SPILL PREVENTION AND RESPONSE PLAN

Kahuna Property

Dunnedin Ventures Inc.

Original Version Submitted: November 2015
Revised Version Submitted: November 8, 2017
Revised: February 13, 2018

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1 Introduction

This Spill Prevention and Response Plan (SPRP) was submitted in 2015 and updated as of November 8, 2017 and has been specifically prepared for the Kahuna Property. The property is located between the communities of Rankin Inlet (Kangiqtiniq) and Chesterfield Inlet (Igluigaarjuk) in the Kivalliq Region of Nunavut (Appendix A). 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. (Dunnedin).

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. Activities permitted include: rock, till and soil sampling, prospecting and geological mapping, ground geophysical surveying, diamond drilling, reverse circulation drilling and bulk sampling.

1.1 Corporate Details

Dunnedin Ventures Inc.
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www.dunnedinventures.com

1.2 Purpose and Scope

Dunnedin Ventures Inc. has prepared this SPRP for drilling, bulk sampling, exploration activities and field camp operations being undertaken on the Kahuna Property. The purpose of this document is to provide a plan of action in the event of a hazardous spill and to mitigate, to the fullest extent possible, the risk of environmental contamination from the accidental release of deleterious materials by providing clear procedures for their storage and handling as well as clear plans of action in the case of such a release. This plan demonstrates that Dunnedin Ventures Inc. has appropriate response procedures and measures in place to effectively contain and recover spills in an efficient manner.

Dunnedin Ventures Inc. will take every reasonable precaution towards ensuring the protection and conservation of the natural environment, the safety and health of Dunnedin Ventures Inc. employees and contractors and protecting the community at large from harmful effects of its materials and operations.

1.3 Project Description

The Kahuna Property comprises 145 mineral claims encompassing 166,463 hectares of land located on NTS map sheets 055O/02, 055O/03, 055O/04, 055O/05, 055O/06, 055O/07, 055J/13, 055J/14, 055N/01 and 055N08 (Appendix A). 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 Project 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.

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 N2015C0019, 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.

1.4 Facilities

1.4.1 Field Camp

To mitigate daily helicopter transits to and from Rankin Inlet, and for safety reasons associated with winter work conditions, Dunnedin is seeking authorization for a temporary field camp located centrally on the Kahuna Property and proximal to high priority exploration targets. The camp will operate seasonally from March through September.

More than 10 different locations were investigated as potential sites for the new field camp. Members of the Chesterfield Inlet HTO provided assistance and recommendations for the final site selection. The recommended location for Dunnedin's temporary field camp 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.

Dunnedin's temporary field camp will accommodate up to 20 people and will be comprised of:

- 1 - Kitchen Tent
- 1 - Office Tent
- 1 - Dry Tent
- 1 - Core Logging Tent
- 1 - Utility Tent
- 1 - Toilet Facility (Pactos)
- 7 - Crew Accommodations (1 tent will house the First Aid Attendant and First Aid Equipment)
- 1 - Generator Shack
- 1 - Portable Fuel-Fired Incinerator
- 2 – 5m x 20m Arctic Grade Containment Berms

Structures will consist of a combination of WeatherPort vinyl tents, canvas prospectors' tents and small plywood structures. All fuel storage and usage areas will be located at least 31 metres from any water body or drainage course.

At the end of the 2018 field season, the WeatherPort vinyl tents and plywood structures will be left standing and ready for use for Dunnedin's 2019 field program. All canvas tent covers will be removed from tent frames during the fall and winter shut down period. The camp will be fully closed and dismantled

upon completion of all exploration activities. The site will then be reclaimed and restored to its original state.

1.4.2 Fuel Storage

Dunnedins' existing permits and licences 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. 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. Additional fuel may be delivered to site via helicopter during the summer months.

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

All fuel drums will to be stored in Arctic grade secondary containment berms equipped with Spilfyter RailMat 3 ply hydrocarbon absorbent fabric and Rain Drain hydrocarbon filters for water drainage. All fuel storage berms, fuel drums, fuel transfer and fuel staging areas will be will be located a minimum 31 metres from any water body or drainage course. All fuel storage berms, fuel drums, fuel transfer and fuel staging areas will be inspected regularly and will be equipped with easily visible and readily available spill kits.

