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Contingency Plan

Belcher Islands
Diamond Drilling Program

Canadian Orebodies Inc.
3130 Airport Road
Box 1130
Timmins, Ontario
Canada P4N 7H9

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1.0 Introduction

This plan has been developed as part of a commitment by Canadian Orebodies Inc. to minimize any detrimental effect its operations may have on the environment. The focus of the plan will be on the exploration camp and diamond drilling operation.

The plan is designed to combat spills on land and/or into watercourses.

As the need arises Canadian Orebodies Inc. may enter into agreements for the sharing of expertise and equipment with other companies, municipalities and resource agencies.

The Plan will be updated and revised as required.

1.1 Project Location

The mineral claims cover by this contingency plan are (Figure 1):

ClaimName	TagNum	NTS Sheet
CO1	K14661	34D/11
CO2	K14662	34D/11
CO3	K14663	34D/06 &D/11
CO4	K14664	34D/06 &D/11
CO5	K14665	34D/06
CO6	K14666	34D/06
CO7	K14667	34D/06
CO8	K14668	34D/06
CO9	K14669	34D/06
CO10	K14670	34D/06 & D/07
CO11	K14671	34D/06
CO12	K14672	34D/06
CO13	K14673	34D/06
CO14	K14674	34D/06
CO15	K14675	34D/06
CO16	K14676	34D/06
CO17	K14677	34D/06
CO18	K14678	34D/06 & D/07
CO19	K14679	34D/06 & D/07

Plus the following IOL Lands:

Haig Inlet IOL Land

Point	Longitude	Latitude	Comment
A	79° 9' 45" W	56° 16' 00" N	
B	79° 7' 15" W	56° 18' 30" N	
C	79° 6' 22" W	56° 20' 20.10" N	On IOL boarder
D	79° 3' 11.2" W	56° 20' 42.6" N	On IOL boarder
E	79° 3' 30" W	56° 19' 30" N	
F	79° 4' 0" W	56° 18' 30" N	
G	79° 4' 45" W	56° 17' 0" N	
H	79° 5' 0" W	56° 16' 0" N	

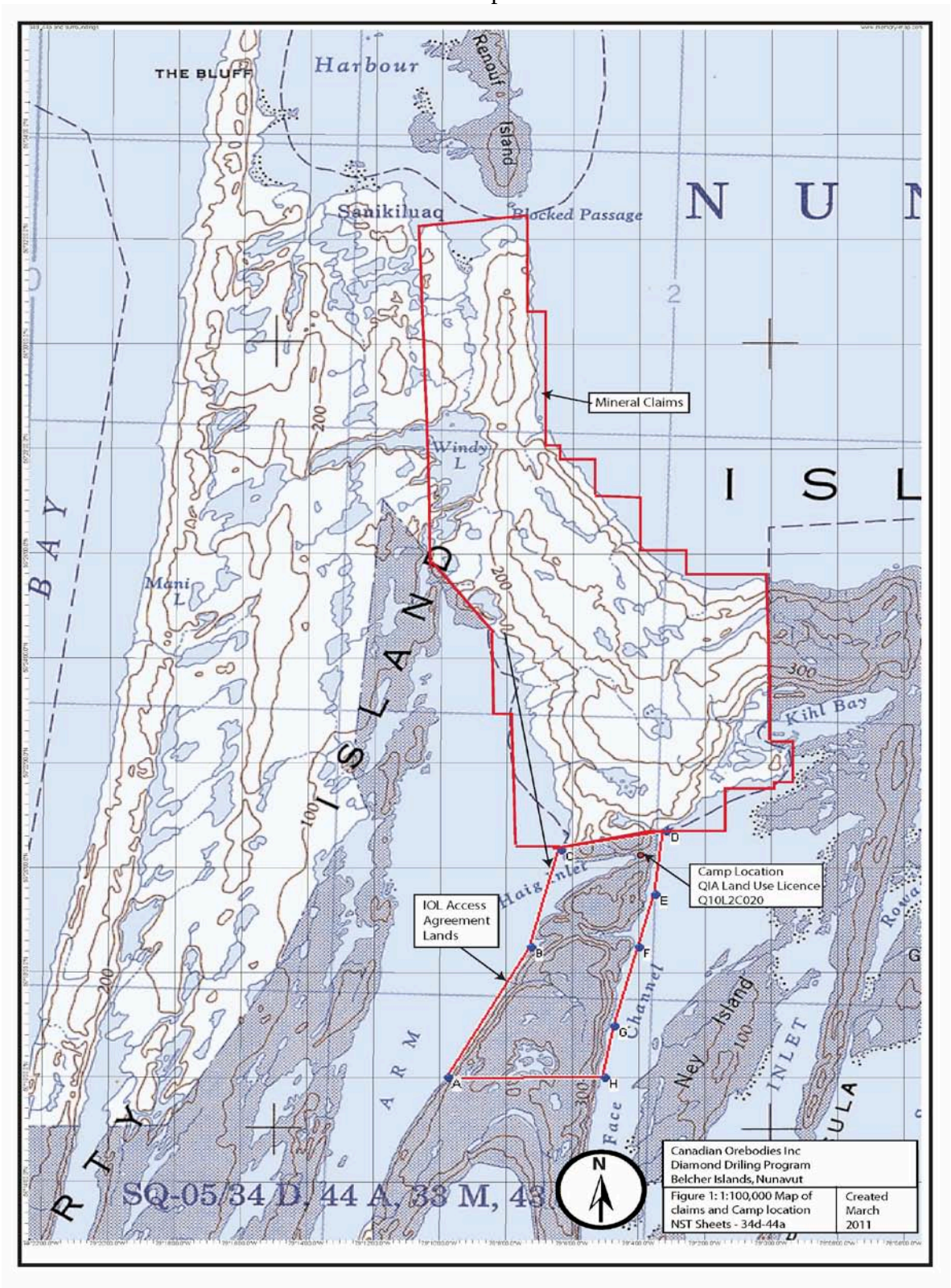
The location of the camp is shown in Figures 1. The proposed camp location is approximately 22 km southeast of Sanikiluaq at the head of Haig Inlet. The camp will be located on a flat area at coordinates 56° 20’ 18.8”N, 79° 04’ 03.7W (NTS 34d-44a) This camp is located on IOL lands and licenced under Q10LC020.

The Boundaries of the project area are:

Haig Inlet Area

	NW	
NW Corner	56^{o} 32’ 57.9” N	79^{o} 12’ 20.4”W
SE Corner	56^{o} 15’ 58.2” N	79^{o} 00’ 23.4”W

Figure 1: Project location map claims and Camp.



2.0 Reporting Procedures

ORGANIZATION AND RESPONSIBILITIES

The overall responsibility for the contingency plan lies with:

Canadian Orebodies Inc.
3130 Airport Road
Box 1130
Timmins, Ontario
Canada P4N 7H9
Tel: 416.644.1747
Cell: 416 919 6187
Fax: 416 364 2753
Email: gordmckinnon@gmail.com

The onsite responsibility for the plan lies with the Canadian Orebodies Inc., Project Manager, Gordon McKinnon**,** who will be the On-site Coordinator (OSC). The camp will be operated by Expedition Helicopters and will have a satellite phone. The number will be supplied when it is installed.

Contractors, sub-contractors and suppliers will provide assistance in all phases of a clean up as directed by the OSC. In the event that a contractor, sub-contractor or supplier or their employees causes a spill, Canadian Orebodies Inc. will charge clean-up and disposal expenses to the responsible party. The OSC will:

1. Be familiar with fuel spill procedures, equipment and contact numbers.
2. Provide liaison with Territorial Government Emergency Programs, Ministry of Environment and Department of Fisheries personnel where applicable.
3. Direct the actions of personnel during clean-up operations.
4. Familiarize key personnel with fuel spill equipment and procedures.
5. Prepare a report on all aspects of any spill.

3.0 Site Information

Fuel	Number of Containers and Capacity	Total Fuel	Purpose

Diesel	400 barrels (205 liters each)	82,000 liters	Diamond Drills, heating and generator
Gasoline	10 barrels (205 liters/barrel)	10,500 liters	ATV, pumps
Jet B	400 barrels (205 liters/barrel)	82,000 liters	Helicopter
Propane	20 bottles (45 kg/bottle)	900 kgs	Cooking

4.0 Failure Prevention

The system components where spills are most likely to occur are:

Petroleum Products and Other Fuels

- Drummed product: Leaks or ruptures may occur. This includes drums of Diesel, Jet B, Waste Fuel, and Waste Oil.
- Fuel cylinders: Propane leaks may occur at the valves. All cylinders are secured at all times.
- Vehicles and equipment: Wheeled vehicles and equipment, aircraft (rotary wing), generators, pumps. Incidents involving leaking or dripping fuels and oils may occur due to malfunctions, impact damage, and lack of regular maintenance, improper storage, or faulty operation.

The risk of spills will be reduced through regular inspection and maintenance of all storage areas and equipment associated with fuel handling in accordance with recognized and accepted standard practices at all Canadian Orebodies Inc. projects. These include:

- Fuel caches in excess of 10 drums should be inspected daily.
- All fuel storage containers will be situated in a manner that allows easy access and removal of containers in the event of leaks or spills.
- Routine checks of fuel transfer hoses and cam lock.
- Carefully monitor fuel content in the receiving vessel during transfer.
- Cleaning up drips and minor spills immediately.
- Waste tracking, or “manifesting,” will be implemented to ensure proper use, storage, and management of materials. Manifests provide detailed information to first responders in the event of an accident and serve as a tool for confirming that shipments of dangerous or hazardous waste are properly handled, transported, and disposed of.
- 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 in camp.

