SPILL CONTINGENCY PLAN HACKETT RIVER EXPLORATION PROJECT

GLENCORE CANADA CORPORATION

Contents

1. INTRODUCTION

This is the updated Spill Contingency Plan, for Glencore Canada Corporation's Hackett River Project (Lease 76F/16-2-2). This plan has been updated to reflect changes at the Hackett River camp. It includes management of all hazardous materials for the Hackett River Camp and the associated airstrip. The Hackett River Project covers portions of NTS map sheets #76G/03, 04, 05, 06, 07, 08, 12, 13, #76F/08, 09, 15, 16. It is a project that is fully supported by fixed wing or helicopter. The project is currently under care and maintenance with plans for drilling exploration. The proposed date for drilling exploration has not been defined. During care and maintenance, the camp is inspected by up to 6 people for short periods during the summer. A report is produced for each site maintenance trip and kept on file. This plan will be reviewed annually and prior to drilling operations.

2. CONTACT INFORMATION

2.1 Site Owner and Employer

Glencore Canada Corporation
100 King St W.
Toronto, ON M5X 2A1
Tel: 416 775-1500

2.2 Person(s) Responsible for Implementation of this Plan

During care and maintenance, the following persons are responsible to ensure that this plan is implemented and may call in additional support as needed:

Primary contact: Stephen Hartwell (514) 970 5192 stephen.hartwell@glencore.ca

Alternate Contact:
Rob Davidson (905) 623 4930 willowbrk@hotmail.com

The implementation includes and is not limited to inventory of hazardous materials, storing and handling hazardous materials, adequate training for all personnel related to hazardous materials, emergency response related to spills and fire, availability of adequate equipment to prevent and mitigate fires and spills, etc.

Appendix A provides additional contacts to assist a spill response.

3. CAMP LOCATION AND DESCRIPTION

The Hackett River mineral exploration camp is located on the southwest shore of Camp Lake (Figure 1) at:

Latitude : 65º 55'N, Longitude : 108º 22'W
619684 E, 7312501N on NTS Map Sheet 76 F/16 (NAD 83 Datum, Zone 12W)

There are two natural (unprepared esker) airstrips, and 3 helipads associated with the camp.

4. HAZARDOUS MATERIALS ON SITE AND MSDS

Hazardous materials on site include the materials as summarized in Table 1. The items listed in Table 1 were updated in August 2015 when the camp went onto care and maintenance and are updated every year during the maintenance site visits.

MSDS are printed and in alphabetical order filed so they can be found within less than 3 minutes. They should be updated once drilling resumes and reviewed yearly to ensure that they reflect the materials on site. MSDS must not be older than 3 years. MSDS of a new product arriving on site is inserted in the MSDS inventory. MSDS as of 2015 were stored at the Helicopter Shack, Drill Foreman's Office, Kitchen and Main Office. The location of their storage will have to be reviewed once drilling operations resume. Refer to Appendix B for the list of MSDS from 2015.

Aviation fuel on site is not certified hence can't be used until a positive re-certification.

Table 1: Location and Quantity of Potential Contaminants, Hackett River Camp

Potential Contaminant	**Location**	**Quantity (September 2015)**	**Updates 2024**
Av Gas	Fuel cache, with gasoline	Up to 2-205 litre drums (currently 0)	0
Acetylene	Drillers shop	2 – 100 lb. tanks.	No acetylene left in camp
Diesel	Fuel caches (8)	Up to 1380-205 litre drums altogether	1380 drums
	Kitchen building	currently 0	0
	Drillers dry tent	currently 0	0
	Drillers dry building	currently 0	0
	Tool sheds / workshops (3)	currently 0	0
	Drill foreman's office / telecommunications	currently 0	0
	Project office	currently 0	0
	Environmental	currently 0	0
	Incinerator shed	<2200 litres in 2 bulk tanks (currently 1 contains waste fuel) 6-205 litre barrels	7 drums
	Main Generator (2010)	<2290 litres in 2 bulk tanks	0
	Main Generator (2008) shed	5 -205 litre barrels	4 drums
	Core cutting area	currently 0	0
	Core logging building	currently 0	0
	Recreation tents (2)	currently 0	0
	Drill supplies storage sheds (2)	currently 0	0
	Accommodations (33 tents/sheds)	currently 0	0
	Helicopter supply sheds (2)	currently 0	0
Gasoline	Fuel Cache (2)	1-205 litre drums	1 drum
	Winter fuelling station	Up to 4 – 205 litre drums	0

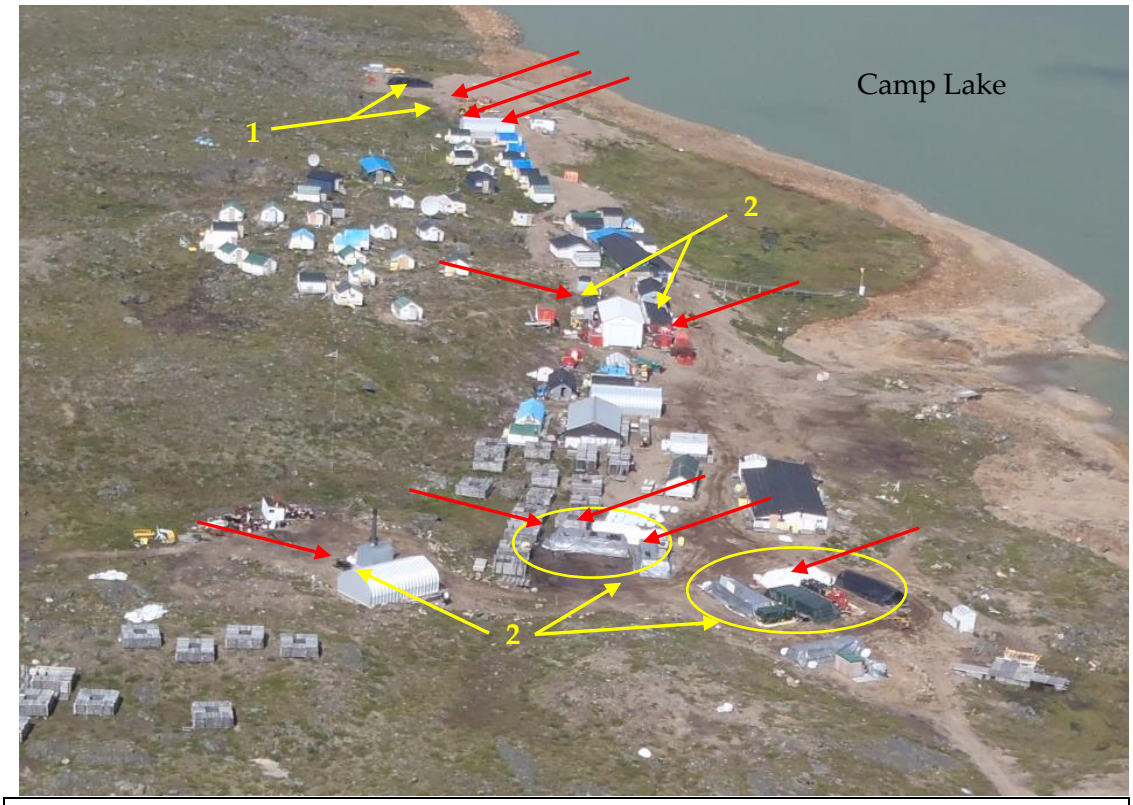
Oil	Tool sheds / workshops (3)	<250 litres, combined, in each building	0
	Main Generator (new) and storage sheds	Up to 2-205 litre barrels	0
	Core storage shed	<50 litres	0
	Main Generator (2008) Shed	Up to 2-205 litre barrels	0
	Helicopter supply sheds (2)	<20 litres	0
	Drill supplies storage sheds (2)	Up to 4 cases of 4 5 litre jugs	50 litres
Waste Oil	Incinerator shed	1100 litres in bulk tanks Up to 2-205 litre barrels	0
	Main Generator (2010) and 2 storage sheds	Up to 8-4 litre jugs	0
	Main Generator (2008) Shed	Up to 1-205 litre barrel	0
Lubricants	Tool sheds / workshops (3)	<250 litres, combined, in each building	0
	Supply shed	<50 litres	0
	Core storage shed	< 50 litres	0
Duron Multigrade Engine Oil SAE Viscosity Grade 10W-30	Drill supplies storage sheds, workshops, metal shed.	100-12 litre cases	1200 litres
Duron Multigrade Engine Oil SAE Viscosity Grade 15W-40	Drill supplies storage shed (new, metal)	100-12 litre cases	1200 litres
Drill Rod Heavy Grease	Drill supplies storage shed (new, metal)	100-5 gal tub	500 gal
Jet A/B Fuel	Fuel Caches (2)	currently 354-205 litre drums	356 drums (this fuel is not certified)
	Helicopter landing pads (3)	currently 2 in 205 litre barrels	0
Propane	Propane Cache	Up to 70-45 Kg cylinders	10 x 45kg fuel tanks
	Kitchen building	Up to 1-45 Kg tanks for kitchen Up to 6-45 Kg tanks for shower/laundry	4 x 45kg partial tanks
	Drillers dry tent	Up to 2-45 Kg tanks	0
	Drillers dry building	Up to 2-45 Kg tanks	0
	Core cutting area	Up to 1-45 Kg tank	0
	Tool sheds / workshops (3)	Up to 2-45 Kg tanks per shop	0
	Welding gas storage area	Up to 1-45 Kg tank	0
Human wastes	Pacto rooms (4)	Up to 40 litres	0
Paint	Tool sheds / workshops (3)	<250 litres, combined, in each building	0
	Supply shed	<50 litres	0
Linseed Soap	Drill supplies storage shed (new, metal)	Up to 65-5 gal pails	325 gal
Matek DD 2000	Drill supplies storage shed (new, metal)	Up to 425-5 gal pails	2125 gal
Poly-Drill 1300	Drill supplies storage shed (new, metal)	Up to 270-5 gal pails	1350 gal

