

# NWB LICENCE No. 2BE-PBP2025 2020 REPORT OF ACTIVITIES

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# Water Licence 2BE-PBP2025

# Northquest Ltd.

# 1. Executive Summary of Report on 2020 Activities

The Pistol Bay Project camp was opened in late August by Nordgold (Northquest Ltd.) personnel based in Whale Cove and they closed the camp after September 05<sup>th</sup>.

The camp is comprised of turn-key style Weatherhaven tents for accommodation, office and storage as well as plywood buildings for the kitchen, core logging facility, generator shacks and drillers' change room ("dry"). As a result, only a few hours of work were required to make the camp fully operational. The camp was occupied from September 02<sup>nd</sup> to 05<sup>th</sup>. No residents of Whale Cove were at the camp while it was occupied by Northquest personnel from southern Canada.

Six personnel comprised of three geologists, one camp manager, one diamond driller and one diamond drill foremen, were in camp from September 02<sup>nd</sup> to September 05<sup>th</sup>. The drillers verified the on-site drilling equipment and ensured it was properly stored for the winter season.

The camp assistants were hired from Whale Cove to open the camp prior to arrival, and close the camp after departure of the geologists, camp manager and drillers. No Whale Cove personnel were on site during the time the geologists, camp manager and drillers were on site.

The F250 pick-up truck, that has been on-site since 2013, was used to make one trip from Whale Cove to the camp with groceries when the camp was opened and to make one trip to transport garbage to the Whale Cove land fill site after the camp was closed.

The pick-up truck and ATVs were also used by field crews to access areas being worked by travel on well-established roads and trails.

A Jet Ranger helicopter owned and operated by Custom Helicopters ("Custom") was used to transport personnel for one day during the program.

The camp drew drinking and wash water from a nearby pond. A total of 1.89 cubic metres of water was utilized during the 4 days of operation. Camp water consumption averaged 0.472 cubic metres per day.

All non-hazardous waste including most paper and cardboard was transported to the Whale Cove municipal dump by truck at the end of the program.

One hundred twenty six 50 kg bags of CaCl are stored inside a Weatherhaven tent on the Vickers Prospect. This tent is also used for storage of other equipment, and serves as an emergency shelter for personnel working on the Vickers Prospect.

A total of 42 drums of Jet A-1 fuel, four drums of fuel suitable for use in drill water heaters, four drums of waste oil, one drum of gasoline and 15 empty drums are currently stored near the base camp generator in a tarpaulin covered fuel berm.

There are a total of 147 full 100 lb propane cylinders, 31 partial 100 lb propane cylinders, and 202 empty 100 lb propane cylinders stored at the base camp.

In addition, a total of 65 drums of Jet A-1 fuel are currently stored in a second tarpaulin covered fuel berm in the vicinity of the base camp generator.

A total of 83 empty fuel drums are stored as follows: 21 in a sea container in Whale Cove, 25 in the storage tent, 22 near the camp generator and 15 in a berm, as noted above. An additional 163 crushed drums are stored in a sea container in Whale Cove.

Each of the two diesel generators has it's own double-walled fuel supply tank and each is approximately half full with an estimated 75 imperial gallons. In addition, two full drums of diesel fuel are stored in a berm inside the shack housing the older generator.

Written authorization allowing Northquest Ltd., to store empty fuel drums and drums containing waste oil at the Whale Cove airport was obtained from the Hamlet of Whale Cove on March 16, 2016; written authorization is presented herein on page 19. No drums or propane cylinders were stored there at any time in 2020.

All grey-water generated in camp was dumped into a sump containing perforated drums and rocks within a pit dug in sand.

Sewage was contained in pits dug beneath the three outhouses.

No unauthorized discharges occurred in 2020.

A log of wildlife observations was made during the 2020 field season and is included herein.

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# 3.0 Excel NWB Annual Report

Note that data not included in the tabulated format is found in the Detailed Summary of Activities in Section 4 below.

NWB Annual Report				Year being reported: 2020						
License No:	2BE	-PBP	1525	Issued Date:	July 23, 2020					
				Expiry Date:	October 31, 2025					
	Project Name	e:	Pistol Bay							
	Licensee:	Nort	hquest Ltd.	uest Ltd.						
	Mailing Address:			Suite 301 - 82 Richmond Street East Toronto Ontario, Canada M5C 1P1						
	Name of Company filing Annual Report (if different from Name of Licensee please									
General Ba	ckground Info	rmatio	n on the Proje	Ct (*optional):						
Licence Re with	quirements: th	e lice	nsee must pro	vide the followin	g information in acc	ordance				
With	Select		Select ▼							
methods of		er; sev	wage and grey		including, but not lin ent; drill waste mana					
	Water Source(s): Water Quantity:			Pond near camp  5.00 / day						
Stanley D. Rol	Waste Management and/or Disposal  Solid Waste Disposa  Sewage  Drill Waste  5  Stanley D. Robinson, F  Sewaywater  Toronto, Canada  January 21, 2021									
Claimey D. No.	Unison, r∟∎eegywo □Hazaro □Other:		10101	no, Gariada		January 21, 2021				

	Additional Details:
	Additional Details.
A list of un	authorized discharges and a summary of follow-up actions taken.
	Spill No.: (as reported to the Spill Hot-line)  Date of Spill: (as reported to the Spill Hot-line)  Date of Notification to an Inspector:
	Additional Details: (impacts to water, mitigation measures, short/long term monitoring, etc)
Revisions t	o the Spill Contingency Plan
	Select
Revisions t	o the Abandonment and Restoration Plan
	Select
	Additional Details:
D	Produce Con West Hestorial on
Progressiv	Additional Details (i.e., work completed and future works proposed)
	Additional Details (i.e., work completed and future works proposed)

**Results of the Monitoring Program including:** 

Additional Details:
The GPS Co-ordinates (in degrees, minutes and seconds of latitude and long each location where wastes associated with the licence are deposited;
Select ▼
Additional Details:
Additional Details.
Results of any additional sampling and/or analysis that was requested by an Inspector
Select ▼
Additional Details: (date of request, analysis of results, data attached, etc)
Additional Details. (date of request, analysis of results, data attached, etc)
etails on water use or waste disposal requested by the Board by November 1 deported.
Select ▼
Additional Details: (Attached or provided below)

Select

•

Additional Deta	iis: (Date	s of Report, Follow-up by the Licensee)	
Any additional comments of	r inform	ation for the Board to consider	
L			
Date Submitted:	xx/01/20	020	
Submitted/Prepared by:	Stanley	Robinson	
Contact Information:	Tel:	1-416-306-0954	
	Fax:		
	email:	stan.robinson@ca.inter.net	

# **GPS** Coordinates for water sources utilized

		Latitud	le	Longitude			
Source Description	Deg	Min	Sec	Deg	Min	Sec	
	0	•	″	0	,	"	
Camp Water	62	20	58.00	92	44	47.00	

# **GPS** Locations of areas of waste disposal

		Latitud	le	Longitude			
Location Description (type)	o Deg	, Min	Sec ,	o Deg	, Min	°, Sec	
Kitchen and Shower Sump	62	21	0.00	92	44	58.00	
Outhouse Pit	62	21	0.50	92	44	59.80	

# 4. Detailed Summary of Activities

The Sub-sections listed herein refer to the similarly numbered sections in Part B, Item 2 of the of Water Licence 2BE-PBP2025

Northquest Ltd's, Pistol Bay camp was opened in late August and occupied from September 2<sup>nd</sup> to September 5<sup>th</sup>; water was only used for the camp

2.a. The camp obtained drinking and washing water from a nearby pond. A total of 1.89 cubic metres was pumped during the period when the camp was opened. A table of the log recording approximate daily use is provided in Appendix 1.

All non-hazardous waste, including some paper and cardboard was transported to the Whale Cove municipal dump in a single trip by truck in September after the camp was closed.

One hundred twenty six 50 kg bags of Calcium Chloride (CaCl) are stored inside a Weatherhaven tent on the Vickers Prospect. This tent is used for storage of other equipment, and it also serves as an emergency shelter for personnel working on the Vickers Prospect.

A total of 42 drums of Jet A-1 fuel and four drums of fuel suitable for use in drill water heaters, four drums of waste oil and one drum of gasoline as well as 15 empty drums are currently stored at the base camp in a tarpaulin covered fuel berm near the generator.

One hundred forty seven full 100 lb cylinders of propane are currently stored at the northwest corner of the base camp. In addition, thirty one partial, in service, 100 lb cylinders are in various locations in the base camp.

A total of 83 empty fuel drums are stored as follows: 21 in a sea container in Whale Cove, 25 in the storage tent, 22 near the camp generator and 15 in a berm, as noted above. An additional 163 crushed drums are stored in a sea container in Whale Cove.

Each of the two diesel generators has it's own fuel supply tank and each is approximately half full with an estimated 75 imperial gallons. In addition, two full drums of diesel fuel are stored inside the shack housing the oldest generator.

65 drums of Jet A-1 fuel are stored in a second tarpaulin covered berm in the vicinity of the generators at the base camp.

202 empty propane cylinders are stored at the north side of the camp.

Written authorization to store empty fuel drums, and drums with waste oil at a designated area at the Whale Cove airport was obtained from the Hamlet of Whale Cove on March 16, 2016 and it is presented herein on page 19; no drums or propane cylinders have been stored there since October 2017.

All grey-water was dumped into a sump containing five perforated drums and rocks within a pit dug in sand.

Sewage was contained in pits dug beneath the outhouses.

- 2.b. No unauthorized discharges occurred in 2020.
- 2.c. Revisions were made to the Spill Contingency Plan and Abandonment and Restoration Plan in 2015, 2017, 2018 and 2019, 2020 and 2021. For the purpose of completeness, the plans are provided herein in Appendices 5 and 6 respectively.
- 2.d. Drilling was not carried out in 2020
- 2.e. Drilling was not carried out in 2020.
- 2.f. Photographs of the camp water supply pump site are presented in Appendix 7.
- 2.g. Monitoring was not requested. Therefore, no monitoring results are provided.

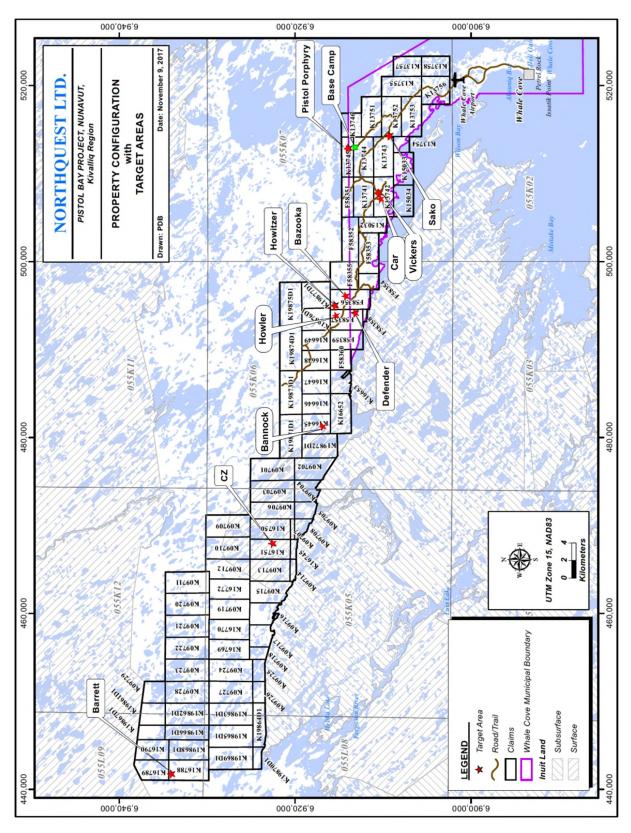


Figure 1. Claim Map, Exploration Targets and Camp Location.

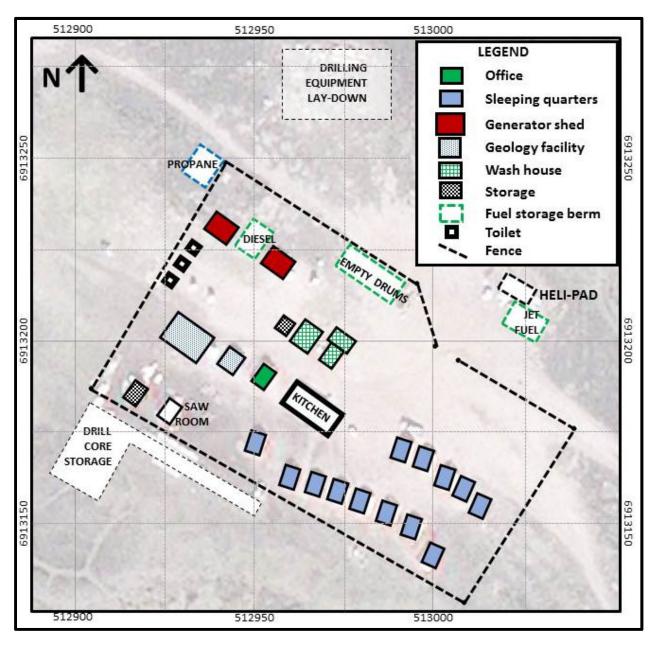


Figure 2. Sketch Map of Camp Layout.