Spill response training is provided to personnel who handle fuels and other petroleum products, and 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.

A 45 gallon spill kit will be positioned at each of the diamond drill. A 45 gallon spill kit will be placed in the area of the fuel storage at the camp for any major events.

5.0 Response Action

Discovery of a fuel spill

Upon discovery of a spill personnel will immediately

a) identify the product that is spilling, or has spilled;
b) assess immediate hazards, and ensure all on-site persons are aware of them;
c) secure the site, and,
d) commence initial notification of appropriate personnel and agencies.

Identification/Assessment of spill

This step is critical to ensure the safety of responders, and to minimize the impact to the environment. The assessment should include:

a) reassess the material spilled and quantity spilled;
b) reassess any immediate hazards;
c) identify all the safety issues that need to be dealt with before taking action. These include ignition sources, protective clothing and public safety.
e) Refer to Material Safety Data Sheets for product identification and handling.

Notification

The On Site Coordinator will take note of the following information from the discoverer of the spill:

a) discoverer's name
b) time and location of the spill;
c) material spilled and approximates quantity;
d) cause of spill if known;
c) weather conditions;
f) action taken so far',
g) immediate serious threats (water courses, fire)

The OSC will then make the following contacts:

1. Immediately notify the Canadian Orebodies Inc. corporate office
   Tel: 416.644.1747
   Cell: 416 919 6187
   Fax: 416 364 2753

2. The 24 Hour SPILL LINE DIAND:
   a. **Spill Line Tel.1-867-920-8130, fax. 1-867-873-6924.**
   b. **Environment Canada – 24 hr. emergency pager 867-766-3737**
   c. **Peter Kusugak, District Manager, Nunavut Field Operations, INAC (867) 975-4295**

3. The Nunavut Spill Report Form is filled out as completely as soon as possible before or immediately after contacting the 24 Hour Spill Line. (Appendix 1)
4. Other members of the response team are notified as deemed necessary
5. Other contacts for spill response/assistance as necessary

The Contact list for this project is as follows:

Organization	**Personnel**	**Telephone Number**
Canadian Orebodies Inc.	Gordon McKinnon, Project Manager	Tel: 416.644.1747 Cell: 416 919 6187 Fax: 416 364 2753
Nunavut 24-Hour Spill Report Line		**867 920 8130**
Environment Canada	Jim Nobel, Environmental Enforcement Officer	867 975 4644 867 920 5131 (Pager)
Government of Nunavut	Department of Environment	867.975.5900
	Manager Pollution Control and Air Quality	867.975.5907
Indian and Northern Affairs Canada	District Manager, Indian and Northern Affairs, Nunavut Field Operations, Iqaluit, Nunavut	(867) 975-4295
	Water Resources Manager	(867) 975-4289
	Resource Managment Officer – Kitikmeot	(867) 982-4306
RCMP	Arctic Bay	867 439-1111 867.439-0123
QIA		867.979-5391 1-800-667-2742
Nunavut Water Board		867.630.6338
Iqaluit Qikiqtani General Hospital	Iqaluit	867 975-8600
Arctic Bay Health Centre	Arctic Bay	867 439-8873

Action

This part of the plan will reconfirm steps that need to be followed when taking action. The person who takes charge is responsible and should:

i) ensure the use of trained personnel is prioritized when possible;
ii) brief responders on safety issues, first aid procedures for material involved;
iii) secure the site from access;
iv) ensure responders are wearing appropriate protective equipment;
v) eliminate all sources of ignition;
vi) stop the source of the spill or contamination
vii) remain at the scene and use every effort to contain the spill until such time as help arrives. This would include the arrival of the OSC, or agency of authority.

Procedure for Spills on Rock

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

1. First responder or his 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 the empty drum(s), the drums marked and then secured for eventual disposal.
6. Depending on the nature and volume of the spill, the 24-Hour Spill Line may be contacted after Step 4 or Step 5.

Procedure for Spills on Land

1. First responder or his 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 away that the fuel can pool for collection and removal (e.g. at the foot of the berm).
3. If there is a large volume of spilled product, pump the liquid into spare empty drums, and dispose of product as advised by the 24-Hour Spill Line.
4. Applying a thin dusting of Multi Sorb or other ultra-dry absorbent to the groundcover may control petroleum-product sheen on vegetation.
5. Contact the 24-Hour Spill Line. Receive instructions from the appropriate contact agencies listed in Section 5.4 regarding collection of the contaminated soil or vegetation, its removal and site cleanup/restoration.

Fuel Spills on Water

It is important to immediately limit the extent of spills. The following procedure is 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 spill.
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 cleanup. Absorbent booms can then be deployed to encircle and then absorb any hydrocarbon spillage that may have escaped the containment boom.
4. Once a boom has been secured, a skimmer may be brought on-scene to aid in capture of the hydrocarbon; once captured, the product should be pumped to the empty fuel drums and held for disposal.
5. As soon as possible either during or after the incident, contact the 24-Hour Spill Line. (This will ensure government agencies are informed).

Fuel spills on Snow and Ice

By its nature, snow is an absorbent, and fuel spilled on snow is collected with relative ease, either by shovel, in the case of small-range spills, and by loader, in the case of more extensive spills.

1. Assess the nature of the spill. Necessary equipment might include shovels, plastic tarp(s, empty drums, and wheeled equipment.
2. Shovel or scrape contaminated snow and deposit in empty refuge drums. If the spill is more extensive, build peat-bale berms or compacted snow berms with plastic over top, around the affected area.
3. Either during or immediately after the accident, notify the 24-Hour Spill Line. Receive instructions on the preferred disposal method (e.g. storage in sealed drums, incineration or deposit in a designated lined containment area on land) from the appropriate contact agencies.

Procedure for spills on Ice

Spills on ice are handled in similar fashion as 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 besought immediately.

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1. Construct a compacted-snow berm around the edge of the spill area.
2. Although hard ice will retard 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 appropriated manner. Contact the 24-Hour Spill Line. Receive disposal instructions (e.g. sealing in drums, burn off, etc.) 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 GPS coordinates and relay to camp or base ASAP.
2. Describe quantity and type of load loss.
3. Base or camp will contact 24 Hour Spill Line, and receive direction and instruction. Administer the appropriate procedure for Spills on Land, Water , Snow, or Ice

6.0 SPILL RESPONSE EQUIPMENT AND SUPPLIES INVENTORY

Spill Kits and Absorbent Material

The basis of the spill response will be two 206-litres heavy duty polyethylene overpack containers which are available commercially pre-packed with an assortment of petroleum absorbent materials. A separate chest of additional absorbent materials and empty labeled chests to contain the materials from the overpacks should they be used will make the petroleum absorbent component of the spill response equipment. The kit contains:

- 150 absorbent pads – 16” x 20”
- 2 absorbent booms - 5" x 120"
- 8 absorbent socks - 3" x 48"
- 4 six mil clear disposal bags
- 1 pairs of safety goggles
- 1 pairs of nitrile gloves
- 1 Tyvek suit
- Instructions

Fuel Transfer Pumps

Dedicated manual fuel transfer pumps for each type of liquid fuel will be stationed in close proximity to each site where that fuel is stored.

Fire Extinguishers

Fire extinguishers of the proper type, size and number will be stationed in each building and near each site where equipment is normally serviced (including fuelling) and anywhere

else it is deemed advisable.

Hand Tools

A full complement of shovels, scoops, and grub hoes or pulaskis will be stationed around camp (typically one shovel and/or scoop at each door to a building); a dedicated set of these tools will be stationed with the chest of absorbent materials at the powerhouse/workshop.

Containers For Storage Of Spilled And Contaminated Materials

A supply of 20-litres polyethylene pails and heavy polyethylene sample bags will be reserved for the collection and storage of used absorbent materials and acid neutralizer.

All-Terrain Vehicle And Trailer

A small ATV and trailer with a load capacity of 450 kilograms will be situated in camp for general purposes and will be dedicated to assisting in any spill response as deemed suitable

7.0 Training Exercises

All members of the Response Team will be familiar with the spill response resources at hand, this Contingency Plan, and appropriate spill response methods. This familiarity will be acquired through:

1. Initial or refresher training, as appropriate, provided once per season.
2. Regular inventory updates are provided in list form to all team members. Information to be reported includes listing of all resources, number of items, their location, condition, date of last inspection and any special comments (such as expiry dates, under whose authority they may be accessed and special handling instructions).

Practice Drills

Canadian Orebodies Inc. is aware that without practice, no Contingency Plan has value. At least one practice drill will be held per season to give personnel a chance to practice emergency response skills. Each practice will be evaluated and a report prepared with the objective of learning where gaps and deficiencies (either in skills or physical resources) exist, and in what areas more practice is required.

