

# Spill Contingency Plan Existing and Proposed Municipal Quarry Sites,

# Sanikiluaq, Nunavut

May 21, 2013

Submitted to: GOVERNMENT OF NUNAVUT -

**COMMUNITY AND GOVERNMENT** 

**SERVICES** 

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#### **Government of Nunavut – Community and Government Services**

2<sup>nd</sup> Floor, GNO 1045 P.O. Box 379 Pond Inlet, NU, X0A 0S0

**ATTENTION: Mr. Grigor Hope** 

RE: SPILL CONTINGENCY PLAN FOR EXISTING AND PROPOSED QUARRY SITES, SANIKILUAQ, NUNAVUT (GN-CGS PROJECT #10-2006)

ARKTIS Piusitippaa Inc. is pleased to provide Government of Nunavut, Community and Government Services (GN-CGS) with the <u>final</u> version of the above referenced document for review and comments.

This plan has been prepared in accordance with the Aboriginal Affairs and Northern Development Canada *Guideline for Spill Contingency Planning* (April 2007) and is intended to assist the GN-CGS in completing a Quarry Administration Agreement with the Municipality of Sanikiluaq and to satisfy Section 2b of the Nunavut Impact Review Board screening application Part 1 Form entitled *Project Proposal Information Requirements*. Once an agreement is in place between these two parties, it is recommended that this plan be updated to include all pertinent contact information.

We trust that the information presented in this report satisfies the requirements of the project at this stage. Please do not hesitate to contact the undersigned if there are any questions or comments.

Sincerely,

ARKTIS SOLUTIONS INC.

Matthew Hamp, P.Eng

**VP Nunavut Affairs & Operations** 

matthe Thep

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## 1.0 Introduction and Project Details

This Spill Contingency Plan has been prepared for the Government of Nunavut – Department of Community and Government Services (GN-CGS) by ARKTIS Piusitippaa Inc. (ARKTIS) for use by the Municipality of Sanikiluaq, Nunavut, during the operation of quarry sites within the municipal boundary.

Under the Nunavut *Spill Contingency Planning and Reporting Regulations*, a Spill Contingency Plan is required to be filed by any person storing contaminants in an underground facility with a capacity equal to or greater than 4,000 litres or kilograms, or storing contaminants in an aboveground storage facility with a capacity equal to or greater than 20,000 litres or kilograms. Although, in the case of the operation of the quarry sites within the municipal boundary of Sanikiluaq, no fuel will be stored at any of the sites, the GN – Department of Environment recommends the adoption of a plan for any operation involving refueling.

This plan is intended to help the Municipality develop their spill response capabilities, including acquisition of spill response equipment and training in their application, and ensure that appropriate measures are in place to effectively address potential spills at the quarry sites identified herein.

This plan follows the Aboriginal Affairs and Northern Development Canada (AANDC) *Guideline for Spill Contingency Planning* (April 2007).

## 1.1 Operating Organization, Location and Mailing Address

Municipality of Sanikiluaq, Nunavut

P.O. Box 157

X0A-0W0

Phone: 867-266-7900

Fax: 867-266-7924

Email: <a href="mailto:sanisao@qiniq.com">sanisao@qiniq.com</a>

Attention: Andre Larabie, Senior Administrative Officer

1.2 Effective Date of Spill Contingency Plan

May 31<sup>st</sup>, 2013



## 1.3 Last Revisions to Spill Contingency Plan

#### None

#### 1.4 Distribution List

The plan and the most recent revisions have been distributed to:

A. Andre Larabie, Senior Administrative Officer, Municipality of Sanikiluaq

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F. Robert Eno, Director, Environmental Protection, GN – Department of Environment

Email: REno@gov.nu.ca Phone: (867) 975-7729 Fax: (867) 975-7739



## 1.5 Purpose and Scope

The purpose of this plan is to outline response actions for potential spills of any size, including a worst case scenario for the Municipality of Sanikiluag at any of the guarry sites identified herein.

The plan identifies key response personnel and their roles and responsibilities in the event of a spill, as well as the equipment and other resources available to respond to a spill. It details spill response procedures that will minimize potential health and safety hazards, environmental damage, and clean-up efforts. The plan has been prepared to ensure quick access to all the information required in responding to a spill.

## 1.6 Description of Operations

It is proposed that the Municipality of Sanikiluaq expand their existing quarry operations to include three additional sites to the two existing areas currently worked for the extraction of granular materials. The materials extracted from the sites will be used primarily for the maintenance of municipal roadways and embankments, and will also accommodate the construction of earthworks for new or upgraded facilities, such as wastewater retention and treatment structures, landfarms, fuel containment facilities, and freshwater retention structures.

At least one of the quarry sites will be in operation year-round to allow access to gravel and sand for application to roadways to provide winter traction for vehicles, while the majority of operations for new construction or rehabilitation work will take place from mid-July to approximately mid-October.

## 1.7 Site Description

There are five quarry sites identified within the municipal boundary of Sanikiluaq. Two of these sites are currently being worked for the extraction of granular materials. As of the date of the first edition of this plan, the remaining three sites have not been exploited for granular materials.

The five quarry sites are shown on **Figure 1** and are described in further detail below. An area plan can be found at the end of this report which shows the quarry sites in relation to local municipal infrastructure and the community.

#### Worked Area #1

This area is located approximately 500 metres due west of the western end of the airport runway and is approximately 20,000 m<sup>2</sup> in area. As of the date of the first edition of this plan, this area is the primary source of granular material for road and embankment maintenance used by the Municipality of Sanikiluaq. The material found in this area is primarily cobbles and coarse gravel to a depth of approximately 1.0 to 1.5 metres overlying silty sand, and forms part of a



poorly-formed esker which is oriented approximately north-south along the western portion of Flaherty Island.

Access to this area is provided by an existing all-weather running along the eastern boundary of the site.

#### Worked Area #2

This area is located immediately north of Worked Area #1 and is approximately 40,000 m<sup>2</sup> in area. Both Worked Area #1 and Worked Area #2 could be considered one large deposit had they not been separated by a narrow seasonal access trail situated between the two deposits, as they are part of the same glacial formation. This is the secondary source of granular material for road and embankment maintenance used by the Municipality of Sanikiluaq.

The material found in this area is primarily cobbles and coarse gravel to a depth of approximately 1.0 to 1.5 metres overlying silty sand.

Access to this area is provided by an existing all-weather running along the eastern boundary of the site.

#### **Borrow Source #1**

This area is located immediately south of, and adjacent to, Worked Area #2 and is approximately 15,000 m² in area. It forms part of the esker discussed above. The area is comprised of primarily cobbles and coarse gravel to a depth of 1.0 to 1.5 metres. As of the date of the first edition of this plan, this source had not been worked for the extraction of granular materials.

Access to this area is provided by an existing seasonal trail running along the eastern boundary of the site and connecting to an all-weather road approximately 300 metres east of the site.

#### **Borrow Source #2**

This area is located approximately 500 metres directly west of the community's primary quarry site (i.e. Worked Area #1) and is approximately 80,000 m<sup>2</sup> in area. The material in this area is comprised of cobbles and coarse gravel to a depth of at least 1.0 metres. As of the date of the first edition of this plan, this source had not been worked for the extraction of granular materials.

Access to this area is provided by an existing seasonal trail oriented east-west which separates Worked Area #1 and Worked Area #2 and bisects this area into a northern partition and a southern partition.



#### **Borrow Source #3**

This area is located approximately 250 metres south of Borrow Source #1 and can be accessed from the same seasonal trail which runs adjacent to that area. It is approximately 10,000 m<sup>2</sup> in area.

This area also forms part of the esker discussed above. The area is comprised of primarily cobbles and coarse gravel to a depth of 1.0 to 1.5 metres. As of the date of the first edition of this plan, this source had not been worked for the extraction of granular materials.



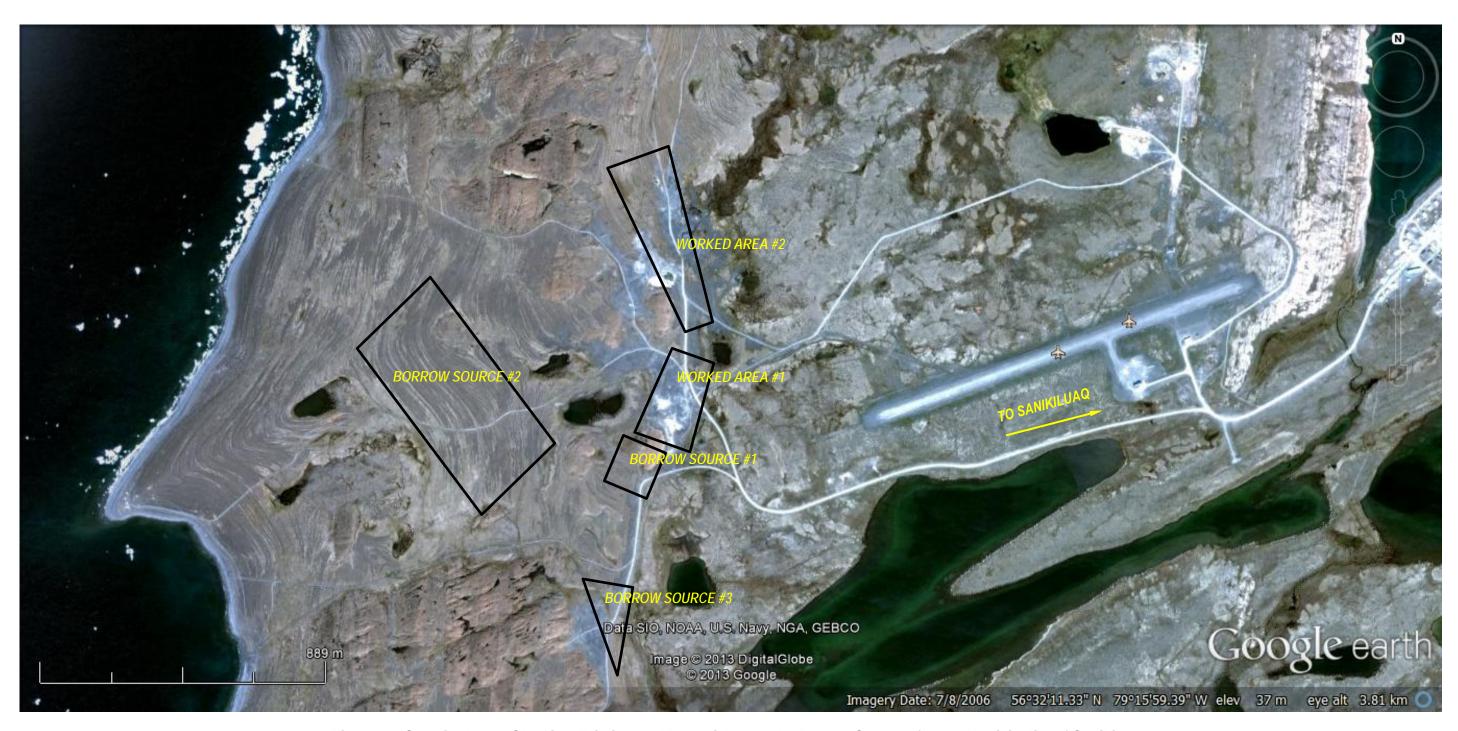


Figure 1 – Satellite Image Showing Existing and Potential Granular Borrow Sources for the Municipality of Sanikiluaq



#### 1.8 Hazardous Materials On-Site

Given the proximity of the community and associated municipal vehicle maintenance facilities, the operation of the five quarry sites identified herein will not require the storage of any fuel or hazardous materials on any of the sites. During routine quarry operations, however, refueling of motorized equipment may take place, opening the site to the risk of a potential spill occurring. In addition to fuel, hydraulically actuated excavation equipment contains hydraulic oil and lubricating oil. Example Material Safety Data Sheets for each hazardous material are included in **Appendix A**.

