# **FUEL MANAGEMENT PLAN**

FOR THE ASTON BAY PROPERTY (Formerly the Storm Property) NUNAVUT, CANADA



Prepared By:



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#### 1. Introduction

This Fuel Management Plan (FMP) applies to mineral exploration activities conducted by, or on behalf of, Commander Resources Ltd. ("Commander"), Aston Bay Holdings Ltd. ("Aston Bay") or APEX Geoscience Ltd. ("APEX") at the Aston Bay Property (formerly the Storm Property), Somerset Island, Nunavut.

The Aston Bay Property is a joint venture between Commander and Aston Bay, where Commander is the primary tenure holder and Aston Bay is the operator. APEX has been retained by Aston Bay and Commander as a consultant and is authorized to act on behalf of Aston Bay and Commander with regard to the Aston Bay Property. This FMP will come into effect June 2015, pending approval. Copies and updates to this plan may be obtained via APEX, Commander or Aston Bay.

#### 1.1 Contact Details

**Commander Resources Ltd.** 

11th Floor, 1111 Melville St. Vancouver, BC V6E 3V6 Tel: (604) 685-5254 Fax: (604) 685-2814

www.commanderresources.com

Aston Bay Holdings Ltd.

222 – 400 E. Evergreen Blvd. Vancouver, WA 98660 Tel: (360) 262-6969 www.astonbayholdings.com **APEX Geoscience Ltd.** 

200 – 9797 45th Ave. Edmonton, AB T6E 5V8 Tel: (780) 439-5380 Fax: (780) 433-1336

www.apexgeoscience.com

#### 1.2 Purpose and Scope

The primary objective of the Aston Bay Property 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 Aston Bay 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 Project and Camp Description

The Aston Bay Property is located east of Aston Bay on Somerset Island, Nunavut, covering an area roughly 63 kilometres (km) long by 42 km wide (Figure 1 in Appendix A). It is approximately 112 km south of the community of Resolute Bay and about 1,500 km northwest of Iqaluit within the 1:250,000 scale NTS map sheet 058C. The Property includes the zinc-silver Seal Prospect and multiple copper showings, collectively known as the Storm Prospect.

Access to the Property is typically restricted to privately chartered helicopter or fixed wing aircraft from Resolute Bay, or the Arctic Watch Lodge, a wilderness adventure resort, located approximately 50 km north of the Property, on Cunningham Inlet.

Activities at the Aston Bay Property are anticipated to include regional soil and rock sampling, geological mapping, and ground geophysical surveys as well as diamond drilling at the Storm and Seal Prospects (Figure 1 in Appendix A). Typically, mineral exploration work in the region is seasonal, and can start as early as June and continue until as late as September. All exploration activities at the Aston Bay Property will be helicopter supported.

Commander is currently permitted, licensed and authorized to establish a small camp and conduct the diamond drilling at the Aston Bay Property (formerly Storm Property) in accordance with the Aboriginal Affairs and Northern Development Canada (AANDC) Land Use Permit N2010C0003, Nunavut Water Board (NWB) License 2BE-STO1015 and Nunavut Impact Review Board (NIRB) file number 10EN013. The AANDC permit is set to expire May 16, 2015. A new land use application is currently being applied for in Aston Bay's name, as they are the operator of the project. A water licence amendment and renewal is currently under application in the name of Commander. The water licence amendment will include a relocation of the camp

and an increase to the quantity of water. The water licence will ultimately be converted into Aston Bay's name.

