Fisheries and Oceans Canada | Pêches et Océans Canada

SPILL CONTINGENCY PLAN

for

Petroleum Product

for

Harbour Development Project

Pangnirtung, Nunavut

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1.0 BACKGROUND

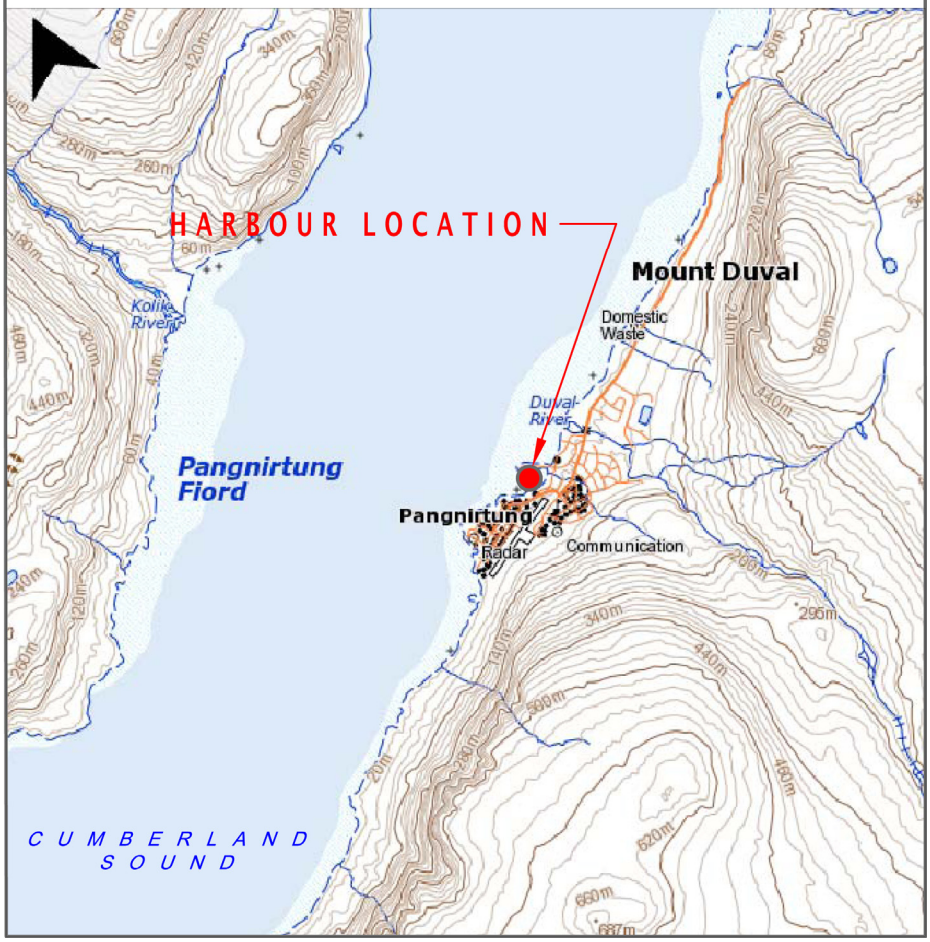
DFO has the responsibility for ensuring that the management of petroleum products storage and dispensing systems at the Harbour Development Project, Pangnirtung, Nunavut is in accordance with the most current legislation.

Petroleum products and allied petroleum products are defined in the Regulations and include product such as diesel fuel.

1.1 Harbour Location

PANGNIRTUNG, NUNAVUT

Latitude/Longitude:
Degrees, Minutes, Seconds: 66° 8' 55" N 65° 42' 18" W
Decimal Degrees: 66.149° N 65.705° W
UTM Coordinates: 20W 377969 7339137
Topographic Map Sheet Number: 026I04



2.0 SCOPE OF CONTINGENCY PLAN

The site-specific emergency plan included in this document applies only to the petroleum product dispensing systems identified in this document. This plan addresses emergencies related to fire or product release associated with the noted dispensing systems only, and focuses mainly on the environmental and the human health and safety aspects of the plan.