## 1.9 Existing Preventative Measures

As noted above, hazardous materials will not be stored on site; however, in the event that refueling of excavation vehicles must take place at any of the sites, it is prudent to plan for an emergency situation. Along with the preventative measures outlined below, adequate training of staff is paramount.

Spill kits are to be located wherever fuel used. As there will be no permanent or temporary structures at any of the quarry sites as part of their operation, this means that spill kits will be located in the cab of each excavator stationed at each site (see **Section 4.1.1** for details on spill kit contents). Portable drip trays and appropriately sized fuel transfer hoses with pumps are to be used when refuelling motorized equipment, to avoid any leaks/drips onto the land.

The Municipal Foreman or designated fuel monitor is to conduct daily visual inspections to check for leaks or damage to the fuel storage containers, as well as for stained or discoloured soils around any motorized equipment.

A checklist is to be used to ensure no areas have been missed and results of the inspections are to be recorded in the company database. Regular maintenance and oil checks of all motorized equipment are also undertaken to avoid preventable leaks.

## 1.10 Additional Copies

A copy of this plan is to be kept in the cab of each excavator operating at any of the quarry sites. Another copy will also be held at the municipal office.

## 1.11 Process for Staff Response to Media and Public Inquiries

All inquiries are to be directed to the Senior Administrative Officer at the municipal office in Sanikiluaq. If the Senior Administrative Officer is not available, there is to be another staff member designated to act in this position. If a reporter or member of the public arrives at the



site unexpectedly, the official in charge of responding to their questions will be the Senior Administrative Officer or acting Senior Administrative Officer.

If a spill has occurred an NT-NU Spill Report needs to be filled out. A copy of this form along with instructions on how to fill it out can be found in **Appendix B**.

## 2.0 Response Process

The flow chart depicted in **Figure 2** identifies the response process, as well as the chain of command for responding to a spill or release. The duties of various response personnel are summarized, contact information is provided including 24-hour phone numbers for responsible people and the location of communications equipment on site is discussed.

An immediately reportable spill is defined as a release of a substance that is likely to be an imminent environmental or human health hazard or meets or exceeds the volumes outlined in **Appendix C**. It must be reported to the NU 24-Hour Spill Report Line at 867-920-8130. Any spills less than these quantities do not need to be reported immediately to the spill reporting line. Rather, these minor spills are to be tracked and documented by the company and submitted to the appropriate authority either immediately upon request or at a pre-determined reporting interval. If there is any doubt that the quantity spilled exceeds reportable levels, the spill will be reported to the NU 24-Hour Spill Report Line.

Following reporting of the spill to the Senior Administrative Officer, he/she will report spills to the NU 24-Hour Spill Line as necessary. The Senior Administrative Officer will also inform the GN Department of Environment – Environmental Protection Division and record the spill data for tracking in databases and notify the GN Department of Environment – Environmental Protection Division in the event of media inquiries. The GN Department of Environment – Environmental Protection Division office number is 867-975-7729.



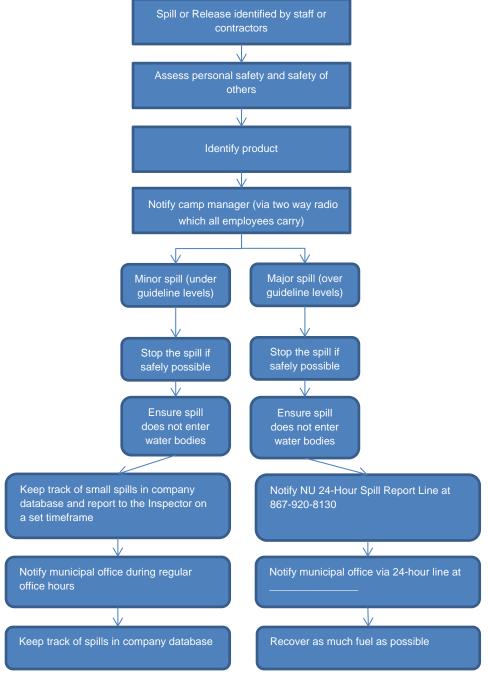


Figure 2 – Flow Chart of Response Process<sup>1</sup>

<sup>&</sup>lt;sup>1</sup> Details of each step will be provided in the procedures for initial actions under Section 3.0 Action Plan



#### 3.0 Action Plan

## 3.1 Potential Spill Sizes and Sources for Each Hazardous Material on Site

In **Table 1**, a list of potential discharge events, with associated discharge volumes and directions is presented for the primary hazardous materials used on site. The most likely discharge volume is indicated and the spill cleanup procedures will focus on spills of this quantity. A worst case scenario is also presented. Specific discharge rates are not indicated for each fuel type as these would vary from a few minutes to several hours, based on the source of leak or puncture.

Table 1 – List of Hazardous Materials, Potential Discharge Events, Potential Discharge Volumes and Direction of Potential Discharge

Material (sources)	Potential Discharge Event	Discharge Volume (worst case)	Direction of Potential Discharge
Diesel Fuel (excavator, dump truck)	Over pumping of fuel from fuel truck into excavator.     Minor leaking from excavator fuel tank.     Large puncture, fast leaking fuel tank from excavator (worst case).	Up to 410 L for a medium sized excavator (worst case)	On flat ground within quarry (likely case)  Toward pond or lake from quarry site (worst case).
Gasoline (dump truck, pick-up trucks)	Overfilling of vehicles (small spill).     Minor leaking from fuel tank.     Large puncture, fast leaking fuel tank from vehicle (worst case).	Likely under 100 L (worst case)	On flat ground within quarry (likely case)  Toward pond or lake from quarry site (worst case).
Hydraulic Oil	Leaking fittings on excavator hydraulic lines.     One or more hydraulic lines punctured or severed.     All hydraulic lines compromised (worst case).	Up to 260 L for a medium sized excavator (worst case)	On flat ground within quarry (likely case)  Toward pond or lake from quarry site (worst case).
Lubricants (Engine Oil)	Leaking drain plug.     Minor leak from oil filter fitting.     Large puncture or crack, fast leaking reservoir (worst case).	Up to 23 L for a medium sized excavator (worst case)	On flat ground within quarry (likely case)  Toward pond or lake from quarry site (worst case).



## 3.2 Potential Environmental Impacts of Spill

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

#### 3.2.1 Diesel Fuel

Environmental impacts: Diesel may be harmful to wildlife and aquatic life. It is not readily biodegradable and has the potential for bioaccumulation in the environment. Diesel burns slowly and thus risk to the environment is reduced during recovery as burn can be more readily contained compared with volatile fuels. Runoff into water bodies must be avoided.

Worst case scenario: The fuel tank of an excavator is punctured and the entire contents of a full tank seeped into surrounding soil and water bodies. This could cause illness or death to aquatic life and indirectly affect wildlife feeding from the land and water.

#### 3.2.2 Gasoline

Environmental impacts: Gasoline may be harmful to wildlife and aquatic life. It is not readily biodegradable and has the potential for bioaccumulation in the environment. Gasoline is quick to volatize. Runoff into water bodies must be avoided.

Worst case scenario: The fuel tank of a motorized vehicle, such as a dump truck, is punctured and the entire contents of a full tank seeped into surrounding soil and water bodies. This could cause illness or death to aquatic life and indirectly affect wildlife feeding from the land and water.

## 3.2.3 Hydraulic Oil and Lubricants

Environmental impacts: hydraulic oils and lubricants may be harmful to wildlife and aquatic life. They are not readily biodegradable and have the potential for bioaccumulation in the environment. Runoff into water bodies must be avoided.

Worst case scenario: All of the hydraulic lines of an excavator are severed or open simultaneously and contents seeped into surrounding soil and water bodies.

This could cause illness or death to aquatic life and indirectly affect wildlife feeding from the land and water.



#### 3.3 Procedures

#### 3.3.1 Procedures for Initial Actions

- Ensure safety of all personnel.
- Assess spill hazards and risks.
- Remove all sources of ignition.
- Stop the spill if safely possible e.g. shut off pump, replace cap, patch leaking hole. Use the contents of the nearest spill kit to aid in stopping the spill if it is safe to do so. Tyvek suits and chemical master gloves are located in the spill kit and should be worm immediately if there is any risk of being in contact with fuel.
- No matter what the volume is, notify the Municipal Foreman via two way radio.
- Contain the spill use contents of spill kits to place sorbent materials on the spill, or use shovel to dig dike to contain spill. Methods will vary depending on the nature of the spill. See Section C for more details.

## 3.3.2 Spill Reporting Procedures

Report spill immediately to Municipal Foreman, who will determine if the spill is to be reported to the NU 24-Hour Spill Line at 867-920-8130.

Each spill kit, as well as the municipal office and Municipal Foreman, are to have copies of the NT-NU Spill Report form to be filled out (see **Appendix B**). Fill out and fax the Spill Report to the staff of the NU 24-Hour spill line. Also retain a copy of the filled out form at the municipal office.

**NU 24-hour Spill Report Line:** 

Phone (867) 920-8130

Fax (867) 873-6924

## 3.3.3 Procedures for Containing and Controlling the Spill

- Initiate spill containment by first determining what will be affected by the spill.
- Assess speed and direction of spill and cause of movement (water, wind and slope).



- Determine best location for containing spill, avoiding any water bodies.
- Have a contingency plan ready in case spill worsens beyond control or if the weather or topography impedes containment.

Specific spill containment methods for land, water, ice and snow are outlined below.

## 3.3.3.1 Containment of Spills on Land

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

#### **Dykes**

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

#### **Trenches**

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

#### 3.3.3.2 Containment of Spills on Water

Spills on water such as rivers, streams or lakes are the most serious types of spills as they can negatively impact water quality and aquatic life. All measures need to be undertaken to contain spills on open water.

#### **Booms**

Booms are commonly used to recover fuel floating on the surface of lakes or slow moving streams. They are released from the shore of a water body to create a circle around the spill. If



the spill is away from the shoreline a boat will need to be used to reach the spill, then the boom can be set out. More than one boom may be used at once. Booms may also be used in streams and should be set out at an angle to the current. Booms are designed to float and have sorbent materials built into them to absorb fuels at the edge of the boom. Fuel contained within the circle of the boom will need to be recovered using sorbent materials or pumps and placed into barrels or bags for disposal.

#### Weirs

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

#### **Barriers**

In some situations barriers made of netting or fence material can be installed across a stream, and sorbent materials placed at the base to absorb spilled fuel. Sorbents will need to be replaced as soon as they are saturated. Water will be allowed to flow through. This is very similar to the weir option discussed above.

Note that in some cases, it may be appropriate to burn fuel or to let volatile fuels such as gasoline evaporate after containment on the water surface.

This should only be undertaken in consultation with, and after approval from AANDC or lead agency Inspector.

#### 3.3.3.3 Containment of Spills on Ice

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

#### **Dykes**

Dykes can be used to contain fuel spills on ice. By collecting surrounding snow, compacting it, and mounding it to form a dyke down slope of the spill, a barrier is created thus helping to contain the spill.



If the quantity of spill is fairly large, a plastic tarp can be placed over the dyke such that the spill pools at the base of the dyke. The collected fuel can then be pumped into barrels or collected with sorbent materials.

#### **Trenches**

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

#### **Burning**

Burning should only be considered if other approaches are not feasible, and is only to be undertaken with the permission of the AANDC or lead agency Inspector.

#### 3.3.3.4 Containment of Spills on Snow

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

#### **Dykes**

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

#### 3.3.3.5 Worst Case Scenarios

Dealing with spilled fuel which exceeds the freeboard of a dyke or barrier would present a possible worst case scenario for the quarry sites identified herein. To contain the overflow, a trench or collection pit would have to be created downstream of the spill to contain the overflow.

# 3.3.4 Procedures for Transferring, Storing, and Managing Spill Related Wastes

In most cases, spill cleanups are initiated at the far end of the spill and contained moving toward the centre of the spill. Sorbent socks and pads are generally used for small spill cleanup. A pump with attached fuel transfer hose can suction spills from leaking containers or large



accumulations on land or ice, and direct these larger quantities into empty drums. Hand tools such as cans, shovels, and rakes are also very effective for small spills or hard to reach areas. Heavy equipment can be used if deemed necessary, and given space and time constraints.

