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P.O Box 2200
Iqaluit, Nunavut
X0A 0H0

Your file - Votre référence

Our file - Notre référence

April 7, 2005

Executive Director
Nunavut Water Board
P.O. Box 119
Gjoa haven, NU X0B 1J0

Dear Executive Director

RE: Water License NWB5SAR0406-Type-"B", CAM-F (Sarcpa Lake) Annual Water Report

Further to the conversation of April 6 with the Nunavut Water Board, Manager of Licencing, following please find the information required for the annual report.

I. The monthly and annual quantities (in cubic metres) of fresh water obtained from all sources;
Answer: The water used from August 4 - 24th, 2004 during the site assessment activities was 24,150 litres.
On average 1,150 liters of water from Sarcpa Lake was used per day. There were approximately 20 people on site for each of the 21 days.
No water was pumped from a local source for any other months as there was no other site activities performed outside of the site assessment period.
All potable water was flown to site. Water from Sarcpa Lake was used for washing and kitchen duties only.

ii. A summary of any construction work, modification and major maintenance work carried out on the water supply and solid waste disposal facilities, including all associated structures;
Answer: Not applicable

iii. Tabular summaries for all data and information generated under the "Monitoring Program"
Answer: No monitoring program necessary in 2004. This will be incorporated during the construction phase.

iv. An analysis of data collected during the "Monitoring Program" and a brief description of any future studies planned by the Licensee;
Answer: Monitoring program is documented in the water use application which was forwarded on April 1, 2005. No data was collected in 2004 other than water usage quantity.

v. A summary of any abandonment and restoration work undertaken during the year and an outline of any work anticipated for the next year;
Answer: Please reference the Water Use Application forwarded on April 1, 2005.

Canada

vi. A summary of any studies requested by the Board that relate to waste disposal, water use or reclamation, and a brief description of any future studies planned;
Answer: Not Applicable

vii. A list of unauthorized discharges and summary of follow-up actions taken;
Answer: Not Applicable

viii. Any revisions to the "Spill Contingency Plan";
Answer: Please see the attached spill contingency plan. This was part of the Water Use Application forwarded on April 1, 2005

ix. A public consultation/participation report describing consultation with local organizations and the residents of the nearby communities;
Answer: Please see the attached "Summary of Public Consultations, Events and Issues.

x. A brief summary of work done to address concerns or deficiencies listed in the inspection reports and/or compliance reports prepared by an Inspector;
Answer: Not Applicable

xi. An executive summary in English and Inuktitut of all plans, reports, or studies conducted under this Licence; and
Answer: Please see the attached executive summaries

xii. Any other details on water use or waste disposal requested by the Board by November 1st of the year being reported.
Answer: Not applicable

If you have any question or comments, Please contact the project manager, Bob Martin, at 867-9079-7931.

Yours truly

Natalie Plato
Director, Contaminated Sites

CC Water Resources Officer
Nunavut District, Nunavut Region
P.O. Box 100
Iqaluit, NU
X0A 0H0

encl:
Executive summary in English and Inuktitut
Summary of Public Consultations, Events and Issues
Spill contingency plan

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 inhabitantsby 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 employement 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.

ᓇᐃᒃᓕᑭᐊᖅᓗᒍ ᐅᓂᒃᑲᖅ

1. ᐱᑭᐊᖅᓴᓪᓕᐅᕈᔪᐊ

ᑲᓚᒪᑎᑐᖅᑯᓐᓂᑦ ᐱᑭᐊᖅᑎᑎᑭᔪᓕᕐᓴᒪᑕ ᑲᓇᑕᐅᑦ ᓄᓇᕗᑎᖓᓕᓂᓂᒃ ᓯᑕᐅᔭᖅᑕᐅᔪᓚᐅᓂᒃ ᖃᓄᐃᑦ
ᓴᓗᒪᓕᕐᓴᖅᓴᐃᔨᔪᑎᒃᓴᓂᒃ (FCSAAP) ᑕᒪᑐᒪᓂ ᐅᑭᐅᑦᑎᓂᓂ ᓴᓗᒪᓕᕐᓴᖅᓴᖅᑕᐅᓂᐊᖅᑐᑦ
ᑲᓚᒪᑎᑐᖅᑯᓐᓂᑦ ᐱᔪᓕᖅᑎᓯᑦ ᐊᓪᓚᓗ ᑭᐅᔪᓇᔪᐊᖅᓴᑎᒃ ᑕᒪᒃᑯᓂᓂᒪ ᑲᒪᔨᐊᔪᓂᔪᖅᑎᑦᑕᖅᑭᒪᔭᒥᓂᒃ
ᓴᓇᕐᓂᐃᓂᓂᒃ ᖃᓄᒃᑕᐅᔪᓚᐅᓂᒃ ᓄᓇᒧᑦ ᐊᕐᑎᑦᑕ ᐃᓕᓴᖅᑕᖅᓯᒪᓂᑦ ᐅᑎᖅᑎᑕᐅᑭᐊᓕᕐᓂᓂᒃ.
FCSAAP-ᓂᑦ ᑭᓇᐅᔭᖅᑕᓴᖅᑎᑕᐅᓕᒪᑕ ᐊᔪᑲᔪᐃᐊᔾᔨᒪᑎᒃᓴᓂᒃ ᖃᓄᒃᑕᐅᔪᓚᐅᓂᒃ ᓄᓇᓕᕐᓂᒃ
ᐊᑦᑕᕐᓇᑕᐅᔾᔨᓂᒃ ᐅᓪᓚᓂᓕᑦᐊᕐᓂᖅᓯᓪᓗᓂᒃ. ᐃᓄᓕᓇᔨᑐᖅᑯᓐᓂᑦ (DIAND) ᑕᒃᑯᓇᓓᑦ
ᑭᓇᐅᔭᓂᑦ ᑐᓵᔪᕐᐅᑎᒥᓕᕐᓴᒪᑕ ᐱᑎᑕᐅᓕᐅᖅᑯᑎᓗᓐᓂ ᓴᓗᒪᓕᕐᓴᖅᓴᐃᔨᔪᑎᒃᓴᓂᒃ ᖃᐅᔨᓴᕿᑕᐅᓂᐊᖅᑐᓂᒃ
ᖃᓄᒃᑕᐅᔪᓚᐅᓂᒃ ᑎᐅᓕᐃᓕᓂᑦ (DEW) ᓇᓕᐅᑎᖅᓄᖅᓴᖅᓂᒃ CAM-F-Γ (ᓴᖅᑭᐅᑦ
ᑕᓯᐊᓂ) ᓄᓇᕐᒥ.

ᑎᐅᓕᐃᓕᓂᑦ CAM-F-Γ ᓇᓕᐅᑎᖅᓄᓇᓕᐅᓕᐅᖅᓯᒪᓓᑕ 1957-Γ ᖃᒪᓐᓂᐊᖅᑐᓂᔾᔪᒃ 1963-Γ
ᒪᑐᐅᑦᓗᑎᒃ; ᑕᐃᒪᓓᓂᑦ ᑕᕐᓪᓕ ᐅᑎᕿᐃᐅᓕᐅᖅᓯᒪᓓᕐᑎᑐᑦ 1963-Γᓂᑦ. ᓄᓇᓕᕆᓇᓓᑦ 1977Γ
ᖃᐅᔨᓴᖅᑎᑯᓘᓂᑦ ᐊᑐᖅᑕᐅᖃᓕᑕᓕᐅᕈᐅᖅᑐᖅ ᓄᓇᕗᐊᒥ ᓯᓚᑦᑐᓴᖅᐅᑎᓂᒃ ᖃᐅᔨᓴᖅᑎᑯᓘᓂᑦ
ᐊᓐᓕᖅᑕᐅᓕᐅᖅᑐᓗᒃ ᐃᓄᓕᓇᔨᑐᖅᑯᓐᓂᑦ. ᑐᓴᘯᓇᖅᑐᖅᑕᖃᖃᐅᖅᑐᑦ ᐱᓴᖅᑕᐅᓕᐅᖅᑐᑦ 1985-Γ
ᐊᓪᓚᓗ ᖃᓄᑎᒥ ᐊᕐᑎᑦᑎᓂᓂᓄᓂᑦ ᐃᓅᐱᓐᓇᓂᖃᖅᑐᑦ ᖃᐅᔨᓴᖅᑕᐅᓕᐅᖅᑐᓗᒃ 1987-88-Γ ᐊᓪᓚᓗ
1994-Γ ᖃᐅᔨᓴᖅᑕᐅᑎᓕᓗᒍ ᓇᓂᓯᓕᐅᕐᓴᒪᑕ ᑐᓴᘯᓇᖅᑐᖅᑕᖃᖃᐅᖅᑐᓂᒃ. 1989-Γ
ᓴᓗᒪᓕᕐᓴᖅᑕᐅᓕᐅᖅᑐᑦ ᐃᓕᓐᓂᑦ ᐃᓗᓗᐃᑦ ᓴᓂᕐᓂᑦ ᖃᔨᓐᓂᑦ, PCB-ᖃᑐᓄᑦ
ᐊᒥᐊᖅᑕᐅᔪᓚᓂᑦ ᐱᓴᖅᑕᐅᕕᓕᐅᖅᑐᓂᒃ ᓴᓇᔨᓄᑦ ᐊᑦᑕᕐᓇᔨᓇᒧᑦ. ᐃᑭᓴᕐᐃᓐᓇᔪᓚᐅᓂᑦ ᐊᓵᐱᓵᕐᒥᒃ
ᐱᓴᖅᑕᐅᓕᐅᖅᓯᒪᔪᑦ ᐊᑲᑕᕐᔪᓂᑐᖅᑕᐅᓕᐅᖅᑐᓂᒃ Δ-Γ 1997-Γ.