Spills of petroleum products cannot be entirely prevented; however, the impacts of spills can be minimized by establishing a predetermined line of response and action plan. The remote location of developments in Nunavut and the environmental sensitivity of the region underlines the necessity for good spill contingency planning.

3.0 EMERGENCY PLAN AVAILABILITY AND USAGE

A copy of the site-specific emergency contact list will be kept on site.

4.0 FUEL DISPENSING SYSTEMS AND SURROUNDINGS

4.1 System Description

All diesel fuel used at the site by DFO contractors is delivered by fuel dispensing trucks owned and operated by Pangnirtung Eskimo Co-op Limited.

Diesel fuel is transferred from the dispensing truck to vehicles via an electric fuel dispensing pump and a rubber fuel transfer hose with a manually operated discharge nozzle. When not in use, the diesel fuel transfer hose is coiled inside the cabinet in the truck

4.2 Delivery Truck Locations and Surroundings

The contractors on site usually require fill-up at periodic times based on their construction activities and the number of equipment that is working at the site. The site generally utilizes 1-2 excavators (345/365) and 1-3 off–road HM400-2 Rock Trucks. The fuel delivery location is usually located a minimum of one hundred meters from the salt water of the Pangnirtung Harbour.

The site area in the vicinity of the harbour exterior is relatively level with a slight slope towards the adjacent municipal roads

5.0 PETROLEUM PRODUCTS IN SYSTEMS

Diesel fuel is dispensed for operating contractor’s equipment at the site. A summary of the hazards associated with diesel fuel and gasoline and the first aid measures and precautionary measures for diesel fuel are included in the following sections.

5.1 Hazards of Diesel Fuel

Diesel fuel is a combustible liquid and a toxic material. Diesel fuel is rated as a slight health hazard, a moderate flammability hazard and an insignificant reactivity hazard. Diesel fuel can be easily ignited by heat, sparks or flames. Diesel fuel vapors are heavier than air and may collect in low-lying areas. Human exposure to diesel fuel can be through dermal contact, ingestion or inhalation. Acute exposure to diesel fuel can result in headaches and other symptoms of central nervous system (CNS) depression, such as nausea and dizziness, as well as a burning sensation in the chest following inhalation. Aspiration into the lungs can cause severe pneumonitis, with coughing, gagging, shortness of breath, chest pain and/or pulmonary edema. Ingestion may produce nausea, vomiting and cramping.

5.2 Precautionary Measures – Diesel Fuel

When handling diesel fuel or gasoline, the following precautionary measures should be used:

- **Personal Protective Equipment**
  - **Gloves** – Nitrile, Viton™ or polyethylene preferred.
  - **Eye Protection** – Chemical safety goggles or face shield, as a good general safety practice.
  - **Respiratory Protection** – NIOSH approved. SCBA or airline respirator with escape cylinder for confined spaces or work with sulphur-containing product. If an air-purifying respirator is appropriate, use organic vapor cartridges. A qualified occupational health and safety professional should advise on respirator selection.
  - **Clothing & Footwear** – Coveralls to prevent skin contact with product. If clothing or footwear becomes contaminated with product, completely decontaminate it before re-use, or discard it.

- **Handling Procedures and Equipment** – Keep containers closed. Keep work area free of ignition sources. Use non-sparking equipment, explosion-proof ventilation and intrinsically safe electrical equipment. Ground handling equipment.

- **Leak and Spill Procedure** – Keep unauthorized persons away. Eliminate all sources of ignition. Ventilate area. Stop leak if it can be done safely. Prevent entry into sewers, waterways or confined spaces. Absorb or cover with dry earth, sand or other non-combustible material and use clean, non-sparking tools to transfer to container.

- **Waste Disposal** – Consult local authorities for advice.

6.0 EMERGENCY RESPONSE – PRODUCT RELEASES

6.1 Minor and Significant Releases

The following are considered to be significant spills or leaks from a petroleum product storage system: any spill or leak that could threaten public health and safety, or reach a harbour or other body of water; any ongoing leak from a storage tank system; or any spill or overfill greater than 70 L.

