Oil and Hazardous Material Spill Contingency Plan

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Prepare By:

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Approved By:

The Board of Roche Bay PLC

Preamble

The Spill Contingency Plan is effective from June 1, 2006 until August 31, 2008 and applies to all projects and operations of Roche Bay plc**.** Chandler & Cooper, Suite 202 Parnaivik Building, P.O. Box 2021, Iqaluit, Nunavut X0A 0H0.

It has been prepared for the Nunavut Water Board to be licensed in the area of Roche Bay, latitude 68°15' – 68°30' and longitude 82°00' – 84°00'. This Plan will be distributed to all employees and personnel directly involved in the project via e-mail.

Additional copies and updates of this Plan may be obtained on our website http://www.rochebay.com or via e-mail candace@rochebay.com.

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Introduction

The purpose of Roche Bay plc's Oil and Hazardous Material Spill Contingency Plan is to provide a plan of action for every foreseeable spill event at the Roche Bay operation. It defines the responsibilities of key response personnel and outlines the procedures for responding to spills in a way that will minimize potential health and safety hazards, environmental damage, and clean up costs. The Plan has been prepared to provide easy access to all the information needed in dealing with a spill.

The map (Figure 1) on the following page shows the development area at Roche Bay. Currently there is no infrastructure at the site. Exploration had been undertaken in the early 1980s but was then put on hold. The present goal is to move the project into feasibility stages through exploratory drilling and to clear the site of the waste that had been left over from previous explorations. Hazardous materials used on site will be minimal, but they will include gasoline and oil which will be stored in drums and transported to the site by ATV from the airstrip. Waste products produced at the site will be flown out and then shipped South on the sealift.

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

- to comply with existing regulations;
- to provide such protection of the environment as is technically feasible and economically practical;
- to cooperate with other groups working on the protection of the environment;
- to anticipate future pollution control requirements and to make provision for them; and
- to keep employees, government officials and the public informed.

It is the belief of the Company that the best way to avoid ever having to implement this Spill Contingency Plan is by taking proper and necessary precautions during the handling of the materials. As part of this, we will ensure that barrels are always moved or placed on metasorb pads and that a barrel is not opened without a pad under it. We will also ensure that at least two spills kits are on hand at all times.

Description of the facility
Facility: Ten person camp comprised of seven Weatherhaven modules and incinerator toilet.
Location: Fuel will be stored in the appropriate facility at a safe distance from the accommodations and well away (at least 90 feet from all streams) from water bodies. To prevent a spill, fuel stored in drums will be located in a natural depression, if possible in an area of low permeability. The containers will be situated in a manner that allows easy access and the removal of containers in the event of a spill. Any fuel caches in excess of 20 drums will be inspected daily.
Size: Fuel stored in sealed 205 litre (45 gallon) steel drums.
Storage capacity:
- 200, 45G containers of diesel
- 20-30, 45G containers of unleaded gasoline
- 50, 100lb tanks of propane

Figure 1: Large Scale Map of Site Plan and Surrounding Area at Roche Bay

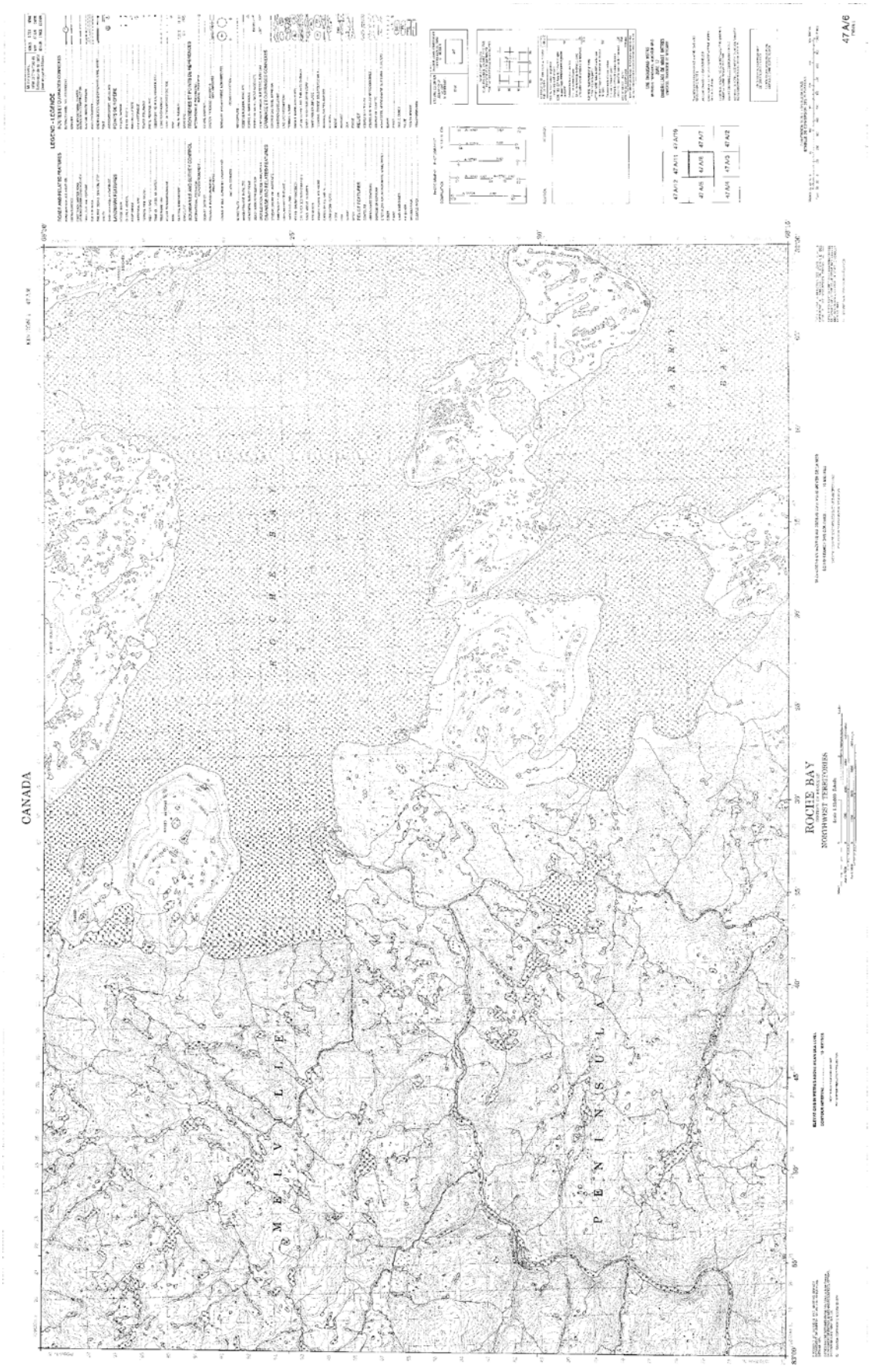
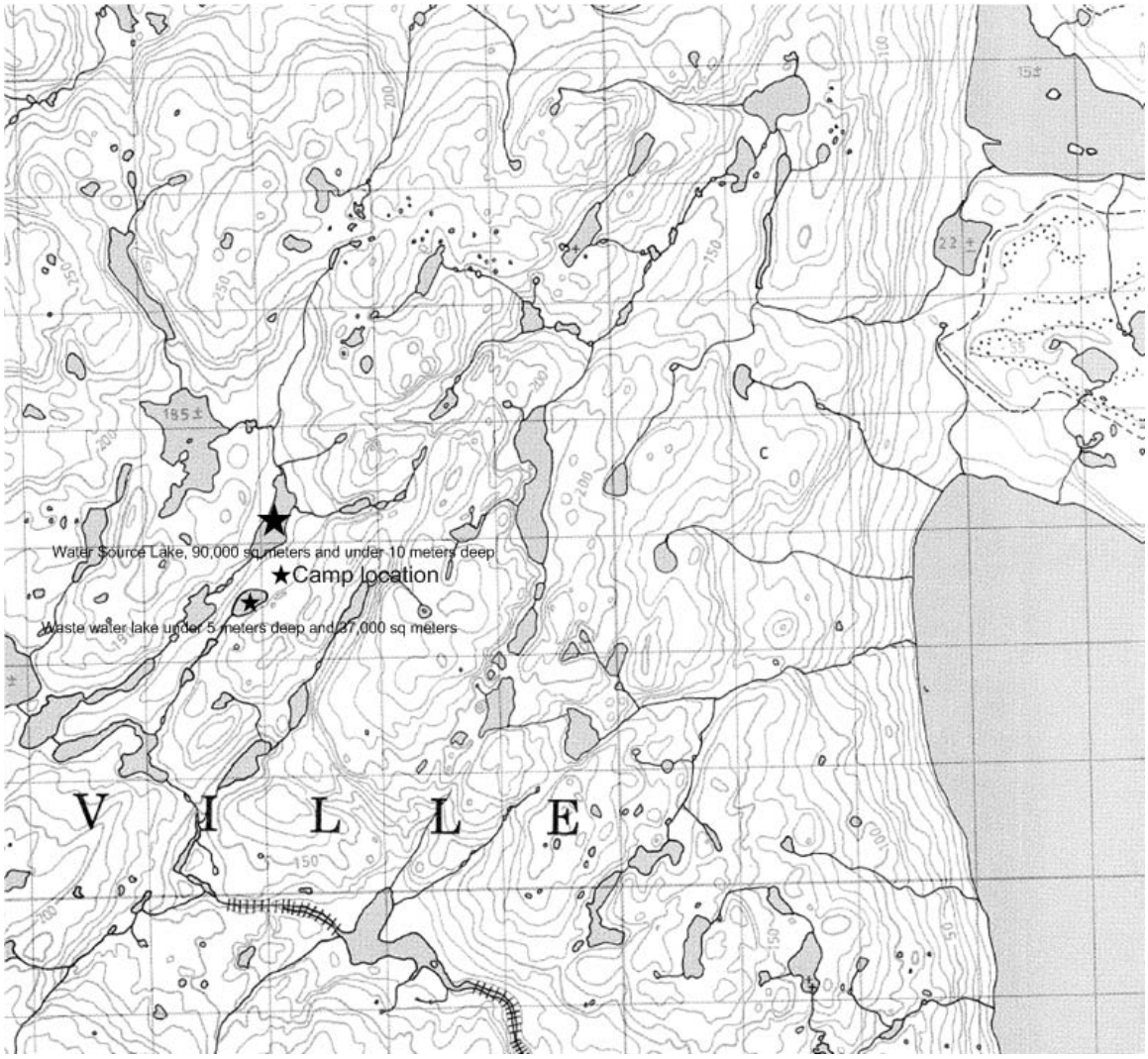


