallet of 4 barrels dropped during transport)**	Appendix I (South End Pipeline)

4.3 Potential Impacts of Petroleum and Allied Petroleum Spills

Petroleum and allied petroleum products may be harmful to wildlife and aquatic life. They are not readily biodegradable and have the potential for bioaccumulation in the environment. Diesel burns slowly and thus the risk to the environment is reduced during recovery as burn can be more readily contained compared to a volatile fuel like gasoline.

Overall, for all hazardous materials discussed above, impacts are lower during winter. Snow is a natural sorbent and ice can form a barrier limiting or eliminating soil or water contamination; thus spills can be more readily recovered when identified and reported.

5. SPILL PREVENTION AND BEST MANAGEMENT PRACTICES

Planning for an emergency situation is imperative because of the hazardous nature of the petroleum and allied petroleum materials and the circumstances detailed in sub-sections 3.2.

These realities magnify the importance of focusing on preventative measures to minimize the likelihood of a spill and thereby provide for the safety of Eureka's personnel and the local environment.

5.1 Current Preventative measures

5.1.1 Tank Farm (EC-00001218) Fuel Re-supply Standard Operating Procedures (SOPs)

Due to the quantity of diesel fuel delivered and its transfer across open water to the shore piping system, the annual bulk transfer by ship offloading poses the greatest risk to the environment at Eureka. The following procedures are currently in place to mitigate the risks of a spill during re-supply:

1) Preliminary inspections of infrastructure before oil transfer operations commence:

    a) Coast Guard confirms that the transfer hose from ship to shore-line has been certified and a pressure test has been conducted on it.
    b) Coast Guard verifies the integrity of the ships mooring lines.
    c) ECCC personnel & Coast Guard inspect the pipeline & valves from the shore to the tank farm and review procedures to be implemented for possible spill scenarios.

2) Restrictions on fuel transfer from ship to diesel tank system:

    a) *If no ice in Slidre Fjord.* No transfer of fuel is permitted under the following environmental conditions:

        i) Wind speed greater than 15 knots; and
        ii) Other unacceptable conditions which increase the likelihood of a spill or impede the ability of the oil handling facility to respond in the event of an incident in the judgment of the CCG.

    b) *If light to medium new year ice conditions in Slidre Fjord.* No transfer of fuel is permitted under the following environmental conditions:

        i) Wind speed greater than 10 knots;

ii) Other unacceptable conditions which increase the likelihood of a spill or impede the ability of the oil handling facility to respond in the event of an incident in the judgment of the CCG; and
iii) Should ice flows pose a risk for damage to the floating transfer hose, and such ice flows cannot be easily diverted away from the transfer hose by CCG zodiacs or landing craft, contact will be made immediately to the CCG icebreaker to shut down the transfer of fuel. Upon draining the transfer hose of all fuel, the hose will be disconnected from the ship and will not be reconnected until ice flows do not pose any immediate problems

c) *If heavy New Year ice conditions in Slidre Fjord.* No transfer of fuel is permitted under the following environmental conditions:

i) Wind speed greater than 10 knots;
ii) Other unacceptable conditions which increase the likelihood of a spill or impede the ability of the oil handling facility to respond in the event of an incident in the judgment of the CCG; and
iii) Should ice flows pose a risk for damage to the floating transfer hose, and such ice flows cannot be easily diverted away from the transfer hose by CCG zodiacs or landing craft, contact will be made immediately to the CCG icebreaker to shut down the transfer of fuel. Upon draining the transfer hose of all fuel, the hose will be disconnected from the ship and will not be reconnected until ice flows do not pose any immediate problems.

3) Safety measures implemented on-land during diesel fuel transfer

The fuel is delivered to the tank at a pressure of approximately 30 - 80 psi which is well below the pressure capabilities of the hose and pipeline systems.

4) Single diesel tank filling procedure

The annual re-supply is only pumped into the 770,000L storage tank (any residual oil contained within the 770,000 L tank having been conveyed to the other 60,000 L tanks prior to re-supply). This procedure significantly lowers the potential for tank overfills, in that only one tank must be monitored during loading and eliminates a problematic procedure of continually switching from tank to tank during the re-supply process.

5) Monitoring procedures during re-supply

The following individuals are in constant radio contact throughout the approximately 14-24 hour transfer which takes place in August or September:

a) The Captain of the Coast Guard ship;

b) The Captain's Coast Guard counterpart (the Beachmaster) on the beach where the hose from the ship meets the fixed pipeline on land;
c) An ECCC contract personnel and/or the Beachmaster patrolling the pipeline; and
d) An ECCC contract personnel and/or the Beachmaster at the 770,000 L tank or any of the 9 - 60,000 L tanks observing the mechanical float level and comparing that observation with a physical measuring of the level of the fuel in the tank by manual dipping. The 770,000 L tank or any of the 9 - 60,000 L tanks are closely monitored during the filling process to ensure there is a minimum of 10% of its capacity remaining to accommodate any possible volume expansion due to a rise in temperature.

5.1.2 Secondary Containment Measures

Secondary containment is provided for all tanks, either in the form of double-walled tanks, or in the case of the tank farm, a berm with high density polyethylene synthetic impermeable liner providing 110% of the capacity of the 770,000 L tank.

An analysis report on fuel storage and product transfer areas for Eureka was conducted in 2009 by a consultant in order to identify measures required in order to comply with Fuels Storage Tank System (FSTS) regulations along with providing suggestions on applicable best management practices. Eureka has implemented the mitigation measures as recommended in the report entitled *Eureka Fuel Storage Product Transfer Areas Analysis Report*, October 2009.
For example:

- Drive-In/drive-out fuel containment pans have been installed at the gasoline/diesel pump re-fuelling location.
- Fuel containment pans have been purchased and installed at various locations in Eureka where storage of drummed fuels takes place such as the POL area and the airstrip.

5.1.3 Maintenance and Inspection Programs

Eureka has implemented Operational Procedures for Inspections and Maintenance of Storage Tank Systems. This consists of Monthly and Annual Checklists (see Appendices Q & R) in order to ensure that the components of Eureka's systems are compliant with the inspection and maintenance requirements of the FSTS regulations, and that Eureka is following best management practices. Copies of the checklists are kept on file in the Station Manager's Office of the Operations Complex.

The maintenance and inspection program aids in minimizing the possibility of fuel spills due to equipment failures, demonstrates due diligence, and is in compliance with FSTS regulations.

5.1.3.1 Monthly Visual Inspection Checklist

A monthly visual inspection is performed by ECCC personnel for its tanks, single walled piping, and related storage tank system components. Copies of the inspection are kept on file in the Eureka Station Manager Office of the Operations Complex.
ECCC's site (both inside and outside buildings) is patrolled by ECCC personnel on a constant basis in order to monitor, by sight or smell, for fuel leaks.

The components of the monthly checklist which are monitored for all FSTS, with the exception tank farm, consist of the following:

1. Inspection of all aboveground tanks and piping for surface rust
2. Inspection of the integrity of the distribution piping
3. Inspection of the vent cap on the tank to ensure it is not obstructed
4. Verification of the refill pipe cover to ensure it is firmly attached to the refill pipe
5. Verification of the integrity of the labels and plates located on the refill pipe
6. Inspection of the interior of the tanks to identify any possible water accumulation (where possible)
7. Maintenance of the valve, by repeatedly opening and closing it, to ensure it is working correctly and to prevent jamming

(See Appendix Q for a copy of the template of the monthly visual inspection checklist)

On a regular basis (for the tank farm):

1) The meters on all tanks at the tank farm are read to identify potential leaks
2) The accuracy of the tank meters is confirmed by lowering a measuring tape to gauge the fuel depth (see Figure 6). This latter reading for each tank is compared to the corresponding tank meter reading to determine if there are any discrepancies;
3) A check is made to confirm that all tank valves are closed except the ones in use;
4) A regular check is made of the motorized valve at the tank farm that opens the pipeline from one of the 60,000 L tank farm diesel fuel tanks to the powerhouse or the dispensing pump when there is a demand for diesel. It is critical that this motorized valve is operational and does not "freeze" in the open position which would cause the previously mentioned sections of the pipeline to be 'charged'. If these sections of the pipeline became damaged while the valve was in the open position, a maximum of 60,000 L tank of diesel could spill onto the land. The motorized valve must be visually checked regularly to ensure the heater is working (no frost on the heater & flag is in right direction indicating valve is off when there is no demand for fuel);
5) All tanks and associated pipelines are checked; and

6) The secondary containment area inside the berm of the tank farm is scrutinized to confirm that are no pools of oil collecting.

Figure 6: Measuring Tank Levels by Dipping

5.1.3.2 Annual Inspection Checklist

The annual inspection of all FSTS is to include the following elements:

- Inspection of all safety measures and equipment
- Inspection of the tank's overfill protection devices
- Inspection of leak detection and leak collection devices
- Inspection of all refuelling devices
- Inspection of the fixed devices connected to the tank system
- Inspection of all markings and signage
- Inspection of all tank system piping
- Review of emergency procedures and documentation

Copies of this documentation are filed in the Eureka Station Manager Office.
(See Appendix R for a copy of the Annual Inspections Checklist.

The Tank Farm containment berm is inspected yearly and, if necessary, repaired to ensure its integrity.

The tank internal inspection program for the Tank Farm (EC-00001218) is performed once every 10 years or based on API 653 inspection results (CEPA).

5.1.4 Emergency Preparedness Checklist (Cross reference table)

An emergency preparedness checklist which cross references the FSTS Regulations has been created in order to ensure that this emergency plan meets all the requirements of sections 30 to 32 of these Regulations. The table illustrates that all the mandatory requirements have been met with respect to CEPA 2008-197, TDG Regulations SOR/2008-34, with management practices outlined in CCME 2003 and the National Fire Code NFCC 2005. (Refer to Appendix S)

5.1.5 Labeling

All tanks subject to SOR/2008-197 have a plate bearing the Environment and Climate Change Canada identification number. Furthermore, all tanks are to display the appropriate WHMIS/TDG labels directly on a part of the tanks such that they are clearly visible to personnel accessing the tanks.

All of these labels are:

- Clearly visible and legible
- Weather- and transport-resistant
- Water-repellent and water-resistant
- Appropriately shaped/sized

5.1.6 Diesel Fuel Conveyance Safety Measures

Tank Farm diesel is only conveyed via the piping system to the power house/diesel dispenser from the 60,000 L tanks. This measure ensures that, if:

1) the motorized valve (discussed above) fails to close, leaving the piping system "charged" and
2) there is a break in the piping system outside the tank farm,

Then the potential oil spill is limited to ~ 50,000 L and not 700,000 L.

5.1.7 Diesel and Gasoline Dispensing Safety Measures

The nozzles on the diesel dispenser and gasoline tank are constructed with self-serve safety devices to ensure that fuel can only be delivered if a human is present.

5.1.8 Spill kits

Currently there are 8 spill kits located within the Eureka site. The spill kits are located in close proximity to the various FSTS located throughout the facility. This includes the pipeline manifold, the power house, warehouse (EC-00001146), old garage (EC-00001212), incinerator (EC-00001214), re-fuelling area (fuel dispensers), gasoline tank (EC- 00001251) and mobile fuel wagon. See figure 7 below for the specific location of the 8 spill kits.

5 of the 8 spill kits contain the following;

50	- 15" x 19' pads
4	- 3" x 12' SOCs
8	- 18" x 18" Pillows
1	- Goggles
1	- pair Nitrile Gloves
5	- Disposable bags
1	- Emergency Handbook

3 of the 8 spill kits are considered spill buckets and they contain the following;

10	- 15" x 19' pads
3	- 3" x 4' SOCs
1	- Pair nitrile gloves
2	- Disposable bags
1	- Instruction sheet

Figure 7: Location of spill kits at Eureka

5.1.9 Training

Training/instruction will assist in the prevention of petroleum and allied petroleum spills and the mitigation of associated health effects.

5.1.9.1 General Health and Safety Training

All ECCC employees and contractors are trained in the following:

1) Workplace Hazardous Materials Information System (WHMIS);
2) First Aid and CPR; and
3) Transportation of Dangerous Goods

A MSDS binder, containing MSDS sheets on all hazardous substances present at Eureka, is located in the front of the vestibule of the main complex. Each building has a MSDS binder containing MSDS sheets for substances contained in that building.

A Workplace Hazardous Materials Information System (WHMIS) manual is located in the front vestibule of the main complex.

Training for employees who may be involved in inspection of fuel tank systems, fuel transfer operations and/or response to a spill is currently being developed. Training will include live exercises.

5.2 Preventative Initiatives In progress

The following is a list of recently initiated preventative measures at the facility.

5.2.1 Product Transfer Areas (PTA)

Drive-in/Drive-out metal secondary containment pans have been installed in the fuel transfer area of the fuel tank farm and the airstrip locations. An additional investigation into the feasibility of installing “no-spill” hose connections on to the Eureka re-fuelling hoses is being undertaken. The re-fuelling hoses are sent south each year to be pressure tested at an accredited facility before they are shipped back to Eureka for use in the re-fuelling process the following year.

6. SPILL CONTINGENCY

This section within this EERP details all aspects of the organization’s response in the event of accidental release of petroleum products. The following response section demonstrates preparedness within Eureka to respond quickly and efficiently to spills,

and/or other emergencies, in order to limit the danger or damage posed by the accidental release of petroleum products.

This section outlines individual roles and responsibilities relating to the plan, protocol on how information is disseminated both internally and externally in the event of an emergency, as well as procedures for emergency response, reporting, containment and management.

This section is divided into four sections:

1) Major roles and responsibilities
2) Health, safety and environmental measures common to all spill events;
3) Responses to a spill in a non-marine environment; and
4) Responses to a spill in a marine environment.

.

6.1 Major Roles and Responsibilities

6.1.1 Eureka Station Program Manager

The Station Program Manager occupies the pivot role in the operations at Eureka HAWS, in general and a response to a petroleum-related spill, in particular:

1) Gathering personnel and resources and deploying and directing them in stopping, controlling, containing, storing and disposing of the spent petroleum product;
2) Communicating details of the spill to the Spill Response Centre and EC's Manager, District 1 Property Management, if spill > 100 L;
3) Providing medical care to any injured persons;
4) Providing regular updates to ARPSD on containment and cleanup activities; and
5) Completing and submitting a spill report form.

6.1.2 Manager, District 1 Property Management

Upon spill notification, Manager, District 1 Property Management is responsible for public relations, insurance and legal issues relating to an incident, as well as ongoing liaison with other Government Departments and Governments.

In the event that the spill cannot be handled internally, then Manager, District 1 Property Management will request assistance from the Nunavut Government's Department of Sustainable Development (DSD) to provide the appropriate expertise to deal with a large spill at Eureka. In the meantime, Eureka staff will use best efforts to contain and control the spill by deploying its equipment in the spill area. However, once DSD or their contractor arrives on site, they may utilize any equipment currently deployed in addition to any equipment that they may have brought with them.

In the case of a major spill involving potentially large expenditure for cleanup costs and contentious claims from third parties, specialized legal counsel will be consulted. Manager, District 1 Property Management will be responsible for arranging for legal advice

6.2 Health and Safety Measures

The following health and safety measures apply to both marine and non-marine spill scenarios

6.2.1 Site Control

In the event of a petroleum or allied petroleum product discharge, an immediate assessment shall be made to ensure that the site is secure. Any incident involving spills or leaks can attract curious onlookers, and therefore all non-authorized personnel shall be kept well outside any hazardous area. Only those directly involved in the containment, control or cleanup of the discharge shall be allowed in the general vicinity of the discharge.

6.2.2 Fires

In the event of a fire, fire extinguishers, fire hoses, axes and pull stations can be accessed throughout all major buildings on site.

6.2.3 Slippery Rocks, Decks or Other West Surfaces

Any person working in the vicinity of the shoreline shall wear oil-resistant rubber, steel-toed safety boots.

6.2.4 Working Around Water

All personnel working in close proximity to the water shall wear the appropriate Personal Flotation Devices (PFDs). Persons working on shore do not have to wear PFDs.

6.2.5 Buddy System

A buddy system shall be observed at all times when workers are in the discharge area or working on vessels. Persons shall work within sight of their assigned partner at all times.

6.2.6 Personnel Protective Equipment (PPE) Requirements

The following outlines the personnel protective equipment requirements for Eureka:

1) Selection of outer PPE shall be based on the potential for whole body contact with the product. A potential for repeated contact shall require rain gear (top and bottoms). Clothing shall be kept zippered when handling dangerous materials;
2) Personnel carrying out work where high body-contact with the spilled substance could take place, shall tape the suit over their gloves and boots;
3) Personnel with limited skin contact potential may wear disposable clean guard garments or equivalent. Personnel with no exposure potential (inspectors, monitors, etc.) need not wear protective clothing;
4) All personnel shall wear safety glasses (regular glasses are satisfactory); and
5) Personnel handling contaminated materials shall wear outer chemical resistant gloves. Sleeves shall be taped whenever handling contaminated wet materials.

6.2.7 Protection of Personnel

Any significant spills of volatile products can cause a significant threat to personnel if the vapour plume approaches a populated area. Based on the wind direction a determination of the potential area of impact shall be made and personnel shall be notified of any potential hazard.

6.2.8 Decontamination

In the event of a spill, decontamination stations may be established in the vicinity of a contaminated area. The configuration of the decontamination stations shall be such that the personnel shall pass through one of the stations prior to leaving the contaminated area. If necessary, the stations may be surrounded by a berm and lined with plastic sheeting. Special purpose washing solutions may be placed near the discharge area. All washing solutions shall be clearly marked.

6.2.9 Waste Petroleum and Allied Petroleum Storage

Secondary containment for waste petroleum and allied petroleum products awaiting disposal is provided in the form of salvage drums, crates constructed with plastic lining or secondary containment pallets at the Barrel Storage Area.

In all cases, the disposed material is:

1) Packaged and labelled; and
2) Accompanied by a manifest

in conformity with regulatory requirements (see Appendix A; *TDG*, *Interprovincial Movement of Hazardous Waste Regulations*). Copies of manifests are retained and filed at the Station Program Manager's Office at Eureka. (See Appendix T for example of Manifest)

The completed manifest form provides the detailed information on:

- the types and amounts of hazardous waste shipped;
- record of the parties involved in the shipment;
- on the storage, treatment or disposal of the waste and;
- the confirmation that the waste reached the final destination.

The Generator (Consignor), Carrier and Receiver (Consignee) must each complete their portion of the manifest

6.3 Non-Marine Spill Response

This section provides:

1) A spill response chart (see Figure 8); and
2) Detailed procedures for responding to non-marine oil spills.