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

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

## 3.3.5 Procedures for Restoring Affected Areas

Once a spill of reportable size has been contained, the Senior Administrative Officer will consult with the AANDC or lead agency Inspector assigned to the file to determine the level of cleanup required. The Inspector may require a site specific study to ensure appropriate clean up levels are met. Criteria that may be considered include natural biodegradation of oil, replacement of soil and revegetation.

## 4.0 Resource Inventory

#### 4.1 On-Site Resources

Spill kits are located throughout the sites at the locations indicated in Figure 2. The contents are described below. In addition, earth moving and other equipment located at Camp Unknown is also listed below.

## 4.1.1 Contents of Spill Kits

Recommended spill kit contents are as follows:

- 4 tyvek splash suits
- 4 pairs of chemical master gloves
- 10 large bags with ties for temporary use
- 2 oil only booms (5" x 10')
- 50 oil only mats (16" x 20")
- 5 sorbent socks



- 10 sorbent pads
- 2 large tarps
- 1 roll duct tape
- 1 utility knife
- 1 field notebook and pencil
- 1 rake
- 1 pick axe
- 3 aluminium scoop shovels (i.e. non-sparking)
- 1 instruction binder
- Earth moving and other equipment
- 1 small loader
- 2 all-terrain vehicles
- 3 snow machines
- 3 fuel transfer hoses with pumps
- tool kit including hack saw, hammer, screwdrivers, etc.

#### 4.2 Off-Site Resources

All the contacts listed below could reach the site within one day at a minimum. However, realistically government officials would not be able to reach the site until the next business day, depending on the severity of the spill.

Senior Administrative Officer, 24-hour emergency line

NU 24-Hour spill line
(867) 920-8130
Water Resources Officer, AANDC Inspector
(867) 975-4289
GN Environmental Protection Division
(867) 975-7729

Tel: 867.446.0036 / 867.446.4129 Fax: 866.475.1147

(867) 266-1111

RCMP (Sanikiluag – Emergency Only)



Health Centre (Sanikiluaq) (867) 266-8965

## **5.0 Training Program**

## 5.1 Outline of Training Program

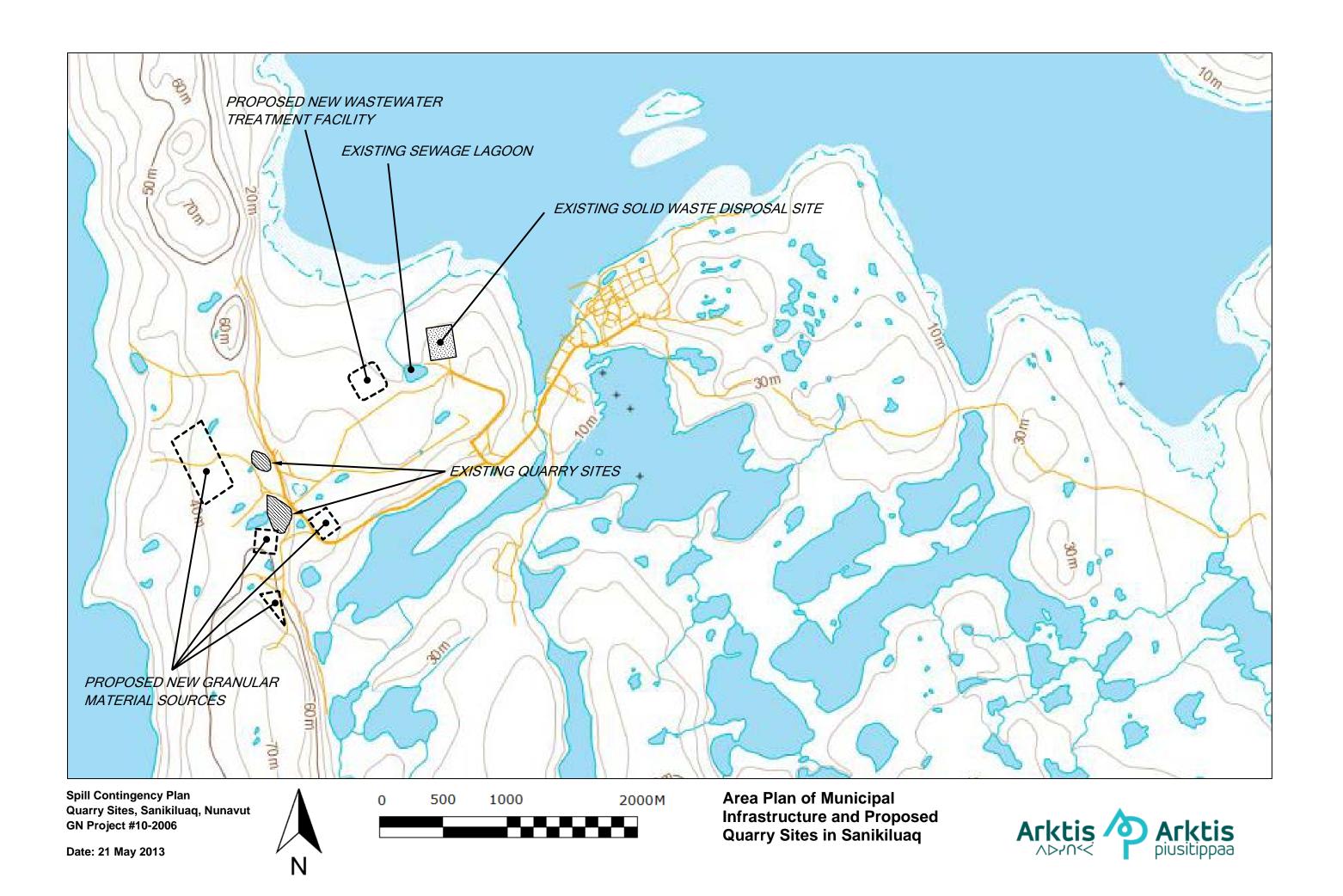
The employee training program is to be developed by the Senior Administrative Officer and disseminated by the Municipal Foreman. The following are key recommendations for inclusion in the program:

- All individuals entering the site are required to participate in an orientation session;
- During this session, all locations of the spill plan and spill kits are provided on a map in hard copy;
- An overview of the plan is provided by the Municipal Foreman leading the orientation session;
- Specific training sessions, including mock spill exercises, are scheduled for individuals directly involved in handling hazardous materials to ensure they know all steps to be undertaken in handling these materials, as well as the steps involved in the event of a spill, including the proper use of spill kits;
- All employees are required to have their basic first aid training, as well as WHMIS training, before working on the site;
- Supervisors are required to have advanced level first aid training.

## 5.2 Training Schedule and Recordkeeping

A spreadsheet is to be kept by the Senior Administrative Officer and at the municipal office indicating the training undertaken, and expiry dates of specific training e.g. first aid. It is to be regularly updated.

A spreadsheet is also to be kept by the Senior Administrative Officer and at the municipal office recording the quantities and locations of each spill of diesel fuel, gasoline, hydraulic oil, and crankcase oil less than the immediately reportable quantities stipulated under the *Environmental Protection Act*.





# Appendix A – Material Safety Data Sheets (MSDS) for Hazardous Materials Used On Site

The formats of Material Safety Data Sheets vary greatly. Examples can be found on the internet and from Spill Contingency Plans in place for various Water Licences in Nunavut (see Water Board public registries).

## **Material Safety Data Sheet**

GASOLINE, UNLEADED



## 1. Product and company identification

Product name

: GASOLINE, UNLEADED

**Synonym** 

: Regular, Unleaded Gasoline (US Grade), Mid-Grade, Plus, Super, WinterGas, SummerGas, Supreme, SuperClean WinterGas, RegularClean, PlusClean, Premium, marked or dyed gasoline, TQRUL, transitional quality regular unleaded, BOB, Blendstock

for Oxygenate Blending, Conventional Gasoline.

Code

: W102E, SAP: 102 to 117

Material uses

: Unleaded gasoline is used in spark ignition engines including motor vehicles, inboard and outboard boat engines, small engines such as chain saws and lawn mowers, and

recreational vehicles.

Manufacturer

PETRO-CANADA P.O. Box 2844

150 - 6th Avenue South-West

Calgary, Alberta

T2P 3E3

In case of emergency

Petro-Canada: 403-296-3000

Canutec Transportation: 613-996-6666

Poison Control Centre: Consult local telephone directory for emergency number(s).

## 2. Hazards identification

**Physical state** 

: Clear liquid.

**Odour** 

Gasoline

WHMIS (Canada)



Class B-2: Flammable liquid

Class D-2A: Material causing other toxic effects (Very toxic). Class D-2B: Material causing other toxic effects (Toxic).

**OSHA/HCS** status

: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Emergency overview** 

: WARNING!

FLAMMABLE LIQUID AND VAPOUR. CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION. CANCER HAZARD - CONTAINS MATERIAL WHICH CAN CAUSE CANCER. CONTAINS MATERIAL WHICH MAY CAUSE HERITABLE GENETIC EFFECTS.

Flammable liquid. Irritating to eyes, respiratory system and skin. Keep away from heat, sparks and flame. Avoid exposure - obtain special instructions before use. Do not breathe vapour or mist. Avoid contact with eyes, skin and clothing. Contains material which can cause cancer. Risk of cancer depends on duration and level of exposure. Contains material which may cause heritable genetic effects. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash

thoroughly after handling.

**Routes of entry** 

: Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

**Inhalation** 

: Inhalation of this product may cause respiratory tract irritation. Inhalation of this product may cause respiratory tract irritation and Central Nervous System (CNS) Depression, symptoms of which may include; weakness, dizziness, slurred speech, drowsiness, unconsciousness and in cases of severe overexposure; coma and death.

Ingestion

: Ingestion of this product may cause gastro-intestinal irritation. Aspiration of this product may result in severe irritation or burns to the respiratory tract. Ingestion of this product may cause Central Nervous System (CNS) Depression, symptoms of which may include; weakness, dizziness, slurred speech, drowsiness, unconsciousness and in cases of severe overexposure; coma and death.

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## 2. Hazards identification

Skin : Irritating to skin.

Eyes : Irritating to eyes.

Potential chronic health effects

Chronic effects : This product contains an ingredient or ingredients, which have been shown to cause

chronic toxic effects. Repeated or prolonged exposure to the substance can produce

blood disorders.

Carcinogenicity : Contains material which can cause cancer. Risk of cancer depends on duration and

level of exposure.

Mutagenicity: Contains material which may cause heritable genetic effects.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Medical conditions

Repeated or prolonged contact with spray or mist may produce chronic eye irritation and severe skin irritation. Repeated skin exposure can produce local skin destruction or

dermatitis.

See toxicological information (Section 11)

## 3. Composition/information on ingredients

<u>Name</u>	CAS number	<u>%</u>
Gasoline	86290-81-5	85-100
Toluene	108-88-3	15-40*
Benzene	71-43-2	0.5-1.5
Ethanol	64-17-5	0.1-0.3

\*Montreal: may vary from 3-40% \*Edmonton: may vary from 1-5%

exposure

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

## 4. First-aid measures

**Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical

attention immediately.

Skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes

while removing contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognised skin cleanser. Wash clothing before reuse. Clean shoes

thoroughly before reuse. Get medical attention immediately.

Inhalation
 Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention

immediately.

**Ingestion**: Wash out mouth with water. Do not induce vomiting unless directed to do so by medical

personnel. Never give anything by mouth to an unconscious person. Get medical

attention immediately.

**Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is

suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water

before removing it, or wear gloves.

Notes to physician : No specific treatment. Treat symptomatically. Contact poison treatment specialist

immediately if large quantities have been ingested or inhaled.

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## 5. Fire-fighting measures

Flammability of the product

: Flammable liquid (NFPA) .