Figure 2: Site Specific Plan Drawings of Facilities

Figure 3 Site Specific Plan Drawings of Facilities



Response Organization

The Spill Response Team will comprise all employees and personnel who are present at the site of an undertaking. Generally, this should include the On-scene Coordinator and the Environmental/Safety Advisor who will run the weekly "tailgate safety meetings". The On-scene Coordinator is responsible for the managing of the entire undertaking and the Environmental/Safety Advisor is in charge of the management of petroleum products or hazardous materials. It is one of these two people who will be initially responsible for clean up activities.

In the event that the primary personnel are away from the site, it will be the responsibility of the first team member at the scene to assume spill activation procedures.

In the case of spill situation, the primary personnel who should already be onsite to activate the proper procedures are:

Benjamin J. Cox, President of Roche Bay plc

Keith Sharp, Acting On-scene Coordinator, Environmental/Safety Advisor

They may be reached 24 hours/day at 503-621-3286.

Initial Actions

This section is included to educate company personnel about the proper procedures for reacting to a spill.

The suggested course of action of the first person at a spill scene is the following:

(a) Be alert and considerate of your safety first. If possible, identify the product spilled;
(b) Assess the hazard to persons in the vicinity of the spill;
(c) If possible, without further assistance, control danger to human life;
(d) Assess whether the spill can be readily stopped or brought under control;
(e) If safe to do so, and if possible, try to stop the flow of material;
(f) Gather information of the status of the situation;
(g) Report the spill without delay to the Spill Response Team and ensure that the government is notified at the same time by the Nunavut 24-Hour Spill Report Line 867-920-8130; and
(h) Resume any effective action to contain, clean up, or stop the flow of the spilled product.

Reporting Procedures

All spills or potential spills of petroleum products or other hazardous materials must be reported to the 24-hour Spill Report Line to ensure that an investigation may be undertaken by the appropriate government authority. This should be done by either the On-scene Coordinator or the Environmental/Safety Advisor. If neither of these people is available at the time of a spill, the first Spill Response Team member who is present at the site is responsible for the reporting procedures.

Spill Reporting Procedures

1. Fill out the "Spill Report From" found in Appendix C as completely as possible before calling in the report.

2. Report IMMEDIATELY to Iqaluit using the 24-hour Spill Report Line

   24-HOUR SPILL REPORT LINE 867-920-8130

3. Where fax is available, follow up immediately by sending a copy of the Spill Report

   FAX: 867-873-6924

4. RCMP communications may be used if other means are not available.

NOTE: Telephone calls can be made collect by informing the Operator that you wish to report a spill.

Once the proper governmental authorities have been notified, attempts should be made to notify the On-scene Coordinator and Environment/Safety Advisor if they were not present at the time of the spill. The next people to be notified is the President of the Company, Benjamin Cox, by telephone at 503-892-3333 and a copy of the report should be e-mailed to him at bjc@rochebay.com as soon as is possible after the spill. A list of additional contact information that might be needed at the time of a spill can be found in Appendix D.

Further to the Spill Report Form, a detailed spill report must be submitted to the Indian and Northern Affairs' Water Resources Officer no later than thirty days after initially reporting the spill to the Spill Report Line.

Action Plans

Given the nature of the undertaking, the most likely spill possibilities would be leakage of the drums at the camp, spilling during transit, as a result of defective equipment, or through simple human error.

The risk of spills will be reduced through regular inspection and maintenance of all storage areas and equipment associated with fuel handling. These include:

- routine checks of fuel transfer hoses and cam lock;
- carefully monitor content in the receiving vessel during transfer;
- cleaning up drips and minor spills immediately;
- regularly inspect drums, tanks and hoses for leaks or potential to leak;
- training personnel, especially those who will be operators, in proper fuel handling and spill response procedures.

A record of these inspections and any remedial action will be maintained at camp.

Procedures for Spills on Rock

For spills on rock outcrops, boulder fields, etc.:

1. First responder or their designate obtains plastic tarp(s) and absorbent sheeting on site.
2. A berm of peat, native soil or snow is constructed down slope of the seepage or spill. The tarp is placed in such a way that the fuel can pool for collection and removal (e.g. at the foot of the berm). If there is a large volume of spilled product, pump the liquid into spare empty drums for sealing and disposal.
3. Absorbent sheeting is placed on the rock to soak up spilled oil, fuel, etc.
4. Multi Sorb (crushed lava rock) can be used to scrub the rock surface.
5. Saturated material is disposed of in an empty drum, which is then labeled and sealed. Alternatively, the pads may be wrung out into empty drum(s), the drums marked and then secured for eventual disposal.
6. Report the nature and volume of the spill to the 24-Hour Spill Line.

Procedure of Spills on Land

1. First responder or their designate obtains plastic tarp(s), absorbent sheeting, Multi Sorb or other ultra-dry absorbent and any other necessary spill containment equipment, pump, hoses, etc.

2. A berm of peat, native soil or snow is constructed down slope of the seepage or spill. The tarp is placed in such a way that the fuel can pool for collection and removal (e.g. at the foot of the berm). If there is a large volume of spilled product, pump the liquid into spare empty drums for sealing and disposal.

3. Apply a thin dusting of Multi Sorb or other ultra-dry absorbent to the groundcover may control petroleum-product sheen on vegetation.

4. Contact the 24-Hour Spill Line.

Procedure of Spills on Water

It is important to immediately limit the extent of spills. The following is the procedure to be implemented when an incident occurs:

1. If the spill is small, deploy hydrophobic (water repellent) absorbent pads on the water. Hydrophobic pads readily absorb hydrocarbons. Alternatively, an ultra-dry absorbent designed for use on water-based spills may be deployed.

2. If the spill is larger, ready several empty drums to act as refuge containers for the spills.

3. Deploy containment booms on the water surface to "fence in" the spill area gradually and to prevent it from spreading. Keep in mind those environmental factors such as high winds and wave action can adversely affect attempts at spill clean up. Absorbent booms can then be deployed to encircle and then absorb any spillage that may have escaped the containment boom.

4. Once a boom has been secured, a skimmer may be brought on scene to help capture the hydrocarbon. Once captured, the product should be pumped into the empty fuel drums and held for disposal.

5. Contact the 24-Hour Spill Line.

Procedure of Spills on Snow and Ice

By its nature, snow is an absorbent and fuel spilled on snow is collected with relative ease using either a shovel or loader, depending on the size of the spill.

1. Assess the nature of the spill. Necessary equipment might include shovels, plastic tarps, empty drums and/or wheeled equipment.

2. Shovel or scrape contaminated snow and deposit in empty fuel drums. If the spill is more extensive, build peat-bale berms or compacted snow berms with plastic overtop, around the affected area.

3. Contact the 24-Hour Spill Line and ask for instructions on the preferred disposal method (e.g. storage in sealed drums, incineration or deposit in a designated line containment area on land).

Procedure for Spills on Ice

Spills on ice are handled similarly to those on snow. However, as ice presents the added danger of immediate access to water, care must be taken to respond quickly to such spills. Should fuel seep or flow through cracks or breaks in the ice, despite all precautions, assistance should be sought immediately.

1. Construct a compacted snow berm around the edge of the spill area.

2. Although hard ice will slow or prevent fuel entry to the receiving waters below, all contaminated snow and ice, as well as objects embedded in the ice (such as gravel or frozen absorbent pads) must be scraped from the ice surface and disposed of in an appropriate manner.

3. Contact the 24-Hour Spill Line and ask for disposal instructions from the appropriate contact agencies.

Procedure for Loss of External Load

The loss of external loads of fuel, oil, or chemicals from aircraft almost certainly results in complete and catastrophic failure of the container that once held the product. Immediate response is imperative.

1. Mark the loss target with global positioning system (GPS) coordinates and relay to camp ASAP. Include quantity and type of load loss.

2. Camp should contact the 24-Hour Spill Line to receive direction.

3. Administer the appropriate procedures for spills on land, water, snow or ice.

Environmental Mapping

As considerable environmental impacts could occur as a result of a spill, detailed maps that illustrate the undertaking's relationship to environmentally sensitive areas are included with this plan in order to help both spill response personnel and regulators understand the risks posed by activities at the site. While there are some maps that are currently available based on previous baseline work, we do not feel that they adequately represent the site. More relevant mapping will be done next spring as part of a new round of baseline studies. When this work is completed, then the maps generated will be included in the section.