# **APPENDIX 1**

# TABLES RECORDING WATER USE AND GARBAGE DISPOSAL

- DAILY WATER USE RECORDS
  - Camp Water
- Hamlet of Whale Cove Letter: Waste Management for Nordgold's Camp
- GARBAGE DISPOSAL RECORDS

# Daily Camp Water Use Record – 2020 Pistol Bay Project Camp

# **Month of September**

		Monthly total 1.89 m3						
Sept	ember	Maximum 1.89 m3						
		Average daily use 0.472 m3						
Date	Reading	Net US Gal	Net m <sup>3</sup>	Notes				
01-Sep	500	0	0.00					
02-Sep	0	40	0.15					
03-Sep	0	110	0.42					
04-Sep	0	150	0.57					
05-Sep	0	200	0.75	Camp closed				

A total of 1.89 cubic metres was pumped when the camp was opened. This was used at the rate of approximately 0.472 cubic metres per day and the remaining amount of the original 1.89 cubic metres was emptied from the storage tanks when the camp was closed.

# HAMLET OF WHALE COVE

PO BOX 120 WHALE COVE. NUNAVUT, XOC 0J0 Telephone: (867) 896-9961 \*\* Fax: (867) 896-9109



June 7, 2017

David Smith Exploration Manager, Canada Nordgold

# Re: Waste Management for Nordgold's Camp

Thank you for your letter of February 1, 2017. The only change that the Hamlet has made is to introduce under By-law a tipping fee of \$50.00 per truck load of camp wastes. We would also like to see Nordgold contribute to the maintenance and upgrading of the access road to the Wilson River(Akkuq). No other changes to the 2016 procedures are necessary at this time.

Sincerely,

Ian Copland, SAO Hamlet of Whale Cove.

# **Garbage Taken to Whale Cove Dump – 2020**

During the 2020 field season, garbage was transported to the Whale Cove waste disposal site pursuant to the conditions of the Hamlet as set forth in a letter from the Hamlet of Whale Cove presented herein on the previous page (page 23).

Pistol Bay Camp						
2020 Whale Cove Dump run						
	September					
Date	Trips	Notes				
Sep	1					

Only one trip was made to the Whale Cove waste disposal site with the Ford ¾ ton pick-up truck in early September as the camp was only occupied for four days in 2020.

# **APPENDIX 2**

# **WILDLIFE LOG**

Wildlife observations were recorded during the 2020 field season.

• The only wildlife observed was an Artic Hare on September 3<sup>rd</sup> on the Vickers Prospect.

### **APPENDIX 3**

#### STORAGE OF CONTAINERS AND CONTAINER REMOVAL

- Hamlet of Whale Cove Letter: Storage of Containers

# HAMLET OF WHALE COVE

PO BOX 120 WHALE COVE, NUNAVUT, XOC 0J0 Telephone: (867) 896-9961 ~ Fax: (867) 896-9109



16 March 2016

Northquest Ltd. 50 Richmond Street East, Suite 101 Toronto ON M5C 1N7

Attention: Dwayne Car

# **Re: Storage of Containers**

In response to your request it is agreed and understood that the Hamlet approves Northquest Ltd. to store empty fuel drums, (45 gallon) at the staging area of the Municipal Airport. The staging area is under the full control of Northquest.

It is understood that the drums have no residual fuel and are restricted to the staging area for storage pending ultimate removal.

It is further agreed that the staging area is approved to accept used oil stored in appropriate containers, prior to ultimate removal to Arviat. Any spillage or remedial work respecting spillage will be completed by Northquest after reporting said spills to the Government of Nunavut.

Yours truly

Mike Richards

SAO

The designated area at the airport was cleared of Northquest Ltd., material during the period of late September to early October 2017. No drums or propane cylinders were stored at the Whale Cove airport in 2020.

# **APPENDIX 4**

# PHOTOGRAPHS OF JET A-1 FUEL IN BERMS AND PROPANE STORED FOR WINTER



Figure 3. Fuel berm Number 1, at the camp generator shack, with diesel gasoline, waste oil and water heater fuel stored for the winter.



Figure 4. Fuel berm Number 2, near generator, with Jet A-1 fuel stored for the winter.



Figure 5. Propane cylinders stored at the Pistol Bay camp.

# **APPENDIX 5**

# **SPILL CONTINGENCY PLAN**

# NORDGOLD (Northquest Ltd) SPILL CONTINGENCY PLAN FOR EXPLORATION CAMP AND DRILL SITES PISTOL BAY AREA, KIVALLIQ REGION

NUNAVUT

Prepared by: Dwayne Car

Revision 1: Stanley Robinson Revision 2: Stanley Robinson Revision 3: Stanley Robinson Revision 4: David Smith Revision 5: Stanley Robinson Revision 6: Stanley Robinson

NORDGOLD (Northquest Ltd.)
Suite 301 - 82 Richmond Street East,
Toronto, Ontario
Canada M5C 1P1
www.nordgold.com

May 2015

March 2017 January 2018 December 2018 June, 2019 March 2020 January 2021

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# **PREAMBLE**

This Spill Contingency Plan is effective from the date of issuance of all water licences and land use permits currently being applied for by Northquest Ltd on its Pistol Bay property located 15 km north of Whale Cove, Nunavut, until the expiry of said licences and permits.

The Spill Contingency Plan was prepared in May 2015 for internal company use and distributed to regulators for approval as part of Northquest's Land Use and Water Licence permits.

This version dated March 2020 reflects project updates since May 2015.

#### 1.0 INTRODUCTION

The purpose of Northquest's Spill Contingency Plan is to provide a plan of action for any spill event during the Company's exploration program in the Pistol Bay area of Nunavut. This Plan provides the protocol for responding to spills (or potential spills) that will minimize health and safety hazards, environmental damage and clean-up costs as well as defining responsibilities of response personnel. This Spill Contingency Plan details the sites that operations will be conducted upon, describes the response organizations, action plans, reporting procedures and training exercises in place.

The Spill Contingency Plan will;

- . Promote the safe and careful use of potentially hazardous materials;
- . Promote the safe and effective recovery Of spilled potentially hazardous materials;
- . Minimize the environmental impacts of spills to water or land;
- . Identify roles, responsibilities and reporting procedures for spill events;
- . Provide readily accessible emergency information to clean-up crews, management and government agencies, and;
- . Comply with federal and territorial regulations and guidelines pertaining to the preparation of contingency plans and notification requirements in the event Of an emergency or spill.

### 2.0 SITE INFORMATION

**2.1. Campsite** The Pistol Bay camp has been in place since 2011 and partially owned by Henik Lake Adventures Ltd. of Arviat. The campsite is located at 62 21 05.2N, 92 45 19.7W

Capacity: 35 people

# Structures (at the end of the 2020 field season):

- Thirteen x 14' x 16' Weatherhaven sleep tents heated with propane
- One 14 x 48' plywood kitchen heated with propane
- One 14' x 16' plywood shack heated with propane, and used for sample shipment preparation and sample drying. Previously, this building was the core shed.
- One 16' x 24' plywood core shack, heated with fuel oil.
- One 16' x 8' extension to plywood core logging shack
- One 14' x 16' Weatherhaven shower/laundry facility, heated with propane, with an 8' x 16' extension which houses the laundry facilities, water storage tanks, water heater and water treatment system
- One 14' x 16' Weatherhaven core cutting tent
- One 14' x 16' Weatherhaven storage tent
- One 14' x 20' Weatherhaven office tent heated with propane

- One 8' x 8' plywood equipment shack
- Three plywood outhouses
- One heli-pad made of plywood framed with wooden pallets
- Two fuel caches stored in four "Insta berms" equipped with water drains
- Spill response equipment located beside fuel berms and heli-pad
- Two plywood generator shacks 8' x 16'
- One 8' x 8' shed to contain electrical panels
- One 16' x 16' plywood dry (heated by fuel oil)
- One plywood emergency shelter (used at drill rig)

# Northquest Machinery (at the end of the 2020 field season):

- One 2013 Ford F250 <sup>3</sup>/<sub>4</sub> ton pick-up Truck
- One 2014 TRX500FM Honda ATV -

One 2014 TRX420FE Honda ATV -

One 2011 TRX500 Honda ATV - One

2016 TRX 500FM Honda ATV - Two

Honda 6500 generators

- One gas portable rock saw
- Two 33.1Kva generators (main power plant and spare for camp).
- Two 50 cc Honda water pumps
- One Smart Ash portable, multipurpose batch load incinerator
- One gas-powered hydraulic barrel crusher
- One Kubota M6060 tractor
- One Sure-track trailer model ST8214TLDD
- Two Vancon Core Saws, 3hp, electric

# Top Rank Diamond Drilling Limited machinery on site at the end of the 2020 field season:

- Two Discovery 2 diamond drills, with 4 Perkins engines
- Three Honda generators
- One Yamaha generators
- One generic generator
- One Lincoln welder
- One Miller welder
- Seven Water pumps
- Four Honda 2" water pumps
- Seven Water pumps
- Four Honda 2" water pumps

# 2.2. Campsite and Drill Sites

See attached Property Configuration Map ATTACHMENT A.

At the end of the 2019 field season, the following fuel storage sites are in use at Pistol Bay:

- A total of 42 drums of Jet A-1 fuel, four drums of fuel suitable for use in drill water heaters, four drums of waste oil, one drum of gasoline and 15 empty drums are currently stored near the base camp generator in a tarpaulin covered fuel berm. In addition, a total of 65 drums of Jet A-1 fuel are currently stored in a second tarpaulin covered fuel berm in the vicinity of the base camp generator.
- There are a total of 147 full 100 lb propane cylinders, 31 partial 100 lb propane cylinders, and 202 empty 100 lb propane cylinders stored at the base camp.
- A total of 83 empty fuel drums are stored as follows: 21 in a sea container in Whale Cove, 25 in the storage tent, 22 near the camp generator and 15 in a berm, as noted above. An additional 163 crushed drums are stored in a sea container in Whale Cove.
- Each of the two diesel generators has their own double-walled fuel supply tank and each is approximately half full with an estimated 75 imperial gallons. In addition, two full drums of diesel fuel are stored in a berm inside the shack housing the older generator.

### 2.3. Effective Date of Plan

June 25, 2015 was the date of the original plan for the project, with the most recent revision dated March 20, 2020. The Plan is effective concurrent with all licences and permits for the Project.

# 2.4. Background Information on the Camp Site

The site is located on a wave-modified, flat-topped esker that was once used as part of an ATV trail network. The Hamlet of Whale Cove recently completed a new gravel-topped road system that allows two-wheel drive vehicles to travel from Whale Cove to the mouth of the Wilson River. The Hamlet also refurbished the existing road which extends to the Pistol Bay campsite. This allows Northquest Ltd personnel to travel by pick-up to Whale Cove, the Whale Cove airport and to the Vickers drill target. However, a helicopter is still the primary mode of transport for the project.

# 3.0 PETROLEUM AND CHEMICAL STORAGE

Fuels required for use in the exploration program and at the campsite are stored in the project base camp. They are all clearly labelled as the property of Northquest, are stored in a safe and secure manner with insta-berms and are secured for the Winter.

	Purpose	Size
Jet A1	Helicopter use	205 litre
propane		100 lb tank

All fuels for exploration purposes i.e., Jet A1, gasoline and diesel are stored in 205 litre (45 gal) metal drums. Propane is stored in standard 100lb propane tanks. Material Safety Data Sheets (MSDS) for these and other petroleum based products used during the drilling programs are located in Appendix B.

Temporary remote fuel caches are located in proximity of the area of drilling and will be located at each drill site, and will be in accordance with CSA approved methods of storage of drummed product. Spill kits will be located at each temporary remote fuel cache and fuel will be stored in Insta-berms.

After drilling at each site, empty drums will be crushed and backhauled to Whale Cove for shipping and disposal offsite. Fuel cache inspections will occur on a regular basis for leaks, damaged or punctured drums.

# 3.1 Petroleum Transfer Method

Manual, electric engine powered pumps, along with the appropriate filtration devices, may be used for the transfer of petroleum products from their storage drums to their end use fuel tanks. Spill kits will be at all petroleum transfer stations.

## 4.0 RISK ASSESSMENT AND MITIGATION OF RISKS

The following is a list of sources:

- . Drummed Products: Leaks or ruptures may occur, and bung caps may be loose. This includes Jet fuel, diesel, waste fuel and waste oil.
- . Fuel cylinders: Propane leaks may occur at the valves.
- . Vehicles and Equipment: Helicopter and fixed wing aircraft, snowmobiles, generators, pumps, diamond drills, ATV's.

Incidents involving leaking or dripping fuels and oils may occur due to malfunctions, impact damage, lack of regular maintenance, improper storage or faulty operation. Regular inspection and maintenance in accordance with recognized and accepted standard practices at all fuel caches reduces the risks associated with the categories listed above. Spill kits will be located at all drill sites.

# 4.1 Responsibilities

<u>Camp Manager:</u> responsible for checking that all fuel and oil drums or containers stored at the camp or the laydown are in good condition with no evidence of leakage, assuring drip trays and berms are in place and not overflowing; keeping spill kits and absorbent mats in good repair and accessible. If spill or likelihood of a spill occurs the Camp Manager will immediately report to the **Project Supervisor**.

