SPILL CONTINGENCY PLAN
HACKETT RIVER
EXPLORATION PROJECT

Water License No. 2BE-HAK0915
AANDC Land Use Permit No. 2013C0017 (previously N2010C0015)
KIA Land Use License No. KTL313C005-Renewed

GLENCORE CANADA CORPORATION

Reviewed By: Rick Schwenger	Reference Number:
Approved By: Michel Boucher	

Note: Only the electronic version of this procedure located on the Glencore Intranet is considered the most current document. Any paper copies of this procedure posted or in a procedure binder must have an approval signature, appear on a controlled distribution list and updated in a timely manner when the electronic original is revised.

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1. INTRODUCTION

This is the updated Spill Contingency Plan, for Glencore Canada Corporation's (formerly Xstrata Zinc Canada's) Hackett River Project (Licence No. 2BE-HAK0915). This plan has been updated to reflect changes at the Hackett River camp. It includes spill contingency planning 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. The project is currently under care and maintenance with plans for drilling exploration (the proposed date for drilling exploration has not been defined). This plan will be reviewed annually and prior to the proposed drilling program.

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 and Authorized to Activate the Spill Plan

The following persons are responsible for and authorized to activate the spill and may call in additional support:

During Care and Maintenance
Primary contact: Rick Schwenger, Glencore Canada Corporation New Brunswick (506) 547-3288 Rick.Schwenger@glencore-ca.com

Alternate Contact:
Michel Boucher (514) 346-7452 Michel.Boucher@glencore-ca.com
Rob Davidson (905) 623 4930 willowbark@hotmail.com
Project Manager: To be determined at the time of drilling exploration
Camp Manager: To be determined at the time of drilling exploration

Appendix A provides additional contacts to assist a spill response.

2.3 Camp Operation Times

The camp is currently in care and maintenance and will only be visited for short periods during the summer to conduct site maintenance, inspection with a maximum of 10 persons. Camp use would be extended to support more people if the project initiates diamond drilling exploration and possible expansion to support advanced exploration and development phases.

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, 3 helipad and one jetty/floating dock associated with the camp.

4. POTENTIAL CONTAMINANTS ON SITE

Potential contaminants on site include a number of materials as summarized in Table 1. The list provided in Table 1 are currently on site as part of care and maintenance (August 2015) and may be back hauled as time and space permits. The quantities will be updated upon initiation of exploration activities. Material Safety Data System sheets (MSDSs) are provided in Appendix B.

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

Table 1: Location and Quantity of Potential Contaminants, Hackett River Camp, September 2015

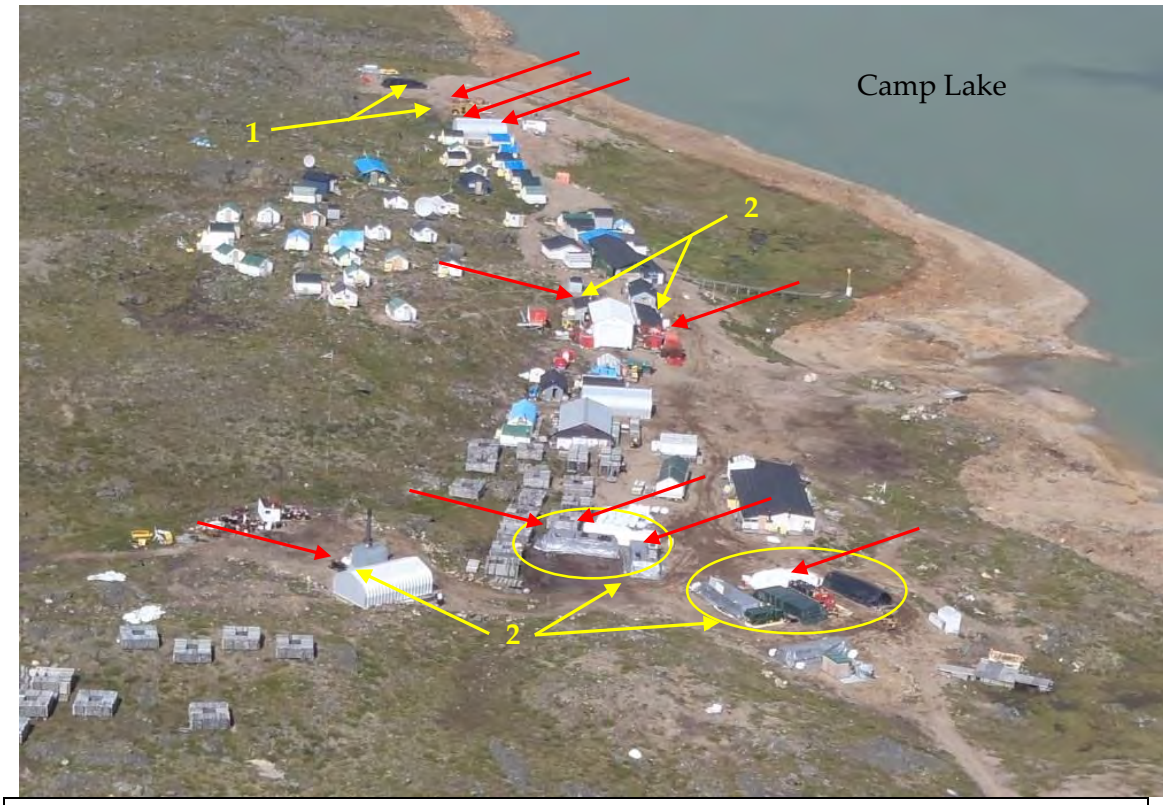
Potential Contaminant	Location	Quantity
Av Gas	Fuel cache, with gasoline	Up to 2-205 litre drums (currently 0)
Acetylene	Drillers shop	2 – 100 lb. tanks.
Diesel	Fuel caches (8)	Up to 1696-205 litre drums altogether
	Kitchen building	currently 0
	Drillers dry tent	currently 0
	Drillers dry building	currently 0
	Tool sheds / workshops (3)	currently 0
	Drill foreman's office / telecommunications	currently 0
	Project office	currently 0
	Environmental	currently 0
	Incinerator shed	<2200 litres in 2 bulk tanks (currently 1 contains waste fuel) 6-205 litre barrels
	Main Generator (2010)	<2290 litres in 2 bulk tanks