PureVis	Drill supplies storage shed (new, metal)	Up to 309-5 gal pails	1545 gal
Calcium Chloride(CaCl)	Drill supplies storage sheds (3)	Up to 380 pallets (50-50lb bags per pallet)	300 pallets
Helium	Logistics office	Up to 2 x 100 lb tanks (weather balloons).	No helium left in camp
Oxygen	First Aid tent Welding gas storage area	Up to 7-0.65 Kg, 2-7 Kg tank Up to 1-7 Kg tank	No oxygen left in camp

As of 2024 no black water present on site.

5. CAMP LAYOUT AND RECEIVING AREAS

Camp layout and sensitive receiving areas are illustrated in Figures 1 to 5.



1. Jet A cache
2. Fuel Storage (diesel, gasoline, and waste fuel)
   Spill kits

Figure 1: Location of Fuel Storage and Spill Kits (September 2015).

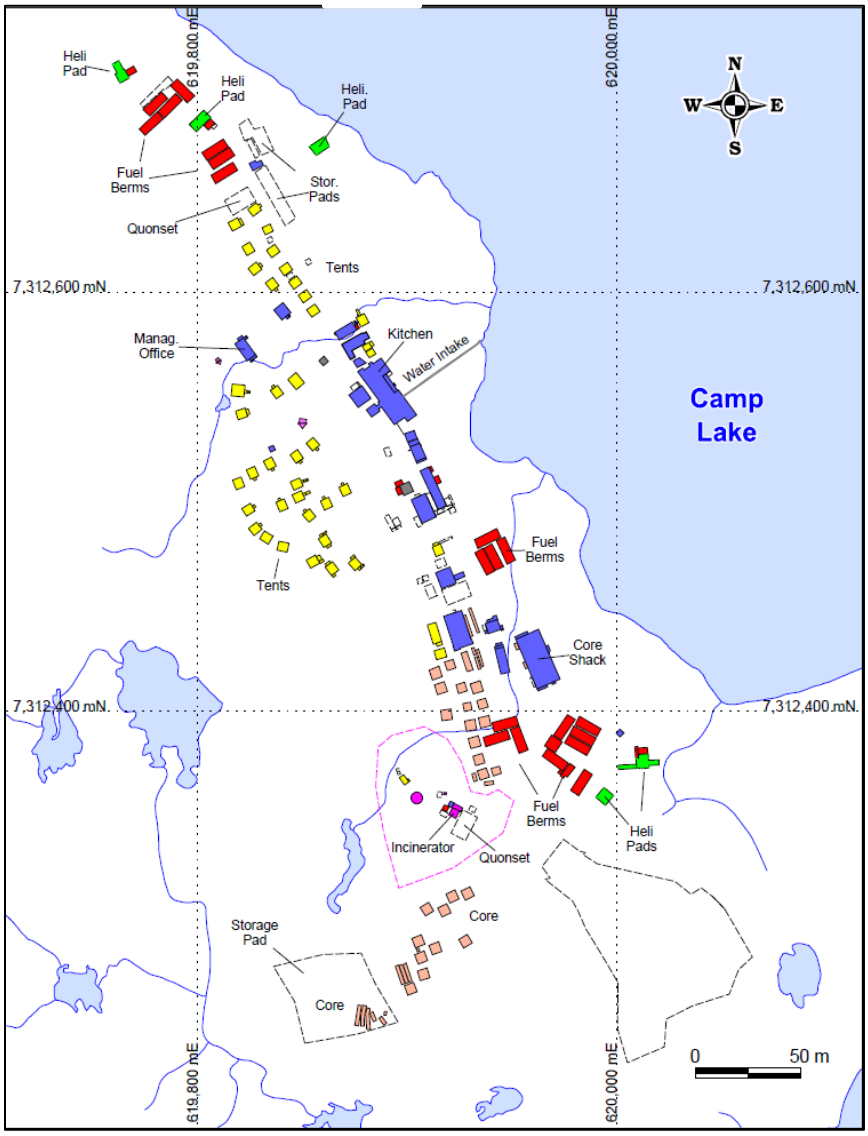


Figure 2: Site Layout, Hackett River Camp, 2015

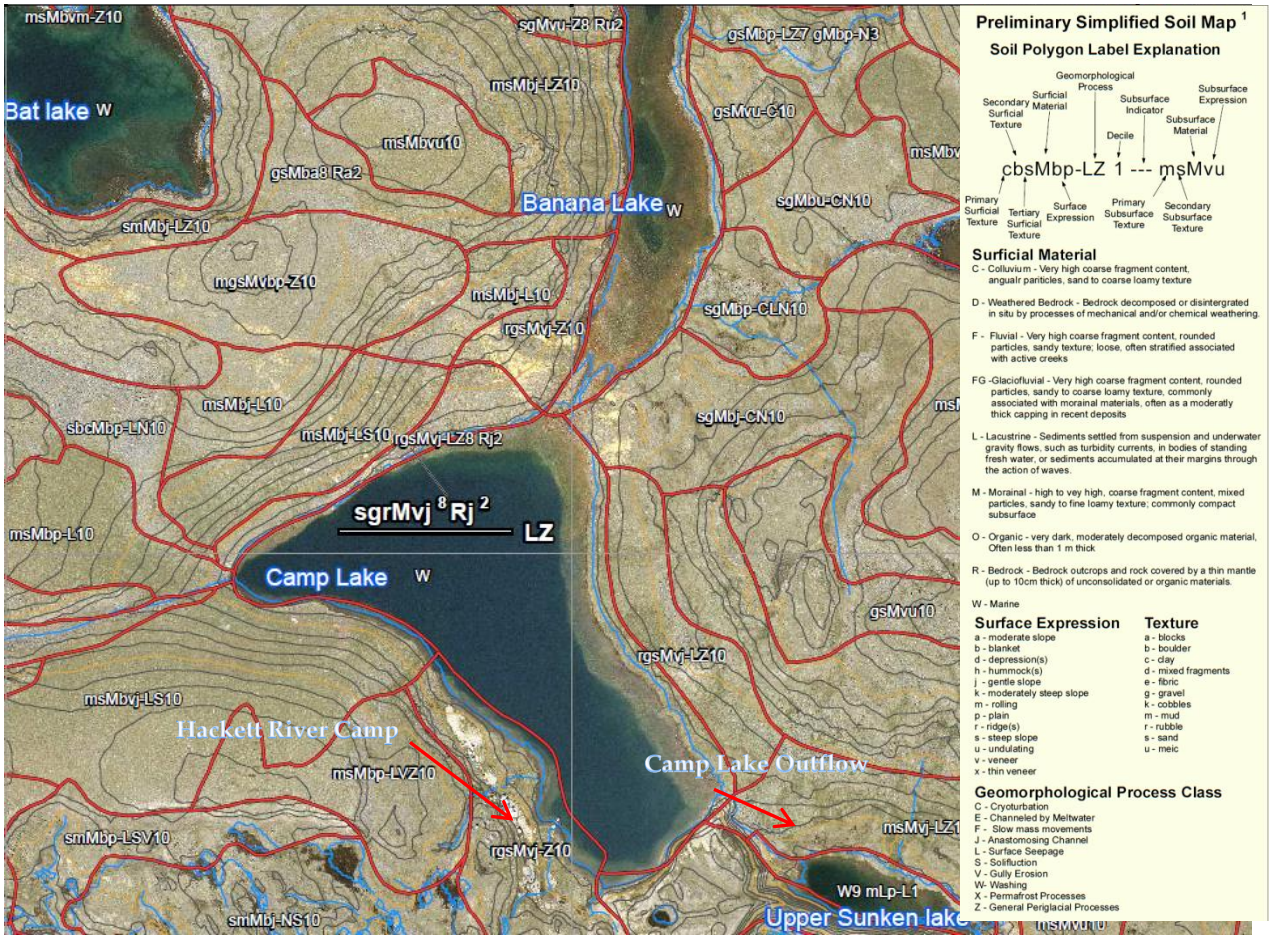


Figure 3: Physical Geography of the Hackett River Camp Area

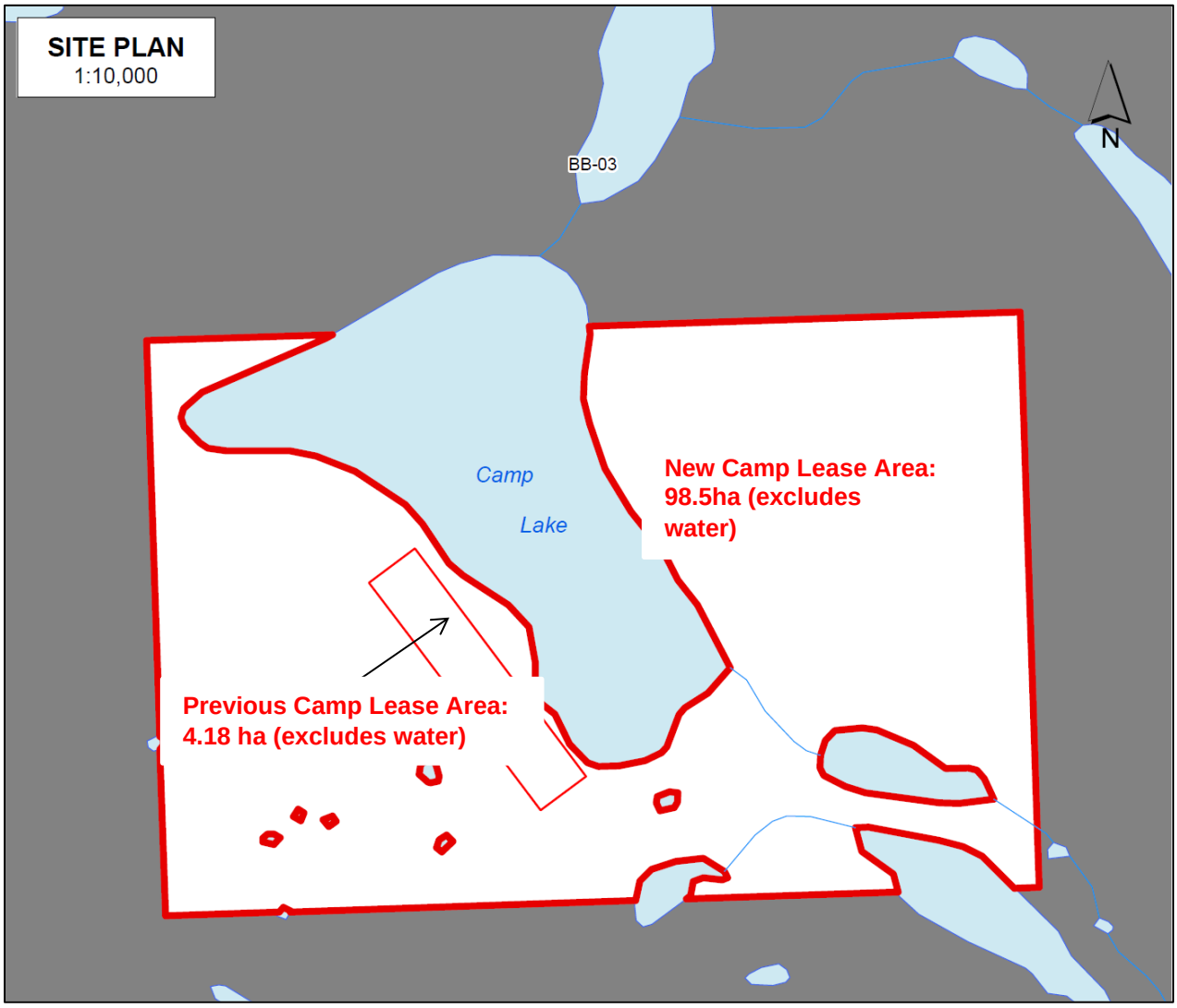


Figure 4. New Camp lease area as per License 76F/16-1-7

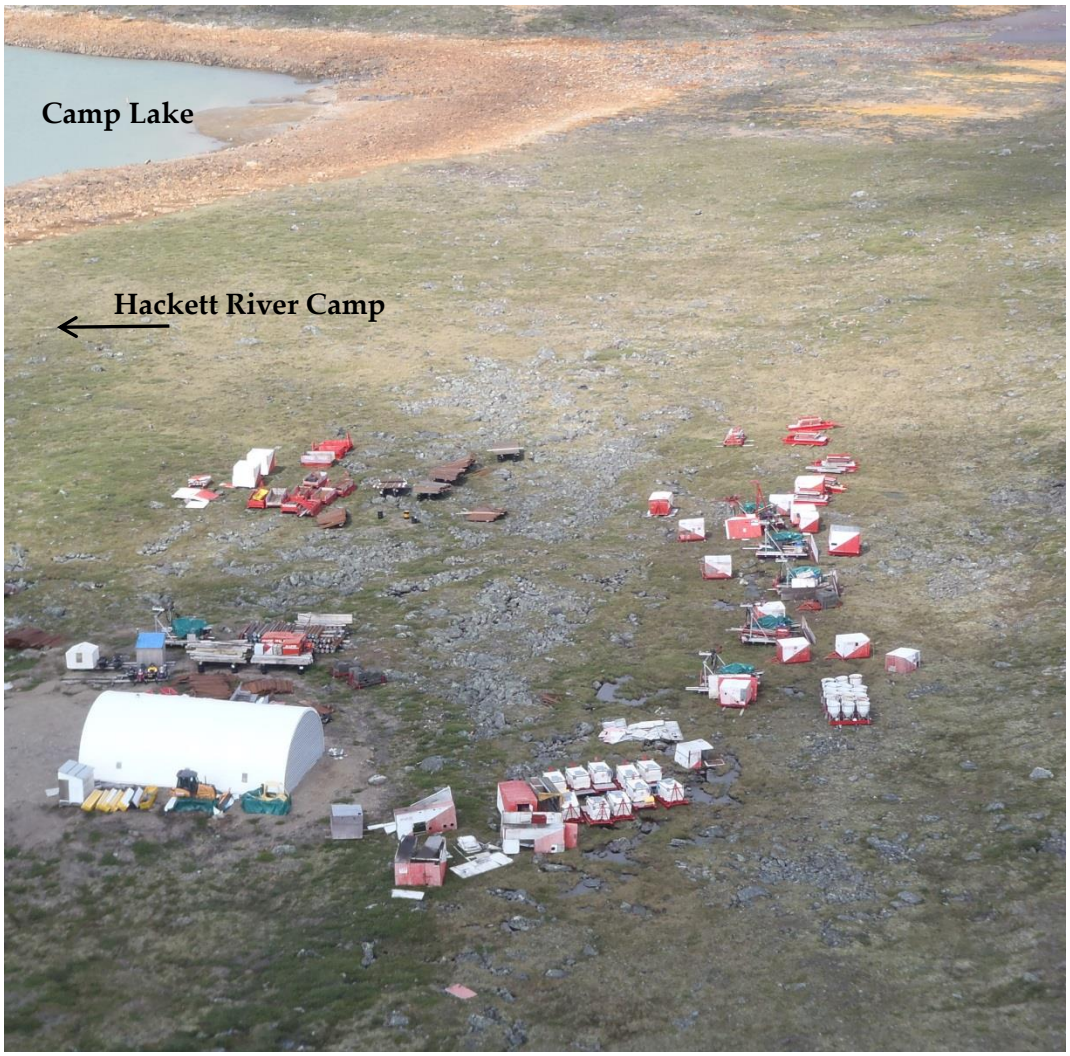


Figure 5. Aerial View of drill laydown area (July 2015)

6. SPILL PREVENTION

Glencore Canada Corporation (Glencore) stores all materials at its Hackett River site to ensure all personnel and contractors remain safe and the environment is adequately protected.

