



FUEL MANAGEMENT PLAN

Kahuna Property

Dunnedin Ventures Inc.

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1 Introduction

This Fuel Management Plan (FMP) shall be in effect from November 8, 2017 and has been specifically prepared for the Kahuna Property. Dunnedin Ventures Inc. (Dunnedin) Kahuna Property is located between the communities of Rankin Inlet (Kangiqtinik) and Chesterfield Inlet (Igluigaarjuk) in the Kivalliq Region of Nunavut.

The purpose of this Fuel Management Plan is to ensure that the storage, transportation and handling of fuel and chemical materials is done in a manner that is environmentally sound and safe to personnel and contractors. A copy of this plan will be kept in the office at site and at the head office in Vancouver. Copies of this plan may be obtained from Dunnedin Ventures Inc.

This Fuel Management Plan should be used in conjunction with other property plans and best management practices. Other plans at the Kahuna Property include:

- Abandonment and Restoration Plan
- Emergency Response Plan
- Environmental and Wildlife Management Plan
- Field Safety Manual
- Spill Prevention and Response Plan
- Waste Management Plan

1.1 Corporate Details

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1.2 Project Description

The Kahuna Property comprises 145 mineral claims encompassing 166,463 hectares of land located on NTS map sheets 0550/02, 0550/03, 0550/04, 0550/05, 0550/06, 0550/07, 055J/13, 055J/14, 055N/01 and 055N08. The southern boundary of the property adjoins the north boundary of subsurface Inuit Owned Land (IOL) parcel RI-01, approximately 25 kilometres northeast of Rankin Inlet. The northeast corner of the property is located approximately 10 kilometres southeast of Chesterfield Inlet. The northwest corner of the property is located approximately 75 kilometres west of Chesterfield Inlet. The Property extends north, south, east and west between Latitudes 62°58' and 63°19' North and Longitudes 90°44' and 92°13' West (UTM coordinates: 6,983,000mN to 7,023,000mN and 539,000mE to 614,000mE, NAD83, Zone 15). A total of 82 mineral claims have surface rights covering 87,570 Ha that are within, or partially within, the boundaries of surface Inuit Owned Land parcel CI-15.

Exploration activities on the Kahuna Property are currently permitted under INAC Land Use Permit N2015C0019, KIA Land Use Licence KVL315B01, KIA Land Use Licence KVR16F01 and NWB Water Licence 2BE-KDP1722.

The exploration program planned and proposed for 2018 will consist of rock, till and soil sampling, prospecting and geological mapping, ground geophysical surveying, diamond drilling, reverse circulation drilling and bulk sampling.

An amendment application has been submitted to NPC and NIRB to authorize a temporary field camp and fuel cache on Crown Lands under INAC Land Use Permit N2015C0010, and authorize domestic water use for the temporary camp under NWB Water Licence 2BE-KDP1722. The temporary camp will be used to support exploration activities authorized by Dunnedin's permits and licences.

Members of the Chesterfield Inlet HTO provided assistance and recommendations for the selected location of Dunnedin's new field camp. A large, flat topped esker feature was recommended as the best location. The site is on Crown Lands approximately 40 kilometres northeast from Rankin Inlet and 50 kilometres southwest from Chesterfield Inlet at 575,975mE and 6,990,875mN in Zone 15, UTM NAD83. The camp will operate seasonally from March through September. The field camp will accommodate up to 20 people and will be comprised of: 1 kitchen tent, 1 office tent, 1 dry tent, 1 utility tent, 1 core logging tent, 7 supplementary sleep tents, a Pacto latrine facility, a small generator shed and 2 arctic grade containment berms. The structures will consist of a combination of WeatherPort vinyl tents, canvas prospectors' tents and small plywood sheds. The field camp will be fully closed and dismantled completely once exploration activities cease. The site will then be reclaimed and restored to its original state. Full details regarding the temporary field camp can be found in the "2018 Work Plan".