	Main Generator (2008) shed	5 -205 litre barrels
	Core cutting area	currently 0
	Core logging building	currently 0
	Recreation tents (2)	currently 0
	Drill supplies storage sheds (2)	currently 0
	Accommodations (33 tents/sheds)	currently 0
	Helicopter supply sheds (2)	currently 0
Gasoline	Fuel Cache (2)	21-205 litre drums
	Winter fuelling station	Up to 4 – 205 litre drums
Oil	Tool sheds / workshops (3)	<250 litres, combined, in each building
	Main Generator (new) and storage sheds	Up to 8-205 litre barrels
	Core storage shed	<50 litres
	Main Generator (2008) Shed	Up to 16-205 litre barrels
	Helicopter supply sheds (2)	<20 litres
	Drill supplies storage sheds (2)	Up to 4 cases of 4 5 litre jugs
Waste Oil	Incinerator shed	1100 litres in bulk tanks Up to 4-205 litre barrels
	Main Generator (2010) and 2 storage sheds	Up to 8-4 litre jugs
	Main Generator (2008) Shed	Up to 1-205 litre barrel
Lubricants	Tool sheds / workshops (3)	<250 litres, combined, in each building
	Supply shed	<50 litres
	Core storage shed	< 50 litres
Duron Multigrade Engine Oil SAE Viscosity Grade 10W-30	Drill supplies storage sheds, workshops, metal shed.	100-12 litre cases
Duron Multigrade Engine Oil SAE Viscosity Grade 15W-40	Drill supplies storage shed (new, metal)	100-12 litre cases
Drill Rod Heavy Grease	Drill supplies storage shed (new, metal)	100-5 gal tub
Jet A/B Fuel	Fuel Caches (2)	currently 182-205 litre drums
	Helicopter landing pads (3)	currently 271 in 205 litre barrels
Propane	Propane Cache	Up to 70-45 Kg cylinders
	Kitchen building	Up to 1-45 Kg tanks for kitchen Up to 6-45 Kg tanks for shower/laundry
	Drillers dry tent	Up to 2-45 Kg tanks
	Drillers dry building	Up to 2-45 Kg tanks

	Core cutting area	Up to 1-45 Kg tank
	Tool sheds / workshops (3)	Up to 2-45 Kg tanks per shop
	Welding gas storage area	Up to 1-45 Kg tank
Human wastes	Pacto rooms (4)	Up to 40 litres
Paint	Tool sheds / workshops (3)	<250 litres, combined, in each building
	Supply shed	<50 litres
Linseed Soap	Drill supplies storage shed (new, metal)	Up to 65-5 gal pails
Matek DD 2000	Drill supplies storage shed (new, metal)	Up to 425-5 gal pails
Poly-Drill 1300	Drill supplies storage shed (new, metal)	Up to 270-5 gal pails
PureVis	Drill supplies storage shed (new, metal)	Up to 309-5 gal pails
Calcium Chloride(CaCl)	Drill supplies storage sheds (3)	Up to 380 pallets (50-50lb bags per pallet)
Helium	Logistics office	Up to 2 x 100 lb tanks (weather balloons).
Oxygen	First Aid tent Welding gas storage area	Up to 7-0.65 Kg, 2-7 Kg tank Up to 1-7 Kg tank

As of August 2015, there are 1,696 drums of diesel, 453 drums of Jet A fuel, and 21 drums of gasoline, all stored in covered berms, for the winter. No black water, acetylene, helium or oxygen is on site.

Other chemicals consumed in small quantities during care and maintenance include kitchen and laundry soaps and cleaning agents, bleach, waterless hand cleaners, hand sanitizer, and other similar household items. Other items on site would include paint, various oils, greases and lubricants for mobile equipment, bear spray and mosquito repellant.



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).