ᐃᓄᓕᓇᔨᑐᖅᑯᓐᓂᑦ ᐃᓕᐃᓕᐅᖅᑐᑦ ᐱᓕᕆᐊᓇᔨᐅᔪᓂᑦᓂᒃ ᐅᑭᐅᓐᔪᐃᓕᐅᖅᑐᑎᓂ ᑕᒪᓐᓇ ᓄᓇ
ᖃᐅᔨᓴᖅᑕᐅᑭᐅᑦᓕᒃᖃᓐᓂᖅᓱᓂ 2004 ᐊᐅᔭᓐᓇᓂ. ᑕᒪᑐᒪᓂᔪᐃᓐᓇᖅ ᓄᓇᓐᓇᓂ ᐊᒃᑕᑦᕄᒃᔪᖅ
ᖃᐅᔨᓴᖅᑕᐅᑎᓕᓂ ᔪᐅᓯᕐᓄᐅᑎᒥᐅᖅᑐᖅ ᓄᓇᓐᓇᓄᑦ ᐊᑦᑕᕐᓇᖅᑎᑦᑐᓂᒃ. ᑕᒪᓐᓇ ᓄᓇᓐᓇ
ᖃᐅᔨᓴᖅᑕᐅᓕᐅᖅᑎᑦᓯᔪᖅ ᐅᒪᓕᐃᓕ ᐊᑦᑕᕐᓇᕆᑕᐅᑐᐃᓐᓇᐃᓕᖅᑲᓐᓇᓐᓇᓂᒃ ᐊᐅᑎᓐᓇᓄᓕᓗ ᖃᐅᔨᓴᖅᑭᑎᑦ
ᐱᐊᓂᒃᑕᐅᓕᓗᓂᑎᒃ ᐊᑐᐊᓚᔪᖅᑕᐅᓂᒃᑕᐅᓕᓗᓂᑎᒃ ᑕᒪᑐᒧᓐᓇ ᓄᓇᒧᑦ. ᑕᐃᓕᓚᓂ ᐅᖃᖅᑕᐅᓕᐅᖅᑐᑦ
PCB-ᓕᑦ ᐱᓴᖅᑕᐅᓕᓗᓂᒃ ᖃᓕᓐᓂᓇᓄᓕᑦ ᐊᐅᓕᓇᖅᑎᑕᐅᓂᐊᖅᓯᒪᑕ ᐊᒃᑕᖅᑕᐅᔪᓐᓇᓄᓕᑦ.

ᑐᓐᓇᐃᓂᓕᓗᑦ ᖃᐅᔨᓴᖅᑕᐅᓕᐅᖅᑐᑦ, ᑐᓴᖅᑕᐅᔾᔨᓕ ᑲᑎᒪᒃᑕᒍᑕᐅᑎᓕᓗᑦ ᓄᓇᕗᓐᓂ,
ᐃᓄᓕᓇᔨᑐᖅᑯᓐᓂᑦ ᐸᑦᓇᐃᔾᔨᑕᐅᓂᒪᓂᒃ ᐊᑭᑦᖅᓯᒪᓕᖅᑐᑦ CAM-F-Γ ᓴᓗᒪᓕᕐᓴᖅᐃᓂᐊᖅᑐᓂᒃ
ᐊᓪᓚᓗ ᐱᑭᐊᖅᑕᐅᓂᐊᖅᓱᓂ ᐅᑭᐅᖅᓴᖅᓂᓂ ᐅᑭᐅᖅ 2005.

2. ᓴᓗᒪᓕᕐᓴᖅᑕᐅᓂᐊᖅᑐᑦ ᓇᒥᒪᓕᖅᓂᑕ

CAM-F-Γ ᑎᐅᓕᐃᓕᓂᑦ ᐃᓕᐅᑎᖅᑎᓕᓂᐊᕐᓂᒃ ᓄᓇᕐᔪᐊᑎᑎᔪᑦ ᐅᕙᓘᓐᓃᖅ 68°33' N, 83°19'
Γᐊᕕᐊᓕ ᐃᑭᕆᓕᕐᓂᓂ, ᐊᒥᑦᑐᕆᒥᐅ ᑲᒥᑎ ᑲᓕᕐᖅᓱᑕ ᐊᑯᓂᕐᓂᓂᓂ ᓄᓇᕗᒥ. ᓄᓇ ᑕᒪᓐᓇ ᑯᐃ
ᓄᓇᓴᐅᑎᓕᓂᑐᖅ. ᐃᒪᓐᓕᔪᐊᖅᑎᖅᓇᕐᓂ ᓴᑯᑎᕐᓂᓂᒋᒥᓂ 260-Γᑐᒥᒃ ᓴᑯᑎᕐᓂᓂᒃ ᓯᓚᕐᓂᓂᓂ
ᐃᒪᓚᖏᒃ, 2-ᑭᓪᓚᒥᑐᒥᒃ ᐅᐊᕐᓇᖏᓐᖏᓕᓂᓯᓂ ᓴᖅᑭᐅᑦ ᑕᓯᓂᑕ, ᓄᓇᕐᓂ ᓇᖅᓴᖅᑲᐅᑎᓪᓚᑲᖅᑐᑦ
ᓴᑯᑎᕐᓂᓯᓪᓗᓂ ᑐᐊᑭᐅᖏᑦ, ᐊᒥᓯᓂᒃ ᑕᓯᓂᒃ ᐊᒥᓯᐊᓗᕐᓂᓂᓗ ᑯᐋᓪᓂᒃ.