<u>Drill Foreman and drillers:</u> responsible for checking that all fuel and oil drums or containers and drill muds stored at the drill sites are in good condition with no evidence of leakage, assuring drip trays and berms are in place and not overflowing; keeping spill kits and absorbent mats in good repair and accessible. If spill or likelihood of a spill occurs the Driller or Drill Foreman will immediately report to the **Project Supervisor**.

<u>Pilots:</u> responsible for checking helicopter fuel storage berms as often as practicable, and at least every time refuelling is completed. All spills or issues with fuel storage will be reported immediately to the Project Supervisor.

<u>Project Supervisor</u> will report any spill to the NWT/NU 24-Hour Spill Report Line and initiate clean-up. Project Supervisor will request additional aid from external sources if deemed necessary. If one or more of these key personnel are absent from the site an alternative person will be named as either Camp Manager or Project Supervisor for the interim.

David Smith, Exploration Manager.

# 5.0 RESPONDING TO FAILURES AND SPILLS

In the case of any spill or environmental emergency, it is necessary to react in the most immediate, safe and environmentally responsible manner. No spill or incident is so minor that it can be ignored and every spill must be reported.

# 5.1 Basic Steps

The basic steps of the response plan are as follows:

- 1. Ensure the safety of all persons at all times.
- <u>1</u> <u>Identify</u> and find the spill substance and its source, and, if possible, stop the process or shut off the source.
- 3. <u>Inform</u> the immediate supervisor or his or her designate at once, so that he/she may take appropriate action. Appropriate action includes the notification of a government official, if required; Spill Report forms are included at the back of this plan.

- <u>4.</u> <u>Contain</u> the spill or environmental hazard, as per its nature, and as per the advice of INAC Water Resources Inspector as required.
- <u>5.</u> <u>Implement</u> any necessary cleanup or remedial action.

# 5.2 Reporting Procedure

Communication by two-way radios will be used so that in the event that a spill occurs outside of camp at either the drill rig or external fuel cache it can be immediately reported to the Project Supervisor.

All spill kits located at all sources of fuel will have contact information for the NWT/NU Spill Report Line prominently displayed.

A listing of the NWT/NU 24 Hour Spill Report Line as well as other government contacts and company officials will be displayed adjacent to the phone in camp. (See Reporting Procedure and Contacts below).

- 1. Immediately notify the Northquest Ltd. head office T: (416) 306-0954 and report to the 24 Hour Spill Line at (867) 920-8130 (Fax: 867-873-6924), CIRNAC Land Use Resource Management Officer (867) 645-2840 and KIA Land Use Inspector (867) 645-5735.
- 2. A Spill Report Form (Appendix C) is filled out as completely as possible before or after contacting the 24 Hour Spill Line.
- 3. Notify Dave Smith, Exploration Manager, Cell: (647) 549-0954

# 5.3 Emergency Contact List

Table 2: Emergency Contact List - Spill Reporting and Response

CONTACT	CONTACT NUMBER (Tel / Cell)
David Smith, Exploration Manager, Nordgold	C: (647) 549-0954
Nordgold Headquarters, Toronto	T: (416) 306-0954
24 Hour Emergency Spill Line phone / fax	(867) 920-8130, Fax (867) 873-6924
Environment Canada – Iqaluit Emergency Pager	
CIRNAC Land Use Resource Management Officer (Rankin Inlet)	(867) 645-2840
KIA Land Use Inspector (Rankin Inlet)	(867) 645-5735
CIRNAC NU Water Resources Manager  CIRNAC NU Lands Administration Manager	(867) 975 4550 FAX (867) 975-4585 (867) 975-4280 FAX (867) 975-4286
DFO NU Region  Manager, Pollution Control and Air Quality	(867) 979-8000 FAX (867) 979-8039 (867) 975-5907

Rankin Inlet Hospital; Office Hours / After 5pm	(867) 645-8300 / (867) 645-6700
Rankin Inlet RCMP; Office Hours / Emergency	(867) 645-0123 / (867) 645-1111
Whale Cove RCMP Detachment	(867) 896-0123 or (867) 896-1111
Keewatin Air Ambulance	(867) 645-4455

A detailed report on each occurrence must also be filled out with the CIRNAC Water Resources Inspector no later than 30 days after initially reporting the event. The Spill Report Form is attached as Appendix C.

#### 6.0 ACTION PLANS

The following responses are recommended for fuel spills in differing environments. Depending on the location and size of the exploration program some of the equipment mentioned in the responses listed below will obviously not be located on site but could be transported to the spill if deemed necessary. The most likely scenario for fuel spills in this type of exploration program would include: leaking drums, hydraulic line malfunction and re-fueling operations. It is not anticipated that a spill of more than 45 gallons will occur as no fuel container on-site will exceed this capacity.

# 6.1 Spills on Land (gravel, rock, soil and vegetation)

Trench or ditch to intercept or contain flow of fuel or petroleum products on land where feasible (loose sand, gravel and surface layers of organic materials are amenable to trenching/ditching-trenching in rocky substrates is typically impractical and impossible).

Construct a soil berm downslope of the spill. Use of synthetic, impervious sheeting can also be used to act as a barrier.

Where available, recover spills through manual or mechanical means including shovels, heavy equipment and pumps.

Absorb petroleum residue with synthetic sorbent pad materials. Recover spilled and contaminated material, including soil and vegetation.

Transport contaminated material to approved disposal or recovery site. Equipment used will depend on the magnitude and location of the spill.

Land based disposal is only authorized with the approval of government authorities.

# 6.2 Spills on Snow

Trench or ditch to intercept or contain flow of fuel or petroleum products on snow, where feasible (ice, snow, loose sand, gravel and surface layers of organic materials as amenable to trench/ditching; trenching in solid, frozen ground or rocky substrates is typically impractical and impossible).

Compact snow around the outside perimeter of the spill area.

Construct a dike or dam out of snow, either manually with shovels or with heavy equipment such as graders or dozers where available.

If feasible, use synthetic lines to provide an impervious barrier at the spill site.

Locate the low point of the spill area and clear channels in the snow, directed away from waterways, to allow non-absorbed material to flow into the low point.

Once collected in the low area, option include shoveling spilled material into containers, picking up with mobile heavy equipment, pumping liquid into tanker trucks or using vacuum truck to pick up material.

Where safe, disposal can be done through in-situ combustion with approval from government and safety consultants.

Transport contaminated material to approved disposal site. Equipment used will depend on the magnitude and location of the spill.

# 6.3 Spills on Ice

Contain material spill using methods described above for snow, if feasible and/or mechanical recovery with heavy equipment.

Prevent fuel/petroleum products from penetrating ice and entering watercourses.

Remove contaminated material, including snow/ice as soon as possible. Containment of fuel/petroleum products under ice surface is difficult given the ice thickness and winter conditions. However, if the materials get under ice, determine area where the fuel/petroleum product is located.

Drill holes through ice using ice auger to locate fuel/petroleum product.

Once detected, cut slits in the ice using chain saws and remove ice blocks.

Fuel /petroleum products collected in ice slots or holes can be picked up via suction hoses connected to portable pump, vacuum truck or standby tanker. Care should be taken to prevent the end of the suction hose clogging up by snow, ice or debris.

# 6.4 Spills on Water

Contain spills on open water immediately to restrict the size and extent of the spill

Fuel/petroleum products which float on water may be contained through the use of booms, absorbent materials, skimming and the erection of culverts.

Deploy containment booms to minimize spill area, although effectiveness of booms may be limited by wind, waves and other factors.

Use sorbent booms to slowly encircle and absorb spilled material. These absorbent are hydrophobic (absorb and repel water).

Once booms are secured, use skimmers to draw in hydrocarbons and minimal amounts of water. Skimmed material can be pumped through hoses to empty fuel tanks/drums.

Culverts permit water flow while capturing and collecting fuel along the surface with absorbent materials.

Chemical methods including dispersants, emulsion – treating agents and shoreline cleaning will be considered.

# 6.5 Spills Due to Accidental Load Release

The loss of external loads of fuel, oil or chemicals from the helicopter requires an immediate response.

- Obtain GPS co-ordinates of the location and contact base camp. Include quantity and type of load loss.
  - 2) Base camp will contact the 24-Hour Spill Line and receive instructions on follow up procedures.
  - 3) Administer the appropriate procedure for spills on Land, Water, Snow or Ice

# NOTE:

- Material Safety Data Sheets for all hazardous materials involved in this project are listed in Appendix B. These MSDS sheets are for all drilling mud, polymers and greases as well as for calcium chloride, diesel, Jet A-1 with AIA, propane and gasoline.
  - 2. Precautions need to be taken to ensure safety of personnel. Also, spilled product should be confined to control burning. These include areas where the spilled material has pooled naturally or been contained via dikes, trenches, depressions or ice slots. Prior to any attempts at in-situ burning, consultation with experts and approval by government authorities are required.

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- 3. Chemical response methods are also available and may include the use of dispersants, emulsions-treating agents, visco-elastic agents, herding agents, solidifiers, and shoreline cleaning agents.
- 4. Biological response methods include nutrient enrichment and natural microbe seeding.
- 5. Site remediation will be completed as per the advice of government authorities.

#### 7.0 RESOURCE INVENTORY

#### Resources available on site:

Trenching/digging equipment in the form of picks and shovels.

**Pumps** 

Impervious sheeting (tarps)

Plastic bags, buckets, empty drums for collection of contaminated material.

2 Spill Kits containing:

4 – oil sorbent booms (5" x 10')

100 – oil sorbent sheets (16.5" x 20" x 3/8")

1 – drain cover (36" x 36" x 1/16")

1 – 1lb plugging compound

2 - pair Nitrile gloves

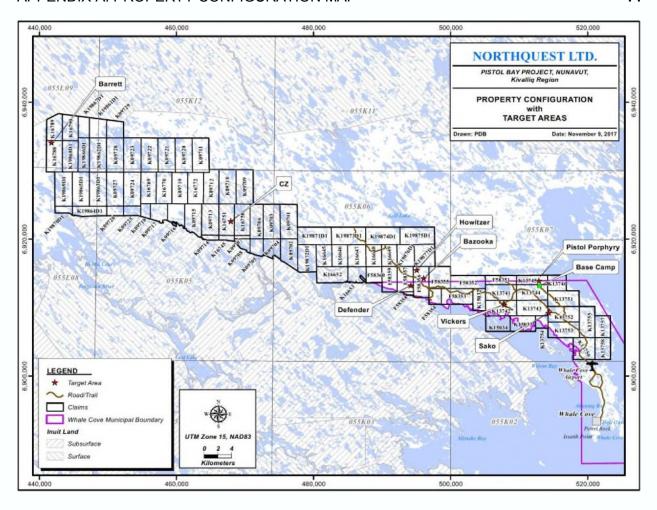
2 – pair Safety goggles

10 – disposable bags

#### 8.0 TRAINING/EXERCISE

Northquest is aware that without practice no Contingency Plan has value.

At least one practice drill will be held per season to give all employees and contractors a chance to practice emergency response skills. Each practice will be evaluated and a report prepared with the objective of learning where gaps and deficiencies exist, and in what areas more practice is required. Response criteria, communication and reporting requirements will be discussed to ensure everyone fully understands them.



# **NT-NU SPILL REPORT**











	U 24-HOUR SPILL REPORT LINE 867) 920-8130 ● Fax: (867) 873-6		lls@gov.nt.ca	ı				REF	ORT LINE USE ONLY	
Α	Report Date:	Report Tim	rt Time: Original S			Danast Number				
В	Occurrence Date:	ate: Occurrence Time:			OR Update # to the Original Spill Report					
С	Land Use Permit Number (if applicable):			Wat	Water Licence Number (if applicable):					
D	Geographic Place Name or Dista	nce and Direction	n from the Nar	ned Loca	tion:	Region:  NT Nunavut Adjacent Jurisdiction or Ocean				
Е	Latitude: Degrees Minutes Seconds				Longitude:	Degrees	Minutes		Seconds	
F	Responsible Party or Vessel Nam	ne:	Respo	nsible Pa	rty Address	or Office Lo	cation:			
G	Any Contractor Involved:		Contra	ector Addr	ress or Office	Location:				
Н	Product Spilled:  Potential S	pill	Quantity in Lite	res, Kilog	rams or Cubi	ic Metres:	U.N. Number:			
1	Spill Source: Spill Cause:					Area of Contamination in Square Metres:				
J	Factors Affecting Spill or Recovery: Describe Any Ass				istance Required: Hazards to Persons, Property or Environmen				perty or Environment:	
Κ	Additional Information, Comments, Actions Proposed or Taken to Contain, Recover or Dispose of Spilled Product and Contaminated Materials:								ninated Materials:	
L	Reported to Spill Line by:	Position:	Empl	loyer:		Location Calling From: Telephone:			Telephone:	
M	Any Alternate Contact:	Position:	Empl	loyer:	r: Alternate Contact Location			n:	Alternate Telephone:	
REP	ORT LINE USE ONLY									
N	Received at Spill Line by: Position: Er			Employer: Location			n Called: Report Line Number:			
Lead	Agency: EC CCG/TCM	ILA	Significance	ce: Minor File Status: Open  Major Unknown Closed						
Agency: Contact Name: Contact Time						Remark	s:			
Lead	Agency:									
First	Support Agency:									
Seco	and Support Agency:									
Third	Support Agency:									

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#### **APPENDIX C**

#### **MATERIAL SAFETY DATA SHEETS (MSDS)**

#### **LIST OF MSDS**

- HESS Gasoline, All Grades
- HESS Diesel Fuel (All types)
- AVJET Jet A-1 with AIA
- BIG BEAR DIAMOND DRILL ROD GREASE
- 550X POLYMER G-STOP
- CHEVRON Polyuran EP Grease 2 (Tube Grease)
- Calcium chloride, Anhydrous



Gasoline, All Grades

MSDS No. 9950

#### **EMERGENCY OVERVIEW** DANGER!

#### **EXTREMELY FLAMMABLE - EYE AND MUCOUS MEMBRANE IRRITANT** - EFFECTS CENTRAL NERVOUS SYSTEM - HARMFUL OR FATAL IF **SWALLOWED - ASPIRATION HAZARD**



High fire hazard. Keep away from heat, spark, open flame, and other ignition sources.