A 10 to 12 person seasonal tent camp is proposed to support exploration activities at the Aston Bay Property. A small temporary camp was constructed in the summer of 2014, at the site of an abandoned Cominco Ltd. ("Cominco") exploration camp, located at approximately 73°42′30" N latitude and 94°43′15" W longitude (Figures 1 and 2 in Appendix A). The abandoned camp site included a small air strip and is the storage site for the historic Cominco drill core. It is adjacent to a river, from which camp water was drawn. Upon completion of the 2014 program, the camp was removed, with the exception of the Cominco drill core, 10 drums of aviation fuel, 17 drums of diesel fuel, 2 propane tanks, one wooden emergency structure and an outhouse, all of which are intended to be used in future programs. In addition, 90 empty drums are stored at the camp site and a fuel cache near Aston Bay. The empty drums will be removed during the 2015 field program. All wastes were separated into combustible, recyclable or hazardous (petroleum products, batteries, etc.) and subsequently removed from site to be properly disposed in an authorized facility in Resolute Bay.

During the 2014 program, a new camp location was scouted due to the limitations of the airstrip located at the current camp. A suitable new camp location was located at approximately 73°39′20″ N latitude and 94°27′34″ W longitude (Figure 2 in Appendix A). While the new camp is being constructed, the old camp will be used as an emergency backup and then subsequently removed and the site remediated. The AANDC Inspector will be notified upon completion of the site remediation, and a summary of the remediation efforts will be submitted as part of the 2015 annual report.

The proposed camp location is along the Aston River, from which camp water can be drawn (Figure 2 in Appendix A). Structures for the proposed camp 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 plywood floors. Figure 3 in Appendix A shows a possible layout for the proposed camp.

A drill program of 5,000 to 10,000 m is proposed for the 2015 season, 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. Similar programs are anticipated for 3 to 4 subsequent years. The areas for the proposed diamond drilling at the Storm and Seal Prospects are defined in figures 1 and 2 in Appendix A.

## 2. Fuel Inventory

Two small fuel caches exist at the old 2014 camp site, comprising 10 drums of aviation fuel, 17 drums of diesel, and 2 propane cylinders. This fuel will be used and the empty drums removed during the 2015 program. Spill kits will be located at each cache until the old camp site is decommissioned.

Table 2.1: Inventory of Fuels Stored at the 2014 Camp

Material	Container	Quantity on Site		
Diesel	205 L Drum	17 Drums		
Jet Fuel (Jet A or Jet B)	205 L Drum	10 Drums		
Propane	100 lb Cylinder	2 Cylinders		

A main fuel cache will be established adjacent to the new proposed camp, primarily to store diesel and jet fuel, with smaller quantities of gasoline and propane. Small fuel caches (under 4000 L) 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 Aston Bay Property will be stored in standard, sealed and labeled 205 litre (L) metal drums. Propane will be stored in standard 100 lb cylinders.

Table 2.2: Inventory of Fuels to be Stored on Site

Material	Container	Maximum On Site*		
Diesel	205 L Drum	500 Drums		
Jet Fuel (Jet A or Jet B)	205 L Drum	500 Drums		
Gasoline	205 L Drum	25 Drums		
Propane	100 lb Cylinder	50 Cylinders		

<sup>\*</sup> 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 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 Aston Bay 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 Aston Bay Property "Spill Prevention and Response Plan". A copy of the Daily Fuel Inspection Record is attached in Appendix B.

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 Aston Bay 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 A: Figures** 

