CAPE CHRISTIAN REMEDIATION PROJECT
EXECUTIVE SUMMARY (ENGLISH)

1. BACKGROUND

The Government of Canada has implemented the Federal Contaminated Sites Action Plan (FCSAP) to clean up federally owned contaminated sites which pose a risk to human health and/or the environment. Indian and Northern Affairs Canada (INAC) has applied, and received funding approval under FSCAP, for the investigation and remediation of the former United States (US) Coast Guard Long Range Navigation (LORAN) communications station in Cape Christian, Nunavut.

The US Coast Guard established a LORAN communications station at Cape Christian in 1954. The station consisted of five buildings (the Main Station, Garage, Hazmat Building, Terminal Building, and Survival Hut); fuel storage facilities; an antenna; airstrip and a water reservoir. The site was abandoned in 1974 and was automatically taken over by the Government of Canada.

In 1979, all buildings and equipment at Cape Christian were transferred to the Government of Northwest Territories (GNWT) pursuant to the federal *Surplus Crown Assets Act*. In 1993 INAC authorized a Block Land Transfer (BLT) (order in council #P.C 1993-1124) to the GNWT which included the Cape Christian site. The BLT's are pursuant to paragraph 23(1) of the Territorial Lands Act. Cape Christian then formed part of the assets and liabilities that were transferred from the GNWT to the GN as of April 1, 1999.

Currently the site features include site buildings and infrastructure in derelict state, empty fuel storage tanks, water reservoir, worked areas (or dump areas) with buried building debris and partially buried barrels, Hazardous and non-hazardous debris scattered throughout the site. There are Metals, Petroleum Hydrocarbons (PHC) and Polychlorinated biphenyls (PCB) contaminated soils identified in some locations on the site.

The Cape Christian site is a clear case of joint liability requiring shared responsibility between the Crown and the GN. INAC, an agent of the Crown, is taken a lead role on this project. The shared responsibility procedure is currently being worked out by the representatives of INAC and the GN.

2. SITE LOCATION/ACCESS

The Cape Christian site is located at the mouth of the Clyde River, on the northeast coast of Baffin Island, in the Territory of Nunavut. It is situated at Latitude 70° 31' N and Longitude 68° 17' W. The nearest community is the Hamlet of Clyde River, located approximately 16km southeast of the site.

The site is situated within the Baffin Island Coastal Lowlands. It extends landward about 20 km. The landscape is gently rolling with small bedrock outcrops. The dominant soils are Turbic Cryosols on sandy colluvial, morainal and marine deposits. Continuous permafrost, with a low ice content, exists at the site at an average depth of 0.5m. Surface drainage at the site flows to the north, toward Baffin Bay.

Access to Cape Christian site is either by boat, ATV or rotary wing aircraft due to the unusable condition of the onsite airstrip.

3. PROJECT ACTIVITIES & SCHEDULE

All site assessment activities required to develop a plan for the remediation of Cape Christian LORAN site have been completed. The assessment studies conducted so far include:

- United States Coast Guard (1974 and 1979): Inventory and Evaluation of Buildings;
- Environment Canada (1985): Investigation into the presence of PCB Containing Equipment;
- AVATI-Norecol, for DIAND (1992): Site Assessment and Soil Sampling;
- Royal Military College, Environmental Sciences Group (ESG)(1996): Environmental Assessment;
- Royal Military College, ESG (1997): Investigation of PCBs in Paint;
- Earth Tech Canada (2002): Environmental Site Delineation and Material Inventory;
- Earth Tech Canada (2006): Cape Christian LORAN Station Supplementary Environmental Site Assessment, Materials Audit and Geotechnical Investigation.

Some remedial activities were also carried out in the past. These included:

- Envirochem Special Projects Inc. for GNWT Dept. of Renewable Resources, Pollution Control Division and Environment Canada (1989 - 1991): PCB Consolidation and Inventory program and Collection of PCB's;
- GNWT Dept of Renewable Resources (Environmental Protection Division) (1996): Removal of PCB Containing Equipment;

Based on the assessment carried out by Earth Tech Canada in 2002, a preliminary Remedial Action Plan (RAP) was developed in 2002 by the PWGSC for the clean up of the Cape Christian site. This RAP and other available information on Cape Christian were reviewed in 2006 and it was decided that supplemental environmental and geotechnical assessments are required on the site. Supplemental assessments were carried out in the summer of 2006, following which a comprehensive RAP was developed for the clean-up of the site.

Following the development of the RAP, a community meeting was held in Clyde River with the members of the community, the representatives of Namautaq Hunters and Trappers Organization (HTO), the elders, the GN, and the hamlet council.

This project is currently going through the regulatory phase, following which there will be a bidding process and the award of the contract for the implementation of the RAP. The two years implementation of the RAP is planned to begin in 2007, with mobilization to site during the summer of 2007 and demobilization from site towards the end of the summer of 2009.

Site remediation activities will include:

- Mobilization of equipment, materials and personnel to site. For logistics reasons, this will take place in two stages: mobilization to Clyde River during the summer of 2007 and mobilization to Cape Christian by January, 2008.
- Enhancement of site access routes – From Clyde River to Cape Christian
- Camp set-up and operation
- Hazardous material removal, handling and transportation
- Temporary storage on site for hazardous materials, equipment and fuels
- Building and infrastructure demolition
- Debris consolidation and disposal

- Excavation and relocation of PHC contaminated soils to the Land farm cell
- Excavation and removal of metals and PCB contaminated soils from site
- Quarrying of gravel and overburden materials
- Landfill construction & closure
- Land farm cell construction & decommissioning (after soil is remediated to INAC protocol standards)
- Site grading
- Site roads improvement
- Airstrip improvement (if required)
- Sealift landing site (if required)
- Demobilization of equipment, materials/wastes and personnel. Again for logistics reasons, this will take place in two stages: demobilization to Clyde River during the winter of 2009 and transportation by sealift from Clyde River to South during the summer of 2009.
- Site monitoring (post-remediation)

Additional details on the above remediation activities are available in the RAP document included with this application.

The site remediation activities will be followed by a long-term post-remediation monitoring starting from 2009. Annual site monitoring activities are planned for the first five years after remediation following which an intermittent monitoring on "as and when required" basis will be performed for another 20 years.

4. SOCIAL IMPACT OF THE PROJECT

As much as possible, the project will adopt solutions tailored to the northern environment and its inhabitants, by using local knowledge and including the unique needs of northerners and their environments in the remediation work plan.

Community stakeholders and local Inuit organizations will be advised of the project plans prior to going on site. A Community consultation meeting will be held in Clyde River prior to the commencement of site remediation activities to discuss employment and sub-contracting opportunities. Community consultations will continue throughout the duration of the project to ensure that the community is informed about the activities, results and plans regarding the site.

As well, meetings to update the Federal and Territorial regulatory bodies are being planned. Resources for on-going communications have been budgeted for.