6.1 Training, Awareness

All personnel working at camp must receive the following training before arriving on site: 1) WHMIS, and 2) First Aid. In addition, upon arrival on site all workers receive a project orientation which includes and is not limited to emergency response plan – which addresses a spill and a fire, use and location of spill kits, location of MSDS, location of muster stations, fire extinguishers, etc.

Camp operation employees receive additional training such as: 1) the use and maintenance of water pumps, 2) the use and maintenance of fire equipment, 3) How to turn off the valve to stop the flow of fuel, at the ignition point and at the source 4) when to activate the Emergency Response Plan (spill response and fire response) and training on this document 5) Use of correct PPE 6) Effective monitoring and maintenance to prevent spills 7) understand the environmental and financial impacts of a spill 8) participate in the risk assessment to better understand the hazards and unwanted events related to hazardous materials e.g. sources of ignition (smoking, electrical sparks) near a fuel source 9) Transport of Dangerous Goods. All training is recorded in a training matrix and verified by project lead on a regular basis.

Simulations must take place during active camp operations and should include spills and fire. The simulations must be recorded and kept on file.

During active operations this plan is communicated periodically to all personnel during safety meetings.

A copy of this plan is posted in the kitchen. Copies of updated ERP are posted in places such as: Major Drill Shop, Kitchen, Main Office and Logistics Office.

6.2 Hazardous Materials Storage, Monitoring and Inspections

The Hackett River Camp has one main fuel storage area two additional satellite storage areas adjacent to generator/incinerator (bulk tanks) or helicopter pads where the fuel is utilized. All drummed fuel is stored in berms the largest ones being 15′ x 40′. All drums are sealed, clearly marked and stored horizontally with bungs and vents at the 3 o'clock and 9'oclock positions.

As full drums are used, the berms are emptied, cleaned, inspected and converted to storage for empty drums, awaiting backhaul to Yellowknife. Tanks containing fuel are double-walled tanks, identified on the Federal Identification Registry for Storage Tank Systems (FIRSTS), situated within secondary containment berms, which are maintained dry. All fuel berms are equipped with a Rain Drain filtration system to aid in maintaining secondary containment dry. Further, fuel transfer occurs in a designated berm, or over drip trays. Refer to the *Fuel Management Plan (2015)* in Appendix C for additional information relating to fuel storage on site.

Spill kits are available at all fuelling sites (Figure 1).

All tents with oil stoves have enclosed secondary fuel containment caddies for the fixed fuel tanks, and drip trays for the drums used to top up the fixed tank.

Calcium chloride (CaCl) "salt" is stored within the drilling supplies storage area, at the south end of camp. CaCl is stored in plastic bags stacked on pallets which are then shrink-wrapped. Any loose bags of salt are transferred to megabags, which are stored off the ground, on tarps placed on pallets or old tent floors to minimize the chance of water dissolving the stored salt. The CaCl storage cache is tarped over.

Propane is stored on a wooden deck located between the dock and generator shed. Cylinders are secured in the upright position and identified full or empty. Tanks that are in use are covered, to keep snow, ice and water away from the valves and to allow for better access and inspection.

Welding gases, when stored on site, are in a secure, open, roofed storage area outside the drill repair shed.

When stored on site, medical oxygen tanks, and helium tanks (for weather balloons) are stored indoors, and are upright and secured to the wall.

Use oils, are burned in the incinerator.

Spills most often occur during fuel handling but may also develop slowly over time. Leak detection is best accomplished through both inspection and reconciliation of storage volumes. Fuel drums and storage containers, secondary containment areas and associated spill containment devices, pumps and product-handling equipment, and overfill protection devices are monitored according to federal regulations and permit conditions. A spill response is initiated in the event of any unexplained loss between inspections. Leaking or damaged drums are noted, immediately marked and drained/removed, with the empty drum placed in a secondary containment berm for transport back to Yellowknife for proper disposal.

During camp operations, inspection records are kept on site, and include employee's name, areas monitored, any deficiencies noted, and actions taken to address deficiencies. Records are reviewed by site management to ensure deficiencies are addressed. During care and maintenance a report is written and submitted to management outlining any issues that may have been encountered and all actions taken during the trip. In addition, as part of care and maintenance, storage volumes are checked and recorded during each site visit.

Monitoring is also conducted to inspect the berms, and to detect leaks or identify conditions that could result in a leak. This is done every time a trip occurs during care and maintenance and very regularly during normal camp operations.

Inspections of all mobile equipment are also performed, any leaks are noted and fixed, and the repair is recorded. Mobile equipment that is being stored after seasonal use is placed over absorbent matting,

to catch any drips or melting snow, which may contain hydrocarbons. Seasonal equipment storage facilities (Quonset hut) are lined to contain any fuel or lubricant which may leak or drip during storage (seasonal closure).

7. SPILL RESPONSE

7.1 Spill Procedure Steps

The ERP should be activated when there is a spill of any hazardous material. The ERP should have a one-page response for spills and updated when drilling operations resume. The below is a more detailed information on how to respond to spills and must be reviewed regularly by camp operation personnel. The below response spill procedures are relevant to petroleum products but are also similar to all other contaminants.

In the event of any spill, the following procedures are to be followed:

1. Evaluate the scene and ensure personal safety and the safety of any others.
2. Find and locate the source of the spill and either stop or contain the spill if possible. Contain the spill by damming with earth or other suitable material. Ensure adequate PPE is being worn.
3. Remove all sources of ignition. Be prepared to use a fire extinguisher.
4. Be aware that gas vapors flow downhill and are extremely explosive.
5. Work from the upwind side to avoid inhaling fuel vapors and becoming engulfed in flames if a fire starts.
6. Notify the Site Manager, one of whom will activate the ERP and report the spill. Refer to section 7.3 Reporting a Spill
7. Avoid flushing spilled fuel or contaminant into potentially higher risk areas. Protect water sources and septic systems.
8. Clean up and dispose of all free product or contaminant by shoveling the contaminated earth or absorbent material into metal containers. Dispose of contaminated cleanup materials in an approved manner.
9. Clean up the spill site using site appropriate absorbents, tools and procedures. Clean up and dispose of all fuel contaminated soil or absorbent material by shoveling into sealed containers.
10. Record the spill on the Spill Report Form and conduct follow-up monitoring if required.
11. Ensure that all ignitable vapors are dispersed before resuming normal activities.
12. Review the incident with others in camp and share ideas on to prevent a similar type of spill from occurring again.

The physical setting of a spill may determine, in part, the methods used to contain and clean up the spill. The physical settings likely to be encountered at Hackett River Camp are land; muskeg; ice and snow; open water; flowing water. Considerations for spill response in each setting are outlined below. In all instances, captured product, spent absorbent material, and contaminated soil, water, snow, ice

and vegetation need to be contained and disposed appropriately. All disposal of hazardous materials must be done in an approved site and documented.

7.1.1 Land

- Stop flowing spills with soil, plastic or another barrier.
- Prevent entry to waterways.
- Remove free product with absorbent dust such as clay, perlite, vermiculite etc or absorbent pads.
- Excavate contaminated soil.
- On well vegetated tundra remove as much free product as possible using absorbent pads followed by removing any remaining contaminated soil and vegetation and place it in lined mega-bags or empty drums

7.1.2 Muskeg

- Carefully place absorbent matting on vegetation to remove as much free product as possible.
- If a drainage outlet is present, deploy spill containment booms to contain the spill to the immediate area.
- If possible, keep equipment off the muskeg as it is likely to cause more damage to vegetation.
- Remove any contaminated soil and place it in sorbent disposal bags or empty drums

7.1.3 Ice and Snow

- Stop flowing spills with snow, plastic or another barrier.
- Prevent entry to waterways.
- Remove free product with absorbent dust or absorbent pads, if possible.
- Collect contaminated snow and ice into a lined mega-bag or suitable cargo sled and transport it to one of the fuel containment berms where it can melt.
- Once melted, collect the free product with absorbent matting and Rain Drains.
- Melt and combust diesel from candled ice surfaces using a propane-powered flame torch.

7.1.4 Standing Water

- Deploy absorbent spill containment booms around the spill source.
- Deploy absorbent spill containment booms at the outflow of the body of water and monitor to prevent downstream contamination.
- Use absorbent pads to remove free product.

7.1.5 Flowing Water

- Deploy absorbent spill containment booms in areas with slow moving water if possible.
- Utilize multiple booms if the current is strong.

7.2 Spill Response Equipment

Spill response equipment available on site is summarized in Table 2.

