

Executive Summary

1. BACKGROUND

The federal government has initiated the Federal Contaminated Sites Accelerated Action Plan (FCSAAP) to clean up federally owned contaminated sites and to address the environmental liabilities associated with each site. The FCSAAP program provides funding for the remediation of contaminated sites posing risks to human health and/or the environment. The Department of Indian Affairs and Northern Development (DIAND) has applied for, and secured, funds under this program for the investigation and remediation of the abandoned intermediate Distant Early Warning (DEW) Line site at CAM-F (Sarcpa Lake) in Nunavut.

The former CAM-F DEW Line site was constructed in 1957 and subsequently closed and abandoned in 1963. The site was converted to a scientific research station in 1977 under the auspices of the Science Institute of the Northwest Territories and DIAND. In 1985, a hazardous materials removal program was implemented in which visible hazardous wastes and liquids from abandoned equipment were removed. Assessments completed in 1987/88 and 1994 confirmed the presence of contaminated soil and additional hazardous materials. In 1989, a partial clean up of the walls and floors, containing PCB amended paints, was carried out to limit the exposure of workers to PCBs. An asbestos abatement program and clean up of Dump A was carried out in 1997.

DIAND augmented work carried out in previous years with a detailed site investigation in the summer of 2004. At the same time, a geotechnical investigation was completed to identify suitable borrow source material and potential locations for non hazardous landfills. A site specific human health and ecological risk assessment was also completed to assist in determining suitable remediation criteria for the site. Previously containerized PCB soil wastes were also removed from the site and transported south for disposal.

Based on the results of these investigations, as well as information gathered during the public consultation process, DIAND has finalized the CAM-F remediation work plan and proposes initiating this work in the fall of 2005.

2. PROJECT LOCATION

The former CAM-F DEW Line site is located at 68°33' N, 83°19' W on Melville Peninsula, between Foxe Basin and Committee Bay in Nunavut Territory. The site is situated exclusively on Crown land. The main station is situated at an elevation of 260 m above sea level on a hill approximately 2 km north of the west arm of Sarcpa Lake. Terrain around the site consists of rolling tundra highland with gravel deposits, several lakes and numerous rivers.

The site, which is approximately 85 km west of Hall Beach and 100 km southwest of Igloolik, is landlocked and inaccessible by sea-lift. It can be reached by canoe or overland winter route by way of Hall Lake and Kingora River. As well, there is an

airstrip, which is accessible for most of the year. Airplanes equipped with floats may land on Sarcpa Lake during the short summer. Site maps and drawings are included in this submission to assist the reviewer in visualizing the site.

3. PROJECT ACTIVITIES & SCHEDULE

Site investigation and site characterization phases were completed in the summer of 2004. A remediation work plan for the proposed activities was prepared and is included in this submission package. Project work is to be started in the fall of 2005 with the mobilization of equipment to Hall Beach. The contractor will mobilize equipment to the site over a winter route during the winter of 2005 with construction to be carried out in the summers of 2006 and 2007. A detailed project schedule is also included in this submission.

All existing site infrastructure will be demolished and the material will be segregated into hazardous and non-hazardous waste streams. Hazardous wastes, predominantly lead based painted materials, will be packaged and transported south for disposal. Non-hazardous building debris and other non-hazardous wastes identified at the site will be put into the on-site engineered non-hazardous landfills that will be constructed as part of the clean up activities.

Waste consolidation activities will be primarily focused on the removal of contaminated soils. Site investigations determined that contaminated soils at the site have not impacted sediments or surface water. Contaminants of concern at the site are similar to those observed at other abandoned DEW Line sites, and include petroleum hydrocarbons (PHC's) and some metals. PCB contaminated soils were identified, however, most of the highly contaminated soils have been removed from site.

Barrels are strewn throughout the site and surrounding areas. A complete barrel count was initiated during the 2004 site investigation work and 9160 barrels were noted. Barrels will be handled and disposed of in accordance with the DIAND DEW Line Barrel Protocol. Most barrels are empty, although a small number contain some product or could not be opened. All barrels will be consolidated, crushed and buried at site.

The Department of National Defence (DND) DEW Line cleanup criteria were established in the mid 90's and have been used for other DEW Line remediation projects. DIAND has adopted these criteria, under the DIAND DEW Line site remediation protocol, but will augment them using the Canadian Councils of Ministers of the Environment (CCME) for some PHC contaminated soils. Site Specific Risk Assessments (SSRAs) will be completed where criteria are not available for the contaminant(s) of concern, based on site-specific issues.

Overland winter transportation will be required via a cat train to allow the movement of heavy equipment between the landing area and the station. In the summer, the station can be accessed via a 3 km road from Sarcpa Lake.

A temporary camp and associated sewage treatment lagoon will be constructed. This facility will allow for a maximum of 35 personnel to reside on site for the duration of the construction season, which is anticipated to take up to 75 days during the 2006 and 2007 field seasons.

Equipment and personnel will normally be mobilized to site by air using the on-site airstrip.

At completion of the project in 2007, the site surface will be restored based on the detailed remediation work plan that is also included in this submission.

4. SOCIAL IMPACT OF THE PROJECT

Wherever possible, the project has adopted 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.

Presentations were conducted in Hall Beach and Igloolik in January and March of 2004 in which the Hamlet Councils, Hunters & Trapper Organizations and Qikiqtani Inuit Association were informed of the proposed remediation work. Presentations focused on the fact that CAM-F is targeted for clean up. In addition, community representatives were invited to visit the site with INAC representatives in March and July of 2004 in order to share information and planning needs. The community presentations were 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 identify the issues and concerns the communities had with the site and the proposed work; and
- To develop a better remediation plan.

The concerns raised by the communities at these meetings included:

- The clean up of barrels scattered throughout the site;
- The option of burial of contaminants on-site or removal from site and disposal in the south;
- Location of landfills and potential impacts from contaminants migrating into adjacent water bodies (Sarcpa Lake); and
- Employment and business opportunities.

To address these concerns, all barrels at the site will be consolidated, crushed and disposed of in one of the site landfills. Landfills will be constructed using technologies accepted in the north. Wastes buried in the landfills will be limited to non hazardous materials and the landfills will be positioned at locations away from water bodies. In addition, a strategy to provide business and employment opportunities has been implemented.

Additional public presentations to provide an update on project status, and to receive feedback, were held in Hall Beach and Igloolik, and with regulators in December of 2004. A summary of the comments and action plans are provided in appendices to this submission.