**Extinguishing media** 

Suitable

: Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam.

Not suitable

: Do not use water jet.

Special exposure hazards

: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

**Products of combustion** 

: Carbon oxides (CO, CO2), nitrogen oxides (NOx), polynuclear aromatic hydrocarbons, phenols, aldehydes, ketones, smoke and irritating vapours as products of incomplete combustion.

Special protective equipment for fire-fighters

: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Special remarks on fire hazards

Extremely flammable in presence of open flames, sparks, shocks, and heat. Vapours are heavier than air and may travel considerable distance to sources of ignition and flash back. Rapid escape of vapour may generate static charge causing ignition. May accumulate in confined spaces.

Special remarks on explosion hazards

: Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Containers may explode in heat of fire. Vapours may form explosive mixtures with air.

## 6. Accidental release measures

**Personal precautions** 

: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

**Environmental precautions** 

: Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

#### Methods for cleaning up

**Small spill** 

: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.

Large spill

: Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

## 7. Handling and storage

**Handling** 

Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Avoid exposure - obtain special instructions before use. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapour or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly

## 7. Handling and storage

closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by earthing and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

#### **Storage**

: Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. Ensure the storage containers are grounded/bonded.

## 8. Exposure controls/personal protection

Ingredient	Exposure limits
Gasoline	ACGIH TLV (United States). TWA: 300 ppm 8 hour(s). STEL: 500 ppm 15 minute(s).
Toluene	ACGIH TLV (United States). TWA: 20 ppm 8 hour(s).
Benzene	ACGIH TLV (United States). Absorbed through skin. TWA: 0.5 ppm 8 hour(s). STEL: 2.5 ppm 15 minute(s).
Ethanol	ACGIH TLV (United States). STEL: 1000 ppm 15 minute(s).

#### Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures

: If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

**Engineering measures** 

: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

**Hygiene measures** 

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

## Personal protection Respiratory

: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: A NIOSH-approved air-purifying respirator with an organic vapour cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air-purifying respirators is limited. Use a positive-pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstances where air-purifying respirators may not provide adequate protection.

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## 8. Exposure controls/personal protection

**Hands** 

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Recommended: polyvinyl alcohol (PVA), Viton®. Consult your PPE provider for breakthrough times and the specific glove that is best for you based on your use patterns. It should be realized that eventually any material regardless of their imperviousness, will get permeated by chemicals. Therefore, protective gloves should be regularly checked for wear and tear. At the first signs of hardening and cracks, they

should be changed.

Eyes : Safety eyewear complying with an approved standard should be used when a risk

assessment indicates this is necessary to avoid exposure to liquid splashes, mists or

dusts.

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling

this product.

**Environmental exposure** 

controls

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

## 9. Physical and chemical properties

Physical state : Clear liquid.

Flash point : Closed cup: -50 to -38°C (-58 to -36.4°F) [Tagliabue.]

**Auto-ignition temperature** : 257°C (494.6°F) (NFPA)

Flammable limits : Lower: 1.3% (NFPA)

Upper: 7.6% (NFPA)

**Colour** : Clear to slightly yellow or green, undyed liquid. May be dyed red for taxation purposes.

Odour : Gasoline
Odour threshold : Not available.
pH : Not available.

Boiling/condensation point : 25 to 220°C (77 to 428°F) (ASTM D86)

**Melting/freezing point** : Not available.

**Relative density** : 0.685 to 0.8 kg/L @ 15°C (59°F)

Vapour pressure : <107 kPa (<802.5 mm Hg) @ 37.8°C (100°F)

Vapour density : 3 to 4 [Air = 1] (NFPA)

Volatility : Not available.

Evaporation rate : Not available.

Viscosity : Not available.

Pour point : Not available.

**Solubility** : Hydrocarbon components virtually insoluble in water. Soluble in alcohol, ether,

chloroform and benzene. Dissolves fats, oils and natural resins.

## 10. Stability and reactivity

Chemical stability

: The product is stable.

**Hazardous polymerisation** 

: Under normal conditions of storage and use, hazardous polymerisation will not occur.

Materials to avoid

: Reactive with oxidising agents, acids and interhalogens.

Hazardous decomposition products

: May release COx, NOx, phenols, polycyclic aromatic hydrocarbons, aldehydes, ketones, smoke and irritating vapours when heated to decomposition.

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## 11. Toxicological information

**Acute toxicity** 

Product/ingredient name	Result	Species	Dose	Exposure
Gasoline	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	13600 mg/kg	-
Toluene	LD50 Dermal	Rabbit	12125 mg/kg	-
	LD50 Oral	Rat	636 mg/kg	-
	LC50 Inhalation	Rat	7585 ppm	4 hours
	Vapour			
Benzene	LD50 Dermal	Rabbit	>8240 mg/kg	-
	LD50 Oral	Rat	930 mg/kg	-
	LC50 Inhalation	Rat	13700 ppm	4 hours
	Vapour			
Ethanol	LD50 Oral	Rat	7060 mg/kg	-
	LC50 Inhalation	Rat	>32380 ppm	4 hours

**Conclusion/Summary** 

: Not available.

Vapour

**Chronic toxicity** 

Conclusion/Summary

: Not available.

Irritation/Corrosion

**Conclusion/Summary**: Not available.

**Sensitiser** 

**Conclusion/Summary**: Not available.

**Carcinogenicity** 

**Conclusion/Summary**: Not available.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
Gasoline	A3	2B	-	-	-	-
Toluene	A4	3	D	-	-	-
Benzene	A1	1	Α	+	Proven.	+
Ethanol	A3	-	-	-	-	-

Mutagenicity

**Conclusion/Summary**: Not available.

**Teratogenicity** 

**Conclusion/Summary**: There is a wealth of information about the teratogenic hazards of Toluene in the

literature; however, based upon professional judgement regarding the body of evidence,

WHMIS classification as a teratogen is not warranted.

Reproductive toxicity

**Conclusion/Summary**: Not available.

## 12. Ecological information

**Environmental effects** 

: No known significant effects or critical hazards.

**Aquatic ecotoxicity** 

**Conclusion/Summary**: Not available.

**Biodegradability** 

**Conclusion/Summary**: Not available.

## 13. Disposal considerations

Waste disposal

: The generation of waste should be avoided or minimised wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

## 14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
TDG Classification	UN1203	GASOLINE	3	II		-
<b>DOT Classification</b>	Not available.	Not available.	Not available.	-		-

PG\*: Packing group

## 15 . Regulatory information

**United States** 

HCS Classification : Flammable liquid

Irritating material Carcinogen

**Canada** 

WHMIS (Canada) : Class B-2: Flammable liquid

Class D-2A: Material causing other toxic effects (Very toxic). Class D-2B: Material causing other toxic effects (Toxic).

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

**International regulations** 

Canada inventory : All components are listed or exempted.

United States inventory

(TSCA 8b)

: All components are listed or exempted.

**Europe inventory** : All components are listed or exempted.

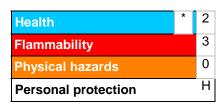
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## 16. Other information

**Label requirements** 

: FLAMMABLE LIQUID AND VAPOUR. CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION. CANCER HAZARD - CONTAINS MATERIAL WHICH CAN CAUSE CANCER. CONTAINS MATERIAL WHICH MAY CAUSE HERITABLE GENETIC EFFECTS.

Hazardous Material Information System (U.S.A.)



National Fire Protection Association (U.S.A.)



**References** : Available upon request.

<sup>™</sup> Trademark of Suncor Energy Inc. Used under licence.

Date of printing : 10/10/2012.

Date of issue : 10 October 2012

Date of previous issue : 4/9/2010.

Responsible name : Product Safety - DSR

Indicates information that has changed from previously issued version.

For Copy of (M)SDS : Internet: www.petro-canada.ca/msds

Canada-wide: telephone: 1-800-668-0220; fax: 1-800-837-1228

For Product Safety Information: (905) 804-4752

#### Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

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WHMIS (Pictograms)	WHMIS (Classification)	Protective Clothing	TDG (pictograms)
<b>(b)</b> (7)	B-3, D-2B		

Section 1. Ch	Section 1. Chemical Product and Company Identification						
Product Name	DIESEL FUEL	Code	W104 SAP: 120, 121, 122, 287				
Synonym	Diesel 50, Diesel 50 LS, #1 Diesel , #1 Diesel LS, Diesel LC, Seasonal Diesel, Seasonal Diesel LS, Diesel AA, Domestic Marine Diesel, International marine Diesel, Seasonal Diesel Locomotive, Domestic Marine diesel LS, diesel -20°C (LS), LSD, Low Sulphur Diesel, dyed diesel, marked diesel, coloured diesel, Naval Distillate.		n 3/2/2001.				
Manufacturer	PETRO-CANADA P.O. Box 2844 Calgary, Alberta T2P 3E3	In case of Emergency	Petro-Canada: 403-296-3000 Canutec Transportation: 613-996-6666 Poison Control Centre: Consult local telephone directory for				
Material Uses	Diesel fuels are distillate fuels suitable for use in high and medium speed internal combustion engines of the compression ignition type.	emergency number(s).					

Section 2. Composition and Information on Ingredients							
			Expo	sure Limits (ACGIH)			
Name	CAS#	% (V/V)	TLV-TWA(8 h)	STEL	CEILING		
1) Diesel oil. 2) Proprietary additives. 3) Aromatic content is 50% maximum ( benzene: nil). 4) * Notice of Intended Change (2000): 100 mg/m³, skin, A3.	68334-30-5 Not available	>99.9 <0.1	Not established* Not established	Not established Not established	Not established Not established		
Manufacturer Not applicable Recommendation							
Other Exposure Limits Consult local, state, provincial or to	erritory authoritie	s for acceptab	le exposure limits.				

Section 3. Hazards Identification.					
Potential Health Effects	Eye contact may cause mild eye irritation. Skin contact can cause moderate to severe irritation and produce drying, cracking, or defatting dermatitis. Inhalation of vapours can cause CNS depression with symptoms of nausea, headaches, vomiting, dizziness, fatigue, light-headedness, reduced coordination, unconciousness and possibly death. Inhalation can also cause irritation of nose and throat. Aspiration of liquid drops into the lungs may produce potentially fatal chemical pneumonitis (fluid in the lungs), severe lung damage, or respiratory failure. For more information, refer to Section 11.				

Section 4. First Aid Measures			
Eye Contact	IMMEDIATELY flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek medical attention.		
Skin Contact	Remove contaminated clothing - launder before reuse. Wash gently and thoroughly the contaminated skin with running water and non-abrasive soap. Seek medical attention.		
Inhalation	Evacuate the victim to a safe area as soon as possible. If the victim is not breathing, perform artificial respiration. Allow the victim to rest in a well ventilated area. Seek medical attention.		
Ingestion	DO NOT induce vomiting because of danger of aspirating liquid into lungs. Seek medical attention.		
Note to Physician	Not available		

Section 5. Fire-fighting Measures				
Flammability	Class II - combustible liquid (NFPA).	Flammable Limits	LOWER: 0.7%, UPPER: 6%	
Flash Points	Diesel Fuel: Closed Cup: >40°C (>104°F) Marine Diesel Fuel: Closed Cup: >60°C (>140°F)	Auto-Ignition 225°C (437°F) Temperature		
Fire Hazards in Presence of Various Substances	Flammable in presence of open flames, sparks, or heat. Vapours are heavier than air and may travel considerable distance to sources of ignition and flash back. This product can accumulate static charge and ignite. May accumulate in confined spaces.	d may travel gnition and Presence of Various cut, weld, heat, drill or pressu container. Vapour explosion haze outdoors or in sewers. Runoff to		
Products of Combustion	Carbon oxides (CO, CO2), nitrogen oxides (NOx), sulphur oxides (SOx), sulphur compounds (H2S), water vapour (H2O), smoke and irritating vapours as products of incomplete combustion.			
Continued on Next Page	Available in French			

DIESEL FUEL	Page Number: 2
Fire Fighting	NAERG96, GUIDE 128, Flammable liquids (Non-polar/Water-immiscible).
Media and Instructions	CAUTION: This product has a moderate flash point above 40°C: Use of water spray when fighting fire may be inefficient.
	If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also consider initial evacuation for 800 meters (1/2 mile) in all directions.
	SMALL FIRES: Dry chemical, CO2, water spray or regular foam.  LARGE FIRES: Water spray, fog or regular foam. Do not use straight streams. Move containers from fire area if you can do it without risk.  Fires Involving Tanks or Car/Trailer Loads: Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
	Cool containers with flooding quantities of water until well after fire is out. Withdraw immediately in case of rising sound from venting devices or any discolouration of tank. ALWAYS stay away from the ends of tanks. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible withdraw from area and let fire burn. Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection.