Resource Inventory

The following is a list of both the personnel and the specific types of equipment, machinery and tools available to respond to possible spills. This includes equipment to be used by a contractor responding to the spill on the Company's behalf. These resources are described in two categories:

• Resources available on site

- Personnel:
    - On-scene coordinator
    - Environmental/Safety advisor
    - 4 Drillers
    - 1 Cook
    - 1 Camp manager
    - 1 Geologist
    - 1 helpers
    - 2 consultants whose presence will fluctuate during the undertaking
- Equipment:
    - 1 Honda ATV with trailer
    - 2 Winco 5500W Industrial Diesel Generators
    - 1 piston water pump
    - 1 Winkie drill
    - 10-person Weatherhaven camp
    - Complete spill kits, oil absorbent kits
        - One kit will be located at the drill site during drilling operations and two at camp and where fuel is stored. All kits will be inspected on a monthly basis to ensure they are fully equipped and usable. Each kit contains (or similar):
            - 1- 45 Gallon, 16 gauge open top drum (with Bolting Ring & Gasket)
            - 1 48"x48"x1/16" Neoprene Pad (drain stop)
            - Plug N/Dike™ Granular, 1-gal US
            - Splash protective goggles
            - 2-PVC oil resistant gloves
            - 1-pkg polyethylene disposable bags (5mm) 10/Pack
            - 1-Shovel (spark proof)
            - 1-case T-12 3" x 12' Mini Boom, 4 booms/case

- 1-bale HP-256 17”x19”x1/2” Pads, 100pads/bale
- 1 bale of Sphag Sorb™

• Resources (personnel and equipment) available from other sources.

  - Please see Appendix D for additional sources and contact information.

Training and Exercises

It is not sufficient to prepare a spill contingency plan without testing its elements through mock spill control and communication exercises. On weekly a basis “tail gate” meetings which will cover all Workers Compensation Board details as well as safety and spill instruction. Training will take place on a rubber mat in order to avoid actual spilling during the procedure. During this training period, facility personnel will be properly instructed in the operation and maintenance of all equipment used on site in order to prevent any accidents.

At least one emergency response drill will be held during the season. A report will be prepared by the response coordinator following each drill, noting response time, personnel involved and any problems or deficiencies encountered. This report will be used to evaluate emergency response capability and remedy any deficiencies if required.

Further, prior to arrival at the site, each member of the Team will also be provided a copy of this contingency plan for review.

Conclusion

This spill contingency plan is dynamic and will evolve with the changing conditions on site, such as changes in the stage of development or in personnel. Once the Nunavut Water Board approves the spill contingency plan, this plan shall be updated annually, as a condition of the water license, to reflect changes in operation and technology.

Copies of this spill contingency plan will be readily available in all locations of concern at the site as well as with personnel entrusted with spill response duties.

Appendix A: Product Information

Gasoline

Approximately 20-30 barrels of gasoline will be transported in drums by ATV and will be stored with the rest of the camp equipment. Due to the quantity of gasoline that will be transported, there are no permits or authorizations required.

http://www.brownoil.com/msdsgasoline.htm

MSDS	Material Safety Data Sheet for Gasoline
Definition of terms	**1. Chemical Product** **MSDS Number:** U4080 **MSDS Date:** 01-1-99 **Product Name:** Gasoline **24 Hour Emergency Phone: (210) 979-8346** **Transportation Emergencies: Call Chemtrec at 1-800-424-9300** MSDS Assistance: (210) 592-4593 **Chemical Name:**Gasoline **Cas Number:** 8006-61-9 **Synonyms/Common Names:** This Material Safety Data Sheet applies to the following product descriptions for Hazard Communication purposes only. Technical specifications vary greatly depending on the product, and are not reflected in this document. Consult specification sheets for technical information. **Unleaded Ggasoline Blendstocks/Subgrades**- all types, grades, octanes, and vapor pressures. **California Air Resources Board (Carb) Gasoline-** all grades, octanes, vapor pressures, and oxygenate blends. **Reformulated Gasoline (RFG)**-all grades, octanes, vapor pressures, and oxygenate blends. **California Reformulated Gasoline (CARFG)**-all grades, octanes, vapor pressures, and oxygenate blends. **Conventional Gasoline**-all grades, octanes, vapor pressures, and oxygenate blends. **2. Composition, Information On Ingredients** **Product Use:** This product is intended for use as a fuel in engines or for use in engineered processes. Use in other applicatiions may result in higher exposures and require additional controls, such as local exhaust ventilation and personal protective

equipment.

Description: Reformulated gasoline is a complex mixture of hydrocarbons from a variety of chemical processes blended to meet standardized product specifications. Composition varies greatly and includes C? to C? hydrocarbons with a boiling range of about 80-473 degrees F. The following is a non-exhaustive list of common components, typical percentage ranges in product, and occupational exposure limits for each. Functional and performance additives may also be present at concentrations below reporting thresholds.

Component or Material Name	%	CAS Number	ACGIH Limits TLV -- STEL -- Units	OSHA Exposure Limits PEL -- STEL -- C/P – Units
Gasoline	90-100	Mixture	300--500--ppm	NA--NA--NA -- ----
Butane	<9	106-97-8	800--NA--ppm	NA--NA--NA -- ----
Pentane	<6	109-66-0	600--750--ppm	1000--NA--NA—ppm
n-Hexane	<4	110-54-3	50--NA--ppm	500--NA--NA—ppm
Hexan(other isomers)	<8	NA	500--1,000--ppm	NA--NA--NA-- ----
Benzene	1.2 - 4.9	7-4-2	0.5--2.5--ppm	1--5--NA—ppm
N-heptane	<2	14-82-5	400--500--ppm	500--NA--NA—ppm
Ethylbenzene	<2	100-41-4	100--125--ppm	100--NA--NA—ppm
Xylene (o,m,p, - isomers)	<11	1330-20-7	100--150--ppm	100--NA--NA—ppm
Cyclohexane	<2	110-82-7	300--NA--ppm	300--NA--NA—ppm
Trimethylbenzene	<4	25551-13-7	25--NA--ppm	NA-NA-NA- ----
Methyl-t-butyl ether (MTBE)	0-15	1634-04-4	40--NA--ppm	NA-NA-NA- ----
Toluene	<12	108-88-3	50-NA-ppm	200-300/500-NA-ppm
Ethyl-t-butyl ether (ETBE)	0-7	637-92-3	N/A-NA-ppm	NA-NA-NA- ----
t-amyl-methyl-ether	0-5	994-05-8	N/A-NA-ppm	NA-NA-NA- ----
Ethanol	0-11	64-17-5	1,000-NA-ppm	1,000-NA-NA-ppm

C=Ceiling concentration not to be exceeded at any tume. P= Peak concentration for a single 10 minute exposure per day.

3. Hazards Identification

Health Hazard Data:

1. The major effect of exposure to this product is central nervous system depression

and polyneuropathy.

2. Studies have shown that repeated exposure of laboratory animals to high concentrations of whole gasoline vapors at 67,262 and 2056 ppm has caused kidney damage and cancer of the kidney in rats and liver cancer in mice.

3. LARC has listed gasoline as possibly carcinogenic (2B) to humans with limited evidence in humans in the absence of sufficient evidence in experimental animals. NIOSH lists gasoline as a carcinogen with no further classification.

4. N-heptane and cyclohexane cause narcosis and irritation of eyes and mucous membranes. Cyclohexane has been reported to cause liver and kidney changes in rabbits. N-heptane has been reported to cause polyneuritis following prolonged exposure.

5. ACGIH lists benzene a human carcinogen with and assigned TLV of 0.5 ppm 8 hour TWA and a STEL of 2.5 ppm; IARC, NTP $ OSHA show sufficient evidence for classifying Benzene as a human carcinogen, see 29 CGR 1910.1028 for current PEL of 1 ppm and specific actions to take. Studies have shown that benzene can induce leukemia at concentrations as low as 1 ppm. Significant elevations of chromosomal aberrations have been corroborated among workers exposed to levels at mean concentrations less than 10 ppm. Based on risk assessment studies by Rinsky, an individual inhaling 1 ppm of benzene for 40 years, the odds of benzene-induced leukemic death were 1.7 times higher than those of unexposed workers.

6. MTBE is a mild irritant to the eye with an LC50 of 85 mg/m3 on 4 hr. exposure and an LD50 ~4 ml/Kg (RATS). An increase in anesthesia with increasing concentration (250,500 & 1000 ppm) was observed during a 90 day Test exposure. ACGIH has listed MTBE as an animal carcinogen (A3) based on tests in experimental animals at relatively high dose levels, by routes of administration, at sites, of histologic types, or by mechanisms not considered relevant to worker exposure. Available evidence suggests that MTBE is not likely to cause cancer in humans except under uncommon or unlikely routes of levels of exposure.

7. Trimethylbenzene (pseudocumene (1,2,4,) & mesitylene (1,2,5,)) has a PEL and TLV of 25 ppm 8 hr. TWA; the isomers may cause nervousness, tension, and anxiety and asthmatic bronchitis.

8. n-Hexane has been shown to cause polyneuropathy (peripheral nerve damage) after repeated and prolonged exposure, other hexanes show narcotic effects at 1000 ppm and are not metabolized like n-hexane.

9. Toluene can cause impairment of coordination and momentary loss of memory (200-500 ppm); Palpations, extreme weakness and pronounced loss of coordination (500-1500). The 100 ppm 8 hr. TWA and the 150 ppm STEL provides adequate protection.

10. The toxicological effects of ETBE and TAME have not been thoroughly investigated. ETBE and TAME are expected to be an inhalation hazard and a severe eye and moderate skin irritant.

Hazards of Combustion Products: Carbon monoxide and carbon dioxide can be found in the combustion products of this product and other forms of hydrocarbon

combustion. Carbon monoxide in moderate concentrations can cause symptoms of headache, nausea, vomiting, increased cardiac output, and confusion. Exposure to higher concentrations of carbon monoxide can cause loss of consciousness, heart damage, brain damage, and/or death. Exposure to high concentrations of carbon dioxide can cause simple asphyxiation by displacing available oxygen. Combustion of this and other similar materials should only be carried out in well ventilated areas.