6.3.1 Spill Response Organization & Roles & Responsibilities

The reduction in the number and severity of spills is facilitated by a comprehensive and clearly articulated spill response organization. Figure 8 outlines the flow chart of response in the event of a spill. The details of the roles and responsibilities are explained in the subsequent sub-sections

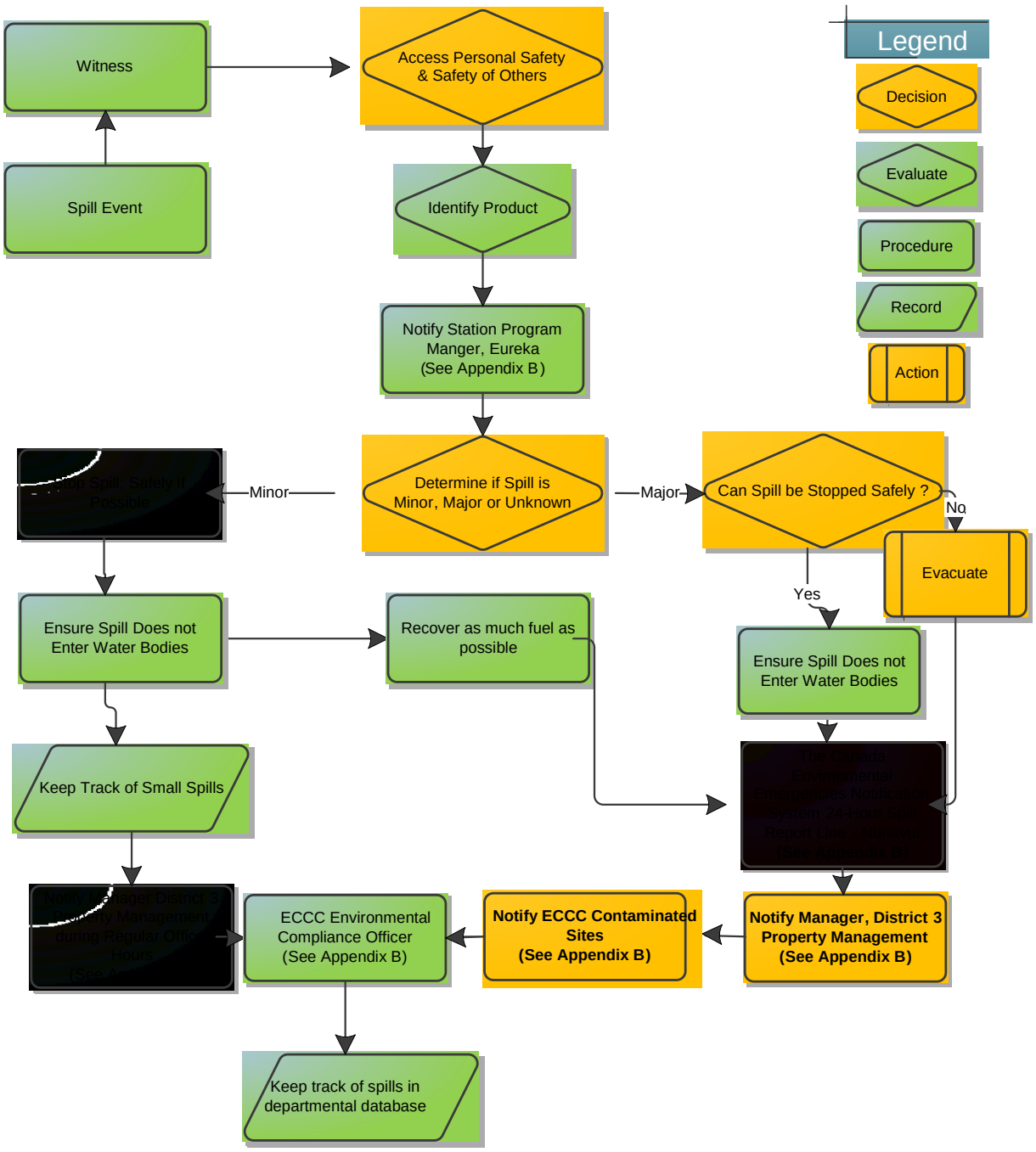


Figure 8: Response Organization for a Non-Marine Petroleum Spill

6.3.2 Procedures for Initial Actions

In the event of a spill, without exception, the health and safety of persons at Eureka is the first priority.

1) Ensure personal safety and that of others.
2) Assess spill hazards and risks.
3) No matter what the volume is, notify Eureka - Station Program Manager. (see Appendix B)
4) Remove all sources of ignition.
5) Stop the spill if safely possible e.g. shut off pump, patch leaking hole. Use the contents of the nearest spill kit to aid in stopping the spill if it is safe to do so.
6) Tyvek suits and chemical master gloves are located in the spill kit and should be worn immediately if there is any risk of being in contact with fuel.
7) Contain the spill.

6.3.3 Procedures for Spill Reporting

Spills at Eureka are required to be reported under various pieces of Environmental Legislation as listed in Appendix B, but more specifically:

1. The Nunavut Water Board License
2. CEPA, 1999, paragraph 212(1)(a)
3. Fisheries Act, subsection 38(4)
4. Government of Nunavut, EPA, paragraph 5.1(a)

(A spill of any amount must be reported if it affects a body of water). These types of spills must be reported to:

1) The Canada Environmental Emergencies Notification System 24-Hour Spill Report Line - Nunavut ; This service is used throughout the NWT to inform all relevant government departments (federal, territorial and/or Aboriginal) that a spill has occurred.
2) Canadian Coast Guard for marine pollution incident.

See **Appendix B** for all Spill Emergency Telephone Numbers.

Any spills less than 100 L do not need to be reported immediately to the spill reporting line. Rather, these minor spills should be tracked and documented by Eureka and submitted to the Nunavut Water Board in Environment and Climate Change Canada's Annual Report to the Board (see Appendix B).

If the spill affects a body of water it must be reported to Canada Environmental Emergencies Notification System 24-Hour Spill Report Line - Nunavut (see Appendix B).

If there is any doubt that the quantity spilled exceeds reportable levels, the spill should be reported to the Canada Environmental Emergencies Notification System 24-Hour Spill Report Line - Nunavut (see Appendix B).

Following gaining control and containment of the spill, the Station Program Manager (SPM) must complete and submit the Environment and Climate Change Canada and Nunavut Spill Report Form (See Appendix P).

6.3.4 Procedures for Containing and Controlling the Spill

Initiate spill containment by first determining what will be affected by the spill.

1) Assess speed and direction of spill and cause of movement (water, wind and slope).
2) Determine best location for containing spill, avoiding any water bodies.

6.3.5 Procedures for Containment of Petroleum Products Spilled on Land, Water, Ice and Snow

6.3.5.1 Procedures for Containment of Spills on Land

Spills on land include spills on rock, gravel, soil and/or vegetation. It is important to note that soil is a natural sorbent, thus spills on soil are generally less serious then spills on water as contaminated soil can be more easily recovered. Generally spills on land occur during the late spring, summer or fall when snow cover is at a minimum. It is important that all measures be undertaken to avoid spills reaching open water bodies.

1) Dykes

Dykes can be created using soil surrounding a spill on land. These dykes are constructed around the perimeter or down slope of the spilled fuel. A dyke needs to be built up to a size that will ensure containment of the maximum quantity of fuel that may reach it. A plastic tarp can be placed on and at the base of the dyke such that fuel can pool up and subsequently be removed with sorbent materials or by pump into barrels or bags. If the spill is migrating very slowly a dyke may not be necessary and sorbents can be used to soak up fuels before they migrate away from the source of the spill.

2) Trenches

Trenches can be dug out to contain spills as long as the top layer of soil is thawed. Shovels, pick axes or a loader can be used depending on the size of trench required. It is recommended that the trench be dug to the bedrock or permafrost, which will then provide containment layer for the spilled fuel. Fuel can then be recovered using a pump or sorbent materials.

6.3.5.2 Procedures for Containment of Spills on Land that reach a body of water

Spills that reach water such as Station Creek at Eureka are the most serious types of spills as they can negatively impact water quality and aquatic life. All measures need to be undertaken to contain spills on open water.

1) Booms

Booms are commonly used to recover fuel floating on the surface of lakes or slow moving streams. They are released from the shore of a water body to create a circle around the spill. If the spill is away from the shoreline a boat will need to be used to reach the spill, then the boom can be set out. More than one boom may be used at once. Booms may also be used in streams and should be set out at an angle to the current. Booms are designed to float and have sorbent materials built into them to absorb fuels at the edge of the boom. Fuel contained within the circle of the boom will need to be recovered using sorbent materials or pumps and placed into barrels or bags for disposal.

2) Weirs

Weirs can be used to contain spills in streams and to prevent further migration downstream. Plywood or other materials found on site can be placed into and across the width of the stream, such that water can still flow under the weir. Spilled fuel will float on the water surface and be contained at the foot of the weir. It can then be removed using sorbents, booms or pumps and placed into barrels or plastic bags.

3) Barriers

In some situations barriers made of netting or fence material can be installed across a stream, and sorbent materials placed at the base to absorb spilled fuel. Sorbents will need to be replaced as soon as they are saturated. Water will be allowed to flow through. This is very similar to the weir option discussed above. Note that in some cases, it may be appropriate to burn fuel or to let volatile fuels such as gasoline evaporate after containment on the water surface. This should only be undertaken in consultation with, and after approval from the INAC or lead agency Inspector.

6.3.5.3 Procedures for Containment of Spills on Ice

Spills on ice are generally the easiest spills to contain due to the predominantly impermeable nature of the ice. For small spills, sorbent materials are used to soak up spilled fuel. Remaining contaminated ice/slush can be scraped and shovelled into a plastic bag or barrel. However, all possible attempts should be made to prevent spills from entering ice covered waters as no easy method exists for containment and recovery of spills if they seep under ice.

1) Dykes

Dykes can be used to contain fuel spills on ice. By collecting surrounding snow, compacting it and mounding it to form a dyke down slope of the spill, a barrier is created thus helping to contain the spill. If the quantity of spill is fairly large, a plastic tarp can be placed over the dyke such that the spill pools at the base of the dyke. The collected fuel can then be pumped into barrels or collected with sorbent materials.

2) Trenches

For significant spills on ice, trenches can be cut into the ice surrounding and/or down slope of the spill such that fuel is allowed to pool in the trench. It can then be removed via pump into barrels, collected with sorbent materials, or mixed with snow and shovelled into barrels or bags.

3) Burning

Burning should only be considered if other approaches are not feasible, and is only to be undertaken with the permission of the Indian and Northern Affairs Canada (INAC) or lead agency Inspector.

6.3.5.4 Procedures for Containment of Spills on Snow

Snow is a natural sorbent, thus as with spills on soil, spilled fuel can be more easily recovered. Generally, small spills on snow can be easily cleaned up by raking and shovelling the contaminated snow into plastic bags or empty barrels, and storing these at an approved location.

1) Dykes

Dykes can be used to contain fuel spills on snow. By compacting snow down slope from the spill, and mounding it to form a dyke, a barrier or berm is created thus helping to contain the spill. If the quantity of spill is fairly large, a plastic tarp can be placed over the dyke such that the spill pools at the base of the dyke. The collected fuel/snow mixture can then be shovelled into barrels or bags, or collected with sorbent materials.

6.3.5.5 Procedures for Transferring, Storing and Managing Petroleum Spill Wastes

In most cases, spill cleanups are initiated at the far end of the spill and contained moving toward the centre of the spill. Sorbent socks and pads are generally used for small spill cleanup. A pump with attached fuel transfer hose can suction spills from leaking containers or large accumulations on land or ice, and direct these larger quantities into empty drums. Hand tools such as cans, shovels, and rakes are also very effective for small spills or hard to reach areas. Heavy equipment can be used if deemed necessary, and given space and time constraints.

Used sorbent materials are to be placed in plastic bags for future disposal. All materials mentioned in this section are available in the spill kits located at Eureka. Following clean up, any tools or equipment used will be properly washed and decontaminated, or replaced if this is not possible.

For most of the containment procedures outlined above, spilled petroleum products and materials used for containment will be placed into empty waste oil containers and sealed for proper disposal at an approved disposal facility.

6.4 Marine Spill Response (During Resupply)

This section of the Plan is designed to enable Eureka personnel to be prepared for and respond to marine based spills of diesel fuel at Eureka HAWS during the annual sea lift operation.

6.4.1 Spill Response Organization & Roles & Responsibilities

The reduction in the number and severity of spills is facilitated by a comprehensive and clearly articulated spill response organization. Figure 9 outlines the flow chart of response in the event of a marine spill.

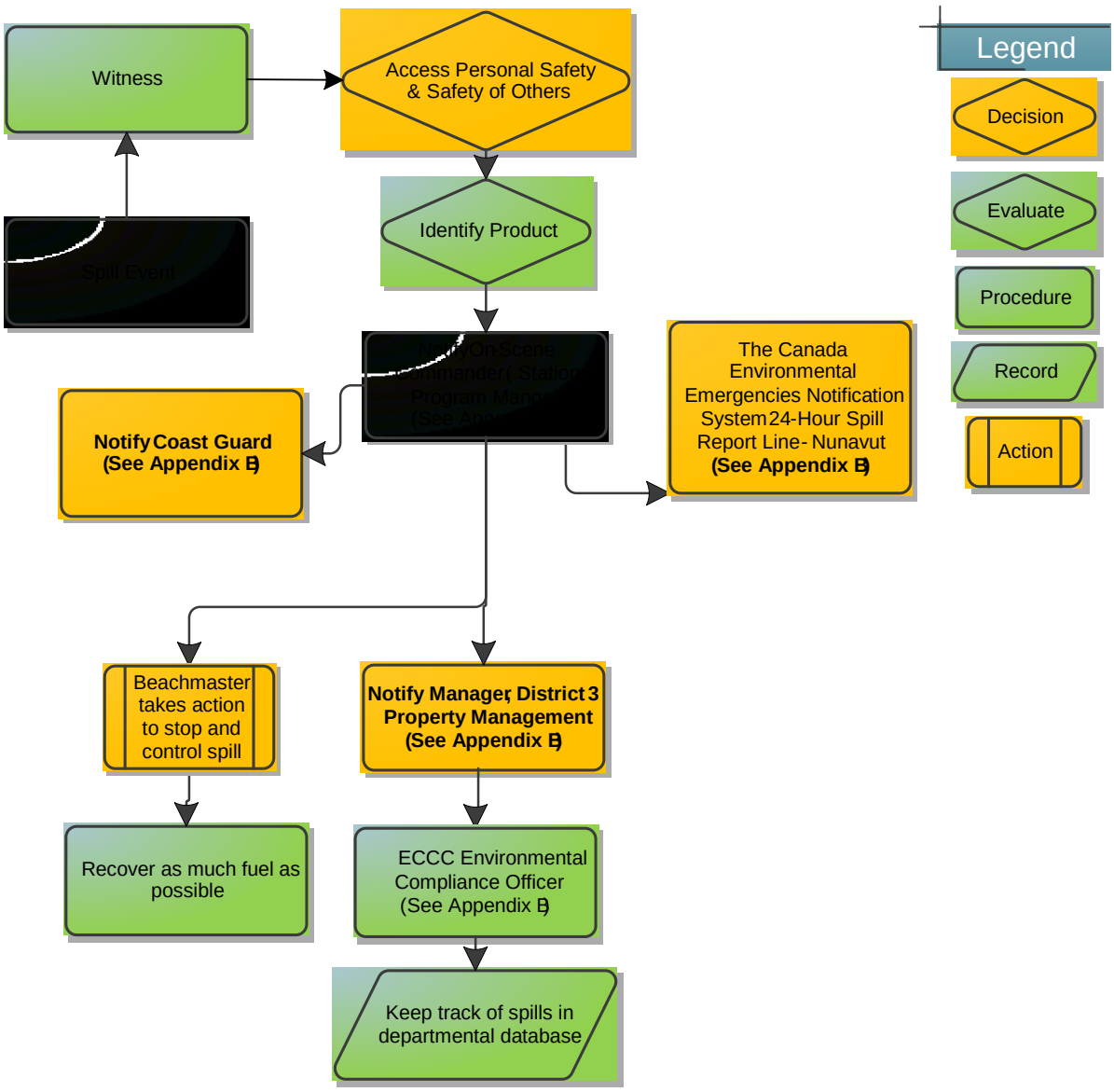


Figure 9: Response Organizations for a Marine Petroleum Spill

6.4.2 Steps Initiated Prior to Arrival of Coast Guard Ship

1) All of the equipment (see Appendix O) is pre-staged and ready for deployment prior to the CCG icebreaker's arrival
2) The containment boom is stored in a shack located on the shore edge to allow for quick deployment onto the water by CCG water craft.
3) Tow lines connected to either end of the boom will allow CCG water craft to connect to the boom and encircle a spill and direct it away from sensitive areas
4) Pipeline from shore to Tank Farm has been pressure tested
5) Any oil remaining in the 770,000 L tank has been transferred to other tanks within the Tank Farm

6.4.3 Steps Initiated Following Arrival of Coast Guard Ship

1) The Beach Master assumes control of the transfer operation and has full authority to stop the operation if he deems it unsafe for any reason and is expected to take such action
2) There are sufficient personnel on site to manage the transfer operation and any subsequent oil pollution incident

6.4.4 Steps Initiated Following a Marine Spill Incident

The health and safety of persons at Eureka is the first priority

1) In the event of a marine oil pollution incident, the Station Program Manager assumes the responsibility of the On-Scene Commander (OSC) and will request the Beach Master to immediately take action to contain or control the released product as quickly as possible providing this can be done safely.
2) Ensure personal safety of self and others.
3) Assess spill hazards and risks.
4) No matter what the volume is, notify Eureka – Station Program Manager (see Appendix B); and
5) Remove all sources of ignition.
6) Stop the spill if safely possible e.g. shut off pump, patch leaking hole. Use the contents of the nearest spill kit to aid in stopping the spill if it is safe to do so.
7) Tyvek suits and chemical master gloves are located in the spill kit and should be worn immediately if there is any risk of being in contact with fuel.
8) Contain the spill.
9) Determine the direction of any winds. If from the east, the following actions should be initiated to protect the Arctic Tern nesting grounds located at the delta approximately 200 M west of the connection of the floating transfer hose to the shore side pipeline:
    a. Scare any birds in the area
    b. If containment of the spill is ineffective, the boom should be relocated to protect the shoreline along the delta

6.4.5 Procedures for Containing and Controlling the Spill

1) Beachmaster will contact the icebreaker immediately to shut down the transfer of fuel.
2) Onshore valves will be immediately closed to prevent any back flow from the pipeline in the event the check valve fails.
3) Area will be secured.
4) CCG will deploy the containment booms downwind and down current to contain the spilled fuel.
5) If deployment of the containment boom is unsafe, ineffective or impractical the fuel spill will be dispersed into deep water by high pressure water hoses from the CCG ship for natural dissipation.
6) If the containment is ineffective, the boom will be relocated to protect the shoreline along the delta.
7) Attempt will be made to adsorb as much of the spill as possible by skimming the water surface with the sorbent booms and soaking up the remainder of the spill with absorbent rolls

6.4.6 Procedures for Spill Reporting

Spills at Eureka are required to be reported under various pieces of Environmental Legislation as listed in Appendix B, but more specifically:

1. The Nunavut Water Board License
2. CEPA, 1999, paragraph 212(1)(a)
3. Fisheries Act, subsection 38(4)
4. Government of Nunavut, EPA, paragraph 5.1(a)

An immediately reportable petroleum spill on water is defined as a release of any amount. It must be reported to:

1) Canada Environmental Emergencies Notification System 24-Hour Spill Report Line - Nunavut (see Appendix B);

See Appendix B for Emergency Spill Telephone Numbers.

Following gaining control and containment of the spill, the Station Program Manager (SPM) must complete and submit the Environment and Climate Change Canada and Nunavut Spill Report Form (See Appendix P).

7. Procedures for Transferring, Storing and Managing Petroleum Spill Wastes

Sorbent socks and pads are generally used for small spill cleanup. A pump with attached fuel transfer hose can suction spills from leaking containers or large accumulations on land or ice, and direct these larger quantities into empty drums. Hand tools such as cans, shovels, and rakes are also very effective for small spills or hard to reach areas. Heavy equipment can be used if deemed necessary, and given space and time constraints.

Used sorbent materials are to be placed in plastic bags for future disposal. All materials mentioned in this section are available in the spill kits located at Eureka. Following clean up, any tools or equipment used will be properly washed and decontaminated, or replaced if this is not possible.

