

# **FUEL MANAGEMENT PLAN**

**MUSKOX DIAMOND PROPERTY  
NUNAVUT, CANADA**



**Original Effective Date: June 2015  
Amended Effective July 2015**

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## 1 Introduction

This Fuel Management Plan (FMP) applies to mineral exploration activities conducted by, or on behalf of APEX Geoscience Ltd. ("APEX") at the Muskox Diamond Property ("the Property"), Nunavut, Canada.

This FMP will come into effect July 2015, pending approval. Copies and updates to this plan may be obtained via APEX.

### 1.1 Contact Details

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### 1.2 Purpose and Scope

The primary objective of the Muskox Diamond FMP is to provide straightforward procedures for the storage and handling of fuels for the purpose of reducing the risk of environmental contamination and to ensure the health and safety of all personnel from the accidental release of deleterious materials. The FMP includes the following:

- Promote safe handling and use of all types of fuel.
- Reduce the likelihood of spills of all types of fuel.
- Identify responsibilities and procedures for all staff and contractors.
- Provide site specific information about the facilities and contingencies in place.
- Comply with federal and territorial government regulations and guidelines pertaining to transportation, storage, handling and disposal of any type of fuel.

### 1.3 Other Plans

The FMP should be considered as a part of the Property wide management system. Other management plans in place at the Muskox Diamond Property include:

- Abandonment and Restoration Plan (ARP)
- Emergency Response Plan (ERP)
- Environmental Management Plan (EMP)
- Spill Prevention and Response Plan (SPRP)
- Waste Management Plan (WMP)

### 1.4 Property and Camp Description

The Muskox Diamond Property is located in the Kitikmeot Region of the Nunavut, within the 1:250,000 scale NTS map sheets, 76E, 76L and 86I. The Property is approximately 250 km southeast of the community of Kugluktuk and is in close proximity to the inactive

Jericho and Lupin Mines. The Property consists of three project areas: the James River, Muskox and Contwoyto Prospects (Figure 1 in Appendix 1).

The proposed exploration program will be supported by a mobile, temporary, 10-12 person exploration camp. As the Property is separated into three projects areas, three camp locations have been identified to support exploration at each prospect. Each camp, with fuel cache, will be established and reclaimed sequentially and therefore no more than one camp will be in use at one time. The exact timing of use for each of the camps is unknown at this time, but the AANDC, NWB and NIRB will be notified as soon as these dates are known. Personnel and cargo will be transported to and from camp in the summer months by fixed wing (Twin Otter) from Yellowknife and due to the close proximity to the Tibbitt to Contwoyto Ice Road can be serviced by ground in the winter. Due to the remoteness of the Property location, the only people, who would be immediately affected by a potential spill, are employees and contractors.

The proposed camp locations were selected due to appropriate terrain composed of a consolidated and durable surface, such as gravel or sand, which is able to withstand repeated, heavy use from aircraft and camp use. Structures for each of the proposed camps may include 6 sleeper tents, medical tent, kitchen, dry, office, shop, core shack, generator housing, incinerator, and 2 outhouses. The majority of the structures will be insulated Weatherhaven tents, or similar, with tarp floors (Figure 2 in Appendix 1).

A fuel cache of approximately 40,000 L (~ 200 drums) will be established on stable ground near the camp location in use, primarily to store diesel and jet fuel. Small quantities of gasoline and propane will also be stored. GPS locations of the camp fuel cache, hazardous waste storage areas and incinerator will be provided to the AANDC, NWB and NIRB once established and included in annual reports. No fuel will be stored at the camp locations that are not in use. Small temporary fuel caches, of less than 4,000 L, may also be required to supply the drilling and exploration programs. Within 30 days of any temporary fuel cache, the appropriate agencies will be notified of the details of the cache including: GPS location, fuel type, container sizes, method of storage and date of removal. The temporary fuel cache GPS locations will also be included in the annual reports submitted to the AANDC, NWB and NIRB.

The proposed exploration activities for the Muskox Property include geological mapping, till sampling, prospecting, ground geophysical surveys and diamond drilling. The 2015 exploration program is projected to start as early as July, or as soon as proper authorizations can be obtained, and has the potential to continue through the winter. Similar programs are anticipated for 3 to 4 subsequent years.

For 2015, a drill program of 5,000 to 10,000 m is proposed, utilizing one to two diamond drills. The average hole depth is expected to be approximately 200 m, up to a maximum proposed depth of 700 m. The areas of proposed drilling are currently uncertain as preliminary exploration work, such as ground geophysical surveys, is required to define precise targets. Exact drillhole locations will be provided to the AANDC, NWB and NIRB in the annual reports. All exploration work will be strictly confined to within the authorized Prospecting Permits (Figure 1 in Appendix 1).