Table 2: Spill Response Equipment, Hackett River Camp, August 2015

Equipment	Location
Fire extinguishers	Adjacent to each fuel storage location
Wajax Mark III Pump	Near heli pads
Honda Fire Pump	Near kitchen
Subaru Pump	Near core shacks
Cat 297 Skid steer	Site tool shop
Torches	Tool shop
8 Shovels (heavy duty, steel snow or "coal") shovels	At most structures in camp
4 Spades	In tool shop and old core building
2 Pickaxes	In tool shop
Chain saw	Tool shop
Hand crank fuel pump	Various locations, for camp fuelling
Extra absorbent material	Rolls of blue matting throughout camp
Empty drums	Near incinerator, and outside tool shop
8-20 litre Spill Kits	Placed throughout camp
20-205 litre Spill kits	Near all berms, heli pads and scattered throughout camp
Line Mega Bags	

Refer to Figure 1 for location of spill kits at camp. In addition, kits are located at each operating drill as well as the ice air strip and the esker air strip. There are two spill kit sizes in camp (20 litre and 205 litre). Kit contents are listed in Table 3. Contents of spill kits were verified in 2024.

Table 3: Spill Response Kit Contents, Hackett River Camp

20 litre All Purpose Spill Response Kit	205 litre H.O.W. Spill Response Kit
1-20 litre poly containment pail	150-17" X 19" oil absorbent pads
12-16" X 20" oil absorbent pads	8-3" X 48" oil absorbent socks
2-3" X 48" oil absorbent socks	2-5" X 120" oil absorbent booms
1 heavy duty disposal bag (8 mil)	4-temporary disposal bags 42x48-XS
1 pair Chemi-Pro gloves	1-pair nitrile gauntlet gloves
3 lbs. of all purpose absorbent	1-pair disposable coverall
	1-pair clear safety goggles
	1-4 oz. temporary Gapseal stick
	1-205 litre containment drum (metal/poly) with quick release lever lock system

7.3 Reporting Spills

All spills must be reported to the site manager. Spills of any petroleum product, allied petroleum product, chemical or hazardous material in quantities less than 25 L must be documented on the form found in Appendix E. If in doubt about whether a spill is reportable, report it. **All spills into watercourse, regardless of quantity, must be reported**.

Table 4: Spill Reporting Requirements Thresholds

Item No.	TDGA Class	Description of Contaminant	Amount Spilled
1.	1	Explosives	Any amount
2.	2.1	Compressed gas (flammable)	Any amount of gas from containers with a capacity greater than 100 litres.
3.	2.2	Compressed gas (non-corrosive, non-flammable)	Any amount of gas from containers with a capacity greater than 100 litres
4.	2.3	Compressed gas (toxic)	Any amount
5.	2.4	Compressed gas (corrosive)	Any amount
6.	3.1, 3.2, 3.3	Flammable liquid	100 litres
7.	4.1	Flammable solid	25 kg
8.	4.2	Spontaneously combustible solids	25 kg
9.	4.3	Water reactant solids	25 kg
10.	5.1	Oxidizing substances	50 litres or 50 kg
11.	5.2	Organic Peroxides	1 litre or 1 kg
12.	6.1	Poisonous substances	5 litres or 5 kg
13.	6.2	Infectious substances	Any amount
14.	7	Radioactive	Any amount
15.	8	Corrosive substances	5 litres or 5 kg
16.	9.1 (in part)	Miscellaneous products or substances, excluding PCB mixtures	50 litres or 50 kg
17.	9.2	Environmentally hazardous	1 litre or 1 kg
18.	9.3	Dangerous wastes	5 litres or 5 kg
19.	9.1 (in part)	PCB mixtures of 5 or more parts per million	0.5 litres or 0.5 kg
20.	None	Other contaminants	100 litres or 100 kg

Any spill, or incident that may likely result in a spill, of an amount equal to or greater than the amount listed in Table 4 shall be promptly reported to:

1. NU/NWT 24-hour spill line at **(867) 920 – 8130**

The spill line will then contact the lead regulatory agency. Collect calls are accepted.

2. CIRNAC Water Resources Inspector at **(867) 975 – 4296**.

When reporting a spill, provide as much information as is available at the time including:

- Spill location with map coordinates (if known).

- Direction of flow (if moving).
- Date and time or estimated time of spill.
- Time of observation of the spill.
- Party responsible for contaminants at the time of the spill.
- Product or products spilled.
- Estimated spilled quantities (in metric if possible).
- Cause of the spill.
- Whether spill is ongoing.
- Estimate rate of spillage.
- Determination if further spillage is possible.
- Extent of contaminated area (in square meters if possible).
- Any factors are affecting the spill, weather, snow cover, terrain, etc.
- Containment measures in place (natural depression, dykes, booms, absorbent pads, etc.).
- Actions, underway to contain, recover, clean-up and dispose of the spilled product and contaminated materials.
- Whether assistance is required to contain, recover, clean-up and dispose of the spilled material.
- Possible hazards to persons, property or environment (e.g. fire, drinking water, fish or wildlife habitat).
- Anyone in direct contact with the contaminant
- Any other relevant information.
- Your name, your job title, employer, address and phone number.

After the spill has been called in, and a spill number has been assigned, complete a written Spill Report Form (Appendix E).

7.4 Disposal of Contaminants

Appropriate disposal for any recovered product and contaminated soil, water or absorbent clean up materials is regulated and must be authorized by the agency investigating the incident. Fuel-contaminated soil would be flown out to Yellowknife for disposal at an approved facility. Any non-reusable recovered product, contaminated soil and clean up materials, which cannot be incinerated, will be stored in covered containers on site prior to disposal at an approved facility.

Absorbent materials, oily or greasy rags, and equipment servicing wastes are incinerated on-site. Used oil and fuel during camp operations is utilized in oil-burning stoves for heating purposes. Used oil (waste motor oil, transmission fluid and other petroleum fluids) is transferred to plastic tubs or other sealable containers and either flown back to Yellowknife for recycling or disposal by the drilling contractor or incinerated in camp. Ash is backhauled for disposal at the Yellowknife landfill site

Additional advice on how to treat or dispose of contaminated materials or soil as well as environmental site assessment and remediation may be obtained through:

ERM Environmental Consultants Canada Ltd.
1500 – 1111 West Hastings St.
Vancouver, British Columbia V6E-2J3
Tel: 604 689 9460 Fax: 604 687 4277

Any waste material will be disposed of through:
KBL Environmental
PO Box 1108
Yellowknife, NT X1A 2N8
Tel: 867 873 5263

A waste generator number and manifests are required for all shipments of hazardous materials, including materials resulting from spill clean-up. The waste generator number for the Hackett River camp is NUG#100050.

8. DOCUMENT REVISION HISTORY

Initial submission: March 5, 2004
First revision: July 29, 2004
Second revision: March 20, 2006
Third revision: June 30, 2006
Fourth revision: November 7, 2006
Fifth revision: April 5, 2008
Sixth revision: February 18, 2009
Seventh revision: September 5, 2009
Eighth revision: May 5, 2011
Ninth revision: Dec 19, 2011
Tenth revision: March 14, 2012
Eleventh revision: November 6, 2012
Twelfth revision: March 31, 2013
Thirteenth revision: October 29, 2013
Fourteenth revision: October 5, 2015
Fifteenth Revision: April 4, 2019
Sixteenth Revision: February 03, 2025

APPENDICES

Appendix A Spill Response Contact List

Glencore Contacts:

Environmental Manager (care and maintenance)	Stephen Hartwell	514 970 5192
Site Manager (care and maintenance)	Rob Davidson	905 623 4930

Additional Assistance From the Following Organizations may be Obtained:

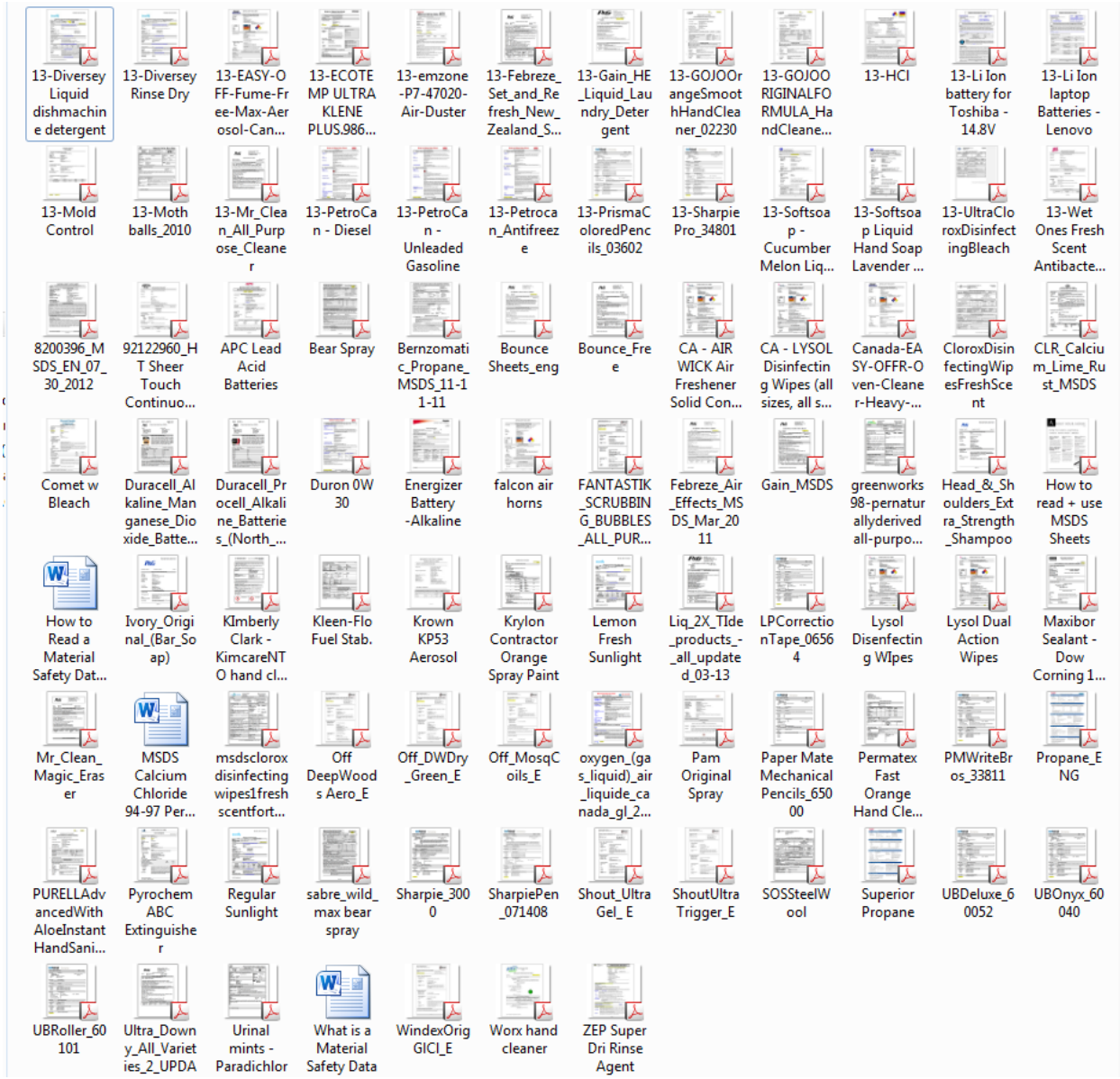
Discovery Mining Services	Expeditors	867 920 4600
Dupont (Fuel Dye)	Advisories on the spill clean up	905 821 5660
KBL Environmental	Manage disposal of hazardous materials	867 873 5263 (NUG#100050)
Midnight Sun Energy (sorbents)	Suppliers for spill equipment	867 988 0379
Acklands (sorbents)	Suppliers for spill equipment	867 873 4100 (gallantl@agi.ca)
ERM Consultants Canada	Environmental consultant if required	604 689 9460

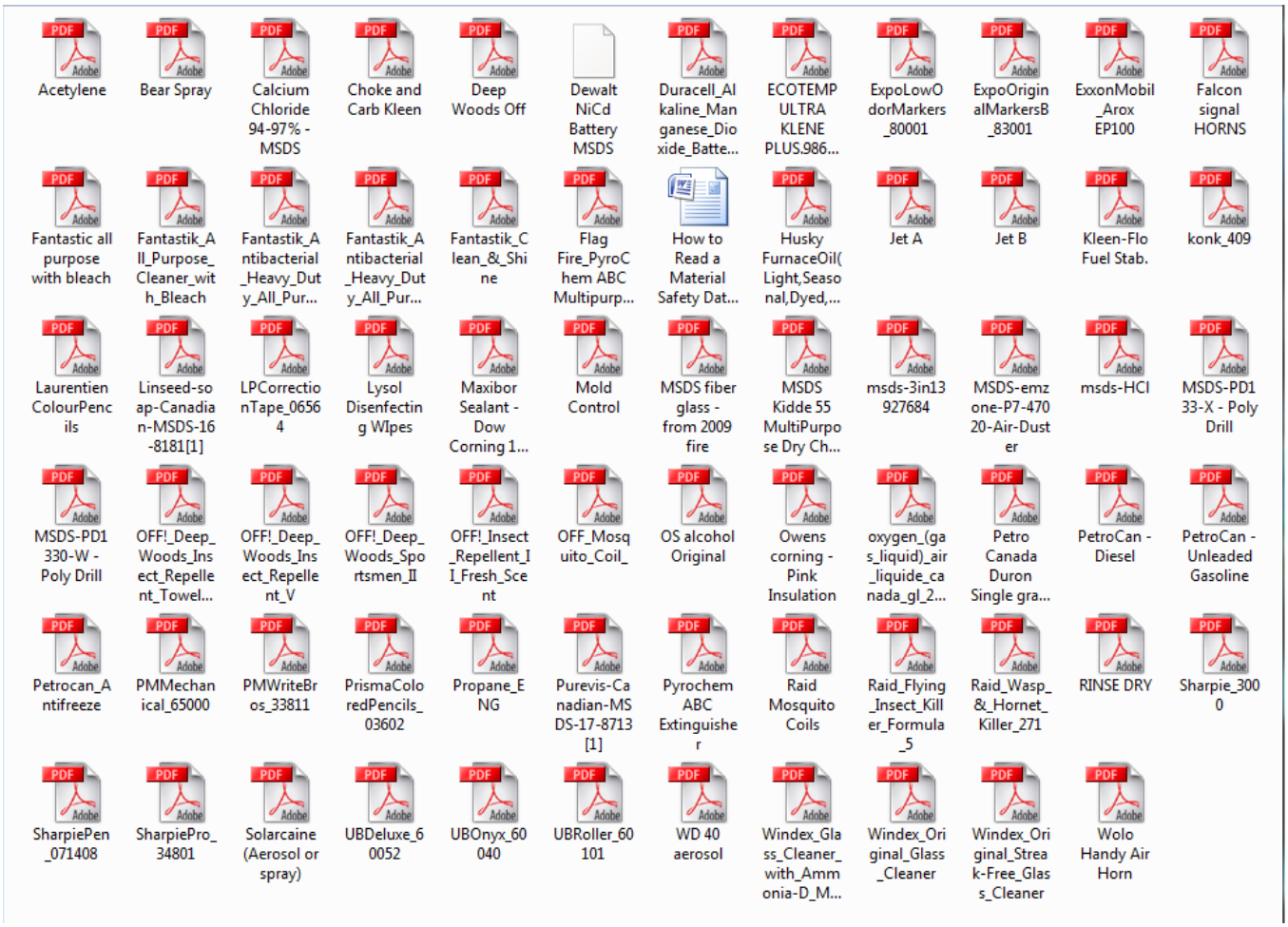
Key Government Contacts:

Nunavut Water Board	Phyllis Beaulieu	867 360 6338 ext. 27
Environment Canada (reporting a spill)	24 Hour Spill Report Line	867 920 8130 867 873 6924 (fax)
	Craig Broome, Manager of Enforcement	867 669 4730
Crown-Indigenous Relations and Northern Affairs Canada (reporting a spill)	Jonathon Mesher, Water Resource Officer	867 222 0118
	Karen Costello, Director Resource Management	867 975 4296
	Erik Allain, Manager of Field Operations	867 975 4295 867 975 6445 (Fax)
Government of Nunavut Environmental Protection (contacted depending on the spill)	Robert Eno Director/Chief Environmental Protection Officer	867 979 8000
Kitikmeot Inuit Association (contacted depending on the spill)	Wynter Kuliktana	867 982 3310
Fisheries and Oceans Canada (contacted depending on the spill)		867 979 8000