For most of the containment procedures outlined above, spilled petroleum products and materials used for containment will be placed into empty waste oil containers and sealed for proper disposal at an approved disposal facility.

8. Procedures for Restoring Affected Areas

Once a spill has been contained it will be managed according to Environment and Climate Change Canada's *Summary of Operations And Maintenance Procedures For Drinking Water, Sewage, Solid Waste Disposal and Waste Treatment Facilities – Eureka High Arctic Weather Station, 2009.* Environment and Climate Change Canada – Environmental Programs, Contaminated Sites should be consulted for advice (see Appendix B)

.

9. Procedures for Disposal

The final destinations for the two following petroleum products are as follows:

- Petroleum products collected from spill events are sent by sealift to Safety-Kleen (Quebec) Ltd.,85 rue de Hambourg, Saint-Augustin-de Desmaures, QC G3A 1S6.

- Waste glycol is sent by sealift to Safety-Kleen (Quebec) Ltd.

APPENDIX A: FEDERAL AND TERRITORIAL LEGAL AND POLICY REQUIREMENTS

Environmental, Health & Safety Legislation, Policies, Agreements, etc.	Major Provisions	Reference
Federal Legislation		
Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations	• S.30-31,32, 41 • Technical standards related to tank systems holding petroleum or allied petroleum products • Emergency Plan Requirements	http://www.ec.gc.ca/st-rs/default.asp?lang=En&n=06EF27CF-1
Transportation of Dangerous Goods Act and Regulations	• Transport manifest • Identify & classify waste • Packaging • Labelling	http://www.tc.gc.ca/tdg/clear/tofc.htm
Nunavut Water Board Licence No. 3BC-EUR1116	• Part H • Requirement for a Spill Contingency Plan • Plan requirements	On File
Canada Occupational Health and Safety Regulation, Part X – Hazardous Substances	• Records of hazardous substances • Hazard investigation • Storage, handling & use • Warnings of hazardous materials • Employee education • Control of hazards	http://laws-lois.justice.gc.ca/eng/regulations/SOR-86-304/index.html
Canada Shipping Act	• Response Measures (s.180) • Requirements of Oil Handling Facilities (s.168)	http://www.tc.gc.ca/eng/acts-regulations/acts-2001c26.htm
Canadian Environmental Protection Act (Part 8) (CEPA)	• Petroleum is a hazardous substance • Reporting of spills • Remedial measures	http://laws.justice.gc.ca/eng/C-15.31/page-7.html#anchorbo-ga:l_9-gb:s_212
Controlled Products Regulations	• MSDS • Labels • Classes of controlled products	http://laws.justice.gc.ca/en/H-3/SOR-88-66/index.html
Environmental Emergency Regulations	• Waste information • Emergency environmental plan	http://www.ec.gc.ca/ee-ue/Default.asp?lang=En&n=E3A506F8-1
Environmental Enforcement Act	Once it is in force • Penalties for environmental offences • liabilities and duties of corporate directors and officers	Not presently on-line

Environmental, Health & Safety Legislation, Policies, Agreements, etc.	Major Provisions	Reference
Export and Import of Hazardous Wastes Regulations	• Release of substances • List of toxic substances	http://laws.justice.gc.ca/eng/C-15.31/index.html
Fisheries Act	• Prohibitions • Duties of persons handling hazardous waste	http://laws-lois.justice.gc.ca/eng/acts/F-14/
Hazardous Products Act	• Designates diesel and gasoline as hazardous products	http://laws-lois.justice.gc.ca/eng/acts/M-7.01/
Interprovincial Movement of Hazardous Waste Regulations	• Manifests	http://www.canlii.org/en/ca/laws/regu/sor-2002-301/latest/sor-2002-301.html
Migratory Birds Convention Act	• Prohibitions	http://laws.justice.gc.ca/eng/M-7.01/page-3.html#anchorbo-ga:s_5
Nunavut Legislation		
Safety Act (Nunavut)	• Safety duties of employers • Safety duties of employees • Powers and duties of safety operators	*www.wscc.nt.ca/YourWSCC/.../Safety%20Act%20-%20**Nunavut**.pdf*
Spill Contingency Planning and Reporting Regulations (Nunavut)	• Requirement for a Spill Contingency Plan • Spill Report Form	http://www.canlii.org/en/nu/laws/regu/nwt-reg-nu-068-93/latest/nwt-reg-nu-068-93.html
Work Site Hazardous Materials Information System Regulations (Nunavut)	• Worker education • Hazardous material labels	link not working. Can't find new site.
Federal Policy		
Environment and Climate Change Canada's Departmental Sustainable Development Strategy	• ECCC Commitments	http://www.ec.gc.ca/dd-sd/default.asp?lang=En=E19EE696-1
Codes of Practice/Guidelines		
Canadian Labour Code II	• Duties of employer • Duties of employees	http://laws.justice.gc.ca/en/L-2/
Environmental Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products	• Registration and approval of tank systems • Design and installation • Monitoring and leak detection • Operation and maintenance • Withdrawal of systems	http://www.ec.gc.ca/lcpe-cepa/default.asp?lang=En&n=61B26EE8-1
National Building Code	• Safety • Health • Accessibility • Fire and Structural Protection of Buildings	http://www.nationalcodes.nrc.gc.ca/eng/nbc/index.shtml
National Fire Code	• Safety • Health • Fire Protection of Buildings and Facilities	http://www.nationalcodes.nrc.gc.ca/eng/nfc/index.shtml

Environmental, Health & Safety Legislation, Policies, Agreements, etc.	Major Provisions	Reference
Technical Guidelines for Above Ground Storage Tank Systems that contain Petroleum Products and Allied Petroleum Products	• Regulatory requirements • Timelines for existing systems • Leak detection & monitoring • Record keeping	http://www.ec.gc.ca/st-rs/default.asp?lang=En&n=400DB49F-1
Implementation Guidelines for Part 8 of the Environmental Protection Act 1999 – Environmental Emergency Plans	• Emergency reporting requirements • Compliance and enforcement	http://www.ec.gc.ca/CEPARegistry/guidelines/impl_guid/toc.cfm

APPENDIX B: SPILL EMERGENCY TELEPHONE NUMBERS

EUREKA EMERGENCY CONTACTS & TELEPHONE #'s

CONTACT	Telephone Numbers
Medical Assistance	
Nurse (Resolute Bay)	(867) 252-3844
Doctor (Iqaluit Hospital)	(867) 975-8600
Medical Evacuation, Kenn Borek Air (Resolute)	(867) 252-3845
Spill Emergency Reporting Centers	
Canada Environmental Emergencies Notification System 24-Hour Spill Report Line - Nunavut	(867) 920-8130
Canadian Coast Guard Emergency Line (24 hours) In all regions, marine pollution incidents may also be reported by contacting a MCTS centre on VHF channel 16.	1-800-265-0237
Federal	
Environment and Climate Change Canada – Station Program Manager, Eureka, NU (from Ottawa line)	(613) 945-3145 Ext: 4460
Environment and Climate Change Canada – Head Aerological & Surface Operational Programs, Winnipeg, MB	(204) 983-4385
Environment and Climate Change Canada – Manager, Technical Services, Ottawa, ON	(613) 998-1316
Environment and Climate Change Canada – Environmental Compliance Officer, Environmental Programs, Property Management Division, Ottawa, ON	819-938-4862 (Stella Kim) and 819-938-4765 (Deniz Baykal)
Environment and Climate Change Canada – Environmental Programs, Contaminated Sites	819-938-4765 (Deniz Baykal)
Nunavut Water Board, Gjoa Haven, NU	(867) 360-6338
Andrea Faechner, Head, Upper Air Operations, Environment and Climate Change Canada	(780) 951-8896
Indigenous and Northern Affairs Canada, Iqaluit, NU (spills)	(867) 222-8458

Indigenous and Northern Affairs Canada Water Resources Inspector Andrew Klein	(867) 222-6488
HRSDC (Human Resources and Skills Development Canada-Labour Program)	Working Hours 1-800-641-4049
Environment and Climate Change Canada, Environmental Enforcement Branch (Yellowknife)	Working Hours (867) 222-1925 After Working Hours (967) 975-4644
Territorial	
Department of Environment, Government of Nunavut	(867) 975-7700
Eureka	
DND (Eureka)	(613) 945-3145 (Ext: 4469 or 4450)
Polar Continental Shelf Program - Resolute	(867) 252-3872
Polar Environment Atmospheric Research Lab	(716) 803-6470 Ext: 100
Media & Public Enquiries	
Environment and Climate Change Canada - Media Relations	1-844-836-7799 or ec.media.ec@canada.ca
Prairie & Northern Region's Communications Unit	(780) 951-8721

Environment Canada Environnement Canada

IMMEDIATELY REPORTABLE SPILL QUANTITIES

TDG Class	Substance for NWT 24 Hour Spill Line	Immediately Reportable Quantities
1 2.3 2.4 6.2 7 None	Explosives Compressed gas (toxic) Compressed gas (corrosive) Infectious substances Radioactive Unknown substance	Any amount
2.1 2.2	Compressed gas (flammable) Compressed gas (non-corrosive, non-flammable)	Any amount of gas from containers with a capacity greater than 100 L
3.1 3.2 3.3	Flammable liquids	> 100 L
4.1 4.2 4.3	Flammable solids Spontaneously combustible solids Water reactant	> 25 kg
5.1 9.1	Oxidizing substances Miscellaneous products or substances excluding PCB mixtures	> 50 L or 50 kg
5.2 9.2	Organic peroxides Environmentally hazardous	> 1 L or 1 kg
6.1 8 9.3	Poisonous substances Corrosive substances Dangerous wastes	> 5 L or 5 kg
9.1	PCB mixtures of 5 or more ppm	> 0.5 L or 0.5 kg
None	Other contaminants (e.g. crude oil, drilling fluid, produced water, waste or spent chemicals, used or waste oil, vehicle fluids, waste water, etc.)	> 100 L or 100 kg
None	Sour natural gas (i.e. contains H2S) Sweet natural gas	Uncontrolled release or sustained flow of 10 minutes or more

Source: http://www.aadnc-aandc.gc.ca/eng/1100100024236#aB3

APPENDIX C: 2017 MSDS SHEETS FOR DIESEL STORED IN EUREKA'S STORAGE TANK SYSTEM

An MSDS binder, containing MSDS sheets on all hazardous substances present at Eureka, is located in the front of the vestibule of the main complex. Each building has a MSDS binder containing MSDS sheets for substances contained in that building.

SAFETY DATA SHEET

DIESEL FUEL

000003000395

Version 3.1 Revision Date 2017/04/20 Print Date 2017/04/20

SECTION 1. IDENTIFICATION

Product name	:	DIESEL FUEL
Synonyms	:	Seasonal Diesel, #1 Diesel, #2 Heating Oil, #1 Heating Oil, D50, Arctic Diesel, Farm Diesel, Marine Diesel, Low Sulphur Diesel, LSD, Ultra Low Sulphur Diesel, ULSD, Mining Diesel, Naval Distillate, Dyed Diesel, Marked Diesel, Coloured Diesel, Furnace special, Biodiesel blend, B1, B2, B5, Diesel Low Cloud (LC), Marine Gas Oil, Marine Gas Oil Dyed.
Product code	:	102762, 102763, 102755, 102302, 102744, 101801, 100678, 100677, 101802, 100107, 100668, 100658, 100911, 100663, 100652, 100460, 100065, 101796, 101793, 101795, 101792, 101794, 101791, 100768, 100643, 100642, 100103, 101798, 101800, 101797, 101788, 101789, 101787, 102531, 100734, 100733, 100640, 100997, 100995, 100732, 100731, 100994
Manufacturer or supplier's details		Petro-Canada P.O. Box 2844, 150 - 6th Avenue South-West Calgary Alberta T2P 3E3 Canada
Emergency telephone number		Suncor Energy: +1 403-296-3000; Canutec Transportation: 1-888- 226-8832 (toll-free) or 613-996-6666; Poison Control Centre: Consult local telephone directory for emergency number(s).

Recommended use of the chemical and restrictions on use

Recommended use	:	Diesel fuels are distillate fuels suitable for use in high and medium speed internal combustion engines of the compression ignition type. Mining diesels, marine diesels, MDO and naval distillates may have a higher flash point requirement.
Prepared by	:	Product Safety: +1 905-804-4752

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance	Bright oily liquid.
Colour	Clear to yellow (This product may be dyed red for taxation purposes)
Odour	Mild petroleum oil like.

GHS Classification

Flammable liquids : Category 3

Acute toxicity (Inhalation)	:	Category 4
Skin irritation	:	Category 2
Carcinogenicity	:	Category 2
Specific target organ toxicity - single exposure	:	Category 3 (Central nervous system)
Specific target organ toxicity - repeated exposure	:	Category 2 (Liver, thymus, Bone)
Aspiration hazard	:	Category 1

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : Flammable liquid and vapour.
May be fatal if swallowed and enters airways.
Causes skin irritation.
Harmful if inhaled.
May cause drowsiness or dizziness.
Suspected of causing cancer.
May cause damage to organs (Liver, thymus, Bone) through prolonged or repeated exposure.

Precautionary statements : **Prevention:**
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Keep container tightly closed.
Ground and bond container and receiving equipment.
Use explosion-proof electrical/ ventilating/ lighting/ equipment.
Use non-sparking tools.
Take action to prevent static discharges.
Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
Wash skin thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
IF SWALLOWED: Immediately call a POISON CENTER/doctor.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
IF exposed or concerned: Get medical advice/ attention.

Do NOT induce vomiting.
If skin irritation occurs: Get medical advice/ attention.
Take off contaminated clothing and wash it before reuse.
In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
Storage:
Store in a well-ventilated place. Keep container tightly closed.
Store in a well-ventilated place. Keep cool.
Store locked up.
Disposal:
Dispose of contents/ container to an approved waste disposal plant.

Potential Health Effects

Primary Routes of Entry	:	Eye contact Ingestion Inhalation Skin contact Skin Absorption
Target Organs	:	Skin Eyes Respiratory Tract
Inhalation	:	May cause respiratory tract irritation. Inhalation may cause central nervous system effects. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness.
Skin	:	Causes skin irritation.
Eyes	:	Causes eye irritation.
Ingestion	:	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea. Aspiration hazard if swallowed - can enter lungs and cause damage.
Aggravated Medical Condition	:	None known.

Other hazards

None known.

IARC	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH	Confirmed animal carcinogen with unknown relevance to humans

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical name	CAS-No.	Concentration
fuels, diesel	68334-30-5	70 - 100 %
fuel oil no. 2	68476-30-2	
kerosine (petroleum)	8008-20-6	
kerosine (petroleum), hydrodesulfurized	64742-81-0	
Alkanes, C10-20-branched and linear	928771-01-1	0 - 25 %
Soybean oil, Methyl ester	67784-80-9	0 - 5 %
Rape oil, Methyl ester	73891-99-3	
Fatty acids, tallow, Methyl esters	61788-61-2	

SECTION 4. FIRST AID MEASURES

If inhaled : Move to fresh air.
Artificial respiration and/or oxygen may be necessary.
Seek medical advice.

In case of skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
Wash skin thoroughly with soap and water or use recognized skin cleanser.
Wash clothing before reuse.
Seek medical advice.

In case of eye contact : Remove contact lenses.
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Obtain medical attention.

If swallowed : Rinse mouth with water.
DO NOT induce vomiting unless directed to do so by a physician or poison control center.
Never give anything by mouth to an unconscious person.
Seek medical advice.

Most important symptoms and effects, both acute and delayed : None known.

Protection of first-aiders : First Aid responders should pay attention to self-protection and use the recommended protective clothing
It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Dry chemical Carbon dioxide (CO2) Water fog. Foam
Unsuitable extinguishing media	:	Do NOT use water jet.
Specific hazards during fire-fighting	:	Cool closed containers exposed to fire with water spray.
Hazardous combustion products	:	Carbon oxides (CO, CO2), nitrogen oxides (NOx), sulphur oxides (SOx), sulphur compounds (H2S), smoke and irritating vapours as products of incomplete combustion.
Further information	:	Prevent fire extinguishing water from contaminating surface water or the ground water system.
Special protective equipment for firefighters	:	Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Use personal protective equipment. Ensure adequate ventilation. Evacuate personnel to safe areas. Material can create slippery conditions.
Environmental precautions	:	If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	:	Prevent further leakage or spillage if safe to do so. Remove all sources of ignition. Soak up with inert absorbent material. Non-sparking tools should be used. Ensure adequate ventilation. Contact the proper local authorities.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling	:	For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Use only with adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid spark promoters. Ground/bond container and equipment. These alone may be insufficient to remove static electricity. Avoid contact with skin, eyes and clothing. Do not ingest.

Keep away from heat and sources of ignition.
Keep container closed when not in use.

Conditions for safe storage : Store in original container.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Keep in a dry, cool and well-ventilated place.
Keep in properly labelled containers.
To maintain product quality, do not store in heat or direct sunlight.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
kerosine (petroleum)	8008-20-6	TWA	200 mg/m3 (total hydrocarbon vapor)	CA BC OEL
		TWA	200 mg/m3 (total hydrocarbon vapor)	CA AB OEL
		TWA	200 mg/m3 (total hydrocarbon vapor)	ACGIH
kerosine (petroleum), hydrodesulfurized	64742-81-0	TWA	200 mg/m3 (As total hydrocarbon vapour)	ACGIH
		TWA	200 mg/m3 (As total hydrocarbon vapour)	ACGIH

Engineering measures : Use only in well-ventilated areas.
Ensure that eyewash station and safety shower are proximal to the work-station location.

Personal protective equipment

Respiratory protection : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Filter type : organic vapour cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air-purifying respirators is limited. Use a positive-pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstances where air-purifying respirators may not provide adequate protection.

Hand protection Material	:	neoprene, nitrile, polyvinyl alcohol (PVA), Viton(R). Consult your PPE provider for breakthrough times and the specific glove that is best for you based on your use patterns. It should be realized that eventually any material regardless of their imperviousness, will get permeated by chemicals. Therefore, protective gloves should be regularly checked for wear and tear. At the first signs of hardening and cracks, they should be changed.
Remarks	:	Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
Eye protection	:	Wear face-shield and protective suit for abnormal processing problems.
Skin and body protection	:	Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.
Protective measures	:	Wash contaminated clothing before re-use.
Hygiene measures	:	Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash face, hands and any exposed skin thoroughly after handling.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Bright oily liquid.
Colour	:	Clear to yellow (This product may be dyed red for taxation purposes)
Odour	:	Mild petroleum oil like.
Odour Threshold	:	No data available
pH	:	No data available
Pour point	:	No data available
Boiling point/boiling range	:	150 - 371 °C (302 - 700 °F)
Flash point	:	> 40 °C (104 °F) Method: closed cup
Auto-Ignition Temperature	:	225 °C (437 °F)
Evaporation rate	:	No data available
Flammability	:	Flammable in presence of open flames, sparks and heat. Va-

		pours are heavier than air and may travel considerable distance to sources of ignition and flash back. This product can accumulate static charge and ignite.
Upper explosion limit	:	6 %(V)
Lower explosion limit	:	0.7 %(V)
Vapour pressure	:	7.5 mmHg (20 °C / 68 °F)
Relative vapour density	:	4.5
Relative density	:	0.8 - 0.88
Solubility(ies)		
Water solubility	:	insoluble
Partition coefficient: n-octanol/water	:	No data available
Viscosity		
Viscosity, kinematic	:	1.3 - 4.1 cSt (40 °C / 104 °F)
Explosive properties	:	Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Runoff to sewer may create fire or explosion hazard.