Material Release or Spill	NAERG96, GUIDE 128, Flammable Liquids (Non-polar/ Water-immiscible). ELIMINATE ALL IGNITION SOURCES. Avoid contact. Stop leak if without risk. Contain spill. Absorb with inert absorbents, dry clay, or diatomaceous earth. Avoid inhaling dust of diatomaceous earth for it may contain silica in very fine particle size, making this a potential respiratory hazard. Place used absorbent in closed metal containers for later disposal or burn absorbent in a suitable combustion chamber. DO NOT FLUSH TO SEWERS, STREAMS OR OTHER BODIES OF WATER. Check with applicable jurisdiction for specific disposal requirements of spilled material and empty containers. Notify the appropriate authorities immediately.
Section 7. Hand	ling and Storage

Section 6. Accidental Release Measures

Section 7. Ha	andling and Storage
Handling	Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk. DO NOT reuse empty containers without commercial cleaning or reconditioning. Ground/bond line and equipment during pumping or transfer to avoid accumulation of static charge. DO NOT ingest. Do not breathe gas/vapour/spray. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately. Avoid contact with skin and eyes. Practice good personal hygiene. Wash hands after handling and before eating. Launder work clothes frequently. Discard saturated leather goods.
Storage	Store in tightly closed containers in cool, dry, isolated, well-ventilated area, and away from incompatibles. Ground all equipment containing material.

Section 8. Exposu	re Controls/Personal Protection
Engineering Controls	For normal application, special ventilation is not necessary. If user's operations generate vapours or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit. Make-up air should always be supplied to balance air removed by exhaust ventilation. Ensure that eyewash station and safety shower are close to work-station.
	The selection of personal protective equipment varies, depending upon conditions of use.  Eye protection (i.e., safety glasses, safety goggles and/or face shield) should be determined based on conditions of use. If product is used in an application where splashing may occur, the use of safety goggles and/or a face shield should be considered.
Body	Wear appropriate clothing to prevent skin contact. As a minimum long sleeves and trousers should be worn.
Respiratory	Where concentrations in air may exceed the occupational exposure limits given in Section 2 (and those applicable to your area) and where engineering, work practices or other means of exposure reduction are not adequate, NIOSH approved respirators may be necessary to prevent overexposure by inhalation.
Hands	Wear appropriate chemically protective gloves. When handling hot product ensure gloves are heat resistant and insulated.
Feet	Wear appropriate footwear to prevent product from coming in contact with feet and skin.

Section 9. Physi	Section 9. Physical and Chemical Properties				
Physical State and Appearance	Bright oily liquid.	Viscosity	1.3-4.1 cSt @ 40°C (104°F)		
Colour	Clear to yellow / brown. Low sulphur diesel fuels (<0.05 wt % sulphur) are colourless to light yellow (and may be dyed red for taxation purposes). Regular sulphur diesel fuels (0.05-0.50 % sulphur) may be colourless to yellow / brown and are usually dyed red for taxation purposes.	Pour Point	Variable, 0°C to -50°C (32°F to -58°F)		
Odour	Petroleum oil like.	Softening Point	Not applicable.		
Odour Threshold	Not available	<b>Dropping Point</b>	Not applicable.		
<b>Boiling Point</b>	150-371°C (302-700°F)	Penetration	Not applicable.		
Density	0.85 kg/L @ 15°C (Water = 1).	Oil / Water Dist. Coefficient	Not available		
Vapour Density	4.5 (Air = 1)	Ionicity (in water)	Not applicable.		
Continued on Next Pag	Continued on Next Page Available in French				

DIESEL FUEL			Page Number: 3
Vapour Pressure	1.0 kPa @ 20°C (7.5 mmHg @ 68°F).	<b>Dispersion Properties</b>	Not available
Volatility	<0.1 (Butyl acetate = 1), less than gasoline. Solubility Insoluble in cold water, soluble in hydrocarbon solvents.		Insoluble in cold water, soluble in non-polar hydrocarbon solvents.

Section 10. Stability and Reactivity				
Corrosivity	Not available			
Stability	The product is stable under normal handling and storage conditions.	Hazardous Polymerization	Will not occur under normal working conditions.	
Incompatible Substances / Conditions to Avoid	Reactive with oxidizing agents and acids.	Decomposition Products	May release COx, NOx, SOx, H2S, H2O, smoke and irritating vapours when heated to decomposition.	

Section 11. Toxicological Info	ormation
Routes of Entry	Skin contact, eye contact, inhalation, and ingestion.
Acute Lethality	Acute oral toxicity (LD50): 7500 mg/kg (rat).
Chronic or Other Toxic Effects Dermal Route:	Skin contact may cause moderate to severe irritation. Repeated exposure would produce drying and cracking or defatting dermatitis.
Inhalation Route:	Inhalation of vapours can cause CNS depression with symptoms of nausea, headaches, vomiting, dizziness, fatigue, light-headedness, reduced coordination, unconciousness and possibly death. Inhalation can also cause irritation of nose and throat.
Oral Route:	Aspiration of liquid drops into the lungs may produce potentially fatal chemical pneumonitis (fluid in the lungs), severe lung damage, or respiratory failure.
Eye Irritation/Inflammation:	Eye contact may cause mild irritation, but no permanent damage.
Immunotoxicity:	Not available
Skin Sensitization:	This product is not expected to be a skin sensitizer, based on the available data and the known hazards of the components.
Respiratory Tract Sensitization:	This product is not expected to be a respiratory tract sensitizer, based on the available data and the known hazards of the components.
Mutagenic:	This product is not expected to be a mutagen, based on the available data and the known hazards of the components.
Reproductive Toxicity:	This product is not expected to be a reproductive hazard, based on the available data and the known hazards of the components.
Teratogenicity/Embryotoxicity:	This product is not expected to be a teratogen or an embryotoxin, based on the available data and the known hazards of the components.
Carcinogenicity (ACGIH):	ACGIH Notice of Intended Changed (2000): proposed A3: animal carcinogen. [Diesel oil]
Carcinogenicity (IARC):	This product is not known to contain any chemicals at reportable quantities that are listed as group 1, 2A or 2B carcinogens by IARC.
Carcinogenicity (NTP):	This product is not known to contain any chemicals at reportable quantities that are listed as carcinogens by NTP.
Carcinogenicity (IRIS):	Not available
Carcinogenicity (OSHA):	This product is not known to contain any chemicals at reportable quantities that are listed as carcinogens by OSHA.
Other Considerations	No additional remark.

Section 12. Ecological Information				
Environmental Fate	Not available	Persistance/ Bioaccumulation Potential	Not available	
BOD5 and COD	Not available	Products of Biodegradation	Not available	
Additional Remarks	No additional remark.			

Continued on Next Page Available in French

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#### Section 13. Disposal Considerations

Waste Disposal

Preferred waste management priorities are: (1) recycle or reprocess; (2) incineration with energy recovery; (3) disposal at licensed waste disposal facility. Ensure that disposal or reprocessing is in compliance with government requirements and local disposal regulations. Consult your local or regional authorities.

Section 14. Transport Information				
TDG Classification	Diesel Fuel UN1202 3 III	Special Provisions for Transport	Not applicable.	

Section 15. Regu	latory Information		
Other Regulations	This product is acceptable for use under the provisions of WHMIS-CPR. All components of this formulation are listed on the CEPA-DSL (Domestic Substances List).		
	All components of this formulation are listed on the US EPA-TSCA Inventory.		
	All components of this product are on the European Inventory of Existing Commercial Chemical Substances (EINECS).		
	This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.		
	Please contact Product Safety for more inf	ormation.	
DSD/DPD (Europe)	Not evaluated.	HCS (U.S.A.)	CLASS: Irritating substance. CLASS: Target organ effects. CLASS: Combustible liquid having a flash point between 37.8°C (100°F) and 93.3°C (200°F).
ADR (Europe) (Pictograms)	NOT EVALUATED FOR EUROPEAN TRANSPORT NON ÉVALUÉ POUR LE TRANSPORT EUROPÉEN.	DOT (U.S.A) (Pictograms)	
HMIS (U.S.A.)		Health 2 0	Rating 0 Insignificant ire Hazard 1 Slight Reactivity 2 Moderate Specific hazard 3 High 4 Extreme

#### Section 16. Other Information

References

Available upon request.

\* Marque de commerce de Petro-Canada - Trademark

#### Glossarv

ACGIH - American Conference of Governmental Industrial Hygienists

ADR - Agreement on Dangerous goods by Road (Europe)

ASTM - American Society for Testing and Materials (

BOD5 - Biological Oxygen Demand in 5 days CAN/CGA B149 2 Propage Installation Code

CAS - Chemical Abstract Services

CEPA - Canadian Environmental Protection Act

CERCLA - Comprehensive Environmental Response, Compensation and Liability Act

CFR - Code of Federal Regulations

CHIP - Chemicals Hazard Information and Packaging Approved Supply List

COD5 - Chemical Oxygen Demand in 5 days CPR - Controlled Products Regulations

DOT - Department of Transport

DSCL - Dangerous Substances Classification and Labeling (Europe)

DSD/DPD - Dangerous Substances or Dangerous Preparations Directives (Europe)

DSL - Domestic Substance List

EEC/EU - European Economic Community/European Union

EINECS - European Inventory of Existing Commercial Chemical Substances

EPCRA - Emergency Planning and Community Right to Know Act

FDA - Food and Drug Administration

FIFRA - Federal Insecticide, Fungicide and Rodenticide Act

HCS - Hazardous Communication System HMIS - Hazardous Material Information System

IARC - International Agency for Research on Cancer

IRIS - Integrated Risk Information System

LD50/LC50 - Lethal Dose/Concentration kill 50%

LDLo/LCLo - Lowest Published Lethal Dose/Concentration

NAERG'96 - North American Emergency Response Guide Book (1996) NEPA - National Fire Prevention Association

NIOSH - National Institute for Occupational Safety & Health

NPRI - National Pollutant Release Inventory

NSNR - New Substances Notification Regulations (Canada)

NTP - National Toxicology Program

OSHA - Occupational Safety & Health Administration

PEL - Permissible Exposure Limit

RCRA - Resource Conservation and Recovery Act

SARA - Superfund Amendments and Reorganization Act

SD - Single Dose

STEL - Short Term Exposure Limit (15 minutes) TDG - Transportation Dangerous Goods (Canada)

TDLo/TCLo - Lowest Published Toxic Dose/Concentration

TLm - Median Tolerance Limit

TLV-TWA - Threshold Limit Value-Time Weighted Average

TSCA - Toxic Substances Control Act

USEPA - United States Environmental Protection Agency

USP - United States Pharmacopoeia

WHMIS - Workplace Hazardous Material Information System

#### For Copy of MSDS

Fuels & Solvents:

Western Canada, telephone: 403-296-4158; fax: 403-296-6551

Ontario & Central Canada, telephone: 1-800-668-0220; fax: 1-800-837-1228 Quebec & Eastern Canada, telephone: 514-640-8308; fax: 514-640-8385

For Product Safety Information: (905) 804-4752

Prepared by Product Safety - TAR on 3/2/2001.

Data entry by Product Safety - JDW.