ᓄᓇ ᑕᒪᓐᓇ ᐃᒪᓚᖏᒃ 85ᑭᓪᓚᒥᑐᒥᒃ ᐅᐊᕐᓇᖏᓐᖏᓕᓂᑐᖅᑐᑦ ᓴᓂᓴᐅᑦ ᐊᒪᓚᓗ 100ᑭᓪᓚᒥᑐᒥᒃ
ᐅᕙᓘᓯᕐᓂᓂᖃᖅᑐᑦᓂᓂ ᐃᒪᓗᓂᒃᑕᒃ, ᓄᓇᑐᐃᓐᓇᕆᑐᖅᑐᑦ ᐅᒥᐊᓴᓵᐅᑯᓯᑐᖅ ᑎᑭᑕᓵᓴᐅᓂᑐᖅ. ᑲᓇᐅᑯᓂ
ᑎᑭᑕᓵᓴᖅᑐᑦ ᓄᓇᐅᑯᓂᓗ ᓴᓂᓴᐅᑦ ᑕᓯᓂᒪᓂ ᑭᕐᔪᐊᓂᓂ ᑯᕐᓘᓂᓂ. ᐊᒪᓚᓗ, ᒥᑦᑕᔪᕐᖃᖅᑐᑦ,
ᑕᐃᒪᓐᓇᓂᑦ ᑎᑭᑕᐅᔾᔨᐃᓐᓇᖅᑐᑦ ᐅᑭᐅᑦᓕᒥᒃ. ᐃᒪᓐᓕᔪᓂᑦ ᖃᐅᔨᓴᖅᑕᐅᓕᐅᖅᑐᑦ ᓴᓗᒪᓕᕐᓴᖅᑕᐅᓂᐊᖅᑐᑦ
ᓴᓇᕐᓂᐃᓂᓂᓕᓂᑦ, ᐊᑭᑎᑕᓵᓴᐅᓂᑐᖅ, ᑲᓇᑕᐅᑦ ᐅᐊᕐᓇᖏᓐᖏᓕᓂᑐᖅᑐᑦ ᑕᓴᔨᓇᖅᑐᖅᓯᒪᓂᑦ
ᓴᓇᕐᓂᐃᓂᓂᓕᓂᑦ, ᐊᑭᑎᑕᓵᓴᐅᓂᑐᖅ ᑕᒪᓐᓇ ᐃᓄᓕᓇᔨᑐᖅᑯᓐᓂᑦ ᑕᓴᔨᓇᖅᑐᖅᓯᒪᓂᑦ ᓴᓇᕐᓂᐃᓂᓂᓕᓂᑦ.

3. ᓴᓇᔭᐅᓂᐊᖅᑐᑦ ᖃᖓᐅᓂᐊᕐᒪᖔᑕᓗ

ᓄᓇᖓᓂᒃ ᖃᐅᔨᓴᖅᑕᐅᑎᑦᑎᓪᓗᑎᒃ ᐊᒻᒪᓗ ᖃᓄᐃᑦᑑᓂᖓᓂᒃ ᓇᓗᓇᐃᔭᐃᓪᓗᑎᒃ 2004 ᐊᐅᔭᖓᓂ. ᐋᕿᒃᓯᐃᔾᔪᑕᐅᓂᐊᖅᑐᑦ ᓄᓇᖓᓂᒃ ᐸᕐᓇᒃᑕᐅᓯᒪᓕᖅᑐᑦ ᐊᒻᒪᓗ ᐃᓚᓕᐅᑎᔭᐅᓚᐅᖅᑐᑦ ᐅᓂᒃᑳᖏᑦ ᑐᒃᓯᕋᐅᑎᒧᑦ ᑲᒪᒋᔭᐅᒋᐊᓖᑦ 2005 ᐊᐅᔭᖓᓂ ᓄᒃᑎᑕᐅᓂᐊᕐᒪᑕ ᑕᒪᐅᖓ ᓴᓂᕋᔭᖑᑦ. ᑳᓐᑐᕌᒃᑎᑕᐅᓯᒪᔪᖅ ᓴᓇᖅᑯᑎᓂᒃ ᑕᒪᐅᖓᐅᔾᔨᓂᐊᖅᑐᖅ 2005 ᐅᑭᐅᖓᓂ ᐊᒻᒪᓗ ᓴᓗᒻᒪᖅᓴᐃᓯᒥᐊᓚᖓᔪᑦ 2006 ᐊᒻᒪᓗ 2007 ᐊᐅᔭᖓᓂ. ᓇᓗᓇᐃᔭᖅᓯᒪᔪᑦ ᐃᓚᓕᐅᑎᖕᒥᔭᕗᑦ.

ᑕᒪᐃᑕᓕᒫᖅ ᓇᐸᔪᑦ ᐃᒡᓗᐃᑦ ᓯᕋᒃᑎᖅᑕᐅᓂᐊᖅᑐᑦ ᐊᒃᑕᖅᑕᐅᓂᐊᕐᒪᑕ ᓇᓗᓇᐃᔭᖅᑕᐅᓗᑎᒃ ᑐᕐᑯᓐᓇᖅᑑᓕᑦ ᖃᓄᐃᖏᑦᑐᓪᓗ ᐊᒃᑕᕐᓗᑯᐃᑦ. ᑐᕐᑯᓐᓇᖅᑑᓕᑦ ᐊᒃᑕᕐᓗᑯᐃᑦ, ᒪᑯᐊ ᓴᕕᕋᔭᐃᑦ ᓕᑦᖃᖅᑐᑦ ᐊᒥᐊᕈᑏᑦ, ᐴᖅᑕᐅᓗᑎᒃ ᐊᒻᒪᓗ ᖃᓪᓗᓇᓄᑦ ᐊᐅᓪᓚᖅᑎᑕᐅᓗᑎᒃ ᑕᐃᒪᐃᑦᑐᓂᒃ ᐊᒃᑕᕐᓗᑯᖃᕐᕕᒧᑦ ᐃᓕᔭᐅᓂᐊᕐᒪᑕ. ᖃᓄᐃᖏᑦᑐᓪᓕ ᐊᒃᑕᓗᑯᐃ ᐃᒡᓗᕐᔭᐊᕖᓂᓪᓗ ᑕᒪᐅᖓ ᓴᐅᔭᐅᓂᐊᖅᑐᑦ ᓴᐅᔭᐅᕝᕕᒃᓴᖅ ᑕᐃᒪ ᐋᕿᒃᓯᖅᑕᐅᓂᐊᖅᑐᖅ ᓴᓗᒻᒪᖅᓴᐃᔪᓄᑦ ᐃᓚᐅᓗᓂ.

ᐊᒃᑕᕐᓗᑯᓂᒃ ᐊᕝᕗᐃᓚᖓᔪᑦ ᑲᑎᖅᓯᐃᓗᑎᒃ ᓯᕈᔪᒃᒥᒪᔪᓂᒃ ᓄᓇᓂᒃ. ᐱᓇᓱᐊᓚᖓᔪᑦ ᓄᓇᑐᐃᓐᓇᒧᓯᓂᒃ ᓄᓇᒃᑯᔪᓂᒃ ᐊᑐᕐᓗᑎᒃ ᑲᑎᒃᓯᐃᓚᐅᕐᓗᑎᒃ ᖃᑦᑕᐅᔭᓂᒃ ᑕᐃᒪᓕ ᖃᖅᑎᑕᓂᐊᕐᓗᑎᒃ ᓵᑦᑑᔭᖑᖅᑎᑕᐅᓗᑎᒃ ᐊᑐᐊᕐᓗᒍ ᑎᐅᓚᐃᓐᑯᒃ ᓴᓗᒻᒪᖅᓴᐃᔾᔪᑎᖓᑕ ᐊᑐᐊᒐᖓ ᖃᑦᑕᐃᔭᕈᓗᖕᓄᑦ. ᑕᒪᑐᒪᓂ ᓄᓇᒥ ᖃᑦᑕᐅᔭᕈᓗᖕᓂ ᑲᑎᖅᓯᐃᔾᔪᑏᑦ ᐊᑐᐊᒐᓕᐅᖅᑕᐅᓯᒪᔪᑦ ᐃᓯᒪᒋᓪᓗᒋᑦ ᓄᓇᒧᑦ ᑯᕕᔪᖃᖅᑕᐃᓕᒥᐊᖃᕐᒪᑕ ᐃᒪᕐᒧᓪᓗ. ᐊᑐᐊᒐᓇᔭᐅᔪᑦ ᑖᒃᑯᐊ ᐅᔾᔨᖅᓯᕈᑕᐅᖓᑕ ᐃᒪᕐᒥ ᐃᖃᓗᖕᓄᑦ ᐆᒪᔪᓐᓇᕐᕕᐅᔪᓂᒃ ᓯᕈᔪᐃᔪᒪᖏᓯᑎᒃ ᑕᒪᑐᒪᓂ ᓴᓗᒻᒪᖅᓴᐃᓂᖏᓐᓂ ᖃᑦᑕᐅᔭᕈᓗᖕᓂᒃ.