SECTION 10. STABILITY AND REACTIVITY

Possibility of hazardous reactions	:	Hazardous polymerisation does not occur. Stable under normal conditions.
Conditions to avoid	:	Extremes of temperature and direct sunlight.
Incompatible materials	:	Reactive with oxidising agents and acids.
Hazardous decomposition products	:	May release COx, NOx, SOx, H2S, smoke and irritating vapours when heated to decomposition.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure
Eye contact
Ingestion
Inhalation
Skin contact
Skin Absorption

Acute toxicity

Product:

Acute oral toxicity : Remarks: No data available

Acute inhalation toxicity : Remarks: No data available

Acute dermal toxicity : Assessment: The substance or mixture has no acute dermal toxicity
Remarks: No data available

Components:

fuels, diesel:

Acute oral toxicity : LD50 (Rat): 7,500 mg/kg,

Acute dermal toxicity : LD50 (Mouse): 24,500 mg/kg,

fuel oil no. 2:

Acute oral toxicity : LD50 (Rat): 12,000 mg/kg,

Acute inhalation toxicity : LC50 (Rat): 4.1 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

kerosine (petroleum):

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg,

Acute inhalation toxicity : LC50 (Rat): > 5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg,

kerosine (petroleum), hydrodesulfurized:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg,

Acute inhalation toxicity : LC50 (Rat): > 5.2 mg/l
Exposure time: 4 hrs
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg,

Skin corrosion/irritation

Product:

Remarks: No data available

Serious eye damage/eye irritation

Product:

Remarks: No data available

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

STOT - single exposure

No data available

STOT - repeated exposure

No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish	:	Remarks: No data available
Toxicity to daphnia and other aquatic invertebrates	:	Remarks: No data available
Toxicity to algae	:	Remarks: No data available
Toxicity to bacteria	:	Remarks: No data available

Persistence and degradability

Product:

Biodegradability	:	Remarks: No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	:	The product should not be allowed to enter drains, water

courses or the soil.
Offer surplus and non-recyclable solutions to a licensed disposal company.
Waste must be classified and labelled prior to recycling or disposal.
Send to a licensed waste management company.
Dispose of as hazardous waste in compliance with local and national regulations.
Dispose of product residue in accordance with the instructions of the person responsible for waste disposal.

Contaminated packaging : Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR

UN/ID No.	:	UN 1202
Proper shipping name	:	Diesel fuel
Class	:	3
Packing group	:	III
Labels	:	Class 3 - Flammable Liquid
Packing instruction (cargo aircraft)	:	366

IMDG-Code

UN number	:	UN 1202
Proper shipping name	:	DIESEL FUEL
Class	:	3
Packing group	:	III
Labels	:	3
EmS Code	:	F-E, S-E
Marine pollutant	:	no

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

National Regulations

TDG

UN number	:	UN 1202
Proper shipping name	:	DIESEL FUEL
Class	:	3
Packing group	:	III
Labels	:	3
ERG Code	:	128
Marine pollutant	:	no

SECTION 15. REGULATORY INFORMATION

SAFETY DATA SHEET

DIESEL FUEL

000003000395

Version 3.1 Revision Date 2017/04/20 Print Date 2017/04/20

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

The components of this product are reported in the following inventories:

DSL	On the inventory, or in compliance with the inventory
TSCA	All chemical substances in this product are either listed on the TSCA Inventory or are in compliance with a TSCA Inventory exemption.
EINECS	On the inventory, or in compliance with the inventory

SECTION 16. OTHER INFORMATION

For Copy of SDS	:	Internet: www.petro-canada.ca/msds Canada-wide: telephone: 1-800-668-0220; fax: 1-800-837-1228 For Product Safety Information: 1 905-804-4752
Prepared by	:	Product Safety: +1 905-804-4752
Revision Date	:	2017/04/20

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

APPENDIX D: 2017 MSDS SHEETS FOR GASOLINE STORED IN EUREKA'S STORAGE TANK SYSTEM

A MSDS binder, containing MSDS sheets on all hazardous substances present at Eureka, is located in the front of the vestibule of the main complex. Each building has a MSDS binder containing MSDS sheets for substances contained in that building.

SAFETY DATA SHEET

GASOLINE, UNLEADED

000003000644

Version 2.0 Revision Date 2017/04/20 Print Date 2017/04/20

SECTION 1. IDENTIFICATION

Product name	:	GASOLINE, UNLEADED
Synonyms	:	Regular, Unleaded Gasoline (US Grade), Mid-Grade, Plus, Super, WinterGas, SummerGas, Supreme, SuperClean, SuperClean WinterGas, RegularClean, PlusClean, Premium, marked or dyed gasoline, TQRUL, transitional quality regular unleaded, BOB, Blendstock for Oxygenate Blending, Conventional Gasoline, RUL, MUL, SUL, PUL.
Product code	:	100127, 100126, 101823, 100507, 101811, 101814, 100141, 101813, 101810, 101812, 100063, 101822, 100138, 101821, 100064, 101820, 101819, 100506, 101818, 101816, 101817, 100488
Manufacturer or supplier's details		Petro-Canada P.O. Box 2844, 150 - 6th Avenue South-West Calgary Alberta T2P 3E3 Canada
Emergency telephone number		Suncor Energy: +1 403-296-3000; Canutec Transportation: 1-888- 226-8832 (toll-free) or 613-996-6666; Poison Control Centre: Consult local telephone directory for emergency number(s).

Recommended use of the chemical and restrictions on use

Recommended use	:	Unleaded gasoline is used in spark ignition engines including motor vehicles, inboard and outboard boat engines, small engines such as chain saws and lawn mowers, and recreational vehicles.
Prepared by	:	Product Safety: +1 905-804-4752

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance	Clear liquid.
Colour	Clear to slightly yellow or green, undyed liquid. May be dyed red for taxation purposes.
Odour	Gasoline

GHS Classification

Flammable liquids	:	Category 1
Skin irritation	:	Category 2

Germ cell mutagenicity	:	Category 1B
Carcinogenicity	:	Category 1A
Reproductive toxicity	:	Category 2
Specific target organ toxicity - single exposure	:	Category 3 (Central nervous system)
Specific target organ toxicity - repeated exposure	:	Category 1
Aspiration hazard	:	Category 1

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : Extremely flammable liquid and vapour.
May be fatal if swallowed and enters airways.
Causes skin irritation.
May cause drowsiness or dizziness.
May cause genetic defects.
May cause cancer.
Suspected of damaging the unborn child.
Causes damage to organs () through prolonged or repeated exposure.

Precautionary statements : **Prevention:**
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ ventilating/ lighting/ equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
Wash skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
IF SWALLOWED: Immediately call a POISON CENTER/doctor.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF INHALED: Remove person to fresh air and keep comfortable

for breathing. Call a POISON CENTER/doctor if you feel unwell.
IF exposed or concerned: Get medical advice/ attention.
Do NOT induce vomiting.
If skin irritation occurs: Get medical advice/ attention.
Take off contaminated clothing and wash before reuse.
In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
Storage:
Store in a well-ventilated place. Keep container tightly closed.
Store in a well-ventilated place. Keep cool.
Store locked up.
Disposal:
Dispose of contents/ container to an approved waste disposal plant.

Potential Health Effects

Primary Routes of Entry	:	Eye contact Ingestion Inhalation Skin contact
Target Organs	:	Blood Immune system
Inhalation	:	Inhalation may cause central nervous system effects. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness.
Skin	:	Causes skin irritation.
Eyes	:	May irritate eyes.
Ingestion	:	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea. Aspiration hazard if swallowed - can enter lungs and cause damage.
Chronic Exposure	:	Chronic exposure to benzene may result in increased risk of leukemia and other blood disorders.
Aggravated Medical Condition	:	None known.

Other hazards

None known.

IARC	Group 1: Carcinogenic to humans	
	Benzene	71-43-2
OSHA	OSHA specifically regulated carcinogen	
	Benzene	71-43-2

NTP	Known to be human carcinogen	
	Benzene	71-43-2

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical name	CAS-No.	Concentration
gasoline, natural	8006-61-9	95 - 100 %
toluene	108-88-3	1 - 40 %
benzene	71-43-2	0.5 - 1.5 %
ethanol	64-17-5	0.1 - 0.3 %

SECTION 4. FIRST AID MEASURES

If inhaled : Artificial respiration and/or oxygen may be necessary.
Move to fresh air.
Seek medical advice.

In case of skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
Wash skin thoroughly with soap and water or use recognized skin cleanser.
Wash clothing before reuse.
Seek medical advice.

In case of eye contact : Remove contact lenses.
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Obtain medical attention.

If swallowed : Rinse mouth with water.
DO NOT induce vomiting unless directed to do so by a physician or poison control center.
Never give anything by mouth to an unconscious person.
Seek medical advice.

Most important symptoms and effects, both acute and delayed : None known.

Protection of first-aiders : First Aid responders should pay attention to self-protection and use the recommended protective clothing
It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Dry chemical Carbon dioxide (CO2) Water fog. Foam
Unsuitable extinguishing media	:	Do NOT use water jet.
Specific hazards during fire-fighting	:	Cool closed containers exposed to fire with water spray.
Hazardous combustion products	:	Carbon oxides (CO, CO2), nitrogen oxides (NOx), polynuclear aromatic hydrocarbons, phenols, aldehydes, ketones, smoke and irritating vapours as products of incomplete combustion.
Further information	:	Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Use personal protective equipment. Ensure adequate ventilation. Evacuate personnel to safe areas. Material can create slippery conditions.
Environmental precautions	:	If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	:	Prevent further leakage or spillage if safe to do so. Remove all sources of ignition. Soak up with inert absorbent material. Non-sparking tools should be used. Ensure adequate ventilation. Contact the proper local authorities.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling	:	For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Use only with adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid spark promoters. Ground/bond container and equipment. These alone may be insufficient to remove static electricity. Avoid contact with skin, eyes and clothing. Do not ingest. Keep away from heat and sources of ignition. Keep container closed when not in use.

Conditions for safe storage : Store in original container.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Keep in a dry, cool and well-ventilated place.
Keep in properly labelled containers.
To maintain product quality, do not store in heat or direct sunlight.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
gasoline, natural	8006-61-9	TWA	300 ppm 900 mg/m3	OSHA P0
		STEL	500 ppm 1,500 mg/m3	OSHA P0
		TWA	500 ppm 2,000 mg/m3	OSHA Z-1
		STEL	500 ppm 1,500 mg/m3	CAL PEL
		PEL	300 ppm 900 mg/m3	CAL PEL
toluene	108-88-3	TWA	20 ppm	ACGIH
		TWA	100 ppm 375 mg/m3	NIOSH REL
		ST	150 ppm 560 mg/m3	NIOSH REL
		TWA	200 ppm	OSHA Z-2
		CEIL	300 ppm	OSHA Z-2
		Peak	500 ppm (10 minutes)	OSHA Z-2
		TWA	100 ppm 375 mg/m3	OSHA P0
		STEL	150 ppm 560 mg/m3	OSHA P0
		PEL	10 ppm 37 mg/m3	CAL PEL
		C	500 ppm	CAL PEL
		STEL	150 ppm 560 mg/m3	CAL PEL
benzene	71-43-2	TWA	0.5 ppm	ACGIH
		STEL	2.5 ppm	ACGIH
		TWA	0.1 ppm	NIOSH REL
		ST	1 ppm	NIOSH REL
		TWA	10 ppm	OSHA Z-2
		CEIL	25 ppm	OSHA Z-2
		Peak	50 ppm (10 minutes)	OSHA Z-2
		PEL	1 ppm	OSHA CARC
		STEL	5 ppm	OSHA CARC

		PEL	1 ppm	CAL PEL
		STEL	5 ppm	CAL PEL
ethanol	64-17-5	TWA	1,000 ppm 1,900 mg/m3	NIOSH REL
		TWA	1,000 ppm 1,900 mg/m3	OSHA Z-1
		TWA	1,000 ppm 1,900 mg/m3	OSHA P0
		STEL	1,000 ppm	ACGIH
		PEL	1,000 ppm 1,900 mg/m3	CAL PEL

Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sam-pling time	Permissible concentra-tion	Basis
Toluene	108-88-3	Toluene	In blood	Prior to last shift of work-week	0.02 mg/l	ACGIH BEI
		Toluene	Urine	End of shift (As soon as possible after exposure ceases)	0.03 mg/l	ACGIH BEI

Engineering measures : Use only in well-ventilated areas.
Ensure that eyewash station and safety shower are proximal to the work-station location.

Personal protective equipment

Respiratory protection : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Filter type : A NIOSH-approved air-purifying respirator with an organic vapour cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air-purifying respirators is limited. Use a positive-pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circum-stances where air-purifying respirators may not provide ade-quate protection.

Hand protection
Material : polyvinyl alcohol (PVA), Viton(R). Consult your PPE provider for breakthrough times and the specific glove that is best for you based on your use patterns. It should be realized that eventually any material regardless of their imperviousness,

		will get permeated by chemicals. Therefore, protective gloves should be regularly checked for wear and tear. At the first signs of hardening and cracks, they should be changed.
Remarks	:	Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
Eye protection	:	Wear face-shield and protective suit for abnormal processing problems.
Skin and body protection	:	Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.
Protective measures	:	Wash contaminated clothing before re-use.
Hygiene measures	:	Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash face, hands and any exposed skin thoroughly after handling.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Clear liquid.
Colour	:	Clear to slightly yellow or green, undyed liquid. May be dyed red for taxation purposes.
Odour	:	Gasoline
Odour Threshold	:	No data available
pH	:	No data available
Pour point	:	No data available
Boiling point/boiling range	:	25 - 225 °C (77 - 437 °F)
Flash point	:	-50 - -38 °C (-58 - -36 °F) Method: Tagliabue.
Auto-Ignition Temperature	:	257 °C (495 °F)
Evaporation rate	:	No data available
Flammability	:	Extremely flammable in presence of open flames, sparks, shocks, and heat. Vapours are heavier than air and may travel considerable distance to sources of ignition and flash back. Rapid escape of vapour may generate static charge causing ignition. May accumulate in confined spaces.
Upper explosion limit	:	7.6 %(V)

Lower explosion limit	:	1.3 %(V)
Vapour pressure	:	< 802.5 mmHg (20 °C / 68 °F)
Relative vapour density	:	3
Relative density	:	0.685 - 0.8
Solubility(ies)		
Water solubility	:	insoluble
Partition coefficient: n-octanol/water	:	No data available
Viscosity		
Explosive properties	:	Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Containers may explode in heat of fire. Vapours may form explosive mixtures with air.

SECTION 10. STABILITY AND REACTIVITY

Possibility of hazardous reactions	:	Hazardous polymerisation does not occur. Stable under normal conditions.
Conditions to avoid	:	Extremes of temperature and direct sunlight.
Incompatible materials	:	Reactive with oxidising agents, acids and interhalogens.
Hazardous decomposition products	:	May release COx, NOx, phenols, polycyclic aromatic hydrocarbons, aldehydes, ketones, smoke and irritating vapours when heated to decomposition.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure
Eye contact
Ingestion
Inhalation
Skin contact

Acute toxicity

Product:

Acute oral toxicity	:	Remarks: No data available
Acute inhalation toxicity	:	Remarks: No data available
Acute dermal toxicity	:	Remarks: No data available

Components:

toluene:

Acute oral toxicity	:	LD50 (Rat): 5,580 mg/kg,
Acute inhalation toxicity	:	LC50 (Rat): 7585 ppm Exposure time: 4 h Test atmosphere: dust/mist
Acute dermal toxicity	:	LD50 (Rabbit): 12,125 mg/kg,

benzene:

Acute oral toxicity	:	LD50 (Rat): 2,990 mg/kg,
Acute inhalation toxicity	:	LC50 (Rat): 13700 ppm Exposure time: 4 h Test atmosphere: dust/mist
Acute dermal toxicity	:	LD50 (Rabbit): > 8,240 mg/kg,

ethanol:

Acute oral toxicity	:	LD50 (Rat): 7,060 mg/kg,
Acute inhalation toxicity	:	LC50 (Rat): > 32380 ppm Exposure time: 4 h Test atmosphere: vapour

Skin corrosion/irritation

Product:

Remarks: No data available

Serious eye damage/eye irritation

Product:

Remarks: No data available

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

STOT - single exposure

No data available

STOT - repeated exposure

No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish	:	Remarks: No data available
Toxicity to daphnia and other aquatic invertebrates	:	Remarks: No data available
Toxicity to algae	:	Remarks: No data available
Toxicity to bacteria	:	Remarks: No data available

Persistence and degradability

Product:

Biodegradability	:	Remarks: No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	:	The product should not be allowed to enter drains, water courses or the soil. Offer surplus and non-recyclable solutions to a licensed disposal company. Waste must be classified and labelled prior to recycling or disposal. Send to a licensed waste management company. Dispose of as hazardous waste in compliance with local and national regulations. Dispose of product residue in accordance with the instructions of the person responsible for waste disposal.
Contaminated packaging	:	Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR

UN/ID No.	:	UN 1203
Proper shipping name	:	Gasoline
Class	:	3
Packing group	:	II
Labels	:	Class 3 - Flammable Liquid
Packing instruction (cargo aircraft)	:	364

IMDG-Code

UN number	:	UN 1203
Proper shipping name	:	GASOLINE
Class	:	3
Packing group	:	II
Labels	:	3
EmS Code	:	F-E, S-E
Marine pollutant	:	no

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

National Regulations

49 CFR

UN/ID/NA number	:	UN 1203
Proper shipping name	:	Gasoline
Class	:	3
Packing group	:	II
Labels	:	Class 3 - Flammable Liquid
ERG Code	:	128
Marine pollutant	:	no

SECTION 15. REGULATORY INFORMATION

The components of this product are reported in the following inventories:

DSL	On the inventory, or in compliance with the inventory
TSCA	All chemical substances in this product are either listed on the TSCA Inventory or are in compliance with a TSCA Inventory exemption.
EINECS	On the inventory, or in compliance with the inventory

SAFETY DATA SHEET

GASOLINE, UNLEADED

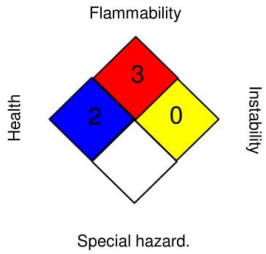
000003000644

Version 2.0 Revision Date 2017/04/20 Print Date 2017/04/20

SECTION 16. OTHER INFORMATION

Further information

NFPA:



HMIS III:

HEALTH	3*
FLAMMABILITY	3
PHYSICAL HAZARD	0
PERSONAL PROTECTION	H

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

For Copy of SDS : Internet: www.petro-canada.ca/msds
Canada-wide: telephone: 1-800-668-0220; fax: 1-800-837-1228
For Product Safety Information: 1 905-804-4752

Prepared by : Product Safety: +1 905-804-4752

Revision Date : 2017/04/20

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

APPENDIX E: EUREKA'S DIESEL FUEL SYSTEM

Prior to the annual arrival of the CCG ice breaker, any remaining diesel in the 770,000 L tank is pumped to one or more of the 9 x 60,000 L tanks. Diesel fuel is then conveyed to the tank farm from the CCG ice breaker via the piping system to the 770,000 L tank. If there is still excess capacity in the 60,000 L tanks, diesel will be pumped into those tanks from the 770,000 tank and the 770,000 L tank will then be filled to tank capacity. Approximately 500,000 - 900,000 L of diesel are conveyed to Eureka's tank farm each year.

Only the 60,000 L tanks deliver fuel. When a 60,000 L tank is emptied, it is filled by gravity feed from the 770,000 L tank. From the 60,000 L tanks, it travels to:

1) Two tanks at the generator building (via pipeline; and
2) The diesel dispenser (just south of the tank farm) where it is pumped into the portable tank, which is employed to transport diesel to the 4 x 9,000 L tanks and to Fort Eureka's & Skull Point's 20,000 L fuel tanks.