Empty drums will drained and stored in a designated area and will be removed from the property regularly to be transported south for recycling or disposal at an authorized facility. Dunnedin will endeavor to consume the majority of the cached fuel by the end of each season. Please refer to the "Fuel Management Plan" and "Spill Prevention and Response Plan" for more information.

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.

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 in their original containers. Refer to the "Waste Management Plan" for the types, quantities and method of storage.

Material Safety Data Sheets (MSDS) for these and other petroleum based products used during the bulk sampling and drilling programs are located in Appendix C.

Fuel caches will be located in natural low-lying depression more than 31 metres (100 feet) from the normal high water mark of any body of water to be consistent with INAC Land Use Permits and KIA Land Use Licences. Temporary fuel caches will be contained in a portable fuel containment berm. Fuel cache inspections will occur on a regular basis for leaks, damaged or punctured drums.

Empty fuel drums will be backhauled to Rankin Inlet by Challenger and sled during the winter months and by helicopter during summer operations. The government of Nunavut Department of Environment monitors the movement of hazardous waste, including waste fuel. This is done through a tracking document known as a Waste Manifest. The Waste Manifest must and will accompany all shipments.

All fuels for exploration purposes, i.e. Jet B, gasoline and diesel are stored in 205 litre (45 gal) metal drums. Propane is stored in standard 100lb propane tanks. A spill kit will be located at each fuel cache.

1.5 Equipment

Equipment that will be used on the Kahuna Property is included in Table 1 below.

TABLE 1: EQUIPMENT LIST

Type	Size	Purpose
Helicopter - 1	A Star, Long Ranger (or similar)	Transportation - crews & equipment
Core Drill heli-portable - 1	Boyles 17A or equivalent	Drill testing
Snow Machine - 4	Small to mid-size	Transportation
Water Pump - 2	Gasoline powered	Water supply for drill & field camp
Excavator - 1	Cat 314C Excavator or equivalent	Extract Bulk Sample
Air Track Drill/RC Drill - 1		Drill blast holes/bulk sampling
Caterpillar Challenger 65s - 2 to 4	100 HP, with steel sleds	Mobilize/Demobilize drill, fuel, equipment & bulk sample
Generators -2	20Kw and 12 Kw	Power generation

2 Predicted Environmental Impacts

All hazardous materials pose a threat to the environment if spilled. The following list outlines potential environmental impacts of hazardous materials stored on site:

- Gasoline may be harmful to wildlife and aquatic life. It is not readily biodegradable and has the potential for bioaccumulation in the environment. Gasoline volatizes quickly and can be explosive and a fire hazard in the event of a spill.

- Diesel may be harmful to wildlife and aquatic life. It is not readily biodegradable and has the potential for bioaccumulation in the environment. Diesel volatizes comparatively slowly but represents a fire hazard in the event of a spill.

- Jet fuel may be harmful to wildlife and aquatic life. It is not readily biodegradable and has the potential for bioaccumulation in the environment. Jet fuel volatizes relatively quickly and represents a fire hazard in the event of a spill.

- Propane may be harmful to wildlife and the surrounding environment, and it has the potential to accumulate in the environment. Propane is highly volatile. In the event of a spill it represents an extreme explosive hazard.

- Oils and greases may be harmful to wildlife and aquatic life. They are not readily biodegradable, their volatility is low and they have the potential for bioaccumulation in the environment.

3 Preventative Measures

The following actions are a proactive approach to environmental stewardship. These actions minimize the potential for spills during fuel handling, transfer and storage.

1. Use fuel transfer hoses with cam lock mechanisms.
2. Carefully monitor fuel content in the receiving container during fuel transfer. Always have fuel absorbent pads on hand while transferring fuel.
3. Clean up drips and minor spills as they happen.
4. Regularly inspect drums, tanks and hoses for leaks or potential to leak and for proper storage.
5. Create fuel caches in natural depressions that are located a minimum of 31 metres from the normal high water mark of any water body nearby.
6. Train personnel, especially those who will be operators, in proper fuel handling and spill response procedures.