Appendix 1: 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 2 –MSDS Sheets

MATERIAL SAFETY DATA SHEET

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

CHS Inc.
P.O. Box 64089
Mail station 525
St. Paul, MN 55164-0089

Transportation Emergency (CHEMTREC): 1-800-424-9300
Technical Information: 1-651-355-8443
MSDS Information: 1-651-355-8438

PRODUCT NAME: Regular, Midgrade & Premium Unleaded Gasoline
COMMON NAME: Unleaded Gasoline, Premium Unleaded Gasoline
CHEMICAL NAME: Light Petroleum Distillate

MSDS: 0147- M6A0 - Rev. G (01/03/07)
CHEMICAL FORMULA: Mixture
CHEMICAL FAMILY: Mixed Petroleum Hydrocarbon

Section 2 - COMPOSITION AND INFORMATION ON INGREDIENTS

INGREDIENTS	PERCENTAGES (by weight)	PEL (OSHA)	TLV (ACGIH)	CAS #
Product				
Gasoline (Mixture)	100	300 ppm TWA 500 ppm STEL	300 ppm TWA 500 ppm STEL	8006-61-9
Ingredients				
Toluene	< 20	200 ppm TWA	50 ppm TWA	108-88-3
Xylene Isomers	< 20	100 ppm TWA 150 ppm STEL	100 ppm TWA 150 ppm STEL	1330-20-7
Benzene	< 5	1 ppm TWA 5 ppm STEL	0.5 ppm TWA 2.5 ppm STEL	71-43-2
1,2,4-Trimethylbenzene	< 5	25 ppm TWA	25 ppm TWA	95-63-6
Ethyl Benzene	< 5	100 ppm TWA 125 ppm STEL	100 ppm TWA 125 ppm STEL	100-41-4
n-Hexane	< 4	500 ppm TWA	50 ppm TWA Skin	110-54-3
Naphthalene	< 0.5	10 ppm TWA	10 ppm TWA	91-20-3

(TWA) - Time Weighted Average is the employee's average airborne exposure in any 8-hour work shift of a 40-hour work week which shall not be exceeded.
(STEL) - Short Term Exposure Limit is the employee's 15-minute time weighted average exposure which shall not be exceeded at any time during a work day unless another time limit is specified.

Section 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Reddish golden brown liquid with gasoline odor - HIGHLY FLAMMABLE LIQUID.
DANGER! Contains Benzene. Cancer Hazard. Can cause kidney, liver and blood disorders.

OSHA HAZARD CLASS

Based on OSHA definitions, the following ingredients in this product are hazardous. The OSHA physical and health hazard categories are shown below. **Note: CHS has not conducted specific toxicity tests on this product. Our hazard evaluation is based on information from similar products, the ingredients, technical literature, and/or professional experience**

Gasoline - Flammable, toxic, irritant, target organ (CNS)
Toluene - Flammable, toxic, irritant, target organ (CNS)
Xylene - Flammable, toxic, irritant
Benzene - Flammable, irritant, carcinogen, target organ (kidney, liver, blood)
1,2,4-Trimethylbenzene - Flammable, toxic, irritant, target organ (CNS, blood)
Ethylbenzene - Flammable, toxic, irritant

POTENTIAL HEALTH EFFECTS

ROUTES OF ENTRY: Inhalation, Dermal, Ingestion.

ACUTE EFFECTS OF OVER EXPOSURE:

Eyes - Slight to moderate eye irritation.

Skin - Moderately irritating; causes redness, drying of skin.

Inhalation - Irritating to mucous membranes and respiratory tract. Causes dizziness, irritation of eyes, nose and throat, signs of intoxications. Can act as a simple asphyxiant.

Ingestion - Burning of the throat and stomach, loss of consciousness, convulsions, cyanosis, congestion and capillary hemorrhaging of the lungs and internal organs. Possible pneumonia (if vomited), loss of consciousness, and death.

CHRONIC EFFECTS OF OVER EXPOSURE: Suspect carcinogen from long term exposure studies on laboratory animals. Recent studies with laboratory animals have shown that gasoline vapors caused kidney damage and kidney cancer in rats and liver cancer in mice.

Mouse skin painting studies have shown that petroleum middle distillates (boiling range of 100-700°F) can cause skin cancer when repeatedly applied and never washed from the animal's skin. The relative significance of this to the skin and the resulting skin effects (irritation, cell damage, etc.) may play a role in the tumorigenic response. Studies have shown that washing the animal's skin with soap and water between treatments greatly reduces the carcinogenic effect of some petroleum oils.

A few studies have indicated that workers exposed many years to high concentrations of benzene have a slightly higher incidence of leukemia. Benzene can also be toxic to the blood and blood-forming tissues. For additional information on employee monitoring, information and training, medical surveillance, methods of compliance, etc., refer to the OSHA benzene standard, CFR 1910.1028.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: May aggravate pre-existing dermatitis, respiratory illness, or other conditions which have the same symptoms or effects as stated above.

CARCINOGENICITY:

Unleaded Gasoline -	**NTP:** No	**IARC:** No	**OSHA:** No
Benzene -	**NTP:** Yes	**IARC:** Yes	**OSHA:** Yes

Section 4 - FIRST AID MEASURES

EMERGENCY AND FIRST AID PROCEDURES:

Eye Contact - If material comes in contact with the eyes, immediately wash the eyes with large amounts of water, occasionally lifting the lower and upper lids until medical attention can be obtained.

Skin Contact - Remove contaminated clothing. Wash affected areas with soap and water. If irritation or redness develops, seek medical attention.

Inhalation - Move person away from source of exposure and into fresh air. If symptoms persist, seek immediate medical attention. Apply artificial respiration or cardiopulmonary resuscitation if not breathing. Get medical attention.

Ingestion - Never give anything by mouth to an unconscious person. Do **not** induce vomiting. Aspiration of material into the lungs due to vomiting can cause chemical pneumonitis which can be fatal. If spontaneous vomiting occurs, keep head below hips to prevent aspiration of liquid into lungs and monitor for breathing difficulty. Seek medical attention immediately. Keep victim warm and quiet.

Section 5 - FIRE - FIGHTING MEASURES

FLASH POINT: -40°F (TCC) **AUTO IGNITION TEMP:** 495-850°F

FLAMMABLE LIMITS IN AIR	**LOWER**	**UPPER**
% BY VOLUME	1.4	7.6

EXTINGUISHING MEDIA: Dry Chemical, Foam, Carbon Dioxide (CO_2), Water (fog pattern).

SPECIAL FIRE FIGHTING PROCEDURES: Water may be ineffective on flames, but should be used to keep fire-exposed containers cool. Large fires, such as tank fires, should be fought with caution. If possible, pump the contents from the tank and keep adjoining structures cool and protect personnel. Avoid spreading burning liquid with water used for cooling purposes. Do not flush down public sewers. The use of a self-contained breathing apparatus and protective clothing is recommended for fire fighters. Avoid inhalation of vapors.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Highly volatile material. Flowing gasoline can be ignited by self-generated static electricity; containers should be bonded and grounded. Vapors may travel along the ground to a source of ignition (pilot light, heater, electric motor) some distance away. Containers, drums (even empty) can explode when heat (welding, cutting, etc.) is applied.

HAZARD RATINGS:	**NFPA 704:**	Health- 1	Fire- 3	Reactivity- 0
	HMIS:	Health- 2	Fire- 4	Reactivity- 0

Section 6 - ACCIDENTAL RELEASE MEASURES

STEPS TO TAKE IF MATERIAL IS RELEASED OR SPILLED: Notify emergency response personnel as appropriate. If facility or operation has an "Oil or Hazardous Substance Contingency Plan", "Spill Prevention Control & Countermeasures (SPCC) Plan" or equivalent, activate its procedures. REMOVE ALL SOURCES OF IGNITION. Keep unnecessary people away; isolate hazard area and deny entry. Contain spill if possible. Small spills can be removed with inert absorbent. Dike area of large spill to prevent run-off to sewers, streams, etc. Ventilate area. Avoid breathing vapors. Use appropriate personal protective equipment during clean up. Contact fire authorities and notify appropriate Federal, State, and Local agencies.

Section 7 - HANDLING AND STORAGE

HANDLING AND STORING: Transport, handle and store in accordance with OSHA Regulation 29 CFR 1910.106, and applicable D.O.T. Regulations. Store in tightly closed containers in a dry cool place, away from sources of heat or ignition. Ground and bond all transfer and storage equipment and equip with self-closing valves, pressure vacuum bungs and flame arrestors. **Caution:** Misuse of empty containers can be hazardous. Empty containers can be hazardous if used to store toxic, flammable, or reactive materials. Cutting, welding or other of empty containers might cause fire, explosion or toxic fumes from residues. Do not pressurize or expose to open flame, heat, sparks or other sources of ignition. Do not siphon gasoline by mouth.

> **WARNING:** Danger! Contains Benzene. Cancer Hazard. Can cause kidney, liver and blood disorders. **Other:** Do not siphon gasoline by mouth. May cause irritation to eyes, skin and respiratory system. Avoid liquid, mist and vapor contact. Harmful or fatal if swallowed. Aspiration hazard, can enter lungs and cause damage. May cause irritation or be harmful if inhaled or absorbed through the skin. Flammable Liquid. Vapors may explode.

Section 8 - EXPOSURE CONTROL - PERSONAL PROTECTION

ENGINEERING CONTROLS: Provide adequate ventilation to keep vapors below permissible concentrations.

RESPIRATORY EQUIPMENT: Use appropriate NIOSH-approved respiratory protection where atmospheric concentrations may exceed acceptable exposure limits. Self-contained breathing apparatus or supplied air respiratory protection required for entry into tanks, vessels, or other confined spaced containing gasoline.