Due to the geographic location of Eureka HAWS and the restrictions that could be caused by severe ice seasons, Eureka always stores diesel fuel for the generator for two years with the hope that, if the ice breaker cannot bring fuel one year, it will be able to do so the following year. Yearly consumption of diesel for the generators and other various uses throughout the station ranges from 500,000 to 700,000 L.

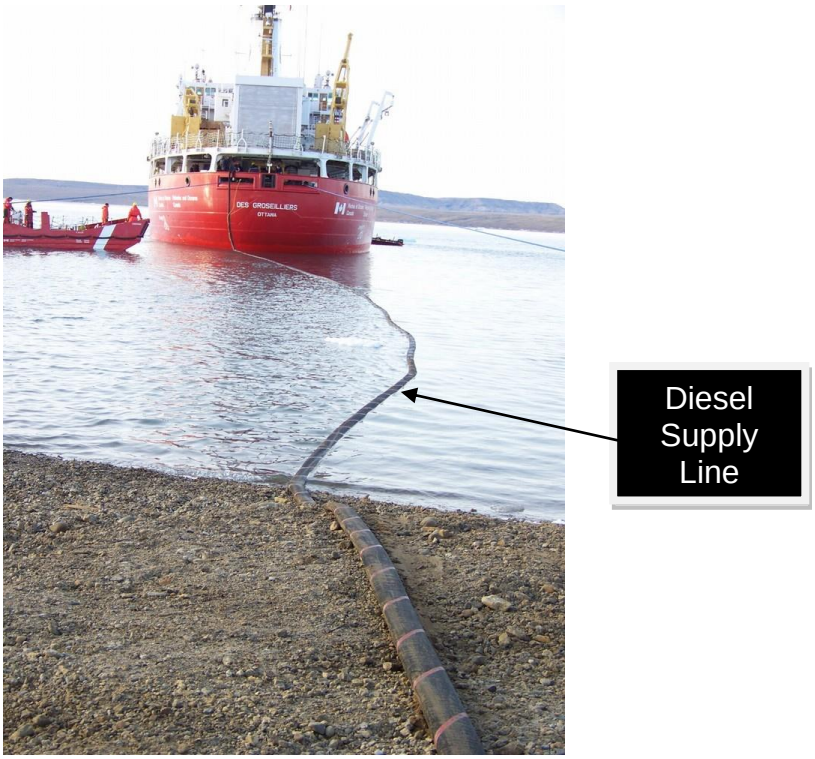


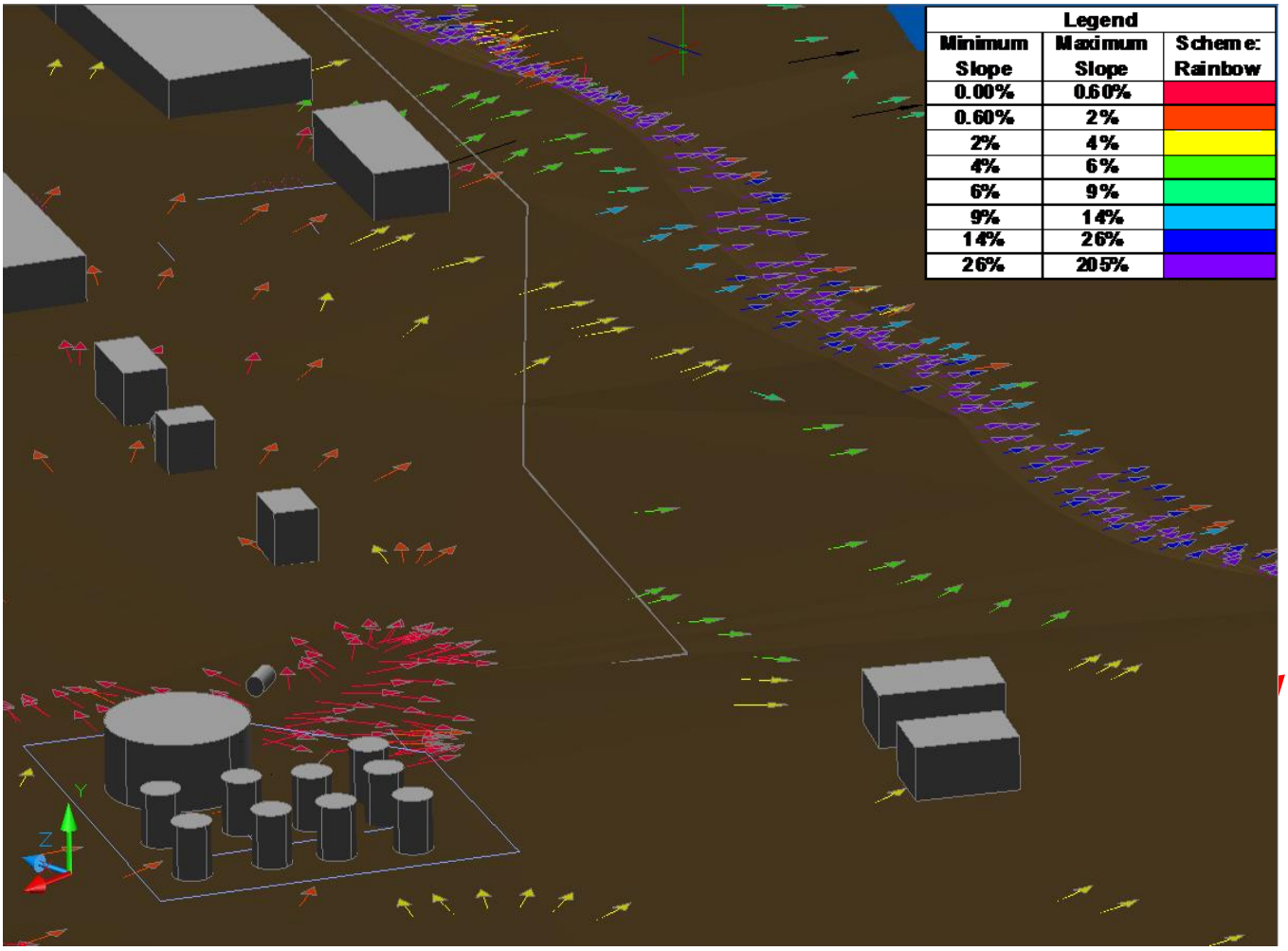
Figure 10: Supply Ship Delivering Diesel Fuel to Eureka

APPENDIX F: EUREKA'S HAWS GASOLINE FUEL SYSTEM

Ten to fifteen barrels of gasoline are brought to Eureka HAWS on the sea-lift each year. The barrels are lifted by a crane on the ship onto a barge which delivers the barrels to the shore (Figure 4). From the barge they are placed on land by a crane located on shore. From the shore, the barrels are conveyed by a loader to the Barrel Storage Area east of the buildings (see Figure 2 and Appendix M) until they are needed to refill the 2,273 L tank. The barrels are brought to the tank by a loader and the contained gasoline is pumped into the gasoline tank.

Figure 11: Transfer of drummed petroleum products to Eureka HAWS

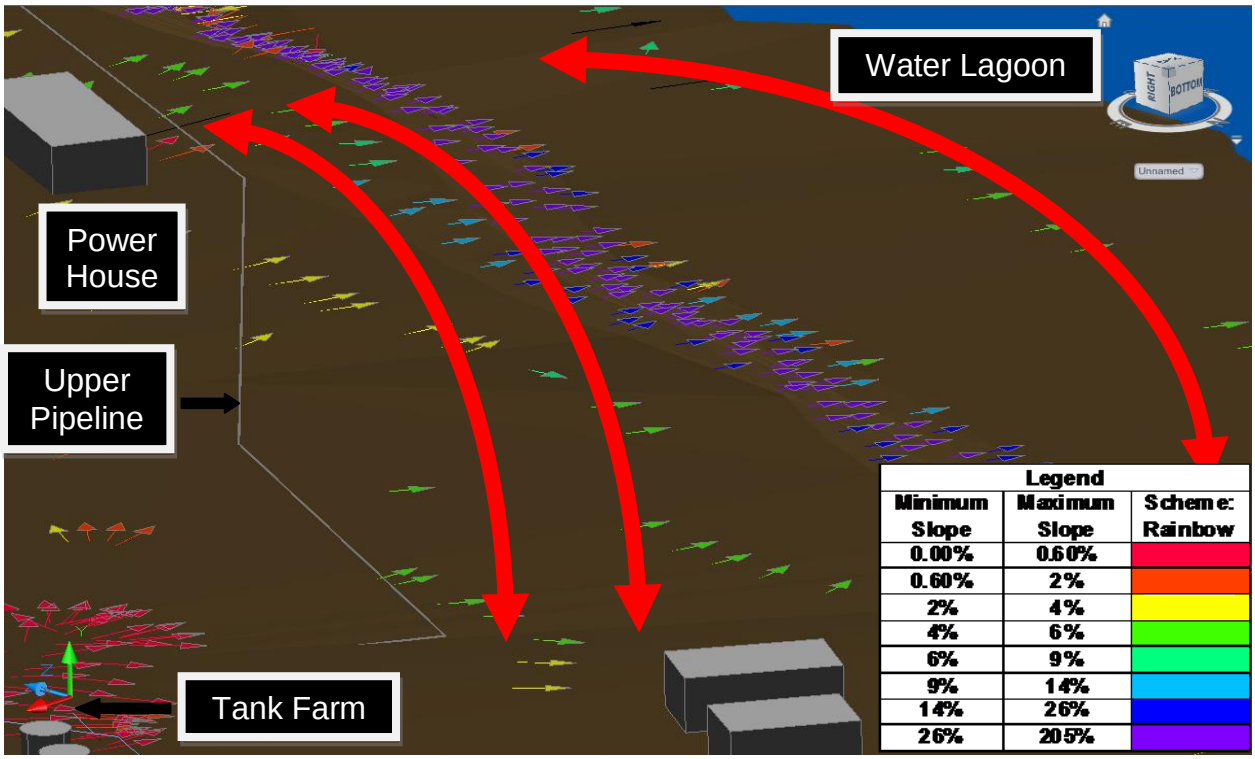
APPENDIX G: TANK FARM: DIRECTION OF POTENTIAL DISCHARGE



Direction of potential discharge from tank farm, diesel dispenser, gasoline tank and possible locations of barriers to prevent contamination of water lagoon

- Individual arrows indicate direction of flow of petroleum spill
- Red lines with arrows indicate possible locations of barriers (piled snow, booms, etc.) to prevent petroleum fluid from reaching water lagoon
- Distance from tank farm, diesel dispenser and gasoline tank to ridge is ~ 85 M
- Distance from ridge to water lagoon is an additional ~ 30 M

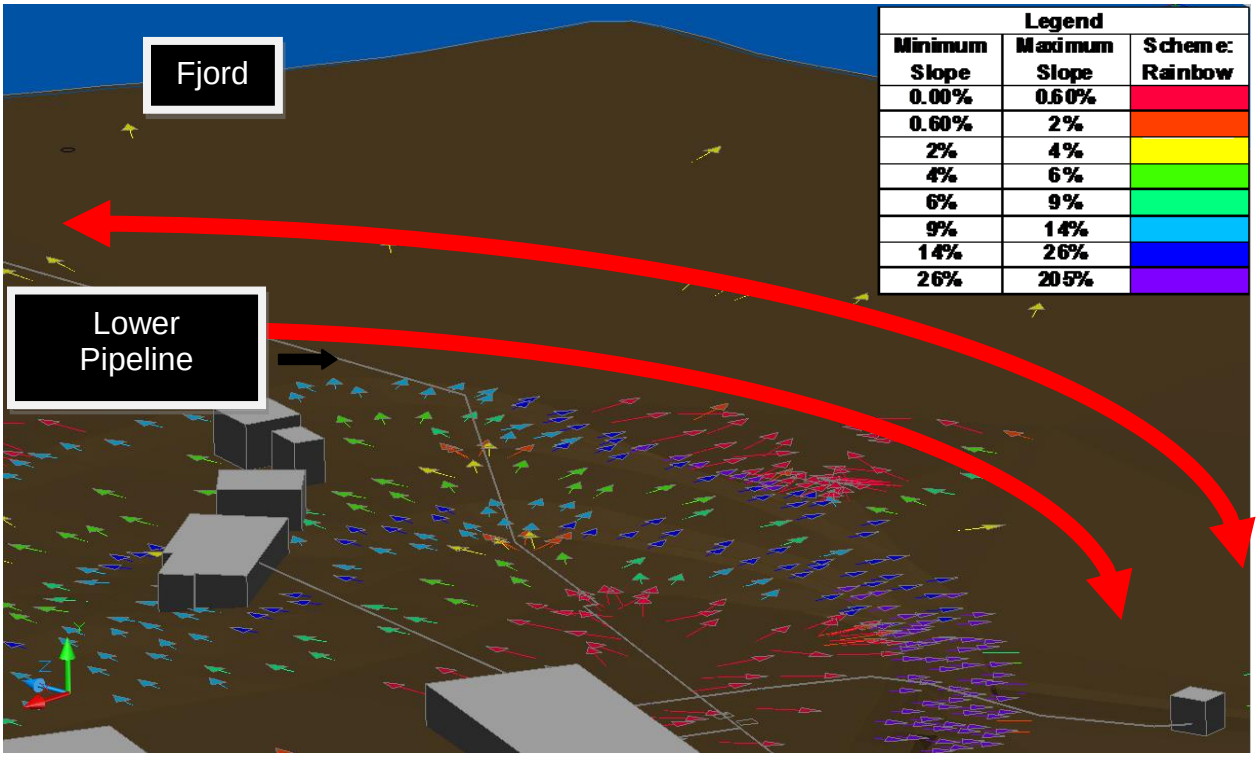
APPENDIX H: NORTH END OF PIPELINE: DIRECTION OF POTENTIAL DISCHARGE



Direction of potential discharge from upper end (north end) of pipeline and possible locations of barriers to prevent contamination of water lagoon

- Individual arrows indicate direction of flow of petroleum spill
- Red lines with arrows indicate possible locations of barriers (piled snow, booms, etc.) to prevent petroleum fluid from reaching water lagoon
- Distance from ridge to water lagoon is ~ 30 M

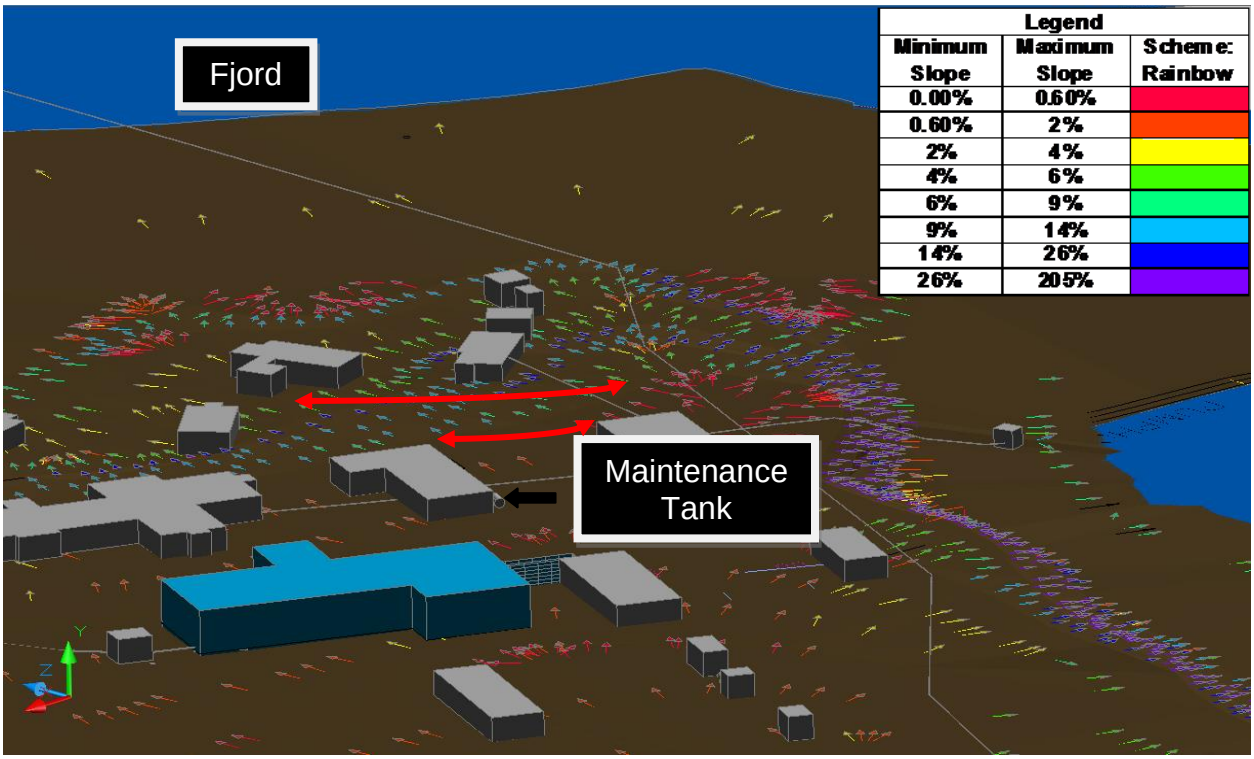
APPENDIX I: SOUTH END OF PIPELINE: DIRECTION OF POTENTIAL DISCHARGE



Direction of potential discharge from lower end (south end) of pipeline and possible locations of barriers to prevent contamination of Fjord

- Individual arrows indicate direction of flow of petroleum spill
- Red lines with arrows indicate possible locations of barriers (piled snow, booms, etc.) to prevent petroleum fluid from reaching the Fjord

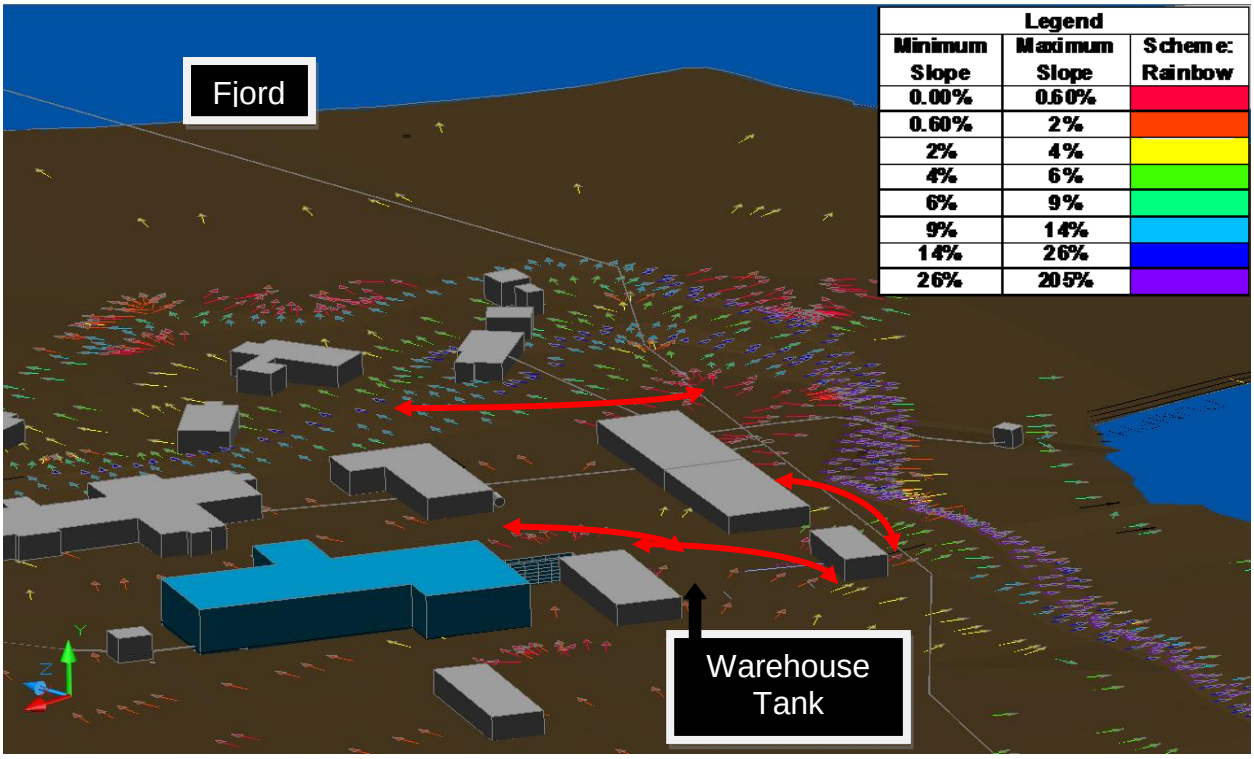
APPENDIX J: MAINTENANCE TANK: DIRECTION OF POTENTIAL DISCHARGE



Direction of potential discharge from maintenance tank and possible locations of barriers to prevent contamination of Fjord