Continued on Next Page Available in French DIESEL FUEL Page Number: 5

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.



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# MATERIAL SAFETY DATA SHEET

#### **SECTION 1**

#### PRODUCT AND COMPANY IDENTIFICATION

#### **PRODUCT**

Product Name: CAT DEO 15W-40 (DIESEL ENGINE OIL)

**Product Description:** Base Oil and Additives **Product Code:** 478669-00, 97X127

Intended Use: Engine oil

#### **COMPANY IDENTIFICATION**

Supplier: EXXON MOBIL CORPORATION

3225 GALLOWS RD.

FAIRFAX, VA. 22037 USA

 24 Hour Health Emergency
 609-737-4411

 Transportation Emergency Phone
 800-424-9300

 ExxonMobil Transportation No.
 281-834-3296

 MSDS Requests
 713-613-3661

Product Technical Information 800-662-4525, 800-947-9147

MSDS Internet Address http://www.exxon.com, http://www.mobil.com

#### **SECTION 2**

#### **COMPOSITION / INFORMATION ON INGREDIENTS**

Reportable Hazardous Substance(s) or Complex Substance(s)

Name	CAS#	Concentration*
ZINC DITHIOPHOSPHATE	68649-42-3	< 2.5%

<sup>\*</sup> All concentrations are percent by weight unless material is a gas. Gas concentrations are in percent by volume.

#### **SECTION 3**

#### HAZARDS IDENTIFICATION

This material is not considered to be hazardous according to regulatory guidelines (see (M)SDS Section 15).

#### POTENTIAL HEALTH EFFECTS

Excessive exposure may result in eye, skin, or respiratory irritation. Low order of toxicity. High-pressure injection under skin may cause serious damage.

NFPA Hazard ID: Health: 0 Flammability: 1 Reactivity: 0 HMIS Hazard ID: Health: 0 Flammability: 1 Reactivity: 0

**NOTE:** This material should not be used for any other purpose than the intended use in Section 1 without expert advice. Health studies have shown that chemical exposure may cause potential human health risks which may vary from person to person.

#### SECTION 4 FIRST AID MEASURES



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#### **INHALATION**

Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.

#### **SKIN CONTACT**

Wash contact areas with soap and water. If product is injected into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a physician as a surgical emergency. Even though initial symptoms from high pressure injection may be minimal or absent, early surgical treatment within the first few hours may significantly reduce the ultimate extent of injury.

#### **EYE CONTACT**

Flush thoroughly with water. If irritation occurs, get medical assistance.

#### INGESTION

First aid is normally not required. Seek medical attention if discomfort occurs.

#### **SECTION 5**

#### **FIRE FIGHTING MEASURES**

#### **EXTINGUISHING MEDIA**

**Appropriate Extinguishing Media:** Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames.

Inappropriate Extinguishing Media: Straight Streams of Water

#### **FIRE FIGHTING**

**Fire Fighting Instructions:** Evacuate area. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply. Firefighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel.

**Hazardous Combustion Products:** Incomplete combustion products, Aldehydes, Oxides of carbon, Smoke, Fume, Sulfur oxides

#### FLAMMABILITY PROPERTIES

Flash Point [Method]: >215°C (419°F) [ ASTM D-92]

Flammable Limits (Approximate volume % in air): LEL: 0.9 UEL: 7.0

**Autoignition Temperature:** N/D

#### **SECTION 6**

#### **ACCIDENTAL RELEASE MEASURES**

#### **NOTIFICATION PROCEDURES**

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations. U.S. regulations require reporting releases of this material to the environment which exceed the reportable quantity or oil spills which could reach any waterway including intermittent dry creeks. The National



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Response Center can be reached at (800)424-8802.

#### SPILL MANAGEMENT

Land Spill: Stop leak if you can do it without risk. Recover by pumping or with suitable absorbent.

**Water Spill:** Confine the spill immediately with booms. Stop leak if you can do it without risk. Warn other shipping. Remove from the surface by skimming or with suitable absorbents. Seek the advice of a specialist before using dispersants.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

#### **ENVIRONMENTAL PRECAUTIONS**

Large Spills: Dike far ahead of liquid spill for later recovery and disposal. Prevent entry into waterways, sewers, basements or confined areas.

#### **SECTION 7**

#### HANDLING AND STORAGE

#### **HANDLING**

Avoid contact with used product. Prevent small spills and leakage to avoid slip hazard.

**Static Accumulator:** This material is a static accumulator.

#### **STORAGE**

Do not store in open or unlabelled containers.

#### **SECTION 8**

#### **EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Exposure limits/standards for materials that can be formed when handling this product:** When mists / aerosols can occur, the following are recommended: 5 mg/m³ - ACGIH TLV, 10 mg/m³ - ACGIH STEL, 5 mg/m³ - OSHA PEL.

NOTE: Limits/standards shown for guidance only. Follow applicable regulations.

#### **ENGINEERING CONTROLS**

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Control measures to consider:

No special requirements under ordinary conditions of use and with adequate ventilation.

#### PERSONAL PROTECTION

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use



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with this material, as provided below, is based upon intended, normal usage.

**Respiratory Protection:** If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include:

No special requirements under ordinary conditions of use and with adequate ventilation.

For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapor warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

**Hand Protection:** Any specific glove information provided is based on published literature and glove manufacturer data. Work conditions can greatly effect glove durability; inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include:

No protection is ordinarily required under normal conditions of use.

Eye Protection: If contact is likely, safety glasses with side shields are recommended.

**Skin and Body Protection:** Any specific clothing information provided is based on published literature or manufacturer data. The types of clothing to be considered for this material include:

No skin protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid skin contact.

**Specific Hygiene Measures:** Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

#### **ENVIRONMENTAL CONTROLS**

See Sections 6, 7, 12, 13.

#### **SECTION 9**

#### PHYSICAL AND CHEMICAL PROPERTIES

Typical physical and chemical properties are given below. Consult the Supplier in Section 1 for additional data.

#### **GENERAL INFORMATION**

Physical State: Liquid

Color: Amber Odor: Characteristic Odor Threshold: N/D

### IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION

Relative Density (at 15 °C): 0.826

Flash Point [Method]: >215°C (419°F) [ ASTM D-92]

Flammable Limits (Approximate volume % in air): LEL: 0.9 UEL: 7.0

Autoignition Temperature: N/D

**Boiling Point / Range:** > 316°C (600°F)

Vapor Density (Air = 1): N/D Vapor Pressure: [N/D at 20 °C]



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Evaporation Rate (n-butyl acetate = 1): N/D

pH: N/A

Log Pow (n-Octanol/Water Partition Coefficient): > 3.5

Solubility in Water: Negligible

Viscosity: 115.5 cSt (115.5 mm<sup>2</sup>/sec ) at 40 °C | 15 cSt (15 mm<sup>2</sup>/sec) at 100°C

Oxidizing Properties: See Sections 3, 15, 16.

OTHER INFORMATION

Freezing Point: N/D Melting Point: N/A

Pour Point:  $< -27^{\circ}\text{C} (-17^{\circ}\text{F})$ 

DMSO Extract (mineral oil only), IP-346: < 3 %wt

#### SECTION 10 STABILITY AND REACTIVITY

**STABILITY:** Material is stable under normal conditions.

**CONDITIONS TO AVOID:** Excessive heat. High energy sources of ignition.

MATERIALS TO AVOID: Strong oxidizers

HAZARDOUS DECOMPOSITION PRODUCTS: Material does not decompose at ambient temperatures.

HAZARDOUS POLYMERIZATION: Will not occur.

**SECTION 11** 

#### TOXICOLOGICAL INFORMATION

#### **ACUTE TOXICITY**

Route of Exposure	Conclusion / Remarks
Inhalation	
Toxicity (Rat): LC50 > 5000 mg/m <sup>3</sup>	Minimally Toxic. Based on test data for structurally similar materials.
Irritation: No end point data.	Negligible hazard at ambient/normal handling temperatures.  Based on assessment of the components.
Ingestion	
Toxicity (Rat): LD50 > 2000 mg/kg	Minimally Toxic. Based on test data for structurally similar materials.
Skin	
Toxicity (Rabbit): LD50 > 2000 mg/kg	Minimally Toxic. Based on test data for structurally similar materials.
Irritation (Rabbit): Data available.	Negligible irritation to skin at ambient temperatures. Based on test data for structurally similar materials.
Eye	
Irritation (Rabbit): Data available.	May cause mild, short-lasting discomfort to eyes. Based on test data for structurally similar materials.

#### **CHRONIC/OTHER EFFECTS**

#### For the product itself:

Diesel engine oils: Not carcinogenic in animals tests. Used and unused diesel engine oils did not produce any carcinogenic effects in chronic mouse skin painting studies.



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Oils that are used in gasoline engines may become hazardous and display the following properties: Carcinogenic in animal tests. Caused mutations in vitro. Possible allergen and photoallergen. Contains polycyclic aromatic compounds (PAC) from combustion products of gasoline and/or thermal degradation

products.

#### Contains:

Base oil severely refined: Not carcinogenic in animal studies. Representative material passes IP-346, Modified Ames test, and/or other screening tests. Dermal and inhalation studies showed minimal effects; lung non-specific infiltration of immune cells, oil deposition and minimal granuloma formation. Not sensitizing in test animals.

Additional information is available by request.

The following ingredients are cited on the lists below: None.

-- REGULATORY LISTS SEARCHED--

1 = NTP CARC 3 = IARC 1 5 = IARC 2B 2 = NTP SUS 4 = IARC 2A 6 = OSHA CARC

#### **SECTION 12**

#### **ECOLOGICAL INFORMATION**

The information given is based on data available for the material, the components of the material, and similar materials.

#### **ECOTOXICITY**

Material -- Not expected to be harmful to aquatic organisms.

#### **MOBILITY**

Base oil component -- Low solubility and floats and is expected to migrate from water to the land. Expected to partition to sediment and wastewater solids.

#### PERSISTENCE AND DEGRADABILITY

#### **Biodegradation:**

Base oil component -- Expected to be inherently biodegradable

#### **BIOACCUMULATION POTENTIAL**

Base oil component -- Has the potential to bioaccumulate, however metabolism or physical properties may reduce the bioconcentration or limit bioavailability.

#### **SECTION 13**

#### **DISPOSAL CONSIDERATIONS**

Disposal recommendations based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

#### **DISPOSAL RECOMMENDATIONS**

Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised



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incineration at very high temperatures to prevent formation of undesirable combustion products.

#### REGULATORY DISPOSAL INFORMATION

RCRA Information: The unused product, in our opinion, is not specifically listed by the EPA as a hazardous waste (40 CFR, Part 261D), nor is it formulated to contain materials which are listed as hazardous wastes. It does not exhibit the hazardous characteristics of ignitability, corrositivity or reactivity and is not formulated with contaminants as determined by the Toxicity Characteristic Leaching Procedure (TCLP). However, used product may be regulated.

**Empty Container Warning** PRECAUTIONARY LABEL TEXT: Empty containers may retain residue and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Do not attempt to refill or clean container since residue is difficult to remove. Empty drums should be completely drained, properly bunged and promptly returned to a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

#### SECTION 14 TRANSPORT INFORMATION

LAND (DOT): Not Regulated for Land Transport

**LAND (TDG)**: Not Regulated for Land Transport

SEA (IMDG): Not Regulated for Sea Transport according to IMDG-Code

AIR (IATA): Not Regulated for Air Transport

#### SECTION 15 REGULATORY INFORMATION

**OSHA HAZARD COMMUNICATION STANDARD:** When used for its intended purposes, this material is not classified as hazardous in accordance with OSHA 29 CFR 1910.1200.

