



TRUE NORTH SAFARIS LTD

Yellowknife NT

Spill Contingency Plan and Emergency Response 2022

Mackay Lake Lodge

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Purpose and Scope

This spill contingency plan has been developed with the purpose of minimizing potential hazards to the environment, people, and communities. This plan outlines the proper protocols to follow in order to minimize all safety hazards, environmental effects, and cleanup cost. It also serves as a guide to the duties of responders. All employees and contractors working at Mackay Lake Lodge, True North Safaris will be required to familiarize themselves with this plan.

Mackay Lake Lodge (True North Safaris) is located on Mackay Lake, Northwest Territories. Fuel caches will be established on the property as needed. A maximum of 3000 Litres of gasoline and 1000 litres of diesel stored on site. The lodge is adjacent to Mackay Lake on an extensive glaciofluvial esker, coordinates of location 63.9703 N and 110.4273 W.

This plan describes the spill contingency measures to be employed at Mackay Lake Lodge.

Introduction

This plan has been developed to outline the actions taken in the event of a spill of hydrocarbon product or hazardous materials. All employees and contractors are required to familiarize themselves with this plan. The responsibilities of key personnel are defined, along with procedures for spill response that will minimize hazards to health and safety, damage to the environment, and cleanup costs. This plan has been prepared to provide easy access to the required information needed for spill response.

TABLE 1: KEY PERSONNEL

Name	Position	Contact Information
Malcolm Jaeb	President/camp manager	867-688-1560
Patricia Andre	Kitchen Manager	867-688-5160
Lloyd Drygeese	Operations Manager/Head guide	867-444-0756
Gary Jaeb	Yellowknife Manager	867-688-1009

Equipment and machinery that may be used at McKay Lake Lodge includes:

Number	Type/Description	Size (weight in tonnes)	Proposed use
1	Grader	~6 tonne	Levelling and grading of the airstrip
1	Dump Truck	~11 tonne	Movement of material for airstrip grading/repair
1	Front End Loader	~6 tonne	Airstrip grading/repair
2	Generators	N/A	Power for garage.
1 to 2	Pickups	~ 5 tonne	Movement of equipment/fuel throughout the land use area
2	Tractors	~ 1 tonne	Care and maintenance on air strip

1	Flat bed truck	~ ½ tonne	Transport camp material (Luggage, food etc.)
1	Cargo Van	~ ½ tonne	Transport clients and bags
2	Portable gas 1200 watt and 7000 watts generators	500 lbs	Power supply
1	Pontoon boat & motor	~800 lbs	Guest transportation
8	Fishing boats and motors	18 ft lunds	Fishing with clients
1	ATV Side by side	~500	Client transportation
2	ATV	~700 lbs	Client transportation

Fuel types to be used by these items include:

- Jet A, Jet B,
- gasoline, diesel,
- kerosene and propane.

Other materials used will include lubricants and hydraulic fluids.

Non-pressurized liquid hydrocarbons are typically stored in a 205 L steel drums, plastic jerry cans, or engineered tanks such as in enviro tanks. Pressurized hydrocarbons (propane) are typically stored in upright, 45 kg cylinders. Lubricants and hydraulic fluid are stored in sealed containers. All fuels and other hazardous materials are checked for indications of leakage or spillage. All the gasoline and diesel are stored on a lined gravel pad near the airstrip.

Leaks or spills will most likely happen as a result of poor seals, improper fuel transfer, mishandling of containers, accidental punctures of fuel lines and wildlife interactions. All fuel lines and connections are checked daily for leakage. Drip trays are placed under all motorized equipment and absorbent padding is secured around connections to minimize the impact of leaks.

The most likely location for spills or leaks to occur are:

1. Fuel storage areas.
2. Aircraft landing and turn around.
3. Equipment using fuel.

Initial response:

If a leak or spill of hydrocarbons or other hazardous materials is suspected.

1. Ensure personal safety by maintaining a safe distance.
2. Alert other personnel to ensure their personal safety.
3. Never approach a spill without proper training.
4. Alert appropriate personnel (Camp manager, pilot) and follow instructions.
5. If trained and conditions allow, the spill should be stopped and contained.
6. Record the pertinent information on spill status.

7. Report to spill immediately to the 24 hour NWT spill report line 867-920-8130 Or online at www.enr.gov.nt.ca/en/spills.
8. Resume or continue action to contain, stop, or clean up the spilled material.