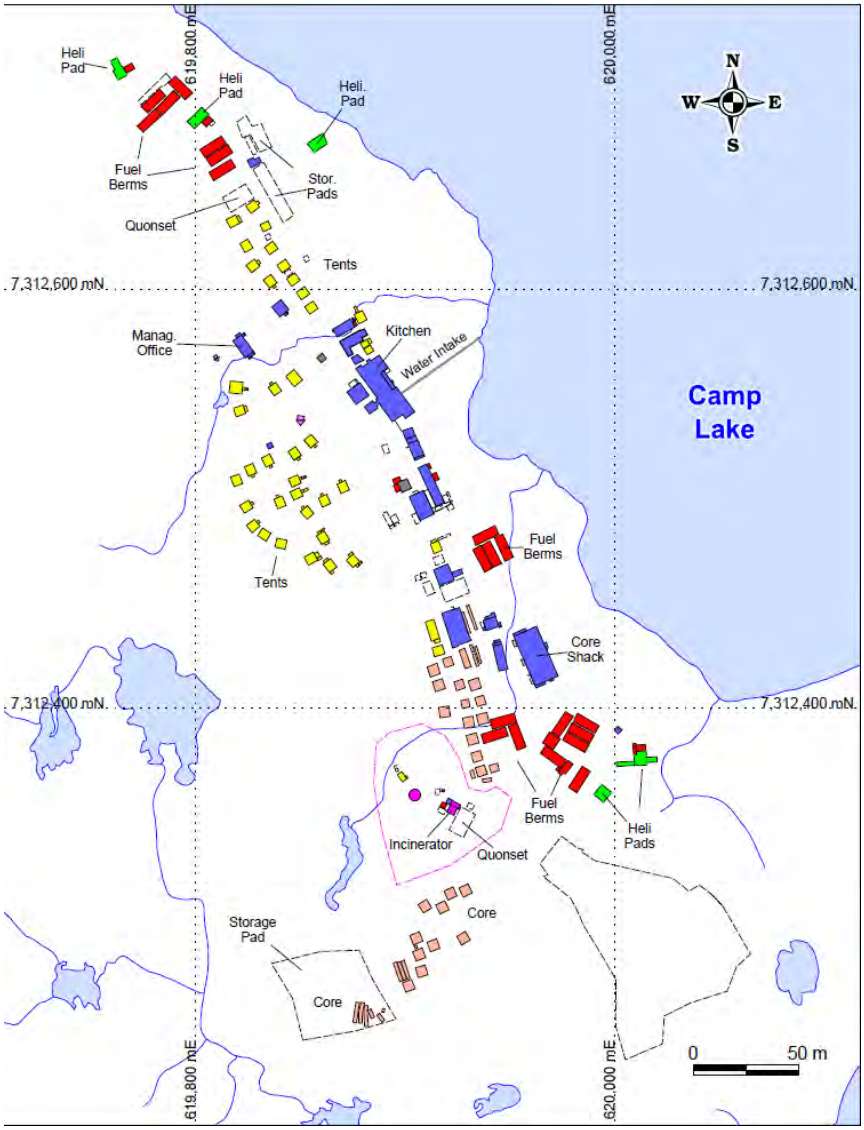


Figure 2: Site Layout, Hackett River Camp, 2015

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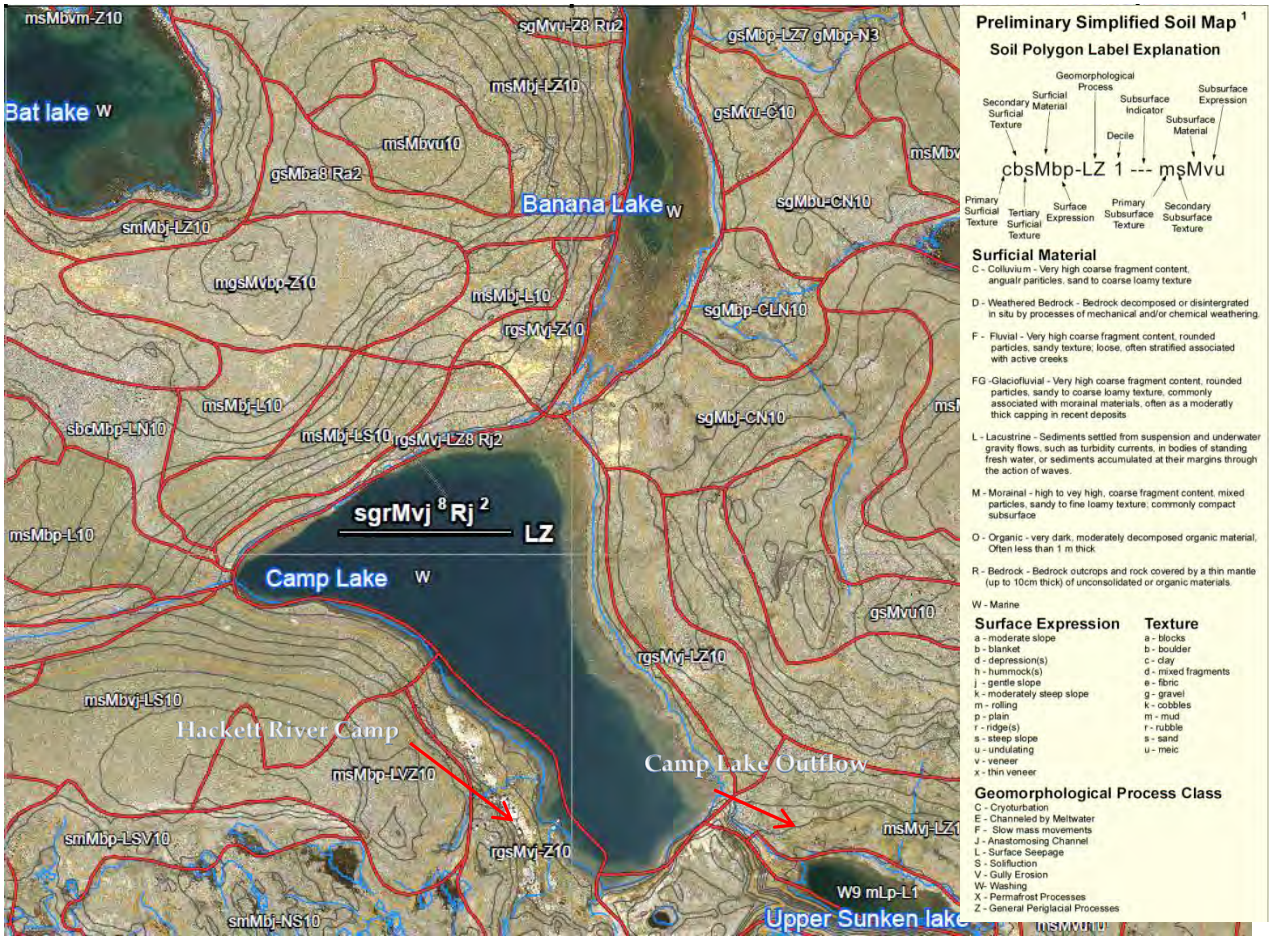