ᐊᒃᓱᑲᓪᓚᒃ ᑕᒪᓐᓇ ᖃᐅᔨᓴᖅᑕᐅᓯᒪᓕᖅᑐᖅ ᑕᒪᐅᖓ ᕿᒥᕈᕆᐊᖅᑐᖅᓯᒪᓪᓗᑎᒃ ᖃᐅᔨᓚᐅᖅᑐᑦ ᐃᓚᖏᑦ ᓯᓚ ᓯᕈᔪᒃᑕᐅᓂᑯᐃ ᓯᓚᒧᑦ ᓄᖑᔪᖅᑕᐅᓯᒪᖏᒻᒪᑕ, ᐃᓚᖏᓪᓗ ᐊᕙᑎᖓᓄᑦ ᓯᕙᓪᓕᐅᑕᐅᓇᑎᒃ. ᑯᕕᔭᐅᔪᐊᕕᓂᑦ ᒪᑯᐊ ᐊᑦᑕᕐᓇᖅᑐᑦ ᐊᒥᐊᒃᑯᖏᑦ ᑰᒐᓚᖕᓂ ᒪᓂᕋᕐᒥᓗ ᑕᐃᒫᓴᐃᓐᓇᖅ ᐊᓯᖏᓐᓂ ᑎᐅᓚᐃᓐᑯᓐᓄᑦ ᕿᒪᒃᑕᐅᔪᕕᓂᕐᓂ ᐱᖓᑕ ᐱᖏᖕᓇᖏᑦᑐᑦ ᑕᐃᒫᓴᐃᓐᓇᖅ ᓴᓗᒻᒪᖅᓴᖅᑕᐅᓚᖓᔪᑦ, ᒪᑯᐊ ᐅᕐᓯᐊᓗᕈᔪᐃᑦ (PHC's), ᓴᕕᕋᔭᐃᓪᓗ PCB's-ᓗ.

ᐅᓇᑕᖅᑐᒃᓴᒃᑯᑦ (DND) ᑎᐅᓚᐃᓐᑯᑦ ᕿᒪᒃᑕᕕᓂᖏᓐᓂᒃ ᓴᓗᒻᒪᖅᓴᐃᔪᑏᑦ ᐊᑐᐊᒐᖏᑦ ᐋᕿᒃᓯᖅᑕᐅᓚᐅᕐᒪᑕ 1990ᓂ ᐊᒻᒪᓗ ᐊᓯᖏᓐᓂ ᑎᐅᓚᐃᓐᑯᓐᓂ ᓴᓗᒻᒪᖅᓴᐃᔾᔪᑕᐅᓪᓗᑎᒃ ᐊᑐᖅᑕᐅᖃᑦᑕᖅᓯᒪᓕᖅᑐᑎᒃ ᐅᓇᑕᖅᑐᒃᓴᒃᑯᓐᓄᑦ DND. ᐃᓄᓕᕆᔨᑐᖅᑯᓐᓄᑦ ᐋᕿᒋᐊᖅᑕᐅᓪᓗᑎᒃ ᐊᑐᐊᒐᓇᔭᐅᓕᓚᐅᕐᒪᑕ ᑲᓇᑕᒥ ᒥᓂᔅᑕᐃᑦ ᑲᑎᒪᔩᖏᓐᓄᑦ ᐊᕙᑎᑦᑎᓐᓄᑦ ᑲᑎᒪᑎᑦᑐᒥᑦ ᑎᓕᓯᔾᔪᑎᕕᓂᖏᓐᓂᒃ ᒪᓕᒃᑐᒥᑦ (CCME) ᑕᒪᒃᑯᓐᓄᖓ ᓄᓇᒥ ᐊᑯᓂᐊᓗᒃ ᓄᖑᓲᖑᖏᑦᑐᓄᑦ PHC-ᓗᑦ ᓯᕈᔪᒃᓯᒪᔪᑦ ᓄᓇᒦᑦᑐᓐᓇᖅᑐᑦ. ᐊᑐᐊᒐᖃᕐᒥᔪᑦ ᐃᒻᒥᒃᑰᖅᑐᓂᒃ ᓄᓇᓂᒃ ᓯᕈᖅᓯᒪᔪᓂᒃ (SSRA) ᐊᑐᐊᖅᑕᐅᓗᑎᒃ ᐋᕿᒃᓯᐃᔾᔪᑕᐅᓂᐊᕐᒥᔪᑦ ᑖᒃᑯᐊ ᐊᑐᐊᒐᓇᓗᒥᑦ ᐱᔪᓐᓇᕌᖓᑕ.

ᓄᓇᒃᑯᑦ ᐅᑭᐅᕐᒥ ᑕᒪᐅᖓᐅᔾᔨᓂᐊᖅᑐᑦ ᐅᓂᐊᖅᓯᓗᑎᒃ ᐅᕿᖏᑦᑐᓂᒃ ᓴᓇᖅᑯᑎᓂᒃ ᓯᒡᔭᒥᑦ ᑕᕝᕗᖓ ᑎᐅᓚᐃᓐᑯᑦ ᓄᓇᓕᕕᓂᖓᓄᑦ, ᐊᐅᔭᒃᑯᑦ, ᑕᒪᐅᖓᖃᑦᑕᕐᓗᑎᒃ 3ᑮᓚᒥᑐᒥᒃ ᐊᖅᑯᑎᖃᕐᒪᑦ ᓴᖅᐸᐅᑉ ᑕᓯᖓᓂᑦ.

ᑕᒪᑐᒪᓂ ᓴᓇᔨᓄᑦ ᓄᓇᓕᕌᓚᓕᐅᕐᓂᐊᖅᑐᑦ ᖁᕐᕕᓄᑦ ᑰᕕᑦ ᐋᕿᒃᓯᖅᑕᐅᓗᑎᒃ. ᑕᕝᕙᓂ ᐊᐅᔭᒃᑯᑦ ᓴᓇᔨᖅᑲᓪᓗᐊᕈᓐᓇᕐᓂᐊᕐᒪᑕ 35-ᓄᑦ ᑎᑭᓪᓗᒍ ᐃᓄᖅᑲᓕᖅᑲᑦᑕᖅᑐᓂ ᑕᒪᒃᑯᐊ ᓴᓇᔭᐅᔪᓐᓇᕐᓂᖏᓐᓂ ᐊᐅᔭᒃᑯᑦ, ᐃᒻᒪᖄ ᐅᓪᓗᓂᒃ 75-ᓂᒃ ᑕᒫᓂ ᓴᓇᔪᓐᓇᕐᓂᐊᕐᒪᑕ 2006 ᐊᒻᒪᓗ 2007 ᐊᐅᔭᖓᓂ.

ᐅᕿᖏᑦᑐᑦ ᓴᓇᖅᑯᑏᑦ ᐃᖅᑲᓇᐃᔭᖅᑏᓪᓗ ᑕᒪᐅᖓᖅᑎᑕᐅᖃᑦᑕᕐᓂᐊᖅᑐᑦ ᖃᖓᑕᓲᒃᑯᑦ ᒥᑦᑕᕐᕕᖃᕐᒪᑕ ᑕᒫᓂ.

CAM-F-ᒥ ᑎᐅᓚᐃᖅᑯᑦ ᕿᒪᖕᓂᑯᖏᓐᓂ ᓴᓗᒻᒪᖅᓴᐃᔾᔪᑎᒃᓴᓂᒃ ᐃᒪᓕᕆᔨᒃᑯᓐᓄᑦ ᐊᑐᕈᓐᓇᐅᑎᒥᒃ ᑐᒃᓯᕋᐅᑎᐊ ᐃᓄᓕᕆᔨᑐᖅᑲᒃᑯᑦ (DIAND) ᑲᓇᑕᒥ

ᐱᐊᓂᓕᖅᐸᑕ 2007 ᐊᐅᔭᖓᓂ, ᒪᓂᕋᖓ ᐃᓕᖅᑯᓯᑐᖅᑲᖓᓄᑦ ᐅᑎᖅᑎᑕᐅᓂᐊᖅᑐᖅ ᐊᑐᐊᒐᐃᑦ ᒪᓕᓗᒋᑦ ᐱᓕᕆᐊᕆᔭᐅᒋᐊᓕᖕᓂ ᑖᒃᑯᐊ ᐸᕐᓇᐅᑕᐅᓯᒪᔪᑦ ᐅᓂᒃᑳᖏᑦ ᐃᓚᓕᐅᑎᔭᕗᑦ ᑕᐃᑯᓂ.