If ingested, do NOT induce vomiting, as this may cause chemical pneumonia (fluid in the lungs). Contact may cause eye, skin and mucous membrane irritation. Harmful if absorbed through the skin. Avoid prolonged breathing of vapors or mists. Inhalation may cause irritation, anesthetic effects (dizziness, nausea, headache, intoxication), and respiratory system effects.

Long-term exposure may cause effects to specific organs, such as to the liver, kidneys, blood, nervous system, and skin. Contains benzene, which can cause blood disease, including anemia and leukemia.

#### 1. CHEMICAL PRODUCT and COMPANY INFORMATION

**Hess Corporation** 

1 Hess Plaza

SYNONYMS:

Woodbridge, NJ 07095-0961

**EMERGENCY TELEPHONE NUMBER (24 hrs):** CHEMTREC (800)424-9300 COMPANY CONTACT (business hours): Corporate Safety (732)750-6000 www.hess.com

MSDS (Environment, Health, Safety) Internet Website

Hess Conventional (Oxygenated and Non-oxygenated) Gasoline; Reformulated Gasoline (RFG); Reformulated Gasoline Blendstock for Oxygenate Blending (RBOB); Unleaded

Motor or Automotive Gasoline

See Section 16 for abbreviations and acronyms.

#### 2. **COMPOSITION and INFORMATION ON INGREDIENTS \***

INGREDIENT NAME (CAS No.)	CONCENTRATION PERCENT BY WEIGHT
Gasoline (86290-81-5)	100
Benzene (71-43-2)	0.1 - 4.9 (0.1 - 1.3 reformulated gasoline)
n-Butane (106-97-8)	< 10
Ethyl Alcohol (Ethanol) (64-17-5)	0 - 10
Ethyl benzene (100-41-4)	< 3
n-Hexane (110-54-3)	0.5 to 4
Methyl-tertiary butyl ether (MTBE) (1634-04-4)	0 to 15.0
Tertiary-amyl methyl ether (TAME) (994-05-8)	0 to 17.2
Toluene (108-88-3)	1 - 25
1,2,4- Trimethylbenzene (95-63-6)	< 6
Xylene, mixed isomers (1330-20-7)	1 - 15

A complex blend of petroleum-derived normal and branched-chain alkane, cycloalkane, alkene, and aromatic hydrocarbons. May contain antioxidant and multifunctional additives. Non-oxygenated Conventional Gasoline and RBOB do not have oxygenates (Ethanol or MTBE and/or TAME).

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#### Gasoline, All Grades

MSDS No. 9950

Oxygenated Conventional and Reformulated Gasoline will have oxygenates for octane enhancement or as legally required.

#### 3. HAZARDS IDENTIFICATION

#### EYES

Moderate irritant. Contact with liquid or vapor may cause irritation.

#### SKIN

Practically non-toxic if absorbed following acute (single) exposure. May cause skin irritation with prolonged or repeated contact. Liquid may be absorbed through the skin in toxic amounts if large areas of skin are exposed repeatedly.

#### INGESTION

The major health threat of ingestion occurs from the danger of aspiration (breathing) of liquid drops into the lungs, particularly from vomiting. Aspiration may result in chemical pneumonia (fluid in the lungs), severe lung damage, respiratory failure and even death.

Ingestion may cause gastrointestinal disturbances, including irritation, nausea, vomiting and diarrhea, and central nervous system (brain) effects similar to alcohol intoxication. In severe cases, tremors, convulsions, loss of consciousness, coma, respiratory arrest, and death may occur.

#### INHALATION

Excessive exposure may cause irritations to the nose, throat, lungs and respiratory tract. Central nervous system (brain) effects may include headache, dizziness, loss of balance and coordination, unconsciousness, coma, respiratory failure, and death.

**WARNING**: the burning of any hydrocarbon as a fuel in an area without adequate ventilation may result in hazardous levels of combustion products, including carbon monoxide, and inadequate oxygen levels, which may cause unconsciousness, suffocation, and death.

#### CHRONIC EFFECTS and CARCINOGENICITY

Contains benzene, a regulated human carcinogen. Benzene has the potential to cause anemia and other blood diseases, including leukemia, after repeated and prolonged exposure. Exposure to light hydrocarbons in the same boiling range as this product has been associated in animal studies with systemic toxicity. See also Section 11 - Toxicological Information.

#### MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

Irritation from skin exposure may aggravate existing open wounds, skin disorders, and dermatitis (rash). Chronic respiratory disease, liver or kidney dysfunction, or pre-existing central nervous system disorders may be aggravated by exposure.

#### 4. FIRST AID MEASURES

#### **EYES**

In case of contact with eyes, immediately flush with clean, low-pressure water for at least 15 min. Hold eyelids open to ensure adequate flushing. Seek medical attention.

#### SKIN

Remove contaminated clothing. Wash contaminated areas thoroughly with soap and water or waterless hand cleanser. Obtain medical attention if irritation or redness develops.

#### INGESTION

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#### Gasoline, All Grades

MSDS No. 9950

DO NOT INDUCE VOMITING. Do not give liquids. Obtain immediate medical attention. If spontaneous vomiting occurs, lean victim forward to reduce the risk of aspiration. Small amounts of material which enter the mouth should be rinsed out until the taste is dissipated.

#### INHALATION

Remove person to fresh air. If person is not breathing, ensure an open airway and provide artificial respiration. If necessary, provide additional oxygen once breathing is restored if trained to do so. Seek medical attention immediately.

#### 5. FIRE FIGHTING MEASURES

#### **FLAMMABLE PROPERTIES:**

FLASH POINT: -45 °F (-43°C)

AUTOIGNITION TEMPERATURE: highly variable; > 530 °F (>280 °C)

OSHA/NFPA FLAMMABILITY CLASS: 1A (flammable liquid)

LOWER EXPLOSIVE LIMIT (%): 1.4% UPPER EXPLOSIVE LIMIT (%): 7.6%

#### FIRE AND EXPLOSION HAZARDS

Vapors may be ignited rapidly when exposed to heat, spark, open flame or other source of ignition. Flowing product may be ignited by self-generated static electricity. When mixed with air and exposed to an ignition source, flammable vapors can burn in the open or explode in confined spaces. Being heavier than air, vapors may travel long distances to an ignition source and flash back. Runoff to sewer may cause fire or explosion hazard.

#### **EXTINGUISHING MEDIA**

SMALL FIRES: Any extinguisher suitable for Class B fires, dry chemical, CO2, water spray, fire fighting foam, or Halon.

LARGE FIRES: Water spray, fog or fire fighting foam. Water may be ineffective for fighting the fire, but may be used to cool fire-exposed containers.

During certain times of the year and/or in certain geographical locations, gasoline may contain MTBE and/or TAME. Firefighting foam suitable for polar solvents is recommended for fuel with greater than 10% oxygenate concentration - refer to NFPA 11 "Low Expansion Foam - 1994 Edition."

#### FIRE FIGHTING INSTRUCTIONS

Small fires in the incipient (beginning) stage may typically be extinguished using handheld portable fire extinguishers and other fire fighting equipment.

Firefighting activities that may result in potential exposure to high heat, smoke or toxic by-products of combustion should require NIOSH/MSHA- approved pressure-demand self-contained breathing apparatus with full facepiece and full protective clothing.

Isolate area around container involved in fire. Cool tanks, shells, and containers exposed to fire and excessive heat with water. For massive fires the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Major fires may require withdrawal, allowing the tank to burn. Large storage tank fires typically require specially trained personnel and equipment to extinguish the fire, often including the need for properly applied fire fighting foam.

See Section 16 for the NFPA 704 Hazard Rating.

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Gasoline, All Grades

MSDS No. 9950

#### 6. ACCIDENTAL RELEASE MEASURES

ACTIVATE FACILITY SPILL CONTINGENCY or EMERGENCY PLAN.

Evacuate nonessential personnel and remove or secure all ignition sources. Consider wind direction; stay upwind and uphill, if possible. Evaluate the direction of product travel, diking, sewers, etc. to confirm spill areas. Spills may infiltrate subsurface soil and groundwater; professional assistance may be necessary to determine the extent of subsurface impact.

Carefully contain and stop the source of the spill, if safe to do so. Protect bodies of water by diking, absorbents, or absorbent boom, if possible. Do not flush down sewer or drainage systems, unless system is designed and permitted to handle such material. The use of fire fighting foam may be useful in certain situations to reduce vapors. The proper use of water spray may effectively disperse product vapors or the liquid itself, preventing contact with ignition sources or areas/equipment that require protection.

Take up with sand or other oil absorbing materials. Carefully shovel, scoop or sweep up into a waste container for reclamation or disposal - caution, flammable vapors may accumulate in closed containers. Response and clean-up crews must be properly trained and must utilize proper protective equipment (see Section 8).

#### 7. HANDLING and STORAGE

#### HANDLING PRECAUTIONS

\*\*\*\*\*\*\*USE ONLY AS A MOTOR FUEL\*\*\*\*\*\*

\*\*\*\*\*\*DO NOT SIPHON BY MOUTH\*\*\*\*\*\*

Handle as a flammable liquid. Keep away from heat, sparks, and open flame! Electrical equipment should be approved for classified area. Bond and ground containers during product transfer to reduce the possibility of static-initiated fire or explosion.

Special slow load procedures for "switch loading" must be followed to avoid the static ignition hazard that can exist when higher flash point material (such as fuel oil) is loaded into tanks previously containing low flash point products (such as this product) - see API Publication 2003, "Protection Against Ignitions Arising Out Of Static, Lightning and Stray Currents.

#### STORAGE PRECAUTIONS

Keep away from flame, sparks, excessive temperatures and open flame. Use approved vented containers. Keep containers closed and clearly labeled. Empty product containers or vessels may contain explosive vapors. Do not pressurize, cut, heat, weld or expose such containers to sources of ignition.

Store in a well-ventilated area. This storage area should comply with NFPA 30 "Flammable and Combustible Liquid Code". Avoid storage near incompatible materials. The cleaning of tanks previously containing this product should follow API Recommended Practice (RP) 2013 "Cleaning Mobile Tanks In Flammable and Combustible Liquid Service" and API RP 2015 "Cleaning Petroleum Storage Tanks".

#### WORK/HYGIENIC PRACTICES

Emergency eye wash capability should be available in the near proximity to operations presenting a potential splash exposure. Use good personal hygiene practices. Avoid repeated and/or prolonged skin exposure. Wash hands before eating, drinking, smoking, or using toilet facilities. Do not use as a cleaning solvent on the skin. Do not use solvents or harsh abrasive skin cleaners for washing this product from exposed skin areas. Waterless hand cleaners are effective. Promptly remove contaminated clothing and launder before reuse. Use care when laundering to prevent the formation of flammable vapors which could ignite via washer or dryer. Consider the need to discard contaminated leather shoes and gloves.

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Gasoline, All Grades

MSDS No. 9950

EXPOSURE LIMITS				
Component (CAS No.)				Exposure Limits
	Source	TWA (ppm)	STEL (ppm)	Note
Gasoline (86290-81-5)	ACGIH	300	500	A3
Benzene (71-43-2)	OSHA	1	5	Carcinogen
	<b>ACGIH</b>	0.5	2.5	A1, skin
	USCG	1	5	
n-Butane (106-97-8)	ACGIH	1000		Aliphatic Hydrocarbon Gases Alkane (C1-C4)
Ethyl Alcohol (ethanol) (64-17-5)	OSHA	1000		
	<b>ACGIH</b>	1000		A4
Ethyl benzene (100-41-4)	OSHA	100		
,	<b>ACGIH</b>	100	125	A3
n-Hexane (110-54-3)	OSHA	500		
	<b>ACGIH</b>	50		Skin
Methyl-tertiary butyl ether [MTBE] (1634-04-4)	ACGIH	50		A3
Tertiary-amyl methyl ether [TAME] (994-05-8)	,			None established
Toluene (108-88-3)	OSHA	200		Ceiling: 300 ppm; Peak: 500 ppm (10 min.)
	<b>ACGIH</b>	20		A4
1,2,4- Trimethylbenzene (95-63-6)	ACGIH	25		
Xylene, mixed isomers (1330-20-7)	OSHA	100		

#### **ENGINEERING CONTROLS**

Use adequate ventilation to keep vapor concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces.

100

150

A4

#### **EYE/FACE PROTECTION**

Safety glasses or goggles are recommended where there is a possibility of splashing or spraying.

ACGIH

#### SKIN PROTECTION

Gloves constructed of nitrile or neoprene are recommended. Chemical protective clothing such as that made of of E.I. DuPont Tychem ®, products or equivalent is recommended based on degree of exposure.