The following are considered to be minor spills or leaks from a petroleum products storage tank system: any spill or leak that does not threaten public health and safety, and can not reach a harbour or other body of water; a leak of less than 70 L from a storage tank system, where the leak is no longer ongoing; or a spill or overfill less than 70 L.

The most probable minor product release at the site would occur as a result of minor spillage during the filling of equipment with diesel fuel, as the result of minor leakage or spillage during on-site dispensing of diesel fuel , or as the result of minor leakage from aboveground diesel fuel truck or hoses. The most probable significant product release at the site would occur as a result of overfilling the contractors' vehicles, as the result of leakage or spillage during on-site dispensing of diesel fuel or the result of leakage from the delivery trucks.

6.2 Prevention of Product Releases

The following measures will reduce the likelihood of occurrence of product releases at the storage tank systems:

1. Installation of suitable vehicle protection systems around the fuel delivery truck systems.

2. Installation of suitable supports and protection from impacts (e.g., proper location of fuelling vehicles.

3. Provision of spill overflow preventer/secondary containment on diesel fuel transfer trucks – each vehicle is equipped with an automatic floats b which prevents the overfilling of fuel during refueling operations.

4. Prohibition of vehicle movement in and around the area while diesel fuel refueling operations are underway.

5. Completion of regular inspections and maintenance of fuel dispensing systems, including the dispenser and pumping systems, hoses and pipelines.

6. The contractor periodically checks all vehicles to ensure that they are running properly and no leaks of fuel or other products are present in the vehicles.

7. Following standard operating procedures during all petroleum products delivery and dispensing operations.

8. Full-time attendance of on-site personnel during all petroleum products delivery and dispensing operations.

9. Draining petroleum products transfer hoses before moving the hoses around the storage tank and refueling areas.

6.3 Preparation for Product Release Emergencies

The following measures will prepare the site for product release emergencies:

1. Development of a site-specific emergency / contingency plan.

2. Posting of an emergency contact list in the vicinity of the site.

3. Ensuring that, as a minimum, a fully charged ABC fire extinguisher is available on the site.

4. Ensuring that the personnel who operate, inspect or maintain the storage tank systems are familiar with the emergency plan and familiar with the location and usage of emergency response equipment, including fire extinguishers.

5. Ensuring that arrangements are made, where necessary, with local contractors to assist, if needed, in the event of an on-site emergency.

6.4 Emergency Response – Product Releases

In case of a significant or minor spill or leak from the fuel delivery trucks, the individual discovering the product release should follow the emergency response plan outlined below.

1. Contact the CCG Environmental Emergencies Line at 1-800-563-9089. Please note that all spills or leaks are reported to the CCG Environmental Emergencies Line, whether they occur on land or water.

2. Shut down petroleum products transfer operations, if they are in progress.

3. Shut off any ignition sources in the area (e.g., motors, electrical circuits, etc.).

4. Enforce “No Smoking” in the area.

5. Refer to the MSDSs in Appendix A for more detailed information on diesel fuel.

6. Contain the escaped petroleum products if possible and safe to do so. If possible, prevent the release from reaching any open drains or catch basins or the adjacent harbour. Dependent on the volume of the release, the escaped petroleum products may be contained with sorbent materials from the on-site spill kit or by constructing berms from sand, soil or other available materials. If possible, berms should be constructed around open drains and catch basins located down-gradient from the release point or between the harbour and the release point. Soil berms (i.e., a berm constructed by placement of a raised row of soil) are normally effective to contain petroleum products migration on soil, rock, asphalt and concrete. If sorbent materials are used to contain escaped petroleum products, the sorbent materials must be replaced continually when saturated with petroleum products.

7. Isolate leaking components on the fuel dispensing systems, if applicable and possible.

8. Arrange for the immediate removal of the remaining petroleum products from the leaking tanks, if necessary.

9. Take reasonable steps to recover or remove the escaped petroleum products. All personnel involved in the cleanup should wear appropriate personal protective equipment. Personnel on site should assess the potential for disturbance of the surrounding area and wildlife by the release or the planned clean up operations. All petroleum products contaminated soil, groundwater or surface water, contaminated berm materials and contaminated absorbent materials should be excavated/removed and disposed of off-site at an approved petroleum products disposal facility.