NATIONAL CHEMICAL INVENTORY LISTING: TSCA

**EPCRA:** This material contains no extremely hazardous substances.

#### SARA (311/312) REPORTABLE HAZARD CATEGORIES: None.

#### **SARA (313) TOXIC RELEASE INVENTORY:**

Chemical Name	CAS Number	Typical Value
ZINC DITHIOPHOSPHATE	68649-42-3	< 2.5%

## The Following Ingredients are Cited on the Lists Below:\*

Chemical Name	CAS Number	List Citations
PHOSPHORUS	7723-14-0	1, 4



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ZINC DITHIOPHOSPHATE 68649-42-3 13, 15, 17

#### -- REGULATORY LISTS SEARCHED--

1 = ACGIH ALL	6 = TSCA 5a2	11 = CA P65 REPRO	16 = MN RTK
2 = ACGIH A1	7 = TSCA 5e	12 = CA RTK	17 = NJ RTK
3 = ACGIH A2	8 = TSCA 6	13 = IL RTK	18 = PA RTK
4 = OSHA Z	9 = TSCA 12b	14 = LA RTK	19 = RI RTK
5 = TSCA 4	10 = CA P65 CARC	15 = MI 293	

Code key: CARC=Carcinogen; REPRO=Reproductive

#### SECTION 16 OTHER INFORMATION

N/D = Not determined, N/A = Not applicable

#### THIS SAFETY DATA SHEET CONTAINS THE FOLLOWING REVISIONS:

No revision information is available.

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Internal Use Only

MHC: 0, 0, 0, 0, 0 PPEC: A

DGN: 2026963XUS (543511)

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<sup>\*</sup> EPA recently added new chemical substances to its TSCA Section 4 test rules. Please contact the supplier to confirm whether the ingredients in this product currently appear on a TSCA 4 or TSCA 12b list.



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# MATERIAL SAFETY DATA SHEET

#### SECTION 1

#### PRODUCT AND COMPANY IDENTIFICATION

#### **PRODUCT**

Product Name: CAT HYDRAULIC OIL (HYDO) SAE 10W

Product Description: Base Oil and Additives

**Product Code:** 20202050B020, 478909-00, 971670

Intended Use: Hydraulic/transmission fluid

#### **COMPANY IDENTIFICATION**

Supplier: EXXON MOBIL CORPORATION

3225 GALLOWS RD.

FAIRFAX, VA. 22037 USA

24 Hour Health Emergency609-737-4411Transportation Emergency Phone800-424-9300ExxonMobil Transportation No.281-834-3296

Product Technical Information 800-662-4525, 800-947-9147

MSDS Internet Address http://www.exxon.com, http://www.mobil.com

#### **SECTION 2**

#### **COMPOSITION / INFORMATION ON INGREDIENTS**

#### Reportable Hazardous Substance(s) or Complex Substance(s)

Name	CAS#	Concentration*
ZINC DITHIOPHOSPHATE	68649-42-3	< 2.5%

<sup>\*</sup> All concentrations are percent by weight unless material is a gas. Gas concentrations are in percent by volume.

#### SECTION 3 HAZARDS IDENTIFICATION

This material is not considered to be hazardous according to regulatory guidelines (see (M)SDS Section 15).

#### POTENTIAL HEALTH EFFECTS

Low order of toxicity. Excessive exposure may result in eye, skin, or respiratory irritation. High-pressure injection under skin may cause serious damage.

NFPA Hazard ID:Health:0Flammability:1Reactivity:0HMIS Hazard ID:Health:0Flammability:1Reactivity:0

NOTE: This material should not be used for any other purpose than the intended use in Section 1 without expert



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advice. Health studies have shown that chemical exposure may cause potential human health risks which may vary from person to person.

#### **SECTION 4**

#### **FIRST AID MEASURES**

#### INHALATION

Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.

#### SKIN CONTACT

Wash contact areas with soap and water. If product is injected into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a physician as a surgical emergency. Even though initial symptoms from high pressure injection may be minimal or absent, early surgical treatment within the first few hours may significantly reduce the ultimate extent of injury.

#### **EYE CONTACT**

Flush thoroughly with water. If irritation occurs, get medical assistance.

#### INGESTION

First aid is normally not required. Seek medical attention if discomfort occurs.

#### **SECTION 5**

#### FIRE FIGHTING MEASURES

#### **EXTINGUISHING MEDIA**

**Appropriate Extinguishing Media:** Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames.

Inappropriate Extinguishing Media: Straight Streams of Water

#### **FIRE FIGHTING**

**Fire Fighting Instructions:** Evacuate area. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply. Firefighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel.

**Unusual Fire Hazards:** Pressurized mists may form a flammable mixture.

**Hazardous Combustion Products:** Smoke, Fume, Aldehydes, Sulfur oxides, Incomplete combustion products, Oxides of carbon

#### FLAMMABILITY PROPERTIES

Flash Point [Method]: >200C (392F) [ ASTM D-92]

Flammable Limits (Approximate volume % in air): LEL: 0.9 UEL: 7.0

**Autoignition Temperature:** N/D



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#### **SECTION 6**

#### **ACCIDENTAL RELEASE MEASURES**

#### NOTIFICATION PROCEDURES

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations. US regulations require reporting releases of this material to the environment which exceed the applicable reportable quantity or oil spills which could reach any waterway including intermittent dry creeks. The National Response Center can be reached at (800)424-8802.

#### SPILL MANAGEMENT

Land Spill: Stop leak if you can do it without risk. Recover by pumping or with suitable absorbent.

**Water Spill:** Stop leak if you can do it without risk. Confine the spill immediately with booms. Warn other shipping. Remove from the surface by skimming or with suitable absorbents. Seek the advice of a specialist before using dispersants.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

#### **ENVIRONMENTAL PRECAUTIONS**

Large Spills: Dike far ahead of liquid spill for later recovery and disposal. Prevent entry into waterways, sewers, basements or confined areas.

#### **SECTION 7**

#### HANDLING AND STORAGE

#### **HANDLING**

Prevent small spills and leakage to avoid slip hazard.

Static Accumulator: This material is a static accumulator.

#### **STORAGE**

Do not store in open or unlabelled containers.

#### **SECTION 8**

#### **EXPOSURE CONTROLS / PERSONAL PROTECTION**

#### **EXPOSURE LIMIT VALUES**

**Exposure limits/standards for materials that can be formed when handling this product:** When mists / aerosols can occur, the following are recommended: 5 mg/m³ - ACGIH TLV, 10 mg/m³ - ACGIH STEL, 5 mg/m³ - OSHA PEL.

NOTE: Limits/standards shown for guidance only. Follow applicable regulations.

#### **ENGINEERING CONTROLS**



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The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Control measures to consider:

No special requirements under ordinary conditions of use and with adequate ventilation.

#### PERSONAL PROTECTION

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

**Respiratory Protection:** If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include:

No special requirements under ordinary conditions of use and with adequate ventilation.

For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapor warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

**Hand Protection:** Any specific glove information provided is based on published literature and glove manufacturer data. Glove suitability and breakthrough time will differ depending on the specific use conditions. Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions. Inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include:

No protection is ordinarily required under normal conditions of use.

Eye Protection: If contact is likely, safety glasses with side shields are recommended.

**Skin and Body Protection:** Any specific clothing information provided is based on published literature or manufacturer data. The types of clothing to be considered for this material include:

No skin protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid skin contact.

**Specific Hygiene Measures:** Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

#### **ENVIRONMENTAL CONTROLS**

See Sections 6, 7, 12, 13.

#### **SECTION 9**

#### PHYSICAL AND CHEMICAL PROPERTIES

Typical physical and chemical properties are given below. Consult the Supplier in Section 1 for additional data.

**GENERAL INFORMATION** 

Physical State: Liquid



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Color: Amber Odor: Characteristic Odor Threshold: N/D

#### IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION

Relative Density (at 15 C): 0.878

**Flash Point [Method]:** >200C (392F) [ ASTM D-92]

Flammable Limits (Approximate volume % in air): LEL: 0.9

**Autoignition Temperature: N/D** 

**Boiling Point / Range:** > 316C (600F) Vapor Density (Air = 1): > 2 at 101 kPa

Vapor Pressure: < 0.013 kPa (0.1 mm Hg) at 20 C Evaporation Rate (n-butyl acetate = 1): N/D

pH: N/A

Log Pow (n-Octanol/Water Partition Coefficient): > 3.5

Solubility in Water: Negligible

Viscosity: 37.7 cSt (37.7 mm2/sec) at 40 C | 6.1 cSt (6.1 mm2/sec) at 100C

Oxidizing Properties: See Sections 3, 15, 16.

#### OTHER INFORMATION

Freezing Point: N/D Melting Point: N/A **Pour Point:** 

-18°C (0°F)

DMSO Extract (mineral oil only), IP-346: < 3 %wt

#### **SECTION 10** STABILITY AND REACTIVITY

**STABILITY:** Material is stable under normal conditions.

**CONDITIONS TO AVOID:** Excessive heat. High energy sources of ignition.

MATERIALS TO AVOID: Strong oxidizers

**HAZARDOUS DECOMPOSITION PRODUCTS:** Material does not decompose at ambient temperatures.

**HAZARDOUS POLYMERIZATION:** Will not occur.

#### SECTION 11 **TOXICOLOGICAL INFORMATION**

#### **ACUTE TOXICITY**

Route of Exposure	Conclusion / Remarks
Inhalation	
Toxicity (Rat): LC50 > 5000 mg/m3	Minimally Toxic. Based on assessment of the components.
Irritation: No end point data.	Negligible hazard at ambient/normal handling temperatures. Based on assessment of the components.
Ingestion	
Toxicity (Rat): LD50 > 5000 mg/kg	Minimally Toxic. Based on test data for structurally similar materials.



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Skin

Skin	
Toxicity (Rabbit): LD50 > 5000 mg/kg	Minimally Toxic. Based on test data for structurally similar materials.
Irritation (Rabbit): Data available.	Negligible irritation to skin at ambient temperatures. Based on assessment of the components.
Eye	
Irritation (Rabbit): Data available.	May cause mild, short-lasting discomfort to eyes. Based on assessment of the components.

#### **CHRONIC/OTHER EFFECTS**

#### **Contains:**

Base oil severely refined: Not carcinogenic in animal studies. Representative material passes IP-346, Modified Ames test, and/or other screening tests. Dermal and inhalation studies showed minimal effects; lung non-specific infiltration of immune cells, oil deposition and minimal granuloma formation. Not sensitizing in test animals.

Additional information is available by request.

The following ingredients are cited on the lists below: None.

-- REGULATORY LISTS SEARCHED--

1 = NTP CARC 3 = IARC 1 5 = IARC 2B 2 = NTP SUS 4 = IARC 2A 6 = OSHA CARC

#### **SECTION 12**

#### **ECOLOGICAL INFORMATION**

The information given is based on data available for the material, the components of the material, and similar materials.

#### **ECOTOXICITY**

Material -- Not expected to be harmful to aquatic organisms.

#### **MOBILITY**

Base oil component -- Low solubility and floats and is expected to migrate from water to the land. Expected to partition to sediment and wastewater solids.

#### PERSISTENCE AND DEGRADABILITY

#### **Biodegradation:**

Base oil component -- Expected to be inherently biodegradable

#### **BIOACCUMULATION POTENTIAL**

Base oil component -- Has the potential to bioaccumulate, however metabolism or physical properties may reduce the bioconcentration or limit bioavailability.

## **SECTION 13**

#### **DISPOSAL CONSIDERATIONS**



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Disposal recommendations based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

#### **DISPOSAL RECOMMENDATIONS**

Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products.

#### REGULATORY DISPOSAL INFORMATION

RCRA Information: The unused product, in our opinion, is not specifically listed by the EPA as a hazardous waste (40 CFR, Part 261D), nor is it formulated to contain materials which are listed as hazardous wastes. It does not exhibit the hazardous characteristics of ignitability, corrositivity or reactivity and is not formulated with contaminants as determined by the Toxicity Characteristic Leaching Procedure (TCLP). However, used product may be regulated.