Figure 3: Physical Geography of the Hackett River Camp Area

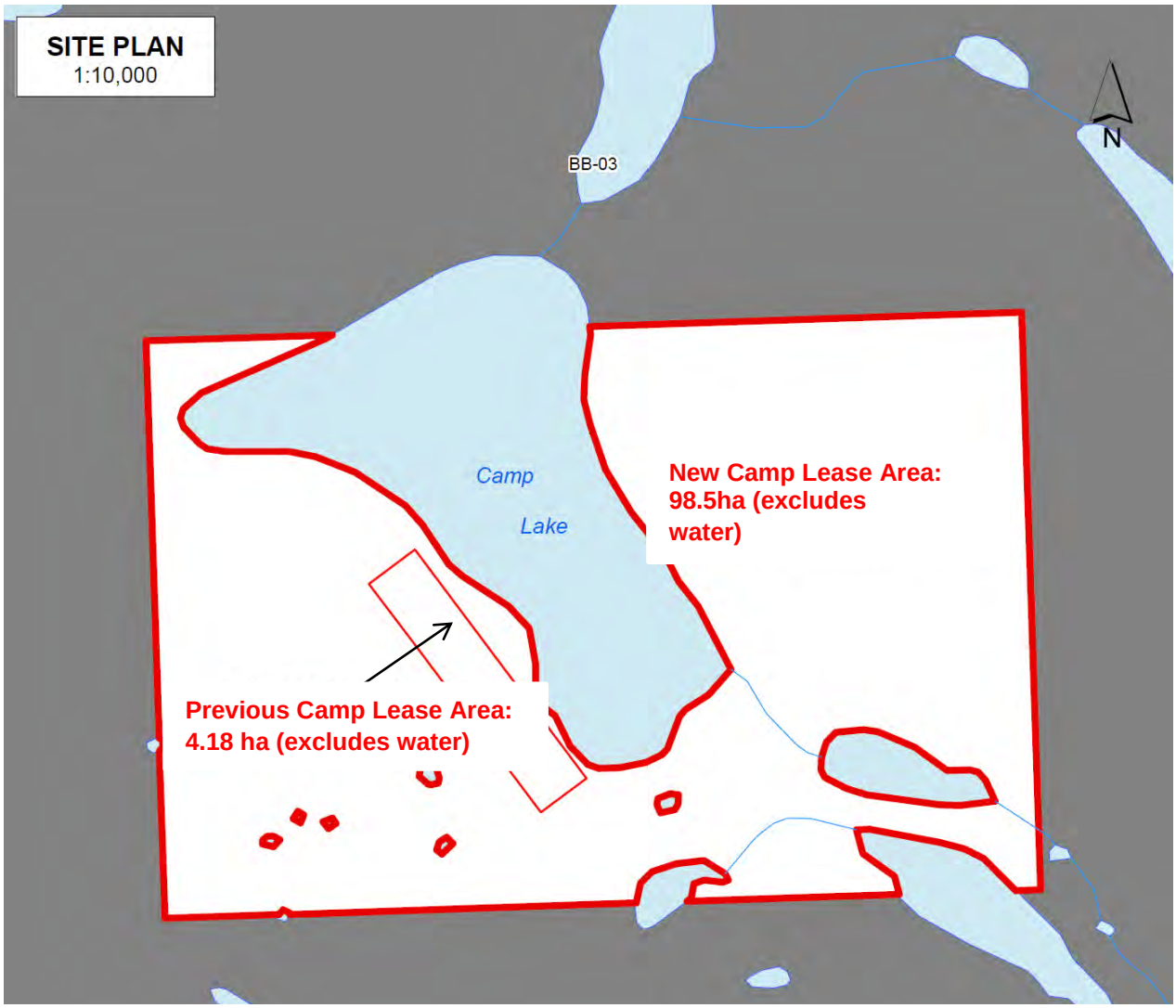


Figure 4. New Camp lease area as per License 76F/16-1-7

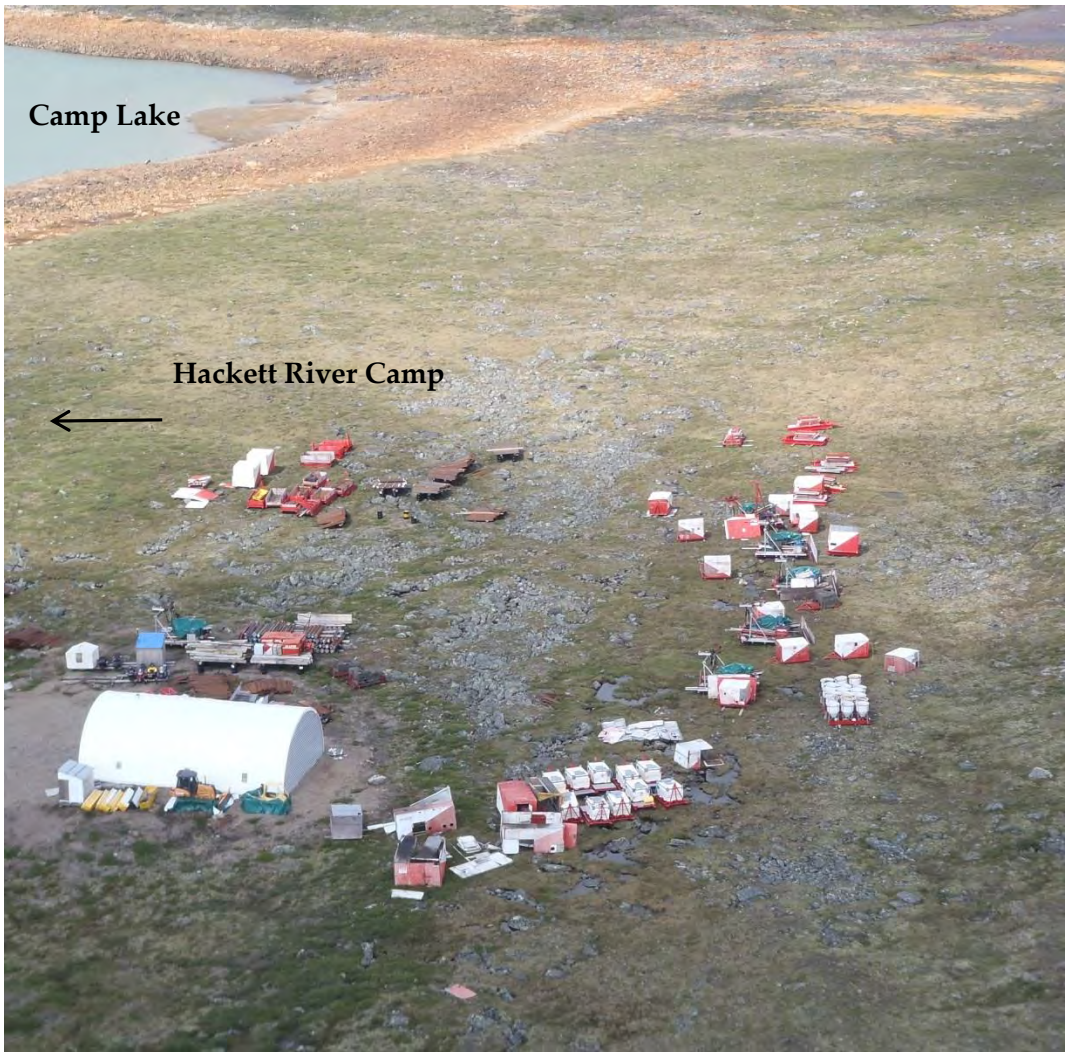


Figure 5. Aerial View of drill laydown area (July 2015)

5. SPILL PREVENTION

Glencore Canada Corporation (Glencore) stores all materials at its Hackett River site appropriately to ensure all personnel and contractors remain safe and the environment is adequately protected. Any personnel involved in the handling, transfer or storage of any materials receive adequate training, including operations, inspections, maintenance and spill response actions.

5.1 Storage and Handling

The Hackett River Camp has 1 principal fuel storage area (

3. Jet A cache

4. Fuel Storage (diesel, gasoline, and waste fuel)
   Spill kits

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

) in addition to satellite storage areas adjacent to generator/incinerator (bulk tanks) or helicopter pads where the fuel is utilized. Drummed fuel is stored in secondary containment berms or trays that are maintained dry and free of punctures or tipping hazards. A total of 15 berms are in use, most of them 15' x 40' in size. 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.

Jet A (Figure 1) is also stored in an appropriate containment system according to regulations near the helipad for the purposes of Helicopter re-fuelling. All drums are sealed and clearly marked.

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 in order to minimize the chance of water dissolving the stored salt. The entire 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.

When stored on site, welding gases are stored 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.

5.2 Leak and Spill Prevention

Leaks and 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. 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.