10. Inspect the storage systems and arrange via the Emergency Plan Coordinator for upgrade or replacement, if required.
11. When reporting a spill or leak, personnel will be asked to provide various information including:
    - Name and telephone number of the person reporting the spill;
    - Report date and time of spill;
    - Location of spill and direction of spill movement;
    - Extent of injuries, if any;
    - Classification, name and quantity of dangerous good spilled;
    - Party responsible;
    - Cause of spill;
    - Has the spill ceased or been terminated or is it continuing;
    - Extent of contaminated area;
    - Factors affecting spill recovery;
    - Containment measures;
    - Response actions to date;
    - Request for assistance;
    - Potential health and environmental hazards; and,
    - Comments and recommendations (if any).

6.5 Recovery from Product Release Emergency

After a product release emergency has occurred on the site, various measures may be required:

1. Once the product release emergency has been removed, the Emergency Plan Coordinator must complete a DFO Emergency Response / Environmental Incident Record Form to document the details of the incident.
2. It may be necessary to complete subsurface investigations and/or remediation of impacted soil, groundwater or surface water in the vicinity of the storage tank systems.
3. If necessary, the removal and disposal of petroleum hydrocarbon impacted soil, groundwater or surface water or spilled petroleum products must be carried out in accordance with existing environmental regulations.
4. The storage tank systems must be fully inspected, with any damaged components repaired or replaced before the storage tank system is put back into service. Dependent on the extent of the damage, particularly if the product release emergency was also associated

with a fire emergency, it may be necessary to remove the petroleum products from the storage tank systems and replace the entire system.

5. A temporary petroleum products storage tank system may be required for the site until the damaged system is inspected and repaired or replaced.
6. Dependent on the nature and circumstances of the product release emergency, it may be necessary to revise the storage tank system's operations, inspection or maintenance procedures or to revise the emergency plan.

7.0 EMERGENCY RESPONSE ROLES AND RESPONSIBILITIES

7.1 Key Personnel/Groups

Key personnel/groups in the implementation of this spill contingency plan include:

1. Emergency Plan Coordinator
2. Territorial Department of Environment
3. DFO Representative on Site
4. DFO Small Craft Harbours staff – Winnipeg, MB
5. Personnel who operate the fuel dispensing system
6. The current local contractor on site
7. Local emergency responders (i.e., RCMP, fire department, local contractors)

7.2 Roles and Responsibilities

The roles and responsibilities of each of these personnel/groups with respect to the implementation of the emergency plan follow:

DFO Personnel, Pangnirtung or Winnipeg, MB

1. Ensure that the emergency plan is maintained up-to-date.
2. Ensure that an Emergency Plan Coordinator is in place.
3. Ensure that the Emergency Plan Coordinator is trained with respect to the content and implementation of the emergency plan and the usage of emergency response equipment.

Emergency Plan Coordinator

1. Is the main person to coordinate the implementation of the emergency plan.

2. Ensure that a copy of the emergency plan is provided to the subject site.

3. Ensure that a copy of the emergency plan is provided to the local fire department and to any local contractors retained by DFO to assist, if necessary, in the implementation of the emergency plan.

4. Ensure that the local diesel supplier contact names and numbers are added to the emergency contact list.

5. Ensure that a copy of the emergency contact list is posted on the job site.

6. Confirm the type and location of emergency response equipment available at the site.

7. Ensure that the necessary emergency response equipment is maintained at the site.

8. Ensure that personnel who operate, inspect and maintain the storage tank system are familiarized with the emergency plan and the location and usage of emergency response equipment.

9. Ensure that arrangements are in place with local contractors to provide equipment and materials, if necessary, to assist in emergency responses at the site, and that the contact names and numbers are on the emergency contact list.