Diesel Fuel

Approximately 200 containers (45 gallon barrels) of diesel will be transported in drums by ATV and stored with the rest of the camp equipment. Due to the quantity of diesel that will be transported, there are no permits or authorizations required.

http://www.equivashellmsds.com/

MATERIAL SAFETY DATA SHEET
Review Date: 04/29/2003

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

PRODUCT: GN LS Diesel 2 Winter 65/35

MSDS NUMBER: 400609E - 2
PRODUCT CODE(S): 02925

SECTION 2 PRODUCT/INGREDIENTS

CAS#	CONCENTRATION	INGREDIENTS
Mixture	100 %weight	#2 Diesel
68814-87-9	0 - 99.99 %weight	Full Range Straight Run Middle Distillate
64741-59-9	0 - 39.99 %weight	Light Catalytic Cracked Distillate
71-43-2	0.01 - 0.64 %weight	Benzene
7704-34-9	0 - 0.04 %weight	Sulfur

NOTE: H2S is a naturally occuring constituent in the petroleum stream and is
not added separately to the product.

SECTION 3 HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
Appearance & Odor: Bright and clear liquid (Tax Exempt Diesels - pale red
liquid). Oil-type odor.
Health Hazards: Hydrogen sulfide (H2S), an extremely flammable and toxic gas,
may be present. Causes severe skin irritation. Toxic and harmful if inhaled.
May be harmful or fatal if swallowed. Do not induce vomiting. May cause
aspiration pneumonitis.
Physical Hazards: Combustible Liquid.
NFPA Rating (Health, Fire, Reactivity): 2, 2, 0
Hazard Rating: Least - 0 Slight - 1 Moderate - 2 High - 3
Extreme - 4

Inhalation:
In applications where vapors (caused by high temperature) or mists (caused by
mixing or spraying) are created, breathing may cause a mild burning sensation
in the nose, throat and lungs. Toxic and harmful if inhaled. Hydrogen Sulfide (H2S) and other hazardous vapors may evolve and collect in the headspace of storage tanks or other enclosed vessels. Hydrogen Sulfide is an
extremely flammable, toxic gas. Inhalation of vapors, mist or fumes (generated at high temperatures) may cause irritation to the nose, throat and
respiratory tract.

Eye Irritation:
If irritation occurs, a temporary burning sensation, minor redness, swelling,
and/or blurred vision may result.

Skin Contact:
Severely irritating to the skin causing pain, redness and swelling. Other
adverse effects not expected from brief skin contact.

Ingestion:
This material may be harmful or fatal if swallowed. Ingestion may result in
vomiting; aspiration (breathing) of vomitus into lungs must be avoided as even

small quantities may result in aspiration pneumonitis. Generally considered
to have a low order of acute oral toxicity.

Other Health Effects:
Carcinogenic in animal tests. It is probable that the material causes cancer
in laboratory animals.
Material may release hydrogen sulfide (H2S), a highly toxic and extremely
flammable gas, when heated to 180 Degrees F or higher. H2S can cause
irritation of the eyes and respiratory tract, headache, dizziness, nausea,
vomitting, diarrhea, and pulmonary edema. The odor ("rotten egg") threshold
is 0.02 ppm. Do not depend on sense of smell for warning; H2S rapidly
deadens the sense of smell.
Refer to Section 11, Toxicological Information, for specific information on
the following effects:

Signs and Symptoms:
Irritation as noted above. Aspiration pneumonitis may be evidenced by
coughing, labored breathing and cyanosis (bluish skin); in severe cases death
may occur.

For additional health information, refer to section 11.

SECTION 4 FIRST AID MEASURES

Inhalation:
Vaporization of H2S that has been trapped in clothing can be dangerous to
rescuers. Maintain respiratory protection to avoid contamination from victim
to rescuer. Mechanical ventilation should be used to resuscitate the victim.
DO NOT attempt to rescue victim unless proper respiratory protection is worn.
If the victim has difficulty breathing or tightness of the chest, is dizzy,
vomiting or unresponsive, give 100% oxygen with rescue breathing or CPR as
required and transport to the nearest medical facility.

Skin:
Remove contaminated clothing. Flush with large amounts of water for at least
15 minutes and follow by washing with soap if available. If redness,
swelling, pain and/or blisters occur, transport to the nearest medical
facility for additional treatment.

Eye:
Flush eyes with plenty of water while holding eyelids open. Rest eyes for 30 minutes. If redness, burning, blurred vision or swelling occur, transport to nearest medical facility for additional treatment.

Ingestion:
DO NOT take internally. In general no treatment is necessary unless large quantities are swallowed, however, get medical advice. Have victim rinse mouth out with water, then drink sips of water to remove taste from mouth. If vomiting occurs spontaneously, keep head below hips to prevent aspiration.

Note to Physician:
If more than 2.0ml/kg body weight has been ingested and vomiting has not occurred, emesis should be induced with supervision. Keep victim's head below hips to prevent aspiration. If symptoms such as loss of gag reflex, convulsions, or unconsciousness occur before emesis, gastric lavage using a cuffed endotracheal tube should be considered.

SECTION 5 FIRE FIGHTING MEASURES

Flash Point [Method]: >125 ºF/>51.67 ºC [Closed Cup]
Autoignition Temperature: 500 °F/260 °C
Flammability in Air: 0.5 - 4.4 %volume

Extinguishing Media:
Material will float and can be re-ignited on surface of water. Use water fog, 'alcohol foam', dry chemical or carbon dioxide (CO2) to extinguish flames. Do not use a direct stream of water.

Fire Fighting Instructions:
CAUTION! COMBUSTIBLE. Clear fire area of all non-emergency personnel. Do not enter confined fire space without full bunker gear (helmet with face shield, bunker coats, gloves and rubber boots), including a positive pressure, NIOSH approved, self-contained breathing apparatus. Cool surrounding equipment, fire-exposed containers and structures with water. Container areas

exposed to direct flame contact should be cooled with large quantities of
water (500 gallons water per minute flame impingement exposure) to prevent
weakening of container structure.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Protective Measures:
CAUTION! COMBUSTIBLE. Eliminate potential sources of ignition. Handling
equipment must be bonded and grounded to prevent sparking.

Wear appropriate personal protective equipment when cleaning up spills. Refer
to Section 8.

Spill Management:
Shut off source of leak if safe to do so. Dike and contain spill.

FOR LARGE SPILLS: Remove with vacuum truck or pump to storage/salvage
vessels.

FOR SMALL SPILLS: Soak up residue with an absorbent such as clay, sand or
other suitable material. Place in non-leaking container and seal tightly for
proper disposal.

Reporting:
CERCLA: Product is covered by EPA's Comprehensive Environmental Response,
Compensation and Liability Act (CERCLA) petroleum exclusion. Releases to air,
land, or water are not reportable under CERCLA (Superfund).

CWA: This product is an oil as defined under Section 311 of EPA's Clean Water
Act (CWA). Spills into or leading to surface waters that cause a sheen must be
reported to the National Response Center, 1-800-424-8802.

SECTION 7 HANDLING AND STORAGE

Precautionary Measures:

CAUTION! COMBUSTIBLE. Do not breathe material. Keep container closed. Use only with adequate ventilation. Avoid heat, open flames, including pilot lights, and strong oxidizing agents. Use explosion-proof ventilation to prevent vapor accumulation. Ground all handling equipment to prevent sparking. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.

Material may release hydrogen sulfide (H2S), a highly toxic and extremely flammable gas, when heated to 180 Degrees F or higher. H2S may collect in the headspace of the container.

Handling:
Surfaces that are sufficiently hot may ignite liquid material.

Storage:
Keep liquid and vapor away from heat, sparks and flame. Extinguish pilot lights, cigarettes and turn off other sources of ignition prior to use and until all vapors have dissipated. Use explosion-proof ventilation indoors and in laboratory settings.

Container Warnings:
Keep containers closed when not in use. Containers, even those that have been emptied, can contain explosive vapors. Do not cut, drill, grind, weld or perform similar operations on or near containers.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Benzene ACGIH TLV TWA: 0.5 ppmv STEL: 2.5 ppmv Notation: Skin
Benzene OSHA PEL TWA: 1 ppmv STEL: 5 ppmv
Diesel Fuel, as total hydrocarbons ACGIH TLV TWA: 100 mg/m3

Carbon dioxide ACGIH - TLV TWA: 5000 ppmm STEL: 30000 ppmm
Carbon dioxide OSHA - PEL STEL: 30000 ppmm
Carbon dioxide OSHA - PEL_IS TWA: 10000 ppmm
Carbon monoxide OSHA - PEL TWA: 35 ppmv Ceiling: 200 ppmv
Carbon monoxide Combustion

EXPOSURE CONTROLS
Adequate explosion-proof ventilation to control airborne concentrations.

PERSONAL PROTECTION
Personal protective equipment (PPE) selections vary based on potential exposure conditions such as handling practices, concentration and ventilation.
Information on the selection of eye, skin and respiratory protection for use
with this material is provided below.

Eye Protection:
Chemical Goggles - If liquid contact is likely., or Safety glasses with side
shields

Skin Protection:
Use protective clothing which is chemically resistant to this material. Selection of protective clothing depends on potential exposure conditions and
may include gloves, boots, suits and other items. The selection(s) should
take into account such factors as job task, type of exposure and durability
requirements.