3.1 Petroleum and Chemical Product Storage

Dunnedin Ventures Inc. will establish a main fuel cache at the site of the remote field camp. Temporary supply caches of nine drums or less will be located at drill sites and bulk sampling sites to maintain operations of diamond drilling equipment and bulk sampling equipment, respectively. Fuel caches will be in accordance with CSA approved methods of storage of drummed product. Inspections of the fuel caches will be conducted during each visit. There will be a spill kit at each fuel cache location.

Preventative measures for the storage of petroleum and chemical products include:

Fuel and Chemical Storage

- All fuels and other hazardous materials will be stored in secondary containment (“berms”).
- All secondary containment 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.

- All drums, tanks and hoses will be regularly inspected for leaks.
- Propane cylinders will be stored standing up and away from any potential sources of ignition.
- Drummed fuel used for heating tents will be placed in secondary containment.
- 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.

Hazardous materials that may be located on the Kahuna Diamond Project include small amounts of hydrochloric acid, cleaners, batteries, electronics, fluorescent light bulbs/tubes, motor oil and hydraulic oil. Materials will be stored in their original containers.

A limited inventory of motor oil and hydraulic oil will be located in the utility tent at the temporary field camp. These products typically come in 1 litre or 4 litre jugs and will be stored in 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 in their original containers. Cleaners, batteries and fluorescent light bulbs/tubes will be kept in their original containers.

3.2 Petroleum Product Handling and Transfer

Manual and electric powered pumps, along with the appropriate filtration devices, are used for the transfer of petroleum products.

Cigarette smoking, sparks, open flame and any other potential ignition sources are prohibited from any fuel storage and fuel transfer site at all times. As a general guideline, all equipment is to be turned off during refueling. A spill kit will be stored in areas of storage and refueling.

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 oils and fluids will be collected in sealed 20 litre pails and will be labelled appropriately and stored in secondary containment berms.
- Empty fuel drums will be removed from site regularly.
- All other transfers will be completed within designated areas within in secondary containment. When secondary containment is not practical (e.g. adding hydraulic oil to the helicopter), absorbent pads will be used to protect from drips and spills.

3.3 Petroleum Product Transport

Shipper

- Ensures proper loading, restraint, containment and documentation, which complies with TDG (Transportation of Dangerous Goods) guidelines.
- Ensures that goods are classified and labelled appropriately. Provide placards if required.
- Ensures safety at all times.
- Ensures proper communication with carrier.

Carrier

- Supervises and ensures proper loading, restraint, containment and documentation, which complies with TDG guidelines.
- Ensures correct volumes for transport, attach placards if required.
- Checks and delivers TDG manifest to receiver.
- Ensures safety of all personnel and equipment.

Receiver

- Supervises unloading procedures.
- Complies with TDG guidelines.
- Ensures safety of containment facilities.
- Ensures maintenance of all pumps and loading/unloading equipment on site.
- Provides on-site emergency communications (telephone, radio).
- Completes regular site inspections of storage facilities.
- Records all shipment manifests. Keeps on-site inventory of dangerous goods.
- Maintains safety procedures at all times.

On-Site Coordinator

- Supervises and organizes spill containment equipment and personnel.
- Reports to internal/external parties.
- Ensures proper safety equipment is available.
- Notifies all personnel of current hazards.
- Provides adequate training for safety and material handling.
- Maintains proper safety procedures at all times.
- Must be compliant with all TDG guidelines.

