



Cape Christian Cleanup **Fuel Management Plan**

*QESin 2007P6
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This plan was developed to present fuel management practices to be implemented at Cape Christian, as requested by the Land Use Permit (No. 701-LUP-B07-001) issued by Indian and Northern Affairs Canada.

The fuel used at Cape Christian is purchased on a regular basis from Nunavut Petroleum Products Division in Clyde River and brought back to Cape Christian in previously used drums. This fuel management approach reduces the environmental and safety risks associated with storing larger quantities of fuel onsite. It also reduces the amount of waste on site (waste water generated from cleaning empty drums and crushed drums to be landfill) and nearly eliminates the security issue of QL's fuel supplies during the off-season. Furthermore, this approach provides additional benefits to Clyde River.

The Superintendant has the overall responsibility of managing a constant fuel supply. The day-to-day operations of refuelling are carried by designated workers. Fire prevention and health and safety issues related to managing fuel onsite are the responsibility of the Health and Safety Officer.

The fuel supply at Cape Christian needs to be replenished every 3 to 4 days for Jet A1 and about 20 days for gasoline, as follows:

- The Nunavut Petroleum Products Division in Clyde River is contacted and a meeting time is set.
- Empty drums (maximum 40) are loaded onto a flatbed attached to a Caterpillar D6 bulldozer and brought to the fuel transfer location situated

just before the bridge on the road connecting Cape Christian to Clyde River.

- The Hamlet's fuel truck fills the drums, which are then brought back to site.
- In the case of Jet A1, a 12-volt electric pump is used to transfer the fuel from the newly filled drums to the onsite fuel truck and 350 litre tanks on the red pickup and crew cab.
- The remaining drums are placed in the onsite stored area and refuelling station within berms.

Onsite refuelling

- Camp generators – refuelled directly from site fuel truck by camp maintenance personnel every day (3-4 drums/day)
- Garage furnace – refuelled directly from site fuel truck by camp maintenance personnel every 5 days
- Heavy equipment – refuelled from tote tanks on red pickup and crew cab by equipment operators, as needed
- Trucks, ATVs, small machinery – refuelled at refuelling station by driver/worker, as needed

Fuel Storage Area and Refuelling Station

The fuel storage area and the refuelling station are located next to each other behind the garage. They are located well above the minimum 30 meter high water mark stipulated in the Land Use permit. *Restricted Area/No Smoking Area* placards are posted.

The refuelling station essentially consists of four 205 L drums of Jet A1 and four 205 litre drums of gasoline on two spill trays. A 12-volt electric pump, a spill kit, fire extinguishers and an eye wash station are also part of the refuelling station.

The fuel storage area contains on average 25 drums of fuel. The area is bermed-in and lined with a geomembrane. Hydraulic oil and glycol are also stored in this area.

Health and Safety

Proper storage and use of fuel can significantly reduce the possibility of accidental fires and injury to employees. Material Safety Data Sheets (MSDS) for Jet A1 and gasoline are available on site.

Due to the potential fire, health and safety hazards associated with handling and storing fuel, the following safety precautions should be taken by all persons coming into contact with fuel:

- Smoking is prohibited in fuel storage areas or while handling fuel. No flames, hot work is permitted in flammable or combustible liquid storage areas.
- Avoid prolonged or repeated skin contact with fuel. Wash skin thoroughly with soap and water in case of contact.
- Avoid breathing vapours or mists.
- Remove any clothing that is wet with fuel. Allow fuel to evaporate completely outdoors before washing. Thoroughly clean clothing before reuse.
- Machinery, heavy equipment, vehicles, stored tanks etc. are to be kept clean (e.g. avoid dripping excess fuel down the side of a pickup when removing the fuel pump nozzle)
- Do not use the gas cap or other objects to hold the fuel pump nozzle open.
- Portable containers of gasoline or diesel are not to exceed 5 gallons (19 L) and are to be properly labelled.
- Know how to properly operate the fuel pump and how to use a fire extinguisher or eye wash station before using the refuelling station. Seek training, if required.

Refer to the Cape Christian Health and Safety Plan for more information on fire prevention, flammable liquids, or safety training.

Spill Contingencies

A separate Spill Contingency Plan was prepared for Cape Christian. The Plan outlines procedures for responding to spills in a way to minimize potential health and safety hazards, environmental damage, and clean up procedures. The Plan identified the fuel storage area and the delivery of fuel using fuel tanks on pick-up trucks as the two main potential sources of spills at Cape Christian.

Measures and procedures to prevent such events from occurring include regular inspection of the drum storage area and containment system, and safety rules concerning the use of vehicles and heavy equipment on site, especially in close proximity of this area (e.g., speed limits, training of heavy equipment operators, restricted area posting, safety orientation of workers, etc.).

In addition to having placed spill kits in strategic areas (refuelling station, fuel storage area, fuel truck, near camp generators, garage etc), and having given all personnel required to handle fuel, basic spill containment information, a specific Spill Response Team is to be formed and trained.

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