## 2 Fuel Inventory

A main fuel cache will be established adjacent to the occupied camp, primarily to store diesel and jet fuel, with smaller quantities of gasoline and propane. There will be no fuel stored at un-occupied camp locations. Small fuel caches will also be established at drill sites while drilling is in progress. These temporary caches will store small amounts of diesel and propane, as needed for drilling. All diesel, jet fuel, and gasoline at the Muskox Diamond Property will be stored in standard, sealed and labeled 205 litre (L) metal drums. Propane will be stored in standard 100 lb cylinders.

Table 2.1: Inventory of Fuels to be Stored on Site

<b>Material</b>	<b>Container</b>	<b>Maximum On Site*</b>
Diesel	205 L Drum	100 Drums
Jet Fuel (Jet A or Jet B)	205 L Drum	100 Drums
Gasoline	205 L Drum	10 Drums
Propane	100 lb Cylinder	20 Cylinders

\*Pending approval from AANDC, NWB and NIRB.

The Project Supervisor is responsible for maintaining a detailed fuel and hazardous material inventory, and is in charge of overseeing the maintenance and monitoring of all fuel and hazardous material caches.

## 3 Storage and Containment

All fuels and other hazardous materials will be stored within “Arctic Insta-Berms”, or similar products, for secondary containment. These types of berms utilize chemical and fire resistant fabric (generally polyurethane coated nylon or vinyl coated polyester material) designed for extreme arctic temperatures and puncture resistance. “RainDrain” or similar hydrocarbon filtration systems will be used to safely remove any water collected inside the berms, and as a safeguard against any potential overflows of contaminated water.

Fuel drums will be stored on their sides in organized rows with the bungs in the three o'clock and nine o'clock positions. Drums will be stood upright 1 to 2 days prior to use in order to allow any contaminants to settle. Daily inspections will be conducted to identify any damaged or leaking containers. In the event that a leak is discovered, the substance will either be used immediately or transferred to an undamaged container.

Propane cylinders will be equipped with a pressure release valve that opens and closes to prevent a buildup of excessive internal pressure. Labels, showing data such as date of manufacture and re-testing dates, will be applied to the collar of the cylinders. Propane is non-toxic and will not contaminate soil, however secondary containment berms will be used for storage as a precaution. All propane cylinders will be secured for safety and stored away from any sources of ignition.

All fuel storage and fuel transfer areas will be located a minimum distance of 31 m from the normal high water mark of any water body. Spill kits and firefighting equipment will

be strategically located near where any hazardous materials are stored or transferred, at all drill sites, in the helicopter(s), and at other locations throughout the camp.

#### 4 Fuel Transportation and Transfer

All fuel will be mobilized to camp by fixed wing aircraft. Drums will be inspected prior to being transferred to camp and between camps to identify any defects (i.e. torn, missing, or twisted gaskets, etc.); a second inspection will be performed upon arrival at camp. Regulations outlined in the Transportation of Dangerous Goods Act, and other relevant legislation, will be observed at all times during transport. Fuel drums will be slung by helicopter as needed to drill sites. All drums will be inspected for leaks and defects prior to and after helicopter transport. Empty drums will be removed from site for proper disposal.

Electric or hand wobble pumps equipped with filtration devices will be used for the transfer of diesel, jet fuel, and gasoline from their storage containers directly to their end-use fuel tanks. Portable drip trays or mini-berms will be used to mitigate the risk of any spillage, and fully stocked spill kits will be available at all refueling stations. Proper grounding procedures will always be used during fuel transfer while using an electric pump. Cigarette smoking, sparks, open flames, and any potential ignition sources are prohibited within 100 m of any fuel storage site and at all times during fuel transfer.

When transferring fuel, the drum will be stood upright and blocked with the high side at 12 o'clock, the bung at 3 o'clock, and the vent at 9 o'clock to prevent water or dirty fuel from reaching the openings. The standpipe will be placed in a manner so that it will not be able to reach the lowest point in the drum, thus ensuring any contaminants will remain in the drum.

Any personnel who are required to handle or store fuel will receive appropriate training, including instruction in the operation and maintenance of fuel transfer and storage equipment. All on-site personnel will receive training as outlined in the Muskox Diamond Property "Spill Prevention and Response Plan".

#### 5 Signs, Labels, and Inspections

All drummed fuel will be clearly labeled in accordance with the Workplace Hazardous Materials Information System (WHMIS) and other applicable legislation. Labels will include, but not limited to, the type of fuel, safe handling procedures, reference to Material Safety Data Sheets (MSDS), company name, and the date of delivery to site. Signs with the same information, along with MSDS for each fuel type will be posted at each fuel storage or transfer site. "No Smoking" signs will be posted at each fuel cache, drill site, and fuel transfer area.