As part of care and maintenance, monthly storage volumes are routinely completed between April and September. A spill response is initiated in the event of any unexplained loss between monthly reports. 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. Monthly monitoring is also conducted to inspect the berms, and to detect leaks or identify conditions that could result in a leak.

Inspections of all mobile equipment are also performed, with any leaks 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).

5.3 Fuel Transportation

Fuel will be transported to site via aircraft.

5.4 Transport and Storage of Waste

Absorbent materials, oily or greasy rags, and equipment servicing wastes are incinerated on-site. Notably, used oil and fuel is currently utilized in oil-burning stoves for heating purposes. Waste oil (includes waste motor oil, transmission fluid and other petroleum fluids) are 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.

5.5 Training and Awareness

Prior to arrival to the Hackett River camp, all employees will be required to participate in a Workplace Hazardous Materials Information System (W.H.M.I.S.) training session. During the course of the drilling exploration, refresher training is provided as necessary.

Upon arrival to camp, on site orientation will be provided to all employees and contractors that will include notification of the location of:

- MSDS sheets, Spill Report Forms, and Spill Record Book.
- Fuel caches.
- Spill response kits.
- Muster Stations, fire extinguishers, water pumps and firefighting equipment.
- Valves that may be used to stop the flow of a fuel.
- *Spill Contingency Plan* and the *Fire Action Plan*.

Onsite training for the following is provided to all employees:
- Spill kit contents.
- Fire extinguishers and water pumps.