Note: The resistance of specific material may vary from product to product as well as with degree of exposure. Consult manufacturer specifications for further information.

#### RESPIRATORY PROTECTION

A NIOSH-approved air-purifying respirator with organic vapor cartridges or canister may be permissible under certain circumstances where airborne concentrations are or may be expected to exceed exposure limits or for odor or irritation. Protection provided by air-purifying respirators is limited. Refer to OSHA 29 CFR 1910.134, NIOSH Respirator Decision Logic, and the manufacturer for additional guidance on respiratory protection selection and limitations.

Use a positive pressure, air-supplied respirator if there is a potential for uncontrolled release, exposure levels are not known, in oxygen-deficient atmospheres, or any other circumstance where an air-purifying respirator may not provide adequate protection.

#### 9. PHYSICAL and CHEMICAL PROPERTIES

#### **APPEARANCE**

A translucent, straw-colored or light yellow liquid

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#### Gasoline, All Grades

MSDS No. 9950

#### ODOR

A strong, characteristic aromatic hydrocarbon odor. Oxygenated gasoline with MTBE and/or TAME may have a sweet, ether-like odor and is detectable at a lower concentration than non-oxygenated gasoline.

#### **ODOR THRESHOLD**

 Odor Detection
 Odor Recognition

 Non-oxygenated gasoline:
 0.5 - 0.6 ppm
 0.8 - 1.1 ppm

 Gasoline with 15% MTBE:
 0.2 - 0.3 ppm
 0.4 - 0.7 ppm

 Gasoline with 15% TAME:
 0.1 ppm
 0.2 ppm

#### **BASIC PHYSICAL PROPERTIES**

BOILING RANGE: 85 to 437 °F (39 to 200 °C)

VAPOR PRESSURE: 6.4 - 15 RVP @ 100 °F (38 °C) (275-475 mm Hg @ 68 °F (20 °C)

VAPOR DENSITY (air = 1): AP 3 to 4 SPECIFIC GRAVITY ( $H_2O = 1$ ): 0.70 – 0.78

EVAPORATION RATE: 10-11 (n-butyl acetate = 1)

PERCENT VOLATILES: 100 %

SOLUBILITY (H<sub>2</sub>O): Non-oxygenated gasoline - negligible (< 0.1% @ 77 °F). Gasoline with 15%

MTBE - slight (0.1 - 3% @ 77 °F); ethanol is readily soluble in water

#### 10. STABILITY and REACTIVITY

STABILITY: Stable. Hazardous polymerization will not occur.

#### **CONDITIONS TO AVOID**

Avoid high temperatures, open flames, sparks, welding, smoking and other ignition sources

#### INCOMPATIBLE MATERIALS

Keep away from strong oxidizers.

#### HAZARDOUS DECOMPOSITION PRODUCTS

Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke). Contact with nitric and sulfuric acids will form nitrocresols that can decompose violently.

#### 11. TOXICOLOGICAL PROPERTIES

#### **ACUTE TOXICITY**

Acute Dermal LD50 (rabbits): > 5 ml/kg Acute Oral LD50 (rat): 18.75 ml/kg

Guinea pig sensitization: negative

#### CHRONIC EFFECTS AND CARCINOGENICITY

Carcinogenicity: OSHA: NO IARC: YES - 2B NTP: NO ACGIH: YES (A3)

IARC has determined that gasoline and gasoline exhaust are possibly carcinogenic in humans. Inhalation exposure to completely vaporized unleaded gasoline caused kidney cancers in male rats and liver tumors in female mice. The U.S. EPA has determined that the male kidney tumors are species-specific and are irrelevant for human health risk assessment. The significance of the tumors seen in female mice is not known. Exposure to light hydrocarbons in the same boiling range as this product has been associated in animal studies with effects to the central and peripheral nervous systems, liver, and kidneys. The significance of these animal models to predict similar human response to gasoline is uncertain.

This product contains benzene. Human health studies indicate that prolonged and/or repeated overexposure to benzene may cause damage to the blood-forming system (particularly bone marrow), and serious blood disorders such as aplastic anemia and leukemia. Benzene is listed as a human carcinogen by the NTP, IARC, OSHA and ACGIH.

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#### Gasoline, All Grades

MSDS No. 9950

This product may contain methyl tertiary butyl ether (MTBE ): animal and human health effects studies indicate that MTBE may cause eye, skin, and respiratory tract irritation, central nervous system depression and neurotoxicity. MTBE is classified as an animal carcinogen (A3) by the ACGIH.

#### 12. **ECOLOGICAL INFORMATION**

Keep out of sewers, drainage areas and waterways. Report spills and releases, as applicable, under Federal and State regulations. If released, oxygenates such as ethers and alcohols will be expected to exhibit fairly high mobility in soil, and therefore may leach into groundwater. The API (www.api.org) provides a number of useful references addressing petroleum and oxygenate contamination of groundwater.

#### **DISPOSAL CONSIDERATIONS**

Consult federal, state and local waste regulations to determine appropriate disposal options.

#### 14. TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME: Gasoline DOT HAZARD CLASS and PACKING GROUP: 3. PG II DOT IDENTIFICATION NUMBER: UN 1203

DOT SHIPPING LABEL: FLAMMABLE LIQUID PLACARD:



#### REGULATORY INFORMATION

#### U.S. FEDERAL, STATE, and LOCAL REGULATORY INFORMATION

This product and its constituents listed herein are on the EPA TSCA Inventory. Any spill or uncontrolled release of this product, including any substantial threat of release, may be subject to federal, state and/or local reporting requirements. This product and/or its constituents may also be subject to other federal, state, or local regulations; consult those regulations applicable to your facility/operation.

#### **CLEAN WATER ACT (OIL SPILLS)**

Any spill or release of this product to "navigable waters" (essentially any surface water, including certain wetlands) or adjoining shorelines sufficient to cause a visible sheen or deposit of a sludge or emulsion must be reported immediately to the National Response Center (1-800-424-8802) as required by U.S. Federal Law. Also contact appropriate state and local regulatory agencies as required.

#### CERCLA SECTION 103 and SARA SECTION 304 (RELEASE TO THE ENVIRONMENT)

The CERCLA definition of hazardous substances contains a "petroleum exclusion" clause which exempts crude oil, refined, and unrefined petroleum products and any indigenous components of such. However, other federal reporting requirements (e.g., SARA Section 304 as well as the Clean Water Act if the spill occurs on navigable waters) may still apply.

#### SARA SECTION 311/312 - HAZARD CLASSES

ACUTE HEALTH CHRONIC HEALTH FIRE SUDDEN RELEASE OF PRESSURE REACTIVE X

#### **SARA SECTION 313 - SUPPLIER NOTIFICATION**

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

#### INGREDIENT NAME (CAS NUMBER) CONCENTRATION WT. PERCENT

Benzene (71-43-2) 0.1 to 4.9 (0.1 to 1.3 for reformulated gasoline) < 3

Ethyl benzene (100-41-4)

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#### Gasoline, All Grades

MSDS No. 9950

n-Hexane (110-54-3)

Methyl-tertiary butyl ether (MTBE) (1634-04-4)

Toluene (108-88-3)

1,2,4- Trimethylbenzene (95-63-6)

Xylene, mixed isomers (1330-20-7)

0.5 to 4

0 to 15.0

1 to 15

US EPA guidance documents (<a href="www.epa.gov/tri">www.epa.gov/tri</a>) for reporting Persistent Bioaccumulating Toxics (PBTs) indicate this product may contain the following deminimis levels of toxic chemicals subject to Section 313 reporting:

INGREDIENT NAME (CAS NUMBER) CONCENTRATION - Parts per million (ppm) by weight

Polycyclic aromatic compounds (PACs) 17
Benzo (g,h,i) perylene (191-24-2) 2.55
Lead (7439-92-1) 0.079

#### **CALIFORNIA PROPOSITION 65 LIST OF CHEMICALS**

This product contains the following chemicals that are included on the Proposition 65 "List of Chemicals" required by the California Safe Drinking Water and Toxic Enforcement Act of 1986:

 INGREDIENT NAME (CAS NUMBER)
 Date Listed

 Benzene
 2/27/1987

 Ethyl benzene
 6/11/2004

 Toluene
 1/1/1991

#### **CANADIAN REGULATORY INFORMATION (WHMIS)**

Class B, Division 2 (Flammable Liquid)

Class D, Division 2A (Very toxic by other means) and Class D, Division 2B (Toxic by other means)

#### 16. OTHER INFORMATION

NFPA® HAZARD RATING HEALTH: 1 Slight

FIRE: 3 Serious REACTIVITY: 0 Minimal

HMIS® HAZARD RATING HEALTH: 1 \* Slight

FIRE: 3 Serious
PHYSICAL: 0 Minimal
\* CHRONIC

SUPERSEDES MSDS DATED: 07/01/06

#### **ABBREVIATIONS:**

AP = Approximately < = Less than > = Greater than N/A = Not Applicable N/D = Not Determined ppm = parts per million

#### ACRONYMS:

**ACGIH** American Conference of Governmental CERCLA Comprehensive Emergency Response, Compensation, and Liability Act Industrial Hygienists **AIHA** DOT U.S. Department of Transportation American Industrial Hygiene Association [General Info: (800)467-4922] American National Standards Institute ANSI (212)642-4900 **EPA** U.S. Environmental Protection Agency API Hazardous Materials Information System American Petroleum Institute **HMIS** (202)682-8000

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MSDS No. 9950

Information System (Canada)

**RCRA** 

Gasoline, All Grades



#### MATERIAL SAFETY DATA SHEET

IARC	International Agency For Research On	REL	Recommended Exposure Limit (NIOSH)
	Cancer	SARA	Superfund Amendments and
MSHA	Mine Safety and Health Administration		Reauthorization Act of 1986 Title III
NFPA	National Fire Protection Association	SCBA	Self-Contained Breathing Apparatus
	(617)770-3000	SPCC	Spill Prevention, Control, and
NIOS	H National Institute of Occupational Safety		Countermeasures
	and Health	STEL	Short-Term Exposure Limit (generally 15
NOIC	Notice of Intended Change (proposed		minutes)
	change to ACGIH TLV)	TLV	Threshold Limit Value (ACGIH)
NTP	National Toxicology Program	TSCA	Toxic Substances Control Act
OPA	Oil Pollution Act of 1990	TWA	Time Weighted Average (8 hr.)
OSHA	U.S. Occupational Safety & Health	WEEL	Workplace Environmental Exposure
	Administration		Level (AIHA)
PEL	Permissible Exposure Limit (OSHA)	WHMIS	Workplace Hazardous Materials

#### DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES

Resource Conservation and Recovery Act

Information presented herein has been compiled from sources considered to be dependable, and is accurate and reliable to the best of our knowledge and belief, but is not guaranteed to be so. Since conditions of use are beyond our control, we make no warranties, expressed or implied, except those that may be contained in our written contract of sale or acknowledgment.

Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, vendor assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material, even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in their use of the material.



Diesel Fuel (All Types)

MSDS No. 9909

#### **EMERGENCY OVERVIEW**

CAUTION!

#### OSHA/NFPA COMBUSTIBLE LIQUID - SLIGHT TO MODERATE IRRITANT EFFECTS CENTRAL NERVOUS SYSTEM HARMFUL OR FATAL IF SWALLOWED



Moderate fire hazard. Avoid breathing vapors or mists. May cause dizziness and drowsiness. May cause moderate eye irritation and skin irritation (rash). Long-term, repeated exposure may cause skin cancer.

NFPA 704 (Section 16)

If ingested, do NOT induce vomiting, as this may cause chemical pneumonia (fluid in the lungs).

#### 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Hess Corporation
1 Hess Plaza

Woodbridge, NJ 07095-0961

EMERGENCY TELEPHONE NUMBER (24 hrs): CHEMTREC (800) 424-9300 COMPANY CONTACT (business hours): Corporate Safety (732) 750-6000

MSDS INTERNET WEBSITE: <a href="https://www.hess.com">www.hess.com</a> (See Environment, Health, Safety & Social Responsibility)

SYNONYMS: Ultra Low Sulfur Diesel (ULSD); Low Sulfur Diesel; Motor Vehicle Diesel Fuel; Diesel

Fuel #2; Dyed Diesel Fuel; Non-Road, Locomotive and Marine Diesel Fuel; Tax-exempt

Diesel Fuel

See Section 16 for abbreviations and acronyms.

#### 2. COMPOSITION and CHEMICAL INFORMATION ON INGREDIENTS

#### **INGREDIENT NAME (CAS No.)**

### CONCENTRATION PERCENT BY WEIGHT

Diesel Fuel (68476-34-6) Naphthalene (91-20-3)

Typically < 0.01

A complex mixture of hydrocarbons with carbon numbers in the range C9 and higher. Diesel fuel may be dyed (red) for tax purposes. May contain a multifunctional additive.

#### HAZARDS IDENTIFICATION

#### EYES

Contact with liquid or vapor may cause mild irritation.

#### SKIN

May cause skin irritation with prolonged or repeated contact. Practically non-toxic if absorbed following acute (single) exposure. Liquid may be absorbed through the skin in toxic amounts if large areas of skin are repeatedly exposed.