Personnel and responsibilities:

1. Pilots - Report any spills or leaks related to aircraft operations directly to the camp manager, Malcolm Jaeb by cell phone at #867-688-1560 or by Landline on site at #780-628-6272 .
2. Site maintenance personnel - check and document fuel storage containers for leaks or damage on the routine basis. Make sure that the spill response kits are properly supplied and up to date. Report any spills or leaks directly to the camp manager.
3. Camp manager - when spills or leaks are detected ensure the safety of personal and the environment, assess the situation. Communicate to other personnel (as necessary), call in emergency personnel (see list below in reporting procedures) if required and reports spills to relevant authorities and company management.

Reportable spills in the Northwest Territories

The following table was taken from the website <https://www.enr.gov.nt.ca/en/services/report-spill>

TABLE 2: REPORTABLE SPILL QUANTITIES IN THE NWT

NOTE: L= LITER, KG= KILOGRAM, PCB= POLYCHLORINATED BIPHENYLS, PPM = PARTS PER MILLION

Substance	Reportable Quantity
Explosives <ul style="list-style-type: none"> • Compressed gas (toxic/corrosive) • Infectious substances • Sewage and Wastewater (unless otherwise authorized) • Radioactive materials • Unknown substance 	Any amount
Compressed gas (Flammable) <ul style="list-style-type: none"> • Compressed gas (Non-corrosive, non-flammable) 	Any amount of gas from containers with a capacity greater than 100L
Flammable liquid	≥100 L
Flammable solid <ul style="list-style-type: none"> • Substances liable to spontaneous combustion • Water reactant substances 	≥ 25 kg
Oxidizing substances	≥ 50 L or 50 kg
Organic peroxides	≥1 L or 1 kg

Environmentally hazardous substances intended for disposal	
Toxic substances	≥ 5 L or 5 kg
Corrosive substances	≥ 5 L or 5 kg
<ul style="list-style-type: none"> Miscellaneous products, substances or organisms 	
PCB mixtures of 5 or more ppm	≥ 0.5 L or 0.5 kg
Other contaminants--for example, crude oil, drilling fluid, produced water, waste or spent chemicals, used or waste oil, vehicle fluids, wastewater.	≥ 100 L or 100 kg
Sour natural gas (i.e., contains H₂S)	Uncontrolled release or sustained flow of 10 minutes or more
Sweet natural gas	
Flammable liquid	≥ 20 L
Vehicle fluid	When released on a frozen water body that is being used as a working surface
Reported releases or potential releases of any size that: <ol style="list-style-type: none"> are near or in an open water body; are near or in a designated sensitive environment or habitat; Pose an imminent threat to human health or safety; or Pose an imminent threat to a listed species at risk or its critical habitat. 	Any amount

Any releases, regardless of quantity, are to be reported if near or into a body of water, designated sensitive environment or sensitive habitat, poses imminent threat to listed species at risk or its critical habitat, or is uncontrollable.

Reporting procedures

All spills of petroleum products or hazardous materials must be reported to the NWT spill report line (867 920-8130) or online at <https://www.enr.gov.nt.ca/en/services/report-spill> to ensure that investigation is conducted by the appropriate government and regulatory authority. For more information and see www.enr.gov.nt.ca/en/services/report-spill.

Emergency Personnel:

Name	Position	Contact Information
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Malcolm Jaeb	President/camp manager	867-688-1560
Patricia Andre	Kitchen Manager	867-688-5160
Lloyd Drygeese	Operations Manager/Head guide	867-444-0756
Gary Jaeb	Yellowknife Manager	867-688-1009

Other phone contact numbers for additional information or assistance:

- GNWT Department of Environment and Natural Resources 867-767-9055
- Mackenzie Valley Land and Water Board Yellowknife 867-669-0506
- Environment and Climate Change Canada Yellowknife 867-669-4700
- GNWT Land Use Permit Inspector cell 867-446-0769/office 867-767-9188
- Department of Fisheries and Oceans Canada 867-669-4900
- Worker’s Compensation Board 867-669-4418
- NWT Fire Marshal 867-873-7469
- RCMP Yellowknife 867-669-1111
- Stanton Territorial Hospital Yellowknife 669-4111

Spill response

1. Spills will be cleaned up promptly.
2. Any reportable spills will be immediately reported to a 24-hour spill report line 867-920-8130 or online at www.enr.gov.nt.ca/en/spill.
3. All spills will be reported internally to the appropriate company representatives (Refer to [emergency personnel](#) in section above).
4. All regulatory reporting requirements will be followed.
5. Spill kits with PPE and absorbant materials will be available at the fuel storage locations.