Personnel Who Operate, Inspect or Maintain Fuel Dispensing Systems

1. Familiarize with the spill contingency plan.

2. Familiarize with the location and usage of emergency response equipment.

3. Follow the emergency plan if necessary.

4. Contact the local emergency responders in the event of an emergency.

Local Emergency Responders

1. **Local Fire Department** - The local fire department will respond to fire emergencies, when called. The local fire department will take control of the emergency response for fires, while on site.

2. **Local Contractors** – Local contractors will provide equipment (e.g., backhoe, loader, boat) and/or materials (e.g., sand, clean fill), at the request of the Emergency Plan Coordinator, to assist DFO in an emergency response at the site. 8.3

Emergency Contact List:

Emergency Contact	Telephone Number
Emergency Plan Coordinator – Peter Jacobsen, Tower Arctic Ltd.	867-473-4114
NT-NU Spill Report Line (24 Hours) Government of Nunavut – Department of Environment Environment Canada will be contacted by Territorial Authorities	867-920-8130
DFO – Small Craft Harbours – Winnipeg, MB	204-391-2116
DFO Inspector on Site – Pangnirtung, NU	902-476-1203
Diesel Fuel Supplier: Eskimo Co-op Limited Alan Patterson	867-473-8936
AANDC's Manager of Field Operations:	867-975-4295
Hamlet of Pangnirtung	867-473-8953
Pangnirtung Fire Department	867-473-4422
RCMP – Pangnirtung For access to CCG Spill Kit on site	867-473-0123
CCG Search and Rescue	902-427-8200
CCG Environmental Emergencies Line (24 hours)	1-800-265-0237

8.0 TRAINING REQUIREMENTS

Training associated with this emergency plan will consist primarily of review and general familiarization with the emergency plan, the emergency contact list and the location and usage of on-site emergency response equipment and resources. The Emergency Plan Coordinator will review the site-specific emergency plan and is familiar with the location and usage of the on-site emergency response equipment and resources. The Emergency Plan Coordinator will ensure that all site personnel and contractors involved in the fuel dispensing operations, and all contractors retained by DFO to provide assistance or resources during an emergency response at the site, review the site-specific emergency plan, sign off on the compliance agreement, and are familiar with the location and usage of the on-site emergency response equipment and resources.

The current supplier of diesel fuel has been trained in the following course:

- Department of Community and Government Services
  Petroleum Products Division Aviation Fuel Handling Course Parts 1-6

- The Co-operative also has a Procedure Book for the Handling of gasoline and diesel fuel spills

9.0 EMERGENCY RESPONSE EQUIPMENT

The following constitutes the availability of emergency spill contingency equipment or materials on site:

The emergency response equipment stored on the fuel truck normally consists of a spill response kit and a fire extinguisher. Available site information indicates that three spill response kits are present in the on-site yard area. Each of these spill kits contains absorbent pads and loose absorbent materials. A fully stocked spill kit and a fully charged ABC fire extinguisher should be readily accessible in the petroleum products storage tanks areas. As a minimum, each spill kit should contain:

- One absorbent “Loose Particulate” (50 L bag);
- Thirty absorbent pads (17” x 19” x 3/8”);
- Three disposal bags (large).

The current contractor, Tower Arctic Ltd., on site has an universal Spill Kit CSKJCARRIER95U which contains the following materials:

- 150 universal pads
- 12 universal socks 3”x4’
- 6 universal pillows 8”x 18”
- 1 pair of splash goggles
- 3 epoxy sticks
- 4 disposal bags
- 1 set of instructions
- 1 95 Gal. wheeled overpack

CCG Emergency Response Equipment & Materials - At the Pangnirtung Harbour site, there are three (3) trailers owned by CCG Emergency Response, Central and Arctic Region, that is stored for a marine emergency. The local RCMP has keys for these units in the case of an emergency.