#### **INGESTION**

The major health threat of ingestion occurs from the danger of aspiration (breathing) of liquid drops into the lungs, particularly from vomiting. Aspiration may result in chemical pneumonia (fluid in the lungs), severe lung damage, respiratory failure and even death.

Ingestion may cause gastrointestinal disturbances, including irritation, nausea, vomiting and diarrhea, and central nervous system (brain) effects similar to alcohol intoxication. In severe cases, tremors, convulsions, loss of consciousness, coma, respiratory arrest, and death may occur.

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#### Diesel Fuel (All Types)

MSDS No. 9909

#### INHALATION

Excessive exposure may cause irritations to the nose, throat, lungs and respiratory tract. Central nervous system (brain) effects may include headache, dizziness, loss of balance and coordination, unconsciousness, coma, respiratory failure, and death.

**WARNING**: the burning of any hydrocarbon as a fuel in an area without adequate ventilation may result in hazardous levels of combustion products, including carbon monoxide, and inadequate oxygen levels, which may cause unconsciousness, suffocation, and death.

#### CHRONIC EFFECTS and CARCINOGENICITY

Similar products produced skin cancer and systemic toxicity in laboratory animals following repeated applications. The significance of these results to human exposures has not been determined - see Section 11 Toxicological Information.

IARC classifies whole diesel fuel exhaust particulates as probably carcinogenic to humans (Group 2A). NIOSH regards whole diesel fuel exhaust particulates as a potential cause of occupational lung cancer based on animal studies and limited evidence in humans.

#### MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

Irritation from skin exposure may aggravate existing open wounds, skin disorders, and dermatitis (rash).

#### 4. FIRST AID MEASURES

#### **EYES**

In case of contact with eyes, immediately flush with clean, low-pressure water for at least 15 min. Hold eyelids open to ensure adequate flushing. Seek medical attention.

#### SKIN

Remove contaminated clothing. Wash contaminated areas thoroughly with soap and water or waterless hand cleanser. Obtain medical attention if irritation or redness develops.

#### INGESTION

DO NOT INDUCE VOMITING. Do not give liquids. Obtain immediate medical attention. If spontaneous vomiting occurs, lean victim forward to reduce the risk of aspiration. Monitor for breathing difficulties. Small amounts of material which enter the mouth should be rinsed out until the taste is dissipated.

#### INHALATION

Remove person to fresh air. If person is not breathing provide artificial respiration. If necessary, provide additional oxygen once breathing is restored if trained to do so. Seek medical attention immediately.

#### 5. FIRE FIGHTING MEASURES

#### FLAMMABLE PROPERTIES:

FLASH POINT: > 125 °F (> 52 °C) minimum PMCC

AUTOIGNITION POINT: 494 °F (257 °C) OSHA/NFPA FLAMMABILITY CLASS: 2 (COMBUSTIBLE)

LOWER EXPLOSIVE LIMIT (%): 0.6 UPPER EXPLOSIVE LIMIT (%): 7.5

#### FIRE AND EXPLOSION HAZARDS

Vapors may be ignited rapidly when exposed to heat, spark, open flame or other source of ignition. When mixed with air and exposed to an ignition source, flammable vapors can burn in the open or explode in confined spaces. Being heavier than air, vapors may travel long distances to an ignition source and flash back. Runoff to sewer may cause fire or explosion hazard.

#### EXTINGUISHING MEDIA

SMALL FIRES: Any extinguisher suitable for Class B fires, dry chemical, CO2, water spray, fire fighting foam, or Halon.

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#### Diesel Fuel (All Types)

MSDS No. 9909

LARGE FIRES: Water spray, fog or fire fighting foam. Water may be ineffective for fighting the fire, but may be used to cool fire-exposed containers.

#### FIRE FIGHTING INSTRUCTIONS

Small fires in the incipient (beginning) stage may typically be extinguished using handheld portable fire extinguishers and other fire fighting equipment.

Firefighting activities that may result in potential exposure to high heat, smoke or toxic by-products of combustion should require NIOSH/MSHA- approved pressure-demand self-contained breathing apparatus with full facepiece and full protective clothing.

Isolate area around container involved in fire. Cool tanks, shells, and containers exposed to fire and excessive heat with water. For massive fires the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Major fires may require withdrawal, allowing the tank to burn. Large storage tank fires typically require specially trained personnel and equipment to extinguish the fire, often including the need for properly applied fire fighting foam.

See Section 16 for the NFPA 704 Hazard Rating.

#### 6. ACCIDENTAL RELEASE MEASURES

#### ACTIVATE FACILITY'S SPILL CONTINGENCY OR EMERGENCY RESPONSE PLAN.

Evacuate nonessential personnel and remove or secure all ignition sources. Consider wind direction; stay upwind and uphill, if possible. Evaluate the direction of product travel, diking, sewers, etc. to confirm spill areas. Spills may infiltrate subsurface soil and groundwater; professional assistance may be necessary to determine the extent of subsurface impact.

Carefully contain and stop the source of the spill, if safe to do so. Protect bodies of water by diking, absorbents, or absorbent boom, if possible. Do not flush down sewer or drainage systems, unless system is designed and permitted to handle such material. The use of fire fighting foam may be useful in certain situations to reduce vapors. The proper use of water spray may effectively disperse product vapors or the liquid itself, preventing contact with ignition sources or areas/equipment that require protection.

Take up with sand or other oil absorbing materials. Carefully shovel, scoop or sweep up into a waste container for reclamation or disposal - caution, flammable vapors may accumulate in closed containers. Response and clean-up crews must be properly trained and must utilize proper protective equipment (see Section 8).

#### 7. HANDLING and STORAGE

#### HANDLING PRECAUTIONS

Handle as a combustible liquid. Keep away from heat, sparks, and open flame! Electrical equipment should be approved for classified area. Bond and ground containers during product transfer to reduce the possibility of static-initiated fire or explosion.

Diesel fuel, and in particular low and ultra low sulfur diesel fuel, has the capability of accumulating a static electrical charge of sufficient energy to cause a fire/explosion in the presence of lower flashpoint products such as gasoline. The accumulation of such a static charge occurs as the diesel flows through pipelines, filters, nozzles and various work tasks such as tank/container filling, splash loading, tank cleaning; product sampling; tank gauging; cleaning, mixing, vacuum truck operations, switch loading, and product agitation. There is a greater potential for static charge accumulation in cold temperature, low humidity conditions.

Documents such as 29 CFR OSHA 1910.106 "Flammable and Combustible Liquids, NFPA 77 Recommended Practice on Static Electricity, API 2003 "Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents and ASTM D4865 "Standard Guide for Generation and Dissipation of Static

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#### Diesel Fuel (All Types)

MSDS No. 9909

Electricity in Petroleum Fuel Systems" address special precautions and design requirements involving loading rates, grounding, bonding, filter installation, conductivity additives and especially the hazards associated with "switch loading." ["Switch Loading" is when a higher flash point product (such as diesel) is loaded into tanks previously containing a low flash point product (such as gasoline) and the electrical charge generated during loading of the diesel results in a static ignition of the vapor from the previous cargo (gasoline).]

Note: When conductivity additives are used or are necessary the product should achieve 25 picosiemens/meter or greater at the handling temperature.

#### STORAGE PRECAUTIONS

Keep away from flame, sparks, excessive temperatures and open flame. Use approved vented containers. Keep containers closed and clearly labeled. Empty product containers or vessels may contain explosive vapors. Do not pressurize, cut, heat, weld or expose such containers to sources of ignition.

Store in a well-ventilated area. This storage area should comply with NFPA 30 "Flammable and Combustible Liquid Code". Avoid storage near incompatible materials. The cleaning of tanks previously containing this product should follow API Recommended Practice (RP) 2013 "Cleaning Mobile Tanks In Flammable and Combustible Liquid Service" and API RP 2015 "Cleaning Petroleum Storage Tanks".

#### WORK/HYGIENIC PRACTICES

Emergency eye wash capability should be available in the near proximity to operations presenting a potential splash exposure. Use good personal hygiene practices. Avoid repeated and/or prolonged skin exposure. Wash hands before eating, drinking, smoking, or using toilet facilities. Do not use as a cleaning solvent on the skin. Do not use solvents or harsh abrasive skin cleaners for washing this product from exposed skin areas. Waterless hand cleaners are effective. Promptly remove contaminated clothing and launder before reuse. Use care when laundering to prevent the formation of flammable vapors which could ignite via washer or dryer. Consider the need to discard contaminated leather shoes and gloves.

#### 8. EXPOSURE CONTROLS and PERSONAL PROTECTION

#### **EXPOSURE LIMITS**

	Exposure Limits						
Components (CAS No.)	Source	TWA/STEL	Note				
Discal Fuel (00470 04 0)	OSHA	5 mg/m, as mineral oil mist					
Diesel Fuel: (68476-34-6)	ACGIH	100 mg/m³ (as totally hydrocarbon vapor) TWA	A3, skin				
	OSHA	10 ppm TWA					
Naphthalene (91-20-3)	ACGIH	10 ppm TWA / 15 ppm STEL	A4, Skin				

#### **ENGINEERING CONTROLS**

Use adequate ventilation to keep vapor concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces.

#### EYE/FACE PROTECTION

Safety glasses or goggles are recommended where there is a possibility of splashing or spraying.

#### SKIN PROTECTION

Gloves constructed of nitrile, neoprene, or PVC are recommended. Chemical protective clothing such as of E.I. DuPont TyChem®, Saranex® or equivalent recommended based on degree of exposure. Note: The resistance of specific material may vary from product to product as well as with degree of exposure. Consult manufacturer specifications for further information.

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#### Diesel Fuel (All Types)

MSDS No. 9909

#### RESPIRATORY PROTECTION

A NIOSH/MSHA-approved air-purifying respirator with organic vapor cartridges or canister may be permissible under certain circumstances where airborne concentrations are or may be expected to exceed exposure limits or for odor or irritation. Protection provided by air-purifying respirators is limited. Refer to OSHA 29 CFR 1910.134, NIOSH Respirator Decision Logic, and the manufacturer for additional guidance on respiratory protection selection.

Use a positive pressure, air-supplied respirator if there is a potential for uncontrolled release, exposure levels are not known, in oxygen-deficient atmospheres, or any other circumstance where an air-purifying respirator may not provide adequate protection.

#### 9. PHYSICAL and CHEMICAL PROPERTIES

#### **APPEARANCE**

Clear, straw-yellow liquid. Dyed fuel oil will be red or reddish-colored.

#### ODOR

Mild, petroleum distillate odor

#### BASIC PHYSICAL PROPERTIES

BOILING RANGE: 320 to 690 oF (160 to 366 °C) VAPOR PRESSURE: 0.009 psia @ 70 °F (21 °C)

VAPOR DENSITY (air = 1): > 1.0

SPECIFIC GRAVITY ( $H_2O = 1$ ): 0.83 to 0.88 @ 60 °F (16 °C)

PERCENT VOLATILES: 100 %

EVAPORATION RATE: Slow; varies with conditions

SOLUBILITY (H<sub>2</sub>O): Negligible

#### 10. STABILITY and REACTIVITY

**STABILITY:** Stable. Hazardous polymerization will not occur.

#### CONDITIONS TO AVOID and INCOMPATIBLE MATERIALS

Avoid high temperatures, open flames, sparks, welding, smoking and other ignition sources. Keep away from strong oxidizers; Viton ®; Fluorel ®

#### HAZARDOUS DECOMPOSITION PRODUCTS

Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke).

#### 11. TOXICOLOGICAL PROPERTIES

#### **ACUTE TOXICITY**

Acute dermal LD50 (rabbits): > 5 ml/kg Acute oral LD50 (rats): 9 ml/kg

Primary dermal irritation: extremely irritating (rabbits) Draize eye irritation: non-irritating (rabbits)

Guinea pig sensitization: negative

#### CHRONIC EFFECTS AND CARCINOGENICITY

Carcinogenic: OSHA: NO IARC: NO NTP: NO ACGIH: A3

Studies have shown that similar products produce skin tumors in laboratory animals following repeated applications without washing or removal. The significance of this finding to human exposure has not been determined. Other studies with active skin carcinogens have shown that washing the animal's skin with soap and water between applications reduced tumor formation.

#### MUTAGENICITY (genetic effects)

This material has been positive in a mutagenicity study.

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Diesel Fuel (All Types)

MSDS No. 9909

#### 12. ECOLOGICAL INFORMATION

Keep out of sewers, drainage areas, and waterways. Report spills and releases, as applicable, under Federal and State regulations.

#### 13. DISPOSAL CONSIDERATIONS

Consult federal, state and local waste regulations to determine appropriate disposal options.

#### 14. TRANSPORTATION INFORMATION

PROPER SHIPPING NAME:

HAZARD CLASS and PACKING GROUP: DOT IDENTIFICATION NUMBER:

DOT SHIPPING LABEL:

15.

Diesel Fuel
3 PG III

NA 1993 (Domestic) UN 1202 (International)

Use Combustible Placard if

Placard (International Only):

## shipping in bulk domestically REGULATORY INFORMATION

U.S. FEDERAL, STATE, and LOCAL REGULATORY INFORMATION

None

This product and its constituents listed herein are on the EPA TSCA Inventory. Any spill or uncontrolled release of this product, including any substantial threat of release, may be subject to federal, state and/or local reporting requirements. This product and/or its constituents may also be subject to other regulations at the state and/or local level. Consult those regulations applicable to your facility/operation.