3.4 Spill Equipment

Complete spill kits are kept on hand at all times at the base of operations and where hazardous materials are being stored. Spill kits contain:

1 – 360 litre/79 gallon polyethylene over-pack drum
4 – Oil sorbent booms (5" X 10')
100 – Oil sorbent sheets (16.5" X 20" X 3/8")
1 – Drain cover (36" X 36" X 1/16")
1 – Caution tape (3" X 500')
1 – 1 lb. plugging compound
2 – Pairs Nitrile gloves
2 – Pairs Safety goggles
2 – Pairs Tyvek coveralls
1 – Instruction booklet
10 – Printed disposable bags (24" X 48")
1 – Shovel

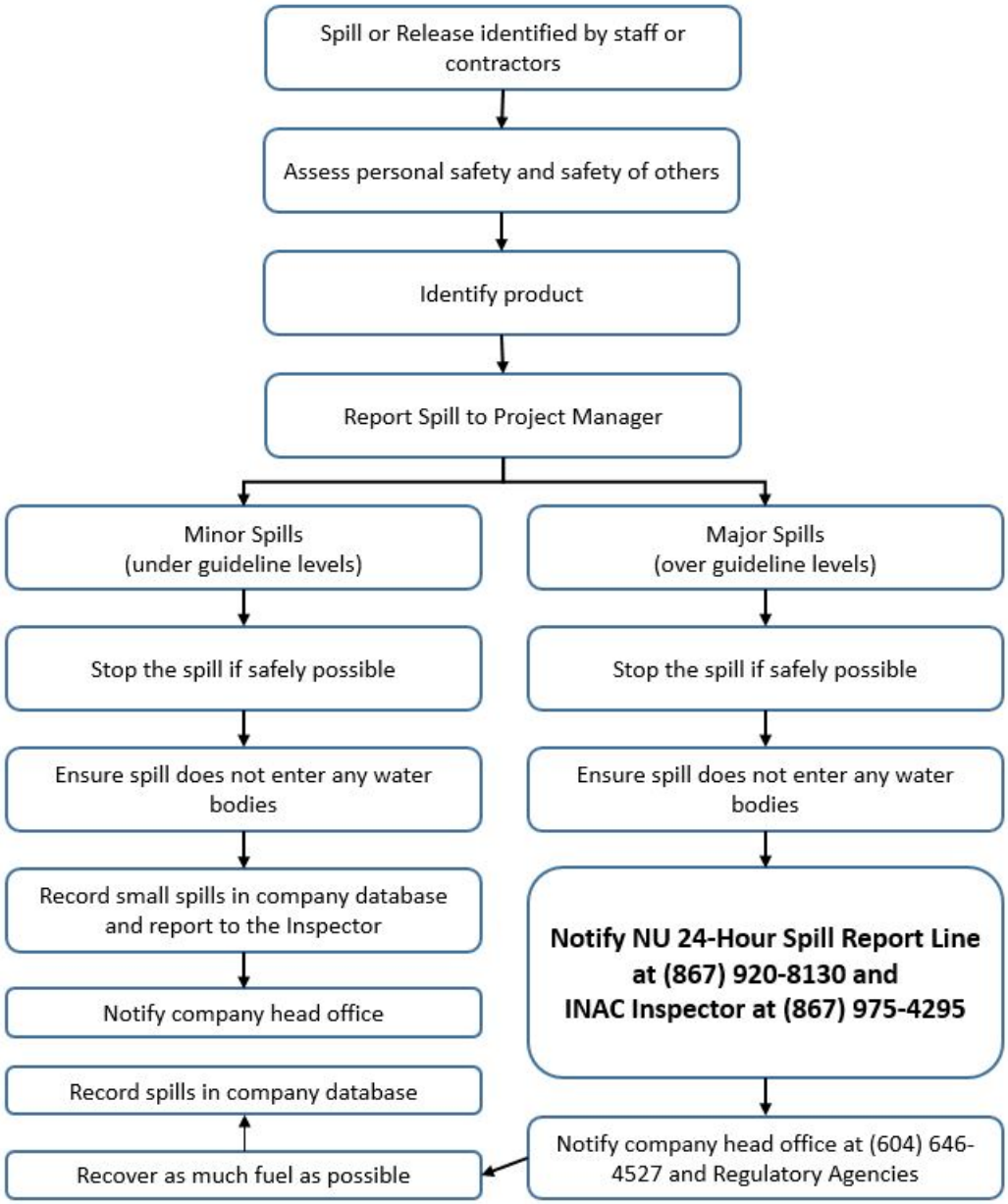
Dunnedin will have a minimum of 30 containment bags ($1m^3$ each) on site to ensure adequate containment of any material that requires removal due to a spill.