Training is provided to all camp operations employees so that they are able to:
- Turn off the valve to stop the flow of fuel, at the ignition point and at the source.
- Activate the *Spill Contingency Plan* and the *Fire Action Plan* (see Appendix D).

- Identify, evaluate and mitigate the hazards posed by any spilled product by using appropriate personal protective equipment (PPE).
- Identify and avoid the conditions which may lead to a spill.
- Develop an understanding of the potential environmental impacts of a spill.
- Develop an understanding of the financial costs of a spill.
- Recognize the hazards associated with sources of ignition (smoking, electrical sparks) near a fuel source.

For employees involved in fuel handling, additional training is provided regarding appropriate refueling techniques and drum handling procedures.

During exploration phases and long-term stays at camp, simulated fuel spill exercises are conducted periodically to ensure familiarity with the *Spill Contingency Plan* and ensure that the Plan is relevant and useful throughout the exploration season. The *Spill Contingency Plan* is brought to the weekly safety meetings every two months, and its location is mentioned every time new personnel come to site. Single sheets, with the action plan printed on them, are posted throughout camp for easy access.

Copies of the *Spill Contingency Plan* are stored in the following locations:

- Main dry building.
- Tool shop.
- Major Drill shop.
- Incinerator.
- Coreshack.

MSDS sheets are maintained current and are stored in the following locations:

- Helicopter shack.
- Drill foreman's office.
- Kitchen.
- Main office.

6. SPILL RESPONSE

6.1 Spill Procedure Steps

Given that the potential contaminants most often used are petroleum products, relevant response procedures outlined below however similar procedures will be used for all 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.
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 Camp Manager and/or Site Manager, one of whom will activate the Spill Contingency Plan and call the 24 hour Spill Report Line at **(867) 920 – 8130, Fax: (867) 873-6924**. The Camp Manager will also call the AANDC Water Resources Inspector at **(867) 975 – 4295**.
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. Dispose of contaminated cleanup materials in an approved manner.
11. Record the spill on the Spill Report Form and conduct follow-up monitoring if required.
12. Ensure that all ignitable vapors are dispersed before resuming normal activities.
13. Review the incident with others in camp and share ideas on to prevent a similar type of spill from occurring again.

The above points are outlined in the "Action Plan in the Event of a Spill or Leak" and posted throughout camp.

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 during a spill response at Hackett River Camp include: 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 of appropriately.

Land

- Stop flowing spills with earth, snow, plastic or other barrier.
- Prevent entry to waterways.
- Remove free product with 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.

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.

Ice and Snow

- Stop flowing spills with snow, plastic or other barrier.
- Prevent entry to waterways.
- Remove free product with absorbent pads, if possible.
- Collect contaminated snow and ice into a 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.

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.

Flowing Water

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

6.2 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 Pick axes	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

20 of the large and 8 of the small spill response kits are available on site. In addition, kits are located at each operating drill as well as the ice air strip and the esker air strip, when in use. Kit contents are listed in Table 3.

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

6.3 Reporting

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.

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, or Fax: (867) 873-6924**.

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

2. AANDC Water Resources Inspector at **(867) 975 – 4295**.

If in doubt about whether a spill is reportable, report it. All spills, regardless of quantity, into watercourse must be reported.

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.
- What product or products spilled.
- Estimated spilled quantities (in metric if possible).
- Cause of the spill.
- Whether spill is ongoing.
- Estimate of the rate of spillage.
- Determination if further spillage 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 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).
- 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).

6.4 Disposal

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.

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
Attn: François Landry, Project Manager

Any waste material will be disposed of through :

KBL Environmental
PO Box 1108
Yellowknife, NT X1A 2N8
Tel: 867 873 5263 Fax: n/a
Attn: Jeff Bembridge

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.

7. 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

Appendix A Spill Response Contact List

Glencore Contacts:

Environmental Manager	Rick Schwenger	506 547 3288
	Michel Boucher	514 346 7452
Site Manager	TBD	

Additional Assistance From the Following Organizations may be Obtained:

Discovery Mining Services		867 920 4600
Shell Canada, Mobile Environmental Response	Steve Bassett	867 874 2562
Kitnuna		867 983-7500
Nuna Logistics Ltd.		866 817 0924
Dupont (Fuel Dye)		905 821 5660
KBL Environmental	Jeff Bembridge	867 873 5263 (NUG#100050)
Midnight Sun Energy (sorbents)		867 988 0379
Acklands (sorbents)		867 873 4100 (gallantl@agi.ca)
ERM Consultants Canada	François Landry	604 689 9460