EYE PROTECTION: Chemical type goggles or face shield where contact with liquid or mist may occur.

PROTECTIVE CLOTHING: Wear impervious clothing and gloves when contact with skin may occur.**OTHER (SAFETY SHOWERS, EYE WASH STATIONS, ETC.):** Emergency eye wash station and safety shower where operations and exposure warrant. Loading, unloading, tank gauging, etc., remain upwind.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Reddish golden brown liquid

ODOR: Gasoline odor (odor threshold approximately 10 ppm).

BOILING POINT: 760 mmHg @ 80°F

SPECIFIC GRAVITY (water=1): .72

VAPOR PRESSURE: 400 mmHg @ 68°F

VAPOR DENSITY (air=1): 4

SOLUBLE IN WATER: Negligible

EVAPORATION RATE (ether=1): Slower

pH: N/D

Section 10 - STABILITY AND REACTIVITY

STABILITY

STABLE **X** (At room temperature and pressure. See handling and storage section)
UNSTABLE _____

INCOMPATIBILITY -

CONDITIONS TO AVOID: Heat, sparks, flame, build-up of static electricity, and other sources of ignition should be avoided.

MATERIALS TO AVOID: Strong oxidizing agents, halogens, strong acids, and alkalies.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide, and hydrocarbons.

HAZARDOUS POLYMERIZATION: Has not been reported to occur under normal temperatures and pressures.

Section 11 - TOXICOLOGY INFORMATION

Note: CHS has not conducted specific toxicity tests on this product.

Section 12 - ECOLOGICAL INFORMATION

Note: CHS has not conducted specific ecological tests on this product.

Section 13 - DISPOSAL CONSIDERATION

WASTE DISPOSAL PROCEDURES: Recycle as much of the recoverable product as possible. Do not flush to drain or storm sewer or otherwise release to the environment. Dispose of non-recyclable material as a RCRA hazardous waste, complying with federal, state and local regulations. Note: Re-evaluation of this product may be required by the user at the time of disposal, since the product uses, transformations, mixtures and processes may change classification to non-hazardous or hazardous for reasons other than, or in addition to ignitable.

Section 14 - TRANSPORTATION

DOT PROPER SHIPPING NAME: Gasoline*

DOT HAZARD CLASS: Flammable Liquid*

DOT IDENTIFICATION NUMBER: UN 1203

DOT EMER. RESPONSE GUIDE NO.: 128

*EFFECTIVE 10/1/93 DOT's HM-181 changes how materials are classified. Proper Shipping Name-**Gasoline**; Hazard Class-**3**; UN/NA Identification #- **UN 1203**; **Packing Group II**; Placard-**FLAMMABLE**

Section 15 - REGULATORY INFORMATION

This product contains the following toxic chemicals subject to the reporting requirements of SARA Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372:

CAS Number	Chemical Name	Percent by Weight
108-88-3	Toluene	Up to 18.1%
1330-20-7	Xylene	Up to 15.3%
71-43-2	Benzene	Up to 5.3%
95-63-6	1,2,4 Trimethylbenzene	Up to 4.8%
100-41-4	Ethylbenzene	Up to 2.6%
110-54-3	n-Hexane	Up to 4%
91-20-3	Naphthalene	Up to 1%

SARA SECTION 311-312 HAZARD CATEGORIES (40 CFR 370.2):

FIRE: Yes **SUDDEN RELEASE OF PRESSURE:** No **REACTIVE:** No **ACUTE:** Yes **CHRONIC:** Yes

Section 16 - OTHER INFORMATION

Updated By: Hue Lam Date: January 03, 2007

Title: EHS Compliance Specialist Supersedes: December 24, 2003

Reason for Issue: Periodic review and update

CENEX® OUR ENERGY COMES THROUGH.™

MATERIAL SAFETY DATA SHEET

SECTION I – PRODUCT INFORMATION

Product Name: Propane
Trade Name: LPG (Liquefied Petroleum Gas)
Chemical Formula: C3H8
WHIMIS Classification: Class A – Compressed Gas
Class B, Division I – Flammable Gas

Supplier:

Business:

Non Medical Emergency:

Uses and Occurrence: Propane is commonly used as fuel for heating, cooking, automobiles, forklift trucks, crop drying and welding and cutting operations. Propane is used in industry as a refrigerant, solvent and as a chemical feedstock.

CEPA: CANADIAN ENVIRONMENTAL PROTECTION ACT

All components of this product are either on the Domestic Substances List (DSL) or are exempt.

SECTION II – HAZARDOUS INGREDIENTS

Components	**CAS Registry No.**	**Proportion of Product**	**LC50**	**LD50**
Propane	74986	95% - 98%	N/A	N/A
Ethane	74840	3% - 5%	N/A	N/A
Butane	791068	1% - 3%	N/A	N/A
Iso-Butane	75285	0.1% - 0.3%	N/A	N/A
Methane	74828	0.1% - 0.2%	N/A	N/A

Note: Composition given is typical for Grade 1 Propane; exact composition will vary from shipment to shipment.

- Explanation for change – HD5 refers to American specification, Grade 1 is Canadian equivalent in CGSB 3.14 Standard

SECTION III – CHEMICAL AND PHYSICAL DATA

Form: While stored under pressure – liquid and/or vapor
Boiling Point: -42 ^{o}C atm
Freezing Point: -188 ^{o}C
Evaporation Rate: Rapid (Gas at Normal Ambient Conditions)
Vapor Pressure: 1,013 (kPa) @ 26.0 ^{o}C
Vapor Density: 1.52 (Air = 1)
Coefficient of Water/Oil Distribution: Not available
PH: Not available
Soluble in Water: 6.1% by Volume @ 17.8 ^{o}C and 753 mmHg

Specific Gravity: 0.51 (Water = 1)
Appearance: Colorless liquid and vapor while stored under pressure.
Colorless and odorless gas in natural state at any concentration.
Commercial propane has an odorant added which is commonly ethyl mercaptan which has an odor similar to boiling cabbage or rotten eggs.
Odor Threshold: 4800 PPM
See Note 1 - Odorants

SECTION IV – FIRE OR EXPLOSION HAZARD DATA

Flash Point: -103.4 ^{o}C **Method**: Closed Cup
Flammable Limits: Lower 2.4%, Upper 9.5%
Auto Ignition Temperature: 432 ^{o}C
Products Evolved Due to Heat or Combustion: Carbon monoxide can be produced when primary and secondary airs are deficient while combustion is taking place.
Fire and Explosive Hazards: Explosive air-vapor mixtures may form if allowed to leak to atmosphere.
Sensitivity to Impact: No
Sensitivity to Static Discharge: Yes

Fire Extinguishing Precautions: Use water spray to cool exposed cylinders or tanks. Do not extinguish fire unless the source of the escaping gas that is fuelling the fire can be turned off. Fire can be extinguished with carbon dioxide and/or dry chemical (BC). Container metal shells require cooling with water to prevent flame impingement and the weakening of metal. If weakening, the area must be evacuated. If gas has not ignited, liquid and vapor may be dispersed by water spray or flooding.
Special Fire Fighting Equipment: Protective clothing, hose monitors, fog nozzles, self contained breathing apparatus.

SECTION V – REACTIVITY DATA

Stability: Stable
Conditions to Avoid: Keep separate fro oxidizing agents. Gas explodes spontaneously when mixed with chlorine dioxide.
Incompatibility: Remove sources of ignition and observe distance requirements for storage tanks from combustible material, drains, and openings to buildings.
Hazardous Decomposition Products: Deficient primary and secondary air can produce carbon monoxide.
Hazardous Polymerization: Will not occur.

SECTION VI – TOXICOLOGICAL PROPERTIES OF MATERIAL

ACUTE EXPOSURE:

Eyes: As a gas, none, Liquid causes "cold burns'.
Respiratory System: Little physiological effect at concentrations below 10.000 PPM. Higher concentrations may cause dizziness and unconsciousness due to asphyxiation. ***SEE NOTE 2 – ASPHYXIANT.***
Chronic Exposure: There are not reported effects from long-term low-level exposure.
Other: Liquid can cause burns and frostbite if in direct contact with skin.
Sensitization Properties: Skin – unknown, **Respiratory** – unknown.
Carcinogenicity: Not determined. ***SEE NOTE 3 (NORM).***

MEDIAN LETHAL DOSE:
Oral: Not applicable for gas.
Inhalation: Not determined.
Dermal: Not applicable for gas.
Other: Not determined.
IRRITATION INDEX:
Skin: No appreciable effect (gas).
Eyes: No appreciable effect (gas).
Symptoms of Exposure: Above 10,000 PPM – dizziness, stupor, unconsciousness. ***SEE NOTE 2 attached.*** American Conference of Governmental Industrial Hygienists (ACGIH) classifies propane as an asphyxiate; there is no recommended "Threshold Limit Value" (TLV).
Teratogenicity: Not determined.
Mutagenicity: Not determined.

SECTION VII – OCCUPATION CONTROL PROCEDURES

Eyes: Safety glasses, goggles, or face shield required when transferring product.
Skin: Insulated gloves if contact with liquid or liquid cooled equipment is expected. Wear gloves and long sleeves when transferring product.
Inhalation: In atmosphere, where the concentration of propane would reduce oxygen level below 18% in inhaled air, self contained breathing apparatus required. ***SEE NOTE 3 – (NORM).***
Ventilation: Explosion proof ventilation equipment required in confined spaces.