- Individual arrows indicate direction of flow of petroleum spill
- Red lines with arrows indicate possible locations of barriers (piled snow, booms, etc.) to prevent petroleum fluid from reaching the Fjord
- Distance from Maintenance Tank to Fjord is ~ 200 M

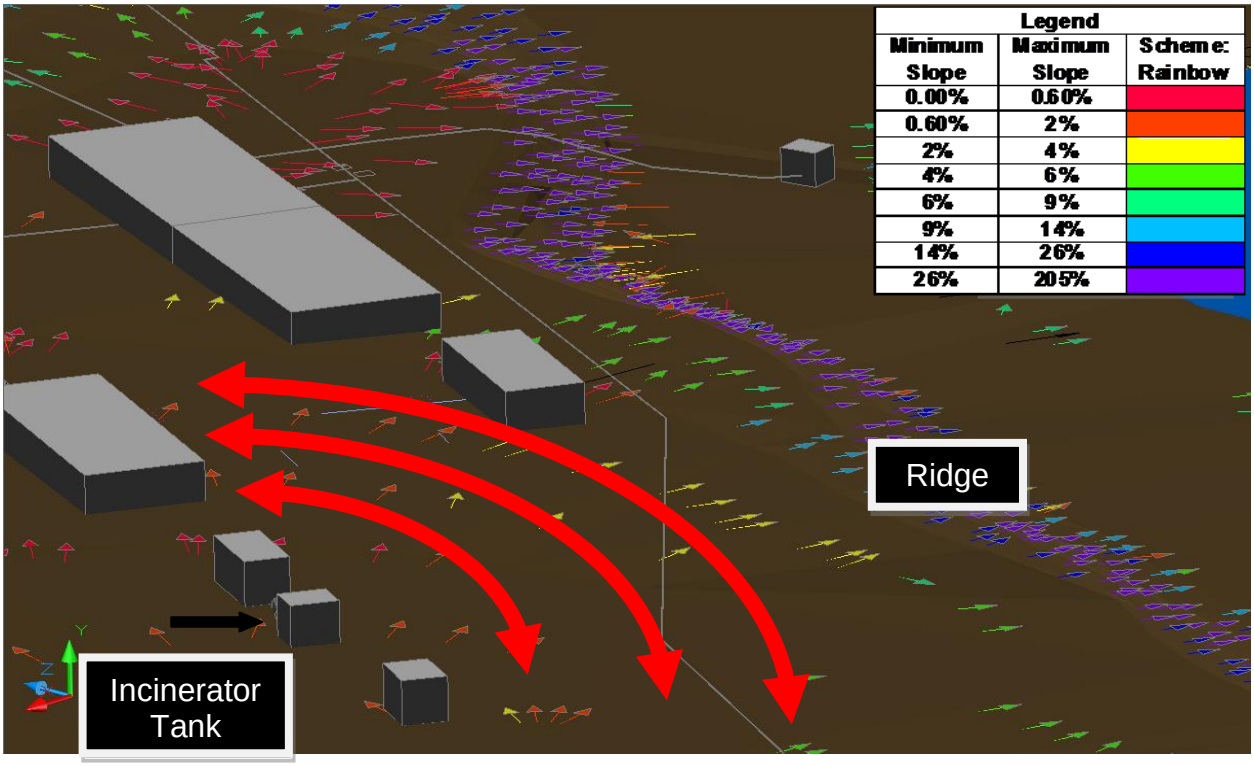
APPENDIX K: WAREHOUSE TANK: DIRECTION OF POTENTIAL DISCHARGE



Direction of potential discharge from warehouse tank and possible locations of barriers to prevent contamination of Fjord.

- Individual arrows indicate direction of flow of petroleum spill
- Red lines with arrows indicate possible locations of barriers (piled snow, booms, etc.) to prevent petroleum fluid from reaching the Fjord
- Distance from Warehouse Tank to Fjord is ~ 250 M

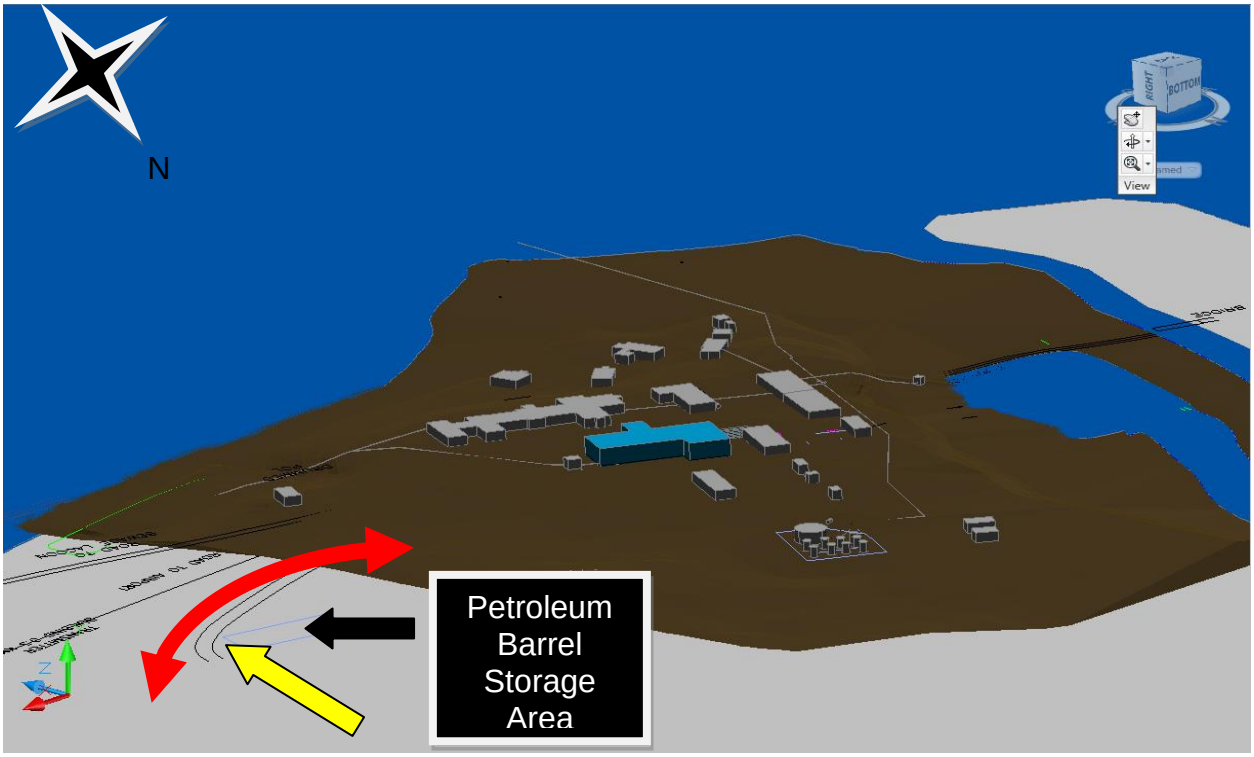
APPENDIX L: INCINERATOR TANK: DIRECTION OF POTENTIAL DISCHARGE



Direction of potential discharge from incinerator tank and possible locations of barriers to prevent contamination of water lagoon

- Individual arrows indicate direction of flow of petroleum spill
- Red lines with arrows indicate possible locations of barriers (piled snow, booms, etc.) to prevent petroleum fluid from reaching the Fjord
- Distance from Incinerator Tank to Water Lagoon is ~ 120 M

APPENDIX M: BARREL STORAGE AREA: DIRECTION OF POTENTIAL DISCHARGE



Direction of potential discharge from barrel storage area and possible locations of barriers to prevent contamination of water lagoon

- Yellow arrow indicates direction of flow of petroleum spill
- Red line with arrows indicate possible location of barrier (piled snow, booms, etc.) to prevent petroleum fluid from reaching the Fjord

APPENDIX O: SPILL RESPONSE RESOURCES & EQUIPMENT

The following is a list of Environment and Climate Change Canada equipment on site at Eureka:

1) 2 - 50’ x 24” Containment booms
2) 2 - 5/8” x 100’ Tow Lines
3) 5 - Sorbent Booms (not packages)
4) 5 - Sorbent Rolls
5) 1 - 1000 gallon Port-A-Tank
6) 4 - Hollow Back Round Point Shovels
7) 4 - Rakes
8) 1 - 10 lb. Sledge Hammer
9) 1 - Fire Axe
10) 100 - heavy duty oil spill garbage bags
11) 2 - Portable Honda Generators
12) 6 - portable/mobile radios (167.7 MHz)
13) 1 - Air/Ground base Station (122.8 MHz & 121.5 MHz)
14) 4 - Fire Extinguishers
15) 1 - CAT IT28B Loader
16) 1 - Case 721D Loader
17) 1 - Champion grader
18) 1 - D7 Bulldozer

The following could be provided in case of emergency by the Canadian Coast Guard:

1) 1 - Canadian Coast Guard Motorized Landing Craft (LCM)
2) 1 - Canadian Coast Guard Dumb Barge

The following is a list of personal protective equipment (PPE) on site:

1) 10 - goggles
2) 10 - pair nitrile/natural rubber gloves
3) 10 - pair Tyvek Coveralls
4) 6 - set 3 piece rain suits
5) 6 - pair rubber safety boots

APPENDIX P: SPILL REPORTING FORMS

Environnement Canada Environment Canada

Spill Report

Internal use only

All releases of petroleum product or allied product MUST be reported by telephone as soon as possible.

This form should be completed by the owner, operator, or the person responsible for managing the response.

Date of Incident :	**Time of Incident:**	**EC Property:**
_____	_____	_____
Weather Conditions:		
_____		

Owner Name:_____ **Division and Direction:** _____

Telephone Number: _____

Operator Name:_____ **Telephone Number:** _____

Reported by:_____ **Signature:**_____

EC Tank Registration Number, if applicable:	EC-_____	EC-_____
Type of Fuel:	_____	
Source of Spill:	Storage Tank ☐ Barrel/Drums ☐ Pumping Operation ☐	Vehicle ☐ Other: _____
How much fuel spilled?	Litres:_____	**If more than 100L, this report SHALL be faxed or scanned to the federal authority with 48 hours.**

Property Management Division, ACEMD

Canada

Environnement Canada Environment Canada

Spill Report

Internal use only

Description of the spill:	Location of spill:	_____
		_____
	Surface or approximate area affected:	_____
	Is the spill contained?	YES ☐ NO ☐
Release Site Description:	Surface at Site:	☐ Paved ☐ Gravel ☐ Vegetation ☐ Concrete Surface
What waterways are in the vicinity of the product release (if applicable)?	_____	
	_____	

Did you contact the appropriate federal authority spill action centres?[1]	YES ☐ NO ☐	Which centre did you contact? _____
Who at EC spill center did you talk to?	Name: _____	Function: _____
	Date: _____	
Incident Number:	_____	
Was a 3rd party property affected by the release?	YES ☐ NO ☐	If yes, who: _____

[1] Refer to PDF Canadian Environmental Emergencies Notification System

Property Management Division, ACEMD

Canada

Environnement Canada Environment Canada

Spill Report

Internal use only

What mitigating measures did you take?	☐ Stop the flow of product ☐ Turned off pumping unit (if applicable) or close manifold valve ☐ Eliminated all sources of ignition ☐ Secured the area ☐ Put on goggles and petroleum resistant gloves and boots ☐ Used absorbents located in storage units to contain and clean up all product ☐ Placed all absorbents in metal drums for disposal ☐ Transport drums to a secure area within facility for temporary storage ☐ Made arrangements to dispose of contaminated materials at an authorized disposal site Other:_____ _____		
Is it possible to keep the system running?	YES ☐	NO ☐	
Is someone supposed to come and fix anything?	YES ☐	NO ☐	If yes, who: _____ _____ _____
The organizations that were notified and / or are involved as well as other relevant information:	_____ _____ _____ _____ _____		

Property Management Division, ACEMD

Canada

Environment Canada | Environnement Canada

Northwest Territories | Nunavut | Canada

NT-NU SPILL REPORT

OIL, GASOLINE, CHEMICALS AND OTHER HAZARDOUS MATERIALS

NT-NU 24-HOUR SPILL REPORT LINE
TEL: (867) 920-8130
FAX: (867) 873-6924
EMAIL: spills@gov.nt.ca

REPORT LINE USE ONLY

A	REPORT DATE: MONTH – DAY – YEAR	REPORT TIME	☐ ORIGINAL SPILL REPORT, OR	REPORT NUMBER -
B	OCCURRENCE DATE: MONTH – DAY – YEAR	OCCURRENCE TIME	☐ UPDATE # TO THE ORIGINAL SPILL REPORT	
C	LAND USE PERMIT NUMBER (IF APPLICABLE)	WATER LICENCE NUMBER (IF APPLICABLE)		
D	GEOGRAPHIC PLACE NAME OR DISTANCE AND DIRECTION FROM THE NAMED LOCATION	REGION ☐ NWT ☐ NUNAVUT ☐ ADJACENT JURISDICTION OR		
E	LATITUDE DEGREES MINUTES SECONDS	LONGITUDE DEGREES MINUTES SECONDS		
F	RESPONSIBLE PARTY OR VESSEL NAME	RESPONSIBLE PARTY ADDRESS OR OFFICE LOCATION		
G	ANY CONTRACTOR INVOLVED	CONTRACTOR ADDRESS OR OFFICE LOCATION		
H	PRODUCT SPILLED	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES	U.N. NUMBER	
	SECOND PRODUCT SPILLED (IF APPLICABLE)	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES	U.N. NUMBER	
I	SPILL SOURCE	SPILL CAUSE	AREA OF CONTAMINATION IN SQUARE METRES	
J	FACTORS AFFECTING SPILL OR RECOVERY	DESCRIBE ANY ASSISTANCE REQUIRED	HAZARDS TO PERSONS, PROPERTY OR EQUIPMENT	
K	ADDITIONAL INFORMATION, COMMENTS, ACTIONS PROPOSED OR TAKEN TO CONTAIN, RECOVER OR DISPOSE OF SPILLED PRODUCT AND CONTAMINATED MATERIALS			

L	REPORTED TO SPILL LINE BY	POSITION	EMPLOYER	LOCATION CALLING FROM	TELEPHONE
M	ANY ALTERNATE CONTACT	POSITION	EMPLOYER	ALTERNATE CONTACT LOCATION	ALTERNATE TELEPHONE

REPORT LINE USE ONLY

N	RECEIVED AT SPILL LINE BY	POSITION **Station operator**	EMPLOYER	LOCATION CALLED **Yellowknife, NT**	REPORT LINE NUMBER **(867) 920-8130**

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

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

APPENDIX Q: MONTHLY VISUAL INSPECTION CHECKLISTS FOR EUREKA'S TANK SYSTEMS

The use of digital cameras, it is also a good idea to take some high definition digital photographs of inspection results. The photographs can be taken from consistent perspective each month to clearly document how the facility changes over time. Remember the old saying, "a picture is worth a thousand words".

Monthly FSTS Inspection Checklist
Enviro Tanks
District 1, Property Management Division

Internal system number and/or name:_____

Facility: _____Eureka_____ **ECCC Identification #:**

Date(Month/Day/Year):_____ **Inspected by:** _____

Fuel Type: Diesel

1. READ CAREFULLY THE CHECKLIST PRIOR TO THE INSPECTION
2. ALWAYS TAKE A PHOTO OF ANY DAMAGES OR PROBLEMS
3. ALWAYS DOCUMENT ANY PROBLEMS AND REPAIR THEM

- **KEEP CHECKLIST ON FILE AT THE SITE**

	Y or N	Comments
General Conditions		
Are the tank's support, foundation, Walls (side, top, and underneath) in good condition? (look for lack of corrosion protection and its deterioration, unstable foundation, etc) *(NFCC, B139)*	☐ Yes ☐ No	
Are the labels in good condition? (look for WHMIS, TDG, ECCC TAG) *(WHMIS, TDG, NFCC)*	☐ Yes ☐ No	
Is the emergency spill kit complete? *(NFCC, BP)*	☐ Yes ☐ No	
Physical Protection		

Is the tank damaged? (look for cracks, brittles, fractures, etc) *(CEPA, NFCC, B139)*	☐ Yes ☐ No	
Is there collision protection and fencing in place around the tank, and are they in good condition? (look for bollards, etc.) *(NFCC, B139)*	☐ Yes ☐ No ☐ N/A	
Is the area clear of debris? (Nothing should get in touch with the tank and piping) (BP)	☐ Yes ☐ No	
Petroleum product pump ☐ N/A		
Are there any leaks on pump, pipes, belts or filters of the petroleum product? *(CEPA, NFCC)*	☐ Yes ☐ No	
Is the petroleum product pump properly working and does it pump product smoothly without making any unusual sounds? (Check mainly for unusual sounds) *(BP)*	☐ Yes ☐ No ☐ Don't know	
Devices		
Is the product shut-off device working properly? *(NFCC)*	☐ Yes ☐ No	
Are the valves (anti-siphon valve, power cut-off valve, recovery valve, drainage valve) working properly? *(NFCC, B139)*	☐ Yes ☐ No	
Is the product level alarm warning system (visual/auditory) working properly? *(NFCC, CCME)*	☐ Yes ☐ No ☐ None	
Piping		
Are there any signs of leaks on any aboveground pipes, elbows, or pipe joints? *(CEPA, NFCC, B139)*	☐ Yes ☐ No ☐ N/A	
Is the tank vent clear? *(NFCC, B139)*	☐ Yes ☐ No	

Summary of leaks		
Has there been a leak alarm (if applicable) or signs of leaks in then interstitial space since the last inspection for double walled tanks? *(BP)*	☐ Yes ☐ No ☐ N/A	
Inventory reconciliation and tank bottom water *(CEPA, NFCC)* ***Complete the form in Appendix L-2*** ***Appendix L-2 completed?*** ☐ Yes ☐ No ***Unfeasible*** ☐		
Overall Conditions		
Is the system working properly? *(CEPA, NFCC, B139)*	☐ Yes ☐ No	
Are there any measures that need to be implemented? *(BP)*	☐ Yes ☐ No	*If so, what are they?*

Environment Canada Environnement Canada

Monthly FSTS Inspection Checklist
Tank Farm System
District 1, Property Management Division

While walking the tank farm, take note of signs of overfill, corrosion, recent repairs that were not apparent by records or discussion. Look for stains on steel where leak may be occurring, check valve function and nozzle welds, check associated piping, check foundation for wash-out/deterioration.

