

DRDC Northern Watch Technology Demonstration Project Abandonment and Restoration Plan

1. Preamble

This abandonment and restoration plan is effective from August 1, 2008 to September 30, 2010 and applies to the Northern Watch Technology Demonstration (NWTD) Project, undertaken by Defence R&D Canada (DRDC), in the North Baffin Region of Nunavut and located at 74° 39'40" N, 91°16'22" W.

The following formal distribution will be made of this plan:

Nunavut Water Board (NWB),
Nelson McCoy (Deputy Project Manager, NWTD); and
Jim Milne (Camp Supervisor, NWTD).

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2. Introduction

The NWTD project will make use of an existing DRDC camp at Gascoyne Inlet. The camp currently consists of six structures and was constructed in the 1980s. The camp currently sees occasional use by the Resolute Bay Hunters and Trappers' Association.

One (1) new 16 foot by 16 foot sleeping quarters and one (1) new 8 foot by 12 foot shelter will be constructed to house personnel and equipment for the NWTD project. Two (2) temporary structures, an 8 foot by 12 foot shed and a 4 foot by 8 foot shed, will be constructed at Cape Liddon.

The NWTD project field trials will take place over three weeks each year for three consecutive summers, starting in 2008. Camp construction will begin in late July 2008, and approximately 20 people will occupy the camp at any one time during each field trial.

When the project is complete in September 2010, the camp will be fully decommissioned as detailed in Section 1, Final Abandonment and Restoration Plan. Between each field trial period, the camp will undergo seasonal shutdown as detailed in Section 2, Seasonal Shutdown and Restoration Plan.

3. Schedule

The abandonment and restoration of the camp will take approximately 5 days to complete and will take place after the field trials have been completed in 2010. The seasonal shutdown and restoration plan will take approximately 2 day to complete and will take place following field trail activities in 2008 and 2009.

The plans will be applied with the assistance of camp personnel (DRDC employees), under the supervision of the camp supervisor.

4. Camp Infrastructure

Structures at the camp currently consist of six non-permanent structures (consisting of simple, plywood construction with two-by-four framing and plywood paneling and flooring) that were built in the late 1970's. One (1) new 16 foot by 16 foot sleeping quarters and one (1) new 8 foot by 12 foot shelter will be constructed at the camp to house personnel and equipment. A gravel airstrip, suitable for small aircraft currently exists at the site and will be used by the NWTDP project.

A diesel generator, already at the site and in good working order, will provide electricity for the camp, power equipment and be used to charge batteries.

Historically, a source of potable water has been available from a melt-water stream located near the camp. A pipeline will carry water from the stream via gravity feed to a holding tank, which will serve as the water supply for the camp. Water will then be pumped into the camp. A propane-fired water heater will be installed for shower and dishwashing facilities.

Two (2) temporary structures will be constructed at Cape Liddon to house equipment and provide shelter to personnel during data collection activities and a small generator to supply electrical power to the electronic equipment.

All new structures will be of simple construction, consisting of two-by-four framing with plywood paneling and flooring, partially built off-site and then transported to the camp and assembled.

Section 1: Final Abandonment and Restoration Plan

1.1 Buildings and Content

The generator, generator shelter, and kitchen structure will remain at the site. The Resolute Bay Hunters and Trappers' Association will be consulted and given the choice of which of the remaining buildings will remain in place at the conclusion of the NWTDP project. Structures that have been deemed surplus to the requirements of the Hunters and Trappers will be disassembled and flown from the site.

All reusable equipment, such as mattresses, stoves, kitchen equipment, showers and the water heater will be packaged and flown out of the site.

All electronic equipment will be dissembled and removed from the site.

1.2 Water System

The pump, tanks and hoses will be drained, dismantled, packaged and flown out of the site. Any structures constructed to house the pump or other water system components will be disassembled and flown out of the site.

1.3 Electrical System

The area surrounding the generator and generator shelter will be inspected and any hydrocarbon contamination will be treated as per the DRDC Northern Watch Technology Demonstration Project Spill Contingency Plan.

The contingency plan prescribes the course of action to be taken in the case of unanticipated spill events during the NWTDP project's Arctic field trials. The plan enables persons in a particular situation to maximize the effectiveness of the environmental protection response and meet all regulatory requirements for reporting to the appropriate authorities.

1.4 Fuel Storage

The fuel storage area will consist of segregated groups of drums with empties apart from full drums. At the end of the field season, an inventory of remaining fuel will be made and full drums will be inspected. Full and empty drums will be flown out from the site. Propane cylinders will also be flown out from the site.

Approximately 200 liters of diesel fuel for emergency use in the generator, and propane for the cooking stoves will be left at the site and will become the responsibility of the Hunters and Trappers Association.

Waste fuel, stored in properly labeled drums, will be flown out of the site to an outlet or disposal site that accepts this type of fuel.

The fuel storage area will be inspected and any hydrocarbon contamination will be treated as per the DRDC Northern Watch Technology Demonstration Project Spill Contingency Plan.

1.5 Documentation and Inspection

Photos will be taken of the existing camp prior to construction of new infrastructure or the beginning of each field trial season. The site condition will be monitored and photographed during occupancy. After the site has been abandoned at the conclusion of the field trials, its condition will again be documented with photographs.

Soil contaminated by hydrocarbons and unnoticed before abandonment will be treated as per the DRDC Northern Watch Technology Demonstration Project Spill Contingency Plan.

Section 2: Seasonal Shutdown and Restoration Plan

2.1 Buildings and Content

All camp buildings will be secured and remain at the site for use in subsequent field trials.

All reusable equipment, such as mattresses, stoves, kitchen equipment, showers and water heater will be packaged and flown out of the site.

An HF radio receiver, antennae, and associated power generating equipment (solar panels and batteries) will remain at Cape Liddon between field trial seasons.

2.2 Water System

The pump, tanks and hoses will be drained, dismantled, packaged and stored on site.

2.3 Electrical System

The area surrounding the generator and generator shelter will be inspected for contamination and any hydrocarbon contamination will be treated as per the DRDC Northern Watch Technology Demonstration Project Spill Contingency Plan.

2.4 Fuel Storage

The fuel storage area will consist of segregated groups of drums with empties apart from full drums. At the end of the field season, an inventory of remaining fuel will be made and full drums will be inspected. Full and empty drums will be flown out from the site. Propane cylinders will also be flown out from the site. Approximately 200 liters of diesel will be left at the site for emergency use in the generator buy the Hunters and Trappers Association.

Waste fuel, stored in properly labeled drums, will be flown out of the site to an outlet or disposal site that accepts this type of fuel.

The fuel storage area will be inspected for and any hydrocarbon contamination will be treated as per the DRDC Northern Watch Technology Demonstration Project Spill Contingency Plan

2.5 Documentation and Inspection

Photos will be taken of the existing camp prior to construction of new infrastructure or the beginning of each field trial season. The site condition will be monitored and photographed during occupancy. After the site has been secured and equipment inventoried at the end of each field trial season, its condition will again be documented with photographs.

Soil contaminated by hydrocarbons and unnoticed before abandonment will be treated as per the DRDC Northern Watch Technology Demonstration Project Spill Contingency Plan.