SECTION VIII – EMERGENCY AND FIRST AID PROCEDURES

FIRST AID:
Eyes: Should eye contact with liquid occur, flush eyes with lukewarm water for 15 minutes. Obtain immediate medical care.
Skin: In case of "Cold Burn" from contact with liquid, immediately place affected area in lukewarm water and keep at this temperature until circulation returns. If fingers or hands are frostbitten, have the victim hold his hand next to his body such as under the armpit. Obtain immediate medical care.

SPILL OR LEAK:
Eliminate leak if possible.
Eliminate source of ignition.
Ensure cylinder is upright.
Disperse vapors with hose streams using fog nozzles, watch for low area, as propane is heavier than air and can settle in low areas. Remain upwind of leak, keep people away.
Prevent vapor and/or liquid from entering into sewers, basements or confined areas.

SECTION 1X – TRANSPORTATION, HANDLING AND STORAGE

- Transport and store cylinders and tanks secured in an upright position in a ventilated space, away from ignition sources (so relief valve is in contact with vapor space of cylinder or tank).
- Cylinders that are not in use must have the valves in the closed position and be equipped with a protective cap or guard.
- Do not store with oxidizing agents, oxygen or chlorine cylinders.
- Transport, handle and store according to applicable federal and provincial regulations (CGA B149.2). ***SEE NOTE 4 – MAGNETIC RESIDUES.***

TDG Classification: 2.1 (gas)
TDG Shipping Name: Liquid Petroleum Gas (Propane)
TDG Special Provisions: 56, 90, and 102
PIN UN: 1075

SECTION X – PREPARTATION INFORMATION

Prepared by: Propane Gas Association of Canada
(403) 543-6500

Date prepared: March 2007

This information is in addition to the information supplied on the MSDS and forms a part of the MSDS by reference to note numbers indicated:

NOTE 1 ODOURANTS:

Odorants are not completely effective warning agents in all cases.
Certain odorants are polar and/or chemically reactive and may be depleted by reaction or absorption.
Sensitivity to odorants differs from person to person and may decrease with age or impaired physical conditions such as colds or respiratory allergies.
Prolonged exposure to odorants can create desensitization to the odor.

NOTE 2 ASPHYXIANT AND NARCOTIC EFFECTS OR PROPANE:

LPG's can displace air and can act as an asphyxiant. Lack of oxygen may cause dizziness, headaches, diminished awareness, faulty judgment, increase in fatigue and impaired muscular co-ordination. If these symptoms are identified while working in close proximity to propane that is released, go immediately into a fresh air environment.

LPG's are anaesthetic gases within the upper explosive limits and higher concentrations. A person working around propane in an enclosed space or in close proximity to a propane source such as filling cylinders, purging lines, investigating leaks, etc. who feels light-headed, dizzy, drunken, sleepy, or intoxicated should go immediately into fresh air. This narcotic effect may impair a person's judgment temporarily but will rapidly disappear in fresh air.

NOTE 3 NATURALLY OCCURRING RADIOACTIVE MATERIAL (NORM):

Sludges and tank scale from propane storage tanks, bulk delivery truck tanks, railway tank cars, and fuel filters and strainers screens may contain Naturally Occurring Radioactive Material (NORM) in the form of lead 210.

Equipment used for the transfer of propane such as propane piping and hoses, pumps and compressors may have detectable levels of radioactive lead 210 on inner surfaces.

Workers involved in cleaning, repair or maintenance on inner surfaces of such equipment should avoid breathing dust generated from such activities. Suitable codes of practice should be developed for the activities, detailing appropriate occupational hygiene and disposal practices.

NOTE 4 MAGNETIC RESIDUES IN PROPANE:

Magnetic residues generated in automotive fuel tanks from "mill scale" or corrosion processes may impair the operation of magnetic gauges and electronic solenoid valves.

Collection of gross amounts of solid residues can affect the proper operation of lock offs, mixers, pressure release valves, etc.

Solid residues could contain NORM (see note 3).

Shell Canada Limited

Material Safety Data Sheet

Effective Date: 2002-08-14
Supersedes: 2001-01-08

Class B2 Flammable Liquid

Class D2B Other Toxic Effects - Skin Irritant

Class D2A Other Toxic Effects - Carcinogen

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT:	**SHELL JET B WITH ANTI-ICING ADDITIVE**
SYNONYMS:	WIDE BOILING RANGE AVIATION TURBINE FUEL PLUS ANTI ICING ADDITIVE
PRODUCT USE:	Fuel
MSDS Number:	141-020

MANUFACTURER	**TELEPHONE NUMBERS**	
Shell Canada Limited	**Shell Emergency Number**	1-800-661-7378
P.O. Box 100, Station M	**CANUTEC 24 HOUR EMERGENCY NUMBER**	613-996-6666
400-4th Ave. S.W.		
Calgary, AB Canada	For general information:	1-800-661-1600
T2P 2H5	For MSDS information:	403-691-3982
	(From 7:30 to 4:30 Mountain Time)	403-691-2220

This MSDS was prepared by the Toxicology and Product Stewardship Section of Shell Canada Limited.

*An asterisk in the product name designates a trade-mark(s) of Shell Canada Limited, used under license by Shell Canada Products.

2. COMPOSITION/INFORMATION ON INGREDIENTS

Component Name	CAS Number	% Range	WHMIS Controlled
Naphtha (Petroleum), Full-range Reformed	68919-37-9	>95	Yes
Benzene	71-43-2	0.5 - 1.5	Yes

See Section 8 for Occupational Exposure Guidelines.

3. HAZARDS IDENTIFICATION

Physical Description: Liquid Bright Clear Typical Gasoline Odour

Routes of Exposure: Exposure may occur via inhalation, ingestion, skin absorption and skin or eye contact.

Hazards:

Flammable Liquid.
Irritating to skin.
Contains Benzene.
May cause cancer.
Vapours are moderately irritating to the eyes.
Vapours are moderately irritating to the respiratory passages. The liquid when accidently aspirated into the lungs can cause a severe inflammation of the lung.
Excessive exposure to benzene may cause leukemia in man.

Handling: Eliminate all ignition sources.
Wear suitable gloves and eye protection.
Bond and ground transfer containers and equipment to avoid static accumulation.
Avoid prolonged exposure to vapours.
Empty containers are hazardous, may contain flammable / explosive dusts, liquid residue or vapours. Keep away from sparks and open flames.

For further information on health effects, see Section 11.

4. FIRST AID

Eyes: Flush eyes with water for at least 15 minutes while holding eyelids open. If irritation occurs and persists, obtain medical attention.

Skin: Wash contaminated skin with mild soap and water for 15 minutes. If irritation occurs and persists, obtain medical attention.

Ingestion: DO NOT INDUCE VOMITING! OBTAIN MEDICAL ATTENTION IMMEDIATELY. Guard against aspiration into lungs by having the individual turn on to their left side. If vomiting occurs spontaneously keep head below hips to prevent aspiration of liquid into the lungs.

Inhalation: Remove victim from further exposure and restore breathing, if required. Obtain medical attention.

Notes to Physician: The main hazard following accidental ingestion is aspiration of the liquid into the lungs producing chemical pneumonitis. If more than 2.0 mL/kg has been ingested, vomiting should be induced with supervision. If symptoms such as loss of gag reflex, convulsions or unconsciousness occur before vomiting, gastric lavage with a cuffed endotracheal tube should be considered.

5. FIRE FIGHTING MEASURES

Extinguishing Media:

Dry Chemical
Carbon Dioxide
Foam
Water Fog

Firefighting Instructions: Extremely flammable. Vapour forms a flammable/explosive mixture with air between upper and lower flammable limits. Vapours may travel along ground and flashback along vapour trail may occur. Flashback may occur along vapour trail. Do not use water except as a fog. Use water to cool fire exposed containers. Product will float and can be reignited on surface of water. Containers exposed to intense heat from fires should be cooled with water to prevent vapour pressure buildup which could result in container rupture. Container areas exposed to direct flame contact should be cooled with large quantities of water as needed to prevent weakening of container structure. Do not enter confined fire space without adequate protective clothing and an approved positive pressure self-contained breathing apparatus. Always stay away from ends of containers due to explosive potential. Fight fire from maximum distance.

Hazardous Combustion Products: A complex mixture of airborne solid, liquid, particulates and gases will evolve when this material undergoes pyrolysis or combustion. Carbon dioxide, carbon monoxide and unidentified organic compounds may be formed upon combustion.

6. ACCIDENTAL RELEASE MEASURES

Issue warning "Flammable". Eliminate all ignition sources. Handling equipment must be grounded. Isolate hazard area and restrict access. Try to work upwind of spill. Avoid direct contact with material. Saturated clothing should be immediately removed to avoid flammability hazard. Wear appropriate breathing apparatus (if applicable) and protective clothing. Stop leak only if safe to do so. Dike and contain land spills; contain water spills by booming. Use water fog to knock down vapours; contain runoff. For large spills remove by mechanical means and place in containers. Absorb residue or small spills with absorbent material and remove to non-leaking containers for disposal. Recommended materials: Clay or Sand . Flush area with water to remove trace residue. Dispose of recovered material as noted under Disposal Considerations. Notify appropriate environmental agency(ies).