All fuel drums will be inspected upon arrival at camp, and before and after helicopter transport. Monitoring of drums, fuel transfer equipment, and fuel caches will be ongoing during the exploration program. Daily inspections will be conducted to identify any damaged or leaking containers, and the findings reported in the "Daily Fuel Inspection Record". Any damage discovered during or as a result of transport will also be recorded. Any leaks or spills will be reported and contained as outlined in the Muskox Diamond

Property “Spill Prevention and Response Plan”. A copy of the Daily Fuel Inspection Record is attached in Appendix 2.

The Project Supervisor is responsible for supervising the monitoring and inspection program, and keeping a detailed inventory of all fuel and other hazardous materials on site.

## 6 Spill Kits

Spill kits will be located at each fuel cache, storage area, and refueling station. See the Muskox Diamond Property “Spill Prevention and Response Plan” for further details regarding spill kits, and spill response and reporting procedures.

## 7 Applicable Legislation and Guidelines

Acts, regulations, and legislation that apply to the storage, handling, and transport of fuel are presented in the following

### 7.1 Federal

- Canadian Centre for Occupational Health and Safety Act
- Canadian Environmental Protection Act
- Fisheries Act
- Nunavut Waters and Nunavut Surface Rights Tribunal Act
- Transportation of Dangerous Goods Act
- National Fire Code of Canada
- Northern Land Use Guidelines
- Workplace Hazardous Materials Information System (WHMIS)
- CCME Environmental Codes of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products
- Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations
- Guidelines for Spill Contingency Planning (AANDC)

### 7.2 Territorial

- Fire Prevention Act
- Environmental Protection Act
- Mine Health and Safety Act and Regulations
- Safety Act
- Nunavut Occupational Health and Safety Regulations
- Environmental Guideline for the General Management of Hazardous Waste