4. ᑖᒪᓂᕐᒥᐅᑦ ᐃᓅᓯᖏᓐᓄᑦ ᐃᒃᐱᖕᓇᕐᓂᖅᑲᕈᑕᐅᔪᑦ ᓴᓇᔪᓄᑦ

ᐊᔪᕐᓇᖏᒃᑳᖑᑦ, ᓴᓇᔩᑦ ᐋᕿᒃᓱᖅᓯᒪᖃᑦᑕᓚᖓᔪᑦ ᐱᓕᕆᔪᓯᕐᒥᓂᒃ ᐅᑭᐅᖅᑕᖅᑑᑦ ᐊᕙᑎᖓᓂᒃ ᐃᖅᑲᓱᒃᑐᓂᒃ ᑖᒪᓂᕐᒥᐅᓂᓗ ᐊᑐᖅᑲᑦᑕᕐᓗᑎᒃ ᓄᓇᓕᖕᒥᐅᑦ ᐱᒃᑯᒋᔭᖏᓐᓂᒃ, ᐊᒻᒪᓗ ᐊᕙᑎᖓᓄᑦ ᐃᓗᐊᕐᓂᖅᓴᓂᒃ ᓴᓗᒻᒪᖅᓴᐃᓂᕐᒥᓂᒃ ᑖᒪᓂ.

ᐅᓂᒃᑲᐅᔾᔭᐅᒥᐊᖅᑐᓚᐅᖅᑐᑦ ᓴᓂᕋᔭᖕᒥᐅᑦ ᐃᒡᓗᓕᖕᒥᐅᓪᓗ ᔫᓐᓄᐊᕆᒥ ᒫᔨᒥᓗ 2004-ᒥ ᓄᓇᓕᖕᒥᑕ ᑲᑎᒪᔨᖕᒥᑦ ᑐᓴᖅᑎᒋᐊᖅᑐᖅᓗᒋᑦ, ᐊᖕᒍᓇᓱᒃᑏᓪᓗ ᑲᑎᒪᔨᖕᒥᑦ ᐊᒻᒪᓗ ᕿᑭᖅᑖᓂ ᐃᓄᐃᑦ ᑲᑐᔾᔨᖅᑎᒌᖕᖓᑦ ᓄᓇᓕᖕᒥᐅᓪᓗ ᑖᒪᓂ ᓄᓇᖓᓂ ᐱᓕᕆᔪᖅᑲᕐᓂᐊᕐᓂᖓᓂᒃ ᓱᓕᓇᓂᐊᕐᒪᖔᑕᓗ. ᐅᓂᒃᑲᐅᔾᔭᐅᓚᖅᑐᑦ ᑕᒪᒃᑯᓂᖓ ᐅᓂᒃᑲᐅᔾᔭᐅᓰᓂᒃ ᐊᒻᒪᓗ ᑖᒃᑯᓂᖓ ᑕᐅᑐᒃᓗᑎᒃ ᓴᓗᒻᒪᖅᓴᖅᑕᐅᒋᐊᓕᖕᓂᒃ CAM-F-ᒥ ᑐᕌᖅᑕᐅᔪᓂᒃ. ᐊᒻᒪᓗ, ᓄᓇᓕᖕᒥᐅᑦ ᑕᒪᐅᖓ ᐴᓚᕆᐊᖅᑎᑕᐅᓚᐅᖅᑐᑦ ᐃᓄᓕᕆᔨᑐᖅᑲᒃᑯᑦ ᐃᖅᑲᓇᐃᔭᖅᑎᖕᒥᑦ ᐱᖅᑎᒥᓪᓗᒥᑦ ᒫᔨᒥ ᔪᓚᐃᒥᓗ 2004ᒥ ᑕᑯᔭᖅᑐᖅᓗᑎᒃ ᑐᑭᓯᒋᐊᖅᑐᖅᓗᑎᒡᓗ ᐸᕐᓇᐃᔪᑕᐅᒋᐊᓕᕐᓂᒃ. ᓄᓇᓕᖕᓄᑦ ᐳᓚᕋᑲᑦᑲᓗᑎᒃ ᐅᓂᒃᑲᐅᔾᔨᓚᐅᖅᑐᑦ ᐅᑯᓂᖓ ᑐᕌᖅᑕᐅᔪᓂᒃ:

- ᑐᓴᖅᑎᑦᑎᓪᓗᑎᒃ ᓴᓇᔭᐅᓂᐊᖅᑐᓂᒃ ᓄᓇᓕᖕᒥᐅᓄᑦ.
- ᑐᓴᕐᕕᒋᓇᓱᐊᖅᓗᒋᑦ ᐃᓄᐃᑦ ᑖᒪᓂᕐᒥᐅᑦ ᓄᓇᒥ ᓱᕈᔫᒃᑕᐅᓯᒪᔪᓂᒃ ᖃᐅᔨᒪᔭᖏᓐᓂᒃ ᑕᐃᓯᒪᖓᓂᓂᑦ ᐱᓕᕆᖃᑦᑕᖅᓯᒪᔪᑦ ᖃᐅᔨᒪᔭᖏᓐᓂᒃ.
- ᓇᓗᓇᐃᔭᐃᔪᒪᓪᓗᑎᒃ ᓄᓇᓕᖓᓂ ᐊᑐᖅᑕᐅᔪᓐᓇᖅᑐᓂᒃ (ᓴᓇᔨᓂᒃ ᓴᓇᖅᑯᑎᓂᓗ) ᓄᓇᓕᖓᓂ ᓴᓗᒻᒪᖅᓴᐃᔨᓄᑦ ᐊᑐᖅᑕᐅᔪᓐᓇᖅᑐᓂᒃ.
- ᓇᓗᓇᐃᔭᐃᓇᓱᐊᖅᓗᑎᓗ ᐃᓱᒫᓗᒋᔭᐅᔪᓂᒃ ᐊᒃᓲᕈᑕᐅᔪᓂᓗ ᓄᓇᓕᖕᒥᐅᓄᑦ ᑖᓐᓇ ᐱᓕᕆᐊᕆᔭᐅᓂᐊᖅᑐᖅ ᐱᑦᓗᒍ, ᐊᒻᒪᓗ
- ᐊᒻᒪᓗ ᐋᕿᒃᓱᐃᔪᒪᓪᓗᑎᒃ ᐃᓗᐊᕐᓂᖅᓴᒥᒃ ᓴᓗᒻᒪᖅᓴᐃᔾᔪᑎᒃᓴᒥᒃ.

ᐃᓱᒫᓗᒋᔭᐅᔪᑦ ᓴᖅᑭᑎᑕᐅᓚᐅᖅᑐᑦ ᓄᓇᓕᖕᓂ ᑲᑎᒪᑎᑕᐅᑎᓪᓗᒋᑦ ᒪᑯᐊ:

- ᓴᓗᒻᒪᖅᓴᖅᑕᐅᕐᑯᔭᐅᓪᓗᑎᒃ ᖃᑦᑕᐅᔭᕈᓗᐃᑦ ᑖᒪᓂᕐᓇᔪᑦ;
- ᖃᓗᖅᑰᕈᑕᐅᓪᓗᑎᒃ ᐊᒃᑕᕐᓗᑯᐃᑦ ᑖᒪᓂ ᓴᐅᔭᐅᔪᓐᓇᖅᑐᑦ ᖃᓪᓗᓈᓄᓪᓗ ᐊᐅᓪᓚᖅᑎᑕᐅᒋᐊᓖᑦ;
- ᓇᒦᒻᒪᖔᑕ ᐊᒃᑕᕐᓗᑯᓂᒃ ᕿᖕᓂᕕᐅᔪᓐᓇᖅᑐᑦ ᐊᒻᒪᓗ ᖃᓄᑎᒋ ᐃᒃᐱᖕᓇᕐᓂᖅᑲᕈᓐᓇᕐᒪᖔᑕ ᓱᕈᔦᐃᔪᓐᓇᖅᑐᑦ ᓴᓇᖅᑰᑎᑦ ᐃᒪᕐᒧᑦ ᑰᒐᓛᓄᓪᓗ (ᓴᖅᐸᐅᑉ ᑕᓯᐊ) ᐃᓱᒪᒋᓪᓗᒍ; ᐊᒻᒪᓗ
- ᐃᖅᑲᓇᐃᔫᒃᓴᑦ ᓇᖕᒥᓂᕐᓗ ᐱᓇᓱᐊᒐᖅᑐᓄᑦ ᑲᒪᒋᔭᐅᔪᓐᓇᖅᑐᑦ.