7. HANDLING AND STORAGE

Handling: Extremely flammable. Avoid excessive heat, sparks, open flames and all other sources of ignition. Fixed equipment as well as transfer containers and equipment should be grounded to prevent accumulation of static charge. Vapours are heavier than air and will settle and collect in low areas and pits, displacing breathing air. Extinguish pilot lights, cigarettes and turn off other sources of ignition prior to use and until all vapours are gone. Vapours may accumulate and travel to distant ignition sources and flashback. Do not cut, drill, grind, weld or perform similar operations on or near containers. Empty containers are hazardous, may contain flammable/explosive dusts, residues or vapours. Do not pressurize drum containers to empty them. Never siphon by mouth. Wash with soap and water prior to eating, drinking, smoking, applying cosmetics or using toilet facilities. Launder contaminated clothing prior to reuse. Use good personal hygiene.

Storage: Use explosion-proof ventilation to prevent vapour accumulation. Keep container tightly closed.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

THE FOLLOWING INFORMATION, WHILE APPROPRIATE FOR THIS PRODUCT, IS GENERAL IN NATURE. THE SELECTION OF PERSONAL PROTECTIVE EQUIPMENT WILL VARY DEPENDING ON

THE CONDITIONS OF USE.

OCCUPATIONAL EXPOSURE LIMITS (Current ACGIH TLV/TWA unless otherwise noted):

North American exposure limits have not been established for the product. Consult local authorities for acceptable provincial values.
Recommend SHELL guideline of 125 mg/m3 for vapours (8 hour shift).
Gasoline: 300 ppm (STEL: 500 ppm)
Benzene (skin) : 0.5 ppm (STEL: 2.5 ppm)

Mechanical Ventilation: Use explosion-proof ventilation as required to control vapour concentrations. Concentrations in air should be maintained below lower explosive limit at all times or below the recommended threshold limit value if unprotected personnel are involved. Make up air should always be supplied to balance air exhausted (either generally or locally). For personnel entry into confined spaces (i.e. bulk storage tanks) a proper confined space entry procedure must be followed including ventilation and testing of tank atmosphere.

PERSONAL PROTECTIVE EQUIPMENT:

Eye Protection: Chemical safety goggles and/or full face shield to protect eyes and face, if product is handled such that it could be splashed into eyes. Provide an eyewash station in the area.

Skin Protection: Impervious gloves (viton, nitrile) should be worn at all times when handling this material. In confined spaces or where the risk of skin exposure is much higher, impervious clothing should be worn. Safety showers should be available for emergency use.

Respiratory Protection: If exposure exceeds occupational exposure limits, use an appropriate NIOSH-approved respirator. Use a NIOSH-approved chemical cartridge respirator with organic vapour cartridges or use a NIOSH-approved supplied-air respirator. For high airborne concentrations, use a NIOSH-approved supplied-air respirator, either self-contained or airline breathing apparatus, operated in positive pressure mode.

9. PHYSICAL DATA

Physical State:	Liquid
Appearance:	Bright Clear
Odour:	Typical Gasoline Odour
Odour Threshold:	Not available
Freezing/Pour Point:	<-51 degrees C
Boiling Point:	60 - 260 degrees C
Density:	750 - 801 kg/m3 @ 15 degrees C
Vapour Density (Air = 1):	Not available
Vapour Pressure (absolute):	>42 mm Hg @ 38 degrees C
pH:	Not applicable
Flash Point:	Method Tag Closed Cup <1 degrees C
Lower Explosion Limit:	1 % (vol.)
Upper Explosion Limit:	7 % (vol.)
Autoignition Temperature:	Not available
Viscosity:	Not available
Evaporation Rate (n-BuAc = 1):	Not available
Partition Coefficient (K_{ow}):	Not available
Water Solubility:	Insoluble

Other Solvents: Hydrocarbon Solvents

10. STABILITY AND REACTIVITY

Chemically Stable:	Yes
Hazardous Polymerization:	No
Sensitive to Mechanical Impact:	No
Sensitive to Static Discharge:	Yes
Hazardous Decomposition Products:	Thermal decomposition products are highly dependent on combustion conditions.
Incompatible Materials:	Avoid contact with strong oxidizing agents and acids.
Conditions of Reactivity:	Avoid excessive heat, open flames and all ignition sources.

11. TOXICOLOGICAL INFORMATION

Ingredient (or Product if not specified)	**Toxicological Data**
Naphtha (Petroleum), Full-range Reformed	LD50 Oral Rat >28 mL/kg
Benzene	LD50 Oral Rat = 930 - 5600 mg/kg
	LC50 Inhalation Rat = 13700 ppm for 4 hours

Routes of Exposure:	Exposure may occur via inhalation, ingestion, skin absorption and skin or eye contact.
Irritancy:	This product is expected to be irritating to skin but is not predicted to be a skin sensitizer.
Chronic Effects:	Prolonged and repeated contact with skin can cause defatting and drying of the skin resulting in skin irritation and dermatitis. Prolonged exposure to high vapour concentration can cause headache, dizziness, nausea, blurred vision and central nervous system depression. Prolonged and repeated exposure may cause serious injury to blood forming organs, resulting in anemia and similar conditions.
Pre-existing Conditions:	Pre-existing eye, skin and respiratory disorders may be aggravated by exposure to this product.
Carcinogenicity and Mutagenicity:	This product contains benzene. Epidemiological studies indicate that long term inhalation of benzene vapour can cause leukaemia in man. Benzene has also produced chromosomal aberrations in peripheral blood lymphocytes. Carcinogenic hazard.

12. ECOLOGICAL INFORMATION

Environmental Effects:	Do not allow product or runoff from fire control to enter storm or sanitary sewers, lakes, rivers, streams, or public waterways. Block off drains and ditches. Provincial regulations require and federal regulations may require that environmental and/or other agencies be notified of a spill incident. Spill area must be cleaned and restored to original condition or to the satisfaction of authorities. May be harmful to aquatic life. May cause physical fouling of aquatic organisms.
Biodegradability:	Not readily biodegradable. Potential for bioaccumulation.

13. DISPOSAL CONSIDERATIONS

Waste management priorities (depending on volumes and concentration of waste) are: 1. recycle (reprocess), 2. energy recovery (cement kilns, thermal power generation), 3. incineration, 4. disposal at a licenced waste disposal facility. Do not attempt to combust waste on-site. Incinerate at a licenced waste disposal site with approval of environmental authority.

14. TRANSPORTATION INFORMATION

Canadian Road and Rail Shipping Classification:

UN Number	UN1863
Proper Shipping Name	FUEL, AVIATION, TURBINE ENGINE
Hazard Class	Class 3 Flammable Liquids
Packing Group	PG II
Shipping Description	FUEL, AVIATION, TURBINE ENGINE Class 3 UN1863 PG II

15. REGULATORY INFORMATION

This product has been classified in accordance with the hazard criteria of the *Controlled Products Regulations (*CPR*)* and the MSDS contains all the information required by the CPR.

WHMIS Class:	Class B2 Flammable Liquid Class D2B Other Toxic Effects - Skin Irritant Class D2A Other Toxic Effects - Carcinogen
DSL/NDSL Status:	This product, or all components, are listed on the Domestic Substances List, as required under the Canadian Environmental Protection Act. This product and/or all components are listed on the U.S. EPA TSCA Inventory.
Other Regulatory Status:	No Canadian federal standards.

16. ADDITIONAL INFORMATION

LABEL STATEMENTS

Hazard Statement :	Flammable Liquid. Irritating to skin. Contains Benzene. May cause cancer.
Handling Statement:	Eliminate all ignition sources. Wear suitable gloves and eye protection. Bond and ground transfer containers and equipment to avoid static accumulation. Avoid prolonged exposure to vapours. Empty containers are hazardous, may contain flammable / explosive dusts, liquid residue or vapours. Keep away from sparks and open flames.
First Aid Statement :	Wash contaminated skin with soap and water. Flush eyes with water. If overcome by vapours remove to fresh air. Do not induce vomiting. Obtain medical attention.

Revisions: This MSDS has been reviewed and updated.
Changes have been made to:
Section 14

SINCLAIR
MATERIAL SAFETY DATA SHEET
SINCLAIR DIESEL MSDS No. 58

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Trade Name (Used on Label): Diesel
Description: Diesel
Synonyms: Diesel, Distillate, Cycle Oil, Fuel Oil, Diesels Cycle Oil, Furnace Oil
Chemical Family: Liquid Hydrocarbons

EMERGENCY TELEPHONE: CHEMTREC - (800) 424-9300 or (703) 527-3887 (collect)
SUPPLIER: Sinclair Oil Corporation
P. O. Box 30825
Salt Lake City, Utah 84130
TELEPHONE: (888) 340-3466
FAX: (801) 524-2740

2. COMPOSITION, INFORMATION ON INGREDIENTS

CAS Registry Number: #1 Diesel 8008-20-6
#2 Diesel 68476-34-6

COMPOSITION COMMENTS:

	Typical wt.%	CAS Registry #
#1 Diesel		
Toluene	0-0.5	108-88-3
Naphthalene	0-0.5	91-20-3
#2 Diesel		
Toluene	0-0.5	108-88-3
Naphthalene	0-0.5	91-20-3

EXPOSURE GUIDELINES:

	OSHA		ACGIH			
COMPONENTS	TWA	STEL	CEILING	TWA	STEL	UNIT
Toluene	200		300			ppm
Naphthalene	10			10	15	ppm
Petroleum Distillates (Naphtha)	500					ppm

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

Colorless, red, blue, or amber liquid with kerosene odor. May cause eye, skin and respiratory tract irritation.