Spill kits are located at all fuel berms, fuel storage, fuel handling and transfer stations, and at drill sites. In the event a damaged or leaking drum is noted, at least one empty fuel drum in good condition will be located at each fuel cache to facilitate a transfer of contents into a secure container. Extra absorbent pads will be kept with the helicopter and in any area where refuelling, transferring and/or handling is done.

4 Response Organization

In the case of any spill or environmental emergency, it is necessary to react in the most immediate, safe and environmentally responsible manner. No spill or incident is so minor that it can be ignored and every spill must be reported. Communications are essential when located in a remote area. A summary of available communication equipment is provided in section 4.4.

The follow flow chart depicts spill response organization, as well as the chain of command for responding to a spill or release.



4.1 Basic Steps – Spill Procedures

The basic steps of the response plan are as follows:

1. *Ensure* the safety of all persons at all times.
2. *Identify* and find the spill substance and its source, and, if possible, stop the process or shut off the source.
3. *Inform* the immediate supervisor or his or her designate at once, so that he/she may take appropriate action. Appropriate action includes the notification of a government official, if required; Spill Report forms are included at the back of this plan.
4. *Contain* the spill or environmental hazard, as per its nature, and as per the advice of INAC Water Resources Inspector as required.
5. *Implement* any necessary cleanup or remedial action.

4.2 Basic Steps - Chain of Command

1. Immediately notify the Dunnedin Ventures Head office (604) 646-8351 and report to the 24 Hour Spill Line at (867) 920-8130 (Fax: 867-873-6924), INAC Land Use Resource Management Officer (867) 645-2840 and KIA Land Use Inspector (867) 645-5735.
2. A Spill Report Form (Appendix A) is filled out as completely as possible before or after contacting the 24 Hour Spill Line, VP Exploration, Dunnedin Ventures Inc. (604) 681-0084; Chris Taylor, Chief Executive Officer, Dunnedin Ventures Inc. (604) 646-8351.

4.3 Spill Response/Reporting Contact Information

Table 2: Contact List

CONTACT	CONTACT NUMBER (Tel / Cell)
Chris Taylor, CEO, Dunnedin Ventures Inc.	(604) 646-8351
Andrew Berry, VP Exploration, Dunnedin Ventures Inc.	(604) 765-1892 (cell)
24 Hour Emergency Spill Line	(867) 920-8130 (phone) (867) 873-6924 (fax)
INAC Land Use Resource Management Officer (Rankin Inlet) INAC Rankin Inlet Office	(867) 645-2840 (867) 645-2830
KIA Land Use Inspector (Rankin Inlet)	(867) 645-5735
Helicopter provider	TBD
Rankin Inlet Hospital	(867) 645-8300 (Office Hours) (867) 645-6700 (24 Hours)
Rankin Inlet RCMP; Office Hours / Emergency	(867) 645-1111 (Emergency) (867) 645-0123 (Office Hours)

4.4 Communications

Communications are essential when using isolated camps with aircraft support. Crew members must be taught how to use all of the communication equipment in camp. There are three types of communication that will be used at the Kahuna Property field camp: Infosat digital satellite data / phone link, Iridium satellite phones, hand held VHF radios and Garmin inReach devices. A summary of communication equipment procedures is below.

To use the Infosat satellite phone: (Digital data / phone link - base camp system)

- Dial as for a regular push button telephone.

To use an Iridium satellite phone:

- Press power button to turn unit.
- Unfold antenna and allow it to stand vertically.
- Ascertain 3 to 5 bar signal strength.
- Dial as for a regular push button telephone.
- Press send.

Hand held VHF radio: (personal communication with appropriate frequencies)

- Channels will be established and designated during field operations.
- Press transmit button on side of unit to talk.
- Remove pressure from transmit button to receive.