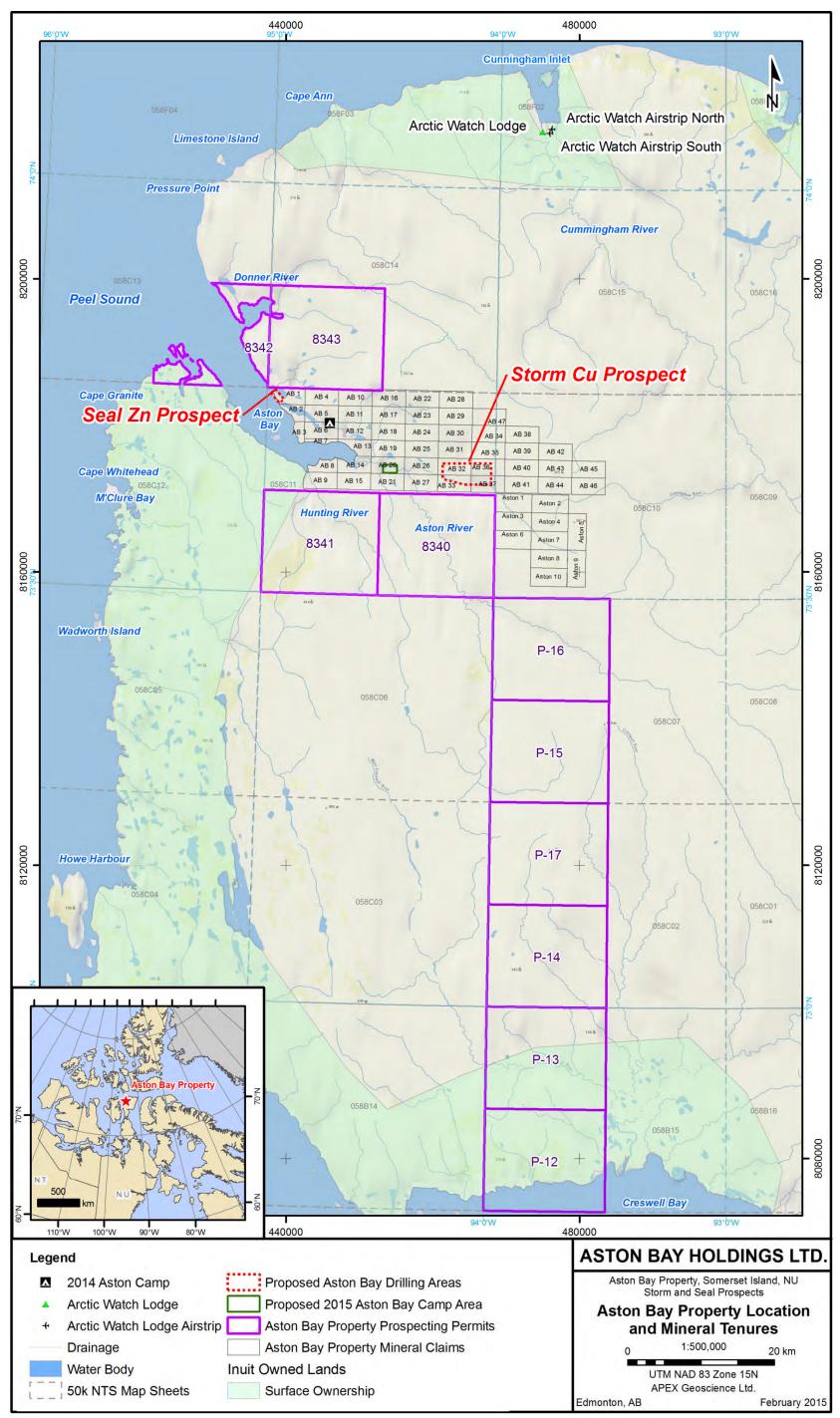


Figure 1

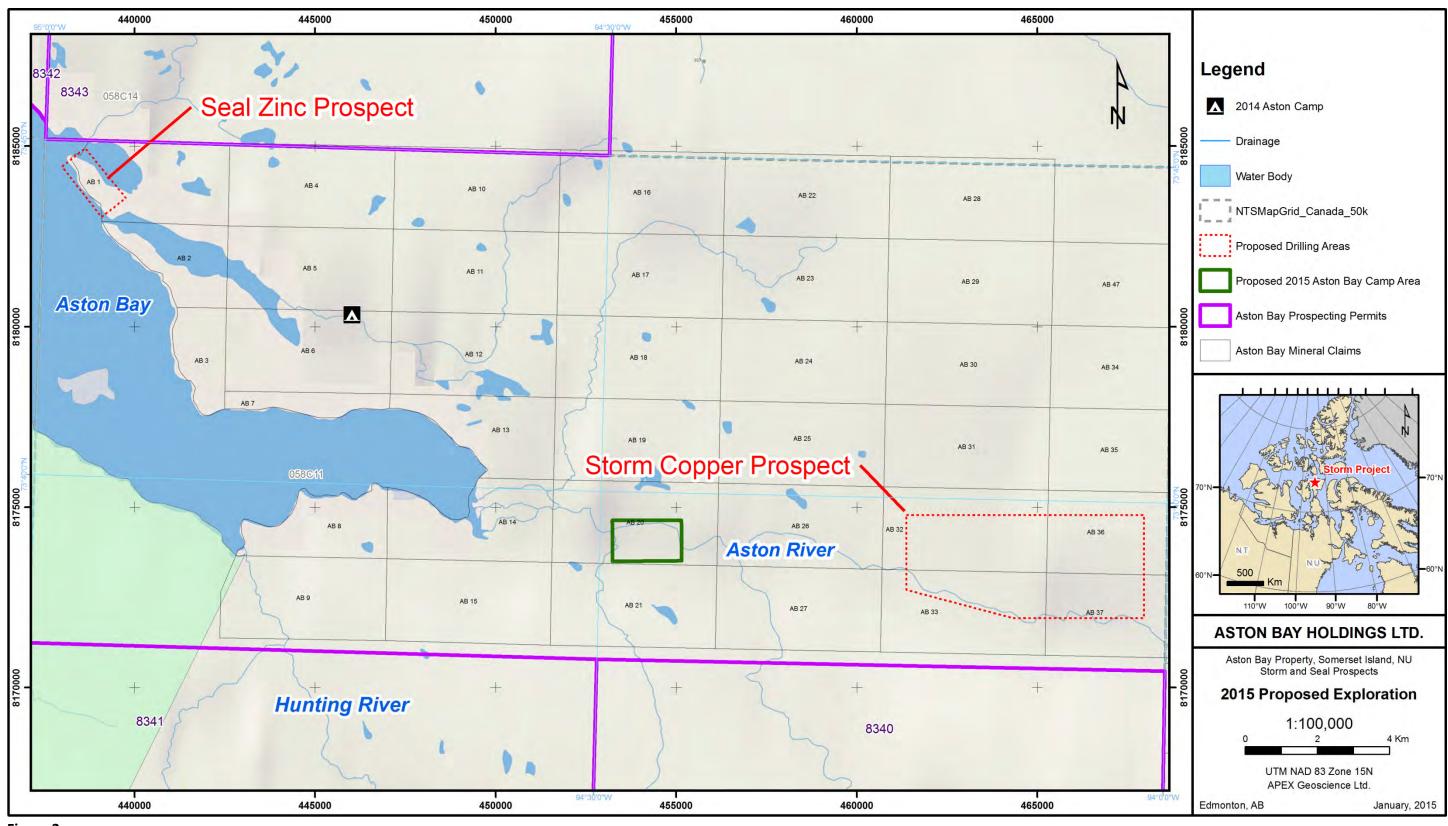


Figure 2

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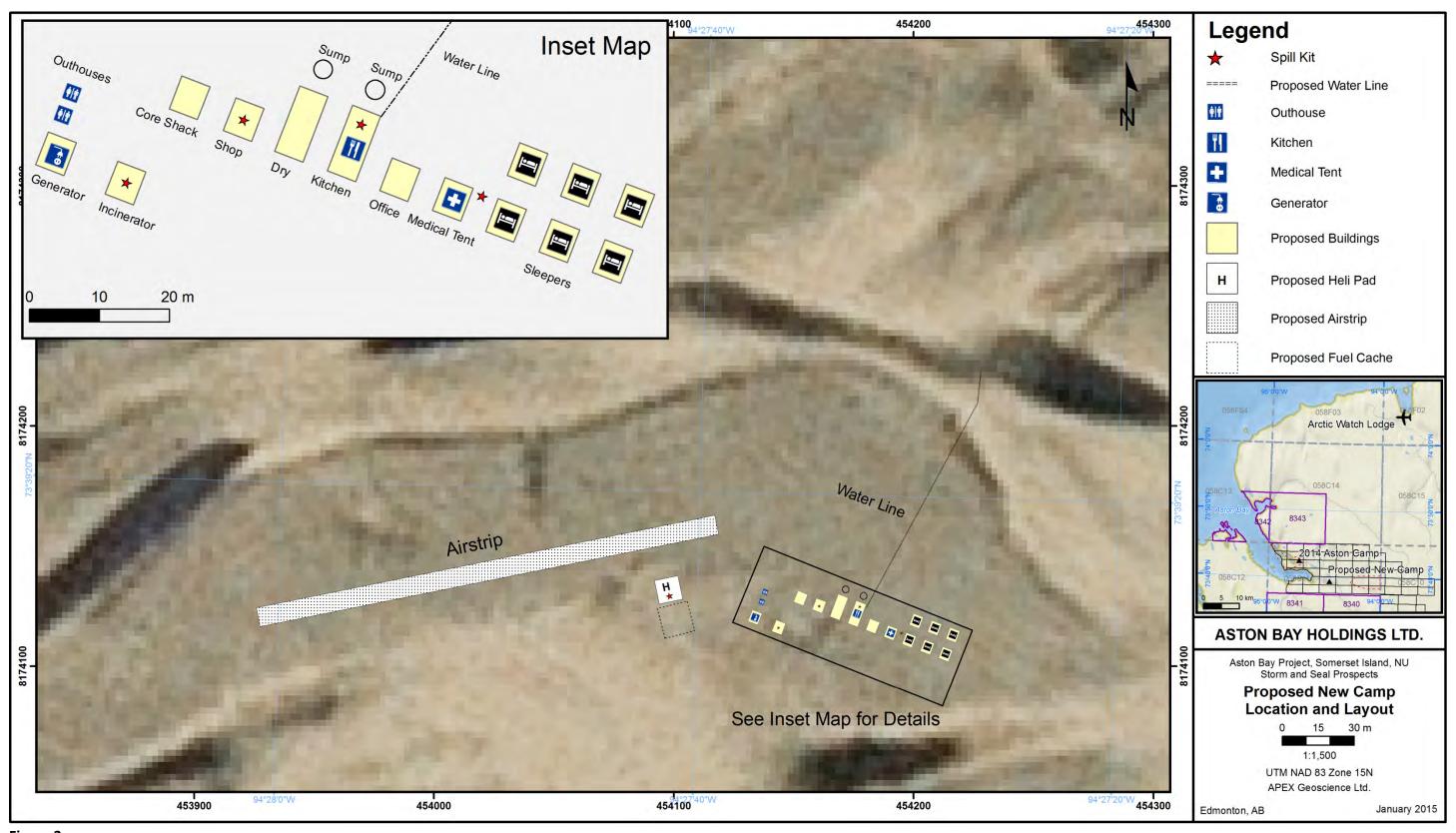


Figure 3

Effective June 2015

# **Appendix B: Daily Fuel Inspection Record**

# Aston Bay Property Daily Fuel Inspection Record

Date	Main Cache	Generator Shack	Refueling Station	Tent Drums	Drill Site	Insta-Berm	Bungs & Rims	Corrosion	Hoses/Valves/Fittings	Spill Kit/Fire Extinguisher	Signs	Comments
Example 25 July, 2025	x					no tears, damage, or leaks; rain drain functioning properly	all bungs and rims sealed properly; no leaks detected	minor corrosion on diesel drums of batch B - should be used before batch C	all fuel transfer equipment functioning properly; no leakage detected	spill kit is fully stocked; fire extinguisher inspection up to date	all signs are posted and undamaged	Example
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