APPENDIX A

NT-NU Spill Report Form

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

Material Safety Data Sheets

Diesel Fuel

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name	**Diesel/Bio-diesel/Distillate**
Revision date	06-23-2011
Version #	03
CAS #	Mixture
Product code	2181
Product use	Fuel. Refinery feedstock.
Synonym(s)	Premium Diesel, EP 3000, Railroad Diesel, Seasonal Diesel, Premium Mine Diesel, Mine Diesel, Summer Diesel, Winter Diesel, Dyed (Purple) Diesel, Export Diesel, Electric Generating Diesel, ARDS Light Distillate, ARDS Heavy Distillate/Diesel, Crude Straight run Diesel, MDU Unifinate/Diesel, CAT light Cycle oil, DHU Low Pour Distillate, DHU High Pour Distillate, #2 Fuel Oil.
Manufacturer/Supplier	Consumers' Co-operative Refineries Ltd. P.O. Box 260 550E, 9th Avenue North Regina, SK S4P 3A1 CA Telephone Number: (306) 721-5353 Contact Person: Safety Advisor
Emergency	24 Hour Emergency Telephone (613) 996-6666 - Canutec
Supplier	Federated Co-operatives Ltd. P.O. Box 1050 401 - 22nd Street East Saskatoon S7K 3M9 CA
Emergency telephone	(613) 996-6666
Telephone Number:	(306) 244-3447

2. Hazards Identification

Physical state	Liquid.
Emergency overview	WARNING! Combustible liquid and vapor. Aspiration hazard: Harmful if swallowed - may enter lungs if swallowed or vomited. High vapor concentrations may cause drowsiness and irritation of the eyes or respiratory tract. Prolonged or repeated skin contact may cause drying, cracking, or irritation. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
OSHA regulatory status	This product is hazardous according to OSHA 29 CFR 1910.1200.
Potential health effects	
Routes of exposure	Ingestion. Eye contact. Inhalation. Skin contact.
Eyes	May cause eye irritation. Contact may cause irritation with redness, tearing, pain, and/or blurred vision.
Skin	Prolonged or repeated contact may dry skin and cause irritation.
Inhalation	Vapors may cause headache, fatigue, dizziness and nausea. May cause central nervous system effects.
Ingestion	Ingestion may result in vomiting; aspiration (breathing) of vomitus into lungs must be avoided as even small quantities may result in aspiration pneumonitis.
Potential environmental effects	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

3. Composition / Information on Ingredients

Components	CAS #	Percent
Fuels, diesel	68334-30-5	95 - 100
Canola Oil - Fatty Acid Methyl Ester	129828-16-6	0 - 5

Rapeseed Oil - Fatty Acid Methyl Ester	73891-99-3	0 - 5
Soy Methyl Esters from Vegetable Oil	67784-80-9	0 - 5

4. First Aid Measures

First aid procedures

Eye contact Immediately flush with plenty of water for at least 15 minutes. Remove any contact lenses. Get medical attention immediately.

Skin contact Remove contaminated clothing. Wash with soap and water. Get medical attention if irritation develops and persists. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.

Inhalation Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately!

Ingestion Rinse mouth thoroughly with water and give large amounts of milk or water to people not unconscious. DO NOT induce vomiting because of danger of aspirating liquid into lungs. Call a physician or poison control center. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Never give anything by mouth to an unconscious person.

Notes to physician Treat symptomatically. The effects might be delayed.

General advice Get medical attention if any discomfort develops.

5. Fire Fighting Measures

Flammable properties The product is combustible, and heating may generate vapors which may form explosive vapor/air mixtures. Material will float and can be re-ignited on surface of water.

Extinguishing media

Suitable extinguishing media Carbon dioxide, regular foam, dry chemical, water spray, or water fog.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Protection of firefighters

Specific hazards arising from the chemical Vapors may form explosive mixtures with air. Vapors are heavier than air and may travel along the floor and in the bottom of containers. Vapors may be ignited by a spark, a hot surface or an ember.

Protective equipment and precautions for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions Move containers from fire area if you can do it without risk. Use water spray to cool unopened containers. Cool containers with flooding quantities of water until well after fire is out.

Hazardous combustion products Carbon monoxide and carbon dioxide.