Garmin inReach devices:

- Important contacts are programmed into the contact list.
- Send messages like you do a text on your mobile phone.
- In the event of an emergency, there is an SOS button on the right side of the device that will initiate emergency response.

5 Spill Response Action Plan

5.1 Potential Spill Hazards

The following is a list of potential spill hazards:

- Drummed products have the potential to leak or rupture. This includes drums of Jet A, Diesel, Gasoline, Waste Fuel, and Waste Oil. Ensure bungs are sealed properly.

- Propane cylinder leaks may occur at the valves. All cylinders are secured at all times. Full fuel cylinders are always stored in the upright position.

- Wheeled vehicles and equipment, aircraft (fixed and rotary wing), diamond drill, reverse circulation drill/air track drill, Caterpillar Challenger, snowmobiles, generators, pumps. Incidents

involving leaking or dripping fuels and oils may occur due to malfunctions, impact damage, and lack of regular maintenance, improper storage, or faulty operation.

Incidents involving leaking or dripping fuels and oils may occur due to malfunctions, impact damage, and lack of regular maintenance, improper storage or faulty operation. Regular inspection and maintenance in accordance with recognized and accepted standard practices at all fuel caches, reduces the risks associated with the categories listed above.

Spill response training is provided to all personnel with particular attention to those personnel who handle fuels and other petroleum products. This training will include a presentation, review of spill kit contents and their use and reporting.

Spill Kits will be located at the field camp and all fuel caches and drill shacks. A description of contents is listed in Section 3.4.

5.2 Initial Action Procedures

1. First steps to take when a spill occurs:

- Ensure your own safety and that of others around you, beginning with those nearest to the scene.
- Control danger to human life, if necessary.
- Identify the source of the spill.
- Notify your supervisor, request assistance if needed.
- Assess whether or not the spill can be readily and safely stopped.
- Contain or stop the spill at the source, if possible, by following these actions.
    - If filling is in progress, STOP AT ONCE.
    - Close or shut off valves.
    - Place plastic sheeting at the foot of the tank, barrel or piece of equipment to prevent seepage into the ground or runoff of fuel.
    - Use absorbent materials (sheets, pads, booms) to absorb and contain the fuel spill.

2. Secondary steps to take:

- Determine status of the spill event.
- If necessary, transfer fuel from a damaged and/or leaking drum or tank into a refuge container.
- Notify the 24 hour Spill Report Line, and receive further instructions from the appropriate contact agencies.
- Complete and fax a copy of the Spill Report Form.
- Notify permitting authorities.
- If possible, resume cleanup and containment.

5.3 Spill Response Actions – Diesel Fuel, jet Fuel, Hydraulic Oil & Lubrication Oil

Take action only if safety permits – stop the source flow if safe to do so and eliminate all ignition sources. **Never smoke** when dealing with these types of spills.

Advice on spill containment and cleanup may be obtained from INAC Resource Management Officer.

Spills on Land

- Build a containment berm using peat, native soil or snow down slope of the seepage or spill.
- Place a tarp at the foot of the berm to allow the fuel to pool for collection and removal. If there is a large volume of spilled product, pump the liquid into empty drums for sealing and disposal.
- Remove the spill by using absorbent pads or excavating the soil or gravel. Petroleum product sheen on vegetation may be controlled by applying a thin dusting of ultra-dry absorbent (e.g. Multi Sorb) to the ground cover. Multi Sorb can also be used to scrub the rock surface.
- Contaminated soil and saturated material will be placed in empty drums or containment bags and shipped from the site for proper disposal. Contact regulatory agencies for approval before commencing removal of any soil, gravel, or vegetation.

Spills on Water

- Deploy hydrophobic (water repellent) absorbent pads on the water to capture small spills. Hydrophobic pads readily absorb hydrocarbons. Alternatively, an ultra-dry absorbent designed for use on water based spills may be deployed.
- For larger spills, ready several empty drums to act as refuge containers for the spill.
- Use containment booms on the water surface to “fence in” the spill area gradually and to prevent it from spreading.
- Absorbent booms can be deployed to encircle and then absorb any hydrocarbon spillage that may have escaped the containment boom.
- Once a boom has been secured, a skimmer may be brought on site to aid in capture of the hydrocarbons. Once captured, the product should be pumped to the empty fuel drums and prepared for proper disposal.