1.3 Applicable Legislation and Guidelines

Acts, Regulations, and Legislation that applies to the storage, handling and transport of fuel include but are not limited to:

1.3.1 Federal

- National Fire Code of Canada (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)
- Workers' compensation Board
- Canadian Environmental Protection Act
- Fisheries Act
- Environmental Protection Act
- Guidelines for Spill Contingency Planning, INAC
- Draft Fuel Storage and Handling Guidelines, April 2009, Indian and Northern Affairs Canada - Nunavut

1.3.2 Territorial

- Fire Prevention Act
- Nunavut Waters Act
- Nunavut Surface Rights Tribunal Act
- Draft Recommended Best Practices for the Storage and Handling of Petroleum and Allied Petroleum Products on Federal Crown Lands in Nunavut
- Nunavut "Guideline for the General Management of Hazardous Waste"

- The Mine, Health and Safety Act and Regulations (Nunavut)
- The NWT and Nunavut Safety Act, the Occupational Health and Safety Regulations

2 Training

Proper use and monitoring is paramount to safe fuel storage and handling. Personnel that will be tasked with handling and inspecting will be required to receive proper and adequate training. This training will include, but not be limited to the following areas:

- Operations/Maintenance
- Spill Response
- WHMIS

3 Fuel Inventory

Diesel, jet fuel, propane and gasoline will be stored at the Kahuna Property. These fuels must be stored in a manner that minimizes risks to the environment, personnel/contractors and camp, while minimizing and preventing the potential impact of infrastructure developments. The majority of fuel to be cached on the property will be transported via Challenger and cargo sled during winter months on the overland winter trail. Additional fuel may be delivered to site via helicopter during the summer months.

Dunnedin's existing permits and licenses include authorization for 3 fuel caches that together contain an aggregate of 75 drums (205L each) of jet fuel and 120 drums of diesel fuel. Dunnedin requests an increase in the amount of fuel to be cached on the Kahuna Property to support the field camp, the proposed 2018 winter drill program and the summer 2018 exploration program.

A main fuel cache will be established on the east side of the new field camp facilities at 576065mE 6990845mN UTM Zone 15, UTM NAD83. Fuel to be cached on the site will include:

- 150 – 205 L drums of diesel fuel
- 150 – 205 L drums of jet fuel
- 10 – 205 L drums of gasoline
- 20 – 100 lb. cylinders of propane

Temporary supply caches of less than nine drums will be located at drill sites and bulk sampling sites to maintain operations of diamond drilling equipment and bulk sampling equipment, respectively.

Dunnedin endeavors to consume a majority of the cached fuel by the end of each season. Please refer to the "Spill Prevention and Response Plan" for more information.

A complete inventory of all fuel and hazardous materials on site will be recorded at the beginning and end of seasonal operations. The Camp Manager will be responsible for daily inspections of the fuel berms and the monitoring, tracking and recording of fuel inventories while operations are active.

4 Storage and Secondary Containment

The use of fuel is required to support operations on the Kahuna Property. All fuel on the property will be stored in secondary containment fuel berms. These fuel berms will be established and operated in accordance with this Fuel Management Plan and Dunnedin's Spill Prevention and Response Plan.

- All fuel drums will be stored in secondary containment berms.
- All secondary containment berms will be capable of holding 110 percent of the volume of the largest fuel reservoir that is housed within the secondary containment.
- All secondary containment will be of sufficient height and depth to hold any potential spill or failure.
- Secondary containment berms will be made of material (Arctic Grade) that is sufficiently durable to withstand Nunavut's climate and the natural terrain.
- Secondary containment berms will be equipped with hydrocarbon filtration systems (rain drains) to safely remove water that is collected inside the berms.
- Secondary containment berms will be inspected daily during operations.
- Within the secondary containment berms fuel drums will be stored in rows on their sides with bungs facing at the 3:00 and 9:00 position.
- Propane cylinders will be stored standing up and away from any potential sources of ignition.
- All drums, tanks, valves, regulators and hoses will be regularly inspected for cracks or leaks.
- Drummed fuel used for heating tents will be placed in secondary containment behind each tent.
- All fuel storage sites will be located a **minimum** of 31 metres from the normal high-water mark of any water body and will be inspected regularly.
- Spill Kits will be placed and will be easily identifiable with clear signage at each fuel storage site.
- "NO SMOKING" signs will be erected at each fuel storage area.
- Smoking, open flame and any potential sources of ignition are prohibited within 31 metres of any fuel storage site.
- Empty fuel drums will be removed from site regularly.