POTENTIAL HEALTH EFFECTS:

Trauma and burns secondary to explosions and fires can result. In enclosed spaces, oxygen may be displaced by vapors or consumed by combustion. Incomplete combustion will produce carbon monoxide and other toxic gases.

INHALATION:

Overexposure may cause weakness, headache, nausea, confusion, blurred vision, drowsiness and other central nervous system effects.

EYE CONTACT:

Contact may cause eye irritation. Naphthalene vapor causes eye irritation.

SKIN CONTACT:

Contact may irritate or burn skin. Absorption through the skin may cause symptoms of intoxication, followed by kidney damage.

INGESTION:

If aspirated (liquid enters lung) following ingestion, severe lung irritation and pulmonary edema (swelling of lung tissue) may occur. Aspiration may also result in central nervous system depression or excitement. Serious permanent lung damage may result. Nausea, vomiting, diarrhea, and abdominal pain may occur following ingestion.

4. FIRST AID MEASURES

Remove all clothing impregnated with material immediately. Consult a physician for major exposures of inhalation or skin contact.

INHALATION:

Remove from further exposure. If unconsciousness occurs, seek immediate medical assistance. If breathing stops, use mouth-to-mouth resuscitation.

EYE CONTACT:

Flush immediately with water for at least 15 minutes minimum. Seek medical attention promptly.

SKIN CONTACT:
Discard contaminated leather articles. Wash contact areas with soap and water. Launder contaminated clothing before reuse.

INGESTION:
DO NOT INDUCE VOMITING. Get medical assistance promptly. (Note to physician: Material if aspirated into the lungs may cause chemical pneumonitis. Treat appropriately.)

5. FIRE FIGHTING MEASURES

Flashpoint and Method:	100^{o} F Minimum
Flammable Limits:	LEL - 1.3 UEL - 6
Autoignition Temperature:	490^{0} - 545^{o} F

GENERAL HAZARD:
Incomplete burning can produce carbon monoxide. Vapors will be released above flash point and when mixed with air, can burn or explode in confined space if exposed to sources of ignition.

FIRE FIGHTING INSTRUCTIONS:
Use foam, dry chemical, CO_2, water fog or vaporizing liquid (Halon). Keep personnel removed from and up-wind of fire. Cool adjacent structures and storage drums with water spray. Evacuate area. Prevent runoff from fire control dilution from entering streams or drinking water supply.

FIRE FIGHTING EQUIPMENT:
Use of SCBA in enclosed or confined spaces, or as otherwise needed. Bunker gear.

HAZARDOUS COMBUSTION PRODUCTS:
May produce carbon monoxide.

6. ACCIDENTAL RELEASE MEASURES

LAND SPILL:

Shut off and eliminate all ignition sources. Keep people away. Remove leaking containers to a safe area. Contain and remove by mechanical means. Add sand, earth or other suitable absorbent to spill area than scrape off the ground. Guard against contamination of water supplies. Report spills to appropriate authorities. Dispose of in accordance with Federal, State and Local regulations.

WATER SPILL:

Spill may be removed from water with mechanical dredges or lifts. Report spills to appropriate authorities. Dispose of in accordance with Federal, State and Local regulations.

7. HANDLING AND STORAGE

GENERAL:

Ground and bond all transfer and storage equipment. Drums must be grounded/ bonded/ equipped with self- closing valves, pressure vacuum bungs and flame arrestors. Store away from ignition sources in a cool area. Outside or detached storage is preferred.

When handling use non-sparking tools and equipment. Do not use as a cleaner or solvent, use only as fuel. Do not siphon by mouth.

8. ENGINEERING CONTROLS, RESPIRATORY & PERSONAL PROTECTION

ENGINEERING CONTROLS:

Provide ventilation sufficient to prevent exceeding recommended exposure limit or build-up of explosive concentrations of vapor in air. Use explosion-proof equipment.

PERSONAL PROTECTION:

RESPIRATOR:

Approved respiratory protection must be used when vapors or mist concentrations are unknown or exceed the TLV. Avoid prolonged or repeated breathing of vapor or mists.

PROTECTIVE CLOTHING:

Use full-face shield, chemical goggles, impervious gloves, boots and whole body protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Vapor Pressure: < 1 PSIA	Vapor Density: >1
Specific Gravity: 0.75 - 0.90	(Air = 1)
Solubility in Water: No	Freezing Point: 0^{o} F
pH: N/A	Appearance: colorless, red, blue or amber
Boiling Point: 550^{o} F	Physical State: Liquid

10. STABILITY AND REACTIVITY

GENERAL:
This product is stable.

INCOMPATIBLE MATERIALS AND CONDITIONS TO AVOID:
Strong acids, alkalies and oxidizers. Avoid heat, sparks, flame and static electricity.

HAZARDOUS DECOMPOSITION:
Incomplete burning can produce carbon monoxide**GENERAL:**

11. TOXICOLOGICAL INFORMATION

SYSTEMIC:
Petroleum-derived fuels and fuel oils are complex and variable mixtures of hydrocarbons. In general, the more viscous the mixture, the less toxic it will be. At high level exposures, humans experience multiple organ failures, some of which may be due to hypoxia and secondary to the failure of other organ systems. In humans kidney failure has been noted only at high, acute levels of exposures, and appears reversible. Liver enzymes may be transiently elevated. At lower level exposures, most acute health effects are reversible. People can be exposed by inhalation, ingestion and dermal contact. Frequently, people are exposed by combined dermal and inhalation exposure.

ACUTE:
Inhalation: Headaches, confusion, disorientation, blurred vision occur with inhalation. Higher exposures may cause hallucinations, CNS excitation, drowsiness, CNS depression. Seizure and coma occur from very high exposures and death may result from respiratory depression. ECG changes, cardiac arrhythmias, tachycardia, shock and cardiovascular collapse can occur. Pneumonia, pulmonary edema and hemorrhages can occur.

Inhalation of 8000-16000 mg/m3 for 2 to 4 hours was lethal to rats.

Ingestion: Central nervous system, cardiovascular, and respiratory effects have been reported with acute exposures to various hydrocarbon fuels and oils similar to those reported with inhalation. Nausea, vomiting, cramping and diarrhea may occur.

Eye: Conjunctivitis and burning, watery eyes have been reported in acute exposures to various hydrocarbon fuels and oils.

Skin: Mild erythema to full thickness chemical burns have occurred after prolonged exposure to various hydrocarbon fuels and oils.

Chronic:
Chronic dermatitis with acanthosis, inflammation, parakeratosis and hyperkeratosis have occurred with chronic exposures to various hydrocarbon fuels and oils.
Occupational exposures in petroleum refining are considered Group 2A (probably carcinogenic) by IARC.

12. DISPOSAL CONSIDERATIONS

RCRA: Disposal of this product or material contaminated with this product may be regulated by RCRA due to the characteristic of ignitability.

EPA Hazard Class: Acute Hazard/Chronic Hazard/Fire Hazard

Dispose of in accordance with Federal, State, and Local regulations.

13.TRANSPORT INFORMATION

DOT (Department of Transportation):

PROPER SHIPPING NAME:	Combustible Liquid nos (Diesel #1, Diesel #2)
HAZARD CLASS:	Combustible Liquid
IDENTIFICATION NUMBER:	UN 1993 PG III
NAERG96 NUMBER:	128

14. REGULATORYINFORMATION

CERCLA (Comprehensive Environmental Response Compensation, and Liability Act):
Naphthalene and Toluene are hazardous substances under CERCLA and therefore are subject to emergency notification requirements.

SARA TITLE III (Superfund Amendments and Reauthorization Act): Naphthalene and Toluene are subject to SARA Title III, Sections 311 and 312, which require MSDS reporting and hazardous chemical inventory reporting.

Naphthalene and Toluene are also subject to SARA Title III, Section 313, which requires chemical release reporting.

15.OTHER INFORMATION

NFPA 704/HMIS

Health - 0 Flammability - 2 Reactivity - 0
(0=insignificant, 1=slight, 2=moderate, 3=high, 4=extreme)

REVISION SUMMARY:
Complete review of MSDS, December 2002.

THIS PRODUCT MATERIAL SAFETY DATA SHEET PROVIDES HEALTH AND SAFETY INFORMATION. THE PRODUCT SHOULD BE USED IN APPLICATIONS CONSISTENT WITH THIS PRODUCT LITERATURE. FOR ANY OTHER USES, EXPOSURES SHOULD BE EVALUATED SO THAT APPROPRIATE HANDLING PRACTICES AND TRAINING PROGRAMS CAN BE ESTABLISHED TO ENSURE SAFE WORKPLACE OPERATIONS

THIS MATERIAL SAFETY DATA SHEET IS PROVIDED IN GOOD FAITH AND MEETS THE REQUIREMENTS OF THE HAZARDOUS COMMUNICATION PROVISIONS OF SARA TITLE III AND 29CFR1910.1200(g) OF THE OSHA REGULATIONS. THE ABOVE INFORMATION IS BASED ON REVIEW OF AVAILABLE INFORMATION SINCLAIR BELIEVES IS RELIABLE AND IS SUPPLIED FOR INFORMATIONAL PURPOSES ONLY. SINCLAIR DOES NOT GUARANTEE ITS COMPLETENESS OR ACCURACY. SINCE CONDITIONS OF USE ARE OUTSIDE THE CONTROL OF SINCLAIR, SINCLAIR DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, AND ANY LIABILITY FOR DAMAGE OR INJURY WHICH RESULTS FROM THE USE OF THE ABOVE DATA. NOTHING HEREIN IS INTENDED TO PERMIT INFRINGEMENT OF VALID PATENTS AND LICENSES.

