Camp Fuel Contingency Plan

Introduction

Each of our three to four small research camps will use a single 5 gallon jerry can of gasoline to operate a small generator to provide power for our small 2-3 person camp during a series of 4 to 7 day periods at each site over the course of a two month field season.

We also have five caches of Jet A fuel for use by the supporting helicopter but will not camp at these sites. A water license for these caches has been applied for via INAC. Each of these caches is enclosed in a spill-proof vinyl berm and is accompanied by a fuel spill clean-up kit.

As required in the Nunavut Water Board application process, below our guidelines we will be following to first and foremost prevent a fuel spill and if a fuel spill were to occur the actions we would follow to reduce the risk of endangering the safety of camp researchers and the minimize the impacts of the spill on the environment.

Arrival at Fly Camps

To ensure that there is no fuel leakage during the transportation of camp equipment and researchers, upon arrival at the camp we will inspect the 5 gallon jerry can to ensure there is no fuel leakage or damage to the container. In the event that we find a leak or damage to the jerry can, we will transfer the fuel to an empty vessel.

Preventative Measures

While response plans are necessary in the event a fuel spill occurs, all involved with fuel handling and storage will strive to take all necessary feasible precautions to ensure fuel spills do not occur. To minimize the risk of a fuel spill many preventative measures and standard operating procedures should be implemented. Some key preventive measures include:

Following federal and territorial requirements affiliated with storing fuel based on the amounts, type of storage container and location. One such document that we will be adapting in regards to fuel storage is the Indian and Northern Affairs Canada's (INAC)

"Recommended Best Practices for the Storage and Handling of Petroleum and Allied Petroleum Products on Federal Crown Lands in Nunavut" (2009).

To minimize the risk of a fuel leak or spill we will ensure that:

- All fuel will be stored and transported in approved sealed containers.
- Our portable fuel container (jerry can) will not be placed within 30m of the ordinary high water mark of any water body.
- No fuelling or servicing of equipment will be done within 30m of a water body.
- Precautions will be taken in the transportation and handling of fuels to prevent contamination of soil or water.
- Our portable fuel container will be inspected regularly to detect leaks and overall condition.

Transferring Fuel

Fuel transfers are often the primary causes of fuel contamination, thus all individuals at our research camp will undertake reasonable measures to ensure that fuel transfers are done properly to avoid spills and contamination. In particular our research camp will be aware of the following:

- Safe operation of the generator;
- Fuel transfers will be stored and transferred in such a manner as to prevent all spillage into a watercourse or on the surrounding land.
- The jerry can will be closed immediately after use.
- Containers will not be overfilled, allowing for sufficient space for product expansion.
- Drip pans and/or other sufficient equipment will be used during a fuel transfer
- All individuals involved with fuelling should be aware of proper fuel handling, and regularly scan the area for evidence of possible leaks or spills.

In the event that fuelling procedures must be done on ice or snow additional precautions will be used because of the dangers or falling or slipping which may potentially cause a fuel spill. In this scenario we will prior to fuelling assess the situation and determine if fuelling must be conducted on the ice or if it can be moved to a more appropriate and safe location. Additionally, appropriate footwear (e.g. boots with good grips) will also be used to ensure maximum traction, thus reducing the chances of a fall and spill.

Responding to a Spill

In the event that a fuel spill does occur we propose a list of procedures outlining our intended course of actions to maximize the safety of the researchers and minimize the impacts of the spill to reduce damage to the environment.

Our suggested protocol is to:

1. Be alert and consider your safety first.
2. Assess the hazards to persons in the vicinity of the spill and alert or take appropriate measures (e.g. eliminate sources of ignition);
3. Determining the origin of the spill
4. Bring the spill under control and try to stop the spill or leak (manoeuvre the jerry can or transfer fuel to another vessel (if needed).
5. Absorb the free fuel before it is allowed to seep into the surrounding ground or runoff. This may involve using camp equipment to dig a small trench to divert the spill from entering a water body.
6. Continue to monitor the site to ensure no subsequent or new spills have occurred
7. Safely and properly dispose of any material used during the containment and clean up of the spill. Each camp has a fuel spill clean up kit.
8. Where required by Territorial Land Use Regulations report the spill to the 24 Hour Spill Report Line at (867) 920 – 8130.

If a fuel spill were to occur on or near snow or ice additional protocols may be followed depending on the scenario. Snow by its nature, snow is an absorbent, and fuel spilled on snow should be easily collected using camp equipment (scoop or shovel). In the event that the spill poses a danger to the environment of running off, compacted snow berms may be used to contain the spill. While spills on ice can be handled in a similar fashion as those on snow, ice presents the added danger of immediate access to water, thus care will be taken to respond quickly to such spills.

A copy of our fuel prevention and spill response guidelines will be at the camp for our reference and to ensure all camp researchers have easy access to the document in the event it is need for a spill.

<u>Leaving Camp</u>

Upon completion of our research we will ensure that any remaining fuel either in the generator or jerry can will be properly transported out of the camp location. A visual inspection of the area will also be done to make sure no fuel spills have occurred.