DRDC Northern Watch Technology Demonstration Project

Abandonment and Restoration Plan

25 February 2015

1. Preamble

This Abandonment and Restoration Plan is effective February 28, 2015 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.

To request additional information, or additional copies of the SCP, please contact:

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2. Introduction

The NWTD project will make use of an existing DRDC camp at Gascoyne Inlet. The original camp was constructed in the late 1970s and was used occasionally by the Resolute Bay Hunters and Trappers' Association. Improvements to the existing camp included the erection of additional sleeping quarters and a new kitchen building.

The NWTD project will emplace two underwater seabed sensors in Barrow Strait and connect them to the Science cabin through the Foreshore pipe cables. Deployment of the underwater sensors will be conducted by Royal Canadian Navy (RCN) ships in close cooperation with project staff. The underwater sensors will be calibrated by the RCN ships using moderate power acoustic transmitters, with due regard for the safety of marine mammals.

The NWTD project field trials have taken place over many years starting in 2008. Camp construction began in late July 2008, and approximately 20 people occupied the camp at any one time during each field trial.

The final surveillance capability demonstration is scheduled to occur in September 2015, once completed the camp will be partially decommissioned.

Upon completion of the NWTD project the camp at Gascoyne Inlet will continue on for use by the Canadian Armed Forces (CAF) and future DRDC summer deployments.

3. Schedule

The abandonment and restoration of the camp will take approximately 5 days to complete. The seasonal shutdown and restoration plan will take approximately 2 day to complete and will take place following field trail activities.

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 nine non-permanent structures (consisting of simple, plywood construction with two-by-four framing and plywood paneling and flooring).

A diesel generator, already at the site and in good working order, provides 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 carries water from the stream via gravity feed to a holding tank, which serves as the water supply for the camp. Water is then pumped into the camp. A propane-fired water heater is installed for shower and dishwashing facilities.

Two (2) temporary structures will be constructed at Cape Liddon in 2015, they will house equipment and provide shelter to personnel during data collection activities and a small generator to supply electrical power to the electronic equipment.

Section 1: Final Abandonment and Restoration Plan

1.1 Buildings and Content

Upon completion of the NWTD project all electronic equipment used for this project will be dissembled and removed from the site. The camp will remain for use by the CAF and for future DRDC summer deployments until such time as it is no longer required. When the Department of National Defence (DND) and DRDC has determined that the camp is no longer a requirement the Resolute Bay Hunters and Trappers' Association will be consulted and given the choice of which of the remaining buildings will remain in place for their use. 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.

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 dissembled and flown out of the site.

1.3 Electrical System

At such time as the Gascoyne Inlet camp is to be decommissioned, 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 NWTD 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. As part of the camp decommissioning, 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 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.

All reusable equipment will be secured and neatly stored on site.

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 consists 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. The diesel generator tanks will be left at ¾ full (3 drum each), the fuel berm will be left with 10 drums diesel, one drum of gasoline and one drum (partial) used oil. The camp will also store 8 x 20lb propane cylinders. The fuel is left in the camp is for use in April by CAF Op Nunalivut and future DRDC summer deployments.

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

The site condition will be monitored and photographed during occupancy. After the site has been secured and equipment inventoried at the end of each season, its condition will again be documented with photographs.