

Executive Summary

1. BACKGROUND

The federal government has initiated the Federal Contaminated Sites Action Plan (FCSAP) to clean up federally owned contaminated sites and to address the environmental liabilities associated with each site. The FCSAP program provides funding for the remediation of contaminated sites posing risks to human health and/or the environment. Indian and Northern Affairs Canada (INAC) has applied for, and secured, funds under this program for the investigation of the abandoned Intermediate Distant Early Warning (DEW) Line site at FOX-A (Bray Island) 175 km east of Igloolik and 170 km northeast of Hall Beach in Nunavut.

The former FOX-A Intermediate DEW Line site was constructed in 1957 and subsequently closed and abandoned in 1963. In 1965, responsibility for the site reverted to INAC. Between 1990 and 1993 the Department of National Defense (DND) constructed an unmanned Short Range Radar (SRR) on the former FOX-A site. Facilities associated with the SSR facility include a technical services building with an emergency shelter, diesel tanks, helipad, communication domes, an old shack and the construction camp accommodation module.

Environmental assessment of the FOX-A DEW Line site was initiated in 1985 when DND and Environment Canada visited the site to remove contaminants such as PCBs and Petroleum, Oils and Lubricants and identify areas of buried materials that could pose environmental risks in the future. Various pieces of PCB-containing equipment were removed from electrical cabinets at the site. Soil samples collected adjacent to the building train identified PCB contamination however no other results were reported.

The site was revisited in 1993 by the Environmental Sciences Group of Royal Roads Military College at which time a limited surface soil sampling program was completed. Their investigations identified soil contamination exceeding Tier I and Tier II levels (based on the DND DEW Line Clean-up Criteria). Elevated levels were detected within the landfills (both east and west of the station) and around the warehouse and garage foundations. However, these investigations did not include assessment of hydrocarbon contamination which has the potential to be a significant source of contamination at the site. In addition to soil contamination, PCB amended paint was identified at the site in addition to insulation samples containing chrysotile asbestos.

The FOX-A radar facilities consisted of a module train, warehouse, garage, Inuit house, POL tanks, Quonset huts, storage pads, a radar tower and airstrips. The main station buildings are located on the western side of Bray Island at an elevation of no more than 30 m above sea level. Raised and fairly well drained beach ridges are present around the island, especially close to the shoreline. The inland portion of the island is poorly drained and contains marshy areas,

large shallow lakes and ponds. At the time of the 1993 site assessment, only the garage, POL tanks and Inuit house were standing with all other buildings removed, demolished or collapsed. The two airstrips; one 1,400 m strip located at the beach and one 1,100 m strip near the station, were reported to be in good condition. Multiple landfills have been identified in areas east and west of the former station.

2. PROJECT LOCATION

The former FOX-A DEW Line site is located at 69°13' N, 77°14' W on Bray Island. FOX-A is approximately 175 km east of Igloolik and 170 km northeast of Hall Beach. The site is situated exclusively on Crown land with the main station buildings located on the west side of Bray Island approximately at an elevation of 30 m.

The site is located on an island and accessible by sea- lift. In addition, there are two airstrips, which are accessible for most of the year. Site maps and drawings are included in this submission to assist the reviewer in visualizing the site.

3. PROJECT ACTIVITIES & SCHEDULE

INAC will augment work carried out in previous years with a detailed Phase III environmental site investigation in the summer of 2006. At the same time, a geotechnical investigation will be completed to identify suitable borrow source material and potential locations for non hazardous landfills. A site specific human health and ecological risk assessment will also be carried out to assist INAC in determining suitable remediation criteria for the site.

Based on the results of these investigations, as well as information to be gathered during the public consultation process, INAC will develop the FOX-A Remedial Action Plan. It is expected that the contracting, regulatory permitting and much of the set up work for this remediation will be completed in 2007 with actual site remediation to occur the following year, in 2008.

In March of 2005, INAC formally adopted the *Abandoned Military Sites Remediation Protocol* for use at all INAC controlled military sites in the north. This document identifies how INAC will handle most aspects of the site clean ups including cleanup criteria, landfill establishment and closure, hazardous materials and wastes handling and disposal, barrel protocol, building demolition and disposal borrow source development and final site reclamation. Site Specific Risk Assessments (SSRAs) will be used to augment CCME and other previously identified criteria where criteria are not available for the contaminant(s) of concern, based on site-specific issues. Note that the remediation project will be submitted to the regulators as a separate project under separate permits.

A temporary camp and associated sewage sump will be constructed under this permit application. This facility will allow for a maximum of 10 personnel to reside on site for the duration of the assessment activities, which is anticipated to take no more than 20 days in late August of 2006.

Equipment and personnel will normally be mobilized to site by air using the on-site airstrip, assuming that the airstrip is in suitable condition. Following the proposed site assessment work the temporary camp will be demobilized.

4. SOCIAL IMPACT OF THE PROJECT

Wherever 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.

The communities of Hall Beach and Igloolik will be contacted to provide any information regarding the historical and current use of the site. This information will be incorporated into the final Phase III Environmental Site Assessment report. In addition, presentations will be conducted in Hall Beach and Igloolik in late 2006 in which the results of the site assessment will be presented to the Hamlet Councils, Hunters & Trapper Organizations and general public. These stakeholders will also be asked to assist in the design of the proposed remediation plan at this meeting. The community presentations will be used to complete the following objectives:

- To share information on the project with the community;
- To hear site-specific concerns from Inuit who are familiar with current conditions at the site or were familiar with on-site activities during facility operation;
- Identify resources (labour and equipment) in the community that would be able to assist in the execution of the project; and
- To develop a comprehensive remediation plan that will be accepted by impacted stakeholders.