ᑖᒃᑯᐊ ᓄᓇᓕᖕᒥᐅᑦ ᐃᓱᒫᓗᒋᔭᖏᑦ ᑭᐅᔭᐅᓇᓱᐊᖅᓗᑎᒃ, ᖃᑦᑕᐅᔭᐃᑦ ᑖᒪᓃᑦᑐᑦ ᑲᑎᖅᓱᖅᑕᐅᓚᐅᖅᑐᑦ, ᖄᖅᑎᑕᐅᓪᓗᑎᓪᓗ ᐊᒃᑕᖅᑕᐅᓪᓗᑎᒃ ᓴᐅᔭᐅᓚᐅᖅᑐᑦ ᕿᖕᓂᕕᐅᓂᐊᖅᑐᓂ. ᐊᑦᑕᕐᓇᖏᑦᑐᓂᒃ ᐊᒃᑕᕐᓗᑯᓂᒃ ᓴᐅᓯᓂᐊᕐᒪᑕ ᑕᒪᐅᖓ ᓄᓇᒧᑦ ᐊᒻᒪᓗ ᑖᒃᑯᐊ ᐅᖓᓯᒃᑐᒥᓐᓂᐊᖅᓗᑎᒃ ᑕᓯᕐᓄᑦ ᑰᒐᓛᓄᓪᓗ. ᐊᒻᒪᓗ ᑕᐃᒪ ᓄᓇᓕᖕᒥᐅᓄᑦ ᑲᒪᒋᔭᐅᔪᑎᒃᓴᐃᑦ ᐋᕿᒃᓱᖅᑕᐅᓚᐅᖅᑐᑦ ᓇᖕᒥᓂᖅ ᐱᓇᓱᐊᒐᖅᑐᓄᑦ ᑲᒪᒋᔭᐅᔪᓐᓇᕐᓂᐊᕐᒪᑕ.

ᓯᓕᒃᑲᓐᓂᑦ ᐅᓂᒃᑳᓇᐊᖅᑐᒃᑲᓐᓂᓚᖓᔪᑦ ᑲᑎᒪᔨᖏᓐᓄᑦ ᖃᓄᐃᓕᐅᕐᓂᕐᒥᓂᒃ ᐅᓂᒃᑲᐅᑎᖅᑲᑦᑕᕐᓗᒋᑦ ᓴᓂᕋᔭᖕᒥ ᐃᒡᓗᓕᖕᒥᓗ ᑎᓯᐱᕆᒥ 2004-ᒥ. ᐅᓂᒃᑳᖏᑦ ᐃᓱᒪᒋᔭᖏᓪᓗ ᐃᓚᓕᐅᑎᔭᐅᔪᑦ. ᐊᑐᓂ ᐅᓂᒃᑲᐅᔭᐅᒥᐊᖅᑐᖅᑲᑦᑕᓚᐅᕐᒥᔪᑦ ᒐᕙᒪᑎᑐᖅᑲᒃᑯᓐᓂ ᐃᖅᑲᓇᐃᔭᖅᑏᑦ ᐃᖅᑲᓗᖕᓂ ᐅᖅᑲᐅᓯᖕᒥᑦ ᐃᓱᒪᒋᔭᖏᓪᓗ ᐃᓚᓕᐅᑎᔭᐅᓚᐅᕐᒥᔪᑦ ᐅᓂᒃᑳᑦᑎᓐᓂ.

ᓴᓇᔨᓕᕆᔩᑦ ᒐᕙᒪᑎᒃᑯᓐᓂ ᐱᔨᑦᓯᕋᖅᑏᑦ ᑲᓇᑕᒥ, ᐱᕐᑯᑎᖏᓐᓂᒃ ᓄᓇᓂ ᑲᒪᔩᑦ ᐃᒡᓗᕐᔪᐊᓕᐅᖅᑏᑦ ᓴᓇᖅᑯᑎᓕᕆᔨᒻᒪᕆᓪᓗ, ᐊᕙᑎᓕᕆᔨᒃᑯᓐᓂ, ᑲᓇᑕᐅᑉ ᐅᐊᓕᓂᖓᓂ

Summary of Public Consultation Events & Issues

Department of Indian Affairs and Northern Development (DIAND) have carried out an extensive consultation process in relation to the remediation of the CAM-F DEW Line site at Sarcpa Lake, Nunavut. Various local groups, communities and individuals have been consulted on both the site investigation and remediation work plan.

A summary of these consultations follows:

January 2004: initial meeting with Hamlet Councils, Hunters & Trappers, Qukiqtani Inuit Association representatives and the public in Hall Beach and Igloolik to briefly introduce the project, especially the planned site investigation.

March 2004: community public consultations in Hall Beach and Igloolik; presented planned site investigation work and sought ideas on overall site remediation plan.

May 2004: initial meetings with Hunters & Trappers Organizations, Hamlet Councils, Qikiqtani Inuit Organizations representatives and the public in Hall Beach and Igloolik to briefly introduce the project and especially the planned site investigation.

July 2004: initial meeting with Nunavut Impact Review Board (NIRB) & Nunavut Water Board (NWB) representatives to introduce the project and obtain feedback on regulatory approval requirements and submissions.

July 2004: transported Hunters & Trappers and Hamlet representatives from local communities to the site during investigation work to illustrate work being carried out and to familiarize them with site and site-specific issues.

December 2004: presented the results of site investigation and preliminary remedial design options to regulators. A summary of comments and concerns is attached.

December 2004: community public consultations in Hall Beach and Igloolik; results of the site investigations and preliminary remediation work plans were presented. A summary of comments and concerns is attached.

December 2004 Qikiqtaaluk Environmental was contracted to review the Site Specific Risk Assessment (SSRA) and to interview Hall Beach and Igloolik elders about the project and project area.

February 2005: presented summary results of site investigation and preliminary remediation work plan to NIRB.

February 2005: presented a brief overview of the project to Fisheries and Oceans Canada (FOC) representatives. No major issues were identified for this site.

March 2005: PWGSC presented the government contracting process to Inuit businesses.

March 2005: met with potential contractor bidders to familiarize them with the remedial project specifics.

DIAND has made a concerted effort to identify and address concerns raised by members of the public and pertinent regulators through a variety of means.

A document summarizing comments and concerns noted during the December 2004 public meetings in Hall Beach and Igloolik (CAM-F Public Consultation Issues Summary) is attached. The final Remediation Work Plan was modified to incorporate comments and to address community concerns, wherever possible.

A second document identifying issues relayed to departmental representatives during the December 2004 presentation to the regulators (Environment Canada, DIAND Land Administration personnel, FOC and NWB) is also attached.

A second meeting that focused on similar project-related issues was held with the Nunavut Impact Review Board in February 2005.

While the scope of comments and concerns has covered a wide variety of types, a few issues have consistently been identified as areas of significant concern that require detailed discussions and effective solutions. The following table identifies some of the major concerns raised by the public and/or regulators throughout the consultation period, as well as DIAND's planned responses to address each of these issues in turn.

Category	Residents' Concerns	DIAND's Response
Health and Safety	Locals ingesting contaminated fish from site water bodies	Site Investigation work plan was modified to include tissue analysis of fish taken from site waters. It was determined that fish present at the site do not contain contaminants at levels above other fish populations in the eastern arctic.
Health and Safety	Containerized PCB's remaining in barrels in the Warehouse	Barrels containing PCB wastes were transported from site and destroyed at a location in the south.
Environment	The location of site landfills	There was some concern that leachate from site landfills would impact on adjacent water bodies. DIAND demonstrated that the landfills are being sited a considerable distance from water bodies and will be adequately engineered using proven northern technologies.
Business Opportunities	Jobs for locals	DIAND will implement a contracting process that increases the credibility of the project within the communities.
Shelter	Loss of shelter at the site	DIAND has developed a policy which permits consideration for leaving shelter

Please refer to attached documents for specific comments and responses.