Published literature, test data and/or glove and clothing manufacturers indicate the best protection is provided by:
Neoprene, or Nitrile Rubber
Respiratory Protection:
If engineering controls do not maintain airborne concentrations to a level
which is adequate to protect worker health, an approved respirator must be
worn. Respirator selection, use and maintenance should be in accordance with
the requirements of the OSHA Respiratory Protection Standard, 29 CFR 1910.134.

Types of respirator(s) to be considered in the selection process include:
Supplied-Air Respirator. Air-Purifying Respirator for Organic Vapors. Self-contained breathing apparatus for use in environments with unknown concentrations or emergency situations.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance & Odor: Bright and clear liquid (Tax Exempt Diesels - pale red
liquid). Oil-type odor.
Substance Chemical Family: Petroleum Hydrocarbon, Fuel Oil

Appearance: Bright and clear liquid (Tax Exempt Diesels - pale red liquid).

Auto Ignition Temperature: 500 ºF

Flammability in Air: 0.5 - 4.4 %volume

Flash Point: > 125 ºF [Closed Cup]

Specific Gravity: 0.85 Typical

Stability: Stable

Vapor Pressure: 0.02 mmHg Typical [Calculated]

Viscosity: 1.9 - 4.1 cSt @ 40 ºC

SECTION 10 REACTIVITY AND STABILITY

Stability:
Material is stable under normal conditions.

Conditions to Avoid:
Avoid heat and open flames.

Materials to Avoid:
Avoid contact with strong oxidizing agents.

Hazardous Decomposition Products:

Thermal decomposition products are highly dependent on combustion conditions.
A complex mixture of airborne solids, liquids and gases will evolve when this
material undergoes pyrolysis or combustion. Aldehydes, Carbon Monoxide, Carbon
Dioxide, Ketonesand other unidentified organic compounds may be formed upon
combustion.

SECTION 11 TOXICOLOGICAL INFORMATION

Acute Toxicity
  Dermal LD50 > 5 ml/kg(Rabbit) OSHA: Non-Toxic Based on similar material(s)

Eye Irritation Non-Irritating [Rabbit] OSHA: Non-Irritating Based on
similar material(s)
Oral LD50 9 ml/kg(Rat) OSHA: Non-Toxic Based on similar material(s)
Skin Irritation Extremely irritating [Rabbit] OSHA: Irritating Based on
similar material(s)
Carcinogenicity Classification
#2 Diesel
NTP: No IARC: No ACGIH: No OSHA: No
Benzene
NTP: Yes IARC: Carcinogen (1) ACGIH: A1 OSHA: Yes
Light Catalytic Cracked Distillate
NTP: No IARC: Possible Carcinogen (2B) ACGIH: No OSHA: No
Carcinogenicity
Related materials have caused the development of skin tumors in lifetime mouse
skin painting studies. However, these tumors have a long latency period and
may be associated with the repeated severe irritation caused by the test
materials. Prolonged and repeated exposure to high concentrations (10s to 100s
ppm) of benzene may cause serious injury to blood-forming organs and is
associated with anemia (depletion of blood cells) and is linked to the later
development of acute myelogenous leukemia (AML).

Genotoxicity
A closely related component (Hydrodesulfurized Middle Distillate) did not
cause detectable mutations in two different in vivo (live animal) studies.
Some evidence of genotoxicity was seen in separate in vitro (test tube)
studies, usually in cases where the test material was metabolically
activated.

SECTION 12 ECOLOGICAL INFORMATION

Environmental Impact Summary:
There is no ecological data available for this product.

SECTION 13 DISPOSAL CONSIDERATIONS

RCRA Information:

Under RCRA, it is the responsibility of the user of the material to determine,
at the time of the disposal, whether the material meets RCRA criteria for
hazardous waste. This is because material uses, transformations, mixtures,
processes, etc. may affect the classification. Refer to the latest EPA, state
and local regulations regarding proper disposal.

SECTION 14 TRANSPORT INFORMATION

US Department of Transportation Classification

Proper Shipping Name:	Diesel Fuel
Identification Number:	NA1993
Hazard Class/Division:	Combustible Liquid
Packing Group:	III

Hazardous Substance/Material RQ: Benzene / 1546.2005 lbs

Oil: This product is an oil under 49CFR (DOT) Part 130. If shipped by rail or
highway in a tank with a capacity of 3500 gallons or more, it is subject to
these requirements. Mixtures or solutions containing 10% or more of this
product may also be subject to this rule.

Emergency Response Guide #128

International Air Transport Association

Hazard Class/Division:	3 (Flammable Liquid)
Identification Number:	UN1202
Packing Group:	III
Proper Shipping Name:	Diesel Fuel

International Maritime Organization Classification

Hazard Class/Division:	3 (Flammable Liquid)
Identification Number:	UN1202
Packing Group:	III
Proper Shipping Name:	Diesel Fuel

SECTION 15 REGULATORY INFORMATION

FEDERAL REGULATORY STATUS

OSHA Classification:
Product is hazardous according to the OSHA Hazard Communication Standard, 29
CFR 1910.1200.

Ozone Depleting Substances (40 CFR 82 Clean Air Act):
This material does not contain nor was it directly manufactured with any Class
I or Class II ozone depleting substances.

Superfund Amendment & Reauthorization Act (SARA) Title III:

SARA Extremely Hazardous Substances (302/304):
Hydrogen sulfide RQ 100 lbs Reportable Spill => 711013 lbs or
100334 gal

SARA Hazard Categories (311/312):
Immediate Health:YES Delayed Health:YES Fire:YES Pressure:NO Reactivity:NO

SARA Toxic Release Inventory (TRI) (313):
Benzene

Toxic Substances Control Act (TSCA) Status:
This material is listed on the EPA/TSCA Inventory of Chemical Substances.

Other Chemical Inventories:
Australian AICS, Canadian DSL, European EINECS, Korean Inventory,

State Regulation
The following chemicals are specifically listed by individual states; other
product specific health and safety data in other sections of the MSDS may also
be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

California Safe Drinking Water and Toxic Enforcement Act (Proposition 65).
WARNING: This product contains a chemical(s) known to the State of California
to cause cancer.

WARNING: This product contains a chemical(s) known to the State of California
to cause birth defects or other reproductive harm.

New Jersey Right-To-Know Chemical List:

Benzene (71-43-2) 0.01 - 0.64   %weight Carcinogen
Benzene (71-43-2) 0.01 - 0.64   %weight Mutagen
Light Cat Cracked Distillate 0 - 39.99   %weight Mutagen

Pennsylvania Right-To-Know Chemical List:
Benzene (71-43-2) 0.01 - 0.64   %weight Spec Haz Sub/Env Hazardous

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SECTION 16 OTHER INFORMATION

Revision#: 2
Review Date: 04/29/2003
Revision Date: 04/29/2003
Revisions since last change (discussion): This Material Safety Data Sheet (MSDS) has been newly reviewed to fully comply with the guidance contained in the ANSI MSDS standard (ANSI Z400.1-1998). We encourage you to take the opportunity to read the MSDS and review the information contained therein.

SECTION 17 LABEL INFORMATION

READ AND UNDERSTAND MATERIAL SAFETY DATA SHEET BEFORE HANDLING OR DISPOSING OF PRODUCT. THIS LABEL COMPLIES WITH THE REQUIREMENTS OF THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200) FOR USE IN THE WORKPLACE. THIS LABEL IS NOT INTENDED TO BE USED WITH PACKAGING INTENDED FOR SALE TO CONSUMERS AND MAY NOT CONFORM WITH THE REQUIREMENTS OF THE CONSUMER PRODUCT SAFETY ACT OR OTHER RELATED REGULATORY REQUIREMENTS.

PRODUCT CODE(S): 02925

GN LS Diesel 2 Winter 65/35

WARNING!

COMBUSTIBLE LIQUID! MAY BE FATAL IF INHALED. CAUSES SEVERE SKIN IRRITATION. ASPIRATION HAZARD IF SWALLOWED - CAN ENTER LUNGS AND CAUSE DAMAGE. CONTAINS BENZENE WHICH IS A CANCER HAZARD - LINKED TO DEVELOPMENT OF ACUTE MYELOGENOUS

LEUKEMIA.
Refer to Section 11, Toxicological Information, for specific information on
the following effects:

Precautionary Measures:
Avoid heat and open flames. Hydrogen Sulfide and other hazardous vapors may
evolve and collect in the headspace of storage tanks or other enclosed vessels. Hydrogen Sulfide is an extremely flammable, toxic gas. Respiratory
protection should be worn when venting tanks. Avoid breathing of vapors,
fumes, or mist. Do not take internally. Use only with adequate ventilation.
Avoid contact with eyes, skin and clothing. Keep container closed when not in
use. Wash thoroughly after handling.

FIRST AID
Inhalation: DO NOT attempt to rescue victim unless proper respiratory protection is worn. Vaporization of H2S that has been trapped in clothing can
be dangerous to rescuers. Maintain respiratory protection to avoid contamination from victim to rescuer. Mechanical ventilation should be used
to resuscitate the victim. If the victim has difficulty breathing or tightness of the chest, is dizzy, vomiting or unresponsive, give 100% oxygen
with rescue breathing or CPR as required and transport to the nearest medical
facility.
Skin Contact: Remove contaminated clothing. Flush with large amounts of
water for at least 15 minutes and follow by washing with soap if available.
If redness, swelling, pain and/or blisters occur, transport to the nearest
medical facility for additional treatment.
Eye Contact: Flush eyes with plenty of water while holding eyelids open.
Rest eyes for 30 minutes. If redness, burning, blurred vision or swelling
occur, transport to nearest medical facility for additional treatment.
Ingestion: DO NOT take internally. If vomiting occurs spontaneously, keep
head below hips to prevent aspiration. Have victim rinse mouth out with
water, then drink sips of water to remove taste from mouth. In general no
treatment is necessary unless large quantities are swallowed, however, get
medical advice.