Spills on Snow and Ice

- Build a containment berm using snow around the spill.
- Remove spill using absorbent pads or particulate sorbent material.
- Shovel or scrape contaminated snow and ice into plastic buckets with lids, empty 205L drums or containment bags.

Spills on Muskeg

- Do not deploy personnel and equipment on marsh or vegetation.

- Remove pooled oil with sorbent pads and/or skimmer.
- Flush with low pressure water to herd oil to collection point. Burn only in localized areas, e.g., trenches, piles or windrows. Do not burn if root systems can be damaged (low water table). Minimize damage caused by equipment and excavation.

Storage and Transfer

All contaminated water, ice, snow, soil, and clean up supplies will be temporarily stored in closed, labelled containers. All containers will be stored in a well-ventilated area away from incompatible materials.

Disposal

Any contaminated material will be shipped from site to an appropriate and approved facility. The DOE monitors the movement of hazardous wastes from generators, carriers to receivers, through a tracking document (Waste Manifest). A Waste Manifest will accompany all movements. Dunnedin Ventures Inc. is in the process of applying for a waste generator number with the Department of Environment.

Bioremediation

At the advice, discretion and approval of land use inspectors and permitting or licensing authorities' bioremediation, or land farming, may be implemented to treat certain contaminated soils temporarily contained in sealed drums on the property. Bioremediation is performed in biotreatment cells or the upper soil zone. Contaminated soils or sediments are incorporated into non contaminated soils and periodically turned over or tilled to aerate the mixture.

5.4 Spill Response Actions - Propane

CAUTION EXPLOSIVE. Take action only if safety permits – stop the source flow if safe to do so and eliminate all ignition sources. **Never smoke** when dealing with these types of spills.

On Land

Do not attempt to contain the propane release.

On Water

Do not attempt to contain the propane release.

On Ice and Snow

Do not attempt to contain the propane release.

General

It is not possible to contain vapours when released.

Water spray can be used to knock down vapours if there is no chance of ignition. Small fires can be extinguished with dry chemical of CO_2.

Personnel should withdraw immediately from area unless a small leak is stopped immediately after it has been detected.

If tanks are damaged, gas should be allowed to disperse and no recovery attempt should be made. Personnel should avoid touching release point on containers since frost forms very rapidly.

Keep away from tank ends.

Storage and Transfer
It is not possible to contain vapours when released.

5.5 Spill Response Actions - Chemical Spills

- Assess the hazard of the spilled material. REFER TO THE MSDS SHEETS.
- Assemble the necessary safety equipment before response.
- Apply absorbents to soak up liquids.
- Place plastic sheeting over solid chemicals, such as dusts and powders, to prevent their disbursement by wind or investigation by birds or other mammals.
- Neutralize acids or caustics. Place spilled material and contaminated cleanup supplies in an empty refuge drum and seal for disposal.
- Contact the 24-Hour Spill Line.

5.6 Spill Response Actions - Loss of External Load

The loss of external loads of fuel, oil or chemicals from aircraft may result in the failure of the container that held the product. Immediate response is required.

- Mark the loss target with GPS coordinates and relay to the base of operations immediately. Include the quantity and type of load lost.
- Note whether the load was dropped onto soil, rocks, water or snow and from what height. Determine if the container failed.
- Base of operations will contact the 24-Hour Spill Line.
- Administer appropriate procedure for Spills on Land, Water, Ice or Snow.

6 Training

All employees and contractors are required to be familiar with the Kahuna Property Spill Prevention and Response Plan, and will also be trained for initial spill response methods.

All employees and contractors of Dunnedin Ventures Inc. will be trained in internal policies, management plans, standard operating procedures and made familiar with the Terms and Conditions of the project's licences and permits. Every person arriving at the Kahuna Property will undergo an orientation session which includes information on health, safety, and environmental responsibilities and stewardship.