DIAND also provided funding and invited Qikiqtaaluk Corporation (QC) to comment on the SSRA. QC did a thorough review of the assessment and provided a number of conclusions in the form of a report. DIAND has officially responded to these conclusions in the form of a letter.

Three of the four QC comments focused on the technical protocols used by the risk assessors. It was determined that these were attributable to professional differences in approach and were not weaknesses in the assessor's risk model.

The fourth comment was that DIAND should not be solely relying on the results of the risk assessment to formulate the site clean up criteria. In fact, DIAND will use these site-specific risk based criteria only where no suitable criteria is available.

CONTINGENCY PLANS

For the Clean Up of CAM-F Intermediate DEW Line Site

Submitted by: Department of Indian Affairs and Northern Development
Northern Affairs Program
Nunavut Regional Office

Prepared by: Public Works and Government Services Canada
Real Property Services
Architectural & Engineering Services
Environmental Services
Western Region

February 2005

Contingency Plans

1 General

1.1 The following contingency plans present the prescribed course of action to be followed in the case of unanticipated events during the site remediation such as fuel or chemical spills, potentially dangerous wildlife encounters, and the discovery of heritage resources. The plans will enable persons in a particular contingency situation to maximize the effectiveness of the environmental response and meet all regulatory requirements for reporting to the appropriate authorities. The plans also describe the locations where hydrocarbons (fuel) and spill response equipment will be stored at the site.

1.2 Spill contingency plans for the site will be included in the Site Specific Remediation Plans and will be posted on-site during the remediation. The following information will be included:

1. a description of pre-emergency planning;
2. personnel roles, lines of authority and communication;
3. emergency alerting and response procedures;
4. evacuation routes and procedures, safe distances and places of refuge;
5. emergency alerting and response procedures;
6. directions/methods of getting to the nearest medical facility;
7. emergency decontamination procedure;
8. emergency medical treatment and first aid;
9. emergency equipment and materials;
10. emergency protective equipment;
11. procedures for reporting incidents; and
12. spill response and containment plans for all materials that could potentially be spilled.

2 Fuel and Hazardous Material Spills

2.1 The objective of the fuel-related contingency plan is to protect the environment and human health by minimizing the impacts of spill events through clear and concise instructions to all personnel.

2.2 A variety of fuels (diesel, gasoline and lubricating oils) may be used during the site remediation of the DEW Line sites. As fuels are usually stored and transferred in barrels of 205 liters or smaller capacity, any spill quantity would likely be small.

2.3 Transportation of fuels must comply with the *Transportation of Dangerous Goods Act and Regulations.*

2.4 The most common pollution incidents would probably involve spills of diesel or gasoline onto land resulting from: human error during transfer, rupture of barrels from deterioration or damage, seepage from fittings or valves, or equipment failure. Daily checking of equipment and preventative maintenance would also identify damage to the fuel system and reduce the risk of spills or leaks.

2.5 In the event of a spill, protection of human health and safety is paramount. Contamination of personnel involved in clean up is a real possibility as is contamination of the surrounding workplace and environment.

The individual responding to a spill shall:

1. Ensure personnel are appropriately trained.
    a. All employees working on the CAM-F DEW Line Site Cleanup project, including contractors and sub-contractors, will be trained in the safe operation of all machinery and tools, as well as in the handling of materials to help prevent and respond to hazardous material spills in a timely and effective manner. All employees on site will also be trained for initial spill response in the event of a spill. The recommended training for these purposes consists initially of the 40-Hour Hazardous Waste Operations and Emergency Response (HAZWOPER) course offered by various environmental firms and the 8-Hour HAZWOPER refresher course every two (2) years thereafter.
2. Make use of materials and equipment available for adequate response to fuel spills, such as excavators for creating earthen dykes and hydrocarbon absorbent booms.
3. Warn people in the immediate vicinity and evacuate the area if necessary.
4. Wear protective clothing as required for handling spills.
5. Isolate and eliminate all ignition sources.
6. Identify the spilled material if possible, and take all safety precautions before approaching it.
7. Attempt to immediately stop the leakage and contain the spill, if safe to do so, by implementing the Spill Response Actions summarized in Section 2.5.1 below.
8. Report to the Field Team Leader the spill location, type of material, volume and extent, status of spill (direction of movement), and prevailing meteorological conditions.
9. Follow all applicable federal/territorial regulations and guidelines or the disposal of spill materials.
10. Document all events and actions taken. Include information required by applicable regulations and guidelines.
11. Notify appropriate government agencies using the contact list. Report spills immediately on the 24-Hour Spill Report Line (867) 902-8130.

2.5.1 Petroleum Hydrocarbon - SPILL RESPONSE ACTIONS

ON LAND

- Do not flush into ditches or drainage systems.
- Block entry into waterways and contain with earth, snow or other barrier.
- Remove small spills with sorbent pads.
- On tundra use peat moss and leave in place to degrade, if practical.

ON SNOW & ICE

- Block entry into waterways and contain with snow or other barrier.
- Remove minor spills with sorbent pads and/or snow.
- Use ice augers and pump to recover diesel under ice.
- Slots in ice can be cut over slow moving water to contain oil.
- Burn accumulated diesel from the surface using Tiger Torches if feasible and safe to do so.

ON MUSKEG

- Do not deploy personnel and equipment on marsh or vegetation.
- Remove pooled diesel with pumps and skimmers.
- Flush with low pressure water to herd diesel to collection point.
- Burn only in localized areas, e.g., trenches, piles or windrows.
- Do not burn if root systems can be damaged (low water table).
- Minimize damage caused by equipment and excavation.

ON WATER

- Contain spill as close to release point as possible.
- Use spill containment boom to concentrate slicks for recovery.
- On small spills, use sorbent pads to pick up contained oil.
- On larger spills, use skimmer on contained slicks.
- Do not deploy personnel and equipment onto mudflats or into wetlands

RIVERS & STREAMS

- Prevent entry into water, if possible, by building berm or trench.
- Intercept moving slicks in quiet areas using (sorbent) booms.
- Do not use sorbent booms/pads in fast currents and turbulent water.

3 Wildlife Encounter

3.1 Bears are a potential hazard to workers at all times and the situation can be exacerbated by the presence of any substance that a bear perceives to be food.

3.2 EMPLOY DEDICATED WILDLIFE MONITORS AT ALL TIMES DURING CLEAN UP OPERATIONS.

3.3 Be familiar with bear deterrent procedures. Be familiar with the GNWT "Safety in Bear Country" manual and make available a reference copy at the site.

3.4 Operators of vehicles and equipment shall make every effort to avoid encounters with large mammals. Congregations of animals near food or garbage are a potential problem, which can be overcome by proper disposal of food wastes. Concentrations of scavenging animals, such as wolves, foxes and bears, increase the risk of diseases, particularly rabies, and danger to personnel. The following precautions and actions are to be taken at each site:

1. The killing of wildlife for any reason at variance with the Wildlife Act and regulations is an offence. Co-ordinate procedures for handling wildlife problems and incidents with the regional Nunavut wildlife office.
2. Use vehicle, noisemakers and, if necessary, a firearm to frighten the bear away from the site.
3. Shoot the bear only if the bear returns repeatedly, refuses to leave or directly threatens human safety. Killing is considered a last resort and, if at all possible, the appropriate wildlife officer should be contacted to alert them of the problem. If a bear is to be shot, assign the task only to a person familiar with and competent with the camp firearm. Wounded or otherwise aggravated bears can be extremely dangerous.
4. Report the death of a bear to the Field Team Leader and the appropriate wildlife officer who will issue instructions as to the disposal of the carcass and the formal reporting procedures to be followed.
5. Due to the possibility of rabies, shoot any animal that bites a human and retain the carcass intact pending instructions from the appropriate wildlife officer. If possible, notify the wildlife officer before any drastic action is taken. Seek medical advice from the appropriate medical facility for treatment of animal-inflicted wounds.

4 Heritage Resources

4.1 All site personnel are prohibited from knowingly disturbing any archaeological or other heritage site or collecting any artifacts. Removing artifacts is a criminal offence.

4.2 In the event of finding heritage resources:

1. Do NOT remove any artifacts or other associated objects from the site unless their integrity is threatened in any way.
2. Mark the site's visible boundaries and avoid the area.
3. Report the discovery of the site to the appropriate regulatory agency.
4. Document the discovery.