FIRE

In case of fire, Use water fog, 'alcohol foam', dry chemical or carbon

dioxide (CO2) to extinguish flames. Do not use a direct stream of water.
Material will float and can be re-ignited on surface of water.
SPILL OR LEAK
Dike and contain spill.
FOR LARGE SPILLS: Remove with vacuum truck or pump to storage/salvage vessels.

FOR SMALL SPILLS: Soak up residue with an absorbent such as clay, sand or
other suitable material. Place in non-leaking container and seal tightly for
proper disposal.

CONTAINS: Full Range Straight Run Middle Distillate, 68814-87-9; Light Catalytic Cracked Distillate, 64741-59-9; Benzene, 71-43-2; Sulfur, 7704-34-9

NFPA Rating (Health, Fire, Reactivity): 2, 2, 0

TRANSPORTATION

US Department of Transportation Classification

Proper Shipping Name:	Diesel Fuel
Identification Number:	NA1993
Hazardous Class/Division:	Combustible Liquid
Packing Group:	III

Hazardous Substance/Material RQ: Benzene / 1546.2005 lbs

Oil: This product is an oil under 49CFR (DOT) Part 130. If shipped by rail or
highway in a tank with a capacity of 3500 gallons or more, it is subject to
these requirements. Mixtures or solutions containing 10% or more of this
product may also be subject to this rule.

Emergency Response Guide #128

California Safe Drinking Water and Toxic Enforcement Act (Proposition 65).
WARNING: This product contains a chemical(s) known to the State of California
to cause cancer.

WARNING: This product contains a chemical(s) known to the State of California
to cause birth defects or other reproductive harm.

THE INFORMATION CONTAINED IN THIS DATA SHEET IS BASED ON THE DATA AVAILABLE TO
US AT THIS TIME, AND IS BELIEVED TO BE ACCURATE BASED UPON THAT : IT IS PROVIDED INDEPENDENTLY OF ANY SALE OF THE PRODUCT, FOR PURPOSE OF HAZARD
COMMUNICATION. IT IS NOT INTENDED TO CONSTITUTE PRODUCT PERFORMANCE INFORMATION, AND NO EXPRESS OR IMPLIED WARRANTY OF ANY KIND IS MADE WITH
RESPECT TO THE PRODUCT, UNDERLYING DATA OR THE INFORMATION CONTAINED HEREIN.
YOU ARE URGED TO OBTAIN DATA SHEETS FOR ALL PRODUCTS YOU BUY, PROCESS, USE OR
DISTRIBUTE, AND ARE ENCOURAGED TO ADVISE THOSE WHO MAY COME IN CONTACT WITH
SUCH PRODUCTS OF THE INFORMATION CONTAINED HEREIN.

TO DETERMINE THE APPLICABILITY OR EFFECT OF ANY LAW OR REGULATION WITH RESPECT
TO THE PRODUCT, YOU SHOULD CONSULT WITH YOUR LEGAL ADVISOR OR THE APPROPRIATE
GOVERNMENT AGENCY. WE WILL NOT PROVIDE ADVICE ON SUCH MATTERS, OR BE RESPONSIBLE FOR ANY INJURY FROM THE USE OF THE PRODUCT DESCRIBED HEREIN. THE
UNDERLYING DATA, AND THE INFORMATION PROVIDED HEREIN AS A RESULT OF THAT DATA,
IS THE PROPERTY OF SHELL OIL PRODUCTS US AND IS NOT TO BE THE SUBJECT OF SALE
OR EXCHANGE WITHOUT THE EXPRESS WRITTEN CONSENT OF SHELL OIL PRODUCTS US.

44156-11800-100R-04/05/2005

Oil

Approximately 100 litres of oil will be transported in drums by ATV and stored with the rest of the camp equipment. Due to the small quantity of oil that will be transported, there are no permits or authorizations required.

http://www.equivashellmsds.com/

MATERIAL SAFETY DATA SHEET
MSDS: 61054E-02 01/04/99
GAS ENGINE OIL 30 (SCP)
TELEPHONE NUMBER:
24 HOUR EMERGENCY ASSISTANCE GENERAL MSDS ASSISTANCE
EQUIVA SERVICES: 877-276-7283 877-276-7285
CHEMTREC: 800-424-9300

SECTION I NAME

PRODUCT: GAS ENGINE OIL 30 (SCP)

CHEM NAME: MIXTURE (SEE SECTION II-A)
CHEM FAMILY: PETROLEUM HYDROCARBON; INDUSTRIAL OIL
SHELL CODE: 67169
HEALTH HAZARD: 1 FIRE HAZARD: 1 REACTIVITY: 0

SECTION II-A PRODUCT/INGREDIENT

NO.	COMPOSITION	CAS NO.	PERCENT
P	GAS ENGINE OIL 30 (SCP)		
1	SOLVENT DEWAXED, HEAVY PARAFFINIC DISTILLATE	64742-65-0	60-70
2	HYDROTREATED HEAVY PARAFFINIC DISTILLATE	64742-54-7	30-40
3	ADDITIVES	MIXTURE	<10

NFPA HAZARD RATING: HEALTH 0 FIRE 1 REACTIVITY 0

SECTION II-B ACUTE TOXICITY DATA

NO.	ACUTE ORAL LD50	ACUTE DERMAL LD50	ACUTE INHALATION LC50
P	NOT AVAILABLE		
1	>5.0 G/KG, RAT*	>5 G/KG, RABBIT*	
2	>5.0 G/KG, RAT*	>5 G/KG, RABBIT*	

* BASED ON API STUDIES

SECTION III HEALTH INFORMATION

THE HEALTH EFFECTS NOTED BELOW ARE CONSISTENT WITH REQUIREMENTS UNDER THE OSHA
HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200).
EYE CONTACT: LUBRICATING BASE OILS ARE GENERALLY CONSIDERED NO MORE THAN
MINIMALLY IRRITATING TO THE EYES.
SKIN CONTACT: LUBRICATING BASE OILS ARE GENERALLY CONSIDERED NO MORE THAN
MILDLY IRRITATING TO THE SKIN. PROLONGED AND REPEATED CONTACT
MAY LEAD TO VARIOUS SKIN DISORDERS SUCH AS DERMATITIS, OIL ACNE
OR FOLLICULITIS.
INHALATION: INHALATION OF VAPORS (GENERATED AT HIGH TEMPERATURES ONLY) OR OIL
MIST FROM THIS PRODUCT MAY CAUSE MILD IRRITATION OF THE UPPER
RESPIRATORY TRACT.
INGESTION: LUBRICATING BASE OILS ARE GENERALLY CONSIDERED NO MORE THAN
SLIGHTLY TOXIC IF SWALLOWED.
SIGNS AND SYMPTOMS: IRRITATION AS NOTED ABOVE.
AGGRAVATED MEDICAL CONDITIONS:

PREEXISTING SKIN AND RESPIRATORY DISORDERS MAY BE AGGRAVATED BY EXPOSURE TO
THIS PRODUCT.
OTHER HEALTH EFFECTS:
THIS PRODUCT AND ITS COMPONENTS ARE NOT CLASSIFIED AS CARCINOGENS BY INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC), NATIONAL TOXICOLOGY
PROGRAM (NTP) OR OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).

SECTION IV OCCUPATIONAL EXPOSURE LIMITS

COMP NO.	OSHA PEL/TWA	PEL/CEILING	TLV/TWA	ACGIH TLV/STEL	OTHER
P	5 MG/M3*	NONE	5 MG/M3*	10 MG/M3*	NONE

*OIL MIST, MINERAL

SECTION V EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT: FLUSH WITH WATER FOR 15 MINUTES WHILE HOLDING EYELIDS OPEN. GET
MEDICAL ATTENTION.
SKIN CONTACT: REMOVE CONTAMINATED CLOTHING AND WIPE EXCESS OFF. WASH WITH SOAP
AND WATER OR A WATERLESS HAND CLEANER FOLLOWED BY SOPA AND WATER.
IF IRRITATION OCCURS, GET MEDICAL ATTENTION.
INHALATION: REMOVE VICTIM TO FRESH AIR AND PROVIDE OXYGEN IF BREATHING IS
DIFFICULT. GET MEDICAL ATTENTION.
INGESTION: DO NOT INDUCE VOMITING. IN GENERAL NO TREATMENT IS NECESSARY
UNLESS LARGE QUANTITIES OF PRODUCT ARE INGESTED. HOWEVER, GET
MEDICAL ADVICE.
NOTE TO PHYSICIAN: IN GENERAL, EMESIS INDUCTION IS UNNECESSARY IN HIGH VISCOSITY, LOW VOLATILITY PRODUCTS, I.E., MOST OILS AND
GREASES.

SECTION VI SUPPLEMENTAL HEALTH INFORMATION

NONE IDENTIFIED.

SECTION VII PHYSICAL DATA

BOILING POINT (DEG F): SPECFIC GRAVITY (H2O = 1): VAPOR PRESSURE (MM HG):
>550 0.8899 <0.1
MELTING POINT (DEG F): SOLUBILITY IN WATER: VAPOR DENSITY (AIR = 1):
10 (POUR POINT) NEGLIGIBLE NOT AVAILABLE
EVAPORATION RATE (NORMAL BUTYL ACETATE = 1):NOT AVAILABLE
APPEARANCE AND ODOR:WHITE LIQUID. SLIGHT HYDROCARBON ODOR.
PHYS/CHEM PROPERTIES:VISCOSITY: 11.8-12.5 (CS @ 104 DEG F).