Environment Canada	Wade Romanko, Env. Emergencies Officer	(867) 669-4730
Kitikmeot Inuit Association	Wade Romanko, Env. Emergencies Officer Wynter Kuniktana	(867) 669-4736 (867) 982-3310
Aboriginal Affairs and Northern Development Canada	Wynter Kuniktana Eva Paul, Water Resources Officer Karen Costello, A/D Resource Management	(867) 982-3310 (867) 975-4548 (867) 975-4546
Aboriginal Affairs and Northern Development Canada	Eva Paul, Water Resources Officer Karen Costello, A/D Resource Management Erik Allain, Manager of Field Operations	(867) 975-4548 (867) 975-4546 (867) 975-4295
Government of Nunavut Environmental Protection	Erik Allain, Manager of Field Operations Robert Eno	(867) 975-4295 (867) 975-7729
Government of Nunavut Environmental Protection	Robert Eno	(867) 975-7729
Department of Fisheries and Oceans	Margaret Keast	(867) 979-8000
Department of Fisheries and Oceans	Margaret Keast	(867) 979-8000
RCMP (Yellowknife)		(867) 669-1111
RCMP (Yellowknife)		(867) 669-1111
RCMP (Kugluktuk)		(867) 982-2111
RCMP (Kugluktuk)		(867) 982-2111

Appendix B List Material Safety Data System (2015)




Acetylene
Bear Spray
Calcium Chloride 94-97% - MSDS
Choke and Carb Kleen
Deep Woods Off
Dewalt NiCd Battery MSDS
Duracell_Alkaline_Manganese_Dioxide_Batte...
ECOTEMP ULTRA KLENE PLUS.986...
ExpoLowOdorMarkers_80001
ExpoOriginalMarkersB_83001
ExxonMobil_Arox EP100
Falcon signal HORNS
Fantastic all purpose with bleach
Fantastik_All_Purpose_Cleaner_with_Bleach
Fantastik_Antibacterial_Heavy_Duty_All_Pur...
Fantastik_Antibacterial_Heavy_Duty_All_Pur...
Fantastik_Clean_&_Shine
Flag Fire_PyroChem ABC Multipurp...
How to Read a Material Safety Dat...
Husky FurnaceOil(Light,Seasonal,Dyed,...
Jet A
Jet B
Kleen-Flo Fuel Stab.
konk_409
Laurentien ColourPencils
Linseed-soap-Canadian-MSDS-16-8181[1]
LPCorrectionTape_06564
Lysol Disenfecting WIpes
Maxibor Sealant - Dow Corning 1...
Mold Control
MSDS fiberglass - from 2009 fire
MSDS Kidde 55 MultiPurpose Dry Ch...
msds-3in13927684
MSDS-emzone-P7-47020-Air-Duster
msds-HCl
MSDS-PD13 3-X - Poly Drill
MSDS-PD1330-W - Poly Drill
OFF!_Deep_Woods_Insect_Repellent_Towel...
OFF!_Deep_Woods_Insect_Repellent_V
OFF!_Deep_Woods_Sportsmen_II
OFF!_Insect_Repellent_II_Fresh_Scent
OFF_Mosquito_Coil_
OS alcohol Original
Owens corning - Pink Insulation
oxygen_(gas_liquid)_air_liquide_canada_gl_2...
Petro Canada Duron Single gra...
PetroCan - Diesel
PetroCan - Unleaded Gasoline
Petrocan_Antifreeze
PMMechanical_65000
PMWriteBros_33811
PrismaColoredPencils_03602
Propane_ENG
Purevis-Canadian-MSDS-17-8713[1]
Pyrochem ABC Extinguisher
Raid Mosquito Coils
Raid_Flying_Insect_Killer_Formula_5
Raid_Wasp_&_Hornet_Killer_271
RINSE DRY
Sharpie_3000
SharpiePen_071408
SharpiePro_34801
Solarcaine (Aerosol or spray)
UBDeluxe_60052
UBOnyx_60040
UBRoller_60101
WD 40 aerosol
Windex_Glass_Cleaner_with_Ammonia-D_M...
Windex_Original_Glass_Cleaner
Windex_Original_Streak-Free_Glass_Cleaner
Wolo Handy Air Horn

Appendix C Fuel Management Plan

Introduction

The following fuel management plan will be revised each year and submitted as an appendix with the Spill Contingency Plan, and the Abandonment and Restoration Plan. This plan reviews in more detail the management of fuel.

The plan considers and is applicable to both the current care and maintenance phase and the proposed drilling exploration phase.

Glencore will store all fuels and hydrocarbons at its Hackett River camp appropriately to ensure all personnel and contractors remain safe and the environment is protected. Any personnel involved in the handling, transfer or storage of any fuel will receive adequate training, including operations, monitoring and inspections, maintenance and Spill Response actions.

Storage and Containment

Diesel, gasoline and aviation fuel (Jet A and B) are stored in 205 litre drums. Diesel is transported to camp in 205 litre drums. When camp is in operation it is transferred to double walled bulk (> 2,200 L) when necessary and day use (400 - 900 L double walled) tanks for use in camp and at the diamond drills. All the drummed and bulk petroleum products are stored in Arctic Grade, secondary containment berms, ranging from 4' x 4' to 15' x 40'. A total of 19 berms are in use on site, including at the generators (2 at each), incinerator (2), and at all fuel transfer points. These berms are chemical and fire resistant. Empty drums, awaiting transport to Yellowknife are also stored in secondary containment berms.

Topographic and other ground conditions dictate the location of nearly every structure on site, from large common buildings to core rack to the storage berms. The site, which is long and narrow, is about 30% sandy, esker-like material, 10% marshy tundra and 60% bedrock or coarse, boulder-rich till. This restricts the choice of locations for the berms, as the ground is either too uneven and rough, or soft and wet. Currently there is one main bermed fuel storage area, located such that it is accessible, relatively flat and also away from living quarters for safety and environmental reasons (during exploration this may be increased; historically there were 3 main areas). For this same reason, and due to the temporary nature of the camp site, as well as transportation challenges at site, drummed fuel continues to be the primary choice over bulk fuel.

During the winter, the berms containing full fuel drums are covered with arctic grade berm covers, supplied by the same manufacturer as the berms. Each berm, and any other fuel caches are located a minimum of 31 metres away from the normal high-water mark to prevent spills or seepage from entering any body of water. The drums are stored within the berms in orderly rows with their bungs checked for tightness, and, where possible, facing outwards. During exploration drilling, each berm, and its contents is monitored daily, and a record kept of the results, and any findings, as well as any actions taken. During care and maintenance monitoring will be conducted during each site visit.

Drums of diesel fuel used for heating tents are contained in fuel caddy-type secondary containment. During normal opening/closing of camp these fuel and storage systems are installed and monitored to ensure safe operation and storage. If deficient they are immediately replaced.

An updated list of fuel and other hazardous materials on site is updated in Table 1 of the Spill Contingency Plan every year after each maintenance visit.

Spill and Leak Prevention

Leaks most often occur during handling of the fuel but may also develop slowly over time. All berms, tanks and drums will be monitored regularly (inspected on each visit during care and maintenance), and if any drums are found to be damaged and/or leaking, the proper spill response measures, as per section 7 of the Spill Contingency Management Plan will be implemented immediately.

Prevention includes training of all staff at the start of employment (or arrival to site each year) to ensure awareness of proper techniques and methods are used in the handling and transfer of materials. Adequate worker training and supervision is required to avoid puncturing the fuel drums during handling. Workers will also be trained in refueling techniques to prevent the spillage of fuel during transfer. This training will include normal standard operating conditions and emergency situations. Copies of this plan are posted throughout camp during camp operations.

In addition to training, prevention of spills is also managed through the proper storage and handling of fuel, chemicals and waste materials. Impermeable geo-membrane, arctic grade, secondary containment berms are used to store drums at fuel caches. Fuel drum storage locations will be inspected for, and cleared of, puncture or tipping hazards, standing water, and leaking or damaged drums. Each fuel berm is equipped with a "Rain Drain" brand berm filtration system, supplied by the manufacturer, allowing gravitational filtering of any hydrocarbon spill contaminates from rainwater or other accumulations in the berms.

This rain drain filter allows continuous drainage of secondary containment berms that will cease all liquid discharge once the filter is full. Coupled with inspections, this ensures each secondary containment berm will have enough capacity to contain any primary container leak because there will be no rainwater contained in the berm.

During drilling operations, the rain drain filters are removed from the berms, safely drained and capped for the winter months, when freezing conditions could cause the filter elements or casing to crack, rendering the drain assemblage ineffective. For the summer months the entire drain assemblages are checked before re-installation, including the filters, which are replaceable in some units. During care and maintenance, the rain drain filters are not removed but verified during the maintenance visits. The drains are re-installed in such a manner as to prevent damage from mobile equipment such as snowmobiles, skid steer loaders and ATV's.

To prevent the build up of standing water, berm covers have been installed on all existing berms to prevent snow and ice build ups in the berms over the winter (e.g., Plate 1).