6. Accidental Release Measures

Personal precautions Stay upwind. Ventilate closed spaces before entering them. Wear suitable protective clothing, gloves and eye/face protection. For personal protection, see section 8 of the MSDS.

Environmental precautions Prevent further leakage or spillage if safe to do so. Prevent spreading over a wide area (e.g. by containment or oil barriers). Do not contaminate water. Contact local authorities in case of spillage to drain/aquatic environment.

Methods for containment Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Prevent entry into waterways, sewer, basements or confined areas.

Methods for cleaning up Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible.

Small Spills: Absorb spillage with non-combustible, absorbent material.

Large Spills: Remove with vacuum trucks or pump to storage/salvage vessels. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Wash area with soap and water. Ensure that waste and contaminated materials are collected and removed from the work area as soon as possible in a suitably labeled container.

7. Handling and Storage

Handling

Access to work area should be restricted to people handling the product only. Should be handled in closed systems, if possible. Avoid contact with eyes, skin, and clothing. Avoid inhalation of vapors. Wear appropriate personal protective equipment. Ground container and transfer equipment to eliminate static electric sparks. The product is a combustible liquid. Take the necessary precautionary measures. Vapors are heavier than air and may travel along the floor and in the bottom of containers. Immediately change contaminated clothes. Do not eat, drink or smoke when using the product. Be aware of potential for surfaces to become slippery. Observe good industrial hygiene practices.

Storage

Keep away from heat, sparks and open flame. Keep in a cool, well-ventilated place. Keep away from food, drink and animal feeding stuffs. Store away from incompatible materials.

8. Exposure Controls / Personal Protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Fuels, diesel (68334-30-5)	TWA	100 mg/m3	Inhalable fraction and vapor.

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value
Fuels, diesel (68334-30-5)	TWA	100 mg/m3

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value	Form
Fuels, diesel (68334-30-5)	TWA	100 mg/m3	Vapor and aerosol.

Canada. Ontario OELs. (Ministry of Labor - Control of Exposure to Biological or Chemical Agents)

Components	Type	Value	Form
Fuels, diesel (68334-30-5)	TWA	100 mg/m3	Vapor and aerosol.

Engineering controls

Provide adequate ventilation and minimize the risk of inhalation of vapors and oil mist. Provide easy access to water supply and eye wash facilities. Use explosion-proof equipment.

Personal protective equipment

Eye / face protection

Wear approved safety goggles.

Skin protection

Wear chemical-resistant gloves, footwear and protective clothing appropriate for risk of exposure. Contact glove manufacturer for specific information.

Respiratory protection

Do not breathe mist or vapor. In case of inadequate ventilation or risk of inhalation of vapors, use suitable respiratory equipment. Wear NIOSH approved respirator appropriate for airborne exposure at the point of use.

General hygiene considerations

Do not eat, drink or smoke when using the product. Wash hands after handling. Launder contaminated clothing before reuse. Handle in accordance with good industrial hygiene and safety practices.

9. Physical & Chemical Properties

Appearance	Not available.
Color	Straw.
Odor	Hydrocarbon-like.
Odor threshold	Not available.
Physical state	Liquid.
Form	Not available.
pH	Not available.
Melting point	Not available.
Freezing point	Not available.
Boiling point	302 - 734 °F (150 - 390 °C)
Flash point	> 104 °F (> 40 °C) Closed Cup

Evaporation rate	Not available.
Flammability limits in air, upper, % by volume	7.6 %
Flammability limits in air, lower, % by volume	0.6 %
Vapor pressure	< 2 psia
Vapor density	Not available.
Specific gravity	< 1 @ 40 °C
Solubility (water)	Insoluble
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	1.7 - 4.1 cSt @ 40 °C

10. Chemical Stability & Reactivity Information

Chemical stability	Stable under normal storage and handling conditions.
Conditions to avoid	Heat, sparks, flames, elevated temperatures. Contact with incompatible materials. Do not pressurize, cut, weld, braze, solder, drill, grind or expose empty containers to heat, flame, sparks, static electricity, or other sources of ignition; they may explode and cause injury or death.
Incompatible materials	Strong acids. Strong oxidizing agents.
Hazardous decomposition products	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.
Possibility of hazardous reactions	Polymerization will not occur. No dangerous reaction known under conditions of normal use.