SECTION VIII FIRE AND EXPLOSION HAZARDS

FLASH POINT AND METHOD: 445 DEG F (PMCC)
FLAMMABLE LIMITS/PERCENT VOLUME IN AIR: LOWER: N/AV HIGHER: N/AV
EXTINGUISHING MEDIA:
USE WATER FOG, FOAM, DRY CHEMICAL OR CO2. DO NOT USE A DIRECT STREAM OF
WATER. PRODUCT WILL FLOAT AND CAN BE REIGNITED ON SURFACE OF WATER.
SPECIAL FIRE FIGHTING PROCEDURES AND PRECAUTIONS:
MATERIAL WILL NOT BURN UNLESS PREHEATED. DO NOT ENTER CONFINED FIRE-SPACE
WITHOUT FULL BUNKER GEAR (HELMET WITH FACE SHIELD, BUNKER COATS, GLOVES AND
RUBBER BOOTS), INCLUDING A POSITIVE-PRESSURE NIOSH-APPROVED SELF-CONTAINED
BREATHING APPARATUS. COOL FIRE EXPOSED CONTAINERS WITH WATER.
UNUSUAL FIRE AND EXPLOSION HAZARDS:
NONE IDENTIFIED

SECTION IX REACTIVITY

STABLITY: STABLE HAZARDOUS POLYMERIZATION WILL NOT OCCUR
CONDITIONS AND MATERIALS TO AVOID:
AVOID HEAT, OPEN FLAMES AND OXIDIZING MATERIALS.
HAZARDOUS DECOMPOSITION PRODUCTS:
THERMAL DECOMPOSITION PRODUCTS ARE HIGHLY DEPENDENT ON THE COMBUSTION
CONDITIONS. A COMPLEX MIXTURE OF AIRBORNE SOLID, LIQUID, PARTICULATES AND
GASES WILL EVOLVE WHEN THIS MATERIAL UNDERGOES PYROLYSIS OR COMBUSTION.
CARBON MONOXIDE AND OTHER UNIDENTIFIED ORGANIC COMPOUNDS MAY BE FORMED UPON
COMBUSTION.

SECTION X EMPLOYEE PROTECTION

RESPIRATORY PROTECTION:
IF EXPOSURE MAY OR DOES EXCEED OCCUPATIONAL EXPOSURE LIMITS (SECTION IV) USE
A NIOSH-APPROVED RESPIRATOR TO PREVENT OVEREXPOSURE. IN ACCORD WITH 29 CFR

1910.134 USE EITHER AN ATMOSPHERE-SUPPLYING RESPIRATOR OR AN AIR-PURIFYING
RESPIRATOR FOR ORGANIC VAPORS.
PROTECTIVE CLOTHING
WEAR CHEMICAL-RESISTANT GLOVES AND OTHER PROTECTIVE CLOTHING AS REQUIRED TO
MINIMIZE SKIN CONTACT. WEAR SAFETY GOGGLES TO AVOID EYE CONTACT.
TEST DATA
FROM PUBLISHED LITERATURE AND/OR GLOVE AND CLOTHING MANUFACTURERS INDICATE
THE BEST PROTECTION IS PROVIDED BY NITRILE GLOVES.
ADDITIONAL PROTECTIVE MEASURES:
NONE IDENTIFIED

SECTION XI ENVIRONMENTAL PROTECTION

SPILL OR LEAK PROCEDURES:
MAY BURN ALTHOUGH NOT READILY IGNITABLE. USE CAUTIOUS JUDGMENT WHEN CLEANING
UP LARGE SPILLS. *** LARGE SPILLS *** WEAR RESPIRATOR AND PROTECTIVE
CLOTHING AS APPROPRIATE. SHUT OFF SOURCE OF LEAK IF SAFE TO DO SO. DIKE
AND CONTAIN. REMOVE WITH VACCUM TRUCKS OR PUMP TO STORAGE SALVAGE VESSELS.
SOAK UP RESIDUE WITH AN ABSORBENT SUCH AS CLAY, SAND, OR OTHER SUITABLE
MATERIALS; DISPOSE OF PROPERLY. FLUSH AREA WITH WATER TO REMOVE TRACE
RESIDUE. *** SMALL SPILLS *** TAKE UP WITH AN ABSORBENT MATERIAL AND DISPOSE
OF PROPERLY.

SECTION XII SPECIAL PRECAUTIONS

MINIMIZE SKIN CONTACT. WASH WITH SOAP AND WATER BEFORE EATING, DRINKING,
SMOKING OR USING TOILET FACILITIES. LAUNDER CONTAMINATED CLOTHING BEFORE
REUSE. PROPERLY DISPOSE OF CONTAMINATED LEATHER ARTICLES, INCLUDING SHOES,
THAT CANNOT BE DECONTAMINATED.
STORE IN A COOL, DRY PLACE WITH ADEQUATE VENTILLATION. KEEP AWAY FROM OPEN
FLAMES AND HIGH TEMPERATURES.

SECTION XIII TRANSPORTATION REQUIREMENTS

DEPARTMENT OF TRANSPORTATION CLASSIFICATION:
NOT HAZARDOUS BY D.O.T. REGULATIONS
DOT PROPER SHIPPING NAME: NOT APPLICABLE
OTHER REQUIREMENTS: NOT APPLICABLE

SECTION XIV OTHER REGULATORY CONTROLS

THE COMPONENTS OF THIS PRODUCT ARE LISTED ON THE EPA/TSCA INVENTORY OF CHEMICAL
SUBSTANCES.
PROTECTION OF STRATOSPHERIC OZONE (PURSUANT TO SECTION 611 OF THE CLEAN AIR ACT
AMENDMENTS OF 1990): PER 40 CFR PART 82, THIS PRODUCT DOES NOT CONTAIN NOR
WAS IT DIRECTLY MANUFACTURED WITH ANY CLASS I OR CLASS II OZONE DEPLETING
SUBSTANCES.
IN ACCORDANCE WITH SARA TITLE III, SECTION 313, THE ATTACHED ENVIRONMENTAL DATA
SHEET (EDS) SHOULD ALWAYS BE COPIED AND SENT WITH THE MSDS.

SECTION XV STATE REGULATORY INFORMATION

STATE LISTED COMPONENT	CAS NO	PERCENT	STATE CODE

BASED ON INFORMATION AVAILABLE, THIS PRODUCT DOES NOT CONTAIN ANY CHEMICAL SUBSTANCE REGULATED BY A SPECIFIC STATE LIST.

SECTION XVI SPECIAL NOTES

MSDS - SECTION II-A AND EDS - SECTION I HAVE BEEN REVISED TO UPDATE INGREDIENTS. THE OSHA HAZARD EVALUATION AND REGULATORY STATUS OF THE
PRODUCT HAVE NOT CHANGED.

THE INFORMATION CONTAINED IN THIS DATA SHEET IS BASED ON THE DATA AVAILABLE
TO US AT THIS TIME, AND IS BELIEVED TO BE ACCURATE BASED UPON THAT DATA. IT IS
PROVIDED INDEPENDENTLY OF ANY SALE OF THE PRODUCT, FOR PURPOSE OF HAZARD
COMMUNICATION. IT IS NOT INTENDED TO CONSTITUTE PRODUCT PERFORMANCE INFORMATION, AND NO EXPRESS OR IMPLIED WARRANTY OF ANY KIND IS MADE WITH
RESPECT TO THE PRODUCT, UNDERLYING DATA OR THE INFORMATION CONTAINED HEREIN. YOU ARE URGED TO OBTAIN DATA SHEETS FOR ALL PRODUCTS YOU BUY, PROCESS, USE OR DISTRIBUTE, AND ARE ENCOURAGED TO ADVISE THOSE WHO MAY COME IN CONTACT WITH SUCH PRODUCTS OF THE INFORMATION CONTAINED HEREIN.

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APPROPRIATE GOVERNMENT AGENCY. WE WILL NOT PROVIDE ADVICE ON SUCH

MATTERS, OR BE RESPONSIBLE FOR ANY INJURY FROM THE USE OF THE PRODUCT DESCRIBED HEREIN. THE UNDERLYING DATA, AND THE INFORMATION PROVIDED HEREIN
AS A RESULT OF THAT DATA, IS THE PROPERTY OF EQUIVA SERVICES, LLC AND IS NOT TO
BE THE SUBJECT OF SALE OR EXCHANGE WITHOUT THE EXPRESS WRITTEN CONSENT OF
EQUIVA SERVICES, LLC.

ENVIRONMENTAL DATA SHEET
EDS: 61054E

GAS ENGINE OIL 30 (SCP)
TELEPHONE NUMBER:
24 HOUR EMERGENCY ASSISTANCE GENERAL MSDS ASSISTANCE
EQUIVA SERVICES: 877-276-7283 877-276-7285
CHEMTREC: 800-424-9300
PRODUCT CODE: 67169

SECTION I PRODUCT COMPOSITION

NO.	COMPOSITION	CAS	PERCENT
P	GAS ENGINE OIL 30 (SCP) MIXTURE	100	
1	SOLVENT DEWAXED HEAVY PARAFFINIC DISTILLATE	64742-65-0	60-70
2	HYDROTREATED HEAVY PARAFFINIC DISTILLATE	64742-54-7	30-40
3	ADDITIVES	MIXTURE	<10

SECTION II SARA TITLE III INFORMATION

NO.	EHS RQ (*1)	EHS TPQ (*2)	SEC-313 (*3)	313 CATEGORY (*4)	311/312 CATEGORY (*5)

BASED ON THE DATA AVAILABLE THIS PRODUCT IS NOT REGULATED BY SARA, TITLE III.