Aircraft spills

If spills or leaks occur during aircraft refilling, slinging, transporting or handling of fuel. It is the responsibility of the contractor follow these guidelines or more stringent internal guidelines. If not accomplished to the satisfactory of the regulatory authorities, then it is the responsibility of the company to carry out procedures listed above.

Actions to minimize spills

1. Conduct routine inspections of fuel caches and transfer points.
2. Use drip pans and or absorbent material at the transfer points and under stationary equipment.
3. Train personnel in proper fuel handling and spill response procedures.
4. Helicopter crew should regularly inspect the fuel slinging gear.

Contaminant and cleanup guidelines

In addition to the initial response actions, the following steps should be completed:

- a) Identify the source
- b) If possible and safe, contain a spill at the source
- c) Stop any filling operations if the receiving container is leaking
- d) Check valves and seals. Stop using valves if leaking

- e) Transfer fuels out of leaking containers
- f) Place impermeable material and absorbent material below the leak to minimize seepage

Spills on the land:

- a) Creating a soil berm down the slope of leaking material.
- b) Place impermeable material at the foot of a berm to allow pooling of leak material.
- c) Use appropriate absorbent material to soak up fuel. Larger quantities of fuel may be pumped into empty drums.
- d) Use a light covering of absorbent material to remove films of petroleum products.
- e) In winter, contaminated snow or ice should be moved into drums or on impermeable material.
- f) Material must be transported to an approved disposal or recovery site.
- g) With safe and with regulatory approval, in situ combustion may be used as a disposal method.

Snow/Ice spills:

- a) Construct a trench or ditch to channel and control the flow of spilled product.
- b) Compact any snow lying along the outside perimeter of the control ditch.
- c) Construct a snow Dyke or dam.
- d) Use impermeable lining material to create an impervious barrier.
- e) Direct material away from water courses.
- f) Collect the spilled material for disposal.
- g) Residuals left from the controlled combustion of spilled material must be packaged and properly disposed.
- h) Use an auger to locate material that has moved under ice
- i) Cut slots with chainsaw and remove blocks.
- j) Use suction hose if available to clean up spills.

Spills on water:

- a) Contain water spills quickly.
- b) Use floating booms for containment.
- c) Fuel contained within the circle of the boom will be recovered using sorbent materials or pumps and placed into barrels or bags for disposal.
- d) Absorbent matting material may be used to capture any floating product.

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

Chemical spills:

- a) Assess The hazard of this building material using SDS.
- b) Assemble the appropriate PPE and safety equipment before response.
- c) Apply absorbent pads to soak up any liquid.
- d) Place impermeable sheets over dry chemical to prevent dispersion and wildlife interaction.
- e) Neutralize the acid or caustics then package clean up material in an empty field room for disposal.
- f) Contact the 24 hour spill report line 867-920-8130 for additional instructions on disposal methods and locations.

Loss of external load:

Loss of external load of fuel, oil or chemical often results in the catastrophic failure of the container. Prompt containment and clean up is vital

- a) Notify camp immediately and give GPS coordinates along with height and amount of loss.
- b) Camp will notify 24 hour spill report line 867-920-8130.
- c) Administer the appropriate procedure for spills on land, water or ice.

Disposal:

- a) Contaminated soil or vegetation will be placed on impermeable liners and burned or packaged for backhaul
- b) Contaminated absorbent pads should be placed in a container for offsite disposal at KBL Environmental. Location? Need approval for NWT facilities

Other response alternatives:

Chemical response methods may also be available and consist of:

- a) Dispersants
- b) Emulsion treatment.
- c) Visco-elastic Agents
- d) Herding agent
- e) Solidifiers
- f) Shoreline cleaning agents.

Biological response methods may include nutrient enrichment and microbial seeding

Training

All personnel will be oriented as to the location of the spill kits, their contents and use, potential and nature of spill hazards, and locally available to spill control materials. In addition, all employees and contractors will be familiarized with documented procedures and given a copy upon arrival at the site. Plan details will be posted in the camp

Resources

Camp resources full-time

1. Spill kits
2. Handtools
3. Wheel barrel
4. Absorbent pads
5. Water
6. PPE
7. First aid kits
8. Satellite telephone

Camp resources part-time:

1. Fixed wing aircraft
2. Helicopter

3. Boat
 Snowmachine
4. Automobile
5. Tractor and loader

Spill kit items:

1. Tyvek splash suits
2. Chemical resistant gloves
3. 10 large garbage bags with ties
4. Oil only booms 5" 10'
5. Oil only mats 16 inches x or and? 20 inches
6. Absorbent socks
7. Absorbent pads
8. Two large tarps
9. One roll tuck tape
10. One utility knife
11. Notebook and pencil
12. Copy of these guidelines
13. Aluminum scoop shovels

All items are to be stored in a plastic tub or barrel which is clearly marked and suitably labelled

Hazardous material information

The following is a summary of potential hazardous materials found on site and that are used for field operations and the typical containers in which the product may be found. See labels on the containers and or SDS for details spill response and safety advice.