## Appendix 1: Figures



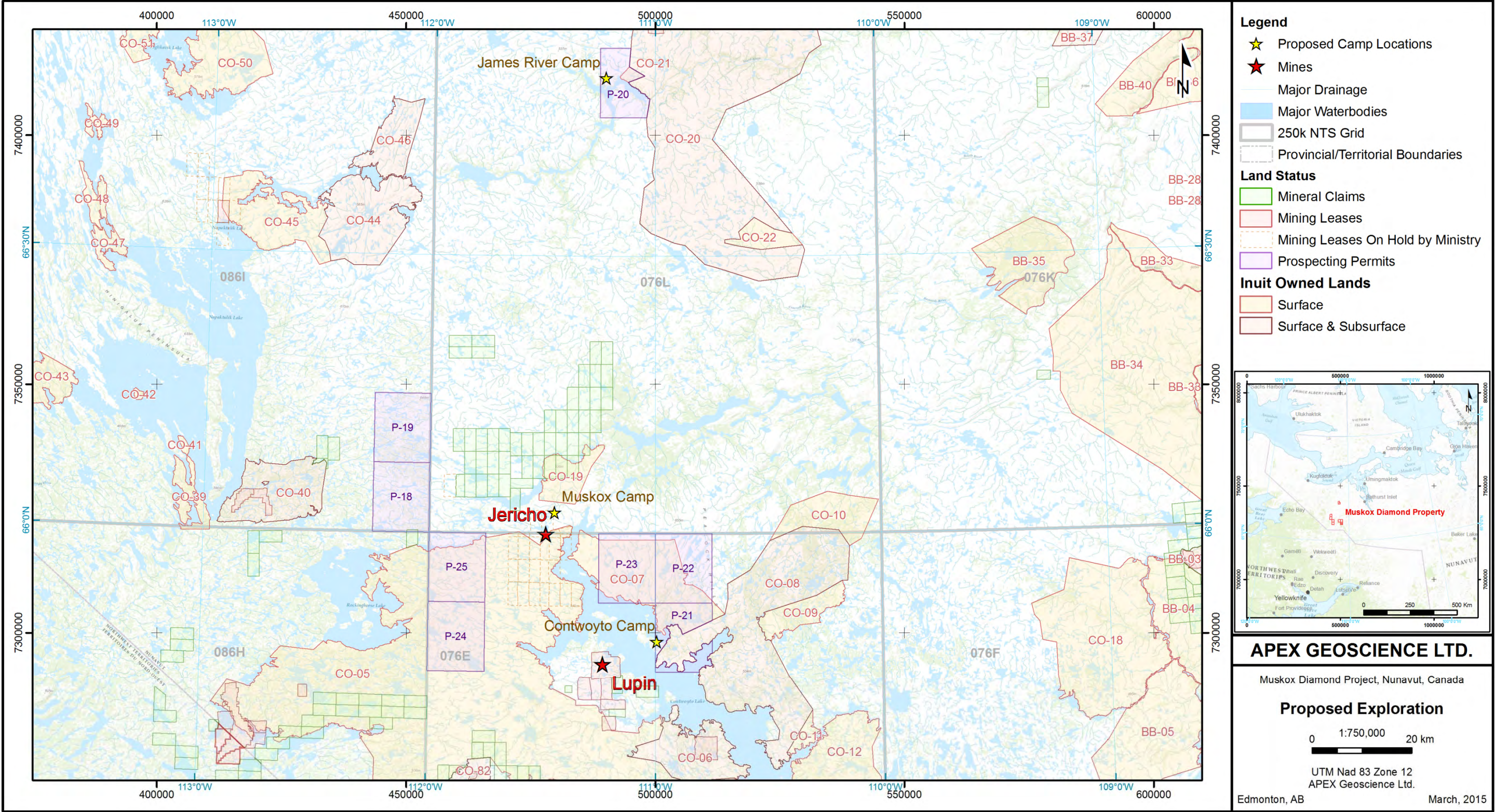


Figure 1



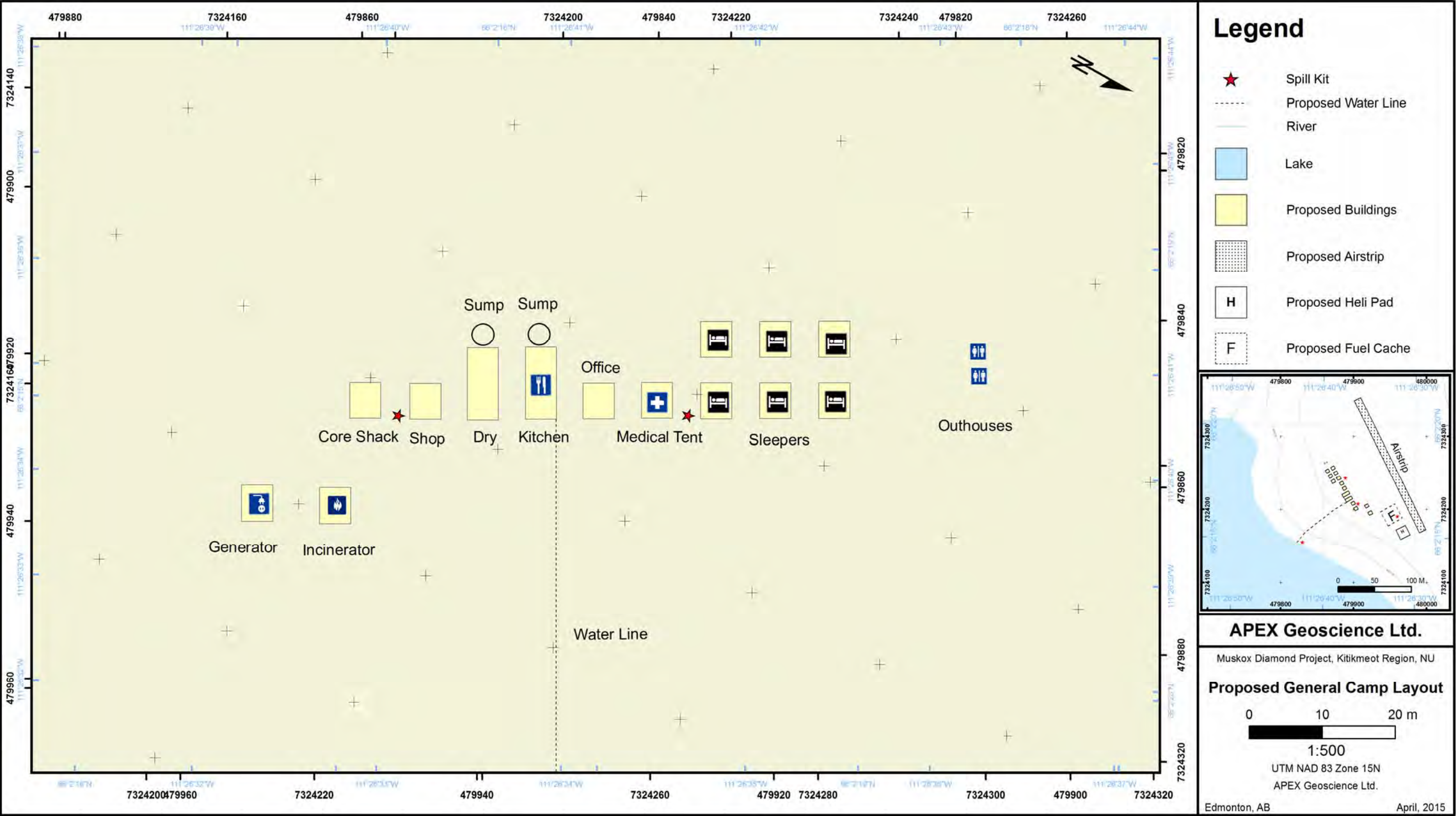


Figure 2

## Appendix 2: Daily Fuel Inspection Record

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