#### **CLEAN WATER ACT (OIL SPILLS)**

Any spill or release of this product to "navigable waters" (essentially any surface water, including certain wetlands) or adjoining shorelines sufficient to cause a visible sheen or deposit of a sludge or emulsion must be reported immediately to the National Response Center (1-800-424-8802) as required by U.S. Federal Law. Also contact appropriate state and local regulatory agencies as required.

#### CERCLA SECTION 103 and SARA SECTION 304 (RELEASE TO THE ENVIRONMENT)

The CERCLA definition of hazardous substances contains a "petroleum exclusion" clause which exempts crude oil, refined, and unrefined petroleum products and any indigenous components of such. However, other federal reporting requirements (e.g., SARA Section 304 as well as the Clean Water Act if the spill occurs on navigable waters) may still apply.

#### SARA SECTION 311/312 - HAZARD CLASSES

ACUTE HEALTH CHRONIC HEALTH FIRE SUDDEN RELEASE OF PRESSURE REACTIVE

#### SARA SECTION 313 - SUPPLIER NOTIFICATION

This product may contain listed chemicals below the *de minimis* levels which therefore are not subject to the supplier notification requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and of 40 CFR 372. If you may be required to report releases of chemicals listed in 40 CFR 372.28, you may contact Hess Corporate Safety if you require additional information regarding this product.

#### CALIFORNIA PROPOSITON 65 LIST OF CHEMICALS

CANADIAN REGULATORY INFORMATION (WHMIS)

This product contains the following chemicals that are included on the Proposition 65 "List of Chemicals" required by the California Safe Drinking Water and Toxic Enforcement Act of 1986:

INGREDIENT NAME (CAS NUMBER)

Date Listed 10/01/1990

#### Diesel Engine Exhaust (no CAS Number listed)

Class B, Division 3 (Combustible Liquid) and Class D, Division 2, Subdivision B (Toxic by other means)

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Diesel Fuel (All Types)

MSDS No. 9909

#### 16. OTHER INFORMATION

NFPA® HAZARD RATING HEALTH: 0

FIRE: 2 REACTIVITY: 0

Refer to NFPA 704 "Identification of the Fire Hazards of Materials" for further information

HMIS® HAZARD RATING HEALTH: 1 \* \* Chronic

FIRE: 2 PHYSICAL: 0

#### SUPERSEDES MSDS DATED: 02/28/2001

#### **ABBREVIATIONS:**

AP = Approximately < = Less than > = Greater than N/A = Not Applicable N/D = Not Determined ppm = parts per million

#### ACRONYMS:

ACGIH	American Conference of Governmental	NTP	National Toxicology Program
	Industrial Hygienists	OPA	Oil Pollution Act of 1990
AIHA	American Industrial Hygiene Association	OSHA	U.S. Occupational Safety & Health
ANSI	American National Standards Institute		Administration
	(212) 642-4900	PEL	Permissible Exposure Limit (OSHA)
API	American Petroleum Institute	RCRA	Resource Conservation and Recovery
	(202) 682-8000		Act
CERCLA	Comprehensive Emergency Response,	REL	Recommended Exposure Limit (NIOSH)
	Compensation, and Liability Act	SARA	Superfund Amendments and
DOT	U.S. Department of Transportation		Reauthorization Act of 1986 Title III
	[General info: (800) 467-4922]	SCBA	Self-Contained Breathing Apparatus
EPA	U.S. Environmental Protection Agency	SPCC	Spill Prevention, Control, and
HMIS	Hazardous Materials Information System		Countermeasures
IARC	International Agency For Research On	STEL	Short-Term Exposure Limit (generally
	Cancer		15 minutes)
MSHA	Mine Safety and Health Administration	TLV	Threshold Limit Value (ACGIH)
NFPA	National Fire Protection Association	TSCA	Toxic Substances Control Act
	(617)770-3000	TWA	Time Weighted Average (8 hr.)
NIOSH	National Institute of Occupational Safety	WEEL	Workplace Environmental Exposure
	and Health		Level (AIHA)
NOIC	Notice of Intended Change (proposed	WHMIS	Canadian Workplace Hazardous
	change to ACGIH TLV)		Materials Information System

#### DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES

Information presented herein has been compiled from sources considered to be dependable, and is accurate and reliable to the best of our knowledge and belief, but is not guaranteed to be so. Since conditions of use are beyond our control, we make no warranties, expressed or implied, except those that may be contained in our written contract of sale or acknowledgment.

Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, vendor assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material, even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in their use of the material.

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Revision Number: 04



# Avjet Holding Inc. Material Safety Data Sheet

Effective Date: 2016-01-01 Supersedes: 2013-01-01





Class B3 Combustible Class D2B Other Toxic Liquid Effects - Skin Irritant

#### 1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT: JET A-1 WITH AIA

SYNONYMS: Aviation Turbine Fuel (Kerosene Type)

May contain anti-icing additive (Diethylene Glycol Monomethyl Ether)

PRODUCT USE: Fuel Solvent MSDS Number: 142-017

MANUFACTURER TELEPHONE NUMBERS

Avjet Holding Inc. Avjet Emergency Number 1-866-472-0007

900, Lemire Boulevard

Drummondville, QC Canada For general information: (819) 479-1000 J2C 7W8 For MSDS information: (819) 479-1000

This MSDS was prepared by the Toxicology and Product Stewardship Section of Avjet Holding Inc.

#### 2. COMPOSITION/INFORMATION ON INGREDIENTS

Component Name CAS Number % Range WHMIS Controlled

Kerosene (Petroleum), Hydrodesulfurized 64742-81-0 60 - 100 Yes

See Section 8 for Occupational Exposure Guidelines.

#### 3. HAZARDS IDENTIFICATION

Physical Description: Liquid Bright Clear Hydrocarbon Odour

Routes of Exposure: Exposure will most likely occur through skin contact or inhalation.

Hazards:

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Combustible Liquid. Irritating to skin.

Vapours are moderately irritating to the eyes.

Ingestion may result in vomiting. Avoid aspiration of vomitus into lungs as small

quantities may result in aspiration pneumonitis.

Vapours are moderately irritating to the respiratory passages.

Handling: Eliminate all ignition sources.

Avoid prolonged exposure to vapours. Wear suitable gloves and eye protection.

Bond and ground transfer containers and equipment to avoid static accumulation. Empty containers are hazardous, may contain flammable / explosive dusts, liquid

residue or vapours. Keep away from sparks and open flames.

For further information on health effects, see Section 11.

#### 4. FIRST AID

Eyes: Flush eyes with water for at least 15 minutes while holding eyelids open. If irritation

occurs and persists, obtain medical attention.

Skin: Wash contaminated skin with mild soap and water for 15 minutes. If irritation

occurs and persists, obtain medical attention.

Ingestion: DO NOT INDUCE VOMITING! OBTAIN MEDICAL ATTENTION IMMEDIATELY.

Guard against aspiration into lungs by having the individual turn on to their left side. If vomiting occurs spontaneously keep head below hips to prevent aspiration of

liquid into the lungs.

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

medical attention.

Notes to Physician: The main hazard following accidental ingestion is aspiration of the liquid into the

lungs producing chemical pneumonitis. If more than 2.0 mL/kg has been ingested, vomiting should be induced with supervision. If symptoms such as loss of gag reflex, convulsions or unconsciousness occur before vomiting, gastric lavage with a

cuffed endotracheal tube should be considered.

#### 5. FIRE FIGHTING MEASURES

Extinguishing Media: Carbon Dioxide

Foam

Dry Chemical Water Fog

Firefighting Instructions: Caution - Combustible. Vapour forms a flammable/explosive mixture with air

between upper and lower flammable limits. Vapours may travel along ground and flashback along vapour trail may occur. Product will float and can be reignited on surface of water. Do not use a direct stream of water as it may spread fire. Containers exposed to intense heat from fires should be cooled with water to prevent vapour pressure buildup which could result in container rupture. Container areas exposed to direct flame contact should be cooled with large quantities of water as needed to prevent weakening of container structure. Do not enter confined fire space without adequate protective clothing and an approved positive pressure self-contained breathing

apparatus.

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

#### 6. ACCIDENTAL RELEASE MEASURES

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

#### 7. HANDLING AND STORAGE

Handling:

Avoid excessive heat, sparks, open flames and all other sources of ignition. Fixed equipment as well as transfer containers and equipment should be grounded to prevent accumulation of static charge. Vapours are heavier than air and will settle and collect in low areas and pits, displacing breathing air. Extinguish pilot lights, cigarettes and turn off other sources of ignition prior to use and until all vapours are gone. Vapours may accumulate and travel to distant ignition sources and flashback. Do not cut, drill, grind, weld or perform similar operations on or near containers. Empty containers are hazardous, may contain flammable/explosive dusts, residues or vapours. Do not pressurize drum containers to empty them. Wash with soap and water prior to eating, drinking, smoking, applying cosmetics or using toilet facilities. Launder contaminated clothing prior to reuse. Use good personal hygiene. Combustible.

Storage:

Store in a cool, dry, well ventilated area, away from heat and ignition sources. Keep container tightly closed.

#### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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

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

Kerosene/Jet fuels, as total hydrocarbon vapour (skin): 200 mg/m3 ( Application restricted to conditions in which there are negligible aerosol exposures.)

Skin Notation: Absorption through skin, eyes and mucous membranes may contribute significantly to the total exposure.

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**Mechanical**Use explosion-proof ventilation as required to control vapour concentrations.

Ventilation: Concentrations in air should be maintained below the recommended threshold limit

value if unprotected personnel are involved. Local ventilation recommended where mechanical ventilation is ineffective in controlling airborne concentrations below the recommended occupational exposure limit. Make up air should always be supplied to balance air exhausted (either generally or locally). For personnel entry into confined spaces (i.e. bulk storage tanks) a proper confined space entry procedure

must be followed including ventilation and testing of tank atmosphere.

#### PERSONAL PROTECTIVE EQUIPMENT:

Eye Protection: Chemical safety goggles and/or full face shield to protect eyes and face, if product

is handled such that it could be splashed into eyes. Provide an eyewash station in

the area.

Skin Protection: Avoid contact with skin. Use protective clothing and gloves manufactured from

nitrile. Safety showers should be available for emergency use.

Respiratory Avoid breathing vapour or mists. If exposure has the potential to exceed

Protection: occupational exposure limits, use an appropriate NIOSH-approved respirator. Use a

NIOSH-approved chemical cartridge respirator with organic vapour cartridges or use

a NIOSH-approved supplied-air respirator.

#### 9. PHYSICAL DATA

Physical State: Liquid
Appearance: Bright Clear
Odour: Hydrocarbon Odour
Odour Threshold: Not available

Freezing/Pour Point: Freeze Point < -47 °C

Boiling Point: 145 - 300 °C

Density: 775 - 840 kg/m3 @ 15 °C

Vapour Density (Air = 1): Not available

Vapour Pressure (absolute): 1 - 1.4 kPa @ 37.8 °C

pH: Not available

Flash Point: Tag Closed Cup > 43 °C

Lower Explosion Limit: 0.7 % (vol.)
Upper Explosion Limit: 5 % (vol.)
Autoignition Temperature: 210 °C

Viscosity: < 8 cSt @ -20 °C

Evaporation Rate (n-BuAc = 1): Not available Partition Coefficient (log K<sub>ow</sub>): 3.3 - 6 Water Solubility: Insoluble

Other Solvents: Hydrocarbon Solvents

#### 10. STABILITY AND REACTIVITY

Chemically Stable: Yes
Hazardous Polymerization: No
Sensitive to Mechanical Impact: No
Sensitive to Static Discharge: Yes

Hazardous Decomposition Thermal decomposition products are highly dependent on

Products: combustion conditions.

Incompatible Materials: Avoid strong oxidizing agents.

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Conditions of Reactivity: Avoid excessive heat, open flames and all ignition sources.

#### 11. TOXICOLOGICAL INFORMATION

Ingredient (or Product if not specified) **Toxicological Data** 

Kerosene (Petroleum), Hydrodesulfurized LD50 Dermal Rabbit > 2000 mg/kg

LD50 Oral Rat > 5000 mg/kg

Routes of Exposure: Exposure will most likely occur through skin contact or inhalation.

This product is expected to be irritating to skin but is not predicted to be a skin Irritancy:

sensitizer.

Chronic Effects: Prolonged and repeated contact with skin can cause defatting and drying of the

skin resulting in skin irritation and dermatitis. Prolonged exposure to high vapour concentration can cause headache, dizziness, nausea, blurred vision and central

nervous system depression.

Pre-existing Pre-existing eye, skin and respiratory disorders may be aggravated by exposure

Conditions: to this product.

Carcinogenicity and

The International Agency for Research on Cancer (IARC) considers that this Mutagenicity: product is not classifiable as to its carcinogenicity to humans. Middle distillates

> have caused skin cancers in laboratory animals when applied repeatedly and left in place between applications. This effect is believed to be caused by the continuous irritation of the skin. Good personal hygiene should be maintained to

avoid this risk.

#### 12. ECOLOGICAL INFORMATION

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

Biodegradability: Not readily biodegradable.

Rapid volatilization.

Bioaccumulation: Potential for bioaccumulation.

Partition Coefficient (log Kow): 3.3 - 6

#### **Aquatic Toxicity**

Product is expected to be toxic to aquatic organisms.