- Chemical - Diesel fuel, P 50, P 40 with additives
- Typical containers-205 L steel drums usually black engineer tanks such as in enviro tanks
- Hazards-fire explosion environment

- Kerosene-
- Typical containers-205 L steel drums usually black engineered tanks such as enviro tank
- Hazards- fire explosion environment

- Jet A/ Jet B
- Typical containers- 205 L steel drums usually black with the yellow stripe
- Hazards Fire explosion environment

- Unleaded gasoline
- Typical containers-205 L steel drum usually red 10 to 25 L Jerry cans engineer tanks such as Enviro tank
- Hazards-Fire explosion environment

- Liquefied propane

- Typical containers-45 kg pressurize cylinder
- Hazards-fire explosion

- Hydraulic oil
- Typical containers- 1 L jug 20 L pail
- Hazards-Fire environment

- Lubricants
- Typical containers-1 L jug 20 L pail
- Hazards fire environment

- Battery acid
- Typical container-battery containers
- Hazards burn corrosion environment

Emergency procedures-General

Despite the best efforts of a health safety and environmental management system to identify and reduce the risk of workplace hazards, incidents do occur, you need to know how to respond in the event of an emergency. You will be given specific training and instructions for the work site. The following general guidelines apply to any situation

Make yourself safe

- a) Determine the cause of the incident and if the emergency is over.
- b) Identify immediate dangers and get away from them.
- c) Assist others to evacuate the area.
- d) Take action to minimize the danger and if you have the training and the equipment available.

Treat the injury

- a) Check if you are injured at either treat yourself or ask for help from a first aider.
- b) Assist other injured people and render first aid

Assess the situation

- a) Identify and minimize or avoid any secondary hazards
- b) Determine available resources (Shelter, food, water, first aid supplies, fuel and communication) carefully plan and ration their use.
- c) Determine your position and the location of the nearest help

Call for help

- a) Use whatever means available to notify outside emergency help. Try to communicate with your supervisor first.
- b) Be ready to provide your name company name location assistance required (medical takes first priority) and your available resource
- c) Verify that your information has been received correctly

- d) Listen carefully and write down any instructions

Stay at your location and prepare for rescue

- a) Remain at your location unless it is unsafe to do so.
- b) Carry out instructions provided by outside help.
- c) Plan how to assist in making rescue quick and effective.

Remain calm think before you take action and prevent the ??Internet from becoming worse. Help will be dispatched, but it is vital to know your correct location and current situation

Fire procedures

In arctic winter conditions exposure to the cold can be just as deadly as fire itself. Everyone must prepare for the possibility of having to evacuate their quarters in the middle of the night.

You must always keep a warm coat in your cabin and wear appropriate indoor and outdoor shoes for the conditions around camp in case you have to leave the cabin to go outside immediately

If you hear a fire alarm or three blast from my hand held airhorn these procedures are to be followed

- a) Treat all fire alarms as if they were an actual fire.
- b) In case of a fire, pull the nearest fire alarm or sound blast with a hand held airhorn three blasts.
- c) If the fire can be put out with an extinguisher do so after you have sounded the alarm ??if you are awake and buy an alarm grab your coat and footwear and get out.
- d) If you are awakened by an alarm and you smell smoke do not stand up roll out of bed and stay close to the floor as possible. Collect your coat and foot wear quickly and exit the tent cabin. If the door is hot to touch use the window for secondary exit.
- e) Everyone is to meet in the designated muster area ? for client and crew count report to management or supervisor at once.
- f) Do not leave the designated muster area. Your manager supervisor will give you further instructions.
- g) Under no circumstances are you to attempt to retrieve personal belongings or sample materials until you have the authorization to leave the muster area.

Safety equipment

- a) Wear safety glasses and appropriate gloves while fuelling equipment from bladders and when operating hand powered tools.
- b) Wear ear protection in generator building or anywhere loud noises are prevalent.
- c) Boat should be equipped with proper safety equipment (Life jackets, Baylor rope, whistle, paddle, emergency tool kit, suitable spare parts, spark plugs, etc.)
- d) Life jackets or immersion suits should be worn at all times went boating.