4.3 In the event of a discovery of human remains:

1. Advise the PMO of the discovery and they will contact the nearest detachment of the RCMP. The RCMP will make the decision as to whether the territorial coroner or archaeological department should be contacted.
2. Halt all activities around the area of discovery. Until determined otherwise, the remains should be treated as evidence in a criminal investigation. If the remains are found in the bucket of heavy equipment, the bucket should not be emptied, as physical evidence may be destroyed.
3. Secure the area and designate it as out of bounds to all personnel. Depending on weather conditions, the human remains should be provided with non-intrusive protection such as a cloth or canvas tarp (non-plastic preferred).
4. Document the discovery

5 Key Contact List

5.1 24-Hour Spill Report Line

1. In the event of a spill, contact the 24-Hour Spill Report Line and provide them with all the relevant details.
   - Telephone: (867) 920-8130 Fax: (867) 873-6924
2. Environment Canada, as lead agency, shall then be contacted by officials to ensure the appropriate response. The lines are staffed 24 hours a day and can also be used to co-ordinate a response in the event of a non-spill emergency outside of normal working hours.

5.2 Other Contacts

1. In the event of a non-spill emergency (e.g. related to wildlife, fisheries, heritage resource, etc.), contacts are provided in Table 1.

Table 1: Contact List

Resource	Location	Phone Number
24 Hour Spill Line	NWT/Nunavut	867-920-8130
Local Fire Department	Gerald Pickett, Chief Fire Marshal Office of the Fire Marshal Nunavut Emergency Services Division Department of Community Government and Transportation *Iqaluit*, Nunavut	867-975-5310
Environment Canada, Enforcement Branch	Environment/Emergencies Enforcement Officer Iqaluit, NT	867-975-4644
Indian and Northern Affairs Canada	Peter Kusugak Iqaluit Region District Operations Manager	867-975-4295
	Iqaluit Office	867-975-4500
Renewable Resources Officer Stations – Baffin Region	Gladis Lemus, Ph.D. Manager Pollution Control & Air Quality Department of Environmental c/o Environmental Protection Government of Nunavut Iqaluit, Nunavut	867-975-5907
Indian and Northern Affairs Canada – Project Proponent	Iqaluit Office	867-975-4500
	Robert Martin	867-979-7931
Public Works and Gov't Svcs. Canada – Project Management	Site Supervisor – Ken Gilmet	780-497-3883
	Program Manager – Jared Buchko	780-497-3886
	Project Manager – Brad Thompson	780-497-3862

Northwest Territories

NWT SPILL REPORT

(Oil, Gas, Hazardous Chemicals or other Materials)

24 – Hour Report Line
Phone: (867) 920-8130
Fax: (867) 873-6924

A Report Date and Time	B Date and Time of spill (if known)	C ☐ Original Report ☐ Update no._____	Spill Number

D Location and map coordinates (if known) and direction (if moving)

E Partly responsible for spill

F Product(s) spilled and estimated quantities (provide metric volumes/weights if possible)

G Cause of spill

H Is spill terminated? ☐ yes ☐ no	I If spill is continuing, give estimated rate	J Is further spillage possible? ☐ yes ☐ no	K Extent of contaminated area (in square meters if possible)

L Factors effecting spill or recovery (weather conditions, terrain, snow cover, etc.)	M Containment (natural depression, dikes, etc.)

N Action, if any, taken or proposed to contain, recover, clean up or dispose of product(s) and contaminated materials

O Do you require assistance? ☐ no ☐ yes, describe:	P Possible hazards to person, property, or environment; eg: fire, drink water, fish or wildlife

Q Comments or recommendations

FOR SPILL LINE USE ONLY

Lead agency

Spill significance

Lead Agency contact and time

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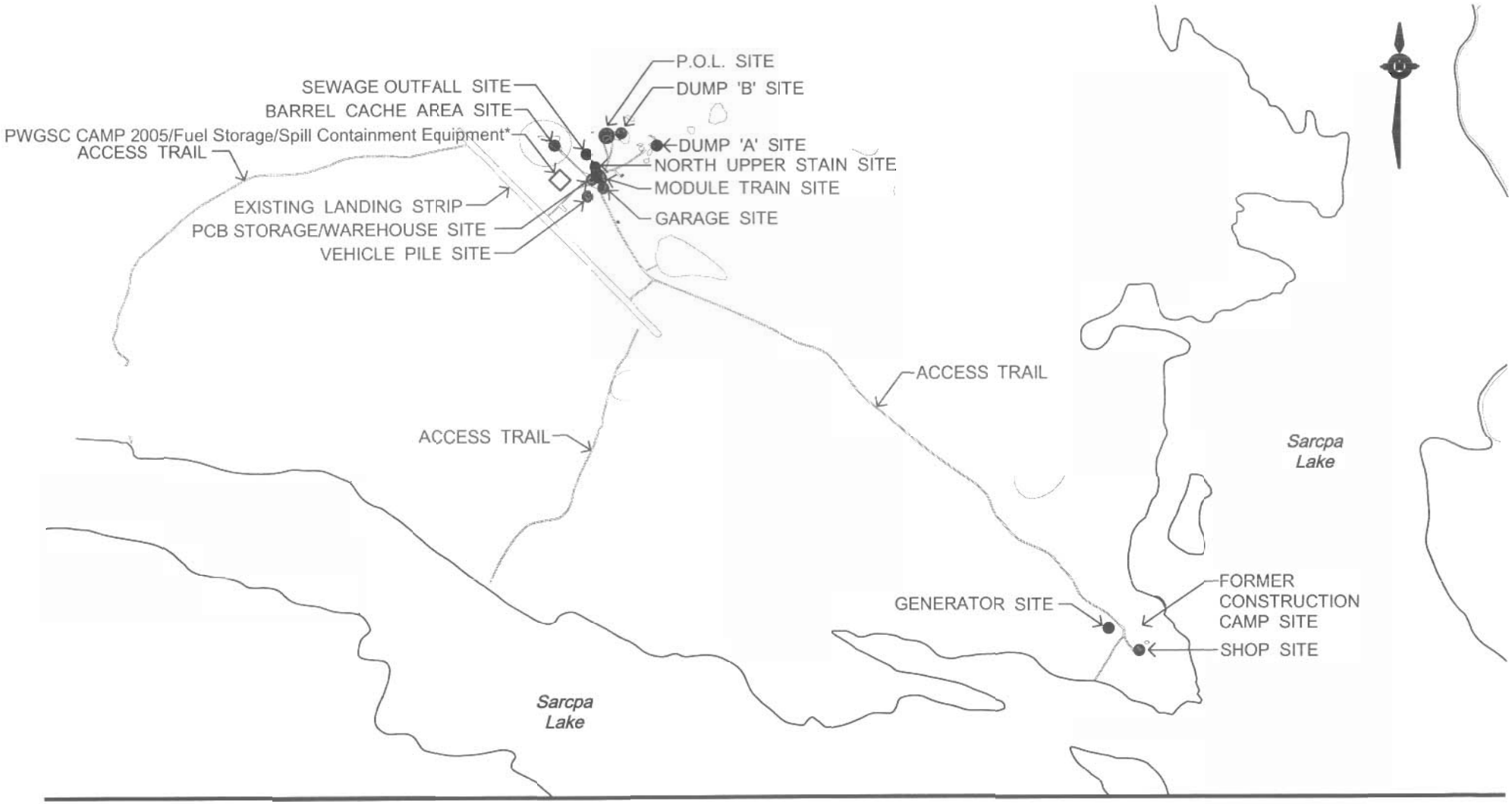
.....

.....

Is this file now closed? ☐ yes ☐ no

Reported by	Position. Employer, Location	Telephone

Reported to	Position. Employer, Location	Telephone



Date: OCTOBER 18, 2004

0 100 200 300 400 500 750m

Scale 1:15000

EarthTech

A Tyco International Ltd. Company

*Fuel spill kits will also be transported on support vehicles that service equipment

P.W.G.S.C.

SARCPA LAKE - DEW LINE SITE

SPILL CONTINGENCY PLAN

Figure 1