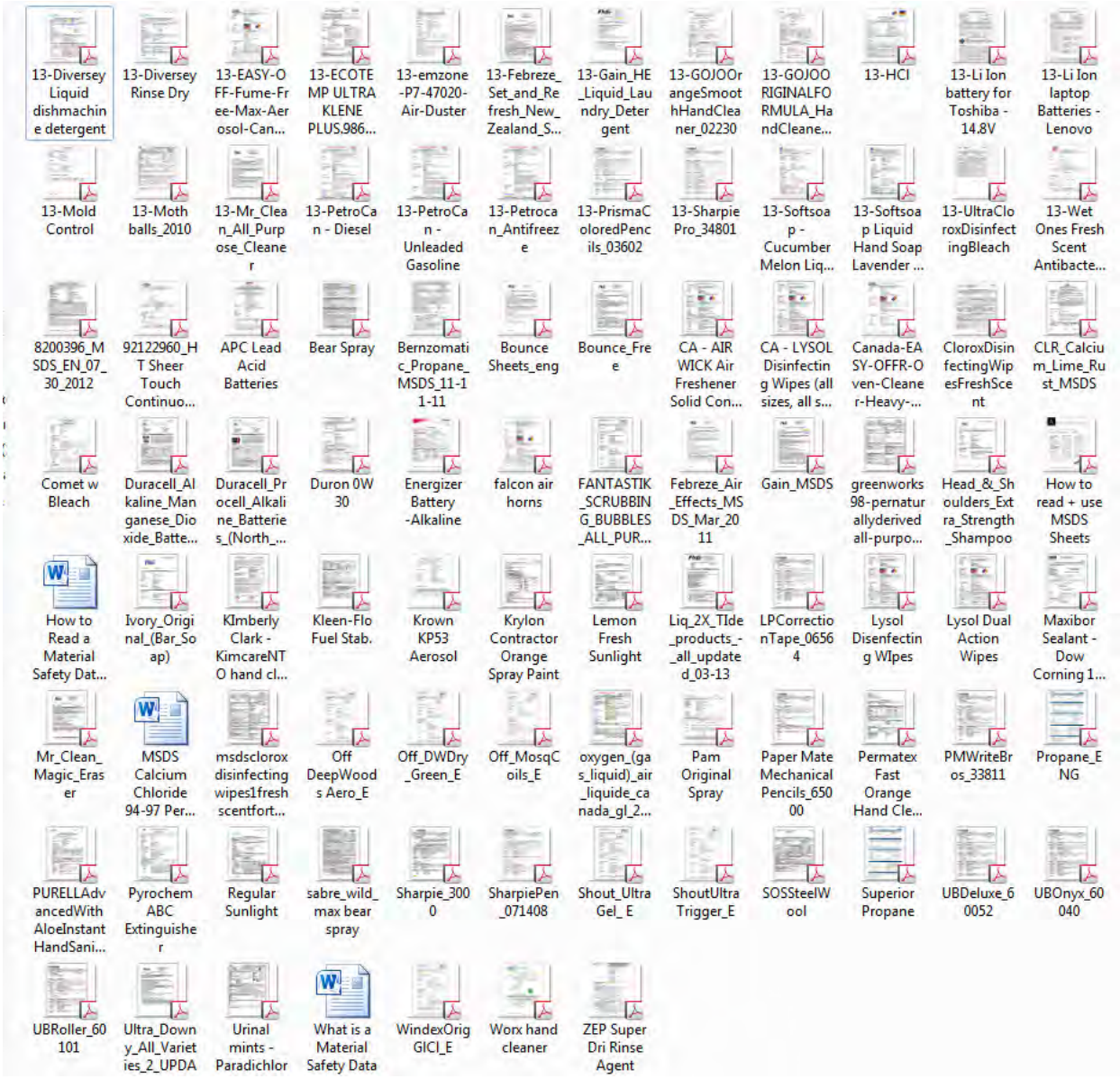
Key Government Contacts:

Nunavut Water Board	Phyllis Beaulieu	867 360 6338 ext. 27
Environment Canada	24 Hour Spill Report Line	867 920 8130 867 873 6924 (fax)
	Craig Broome, Manager of Enforcement	867 669 4730
Aboriginal Affairs and Northern Development Canada	Eva Paul, Water Resource Officer	867 975 4548
	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	Robert Eno Director/Chief Environmental Protection Officer	867 979 8000
Fisheries and Oceans Canada		867 979 8000
RCMP (Yellowknife)		867 669 1111

RCMP (Cambridge Bay)		867 983 2111
Workers Safety and Compensation Commission Incident and Injury Reporting		800 661 0792