Internal system number and/or name:_____

Facility: _____Eureka_____ **ECCC Identification #: EC-00001218**

Date(Month/Day/Year):_____ **Inspected by:** _____

Fuel Type: Diesel

1. READ CAREFULLY THE CHECKLIST PRIOR TO THE INSPECTION
2. ALWAYS TAKE A PHOTO OF ANY DAMAGES OR PROBLEMS
3. ALWAYS DOCUMENT ANY PROBLEMS AND REPAIR THEM

- **KEEP CHECKLIST ON FILE AT THE SITE**

	Y or N	Comments
General Conditions		
Are the tank's shell, foundation, (Side, top) and roof in good condition? (look for deterioration, unstable foundation, of welds, plates, and appurtenances) *(NFCC & API)*	☐ Yes ☐ No	
Are the labels in good condition? (look for WHMIS, TDG, ECCC TAG) (*WHMIS, TDG, NFCC*)	☐ Yes ☐ No	
Is the emergency spill kit complete? *(NFCC, BP)*	☐ Yes ☐ No	
Protection		
Are the tanks damaged? (look for cracks, brittles, fractures, etc) *(CEPA, NFCC, B139)*	☐ Yes ☐ No	

Are the collision protections in good condition? (Look for bollards, door-gate etc.) *(NFCC, B139)*	☐ Yes ☐ No	
Is the exterior coating in good condition, both shell and roof? (Look for lack of corrosion protection) (*API*)	☐ Yes ☐ No	
Petroleum product pump ☐ N/A		
If applicable, are there any leaks on pipes or filters of the petroleum product? *(CEPA, NFCC)*	☐ Yes ☐ No	
If applicable, is the petroleum product pump properly working and does it pump product smoothly without making any unusual sounds? (Check mainly for unusual sounds around yellow tanks inside generator building.) *(BP)*	☐ Yes ☐ No ☐ Don't know	
Is the product shut-off device working properly? *(NFCC)*	☐ Yes ☐ No	
Are the valves and flanges working properly? *(NFCC, B139)*	☐ Yes ☐ No	
Piping		
Are there any signs of leaks on any aboveground pipes, elbows, or pipe joints? *(CEPA, NFCC, B139)*	☐ Yes ☐ No ☐ N/A	
Is the tank vent clear? (Look at the vents of the Yellow tanks) *(NFCC, B139)*	☐ Yes ☐ No ☐ Not accessible	
Monitoring leaks		
Are there any petroleum products or water in the containment enclosure for tanks with secondary containment? (Check at the tank Farm, check secondary	☐ Yes ☐ No	

containment integrity) *(CEPA)*		
Are the drain valve locked to prevent leak? (*API)*	☐ Yes ☐ No	
Inventory reconciliation and tank bottom water *(CEPA, NFCC)* ***Complete the form in Appendix L-2*** ***Appendix L-2 completed?*** ☐ Yes ☐ No		
Overall Conditions		
Is the system working properly? *(CEPA, NFCC, B139)*	☐ Yes ☐ No	
Are there any measures that need to be implemented? *(BP)*	☐ Yes ☐ No	*If so, what are they?*

Environment Canada Environnement Canada

Monthly FSTS Inspection Checklist
Gasoline Dispenser
District 1, Property Management Division

Internal system number and/or name:_____

Facility: _____Eureka_____ **EC Identification #:**

Date(Month/Day/Year):_____ **Inspected by:** _____

Fuel Type: Gasoline

1. READ CAREFULLY THE CHECKLIST PRIOR TO THE INSPECTION
2. ALWAYS TAKE A PHOTO OF ANY DAMAGES OR PROBLEMS
3. ALWAYS DOCUMENT ANY PROBLEMS AND REPAIR THEM

- **KEEP CHECKLIST ON FILE AT THE SITE**

	Y or N	Comments
General Conditions		
Are the tank's support, foundation, Walls (side, top, and underneath) in good condition? (look for lack of corrosion protection and its deterioration, unstable foundation, etc) *(NFCC, B139)*	☐ Yes ☐ No	
Are the labels in good condition? (look for WHMIS, TDG, ECCC TAG) *(WHMIS, TDG, NFCC)*	☐ Yes ☐ No	
Is the emergency spill kit complete? *(NFCC, BP)*	☐ Yes ☐ No	
Physical Protection		
Is there any evidence of damage to any of the tank system equipment? (look for cracks, brittles, fractures, etc) *(CEPA, NFCC, B139)*	☐ Yes ☐ No	

Is collision protection is in good order? (look for bollards, etc.) *(NFCC, B139)*	☐ Yes ☐ No	
Is the area clear of debris? (Nothing should get in touch with the tank and piping) (BP)	☐ Yes ☐ No	
Pump, devices and dispenser		
Are there any leaks on Pump and pipes of the petroleum product? *(CEPA, NFCC)*	☐ Yes ☐ No	
Is the petroleum product pump properly working and does it pump product smoothly without making any unusual sounds? (Check mainly for unusual sounds) *(BP)*	☐ Yes ☐ No	
Check suction pump operation; Is there any leakage at the fuel pump: fittings, belts or fuel filters? *(NFCC, B139)*	☐ Yes ☐ No	
Is the nozzle without cuts and tears?	☐ Yes ☐ No	
Is the dispenser hose without cracks or crimps?	☐ Yes ☐ No	
Piping		
Is there anything broken on any of the connections or the piping? (look at supply, fill and vent pipes) *(BP)*	☐ Yes ☐ No	
Are there any signs of leaks on any aboveground pipes, elbows, or pipe joints? *(CEPA, NFCC, B139)*	☐ Yes ☐ No	
Is the tank vent clear of obstructions? *(NFCC, B139)*	☐ Yes ☐ No	
Leak Summary		

Was there any evidence of a leak in the interstitial space of the double walled tank since the last inspection? (look at the vacuum gauge)	☐ Yes ☐ No	
Is the product level alarm warning system (visual/auditory) working properly? *(NFCC, CCME)*	☐ Yes ☐ No	
Overall Conditions		
Is the system working properly? *(CEPA, NFCC, B139)*	☐ Yes ☐ No	
Are there any measures that need to be implemented? *(BP)*	☐ Yes ☐ No	*If so, what are they?*

Monthly FSTS Inspection Checklist
Mobile Tank
District 1, Property Management Division

Internal system number and/or name:_____

Facility: _____Eureka_____ **ECCC Identification #: N/A**

Date(Month/Day/Year):_____ **Inspected by:** _____

Fuel Type: Diesel

1. READ CAREFULLY THE CHECKLIST PRIOR TO THE INSPECTION
2. ALWAYS TAKE A PHOTO OF ANY DAMAGES OR PROBLEMS
3. ALWAYS DOCUMENT ANY PROBLEMS AND REPAIR THEM

- **KEEP CHECKLIST ON FILE AT THE SITE**

	Y or N	Comments
General Conditions		
Are the tank's support, foundation, Walls (side, top, and underneath) in good condition? (look for lack of corrosion protection and its deterioration, unstable foundation, etc) *(NFCC, B139)*	☐ Yes ☐ No	
Are the labels in good condition? (look for WHMIS, TDG, EC TAG) *(WHMIS, TDG, NFCC)*	☐ Yes ☐ No	
Is the emergency spill kit complete at the storage mobile tank area? *(NFCC, BP)*	☐ Yes ☐ No	
Physical Protection		
Is the tank damaged? (look for cracks, brittles, fractures, etc) *(CEPA, NFCC, B139)*	☐ Yes ☐ No	

Is the area clear of debris? (Nothing should get in touch with the tank and piping) (BP)	□ Yes □ No	
Dispenser		
Are there any leaks on pump, pipes, belts or filters of the petroleum product? *(CEPA, NFCC)*	□ Yes □ No	
Is the petroleum product pump properly working and does it pump product smoothly without making any unusual sounds? (Check mainly for unusual sounds) *(BP)*	□ Yes □ No □ Don't know	
Is the nozzle without cuts and tears?	□ Yes □ No	
Is the dispenser hose without cracks or crimps?	□ Yes □ No	
Devices		
Is the product shut-off device working properly? *(NFCC)*	□ Yes □ No	
Are the valves (anti-siphon valve, power cut-off valve, recovery valve, drainage valve) working properly? *(NFCC, B139)*	□ Yes □ No	
Is the product level alarm warning system (visual/auditory) working properly? *(NFCC, CCME)*	□ Yes □ No □ None	
Piping		
Are there any signs of leaks on hose or venting port? *(CEPA, NFCC, B139)*	□ Yes □ No □ N/A	
Is the tank vent clear? *(NFCC, B139)*	□ Yes □ No	

Summary of leaks		
Has there been a leak alarm (if applicable) or signs of leaks in then interstitial space since the last inspection for double walled tanks? *(BP)*	☐ Yes ☐ No ☐ N/A	
Inventory reconciliation and tank bottom water *(CEPA, NFCC)* ***Complete the form in Appendix L-2*** ***Appendix L-2 completed?*** ☐ Yes ☐ No ***Unfeasible*** ☐		
Overall Conditions		
Is the system working properly? *(CEPA, NFCC, B139)*	☐ Yes ☐ No	
Are there any measures that need to be implemented? *(BP)*	☐ Yes ☐ No	*If so, what are they?*

L-2

Inventory Reconciliation Form		
Federal registration number (ECCC):		
Tank location:		
Date:		
Name of person responsible for reconciliation:		
A	Date of last reconciliation (manual immersion):	
B	Date of current reconciliation:	
C	Number of days since last reconciliation: (**B** – **A** = **C**)	
D	Average daily consumption rate (litres): *Note: This data is determined using counter reading records (precise average) or product delivery record histories (approximate average).*	
E	Estimated total consumption (litres): (**D** x **C** = **E**)	
F	Previous immersion reading (cm):	
G	Conversion of immersion reading (**F**) in litres based on the tank's specific conversion chart:	
H	Quantity of product delivered since the last immersion reading (litres):	
I	Current immersion reading (cm):	
J	Conversion of immersion reading (**I**) in litres based on the tank's specific conversion chart:	
K	Difference in volume: (**G** + **H** – **I** = **K**) Note: A negative result indicates a loss of volume; a positive result indicates an increase in volume.	
Does the consumption rate (**E**) match the difference calculated (**K**)? If not, explain:		

Tank bottom water		
Quantity of water measured (cm):	Conversion into litres:	
Quantity of water removed (litres):	Date:	
Company or individual who disposed of the tank bottom water:		
Method and location of water disposal:		

Environment Canada Environnement Canada

APPENDIX R: CHECKLIST FOR ANNUAL INSPECTION

Environment and Climate Change Canada

Checklist for Yearly Inspection of Fuel Storage Tank Systems

Internal system number and/or name: _____

ECCC Identification number: EC-_____

Date of inspection: _____

Inspected by (company): _____

Inspector's signature: _____

A. Applies to storage tank system locations				
Acceptable		**Not compliant**	**Element**	**Corrective measure**
1			Access for emergency and delivery vehicles (15 m turn radius around the location) *(BP)*	
2			Restricted sources of ignition (7.5 m radius) *(NFCC)*	
3			Drainage control in event of spill or emergency *(NFCC)*	

B. Applies to all storage tank systems				
Acceptable		**Not compliant**	**Element**	**Corrective measure**
4			Inspect debris and clean the ULC-certified vent. The vent must measure 2 000 mm (diesel) or 3 500 mm (gasoline) in height and located at least 1 200 mm above the surface of the tank and 1 000 mm away from any building openings *(NFCC)*	
5			The ULC label on the emergency tank ventilation (aboveground tanks only), is in good condition *(BP)*	
6			Check the secondary containment for spills or leaks (and repair if necessary) *(CEPA, NFCC)*	
7			Repair any damaged corrosion protection on	

			metallic surfaces *(BP)*	
8			Check the working condition of the vapour- and water-tight fill pipe and its cap *(NFCC)*	
9			Ensure the pump shut-off device is in good working condition *(NFCC)*	
10			The spill containment has a ULC label (max. capacity of 15 litres) and is free of debris *(CEPA, BP)*	
11			There is access to stairs (if the height to reach the product distribution equipment is above 990 mm) *(BP)*	
12			The overfill protection device is in good condition and is labelled *(NFCC, BP)*	
13			Check the tank's secondary containment for any product *(CEPA, NFCC)*	
14			Perform a diagnostic test on the tank's secondary containment control system *(BP)*	
15			Check and calibrate the product level gauge, ensure it has a ULC label *(NFCC, B139, BP)*	
16			Ensure the aboveground tank support framework (at least 150 mm above the ground) is in good condition *(BP)*	
17			Annual precision leak detection tests for storage tank systems *(CEPA, NFCC, B139)*	
18			Check and record : the tank bottom water by during manual immersions, measure using a dip stick covered with a water-reactive paste *(CEPA)*	

C. Refuelling device				
Acceptable		**Not compliant**	**Element**	**Corrective measure**
19			Verify that the refuelling pipe and filter (bearing a ULC label, to be replaced once a year) are secure and in good condition *(NFCC, BP)*	
20			Verify that the automatic shut-off nozzle (bearing a ULC label) is in good condition *(NFCC)*	
21			Verify that there is an emergency shut-off device at least 2 500 mm away from the refuelling area, is in good condition, and that is properly labelled *(NFCC)*	
22			Examine and update the operational procedures for the petroleum product management system and the shut-off device *(BP) (See EERP section 5.1.1)*	

D. Fixed device supplied with petroleum products (e.g. boiler, cooling pump, generator)				
Acceptable		**Not compliant**	**Element**	**Corrective measure**
23			Verify that there is an emergency pump shut-off device (on the pump, boiler or generator), that it is in good condition, and that it is properly labelled *(B139)*	
24			Inspect and repair potential leaks on transfer pumps *(B139)*	
25			Annual integrity testing on the storage tank as per section	

			15.2 of the Code *(B139*)	
26			Annual test of petroleum product quality as required under the NFCC *(NFCC, C282)*[1]	
27			Inspect and repair all control valves in damaged pipes *(B139)*	

E. Marking and signage for all tanks				
Acceptable		**Not compliant**	**Element**	**Corrective measure**
28			Replace missing or damaged CEPA labels (Identification Tags) on the supply pipe *(CEPA, NFCC)*	
29			Replace missing or damaged TDG plates (for aboveground tanks only) *(BP)*	
30			Regularly inspect attached ULC labels (for aboveground tanks) *(BP)*	
31			Replace missing or damaged “no smoking” and anti-static signs *(NFCC)*	
32			Verify that there are monthly inspection forms and ensure they are legible *(CEPA)*	
33			Replace any missing or damaged pipe labels indicating flow direction *(NFCC, B139)*	

F. Piping for all tank types				
Acceptable		**Not compliant**	**Element**	**Corrective measure**
34			Repair any damaged corrosion protection on metallic surfaces *(BP) (painting)*	
35			The anti-siphon [2]valve is present and in good working order *(B139)*	
36			Check that the locking closure valve works and is in the open position *(NFCC, B139)*	
37			Check that valves bearing ULC/CSA/ASTM/ASME labels work *(BP)*	
38			Annual precision leak detection test for all buried pipes and the secondary containment *(CEPA, NFCC, B139*) Ensure there are leak detection test records and update them (*CEPA, NFCC) (underground piping)*	
39			Check the condition of all aboveground pipes used to transport petroleum products and repair them if necessary *(CEPA, NFCC, B139)*	

[1] Option: Purchase kits to test the fuel, change the fuel if not used frequently or have it filtered if dough of sediment and water contamination to prevent device damage.
[2] Anti-siphon valve in the suction pipe; Should a leak occur in the suction pipe between the Anti-siphon valve and the burner, the valve will prevent the oil in the tank from being siphoned off.

G. Emergency procedures				
Acceptable		**Not compliant**	**Element**	**Corrective measure**
40			Update the emergency response plan (ensure that the location of the environmental emergency response plan matches what is indicated on the CEPA FIRSTS[3]) *(CEPA)*	
41			The tank refuelling log (i.e. registries) is on-site and up-to-date *(CEPA, NFCC, B139)*	
42			All documents relating to tests are conducted on the tank and its equipment (including product loss/spill reports) *(CEPA)*	

Legend:

C282 : Emergency electrical power supply for buildings

CEPA: *Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations*

BP: Best Management Practices

B139: Installation Code for Oil-Burning Equipment (standard B139)

- the installation of aboveground tanks that have a maximum individual capacity of 2 500 L (550 gal) and a maximum aggregate capacity of 5 000 L (1 100 gal), and the piping and tubing systems from the tanks to the oil-fired appliance.

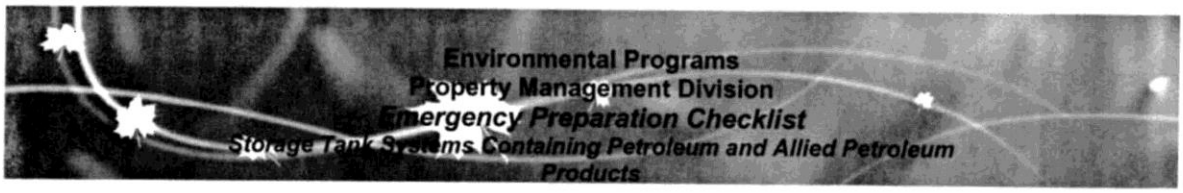
NFCC: National Fire Code of Canada, National Research Council of Canada, 2010:

- The National Fire Code of Canada (NFCC), part 4, details the storage, handling, usage, and treatment of flammable and combustible liquids in buildings, structures and open spaces equipped with underground storage tank systems and aboveground storage tank systems with a total capacity of over 2 500 litres.

[3] Federal Identification Registry for Storage Tank Systems. Environmental Programs group is the Administrator of all EC regulatees.

APPENDIX S: EMERGENCY PREPARATION CHECKLIST

Environment Canada Environnement Canada



Revised July 2012 by
Marie-Michelle Mobiry
PMD
Environmental Programs

Appendix E-1

	Detailed Requirement	Regulatory or Management Practice Reference[1]	Finding	
			Yes (Y)	No (N)
1	The owner or operator of a storage tank system has prepared an emergency plan taking into consideration the following factors: (a) the properties and characteristics of each petroleum product or allied petroleum product stored in each tank of the system and the maximum expected quantity of the petroleum product or allied petroleum product to be stored in the system at any time during any calendar year; and (b) the characteristics of the place where the system is located and of the surrounding area that may increase the risk of harm to the environment or of danger to human life or health.	CEPA-197, 30 (1) Section 3.5 pg 14 MSDS sheet Section 4.3 Section 3.6 pg 15 Topography	✓ ✓	Appendices pictures etc

1) [1] Regulatory: Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations, CEPA 2008-197;
2) Regulatory: Transports of Dangerous Goods (TDG) Regulations SOR/2008-34;
3) Management Practice: Environmental Code of Practice for Aboveground and Underground Storage Tank Systems containing Petroleum and Allied Petroleum Products, Canadian Council of Ministers of the Environment (CCME, 2003);
4) Management Practice: National Fire Code of Canada, the National Research Council Canada (NFCC, 2005);
5) Management Practice: Ontario Fire Code (OFC) O. Reg. 388/97.

Adapted from PWGSC *Emergency Preparedness Checklist*, 2009.