11. Toxicological Information

Acute effects	Swallowing or vomiting of the liquid may result in aspiration into the lungs. Breathing of high concentrations may cause dizziness, light-headedness, headache, nausea and loss of coordination. Continued inhalation may result in unconsciousness.
Local effects	Prolonged or repeated contact may dry skin and cause irritation.

US ACGIH Threshold Limit Values: Skin designation

Fuels, diesel (CAS 68334-30-5)	Can be absorbed through the skin.

Sensitization	May cause eczema-like skin disorders (dermatitis).
Chronic effects	Prolonged or repeated contact with skin may cause redness, itching, irritation, eczema/chapping and oil acne.
Carcinogenicity	IARC, NTP and OSHA: Not listed.

ACGIH Carcinogens

Fuels, diesel (CAS 68334-30-5)	A3 Confirmed animal carcinogen with unknown relevance to humans.

Epidemiology	Pre-existing skin conditions including dermatitis might be aggravated by exposure to this product.
Mutagenicity	Knowledge about mutagenicity is incomplete.
Reproductive effects	Knowledge about reproductive effects is incomplete.
Further information	Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.

12. Ecological Information

Ecotoxicity	Oil spills are generally hazardous to the environment.
Environmental effects	The product contains volatile organic compounds which have a photochemical ozone creation potential.
Persistence and degradability	The degradability of the product has not been stated.
Bioaccumulation / Accumulation	No data available on bioaccumulation.

Partition coefficient (n-octanol/water)	Not available.
Mobility in environmental media	The product is insoluble in water. It will spread on the water surface while some of the components will eventually sediment in water systems. The volatile components of the product will spread in the atmosphere.

13. Disposal Considerations

Disposal instructions	Disposal of this product, solutions, or containers must at all times comply with the requirements of the environmental protection and waste disposal legislation and any regional local authority requirements.
Waste from residues / unused products	The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

14. Transport Information

DOT

Basic shipping requirements:

UN number	UN1202
Proper shipping name	Diesel Fuel
Hazard class	Combustible Liquid
Packing group	III
Labels required	Combustible Liquid

Additional information:

Special provisions	144, B1, IB3, T2, TP1
Packaging exceptions	150
Packaging non bulk	203
Packaging bulk	242
ERG number	128

IATA

Basic shipping requirements:

UN number	1202
Proper shipping name	Diesel Fuel
Hazard class	3
Packing group	III

Additional information:

ERG code	3L

IMDG

Basic shipping requirements:

UN number	1202
Proper shipping name	Diesel Fuel
Hazard class	3
Packing group	III
EmS No.	F-E, S-E

TDG

Basic shipping requirements:

Proper shipping name	Diesel Fuel
Hazard class	3
UN number	UN1202
Packing group	III

15. Regulatory Information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification(40 CFR 707, Subpt. D)

Not regulated.

CERCLA (Superfund) reportable quantity (lbs) (40 CFR 302.4)

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - No Delayed Hazard - No Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No
Section 302 extremely hazardous substance (40 CRF 355, Appendix A)	No
Section 311/312 (40 CFR 370)	No
Drug Enforcement Administration (DEA) (21 CFR 1308.11-15)	Not controlled
Canadian regulations	This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.
WHMIS status	Controlled
WHMIS classification	B3 - Flammable/Combustible D2B - Other Toxic Effects-TOXIC

WHMIS labeling

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

State regulations

US - Pennsylvania RTK - Hazardous Substances: Listed substance

Fuels, diesel (CAS 68334-30-5) Listed.

16. Other Information

HMIS® ratings	Health: 2 Flammability: 2 Physical hazard: 0
NFPA ratings	Health: 2 Flammability: 2 Instability: 0
Disclaimer	The information in the sheet was written based on the best knowledge and experience currently available.
Issue date	06-23-2011