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*1 = REPORTABLE QUANTITY OF EXTREMELY HAZARDOUS SUBSTANCE, SEC 302
*2 = THRESHOLD PLANNING QUANTITY, EXTREMELY HAZARDOUS SUBSTANCE, SEC 302
*3 = TOXIC CHEMICAL, SEC 313
*4 = CATEGORY AS REQUIRED BY SEC 313 (40 CFR 372.65 C), MUST BE USED ON TOXIC
RELEASE INVENTORY FORM
*5 = CATEGORY (FOR AGGREGATE REPORTING REQUIREMENTS UNDER SARA 311, 312)
HEALTH: H-1 = IMMEDIATE (ACUTE) HEALTH HAZARD
H-2 = DELAYED (CHRONIC) HEALTH HAZARD
PHYSICAL: P-3 = FIRE HAZARD

P-4 = SUDDEN RELEASE OF PRESSURE HAZARD
P-5 = REACTIVE HAZARD

SECTION III ENVIRONMENTAL RELEASE INFORMATION

THIS PRODUCT IS COVERED BY EPA'S COMPREHENSIVE ENVIRONMENTAL RESPONSE,
COMPENSATION AND LIABILITY ACT (CERCLA) PETROLEUM EXCLUSION. THEREFORE,
RELEASES TO AIR, LAND, OR WATER ARE NOT REPORTABLE UNDER CERCLA ("SUPERFUND"). HOWEVER, UNDER SECTION 311 OF EPA'S CLEAN WATER ACT (CWA),
THIS PRODUCT IS CONSIDERED AN OIL. AS SUCH, SPILLS INTO OR LEADING TO
SURFACE WATERS THAT CAUSE A SHEEN MUST BE REPORTED TO THE NATIONAL RESPONSE
CENTER, 800-424-8802.
THIS PRODUCT IS AN OIL UNDER 49 CFR (DOT) PART 130. IF SHIPPED BY RAIL OR
HIGHWAY IN A TANK WITH A CAPACITY OF 3,500 GALLONS OR MORE, IT IS SUBJECT TO
THE REQUIREMENTS OF PART 130. MIXTURE SOLUTIONS IN WHICH THIS PRODUCT IS
PRESENT AT 10% OR MORE MAY ALSO BE SUBJECT TO THIS RULE.

SECTION IV RCRA INFORMATION

IF THIS PRODUCT BECOMES A WASTE, IT WOULD NOT BE A HAZARDOUS WASTE BY RCRA
CRITERIA (40 CFR 261). PLACE IN AN APPROPRIATE DISPOSAL FACILITY IN
COMPLIANCE WITH LOCAL REGULATIONS.

THE INFORMATION CONTAINED IN THIS DATA SHEET IS BASED ON THE DATA AVAILABLE
TO US AT THIS TIME, AND IS BELIEVED TO BE ACCURATE BASED UPON THAT DATA. IT IS
PROVIDED INDEPENDENTLY OF ANY SALE OF THE PRODUCT, FOR PURPOSE OF HAZARD
COMMUNICATION. IT IS NOT INTENDED TO CONSTITUTE PRODUCT PERFORMANCE INFORMATION, AND NO EXPRESS OR IMPLIED WARRANTY OF ANY KIND IS MADE WITH
RESPECT TO THE PRODUCT, UNDERLYING DATA OR THE INFORMATION CONTAINED HEREIN. YOU ARE URGED TO OBTAIN DATA SHEETS FOR ALL PRODUCTS YOU BUY, PROCESS, USE OR DISTRIBUTE, AND ARE ENCOURAGED TO ADVISE THOSE WHO MAY COME IN CONTACT WITH SUCH PRODUCTS OF THE INFORMATION CONTAINED HEREIN.

TO DETERMINE THE APPLICABILITY OR EFFECT OF ANY LAW OR REGULATION WITH RESPECT TO THE PRODUCT, YOU SHOULD CONSULT WITH YOUR LEGAL ADVISOR OR THE
APPROPRIATE GOVERNMENT AGENCY. WE WILL NOT PROVIDE ADVICE ON SUCH MATTERS, OR BE RESPONSIBLE FOR ANY INJURY FROM THE USE OF THE PRODUCT DESCRIBED HEREIN. THE UNDERLYING DATA, AND THE INFORMATION PROVIDED HEREIN

AS A RESULT OF THAT DATA, IS THE PROPERTY OF EQUIVA SERVICES, LLC AND IS NOT TO
BE THE SUBJECT OF SALE OR EXCHANGE WITHOUT THE EXPRESS WRITTEN CONSENT OF
EQUIVA SERVICES, LLC.
77267-4414

FOR ADDITIONAL INFORMATION ON THIS ENVIRONMENTAL DATA PLEASE CALL
(877) 276-7285
FOR EMERGENCY ASSISTANCE PLEASE CALL
EQUIVA SERVICES LLC: (877) 276-7283
CHEMTREC: (800) 424-9300

Appendix B: Supporting Documents

This section includes a listing of reference materials and government reports, which are relevant to the types of hazardous material stored, handled, or transported and to the environmental setting of the areas where impacts could occur.

- Public Water Supply Regulations, Ch. P-23, Public Health Act.
  ftp://ftp.nunavut.ca/nwb/NWB%20Administration/NWB%20GENERAL%20INFORMATION/Agency%20Regulations/Guidelines%20and%20Other%20Legislation/

- Contingency Planning and Spill Reporting in the NWT: A Guide to the New Regulations.
  ftp://ftp.nunavut.ca/nwb/NWB%20Administration/NWB%20GENERAL%20INFORMATION/Agency%20Regulations/Guidelines%20and%20Other%20Legislation/

- Guidelines for Contaminated Site Remediation in the NWT.
  ftp://ftp.nunavut.ca/nwb/NWB%20Administration/NWB%20GENERAL%20INFORMATION/Agency%20Regulations/Guidelines%20and%20Other%20Legislation/Guideline%20for%20Site%20Remediation.pdf

- Territorial Lands Act, Chapter T-7.
  ftp://ftp.nunavut.ca/nwb/NWB%20Administration/NWB%20GENERAL%20INFORMATION/Agency%20Regulations/Guidelines%20and%20Other%20Legislation/850101territoriallandact-FTAE.pdf

Appendix C: Spill Report Form

Northwest Territories

NWT SPILL REPORT

(Oil, Gas, Hazardous Chemicals or other Materials)

24 – Hour Report Line
Phone: (867) 920-8130
Fax: (867) 873-6924

A Report Date and Time	B Date and Time of spill (if known)	C ☐ Original Report ☐ Update no._____	Spill Number
D Location and map coordinates (if known) and direction (if moving)			
E Partly responsible for spill			
F Product(s) spilled and estimated quantities (provide metric volumes/weights if possible)			
G Cause of spill			
H Is spill terminated? ☐ yes ☐ no	I If spill is continuing, give estimated rate	J Is further spillage possible? ☐ yes ☐ no	K Extent of contaminated area (in square meters if possible)
L Factors effecting spill or recovery (weather conditions, terrain, snow cover, etc.)	M Containment (natural depression, dikes, etc.)		
N Action, if any, taken or proposed to contain, recover, clean up or dispose of product(s) and contaminated materials			
O Do you require assistance? ☐ no ☐ yes, describe:	P Possible hazards to person, property, or environment; eg: fire, drink water, fish or wildlife		
Q Comments or recommendations		FOR SPILL LINE USE ONLY Lead agency Spill significance Lead Agency contact and time _____ _____ _____ Is this file now closed? ☐ yes ☐ no	
Reported by	Position. Employer, Location	Telephone	
Reported to	Position. Employer, Location	Telephone	

NWT 1752/0202

Appendix D: Additional Contact Information

Northwest Territories/Nunavut 24 Hour Spill Report Line
Tel (867) 920-8130 Fax (867) 873-6924

Nunavut Water Board Tel (867) 360-6338 Fax (867) 360-6369

Environment Canada Tel (867) 669-4700 Fax (867) 873-8185

Environment Canada Enforcement Officer
Jimmy Noble
(867) 975-4644
(867) 975-1925 (cell)
(867) 975-4594 (fax)

Environmental Protection Branch
Manager Pollution Control & Air Quality Tel (867) 975-5907 Fax (867) 975-5981

Environmental Protection
Government of Nunavut
Indian and Northern Affairs Canada Tel (867) 975-4550 Fax (867) 975-4585

Water Resources Manager
Nunavut Regional Office
Indian and Northern Affairs Canada Tel (867) 975-4280 Fax (867) 975-4286

Land Administration Minister
Nunavut Regional Office
Department of Fisheries and Oceans Tel (867) 979-8000 Fax (867) 979-8039

Appendix E: Waste Manifest

Of the potential sources of spillage throughout the course of the project, the transportation of hazardous materials is one of them. Because of this, an effective tracking system as well as safe transportation by all modes: air, marine, road and rail, is required. The Environmental Protection Service (EPS) of the Department of Sustainable Development has developed guidelines to ensure the proper management of hazardous waste in Nunavut. As part of this, the EPS tracks the movement of hazardous waste from the generator to final disposal through the use of a document called a waste manifest. This document must accompany all hazardous waste in transit regardless of the means of transport. All parties (the generator, carrier, receiver) must be registered by EPS and the registration number entered in the appropriate location on the waste manifest form. Registration numbers and waste manifest forms are available from EPS.

The completed manifest form provides:

- Detailed information on the types and amounts of hazardous waste shipped;

- A record of the firms or individuals involved in the shipment; and

- Information on the storage, treatment or disposal of the waste and confirmation that they reached their intended final destination.

Registration of generators, carriers and receivers can be done with the Environmental Protection Service, Department of Sustainable Development, P.O. Box 1000, Station 1195, Iqaluit, Nunavut, X0A 0H0, Phone 867-975-5900, Fax, 867-975-5990.