Ingredient: **Toxicological Data** 

Kerosene EL50 - growth rate (WAF method) Algae (72hr) 1 - 10 mg/L. EL50 (WAF method) Daphnia Magna (48hr) 1 - 10 mg/L. (Petroleum), Hydrodesulfurized LL50 (WAF method) Rainbow Trout (96hr) 1 - 10 mg/L.

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Definition(s): LL and EL are the lethal loading concentration and effective loading concentration

respectively. The concentration represents the amount of substance added to the system to obtain a toxic concentration. They replace the traditional LC and EC for

low solubility substances.

WAF is the water accommodated fraction. A slightly soluble hydrocarbon is stirred into water and the insoluble portions are removed. The remaining solution is the

water accommodated fraction.

#### 13. DISPOSAL CONSIDERATIONS

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

#### 14. TRANSPORTATION INFORMATION

#### Canadian Road and Rail Shipping Classification:

UN Number UN1863

Proper Shipping Name FUEL, AVIATION, TURBINE ENGINE

Hazard Class Class 3 Flammable Liquids

Packing Group PG III

Additional Information

Not Regulated in Containers Less Than or Equal to 450 Litres.

FUEL, AVIATION, TURBINE ENGINE Class 3 UN1863 PG III

Not Regulated in Containers Less Than or Equal to 450 Litres.

#### 15. REGULATORY INFORMATION

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

WHMIS Class: Class B3 Combustible Liquid

Class D2B Other Toxic Effects - Skin Irritant

DSL/NDSL Status: This product, or all components, are listed on the Domestic Substances

List, as required under the Canadian Environmental Protection Act.

Other Regulatory Status: No Canadian federal standards.

#### 16. ADDITIONAL INFORMATION

LABEL STATEMENTS

Hazard Statement : Combustible Liquid.

Irritating to skin.

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Handling Statement: Eliminate all ignition sources.

Avoid prolonged exposure to vapours. Wear suitable gloves and eye protection.

Bond and ground transfer containers and equipment to avoid static accumulation. Empty containers are hazardous, may contain flammable / explosive dusts,

liquid residue or vapours. Keep away from sparks and open flames.

First Aid Statement: Wash contaminated skin with soap and water.

Flush eyes with water.

If overcome by vapours remove to fresh air.

Do not induce vomiting. Obtain medical attention.

Revisions: This MSDS has been reviewed and updated.

Changes have been made to:

Section 3 Section 4 Section 5 Section 7 Section 8 Section 9 Section 12 Section 14

#### **APPENDIX 6**

#### **ABANDONMENT AND RESTORATION PLAN**

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# NORTHQUEST LTD ABANDONMENT AND RESTORATION PLAN PISTOL BAY PROJECT, NUNAVUT

Prepared by: Dwayne Car
Revision 1: Stanley Robinson
Revision 2: Stanley Robinson
Revision 3: Stanley Robinson
Revision 4: David Smith
Revision 5: Stanley Robinson
Revision 6: Stanley Robinson

May 2015 March 2017 November 2017 December 2018 June 2019 March 2020 January 11, 2021

#### NORDGOLD (Northquest Ltd.)

Suite 301 - 82 Richmond Street East, Toronto, Ontario Canada M5C 1P1

www.nordgold.com

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#### 1. Preamble

This Abandonment and Restoration Plan (A&R Plan) is in effect until the expiry of Northquest's water licence and land use permits, and applies to the work areas planned for the Pistol Bay property. These work areas lie within the municipal boundary of Whale Cove, on Crown Land and on Kivalliq Inuit Association (KIA) Inuit Owned (IOL) surface land.

Northquest has received licences and permits from Crown Indigenous Relations and Northern Affairs Canada (CIRNAC) for exploration activities on Crown Land, the Kivalliq Inuit Association (KIA) for activities on Inuit Owned surface land (IOL), a water licence from the Nunavut Water Board (NWB) for water use and waste disposal related to the project, as well as permission from the Hamlet of Whale Cove and Permission to Occupy from the Government of Nunavut Department of Community and Government Services (GN CGS) for activities on Commissioners Land.

Questions or concerns regarding this Plan can be directed to

David Smith
Exploration Manager, Canada
NORDGOLD (Northquest Ltd.)
Suite 301 - 82 Richmond Street East,
Toronto, Ontario
Canada M5C 1P1

T: (416) 306-0954 C: (647) 549-0954

EMAIL: david.smith@nordgold.com www.nordgold.com

#### 2. Introduction

This Plan has been prepared for one temporary campsite and several proposed diamond drilling locations on Northquest Ltd's Pistol Bay project. The campsite is located at 62 21 05.2N, 92 45 19.7W. The site is located on an existing road that is capable of permitting standard vehicular travel. This road is part of a road system that the Whale Cove Hamlet has constructed to allow for easy access to the mouth of the Wilson River for its residents to pursue traditional activities

The Pistol Bay camp has been in place since 2011 and is partially owned by Henik Lake Adventures Ltd. of Arviat. The camp consists of several aluminum framed 14' by 16' tents on plywood floors, a plywood kitchen, a plywood core logging tent, and can accommodate up to 35 people. Some structures were added by Northquest in during the field seasons of 2016 and 2017.

Exploration based out of the camp generally consists of prospecting, till sampling, geophysical surveys, mapping and diamond drilling.

#### 3. Background Information on the Campsite

The site is located on a wave-modified, flat-topped esker and is situated on an existing road that is capable of permitting standard vehicular travel. This road is connected to a road system that the Hamlet of Whale Cove constructed to allow for easy access to the mouth of the Wilson River for its residents to pursue traditional activities

#### 4. Schedule

The effective date of the plan is June 25, 2015. The restoration of the camp will occur when the program has been completed and will be finished prior to expiration of the renewed water licence, unless another renewal is applied for. Each drill site will be restored as soon as the drill is moved to a new location (progressive reclamation).

#### 5. Infrastructure

#### Structures:

- Thirteen x 14' x 16' Weatherhaven sleep tents heated with propane
- One 14 x 48' plywood kitchen heated with propane
- One 14' x 16' plywood shack heated with propane, and used for sample shipment preparation and sample drying. Previously, this building was the core shed.
- One 16' x 24' plywood core shack, heated with fuel oil.
- One 14' x 16' Weatherhaven shower/laundry facility, heated with propane, with an 8' x 16' extension which houses the laundry facilities, water storage tanks, water heater and water treatment system
- One 14' x 16' Weatherhaven core cutting tent
- One 14' x 16' Weatherhaven storage tent
- One 14' x 20' Weatherhaven office tent heated with propane
- One 8' x 8' plywood equipment shack
- Three plywood outhouses

- One heli-pad made of plywood framed with wooden pallets
- Two fuel caches stored in four "Insta berms" equipped with water drains
- Spill response equipment located beside fuel berms and heli-pad
- Two plywood generator shacks 8' x 16'
- One 16' x 8' extension to plywood core logging shack
- One 8' x 8' shed to contain electrical panels
- One 16' x 16' plywood dry (heated by fuel oil)
- One plywood emergency shelter (used at drill rig)

#### Northquest Machinery (end of the 2020 field season):

- One 2013 Ford F250 <sup>3</sup>/<sub>4</sub> ton pick-up Truck
- One 2014 TRX500FM Honda ATV
- One 2014 TRX420FE Honda ATV
- One 2011 TRX500 Honda ATV
- One 2016 TRX 500FM Honda ATV
- Two Honda 6500 generators
- One gas portable rock saw
- Two 33.1Kva generators (main power plant and spare for camp).
- Two 50 cc Honda water pumps
- One Smart Ash portable, multipurpose batch load incinerator
- One gas-powered hydraulic barrel crusher
- One Kubota M6060 tractor
- One Sure-track trailer model ST8214TLDD
- Two Vancon Core Saws, 3hp, electric

Top Rank Diamond Drilling Limited machinery on site at the end of the 2020 field season:

- Two Discovery 2 diamond drills, with 4 Perkins engines
- Three Honda generators
- One Yamaha generators
- One generic generator
- One Lincoln welder
- One Miller welder
- Seven Water pumps
- Four Honda 2" water pumps

#### 6. Seasonal Shutdowns

#### **Buildings and Contents**

All doors on the Weatherhaven tents will be screwed shut before the camp is closed for the winter. All windows and doors on the plywood kitchen and core logging tent will be covered with plywood.

#### **Vehicles**

The ATV's snowmobiles will be stored inside one tent or the core shed. The pick-up will be stored in Whale Cove.

#### Water System

The pump and hoses will be drained. All will be stored in the winterized kitchen tent for the winter.

#### **Fuel and Chemical Storage**

An inventory of fuel will be made at the end of each season and all drums will be inspected for possible leaks. The fuel will remain stored in the portable "Insta Berm" fuel berms. All empty drums will be temporarily stored at the camp before being crushed and shipped south for disposal. All empty propane cylinders will be returned to off-site facilities.

Drill additives and unused salt will be stored in the storage tent.

#### Waste

#### Combustible Waste

All combustible waste will be burned on site in an incinerator. Ash will be sealed in 45 gallon drums for transport to the Hamlet of Whale Cove's landfill.

#### Non-Combustible Waste

All non-combustible waste will be transferred to the Whale Cove dump for disposal. This waste will only consist of metallic materials such as cans and steel strapping and wire.

Used batteries will be transported to Ontario for disposal.

#### Used Motor Oil/waste fuel

Used motor oil and contaminated fuel will be sealed in 45 gallon drums and transported off site for disposal.

#### **Grey Water Sump**

Buried in a sump at the end of the season.

#### **Sewage**

The outhouse sumps will be buried at the end of the season.

#### **Drills and Drill Sites**

Prior to shutting down for the season, the drills will be secured at the final drill site of the season or returned to the camp and stored there.

All drill sites will be inspected upon completion of each hole. All combustible and metallic waste will be collected and sent to the Whale Cove dump site and all sumps will be filled. Casing will be cut off to ground level as soon as practicable after the drill hole collar has been surveyed. Photographs of each drill site before and after drilling will also be taken for inclusion the annual report that is sent to the NWB.

#### **Contamination Clean Up**

Any soil at camp or the drill sites that has been contaminated will be treated according to procedures outlined in the Fuel Spill Contingency Plan. The soil will be transferred off site for disposal.

#### **Inspection and Documentation**

A complete inspection of all disturbed areas at the camp and drill sites will be conducted prior to seasonal closure of the project. A full inventory of equipment will be made. Photographs will be taken of the campsite after it has been winterized.

#### 7. Final Abandonment and Restoration

#### **Tents and Contents**

All tents and structures will be dismantled and removed, using a local contractor. All material will be taken to the Whale Cove airport or the port for final removal off site.

#### Equipment

All equipment including the diamond drills, pumps and generators will be removed from the project site by truck and helicopter. All material will be taken to the Whale Cove airport or the port for final removal to off site.

#### **Fuel Cache and Chemicals**

All fuel drums and chemical containers will be removed from the site. All sites that contained fuel will be inspected and any contamination will be dealt with according to the Spill Contingency Plan. Final photos of each fuel cache site will be taken.

#### Sumps

All sumps will be inspected and backfilled. Final photos will be taken and forwarded to the NRB

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#### Camp Site

A final inspection will be made. Photos will be taken and forwarded to the NWB.

#### **Core Storage**

All drill core will be removed from the site unless specified otherwise by the Nunavut government.

#### **Drill Sites**

All drill sites will be inspected upon completion of each hole. All waste will be collected and transferred to the Whale Cove municipal dump site. All sumps will be backfilled. Each drill collar will be cut off to ground level. Photographs of each site will be taken and forwarded to the NWB.

#### **Contamination Clean Up**

Any contamination will be treated according to procedures laid down in the Fuel Spill Contingency Plan. Any contamination and subsequent clean-up will be documented with photographs. All contaminated waste will be transferred off-site for disposal.

#### **Inspection and Documentation**

A complete inspection of all areas will be conducted prior to closure. Photographs will be taken for use in the final report. All appropriate agencies will be contacted upon final clean up.

#### 8.0 Contact Numbers for Relevant Organizations

Whale Cove Hamlet Office – (867) 896-9961 Nordgold (Northquest Ltd) – (416) 306-0954 NT – NU Spill Hot Line – (867) 920-8130 Henik Lake Adventures Ltd (owner of camp equipment) (867) 857-2978

#### **APPENDIX 7**

#### PHOTOGRAPHS OF PISTOL BAY CAMP AND PUMP SITE

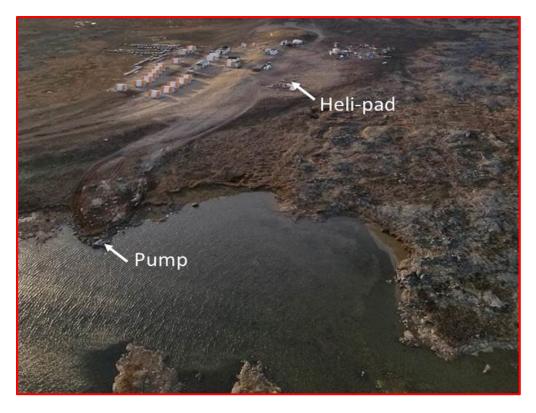


Figure 6. Aerial View of the Pistol Bay Camp and water source



Figure 7. View of the Pistol Bay Camp water pump installation