Chemicals and hazardous materials that may be located on the Kahuna Property include limited volumes of motor oil and hydraulic oil, cleaners, batteries, electronics, fluorescent light bulbs/tubes and small quantities of hydrochloric acid. All such materials will be stored on drip trays in their original containers.

A limited supply of motor oil and hydraulic oil will be located in the utility tent at the temporary field camp. Oil containers will be kept on a drip tray with a spill kit nearby. Hydrochloric acid is used for core logging in very small amounts (<0.5 litre) and will be kept in a sealed container in the core shack. Cleaners (solvents) will be kept in a designated area on a drip tray and in their original containers. Cleaners, batteries and fluorescent light bulbs/tubes will be kept in their original containers.

Please refer to the "Spill Prevention and Response Plan" for MSDS sheets that accompany these materials and the "Waste Management Plan" for additional information.

5 Handling, Transfer and Transportation

Fuel will be transported to the property via Caterpillar Challenger and sleds during the winter and via helicopters in the summer in accordance with the regulations outlined in the Transportation of Dangerous Goods Act and Transport Canada Aviation legislation. Empty drums will be removed from the property regularly and shipped to an authorized facility for recycling or disposal.

Manual and electric pumps will be used for the transfer of petroleum products. Smoking, sparks, or open flames are **prohibited** in fuel storage and fuel transfer areas at all times. Spill kits will be placed with clear signage in all fuel storage and fuel transfer areas. When transferring fuel from drums those drums will be placed upon platforms underlain by a secondary containment.

Preventative mitigation measures include:

Handling and Transfer

- Fuel transfer hoses with cam lock mechanisms to prevent leakage are used.
- Fuel absorbent pads are placed appropriately to protect from drips and spills.
- Personnel will carefully monitor fuel content in the receiving vessel during transfer and always have absorbent pads available while transferring fuel.
- Any drips or leakages are cleaned immediately.
- All operating personnel will be trained in proper fuel handling and spill response procedures.
- Smoking, open flame and any potential sources of ignition are prohibited within 31 metres of any fuel storage site and fuel transfer locations.
- “NO SMOKING” signs will be erected at each fuel transfer area.
- Equipment maintenance and servicing will be conducted in designated areas. Equipment will be underlain by absorbent pads and spill trays for lubricant changes.
- Funnels will be used to reduce the potential for spillage.
- Waste fuels, oils and fluids will be collected in sealed 20 litre pails or sealed 205 litre drums and will be labelled appropriately and stored in secondary containment berms.
- Empty fuel drums will be removed from site regularly.

Please refer to Dunnedin’s Kahuna Property “Spill Prevention and Response Plan” in the event of a spill.

6 Signs and Labels

All drummed fuel will be clearly labeled in accordance with the Workplace Hazardous Materials Information System (WHMIS) which includes the name of the company and the type of fuel contained within. Signs will be erected at each fuel cache with the same information. “NO SMOKING” signs will be erected at each fuel cache and fuel storage area.

7 Inspections

The Camp Manager will be responsible for daily inspections of the fuel berms and the monitoring, tracking and recording of fuel inventories while operations are active. Secondary containment berms will be inspected for signs of punctures, failures, leaks, etc. Drums will be inspected for proper storage, leaking bungs, cracks and punctures. Any issues noted will be remediated immediately.

8 Spill Kits

A spill kit capable of addressing potential spills (based on type, location and volume of fuel cache) shall be located at each fuel cache, storage area and re-fueling station. Refer to the “Spill Prevention and Response Plan” for more information.