DATE: **July 2004**
SUPERSEDES: **July 2003**

PANTHER INDUSTRIES INC.
BOX 698, DAVIDSON, SASK., CANADA S0G 1A0
PHONE: (306)567-2814 FAX: (306)567-2888

PRODUCT DATA

PRODUCT: Calcium Chloride High Test Fines

ITEM	%	METHOD
Calcium Chloride, min.	94.0	ASTM E449-84
Alkali Chlorides, max.	4.9	ASTM E449-84
Total magnesium, as MgCl,max.	0.4	ASTM E449-84
Heavy Meatal as Pb, max.	0.005	13964
Calcium Hydroxide, max.	0.20	ASTM E449-84
Sulphate (calculated as SO_4), max.	0.20	13964
Calcium Carbonate	0.20	13964
Iron, max	0.005	LDG-AM-82-73
Other Impurities, not including H_2O, max.	0.98	

SIEVE ANALYSIS
Based on STD TYLER MESH

ITEM	%
Passing #10 sieve	99
Passing #20 sieve	45
Passing #35 sieve	20
Bulk density	75 lbs/ft^3

MSDS # CALCIUM CHLORIDE-94%

PRODUCT INFORMATION

CHEMICAL NAME: Calcium Chloride

SYNONYM(S): High Test Fines, High Test Powder, High Test Beads,

CHEMICAL FAMILY: Inorganic salt

Product use: Calcium chloride is used to dehydrate natural gas with high sulfur content, gas from remote or offshore wells, or from wells with low flow rates.

MOLECULAR FORMULA: $CaCl_2$

SHIPPING NAME: Calcium Chloride

PIN - UN NUMBER: Not controlled

WHMIS: D2B

MANUFACTURER: The Dow Chemical Company Ltd.
P.O box 1012
Sarnia, Ontario
N7T 7K7
DOW Emergency Number: 780-998-8282 (Ft Saskatchewan, Alberta)
519-339-3711 (Sarnia, Ontario)
450-652-1000 (Varennes, Quebec)

SUPPLIER: Panther Industries Inc.
Box 628
Davidson, Sask. S0G 1A0

EMERGENCY TELEPHONE NUMBER: (306)567-2814

HAZARDOUS INGREDIENTS

INGREDIENTS:	WEIGHT %	C.A.S. REGISTRY NUMBER:
Calcium Chloride	94-97%	10043-52-4

OTHER INGREDIENTS

INGREDIENTS:	WEIGHT%	C.A.S. REGISTRY NUMBER:
Strontium Chloride	0-1%	10476-85-4
Sodium Chloride	1-2%	07647-14-5
Potassium Chloride	2-3%	07447-40-7
Water		07732-18-5

PHYSICAL DATA

PHYSICAL STATE: Solid.

PH: data to indicate the product is basic

ODOUR AND APPEARANCE: Odourless white to off white pellets.

ODOUR THRESHOLD: Not applicable

VAPOUR PRESSURE: <0.005 mmHg, at 20 ^{o}C.

VAPOUR DENSITY: Not applicable

BOILING POINT: 1670^{o}C

SOLUBILITY IN WATER: Very soluble

MELTING POINT: Approx. 772^{o}C, 1424^{o}F

SPECIFIC GRAVITY: 2.2

FIRE AND EXPLOSION DATA

CONDITIONS OF FLAMMABILITY: Not applicable.

MEANS OF EXTINGUISHING: This material does not burn. If exposed to fire from another

source, use suitable extinguishing agent for that fire.

FLASH POINT: Not applicable.

UPPER FLAMMABLE LIMIT: Not applicable.

LOWER FLAMMABLE LIMIT: Not applicable.

SPECIAL FIRE FIGHTING PROCEDURES: Keep people away. Isolate fire area and deny unnecessary entry. Firefighters should wear positive-pressure self-contained breathing apparatus (SCBA) and full protective fire fighting clothing (included fire fighting helmet, coat, pants, boots, and gloves.)

EXPLOSION HAZARDS: **Hydrogen chloride is a hazardous combustion product at temperatures in excess of 1600 degrees Celsius.**

REACTIVITY DATA

STABILITY: Stable. Hygroscopic.

HAZARDOUS POLYMERIZATION: Will not occur

HAZARDOUS DECOMPOSITION PRODUCTS: Does no decompose.

CONDITIONS TO AVOID: None known.

INCOMPATIBILITY: Corrosive to some metals. Corrosive when wet. Flammable hydrogen may be generated from contact with metals such as zinc or sodium. Avoid contact with sulfuric acid. Heat is generated when mixed with water. Spattering or boiling can occur.

HEALTH HAZARD DATA

INHALATION: Vapors are unlikely due to physical properties. Dust may cause irritation to upper respiratory tract. **Calcium Chloride has an LD_{50} of 1940 mg/kg oral mouse**

SKIN CONTACT: Short single exposure not likely to cause significant skin irritation. Prolonged or repeated exposure may cause skin irritation, even a burn. May cause more severe response if skin is damp or if material is confined to skin. May cause more severe response is skin is abraded (scratched or cut). When dissolving, the heat produced may cause more intense effects as well as thermal burns. Not classified as corrosive according to DOT. A single prolonged exposure is not likely to result in the material being absorbed through skin in harmful amounts.

EYE CONTACT: Dusts may cause severe irritation with corneal injury, pellets may cause slight eye irritation. Effects may be slow to heal. When dissolving, the heat produced may cause more intense effects as well as thermal burns.

INGESTION: Single dose oral toxicity is considered to be low. Small amounts swallowed incidental to normal handling operations are not likely to cause injury; swallowing amounts larger than that may cause injury. Ingestion may cause gastrointestinal irritation or ulceration.

Toxicological data: Effects of chronic exposure: These effects are; Repeated exposure may cause irritation or even a burn to the skin, eyes and nasal cavity.

IRRITANCY: Slight.

MUTAGENICITY: Negative

SENSITIZATION TO PRODUCT: Not available.

REPRODUCTIVE TOXICITY: Not available.

ANIMAL TOXICITY DATA:

LD50 - 967-1668 mg/kg oral, rat.
>5000 mg/kg skin, rabbits

FIRST AID PROCEDURES

INHALATION: Remove to fresh air if effects occur. Consult a physician.

EYE CONTACT: Irrigate with flowing water immediately and continuously for 15 minutes. Consult medical personnel.

SKIN CONTACT: Wash off in flowing water or shower.

INGESTION: If swallowed, seek medical attention. Give 2-4 glasses of water or milk and don’t induce vomiting unless directed to do so by medical personnel.

NOTE TO PHYSICIAN: If burn is present, treat as any thermal burn, after decontamination. No specific antidote. Supportive care. Treatment based on judgment of the physician in response to reactions of the patient.

PREVENTATIVE MEASURES

RESPIRATORY PROTECTION: In dusty atmospheres, use an approved dust respirator. Atmospheric levels should be maintained below the exposure guideline.

EXPOSURE GUIDELINES: Calcium chloride: Dow IHG is 10 mg/m3
Sodium chloride: Dow IHG is 10 mg/m3
Potassium chloride: Dow IHG is 10 mg/m3

EYE AND FACE PROTECTION: Use safety glasses. For dusty operations or when handling solutions of the material, wear chemical goggles.

SKIN PROTECTION: When prolonged or frequently repeated contact could occur, use protective clothing impervious to this material. Selection of specific items such as faceshield, gloves, boots, apron or full-body suit will depend on operation. Remove contaminated clothing immediately, wash skin area with soap and water and launder clothing before reuse. If hands are cut or scratched, use gloves impervious to this material even for brief exposures.

STORAGE REQUIREMENTS: Keep containers tightly closed when not in use. Store in a dry place. Protect from atmospheric moisture.

ENGINEERING CONTROLS: Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

HANDLING: Heat developed during diluting or dissolving is very high. Use cool water when diluting or dissolving (temperature less than 80F, 27C)

ENVIRONMENTAL PROTECTION DATA

PROCEDURES TO BE FOLLOWED IN CASE OF A LEAK OR SPILL: Contain spill. Shovel and sweep up spill and place in a suitable and properly labelled container. Flush residue with large amounts of water. Keep contaminated water from entering sewers and water courses.

WASTE DISPOSAL: All disposal methods must be in compliance with all Federal, State/Provincial and local laws and regulations.

AQUATIC TOXICITY: Material is practically non-toxic to aquatic organisms on an acute bases (LC50/EC50 > 100 mg/L in most sensitive species).

PREPARATION INFORMATION

MSDS PREPARED BY: Technical Department
Panther Industries Inc.
Davidson, Sask.
Ph. (306) 567-2814

DATE PREPARED/REVISED: Feb 17 2004

DATE PRINTED: Feb 17 2004

REFERENCES:
1. Patty's Industrial Hygiene and Toxicology 3rd Ed.1981 by Clayton & Clayton John Wiley & Sons, New York.
2. Manufacturer's MSDS.