EXECUTIVE SUMMARY

1. BACKGROUND

The Government of Canada 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 and remediation of the abandoned intermediate Distant Early Warning (DEW) Line site at CAM-D (Simpson Lake).

The former CAM-D 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 1992 and 1995 DND constructed an unmanned Short Range Radar (SRR) facility approximately 1 km east of the former CAM-D 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. The gravel pad for the SRR was constructed using material from the old DEW Line site. Any work on the SRR site is not included in this application.

Environmental assessment of the CAM-D DEW Line site was initiated in 1985 when DND and Environment Canada visited the site to remove contaminants such as PCBs and POLs 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 from beneath the cabinets identified PCB contamination. No other results were reported.

The site was revisited in 1994 by the Environmental Sciences Group of Royal Roads Military College at which time a limited sampling program was completed. Their investigations identified soil contamination exceeding Tier I and/or Tier II (based on the DND DEW Line Clean-up Criteria) near the module train outfall, the garage, the main dump and at the debris area near Simpson Lake. However, these investigations did not include assessment of hydrocarbon contamination that has the potential to be a significant source of contamination at the site. No PCB amended paint was identified at the site but insulation samples collected from the garage and warehouse contained chrysotile asbestos.

INAC augmented work carried out in previous years with a detailed site investigation in the summer of 2005. 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. An archaeological assessment and additional sampling was completed in September 2007.

Based on the results of these investigations, as well as information gathered during the public consultation process, INAC has finalized the CAM-D remedial action plan (RAP) in accordance with the *Abandoned Military Sites Remediation Protocol* and proposes initiating this work in the winter of 2008/09.

2. PROJECT LOCATION

The former CAM-D DEW Line site is located at 68°35' N, 91°57' W on Boothia Peninsula, 4.5 km south of Simpson Lake. CAM-D is approximately half way between Shepherd Bay and Kugaaruk, 120 km south of Taloyoak and 80 km west of Kugaaruk. The site is situated exclusively on Crown land, although Inuit Owned Lands are present to the north, east and west of the site which may be part of the Cat train route taken during the mobilization and demobilization. The main station buildings are located in the Ross Hills at an elevation of 370 m. The terrain is composed of rolling grassy hills cut by rock outcrops.

The site is landlocked and inaccessible by sea-lift. There is an airstrip, which is accessible for most of the year. Airplanes equipped with floats may land on Simpson Lake during the short summer. Site maps and drawings are included in this submission to assist the reviewer in visualizing the site (See Figures 1 through 3).

3. PROJECT ACTIVITIES & SCHEDULE

Site investigation and site characterization phases were completed in the summer of 2005. A Remedial Action Plan (RAP) for the proposed activities was prepared and is included in this submission package. Project work is to be started in the summer 2008 with the mobilization of equipment to the area. The contractor will mobilize equipment to the site over a winter route during the winter of 2008/09 with construction to be carried out in the summer of 2009. 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 and PCB contaminated painted materials and asbestos, 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 non hazardous landfill 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.

Barrels are strewn throughout the site and surrounding areas. A complete barrel count was initiated during the 2005 site investigation work and approximately 9054 barrels were noted. Barrels will be handled and disposed of in accordance with the INAC *DEW Line Barrel Protocol*. Most barrels are empty, although a small number contain some product or could not be opened. Subsurface soil conditions below the barrels will be determined following their removal. All barrels will be consolidated, crushed and buried at the site.

INAC formally adopted the *Abandoned Military Sites Remediation Protocol* for use at all INAC controlled military sites in the north in March of 2005. 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.

Overland winter transportation will be required via a Cat train to allow the movement of heavy equipment between the landing area and the station. An application to the Kitikmeot Inuit Association Lands Division for access to Inuit Owned Land (IOL) for the overland route has been submitted.

A temporary camp and associated sewage treatment lagoons will be constructed. This facility will allow for a maximum of 50 personnel to reside on site for the duration of the construction season, which is anticipated to take up to 90 days during the 2009 field season. Following the proposed site remediation work the temporary camp will be demobilized.

Personnel will normally be mobilized to site by air using the on-site airstrip. At completion of the project in 2009, 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 Taloyoak, Kugaaruk and Gjoa Haven in April 2006 in which the Hamlet Councils, Hunters & Trapper Organizations and general public were asked to assist in the design of the proposed remediation work. Presentations focused on the fact that CAM-D is targeted for clean-up. 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;
- To identify the issues and concerns the communities had with the site and the proposed work;
- To identify resources (labour and equipment) in the community that would be able to assist in the execution of the project; and
- To develop a better remediation plan.

The concerns/observations raised by the communities at these meetings included:

- Best overland Cat train route for the mobilization and demobilization of equipment and contaminated soils;
- Location of landfill and potential impacts due to contaminants migrating into adjacent water bodies; and
- Employment and business opportunities.