Canada

Environnement Canada Environment Canada

2	The emergency plan required in section 30 (*a*) includes a description of the factors considered under section 30 (1); (*b*) a description of the measures to be used to prevent, prepare for, respond to and recover from any emergency that may cause harm to the environment or danger to human life or health; (*c*) a list of the individuals who are required to carry out the plan and a description of their roles and responsibilities; (*d*) identification of the training required for each of the individuals listed under paragraph (*c*); (*e*) a list of the emergency response equipment included as part of the plan, and the equipment's location; and; (*f*) the measures to be taken to notify members of the public who may be adversely affected by the harm or danger referred to in paragraph (*b*).	CEPA-197, 30 (2) 6.1 to 6.6 pg 34 section 6.4.2 & 5 & 6.3.1.1 to & 6.3.1.4 6.1 pg 27 Section 5.3 pg 26 Appendix D section 6.2 pg 29 2.4 pg 10	✓ ✓ ✓ ✓ ✓ ✓	Flow chart
3	The owner or operator of a storage tank system must ensure that the emergency plan is implemented (a) in the case of a storage tank system that is installed before the coming June 12, 2008, no later than June 12, 2010; and (b) in any other case, before the day on which the first transfer of petroleum products or allied petroleum products into any tank of the storage tank system occurs.	CEPA-197, 30 (3) Effective Date April 1, 2010. N/A.	✓	
4	The owner or operator of a storage tank has kept the emergency plan up-to-date and keep a copy of it readily for the individuals who are to carry of it into effect and at the place where the storage tanks system is located if that place is a place of work. The owner or operator has notified the Minister of the civic address of each location where the emergency plans.	CEPA-197, 31 pg i + control page updated July 2012	✓	

Adapted from PWGSC *Emergency Preparedness Checklist*, 2009.
Environmental Programs
Property Management Division

Canada

Environnement Canada Environment Canada

5	For the purposes of paragraph 212 (1) (a) of the Canadian Environmental Protection Act, 1999, the written report have contained the following information: -the names of both the owner and the operator of the storage tank system; -the identification number of the storage tank system; the date on which the spill, if any, occurred; -the type of each petroleum product or allied petroleum product that is the subject of the report; -the quantity of each petroleum product or allied petroleum product that is the subject of the report or, if the quantity cannot be determined, an estimate of that quantity; -a description of the circumstances of the spill, if any, and any mitigating measures taken; -and a description of the measures taken following the spill, if any, to prevent a subsequent occurrence.	CEPA-197, 41 Section 3.5 pg 14 Section 6.4 + 6.5 Section 5.1	✓	
6	Standard procedures for normal product transfer operation as well as for emergencies are given to operators and posted in print. Fuel Transfer Training must be periodically followed up to ensure that proper procedures are being followed.	CCME, 8.5.3 (2) 5.1 pg 22+23	✓	
7	The owner of each registered storage tank systems prepares and maintains an emergency response planned procedures for reporting, containing, removing, and cleaning up spill or leak.	CCME, 8.9.1 6.4 + 6.5	✓	
8	Where dangerous goods are stored or handled, the fire safety plan includes the names, addresses and telephone numbers of persons to be contacted in case of fire during non-operating hours.	NFC, 3.1.2.6.1 emergency contacts pg 46 Appendix B - Non specific to fire	✓	

Environnement Canada Environment Canada

9	1) Appropriate materials and measures are available to clean up any type of spilled liquid or solid dangerous materials or prevent spills from flowing outside the spill area. 2) Materials used to clean up dangerous materials spills are -compatible and non-reactive with the dangerous goods being cleaned up and -are disposed of in a receptacle with a lid.	NFC, 3.2.7.11 6.4.5 pg 35-37 pg 42	✓	✓
10	Individual storage areas used for storage of dangerous goods are clearly designated as such by posted placards conforming to the Transportation of Dangerous Goods Regulations	TDG, 4 6.3.9 section 5 Nothing on placards	✓	Placards Installed
11	All employees involved in the storage and handling of dangerous goods are trained in safe handling procedures and correct responses to an emergency situation by the appropriate federal, provincial, or territorial Occupational Health and Safety. (WHMIS)	Workplace Hazardous Materials Information System (WHMIS) and Hazardous Product Act WHMIS Labels section 5	✓	
12	Areas used for storage of dangerous goods are secured against unauthorized access.	NFC, 3.2.7.16 did not find	✓	✓ - But, the facility is so isolated, the risks are almost inexistent
13	A spill of flammable or combustible liquids is prevented from flowing outside the spill area and from reaching waterways, sewer systems and potable water sources by: a) constructing a non combustible barrier that can contain the spill; or b) grading site or sloping of the floor to divert the spill to a dedicated drainage system	NFC, 4.1.6.1.1 6.4.5.2 pg 36	✓	
14	Any drainage system designated to collect spills of dangerous goods: a) terminate at a location where the spill will not create a fire hazard or any risk to public health and safety ; and b) directs the spill away from buildings, means of egress or water supplies for	NFC, 4.1.6.2.1 unsure See Appendices "potential discharge" dykes? 6.4.5.1	✓	

Adapted from PWGSC *Emergency Preparedness Checklist*, 2009.
Environmental Programs
Property Management Division

Canada

Environnement Canada Environment Canada

	fire fighting.			
15	Absorbents used to remove spilled or leaked are non combustible. spill kit	NFC, 4.1.6.3.4 and Controlled Products Regulations	6.2 ✓	
16	All employees concerned with transfer operations involving flammable liquids and combustible liquids are trained in: a) emergency procedure; b) the importance of attendance during loading and unloading c) extinguishing procedures for fires; and d) the colour coding and identification system.	NFC, 4.5.10.2.1 and WHMIS 5.3.1 pg 26 fraing "Being developed" PTA training under development		✓
17	If applicable, Measures to accommodate possible leakage or spillage from HOSE couplings are provided: 1) by constructing a non-combustible barrier of sufficient height to contain the spill or grading the site to divert the spill to a drainage system; 2) having a drainage system that terminate at a location where the spill will not create a hazard and direct the spill away from buildings, exits and access; or 3) preventing the escape of spilled liquids through flushing or use of absorbents.	NFC, 4.8.7.2.1 6.4 pg 36	✓	
18	If applicable, provisions are in place to prevent spillage resulting from the disconnection of hoses.	NFC, 4.8.7.2.2 5.1.1 pg 23	✓	
19	If applicable, pump house are non-combustible construction with floors that are chemically resistant to the liquid being handled, liquid-tight and equipped with curbs or flashings around the base of the wall not less than 100 mm in height to contain any spilled liquid.	NFC, 4.8.10.1 looks like a pump house from picture under process to be changed 2013-2015		✓
20	Transfer operations are carried out only under continuous supervision of a person	NFC, 4.8.11.1.1 5.1.1	✓	

Adapted from PWGSC *Emergency Preparedness Checklist*, 2009.
Environmental Programs
Property Management Division

Canada

Environnement Canada Environment Canada

	qualified to supervise such operations.			
21	Spill control procedures are approved and implemented for any occupancy where any quantity of flammable or combustible liquids are stored, handled, processed or used.	OFC, 4.1.6.4 (1) 6.4 pg 32-41	✓	
22	Employees engaged in the operation of equipment for the transfer of flammable or combustible liquids are trained in the location, function and operation of valves used for the operation of fire protection equipment and manual emergency shut-off valves.	OFC, 4.4.11.2 (2) 5.3.1 pg 26 "Being developed"		✓

Adapted from PWGSC *Emergency Preparedness Checklist*, 2009.
Environmental Programs
Property Management Division

MOVEMENT DOCUMENT / MANIFEST
DOCUMENT DE MOUVEMENT / MANIFESTE

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

2464475-9

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

A Generator / consignor / Producteur / expéditeur

Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: NUG 100009

Company name / Nom de l'entreprise: ENVIRONMENT CANADA

Mailing address / Adresse postale: WEATHER STN, EUREKA, NU — City / Ville — Province — Postal code / Code postal: X0A 0G0

E-mail / Courrier électronique: EUREKAWXSTN@EC.GC.CA — Tel. No. / N° de tél.: (204) 984-6376 EXT 4460

Shipping site address / Adresse du lieu de l'expédition: EUREKA WEATHER STATION

City / Ville: EUREKA — Province: NU — Postal code / Code postal: X0A 0G0

Intended Receiver / consignee / Réceptionnaire / destinataire prévu 2

Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial:

CLEAN HARBOURS INC

Mailing address / Adresse postale: 7305 BOUL. MARIE-VICTORIN — City / Ville: BROSSARD — Province: PQ — Postal code / Code postal:

E-mail / Courrier électronique: — Tel. No. / N° de tél.: (514) 944-1291

Receiving site address / Adresse du lieu de l'expédition: 7305 BOULEVARD MARIE-VICTORIN

City / Ville: BROSSARD — Province: ~~QUEBEC~~ QUÉBEC — Postal code / Code postal: J4W 1A6

B Carrier / Transporteur

Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial: NUC 200013

Company name / Nom de l'entreprise: CANADIAN COAST GUARD / NSSI

Mailing address / Adresse postale: 200 KENT ST., OTTAWA, ON — City / Ville — Province — Postal code / Code postal: K1A 0E6

E-mail / Courrier électronique: — Tel. No. / N° de tél.: (613) 998-1585

Vehicle / Véhicule	Registration No. / N° d'immatriculation	Prov.
Trailer - Rail car No. 1 / 1re remorque - wagon		
Trailer - Rail car No. 2 / 2e remorque - wagon		

Port of entry / Point d'entrée: International use only — Port of exit / Point de sortie: International use only

Carrier Certification : *I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct.*
***Attestation du transporteur** : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractères d'imprimerie): LUC BELAND — Tel. No. / N° de tél.: 867 979-6298

Year / Année: 12 — Month / Mois: 08 — Day / Jour: 21 — Signature: Luc Beland

C Receiver / consignee / Réceptionnaire / destinataire

Registration No. / Provincial ID No. / N° d'immatriculation - d'id. provincial:

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés

Receiver / consignee information same as in Part A
Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A
☐ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise:

Mailing address / Adresse postale:

City / Ville — Province — Postal code / Code postal:

E-mail / Courrier électronique: — Tel. No. / N° de tél.: ( )

Receiving site address / Adresse du lieu de destination:

Date received / Date de réception: Year / Année — Month / Mois — Day / Jour — Time / Heure — ☐ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name/ Si les dechets ou matières recyclables doivent être transférés, préciser le nom du destinataire

Registration No./Provincial ID No. / N° d'immatriculation/d'id provincial

	Prov. code / Code prov.	Shipping name / Appellation réglementaire	Class / Classe Sub. class(es) / Classe(s) sub.	UN No. / N°NU	Packing / risk gr. / Gr. d'emballage/ de risque	Quantity shipped / Quantité expédiée	Units / L or / ou Kg / Unités	Packaging / Contenant No. / N°	Codes Int – ext	Phys. state / État phys.
(i)	NU	BATTERIES, WET, FILLED WITH ACID, ELECTRIC STORAGE (DRAIN NEUT)	8	2794	II	600	KG	07		
(ii)	NU	ENVIRONMENTALLY HAZARDOUS SUBSTANCE (WASTE OIL FILTERS)	9	3082	III	100	KG	01		
(iii)	NU	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (INCIN. ASH)	9	3077	III	2000	KG	01		
(iv)	NU	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (WASTE OIL)	9	3082	III	2454	KG	01		

	Quantity received / Quantité reçue	Units / L or / ou Kg / Unités	Comments / Commentaires	Handling Code / Code de manutention	Shipment / Envoi Accepted / Accepté	Shipment / Envoi Refused / Refusé	Decont. Pack. / Cont.	Decont. Veh. / Véh.
(i)								
(ii)								
(iii)								
(iv)								

	Notice No. / N° de notification	Notice Line No / N° de ligne de la notification	Shipment / Envoi	Of / De	D or R code / Code É ou R	C code / Code C	Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE	H code / Code H	Y code / Code Y	National code in country of / Code du pays: Export / Exportation	Import / Importation	Customs code(s) / Code(s) de douanes
(i)												
(ii)												
(iii)	International use only											
(iv)												

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier)

***Receiver / consignee certification** : I certify that the information contained in Part C is correct and complete. / **Attestation du réceptionnaire / destinataire** : J'atteste que tous les renseignements à la partie C sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie)

Signature — Tel. No. / N° de tél.: ( )

Special handling / Manutention spéciale: ☐ Attached /Ci-joint: ☐ As follows/ Ci-contre :

Date shipped / Date d'expédition: Year / Année — Month / Mois — Day / Jour — Time / Heure — ☐ A.M. ☐ P.M.

Scheduled arrival date / Date d'arrivée prévue: Year / Année — Month / Mois — Day / Jour

***Generator / consignor certification:** I certify that the information contained in Part A is correct and complete.*
***Attestation du producteur / expéditeur:** J'atteste que tous les renseignements à la partie A sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie) — Signature — Tel. No. / N° de tél.: ( )

MOE 04-1917 (07/07)

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

Copy / Copie 1 (white / blanche

Environment Canada Environnement Canada

Environment Canada Environnement Canada

Revision Date: June 2017

Version 7.0

MOVEMENT DOCUMENT / MANIFEST
DOCUMENT DE MOUVEMENT / MANIFESTE

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

2464476-7

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

A Generator / consignor — Producteur / expéditeur

Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial: NUG100009

Company name / Nom de l'entreprise: ENVIRONMENT CANADA

Mailing address / Adresse postale: WEATHER STN, — City / Ville: EUREKA, — Province: NU — Postal code / Code postal: X0A 0G0

E-mail / Courrier électronique: EUREKAWXSTN@EC.GC.CA — Tel. No. / N° de tél.: (24)984-6376 Ext 4460

Shipping site address / Adresse du lieu de l'expédition: EUREKA WEATHER STATION

City / Ville: EUREKA — Province: NU — Postal code / Code postal: X0A 0G0

Intended Receiver / consignee — Réceptionnaire / destinataire prévu 2

Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial:

ENVIRONMENT CANADA

Mailing address / Adresse postale: 9345-49 ST., — City / Ville: EDMONTON, — Province: AB — Postal code / Code postal: T6B 2R8

E-mail / Courrier électronique: RUSS.LOGAN@EC.GC.CA — Tel. No. / N° de tél.: (780 495-6003

Receiving site address / Adresse du lieu de l'expédition: MICHAEL J. GREENWOOD CENTRE, 9345-49 ST.,

City / Ville: EDMONTON — Province: AB — Postal code / Code postal: T6B 2R8

B Carrier — Transporteur

Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial: NUC 200013 — 23

Company name / Nom de l'entreprise: CANADIAN COAST GUARD / NSSI

Mailing address / Adresse postale: 200 KENT ST., — City / Ville: OTTAWA, — Province: ON — Postal code / Code postal: K1A 0E6

E-mail / Courrier électronique — Tel. No. / N° de tél.: (613) 998 1585

Vehicle / Véhicule	Registration No. / N° d'immatriculation	Prov. 24
Trailer - Rail car No. 1 / 1re remorque - wagon		
Trailer - Rail car No. 2 / 2e remorque - wagon		

Port of entry / Point d'entrée: international use only — Port of exit / Point de sortie: international use only — 25

Carrier Certification : *I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct.* — 26
Attestation du transporteur : *J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.*

Name of authorized person (print): Nom de l'agent autorisé (caractères d'imprimerie): LUC BRELAND — Tel. No. / N° de tél.: (867 979 6298

Year / Année: 12 — Month / Mois: 08 — Day / Jour: 21 — Signature: Luc Breland

C Receiver / consignee — Réceptionnaire / destinataire

Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés.

Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial

Receiver / consignee information same as in Part A
Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A
☐ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise

Mailing address / Adresse postale

City / Ville — Province — Postal code / Code postal

E-mail / Courrier électronique — Tel. No. / N° de tél. ( )

Receiving site address / Adresse du lieu de destination

Date received / Date de réception — Year / Année — Month / Mois — Day / Jour — Time / Heure — 29 — ☐ A.M. ☐ P.M.

If waste or recyclable material to be transferred, specify intended company name/ Si les dechets ou matières recyclables doivent être transférés, préciser le nom du destinataire — 30

Registration No./Provincial ID No. — N° d'immatriculation/d'id provincial

	Prov. code / Code prov. 3	Shipping name / Appellation réglementaire 4	Class / Classe 5 Sub. class(es) / Classe(s) sub.	UN No. / N° NU 6	Packing / risk gr. 7 / Gr. d'emballage / de risque	Quantity shipped / Quantité expédiée	Units 8 L or / ou Kg Unités	Packaging / Contenant 9 No. / N°	Codes Int.– ext.	Phys. state / État phys. 10
(i)	NU	HELIUM, COMPRESSED PREVIOUSLY HELD HELIUM	2.2	1046		400 272.7	KG	07		
(ii)										
(iii)										
(iv)										

	Notice No. / N° de notification 11	Notice Line No / N° de ligne de la notification	Shipment / Envoi 12	Of / De	D or R code / Code É ou R 13	C code / Code C 14	Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE 15	H code / Code H 16	Y code / Code Y 17	National code in country of / Code du pays: Export / Exportation 18	Import / Importation	Customs code(s) / Code(s) de douanes 19
(i)												
(ii)												
(iii)	International use only											
(iv)												

Quantity received / Quantité reçue	Units / L or / ou kg Unités 31	Comments / Commentaires 32	Handling / Code / Code de manutention 33	Shipment / Envoi: Accepted / Accepté	Refused / Refusé 34	Decont. Pack. / Cont.	Vel Vé

If handling code "Other" (specify) / Si code de manutention « autre » (spécifier) — 3

Receiver / consignee certification : *I certify that the information contained in Part C is correct and complete.* / **Attestation du réceptionnaire / destinataire :** *J'atteste que tous les renseignements à la partie C sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie)

Signature — Tel. No. / N° de tél. ( )

Generator / consignor certification: *I certify that the information contained in Part A is correct and complete.*
Attestation du producteur / expéditeur: *J'atteste que tous les renseignements à la partie A sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie) — Signature — Tel. No. / N° de tél. 20 ( )

Special handling / Manutention spéciale — 22 — ☐ Attached / Ci-joint. ☐ As follows / Ci-contre :

21 Date shipped / Date d'expédition — Year / Année — Month / Mois — Day / Jour — Time / Heure ☐ A.M. ☐ P.M. — Scheduled arrival date / Date d'arrivée prévue — Year / Année — Month / Mois — Day / Jour

MOE 04-1917 (07/07)

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

Copy / Copie 1 (white / blanch

Environment Canada Environnement Canada

Environment Canada Environnement Canada

Revision Date: June 2017

Version 7.0

REFERENCES

1. Eureka Site Safety and Emergency Contingency Plans, Environment and Climate Change Canada, August 2009.
2. Guidelines for Spill Contingency Planning, Indian and Northern Affairs Canada, April 2007.
3. Nunavut Water Board Licence No. 3BC-EUR1116 issued to Environment and Climate Change Canada by the Nunavut Water Board, June 7, 2011.
4. Oil Pollution Emergency Plan for Fuel Transfer at Eureka HAWS, Environment and Climate Change Canada, July 2006.
5. Oil Pollution Emergency Plan for Land Spills, - Eureka High Arctic Weather Station – in support of the Nunavut Water Board Licence No. 3BC-EUR1116, Environment and Climate Change Canada, 2016.
6. Summary of Operations and Maintenance Procedures for Sewage, Solid Waste Disposal and Waste Treatment Facilities – Eureka High Arctic Weather Station – in support of the Nunavut Water Board Licence No. 3BC-EUR1116, Environment and Climate Change Canada, 2016.
7. Summary of Spill Events in Canada, 1984-1995, Environment and Climate Change Canada.