APPENDIX A

MAPS

APPENDIX B

NUNAVUT SPILL REPORT FORM

AND

GUIDE TO COMPLETE THE SPILL REPORT FORM

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,	REPORT NUMBER -
B	OCCURRENCE DATE: MONTH – DAY – YEAR	OCCURRENCE TIME	☐ OR 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 **OCEAN**
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			

Instructions for Completing the NT-NU Spill Report Form

Spills of hazardous substances can be reported by calling the NT-NU Spill Report Line at (867) 920-8130. Collect calls are accepted. As an alternative, the Spill Report form can be filled out and e-mailed as an attachment to spills@gov.nt.ca. Receipt of e-mail transmissions should be verified with a follow-up telephone call to the Spill Line. Completed forms can also be faxed to the Spill Line at (867) 873-6924.

A. Report Date/Time	The actual date and time that the spill was reported to the spill line. If the spill is phoned in, the Spill Line will fill this out. *Please do not fill in the Report Number:* the spill line will assign a number after the spill. is reported.
B. Occurrence Date/Time	Indicate, to the best of your knowledge, the exact date and time that the spill occurred. Not to be confused with the report date and time (see above).
C. Land Use Permit Number /Water Licence Number	This needs to be filled in only if the activity has been licensed by the Nunavut Water Board or if a Land Use Permit has been issued. Applies primarily to mines and mineral exploration sites.
D. Geographic Place Name	In most cases, this will be the name of the community where the spill occurred. For remote locations, identify the most prominent geographic feature, such as a lake or mountain or the distance and direction from the nearest community
E. Geographic Coordinates	This needs to be filled out if the spill occurred outside of an established community such as at a mine site. The location should be stated in degrees, minutes and seconds of Latitude and Longitude.
F. Responsible Party Or Vessel Name	Identify the person or party who owned or was in control of the substance at the time it was spilled. In the case of a spill from a ship or vessel, include the name of the ship or vessel. Include full address, telephone number and e-mail. Use box K if there is insufficient space. *Note that the owner of the spilled substance is ultimately responsible for any spills of that substance, regardless of who may have actually caused the spill.*
G. Contractor involved?	Were there any other parties or contractors involved? (e.g. a construction company who is working on behalf of the owner of the spilled substance and who may have contributed to, or directly caused the spill and is responding to the spill).
H. Product Spilled	Identify the product spilled. Most commonly this is gasoline, diesel fuel or sewage. Use the chemical name of the substance and, where possible, identify the product using the four digit UN number (e.g. UN1203 for gasoline; UN1202 for diesel fuel; UN1863 for Jet A & B). Avoid trade names.

I. Spill Source	Identify the source of the spill (e.g. truck, ship, home heating fuel tank) and the cause (e.g. fuel tank overfill, leaking tank, ship ran aground, traffic accident, vandalism, storm). Provide an estimate of the extent of the contaminated area (e.g. 10 m^2)
J. Factors Affecting Spill	Identify any factors which might make it difficult to clean up the spill (e.g. rough terrain, bad weather, remote location, lack of equipment). Do you require advice and assistance with the cleanup? Identify any hazards to persons, property or environment (e.g. a gasoline spill beside a daycare centre would pose a safety hazard to children). Use box K if there is insufficient space.
K. Additional Information	Provide any additional pertinent details about the spill. State what action is being taken to clean up the spill, dispose of spilled material or notify affected parties. Attach additional sheets to the spill report if necessary. Number the pages in the same format found in the lower right hand corner of the spill form (e.g. Page 1 of 2). **Number the pages to ensure that recipients can be certain they received all pertinent documents.** If only the Spill Report form was filled out, number the form as "Page 1 of 1".
L. Reported to Spill Line by	Include your full name, employer, contact number and the location from which you are reporting the spill. Use box K if there is insufficient space.
M. Alternate Contact	Identify any alternate contacts. This information assists regulatory agencies to obtain additional information if they cannot reach the individual who reported the spill.
N. Report Line Use Only	*Leave Blank. This box is for Spill Line use only.*

APPENDIX C

MSDS SHEETS

CONTENTS