Plate 1: *North End Berm #2 Covered and Secured, Hackett River Camp. (07/21/2015)*

The inspections conducted include the fuel drums and storage containers, secondary containment sumps and associated spill containment devices, any pumps and product-handling equipment, and overfill protection devices. These inspections are recorded to include who completed the inspections, areas included in the visual inspection and any deficiencies noted. Inspections of all mobile equipment are also be performed, and any leaks noted and fixed, and the repair recorded in weekly reconciliation reports. Mobile equipment that is being worked on or stored for any period longer than 5 days will be placed over blue, absorbent matting, to catch any drips or melting snow, which may contain hydrocarbons. Seasonal equipment storage facilities (Quonset hut) and the Major shop were modified to include liners in 2012 to prevent any fuel from soaking into the ground beneath the structures. The main camp workshop has a liner installed under the floor.

Spills will be reported as per section 7.3 of the Spill Contingency Plan.

Fuel Transfer Areas and Transportation

All Fuel transfer stations will be contained within berms.

Fuel transfer consists primarily of fuelling larger tanks, from 205 L drums, using an electric fuel pump (Plate 2). These pumps are either portable, or affixed to a wall, where they are above a secondary containment berm.

Day use tanks (400 – 600 L), used in diamond drilling operations are stored, and filled, within a large berm, and fuel transfer at all other bulk tanks also occurs from bermed 205 L drums to the larger tanks. Mobile equipment fuelling stations are also contained within berms.

During drilling operations, drums of fuel are flown to site during the winter re-supply period (March to May), in approved containers and they are then transported to fuel storage berms. Empty drums are flown out to Yellowknife for recycling or crushing. Empty drums are flown out primarily in the winter, and stockpiled the rest of the year, in berms, to be flown out the following winter. Day tanks remain on site, stored in berms. During care and maintenance empty fuel drums and drums containing waste are being transported back to Yellowknife as space permits.

All empty drums are completely drained, within the fuel transfer berms, and the used fuel from these empty drums becomes the burn fuel for the incinerator.

Plate 2: *Bulk fuel tank, fuel transfer pump and drummed fuel at main generator, Hackett River Camp. (07/04/2014)*

Signs, Labels and Inspections

All drummed fuel will be clearly labeled and include the type of fuel, the company name and the date of filling. 'No Smoking' signs will be posted at each fuel cache and the fuel storage area. Any fuel cache with more than 19 drums of fuel will be monitored regularly (inspected on each site visit during care and maintenance) and any secondary containment structures will be reviewed regularly to check for signs of punctures or failures, as well as monitoring the water level within the berms. A record of these

inspections will be kept in the office and be available upon request and records will be appended in the annual report.

Bulk tanks are identified with Environment Canada, under the Federal Identification Registry for Storage Tank Systems (FIRSTS), and subject to the *Storage Tank for Petroleum Products and Allied Petroleum Products Regulations*. The four bulk tanks located on site are summarized in the table below:

Description	EC Tank Registry #	Quantity of Fuel	Type of Fuel	Date of Manufacture	Date of Install
Incinerator Fuel	00026509	2,200 L	Diesel, some mixed	2008	2008
Main Generator	00026544	2,270 L	Diesel	2008	2008
Secondary Generator	00026546	2,290 L	Diesel	2010	2011
Waste Oil - Incinerator	00026547	1,100 L	Used Oil	2011	2012

Fuel tanks are currently empty or with just minor residues. Regulations regarding the fuel tanks should be reviewed before drilling operations resume.

Spill Kits

Every fuel cache, storage area and refueling station will have a fire extinguisher and spill kit, appropriate to the type and volume of fuel contained. Refer to Figure 1 of the Spill Contingency Plan for the location of spill kits.

Applicable Legislation and Guidelines

Acts, Regulations, and Legislation that may apply to the storage, handling and transport of fuel are presented in:

Federal:

- Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations
- Federal Aboveground Storage Tank Technical Guidelines
- CCME Environmental Codes of Practice for Underground and Aboveground Storage Tank Systems
- Transport of Dangerous Goods Act
- The Workplace Hazardous Materials Information System (WHMIS)
- Worker's Compensation Board
- National Fire Code of Canada
- Fisheries Act
- Guidelines for Spill Contingency Planning, Indian and Northern Affairs Canada
- Draft Fuel Storage and Handling Guidelines, April 2008, Indian and Northern Affairs Canada

Territorial:

- Fire Prevention Act
- Nunavut Waters Act
- Nunavut "Guideline for the General Management of Hazardous Waste"

- The Mine, Health and Safety Act and Regulations (NT / NU)
- The NT and NU Safety Act, the Occupational Health and Safety Regulations

Appendix D Fire Action Plan (2015)

Action plan in the event of a petroleum fire

- Raise the alarm! Warn others and call for assistance.
- Personal safety comes first; make sure you and others nearby are safe. Evacuate if necessary and account for everyone. The main muster station is the kitchen, and the secondary muster station is the main office. If danger of an explosion personnel to move further away.
- If necessary, provide first aid and locate any missing workers. Remove any injured people to a safe site, generally upwind from the fire.
- If a person, who is splashed with fuel, catches fire, wrap him in a fire blanket or roll him on the ground to remove oxygen and extinguish the fire. If this doesn't work, use an ABC, dry chemical, fire extinguisher to put out the fire
- Where possible, and if there is no danger, stop the flow of fuel feeding the fire.
- Remove on-going sources of ignition i.e., shut off the electricity.
- Attempt to extinguish flames using approved equipment. Remember, diesel fuel and gasoline float. Don't wash flames to an area of higher danger.
- Remember the order of priority, human safety comes first, then property. Don't risk your life for possessions.
- Notify the Site Manager who will implement the Action Plan for Leaks or Spills once the fire is out and who will also notify authorities, if required. Site Manager will also notify head office and fill our incident form(s).
- Conduct follow-up monitoring, if required.
- Clean-up the site when allowed to do so.
- Review the incident with others in camp and discuss ways to prevent similar fires in the future.

Appendix E Spill Report Forms (2015)

This form is to be used for internal documentation of spills of any petroleum product, chemical, ethylene glycol (antifreeze), or other hazardous material in quantities of less than 25L. For quantities in excess of 25L, spills MUST be reported to the NWT/NU 24-hour spill reporting line (867-920-8130), and the appropriate form filled in. ALL spills (regardless of quantity) into a water body must be reported to the spill reporting line.

***Report Date and Time*:**	***Spill Date and Time*:** ☐ Spill occurred ☐ Spill observed
***Spill Location*:** ☐ Hackett Camp ☐ Hackett Drills ☐ Wishbone Claims ☐ Other	***Describe Location*:**
***Coordinates (Lat/Long or UTM)*:**	

***Product(s) Spilled*:**	Jet fuel (A or B)	Diesel (P50)	Gasoline	AvGas	Oil (type)	Antifreeze	Other (describe)
***Quantity (L or kg)*:**							

Personnel Involved:	☐ Employee	☐ Contractor	☐ Visitor	☐ Other

***Cause of Spill*:**
***Containment/Cleanup Measures Taken*:**
***Factors Affecting Spill or Recovery (weather, snow, ground conditions, etc.)*:**
***Additional Action Required*:**
***Additional Comments*:**

	Name	***Employer***	***Signature***
***Reported by*:**			
***Reported to*:**			

http://gov.nu.ca/sites/default/files/NT%20NU%20Spill%20Report%20Form.pdf

Northwest Territories Nunavut Canada

NT-NU SPILL REPORT

OIL, GASOLINE, CHEMICALS AND OTHER HAZARDOUS MATERIALS

NT-NU 24-HOUR SPILL REPORT LINE
TEL: (867) 920-8130
FAX: (867) 873-6924
EMAIL: spills@gov.nt.ca

REPORT LINE USE ONLY

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

L	REPORTED TO SPILL LINE BY	POSITION	EMPLOYER	LOCATION CALLING FROM	TELEPHONE
M	ANY ALTERNATE CONTACT	POSITION	EMPLOYER	ALTERNATE CONTACT LOCATION	ALTERNATE TELEPHONE

REPORT LINE USE ONLY

N	RECEIVED AT SPILL LINE BY	POSITION **Station operator**	EMPLOYER	LOCATION CALLED **Yellowknife, NT**	REPORT LINE NUMBER **(867) 920-8130**

LEAD AGENCY ☐ EC ☐ CCG ☐ GNWT ☐ GN ☐ ILA ☐ INAC ☐ NEB ☐ TC	SIGNIFICANCE ☐ MINOR ☐ MAJOR ☐ UNKNOWN	FILE STATUS ☐ OPEN ☐ CLOSED

AGENCY	CONTACT NAME	CONTACT TIME	REMARKS
LEAD AGENCY			
FIRST SUPPORT AGENCY			
SECOND SUPPORT AGENCY			
THIRD SUPPORT AGENCY			

Page 1 of