**Empty Container Warning** Empty Container Warning (where applicable): Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. DO NOT PRESSURISE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

#### SECTION 14 TRANSPORT INFORMATION

**LAND (DOT)**: Not Regulated for Land Transport

**LAND (TDG)**: Not Regulated for Land Transport

SEA (IMDG): Not Regulated for Sea Transport according to IMDG-Code

AIR (IATA): Not Regulated for Air Transport

#### SECTION 15 REGULATORY INFORMATION

**OSHA HAZARD COMMUNICATION STANDARD:** When used for its intended purposes, this material is not classified as hazardous in accordance with OSHA 29 CFR 1910.1200.

NATIONAL CHEMICAL INVENTORY LISTING: DSL, KECI, TSCA

**Special Cases:** 

Inventory	Status
AICS	Restrictions Apply
ELINCS	Restrictions Apply

**EPCRA:** This material contains no extremely hazardous substances.



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#### SARA (311/312) REPORTABLE HAZARD CATEGORIES: None.

#### **SARA (313) TOXIC RELEASE INVENTORY:**

Chemical Name	CAS Number	Typical Value
ZINC DITHIOPHOSPHATE	68649-42-3	< 2.5%

#### The Following Ingredients are Cited on the Lists Below:

Chemical Name	CAS Number	List Citations
ZINC DITHIOPHOSPHATE	68649-42-3	13, 15, 17

#### --REGULATORY LISTS SEARCHED--

1 = ACGIH ALL	6 = TSCA 5a2	11 = CA P65 REPRO	16 = MN RTK
2 = ACGIH A1	7 = TSCA 5e	12 = CA RTK	17 = NJ RTK
3 = ACGIH A2	8 = TSCA 6	13 = IL RTK	18 = PA RTK
4 = OSHA Z	9 = TSCA 12b	14 = LA RTK	19 = RI RTK
5 = TSCA 4	10 = CA P65 CARC	15 = MI 293	

Code key: CARC=Carcinogen; REPRO=Reproductive

SECTION 16	OTHER INFORMATION	

N/D = Not determined, N/A = Not applicable

#### THIS SAFETY DATA SHEET CONTAINS THE FOLLOWING REVISIONS:

**Revision Changes:** 

Section 06: Notification Procedures - Header was modified.

Section 01: Product Code was modified.

Section 13: Empty Container Warning was modified.

Section 09: Boiling Point C(F) was modified.

Section 08: Hand Protection was modified.

Section 09: Vapor Pressure was modified.

Section 11: Dermal Lethality Test Data was modified.

Section 11: Oral Lethality Test Data was modified.

Section 11: Inhalation Lethality Test Data was modified.

Section 05: Hazardous Combustion Products was modified.

Section 06: Accidental Release - Spill Management - Water was modified.

Section 09: Relative Density - Header was modified.

Section 09: Flash Point C(F) was modified.

Section 09: Viscosity was modified.

Section 09: Viscosity was modified.

Section 15: List Citations Table was modified.

Section 15: List Citation Table - Header was modified.

Section 15: SARA (313) TOXIC RELEASE INVENTORY - Header was modified.

Section 15: National Chemical Inventory Listing was modified.

Section 06: Accidental Release Measures - Environmental Precautions was modified.



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Section 16: Code to MHCs was modified. Composition: No components was modified. Section 06: Notification Procedures was modified.

Section 01: Company Contact Methods Sorted by Priority was modified.

Composition: Component table was added.

Section 15: SARA (313) TOXIC RELEASE INVENTORY - Table was added.

Section 15: SARA 313 - Chemical Name - Header was added. Section 15: SARA 313 - CAS Number - Header was added. Section 15: SARA313 - Typical Value - Header was added.

Composition: Primary Ingredient Name was added.

Composition: CAS Number was added.

Composition: Concentration - Header was added.
Composition: Substances Table - Header was added.
Composition: Concentration Footnote was added.
Section 15: Special Cases - Header was added.
Section 15: Special Cases Table was added.
Section 15: Inventory - Header was added.
Section 15: Status - Header was added.

Section 08: Exposure Limit Values - Header was added. Section 15: TSCA Class 2 Statement was deleted.

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Internal Use Only

MHC: 0B, 0B, 0, 0, 0, 0 PPEC: A

DGN: 2004671XUS (546411)

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Spill Contingency Plan Quarry Sites, Sanikiluaq, Nunavut GN Project #10-2006



# Appendix B – NT-NU Spill Report Form





# Canada NT-NU SPILL REPORT

OIL, GASOLINE, CHEMICALS AND OTHER HAZARDOUS MATERIALS

NT-NU 24-HOUR SPILL REPORT LINE

TEL: (867) 920-8130 FAX: (867) 873-6924 EMAIL: spills@gov.nt.ca

#### REPORT LINE USE ONLY

Α	REPORT DATE: MONTH – DAY – YEAR				REPORT TIME					RIGINAL SPILL REPO	ORT,	DEDODT NUMBER
/ \	OCCURRENCE DATE: MONTH	1 – DV.	V_VEAR					OR	PDATE #		REPORT NUMBER	
В	COOCH LENGE BALL MOINT	ONNEINCE DATE. MONTH - DAT - TEAN			I			THE ORIGINAL SPILL	REPORT	<del>-</del>		
С	LAND USE PERMIT NUMBER (IF APPLICABLE)				WATER LICENCE NUMBER (IF			(IF A	PPLICABLE)			
D	GEOGRAPHIC PLACE NAME OR DISTANCE AND DIRECTION FROM NAM			I FROM NAMED L	OCATIO	ATION REGION  □ NWT □ NUNAVUT □ ADJACENT JURISDICTION OR OCEAN					OR OCEAN	
_	LATITUDE				LONGITUDE							
Е	DEGREES	MIN	UTES	SECONDS DEGREES				MINUTES SECONDS				
F	RESPONSIBLE PARTY OR VESSEL NAME			RESPONSIBLE PARTY ADDRESS OR OFFICE LOCATION								
G	ANY CONTRACTOR INVOLVED			CONTRACTOR ADDRESS OR OFFICE LOCATION								
	PRODUCT SPILLED			QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES			ΞS	U.N. NUMBER				
Н	SECOND PRODUCT SPILLED (IF APPLICABLE)		QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES			ΞS	U.N. NUMBER					
I	SPILL SOURCE			SPILL CAUSE						AREA OF CONTAMINATION IN SQUARE METRES		
J	FACTORS AFFECTING SPILL OR RECOVERY		ECOVERY	DESCRIBE ANY ASSISTANCE REQUIRED				HAZARDS TO PERSONS, PROPERTY OR ENVIRONMENT				
K												
L	REPORTED TO SPILL LINE BY		POSITION		EMPLOYER L			LOC	OCATION CALLING FROM		ΓELEPHONE	
M	ANY ALTERNATE CONTACT		POSITION	EMPLO					TERNATE CONTACT		ALTERNATE TELEPHONE	
	REPORT LINE USE ONLY											
Ν	RECEIVED AT SPILL LINE BY POSITION		EMPI		PLOYER LC		LOC			REPORT LINE NUMBER		
IN	STATION OPERATOR				YI					YELL	867) 920-8130	
LEAD AGENCY   EC   CCG   GNWT   GN   ILA   INAC			□ NEB □ TC									
		CONTACT NAME		CO	CONTACT TIME				REMARKS			
	FIRST SUPPORT AGENCY								+			
SECO	SECOND SUPPORT AGENCY								$\dagger$			
THIR	D SUPPORT AGENCY											

# Instructions for Completing the NT-NU Spill Report Form

This form can be filled out electronically and e-mailed as an attachment to spills@gov.nt.ca. Until further notice, please verify receipt of e-mail transmissions with a follow-up telephone call to the spill line. Forms can also be printed and faxed to the spill line at 867-873-6924. Spills can still be phoned in by calling collect at 867-920-8130.

A Domant Date (Time	The partial data and time that the entities are second to the second to
A. Report Date/Time	The actual date and time that the spill was reported to the spill line. If the spill is phoned in, the Spill Line will fill this out. <b>Please do not fill in the Report Number</b> : the spill line will assign a number after the spill is reported.
	Indicate, to the best of your knowledge, the exact date and time that the spill occurred. Not to be confused with the report date and time (see above).
C. Land Use Permit Number /Water Licence Number	This only needs to be filled in if the activity has been licenced by the Nunavut Water Board and/or if a Land Use Permit has been issued. Applies primarily to mines and mineral exploration sites.
	In most cases, this will be the name of the city or town in which the spill occurred. For remote locations – outside of human habitations – identify the most prominent geographic feature, such as a lake or mountain and/or the distance and direction from the nearest population center. <b>You must include the geographic coordinates</b> (Refer to Section E).
	This only needs to be filled out if the spill occurred outside of an established community such as a mine site. Please note that the location should be stated in degrees, minutes and seconds of Latitude and Longitude.
Name	This is the person who was in management/control/ownership of the substance at the time that it was spilled. In the case of a spill from a ship/vessel, include the name of the ship/vessel. Please include full address, telephone number and email. Use box K if there is insufficient space. Please note that, the owner of the spilled substance is ultimately responsible for any spills of that substance, regardless of who may have actually caused the spill.
	Were there any other parties/contractors involved? An example would be a construction company who is undertaking work on behalf of the owner of the spilled substance and who may have contributed to, or directly caused the spill and/or is responding to the spill.
	Identify the product spilled; most commonly, it is gasoline, diesel fuel or sewage. For other substances, avoid trade names. Wherever possible, use the chemical name of the substance and further, identify the product using the four digit UN number (eg: UN1203 for gasoline; UN1202 for diesel fuel; UN1863 for Jet A & B)
	Identify the source of the spill: truck, ship, home heating fuel tank and, if known, the cause (eg: fuel tank overfill, leaking tank; ship ran aground; traffic accident, vandalism, storm, etc.). Provide an estimate of the extent of the contaminated/impacted area (eg: $10  \text{m}^2$ )
	Any factors which might make it difficult to clean up the spill: rough terrain, bad weather, remote location, lack of equipment. Do you require advice and/or assistance with the cleanup operation? Identify any hazards to persons, property or environment: for example, a gasoline spill beside a daycare centre would pose a safety hazard to children. Use box K if there is insufficient space.
K. Additional Information	a safety mazara to children. Ose box is there is insufficient space.
	Provide any additional, pertinent details about the spill, such as any peculiar/unique hazards associated with the spilled material. State what action is being taken towards cleaning up the spill; disposal of spilled material; notification of affected parties. If necessary, append additional sheets to the spill report. Number the pages in the same format found in the lower right hand corner of the spill form: eg. "Page 1 of 2", "Page 2 of 2" etc. Please number the pages to ensure that recipients can be certain that they received all pertinent documents. If only the spill report form was filled out, number the form as "Page 1 of 1".
L. Reported to Spill Line by	Provide any additional, pertinent details about the spill, such as any peculiar/unique hazards associated with the spilled material. State what action is being taken towards cleaning up the spill; disposal of spilled material; notification of affected parties. If necessary, append additional sheets to the spill report. Number the pages in the same format found in the lower right hand corner of the spill form: eg. "Page 1 of 2", "Page 2 of 2" etc. Please number the pages to ensure that recipients can be certain that they received all pertinent documents. If only the spill report form was filled out, number the form as "Page
L. Reported to Spill Line by  M. Alternate Contact	Provide any additional, pertinent details about the spill, such as any peculiar/unique hazards associated with the spilled material. State what action is being taken towards cleaning up the spill; disposal of spilled material; notification of affected parties. If necessary, append additional sheets to the spill report. Number the pages in the same format found in the lower right hand corner of the spill form: eg. "Page 1 of 2", "Page 2 of 2" etc. Please number the pages to ensure that recipients can be certain that they received all pertinent documents. If only the spill report form was filled out, number the form as "Page 1 of 1".  Include your full name, employer, contact number and the location from which

Spill Contingency Plan Quarry Sites, Sanikiluaq, Nunavut GN Project #10-2006



# **Appendix C – Immediately Reportable Spill Quantities**

# Spill Contingency Plan Quarry Sites, Sanikiluaq, Nunavut GN Project #10-2006



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