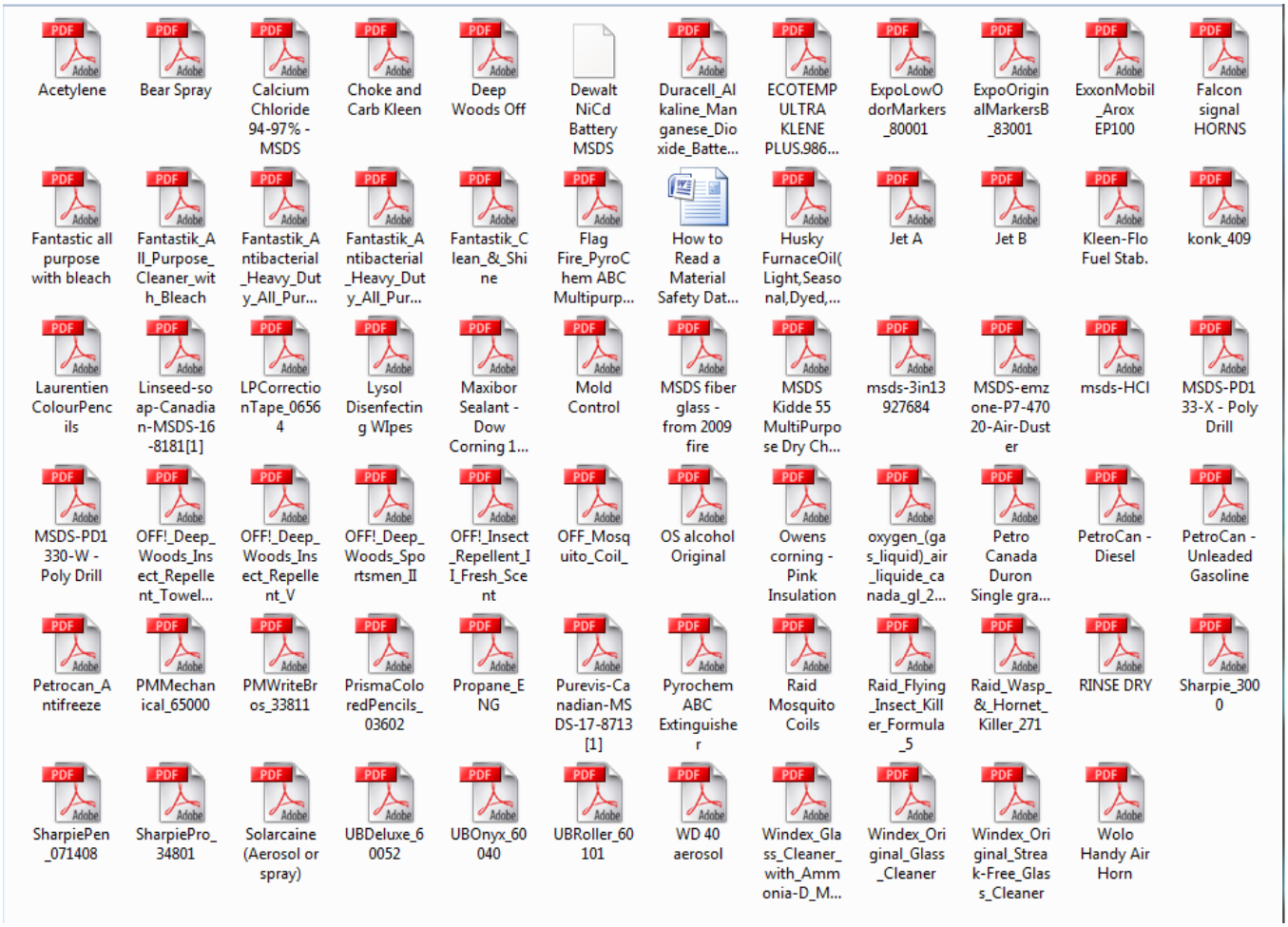
Kitikmeot Inuit Association	Wynter Kuniktana, Env. Emergencies Officer	(867) 982-3310
Aboriginal Affairs and Northern Development Canada	Eva Paul, Water Resources Officer	(867) 975-4548
Aboriginal Affairs and Northern Development Canada	Karen Costello, A/D Resource Management	(867) 975-4546
Aboriginal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

Appendix B Material Safety Data System Sheets



Reviewed By: Rick Schwenger	Reference Number:
Approved By: Michel Boucher	

Note: Only the electronic version of this procedure located on the Glencore Intranet is considered the most current document. Any paper copies of this procedure posted or in a procedure binder must have an approval signature, appear on a controlled distribution list and updated in a timely manner when the electronic original is revised.



Reviewed By: Rick Schwenger	Reference Number:
Approved By: Michel Boucher	

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Appendix C Fuel Management Plan, 2015

1. 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.

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.

2. Storage and Containment

Diesel, gasoline and aviation fuel (Jet A and B) will be stored in 205 litre drums, and diesel will also be transferred to double walled bulk (> 2,200 L) and day use (400 - 900 L double walled) tanks for use in camp and at the diamond drills. All of 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. The total number includes some not currently in use (August 2015).

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 areas, located such that they are 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 period from Oct 1 to Feb 20, 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 will be 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 will be 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 on a monthly basis between April and September of each year.

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.

All berms, tanks and drums will be monitored, daily to weekly (monthly during care and maintenance), and if any drums are found to be damaged and/or leaking, the proper spill response measures, as per the Spill Contingency Plan, will be implemented immediately.

During care and maintenance fuel on site has been reduced to 1,696 drums of diesel, 453 drums of Jet A fuel and 21 drums of gasoline (September 2015). A total of 19, 100 lb propane tanks and 2 – 320 lbs tanks are currently on site (September 2015). These totals will be updated when additional fuel will be required during the proposed exploration phase. At this time fuel will be flown to site between March 1 and May 30.

Propane is flown to site in 20 and 100 lb. tanks to be used for water heating primarily, but also for heating at the drills. These tanks are stored in an upright, secured position in open, walled storage areas, and moved to where they'll be used as needed.

3. 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, daily to weekly (monthly during care and maintenance), and if any drums are found to be damaged and/or leaking, the proper spill response measures, as per the Spill Contingency 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 the action plan in case of spill or leaks are posted throughout camp.

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.

The rain drain filters are removed from the berms, safely drained and capped during the winter months, when freezing conditions could cause the filter elements or casing to crack, rendering the drain assemblage ineffective. The entire drain assemblages are checked before re-installation, including the filters, which are replaceable in some units. 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)*

Propane, oxygen and acetylene tanks will be stored securely upright to prevent tipping and possible breakage of gas fittings. Those tanks that are in use are also covered, to keep snow, ice and water away from the valves and to allow for better access and inspection.

Inspections will be conducted to ensure that there are no leaks or that there are no conditions of the area could result in a leak. These inspections will 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 will be recorded to include who completed the inspections, areas included in the visual inspection and any deficiencies noted. Inspections of all mobile equipment will 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 to the 24 hour spill line, and the Spill Contingency Plan implemented immediately.

4. 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.

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. Empty propane cylinders are flown back to Yellowknife for re-filling, and returned to site.

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

5. 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 daily (monthly during care and maintenance) and any secondary containment structures will be reviewed daily 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 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

6. 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.

7. 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

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 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 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
- If there is a danger of explosion get away!
- 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 Camp Manager or 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

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